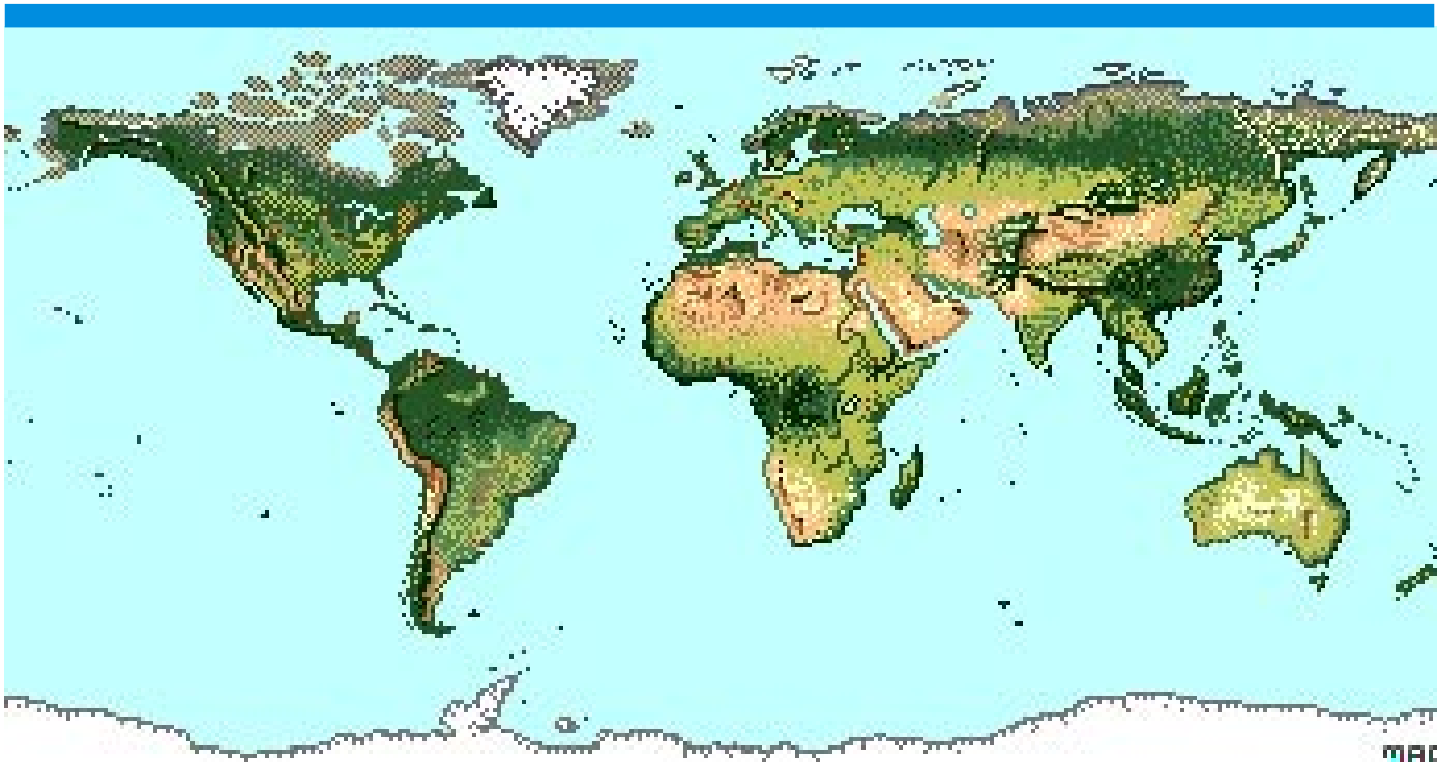
hawle



*Your supplier of high quality pipeline connections*

**Hawle pipeline fittings all over the world**
since 1948

- Leaders in development, quality and breadth of range
- recognized for service, reliability and adaptability

**E. Hawle Armaturenwerke GmbH**
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hawle

# HAWLE-Manufacturing plants in Austria

I: Vöcklabruck

II: Frankenmarkt

Products of HAWLE — well-known throughout the world for quality and durability.

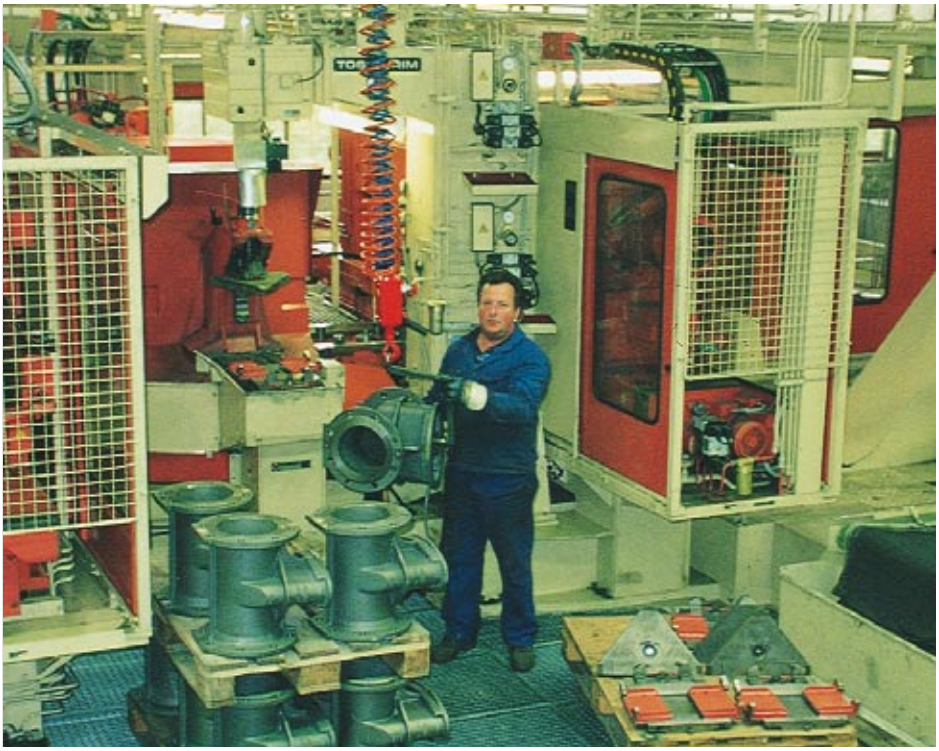
Licensees all over the world use HAWLE-know-how.

Two thirds of HAWLE output is exported to all 5 continents, comprising more than 60 countries.

HAWLE recognized for innovation:

- first resilient-seated gate valve in the world
- first combination valve
- first corrosion free hydrant and many other major firsts.

**HAWLE — the name for durability and reliability**





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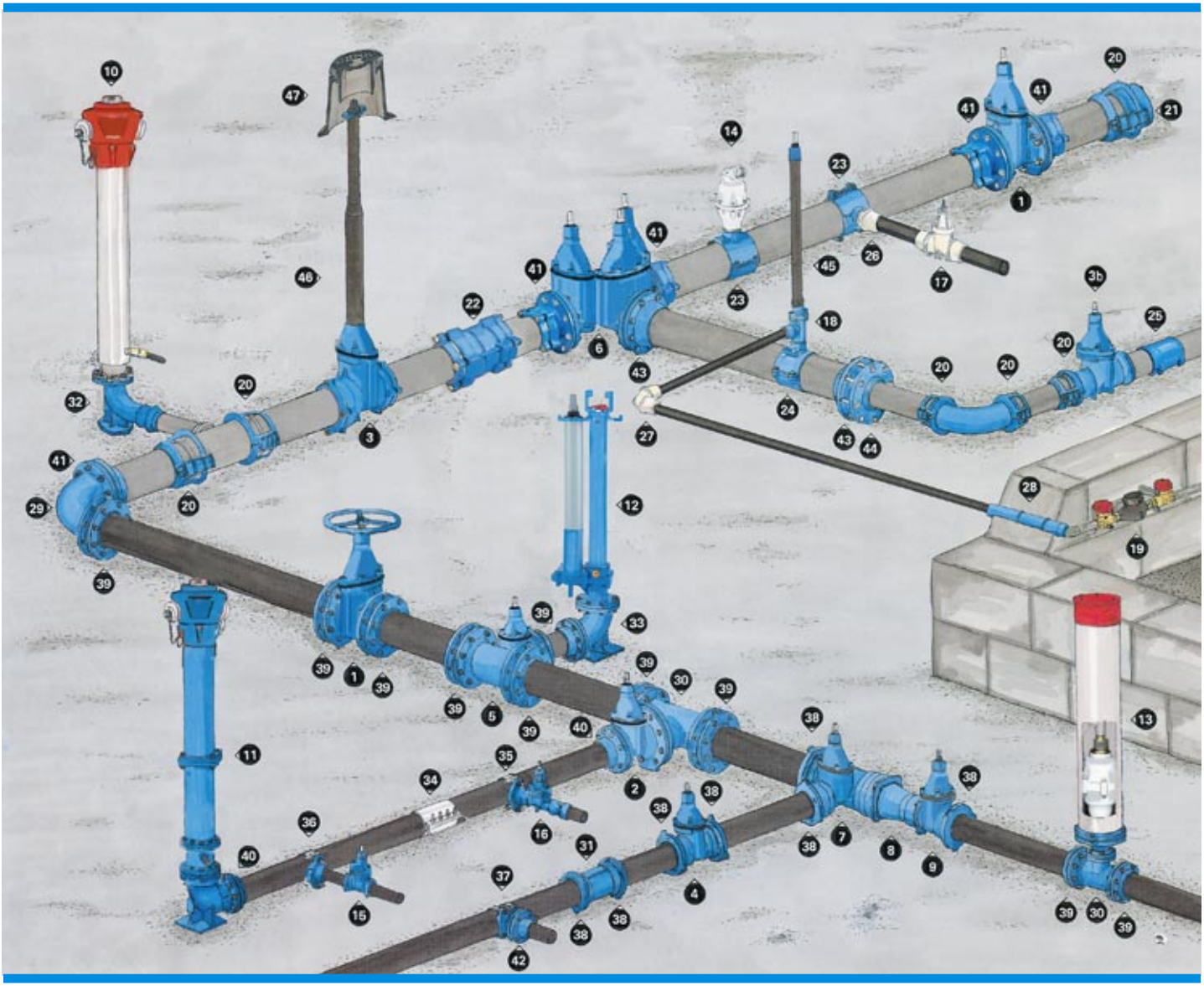
# HAWLE-Product range

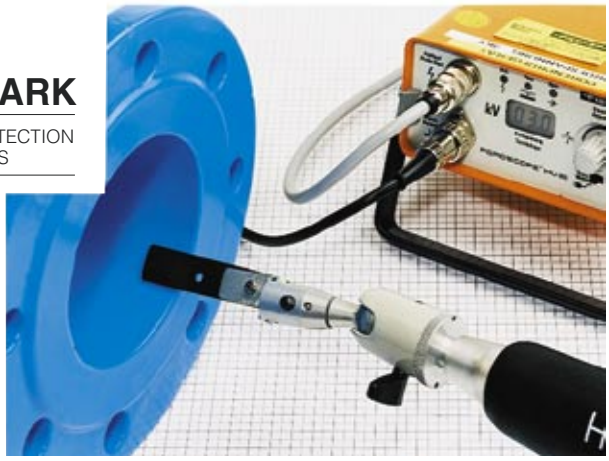


| | | Order no. |
|---|---|---|
| 1 | *E2* VALVE FLANGED ENDS | no. 4000E2 |
| 2 | *E2* REDUCING VALVE | no. 4150E2 |
| 3 | *E2* VALVE "SYSTEM 2000" | no. 4040E2 |
| 3b | ELYPSO VALVE, SOCKET ENDS FOR PVC | no. 4600 |
| 4 | *E2* VALVE, SOCKET ENDS FOR CAST IRON | no. 4500E2 |
| 5 | *E2* COMBI-T, SINGLE VALVE TEE | no. 4340E2 |
| 6 | *E2* COMBI-III, TRIPLE VALVE TEE | no. 4450E2 |
| 7 | *E2* COMBI-T, SOCKET ENDS | no. NL10E2 |
| 8 | CONCENTRIC TAPER | no. NL40 |
| 9 | *E2* SPIGOT SOCKET VALVE | no. NL00E2 |
| 10 | *H4* CORROSION FREE HYDRANT - RIGID TYPE | no. 5151H4 |
| 11 | *H4* ABOVE GROUND HYDRANT - BREAK AWAY | no. 5096H4 |
| 12 | FREEFLOW BELOW GROUND HYDRANT | no. 5060 |
| 13 | COMBINED AIR RELEASE VALVE | no. 9822 |
| 14 | AUTOMATIC AIR VALVE | no. 9876 |
| 15 | SERVICE VALVE | no. 2500 |
| 16 | SERVICE VALVE | no. 2800 |
| 17 | SERVICE VALVE | no. 2630 |
| 18 | SERVICE VALVE | no. 3130 |
| 19 | WATER METER CONSOLE | no. 2961 |
| 20 | RESTRAINT CLAMP, for PVC | no. 1254 |
| 21 | ENDCAP | no. 8050 |
| 22 | RESTRAINT COLLAR, for PVC | no. 0430 |
| 23 | HAKU SADDLE FOR PLASTIC PIPES | no. 5250 |

| | | Order no. |
|---|---|---|
| 24 | HAKU SADDLE FOR PLASTIC PIPES | no. 5310 |
| 25 | SPLIT COLLAR (Pipe to Pipe) | no. 9240 |
| 26 | ISO FITTING MALE ADAPTOR, Acetal | no. 6120 |
| 27 | ISO FITTING ELBOW 90°, Acetal | no. 6420 |
| 28 | WALL INLET FITTING | no. 6990 |
| 29 | DOUBLE FLANGED BEND 90° | no. 8530 |
| 30 | ALL FLANGED TEE | no. 8510 |
| 31 | COLLAR WITHOUT THREAD | no. NL50 |
| 32 | FLANGED DUCK FOOT BEND WITH PVC SOCKET 90° | no. 5046 |
| 33 | DOUBLE FLANGED DUCK FOOT BEND 90° | no. 5049 |
| 34 | REPAIR CLAMP, single lug | no. 0750 |
| 35 | UNIVERSAL PIPE SADDLE | no. 3500 |
| 36 | SHUT-OFF SADDLE WITH O-RING | no. 3800 |
| 37 | UNIVERSAL PIPE SADDLE, FLANGED OUTLET | no. 3510 |
| 38 | PIPE-LOCK-RING | no. 1200 |
| 39 | RESTRAINT FLANGE ADAPTOR FOR CAST IRON | no. 7602 |
| 40 | DOUBLE CHAMBER FLANGE ADAPTOR FOR CAST IRON | no. 7102 |
| 41 | RESTRAINT FLANGE ADAPTOR FOR PVC | no. 0400 |
| 42 | ISO PIPE FLANGE ADAPTOR FOR PE | no. 5500 |
| 43 | DOUBLE CHAMBER FLANGE ADAPTOR FOR PVC | no. 5600 |
| 44 | DOUBLE CHAMBER FLANGE ADAPTOR FOR PVC, reducing | no. 5630 |
| 45 | EXTENSION SPINDLE FOR SERVICE VALVES | no. 9101 |
| 46 | TELESCOPIC EXTENSION SPINDLE FOR *E2* VALVES | no. 9500E2 |
| 47 | SURFACE BOX ADJUSTABLE | no. 2050 |

Fluidised bed
Epoxy powder coating at 200° C


Measuring coating thickness



Spark-test for coating integrity
(min. 3000 V)

RAL QUALITY MARK

HIGH QUALITY CORROSION PROTECTION
FOR VALVES AND FITTINGS

## High quality corrosion protection using the GSK fluidised bed Epoxy coating system

*The environmentally friendly solvent- and pollution free powder coating technology*

### Epoxy coating

- Minimum coating thickness 250 µm
- Zero porosity
- High adhesion to metal (min. 12 N/mm$^2$)
- High resilience (no cracking)
- Smooth surface (no encrustation)
- Approved for food handling to KTW standard (German Federal health standard)
- High impact resistance
- Bacteriological approval to DVGW recommendation W270
- Regular quality tests according DIN 30 677 T2 - coating thickness, adhesion, spark-testing, impact resistance
- Independant auditing of quality control systems by MPA Hannover in accordance with the test methods of **GSK** (**G**ütegemeinschaft **S**chwerer **K**orrosionsschutz - the association for high quality corrosion protection)
- HAWLE Standardcolour RAL 5012



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# Terms of delivery

The following terms of delivery have sole application for deliveries of our products. They are considered to have been accepted in so far as he/she does not challenge them within a period of one week after receipt of the order confirmation. Any divergent purchasing conditions on the part of the customer are only then binding when we have expressly agreed to them in writing.

Our supply prices remain free and are only binding after acceptance of an order. The prices are understood as being ex works exclusive of packaging, in so far as other terms have not been agreed. Express railway deliveries are to be made exclusively at the expense of the customer. Deliveries carriage paid free house or carriage paid to the destination railway station must be expressly agreed in writing. The goods delivered are transported at the risk of the placer of the order or receiver, in so far as other terms have not been agreed. For international deliveries we use the agreed terms of delivery according Incoterms 2000, in so far as other terms have not been agreed in writing.

Payment must be within 30 days, in so far as other terms have not been agreed. Payment is to be calculated in each case from the earliest claim. In the event of delayed payment, default interest of 4% p.a. over and above the bank rate will be charged.

All goods, which we deliver, remain our property until they have been paid in full. Our duty to fulfill agreed contracts is in suspension with customers with overdue payments. In the event of a credit rating deficiency that will be judged by us a continued fulfillment of orders may be made dependent on the provision of securities.

Agreed delivery dates are always to be understood as approximations and in no way as binding. Complaints may only be taken account of when they are made within 8 days of the arrival of the goods at their destination. Obvious faults should be reported at once.

In the event of defects in our goods resulting from poor materials or errors in processing we provide a two year warranty. In a warranty event we reserve the right to free ourselves against the claims of the customer from a canceling of the contract or reduction in price in that we replace defective products with others that are not defective within a reasonable period of grace, in that we carry out the repairs required within a reasonable period of grace or provide any missing item. The warranty is waivered when the purchaser does not inform us of any damage that has appeared without delay, so that we can be present at the first investigation of the defects. The warranty extends in each case only to the improvement or the replacement of a defective product. Repairs of defects do not extend the warranty period. We do not provide the customer with indemnification on any goods, which are not the object of the contract, for other damage, for loss of profit or production time in so far as serious blame does not attach to us from the circumstances of the individual case.

All claims for damages resulting from defective deliveries and/or services, must be upheld in court within one year of the expiry of the warranty term laid down by contract – in cases where we do not expressly accept the defects in writing – otherwise the claims will be void.

Should a claim be made on grounds of product liability law relating to a product manufactured by us, our contractual partner accepts the obligation to inform us about this immediately by telephone or in writing and also to supply our address to the claimant. Negotiations relating to the product liability of our goods are to be carried out exclusively by us.

Special deliveries are in general excluded from the possibility of a return.

The place of fulfillment for the delivery and payment is A-4840 Vöcklabruck, Austria, the court of jurisdiction in all disputes arising from this contract is the appropriate local Austrian court of law.


## Hawle-quality-warranty

Hawle-products are produced according to the latest state of the art technology.

For original Hawle-products labeled with the “hawle” logo, we guarantee satisfactory operation for a period of ten years from the day of delivery. The warranty refers to products appropriately used for drinking water supply – concerning the usage of gas products the warranty refers to the distribution of fuel gases according to EN 437.

Damages caused by careless storage, transport, treatment and unqualified installation, failure to observe the applications regulations, unsatisfactory maintenance and care and the inadequate usage of products and replacement parts will not be covered by the warranty.

Damaged products will be repaired and/or replaced with equivalent products by Hawle during the warranty period.



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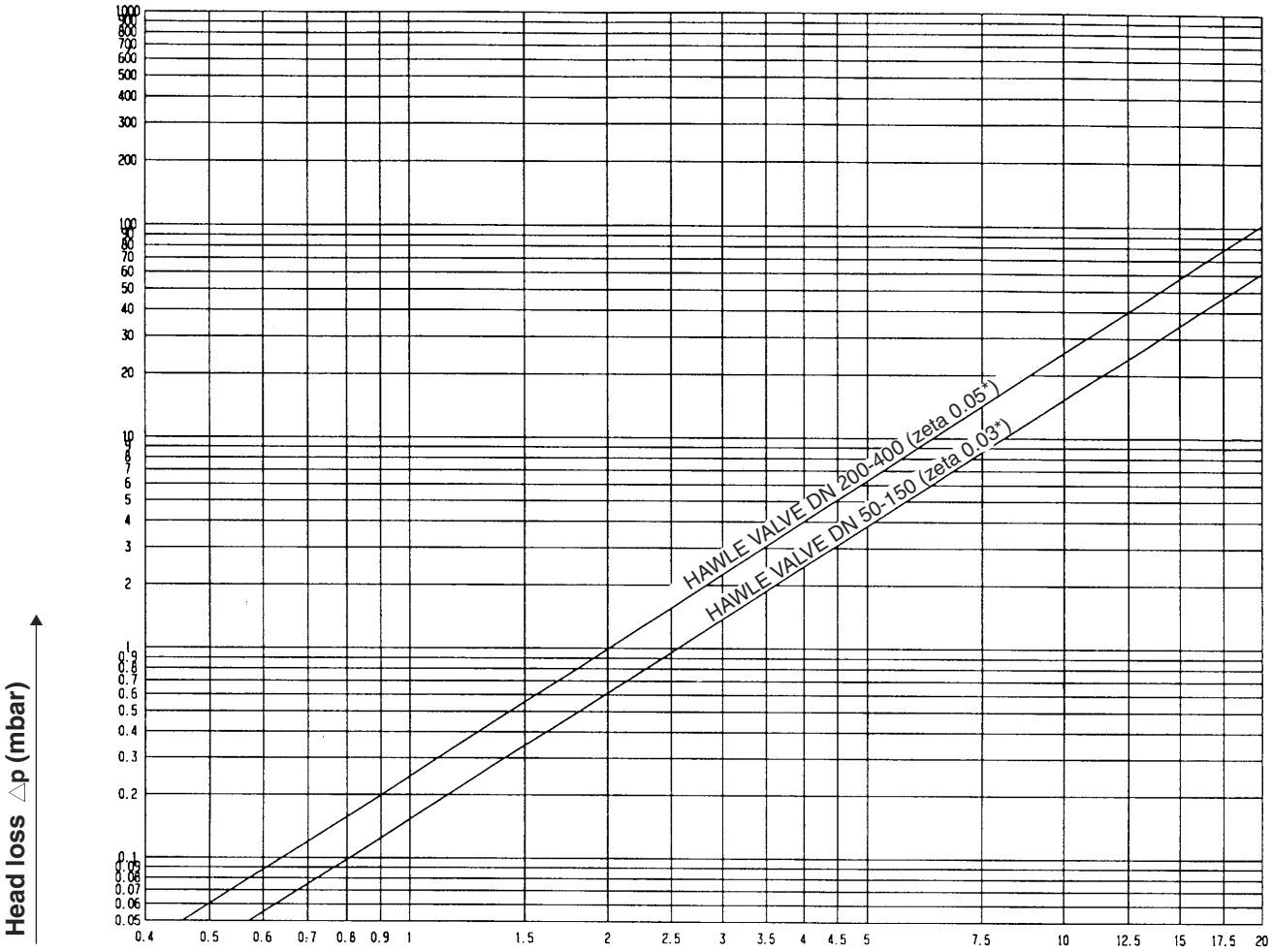
## Head loss diagramm




* . . . Zeta = resistance value when valve fully opened.
Established during test, and rounded. (zeta= 2.△p / Rho. $v^2$)
△p . . . Head loss v . . . Velocity of flow
Rho . . . Density of water

## Table of flow capacity of HAWLE valves ($m^3/h$)

| DN | Velocity of flow v (m/s) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 1,5 | 2 | 2,5 | 3 | 3,5 | 4 | 4,5 | 5 |
| 50 | 6,9 | 10,4 | 13,8 | 17,3 | 20,7 | 24,2 | 27,6 | 31,1 | 34,5 |
| 80 | 17,4 | 26,0 | 34,7 | 43,4 | 52,1 | 60,8 | 69,5 | 78,2 | 89,8 |
| 100 | 27,6 | 41,5 | 55,3 | 69,1 | 82,9 | 96,7 | 110,6 | 124,4 | 138,2 |
| 125 | 41,5 | 62,2 | 82,9 | 103,7 | 124,4 | 145,1 | 165,9 | 186,6 | 207,4 |
| 150 | 62,2 | 93,3 | 124,4 | 155,5 | 186,6 | 217,7 | 248,8 | 279,9 | 311,0 |
| 200 | 107,1 | 160,7 | 214,3 | 267,8 | 321,4 | 374,9 | 428,5 | 482,1 | 535,7 |
| 250 | 169,3 | 254,0 | 338,7 | 423,4 | 508,0 | 592,7 | 677,4 | 762,0 | 846,7 |
| 300 | 245,4 | 368,1 | 490,7 | 613,4 | 736,1 | 858,8 | 981,5 | 1104,2 | 1226,9 |
| 400 | 435,5 | 653,2 | 870,9 | 1088,6 | 1306,4 | 1524,1 | 1741,8 | 1959,5 | 2177,3 |
| 500 | 706,7 | 1060,3 | 1413,7 | 1767,1 | 2120,6 | 2474 | 2827,5 | 3180,9 | 3534,3 |
| 600 | 1018 | 1526,8 | 2035,8 | 2544,7 | 3053,6 | 3562,6 | 4071,5 | 4580,5 | 5089,4 |

SOURCE: VALVE TEST REPORT No. 713/2/2495 VITUKI BUDAPEST



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| Order no. | Face-to-face dim. | Application | PN | 80 | 100 | 150 | 200 |
|---|---|---|---|---|---|---|---|
| 4000A | short EN 558-1 GR 14 | water, municipal waste water other applications on request | 16 | ● | ● | ● | ● |
| 4700A | long EN 558-1 GR 15 | | | ● | ● | ● | ● |

**The HAWLEA valve is the first mono-design resilient-seated shut-off valve world-wide. Due to its singular mono design an unequalled strength of the valve is achieved.**

## Material and design features:

**No screwed-on bonnet - spindle bearing fixed in the housing via bayonet lock - these unique design features permit 100% all-over epoxy powder coating, thus providing an unequalled corrosion protection according to the regulations of GSK - The Quality Association for Heavy Duty Corrosion Protection of Powder Coated Valves and Fittings.**

**Body of ductile iron** EN-GJS-400/500 acc. to EN 1563
inside and outside powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - The Quality Association for Heavy Duty Corrosion Protection of Powder Coated Valves and Fittings).
cleaning with pig possible
flange bores PN 10 acc. to EN 1092-2
PN 16 - DN 200 to be specified on order

**Stainless steel spindle**
St 1.4021, with rolled thread
plain bearing of POM

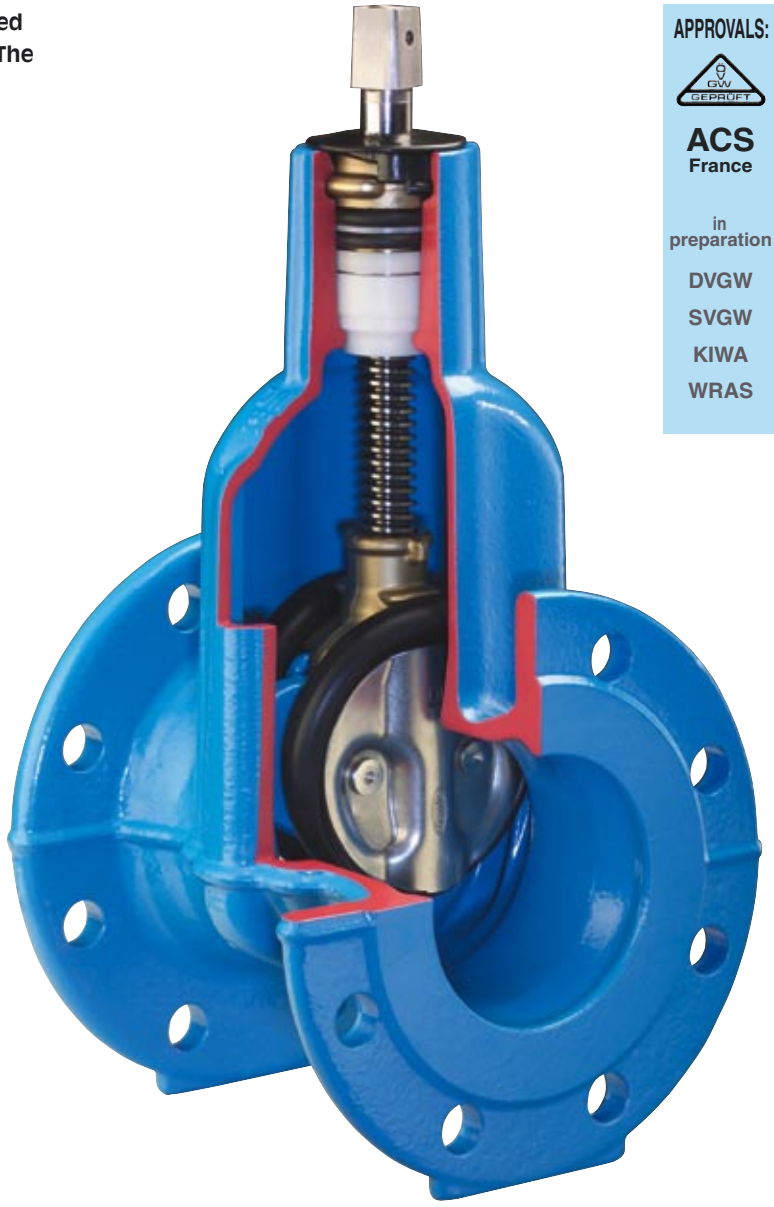
**O-ring bush**
of dezincification resistant brass, fixed in housing with bayonet lock, with locking piston, multiple O-ring sealing

**Wedge**
of ductile iron EN-GJS-400/500 / 1.4301
elastomer (suitable for potable water)
in sandwich design with two separate rubber gaskets. This new wedge and sealing geometry as well as the special wedge guide ensure low closing torques in every situation.

The movable wedge nut, made of dezincification resistant brass, ensures a perfect function of the valve even under high loads.

**Cap**
Dirt control for spindle bearing of PE

## The HAWLEA valve - the revolution in valve technology



APPROVALS:
ACS France
in preparation
DVGW
SVGW
KIWA
WRAS



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# HAWLE Valve Flanged Ends

**Standard version:** without handwheel and extension spindle

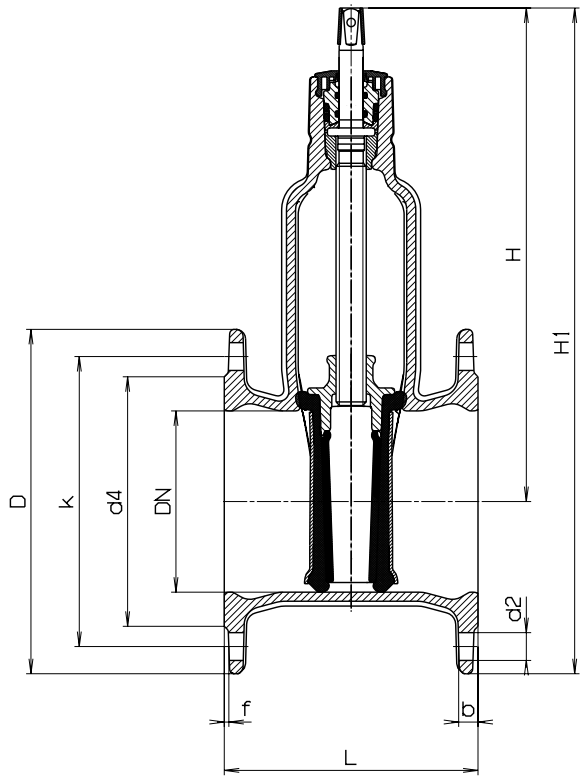
**Design versions:** short or long face-to-face dimension
clockwise or anticlockwise closing

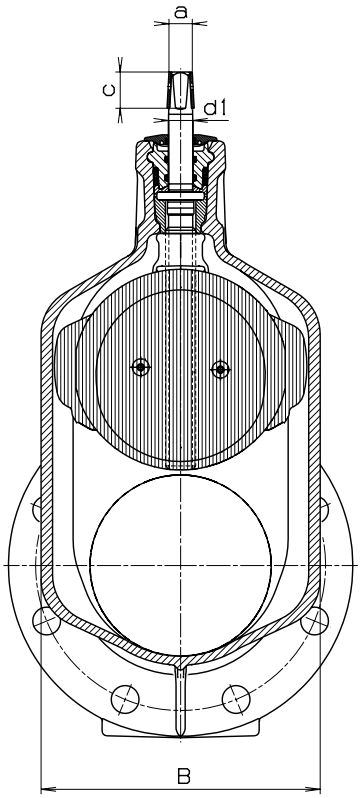
**Suitable accesories:**

**Handwheel:** No. 7800

**Extension spindles:**
rigid No. 9000A
telescopic No. 9500A

**Surface boxes:**
rigid No. 1750
telescopic No. 2050




| DN | PN | Flange | | | | | Bolts | | | Spindle | | | Valve | | | | | Weight kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D | b | k | d4 | f | Qty. | Thread | d2 | a | c | d1 | H | H1 | L short | L long | B | short | long |
| **80** | 10<br>16 | 200 | 16 | 160 | 133 | 4 | 8 | M 16 | 19 | 17,3 | 30 | 20 | 286 | 386 | 180 | 280 | 136 | 10,5 | 12,8 |
| **100** | 10<br>16 | 220 | 16 | 180 | 153 | 4 | 8 | M 16 | 19 | 19,3 | 30 | 20 | 317 | 427 | 190 | 300 | 158 | 15,0 | 16,3 |
| **150** | 10<br>16 | 285 | 16 | 240 | 207 | 4 | 8 | M 20 | 23 | 19,3 | 30 | 20 | 409 | 552 | 210 | 350 | 231 | 26,5 | 30,0 |
| **200** | 10<br>16 | 340 | 17 | 295 | 264 | 4 | 8<br>12 | M 20 | 23 | 24,3 | 38 | 25 | 509 | 679 | 230 | 400 | 282 | 41,0 | 46,5 |

# Elypso Valve Flanged Ends DN 20-40

| Order no. | Face-to-face dimension | Application | PN | Dimensions/DN | | | |
|---|---|---|---|---|---|---|---|
| | | | | 20 | 25 | 32 | 40 |
| **4000** | **short (DIN 3202 F 4)<br>EN 558-1 GR 14** | **Water<br>non aggressive effluent**<br><br>other applications on request | 16 | ● | ● | ● | ● |
| **4700** | **long (DIN 3202 F 5)<br>EN 558-1 GR 15** | | | | | ● | ● |

## Resilient seated gate valve with smooth straight-through bore

### Material and design features:

1/2 **Body (1) and Bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

4 **Wedge** fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole DN 20 - 40 of Ms 58 - DIN 17660

7 **Bush** of Ms 58 - DIN 17660, solide spindle support of drawn brass

8 **O rings** of elastomer, the perfect spindle seal

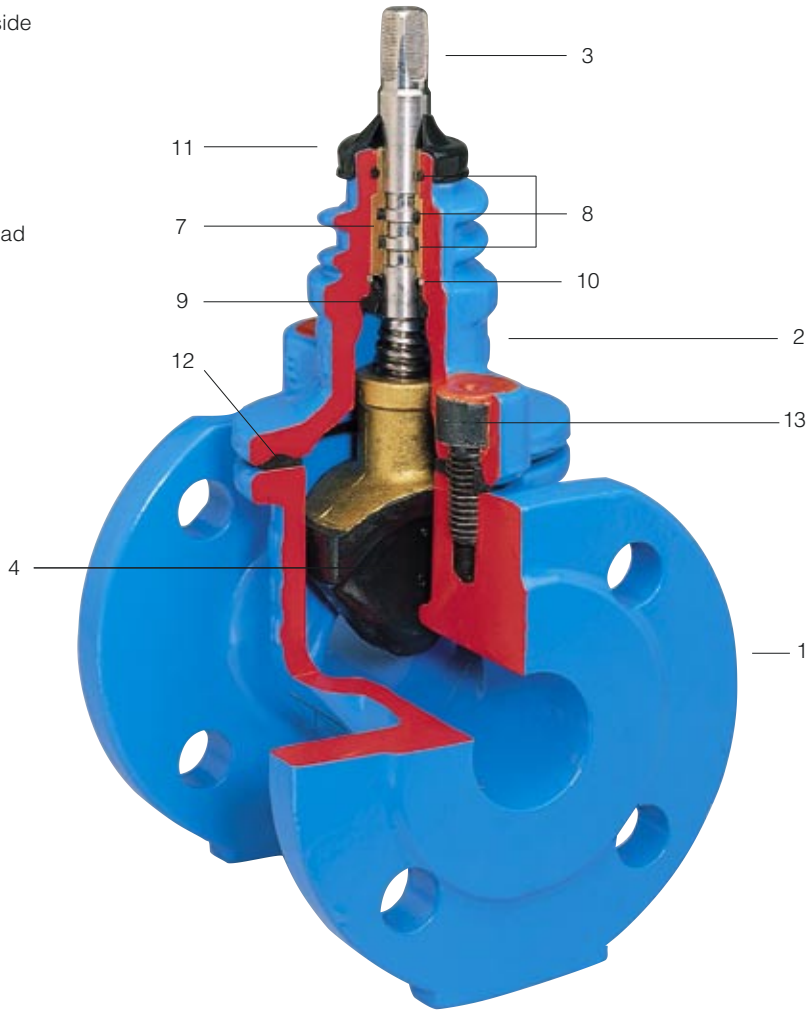
9 **Back seal** of elastomer (suitable for potable water)

10 **Circlip** 1.4301

11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer (suitable for potable water)

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket




**Flanges** according to EN 1092-2 (DIN 28605), drilled to DIN 2501 - PN 10 (standard)



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E-mail: hawle@hawle.at

# Elypso Valve Flanged Ends DN 20-40

**The Hawle Elypso valve is constructed plainly and made up of a limited number of components.**

**Sealing system:** The contact between wedge and body is **friction free.** Therefore no scuffing or abrasion of the wedge.

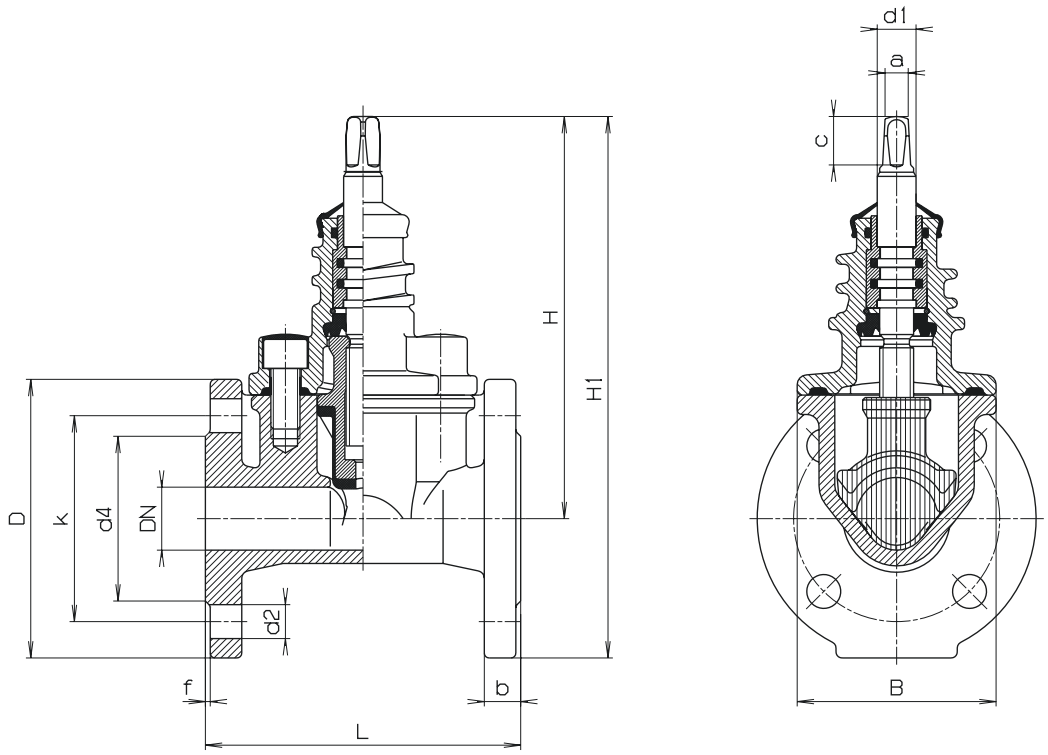
**Standard version:**
Drilled to PN 10 - DIN 2501;
Without handwheel and extension spindle

**Special versions on request**

**Suitable handwheel:** No. 7800

**Suitable extension spindles:**
rigid No. 9101, telescopic No. 9601

**Suitable surface boxes:**
rigid No. 1550 or 1650,
telescopic No.1850




| DN | PN | Flange | | | | | Bolts | | | Spindle | | | Valve | | | | | Weight kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D | b | k | d 4 | f | Qty. | Thread | d 2 | a | c | d1 | H | H1 | L short | L long | B | short | long |
| **20** | 10 | 115 | 16 | 75 | 58 | 2 | 4 | M 12 | 14 | 10,3 | 20 | 16 | 164 | 223 | 130 | | 80 | 4,5 | |
| | 16 | | | | | | | | | | | | | | | | | | |
| **25** | 10 | 115 | 16 | 85 | 68 | 2 | 4 | M 12 | 14 | 10,3 | 20 | 16 | 164 | 223 | 130 | | 80 | 4,5 | |
| | 16 | | | | | | | | | | | | | | | | | | |
| **32** | 10 | 150 | 18 | 100 | 78 | 2 | 4 | M 16 | 18 | 10,3 | 20 | 16 | 200 | 275 | 140 | 240 | 103 | 7,0 | 8,5 |
| | 16 | | | | | | | | | | | | | | | | | | |
| **40** | 10 | 150 | 18 | 110 | 88 | 2 | 4 | M 16 | 18 | 10,3 | 20 | 16 | 200 | 275 | 140 | 240 | 103 | 7,0 | 8,5 |
| | 16 | | | | | | | | | | | | | | | | | | |

# E2 Valve Flanged Ends DN 50-200

| Order no. | Face-to-face dimension | Applications | PN | Dimensions/DN | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| **4000E2** | short (DIN 3202 F 4) EN 558-1 GR 14 | Water non aggressive effluent; other applications on request! | 16 | ● | ● | ● | ● | ● | ● | ● |
| **4700E2** | long (DIN 3202 F 5) EN 558-1 GR 15 | | | ● | ● | ● | ● | ● | ● | ● |
| **4060E2** | to BS 5163 | | | ● | | ● | ● | | ● | ● |

## Resilient seated gate valve with smooth straight-through bore

### Material and design features:

1/2 **Body (1) and Bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable fo r potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (according to ISO 7259)

9 **Back seal** of elastomer, suitable for potable water

10 **Circlip** of POM

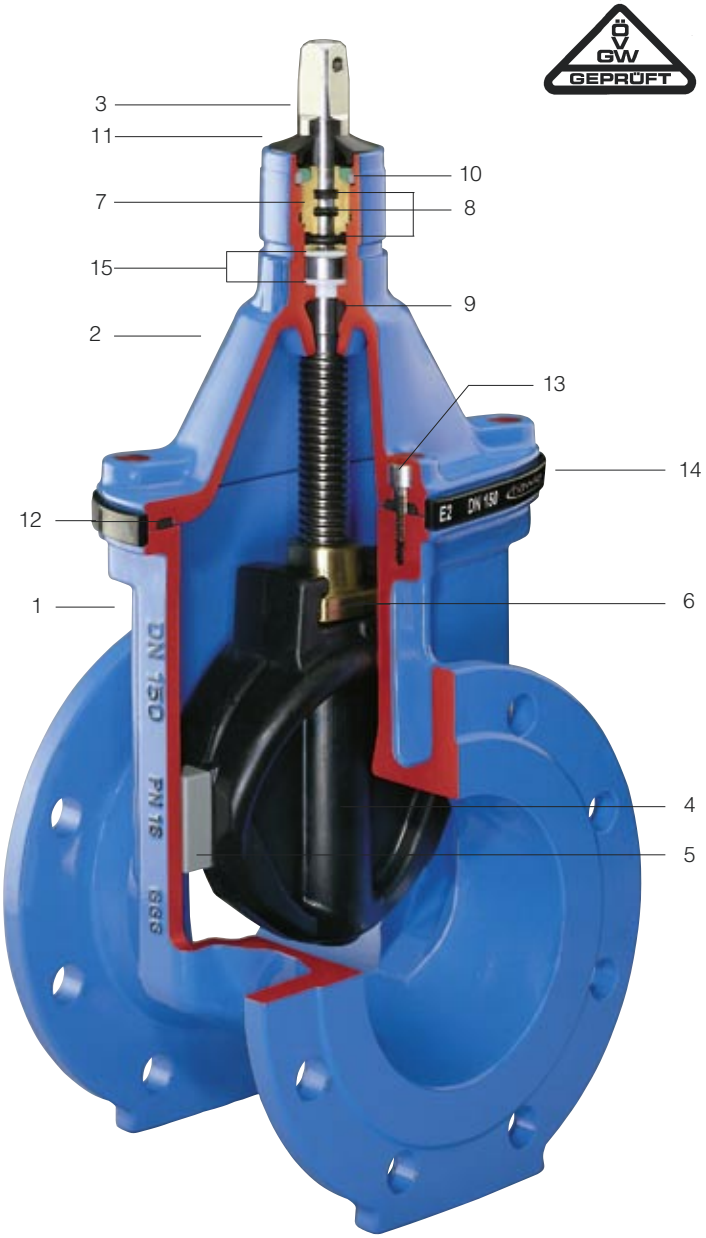
11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding




**Flanges** according to EN 1092-2, drilled to DIN 2501-PN10 (standard);
For DIN 2501-PN 16 in sizes of DN 200 mm please specify on order - other standards on request !



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# E2 Valve Flanged Ends DN 50-200

**Standard version:** without handwheel and extension spindle

**Design versions:** for electric actuator: No. 4000EL*E2*;
with position indicator: No. 4000ST*E2*

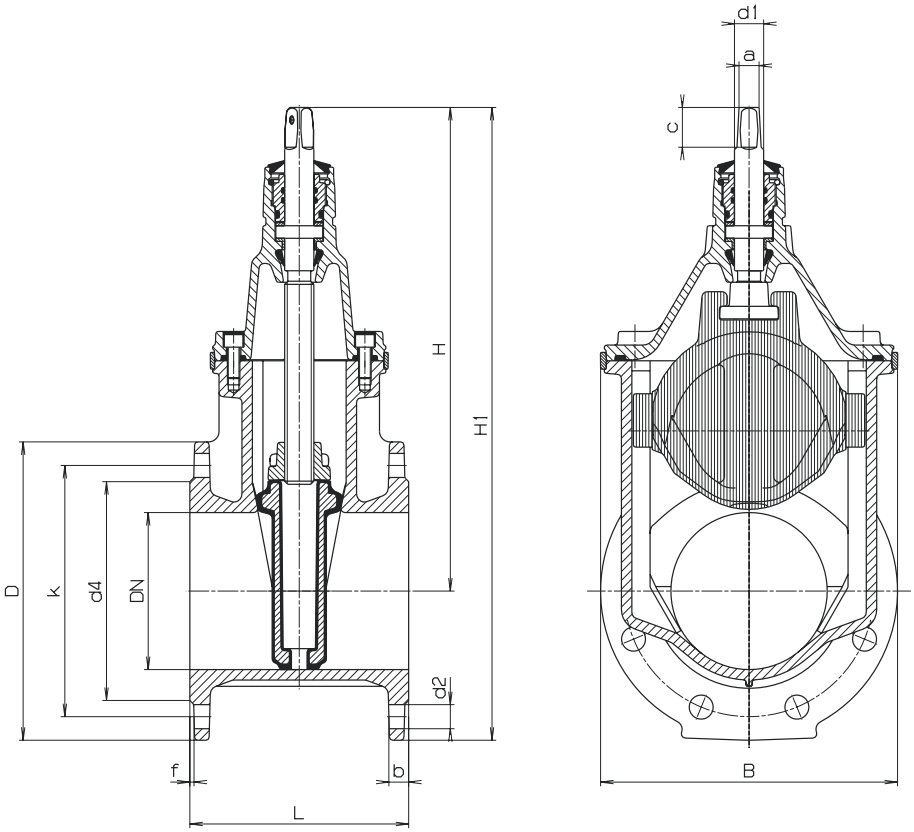
**Special versions:** **on request!**

**Suitable accessories:**

**Handwheel:** No. 7800

**Extension Spindles:**
rigid No. 9000*E2*
telescopic No. 9500*E2*

**Surface Boxes:**
rigid No. 1750
telescopic No. 2050




**Design features:**

- easiest retrofitting of position indicator and automatic actuator on the standard bonnet possible
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread engthin the wedge nut guarantees highest possible breaking torques
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings under pressure (according ISO 7259)
- cleaning with pig possible

| DN | PN | Flange | | | | | Bolts | | | Spindle | | | Valve | | | | | | Weight kg | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D | b | k | d 4 | f | Qty. | Thread | d 2 | a | c | d1 | H | H1 | L short | L long | L BS 5163 | B | short | long | BS 5163 |
| **50** | 10<br>16 | 165 | 19 | 125 | 98 | 3 | 4 | M 16 | 19 | 14,8 | 30 | 22 | 260 | 342 | 150 | 250 | 178 | 143 | 11,0 | 12,0 | 11,5 |
| **65** | 10<br>16 | 185 | 19 | 145 | 118 | 3 | 4 | M 16 | 19 | 17,3 | 35 | 25 | 328 | 420 | 170 | 270 | | 180 | 17,0 | 18,5 | |
| **80** | 10<br>16 | 200 | 19 | 160 | 133 | 3 | 8 | M 16 | 19 | 17,3 | 35 | 25 | 336 | 436 | 180 | 280 | 203 | 180 | 18,5 | 20,5 | 19,0 |
| **100** | 10<br>16 | 220 | 19 | 180 | 153 | 3 | 8 | M 16 | 19 | 19,3 | 38 | 25 | 373 | 483 | 190 | 300 | 229 | 213 | 24,5 | 27,5 | 26,0 |
| **125** | 10<br>16 | 250 | 19 | 210 | 183 | 3 | 8 | M 16 | 19 | 19,3 | 38 | 28 | 450 | 575 | 200 | 325 | | 285 | 35,0 | 38,0 | |
| **150** | 10<br>16 | 285 | 19 | 240 | 209 | 3 | 8 | M 20 | 23 | 19,3 | 38 | 28 | 462 | 605 | 210 | 350 | 267 | 285 | 40,5 | 46,0 | 45,0 |
| **200** | 10<br>16 | 340 | 20 | 295 | 264 | 3 | 8<br>12 | M 20 | 23 | 24,3 | 48 | 32 | 563 | 733 | 230 | 400 | 292 | 357 | 64,0 | 72,0 | 67,5 |

# E2 Elypso Valve Flanged Ends DN 250-600

| Order no. | Face-to-face dimension | Application | PN | Dimensions/DN | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 250 | 300 | 350 | 400 | 450* | 500* | 500 | 600 |
| **4000E2** | **short (DIN 3202 F 4) EN 558-1 GR 14** | **Water non aggressive effluent** other applications on request! | 16 | ● | ● | ● | ● | | | ● | ● |
| **4700E2** | **long (DIN 3202 F 5) EN 558-1 GR 15** | | | ● | ● | | ● | ● | ● | ● | ● |
| **4060E2** | **to BS 5163** | | | ● | ● | | | | | | |

* Body: DN 400 - flange connection: DN 450 or 500

## Resilient seated gate valve with smooth straight-through bore

### Material and design features:

1/2/16 **Body (1), Bonnet (2) and Center housing (16)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

4 **Wedge** of ductile cast iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the **wedge nut** guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8/18 **O rings (8), sealing rings (18)** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable without pressure

9 **Back seal** of elastomer, suitable for potable water

11 **Wiper ring** of elastomer, suitable for potable water

12 **Bonnet gasket** of elastomer, suitable for potable water

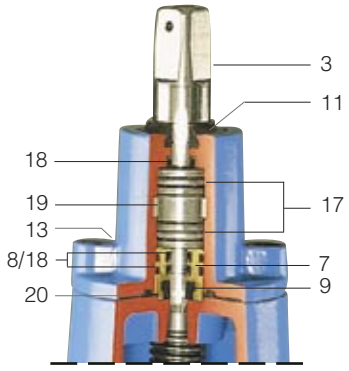
13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

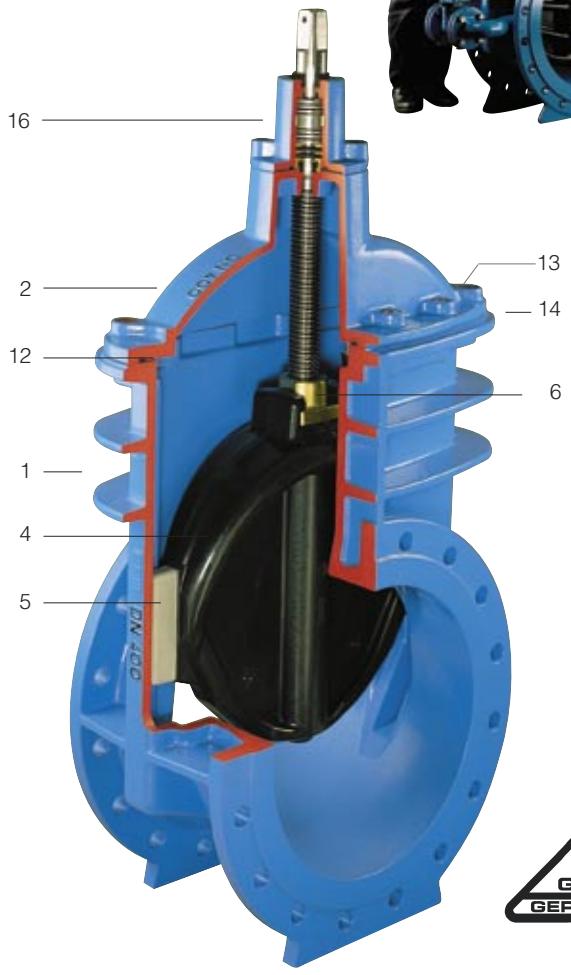
14 **Edge protecting ring** of PE avoids damages during transport and storage

17 **Ball bearing**

19 **Center ring** of POM

20 **Center housing gasket** of elastomer, suitable for potable water




ÖVGW GEPRÜFT

**Flanges** according to EN 1092-2, drilled to DIN 2501-PN10 (standard); For DIN 2501-PN 16 please specify on order - other standards of request !



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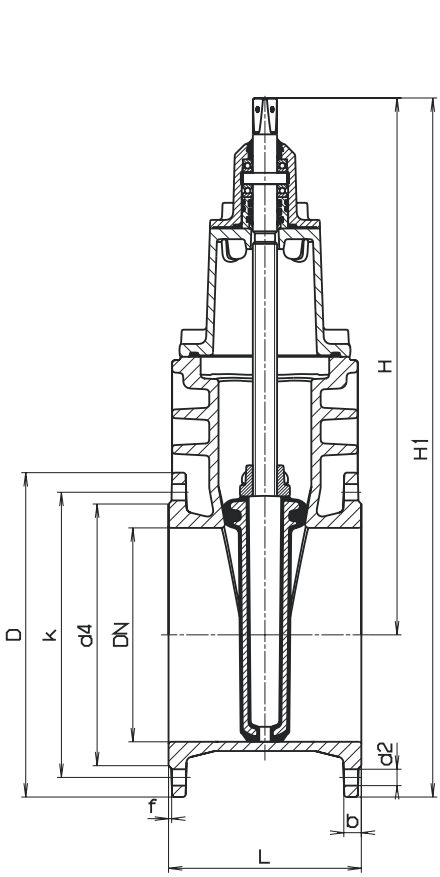
# E2 Elypso Valve Flanged Ends DN 250-600

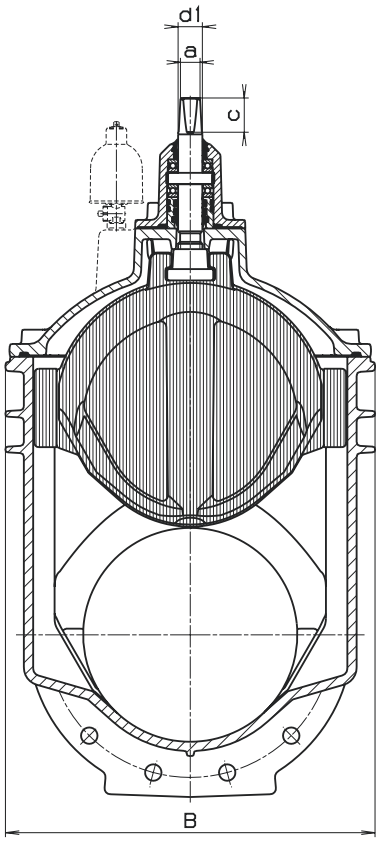
**Standard version:** without handwheel and extension spindle

**Design versions:** for electric actuator: No. 4000EL*E2*;
with position indicator: No. 4000ST*E2*

**Special versions:** **on request!**
- for DN 500/DN 600
- angular gear drive
- type with bypass available!
- air release valve; for small air volume in the bonnet ! (not for the main pipeline !)

**Suitable accessories:**
**Handwheel:** No. 7800
**Extension Spindles:** rigid No. 9000
telescopic No. 9500
**Surface Boxes:** rigid No. 1750, telescopic No. 2050




**Design features:**

- can be easily actuated without by-pass and without power assist - even at a differential of 16 bar
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in wedge nut guarantees highest possible breaking torques
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings without pressure
- spindles borne in ball bearings permit minimum closing forces
- for attaching in actuator or a position indicator: take off centering flange and put on position indicator or actuator with louver
- 100% suitable for underground installation
- cleaning with pig possible

| DN | PN | Flange | | | | | Bolts | | | Spindle | | | Valve | | | | | | Weight kg | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D | b | k | d 4 | f | Qty. | Thread | d 2 | a | c | d1 | H | H1 | L short | L long | L BS 5163 | B | short | long | BS 5163 |
| **250** | 10 | 400 | 22 | 350 | 319 | 3 | 12 | M 20 | 23 | 27,3 | 48 | 34 | 670 | 870 | 250 | 450 | 330 | 432 | 100,0 | 121,0 | 104,0 |
| | 16 | | | 355 | | | | M 24 | 28 | | | | | | | | | | | | |
| **300** | 10 | 455 | 24,5 | 400 | 367 | 4 | 12 | M 20 | 23 | 27,3 | 48 | 34 | 753 | 981 | 270 | 500 | 356 | 518 | 147,0 | 170,0 | 153,5 |
| | 16 | | | 410 | | | | M 24 | 28 | | | | | | | | | | | | |
| **350** | 10 | 520 | 26,5 | 460 | 427 | 4 | 16 | M 20 | 23 | 27,3 | 48 | 34 | 838 | 1098 | 290 | | | 604 | 205,0 | | |
| | 16 | | | 470 | | | | M 24 | 28 | | | | | | | | | | | | |
| **400** | 10 | 580 | 28 | 515 | 477 | 4 | 16 | M 24 | 28 | 32,3 | 55 | 44 | 974 | 1264 | 310 | 600 | | 687 | 261,0 | 300,0 | |
| | 16 | | | 525 | | | | M 27 | 31 | | | | | | | | | | | | |
| **450*** | 10 | 640 | 30 | 565 | 530 | 4 | 20 | M 24 | 28 | 32,3 | 55 | 44 | 974 | 1310 | | 650 | | 687 | | 332,0 | |
| | 16 | | | 585 | | | | M 27 | 31 | | | | | | | | | | | | |
| **500*** | 10 | 715 | 31,5 | 620 | 582 | 4 | 20 | M 24 | 28 | 32,3 | 55 | 44 | 974 | 1345 | | 700 | | 687 | | 371,0 | |
| | 16 | | | 650 | | | | M 30 | 34 | | | | | | | | | | | | |
| **500** | 10 | 715 | 31,5 | 620 | 582 | 4 | 20 | M 24 | 28 | 36,3 | 66 | 50 | 1220 | 1578 | 350 | 700 | | 800 | 479,0 | 542,0 | |
| | 16 | | | 650 | | | | M 30 | 34 | | | | | | | | | | | | |
| **600** | 10 | 840 | 36 | 725 | 720 | 5 | 20 | M 27 | 31 | 36,3 | 66 | 50 | 1377 | 1797 | 390 | 800 | | 944 | 710,0 | 810,0 | |
| | 16 | | | 770 | | | | M 33 | 37 | | | | | | | | | | | | |

* Body: DN 400 - flange connection: DN 450 &/or 500

# E2 Valve Flanged Ends „PN 25”

| Order no. | Face-to-face dimension | Application | PN | Dimensions/DN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| **4010E2** | **short** (DIN 3202 F 4) EN 558-1 GR 14 | Water | 25 | ● | ● | ● | ● | ● | ● | ● | | |
| **4710E2** | **long** (DIN 3202 F 5) EN 558-1 GR 15 | | | | | | | | ● | ● | ● | ● |

## Resilient seated gate valve with smooth straight-through bore

### Material and design features:

1/2 **Body (1), Bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized of elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, suitable for potable water, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (according to ISO 7259)

9 **Back seal** of ela stomer, suitable for potable water

10 **Circlip** of POM

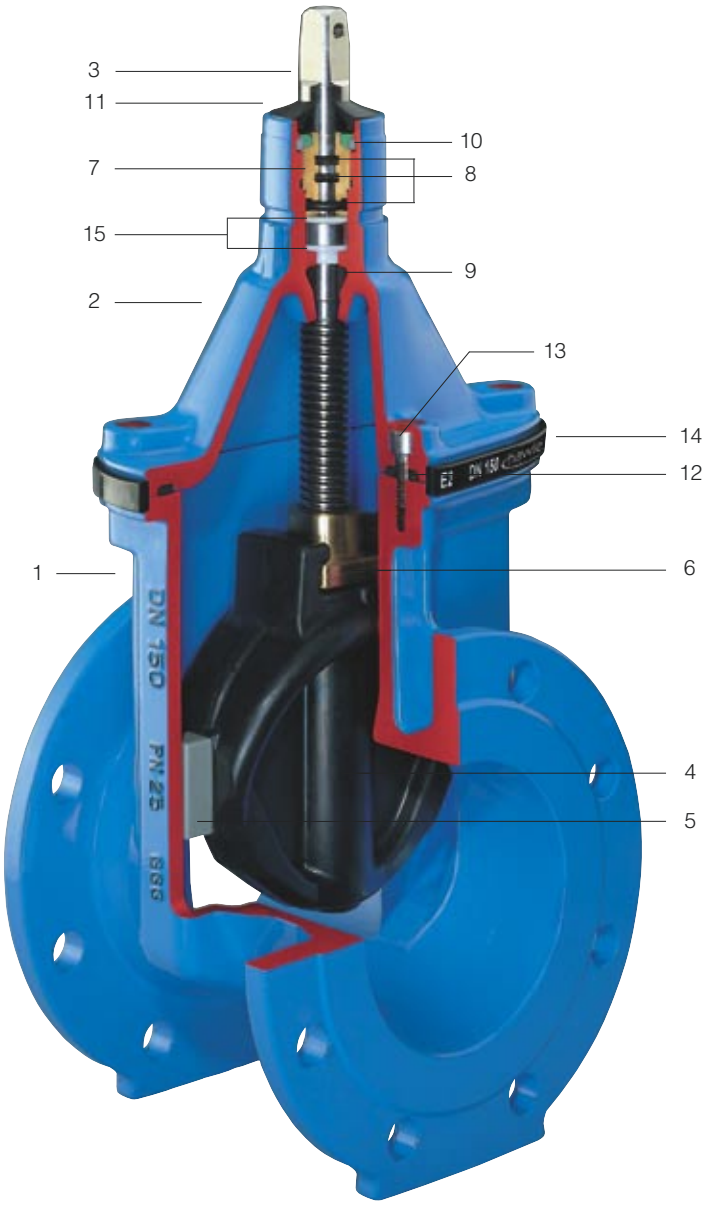
11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding




**Flanges** according to EN 1092-2, drilled to DIN 2501-PN 25 (standard);
For DIN 2501-PN 16 in sizes of DN 200 mm and above please specify on order - other standards on request !



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# E2 Valve Flanged Ends „PN 25”

**Standard version:** without handwheel and extension spindle

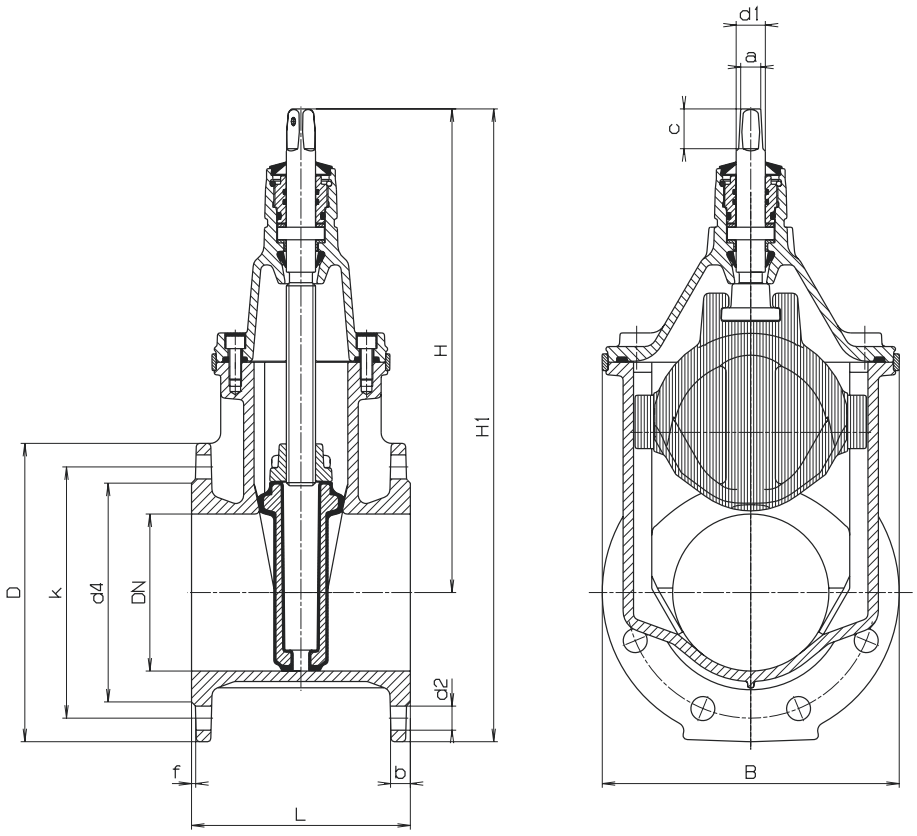
**Design versions:** for electric actuator: Nr. 4000EL*E2*;
with position indicator: No. 4000ST*E2*

**Special versions:** **on request!**

**Suitable accessories:** **Handwheel:** No. 7800

**Extension Spindles:** rigid No.9000*E2*, for DN 250 and above No. 9000
telescopic No. 9500*E2,* for DN 250 No. 9500

**Surface Boxes:** rigid No. 1750, telescopic No. 2050




**Design features:**

- easiest retrofitting of position indicator and automatic actuator on the standard bonnet possible
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 25 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques
- O rings embedded in non-corrosive material
(according to DIN 3547-T1)
- replaceable O rings
  - up to DN 200 under pressure (according ISO 7259)
  - from DN 250 without pressure
- cleaning with pig possible

| DN | PN | Flange | | | | | Bolts | | | Spindle | | | Valve | | | | | Weight kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D | b | k | d 4 | f | Qty. | Thread | d 2 | a | c | d1 | H | H1 | L short | L long | B | short | long |
| **50** | 25 | 165 | 19 | 125 | 98 | 3 | 4 | M 16 | 19 | 14,8 | 30 | 22 | 260 | 342 | 150 | | 143 | 11,0 | |
| **65** | | 185 | 19 | 145 | 118 | 3 | 8 | M 16 | 19 | 17,3 | 35 | 25 | 328 | 420 | 170 | | 180 | 17,0 | |
| **80** | | 200 | 19 | 160 | 133 | 3 | 8 | M 16 | 19 | 17,3 | 35 | 25 | 336 | 436 | 180 | | 180 | 18,5 | |
| **100** | | 235 | 19 | 190 | 153 | 3 | 8 | M 20 | 23 | 19,3 | 38 | 25 | 373 | 480 | 190 | | 213 | 24,5 | |
| **125** | | 270 | 19 | 220 | 183 | 3 | 8 | M 24 | 28 | 19,3 | 38 | 28 | 450 | 585 | 200 | | 285 | 35,0 | |
| **150** | | 300 | 19 | 250 | 209 | 3 | 8 | M 24 | 28 | 19,3 | 38 | 28 | 462 | 602 | 210 | 350 | 285 | 40,5 | 49,0 |
| **200** | | 360 | 20 | 310 | 264 | 3 | 12 | M 24 | 28 | 24,3 | 48 | 32 | 563 | 743 | 230 | 400 | 357 | 64,0 | 81,0 |
| **250** | | 425 | 24,5 | 370 | 330 | 3 | 12 | M 27 | 31 | 27,3 | 48 | 34 | 670 | 883 | | 450 | 432 | | 136,0 |
| **300** | | 485 | 27,5 | 430 | 389 | 4,5 | 16 | M 27 | 31 | 27,3 | 48 | 34 | 753 | 996 | | 500 | 518 | | 196,0 |

# E2 Elypso Reducing Valve

| Order no. | Application | PN | Dimensions/DN The valve is sized in accordance with the smaller flange | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 65 | 100 80 | 150 80 | 125 100 | 150 100 | 200 100 | 200 150 | 250 150 | 300 150 | 250 200 | 300 200 | 300 250 |
| **4150E2** | **for water and non aggressive waste water** other applications on request | 16 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

## Resilient seated gate valve with unequal flange sizes

**of ductile iron**
epoxy powder coated

This **E2 Elypso Reducing Valve** is a valve and a reducing connector in one piece. This feature offers major material and space saving benefits, particularly at junctions and branches where a reduction is needed.

The E2 Elypso Reducing Valves when used in conjunction with the Hawle cross connection fittings enable crossing points to be designed with excellent savings in the number of joints and fittings, and in labour and stock holding costs.

## Material and design features:

1/2 **Body (1) and Bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure up to DN 200 (according to ISO 7259), for DN 250 and higher without pressure

9 **Back seal** of elastomer, suitable for potable water

10 **Circlip** of POM

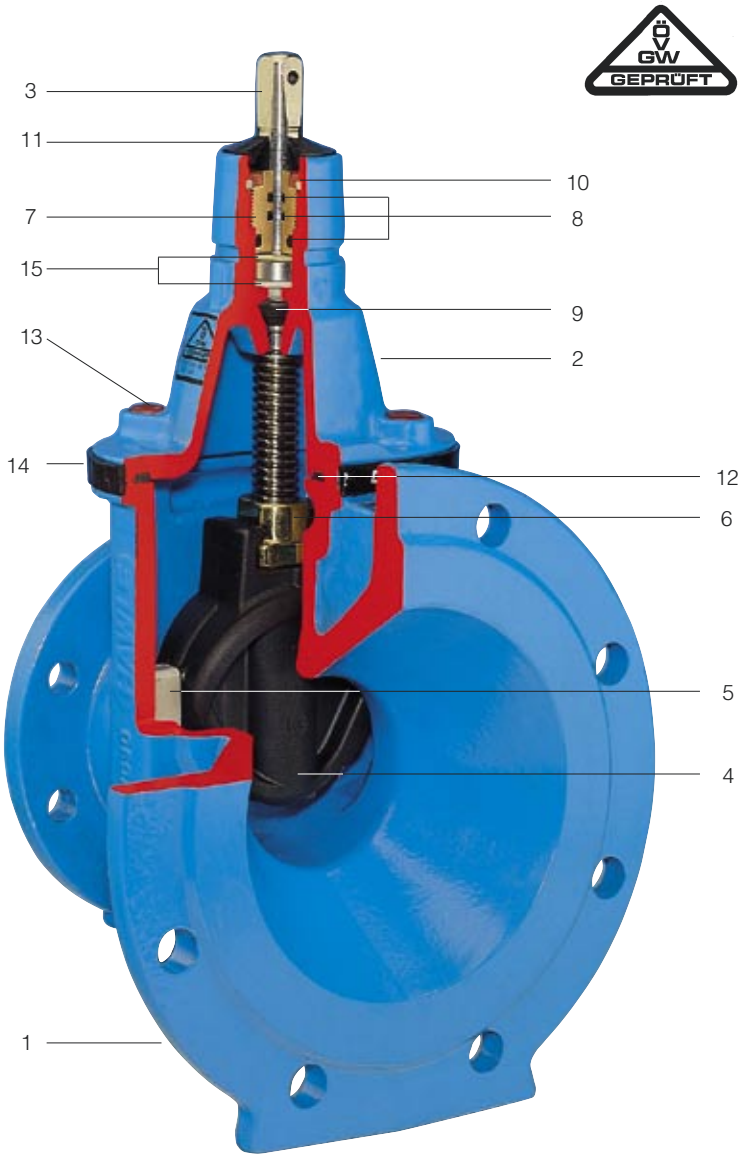
11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding




**Flanges** according to EN 1092-2, drilled to DIN 2501 - PN 10 (standard);
For DIN 2501 - PN 16 in sizes of DN 200 mm and above please specify on order - other standards of request !



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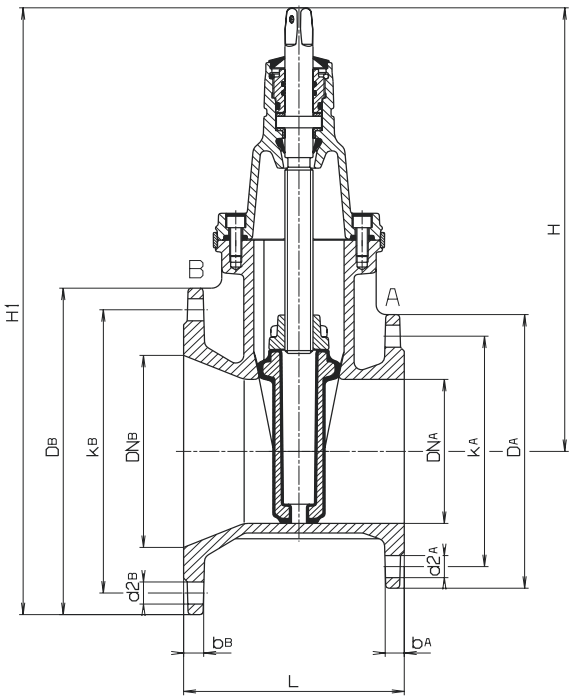
# E2 Elypso Reducing Valve

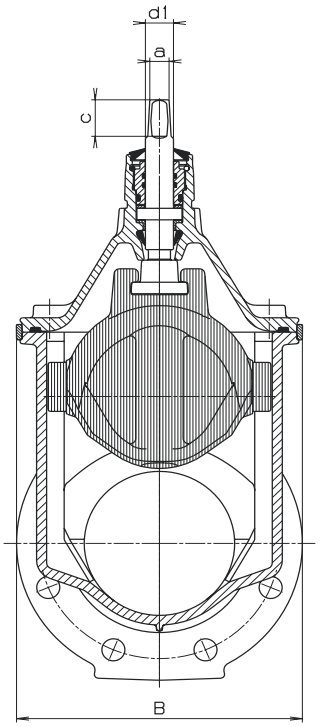
**Standard version:** without handwheel and extension spindle

**Design versions:** for electric actuator: No. 4150EL*E2*;
with position indicator: No. 4150ST*E2*

**Special versions:** **on request !**

**Suitable accessories:**
**Handwheel:** No. 7800
**Extension Spindles:** rigid No. 9000*E2,* for DN 250 and higher No. 9000
telescopic No. 9500*E2,* for DN 250 and higher No. 9500
**Surface Boxes:** rigid No. 1750, telescopic No.2050




**Design features:**

- easy retrofitting of position indicator and automatic actuator on the standard bonnet
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings
  - up to DN 200 under pressure (according ISO 7259)
  - from DN 250 without pressure

**The valve is sized in accordance with the smaller flange** **$n_B$*, $n_A$* = bolts per flange**

| DN | PN | Flange A | | | | | Flange B | | | | | Valve | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $D_A$ | $b_A$ | $k_A$ | $d2_A$ | $n_A$* | $D_B$ | $b_B$ | $k_B$ | $d2_B$ | $n_B$* | H | H 1 | L | B | a | c | d 1 | |
| **100 - 65** | 10<br>16 | 185 | 19 | 145 | 19 | 4 | 220 | 19,0 | 180 | 19 | 8 | 328 | 438 | 180 | 180 | 17,3 | 35 | 25 | 19,0 |
| **100 - 80** | 10<br>16 | 200 | 19 | 160 | 19 | 8 | 220 | 19,0 | 180 | 19 | 8 | 336 | 446 | 190 | 180 | 17,3 | 35 | 25 | 20,0 |
| **150 - 80** | 10<br>16 | 200 | 19 | 160 | 19 | 8 | 285 | 19,0 | 240 | 23 | 8 | 336 | 479 | 200 | 180 | 17,3 | 35 | 25 | 24,0 |
| **125 - 100** | 10<br>16 | 220 | 19 | 180 | 19 | 8 | 250 | 19,0 | 210 | 19 | 8 | 373 | 498 | 200 | 213 | 19,3 | 38 | 25 | 25,5 |
| **150 - 100** | 10<br>16 | 220 | 19 | 180 | 19 | 8 | 285 | 19,0 | 240 | 23 | 8 | 373 | 516 | 210 | 213 | 19,3 | 38 | 25 | 28,0 |
| **200 - 100** | 10<br>16 | 220 | 19 | 180 | 19 | 8 | 340 | 20,0 | 295 | 23 | 8<br>12 | 373 | 543 | 210 | 213 | 19,3 | 38 | 25 | 32,0 |
| **200 - 150** | 10<br>16 | 285 | 19 | 240 | 23 | 8 | 340 | 20,0 | 295 | 23 | 8<br>12 | 462 | 632 | 220 | 285 | 19,3 | 38 | 28 | 46,5 |
| **250 - 150** | 10<br>16 | 285 | 19 | 240 | 23 | 8 | 400 | 22,0 | 350<br>355 | 23<br>28 | 12 | 462 | 662 | 230 | 285 | 19,3 | 38 | 28 | 52,5 |
| **300 - 150** | 10<br>16 | 285 | 19 | 240 | 23 | 8 | 455 | 24,5 | 400<br>410 | 23<br>28 | 12 | 462 | 690 | 240 | 285 | 19,3 | 38 | 28 | 57,0 |
| **250 - 200** | 10<br>16 | 340 | 20 | 295 | 23 | 8<br>12 | 400 | 22,0 | 350<br>355 | 23<br>28 | 12 | 563 | 763 | 240 | 357 | 24,3 | 48 | 32 | 68,0 |
| **300 - 200** | 10<br>16 | 340 | 20 | 295 | 23 | 8<br>12 | 455 | 24,5 | 400<br>410 | 23<br>28 | 12 | 563 | 791 | 250 | 357 | 24,3 | 48 | 32 | 74,0 |
| **300 - 250** | 10<br>16 | 400 | 22 | 350<br>355 | 23<br>28 | 12 | 455 | 24,5 | 400<br>410 | 23<br>28 | 12 | 670 | 898 | 260 | 432 | 27,3 | 48 | 34 | 105,0 |

| Order no. | Version | Application | PN | Dimensions/DN | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 400 |
| **4100E2** | standard length | **Water, non aggressive effluent** other applications on request ! | 16 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| **4140E2** | Length 600 mm | | | | | ● | ● | | ● | ● | | | |

## Resilient seated gate valve with smooth straight-through bore

**of ductile iron**
epoxy powder coated

The **Hawle E2 Valve** with smooth spigot ends is a universal design suitable for both flange and socket connections.

Makes easy the replacement of old valves with flanged ends; if Hawle flanges are used on the valve spigot ends, then flat gaskets are not necessary.

Face-to-face dimension of the valve can be adjusted by shortening the spigots.

The outside diameters of the spigots are the same as those of cast iron pipes; (other sizes on request).

### Material and design features:

1/2 **Body (1) and Bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (according to ISO 7259) up to DN 200, for DN 250 and higher without pressure

9 **Back seal** of elastomer, suitable for potable water

10 **Circlip** of POM

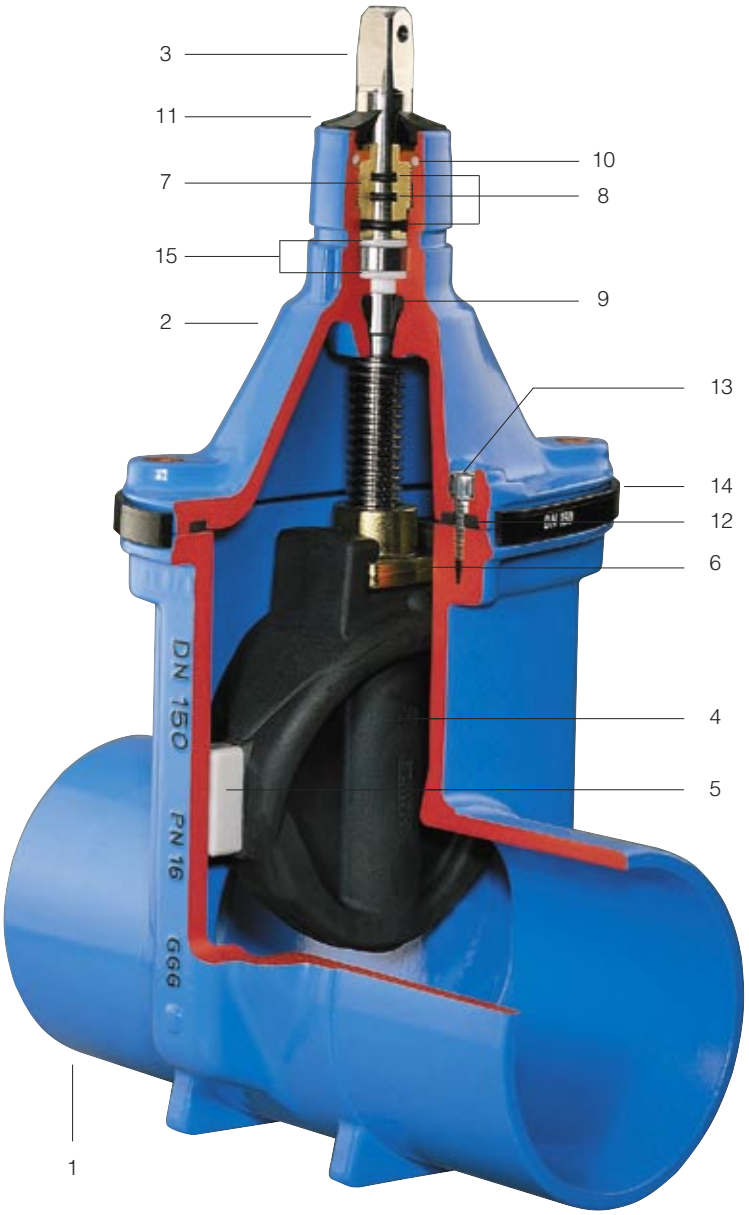
11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding



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# E2 Valve Spigot Ends

**Standard version:** without handwheel and extension spindle

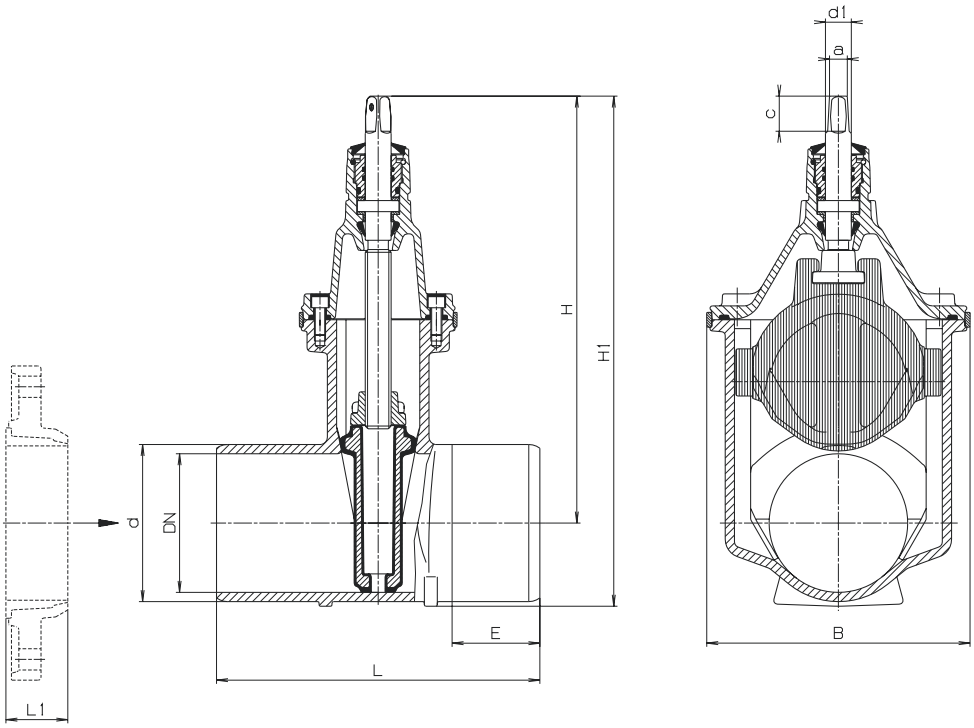
**Special versions:** **for example:** **restraint type on request !**

**Suitable accessories:**

**Handwheel:** No. 7800

**Extension Spindles:** rigid No. 9000***E2***, for DN 250 and higher No. 9000
telescopic No. 9500***E2***, for DN 250 and higher No. 9500

**Surface Boxes:** rigid No. 1750, telescopic No. 2050




**Design features:**

- easiest retrofitting of position indicator and automatic actuator on the standard bonnet possible
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques
- O rings embedded in non-corrosive material
  (according to DIN 3547-T1)
- replaceable O rings
  - up to DN 200 under pressure (according ISO 7259)
  - from DN 250 without pressure
- cleaning with pig possible

**For a shorter face-to-face dimension, shorten the spigot ends and assemble with HAWLE flanges** (see "Flanges" in the catalogue index)**.**

**Note:** ensure that spigot length "E" is not less than flange body depth "L 1".

| DN | Valve | | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|
| | d* | L | E | H | H1 | B | a | c | d 1 | |
| **50** | 66 | 250 | 80 | 260 | 296 | 143 | 14,8 | 30 | 22 | 7,8 |
| **65** | 82 | 270 | 85 | 328 | 373 | 180 | 17,3 | 35 | 25 | 13,0 |
| **80** | 98 | 280 | 85 | 336 | 390 | 180 | 17,3 | 35 | 25 | 14,5 |
| | | 600 | 245 | | | | | | | 19,5 |
| **100** | 118 | 300 | 90 | 373 | 438 | 213 | 19,3 | 38 | 25 | 20,0 |
| | | 600 | 240 | | | | | | | 26,0 |
| **125** | 144 | 325 | 95 | 450 | 527 | 285 | 19,3 | 38 | 28 | 30,0 |
| **150** | 170 | 350 | 95 | 462 | 552 | 285 | 19,3 | 38 | 28 | 34,5 |
| | | 600 | 220 | | | | | | | 41,5 |
| **200** | 222 | 400 | 115 | 563 | 679 | 357 | 24,3 | 48 | 32 | 55,5 |
| | | 600 | 215 | | | | | | | 65,0 |
| **250** | 274 | 450 | 120 | 670 | 813 | 432 | 27,3 | 48 | 34 | 93,0 |
| **300** | 326 | 500 | 120 | 753 | 919 | 518 | 27,3 | 48 | 34 | 137,0 |
| **400** | 429 | 600 | 133 | 974 | 1198 | 687 | 32,3 | 55 | 44 | 254,0 |

* other outside diameters on request

# E2 Elypso Valve Socket Ends

## for ductile cast iron pipes to ÖNORM M 6072 – DIN 28603

| Order no. | Application | PN | Dimensions/DN | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| **4500*E2*** | **for water and non aggressive effluent** other applications on request | 16 | ● | ● | ● | ● | ● | ● | ● |

## Hawle Stop / Pipe-Lock-Ring* for restraint

| Order no. | Dimensions/DN | | | | | | |
|---|---|---|---|---|---|---|---|
| | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| **NL 80** | ● | ● | ● | ● | ● | | |
| **1200** | | | | | | ●* | ●* |

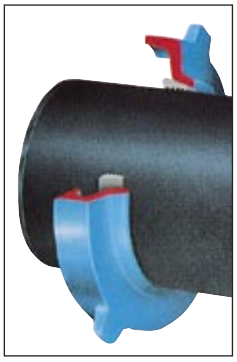
of ductile iron, epoxy powder coated
locking ring of ductile iron

This is assembled onto the socket by the bayonet closure principle, which involves hammering the lug to tighten the grip ring.

For installation with deflection of up to 3°:

- put the Hawle Stop/Pipe-Lock-Ring loosely on the bayonet closure
- deflect the pipe as required
- hammer the Hawle Stop/Pipe-Lock-Ring tight

Without the Pipe-Lock-Ring restraint assembly, an angle of up to 5° is possible within the socket.



## Resilient seated gate valve with sockets for cast iron pipes

### of ductile iron

epoxy powder coated

1/2 **Body (1) and Bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in **the wedge nut** guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (according to ISO 7259) up to DN 200, for DN 250 and higher without pressure

9 **Back seal** of elastomer, suitable for potable water

10 **Circlip** aus POM

11 **Wiper ring** of elastomer

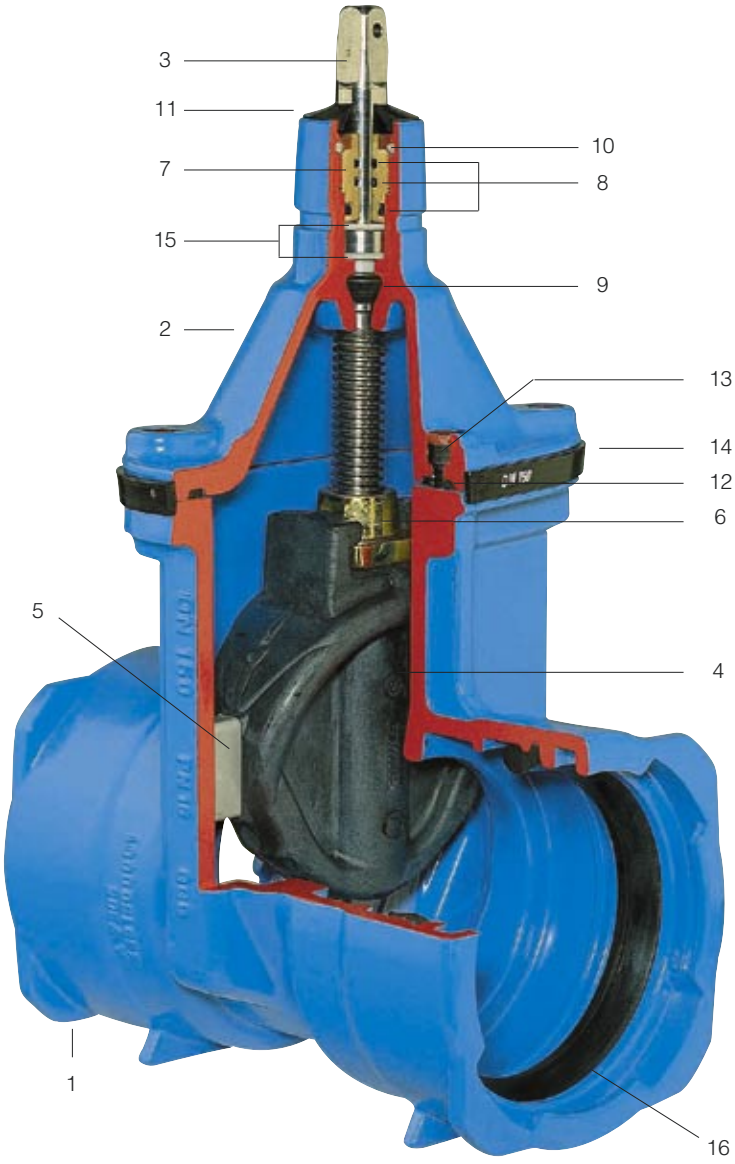
12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding

16 **Socket seal** of elastomer, suitable for potable water



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# E2 Elypso Valve Socket Ends for ductile cast iron pipes

**Standard version:** without handwheel and extension spindle

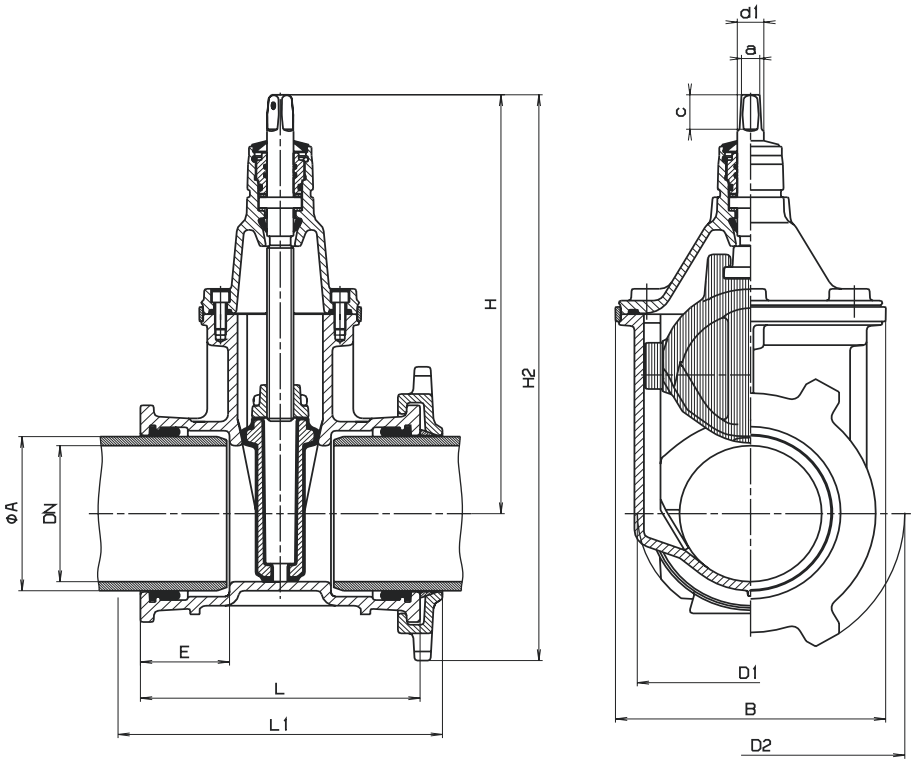
**Design versions:** for electric actuator: No. 4500EL***E2***
with position indicator: No. 4500ST***E2***

**Special versions:** on request!

**Suitable accessories:** **Handwheel:** No. 7800

**Extension Spindles:**
rigid No. 9000***E2***, for DN 250 and higher No. 9000
telescopic No. 9500***E2***, for DN 250 and higher No. 9500

**Surface Boxes:**
rigid No. 1750, telescopic No. 2050







**Design features:**

- easy retrofitting of position indicator and automatic actuator on the standard bonnet
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible strength
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings
  - up to DN 200 under pressure (according ISO 7259)
  - from DN 250 without pressure
- cleaning with pig possible

| DN | Pipe-Ø A | Valve | | | | | | | | Spindle | | | Hawle Stop Pipe-Lock-Ring* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D1 | E | H | H 2 | L | L1 | B | Weight | a | c | d 1 | Weight/kg |
| **80** | 98 | 165 | 110 | 336 | 456 | 300 | 357 | 180 | 14,5 | 17,3 | 35 | 25 | 3,7 |
| **100** | 118 | 187 | 105 | 373 | 505 | 300 | 355 | 213 | 20,0 | 19,3 | 38 | 25 | 4,7 |
| **125** | 144 | 213 | 115 | 450 | 595 | 345 | 400 | 285 | 26,0 | 19,3 | 38 | 28 | 5,0 |
| **150** | 170 | 239 | 115 | 462 | 624 | 340 | 400 | 285 | 34,5 | 19,3 | 38 | 28 | 5,5 |
| **200** | 222 | 302 | 125 | 563 | 757 | 365 | 440 | 357 | 56,0 | 24,3 | 48 | 32 | 9,6 |
| **250** | 274 | 360 | 105 | 670 | 895 | 335 | 402 | 432 | 104,0 | 27,3 | 48 | 36 | 11,2* |
| **300** | 326 | 421 | 110 | 753 | 1008 | 355 | 420 | 518 | 155,0 | 27,3 | 48 | 36 | 14,0* |

# E2 VRS-Socket Valve

## for ductile cast iron pipes and pipes with VRS-Socket

| Order no. | Version | Application | PN | Dimensions/DN | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 80 | 100 | 150 | 200 | 250 | 300 |
| **4027*E2*** | **Socket - Spigot** | **for water and non aggressive waste water**<br>other applications on request | 16 | ● | ● | ● | ● | ● | ● |

**of ductile iron**
epoxy powder coated

### Material and design features:

1/2 **Body (1) and Bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (according to ISO 7259) up to DN 200, for DN 250 and higher without pressure

9 **Back seal** of elastomer, suitable for potable water

10 **Circlip** of POM

11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

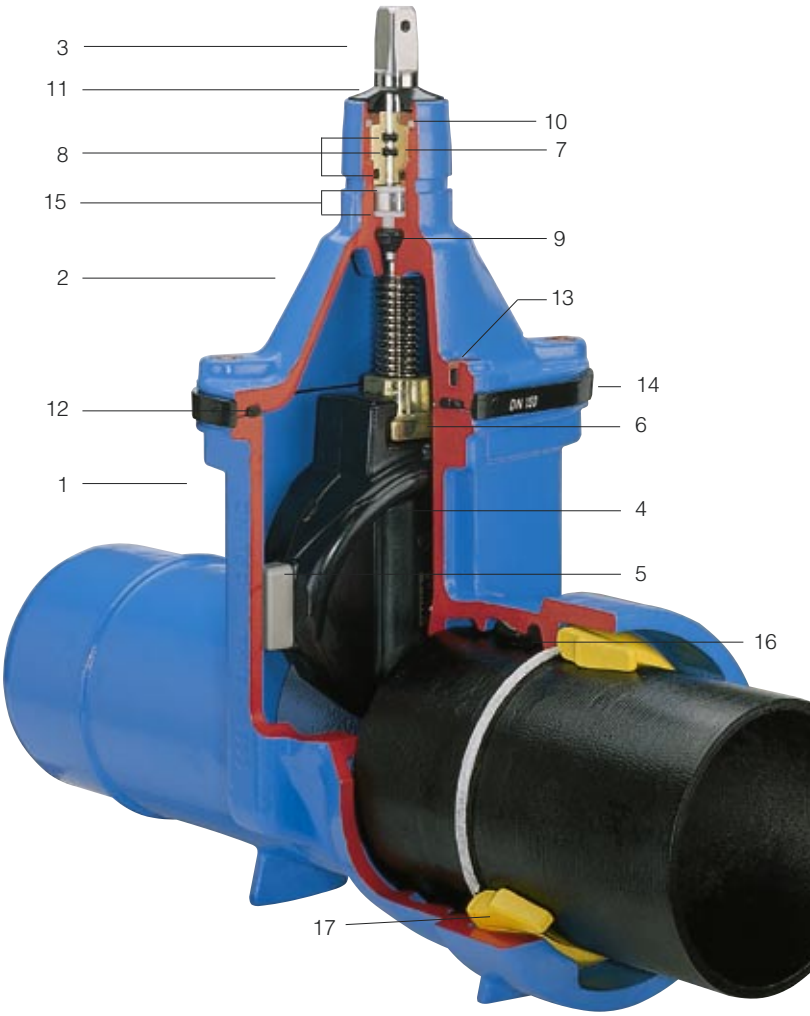
13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding

16 **Socket seal** of elastomer, suitable for potable water

17 **Standard version** without pipe restraint clamp




### The no-flange pipeline!



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# E2 VRS-Socket Valve

**Standard version:** without handwheel and extension spindle

**Design versions:** for electric actuator: No. 4027ELE2;
with position indicator: No. 4027STE2

**Special versions:** **on request!**

**Suitable accessories:**

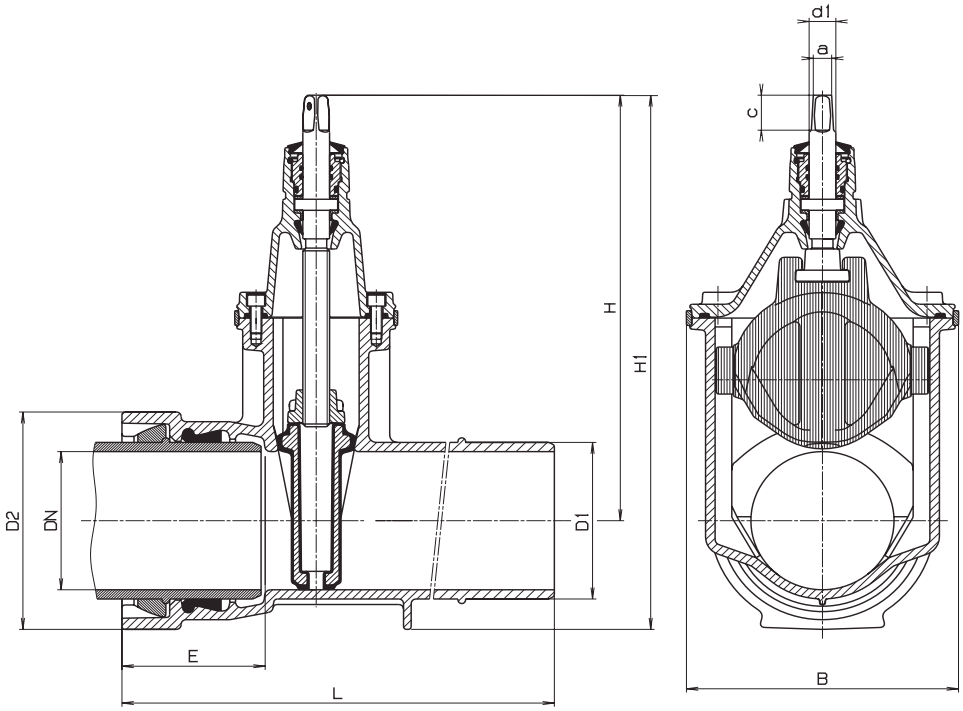
**Handwheel:** No. 7800

**Extension Spindles:** rigid No. 9000E2, from DN 250 No. 9000
telescopic No. 9500E2, from DN 250 No. 9500

**Surface Boxes:** rigid No. 1750, telescopic No. 2050

**Design features:**

- easiest retrofitting of position indicator and automatic actuator on the standard bonnet possible
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques
- O rings embedded in non-corrosive material
(according to DIN 3547-T1)
- replaceable O rings
  - up to DN 200 under pressure (according ISO 7259)
  - from DN 250 without pressure
- cleaning with pig possible




| DN | Pipe Ø mm | Valve | | | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D1 | D 2 | E | H | H 1 | L | B | a | c | d 1 | |
| **80** | 98 | 98 | 156 | 127 | 336 | 414 | 422 | 180 | 17,3 | 35 | 25 | 20,5 |
| **100** | 118 | 118 | 178 | 135 | 373 | 462 | 440 | 213 | 19,3 | 38 | 25 | 26,5 |
| **150** | 170 | 170 | 235 | 150 | 462 | 580 | 513 | 285 | 19,3 | 38 | 28 | 46,5 |
| **200** | 222 | 222 | 295 | 160 | 563 | 711 | 535 | 357 | 24,3 | 48 | 32 | 74,0 |
| **250** | 274 | 274 | 356 | 165 | 670 | 848 | 577 | 432 | 27,3 | 48 | 36 | 112,0 |
| **300** | 326 | 326 | 414 | 170 | 753 | 960 | 638 | 518 | 27,3 | 48 | 36 | 168,0 |

# E2 Elypso Valve for PE fusion

| Order no. | PE-fusion tails | PN | Application | Dimensions/DN Pipe-Ø mm | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 25 32 | 32 40 | 40 50 | 50 63 | 65 75 | 80 90 | 100 110 | 100 125 | 125 140 | 150 160 | 150 180 | 200 200 | 200 225 |
| 4050 | PE 80 / SDR 11 | 10 | for cold water, non aggressive effluent other application on request | ● | ● | ● | | | | | | | | | | |
| | PE 100 / SDR 11 | 16 | | | | | | | | | | | | | | |
| 4051 | PE 80 / SDR 17.6 | 6 | | ● | ● | ● | | | | | | | | | | |
| | PE 100 / SDR 17.6 | 10 | | | | | | | | | | | | | | |
| 4050E2 | PE 80 / SDR 11 | 10 | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | PE 100 / SDR 11 | 16 | | | | | | | | | | | | | | |
| 4051E2 | PE 80 / SDR 17.6 | 6 | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | PE 100 / SDR 17.6 | 10 | | | | | | | | | | | | | | |

please specify on order PE (standard PE 80)

## Resilient seated gate valve with PE fusion tails for use with PE piping according to ÖNORM B 5172, DIN 8075 of ductile iron, epoxy powder coated

GW GEPRÜFT

### Material and design features:

1/2 **Body (1) and bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread and O ring slide faces

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (DN 50 - 200, according to ISO 7259)

9 **Back seal** of elastomer, suitable for potable water

10 **Circlip** of POM

11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding

16 **O ring** of elastomer, suitable for potable water

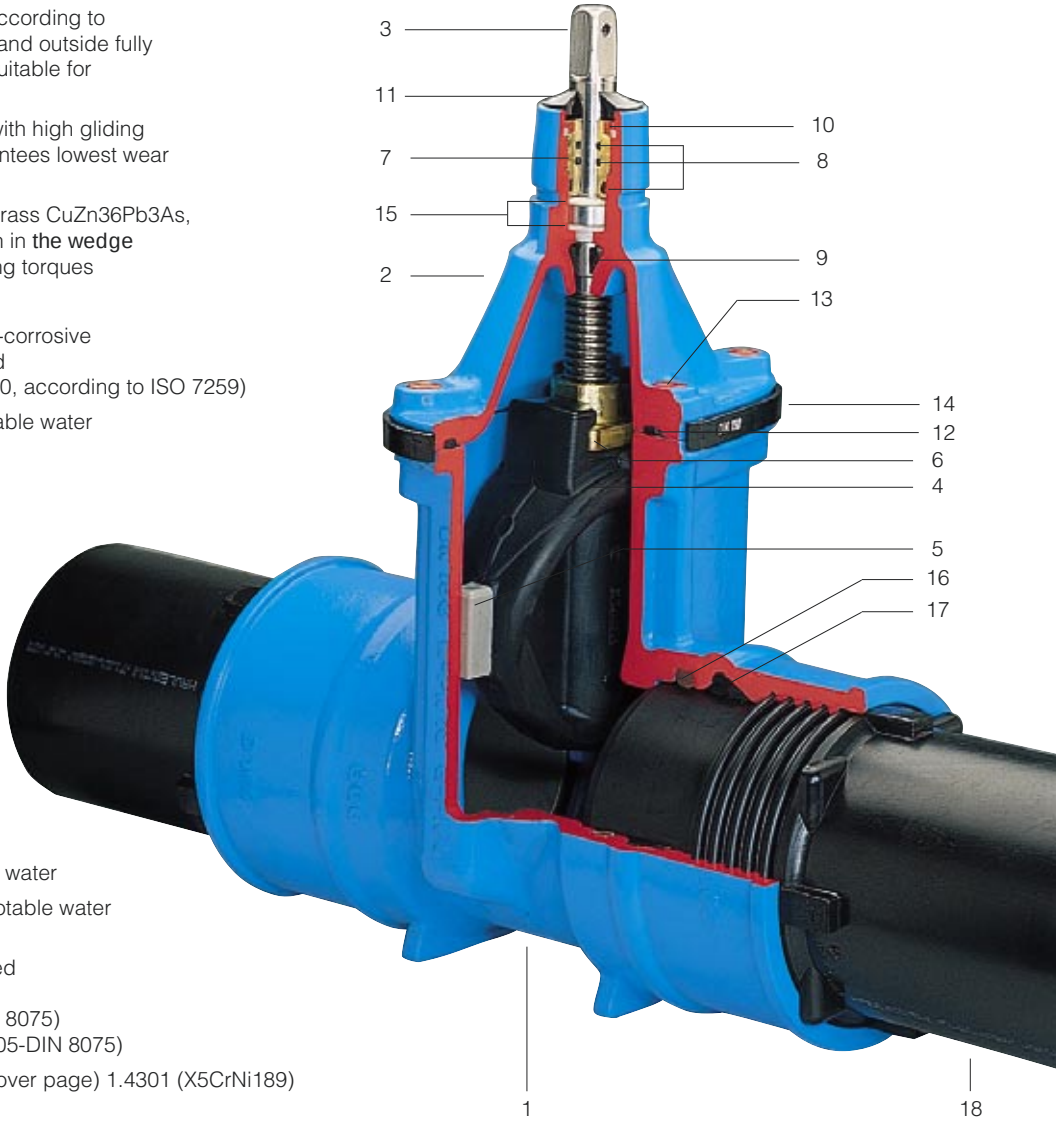
17 **Socket seal** of elastomer, suitable for potable water

18 **PE tails**
standard version PE 80 injection moulded
Melt flow rate: MFR 190/5 kg - 09
MFR-group 010 (DIN 8075)
(PE 100 MFR-group 05-DIN 8075)

**Support liner** for PE tails (see drawing over page) 1.4301 (X5CrNi189)

**This resilient seated valve has PE tails screwed into and sealed in the sockets.**

High performance sealing of the PE tails within the sockets is assured by two separate seals and a stainless steel support liner within the tails.
The valve can be connected to the PE pipeline by either butt fusion or electrofusion.



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# *E2* Elypso Valve for PE fusion

**Standard version:** without handwheel and extension spindle

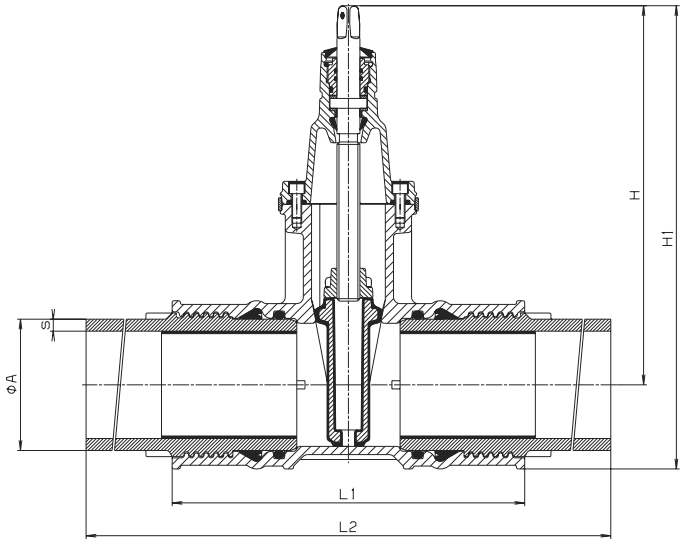
**Design versions:** for electric actuator: No. 4050EL*E2,* No. 4051EL*E2*
with position indicator: No. 4050ST*E2,* No. 4051EL*E2*

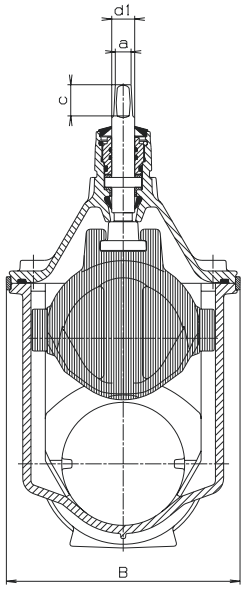
**Special versions:** **on request**

**Suitable accessories:** **Handwheel:** No. 7800

**Extension Spindles:** rigid No. 9000*E2,* up to DN 40 No. 9101
Teleskopisch No. 9500*E2,* up to DN 40 No. 9601

**Surface Boxes:** rigid No. 1750, telescopic No. 2050




**Design features:**
DN 50 - DN 200

- easy retrofitting of position indicator and automatic actuator on the standard bonnet
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings under pressure (DN 50 - 200, according ISO 7259)
- cleaning with pig possible

| DN | Ø A | Valve with PE tails | | | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | s (PN 6)* | s (PN 10)** | H | H 1 | L 1 | L 2 | B | a | c | d 1 | |
| **25** | **32** | 2,0 | 3,0 | 164 | 192 | 196 | 518 | 80 | 10,3 | 20 | 14 | 11,5 |
| **32** | **40** | 2,3 | 3,7 | 199 | 234 | 230 | 556 | 103 | 10,3 | 20 | 16 | 11,5 |
| **40** | **50** | 2,9 | 4,6 | 199 | 242 | 240 | 576 | 103 | 10,3 | 20 | 16 | 11,5 |
| **50** | **63** | 3,6 | 5,8 | 260 | 309 | 280 | 648 | 143 | 14,8 | 30 | 22 | 11,5 |
| **65** | **75** | 4,3 | 6,9 | 328 | 384 | 295 | 657 | 180 | 17,3 | 35 | 25 | 17,5 |
| **80** | **90** | 5,1 | 8,2 | 336 | 400 | 310 | 668 | 180 | 17,3 | 35 | 25 | 20,0 |
| **100** | **110** | 6,3 | 10,0 | 373 | 449 | 340 | 710 | 213 | 19,3 | 38 | 25 | 27,5 |
| **100** | **125** | 7,1 | 11,4 | 373 | 458 | 395 | 761 | 213 | 19,3 | 38 | 25 | 30,0 |
| **125** | **140** | 8,0 | 12,8 | 450 | 542 | 390 | 756 | 285 | 19,3 | 38 | 28 | 44,0 |
| **150** | **160** | 9,1 | 14,6 | 462 | 565 | 430 | 796 | 285 | 19,3 | 38 | 28 | 52,0 |
| **150** | **180** | 10,4 | 16,4 | 462 | 577 | 458 | 814 | 285 | 19,3 | 38 | 28 | 61,5 |
| **200** | **200** | 11,4 | 18,2 | 563 | 701 | 514 | 900 | 357 | 24,3 | 48 | 32 | 92,0 |
| **200** | **225** | 12,8 | 20,5 | 563 | 701 | 514 | 900 | 357 | 24,3 | 48 | 32 | 94,0 |

*SDR 17.6 **SDR 11

# E2 Elypso Valve Flange/PE tail

| Order no. | PE-fusion tails | PN | Application | Dimensions/DN Pipe Ø mm | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 50 63 | 65 75 | 80 90 | 100 110 | 100 125 | 125 140 | 150 160 | 150 180 | 200 200 | 200 225 |
| 4090E2 | PE 80 / SDR 11 | 10 | for cold water, non aggressive effluent other applications on request | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | PE 100 / SDR 11 | 16 | | | | | | | | | | | |
| 4091E2 | PE 80 / SDR 17.6 | 6 | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | PE 100 / SDR 17.6 | 10 | | | | | | | | | | | |

please specify on order PE (standard PE 80)

## Resilient seated gate valve with flange and PE tail

**for use with PE piping according to ÖNORM B 5172, DIN 8075,**

**of ductile iron,** epoxy powder coated

### Material and design features:

1/2 **Body (1) and Bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread and O ring slide faces

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (according to ISO 7259)

9 **Back seal** of elastomer, suitable for potable water

10 **Circlip** of POM

11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding

16 **O ring** of elastomer, suitable for potable water

17 **Socket seal** of elastomer, suitable for potable water

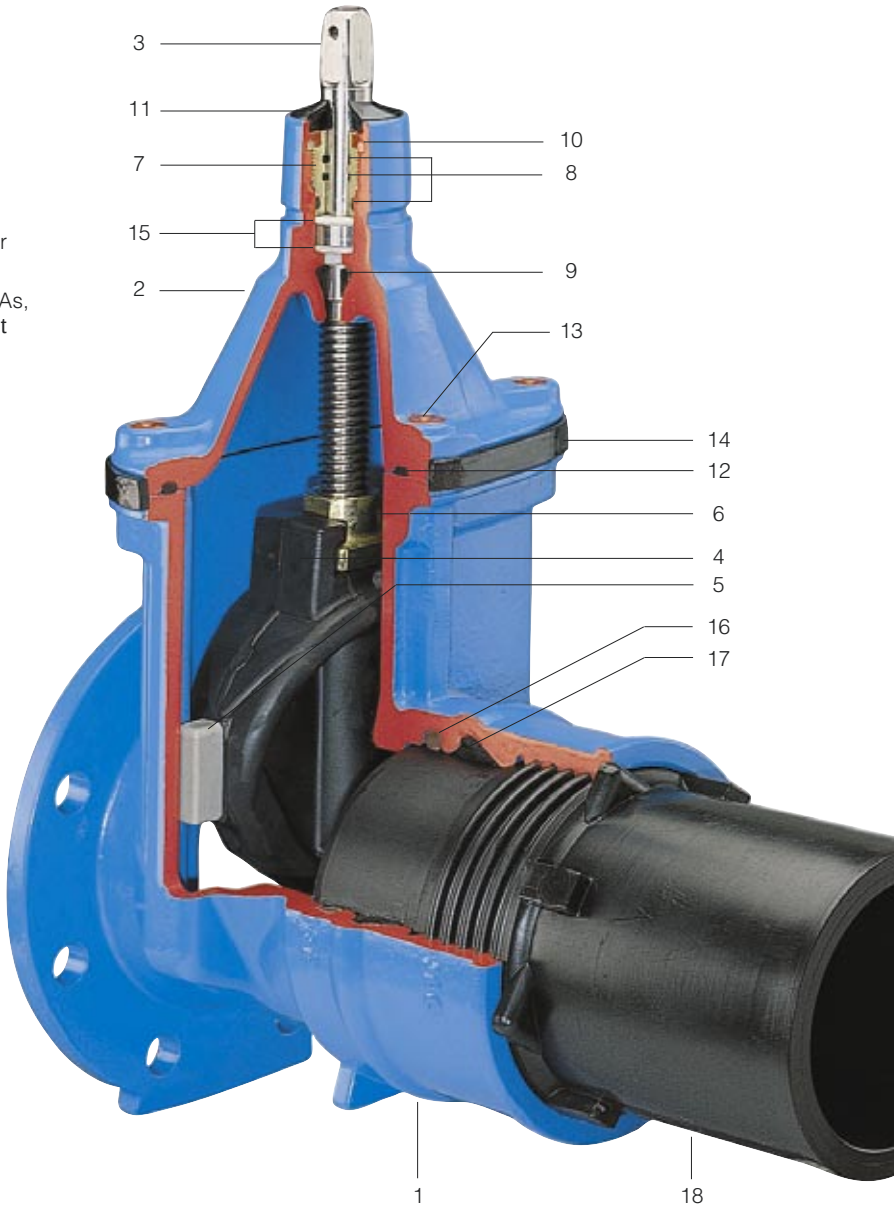
18 **PE tails**
standard version PE 80 injection moulded
Melt flow rate: MFR 190/5 kg - 09
MFR-group 010 (DIN 8075)
(PE 100 MFR-group 05-DIN 8075)

**Support liner** for PE tails (see drawing over page)
1.4301 (X5CrNi189)

**Flanges** according to EN 1092-2, drilled to DIN 2501 - PN 10

**This resilient seated valve has one flange and one PE tail screwed into and sealed in the socket.**

High performance sealing of the PE tail within the sockets is assured by two separate seals and a stainless steel support liner within the tail. The valve can be connected to the PE pipeline by either butt fusion or electrofusion.



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# E2 Elypso Valve Flange/PE tail

**Standard version:** without handwheel and extension spindle

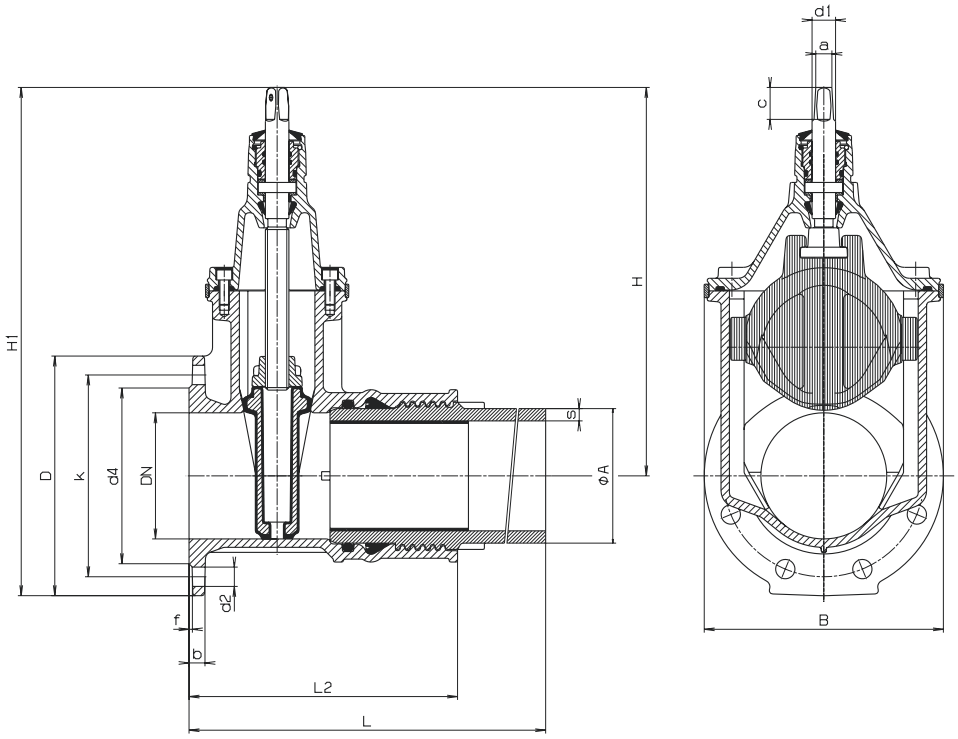
**Design versions:** for electric actuator: No. 4090EL*E2*, No. 4091EL*E2*
with position indicator: No. 4090ST*E2*, No. 4091ST*E2*

**Special versions:** **on request!**

**Suitable accessories:**
**Handwheel:** No. 7800
**Extension Spindles:** rigid No. 9000*E2*
telescopic No. 9500*E2*
**Surface Boxes:** rigid No. 1750
telescopic No. 2050

**Design features:**

- easy retrofitting of position indicator and automatic actuator on the standard bonnet
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible strength
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings under pressure (according ISO 7259)
- cleaning with pig possible




| DN | Pipe Ø mm | Flange | | | | | Bolts | | | Valve with PE tail | | | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D | b | k | d 4 | f | Qty. | Thread | d 2 | s (PN 6)* | s (PN 10)** | H | H 1 | L | L 2 | B | a | c | d 1 | |
| **50** | **63** | 165 | 19 | 125 | 98 | 3 | 4 | M 16 | 19 | 3,6 | 5,8 | 260 | 342 | 399 | 215 | 143 | 14,8 | 30 | 22 | 11,5 |
| **65** | **75** | 185 | 19 | 145 | 118 | 3 | 4 | M 16 | 19 | 4,3 | 6,9 | 328 | 420 | 416 | 235 | 180 | 17,3 | 35 | 25 | 17,5 |
| **80** | **90** | 200 | 19 | 160 | 133 | 3 | 8 | M 16 | 19 | 5,1 | 8,2 | 336 | 436 | 425 | 245 | 180 | 17,3 | 35 | 25 | 18,5 |
| **100** | **110** | 220 | 19 | 180 | 153 | 3 | 8 | M 16 | 19 | 6,3 | 10,0 | 373 | 483 | 450 | 265 | 213 | 19,3 | 38 | 25 | 26,0 |
| **100** | **125** | 220 | 19 | 180 | 153 | 3 | 8 | M 16 | 19 | 7,1 | 11,4 | 373 | 483 | 476 | 293 | 213 | 19,3 | 38 | 25 | 28,0 |
| **125** | **140** | 250 | 19 | 210 | 183 | 3 | 8 | M 16 | 19 | 8,0 | 12,8 | 450 | 575 | 485 | 310 | 285 | 19,3 | 38 | 28 | 39,5 |
| **150** | **160** | 285 | 19 | 240 | 209 | 3 | 8 | M 20 | 23 | 9,1 | 14,6 | 462 | 605 | 503 | 320 | 285 | 19,3 | 38 | 28 | 46,0 |
| **150** | **180** | 285 | 19 | 240 | 209 | 3 | 8 | M 20 | 23 | 10,4 | 16,4 | 462 | 605 | 512 | 334 | 285 | 19,3 | 38 | 28 | 50,5 |
| **200** | **200** | 340 | 20 | 295 | 264 | 3 | 8 | M 20 | 23 | 11,4 | 18,2 | 563 | 733 | 565 | 372 | 357 | 24,3 | 48 | 32 | 78,5 |
| **200** | **225** | 340 | 20 | 295 | 264 | 3 | 8 | M 20 | 23 | 12,8 | 20,5 | 563 | 733 | 565 | 372 | 357 | 24,3 | 48 | 32 | 79,5 |
| | | | | | | | | | | *SDR 17.6 | **SDR 11 | | | | | | | | | |

| Order no. | PN | Dimensions/DN Pipe Ø mm | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50<br>63 | 65<br>75 | 80<br>90 | 100<br>110 | 100<br>125 | 125<br>125 | 125<br>140 | 150<br>160 | 150<br>180 | 200<br>200 | 200<br>225 | 250<br>250 | 250<br>280 | 300<br>315 |
| **4040E2** | 16 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

## Resilient seated gate valve with sockets for PE (PE 80/100) and PVC pipes (DIN 8074, 8061 / 8062) - total restraint

### Material and design features:

1/2/16 **Body (1) bonnet (2) and lock ring (16)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread and O ring slide faces

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure up to DN 200 (according to ISO 7259), for DN 250 and higher without pressure

9 **Back seal** of elastomer, suitable for potable water

10 **Circlip** of POM

11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding

17 **Grip ring** of Ms 58 (from DN 300 Rg 7)

18 **Lip seal** of elastomer, suitable for potable water

19 **Bolts and washers** of A2 (stainless steel)

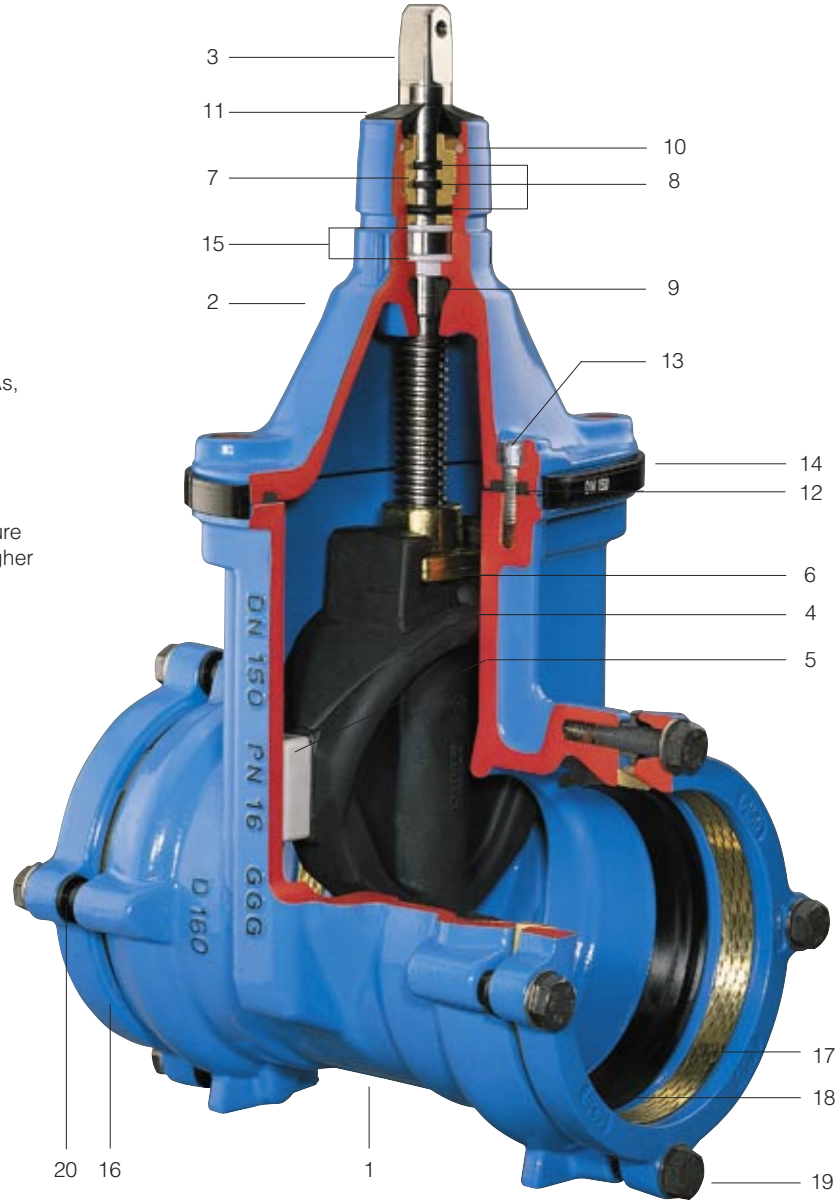
20 **Spacer bushes** of PE

The pipe is sealed with a lip seal.

Minimal pipe insertion force is required for pushing the pipe end into the seal chamfer with an appropriate chamfer.

The pipe restraining system is effective separately from the sealing system and is activated by tightening the lock ring.

For thinwalled PE pipes (up to 3 mm wall thickness) and low internal pressure we recommend using a support liner (see page D 2/4).




**Assembly instructions:** see page M 6/2

**Tensile load:** see page M 6/2



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# E2 Valve SYSTEM 2000

**Standard version:** without handwheel and extension spindle

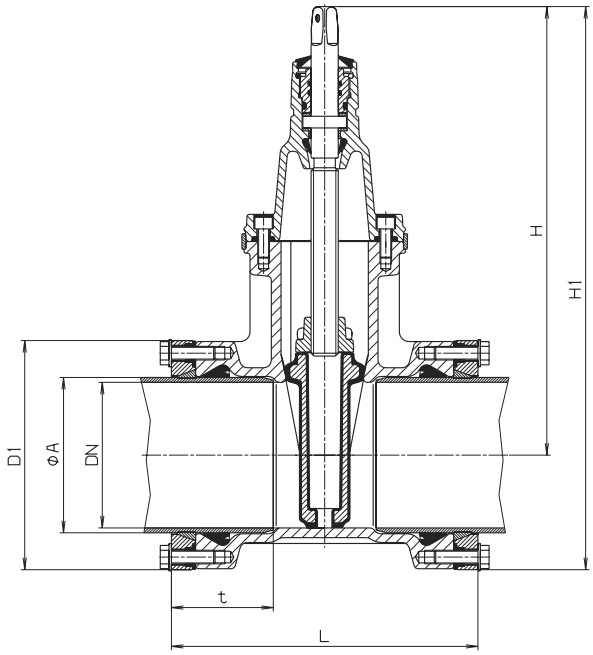
**Special versions:** **on request**

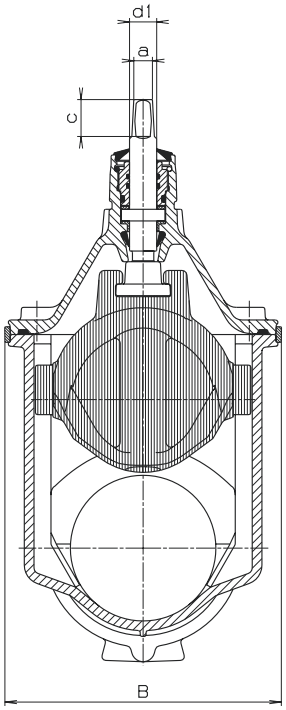
**Suitable accessories:**

**Handwheel:** No. 7800

**Extension Spindles:** rigid No. 9000***E2***, from DN 250 No. 9000
telescopic No. 9500***E2***, from DN 250 No. 9500

**Surface Boxes:** rigid No. 1750, telescopic No. 2050




**Design features:**

- easiest retrofitting of position indicator and automatic actuator on the standard bonnet possible
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings
  - up to DN 200 under pressure (according ISO 7259)
  - from DN 250 without pressure
- cleaning with pig possible

| DN | Pipe Ø mm | Valve | | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D1 | t | H | H 1 | L | B | a | c | d 1 | |
| **50** | 63 | 124 | 83 | 260 | 322 | 226 | 143 | 14,8 | 30 | 22 | 8,1 |
| **65** | 75 | 138 | 85 | 328 | 397 | 240 | 180 | 17,3 | 35 | 25 | 14,3 |
| **80** | 90 | 152 | 88 | 336 | 412 | 242 | 180 | 17,3 | 35 | 25 | 13,8 |
| **100** | 110 | 174 | 88 | 373 | 460 | 252 | 213 | 19,3 | 38 | 25 | 18,3 |
| | 125 | 195 | 88 | 373 | 470 | 260 | 213 | 19,3 | 38 | 25 | 19,0 |
| **125** | 125 | 195 | 90 | 450 | 547 | 280 | 285 | 19,3 | 38 | 28 | 32,0 |
| | 140 | 212 | 96 | 450 | 556 | 278 | 285 | 19,3 | 38 | 28 | 33,0 |
| **150** | 160 | 236 | 108 | 462 | 580 | 316 | 285 | 19,3 | 38 | 28 | 34,0 |
| | 180 | 258 | 118 | 462 | 591 | 342 | 285 | 19,3 | 38 | 28 | 36,0 |
| **200** | 200 | 284 | 128 | 563 | 705 | 366 | 357 | 24,3 | 48 | 32 | 65,0 |
| | 225 | 314 | 130 | 563 | 720 | 366 | 357 | 24,3 | 48 | 32 | 69,0 |
| **250** | 250 | 347 | 147 | 670 | 844 | 400 | 432 | 27,3 | 48 | 34 | 103,0 |
| | 280 | 376 | 150 | 670 | 858 | 420 | 432 | 27,3 | 48 | 34 | 110,0 |
| **300** | 315 | 422 | 176 | 753 | 964 | 472 | 518 | 27,3 | 48 | 34 | 168,0 |

| Order no. | PN | Dimension/DN Pipe Ø mm | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50<br>63 | 65<br>75 | 80<br>90 | 100<br>110 | 100<br>125 | 125<br>140 | 150<br>160 | 150<br>180 | 200<br>200 | 200<br>225 | 250<br>250 | 250<br>280 | 300<br>315 |
| **4041E2** | 16 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

## Resilient seated gate valve with flange and socket for PE (PE 80/100) and PVC pipes (DIN 8074, 8061 / 8062) - total restraint

### Material and design features:

1/2/16 **Body (1) bonnet (2) and lock ring (16)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread and O ring slide faces

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

6 **Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

7 **O ring bush** of Ms 58

8 **O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure up to DN 200 (according to ISO 7259), DN 250 and higher without pressure

9 **Back seal** of elastomer, suitable for potable water

10 **Circlip** of POM

11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

14 **Edge protecting ring** of PE avoids damages during transport and storage

15 **Friction washers** of POM guarantee smooth spindle guiding

17 **Grip ring** of Ms 58 (from DN 300 Rg 7)

18 **Lip seal** of elastomer, suitable for potable water

19 **Bolts and washers** of A2 (stainless steel)

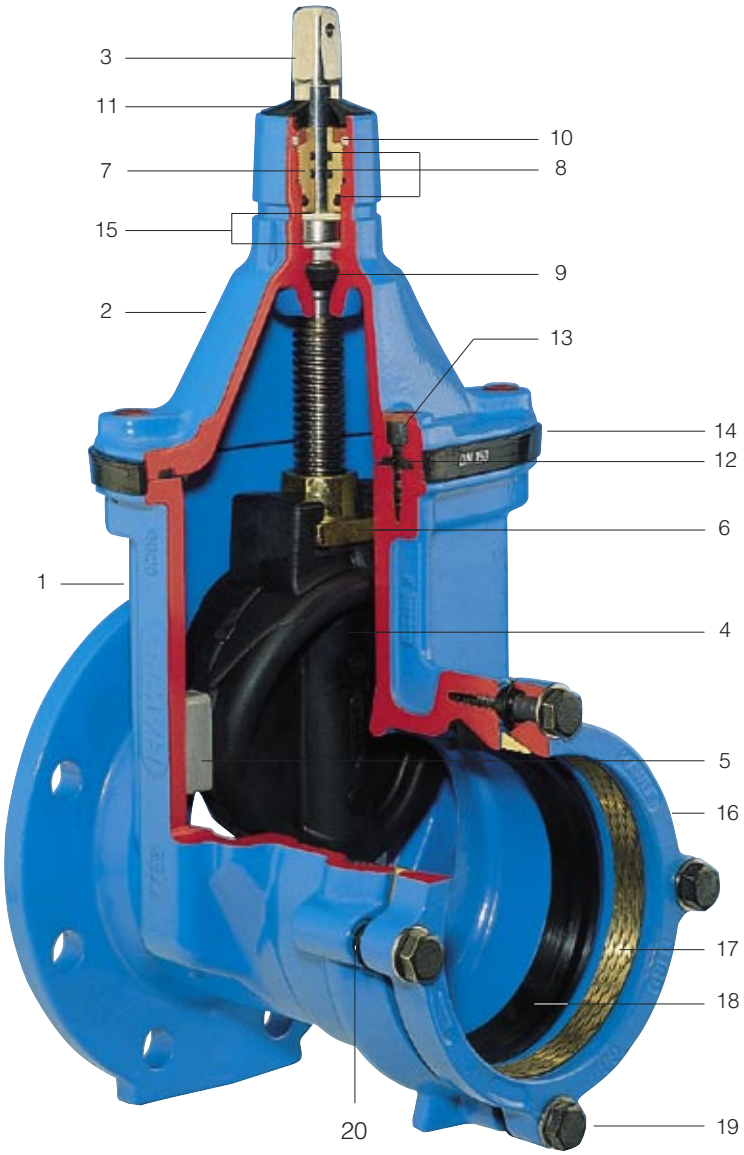
20 **Spacer bushes** of PE

The pipe is sealed with a lip seal.

Minimal pipe insertion force is required for pushing the pipe end into the seal chamfer with an appropriate chamfer.

The pipe restraining system is effective separately from the sealing system and is activated by tightening the lock ring.

For thinwalled PE pipes (up to 3 mm wall thickness) and low internal pressure we recommend using a support liner (see page D 2/4).




**Assembly instructions:** see page M 6/2
**Tensile load:** see page M 6/2

**Flange** according to EN 1092-2, drilled to DIN 2501-PN10 (standard);
For DIN 2501-PN 16 in sizes of DN 200 mm and above please specify on order - other standards on request !



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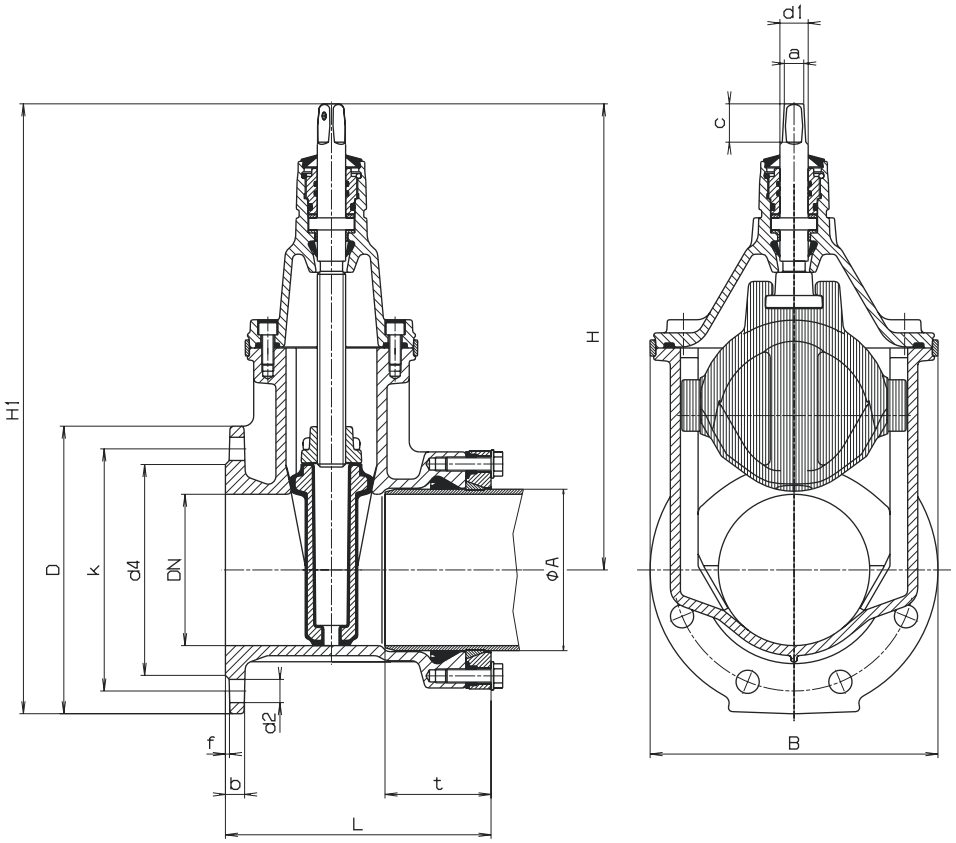
# E2 Valve Flange/socket SYSTEM 2000

**Standard version:** without handwheel and extension spindle

**Design versions:** for electric actuator: No.4041EL***E2***;
with position indicator: No. 4041ST***E2***

**Special versions:** **on request**

**Suitable accessories:**
**Handwheel:** No. 7800
**Extension Spindles:** rigid No. 9000***E2***, from DN 250 No. 9000
telescopic No. 9500***E2***, from DN 250 No. 9500
**Surface Boxes:** rigid No. 1750, telescopic No. 2050







**Design features:**

- easy retrofitting of position indicator and automatic actuator on the standard bonnet
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible strength
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings
  - up to DN 200 under pressure (according ISO 7259)
  - from DN 250 without pressure
- cleaning with pig possible

| DN | PN | Pipe Ø mm | Flange | | | | | Bolts | | | Valve | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | D | b | k | d 4 | f | Qty. | Thread | d 2 | t | H | H 1 | L | B | a | c | d 1 | |
| **50** | 10/16 | 63 | 165 | 19 | 125 | 98 | 3 | 4 | M 16 | 19 | 83 | 260 | 342 | 188 | 143 | 14,8 | 30 | 22 | 10,5 |
| **65** | 10/16 | 75 | 185 | 19 | 145 | 118 | 3 | 4 | M 16 | 19 | 85 | 328 | 420 | 205 | 180 | 17,3 | 35 | 25 | 15,5 |
| **80** | 10/16 | 90 | 200 | 19 | 160 | 133 | 3 | 8 | M 16 | 19 | 88 | 336 | 436 | 211 | 180 | 17,3 | 35 | 25 | 17,5 |
| **100** | 10/16 | 110 | 220 | 19 | 180 | 153 | 3 | 8 | M 16 | 19 | 88 | 373 | 483 | 221 | 213 | 19,3 | 38 | 25 | 22,0 |
| | 10/16 | 125 | 220 | 19 | 180 | 153 | 3 | 8 | M 16 | 19 | 88 | 373 | 483 | 225 | 213 | 19,3 | 38 | 25 | 23,0 |
| **125** | 10/16 | 140 | 250 | 19 | 210 | 183 | 3 | 8 | M 16 | 19 | 96 | 450 | 575 | 239 | 285 | 19,3 | 38 | 28 | 33,5 |
| **150** | 10/16 | 160 | 285 | 19 | 240 | 209 | 3 | 8 | M 20 | 23 | 108 | 462 | 605 | 263 | 285 | 19,3 | 38 | 28 | 40,0 |
| | 10/16 | 180 | 285 | 19 | 240 | 209 | 3 | 8 | M 20 | 23 | 118 | 462 | 605 | 276 | 285 | 19,3 | 38 | 28 | 43,0 |
| **200** | 10/16 | 200 | 340 | 20 | 295 | 264 | 3 | 8/12 | M 20 | 23 | 128 | 563 | 733 | 298 | 357 | 24,3 | 48 | 32 | 65,0 |
| | 10/16 | 225 | 340 | 20 | 295 | 264 | 3 | 8/12 | M 20 | 23 | 130 | 563 | 733 | 298 | 357 | 24,3 | 48 | 32 | 66,0 |
| **250** | 10/16 | 250 | 400 | 22 | 350/355 | 319 | 3 | 12 | M 20/M 24 | 23/28 | 147 | 670 | 870 | 325 | 432 | 27,3 | 48 | 34 | 102,0 |
| | 10/16 | 280 | 400 | 22 | 350/355 | 319 | 3 | 12 | M 20/M 24 | 23/28 | 150 | 670 | 870 | 335 | 432 | 27,3 | 48 | 34 | 105,0 |
| **300** | 10/16 | 315 | 455 | 24,5 | 400/410 | 367 | 4 | 12 | M 20/M 24 | 23/28 | 176 | 753 | 981 | 371 | 518 | 27,3 | 48 | 34 | 158,0 |

# Elypso Valve Socket Ends

## for PVC-pipes to DIN 8061/8062

| Order no. | Application | PN | Dimensions/DN Pipe Ø mm | | |
|---|---|---|---|---|---|
| | | | 80<br>90 | 100<br>110 | 150<br>160 |
| **4600** | **for water, non aggressive effluent** | 16 | ● | ● | ● |

## Resilient seated gate valve with socket ends for PVC-pipes

**of grey iron / ductile iron**
epoxy powder coated

### Material and design features:

1/2 **Body (1)** of grey iron EN-GJL-250 according to EN 1561 (GG 250-DIN 1691)
**Bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693)
inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

3 **Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

4 **Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), rubberized with vulcanized elastomer, suitable for potable water, with drain hole

5 **Wedge guide** patented, effective 3-point guide system prevents the wedge from tilting, relieves the force on the spindle and minimises the closing torque

6 **Spindle nut** DN 80 - 100 CuZn35Pb3As
DN 150 Rg 7

7 **Thrust collar** drawn brass Ms 58 - DIN 17660 giving positive support to spindle neck

8 **O rings** of elastomer, the perfect spindle seal

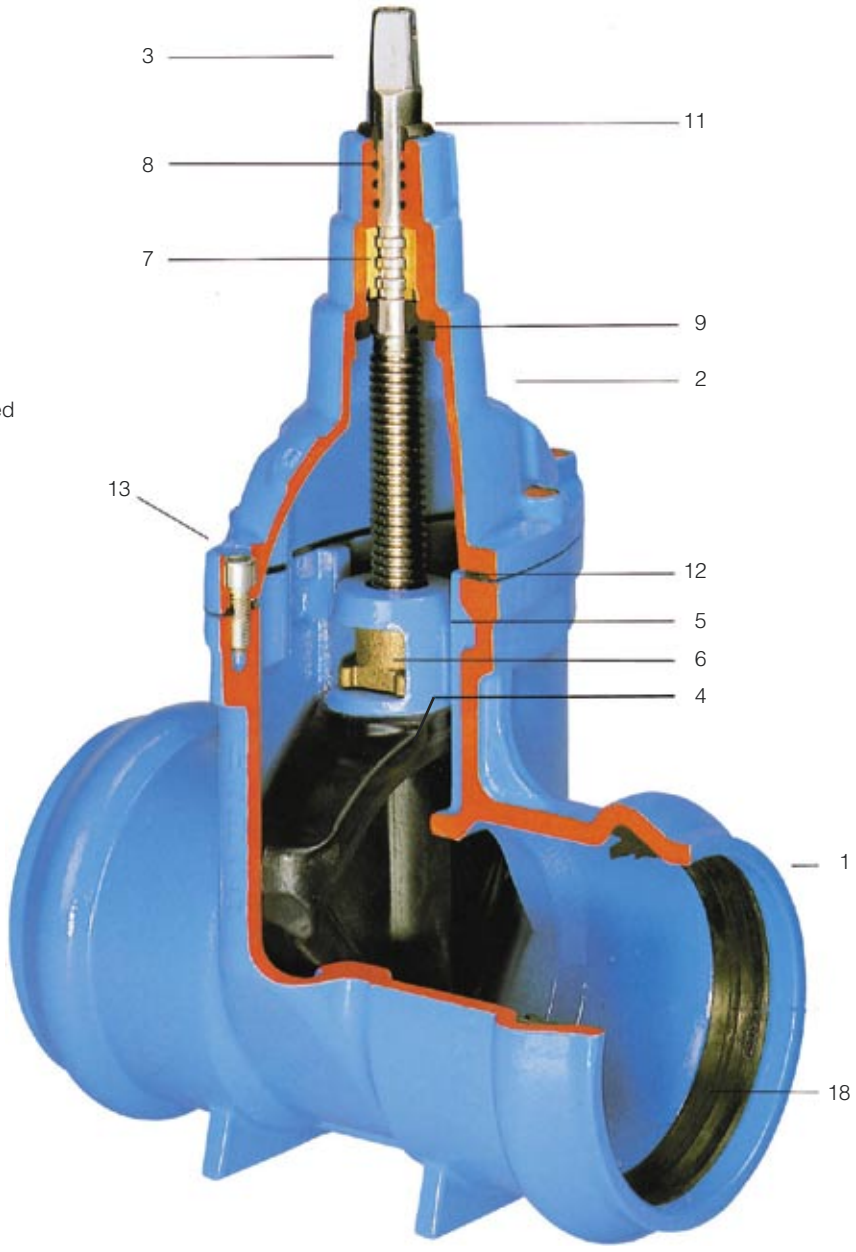
9 **Back seal** of elastomer, suitable for potable water

11 **Wiper ring** of elastomer

12 **Bonnet gasket** of elastomer, suitable for potable water

13 **Allen screws** steel St 8.8 DIN 912, absolutely corrosion protected by being sunk into the body and sealed, and by passing through flat gasket

18 **Socket seal** of elastomer, suitable for potable water



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# Elypso Valve Socket Ends

**The HAWLE Elypso Valve with socket ends for PVC-pipes is of simple construction and is made of the minimum number of parts.**

**No wear and tear of the sealing faces. The wedge and the bonnet can be interchanged between various Elypso and combination valves.**

**Sealing system:**
The contact between the wedge and body is **friction free**. Therefore no scuffing or abrasion of the wedge.

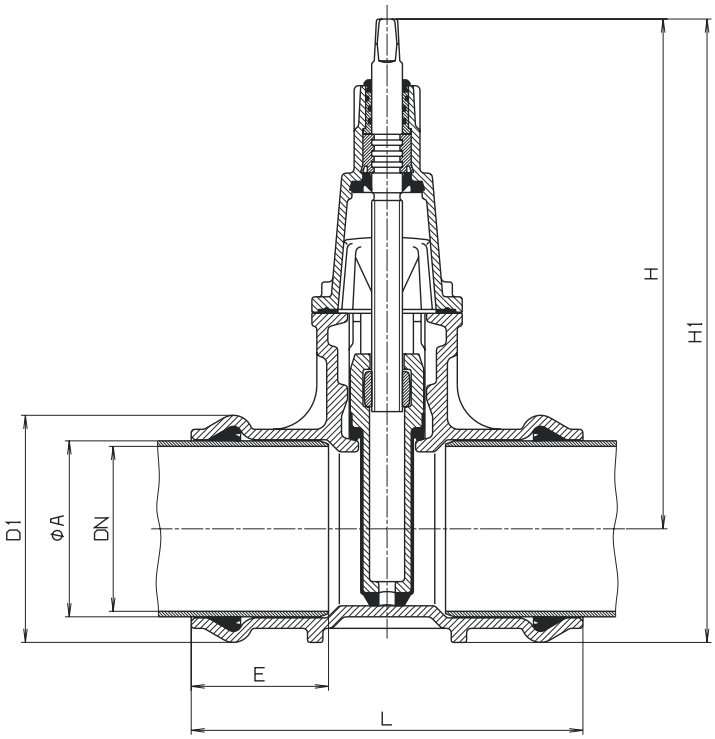
**Standard version:**
Without handwheel or extension spindle

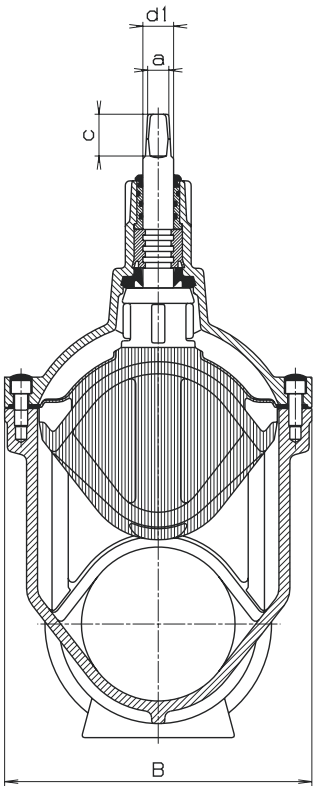
**Special versions on request**

**Suitable handwheel:** No. 7800

**Suitable extension spindles:**
rigid No. 9000, telescopic No. 9500

**Suitable surface boxes:**
rigid No. 1750, telescopic No. 2050




| DN | Pipe Ø mm | Valve | | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D1 | E | H | H 1 | L | B | a | c | d 1 | |
| **80** | 90 | 130 | 105 | 288 | 353 | 292 | 160 | 17,3 | 35 | 25 | 13,5 |
| **100** | 110 | 151 | 115 | 334 | 410 | 305 | 188 | 19,3 | 38 | 25 | 18,0 |
| **150** | 160 | 207 | 133 | 465 | 568 | 357 | 280 | 19,3 | 38 | 28 | 34,5 |

# Knife Gate Valve

| Order no. | Version | PN | Dimensions/DN | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
| **3600** | with non-rising spindle | 10 | ● | ● | ● | ● | ● | ● | ● | | | | |
| | | 6 | | | | | | | | ● | ● | ● | ● |
| **3600EL** | with non-rising spindle and adaptor for connecting electric actuator | 10 | | | ● | ● | ● | ● | ● | | | | |
| | | 6 | | | | | | | | ● | ● | ● | ● |

Ask for a special leaflet.

Resilient seated gate valve for many applications in for example sewage treatment plants, the paper industry, the mining industry, the chemical and animal feed stuff industries and for low viscosity fluids and dry products.

High corrosion resistance is ensured by the use of high grade stainless steel for the knife and spindle and epoxy powder coating for the grey cast iron body.

The Knife Gate Valve can be mounted either between two flanges in a pipeline or with an opposing flange at the end of a pipeline.

The bore is clear and unobstructed.

The valve can be operated with a handwheel, a key, an extension spindle or by an electrically powered actuator. Please specify as required.

## Material and design features:

| | | |
|---|---|---|
| 1 | **Body** | of grey iron EN-GJL -250 according to EN 1561 (GG 250-DIN 1691) epoxy powder coated inside and outside (undivided up to DN 200) |
| 2 | **Thrust block** | DN 50 - 200 of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400-DIN 1693) DN 250 - 400 of grey iron EN-GJL -250 according to EN 1561 (GG 250-DIN 1691) epoxy powder coated |
| 3 | **Stainless steel spindle** | 1.4021, with rolled thread, long heavy duty spindle for high resistance to wear and tear |
| 4 | **Knife** | stainless steel 1.4301, other materials on request |
| 5 | **Back rest** | up to DN 200, of grey iron EN-GJL -250 according to EN 1561 (GG 250-DIN 1691) inside and outside epoxy powder coated |
| 6 | **Spindle nut** | Rg 7 |
| 7 | **Tie bar** | stainless steel 1.4021 |
| 8 | **Hexagon bolts** | A 2 |
| 9 | **Hexagon nut** | A 2 |
| | **Cross sealing and U-sealing** | of elastomer |
| | **Friction washer** | of POM |
| | **Handwheel** | of grey iron EN-GJL -250 according to EN 1561 (GG 250-DIN 1691) epoxy powder coated |

**Flanges** according to EN 1092-2, PN 10

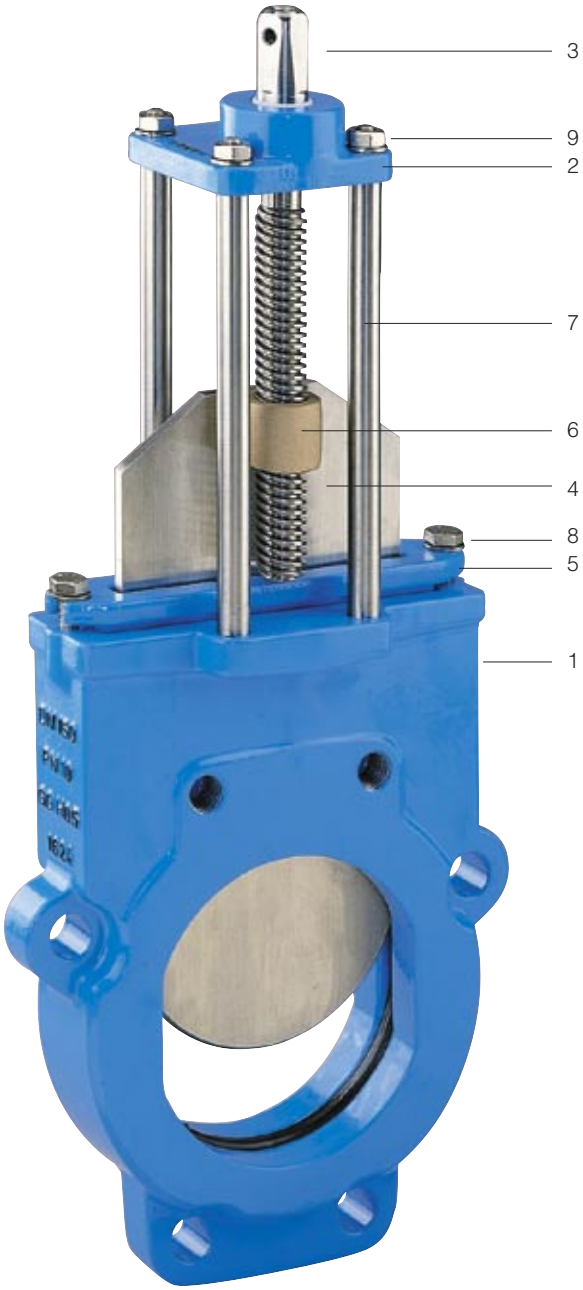



illustration DN 50 - 200



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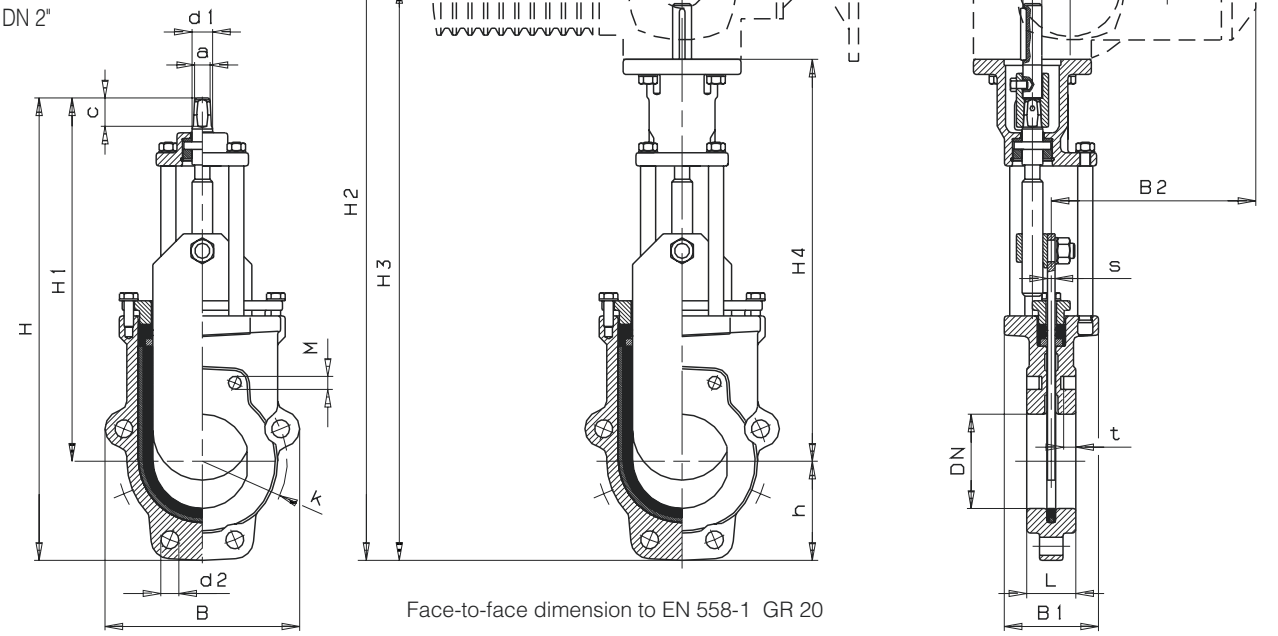
# Knife Gate Valve

**suitable handwheels:**

No. 7840
DN 80, 100, 200, 250, 300, 400

No. 7800
DN 50*/65*, 125/150, 350

* = No. 7800 DN 2"




Face-to-face dimension to EN 558-1 GR 20

| Dimensions | DN | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Working pressure | PN | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 6 | 6 | 6 | 6 |
| Flange | k | 125 | 145 | 160 | 180 | 210 | 240 | 295 | 350 | 400 | 460 | 515 |
| | d2 | 19 | 19 | 19 | 19 | 19 | 23 | 23 | 23 | 23 | 23 | 28 |
| Bolts | Thread | M 16 | M 16 | M 16 | M 16 | M 16 | M 20 | M 20 | M 20 | M 20 | M 20 | M 24 |
| - Through bore holes | Qty. | 2 | 2 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 10 | 10 |
| - Blind tapped holes | Qty | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 12 | 12 |
| | t Depth | 9,5 | 11 | 10 | 13 | 14 | 14 | 14 | 14 | 19 | 19 | 26 |
| Bolt length with washer | Through bore holes | 110 | 110 | 110 | 120 | 120 | 130 | 130 | 150 | 160 | 160 | 200 |
| for standard flange EN 1092-2, PN 10 | Blind tapped holes | 34 | 35 | 35 | 36 | 38 | 38 | 38 | 40 | 48 | 48 | 56 |
| Valve | H | 349 | 381 | 450 | 490 | 559 | 619 | 753 | 957 | 1081 | 1242 | 1353 |
| | h | 65 | 72 | 95 | 105 | 120 | 136 | 162 | 169 | 193 | 226 | 250 |
| | H 1 | 284 | 309 | 355 | 385 | 439 | 483 | 591 | 788 | 888 | 1016 | 1103 |
| | B | 125 | 139 | 188 | 206 | 234 | 268 | 319 | 347 | 399 | 462 | 512 |
| | L | 43 | 46 | 46 | 52 | 56 | 56 | 60 | 68 | 78 | 78 | 102 |
| | B 1 | 88 | 88 | 100 | 100 | 100 | 100 | 127 | 160 | 160 | 180 | 180 |
| Spindle | a | 10,3 | 10,3 | 16,3 | 16,3 | 19,3 | 19,3 | 19,3 | 24,3 | 24,3 | 27,3 | 27,3 |
| | c | 20 | 20 | 30 | 30 | 38 | 38 | 38 | 48 | 48 | 48 | 48 |
| | d 1 | 16 | 16 | 22 | 22 | 25 | 25 | 28 | 32 | 32 | 36 | 36 |
| Knife | s | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 12 | 12 | 15 | 15 |
| Electric actuator | Type | | | SA07.5 | SA07.5 | SA07.5 | SA07.5 | SA10.1 | SA10.1 | SA10.1 | SA14.1 | SA14.1 |
| | H 2 | | | 739 | 779 | 852 | 912 | 1048 | 1256 | 1380 | 1584 | 1695 |
| | H 3 | | | 569 | 609 | 682 | 742 | 878 | 1086 | 1210 | 1404 | 1514 |
| | H 4 | | | 396 | 426 | 484 | 528 | 636 | 837 | 937 | 1068 | 1155 |
| | B 2 | | | 273 | 273 | 273 | 273 | 287 | 279 | 279 | 318 | 318 |
| | B 3 | | | 265 | 265 | 265 | 265 | 282 | 282 | 282 | 385 | 385 |
| | B 4 | | | 250 | 250 | 250 | 250 | 256 | 256 | 256 | 325 | 325 |
| | Open/close revolutions | | | 8 | 10 | 13 | 15 | 20 | 21 | 25 | 29 | 34 |
| | d 3 | | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 30 | 30 |
| Weight kg | No. 3600 | 6,3 | 7,0 | 11,0 | 14,0 | 17,0 | 22,0 | 33,0 | 73,0 | 99,0 | 140,0 | 180,0 |
| | No. 3600EL | | | 13,0 | 16,0 | 19,5 | 24,5 | 36,0 | 76,0 | 102,0 | 144,0 | 184,0 |

| Order no. | Application | PN | Dimensions/DN 1 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | DN | 65 | 80 | 100 | 150 | 200 |
| 4340E2 | Water, non aggressive waste water<br>other applications on request | 16 | 80 | | ● | | | |
| | | | 100 | ● | ● | ● | | |
| | | | 125 | | ● | ● | | |
| | | | 150 | ● | ● | ● | ● | |
| | | | 200 | ● | ● | ● | ● | ● |

## Flanged Tee Piece with one integral E2 Elypso Valve

### short style, equal and reduced

The short style provides for space saving installation and lower material, labour, transport and stockholding costs.

The compact design enables the valve chamber to be made from sectional concrete giving typical savings of 25 % in chamber construction costs.

**Note:**

Combining the E2 Combi-T with E2 Elypso Reducing Valves can provide solutions to many common problems.

### Material and design features:

**Body and bonnet** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

**Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer (suitable for potable water) with drain hole

**Wedge nut** of dezincification resistant brass CuZn36Pb3As

**Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

**Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread and O ring slide faces

**Edge protecting ring** of PE avoids damages during transport and storage

**Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

**Flanges** according to EN 1092-2 (DIN 28605), drilled to DIN 2501 - PN 10 (standard);
For DIN 2501 - PN 16 in sizes of DN 200 mm please specify on order - other standards on request !

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# E2 Combi-T

**Standard version:** without handwheel and extension spindle

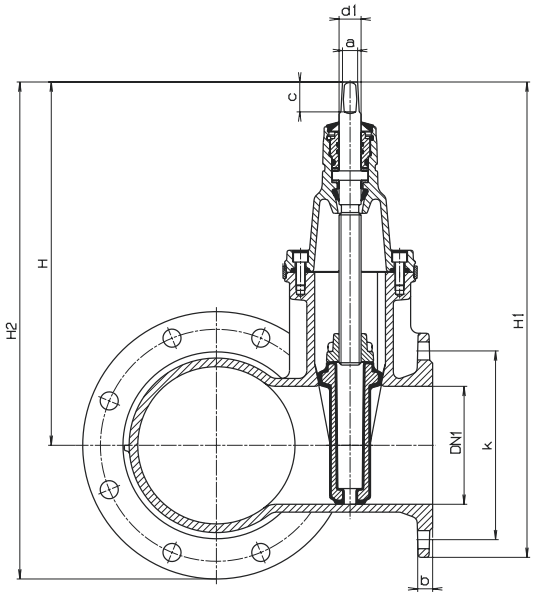
**Design versions:** for electric actuator: No. 4340EL*E2*;
with position indicator: No. 4340ST*E2*

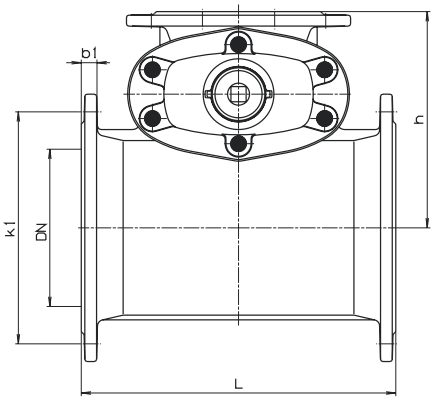
**Special versions:** **on request**

**Suitable accessories:**
**Handwheel:** No. 7800
**Extension Spindles:** rigid No. 9000*E2*
telescopic No. 9500*E2*
**Surface Boxes:** rigid No. 1750,
telescopic No. 2050

**Design features:**

- easy retrofitting of position indicator and automatic actuator on the standard bonnet
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torque
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings under pressure (according ISO 7259)
- cleaning with pig possible




| DN | DN 1 | E2 Combi-T | | | | | Flanges | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | H | H 1 | H 2 | h | k | b | k 1 | b 1 | a | c | d 1 | |
| **80** | **80** | 280 | 336 | 436 | 436 | 170 | 160 | 19 | 160 | 19 | 17,3 | 35 | 25 | 25,0 |
| **100** | **65** | 260 | 328 | 420 | 438 | 180 | 145 | 19 | 180 | 19 | 17,3 | 35 | 25 | 29,5 |
| **100** | **80** | 280 | 336 | 436 | 446 | 200 | 180 | 19 | 180 | 19 | 17,3 | 35 | 25 | 30,5 |
| **100** | **100** | 310 | 373 | 483 | 483 | 200 | 125 | 19 | 180 | 19 | 19,3 | 38 | 25 | 34,5 |
| **125** | **80** | 280 | 336 | 436 | 461 | 200 | 160 | 19 | 210 | 19 | 17,3 | 35 | 25 | 30,0 |
| **125** | **100** | 310 | 373 | 483 | 498 | 215 | 180 | 19 | 210 | 19 | 19,3 | 38 | 25 | 38,0 |
| **150** | **65** | 260 | 328 | 420 | 470 | 210 | 145 | 19 | 240 | 19 | 17,3 | 35 | 25 | 33,0 |
| **150** | **80** | 280 | 336 | 436 | 473 | 220 | 160 | 19 | 240 | 19 | 17,3 | 35 | 25 | 36,5 |
| **150** | **100** | 310 | 373 | 483 | 516 | 220 | 180 | 19 | 240 | 19 | 19,3 | 38 | 25 | 40,0 |
| **150** | **150** | 400 | 462 | 605 | 605 | 250 | 240 | 19 | 240 | 19 | 19,3 | 38 | 28 | 56,0 |
| **200** | **65** | 260 | 328 | 420 | 498 | 250 | 144 | 19 | 295 | 19 | 17,3 | 35 | 25 | 43,5 |
| **200** | **80** | 280 | 336 | 436 | 506 | 250 | 160 | 19 | 295 | 20 | 17,3 | 35 | 25 | 46,5 |
| **200** | **100** | 310 | 373 | 483 | 543 | 250 | 180 | 19 | 295 | 20 | 19,3 | 38 | 25 | 49,0 |
| **200** | **150** | 400 | 462 | 605 | 632 | 275 | 240 | 19 | 295 | 20 | 19,3 | 38 | 28 | 66,0 |
| **200** | **200** | 460 | 563 | 733 | 733 | 295 | 295 | 20 | 295 | 20 | 24,3 | 48 | 32 | 88,0 |

| Order no. | Application | PN | Dimensions/DN 1 Pipe Ø mm | | | | |
|---|---|---|---|---|---|---|---|
| | | | **DN /** Pipe Ø mm | **50** 63 | **80** 90 | **100** 110 | **100** 125 | **150** 160 |
| **4343E2** | **Water, non aggressive effluent** other applications on request ! | 16 | **80** / 90 | | ● | | | |
| | | | **100** / 110 | ● | ● | ● | | |
| | | | **100** / 125 | | | | ● | |
| | | | **150** / 160 | | ● | ● | ● | ● |
| | | | **200** / 225 | | ● | ● | | |

## All socket tee with one integral E2Valve

### for PE (PE 80/100) and PVC Pipes (DIN 8074, 8061/8062) - absolut restraint

The short style provides for space saving installation and lower material, labour, transport and stockholding costs.

### Material and design features:

**Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread and O ring slide faces

**O ring bush** of Ms 58

**Friction washers** of POM guarantee smooth spindle guiding

**Bonnet, body and lock ring** of ductile iron EN-GJS-400-18 according EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

**Circlip** of POM

**O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (according to ISO 7259)

**Bonnet gasket, Wiper ring and Back seal** of elastomer, suitable for potable water

**Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

**Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

**Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

**Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

**Edge protecting ring** of PE avoids damages during transport and storage

**Grip ring** of Ms 58 (from DN 300 Rg 7)

**Lip seal** of elastomer

**Bolts and washers** for lock ring of A2

**Spacer bush** of PE

The pipe is sealed with a lip seal.

Minimal pipe insertion force is required for pushing the pipe end into the seal chamfer with an appropriate chamfer.

The pipe restraining system is effective separately from the sealing system and is activated by tightening the lock ring.

For thinwalled PE pipes (up to 3 mm wall thickness) and low internal pressure we recommend using a support liner (see page D 2/4).


**Assembly instructions:** see page M 6/2
**Tensile load:** see page M 6/2



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# *E2* Combi-T SYSTEM 2000

**Design features:**

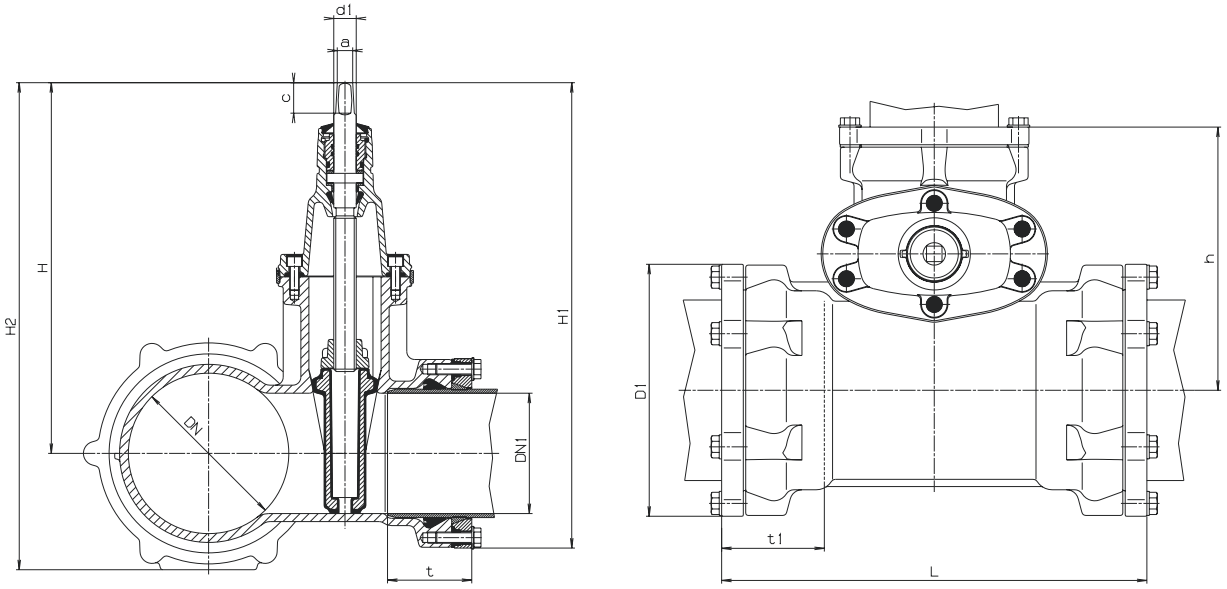
- easy retrofitting of position indicator and automatic actuator on the standard bonnet
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential pressure up to 16 bar
- 100 % suitable for operation by automatic actuators
- generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques
- O rings embedded in non-corrosive material (according to DIN 3547-T1)
- replaceable O rings under pressure (according ISO 7259)
- cleaning with pig possible

**Standard version:** without handwheel and extension spindle

**Design versions:** for electric actuator: No. 4343EL*E2*
with position indicator: No. 4343ST*E2*

**Special versions:** on request!

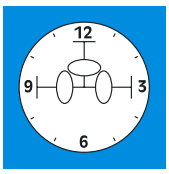
**Suitable accessories:**
**Handwheel:** No. 7800
**Extension Spindles:** rigid No. 9000*E2*
telescopic No. 9500*E2*
**Surface Boxes:** rigid No. 1750, telescopic No. 2050




| DN Pipe Ø | DN 1 Pipe Ø | E2 Combi-T | | | | | Socket | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | H | H 1 | H 2 | t | L | t 1 | D 1 | h | a | c | d 1 | |
| **80** / 90 | **80** / 90 | 336 | 412 | 412 | 88 | 310 | 88 | 150 | 201 | 17,3 | 35 | 25 | 21,0 |
| **100** / 110 | **50** / 63 | 260 | 322 | 346 | 83 | 290 | 88 | 172 | 218 | 14,8 | 30 | 22 | 17,0 |
| **100** / 110 | **80** / 90 | 336 | 412 | 422 | 88 | 320 | 88 | 172 | 231 | 17,3 | 35 | 25 | 23,5 |
| **100** / 110 | **100** / 110 | 373 | 460 | 460 | 88 | 340 | 88 | 172 | 231 | 19,3 | 38 | 25 | 28,0 |
| **100** / 125 | **100** / 125 | 373 | 470 | 470 | 88 | 345 | 88 | 193 | 235 | 19,3 | 38 | 25 | 31,0 |
| **150** / 160 | **80** / 90 | 336 | 412 | 453 | 88 | 350 | 108 | 234 | 251 | 17,3 | 35 | 25 | 31,0 |
| **150** / 160 | **100** / 110 | 373 | 460 | 490 | 88 | 370 | 108 | 234 | 251 | 19,3 | 38 | 25 | 35,0 |
| **150** / 160 | **100** / 125 | 373 | 470 | 490 | 88 | 370 | 108 | 234 | 255 | 19,3 | 38 | 25 | 38,5 |
| **150** / 160 | **150** / 160 | 462 | 580 | 580 | 108 | 420 | 108 | 234 | 303 | 19,3 | 38 | 28 | 51,0 |
| **200** / 225 | **80** / 90 | 336 | 412 | 481 | 88 | 410 | 130 | 312 | 281 | 17,3 | 35 | 25 | 48,0 |
| **200** / 225 | **100** / 110 | 373 | 460 | 518 | 88 | 430 | 130 | 312 | 291 | 19,3 | 38 | 25 | 52,0 |

| Order no. | Version | Application | PN | No. of Valves | Dimensions/DN | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 80 | 100 | 125 | 150 | 200 |
| **4450E2** | without vertical centre outlet | **for water**, non aggressive effluent | 16 | 2 | ● | ● | ● | ● | ● |
| | | | | 3 | ● | ● | ● | ● | ● |
| **4460E2** | without vertical outlet | other applications on request | | 2 | | ● | | ● | ● |
| | | | | 3 | | ● | | ● | ● |

## Flanged Tee Piece with 3 flanged outlets and 2 or 3 integral E2 Elypso Valves




Please specify the arrangement of the valves in a clockwise direction

The short style provides for space saving installation and lower material, labour, transport and stockholding costs.

The compact design enables the valve chamber to be made from sectional concrete giving typical savings of 25 % in chamber construction.

**Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

**Wipe ring** of elastomer

**O ring bush** of Ms 58

**Friction washers, Protecting ring** of POM
guarantees smooth spindle guiding

**Body and bonnet** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

**O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (according to ISO 7259)

**Back seal** of elastomer

**Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

**Edge protecting ring** of PE avoids damages during transport and storage

**Bonnet gasket** of Elastomer

**Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

**Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

**Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

**Mounting points** undrilled in standard version; surcharge for drilling


**A cap No. 8570E2 can be fitted instead of the bonnet at any outlet not requiring a valve**

**No. 4460E2 Flange Tee piece**
with 2 valves and vertical centre outlet

**Flanges** according to EN 1092-2, drilled to DIN 2501 - PN 10 (standard);
For DIN 2501 - PN 16 in sizes of DN 200 mm and above please specify on order - other standards on request



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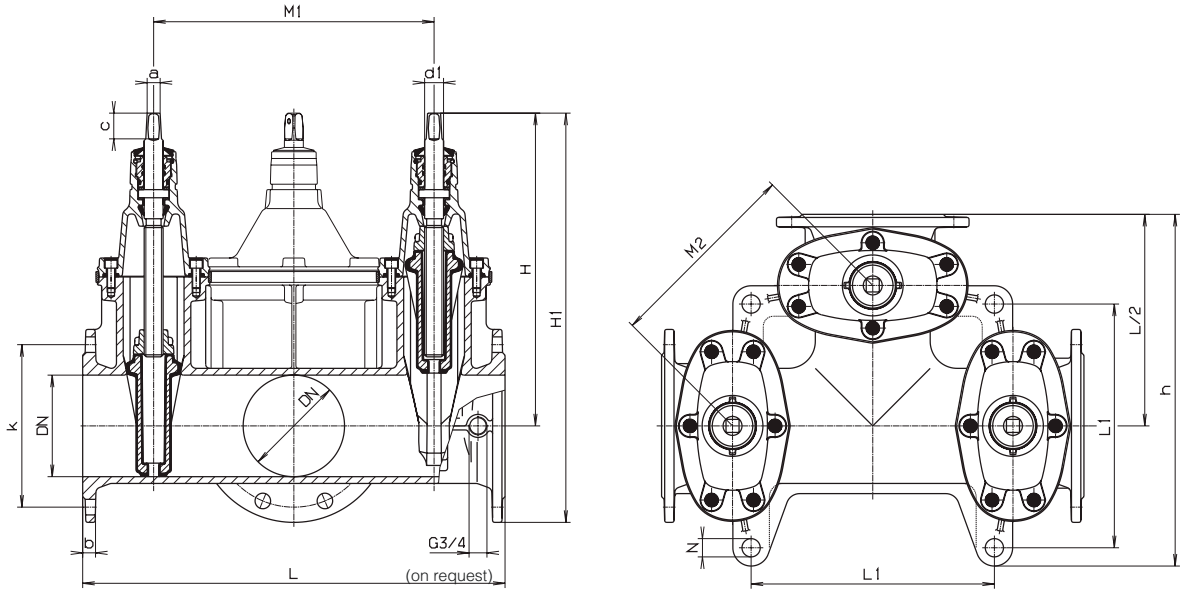
**The wedge and the bonnet can be interchanged between various HAWLE E2 Elypso and E2 combination valves.**

**Suitable extension spindles:**
rigid No. 9000E2, telescopic No. 9500E2

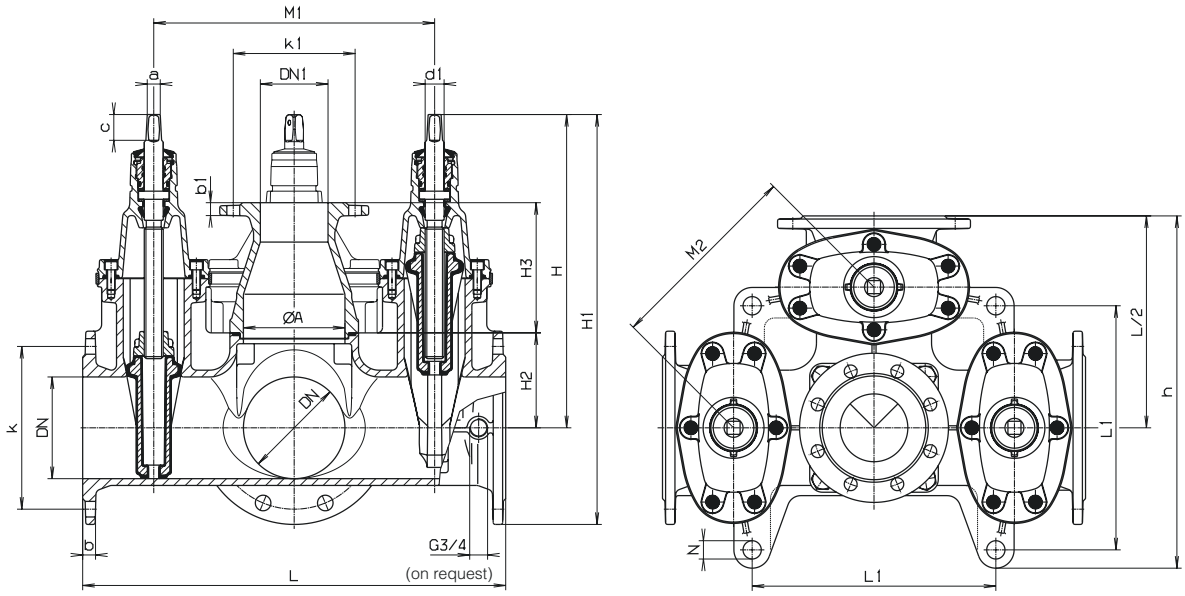
**Suitable handwheel:** No. 7800

**Suitable surface box:** No. 4550

**Cleaning with pig possible**




| DN | E2 Combi III without vertical centre outlet | | | | | | | | | | Spindle | | | Weight kg (no. of valves) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | H | H 1 | k | b | M 1 | M 2 | L 1 | h | N | a | c | d 1 | 2 | 3 |
| **80** | 435 | 336 | 436 | 160 | 19 | 255 | 180 | - | 318 | - | 17,3 | 35 | 25 | 45,0 | 50,0 |
| **100** | 555 | 373 | 483 | 180 | 19 | 365 | 258 | 212 | 411 | 27 | 19,3 | 38 | 25 | 68,0 | 74,0 |
| **125** | 615 | 475 | 600 | 210 | 19 | 415 | 293,5 | 360 | 515 | 27 | 19,3 | 38 | 28 | 101,0 | 111,0 |
| **150** | 625 | 462 | 605 | 240 | 19 | 415 | 293,5 | 360 | 520 | 27 | 19,3 | 38 | 28 | 105,0 | 115,0 |
| **200** | 695 | 563 | 733 | 295 | 20 | 465 | 329 | 445 | 602 | 32 | 24,3 | 48 | 32 | 167,0 | 183,0 |

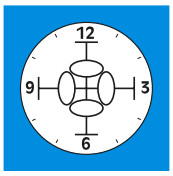



| DN | E2 Combi III with vertical centre outlet | | | | | | | | | | | | | | | | Spindle | | | Weight (no. of valves) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø A | DN 1 | L | L 1 | H | H 1 | H 2 | H 3 | b | b 1 | k | k 1 | M 1 | M 2 | h | N | a | c | d 1 | 2 | 3 |
| **100** | 100 | 100 | 555 | 212 | 373 | 483 | 90 | + | 19 | + | 180 | + | 365 | 258 | 411 | 27 | 19,3 | 38 | 25 | 71,0 | 76,0 |
| **150** | 150 | 100 / 150* | 625 | 360 | 462 | 605 | 140 | 192 | 19 | 19 | 240 | 180 / 240 | 415 | 293,5 | 520 | 27 | 19,3 | 38 | 28 | 120,0 | 130,0 |
| **200** | 200 | 100 / 200* | 695 | 445 | 563 | 733 | 180 | 192 | 20 | 19 / 20 | 295 | 180 / 295 | 465 | 329 | 602 | 32 | 24,3 | 48 | 32 | 185,0 | 201,0 |

* on request
+ flange connection directly on the body (blind tapped holes M 16 x 23)

| Order no. | Version | Application | PN | No. of Valves | Dimensions/DN | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 80 | 100 | 125 | 150 | 200 |
| **4400E2** | **without vertical centre outlet** | **for Water, non aggressive effluent**<br>other applications on request | 16 | 2 | ● | ● | ● | ● | ● |
| | | | | 3 | ● | ● | ● | ● | ● |
| | | | | 4 | ● | ● | ● | ● | ● |
| **4410E2** | **with vertical outlet** | | | 2 | | ● | | ● | ● |
| | | | | 3 | | ● | | ● | ● |
| | | | | 4 | | ● | | ● | ● |

## Flanged Tee Piece with 4 flanged outlets and 2, 3 or 4 integral E2 Elypso Valves




Please specify the arrangement of the valves in a clockwise direction

**Stainless steel spindle** St 1.4021 (X20Cr13), with rolled thread

**Wipe ring** of elastomer

**O ring bush** of Ms 58

**Friction washers, Protecting ring** of POM guarantees smooth spindle guiding

**Body and bonnet** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)

**O rings** of elastomer, embedded in non-corrosive material (according to DIN 3547-T1) and replaceable under pressure (according to ISO 7259)

**Back seal** of elastomer

**Allen screws** St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

**Edge protecting ring** of PE avoids damages during transport and storage

**Bonnet gasket** of Elastomer

**Wedge nut** of dezincification resistant brass CuZn36Pb3As, generous oversizing of the thread length in the wedge nut guarantees highest possible breaking torques

**Wedge** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), inside and outside fully rubberized with vulcanized elastomer, suitable for potable water, with drain hole

**Wedge guide** of wear resistant plastic with high gliding features; optimally placed design guarantees lowest wear and tear and lowest closing torques

**Mounting points** undrilled in standard version; surcharge for drilling

**Flanges** according to EN 1092-2, drilled to DIN 2501-PN10 (standard);

For DIN 2501-PN 16 in sizes of DN 200 mm and above please specify on order - other standards on request

The short style provides for space saving installation and lower material, labour, transport and stockholding costs.

The compact design enables the valve chamber to be made from sectional concrete giving typical savings of 25 % in chamber construction.


**A cap No. 8570E2 can be fitted instead of the bonnet at any outlet not requiring a valve**

**No. 4410E2 Cross connection**
with 2 valves and vertical centre outlet

**No. 4400E2 Cross connection**
with 3 valves



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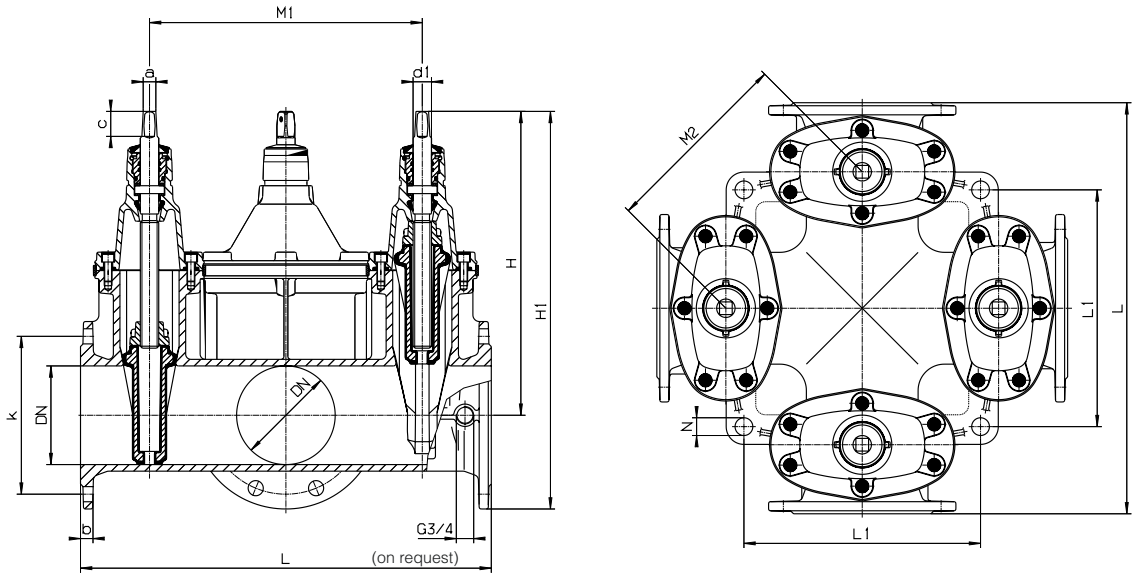
# E2 Combi-IV

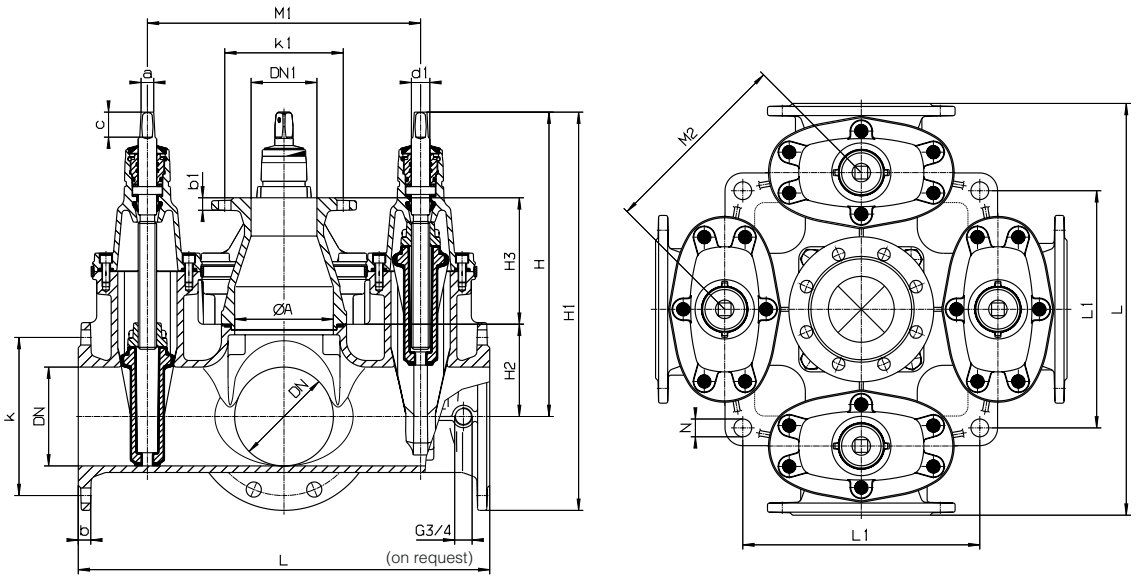
**The wedge and the bonnet can be interchanged between various HAWLE E2 Elypso and E2 combination valves.**

**Suitable extension spindles:**
rigid No. 9000E2, telescopic No. 9500E2

**Suitable handwheel:** No. 7800
**Suitable surface box:** No. 4550
**Cleaning with pig possible**




| DN | E2 Combi IV without vertical centre outlet | | | | | | | | | Spindle | | | Weight kg (no. of valves) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | H | H 1 | k | b | M 1 | M 2 | L 1 | N | a | c | d 1 | 2 | 3 | 4 |
| **80** | 435 | 336 | 436 | 160 | 19 | 255 | 180 | - | - | 17,3 | 35 | 25 | 55,0 | 60,0 | 65,0 |
| **100** | 555 | 373 | 483 | 180 | 19 | 365 | 258 | 212 | 27 | 19,3 | 38 | 25 | 76,0 | 84,0 | 90,0 |
| **125** | 615 | 475 | 600 | 210 | 19 | 415 | 293,5 | 360 | 27 | 19,3 | 38 | 28 | 125,0 | 135,0 | 145,0 |
| **150** | 625 | 462 | 605 | 240 | 19 | 415 | 293,5 | 360 | 27 | 19,3 | 38 | 28 | 133,0 | 143,0 | 153,0 |
| **200** | 695 | 563 | 733 | 295 | 20 | 465 | 329 | 445 | 32 | 24,3 | 48 | 32 | 207,0 | 223,0 | 239,0 |




| DN | E2 Combi IV with vertical centre outlet | | | | | | | | | | | | | | | Spindle | | | Weight kg (no. of valves) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ø A | DN 1 | L | L 1 | H | H 1 | H 2 | H 3 | b | b 1 | k | k 1 | M 1 | M 2 | N | a | c | d 1 | 2 | 3 | 4 |
| **100** | 100 | 100 | 555 | 212 | 373 | 483 | 90 | + | 19 | + | 180 | + | 365 | 258 | 27 | 19,3 | 38 | 25 | 84,0 | 90,0 | 96,0 |
| **150** | 150 | 100<br>150* | 625 | 360 | 462 | 605 | 140 | 192 | 19 | 19 | 240 | 180<br>240 | 415 | 293,5 | 27 | 19,3 | 38 | 28 | 145,0 | 155,0 | 165,0 |
| **200** | 200 | 100<br>200* | 695 | 445 | 563 | 733 | 180 | 192 | 20 | 19<br>20 | 295 | 180<br>295 | 465 | 329 | 32 | 24,3 | 48 | 32 | 232,0 | 248,0 | 264,0 |

* on request
+ flange connection directly on the body (blind tapped holes M 16 x 23)

| Order no. | Version | Application | PN | Dimensions/DN | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | ¾" | 1" | 1¼" | 1½" | 2" |
| **2500** | **ductile iron, epoxy powder coated, female iron threads both ends** | **for water,** other applications on request | 16 | ● | ● | ● | ● | ● |
| **2510** | **stamped brass, female iron threads both ends** | **for water that is aggressive or subject to sedimentation** | | | ● | ● | ● | ● |

**Design features:**

- multiple O ring spindle seals
- stainless steel spindle
- unobstructed waterway
- wedge encapsulated with vulcanized elastomer, suitable for potable water
- threaded connection for extension spindles
- no. 2500: allen screws absolutely corrosion protected by being sunk into the body and sealed, and by passing through flat gasket

**Sealing system:**

The contact between wedge and body is friction free. Therefore no scuffing or abrasion of the wedge.

**No. 2500**

**Material:**

**Body and bonnet:**

| | |
|---|---|
| No. 2500 | of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coated |
| No. 2510 | CuZn39Pb3 (Ms 58) Bonnet is screwed and glued to the body. To unscrew, the thread must be heated to 250° C. |
| **Wedge:** | CuZn39Pb3 (Ms 58) wedge rubber elastomer, suitable for potable water |
| **Spindle:** | stainless steel 1.4021 (X20 Cr13) |

**No. 2510**



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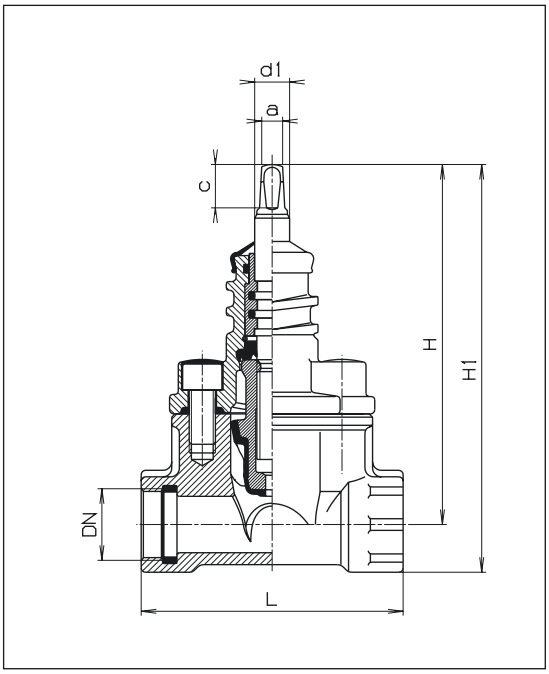
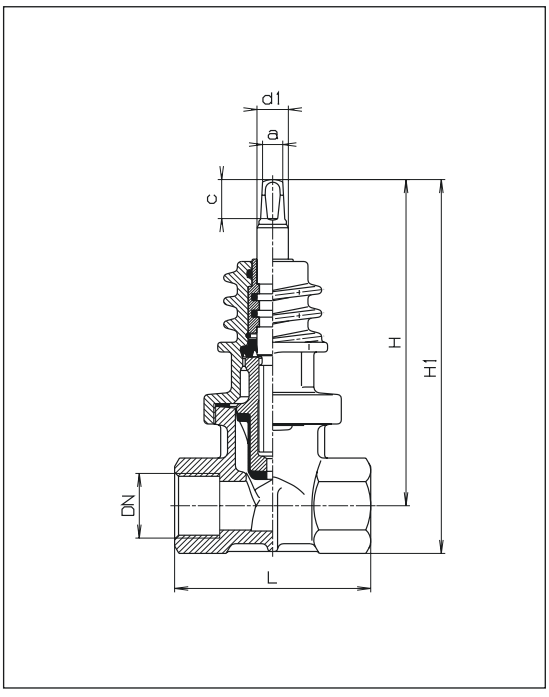
# Service Valve

| | | | |
|---|---|---|---|
| **Suitable handwheel:** | No. 7800 | **Suitable surface boxes:** | rigid No. 1550 light duty, |
| **Suitable extension spindles:** | rigid No. 9101, telescopic No. 9601 | | rigid No. 1650 heavy duty telescopic No. 1850 |




## No. 2500
## Service Valve, of ductile cast iron
**female thread both ends**

| DN | Valve | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|
| | L | H | H 1 | a | c | d 1 | |
| ¾" | 120 | 164 | 184 | 10,3 | 20 | 16 | 2,60 |
| 1" | 120 | 164 | 188 | 10,3 | 20 | 16 | 2,50 |
| 1¼" | 140 | 200 | 229 | 10,3 | 20 | 16 | 4,20 |
| 1½" | 140 | 200 | 232 | 10,3 | 20 | 16 | 4,40 |
| 2" | 150 | 219 | 258 | 10,3 | 20 | 16 | 5,20 |




## No. 2510
## Service Valve, of Ms 58
**female thread both ends**

| DN | Valve | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|
| | L | H | H 1 | a | c | d 1 | |
| 1" | 100 | 161 | 182 | 10,3 | 20 | 16 | 1,90 |
| 1¼" | 100 | 194 | 223 | 10,3 | 20 | 16 | 2,60 |
| 1½" | 100 | 194 | 223 | 10,3 | 20 | 16 | 2,70 |
| 2" | 100 | 219 | 256 | 10,3 | 20 | 16 | 4,00 |

| Order no. | Version | Application | PN | Dimensions/DN 1" | 1¼" | 1½" | 2" |
|---|---|---|---|---|---|---|---|
| **2520** | **1 female thread**<br>**1 male thread**<br>Dimensions for connection see table overleaf | **for water,**<br>other applications<br>on request | 16 | ● | ● | ●* | ● |
| **2800** | **1 male thread,**<br>**1 ISO-fitting for PE pipe**<br>**1 female thread** for attaching an under pressure drilling machine, or for steel pipe connection<br>Dimensions for connection see table overleaf | **for cold water,**<br>other applications<br>on request | | ● | ● | ● | ● |

* also available with 1½" male thread - No. 2800 can be adapted for PVC pipe with carborundum grip ring at extra cost

**These valves can be attached directly to pipe saddles for under pressure drilling without the need for additional threaded fittings.**

ÖVGW GEPRÜFT

## Design features

- multiple O ring spindle seals
- stainless steel spindle
- unobstructed waterway
- wedge encapsulated with vulcanized elastomer, suitable for potable water
- epoxy powder coated
- threaded connection for extension spindles
- allen screws absolutely corrosion protected by being sunk into the body and sealed, and by passing throughflat gasket

**No. 2520**

## Sealing system:

The contact between wedge and body is friction free. Therefore no scuffing or abrasion of the wedge.

**No. 2800**

STRUCTURE of grip ring for PE pipes

### Material:

**Body and bonnet:**

of ductile iron EN-GJS-400-18
according to EN 1563 (GGG 400 - DIN 1693)
epoxy powder coated

**Wedge:** CuZn39Pb3 (Ms 58)
wedge rubber elastomer, suitable for potable water

**Spindle:** stainless steel 1.4021



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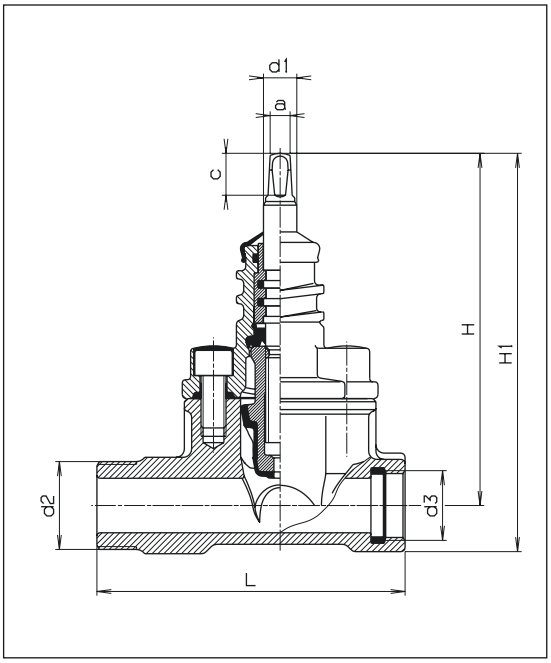
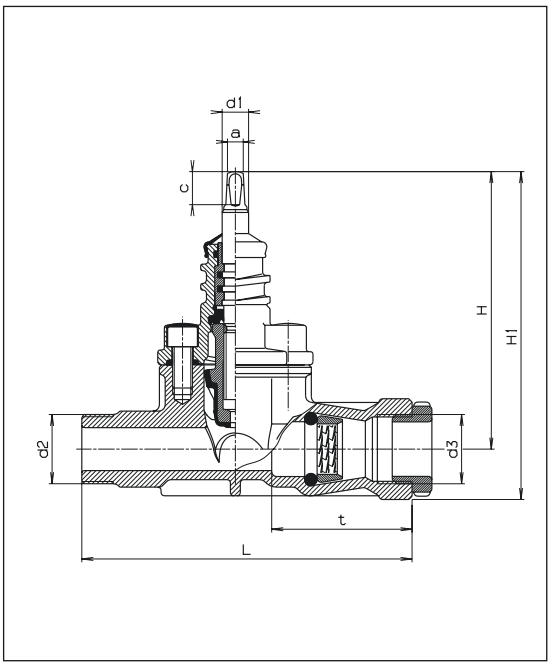
# Service Valve

| | | | |
|---|---|---|---|
| **Suitable handwheel:** | No. 7800 | **Suitable surface boxes:** | rigid No. 1550 light duty,<br>rigid No. 1650 heavy duty<br>telescopic No. 1850 |
| **Suitable extension spindles:** | rigid No. 9101,<br>telescopic No. 9601 | | |




## No. 2520
## Service Valve
**with one female and one male thread**

| DN | Valve | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| | L | H | H 1 | d 2 | d 3 | a | c | d 1 | |
| **1"** | 148 | 164 | 191 | 1¼" | 1" | 10,3 | 20 | 16 | 2,80 |
| **1¼"** | 167 | 200 | 234 | 2" | 1¼" | 10,3 | 20 | 16 | 4,70 |
| **1½"** | 167 | 200 | 238 | 2" | 1½" | 10,3 | 20 | 16 | 4,80 |
| **1½"** | 167 | 200 | 238 | 1½" | 1½" | 10,3 | 20 | 16 | 4,80 |
| **2"** | 172 | 219 | 264 | 2" | 2" | 10,3 | 20 | 16 | 5,20 |




## No. 2800
## Service Valve
**1 male thread, 1 ISO-fitting, 1 female thread**

| DN | Pipe o.d. Ø | Valve | | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | d 2 | d 3 | t | L | H | H 1 | a | c | d 1 | |
| **1"** | **32** | 1¼" | 1¼" | 85 | 200 | 164 | 193 | 10,3 | 20 | 16 | 3,10 |
| **1¼"** | **40** | 2" | 1½" | 101 | 245 | 200 | 234 | 10,3 | 20 | 16 | 4,90 |
| **1½"** | **50** | 2" | 2" | 121 | 255 | 200 | 239 | 10,3 | 20 | 16 | 5,60 |
| **2"** | **63** | 2" | 2½" | 137 | 264 | 219 | 267 | 10,3 | 20 | 16 | 6,50 |

| Order no. | Version | Application | PN | Dimensions/DN | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | ½" | ¾" | 1" | 1¼" | 1½" | 2" |
| **2600** | **grey iron / ductile iron**<br>**ISO-fitting for PR pipe both ends** | **for cold water,**<br>other applications on request | 16 | | ● | ●* | ● | ● | ● |
| **2630** | **of POM**<br>**ISO-fitting for PR pipe both ends** | | | ● | ● | ● | ● | ● | ● |

both valves can be adapted for PVC pipe with carborundum grip ring at extra cost

## Design features

- multiple O ring spindle seals
- stainless steel spindle
- unobstructed waterway
- wedge encapsulated with vulcanized elastomer, suitable for potable water
- threaded connection for extension spindles
- no. 2600: allen screws absolutely corrosion protected by being sunk into the body and sealed, and by passing through flat gasket

## Sealing system:

The contact between wedge and body is friction free. Therefore no scuffing or abrasion of the wedge.

**No. 2600**

ÖVGW GEPRÜFT

STRUCTURE of grip ring for PE pipes

### Material:

| | |
|---|---|
| **Body No. 2600:** | of grey iron EN-GJL -250 according to EN 1561 (GG 250- DIN 1691) epoxy powder coated |
| **Bonnet No. 2600:** | of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400- DIN 1693) epoxy powder coated |
| **Body and bonnet No. 2630:** | POM - tensile strength 7000 N/cm² |
| **Wedge:** | CuZn39Pb3 (Ms 58) wedge rubber elastomer, suitable for potable water |
| **Spindle:** | stainless steel 1.4021 |

## Service Valve of POM

The bonnet is spin welded to the body.

Maximum spindle torque: 80 Nm

The material is entirely resistant to corrosion.

The valve design prevents sediment accumulating irrespective of water quality.

Suitable for installation of service lines in aggressive grounds.

**No. 2630**



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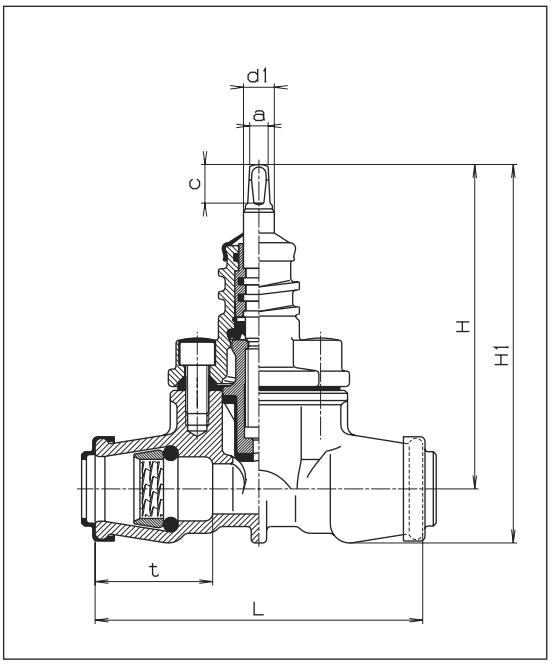
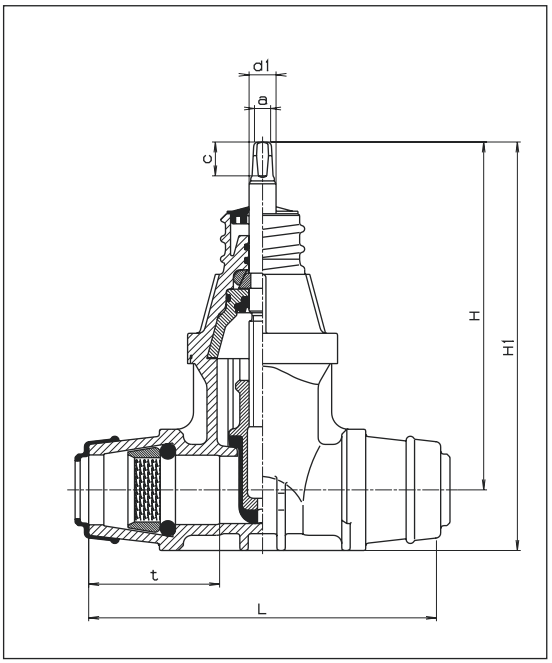
# Service Valve

| | | | |
|---|---|---|---|
| **Suitable handwheel:** | No. 7800 | **Suitable surface boxes:** | rigid No. 1550 light duty,<br>rigid No. 1650 heavy duty<br>telescopic No. 1850 |
| **Suitable extension spindles:** | rigid No. 9101,<br>telescopic No. 9601 | | |




## No. 2600
## **Service Valve**, of grey iron / ductile iron
**ISO-fitting for PE pipe both ends**

| DN | Pipe o.d. Ø | Valve | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| | | t | L | H | H 1 | a | c | d 1 | |
| ¾" | 25 | 52 | 165 | 164 | 187 | 10,3 | 20 | 16 | 2,50 |
| 1" | 32 | 61 | 170 | 164 | 192 | 10,3 | 20 | 16 | 2,80 |
| 1¼" | 40 | 76 | 220 | 200 | 235 | 10,3 | 20 | 16 | 4,80 |
| 1½" | 50 | 91 | 232 | 200 | 240 | 10,3 | 20 | 16 | 5,10 |
| 2" | 63 | 103 | 270 | 219 | 267 | 10,3 | 20 | 16 | 6,80 |




## No. 2630
## **Service Valve,** of POM
**ISO-fitting for PE pipe both ends**

| DN | Pipe o.d. Ø | Valve | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| | | t | L | H | H 1 | a | c | d 1 | |
| ½" | 20 | 43 | 125 | 178 | 200 | 10,3 | 20 | 16 | 0,85 |
| ¾" | 25 | 52 | 152 | 177 | 205 | 10,3 | 20 | 16 | 0,85 |
| 1" | 32 | 63 | 174 | 177 | 205 | 10,3 | 20 | 16 | 0,95 |
| 1¼" | 40 | 78 | 208 | 205 | 241 | 10,3 | 20 | 16 | 1,50 |
| 1½" | 50 | 92 | 246 | 205 | 247 | 10,3 | 20 | 16 | 1,65 |
| 2" | 63 | 100 | 261 | 221 | 271 | 10,3 | 20 | 16 | 2,10 |

# Service Valve for PE fusion

| Order no. | Version | PE fusion tail | PN | Application | Dimensions/DN 1" | 1¼" | 1½" | 2" |
|---|---|---|---|---|---|---|---|---|
| **2670** | **of POM with PE fusion tails for welding to PE pipes to ÖNORM 5172, DIN 8075** | **PE 80 / SDR 11** | 10 | **cold water** other applications on request | ● | ● | ● | ● |
| **2671** | | **PE 80 / SDR 17.6** | 6 | | ● | ● | ● | ● |

## Design features

- the bonnet is spin welded to the body
- multiple O ring spindle seals
- stainless steel spindle
- unobstructed waterway
- wedge encapsulated with vulcanized elastomer, suitable for potable water
- threaded connection for extension spindles

## Sealing system:

The contact between wedge and body is friction free. Therefore no scuffing or abrasion of the wedge.

## Material:

| | |
|---|---|
| **Body and Bonnet:** | of POM - tensile strength 7000 N/cm² |
| **PE fusion tails:** | Standard version PE 80 injection moulded |
| Melt flow index: | MFR 190/5 kg - 09<br>MFR-group 010 (DIN 8075)<br>(PE 100 MFR group 05-DIN 8075 on request) |
| **Support liner**: | stainless steel 1. 4301 (X5CrNi189) |
| **Wedge:** | DN 1" CuZn39Pb3 (Ms 58)<br>DN 1¼" - 2" CuSn7ZnPb (Rg 7)<br>wedge rubber of elastomer, suitable for potable water |
| **Spindle:** | stainless steel 1.4021 (X20 Cr13) |

This resilient seated valve has PE tails screwed into and sealed in the sockets.

High performance sealing of the PE tails within the sockets is assured by two separate seals and a stainless steel support liner within the tails.

The valve can be connected to the PE pipeline by either butt fusion or electrofusion.



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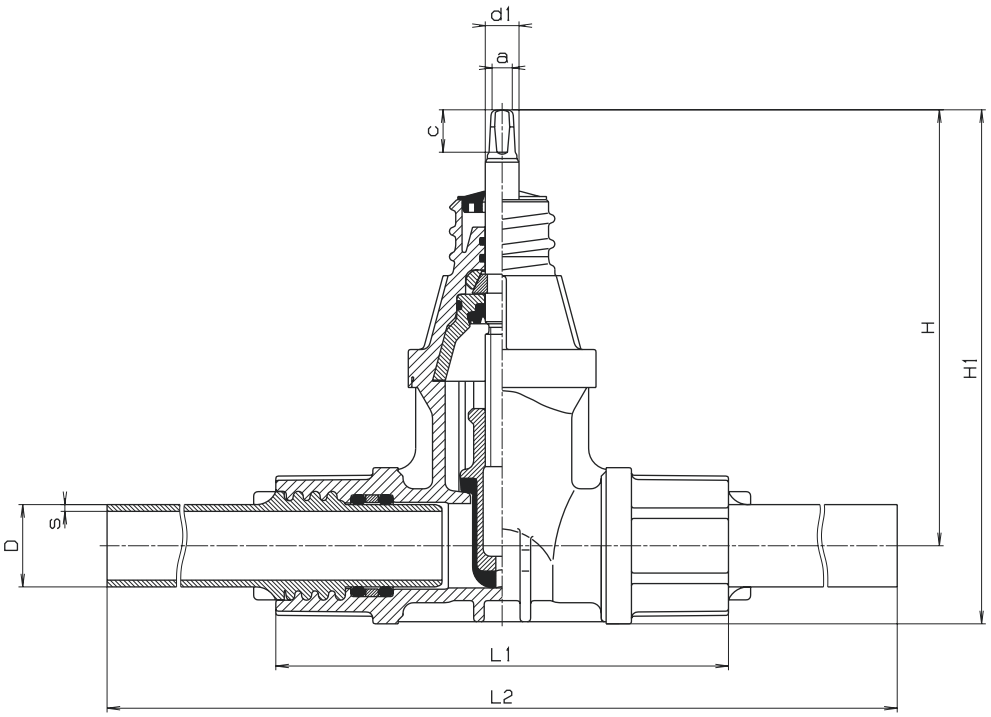
# Service Valve for PE fusion

| | | | |
|---|---|---|---|
| **Suitable handwheel:** | No. 7800 | **Suitable surface boxes:** | rigid No. 1550 light duty,<br>rigid No. 1650 heavy duty<br>telescopic No. 1850 |
| **Suitable extension spindles:** | rigid No. 9101,<br>telescopic No. 9601 | | |

## No. 2670 - PN 10
## No. 2671 - PN 6

### Valve for PE fusion, of POM
**with PE fusion tails**

**Pressure rating:** PN 10
**Maximum spindle torque:** 80 Nm




| DN | Ø D | Valve with PE tails | | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | s (PN 6)* | s (PN 10)** | H | H 1 | L 1 | L 2 | a | c | d 1 | |
| 1" | 32 | 2,0 | 3,0 | 177 | 212 | 180 | 502 | 10,3 | 20 | 14 | 1,25 |
| 1¼" | 40 | 2,3 | 3,7 | 205 | 241 | 218 | 544 | 10,3 | 20 | 16 | 1,85 |
| 1½" | 50 | 2,9 | 4,6 | 205 | 247 | 251 | 587 | 10,3 | 20 | 16 | 2,30 |
| 2" | 63 | 3,6 | 5,8 | 221 | 271 | 271 | 639 | 10,3 | 20 | 16 | 3,10 |

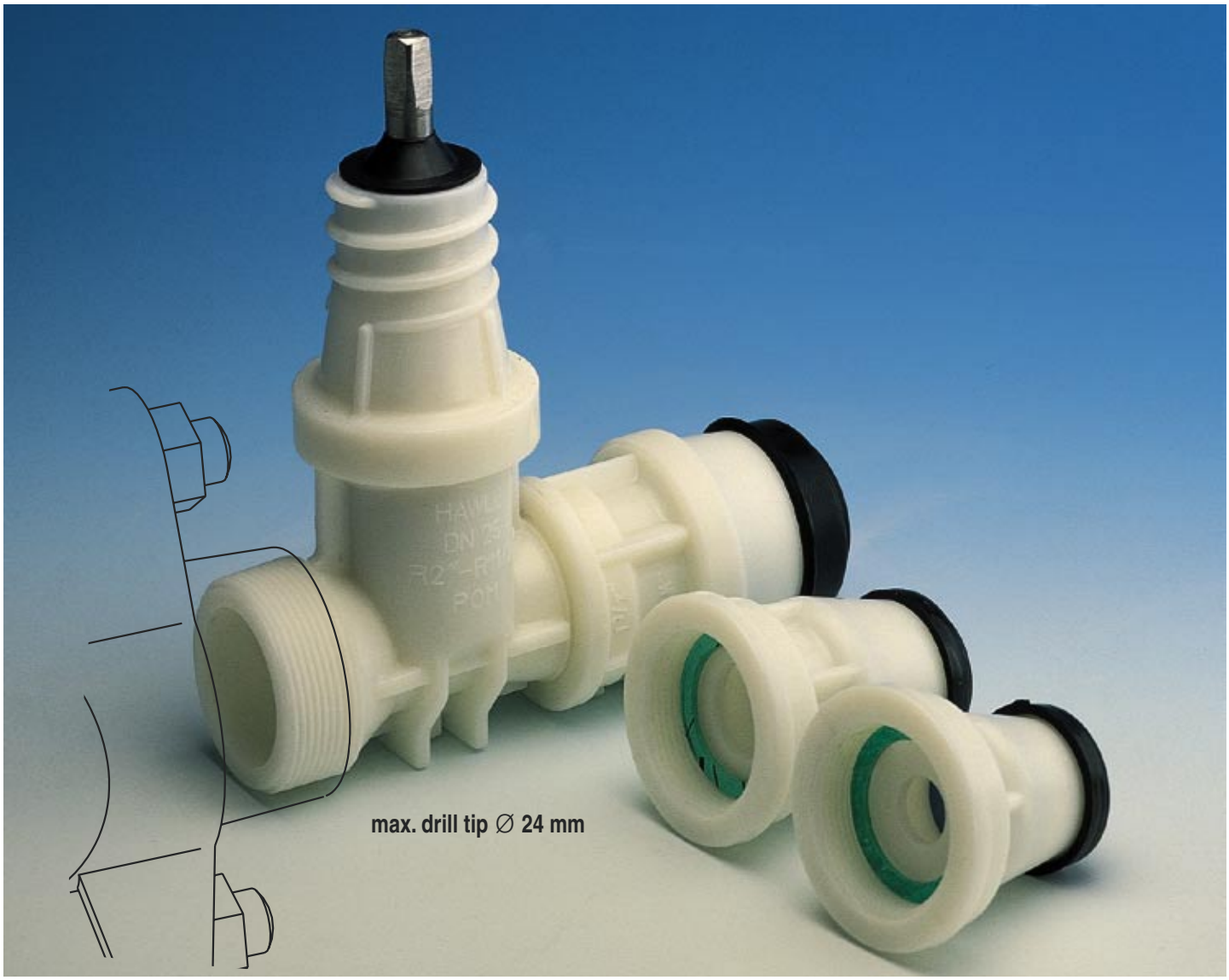
*SDR 17.6 **SDR 11

# ISO Combination Tapping Valve

| Order no. | Version | Appli-cation | PN | DN | Thread | PE pipe Ø mm | |
|---|---|---|---|---|---|---|---|
| **2681** | **ISO Combination Tapping Valve DN 1"** with 2" male iron thread for mounting onto saddle and 1½" male iron thread only for ISO push-fit fitting No. 6221F (without ISO push-fit fitting) | **cold water** other applications on request | 16 | **1"** | **2" - 1½"** | | ● |
| **2680** | **ISO Combination Tapping Valve DN 1"** with 2" male iron thread for mounting onto saddle and 1½"male iron thread only for ISO push-fit fitting No. 6221F (complete with choice of ISO push-fit fitting) | | | **1"** | **2" - 1½"** | 25 | ● |
| | | | | | | 32 | ● |
| | | | | | | 40 | ● |
| | | | | | | 50 | ● |
| | | | | | | 63 | ● |
| **6221F** | **ISO push-fit fitting** with backing washer | | | | **1½"** | 25 | ● |
| | | | | | | 32 | ● |
| | | | | | | 40 | ● |
| | | | | | | 50 | ● |
| | | | | | | 63 | ● |
| **5940** | **Adaptor** for HAWLE drilling machine (2") | | | | **1½" - 2"** | | ● |

- One valve with 5 ISO push-fit fittings for PE pipes (pipe Ø 25/32/40/50/63 mm) - reduces stockkeeping
- A robust valve of POM
- For the easiest under pressure tapping and the quickest installation of ISO push-fit fittings

For technical details and instructions for use, see over page.



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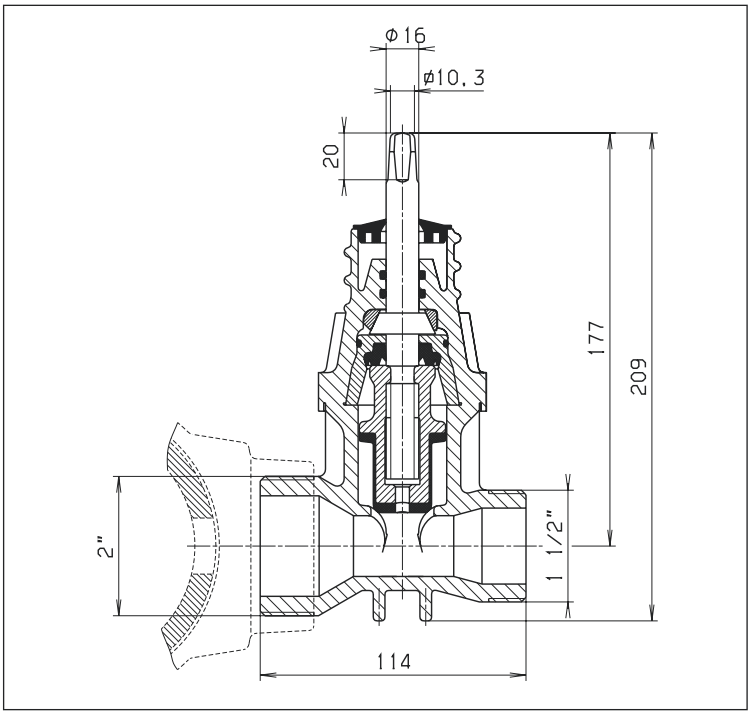
# ISO Combination Tapping Valve

| | | | |
|---|---|---|---|
| **Suitable handwheel:** | No. 7800 | **Suitable surface boxes:** | rigid No. 1550 light duty, |
| **Suitable extension spindles:** | rigid No. 9101, telescopic: No. 9601 | | rigid No. 1650 heavy duty, telescopic: No. 1850 |




## No. 2681

### Tapping Valve DN 1"

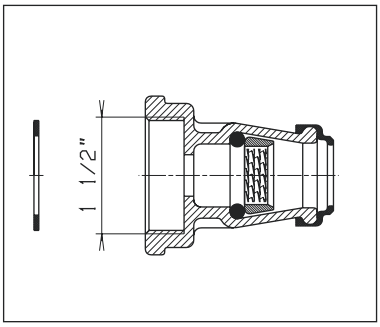
**with 2" male iron thread** for mounting onto saddle

**and 1½" male iron thread** only for ISO push-fit fitting No. 6221F

**Sealing system:**
The contact between wedge and body is friction free. Therefore no scuffing or abrasion of the wedge.

**Material:**

| | |
|---|---|
| **Body:** | POM<br>tensile strength 7000 N/cm² |
| **Wedge:** | CuZn39Pb3 (Ms 58)<br>wedge rubber of elastomer, suitable for potable water |
| **Spindle:** | stainless steel 1.4021 (X20Cr13) |




## No. 6221F

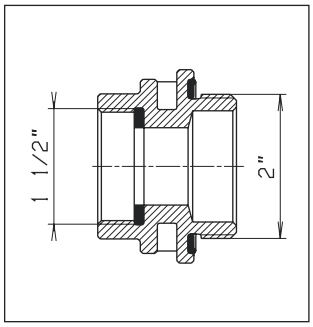
### ISO push-fit fitting

POM

female thread 1½"

push-fit socket for PE pipes up to PN 16, pipe Ø 25/32/40/50/63 mm

The backing washer (made of Aqua-Gummi) eliminates time-consuming sealing with hemp or PTFE tape.




## No. 5940

### Adaptor

G-CuSn7ZnPb (Rg7)

female thread 1½"
male thread 2"

for HAWLE drilling machines No. 5800 or No. 5805

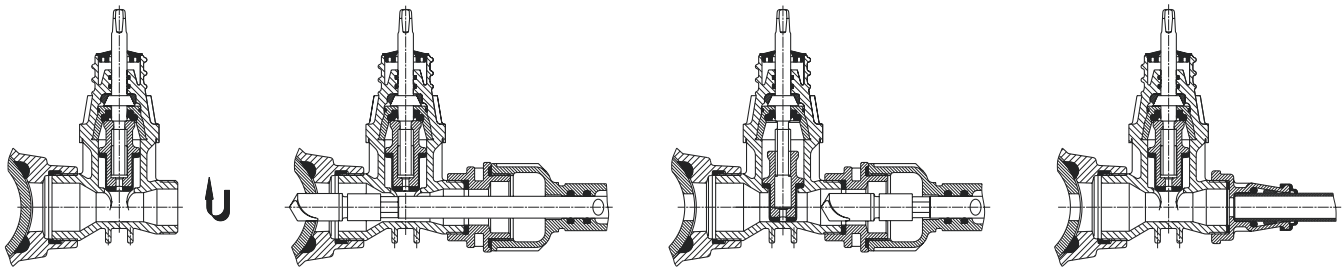
## DRILLING AND ASSEMBLY INSTRUCTIONS

**1. Mounting onto the saddle:**
Screw the 2" male thread into the female thread of the saddle.

**2. Drilling:**
Open the valve completely; if necessary use adaptor no. 5940.

**3. Shut off:**
After drilling, retract the drill and close the valve.

**4. Pipe assembly:**
Screw on one of the three ISO push-fit fittings — push the pipe in — finished.



| Order no. | Version | Application | PN | Dimensions/DN | | | |
|---|---|---|---|---|---|---|---|
| | | | | 1" | 1¼" | 1½" | 2" |
| **3120** | **with female thread outlet** | **for cold water** other applications on request | 16 | ● | ● | ● | ● |
| **3128** | **with female thread outlet and automatic drainage device*** | | | ● | | ● | |
| **3130** | **with ISO-fitting for PE pipe** | | | ● | ● | ● | ● |

*see over page - No. 3130 can be adapted for PVC pipe with carborundum grip ring at extra cost

## For vertical installation on pipe saddles

### Design features

- multiple O ring spindle seals
- robust construction with good waterway flow characteristics
- allen screws absolutely corrosion protected by being sunk into the body and sealed, and by passing through flat gasket
- stainless steel spindle
- shut off plug encapsulated with vulcanized elastomer, suitable for potable water
- threaded connection for extension spindles
- epoxy powder coated

### Material:

**Body and bonnet:**
of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400-DIN 1693), epoxy powder coated

**Shut off plug:** of CuZn39Pb3 (Ms58)

**Plug seal:** of elastomer, suitable for potable water

**Spindle:** stainless steel 1.4021 (X20 Cr13)

**O rings:** of elastomer

### Sealing system:

The contact between shut-off plug and the body is friction free. Therefore no scuffing or abrasion of the seal.

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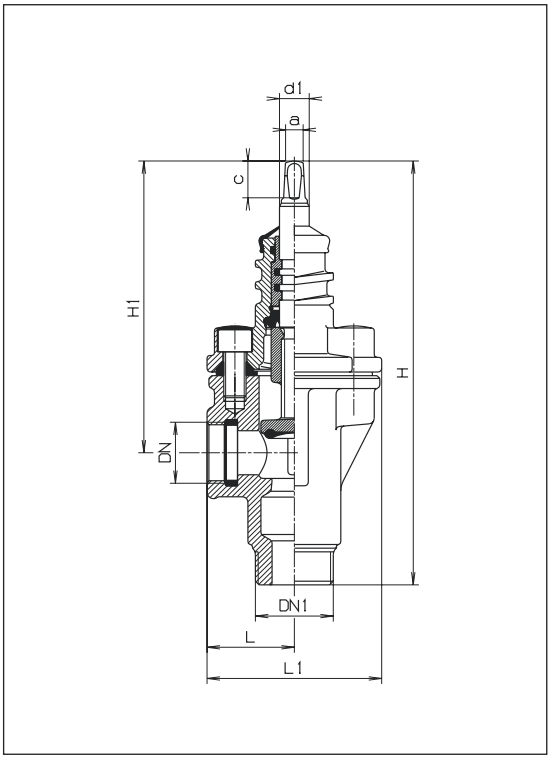
# Service Valve

| | | | |
|---|---|---|---|
| **Suitable handwheel:** | No. 7800 | **Suitable surface boxes:** | rigid No. 1550 light duty,<br>rigid No. 1650 heavy duty<br>telescopic No. 1850 |
| **Suitable extension spindles:** | rigid No. 9101,<br>telescopic No. 9601 | | |




## No. 3120
## Service Valve
**with female thread outlet**

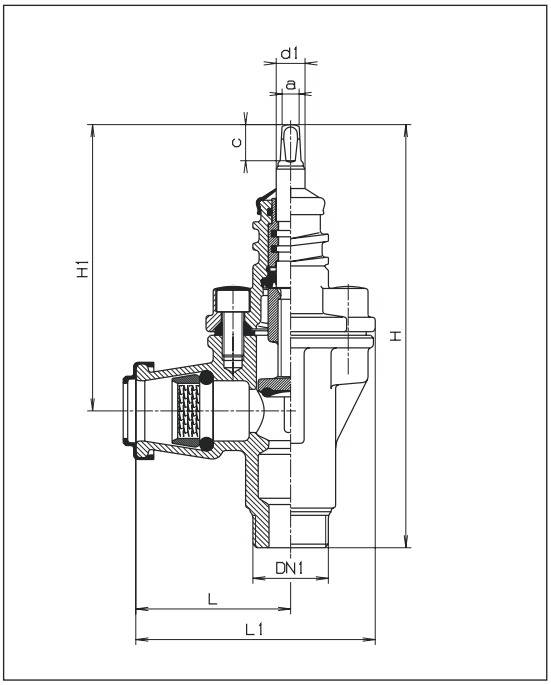
## No. 3128
## Service Valve
**with female thread outlet and automatic drainage device**
(not shown)

* NOT suitable for locations with a drainage hole under the water table

Please observe the flow directional arrow.
Protection against pressure water only when fully opened.

The automatic drainage of the service is only available when the valve is fully shut.

| DN | DN 1 | Valve | | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L | L 1 | H No. | | H 1 No. | | a | c | d 1 | |
| | | | | 3120 | 3128 | 3120 | 3128 | | | | |
| 1" | 1¼" | 47 | 93 | 227 | 242 | 159 | 170 | 10,3 | 20 | 16 | 2,20 |
| 1¼" | 2" | 55 | 108 | 271 | - | 191 | - | 10,3 | 20 | 16 | 3,60 |
| 1½" | 2" | 56 | 109 | 280 | 292 | 193 | 205 | 10,3 | 20 | 16 | 3,90 |
| 2" | 2" | 60 | 113 | 289 | - | 196 | - | 10,3 | 20 | 16 | 4,40 |




## No. 3130
## Service Valve
**with ISO-fitting for PE pipe**

| DN | Pipe o.d. Ø | DN 1 | Valve | | | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | t | L | L 1 | H | H 1 | a | c | d 1 | |
| 1" | 32 | 1¼" | 63 | 86 | 132 | 231 | 159 | 10,3 | 20 | 16 | 2,50 |
| 1¼" | 40 | 2" | 77 | 106 | 159 | 273 | 191 | 10,3 | 20 | 16 | 4,00 |
| 1½" | 50 | 2" | 91 | 120 | 173 | 283 | 193 | 10,3 | 20 | 16 | 4,40 |
| 2" | 63 | 2" | 103 | 135 | 188 | 289 | 196 | 10,3 | 20 | 16 | 5,50 |

# ISO Combination Service Valve

| Order no. | Version | Appli-cation | PN | DN | Thread | PE pipe Ø mm | |
|---|---|---|---|---|---|---|---|
| **3151** | **ISO Combination Service Valve DN 1"**<br>with 2" male thread for mounting onto saddle and 1½" male thread<br>only for ISO push-fit fitting No. 6221F **(without ISO push-fit fitting)** | **cold water**<br>other applications on request | 16 | **1"** | **2" - 1½"** | | ● |
| **3150** | **ISO Combination Service Valve DN 1"**<br>with 2" male thread for mounting onto saddle and 1½" male thread<br>only for ISO push-fit fitting No. 6221F **(complete with choice of ISO push-fit fitting)** | | | **1"** | **2" - 1½"** | 25 | ● |
| | | | | | | 32 | ● |
| | | | | | | 40 | ● |
| | | | | | | 50 | ● |
| | | | | | | 63 | ● |
| **6221F** | **ISO push-fit fitting** with backing washer | | | | **1½"** | 25 | ● |
| | | | | | | 32 | ● |
| | | | | | | 40 | ● |
| | | | | | | 50 | ● |
| | | | | | | 63 | ● |

- one valve with 5 ISO push-fit fittings for PE pipes (pipe Ø 25/32/40/50/63 mm) - reduces stockkeeping
- a robust design of POM
- totally corrosion-free



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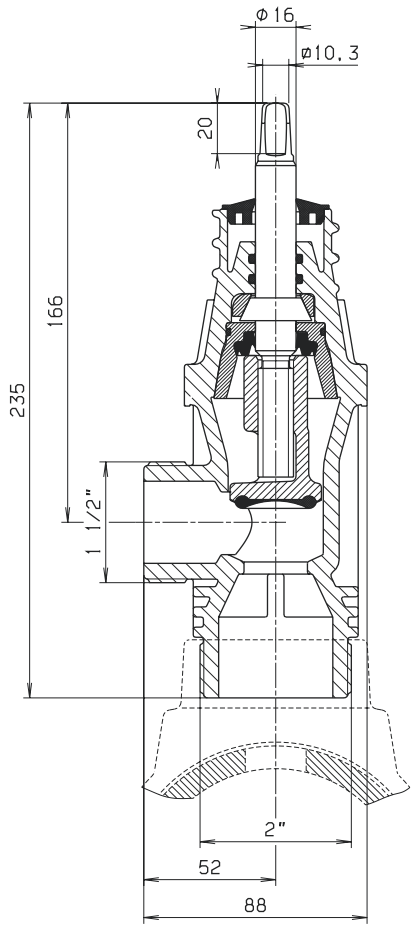
# ISO Combination Service Valve

| | | | |
|---|---|---|---|
| **Suitable handwheel:** | No. 7800 | **Suitable surface boxes:** | rigid No. 1550 light duty, |
| **Suitable extension spindles:** | rigid No. 9101, telescopic: No. 9601 | | rigid No. 1650 heavy duty, telescopic: No. 1850 |




## ISO Combination Service Valve DN 1"

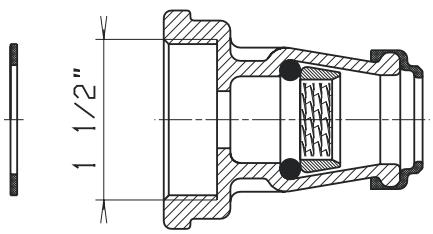
**with 2" male thread** for mounting onto saddle **and 1½" male thread** only for ISO push-fit fitting No. 6221F

**Sealing system:**

The contact between plug and body is friction free. Therefore no scuffing or abrasion on the plug.

**Materials:**

| | |
|---|---|
| **Body:** | POM<br>tensile strength 7000 N/cm² |
| **Plug:** | CuZn39Pb3 (Ms 58) |
| **Plug seal:** | of elastomer, suitable for potable water |
| **Spindle:** | stainless steel 1.4021 (X20Cr13) |




## No. 6221F
## ISO push-fit fitting

of POM

female thread 1½"

push-fit socket for PE pipes up to PN 16,
pipe Ø 25/32/40/50/63 mm

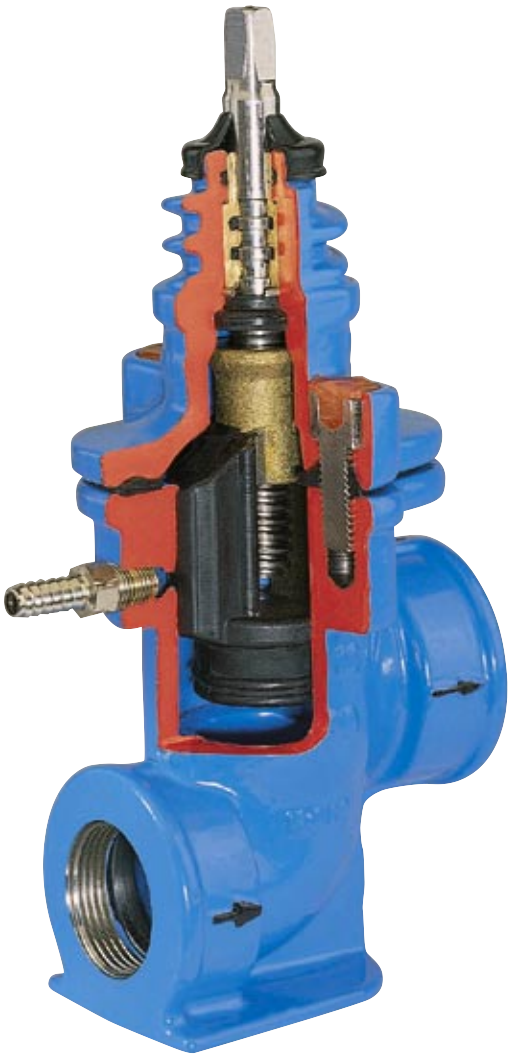
The backing washer ("Aqua-rubber") eliminates sealing with hemp, therefore quick assembly!

| Order no. | Version | Application | PN | Dimensions/DN | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | ¾" | 1" | 1¼" | 1½" | 2" |
| **2491** | **female iron threads both ends, automatic drainage device** | **for water** other applications on request | 16 | ● | ● | ● | ● | ● |

Suitable for draining of pipes which might freeze e.g. irrigation pipes etc.
In below ground applications sufficient draining for the valve has to be considered (e.g. drainage pit)

**Design features:**

- secured drain hole
- automatic drainage device
- multiple O ring spindle seals
- solid construction
- allen screws St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket
- stainless steel spindle
- vulcanised plug (suitable for potable water)
- threaded connection for extension spindles
- inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz - the association for high quality corrosion protection)



**Material:**

**Body and Bonnet:**
of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400-DIN 1693), epoxy powder coated

**Plug:** of brass/elastomer, suitable for potable water

**Spindle:** stainless steel 1.4021 (X20 Cr13)

**O rings:** of elastomer

**Closing system (secured):**

Automatic secured draining when valve is completely closed.

No cleaning when the valve is partly or completely open.



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# Service Valve

| | | | |
|---|---|---|---|
| **Suitable handwheel:** | No. 7800 | **Suitable surface boxes:** | rigid No. 1550 light duty, |
| **Suitable extension spindles:** | rigid No. 9101, telescopic No. 9601 | | rigid No. 1650 heavy duty telescopic No. 1850 |

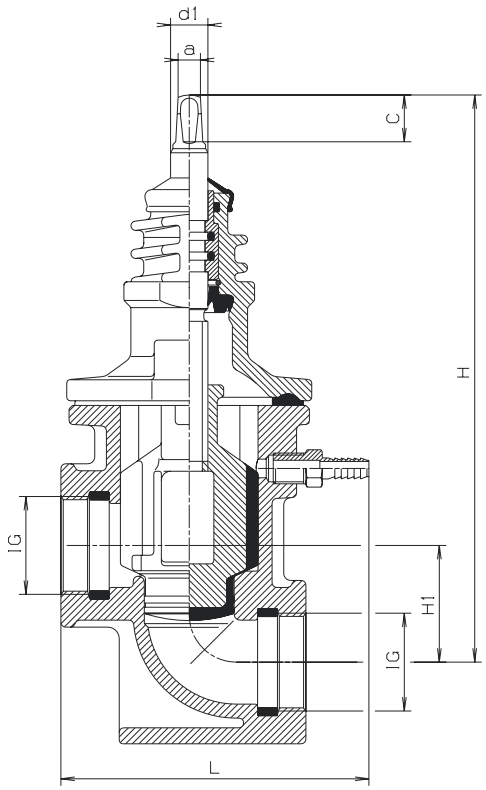
## No. 2491

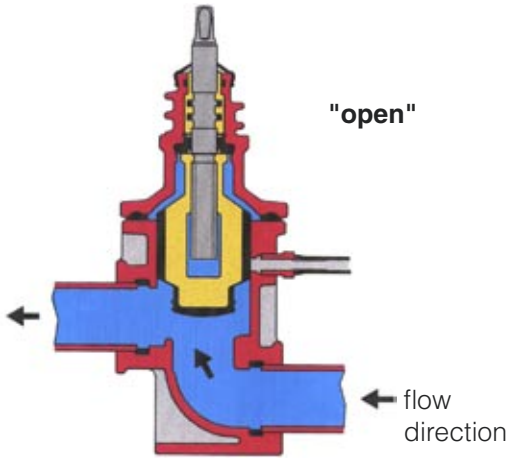
**with threaded drainhole* and automatic draining**

Note (arrow) installation direction

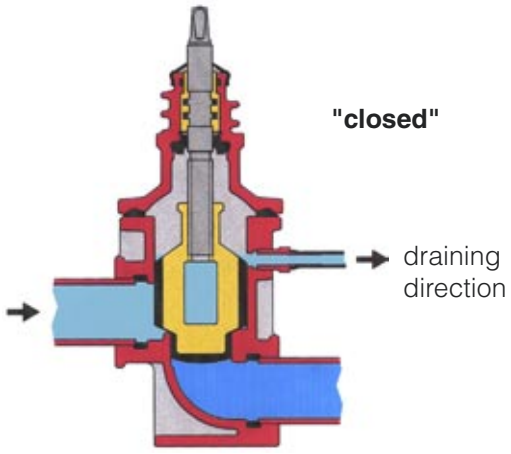
Draining only when the valve is completely closed

* Note that drainhole must be positioned above ground water level in case of below ground installation (no backflow prevention in the drainhole).




max. opening torque 40 Nm




max. closing torque 40 Nm

| DN IG (ISO 228) | Valve | | | Spindle | | | Weight kg |
|---|---|---|---|---|---|---|---|
| | L | H | H 1 | a | c | d 1 | |
| ¾" | 115 | 207 | 41 | 10,3 | 20 | 16 | 2,30 |
| 1" | 115 | 207 | 41 | 10,3 | 20 | 16 | 2,40 |
| 1¼" | 130 | 243 | 50 | 10,3 | 20 | 16 | 4,20 |
| 1½" | 130 | 243 | 50 | 10,3 | 20 | 16 | 4,10 |
| 2" | 140 | 243 | 50 | 10,3 | 20 | 16 | 4,50 |

# Hawlinger Pipe Drilling Saddle

| Order no. | Version | Application | PN | Dimensions/DN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
| **2402** | **Universal-Hawlinger**<br>for DCI, steel an AC pipes | **for water**<br>other applications on request | 16 | ● | ● | ● | ● | ● | ● | ● | ● | ● |

| Order no. | Version | Application | PN | Pipe Ø mm | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | 90 | 110 | 140 | 160 | 225 |
| **2300** | **HAKU-Hawlinger**<br>for PVC and PE pipes | **for water**<br>other applications on request | 16 | ● | ● | ● | ● | ● |

| Order no. | Version | Application | PN | | | male thread | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 1¼" | 1½" | 2" |
| **2200** | **Hawlinger Adaptor Valve**<br>for use with any pipe saddle | **for water**<br>other applications on request | 16 | female thread | 1" | ● | | |
| | | | | | 1¼" | ● | | |
| | | | | | 1½" | | ● | ● |

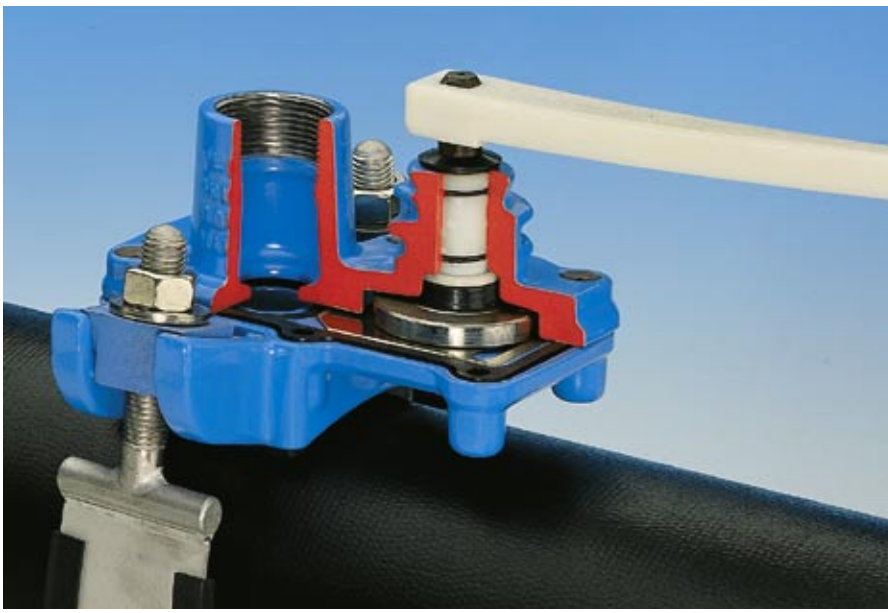
## Design features

- robust and simple design
- in the open position:
  clear, unobstructed waterway
  working parts not in contact with water
- just half a turn to open or close
- eccentric disc and shut off plate of high grade stainless steel (1.4021 = X20 Cr13 / 1.4310 = X12 CrNi17 7)
- outlet is 1", 1¼" and 1½" female thread on all models and sizes
- reducer elbow fittings available for PE pipes
- can be used with all commercial drilling machines (e.g. Hawle Drilling Machine No. 5800 or No. 5805)

**for vertical drilling only**
**includes shut-off valve**

**No. 2200** **No. 2300**

**No. 2402**



## Material:

**Body:** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coated

**Saddle strap:** for No. 2402, stainless steel 1.4571 (X10 CrNiMoTi18 10)

**Seals:** elastomer, suitable for potable water

Supplied complete with plastic operating key.
Please specify type of pipe or pipe o.d.



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# Hawlinger Pipe Drilling Saddle

**Suitable extension spindles:** on request

## No. 2402

## Universal-Hawlinger

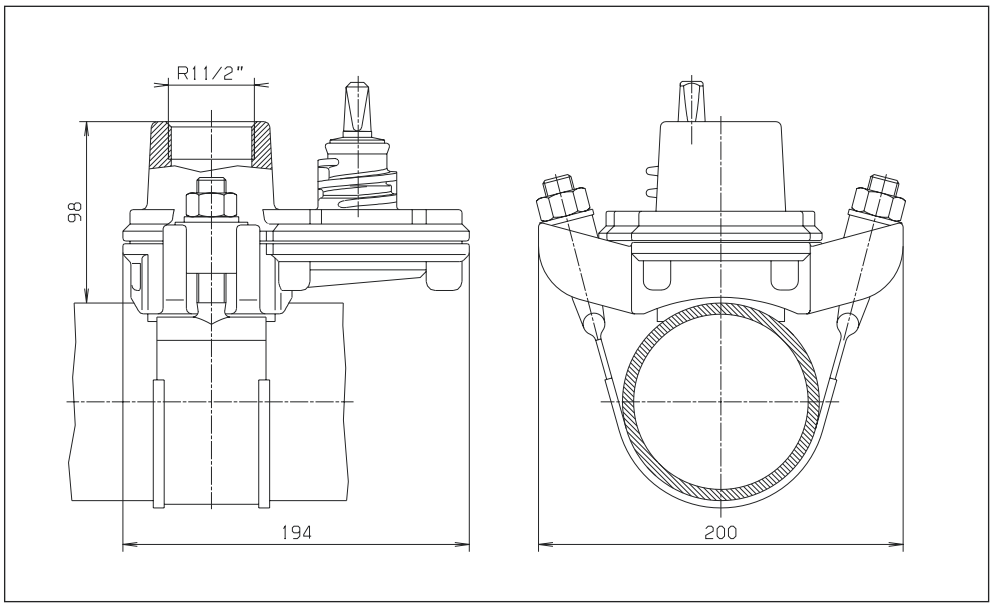
**for DCI, steel and AC pipes**

DN 80 - DN 400

with female thread 1" / 1¼" / 1½"

Dimensions and weights for female thread 1½"

| DN | Weight | DN | Weight |
|---|---|---|---|
| **80** | 7,90 | **250** | 8,40 |
| **100** | 7,90 | **300** | 8,50 |
| **125** | 8,00 | **350** | 8,70 |
| **150** | 8,10 | **400** | 8,90 |
| **200** | 8,30 | | |




## No. 2200

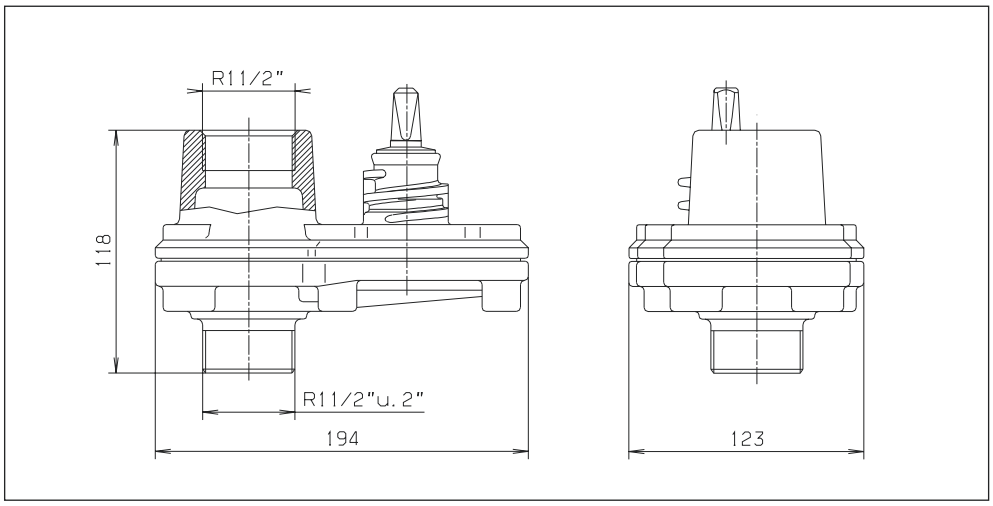
## Hawlinger Adaptor Valve

R 1" Drilling-Ø max. 24 mm
R 1¼" Drilling-Ø max. 24 mm
R 1½" Drilling-Ø max. 28 mm
R 2" Drilling-Ø max. 35 mm

with female thread 1" / 1¼" / 1½"

Dimensions and weights for female thread 1½"

Weight: 5,6 kg




## No. 2300

## HAKU-Hawlinger

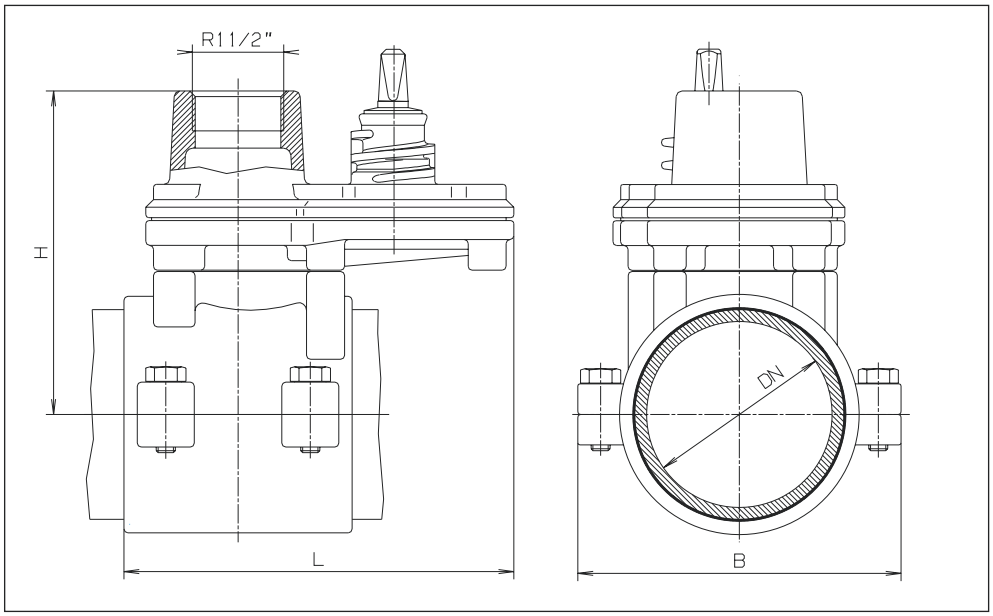
**for PVC and PE pipes**

DN 80 - DN 200

with female thread 1" / 1¼" / 1½"

Dimensions and weights for female thread 1½"

| DN | Pipe Ø | B | L | H | Weight kg |
|---|---|---|---|---|---|
| **80** | 90 | 154 | 194 | 146 | 8,30 |
| **100** | 110 | 170 | 194 | 160 | 8,50 |
| **125** | 140 | 204 | 194 | 177 | 9,35 |
| **150** | 160 | 228 | 194 | 188 | 10,30 |
| **200** | 225 | 298 | 200 | 240 | 11,80 |



# Water Meter Console

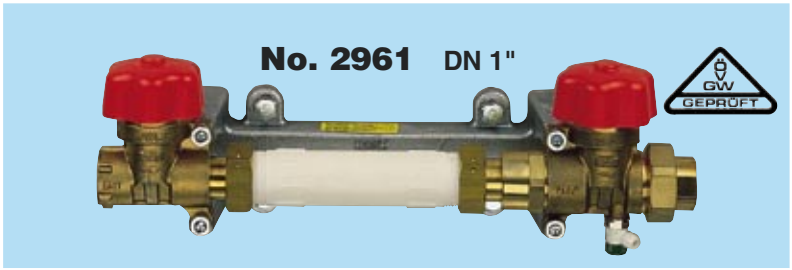
| Order no. | DN | Valve connection | $k_v$ value m³/h bei 1 bar △ p | for water meter ÖNORM B 2535 DIN-ISO 4064 | |
|---|---|---|---|---|---|
| **2961** | 1" | 2 female threads G 1 ISO 228 | 11,4 | 3(5) m³/h - 7(10) m³/h | ● |
| | 1¼"* | 2 male threads R 1¼" DIN 2999 | 11,4 | 3(5) m³/h - 7(10) m³/h | ● |
| **2960** | 1½" | 2 female threads G 1½ ISO 228 | 32,1 | 20 m³/h | ● |
| | 2" ** | 2 female threads G 2 ISO 228 | 47,2 | 30 m³/h | ● |

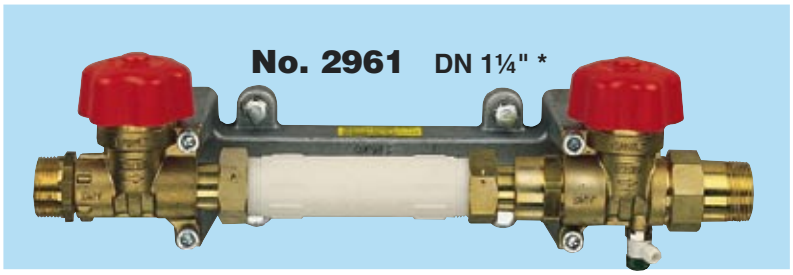
**for cold water up to 30° C - PN 16**

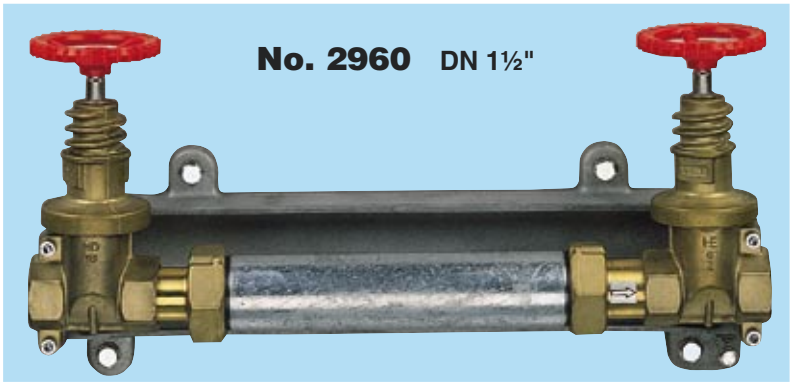
**Special versions:** * DN 1¼" with female thread G 1¼ ISO 228
** DN 2" without meter substitution connector

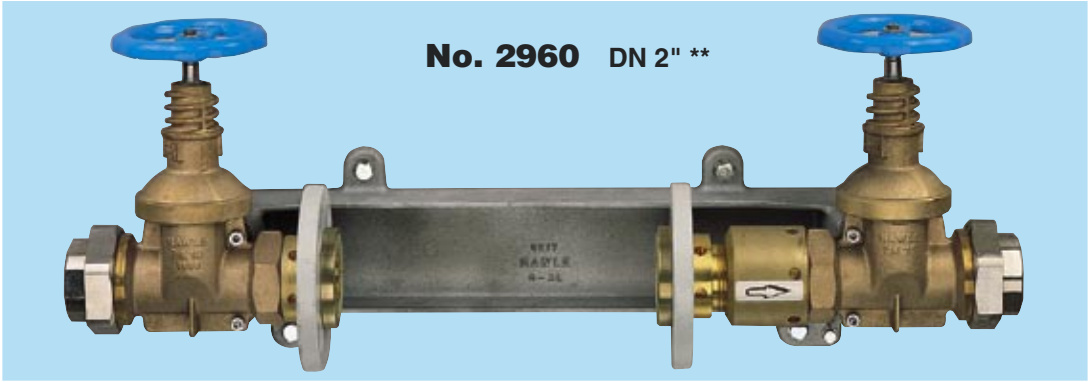
**Design features:**

- compact design - with integral back flow preventer
- problem-free assembly and dismantling of the water meter by length adjustment (supplied without water meter)
- body of brass, wall plate of aluminium (including fastening set for water meter console)
- electrical earthing link to base plate
- Order no. 2961 with drainage plug
- DN 1", 1¼" and 1½" supplied with meter substitution connector



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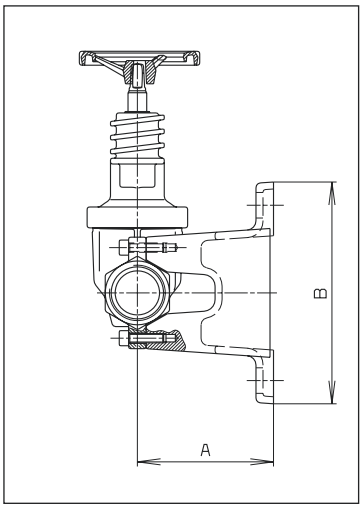
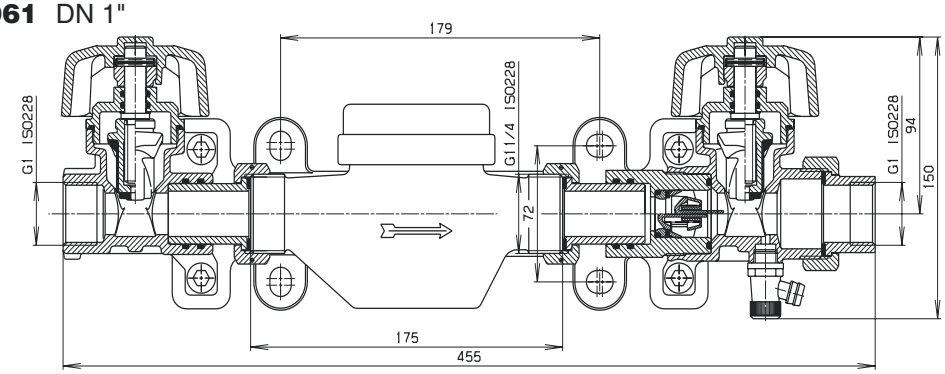
# Water Meter Console



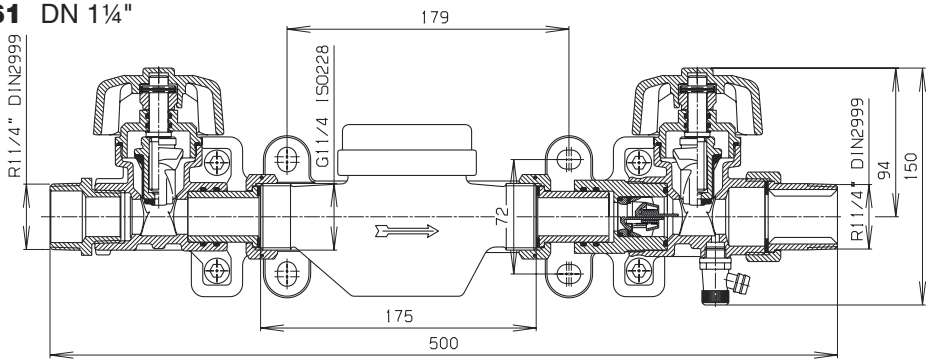

| DN | Meter connection | A mm | Weight kg |
|---|---|---|---|
| **1"** | 1¼" | 90 | 4,40 |
| **1¼"** | 1¼" | 90 | 4,60 |
| **1½"** | 2" | 115 | 11,50 |
| **2"** | Flange DN 50 | 115 | 21,50 |

| DN | Wall plate | |
|---|---|---|
| | L mm | B mm |
| **1"** | 300 | 100 |
| **1¼"** | 300 | 100 |
| **1½"** | 590 | 190 |
| **2"** | 590 | 190 |

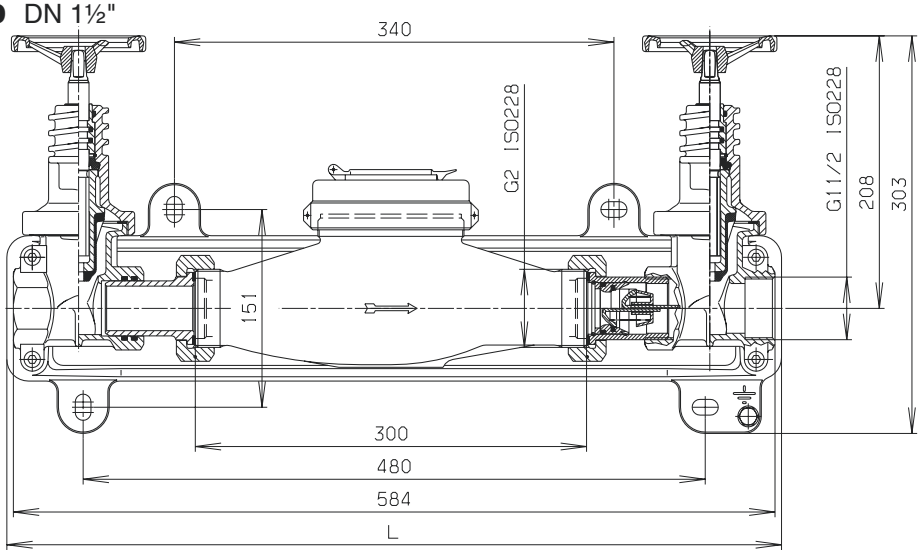
**No. 2961** DN 1"



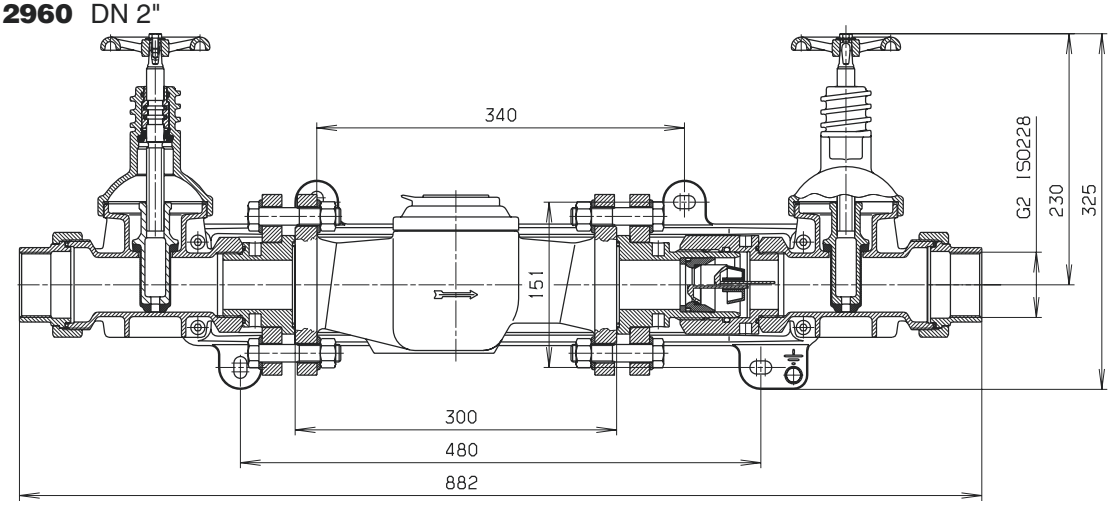

**No. 2961** DN 1¼"




**No. 2960** DN 1½"




**No. 2960** DN 2"



# rigid or telescopic

## for Elypso and Combi Valves

| Order no. | Version | Pipe cover depth | for dimensions/DN | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400-500 |
| **8980** | **rigid** | 1,00 m | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| **8990** | **rigid** | 1,25 m | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| **9000** | **rigid** (standard) | 1,50 m | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| **9010** | **rigid** | 2,00 m | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| **9020** | **rigid** | 2,50 m | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| **9500** | **telescopic** | 1,30 - 1,80 m | ● | ● | ● | ● | ● | ● | | | | | |
| **9500** | **telescopic** | 1,35 - 1,80 m | | | | | | | ● | | | | |
| **9500** | **telescopic** | 1,40 - 1,80 m | | | | | | | | ● | | | |
| **9500** | **telescopic** | 1,50 - 1,80 m | | | | | | | | | ● | ● | ● |
| **9510** | **telescopic** | 2,00 - 2,50 m | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

## for Service Valves with threaded connection for spindle

**DN ¾" — 2"**

| Order no. | Version | Pipe cover depth | |
|---|---|---|---|
| **9041** | **rigid** | 0,75 m | ● |
| **9051** | **rigid** | 1,00 m | ● |
| **9091** | **rigid** | 1,25 m | ● |
| **9101** | **rigid** (standard) | 1,50 m | ● |
| **9111** | **rigid** | 2,00 m | ● |
| **9121** | **rigid** | 2,50 m | ● |
| **9613** | **telescopic** | 0,60 - 0,80 m | ● |
| **9612** | **telescopic** | 0,80 - 1,20 m | ● |
| **9601** | **telescopic** | 1,30 - 1,80 m | ● |
| **9611** | **telescopic** | 2,00 - 2,50 m | ● |

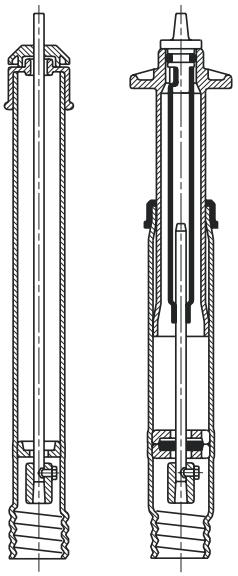
**Extender for rigid spindle**
**Order no. 7830** price for 1st m
**Order no. 7831** price for each additional 0.5 m
please specify dimension and length

## for Service Valves with connection (old version)

**DN ¾" - 1½"**

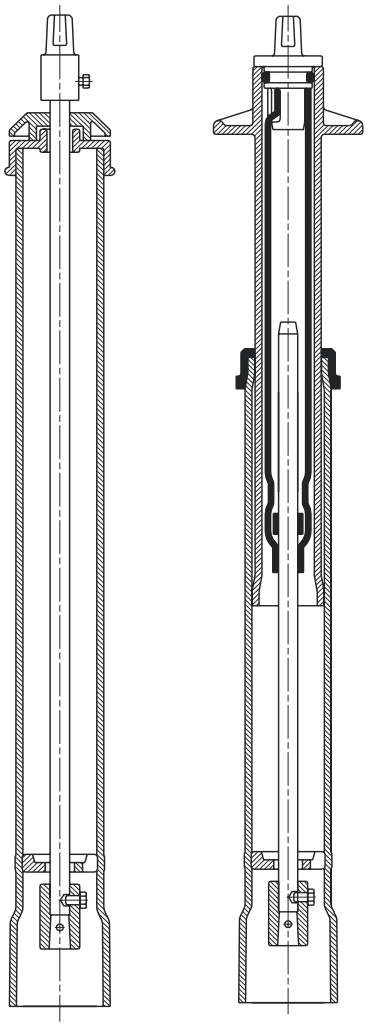
| Order no. | Version | Pipe cover depth | |
|---|---|---|---|
| **9050** | **rigid** | 1,00 m | ● |
| **9090** | **rigid** | 1,25 m | ● |
| **9100** | **rigid** (standard) | 1,50 m | ● |
| **9110** | **rigid** | 2,00 m | ● |
| **9120** | **rigid** | 2,50 m | ● |
| **9600** | **telescopic** | 1,30 - 1,80 m | ● |
| **9610** | **telescopic** | 2,00 - 2,50 m | ● |

for Service Valves



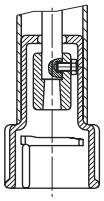
rigid telescopic

for Elypso and Combi Valves



rigid telescopic

**Bayonet**



Bayonet connection (old)



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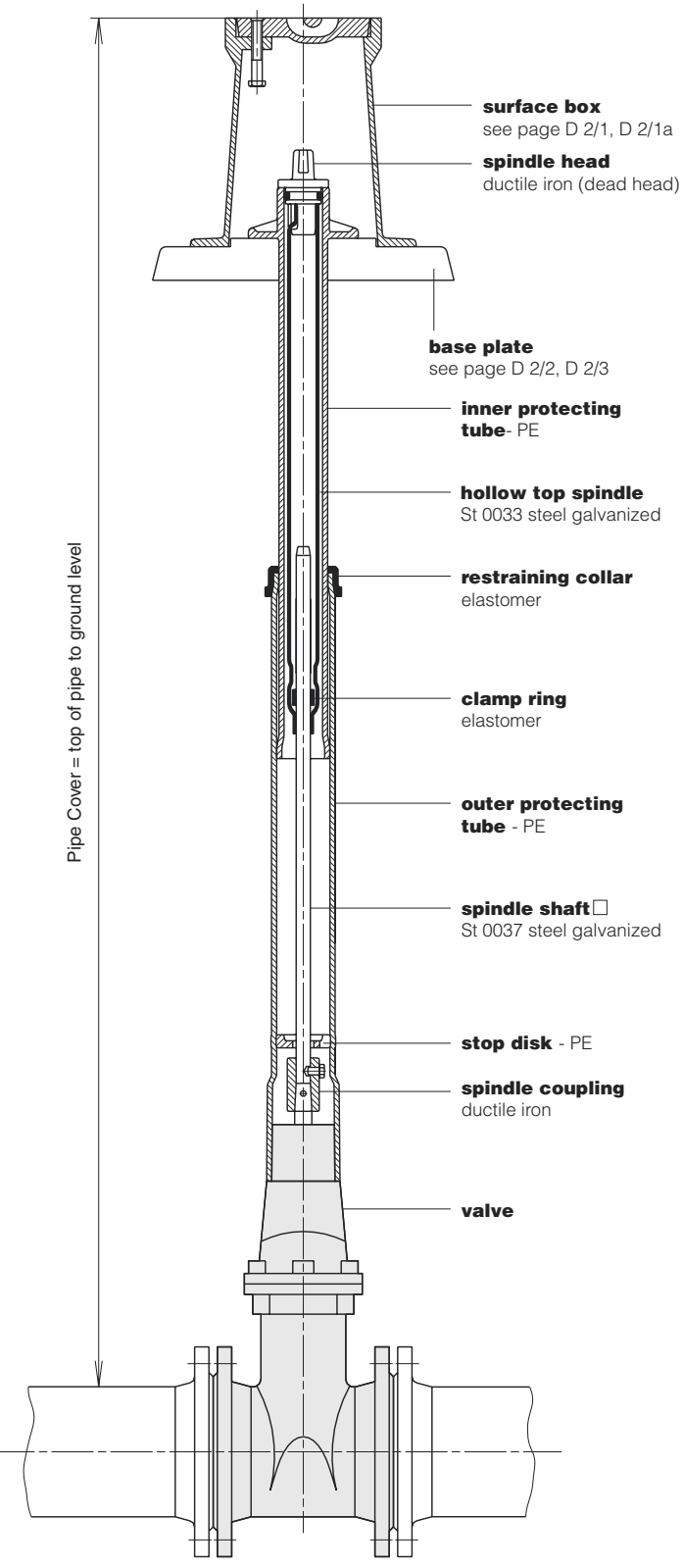
# Extension Spindles

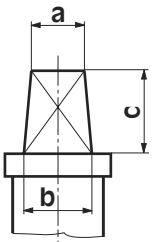
## rigid or telescopic

The **telescopic extension spindle** can be progressively adjusted to the ground level.
This is done by pushing or pulling the tube and the spindle shaft.

The telescopic effect protects the pipe and fitting from surface impact.
Supplied with or without surface box and base plate.




Telescopic Extension Spindle




**Spindle head**

| | |
|---|---|
| **for Service Valves** | a 13 mm<br>b 15 mm<br>c 24 mm |
| **for Elypso and Combi Valves** | a 27 mm<br>b 32 mm<br>c 48 mm |

### Weight of Extension Spindle for Elypso and Combi Valves

| DN | Weight kg for Order no. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 8980 | 8990 | 9000 | 9010 | 9020 | 9500 | 9510 |
| 50 | 3,20 | 4,40 | 5,30 | 7,20 | 9,20 | 6,90 | 9,10 |
| 65 | 3,20 | 4,40 | 5,30 | 7,20 | 9,20 | 6,30 | 8,90 |
| 80 | 3,30 | 4,40 | 5,20 | 7,20 | 9,10 | 6,30 | 8,80 |
| 100 | 3,40 | 4,60 | 5,30 | 7,20 | 9,20 | 6,50 | 8,80 |
| 125 | 3,00 | 4,20 | 5,20 | 10,00 | 13,20 | 7,30 | 11,15 |
| 150 | 3,00 | 4,20 | 5,20 | 10,00 | 13,20 | 7,30 | 11,15 |
| 200 | 3,40 | 3,90 | 4,80 | 9,90 | 12,50 | 6,50 | 10,95 |
| 250 | 3,10 | 4,50 | 6,00 | 9,30 | 12,30 | 6,70 | 10,60 |
| 300 | 2,70 | 4,20 | 5,70 | 9,00 | 12,00 | 6,50 | 10,20 |
| 350 | | 4,00 | 5,60 | 8,60 | 11,80 | 6,20 | 10,10 |
| 400-500 | | 3,90 | 5,30 | 8,40 | 11,50 | 6,10 | 10,10 |

### Weight of Extension Spindle with threaded connection for Service Valves

| DN | Weight kg for Order no. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 9041 | 9051 | 9091 | 9101 | 9111 | 9121 | 9601 | 9611 | 9612 | 9613 |
| ¾" - 2" | 1,20 | 1,70 | 2,20 | 2,70 | 3,70 | 4,70 | 3,50 | 4,90 | 2,40 | 1,60 |

Weight of Extension Spindle with Bayonet connection (old) for Service Valves

| DN | Weight kg for Order no. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 9050 | 9090 | 9100 | 9110 | 9120 | 9600 | 9610 |
| ¾" - 1½" | 1,60 | 2,10 | 2,50 | 3,40 | 4,30 | 3,50 | 5,05 |

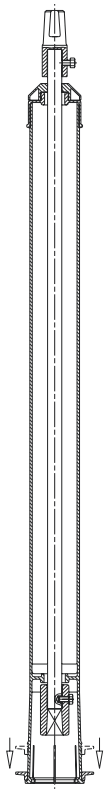
# rigid or telescopic

## for E2 Valves and E2 Combi Valves DN 50 - 200

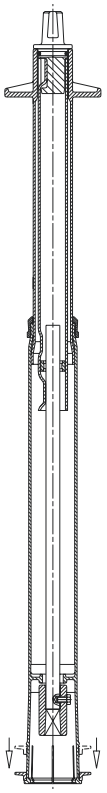
- one extension spindle for several dimensions
- protective cover with integrated locking mechanism
- No additional fixing (bolt/pin) necessary

| Order no. | Version | Pipe cover depth | for dimensions/DN | | |
|---|---|---|---|---|---|
| | | | 50/65/80/100 | 125/150 | 200 |
| **8980E2** | **rigid** | 1,00 m | ● | ● | ● |
| **8990E2** | **rigid** | 1,25 m | ● | ● | ● |
| **9000E2** | **rigid** (standard) | 1,50 m | ● | ● | ● |
| **9010E2** | **rigid** | 2,00 m | ● | ● | ● |
| **9020E2** | **rigid** | 2,50 m | ● | ● | ● |
| **9500E2** | **telescopic** | 1,30 - 1,80 m | ● | ● | |
| **9500E2** | **telescopic** | 1,35 - 1,80 m | | | ● |
| **9510E2** | **telescopic** | 2,00 - 2,50 m | ● | ● | ● |

rigid



telescopic

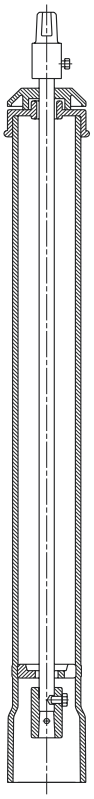


## for E2 Valve DN 250 - 600

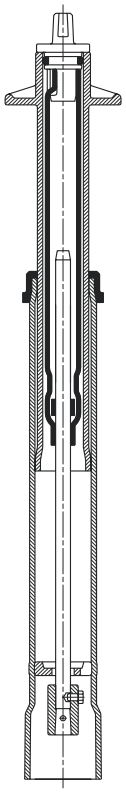
| Order no. | Version | Pipe cover depth | for dimensions/DN | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 250 | 300 | 350 | 400-500* | 500 | 600 |
| **8980** | **rigid** | 1,00 m | ● | ● | | | | |
| **8990** | **rigid** | 1,25 m | ● | ● | ● | ● | | |
| **9000** | **rigid** (standard) | 1,50 m | ● | ● | ● | ● | | |
| **9010** | **rigid** | 1,90 m | | | | | ● | |
| **9010** | **rigid** | 2,00 m | ● | ● | ● | ● | | ● |
| **9020** | **rigid** | 2,40 m | | | | | ● | |
| **9020** | **rigid** | 2,50 m | ● | ● | ● | ● | | ● |
| **9500** | **telescopic** | 1,40 - 1,80 m | ● | | | | | |
| **9500** | **telescopic** | 1,50 - 1,80 m | | ● | ● | ● | | |
| **9510** | **telescopic** | 1,90 - 2,20 m | | | | | ● | |
| **9510** | **telescopic** | 2,00 - 2,30 m | | | | | | ● |
| **9510** | **telescopic** | 2,00 - 2,50 m | ● | ● | ● | ● | | |

* Body: DN 400 – flange connection: DN 450 or 500

rigid



telescopic





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# *E2* Extension Spindles

**All extension spindles (fixe and téléscopique) of all types and dimensions are protected against dirt and surface water.**

The **téléscopique extension spindle** can be progressively adjusted to the ground level.
This is done by pushing or pulling the tube and the spindle shaft.

The téléscopique effect protects the pipe and fitting from surface impact.
Supplied with or without surface box and base plate.

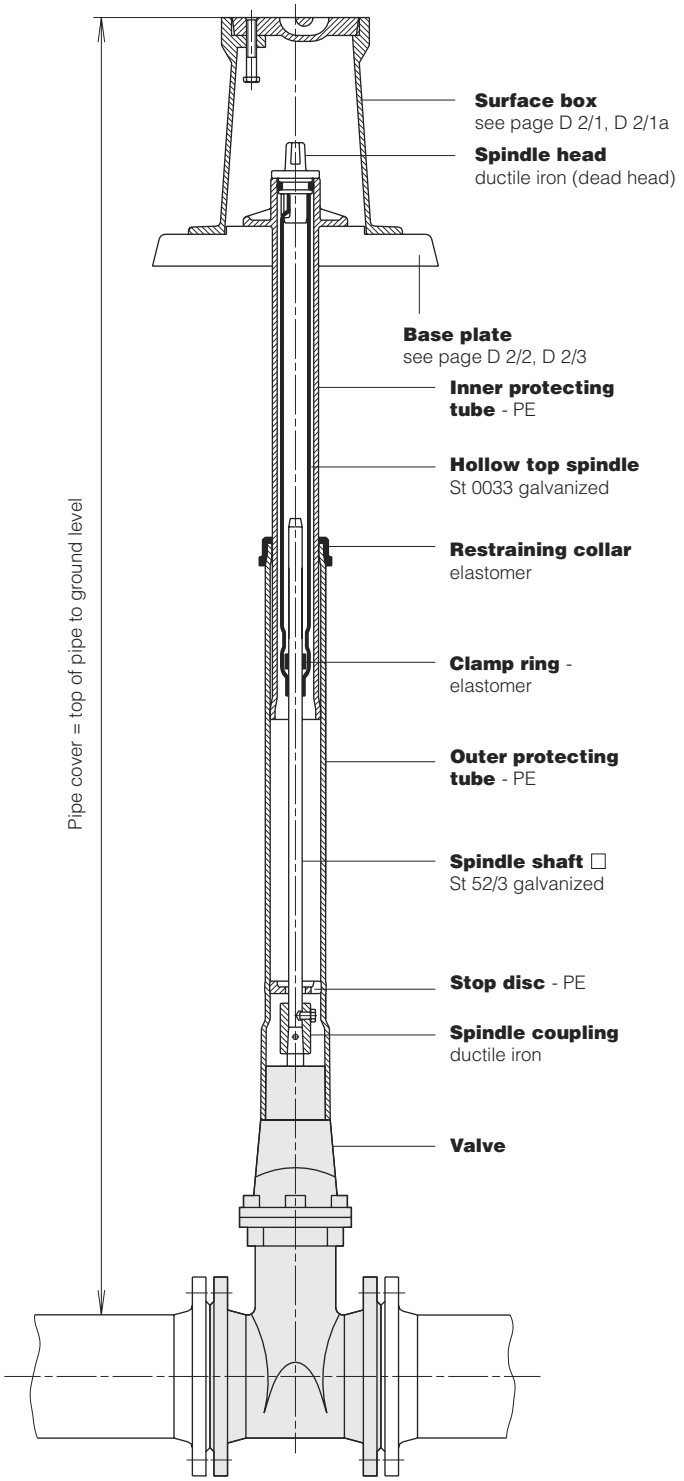
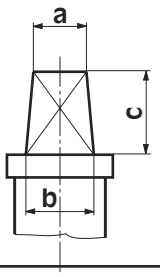



**Illustration: Téléscopique Extension Spindle DN 250 - 600**




| Spindle head | |
|---|---|
| for Service Valves | a 13 mm<br>b 15 mm<br>c 24 mm |
| for Valves and Combi Valves | a 27 mm<br>b 32 mm<br>c 48 mm |

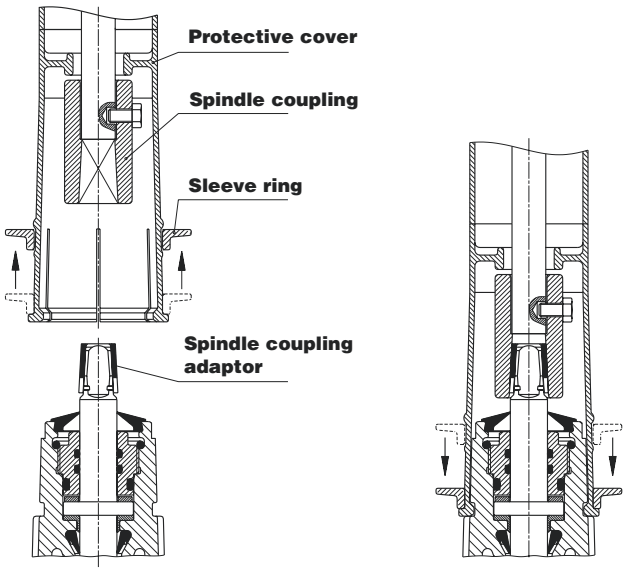
## Weight of Extension Spindle for *E2* Valves and *E2* Combi Valves DN 50 - 200

| DN | Weight kg for order no. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 8980E2 | 8990E2 | 9000E2 | 9010E2 | 9020E2 | 9500E2 | 9510E2 |
| 50-100 | 3,45 | 4,45 | 5,40 | 7,45 | 9,50 | 6,75 | 9,40 |
| 125-150 | 2,90 | 3,90 | 4,90 | 6,90 | 8,90 | 6,25 | 8,90 |
| 200 | 2,70 | 3,70 | 4,70 | 6,70 | 8,70 | 6,10 | 8,60 |

## Weight of Extension Spindle for *E2* Valves DN 250-600

| DN | Weight kg for order no. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 8980 | 8990 | 9000 | 9010 | 9020 | 9500 | 9510 |
| 250 | 3,20 | 4,70 | 6,15 | 9,15 | 12,30 | 7,30 | 11,10 |
| 300 | 2,90 | 4,40 | 5,85 | 8,80 | 12,00 | 6,85 | 10,70 |
| 350 | | 4,00 | 5,50 | 8,45 | 11,60 | 6,60 | 10,30 |
| 400-500 | | 3,55 | 5,00 | 8,00 | 11,00 | 6,25 | 9,80 |
| 500-600 | | | | 7,40 | 9,70 | | 8,70 |

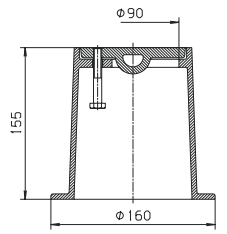
**Illustration: Assembly of *E2* Extension Spindle DN 50-200**



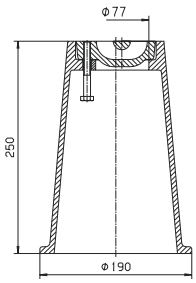
# Surface Box non-adjustable

| Model for: | Order no. | Version | Material | Weight kg | |
|---|---|---|---|---|---|
| Service Valves | 1550 | light* | grey iron, bitumen coated | 2,8 | ● |
| | 1650 | heavy | | 6,5 | ● |
| Elypso Valves and Combi-T | 1750 | | grey iron, bitumen coated | 11,3 | ● |
| Below Ground Hydrants | 1950 | | grey iron, bitumen coated | 32,0 | ● |
| Air-Release Hydrants | 1790 | | grey iron, bitumen coated | 41,5 | ● |
| Combi-III and Combi-IV | 4550 | DN 80+ | ductile iron, bitumen coated | 34,0 | ● |
| | 4550 | DN 100-200++ | | 54,5 | ● |

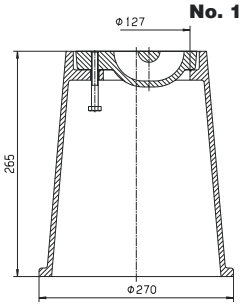
**No. 1550** * for light traffic duty only



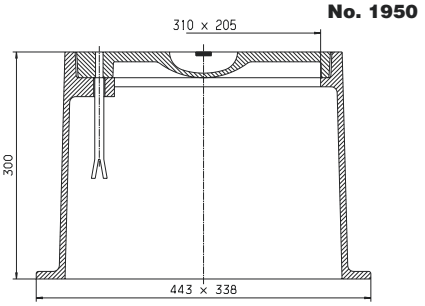

**No. 1650**



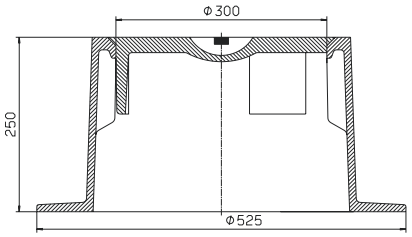

**No. 1750**




**No. 1950**




**No. 1790**

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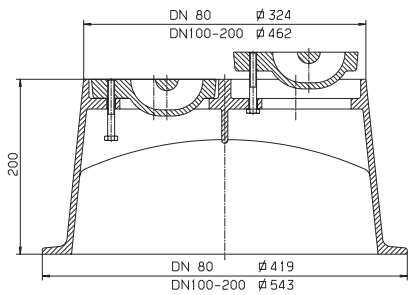



max. load 200 kN
(excluding No. 1550)

\+ E-type DN 80-150
E2-type DN 80

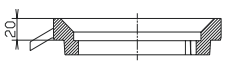
++ E-type DN 200
E2-type DN 100-200

## Conversion Rings

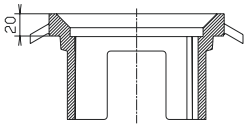
these rings are used to adapt non adjustable surface boxes already installed to HAWLE adjustable types.

**No. 1560**


**No. 1660**




**No. 1760**




| | | | | |
|---|---|---|---|---|
| for surface box no. 1550 | Order no. 1560 | grey iron, bitumen coated | Weight 0,9 kg | ● |
| for surface box no. 1650 | Order no. 1660 | grey iron, bitumen coated | Weight 0,9 kg | ● |
| for surface box no. 1750 | Order no. 1760 | grey iron, bitumen coated | Weight 2,7 kg | ● |



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E-mail: hawle@hawle.at

# Surface Box adjustable

| Model for: | Order no. | Version | Material | Weight kg | |
|---|---|---|---|---|---|
| Service valves | 1850 | complete box, without extension rings | grey iron, bitumen coated | 7,4 | ● |
| Elypso Valves and Combi-T | 2050 | | | 12,9 | ● |

Height adjustable Surface Box to DIN see page D 2/1a

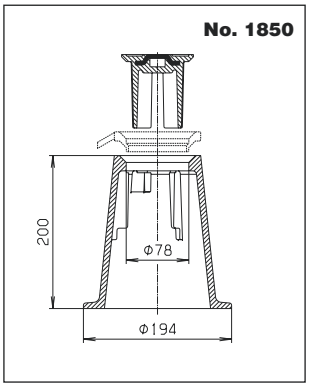
max. load 200 kN

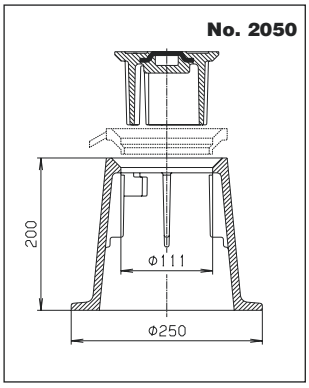
## Surface Box adjustable

**with extension rings to adjust to ground level**

The cylindrical guide combined with machined conical seating results in tight and noiseless fitting of the lid.

The design enables the lid to be easily removed.

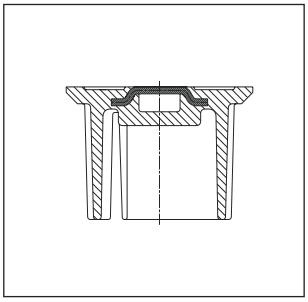


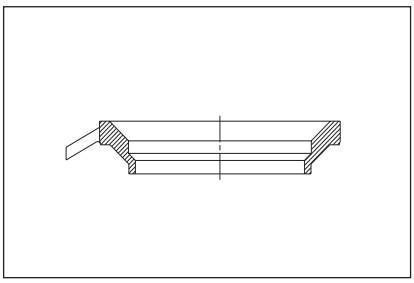




## Lid for adjustable Surface Boxes

of grey iron, bitumen coated

| Order no. | suitable for | Weight kg | |
|---|---|---|---|
| 1860 | surface box No. 1850 | 1,30 | ● |
| 2060 | surface box No. 2050 | 2,90 | ● |



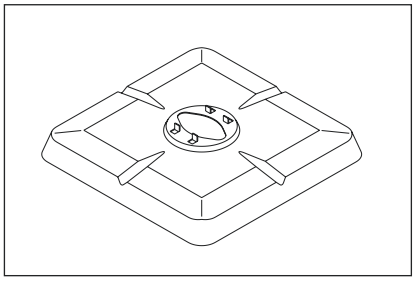


## Extension Rings

for adjusting to ground level
of grey iron, bitumen coated

| | Weight kg | | | | | |
|---|---|---|---|---|---|---|
| Height mm | 12 | 15 | 20 | 30 | 40 | 50 |
| No. 2030 | 0,50 | 0,60 | 0,80 | 1,20 | 1,50 | 1,90 |
| No. 2040 | | 1,00 | 1,40 | 2,00 | 2,80 | 3,50 |

| Order no. | suitable for | Height mm | | | | | |
|---|---|---|---|---|---|---|---|
| | | 12 | 15 | 20 | 30 | 40 | 50 |
| 2030 | adjustable surface box No. 1850 | ● | ● | ● | ● | ● | ● |
| 2040 | adjustable surface box No. 2050 | | ● | ● | ● | ● | ● |



## Base plate

of stamped sheet steel, galvanized
Measurement: 360 x 360 mm

| Order no. | suitable for | Weight kg | |
|---|---|---|---|
| 3480 | surface box No. 1550, 1650, 1850 | 1,70 | ● |
| 3490 | surface box No. 1750, 2050 | 1,70 | ● |

# Height adjustable Surface Box to DIN

**with separate removable mounting ring for road surfaces which have to be milled down**

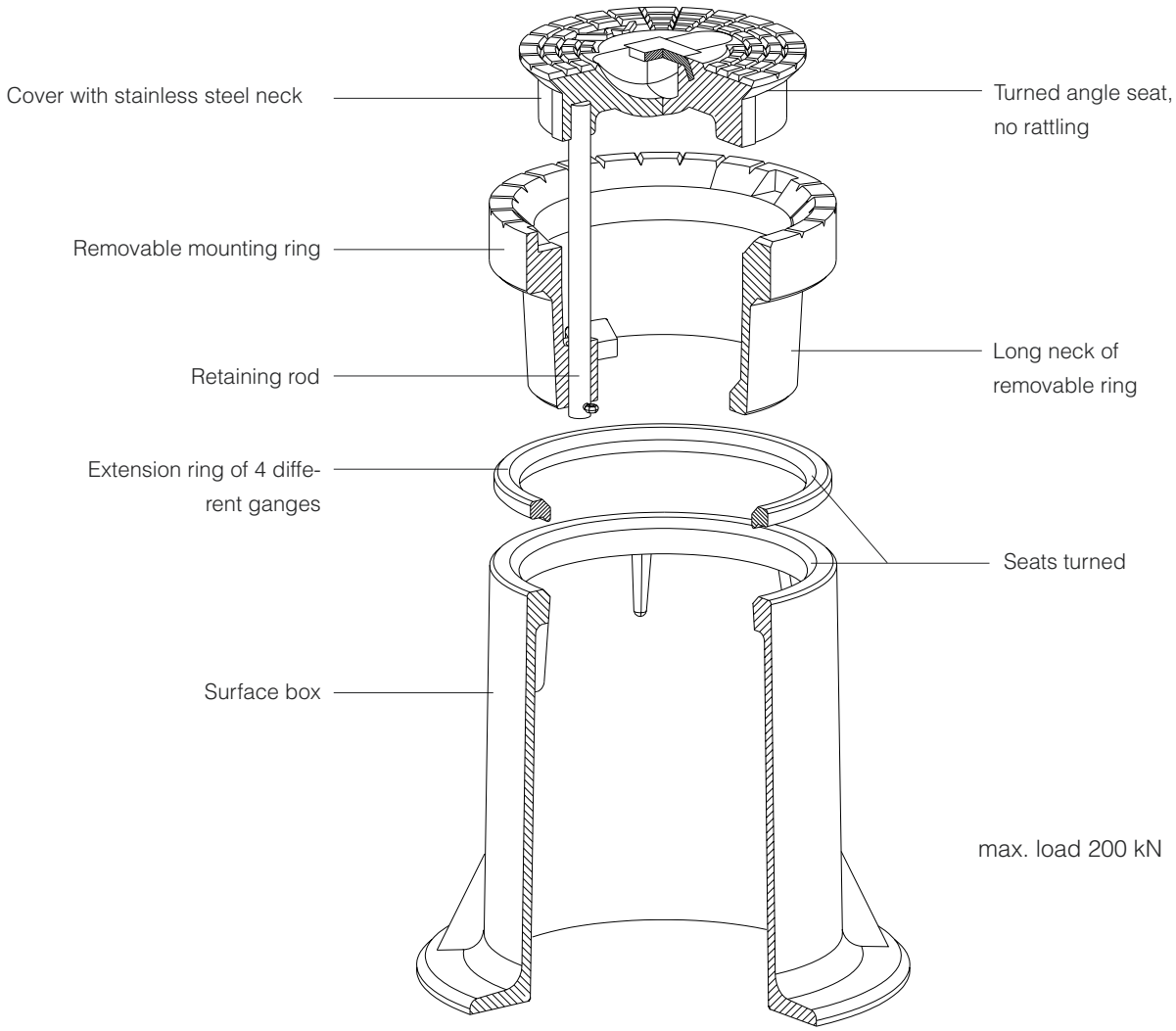
## Surface Boxes

| Order no. | Version | Weight kg | |
|---|---|---|---|
| **2051** | **DIN 4056 (gate valves)** | 21,5 | ● |
| **1851** | **DIN 4057 (service valves)** | 11,0 | ● |

## Surface Boxes

| Order no. | suitable for | Height mm | | | |
|---|---|---|---|---|---|
| | | 10 | 20 | 30 | 50 |
| **2045** | Surface Box No. 2051 | ● | ● | ● | ● |
| | | 0,5 kg | 1,1 kg | 1,6 kg | 3,0 kg |
| **2035** | Surface Box No. 1851 | ● | ● | ● | ● |
| | | 0,4 kg | 0,8 kg | 1,2 kg | 2,0 kg |

Accessories: Puller No. 5971 (see illustration 1)




## Advantages:

- Proven angle seat prevents the cover from rattling.
- **High quality corrosion protection** using the GSK fluidised bed Epoxy coating system.
- The removable mounting ring enables a milling down of the road surface without removing the surface box.
- **Height adjustable** with extension rings.
- **Cover secured** by stainless steel retaining rod.
- Available on request: special wedged extension ring for sloping roads (see illustration 2).



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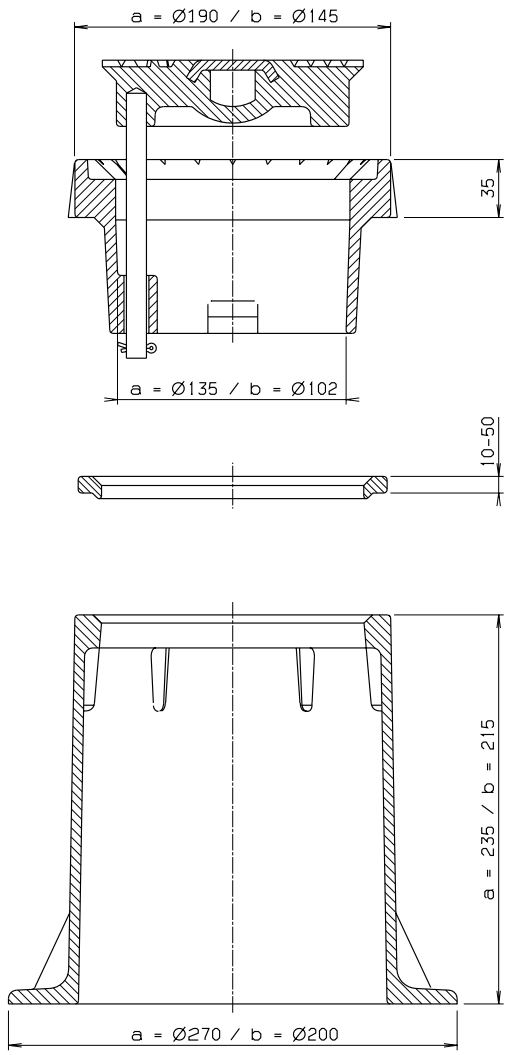
# Height adjustable Surface Box to DIN

**Dimensions for Surface Box to DIN** a = DIN 4056 b = DIN 4057




Puller No. 5971

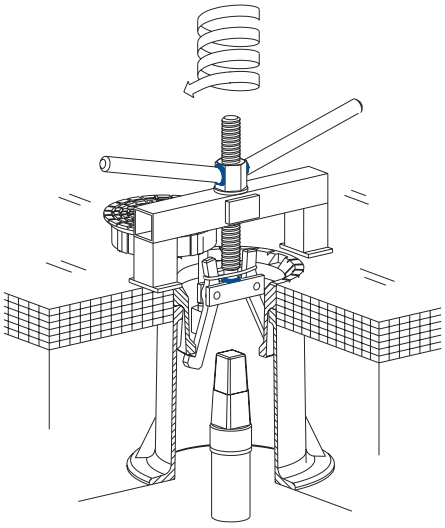


Illustration 1

Extension ring for sloping roads

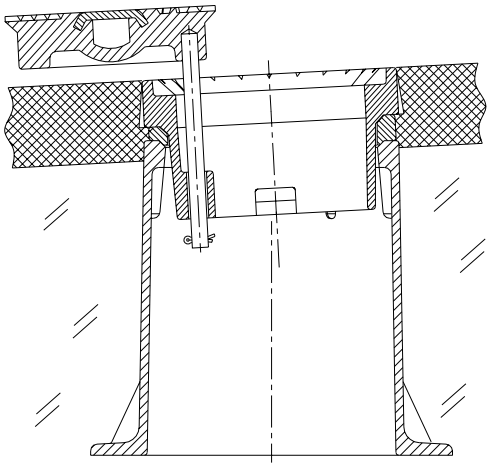


Illustration 2

**Material:** - box of grey iron, epoxy powder coating in accordance with GSK

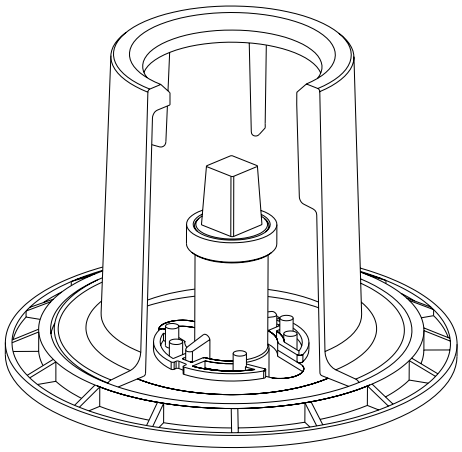
- retaining rod and cover neck of stainless steel

Angle seats are turned!

# Base Plate for Surface Boxes

| suitable for surface boxes according: | Order no. | Weight kg | |
|---|---|---|---|
| DIN 4056 and DIN 4057 | **3481** | 0,6 | ● |
| DIN 4055 | **3482** | 2,0 | ● |

Fitted position:



**of recycled plastic**

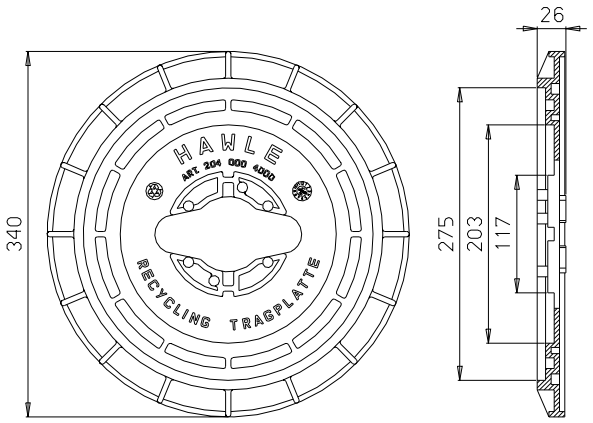
- **unbreakable and solid**
- **easiest assembly**
- **small weight**
- **unrottable**

## Universal Base Plate No. 3481

for surface boxes according:

- DIN 4056 (Gate Valves)
- DIN 4057, Edition 9.38 and 11.74 (Service Valves)

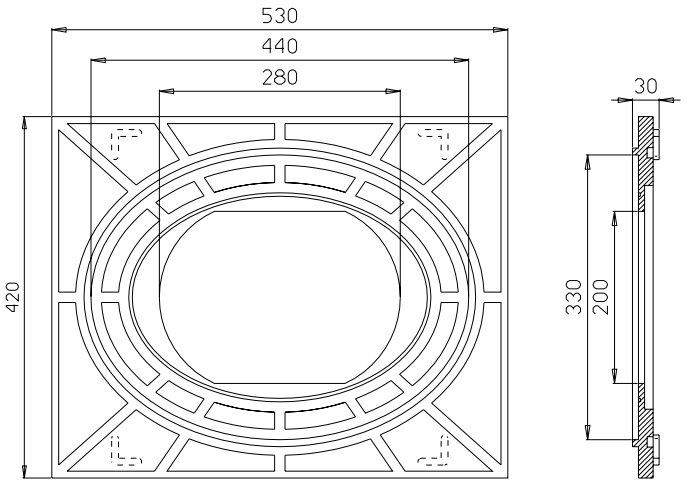
**Safe fixture of HAWLE Telescopic Extension Spindles for Gate Valves, Combi-T and Service Valves**




## Base Plate No. 3482

for surface boxes according:

DIN 4055 (for Below Ground Hydrants)



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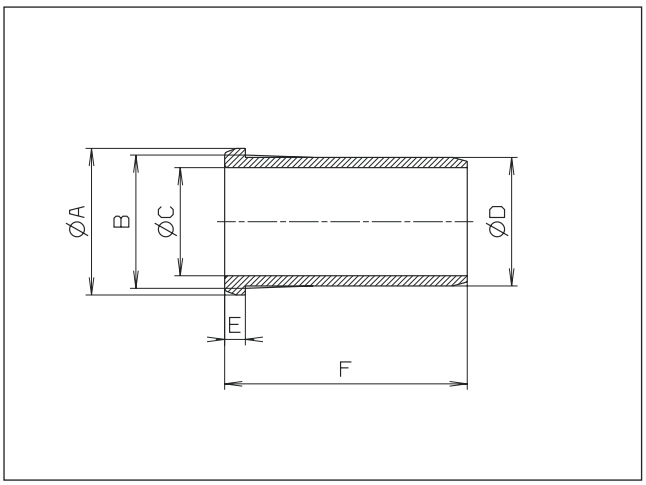
# Support liners for PE Pipes

## No. 6031 Support liner for ISO Pipe Fittings
of POM




**CLASS SDR 11 PE 80 - PN 10**

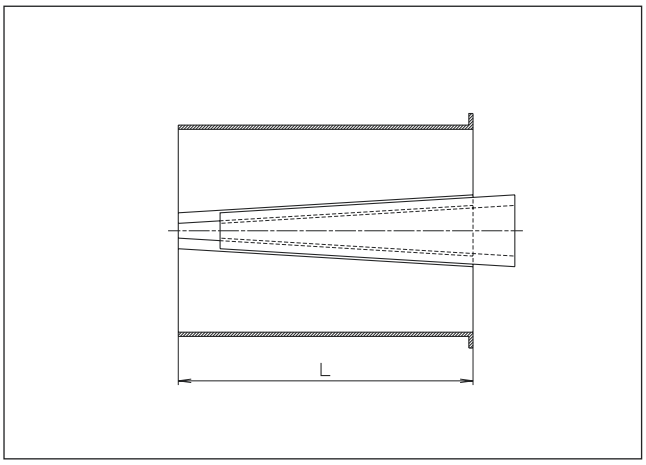
| Pipe o.d. Ø | D | C | A | F | E | B | |
|---|---|---|---|---|---|---|---|
| **20** | 15,4 | 10,3 | 19,5 | 42 | 4 | 16,5 | ● |
| **25** | 19,8 | 14,3 | 24,5 | 52 | 5 | 20,9 | ● |
| **32** | 25,2 | 19,3 | 31,5 | 62 | 6 | 26,5 | ● |
| **40** | 31,6 | 25,3 | 39,5 | 72 | 7 | 33,2 | ● |
| **50** | 39,6 | 32,7 | 49,5 | 82 | 7 | 41,5 | ● |
| **63** | 50 | 42,1 | 62,5 | 91 | 8 | 52,2 | ● |

**CLASS SDR 17,6 PE 80 - PN 6**

| Pipe o.d. Ø | D | C | A | F | E | B | |
|---|---|---|---|---|---|---|---|
| **20** | 15,4 | 10,3 | 19,5 | 42 | 4 | 16,5 | ● |
| **25** | 20,4 | 15,2 | 24,5 | 52 | 5 | 21,5 | ● |
| **32** | 27,4 | 22,2 | 31,5 | 67 | 6 | 28,5 | ● |
| **40** | 34,8 | 28,5 | 39,5 | 84 | 7 | 36 | ● |
| **50** | 43,4 | 36,5 | 49,5 | 82 | 7 | 44,9 | ● |
| **63** | 54,8 | 46,9 | 62,5 | 92 | 8 | 56,6 | ● |

## **Support liner for PE pipe** of stainless steel 1.4301

**No. 6035 Class SDR 17,6 PE 80 - PN 6** (PE 100 - PN 10) — **No. 6036 Class SDR 11 PE 80 - PN 10** (PE 100 - PN 16)




| Pipe o.d. Ø | L | Weight kg | |
|---|---|---|---|
| **63** | 170 | 0,10 | ● |
| **75** | 170 | 0,25 | ● |
| **90** | 170 | 0,33 | ● |
| **110** | 170 | 0,39 | ● |
| **125** | 170 | 0,48 | ● |
| **140** | 170 | 0,55 | ● |
| **160** | 200 | 0,67 | ● |
| **180** | 220 | 0,86 | ● |
| **200** | 220 | 1,50 | ● |
| **225** | 220 | 1,62 | ● |
| **250** | 220 | 1,85 | ● |
| **280** | 220 | 2,15 | ● |
| **315** | 220 | 2,55 | ● |

## No. 7800 Handwheel

**for Service Valves, Gate Valves and Combi Valves**

of grey iron, epoxy powder coated in sizes DN 50 and above available with grip

+ and for Knife Gate Valve No. 3600

++ and for Knife Gate Valve No. 3600 DN 50-65

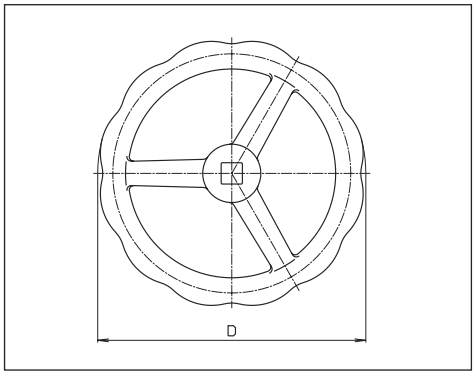
## No. 7840 Handwheel

**for Knife Gate Valve No. 3600**

DN 80/100/200/250/300/400
of grey iron, epoxy powder coated

## No. 7809 Handwheel

of aluminium, DN 50 - 200




**+** Body: DN 400 - flange connection: DN 450 or 500

| Order no. | DN | D | Weight | |
|---|---|---|---|---|
| 7800 | ¾" - 2" ** | 140 | 0,65 | ● |
| | 50 | 160 | 1,00 | ● |
| | 65 | 190 | 1,30 | ● |
| | 80 | 190 | 1,70 | ● |
| | 100 | 240 | 2,20 | ● |
| | 125* - 150* | 320 | 4,20 | ● |
| | 200 | 360 | 6,50 | ● |
| | 250 - 350* | 486 | 10,00 | ● |
| | 400 - 500+ | 600 | 21,00 | ● |
| | 500 - 600 | 800 | 22,0 | ● |

## No. 2156 Operating Cap

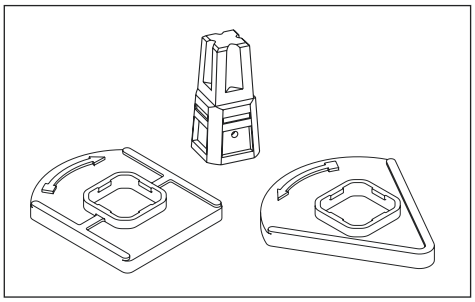
en ductile iron, galvanized

## Direction Indicator

of elastomer
suitable for Operating Cap

**No. 2162** "clockwise closing"

**No. 2152** "anti clockwise closing"



**+** Body: DN 400 - flange connection: DN 450 or 500

| DN | No. 2156 | No. 2162 | No. 2152 |
|---|---|---|---|
| 50 | ● | ● | ● |
| 65 | ● | | |
| 80 | ● | | |
| 100 - 150 | ● | | |
| 200 | ● | ● | ● |
| 250 - 350 | ● | | |
| 400 - 500+ | ● | ● | ● |

## Additional Extension Spindle

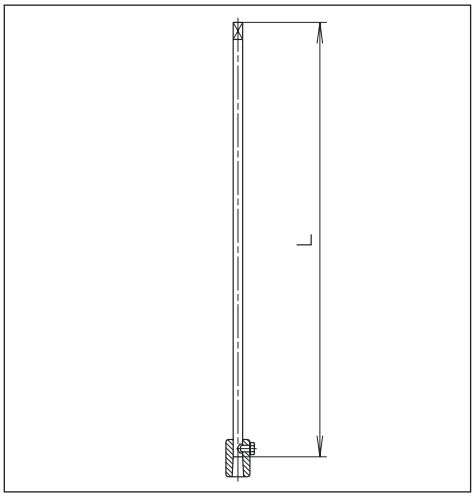
**Material:** St 0037 (steel)

**No. 7820** price for 1st m
**No. 7821** price for each additional 0,5 m

**Material:** stainless steel

**No. 7825** price for 1st m
**No. 7826** price for each additional 0,5 m

Please specify total length on order

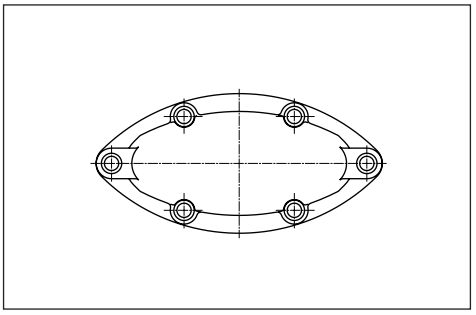



| DN | No. 7820 No. 7821 | No. 7825 No. 7826 |
|---|---|---|
| ¾" - 2" | ● | |
| 50 | ● | ● |
| 65 | ● | ● |
| 80 | ● | ● |
| 100 - 150 | ● | ● |
| 200 | ● | ● |
| 250 - 300 | ● | ● |
| 400 - 500 | ● | ● |
| 500 - 600 | | ● |

## No. 8570E2
## No. 8570
## Blanking Cap

**for Combi Valves in place of valve bonnet**

of ductile iron, epoxy powder coated



| Order no. | DN | Weight | |
|---|---|---|---|
| 8570 | 80 | 1,20 | ● |
| 8570E2 | 65 - 80 | 1,80 | ● |
| | 100 | 1,90 | ● |
| | 125 - 150 | 3,20 | ● |
| | 200 | 5,00 | ● |



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# Accessories

## No. 4000STE2

### E2 Elypso Valve - short version

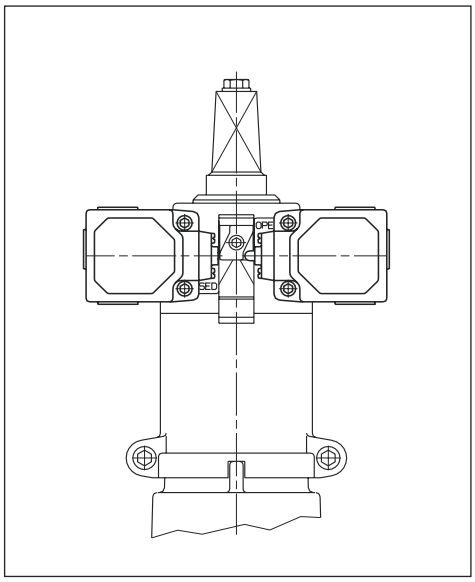
**with position indicator**

## No. 4700STE2
### E2 Eypso Valve - long version

**with position indicator**

## No. 2190
### Limit switch

further Hawle Elypso Valves with position indicator and version with limit switch on request




| DN | No. 4000STE2 | No. 4700STE2 |
|---|---|---|
| 50 | ● | ● |
| 65 | ● | ● |
| 80 | ● | ● |
| 100 | ● | ● |
| 125 | ● | ● |
| 150 | ● | ● |
| 200 | ● | ● |
| 250 | ● | ● |
| 300 | ● | ● |
| 350 | ● | |
| 400 | ● | ● |
| 450 | | ● |
| 500 | | ● |

## Flap Valve

## No. 9930

with flange PN 10 - DIN 2501

of grey iron,
epoxy powder coated

| DN | Weight kg | |
|---|---|---|
| 50 | 4,70 | ● |
| 65 | 4,40 | ● |
| 80 | 7,70 | ● |
| 100 | 9,80 | ● |
| 125 | 10,00 | ● |
| 150 | 20,50 | ● |
| 200 | 17,50 | ● |
| 250 | 26,50 | ● |
| 300 | 34,00 | ● |

## No. 8653
## Suction Strainer

of stainless steel 1.4301

| DN | Length | Weight | |
|---|---|---|---|
| 50 | 300 | 0,9 | ● |
| 65 | | 1,1 | ● |
| 80 | | 1,3 | ● |
| 100 | | 1,5 | ● |
| 125 | | 1,9 | ● |
| 150 | | 2,4 | ● |
| 200 | | 3,2 | ● |

other dimensions on request

## No. 3470
## Flat Gasket

with fabric liner

of elastomer, suitable for potable water

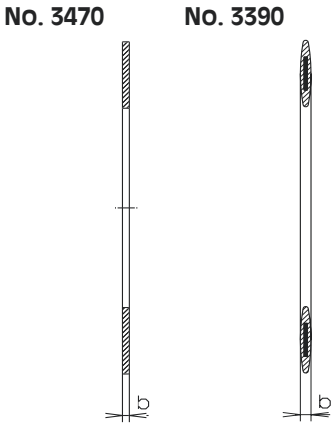
## No. 3390
## Flat Gasket

steel reinforced

keeps its shape and therefore easy to position

of elastomer, suitable for potable water

Standard version PN 10
PN 16 and PN 25 on request




| DN | b No. | | Weight kg | | |
|---|---|---|---|---|---|
| | 3470 | 3390 | 3470 | 3390 | |
| 50 | 3 | 4 | 0,02 | 0,04 | ● |
| 65 | 3 | 4 | 0,03 | 0,06 | ● |
| 80 | 3 | 4 | 0,04 | 0,07 | ● |
| 100 | 3 | 5 | 0,04 | 0,07 | ● |
| 125 | 3 | 5 | 0,05 | 0,12 | ● |
| 150 | 4 | 5 | 0,06 | 0,13 | ● |
| 200 | 4 | 6 | 0,10 | 0,18 | ● |
| 250 | 4 | 6 | 0,13 | 0,23 | ● |
| 300 | 4 | 6 | 0,17 | 0,60 | ● |
| 350 | 4 | 7 | 0,21 | 0,70 | ● |
| 400 | 4 | 7 | 0,23 | 0,77 | ● |

## Enlarging Sleeve

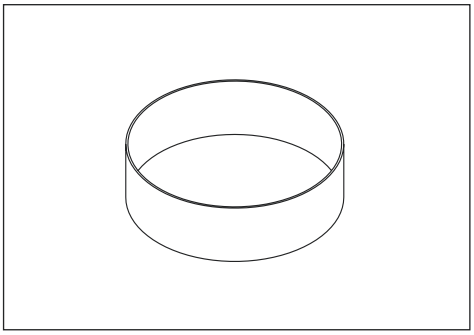
for flange adaptors

to increase pipe outside diameter to fit flange adaptor

**No. 7540** Sleeve gauge 2 mm
(60 mm wide)

**No. 7560** Sleeve gauge 3 mm
(80 mm wide)

Please specify pipe material and diameter



| DN | |
|---|---|
| 50 | ● |
| 65 | ● |
| 80 | ● |
| 100 | ● |
| 125 | ● |
| 150 | ● |
| 200 | ● |
| 250 | ● |
| 300 | ● |
| 350 | ● |
| 400 | ● |



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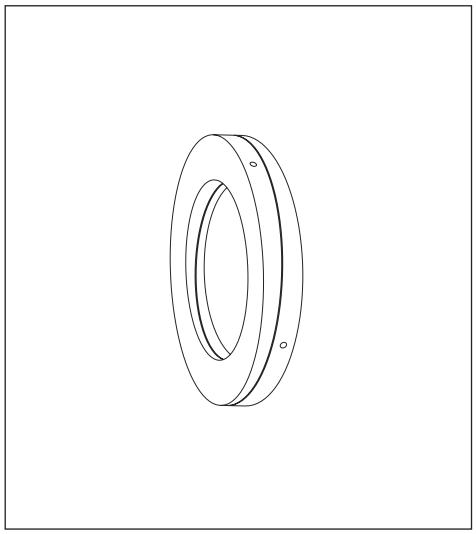
# Accessories

## No. 8730

### Angle Piece adjustable 0°–8°

of steel, galvanized

| Angle Piece adjustable mm | | |
|---|---|---|
| **DN** | **bei 0°** | **bei 8°** |
| **80** | 27 | 18/37 |
| **100** | 25 | 14/38 |
| **125** | 29 | 16/43 |
| **150** | 33 | 18/48 |
| **200** | 35 | 18/56 |
| **250** | 40 | 22/65 |
| **300** | 44 | 21/70 |
| **350** | 55 | 28/85 |
| **400** | 57 | 28/90 |



| DN | Weight kg | |
|---|---|---|
| **80** | 1,70 | ● |
| **100** | 2,00 | ● |
| **125** | 2,90 | ● |
| **150** | 3,70 | ● |
| **200** | 5,20 | ● |
| **250** | 7,70 | ● |
| **300** | 9,10 | ● |
| **350** | 17,50 | ● |
| **400** | 21,50 | ● |

## No. NL 47

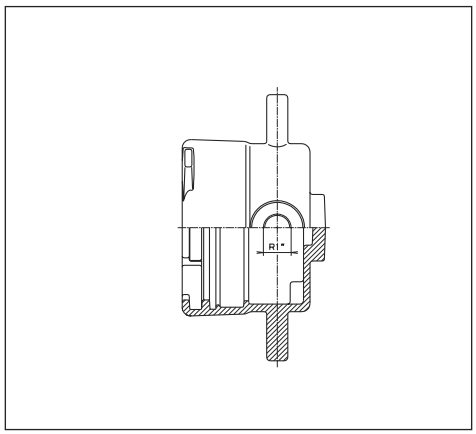
### Endcap

**with socket for CI pipes**
**PN 16**

of ductile iron
epoxy powder coated

(suitable restraint „Hawle-Stop“ No. NL80 see page A 5/1a)

threaded outlet 1"



| DN | Pipe Ø mm | Weight kg | |
|---|---|---|---|
| **80** | 98 | 5,00 | ● |
| **100** | 118 | 5,40 | ● |
| **125** | 144 | 7,90 | ● |
| **150** | 170 | 8,50 | ● |
| **200** | 222 | 13,00 | ● |

## Theft indicator

**for HAWLE-Above Ground Hydrants**

effective protection against unauthorised access

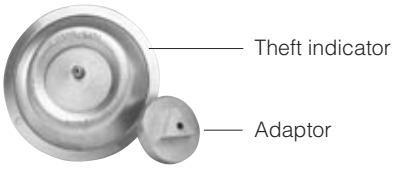
-for Hawle Hydrants supplied after 1997

(for Hawle Hydrants supplied before please specify in your inquiry)

| Theft indicator | | | |
|---|---|---|---|
| **Order no.** | **Outlet** | **Weight** | |
| **5397** | **for A-coupling** | 3,70 | ● |
| **5398** | **for B-coupling** | 2,20 | ● |
| **5399** | **for C-coupling** | 1,70 | ● |
| **Adaptor** | | | |
| **Order no.** | **for coupling** | **Weight** | |
| **3453** | A + B + C | 0,50 | ● |

## Adaptor

Opening of Hydrant solely with adaptor and operating key no. 3460 (see page K 3/2) possible



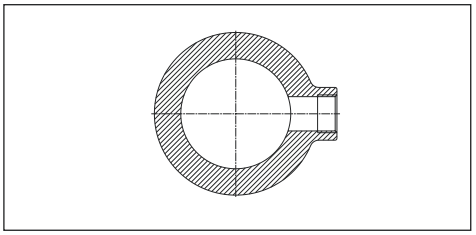
## No. 8580

### Wafer Tee Piece

**1 threaded outlet**

PN 16

of grey iron
epoxy powder coated



| DN | Thread | Height | Weight | |
|---|---|---|---|---|
| 80 | 1¼" | 60 | 3,90 | ● |
| 100 | 1¼" | 60 | 4,20 | ● |
| 150 | 1¼" | 60 | 7,90 | ● |

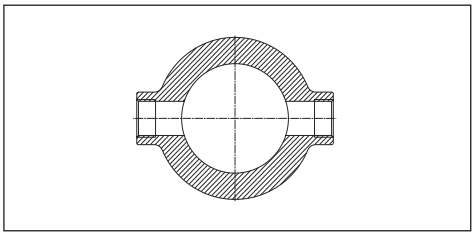
## No. 8590

### Wafer Tee Piece

**2 threaded outlets**

PN 16

of grey iron
epoxy powder coated



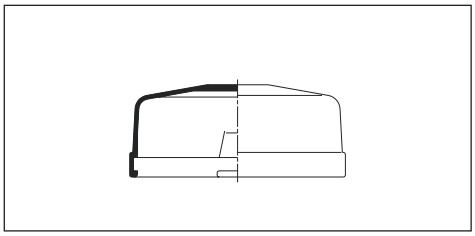
| DN | Thread | Height | Weight | |
|---|---|---|---|---|
| 100 | 1¼" | 60 | 4,30 | ● |
| 125 | 1¼" | 60 | 6,30 | ● |
| 150 | 1¼" | 60 | 7,80 | ● |
| 250 | 1¼" | 90 | 19,20 | ● |

## No. 5417

### Theft Indicator Cap

for Above-Ground Hydrant

Since September 1988 all HAWLE Above-Ground Hydrants have been supplied in a form that can accept theft indicator caps.



| No. 5417 | ● |
|---|---|

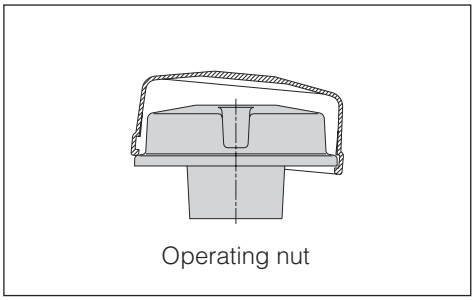
## Conversion Kits for Theft Indicator Cap

for hydrants made before September 1988

**No. 5416** standard,
for all HAWLE hydrants with the standard ÖNORM-F 2010

**No. 5418** for hydrants type
No. 480 and 482 old, spindle □18 mm

**No. 5419** for hydrants type
No. 481 and 482, spindle □ 22 mm conical



Operating nut

| No. 5416 | ● |
|---|---|
| No. 5418 | ● |
| No. 5419 | ● |

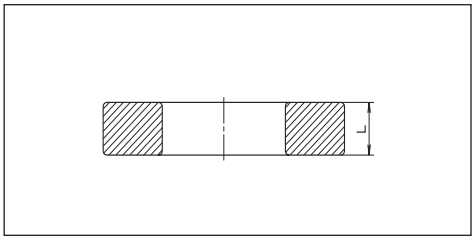
## No. 8615

### Spacer Ring

to fill a gap

Steel 1.0037

**Please specify length "L" on order**




| DN | |
|---|---|
| 50 | ● |
| 65 | ● |
| 80 | ● |
| 100 | ● |
| 125 | ● |
| 150 | ● |
| 200 | ● |

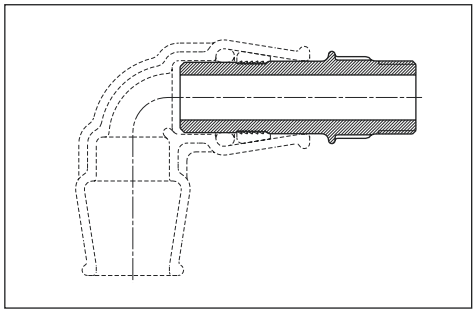
## Push Fit Swivel Converter

**No. 6630** equal ends
**No. 6631** unequal ends

with one male thread outlet

of POM

Every push fit end can be modified to a male thread outlet



| Order no. | DN | Thread | L | Weight kg | |
|---|---|---|---|---|---|
| 6630 | ¾" | ¾" | 92 | 0,04 | ● |
| | 1" | 1" | 105 | 0,05 | ● |
| | 1¼" | 1¼" | 123 | 0,10 | ● |
| | 1½" | 1½" | 144 | 0,20 | ● |
| | 2" | 2" | 160 | 0,35 | ● |
| 6631 | 1" | 1¼" | 111 | 0,06 | ● |
| | 1" | 1½" | 117 | 0,07 | ● |
| | 1" | 2" | 126 | 0,12 | ● |



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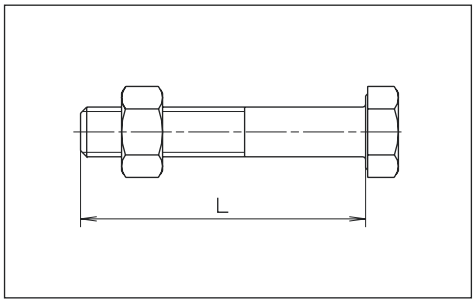
# Accessories

## Nut and Bolt

**No. 8810** electro galvanized

**No. 8830** A 2 corrosion proofing

**No. 8840** A 4 corrosion and acid proofing

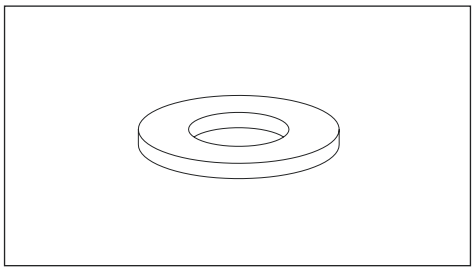



| Bolt Length L | No. 8810 | | No. 8830 | | No. 8840 | |
|---|---|---|---|---|---|---|
| | M 16 | M 20 | M 16 | M 20 | M 16 | M 20 |
| 60 | ● | ● | ● | ● | ● | ● |
| 70 | ● | ● | ● | ● | ● | ● |
| 80 | ● | ● | ● | ● | ● | ● |
| 90 | ● | ● | ● | ● | ● | ● |
| 100 | ● | ● | ● | ● | ● | ● |
| 110 | ● | ● | | | | |
| 120 | ● | ● | | | | |
| 130 | | ● | | | | |
| 140 | | ● | | | | |
| 150 | | ● | | | | |

## Washer

**No. 8873** A 2 corrosion proofing

**No. 8874** A 4 corrosion and acid proofing



| | | |
|---|---|---|
| No. 8873 | für M 16 | ● |
| | für M 20 | ● |
| No. 8874 | für M 16 | ● |
| | für M 20 | ● |

## Bolt insulator

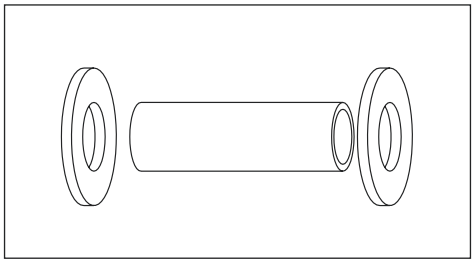
for electrical insulation of bolts for prevention of electrolytic corrosion

**No. 8877 Washer**

3 mm gauge, of epoxy glass

**No. 8820 Pipe**

of polyester



| | for thread | |
|---|---|---|
| Washer | M 16 | ● |
| | M 20 | ● |
| Pipe Length 1 m | M 16 | ● |
| | M 20 | ● |

## Required bolt lengths: Flanged Valves - Flange (PN 10)

| Flanged Valve DN | Bolt dimension | No. of bolts | Bolt length for flange No. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0101 0102 | 7101 7102 7103 | 0400 | 5500 | 5600 | 0310 0311 | 7602 | 7601 | 8100 |
| **50** | M 16 | 4 | 70 | 70 | 60 | 60 | 70 | 60 | 90 | 80 | 60 |
| **65** | M 16 | 4 | 70 | 70 | 70 | 70 | 70 | 70 | 100 | 80 | 70 |
| **80** | M 16 | 8 | 80 | 70 | 70 | 70 | 70 | 70 | 100 | 80 | 70 |
| **100** | M 16 | 8 | 80 | 70 | 70 | 70 | 70 | 70 | 100 | 80 | 70 |
| **125** | M 16 | 8 | 80 | 80 | 70 | 70 | 80 | 70 | 100 | 80 | 70 |
| **150** | M 20 | 8 | 90 | 80 | 70 | 70 | 80 | 70 | 140 | 100 | 70 |
| **200** | M 20 | 8 | 90 | 80 | 70 | | 80 | 70 | 140 | 100 | 70 |
| **250** | M 20 | 12 | 100 | 90 | 80 | | 90 | 80 | 140 | | 80 |
| **300** | M 20 | 12 | 100 | 90 | 90 | | 90 | 90 | 140 | | 90 |
| **350** | M 20 | 16 | 120 | | | | | | | | 100 |
| **400** | M 24 | 16 | 120 | | | | | | | | 100 |

# Automatic Air Valve

| Order no. | DN | Version | Application | Working pressure bar | |
|---|---|---|---|---|---|
| **9876** | 1" | standard | for cold water | PN 0,1 - PN 6 | ● |
| | | | | PN 0,8 - PN 16 | ● |
| **9876** | 2" | standard | for cold water | PN 0,1 - PN 6 | ● |
| | | | | PN 1 - PN 16 | ● |
| **9874** | 2" | with flange DN 50 (ductile iron) | for cold water | PN 0,1 - PN 6 | ● |
| | | | | PN 1 - PN 16 | ● |

Air valve for releasing air only: on request
(minimum pressure required: 0,3 bar)
The female thread inlet is reinforced with a stainless steel ring

**Installation:** upright, preferably at the highest point in the pipeline with isolating valves.

**PE shield for UV protection**

**No. 9876**
DN 1"

**No. 9874**
DN 2"

**No. 9876**
DN 2"



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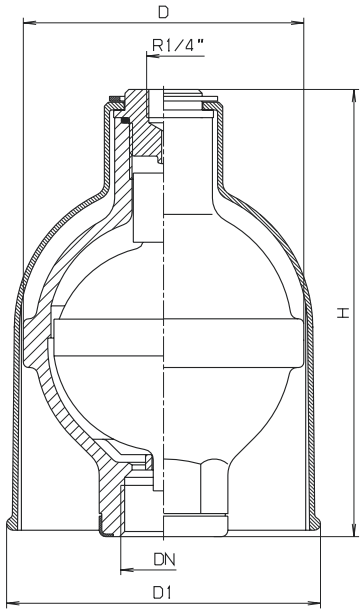
# Automatic Air Valve




**Valve**
(= wearing part)
replaceable on the spot in depressurised status

- demount safeguard ring
- remove cap
- loosen locking screw
- unscrew the valve

## DN 1"
## for small air discharge

**Max.**
**Air release capacity:**
0,13 m³/min.

**Test pressure:**
Body 24 bar

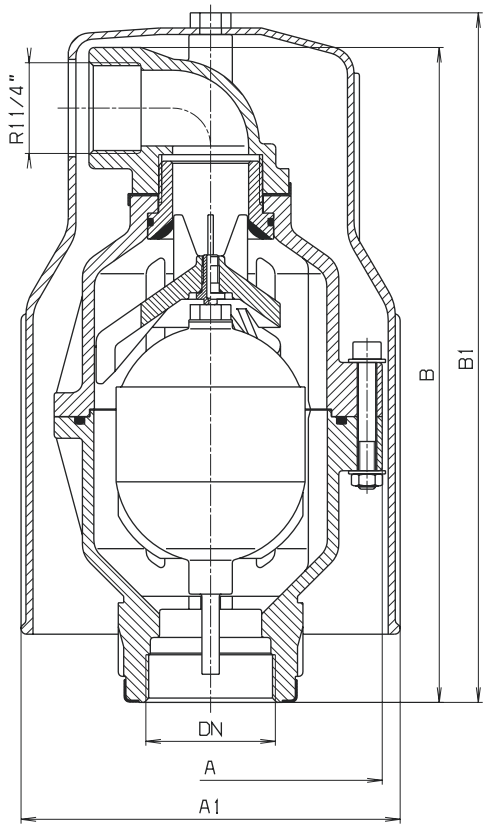
**Working pressure:**
0,1 — 6 bar
0,8 — 16 bar

**Material:**

| | |
|---|---|
| Body: | POM |
| Orifice and valve plug: | CuAl10 |
| Float: | POM |
| Seal: | elastomer |
| UV shield: | PE |

Please specify working pressure

| DN | PN | Working pressure | Size of the opening | Ø D | Ø D 1 | H | Weight kg |
|---|---|---|---|---|---|---|---|
| 1" | 6 | 0,1 - 6 | 1,77 mm² | 109 | 122 | 172 | 0,90 |
| 1" | 16 | 0,8 - 16 | 1,77 mm² | 109 | 122 | 172 | 0,90 |




## DN 2"

**Max.**
**Air release capacity:**
3,2 m³/min.

**Test pressure:**
Body 24 bar

**Working pressure:**
0,1 — 6 bar
1 — 16 bar

**Material:**

| | |
|---|---|
| Body and outlet elbow: | POM |
| Valve seat: | CuZn35Pb3As |
| Float: | POM |
| Seal: | elastomer |
| UV shield: | PE |

Please specify working pressure

| DN | PN | Working pressure | Size of the opening | Ø A | Ø A 1 | B | B 1 | Weight kg |
|---|---|---|---|---|---|---|---|---|
| 2" | 6 | 0,1 - 6 | 900/2,0 mm² | 160 | 175 | 305 | 320 | 2,80 |
| 2" | 16 | 1 - 16 | 900/2,0 mm² | 160 | 175 | 305 | 320 | 2,80 |

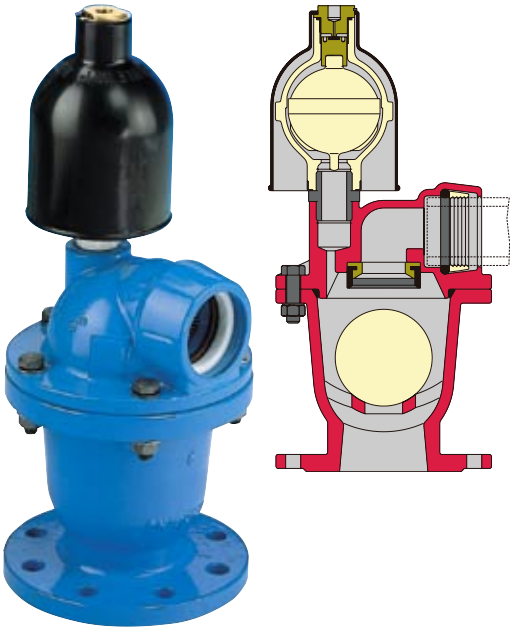
# Automatic Air Valve

| Order no. | Version | Working pressure bar | DN 80 PE pipe connection d 63 | DN 100 PE pipe connection d 75 | DN 150 | DN 200 |
|---|---|---|---|---|---|---|
| **9835** | double orifice (with travelling valve) | PN 6 (0,2 - 6 bar) | ● | ● | ● | ● |
| | | PN 16 (0,8 - 16 bar) | ● | ● | ● | ● |
| **9836** | double orifice (with travelling valve) with PE pipe and insect protective grid | PN 6 (0,2 - 6 bar) | ● | ● | | |
| | | PN 16 (0,8 - 16 bar) | ● | ● | | |
| **9837** | single orifice (without travelling valve) | PN 16 (0,2 - 16 bar) | ● | ● | ● | ● |
| **9838** | single orifice (without travelling valve) with PE pipe and insect protective grid | PN 16 (0,2 - 16 bar) | ● | ● | | |

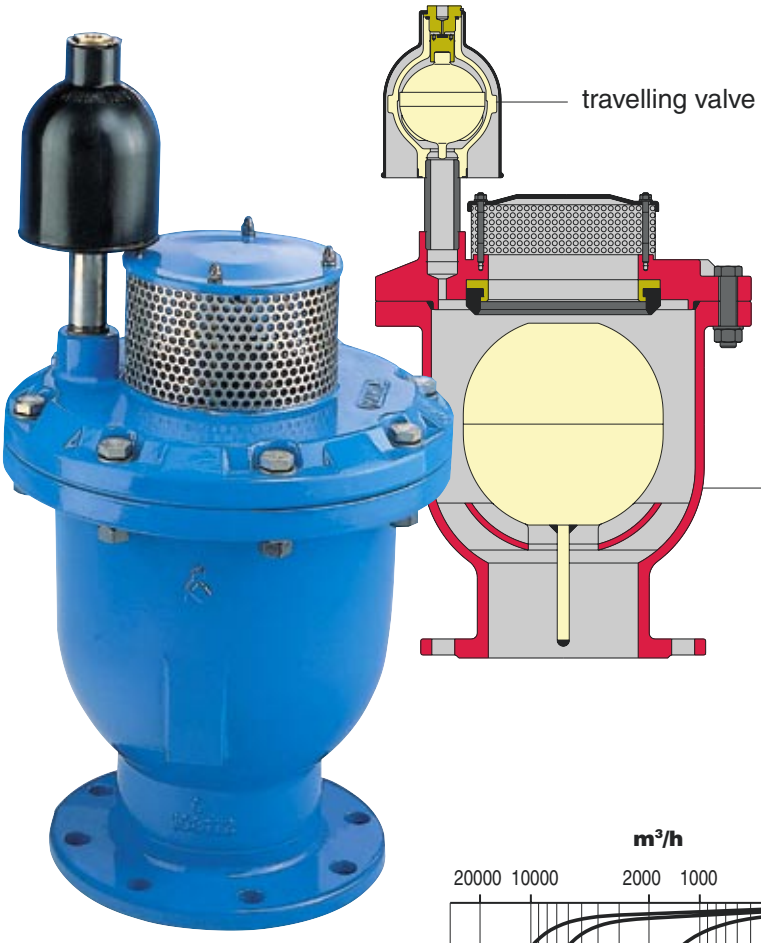
**for cold water**

- **automatic**
- **all mechanical parts made from corrosion resistant materials**

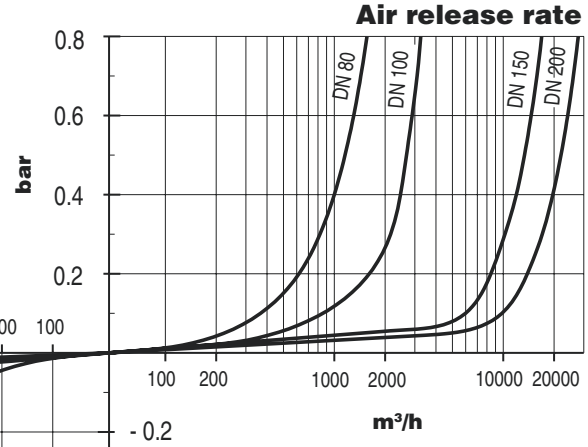
**DN 80 / DN 100**



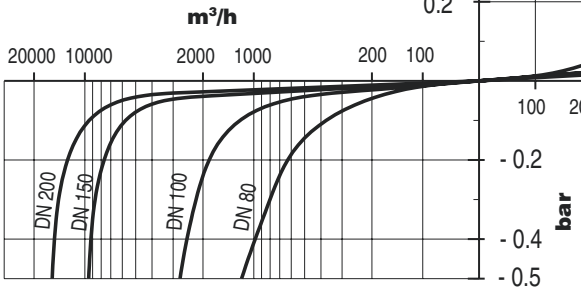
**DN 150 / DN 200**




**Air release rate**




**Air inflow rate**



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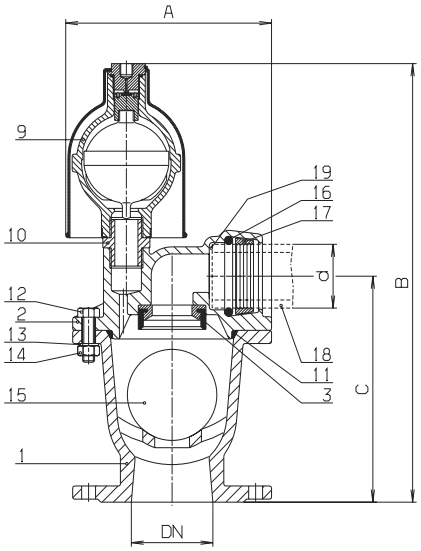
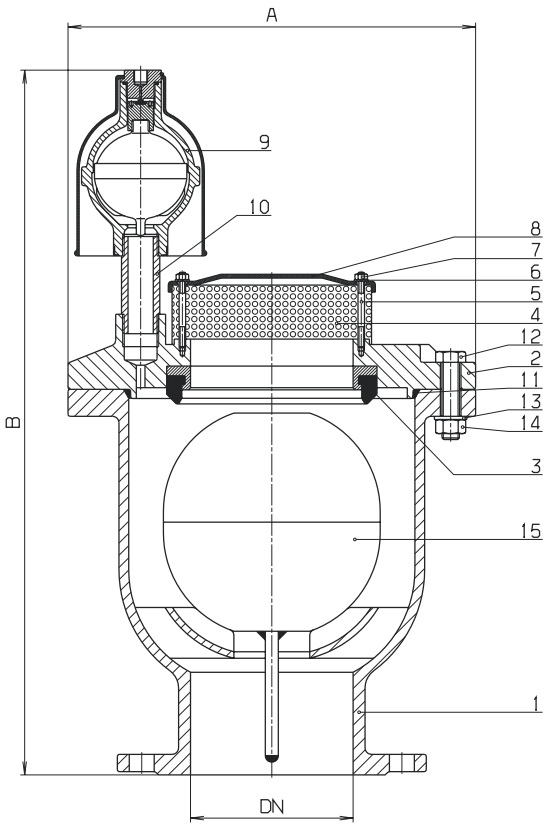
# Automatic Air Valve

## DN 80 / DN 100




## DN 150 / DN 200




### Material

| | | |
|---|---|---|
| 1, 2 | body and bonnet | grey iron, epoxy powder coated |
| 3 | seat | Ms 58 /elastomer, suitable for potable water |
| 4 | grid | stainless steel A 2 |
| 5 | bolt | stainless steel A 2 |
| 6 | washer | stainless steel A 2 |
| 7 | nut | stainless steel A 2 |
| 8 | cap | St 37, epoxy powder coated |
| 9 | Automatic air valve 1" | divers (see page E 1/2) |
| 10 | nipple | POM (DN 80, 100) / A 2 (DN 150, 200) |
| 11 | O ring | elastomer, suitable for potable water |
| 12 | hexagonal bolt | stainless steel A 2 |
| 13 | washer | stainless steel A 2 |
| 14 | hexagonal nut | stainless steel A 2 |
| 15 | float | DN 80 - 100 polycarbonat<br>DN 150 - 200 A 2 passivated |
| 16 | O ring | elastomer, suitable for potable water |
| 17 | clamp ring | POM |
| 18 | pipe tail (on request) | PE |
| 19 | insect protective grid (on request) | stainless steel A 2 |

Please specify dimension on order !

| DN | A | B | C | d | Weight kg |
|---|---|---|---|---|---|
| **80** | 212 | 455 | 230 | 63 | 17,0 |
| **100** | 250 | 505 | 260 | 75 | 26,0 |
| **150** | 387 | 686 | - | - | 69,0 |
| **200** | 387 | 686 | - | - | 77,0 |

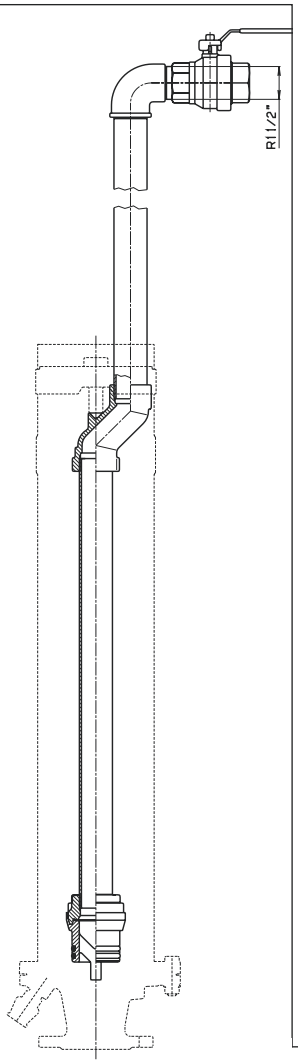
## Technical details:

| Dimensions | DN 80 | DN 100 | DN 150 | DN 200* |
|---|---|---|---|---|
| Test pressure (body) | 24 bar | | | |
| Working pressure PN 16 (standard) | 0,8 - 16 bar | | | |
| Working pressure PN 6 | 0,2 - 6 bar | | | |
| Maximum air release capacity | 1562 $m^3/h$ | 3250 $m^3/h$ | 16900 $m^3/h$ | 27800 $m^3/h$ |
| Size of the opening | 1810/1,77 $mm^2$ | 3320/1,77 $mm^2$ | 17670/1,77 $mm^2$ | 17670/1,77 $mm^2$ |
| PE pipe connection | d 63 | d 75 | - | - |
| Flange connection PN 10 EN 1092-2 (DIN 2501) | *DN 200 PN 16 EN 1092-2 (DIN 2501) please specify on order | | | |

# Combined Air Release Valve

| Order no. | Working pressure | DN | Installation depth above-ground (fig. 1) | Installation depth below-ground (fig. 2) | L= total length* | Weight kg | |
|---|---|---|---|---|---|---|---|
| 9822 | PN 1 - PN 16 | 50 | 0,75 m | 1,00 m | 755 | 23,0 | ● |
| | | | 1,00 m | 1,25 m | 1055 | 27,0 | ● |
| | | | 1,25, m | 1,50 m | 1305 | 30,0 | ● |
| | | | 1,50 m | | 1555 | 33,0 | ● |
| | | 80 | 0,75 m | 1,00 m | 755 | 24,0 | ● |
| | | | 1,00 m | 1,25 m | 1055 | 28,0 | ● |
| | | | 1,25, m | 1,50 m | 1305 | 31,0 | ● |
| | | | 1,50 m | | 1555 | 34,0 | ● |
| 9823 | PN 0,1 - PN 6 | 50 | 0,75 m | 1,00 m | 755 | 23,0 | ● |
| | | | 1,00 m | 1,25 m | 1055 | 27,0 | ● |
| | | | 1,25, m | 1,50 m | 1305 | 30,0 | ● |
| | | | 1,50 m | | 1555 | 33,0 | ● |
| | | 80 | 0,75 m | 1,00 m | 755 | 24,0 | ● |
| | | | 1,00 m | 1,25 m | 1055 | 28,0 | ● |
| | | | 1,25, m | 1,50 m | 1305 | 31,0 | ● |
| | | | 1,50 m | | 1555 | 34,0 | ● |

**Air valve for releasing air only: (with air inflow stop) on request**
(see over page figure 3)




*Length= reducible 100 mm  minimum Length= 650 mm
maximum Length= 2500 mm

This arrangement eliminates expensive valve chambers.

The stainless steel stand pipe protects the automatic air valve.

An automatic shut-off valve enables the equipment easily to be removed for inspection and reinstalled under pressure.

The materials from which the valve is made, namely POM and bronze assure complete corrosion resistance.

Excess water is drained away through an ISO-Pipe-Fitting DN 1/2".

For below-ground installation a surface box with minimum opening of 300 mm diameter is required.

Gravel backfilling should be used to prevent rain water from accumulating in the surface box (see figure 2, page E 2/2)

The air release valve can be shortened by 100 mm by cutting the standpipe 5 and extension tube 3 at the red marks (see over page).

**Max. air release capacity:** 3,2 m³/min

**Inlet flange:** DN 50 or DN 80
drilled to DN 2501

Air valve for releasing air only: on request
(minimum pressure required: 0,3 bar)

## Flushing Stand Pipe

including shut-off valve

Instead of the air valve assembly a stand pipe can be supplied for water main flushing and for water discharge generally.

| Order no. | L | Weight kg | |
|---|---|---|---|
| 9824 | 755 | 4,70 | ● |
| | 1055 | 5,80 | ● |
| | 1305 | 6,75 | ● |
| | 1555 | 7,60 | ● |

L= Total lenght of the hydrant



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E-mail: hawle@hawle.at

# Combined Air Release Valve

**fig. 1**

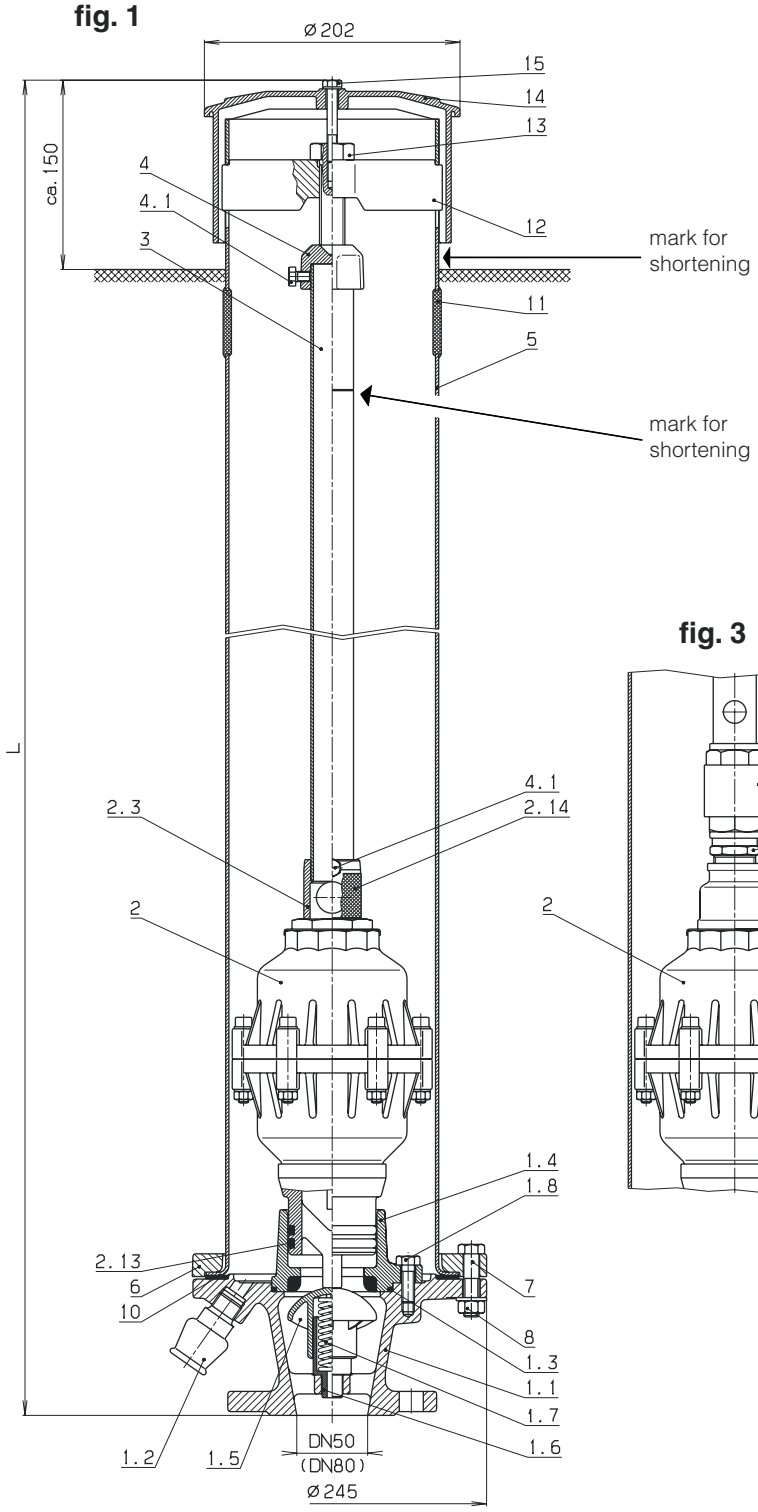



**fig. 2**

**Surface box**
**Order no. 1790**

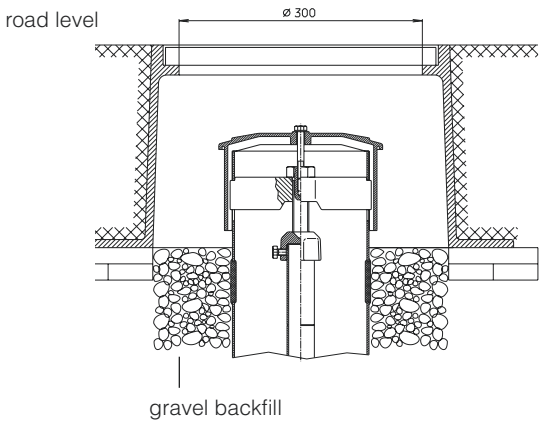
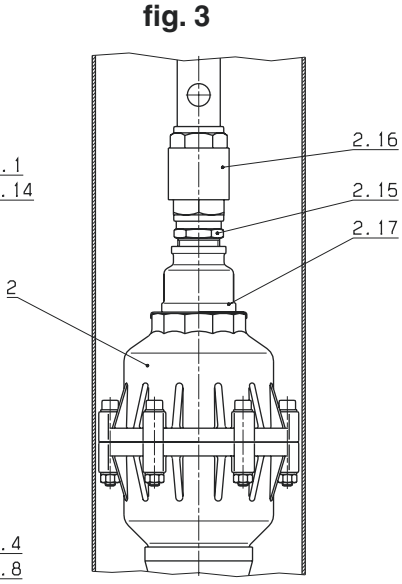



**fig. 3**




| | Parts | Material |
|---|---|---|
| 1.1 | inlet flange | EN-GJS (GGG) |
| 1.2 | drain-off fitting | EN-GJS (GGG) |
| 1.3 | O ring | elastomer |
| 1.4 | foot valve flange | Ms |
| 1.5 | foot valve | POM |
| 1.6 | spring case | POM |
| 1.7 | spring | A2 |
| 1.8 | hexagon bolt M 10 DIN 934 | A2 |
| 2 | air valve | see page E 1/2 |
| 2.3 | air outlet | Ms/elastomer |
| 2.13 | O ring | elastomer |
| 2.14 | insect protective grid | A2 |
| 2.15 | double nipple | Ms |
| 2.16 | non return valve Europa | Ms |
| 2.17 | reducing socket | Ms |
| 3 | tube, galvanized | A2 |
| 4 | coupling | EN-GJS (GGG) |
| 4.1 | hexagon bolt DIN 933 | A2 |
| 5 | stand pipe | A4 |
| 6 | lock ring | EN-GJS (GGG) |
| 7 | hexagon bolt M 12 x 50 DIN 931 | A2 |
| 8 | hexagon nut DIN 934 | A2 |
| 10 | seal | elastomer |
| 11 | blind cover | elastomer |
| 12 | spindle support | EN-GJS (GGG) |
| 13 | operating bolt | A2 |
| 14 | hood | HDPE |
| 15 | hexagon bolt DIN 933 | A2 |

**Removal:**

- unscrew the bolts (15)
- take off the hood (14)
- Undo bolt (13), until spindle support (12) disconnects from standpipe (5)
- the foot valve will close (1.5)
- lift off the air valve assembly with the extension tube (3)

**Installation:**
reverse the above instructions

# Automatic Air Valve for wastewater

| Order no. | Version | Application | Working pressure bar | Dimensions/DN | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 2" | 50 | 80 | 100 | 150 | 200 |
| **9864** | **stainless steel with flanged connection** | wastewater | PN 0 - PN 16 | | ● | ● | ● | ● | ● |
| **9864** | **stainless steel with female thread connection 2"** | | | ● | | | | | |
| **9863** | **St 37, epoxy powder coated with flanged connection** | | | | ● | ● | ● | ● | ● |
| **9863** | **St 37, epoxy powder coated with female thread connection 2"** | | | ● | | | | | |

**Design features**:

- direct automatic air inflow and release valve for wastewater
- operates automatically
- max. air release capacity: 230 $m^3/h$
- max. size of the opening: 480 $mm^2$
- sealing face is not in contact with the wastewater
- the two joints facilitate easy and excellent flushing at maintenance (above joint = inlet for flushing)
- all mechanical parts of corrosion resistant materials
- flange drilled according to DIN 2501 (= BS 4504) - PN 10 (for PN 16 - DIN 2501 = BS 4504 in DN 200 size please specify on order)
- due to the direct operation the release of lots of air is possible, even under full working pressure
- please take the direction and maintenance instructions into consideration

**Maintenance:**

Automatic Air Valves have to be maintained regularly:
Flush the valve via the two joints in non operating condition.



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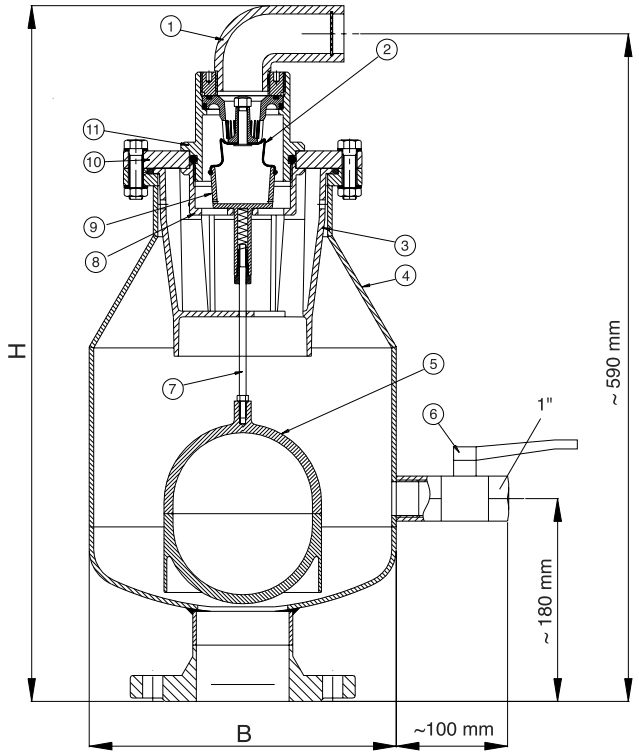
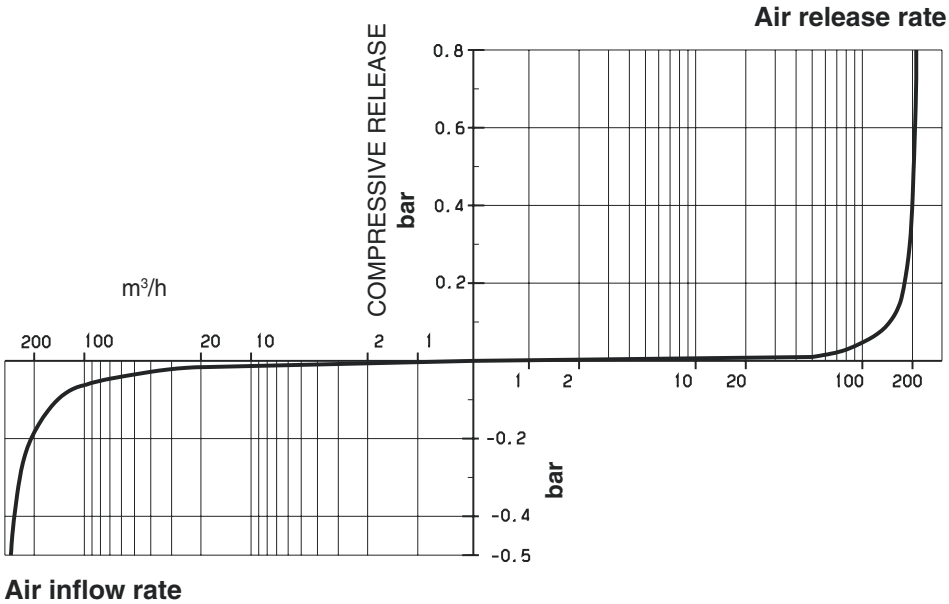
# Automatic Air Valve for wastewater




| | Part | | Material |
|---|---|---|---|
| 1 | Outlet elbow with dirt sieve | | PE 100 / St 1.4301 |
| 2 | Diaphragm with retaining ring | | (POM) elastomer |
| 3 | Protector | | PE |
| 4 | Body | No. 9864<br>No. 9863 | St 1.4571<br>St 37, epoxy powder coated |
| 5 | Float | | POM |
| 6 | Ball valve outlet 1" | | stainless steel |
| 7 | Rod | | St 1.4301 |
| 8 | Body nut with sieve | | POM / St 1.4301 |
| 9 | Diaphragm holder | | POM |
| 10 | Fix flange<br>Fix flange | No. 9864<br>No. 9863 | St 1.4571<br>St 37, epoxy powder coated |
| 11 | Valve body-bonnet | | POM |
| | Bolts, nuts and springs | | St 1.4301 |

| Flange ID DN | B | H | Weight kg |
|---|---|---|---|
| **2"** | 270 | 615 | 23,0 |
| **50** | 270 | 615 | 23,5 |
| **80** | 270 | 615 | 25,0 |
| **100** | 270 | 615 | 26,0 |
| **150** | 270 | 615 | 28,0 |
| **200** | 270 | 615 | 33,0 |

## Flow performance diagram




**Air inflow rate**

# Automatic Air Valve for waste water

**Working pressure:** PN 16 / 0 - 16 bar

**Max. air release capacity:** 230 $m^3/h$

**Orifice:** 480 $mm^2$

**Connections:** Spigot DN 80
Flange DN 80

| Order no. | Version | pipe cover | |
|---|---|---|---|
| **9827** | **spigot end DN 80** | 1,25 m | ● |
| | | 1,50 m | ● |
| **9828** | **flange connection DN 80** | 1,25 m | ● |
| | | 1,50 m | ● |

**Technical features:**

The air valve assembly consists or a PE shaft with a shut-off valve and air valve, thus eliminating expensive chamber constructions.

The air valve assembly can be installed later on sewage pipes via a saddle. For covering we recommend a commercial ventilating cover (the saddle and the cover are not included in the scope of supply).

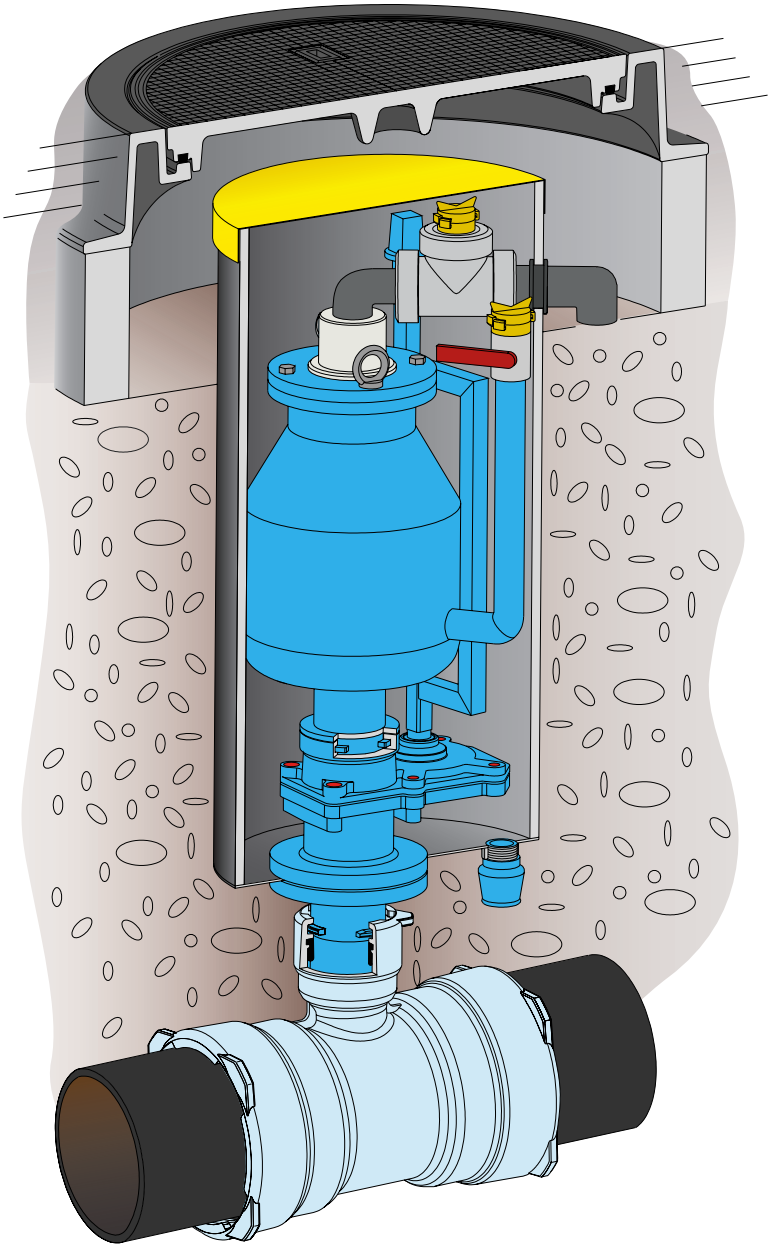
All maintenance and service work can be done from the road surface, thus avoiding the dangers arising shafts.

Excess water is drained away through the drain off system. We recommend the installation of coarse gravel backfill reaching from the road surface down to the piping. If installed in groundwater, additional measures are necessary (closing the drain hole).

For reasons of easier installation we recommend the use of the spigot end version. Please use dirt protection and locking device !

The air release pipe lead through laterally serves for letting off the outgoing air.

**Application:** Waste water from private homes.





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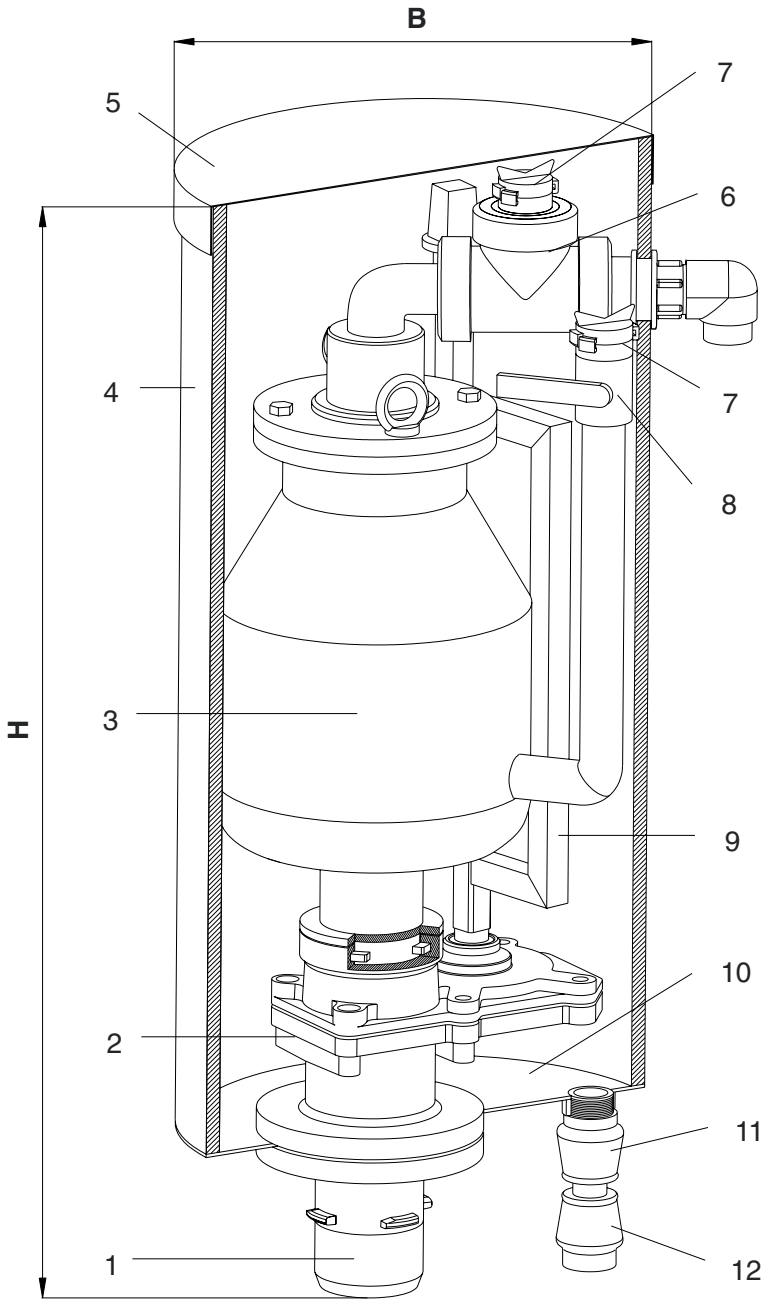
# Automatic Air Valve for waste water




| | Parts | Material |
|---|---|---|
| 1 | Spigot end | ductile iron |
| 2 | Shut-off valve | ductile iron |
| 3 | Air valve | stainless steel |
| 4 | Shaft pipe | PE-HD |
| 5 | Cover | PE |
| 6 | Three-way ball valve | PVC |
| 7 | Hose coupling | Brass |
| 8 | Ball valve outlet | A2 |
| 9 | Rod | square bar steel St 37 epoxy coated |
| 10 | Base plate | Steel St 37 epoxy coated |
| 11 | Drain-off fitting | ductile iron |
| 12 | End fitting (please note surcharge !) | POM |

### Valve maintenance:

Close the shut-off valve.

The valve is provided with two flushing inlets, which are pulled up to the cover.

By connecting flushing lines, dirt can be easily and quickly flushed out of the valve.

Opening of the valve and manual cleaning and/or removal of dirt is required only in case of larger dirt particles.

| Order no. | Version | Pipe cover | total height H | total width A | Weight kg |
|---|---|---|---|---|---|
| **9827** | **Spigot end DN 80** | 1,25 m | 1050 | 455 | 62,0 |
| | | 1,50 m | 1300 | 455 | 80,0 |
| **9828** | **Flange DN 80** | 1,25 m | 975 | 455 | 62,0 |
| | | 1,50 m | 1225 | 455 | 80,0 |

# Universal Pipe Saddle, Undrilled Saddle

| Order no. | Version | | Dimensions/DN | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
| **3500** | **Universal Pipe Saddle with female threaded outlet** | 1" | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | |
| | | 1¼" | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | |
| | | 1½" | | | ● | ● | ● | ● | ● | ● | ● | | | | | |
| | | 2" | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | 2½" | | | | | | ● | ● | | | | | | | |
| | | 3" | | | | | | ● | ● | ● | ● | | | | | |
| **3510** | **Universal Pipe Saddle with flanged outlet** | DN 40 | | | ● | ● | ● | ● | ● | ● | ● | | | | | |
| | | DN 50 | | | ● | ● | ● | ● | ● | ● | ● | | | | | |
| | | DN 80 | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | DN 100 | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | DN 150 | | | | | | | | | | | ● | ● | ● | ● |
| **3530** | **Undrilled Saddle** (see page F 1/2) | | | ● | ● | ● | ● | ● | ● | | | ● | ● | ● | ● | ● |

larger sizes on request; surcharge for electrical earthing arrangement

**for DCI, steel and AC pipes**

Please specify pipe material on order

**up to PN 16**

## Design features

- stainless steel rubber insulated strap
- solid epoxy powder coated body
- favourable angle of contact
- flexible wrap around straps for easy installation
- the saddle seal is moulded to fit the pipe diameter and is prefixed in the saddle body
- easily accessible nut on stainless steel dished washer (No. 3500/3530) resp. on stainless steel flat washer (No. 3510)

**No. 3510**
**with flanged outlet**

**No. 3500**
**with female thread**



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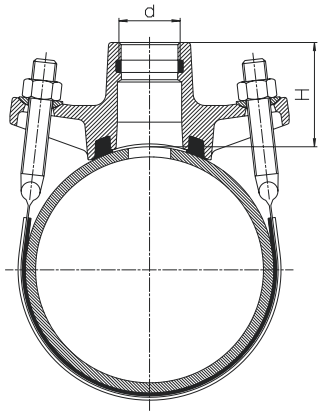
# Universal Pipe Saddle, Undrilled Saddle

**Material**

| | |
|---|---|
| Saddle body: | ductile iron, epoxy powder coated |
| Saddle seal: | elastomer, suitable for potable water |
| Strap: | 1.5 mm gauge, stainless steel 1.4571 DIN 17006 (X10 CrNiMoTi 18 10) |
| Strap insulation: | elastomer |
| Bolts: | M 16 - stainless steel 1.4408 DIN 17006 (G-X6 Cr NiMo 18 10) |
| Nuts: | DIN 934, rust & acid proof steel 1.4401, DIN 17006 (X5 CrNiMo 18 10) molybdenum coating |

## No. 3500 Universal Pipe Saddle with female threaded outlet

DIN 2999 used in conjunction with shut-off adaptor no. 3720 for under pressure drilling

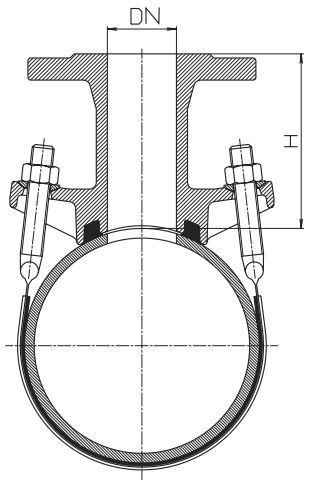



*Double strap model
DN 450 - 1000 „Weight" and „H" on request

| Threaded outlet | | Dimensions/DN | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
| 1" | Weight | 2,30 | 2,20 | 2,40 | 2,50 | 3,30 | 3,40 | 3,90 | 4,60 | 4,70 | | |
| | H | 64 | 64 | 61 | 61 | 78 | 78 | 86 | 89 | 89 | | |
| 1¼" | Weight | 2,30 | 2,20 | 2,40 | 2,50 | 3,40 | 3,50 | 4,10 | 4,60 | 4,70 | | |
| | H | 64 | 64 | 61 | 61 | 78 | 78 | 86 | 89 | 89 | | |
| 1½" | Weight | | | 2,40 | 2,50 | 3,60 | 3,60 | 4,20 | 4,80 | 4,90 | | |
| | H | | | 57 | 57 | 78 | 78 | 86 | 89 | 89 | | |
| 2" | Weight | | | 2,45 | 2,50 | 3,80 | 3,90 | 4,40 | 5,00 | 5,10 | 6,40 | 6,60 |
| | H | | | 57 | 57 | 78 | 78 | 86 | 89 | 89 | 74* | 74* |
| 2½" | Weight | | | | | | 5,30 | 5,70 | | | | |
| | H | | | | | | 54* | 56* | | | | |
| 3" | Weight | | | | | | 5,40 | 5,40 | 5,90 | 6,00 | | |
| | H | | | | | | 54* | 56* | 56* | 56* | | |

## No. 3510 Universal Pipe Saddle with flanged outlet - DIN 28504

all models have a double strap, flange drilling to DIN 2501 - PN 16



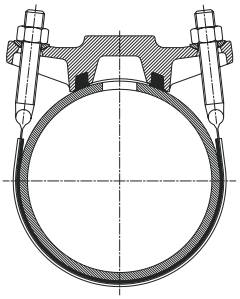

larger sizes dimensions on request

| Flanged outlet DN | | Dimensions/DN | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 |
| 40 | Weight | 6,60 | 6,60 | 6,80 | 6,90 | 7,70 | 7,90 | 8,00 | | | | | |
| | H | 114 | 114 | 126 | 126 | 145 | 153 | 153 | | | | | |
| 50 | Weight | 6,60 | 6,60 | 6,80 | 6,90 | 7,70 | 7,90 | 8,00 | | | | | |
| | H | 114 | 114 | 126 | 126 | 145 | 153 | 153 | | | | | |
| 80 | Weight | | | | 8,80 | 10,00 | 10,40 | 10,50 | 11,00 | 12,20 | 12,30 | 12,50 | 11,80 |
| | H | | | | 135 | 150 | 147 | 147 | 146 | 146 | 146 | 146 | 146 |
| 100 | Weight | | | | 10,30 | 10,10 | 11,60 | 11,70 | 12,50 | 12,70 | 12,80 | 12,90 | 13,30 |
| | H | | | | 140 | 155 | 158 | 158 | 165 | 165 | 165 | 165 | 165 |
| 150 | Weight | | | | | | | | | 27,50 | 28,00 | 29,00 | 30,50 |
| | H | | | | | | | | | 186 | 186 | 186 | 186 |

## No. 3530 Undrilled Saddle

ductile iron, epoxy powder coated

suitable for covering of drill holes up to Ø 40 mm



DN 250 - 600 „Weight" on request

| Dimensions / DN | 65 | 80 | 100 | 125 | 150 | 200 |
|---|---|---|---|---|---|---|
| Weight kg | 2,60 | 2,70 | 2,70 | 3,50 | 3,60 | 4,30 |

# HACOM Pipe Saddle

## The HAWLE COMPACT SADDLE

**Combines efficiency and technical perfection**

**Suitable for renovation and new installations**

| Order no. | Article | Application | Threaded outlet | Dimensions/DN | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | 80 | 100 | 125 | 150 | 200 |
| **3350** | **HACOM pipe Saddle** with rubber insert for ductile cast iron pipes | **water** non aggressive effluent | 1" | ● | ● | ● | ● | ● |
| | | | 1¼" | ● | ● | ● | ● | ● |
| | | | 1½" | ● | ● | ● | ● | ● |
| | | | 2" | ● | ● | ● | ● | ● |
| **3382** | **Rubber Insert** for adapting to steel pipes | | | ● | ● | ● | ● | ● |

**for DCI and steel pipes**

Please specify pipe material and outside diameter on order

**up to PN 16**

- robust design of ductile iron, epoxy powder coated, bolts of corrosion resistant material
- easy exchange of the rubber insert enables adaptation from ductile cast iron to steel pipes; the rubber insert ensures proper contact with the pipe
- a protecting ring on the end of the thread reliably protects against corrosion and encrustation and, therefore, prevents a reduction of the flow section

**Material:**

1 **Saddle body:**
of ductile iron, EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693)
epoxy powder coated
strap width 50 % greater than DIN-requirements (DIN 3543 part 2)

2 **Rubber insert:**
of elastomer

3 **O ring:**
of elastomer, suitable for potable water

4 **Protecting ring:**
of elastomer, suitable for potable water

5 **Bolts, nuts and washers:**
M 16 - Delta-Magni coated, therefore highest corrosion protection

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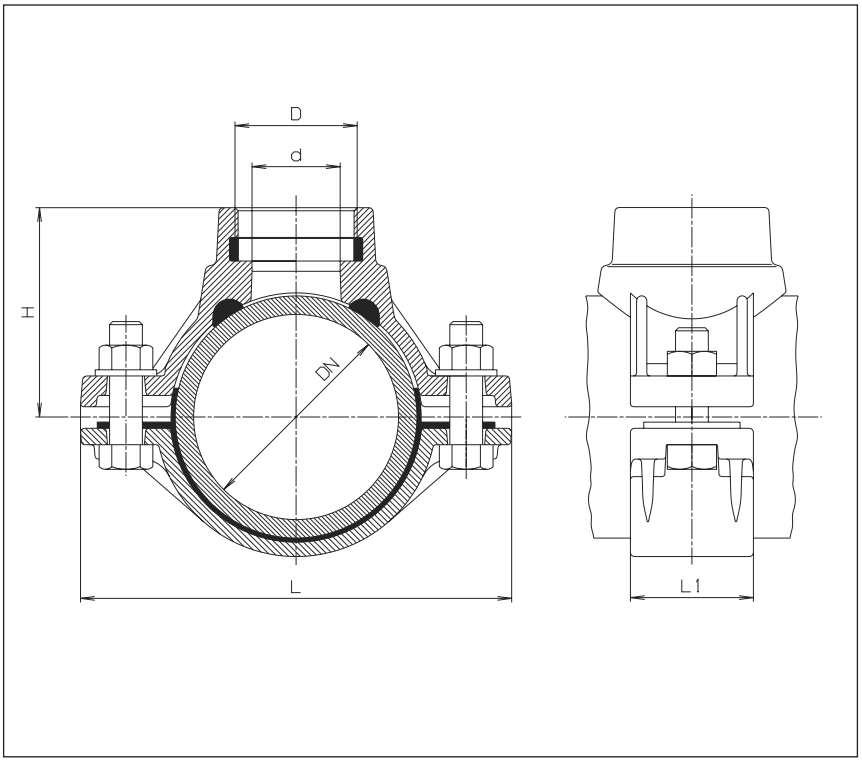
# HACOM Pipe Saddle

## No. 3350

## HACOM Pipe Saddle with thread outlet




| DN | D | d Ø | H | L | L 1 | Weight kg |
|---|---|---|---|---|---|---|
| 80 | 1" | 30 | 70 | 186 | 60 | 2,3 |
| | 1¼" | 38,5 | 73 | 186 | 60 | 2,3 |
| | 1½" | 43 | 83 | 186 | 60 | 2,5 |
| | 2" | 43 | 89 | 186 | 60 | 2,5 |
| 100 | 1" | 30 | 81 | 210 | 60 | 2,5 |
| | 1¼" | 38,5 | 84 | 210 | 60 | 2,5 |
| | 1½" | 43 | 94 | 210 | 60 | 2,7 |
| | 2" | 43 | 100 | 210 | 60 | 2,7 |
| 125 | 1" | 30 | 94 | 238 | 60 | 2,7 |
| | 1¼" | 38,5 | 97 | 238 | 60 | 2,7 |
| | 1½" | 43 | 107 | 238 | 60 | 2,9 |
| | 2" | 43 | 113 | 238 | 60 | 2,9 |
| 150 | 1" | 30 | 107 | 264 | 60 | 3,0 |
| | 1¼" | 38,5 | 110 | 264 | 60 | 3,0 |
| | 1½" | 43 | 120 | 264 | 60 | 3,2 |
| | 2" | 43 | 126 | 264 | 60 | 3,2 |
| 200 | 1" | 30 | 133 | 316 | 60 | 3,5 |
| | 1¼" | 38,5 | 136 | 316 | 60 | 3,5 |
| | 1½" | 43 | 146 | 316 | 60 | 3,7 |
| | 2" | 43 | 152 | 316 | 60 | 3,7 |

## INSTALLATION EXAMPLE: HACOM Pipe Saddle for house connection

Assemble the **HAWLE HACOM Pipe Saddle** with 2" female thread onto the DCI or steel pipe

Install the **HAWLE ISO Combination Tapping Valve** DN 1" - No. 2681 - of POM
(ask for special leaflet)

Drill the pipe through the opened valve with the **HAWLE Drilling Machine** No. 5800 or No. 5805
(ask for special leaflet)

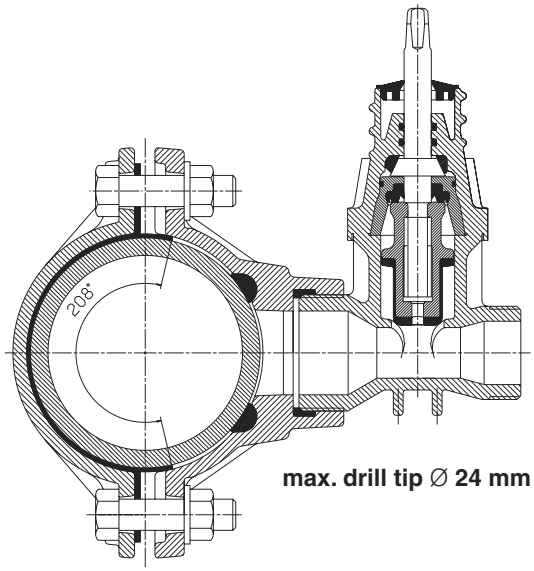
After drilling, retract the drill

Close the valve

Screw on one of the **HAWLE ISO push-fit fittings,** No. 6221F, suitable for PE pipes of Ø 25, Ø 32, Ø 40, Ø 50, or Ø 63 mm

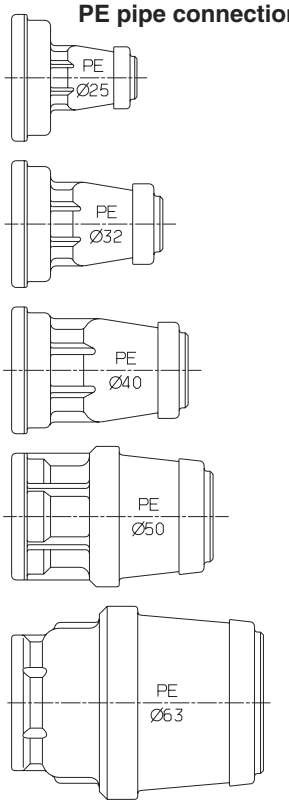
Push the PE pipe in - **finished**

**DCI or steel pipe**




**max. drill tip Ø 24 mm**

**PE pipe connection**



# Shut-Off Saddle with O ring

## for DCI, steel and AC pipes

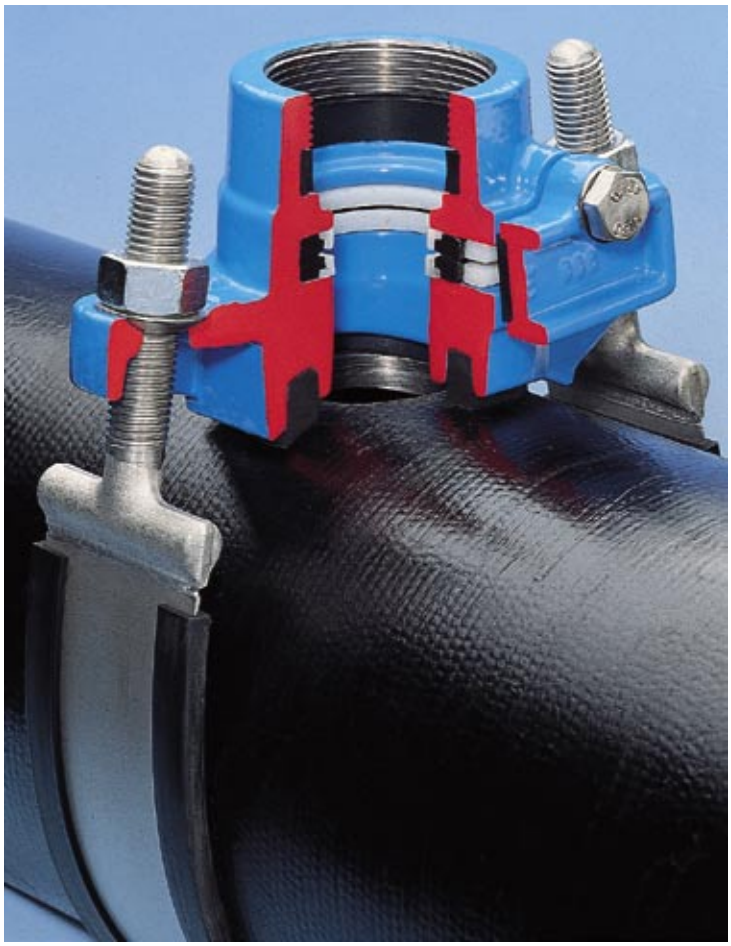
Please specify pipe material on order !

## for under pressure drilling

up to DN 600 mm on request

| Order no. | Version | | Dimensions/DN | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
| 3800 | with female threaded outlet | 1" | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | | 1¼" | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| | | 1½" | | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | 2" | | | ● | ● | ● | ● | ● | ● | ● | ● | ● |

larger sizes on request; surcharge for electrical earthing arrangement



### up to PN 16

#### Design features

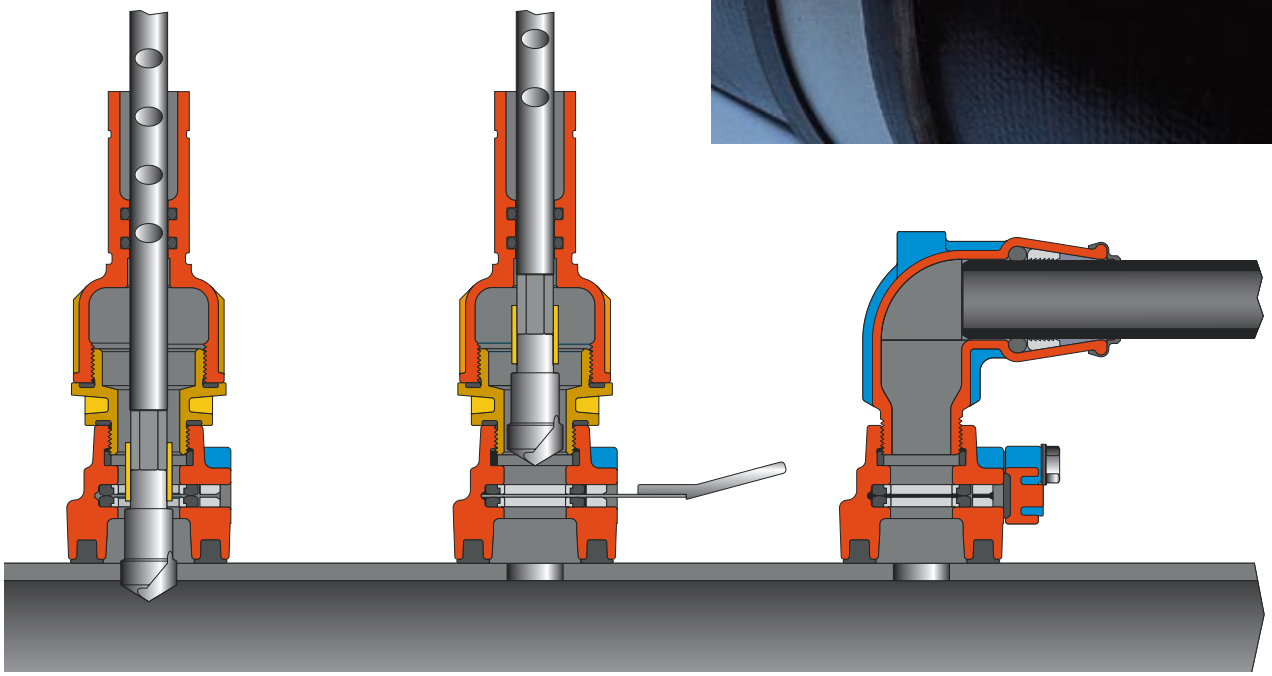
- stainless steel rubber insulated strap
- solid epoxy powder coated body
- flexible wrap around straps for easy installation
- favourable angle of contact
- the saddle seal is moulded to fit the pipe diameter and is prefixed in the saddle body
- easily accessible nuts with stainless steel dished washers
- can be pressure tested from both directions

#### Drilling instructions

**Drilling:**
drill the pipe with a drilling machine (Hawle drilling machines, see special leaflets) — retract the drill

**Shut-off:**
lubricate the saddle blade (Order no. 8401) — insert it — shut-off

**Connection:**
connect the pipe — retract the saddle blade — screw on the cover





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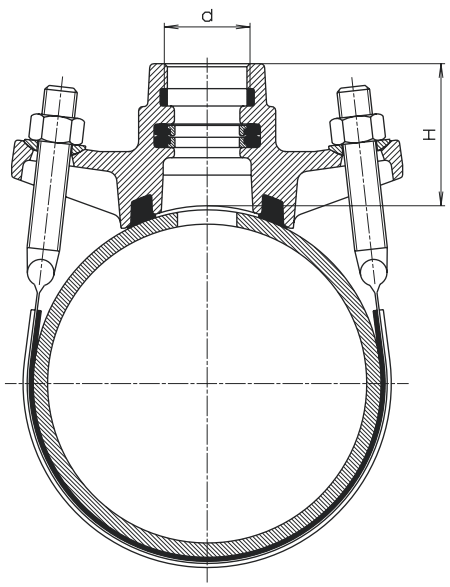
# Shut-Off Saddle with O ring




## No. 3800

## Shut-Off Saddle with O ring

with female thread outlet DIN 2999

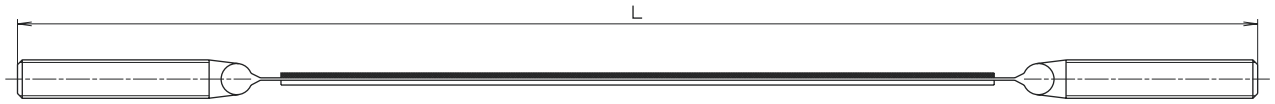
**Material:**

| | |
|---|---|
| Saddle body: | ductile iron - DIN 1693, epoxy powder coated |
| Cover: | POM, glass fiber reinforced |
| Seals: | elastomer, suitable for potable water |
| O ring carrier: | POM |
| Strap: | 1.5 mm gauge, stainless steel 1.4571- DIN 17006 (X10CrNiMoTi 18 10) |
| Strap insulation: | elastomer |
| Bolts: | M 16 - stainless steel 1.4408 - DIN 17006 (G-X6CrNiMo 18 10) |
| Nuts: | DIN 934, stainless & acid resistant steel 1.4401 - DIN 17006 (X5CrNiMo 18 10) (molybdenum coating) |

| Threaded outlet | | Dimensions/DN | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
| 1" | Weight kg | 2,10 | 2,10 | 2,60 | 2,70 | 3,10 | 3,20 | 4,00 | 4,60 | 4,70 | | |
| | H | 67 | 68 | 69 | 69 | 70 | 70 | 80 | 82 | 82 | | |
| 1¼" | Weight kg | 2,10 | 2,10 | 2,70 | 2,70 | 3,20 | 3,30 | 4,10 | 4,70 | 4,70 | | |
| | H | 70 | 71 | 72 | 72 | 73 | 73 | 80 | 82 | 82 | | |
| 1½" | Weight kg | | | 3,00 | 3,00 | 3,60 | 3,70 | 4,30 | 4,90 | 4,90 | 6,60 | 6,80 |
| | H | | | 73 | 73 | 74 | 74 | 80 | 82 | 82 | 78 | 78 |
| 2" | Weight kg | | | 3,10 | 3,10 | 3,80 | 3,80 | 4,60 | 5,30 | 5,40 | 6,40 | 6,60 |
| | H | | | 78 | 78 | 78 | 78 | 81 | 83 | 83 | 78 | 78 |

# Straps for Hawle Pipe Saddles

## Reference and order list




| Dimensions DN | Pipe material | | | Markings | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Steel | DI | AC | Ø - Diameter range of strap | Total length "L" | DN | Pipe material | | |
| *50 | ● | ● | ● | 60 - 70 | 330 | 50 | ST | G | AZ |
| *65 | ● | ● | ● | 70 - 82 | 360 | 65 | ST | G | AZ |
| *80 | ● | ● | ● | 89 - 108 | 400 | 80 | ST | G | AZ |
| *100 | ● | ● | ● | 102 - 130 | 450 | 100 | ST | G | AZ |
| *125 | ● | ● | ● | 132 - 158 | 520 | 125 | ST | G | AZ |
| *150 | ● | ● | ● | 159 - 185 | 595 | 150 | ST | G | AZ |
| 175 | ● | ● | | 185 - 210 | 685 | 175 | ST | G | |
| 200 | ● | ● | | 210 - 235 | 760 | 200 | ST | G | |
| *200 | | ● | ● | 219 - 244 | 785 | 200 | | G | AZ |
| *250 | ● | ● | | 264 - 288 | 905 | 250 | ST | G | |
| 250 | | | ● | 288 - 310 | 975 | 250 | | | AZ |
| *300 | ● | ● | | 316 - 340 | 1055 | 300 | ST | G | |
| 300 | | | ● | 335 - 360 | 1130 | 300 | | | AZ |
| *350 | ● | ● | | 355 - 380 | 1155 | 350 | ST | G | |
| 350 | | | ● | 385 - 408 | 1250 | 350 | | | AZ |
| 400 | ● | ● | | 406 - 429 | 1300 | 400 | ST | | |
| *400 | ● | ● | | 415 - 440 | 1325 | 400 | ST | G | |
| 400 | | | ● | 450 - 475 | 1425 | 400 | | | AZ |
| *450 | ● | ● | | 467 - 485 | 1480 | 400 | ST | G | |
| 450 | | | ● | 496 - 520 | 1570 | 450 | | | AZ |
| *500 | ● | ● | | 518 - 535 | 1630 | 450 | ST | G | |
| 500 | | | ● | 578 - 600 | 1810 | 500 | | | AZ |
| *600 | ● | ● | | 620 - 640 | 1945 | 600 | ST | G | |
| 600 | | | ● | 680 - 700 | 2120 | 600 | | | AZ |

* If the pipe material and diameter is not specified in the order, the saddle will be supplied with a strap for the size range indicated.

Illustrations, technical data, dimensions and weights are subject to alteration without notice.



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# HACOM Shut-Off Saddle

## The HAWLE-COMPACT SADDLE

**for under pressure drilling**

**Combines efficiency and technical perfection**

**Suitable for renovation and new installations**

| Order no. | Article | Application | Threaded outlet | Dimensions/DN | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | 80 | 100 | 125 | 150 | 200 |
| 3370 | HACOM Shut-Off Saddle with rubber insert for ductile cast iron pipes | Water non aggressive effluent | 1" | ● | ● | ● | ● | ● |
| | | | 1¼" | ● | ● | ● | ● | ● |
| | | | 1½" | ● | ● | ● | ● | ● |
| | | | 2" | ● | ● | ● | ● | ● |
| 3382 | Rubber insert for adapting to steel pipes | | | ● | ● | ● | ● | ● |

**for DCI and steel pipes**

Please specify pipe material and outside diameter on order

**up to PN 16**

For drilling instructions see over page.

- robust design of ductile iron, epoxy powder coated, bolts of corrosion resistant material
- easy exchange of the rubber insert enables adaptation from ductile cast iron to steel pipes; the rubber insert ensures proper contact with the pipe
- a protecting ring on the end of the thread reliably shields against corrosion and encrustation and therefore prevents reduction in the flow section

**Material:**

1 **Saddle body:** of ductile iron, EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693)
strap width 50 % greater than DIN-requirements (DIN 3543 part 2)

2 **Rubber insert:** of elastomer

3 **O ring:** of elastomer, suitable for potable water

4 **Protecting ring:** of elastomer, suitable for potable water

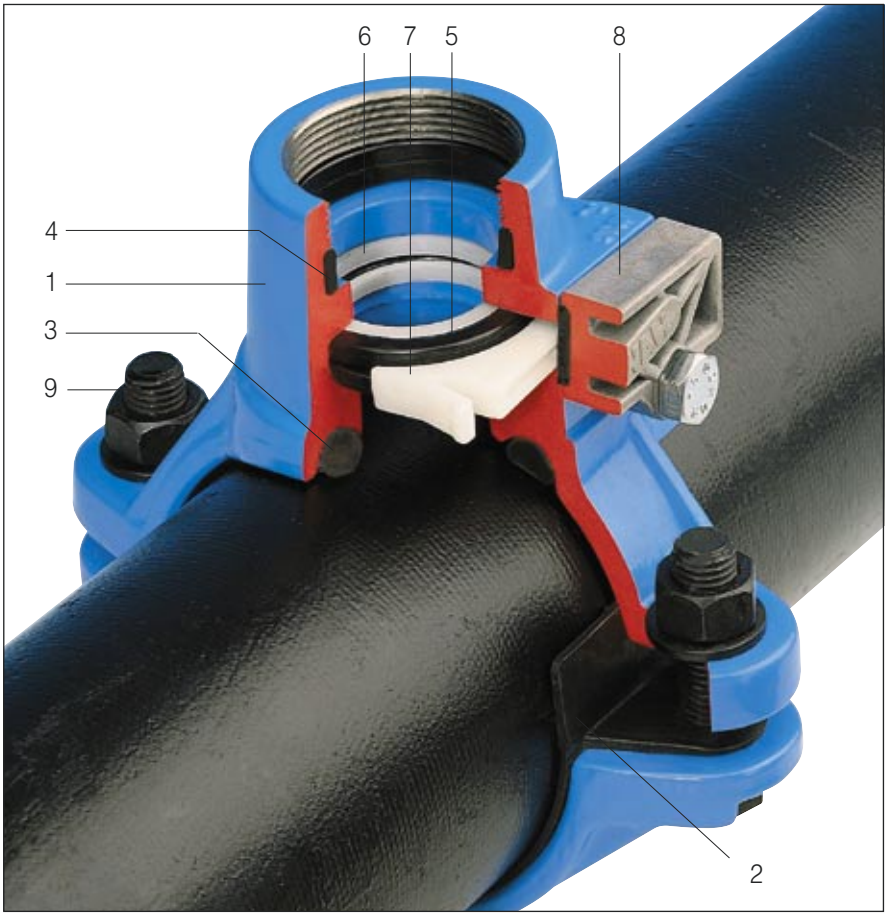
5 **Seal:** of elastomer, suitable for potable water

6 **O ring carrier:** of POM

7 **Backing plate:** of POM

8 **Sealing cover:** of POM, reinforced

9 **Bolts, nuts and washers:** M 16 - Delta-Magni coated, therefore highest corrosion protection



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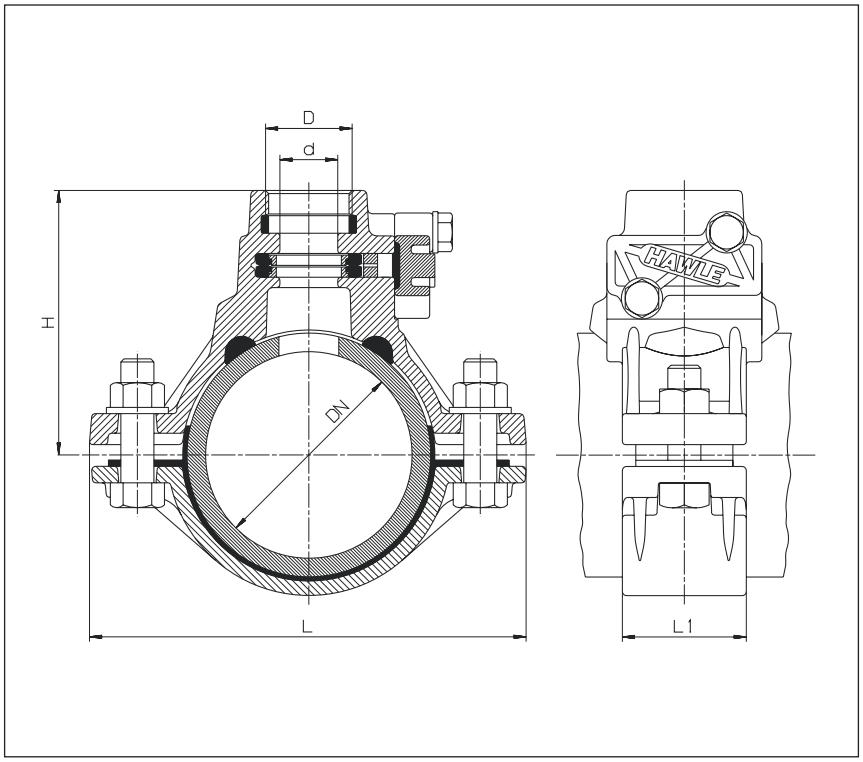
# HACOM Shut-Off Saddle

## No. 3370

## HACOM Shut-Off Saddle with threaded outlet




| DN | D | d Ø | H | L | L 1 | Weight kg |
|---|---|---|---|---|---|---|
| 80 | 1" | 28 | 103,5 | 186 | 60 | 2,8 |
| | 1¼" | 32 | 109 | 186 | 60 | 2,9 |
| | 1½" | 43 | 109 | 186 | 60 | 3,0 |
| | 2" | 43 | 114,5 | 186 | 60 | 3,1 |
| 100 | 1" | 28 | 102,5 | 210 | 60 | 3,0 |
| | 1¼" | 32 | 108 | 210 | 60 | 3,1 |
| | 1½" | 43 | 109 | 210 | 60 | 3,2 |
| | 2" | 43 | 114,5 | 210 | 60 | 3,3 |
| 125 | 1" | 28 | 115,5 | 238 | 60 | 3,2 |
| | 1¼" | 32 | 121 | 238 | 60 | 3,3 |
| | 1½" | 43 | 122 | 238 | 60 | 3,4 |
| | 2" | 43 | 127,5 | 238 | 60 | 3,5 |
| 150 | 1" | 28 | 128,5 | 264 | 60 | 3,5 |
| | 1¼" | 32 | 134 | 264 | 60 | 3,6 |
| | 1½" | 43 | 135 | 264 | 60 | 3,7 |
| | 2" | 43 | 140,5 | 264 | 60 | 3,8 |
| 200 | 1" | 28 | 154,5 | 316 | 60 | 4,0 |
| | 1¼" | 32 | 160 | 316 | 60 | 4,1 |
| | 1½" | 43 | 161 | 316 | 60 | 4,2 |
| | 2" | 43 | 166,5 | 316 | 60 | 4,3 |

## DRILLING INSTRUCTIONS:

**Drilling:**

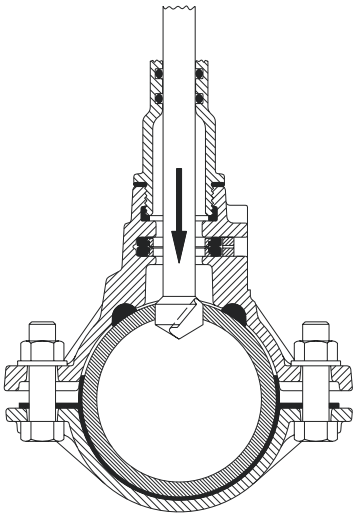
drill the pipe with a drilling machine (for Hawle drilling machines, see special leaflets) — retract the drill

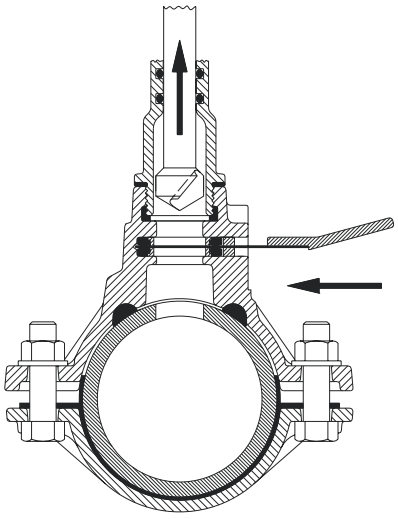
**Shut-off:**

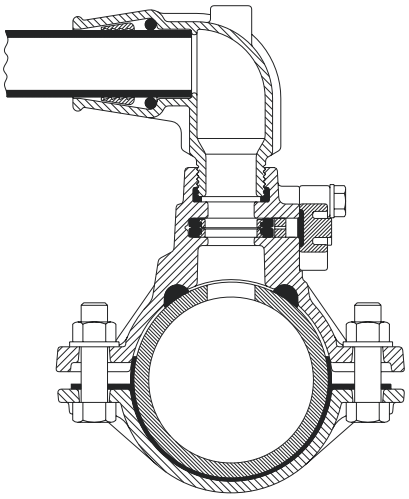
lubricate the saddle blade (Order no. 8401) — insert it — shut-off

**Connection:**

connect the pipe — retract the saddle blade — screw on the cover







## No. 5250 HAKU Saddle

| Pipe Ø mm | female threaded outlet | | | |
|---|---|---|---|---|
| | 1" | 1¼" | 1½" | 2" |
| 40 | ● | | | |
| 50 | ● | | | |
| 63 | ● | ● | ● | ● |
| 75 | ● | ● | ● | ● |
| 90 | ● | ● | ● | ● |
| 110 | ● | ● | ● | ● |
| 125 | ● | ● | ● | ● |
| 140 | ● | ● | ● | ● |
| 160 | ● | ● | ● | ● |
| 180 | ● | ● | ● | ● |
| 200 | ● | ● | ● | ● |
| 225 | ● | ● | ● | ● |
| 250 | ● | ● | ● | ● |
| 280 | | | | ● |
| 280* | ● | ● | ● | ● |
| 315 | | | | ● |
| 315* | ● | ● | ● | ● |
| 400* | | | ● | ● |
| 450* | | | ● | ● |
| 500* | | | ● | ● |

* supplied as saddle piece with strap
Caution: When being used on **PE pipes**, this type is suitable on **class SDR 11** and higher qualities, **only**

**For PE and PVC pipes of all pressure ratings up to PN 16** to DIN 8074, 8061/8062

**for cold water,** other applications on request

The HAKU sealing system is the best method for sealing outlets in plastic pipes.

The HAKU seal is in full contact with the entire diameter of the PE or PVC pipe and is glued into the saddle for ease of assembly.

In addition several concentric seals with increasing diameter surround the outlet thus relieving the pressure upon the drill hole and protecting it from deformation.

**Material:**

| | |
|---|---|
| d 40 | EN-GJL-250 (GG 250) - EN 1561, epoxy powder coated |
| d 50 - 500 | EN-GJS-400-18 (GGG 400) - EN 1563 epoxy powder coated |
| Rubber seals: | elastomer, suitable for potable water |
| Bolts and washers: | stainless steel - A 2 |



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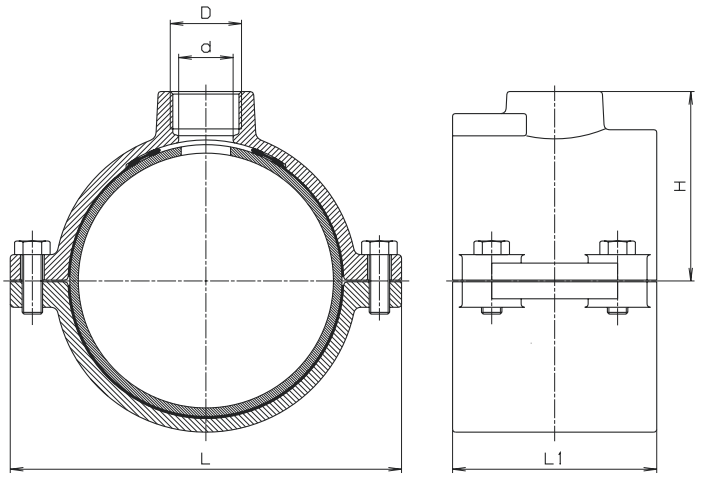
# HAKU Saddle

## No. 5250
## HAKU Saddle

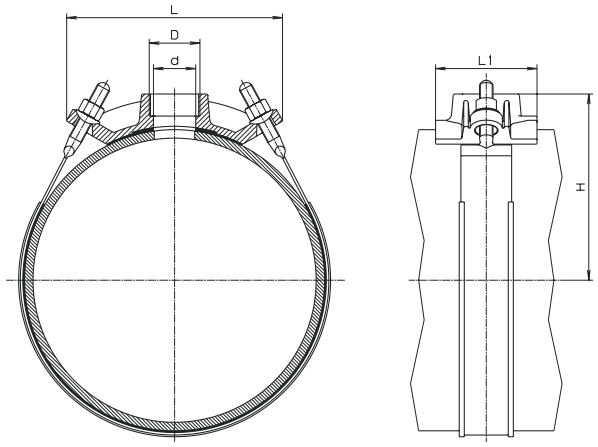
| Pipes | ÖNORM | DIN |
|---|---|---|
| PE | B 5170 | 8072 |
| PE | B 5172 | 8074 |
| PVC | B 5182 | 8061/62 resp.19532 |

**Pipe ∅ mm 40 - 315**




+ max. 35 mm drill tips

*** Pipe ∅ mm 280 - 500** (supplied as saddle piece with strap)
Caution: When being used on **PE pipes**, this type is suitable on **class SDR 11** and higher qualities, **only**




| Pipe ∅ mm | D | d ∅ | H | L | L 1 | Weight kg |
|---|---|---|---|---|---|---|
| 40 | 1" | 27 | 42 | 98 | 70 | 0,95 |
| 50 | 1" | 27 | 56 | 110 | 80 | 1,20 |
| 63 | 1" | 27 | 57 | 124 | 100 | 1,80 |
| | 1¼" | 33 | 62 | | | 2,00 |
| | 1½" | 40 | 62 | | | 1,90 |
| | 2" | 40+ | 68 | | | 2,10 |
| 75 | 1" | 27 | 63 | 135 | 110 | 2,15 |
| | 1¼" | 33 | 68 | | | 2,25 |
| | 1½" | 40 | 68 | | | 2,20 |
| | 2" | 50 | 73 | | | 2,30 |
| 90 | 1" | 27 | 71 | 150 | 110 | 2,60 |
| | 1¼" | 33 | 75 | | | 2,70 |
| | 1½" | 40 | 75 | | | 2,60 |
| | 2" | 50 | 80 | | | 2,70 |
| 110 | 1" | 27 | 81 | 170 | 120 | 3,60 |
| | 1¼" | 33 | 85 | | | 3,60 |
| | 1½" | 40 | 85 | | | 3,80 |
| | 2" | 50 | 90 | | | 3,60 |
| 125 | 1" | 27 | 87 | 192 | 120 | 3,70 |
| | 1¼" | 33 | 93 | | | 3,70 |
| | 1½" | 40 | 93 | | | 4,15 |
| | 2" | 50 | 98 | | | 4,10 |
| 140 | 1" | 27 | 96 | 208 | 120 | 4,40 |
| | 1¼" | 33 | 100 | | | 4,30 |
| | 1½" | 40 | 100 | | | 4,60 |
| | 2" | 50 | 106 | | | 4,50 |
| 160 | 1" | 27 | 106 | 230 | 120 | 5,90 |
| | 1¼" | 33 | 111 | | | 6,10 |
| | 1½" | 40 | 111 | | | 6,30 |
| | 2" | 50 | 116 | | | 6,20 |
| 180 | 1" | 27 | 125 | 262 | 120 | 8,00 |
| | 1¼" | 33 | 125 | | | 8,00 |
| | 1½" | 40 | 127 | | | 8,10 |
| | 2" | 50 | 127 | | | 8,10 |
| 200 | 1" | 30 | 132 | 282 | 120 | 8,10 |
| | 1¼" | 33 | 132 | | | 7,80 |
| | 1½" | 40 | 137 | | | 8,30 |
| | 2" | 50 | 137 | | | 8,10 |
| 225 | 1" | 27 | 143 | 310 | 120 | 9,10 |
| | 1¼" | 33 | 145 | | | 9,40 |
| | 1½" | 40 | 145 | | | 9,70 |
| | 2" | 50 | 150 | | | 9,60 |
| 250 | 1" | 27 | 156 | 347 | 180 | 11,00 |
| | 1¼" | 33 | 156 | | | 11,30 |
| | 1½" | 40 | 163 | | | 11,50 |
| | 2" | 50 | 163 | | | 12,00 |
| 280 | 1"* | 27 | 176 | 204 | 120 | 3,80 |
| | 1¼"* | 38 | 176 | | | 3,60 |
| | 1½"* | 44 | 176 | | | 3,60 |
| | 2"* | 50 | 176 | | | 3,30 |
| | 2" | 51 | 178 | 377 | 180 | 14,20 |
| 315 | 1"* | 27 | 196 | 200 | 120 | 3,80 |
| | 1¼"* | 38 | 196 | | | 3,80 |
| | 1½"* | 44 | 196 | | | 3,75 |
| | 2"* | 50 | 196 | | | 3,55 |
| | 2" | 51 | 196 | 408 | 180 | 16,70 |
| 400 | 1½"* | 40 | 243 | 270 | 120 | 4,90 |
| | 2"* | 50 | 243 | | | 4,90 |
| 450 | 1½"* | 40 | 268 | 235 | 120 | 4,60 |
| | 2"* | 50 | 268 | | | 4,60 |
| 500 | 1½"* | 40 | 292 | 255 | 120 | 4,90 |
| | 2"* | 50 | 292 | | | 4,90 |

# HAKU Pipe Saddle with flanged outlet

**for cold water,**

other applications on request

up to PN 16

| Order no. | Flange DN | Pipe Ø mm | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 110 | 140 | 160 | 180 | 200 | 225 | 250 |
| **5230** | 80 | ● | ● | ● | ● | ● | ● | ● |
| | 100 | | ● | ● | ● | ● | ● | |

for **PE-pipes** according to DIN 8074 PN 10 (SDR 11) and PN 16 (SDR 7.4)
and **PVC-pipes** according to DIN 8061/8062 PN 10 (SDR 21) and PN 16 (SDR 13.5)

Flanged outlet - EN 1092-2

**Design features:**

- solid construction of ductile iron epoxy powder coated
- bolts, nuts and washers of stainless steel
- the drilled hole is sealed by an O ring inserted in the upper part of saddle
- the rubber linings are bonded to the lower part of saddle – this ensures positive positioning of saddle

**Material:**

**Saddle body:**
of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693)
epoxy powder coated

**Rubber-in the lower part:**
Elastomer

**O ring seal-in the bonnet:**
Elastomer, (suitable for potable water)

**Bolts, Nuts and Washers:**
stainless steel - A 2

**Nuts:**
molybdenum coated



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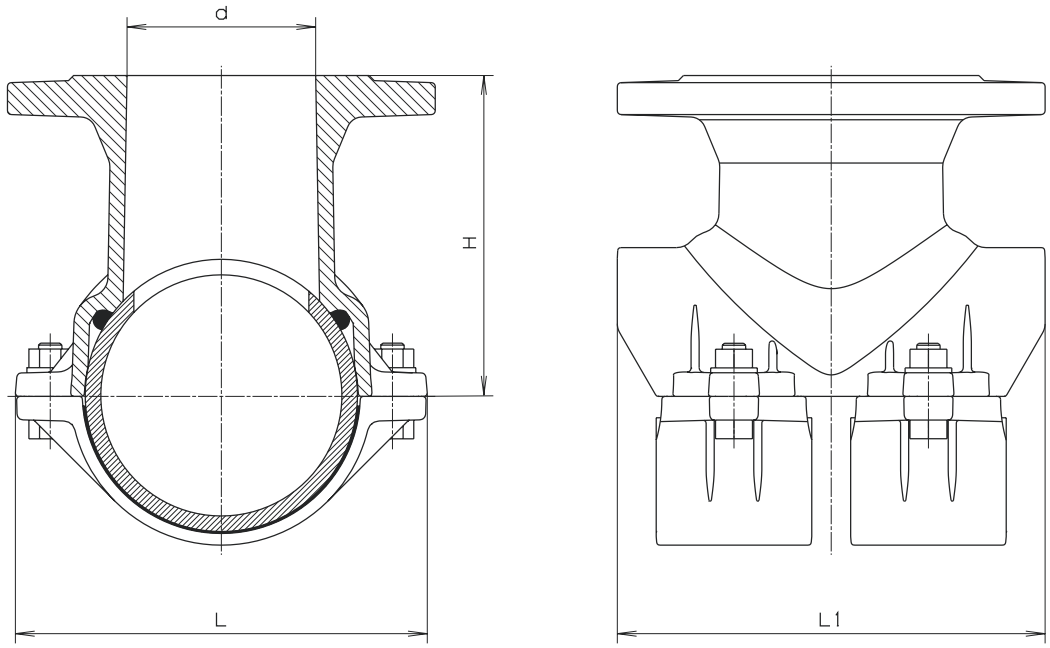
# HAKU Pipe Saddle with flanged outlet

for **PE-pipes** according to DIN 8074 PN 10 (SDR 11) and PN 16 (SDR 7.4)
and **PVC-pipes** according to DIN 8061/8062 PN 10 (SDR 21) and PN 16 (SDR 13.5)

Flanged outlet - EN 1092-2

**No. 5230**




| Pipe Ø mm | Flange DN | d Ø | H | L | L 1 | Weight kg |
|---|---|---|---|---|---|---|
| **110** | **80** | 80 | 150 | 182 | 180 | 8,30 |
| **140** | **80** | 80 | 166 | 212 | 220 | 10,2 |
| | **100** | 100 | 166 | 212 | 220 | 10,9 |
| **160** | **80** | 80 | 176 | 234 | 220 | 10,1 |
| | **100** | 100 | 176 | 234 | 220 | 11,0 |
| **180** | **80** | 80 | 186 | 254 | 220 | 9,0 |
| | **100** | 100 | 186 | 254 | 220 | 12,2 |
| **200** | **80** | 80 | 191 | 270 | 220 | 11,8 |
| | **100** | 100 | 191 | 270 | 220 | 13,8 |
| **225** | **80** | 80 | 206 | 301 | 220 | 14,0 |
| | **100** | 100 | 206 | 301 | 220 | 16,0 |
| **250** | **80** | 80 | 221 | 347 | 220 | 14,7 |

# HAKU Shut-Off Saddle, Shut-Off Adaptor

**No. 5310**

| Pipe Ø mm | female threaded outlet | | | | |
|---|---|---|---|---|---|
| | ¾" | 1" | 1¼" | 1½" | 2" |
| 63 | | ● | ● | | |
| 75 | | ● | ● | ● | ● |
| 90 | ● | ● | ● | ● | ● |
| 110 | | ● | ● | ● | ● |
| 160 | | ● | ● | ● | ● |
| **No. 5210** Combined Assembly: HAKU Saddle No. 5250 (page F 3/1) with Shut-Off Adaptor No. 3720 | | | | | |
| 125 | | ● | ● | ● | ● |
| 140 | | ● | ● | ● | ● |
| 225 | | ● | ● | ● | ● |

other dimensions on request

## For **PE and PVC Tubes** of all pressure ratings up to PN 16 (DIN 8074, 8061 / 8062)

**for cold water,** other applications on request

**Under pressure drilling with the O ring shut-off saddle system has been proven over many decades.**

The HAKU sealing system is the best method for sealing outlets in plastic Tubes.

The HAKU seal is in full contact with the entire diameter of the PE or PVC Tube and is glued into the saddle for ease of assembly.

In addition several concentric lip seals with increasing diameter surround the outlet thus relieving the pressure upon the drill hole and protecting it from deformation.

## No. 5310 HAKU Shut-Off Saddle

**Material:**

| | |
|---|---|
| Body: | of ductile iron EN-GJS-400-18 (GGG 400) - EN 1563, epoxy coated |
| Rubber seals: | élastomer, suitable for potable water |
| Bolts: | stainless steel - A2 DIN 933 |
| O ring seal: | élastomer, suitable for potable water |

**Drilling instructions:** see over page

**Under pressure drilling with the O ring shut-off saddle system has been proven over decades.**

This shut-off adaptor can be used for under pressure drilling with every type of standard saddle.

| DN | |
|---|---|
| 1" | ● |
| 1¼" | ● |
| 1½" | ● |
| 2" | ● |

**for water,** other applications on request

**Note:**
The male thread is one size larger than the female threaded outlet, except on the 2" size, this to provide greater strength.

**Material:**
of ductile iron EN-GJS-400-18 (GGG 400) - EN 1563, epoxy coated
O ring seal: élastomer, suitable for potable water

## No. 3720 Shut-Off Adaptor

**PN 16**

**Drilling instructions:** see over page



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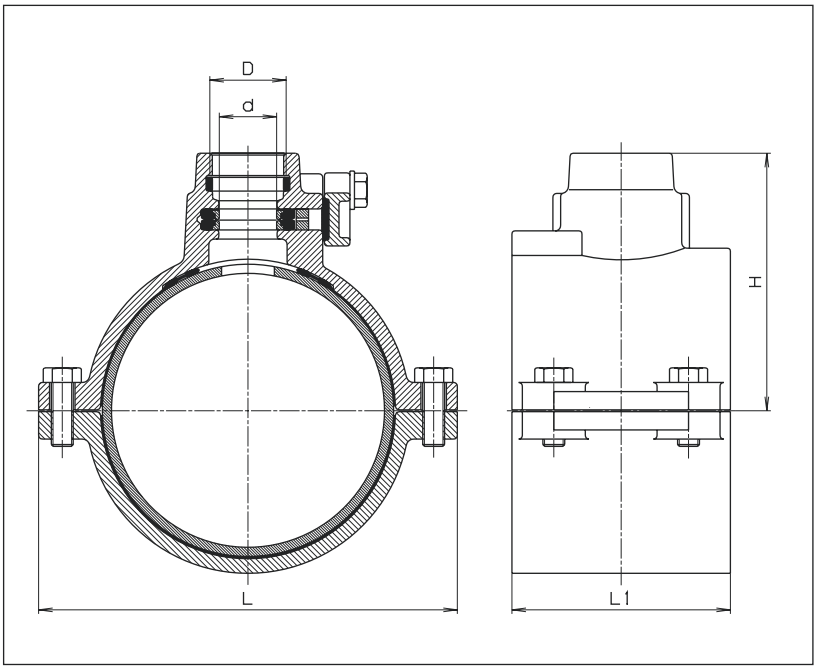
# HAKU Shut-Off Saddle, Shut-Off Adaptor

**Drilling instructions:**

**Drilling:** drill the pipe with a drilling machine (HAWLE drilling machine see „Tools“) — retract the drill

**Shut-off:** lubricate the saddle blade (order no. 8401 - see page K 3/1) — insert it — shut-off

**Connection:** connect the branch pipe — retract the saddle blade — screw on the cover



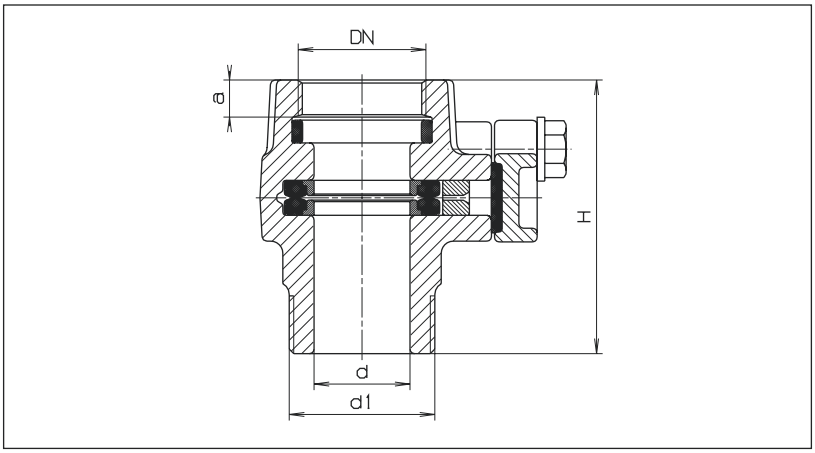

| Pipes | ÖNORM | DIN |
|---|---|---|
| PE | B 5170 | 8072 |
| PE | B 5172 | 8074 |
| PVC | B 5182 | 8061/62 resp. 19532 |

## No. 5310
## HAKU Shut-Off Saddle

| Pipe Ø mm | D | d Ø | H | L | L 1 | Weight kg |
|---|---|---|---|---|---|---|
| 63 | 1" | 28 | 84 | 124 | 100 | 2,5 |
| | 1¼" | 32 | 87 | | | 2,4 |
| 75 | 1" | 28 | 91 | 135 | 110 | 2,8 |
| | 1¼" | 32 | 94 | | | 2,6 |
| | 1½" | 43 | 91 | | | 3,3 |
| | 2" | 43 | 95 | | | 3,0 |
| 90 | ¾" | 24 | 100 | 150 | 110 | 3,0 |
| | 1" | 28 | 100 | | | 3,0 |
| | 1¼" | 32 | 103 | | | 2,5 |
| | 1½" | 43 | 101 | | | 3,6 |
| | 2" | 43 | 105 | | | 3,4 |
| 110 | 1" | 28 | 110 | 170 | 120 | 3,6 |
| | 1¼" | 32 | 113 | | | 3,6 |
| | 1½" | 43 | 113 | | | 4,3 |
| | 2" | 43 | 117 | | | 4,0 |
| 160 | 1" | 28 | 138 | 230 | 120 | 5,5 |
| | 1¼" | 32 | 141 | | | 5,4 |
| | 1½" | 43 | 140 | | | 5,6 |
| | 2" | 43 | 145 | | | 5,6 |

**No. 5210 Combined Assembly: HAKU Saddle No. 5250 with Shut-Off Adaptor No. 3720**

| | | | | | | |
|---|---|---|---|---|---|---|
| 125 | 1" | 27 | 167 | 192 | 120 | 4,8 |
| | 1¼" | 31 | 170 | | | 5,5 |
| | 1½" | 37 | 180 | | | 5,8 |
| | 2" | 42 | 183 | | | 5,8 |
| 140 | 1" | 27 | 174 | 208 | 120 | 5,4 |
| | 1¼" | 31 | 177 | | | 5,9 |
| | 1½" | 37 | 188 | | | 6,2 |
| | 2" | 42 | 191 | | | 6,2 |
| 225 | 1" | 27 | 219 | 310 | 120 | 10,5 |
| | 1¼" | 31 | 222 | | | 11,0 |
| | 1½" | 37 | 232 | | | 11,3 |
| | 2" | 42 | 235 | | | 12,0 |




## No. 3720
## Shut-Off Adaptor

| DN | d 1 | H | a | d Ø | Weight kg |
|---|---|---|---|---|---|
| 1" | 1¼" | 85 | 10 | 27 | 1,1 |
| 1¼" | 1½" | 90 | 12 | 31 | 1,3 |
| 1½" | 2" | 95 | 12 | 37 | 1,7 |
| 2" | 2" | 100 | 15 | 42 | 1,8 |

## for **PE and PVC pipes** PN 10/PN 16 to DIN 8074, 8061/8062

**for water**

| Order no. | Threaded outlet | Pipe Ø mm* | | | | |
|---|---|---|---|---|---|---|
| | | 75 | 90 | 110 | 160 | 225 |
| 5270 | ¾" | ● | ● | ● | ● | ● |
| | 1" | ● | ● | ● | ● | ● |
| | 1¼" | ● | ● | ● | ● | ● |
| | 1½" | ● | ● | ● | ● | ● |
| | 2" | ● | ● | ● | ● | ● |

* For pipe Ø 63 mm see type "HAKU Saddle" (page F 3/1)

### Design features:

- robust design of ductile iron, epoxy powder coated
- bolts, nuts and washers of stainless steel A2
- the drill hole is sealed by an O ring inserted in the upper saddle part
- the rubber seals are lubricated to the lower saddle part

### Material:

Saddle body: ductile iron - EN-GJS-400-18 (GGG 400) - EN 1563 epoxy powder coated

Rubber seals: elastomer

O ring seal: elastomer, suitable for potable water

Bolts, nuts and washers: stainless steel A2
Nuts: molybdenum coating



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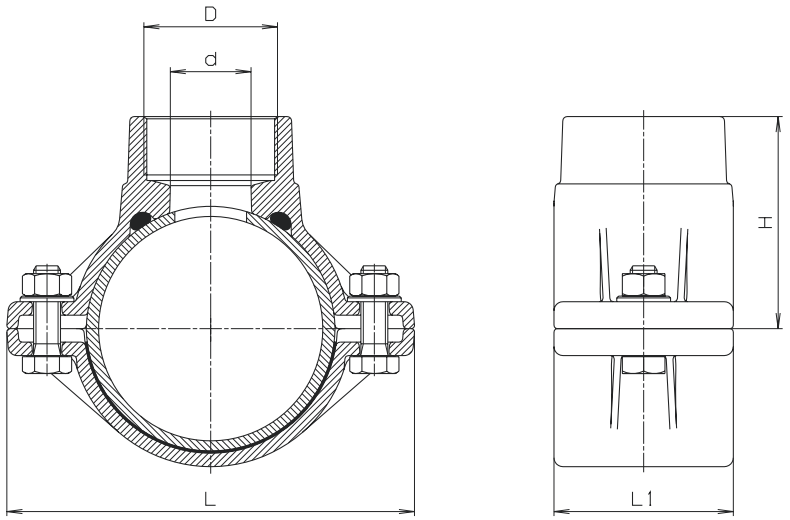
# HAWEX Pipe Saddle

## No. 5270

### HAWEX Pipe Saddle with threaded outlet




Bolts: Pipe Ø 75-160 mm = M 12 x 40 - A 2 DIN 933
Pipe Ø 225 mm = M 12 x 50 - A 2 DIN 931

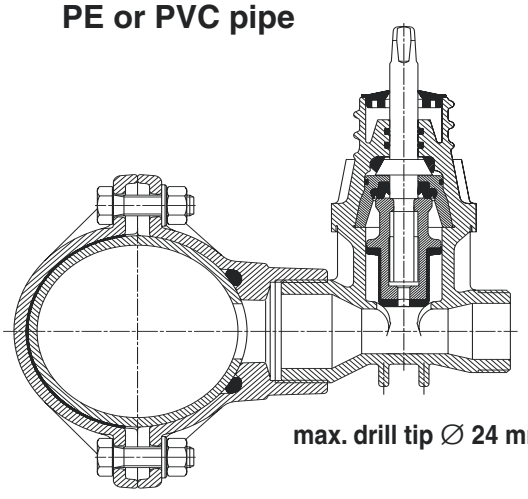
| Pipe Ø mm | D | d Ø | L | L 1 | H | Weight kg |
|---|---|---|---|---|---|---|
| 75 | ¾" | 24 | 148 | 80 | 66 | 1,85 |
| | 1" | 30 | 148 | 80 | 66 | 1,95 |
| | 1¼" | 35 | 148 | 80 | 75 | 1,90 |
| | 1½" | 42 | 148 | 80 | 75 | 1,95 |
| | 2" | 42 | 148 | 80 | 77 | 2,00 |
| 90 | ¾" | 24 | 162 | 80 | 74 | 1,85 |
| | 1" | 30 | 162 | 80 | 74 | 1,95 |
| | 1¼" | 35 | 162 | 80 | 82 | 1,90 |
| | 1½" | 42 | 162 | 80 | 82 | 2,00 |
| | 2" | 42 | 162 | 80 | 85 | 2,00 |
| 110 | ¾" | 24 | 182 | 80 | 84 | 2,15 |
| | 1" | 30 | 182 | 80 | 84 | 2,25 |
| | 1¼" | 35 | 182 | 80 | 92 | 2,30 |
| | 1½" | 42 | 182 | 80 | 92 | 2,30 |
| | 2" | 42 | 182 | 80 | 95 | 2,30 |
| 160 | ¾" | 24 | 228 | 80 | 109 | 2,60 |
| | 1" | 30 | 228 | 80 | 109 | 2,70 |
| | 1¼" | 35 | 228 | 80 | 117 | 2,70 |
| | 1½" | 42 | 228 | 80 | 117 | 2,75 |
| | 2" | 42 | 228 | 80 | 120 | 2,80 |
| 225 | ¾" | 24 | 295 | 100 | 141 | 4,65 |
| | 1" | 30 | 295 | 100 | 141 | 4,75 |
| | 1¼" | 35 | 295 | 100 | 150 | 4,85 |
| | 1½" | 42 | 295 | 100 | 150 | 4,95 |
| | 2" | 42 | 295 | 100 | 152 | 4,95 |

## INSTALLATION EXAMPLE: HAWEX Pipe Saddle for house connection

- Assemble the **HAWLE HAWEX Pipe Saddle** with 2" female thread onto the PE or PVC pipe
- Install the **HAWLE ISO Combination Tapping Valve** DN 1"- No. 2681 - of POM (ask for special leaflet)
- Drill the pipe through the opened valve with the **HAWLE Drilling Machine** No. 5800 or No. 5805 (ask for special leaflet)
- After drilling, retract the drill
- Close the valve
- Screw on one of the **HAWLE ISO push-fit fittings,** No. 6221F, suitable for PE pipes of Ø 25, Ø 32, Ø 40, Ø 50, or Ø 63 mm
- Push the PE pipe in - **finished**

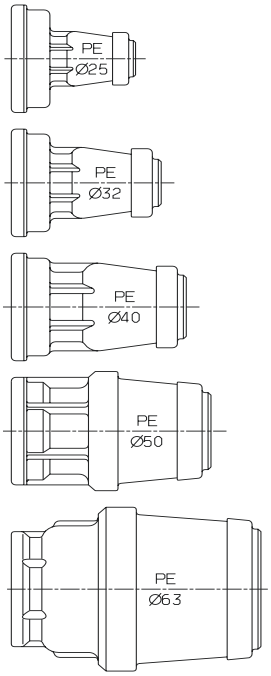
**for under pressure drilling**

**PE or PVC pipe**



**max. drill tip ∅ 24 mm**

**PE pipe connection**



# Pipe Repair and Coupling Clamp

## for steel, DCI, AC and PVC pipes

## stainless steel

all metallic parts - chromium-nickel-steel

**fully encircling elastomer gasket seals complete gaps and other pipe damage**

**Application:** water up to 110° C, other applications on request

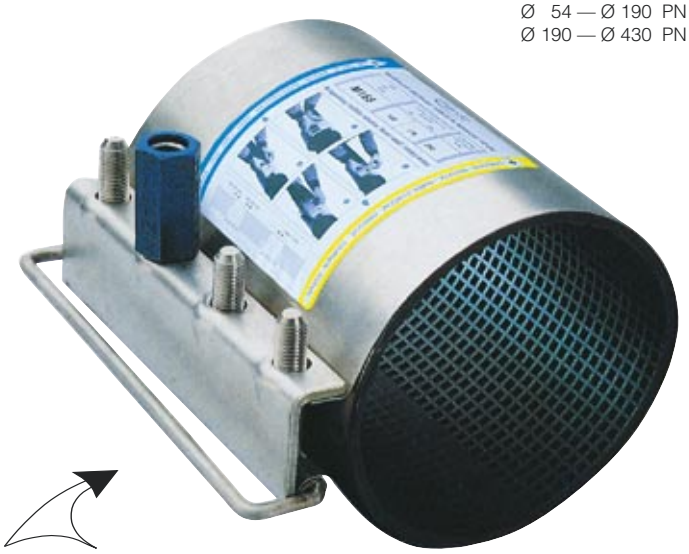
**The clamp with the self-centering lug system**
The short bolts (3) are welded to the bolt bar (4). The handle makes for easy assembly onto the pipe. The nuts are fed directly to the bolts from a special nut dispenser (8). This eases the positioning of lugs and bolts, and avoids handling of loose parts.

Pipe repair clamps cannot be used for restraint connections.

Special version such as larger diameters and other lengths on request.

### No. 0750

tested under normal conditions:
Ø 54 — Ø 190 PN 16
Ø 190 — Ø 430 PN 10



The quick assembly system with the easy to use handle and nut dispenser

### No. 0750 „single lug"

for pipe outside diameters of 54 - 430 mm
length 150 - 380 mm

### No. 0751

tested under normal conditions:
Ø 87 — Ø 186 PN 16
Ø 208 — Ø 430 PN 10
Ø 425 — Ø 471 PN 6

### No. 0751 „double lug"

for pipe outside diameter of 87 - 471 mm
length 200 - 380 mm

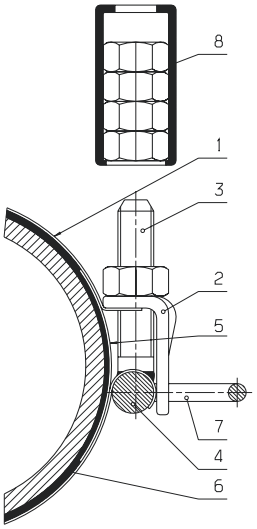
The advantage of the double lug is that each clamp covers a bigger diameter range.

This system enables larger diameter clamps to be manufactured more quickly.

Clamps of over 400 mm are sometimes made with more than 2 lugs.

### No. 0750/0751

1. Band 1.4571
2. Lug 1.4301
3. Bolts A 2 1.4301
4. Bolt-bar 1.4301
5. Bridging plate 1.4301
6. Gasket Elastomer
7. Handle 1.4301
8. Nut dispenser Elastomer




### No. 0501

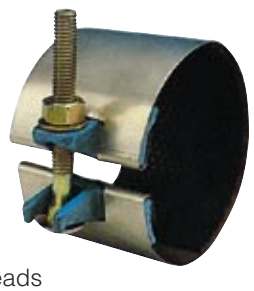
**„light weight model"**

not suitable for plastic pipes

**Application:** water up to 70° C

for Pipe diameter of
21 — 64 mm, length 76 mm

Band: stainless steel 1.4301
Gasket: Elastomer
Lug: malleable iron
Bolts: electro galvanized, imperial threads





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# Pipe Repair and Coupling Clamp

## Order no. 0750 single lug

| Type | Pipe Ø mm | Length mm | suitable for pipe DN | | | | | | | Weight kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Steel | DI | AC-PN 10 raw | AC-PN 10 machined | AC-PN 16 raw | AC-PN 16 machined | PVC OD | | |
| K 54 | 54-58 | 150 | 50 | | | | | | | 1,1 | ● |
| M 54 | | 200 | | | | | | | | 1,5 | ● |
| K 58 | 58-64 | 150 | 50 | | | | | | 63 | 1,1 | ● |
| M 58 | | 200 | | | | | | | | 1,5 | ● |
| K 63 | 63-68 | 150 | | 50 | | | | | 63 | 1,2 | ● |
| M 63 | | 200 | | | | | | | | 1,6 | ● |
| K 68 | 68-76 | 150 | | | 50 | 50 | | | | 1,2 | ● |
| M 68 | | 200 | | | | | | | | 1,7 | ● |
| K 75 | 75-83 | 150 | 65 | 60 | 60 | 60 | | | 75 | 1,3 | ● |
| M 75 | | 200 | | | | | | | | 1,7 | ● |
| K 82 | 82-91 | 150 | 80 | 65 | | | | | 90 | 1,3 | ● |
| M 82 | | 200 | | | | | | | | 1,8 | ● |
| K 95 | 95-104 | 150 | | 80 | 80 | 80 | | 80 | | 1,4 | ● |
| M 95 | | 200 | | | | | | | | 1,9 | ● |
| K 104 | 104-112 | 150 | 100 | | | | 80 | 80 | 110 | 1,5 | ● |
| M 104 | | 200 | | | | | | | | 2,0 | ● |
| K 112 | 112-121 | 150 | 100 | 100 | | 100 | | | | 1,5 | ● |
| M 112 | | 200 | | | | | | | | 2,1 | ● |
| K 115 | 115-125 | 150 | | 100 | 100 | 100 | | | 125 | 1,5 | ● |
| M 115 | | 200 | | | | | | | | 2,1 | ● |
| K 120 | 120-130 | 150 | | | 100 | 100 | | 100 | 125 | 1,7 | ● |
| M 120 | | 200 | | | | | | | | 2,2 | ● |
| K 131 | 131-141 | 200 | 125 | | | | 100 | | 140 | 3,2 | ● |
| M 131 | | 250 | | | | | | | | 4,0 | ● |
| K 140 | 140-150 | 200 | | 125 | | 125 | | | | 3,2 | ● |
| M 140 | | 250 | | | | | | | | 4,0 | ● |
| L 140 | | 315 | | | | | | | | 5,2 | ● |
| K 151 | 151-161 | 200 | 150 | | 125 | | | 125 | 160 | 3,4 | ● |
| M 151 | | 250 | | | | | | | | 4,3 | ● |
| L 151 | | 315 | | | | | | | | 5,4 | ● |
| K 166 | 166-178 | 200 | 150 | 150 | | 150 | | | | 3,5 | ● |
| M 166 | | 250 | | | | | | | | 4,4 | ● |
| L 166 | | 315 | | | | | | | | 5,5 | ● |
| K 178 | 178-190 | 200 | | | 150 | 150 | | 150 | 180 | 3,6 | ● |
| M 178 | | 250 | | | | | | | | 4,5 | ● |
| L 178 | | 315 | | | | | | | | 5,7 | ● |
| K 190 | 190-202 | 200 | | | | | 150 | 150 | 200 | 3,9 | ● |
| M 190 | | 250 | | | | | | | | 4,7 | ● |
| L 190 | | 315 | | | | | | | | 5,8 | ● |
| K 200 | 200-212 | 250 | 200 | | | | | | | 5,0 | ● |
| M 200 | | 315 | | | | | | | | 6,2 | ● |
| L 200 | | 380 | | | | | | | | 7,5 | ● |
| K 215 | 215-227 | 250 | 200 | 200 | | | | | 225 | 5,0 | ● |
| M 215 | | 315 | | | | | | | | 6,3 | ● |
| L 215 | | 380 | | | | | | | | 7,6 | ● |
| K 233 | 233-246 | 250 | | | 200 | 200 | | | | 5,2 | ● |
| M 233 | | 315 | | | | | | | | 6,3 | ● |
| L 233 | | 380 | | | | | | | | 7,8 | ● |
| K 250 | 250-262 | 250 | | | | | 200 | 200 | 250 | 5,4 | ● |
| M 250 | | 315 | | | | | | | | 6,8 | ● |
| L 250 | | 380 | | | | | | | | 8,1 | ● |
| K 269 | 269-281 | 250 | 250 | 250 | | | | | 280 | 5,6 | ● |
| M 269 | | 315 | | | | | | | | 7,1 | ● |
| L 269 | | 380 | | | | | | | | 8,5 | ● |
| K 285 | 285-297 | 250 | | | 250 | 250 | | | | 6,0 | ● |
| M 285 | | 315 | | | | | | | | 7,5 | ● |
| L 285 | | 380 | | | | | | | | 9,0 | ● |
| K 306 | 306-318 | 250 | | | | | 250 | 250 | 315 | 6,0 | ● |
| M 306 | | 315 | | | | | | | | 7,8 | ● |
| L 306 | | 380 | | | | | | | | 9,2 | ● |
| K 315 | 315-327 | 250 | 300 | 300 | | | | | 315 | 6,2 | ● |
| M 315 | | 315 | | | | | | | | 7,8 | ● |
| L 315 | | 380 | | | | | | | | 9,5 | ● |
| K 345 | 345-357 | 250 | 350 | | 300 | 300 | | | 355 | 6,7 | ● |
| M 345 | | 315 | | | | | | | | 8,3 | ● |
| L 345 | | 380 | | | | | | | | 10,0 | ● |
| K 366 | 366-379 | 250 | 350 | 350 | | | 300 | 300 | | 7,0 | ● |
| M 366 | | 315 | | | | | | | | 8,7 | ● |
| L 366 | | 380 | | | | | | | | 10,5 | ● |
| K 400 | 400-412 | 250 | 400 | | 350 | 350 | | | 400 | 7,4 | ● |
| M 400 | | 315 | | | | | | | | 9,2 | ● |
| L 400 | | 380 | | | | | | | | 10,9 | ● |
| K 418 | 418-430 | 250 | 400 | 400 | | | | | | 7,6 | ● |
| M 418 | | 315 | | | | | | | | 9,7 | ● |
| L 418 | | 380 | | | | | | | | 11,8 | ● |

## Order no. 0751 double lug

| Type | Pipe Ø mm | Length mm | suitable for pipe DN | | | | | | | Weight kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Steel | DI | AC-PN 10 raw | AC-PN 10 machined | AC-PN 16 raw | AC-PN 16 machined | PVC O.D. | | |
| M 87 | 87-102 | 200 | 80 | 80 | 80 | 80 | | | 90 | 2,7 | ● |
| M 106 | 106-124 | 200 | 100 | 100 | 100 | 100 | 80 | | 110 | 2,8 | ● |
| M 114 | 114-132 | 200 | 125 | 100 | 100 | 100 | | 100 | 125 | 2,9 | ● |
| K 132 | 132-152 | 200 | 125 | 125 | 125 | 125 | 100 | | 140 | 4,9 | ● |
| M 132 | | 250 | | | | | | | | 6,2 | ● |
| K 142 | 142-162 | 200 | 150 | 125 | 125 | 125 | 125 | 125 | 160 | 5,0 | ● |
| M 142 | | 250 | | | | | | | | 6,4 | ● |
| K 160 | 160-180 | 200 | 150 | 150 | | 150 | | | 160 | 5,3 | ● |
| M 160 | | 250 | | | | | | | | 6,5 | ● |
| L 160 | | 315 | | | | | | | | 8,1 | ● |
| K 166 | 166-186 | 200 | 150 | 150 | 150 | 150 | | | | 5,3 | ● |
| M 166 | | 250 | | | | | | | | 6,7 | ● |
| L 166 | | 315 | | | | | | | | 8,3 | ● |
| K 208 | 208-230 | 250 | 200 | 200 | | | | | 225 | 7,2 | ● |
| M 208 | | 315 | | | | | | | | 8,8 | ● |
| L 208 | | 380 | | | | | | | | 10,7 | ● |
| K 220 | 220-242 | 250 | | 200 | | 200 | | | 225 | 7,3 | ● |
| M 220 | | 315 | | | | | | | | 9,0 | ● |
| L 220 | | 380 | | | | | | | | 11,1 | ● |
| K 236 | 236-258 | 250 | | | 200 | 200 | 200 | 200 | 250 | 7,5 | ● |
| M 236 | | 315 | | | | | | | | 9,4 | ● |
| L 236 | | 380 | | | | | | | | 11,1 | ● |
| K 271 | 271-293 | 250 | 250 | 250 | 250 | 250 | | | 280 | 7,8 | ● |
| M 271 | | 315 | | | | | | | | 9,9 | ● |
| L 271 | | 380 | | | | | | | | 11,8 | ● |
| K 306 | 306-328 | 250 | 300 | 300 | | | 250 | 250 | 315 | 8,4 | ● |
| M 306 | | 315 | | | | | | | | 10,0 | ● |
| L 306 | | 380 | | | | | | | | 12,0 | ● |
| K 330 | 330-352 | 250 | | | | 300 | | | | 8,9 | ● |
| M 330 | | 315 | | | | | | | | 10,7 | ● |
| L 330 | | 380 | | | | | | | | 13,1 | ● |
| K 346 | 346-368 | 250 | 350 | | 300 | 300 | | | 355 | 8,9 | ● |
| M 346 | | 315 | | | | | | | | 11,0 | ● |
| L 346 | | 380 | | | | | | | | 13,3 | ● |
| K 369 | 369-392 | 250 | | 350 | | | 300 | 300 | | 9,1 | ● |
| M 369 | | 315 | | | | | | | | 11,2 | ● |
| L 369 | | 380 | | | | | | | | 13,8 | ● |
| K 406 | 406-430 | 250 | 400 | 400 | 350 | | | | | 9,7 | ● |
| M 406 | | 315 | | | | | | | | 11,7 | ● |
| L 406 | | 380 | | | | | | | | 14,5 | ● |
| K 425 | 425-448 | 250 | | 400 | | | 350 | 350 | | 9,8 | ● |
| M 425 | | 315 | | | | | | | | 12,3 | ● |
| L 425 | | 380 | | | | | | | | 14,8 | ● |
| K 448 | 448-471 | 250 | | | 400 | 400 | | | 450 | 10,2 | ● |
| M 448 | | 315 | | | | | | | | 12,8 | ● |
| L 448 | | 380 | | | | | | | | 15,1 | ● |

## Order no. 0501

| Type | Pipe Ø mm | Length | Weight kg | |
|---|---|---|---|---|
| D 21 | 21-25 | 76 | 0,25 | ● |
| D 26 | 26-30 | 76 | 0,30 | ● |
| D 33 | 33-37 | 76 | 0,35 | ● |
| D 42 | 42-45 | 76 | 0,35 | ● |
| D 48 | 48-51 | 76 | 0,45 | ● |
| D 50 | 50-54 | 76 | 0,45 | ● |
| D 60 | 60-64 | 76 | 0,45 | ● |

# Flanged Connections for PE pipes, restraint

## Flange Adaptor "System 2000"

**restraint**

**for PE** (PE 80/100) **pipes**

**up to PN 16**

## No. 0400

**Material:**

Flange and locking ring: ductile iron, epoxy powder coated

Lip seal: Elastomer, suitable for potable water (durably lubricated)

Flat gasket: Elastomer

Grip ring: Ms 58 (up to DN 300 Rg7)

Hexagonal bolts: A 2 stainless

Flanges to EN 1092-2

For thinwalled PE-pipes (up to 3mm wall thickness) and low internal pressure we recommend using a support liner (see page D2/4).

The use of lip seals enables the pipe to be pushed in with minimal force.

The flange to flange seal is incorporated onto the flange.

The pipe restraining system is effective separately from the sealing system and is activated by tightening the locking ring.

**Assembly:**

**1.** Chamfer the pipe end 30° and moisten, then
a) push the pipe end into the loosely assembled flange until it stops, or
b) push the loose bride onto the pipe end until it stops.

**2.** Bolt up the locking ring until it stops. This shall be done only after firmly assembling the flange adaptor with the opposing flange.

## Flange Adaptor with PE fusion tail

**No. 0310**
PE 80 / SDR 11 - PN 10
PE 100 / SDR 11 - PN 16

**No. 0311**
PE 80 / SDR 17.6 - PN 6
PE 100 / SDR 17.6 - PN 10

**Material:**

Flange: ductile iron, epoxy powder coated

PE tail injection moulded PE 80 (standard)

Melt flow index: MFR 190/5 kg MFR group 10 (DIN 8075) (PE 100 MFR group 05-DIN 8075)

Support liner: 1.4301

Seals: Elastomer, suitable for potable water

High performance sealing of the PE tail is assured by two separate O ring seals and a stainless steel support liner within the tail.

The flange can be connected to the PE pipline by either butt fusion or electrofusion.

**for PE pipes according to ÖNORM B 5172, DIN 8074/8075**
**standard version:** PN 10 - DIN 2501

| Flange DN | Pipe ∅ mm | Flange Adaptor "System 2000" | | ISO Pipe Flange | | | | Flange with PE fusion tail | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | equal | | reducing | | PN 10 | | PN 6 | |
| | | No. 0400 | | No. 5500 | | No. 5530 | | No. 0310 | | No. 0311 | |
| 40 | 40 | | | | | ● | G | | | | |
| 40 | 50 | | | ● | G | | | | | | |
| 50 | 50 | | | | | ● | G | | | | |
| 50 | 63 | ● | S | ● | G | | | ● | S | ● | S |
| 60 | 50 | | | | | ● | G | | | | |
| 60 | 63 | ● | S | | | ● | G | | | | |
| 60 | 75 | ● | S | ● | G | | | | | | |
| 65 | 63 | ● | S | | | ● | G | | | | |
| 65 | 75 | ● | S | ● | G | | | | | | |
| 80 | 75 | ● | S | | | ● | G | | | | |
| 80 | 90 | ● | S | ● | G | | | ● | S | ● | S |
| 100 | 90 | ● | S | | | ● | G | | | | |
| 100 | 110 | ● | S | ● | G | | | ● | S | ● | S |
| 100 | 125 | ● | S | ● | G | | | ● | S | ● | S |
| 125 | 110 | ● | S | | | ● | G | | | | |
| 125 | 125 | ● | S | | | | | | | | |
| 125 | 140 | ● | S | | | | | | | | |
| 150 | 140 | ● | S | | | | | | | | |
| 150 | 160 | ● | S | ● | S | | | ● | S | ● | S |
| 150 | 180 | ● | S | | | | | ● | S | ● | S |
| 200 | 200 | ● | S* | | | | | ● | S | ● | S |
| 200 | 225 | ● | S* | | | | | ● | S | ● | S |
| 250 | 250 | ● | S* | | | | | | | | |
| 250 | 280 | ● | S* | | | | | | | | |
| 300 | 315 | ● | S* | | | | | | | | |
| 300 | 355 | ● | S* | | | | | | | | |
| 400 | 400 | ● | S* | | | | | | | | |
| 400 | 450 | ● | S* | | | | | | | | |

**Explanation:** * also available in PN 16
S of ductile iron G of grey iron

## ISO Pipe Flange Adaptor

**No. 5500** equal
**No. 5530** reducing

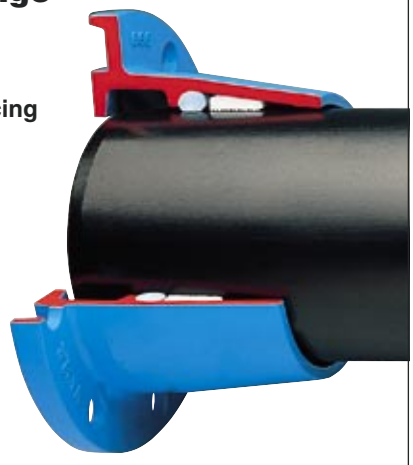
**up to PN 16**

**Material:**

Flange: see above table, epoxy powder coated

Grip ring: POM

Seal ring: Elastomer, suitable for potable water



**Assembly instructions:** chamfer the pipe 30° and moisten, and push into the socket until it stops.



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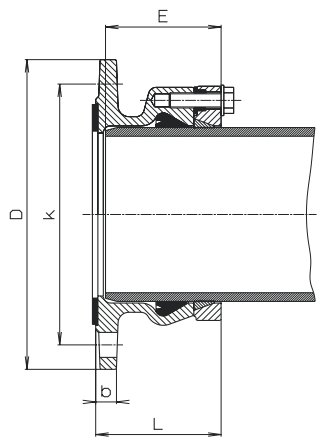
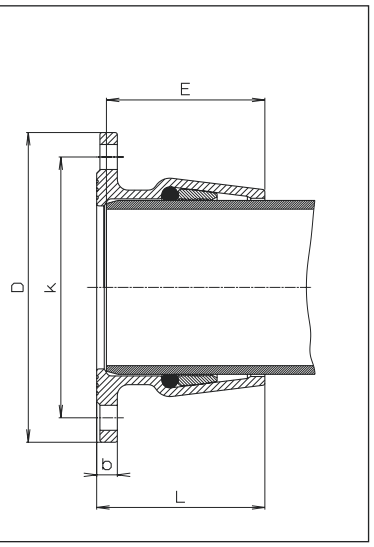
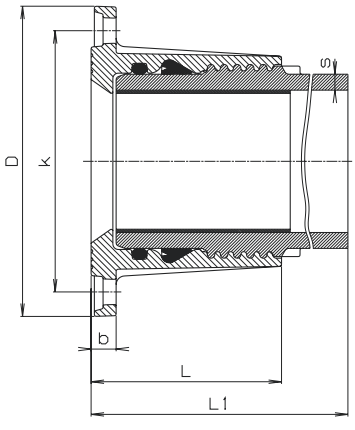
# Flanged Connections for PE pipes, restraint

**No. 0400**




**No. 0310 / No. 0311**




## No. 0400 / No. 5500

| Flange DN | Pipe Ø mm | D | K | b - No. | | ~ L (assembled) | | E - No. | | Bolts | | Weight No. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0400 | 5500 | 0400 | 5500 | 0400 | 5500 | Qty. | Thread | 0400 | 5500 |
| **40** | 50 | 150 | 112 | | 23 | | 97 | | 93 | 4 | M 16 | | 2,6 |
| **50** | 63 | 165 | 125 | 19 | 23 | 90 | 94 | 80 | 80 | 4 | M 16 | 3,6 | 3,2 |
| **60** | 63 | 175 | 135 | 19 | | 90 | | 80 | | 4 | M 16 | 3,8 | |
| **60** | 75 | 175 | 138 | 19 | 24 | 92 | 105 | 82 | 100 | 4 | M 16 | 4,0 | 3,9 |
| **65** | 63 | 185 | 145 | 19 | | 90 | | 80 | | 4 | M 16 | 4,3 | |
| **65** | 75 | 185 | 145 | 19 | 24 | 92 | 105 | 82 | 99 | 4 | M 16 | 4,3 | 4,0 |
| **80** | 75 | 200 | 160 | 19 | | 92 | | 82 | | 8 | M 16 | 5,0 | |
| **80** | 90 | 200 | 160 | 19 | 24 | 95 | 101 | 85 | 96 | 8 | M 16 | 5,5 | 4,2 |
| **100** | 90 | 220 | 180 | 19 | | 95 | | 85 | | 8 | M 16 | 6,8 | |
| **100** | 110 | 220 | 180 | 19 | 25 | 95 | 124 | 85 | 119 | 8 | M 16 | 6,2 | 6,7 |
| **100** | 125 | 220 | 180 | 19 | 25 | 97 | 173 | 87 | 162 | 8 | M 16 | 7,0 | 8,2 |
| **125** | 110 | 250 | 210 | 19 | | 95 | | 85 | | 8 | M 16 | 7,8 | |
| **125** | 125 | 250 | 210 | 19 | | 97 | | 87 | | 8 | M 16 | 8,2 | |
| **125** | 140 | 250 | 210 | 19 | | 103 | | 93 | | 8 | M 16 | 8,5 | |
| **150** | 140 | 285 | 240 | 19 | | 103 | | 93 | | 8 | M 16 | 11,3 | |
| **150** | 160 | 285 | 240 | 19 | 19 | 115 | 155 | 105 | 148 | 8 | M 20 | 10,5 | 9,3 |
| **150** | 180 | 285 | 240 | 19 | | 125 | | 115 | | 8 | M 20 | 11,6 | |
| **200** | 200 | 340 | 295 | 20 | | 135 | | 125 | | 8 | M 20 | 18,0 | |
| **200** | 225 | 340 | 295 | 20 | | 138 | | 128 | | 8 | M 20 | 16,0 | |
| **250** | 250 | 400 | 350 | 22 | | 155 | | 145 | | 12 | M 20 | 22,0 | |
| **250** | 280 | 400 | 350 | 22 | | 158 | | 148 | | 12 | M 20 | 29,0 | |
| **300** | 315 | 455 | 400 | 25 | | 184 | | 174 | | 12 | M 20 | 44,0 | |
| **300** | 355 | 455 | 400 | 25 | | 277 | | 237 | | 12 | M 20 | 61,0 | |
| **400** | 400 | 565 | 515 | 25 | | 242 | | 230 | | 16 | M 24 | 97,0 | |
| **400** | 450 | 565 | 515 | 25 | | 302 | | 260 | | 16 | M 24 | 81,0 | |

## No. 5530

| Flange DN | Pipe Ø mm | D | K | b | L | E | Bolts | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Qty. | Thread | |
| **40** | 40 | 150 | 110 | 21 | 85 | 80 | 4 | M 16 | 2,4 |
| **50** | 50 | 165 | 125 | 23 | 97 | 93 | 4 | M 16 | 3,0 |
| **60** | 50 | 175 | 135 | 24 | 97 | 94 | 4 | M 16 | 3,4 |
| **60** | 63 | 175 | 135 | 24 | 94 | 90 | 4 | M 16 | 3,9 |
| **65** | 63 | 185 | 145 | 24 | 94 | 90 | 4 | M 16 | 4,2 |
| **80** | 75 | 200 | 160 | 24 | 105 | 100 | 8 | M 16 | 5,0 |
| **100** | 90 | 220 | 180 | 25 | 101 | 96 | 8 | M 16 | 5,9 |
| **125** | 110 | 250 | 210 | 26 | 124 | 119 | 8 | M 16 | 8,8 |

## No. 0310 / No. 0311

| Flange DN | Pipe Ø mm | D | K | b | L | L 1 | s | | Bolts | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | (PN 6)* | (PN 10)* | Qty. | Thread | |
| **50** | 63 | 165 | 125 | 19 | 106 | 291 | 3,6 | 5,8 | 4 | M 16 | 4,0 |
| **80** | 90 | 200 | 160 | 20 | 125 | 305 | 5,1 | 8,2 | 8 | M 16 | 6,7 |
| **100** | 110 | 220 | 180 | 21 | 142 | 327 | 6,3 | 10,0 | 8 | M 16 | 9,3 |
| **100** | 125 | 220 | 180 | 19 | 190 | 373 | 7,1 | 11,4 | 8 | M 16 | 12,4 |
| **150** | 160 | 285 | 240 | 23 | 175 | 358 | 9,1 | 14,6 | 8 | M 20 | 16,0 |
| **150** | 180 | 285 | 240 | 19 | 260 | 437 | 10,2 | 16,4 | 8 | M 20 | 23,0 |
| **200** | 200 | 340 | 295 | 20 | 210 | 403 | 11,4 | 18,3 | 8 | M 20 | 28,0 |
| **200** | 225 | 340 | 295 | 20 | 210 | 403 | 12,8 | 20,5 | 8 | M 20 | 28,0 |

*SDR 17.6 *SDR 11

## Flange Adaptor „System 2000” restraint

**for PVC pipes**

**up to PN 16**

## No. 0400

**Material:**

Flange and locking ring: ductile iron, epoxy powder coated

Lip seal: elastomer suitable for potable water (durably lubricated)

Flat gasket: elastomer

Grip ring: Ms 58 (from DN 300 Rg7)

Hexagonal bolts: A 2

Flanges to EN 1092-2

The use of lip seals enables the pipe to be pushed in with minimal force.
The flange to flange seal is incorporated onto the flange.

The pipe restraining system is effective separately from the sealing system and is activated by tightening the locking ring.

**Assembly:**

1. Chamfer the pipe end 30° and moisten, then
   a) push the pipe end into the loosely assembled flange until it stops, or
   b) push the loose bride onto the pipe end until it stops.
2. Bolt up the locking ring until it stops. This shall be done only after firmly assembling the flange adaptor with the opposing flange

## Double Chamber Flange Adaptor

**up to PN 16**

**No. 5600** equal
**No. 5630** reducing

with reducing ring

**Material:**

Flange: see table above right, epoxy powder coated

Sleeve gasket: elastomer, suitable for potable water

**Assembly:** Cut the pipe end square, do not chamfer or moisten – push the flange onto the pipe and then push the gasket on.

**for PVC pipes according to EN 1452-2, DIN 8061/8062**
**standard version:** PN 10 - DIN 2501

| Flange DN | Pipe Ø mm | Flange Adaptor "System 2000" | | Double Chamber Flange Adaptor | | | |
|---|---|---|---|---|---|---|---|
| | | | | equal | | reducing | |
| | | No. 0400 | | No. 5600 | | No. 5630 | |
| 50 | 63 | ● | S | ● | G | | |
| 60 | 63 | ● | S | | | | |
| 60 | 75 | ● | S | ● | G | | |
| 65 | 63 | ● | S | | | | |
| 65 | 75 | | | ● | G | | |
| 80 | 75 | ● | S | | | ● | G |
| 80 | 90 | ● | S | ● | G | | |
| 100 | 90 | ● | S | | | | |
| 100 | 110 | ● | S | ● | G | | |
| 100 | 125 | ● | S | | | | |
| 125 | 110 | ● | S | | | | |
| 125 | 125 | ● | S | | | | |
| 125 | 140 | ● | S | | | | |
| 150 | 110 | | | | | ● | G |
| 150 | 140 | ● | S | | | ● | G |
| 150 | 160 | ● | S | ● | G | | |
| 150 | 180 | ● | S | | | | |
| 200 | 200 | ● | S* | ● | S* | | |
| 200 | 225 | ● | S* | ● | S* | | |
| 250 | 250 | ● | S* | | | | |
| 250 | 280 | ● | S* | ● | S* | | |
| 300 | 315 | ● | S* | ● | S* | | |
| 300 | 355 | ● | S* | | | | |
| 400 | 400 | ● | S* | ● | S* | | |
| 400 | 450 | ● | S* | | | | |

**Explanation:** * also available in PN 16
S of ductile iron G of grey iron



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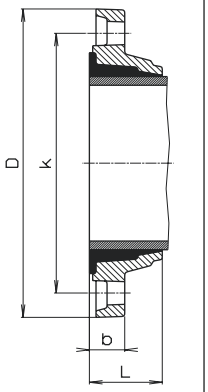
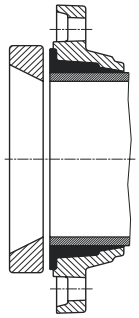
E-mail: hawle@hawle.at

# Flanged Connections for PVC pipes

**No. 5600**




**No. 5630**



## No. 5600

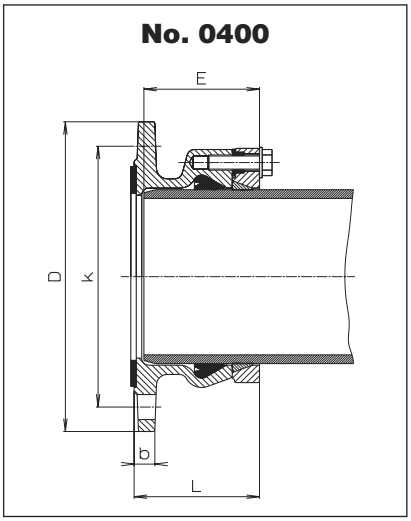
| Flange DN | Pipe Ø mm | D | K | b | L (assembled) | Bolts | | Weight kg |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Qty. | Thread | |
| **50** | 63 | 165 | 125 | 24 | 54 | 4 | M 16 | 2,0 |
| **60** | 75 | 175 | 135 | 24 | 54 | 4 | M 16 | 2,6 |
| **65** | 75 | 185 | 145 | 24 | 54 | 4 | M 16 | 3,0 |
| **80** | 90 | 200 | 160 | 25 | 60 | 8 | M 16 | 3,2 |
| **100** | 110 | 220 | 180 | 26 | 62 | 8 | M 16 | 4,1 |
| **150** | 160 | 285 | 240 | 29 | 66 | 8 | M 20 | 6,7 |
| **200** | 200 | 340 | 295 | 31 | 93 | 8 | M 20 | 9,4 |
| **200** | 225 | 340 | 295 | 24 | 92 | 8 | M 20 | 7,9 |
| **250** | 280 | 400 | 350 | 32 | 114 | 12 | M 20 | 15,5 |
| **300** | 315 | 445 | 400 | 33 | 117 | 12 | M 20 | 15,8 |
| **400** | 400 | 565 | 515 | 33 | 134 | 16 | M 24 | 27,0 |

## No. 5630

Weight including reducer ring

| Flange DN | Pipe Ø mm | D | K | b with reducer | L with reducer | Bolts | | Weight kg |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Qty. | Thread | |
| **80** | 75 | 200 | 160 | 50 | 78 | 8 | M 16 | 5,1 |
| **150** | 110 | 285 | 240 | 62 | 94 | 8 | M 20 | 12,0 |
| **150** | 140 | 285 | 240 | 63 | 97 | 8 | M 20 | 8,5 |

**No. 0400**




## No. 0400

| Flange DN | Pipe Ø mm | D | K | E | b | L | Bolts | | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Qty. | Thread | |
| **50** | 63 | 165 | 125 | 80 | 19 | 90 | 4 | M 16 | 3,6 |
| **60** | 63 | 175 | 135 | 80 | 19 | 90 | 4 | M 16 | 3,8 |
| **60** | 75 | 175 | 135 | 82 | 19 | 92 | 4 | M 16 | 4,0 |
| **65** | 63 | 185 | 145 | 80 | 19 | 90 | 4 | M 16 | 4,3 |
| **65** | 75 | 185 | 145 | 82 | 19 | 92 | 4 | M 16 | 4,3 |
| **80** | 75 | 200 | 160 | 82 | 19 | 92 | 8 | M 16 | 5,0 |
| **80** | 90 | 200 | 160 | 85 | 19 | 95 | 8 | M 16 | 5,5 |
| **100** | 90 | 220 | 180 | 85 | 19 | 95 | 8 | M 16 | 6,8 |
| **100** | 110 | 220 | 180 | 85 | 19 | 95 | 8 | M 16 | 6,2 |
| **100** | 125 | 220 | 180 | 87 | 19 | 97 | 8 | M 16 | 7,0 |
| **125** | 110 | 250 | 210 | 85 | 19 | 95 | 8 | M 16 | 7,8 |
| **125** | 125 | 250 | 210 | 87 | 19 | 97 | 8 | M 16 | 8,2 |
| **125** | 140 | 250 | 210 | 93 | 19 | 103 | 8 | M 16 | 8,5 |
| **150** | 140 | 285 | 240 | 93 | 19 | 103 | 8 | M 16 | 11,3 |
| **150** | 160 | 285 | 240 | 105 | 19 | 115 | 8 | M 20 | 10,5 |
| **150** | 180 | 285 | 240 | 115 | 19 | 125 | 8 | M 20 | 11,6 |
| **200** | 200 | 340 | 295 | 125 | 20 | 135 | 8 | M 20 | 18,0 |
| **200** | 225 | 340 | 295 | 128 | 20 | 138 | 8 | M 20 | 16,0 |
| **250** | 250 | 400 | 350 | 145 | 22 | 155 | 12 | M 20 | 22,0 |
| **250** | 280 | 400 | 350 | 148 | 22 | 158 | 12 | M 20 | 29,0 |
| **300** | 315 | 455 | 400 | 174 | 25 | 184 | 12 | M 20 | 44,0 |
| **300** | 355 | 455 | 400 | 237 | 25 | 277 | 12 | M 20 | 61,0 |
| **400** | 400 | 565 | 515 | 230 | 25 | 242 | 16 | M 24 | 97,0 |
| **400** | 450 | 565 | 515 | 260 | 25 | 302 | 16 | M 24 | 81,0 |

## Double Chamber Flange Adaptor

**to PN 16**

**No. 7102** standard
**No. 7402** reducing
(with reducing ring)

**Material:**

1 Flange:
see right table
epoxy powder coated

2 Sleeve gasket:
elastomer, suitable for
potable water

**These Hawle flanges are a further development of the well proven Hawle Spar Flanges.**

The long draw of the fitting and the double chambered gasket result in the pressure being spread well back from the pipe end.

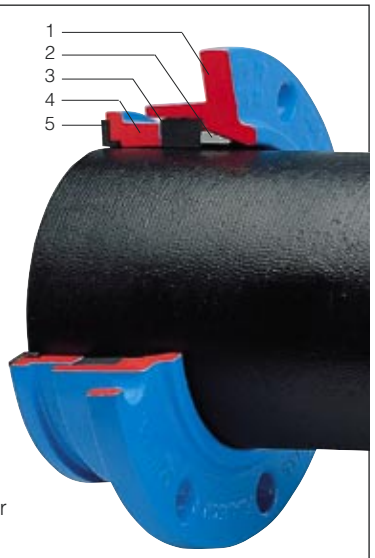
The resilience of the connection prevents tension in the pipe and minimises the danger of breakage.

## Flange Adaptor

**restraint**

**to PN 16**

**No. 7602**




**Material:**

1 Flange: ductile iron,
epoxy powder coated

2 Grip ring:
steel 1.0037 hardened

3 Sleeve gasket: elastomer,
suitable for potable water

4 Pressure ring: grey iron

5 Seal: elastomer, suitable for
potable water

**Simultaneous pipe restraint and sealing.**

This avoids the need for pipe supports and additional bolting to counter the effect of axial load and pressure.

This connection can be easily dismantled at any time.

**Assembly:** Assemble the flange with the sleeve gasket and pressure ring, and push onto the pipe. Offer up the complete flange to the opposing flange, ensuring that the pressure ring projects approx. 10 mm over the end of the pipe. Cross tighten the nuts and bolts to make the connection. This fitting has the advantage that it can cope with a gap or an unsquare cut that extends up to 15 mm from the opposing flange.

**to EN 545**

| Flange DN | Pipe ∅ mm | Double Chamber Flange Adaptor | | | | Double Chamber Flange Adaptor | | Spar Flange see picture over page | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | standard | | reducing | | | | standard | | reducing | |
| | | Order no. 7102 | | Order no. 7402 | | Order no. 7602 | | Order no. 0102 | | Order no. 1002 | |
| 50 | 56 | | | x | G | | | | | | |
| 50 | 66 | ● | S | | | ● | S | | | | |
| 60 | 77 | ● | S | | | ● | S | ● | G | | |
| 60 | 82 | | | | | | | ● | G | | |
| 65 | 66 | | | | | | | | | x | G |
| 65 | 82 | ● | G | | | ● | S | | | | |
| 80 | 98 | ● | S | | | ● | S | ● | G | | |
| 80 | 101 | ● | S | | | | | | | | |
| 100 | 118 | ● | S | | | ● | S | ● | G | | |
| 125 | 118 | | | | | | | | | ● | G |
| 125 | 144 | ● | S | | | ● | S | ● | G | | |
| 150 | 144 | | | ● | S | | | | | | |
| 150 | 170 | ● | S | | | ● | S | ● | G | | |
| 175 | 196 | | | | | | | ● | G | | |
| 200 | 170 | | | ● | G | | | | | | |
| 200 | 222 | ● | S* | | | ● | S* | ● | G | | |
| 250 | 273-274 | ● | S* | | | ● | S* | | | | |
| 300 | 326 | ● | S* | | | ● | S* | ● | G | | |
| 350 | 378 | | | | | | | ● | G | | |
| 400 | 429 | ● | S* | | | | | ● | S | | |
| 500 | 532 | | | | | | | ● | S* | | |
| 600 | 635 | | | | | | | ● | S | | |

**Explanation:**
* also available in PN 16
S of ductile iron
G of grey iron
x see picture G 4/1

**Standard version:** drilled to PN 10 - DIN 2501

**Note:** do not chamfer the pipe

special dimensions: on request



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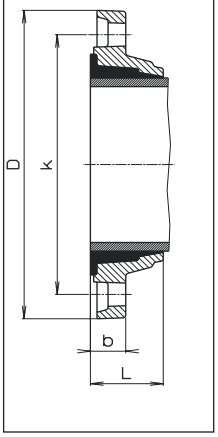
# Flanged Connections for DCI pipes

**No. 7102**

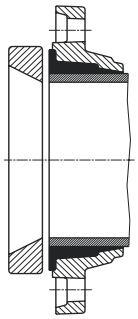



**No. 0102**

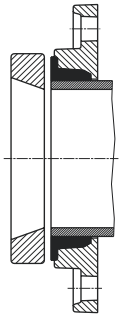

## No. 7102 / No. 0102

| Flange DN | CI pipe Ø mm | D - No. | | K | b - No. | ~ L (assembled) - No. | | Bolts | | Weight- No. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7102 | 0102 | | 7102 | 7102 | 0102 | Qty. | Thread | 7102 | 0102 |
| **50** | 66 | 165 | 165 | 125 | 22 | 56 | 35 | 4 | M 16 | 1,8 | 2,2 |
| **60** | 77 | 175 | 175 | 135 | 28 | 56 | 35 | 4 | M 16 | 3,1 | 2,4 |
| **60** | 82 | | 175 | 135 | | | 35 | 4 | M 16 | | 3,0 |
| **65** | 82 | 185 | | 145 | 29 | 58 | | 4 | M 16 | 3,4 | |
| **80** | 98 | 200 | 200 | 160 | 22 | 64 | 38 | 8 | M 16 | 2,6 | 3,2 |
| **80** | 101 | 200 | | 160 | 22 | 64 | | 8 | M 16 | 2,8 | |
| **100** | 118 | 220 | 220 | 180 | 23 | 62 | 38 | 8 | M 16 | 3,1 | 3,8 |
| **125** | 144 | 250 | 250 | 210 | 24 | 66 | 42 | 8 | M 16 | 4,2 | 5,3 |
| **150** | 170 | 285 | 285 | 240 | 25 | 66 | 45 | 8 | M 20 | 5,2 | 7,0 |
| **175** | 196 | | 315 | 270 | | | 46 | 8 | M 20 | | 6,8 |
| **200** | 222 | 340 | 340 | 295 | 30 | 71 | 45 | 8 | M 20 | 7,6 | 10,5 |
| **250** | 274 | 400 | | 350 | 32 | 78 | | 12 | M 20 | 10,9 | |
| **300** | 326 | 455 | 455 | 400 | 33 | 82 | 51 | 12 | M 20 | 13,8 | 15,0 |
| **350** | 378 | | 510 | 460 | | | 61 | 16 | M 20 | | 23,0 |
| **400** | 429 | 570 | 580 | 515 | 37 | 103 | 61 | 16 | M 24 | 22,0 | 22,5 |
| **500** | 532 | | 690 | 620 | | | 74 | 20 | M 24 | | 35,0 |
| **600** | 636 | | 776 | 730 | | | 74 | 20 | M 27 | | 38,0 |

**No. 7402**



**No. 1002**

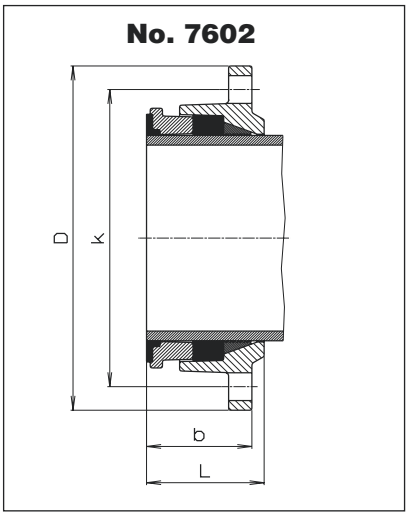


## No. 7402 / No. 1002

| Flange DN | CI pipe Ø mm | D - No. | | K | b with reducer | ~ L with reducer | | Bolts | | Weight - No. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7402 | 1002 | | 7402 | 7402 | 1002 | Qty. | Thread | 7402 | 1002 |
| **125** | 118 | | 250 | 210 | | | 72 | 8 | M 16 | | 9,5 |
| **150** | 144 | 285 | | 240 | 58 | 94 | | 8 | M 20 | 10,2 | |
| **200** | 170 | 340 | | 295 | 65 | 95 | | 8 | M 20 | 15,0 | |

Weight including reducing ring

**No. 7602**




## No. 7602

| Flange DN | CI pipe Ø mm | D | K | b | ~ L (unassembled) | Bolts | | Weight kg |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Qty. | Thread | |
| **50** | 66 | 165 | 125 | 60 | 71 | 4 | M 16 | 3,0 |
| **60** | 77 | 175 | 135 | 60 | 73 | 4 | M 16 | 3,2 |
| **65** | 82 | 185 | 145 | 63 | 79 | 4 | M 16 | 3,7 |
| **80** | 98 | 200 | 160 | 59 | 76 | 8 | M 16 | 3,9 |
| **100** | 118 | 220 | 180 | 60 | 78 | 8 | M 16 | 4,6 |
| **125** | 144 | 250 | 210 | 62 | 85 | 8 | M 16 | 6,0 |
| **150** | 170 | 285 | 240 | 87 | 98 | 8 | M 20 | 10,0 |
| **200** | 222 | 340 | 295 | 90 | 105 | 8 | M 20 | 14,5 |
| **250** | 274 | 400 | 355 | 90 | 105 | 12 | M 20 | 17,5 |
| **300** | 326 | 455 | 405 | 90 | 105 | 12 | M 20 | 21,5 |

## Double Chamber Flange Adaptor No. 7101

**to PN 16**

**Working pressure:**

**up to PN 16**

**Material:**

Flange:
see table on right
epoxy powder coated

Sleeve gasket:
elastomer, suitable for potable water

**These Hawle flanges are a further development of the well proven Hawle Spar Flanges.**

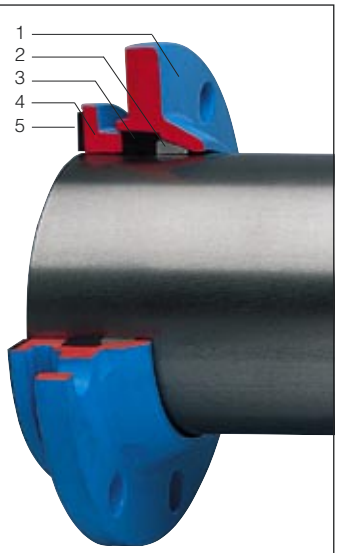
The long draw of fitting and the double chambered gasket result in the pressure being spread well back from the pipe end.

The resilience of the connection prevents tension in the pipe and minimises the danger of breakage.

## Flange Adaptor restraint

**to PN 16**

**No. 7601**




**Material:**

1 Flange: ductile iron, epoxy powder coated
2 Grip ring: steel 1.0037 hardened
3 Sleeve gasket: elastomer, suitable for potable water
4 Pressure ring: ductile iron
5 Seal: elastomer, suitable for potable water

**Simultaneous pipe restraint and sealing.**

This avoids the need for pipe supports and additional bolting to counter the effect of axial load and pressure.

This connection can be easily dismantled at any time.

**Assembly:** Assemble the flange with the sleeve gasket and pressure ring, and push onto the pipe. Offer up the complete flange to the opposing flange, ensuring that the pressure ring projects approx. 10 mm over the end of the pipe. Cross tighten the nuts and bolts to make the connection. This fitting has the advantage that it can cope with a gap or unsquare cut that extends up to 15 mm from the opposing flange.

**Note:** do not chamfer the pipe

| Flange DN | Steel pipe ∅ mm | Double Chamber Flange Adaptor Order no. 7101 | | Flange Adaptor restraint Order no. 7601 | | Spar Flange (picture see over page) standard Order no. 0101 | | Spar Flange reducing Order no. 1001 | |
|---|---|---|---|---|---|---|---|---|---|
| 40 | 48 | | | | | ● | G | | |
| 50 | 56-57 | ● | S | | | | | | |
| 50 | 59-61 | ● | S | ● | S | | | | |
| 60 | 67 | | | | | ● | G | | |
| 65 | 66-68 | | | | | | | ● | G |
| 65 | 76 | ● | G | ● | S | | | | |
| 80 | 89 | | | ● | S | ● | G | | |
| 100 | 108 | ● | S | ● | S | ● | G | | |
| 100 | 114 | ● | S | ● | S | | | | |
| 125 | 133 | ● | G | ● | S | | | | |
| 150 | 159 | | | ● | S | ● | G | | |
| 150 | 168 | | | ● | S | | | | |
| 200 | 219 | ● | S* | ● | S | | | | |
| 250 | 267 | | | | | ● | G | | |
| 250 | 273 | x | S* | x | S* | | | | |
| 300 | 316 | ● | G | | | | | | |
| 400 | 406 | | | | | ● | S | | |
| 400 | 419 | | | | | ● | G | | |
| 500 | 508 | | | | | ● | G | | |

**Explanation:**
* also available in PN 16
S of ductile iron
G of grey iron
x see picture G 3/1

**Standard version:** PN 10 - DIN 2501

special dimensions: on request



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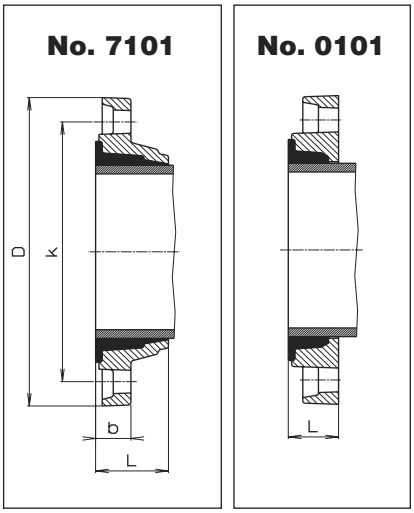
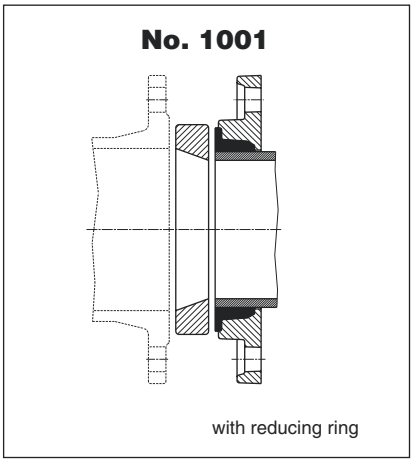
# Flanged Connections for steel pipes




## No. 7101 / No. 0101

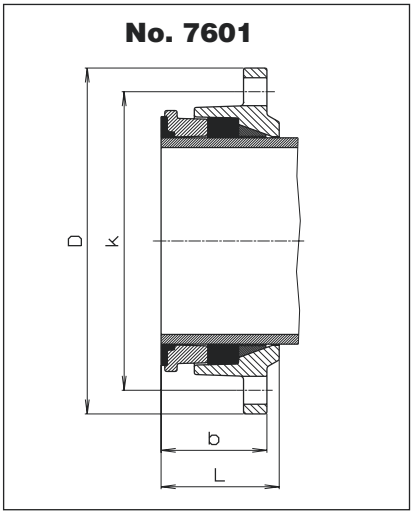
| Flange DN | Steel Pipe Ø mm | D - No. | | K | b - No. | ~ L (assembled) | | Bolts | | Weight kg - No. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 7101 | 0101 | | 7101 | 7101 | 0101 | Qty. | Thread | 7101 | 0101 |
| **40** | 48 | | 150 | 110 | | | 30 | 4 | M 16 | | 0,9 |
| **50** | 56-57 | 165 | | 125 | 26 | 54 | | 4 | M 16 | 2,6 | |
| **50** | 59/61 | 165 | | 125 | 26 | 54 | | 4 | M 16 | 2,6 | |
| **60** | 67 | | 175 | 135 | | | 37 | 4 | M 16 | | 2,5 |
| **65** | 76 | 185 | | 145 | 28 | 56 | | 4 | M 16 | 3,5 | |
| **80** | 89 | | 200 | 160 | | | 37 | 8 | M 16 | | 3,2 |
| **100** | 108 | 220 | 220 | 180 | 25 | 63 | 38 | 8 | M 16 | 3,8 | 4,4 |
| **100** | 114 | 220 | | 180 | 23 | 63 | | 8 | M 16 | 3,5 | |
| **125** | 133 | 250 | | 210 | 33 | 64 | | 8 | M 16 | 6,8 | |
| **150** | 159 | | 285 | 240 | | | 45 | 8 | M 20 | | 7,5 |
| **200** | 219 | 340 | | 295 | 30 | 71 | | 8 | M 20 | 8,6 | |
| **250** | 267 | | 400 | 350 | | | 48 | 12 | M 20 | | 14,5 |
| **300** | 316 | 455 | | 400 | 49 | 82 | | 12 | M 20 | 18,5 | |
| **400** | 406 | | 565 | 515 | | | 60 | 16 | M 24 | | 22,0 |
| **400** | 419 | | 565 | 515 | | | 60 | 16 | M 24 | | 36,5 |
| **500** | 508 | | 690 | 620 | | | 76 | 20 | M 24 | | 43,0 |




## No. 1001

| Flange DN | Steel pipe Ø mm | D | K | ~ L with reducer | Bolts | | Weight kg |
|---|---|---|---|---|---|---|---|
| | | | | | Qty. | Thread | |
| **65** | 66-68 | 185 | 145 | 60 | 4 | M 16 | 5,0 |

Weight including reducing ring




## No. 7601

| Flange DN | Steel pipe Ø mm | D | K | b | ~ L (unassembled) | Bolts | | Weight kg |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Qty. | Thread | |
| **50** | 60 | 165 | 125 | 39 | 61 | 4 | M 16 | 2,7 |
| **65** | 76 | 185 | 145 | 38 | 61 | 4 | M 16 | 3,4 |
| **80** | 89 | 200 | 160 | 39 | 67 | 8 | M 16 | 3,9 |
| **100** | 108 | 220 | 180 | 39 | 69 | 8 | M 16 | 4,6 |
| **100** | 114 | 220 | 180 | 44 | 69 | 8 | M 16 | 4,4 |
| **125** | 133 | 250 | 210 | 39 | 69 | 8 | M 16 | 5,8 |
| **150** | 159 | 285 | 240 | 49 | 73 | 8 | M 20 | 7,8 |
| **150** | 168 | 285 | 240 | 52 | 73 | 8 | M 20 | 7,3 |
| **200** | 219 | 340 | 295 | 52 | 81 | 8 | M 20 | 10,0 |

## Double Chamber Flange Adaptor No. 7103

**to PN 16**

**Material:**

Flange:
see table on right
epoxy powder coated

Sleeve gasket:
elastomer, suitable for potable water

| Flange DN | Ø mm | Double Chamber Flange Adaptor Order No. 7103 | |
|---|---|---|---|
| **80** | 98 | x | S |
| **100** | 120 | ● | G + |
| **150** | 176 | ● | S |
| **150** | 178 | ● | S + |

**Explanation:** + also available DIN 1882
S of ductile iron
G of grey iron
X see picture G 3/1 No. 7102/0102

**These Hawle flanges are a further development of the well proven Hawle Spar Flanges.**

The long draw of the fitting and the double chambered gasket result in the pressure being spread well back from the pipe end.

The resilience of the connection prevents tension in the pipe and minimises the danger of breakage.

**standard version:** drilled to PN 10 - DIN 2501

**Note:** do not chamfer the pipe

special dimensions: on request



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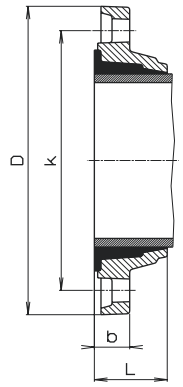
# Flanged Connections for AC pipes

**No. 7103**




**No. 7103**

| Flange DN | ∅ mm | D | k | b | ~ L (assembled) | Bolts | | Weight kg |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Qty. | Thread | |
| **80** | 98 | 200 | 160 | 22 | 64 | 8 | M 16 | 2,6 |
| **100** | 120 | 220 | 180 | 23 | 62 | 8 | M 16 | 2,8 |
| **150** | 176 | 285 | 240 | 46 | 66 | 8 | M 20 | 5,8 |
| **150** | 178 | 290 | 244 | 48 | 66 | 8 | M 20 | 5,8 |

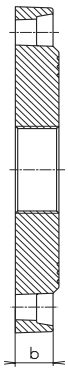
## No. 8100

### Threaded Flange
**female thread**

of grey iron
epoxy powder coated

Flange drilling to
DIN 2501 - PN 10

special dimensions on request




**b**
see No. 8000

| DN | Thread | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1" | 1¼" | 1½" | 2" | 2½" | 3" | 3½" | 4" |
| 25 | ● | | | | | | | |
| 32 | ● | ● | ● | | | | | |
| 40 | ● | ● | ● | ● | | | | |
| 50 | ● | ● | ● | ● | | | | |
| 60 | ● | ● | ● | ● | ● | | | |
| 65 | ● | ● | ● | ● | ● | ● | | |
| 80 | ● | ● | ● | ● | ● | ● | ● | |
| 100 | ● | ● | ● | ● | ● | ● | ● | ● |
| 125 | ● | ● | ● | ● | ● | ● | ● | ● |
| 150 | ● | ● | ● | ● | ● | ● | ● | ● |
| 200 | ● | ● | ● | ● | ● | ● | ● | ● |

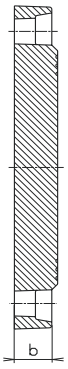
| DN | Weight kg | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1" | 1¼" | 1½" | 2" | 2½" | 3" | 3½" | 4" |
| 25 | 1,15 | | | | | | | |
| 32 | 1,70 | 1,65 | 1,60 | | | | | |
| 40 | 1,75 | 1,60 | 1,60 | 1,45 | | | | |
| 50 | 2,10 | 2,10 | 2,00 | 2,10 | | | | |
| 60 | 2,60 | 2,60 | 2,50 | 2,30 | 2,00 | | | |
| 65 | 3,70 | 3,50 | 3,50 | 4,00 | 3,60 | 3,30 | | |
| 80 | 4,00 | 3,90 | 3,90 | 4,30 | 3,90 | 3,70 | 3,10 | |
| 100 | 5,20 | 5,00 | 4,80 | 5,60 | 5,10 | 4,60 | 4,00 | 2,80 |
| 125 | 7,80 | 7,80 | 7,70 | 7,60 | 7,30 | 7,00 | 6,60 | 3,40 |
| 150 | 9,50 | 9,30 | 9,10 | 9,10 | 8,70 | 8,60 | 8,10 | 8,00 |
| 200 | 15,50 | 15,50 | 14,90 | 15,10 | 14,70 | 14,10 | 13,90 | 13,70 |

## No. 8000

### Blank Flange

of grey iron
epoxy powder coated

Flange drilling to
DIN 2501 - PN 10




| DN | b | Weight kg | |
|---|---|---|---|
| 40 | 20 | 1,90 | ● |
| 50 | 20 | 2,20 | ● |
| 60 | 23 | 2,80 | ● |
| 65 | 23 | 3,80 | ● |
| 80 | 20 | 4,10 | ● |
| 100 | 22 | 5,10 | ● |
| 125 | 30 | 7,90 | ● |
| 150 | 27 | 9,50 | ● |
| 200 | 27 | 15,80 | ● |
| 250 | 36 | 24,00 | ● |
| 300 | 40 | 39,00 | ● |
| 350 | 45 | 48,00 | ● |
| 400 | 50 | 62,00 | ● |



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# Reducing, Transition Flanges

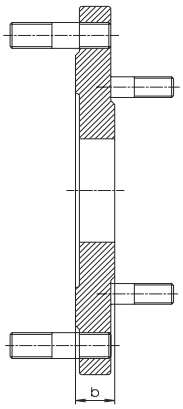
## No. 0801

### Reducing Flange "Type A"

of ductile iron
epoxy powder coated

Bolts: stainless steel

The low profile enables transitions to be made between dimensions in the shortest possible space.




| DN | Bolts DN 1 | | Bolts DN 2 | | b | Weight kg | |
|---|---|---|---|---|---|---|---|
| | Qty. | Thread | Qty. | Thread | | | |
| **80-50** | 8 | M 16 x 50 | 4 | M 16 x 50 | 28 | 5,6 | ● |
| **80-65** | 8 | M 16 x 50 | 4 | M 16 x 50 | 28 | 5,4 | ● |
| **100-80** | 8 | M 16 x 50 | 8 | M 16 x 50 | 30 | 6,9 | ● |
| **125-80** | 8 | M 16 x 50 | 8 | M 16 x 50 | 30 | 8,0 | ● |
| **125-100** | 8 | M 16 x 50 | 8 | M 16 x 50 | 30 | 7,6 | ● |
| **150-100** | 8 | M 20 x 60 | 8 | M 16 x 50 | 30 | 11,2 | ● |
| **150-125** | 8 | M 20 x 60 | 8 | M 16 x 50 | 30 | 11,2 | ● |
| **200-150** | 8 | M 20 x 60 | 8 | M 20 x 60 | 32 | 16,5 | ● |
| **250-200** | 12 | M 20 x 60 | 8 | M 20 x 60 | 32 | 21,3 | ● |

Other dimensions on request

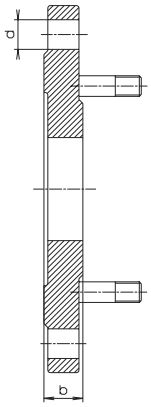
## No. 0802

### Reducing Flange "Type B"

of ductile iron
epoxy powder coated

Bolts: stainless steel

The low profile enables transitions to be made between dimensions in the shortest possible space.




| DN | DN 1 | | Bolts DN 2 | | b | Weight kg | |
|---|---|---|---|---|---|---|---|
| | Qty. | d | Qty. | Thread | | | |
| **150-80** | 8 | 23 | 8 | M 16 x 50 | 30 | 10,7 | ● |
| **200-80** | 8 | 23 | 8 | M 16 x 50 | 30 | 14,5 | ● |
| **200-100** | 8 | 23 | 8 | M 16 x 50 | 30 | 15,0 | ● |
| **250-80** | 12 | 23 | 8 | M 16 x 50 | 31 | 22,0 | ● |
| **250-100** | 12 | 23 | 8 | M 16 x 50 | 31 | 22,0 | ● |
| **250-150** | 12 | 23 | 8 | M 20 x 60 | 31 | 20,0 | ● |

Other dimensions on request

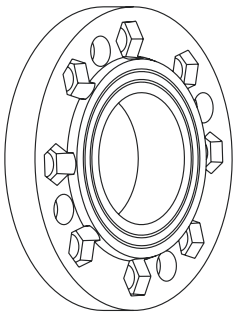
## No. 0800

### Transition Flange

**DN 80**
from 4 holes (old standard)
to 8 holes (new standard)

of grey iron
epoxy powder coated

PN 10 - PN 16



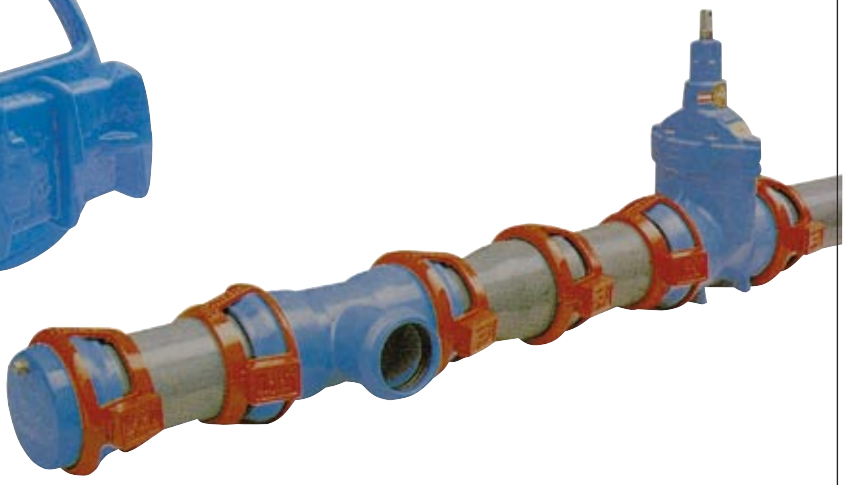
| DN | Length | Weight kg | |
|---|---|---|---|
| **80** | 42 | 5,00 | ● |

| Product name | Order no. | PN | Dimensions/DN PVC pipe Ø mm | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 50<br>63 | 65<br>75 | 80<br>90 | 100<br>110 | 125<br>140 | 150<br>160 | 200<br>200 | 200<br>225 | 250<br>280 | 300<br>315 |
| Restraint Clamp | 1254 | PN 10<br>*PN10 + PN 16 | ●* | ●* | ●* | ● | ● | ● | | ● | ● | ● |
| | 1255 | PN 16 | | | | ● | ● | ● | | ● | | |
| Split Collar | 9240 | PN 10 | | ● | ● | ● | ● | ● | ● | ● | | |

## No. 1254 Restraint Clamp (Socket to Pipe)

of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), epoxy powder coated

Grip ring
Ms 58 (CuZn36Pb3)



## No. 9240 Split Collar (Pipe to Pipe)

| | |
|---|---|
| Body: | ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), epoxy powder coated |
| Grip ring: | Ms 58 (CuZn36Pb3) |
| Bolts: | A 2 DIN 933 |
| Seal: | elastomer, suitable for potable water |



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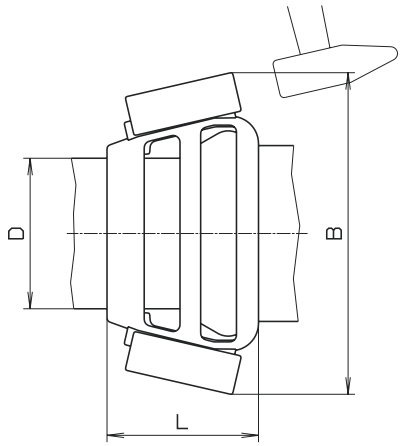
# Restraint Systems for PVC pipes



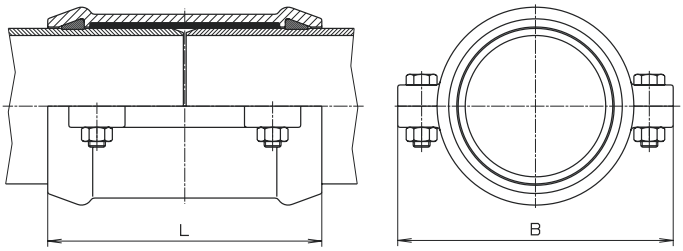

## No. 1254 Restraint Clamp

**The Restraint Clamp for <u>all</u> PVC pipes and sockets.**

The 2-part body can be assembled onto an existing pipeline. If required it can be dismantled and reused.

The grip ring is self tightening within its tapered seating. The design of the teeth avoids cutting into the pipe resulting in the highest gripping force without pipe damage.

Wedge fastening on both sides.
Hammer the wedges until the clamp is tightly closed.




## No. 9240 Split Collar

**Restraint connection for 2 spigot ends;
can also be used as a repair coupling**

The teeth of the grip ring do not abrade the pipe; it is not necessary to chamfer the pipe.

For thick walled PE pipes and for joining PE pipes to PVC pipes. For thin walled PE pipes support liners should be used.

| DN | PVC-pipe Ø | B | | L | | Weight kg | |
|---|---|---|---|---|---|---|---|
| | | No. 1254/1255 | No. 9240 | No. 1254/1255 | No. 9240 | No. 1254/1255 | No. 9240 |
| **50** | 63 | 180 | | 91 | | 2,5 | |
| **65** | 75 | 200 | 156 | 96 | 170 | 2,8 | 3,4 |
| **80** | 90 | 220 | 174 | 103 | 174 | 3,0 | 4,5 |
| **100** | 110 | 240 | 196 | 110 | 195 | 3,5 | 5,8 |
| **125** | 140 | 280 | 228 | 123 | 220 | 3,9 | 7,3 |
| **150** | 160 | 300/320 | 254 | 140/152 | 245 | 6,0 | 10,5 |
| **200** | 200 | | 308 | | 316 | | 19,5 |
| **200** | 225 | 380/400 | 332 | 165/185 | 350 | 9,5 | 21,0 |
| **250** | 280 | 455 | | 195 | | 13,5 | |
| **300** | 315 | 495 | | 200 | | 16,3 | |

## **for PE pipes** (to ÖNORM B 5172, DIN 8074) **up to PN 16 - for cold water**

**of grey iron** (ductile iron)
epoxy powder coated


**of POM**


**The HAWLE ISO Pipe Fitting is the easiest way of joining polyethylene pipes up to PN 16.**

The gripping and sealing functions act only on the o.d. of the pipe; therefore only one fitting is required for all pressure ratings.

The function of the ISO Pipe Fitting is clear and simple. The O ring is made of elastomer and seals well even when the pressure is nil, because it is compressed onto the pipe.

As the water pressure and pipe tension increase, the sealing and grip rings are compressed further into the conical chamber, thus increasing the sealing and gripping effect.

The joint is flexible and the fitting can be turned on the pipe without affecting the grip or seal. The fitting can be dismantle if required. Assembly is quick and simple.

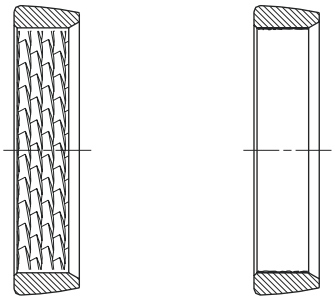
**The HAWLE ISO Pipe Fitting of POM has been developed from the grey iron version.**

The underlying principle is to use a fitting that is as corrosion free as the plastic pipe itself. POM is a high grade engineering plastic.

This design has been well proven for many years in water distribution and is used in pipelines of all pressure ratings including vacuum levels.

All female threads are strengthened with a stainless steel ring.

All ISO Pipe Fittings can also be supplied for PVC pipes with a carborundum grip ring at extra cost. (Carborundum grip ring see page J 3/1)



**Grip ring "standard"**
Interlocking teeth

**Grip ring "carborundum"**

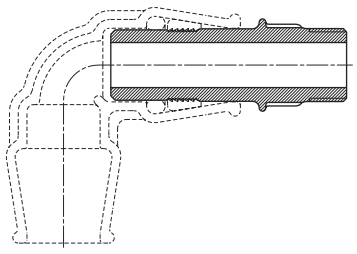
**Push Fit Swivel Converter**

of POM

with male thread end

every fitting in the range can be converted to a swivel male thread outlet.

see page D 5/1





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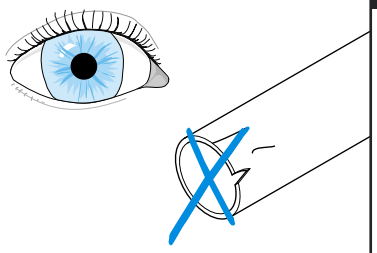
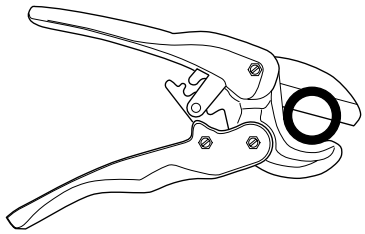
# ISO Pipe Fitting Instruction for Assembly and Dismantling

## ASSEMBLY
for Gas always **new Fittings**

1

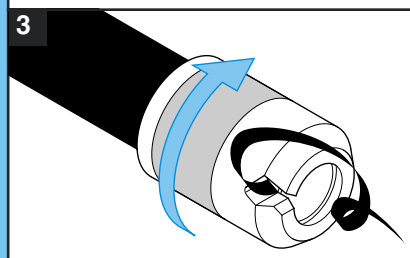


2



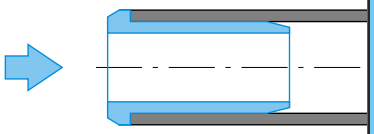
Pipe Cutter No. 6050

3



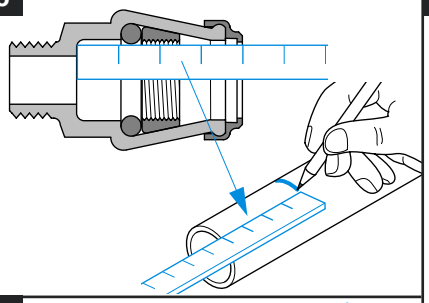
Chamfering Tool No. 6000

4

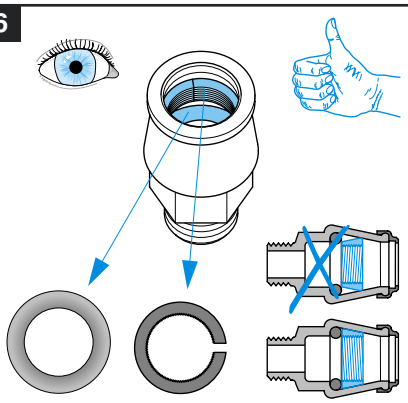


Support Liner No. 6031
for zero pressure and low pressure pipelines.
Don´t chamfer the pipe

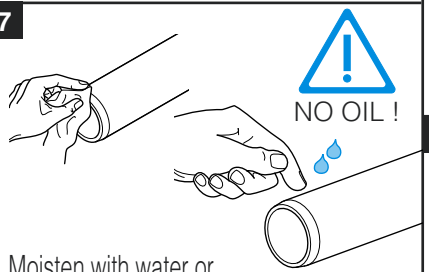
5



6

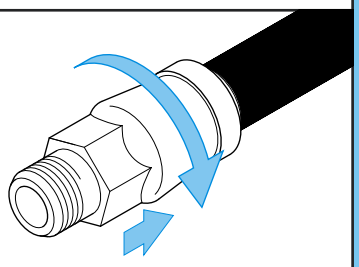


7

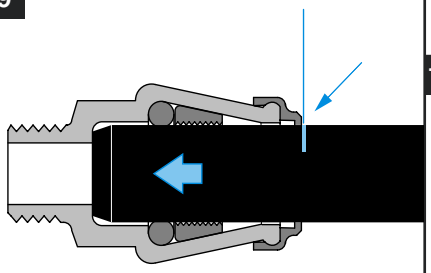



Moisten with water or lubricants (see M5/2)

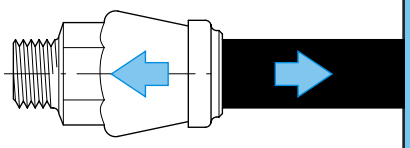
8



9



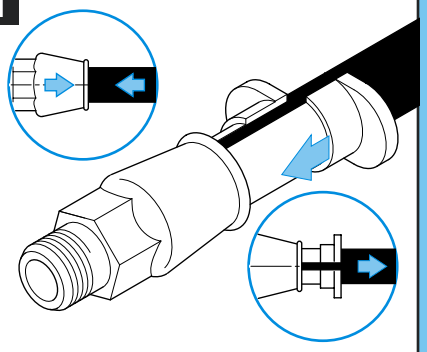
10



11 **Pressure test at completed pipline and exposed connections!**

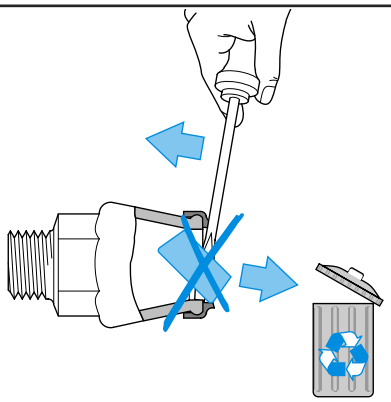
## DISMANTLING

1



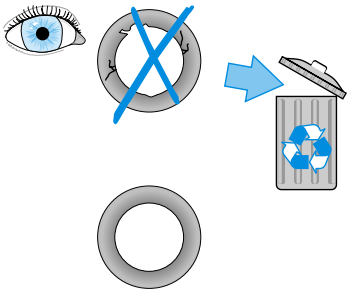
Extractors No. 6010

2



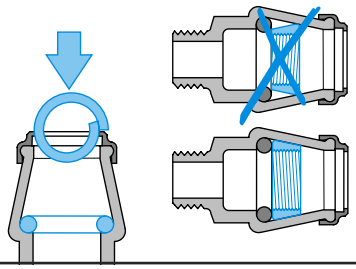
Grip ring No. 6932 for PE pipes
Grip ring No. 6931 for PVC pipes

3



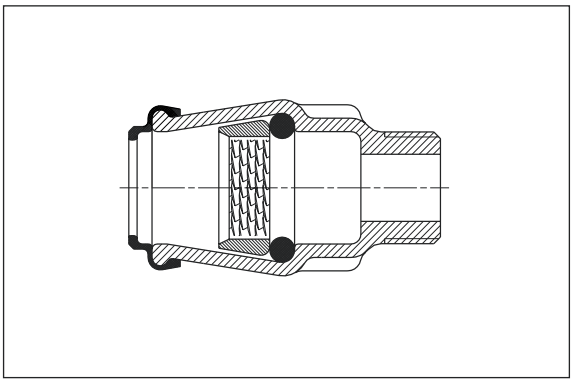
O ring No. 6940

4



5 **Assembly**

## Male Adaptor



**No. 6100** of grey iron (32/1" of ductile iron)
**No. 6120** of POM

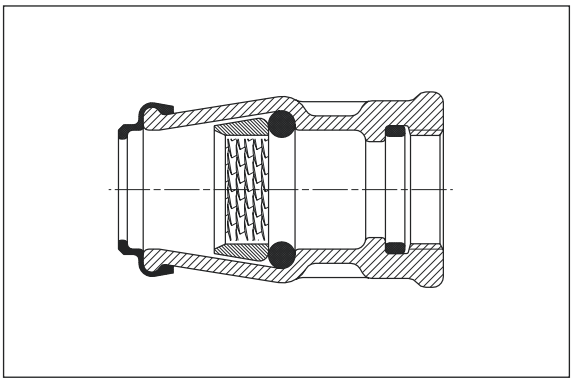
**Special dimensions**

**No. 6110** of grey iron

| Pipe Ø mm | Thread | Order No. 6100 | | Order No. 6120 | |
|---|---|---|---|---|---|
| | | | Weight kg | | Weight kg |
| 20 | ½" | ● | 0,16 | ● | 0,04 |
| 25 | ¾" | ● | 0,24 | ● | 0,06 |
| 32 | 1" | ● | 0,35 | ● | 0,10 |
| 40 | 1¼" | ● | 0,63 | ● | 0,21 |
| 50 | 1½" | ● | 0,93 | ● | 0,28 |
| 63 | 2" | ● | 1,45 | ● | 0,44 |

| Pipe Ø mm | Thread | Order No. 6110 | |
|---|---|---|---|
| | | | Weight kg |
| 32 | 1¼" | ● | 0,39 |
| 32 | 2" | ● | 0,67 |
| 40 | 1" | ● | 0,64 |
| 40 | 1½" | ● | 0,66 |
| 40 | 2" | ● | 0,72 |
| 50 | 1¼" | ● | 0,90 |
| 50 | 2" | ● | 0,95 |
| 63 | 1¼" | ● | 1,40 |
| 63 | 1½" | ● | 1,45 |
| 75 | 2" | ● | 2,50 |

## Female Adaptor



**No. 6200** of grey iron
**No. 6220** of POM

**Special dimensions**

**No. 6210** of grey iron

| Pipe Ø mm | Thread | Order No. 6200 | | Order No. 6220 | |
|---|---|---|---|---|---|
| | | | Weight kg | | Weight kg |
| 20 | ½" | ● | 0,16 | ● | 0,06 |
| 25 | ¾" | ● | 0,24 | ● | 0,08 |
| 32 | 1" | ● | 0,42 | ● | 0,12 |
| 40 | 1¼" | ● | 0,70 | ● | 0,23 |
| 50 | 1½" | ● | 1,00 | ● | 0,34 |
| 63 | 2" | ● | 1,70 | ● | 0,47 |
| 75 | 2½" | ● | 3,20 | | |
| 90 | 3" | ● | 3,60 | | |

| Pipe Ø mm | Thread | Order No. 6210 | |
|---|---|---|---|
| | | | Weight kg |
| 32 | 1¼" | ● | 0,57 |
| 40 | 1" | ● | 0,77 |
| 50 | 1¼" | ● | 1,10 |
| 90 | 2" | ● | 4,00 |



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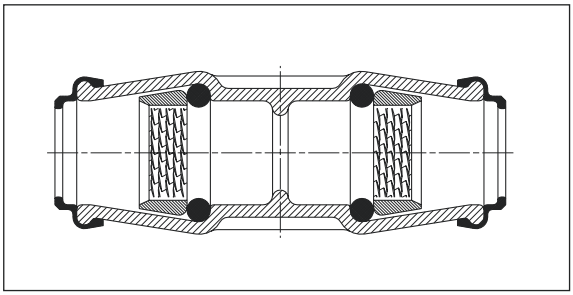
# ISO Pipe Fitting

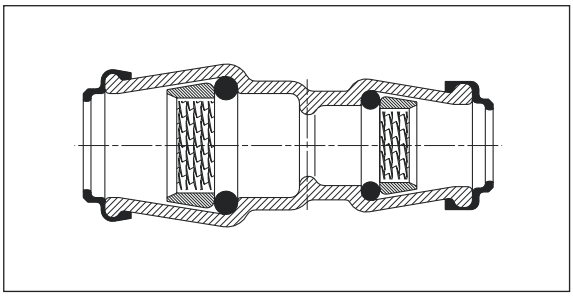
## Connector



**No. 6300** of grey iron
**No. 6320** of POM

| Pipe Ø mm | Order No. 6300 | | Order No. 6320 | |
|---|---|---|---|---|
| | | Gewicht kg | | Weight kg |
| 20 | ● | 0,26 | ● | 0,07 |
| 25 | ● | 0,35 | ● | 0,10 |
| 32 | ● | 0,65 | ● | 0,15 |
| 40 | ● | 0,97 | ● | 0,30 |
| 50 | ● | 1,40 | ● | 0,50 |
| 63 | ● | 2,30 | ● | 0,75 |
| 75 | ● | 3,20 | | |
| 90 | ● | 3,15 | | |

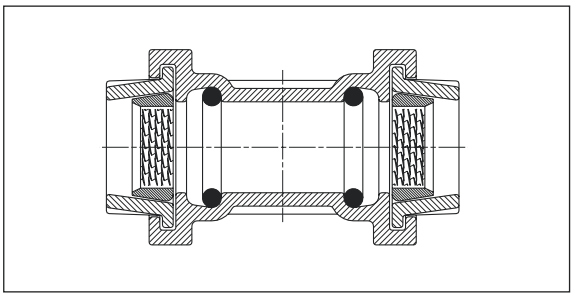
## Connector Special dimensions



**No. 6310** of grey iron
**No. 6330** of POM

| Pipe Ø 1 mm | Pipe Ø 2 mm | Order No. 6310 | | Order No. 6330 | |
|---|---|---|---|---|---|
| | | | Weight kg | | Weight kg |
| 25 | 20 | ● | 0,30 | ● | 0,08 |
| 32 | 25 | ● | 0,51 | ● | 0,13 |
| 40 | 25 | ● | 1,00 | ● | 0,20 |
| 40 | 32 | ● | 0,80 | ● | 0,23 |
| 50 | 32 | ● | 1,70 | ● | 0,30 |
| 50 | 40 | ● | 1,40 | ● | 0,42 |
| 63 | 40 | | | ● | 0,50 |
| 63 | 50 | ● | 1,70 | ● | 0,60 |
| 75 | 63 | ● | 2,65 | | |
| 90 | 75 | ● | 3,30 | | |

## Connector with detachable ends for subsequent assembly

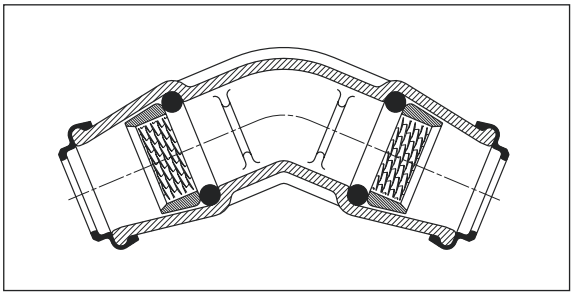


**No. 6301** of grey iron

| Pipe Ø mm | Order No. 6301 | |
|---|---|---|
| | | Weight kg |
| 32 | ● | 1,10 |
| 40 | ● | 1,90 |
| 50 | ● | 2,10 |
| 63 | ● | 3,20 |

**Attention: no stop !**

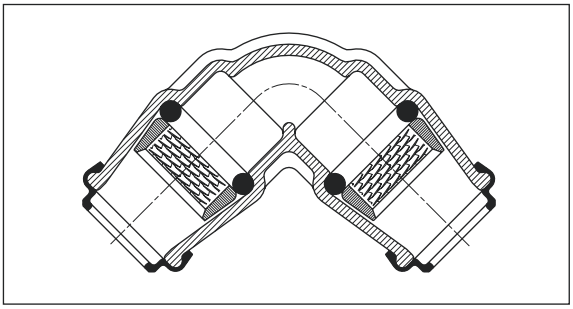
## Elbow 45°



**No. 6440** of grey iron

| Pipe Ø mm | Order No. 6440 | |
|---|---|---|
| | | Weight kg |
| 40 | ● | 1,20 |
| 50 | ● | 1,80 |
| 63 | ● | 2,60 |
| 90 | ● | 5,00 |
| 110 | ● | 7,40 |

## Elbow 90°



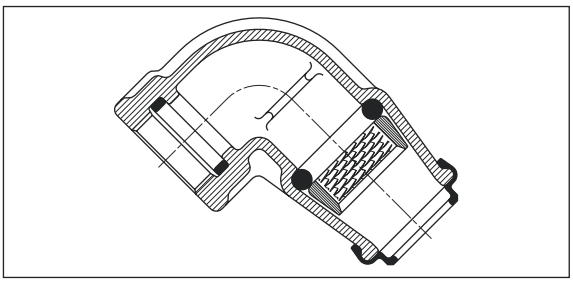
**No. 6400** of grey iron
**No. 6420** of POM

**Special dimensions**
**No. 6490** of POM

| Pipe Ø mm | Order No. 6400 | Weight kg | Order No. 6420 | Weight kg |
|---|---|---|---|---|
| 20 | ● | 0,30 | ● | 0,06 |
| 25 | ● | 0,45 | ● | 0,10 |
| 32 | ● | 0,80 | ● | 0,18 |
| 40 | ● | 1,20 | ● | 0,37 |
| 50 | ● | 1,90 | ● | 0,52 |
| 63 | ● | 3,00 | ● | 0,80 |

| Pipe Ø 1 mm | Pipe Ø 2 mm | Order No. 6490 | Weight kg |
|---|---|---|---|
| 32 | 25 | ● | 0,13 |
| 40 | 32 | ● | 0,25 |

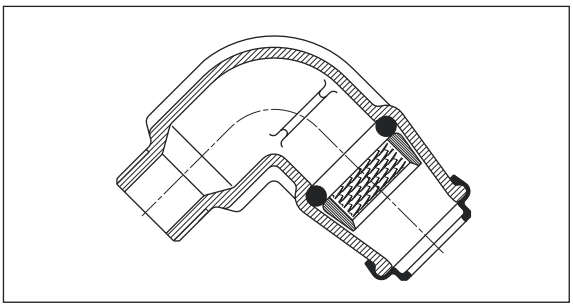
## Elbow 90° with female thread



**No. 6410** of grey iron
**No. 6430** of POM

| Pipe Ø mm | Thread | Order No. 6410 | Weight kg | Order No. 6430 | Weight kg |
|---|---|---|---|---|---|
| 20 | ½" | | | ● | 0,07 |
| 25 | ¾" | ● | 0,38 | ● | 0,10 |
| 32 | 1" | ● | 0,65 | ● | 0,14 |
| 40 | 1¼" | ● | 0,98 | ● | 0,28 |
| 50 | 1½" | ● | 1,50 | ● | 0,42 |
| 63 | 2" | ● | 2,20 | ● | 0,67 |

## Elbow 90° with male thread



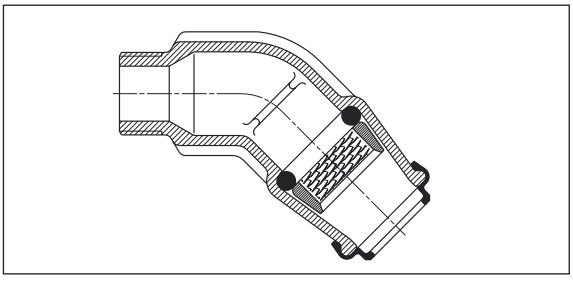
**No. 6460** of grey iron (32/1" of ductile iron)

**Special dimensions**
**No. 6470** of grey iron

| Pipe Ø mm | Thread | Order No. 6460 | Weight kg |
|---|---|---|---|
| 25 | ¾" | ● | 0,40 |
| 32 | 1" | ● | 0,65 |
| 40 | 1¼" | ● | 1,10 |
| 50 | 1½" | ● | 1,70 |
| 63 | 2" | ● | 2,25 |

| Pipe Ø mm | Thread | Order No. 6470 | Weight kg |
|---|---|---|---|
| 32 | 1¼" | ● | 0,60 |
| 32 | 1½" | ● | 0,90 |
| 40 | 1½" | ● | 1,10 |

## Elbow 45° with male thread



**No. 6411** of grey iron

| Pipe Ø mm | Thread | Order No. 6411 | Weight kg |
|---|---|---|---|
| 32 | 1" | ● | 0,60 |
| 50 | 1½" | ● | 1,45 |
| 63 | 2" | ● | 1,90 |



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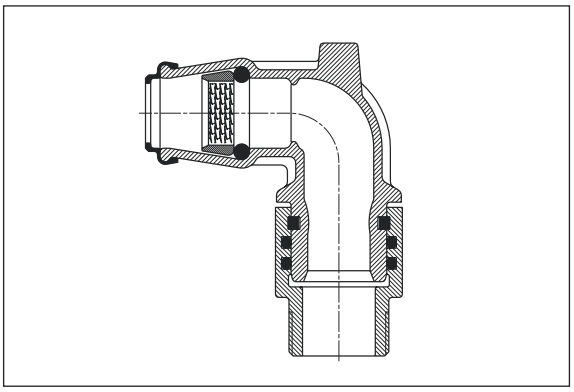
# ISO Pipe Fitting

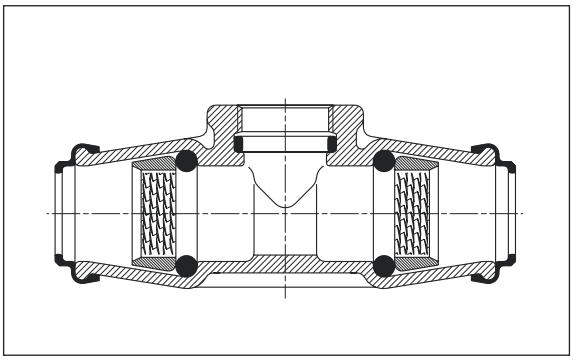
## Elbow 90°
**Swivelling fitting, with male Thread**



**No. 6462** of grey iron

| Pipe Ø mm | Thread | Order No. 6462 | |
|---|---|---|---|
| | | | Weight kg |
| 50 | 1½" | ● | 2,00 |
| 63 | 1½" | ● | 2,65 |

## Tee with female thread outlet



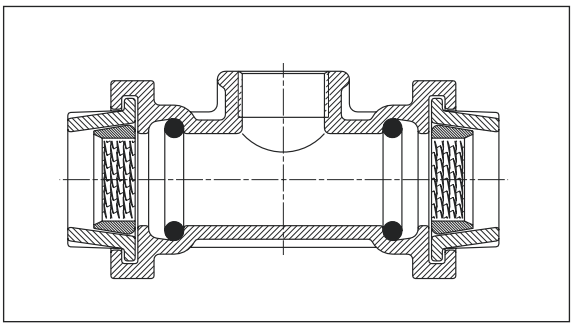
**No. 6500** of grey iron
**No. 6520** of POM

**Special dimensions**
**No. 6510** of grey iron

| Pipe Ø mm | Thread | Order No. 6500 | | Order No. 6520 | |
|---|---|---|---|---|---|
| | | | Weight kg | | Weight kg |
| 20 | ½" | ● | 0,38 | ● | 0,10 |
| 25 | ¾" | ● | 0,56 | ● | 0,15 |
| 32 | 1" | ● | 0,83 | ● | 0,22 |
| 40 | 1¼" | ● | 1,45 | ● | 0,43 |
| 50 | 1½" | ● | 2,20 | ● | 0,60 |
| 63 | 2" | ● | 3,70 | ● | 0,90 |

| Pipe Ø mm | Thread | Order No. 6510 | |
|---|---|---|---|
| | | | Weight kg |
| 50 | 2" | ● | 2,40 |
| 75 | 1" | ● | 5,20 |
| 75 | 2" | ● | 4,60 |

## Tee with female thread outlet, with detachable ends for subsequent assembly

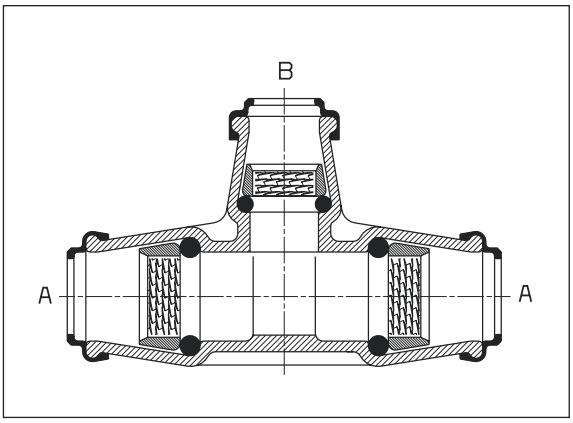


**No. 6501** of grey iron

| Pipe Ø mm | Thread | Order No. 6501 | |
|---|---|---|---|
| | | | Weight kg |
| 32 | 1" | ● | 1,50 |
| 40 | 1¼" | ● | 2,40 |
| 50 | 1½" | ● | 2,70 |
| 63 | 2" | ● | 4,10 |

if used as sleeve - Attention: no stop !

## Tee with 3 sockets




**No. 6530** of grey iron
**No. 6550** of POM

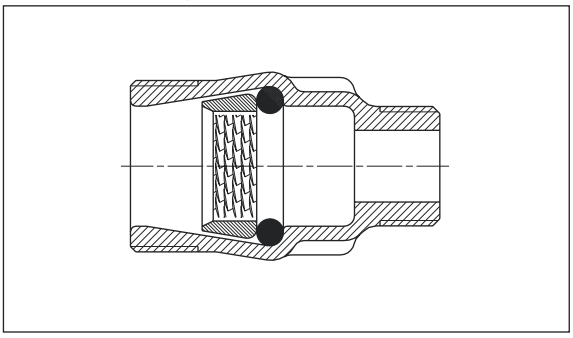
**Special dimensions**
**No. 6531** of grey iron

| Pipe Ø A mm | Pipe Ø B mm | Order No. 6530 | Weight kg | Order No. 6550 | Weight kg |
|---|---|---|---|---|---|
| 25 | 25 | | | ● | 0,16 |
| 32 | 32 | ● | 0,95 | ● | 0,25 |
| 40 | 40 | ● | 1,55 | ● | 0,57 |
| 50 | 50 | ● | 3,00 | ● | 0,75 |
| 63 | 63 | ● | 4,45 | ● | 1,20 |

| Pipe Ø A mm | Pipe Ø B mm | Order No. 6531 | Weight kg |
|---|---|---|---|
| 32 | 25 | ● | 0,90 |
| 40 | 25 | ● | 1,50 |
| 50 | 25 | ● | 1,90 |
| 50 | 32 | ● | 2,00 |
| 50 | 40 | ● | 2,70 |
| 63 | 32 | ● | 2,60 |
| 63 | 40 | ● | 3,20 |
| 63 | 50 | ● | 3,45 |

## Fitting

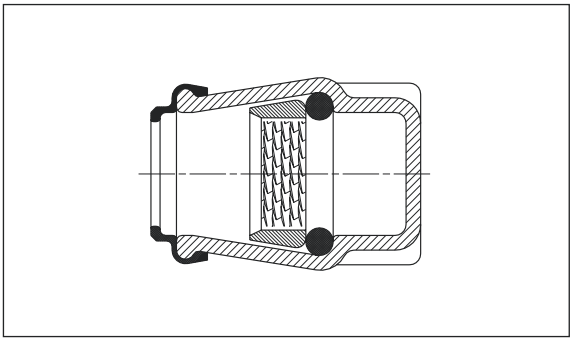
for wall inlet fitting No. 690 (old version)



**No. 6901** of grey iron

| Pipe Ø mm | Connecting thread | Protective sleeve thread | Order No. 6901 | Weight kg |
|---|---|---|---|---|
| 32 | 1" | 1½" | ● | 0,40 |
| 40 | 1¼" | 2" | ● | 0,70 |
| 50 | 1½" | 2½" | ● | 1,10 |

## End Stop



**No. 6223** of POM

| Pipe Ø mm | Order No. 6223 | Weight kg |
|---|---|---|
| 20 | ● | 0,04 |
| 25 | ● | 0,06 |
| 32 | ● | 0,09 |
| 40 | ● | 0,20 |
| 50 | ● | 0,28 |
| 63 | ● | 0,40 |



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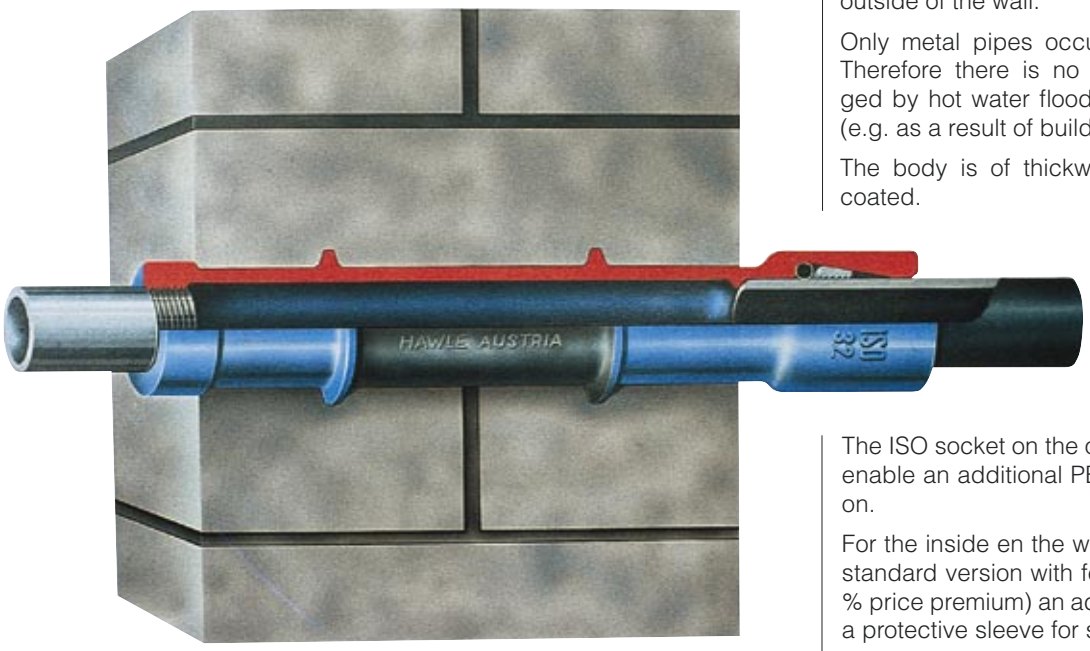
# ISO Pipe Fitting

**Hawle Wall Inlet Fitting** for **PE pipes up to PN 16** - without protective sleeve - for cold water - single piece version - simple and economical to install.




This wall inlet fitting enables the plastic pipe to end on the outside of the wall.

Only metal pipes occur in the wall and in the cellar. Therefore there is no risc en PE pipes being damaged by hot water flooding the cellar or other damages (e.g. as a result of building works).

The body is of thickwalled ductile iron and is epoxy coated.

The ISO socket on the outside of the wall is cylindrical to enable an additional PE protective sleeve to be pushed on.

For the inside en the wall there are two possibilities: the standard version with female thread; alternatively (at 10 % price premium) an additional male thread for installing a protective sleeve for special application.

The outside central portion of the wall inlet body is ribbed and uncoated to ensure good adhesion to cement.

## No. 6990

of ductile iron, epoxy coated

| Pipe Ø mm | d 1* | R" DIN 2999 | d 2** DIN 2999 | t | L | L 1+ | d 3 | Weight kg | |
|---|---|---|---|---|---|---|---|---|---|
| **32** | 56 | 1" | R 2" | 75 | 440 | 410 | 80 | 4,65 | ● |
| **40** | 66,5 | 1¼" | R 2½" | 90 | 440 | 410 | 87 | 5,40 | ● |
| **50** | 80 | 1½" | R 2½" | 105 | 440 | 410 | 87 | 5,70 | ● |
| **63** | 97 | 2" | R 3" | 115 | 510 | 470 | 101 | 8,40 | ● |

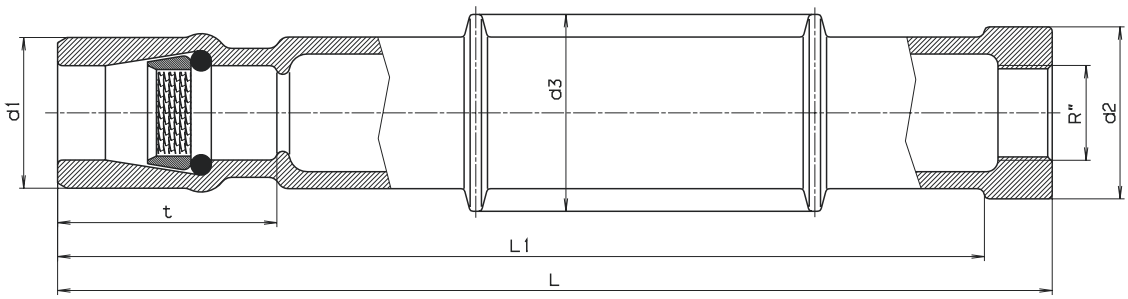
* a protective sleeve can be pushed on

** can be threaded if required

\+ maximum wall thickness

Electrical earthing arrangement available on request

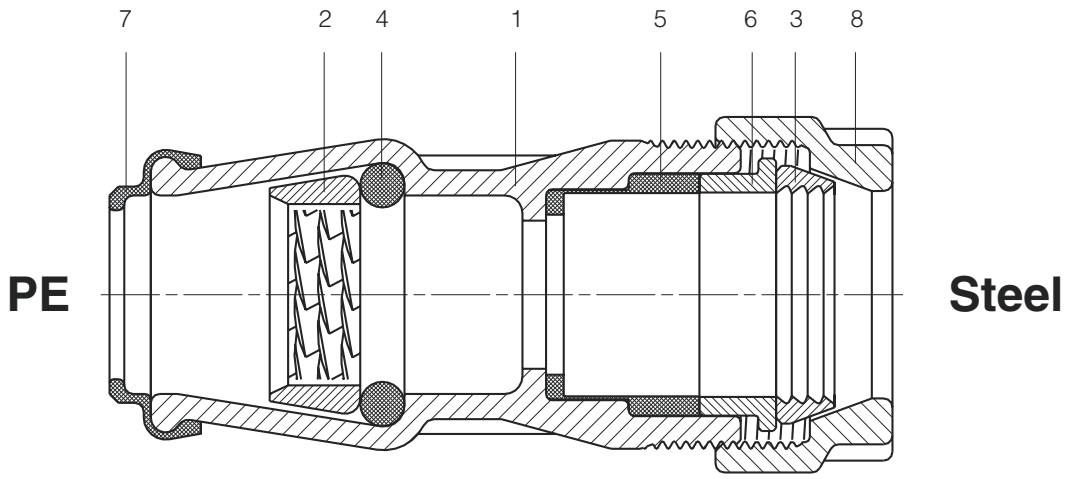
**Assembly instruction:**
see page H 1/2



## Connector "PE Pipe — Steel Pipe" total restraint

of ductile iron
epoxy powder coated

| Order no. | PE pipe Ø mm | Steel Pipe | |
|---|---|---|---|
| **6310ST** | 32 | ¾" | ● |
| **6300ST** | 32 | 1" | ● |




**Material:**

| | | |
|---|---|---|
| 1/8 | Body (1)<br>Tension nut (8): | of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coating |
| 2 | Grip ring PE: | POM |
| 3 | Grip ring acier: | hardened acier |
| 4 | O ring: | Elastomer, suitable for potable water |
| 5 | Gasket: | Elastomer, suitable for potable water |
| 6 | Thrust collar: | POM |
| 7 | Protection cap: | Elastomer, suitable for potable water |

| Order no. | PE pipe Ø mm | Steel Pipe | Weight kg |
|---|---|---|---|
| **6310ST** | 32 | ¾" (D 26,9 mm) | 0,66 |
| **6300ST** | 32 | 1" (D 33,7 mm) | 0,73 |





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# H4 Corrosion Free Hydrant - rigid type

| Order no. | Colour / RAL | DN | Outlet A | Outlet B | Outlet C | Weight kg | |
|---|---|---|---|---|---|---|---|
| **5151H4** | red* / 3003 | 80 | | 1 | 2 | 59,0 | ● |
| **5151H4B** | blue** / 5003 | | | | | | ● |
| **5140H4** | red* / 3003 | 80 | | 2 | | 58,0 | ● |
| **5140H4B** | blue** / 5003 | | | | | | ● |
| **5151H4** | red* / 3003 | 100 | 1 | 2 | | 62,0 | ● |
| **5151H4B** | blue** / 5003 | | | | | | ● |
| **5140H4** | red* / 3003 | 100 | | 2 | | 59,0 | ● |
| **5140H4B** | blue** / 5003 | | | | | | ● |

* standard colour red  ** special colour blue - other colours on request

**Standard:** **ÖNORM F 2010 — DIN 3222**
**Tested acc. to:** ÖVGW / DVGW
**Max. working pressure:** 16 bar
**Standard pipe cover:** 1,50 m (on request 1,25 m and 1,00 m possible)
**Remaining water content:** "0" according DIN 3321

Design Award
Winner 2001

**Instructions for use:** see page I 8
**Theft indicator cap:** see page D 5/1
**Security cap:** see page D 4/2
**Operating key:** see page K 3/2
**Other pipe cover:** double flanged pipe see page L 1/1

## Design features:

- entirely of corrosion free materials
- O rings embedded in non-corrosive material (according DIN 3547-T1)
- minimum torque for operation
- noticeable stop at the limits when opening and closing
- hydrant head can be turned from 0° to 360°
- automatic drain off system with pressure control
- drain outlet connection possible with PE pipe Ø 32 mm
- easy exchange of all inner parts
- several outlets on the stand pipe possible, positions on request
- outlets according to other standards possible

**Hydrant head:** sea water proof tempered aluminium alloy, UV resistant coated
**Stand pipe:** thick walled stainless steel tube, polished
**Operating controls:** stainless steel
**Base:** cast stainless steel
**Rate of flow:** rate of flow Q ($m^3/h$) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222



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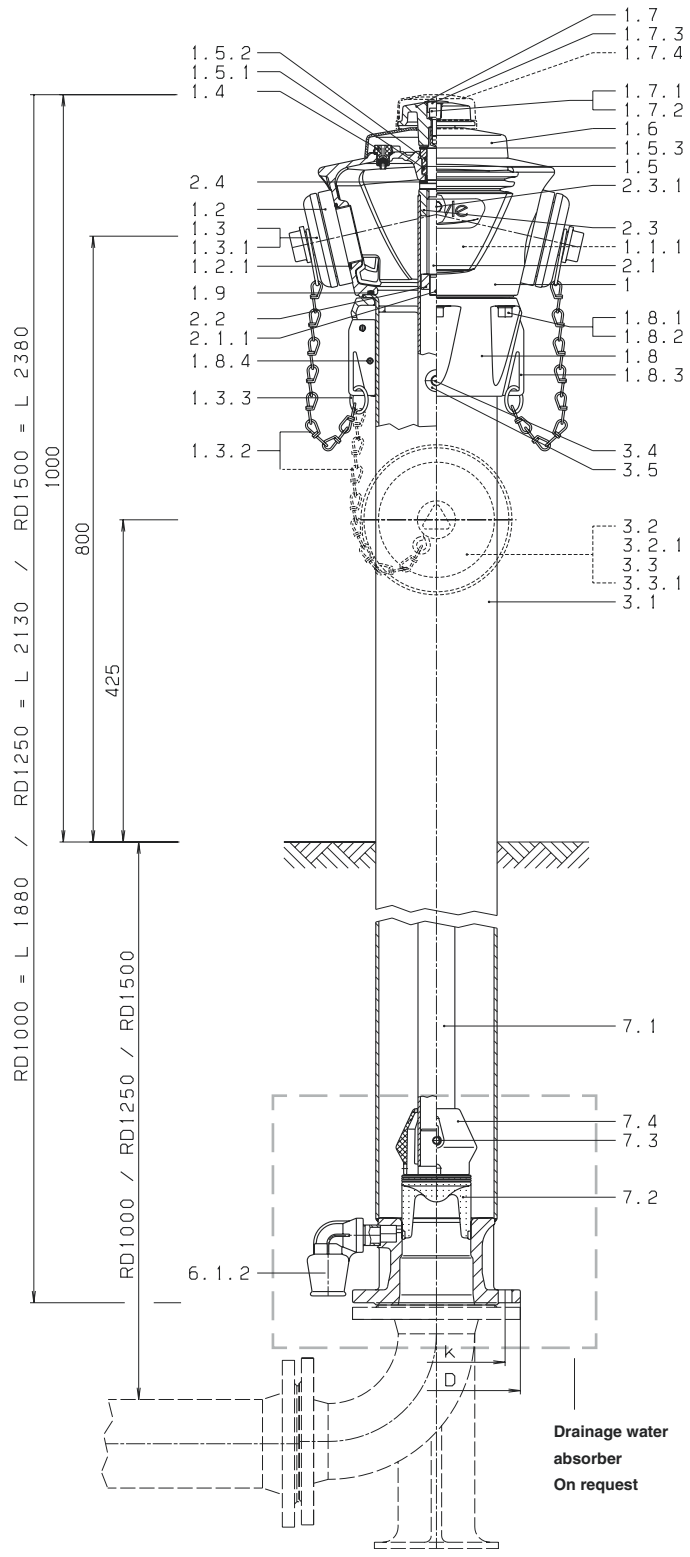
# *H4* Corrosion Free Hydrant - rigid type




| DN | Outlets | | | Pipe cover | Base flange according EN 1092-1, drilled to DIN 2501 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | RD | DN | D | k | Bolts | Qty. |
| 80 | | 1 | 2 | 1500 1250 1000 | 80 | 200 | 160 | M 16 | 8 |
| | | 2 | | | | | | | |
| 100 | 1 | 2 | | | 100 | 220 | 180 | | |
| | | 2 | | | | | | | |

**Required details for ordering spare parts:**
order no. / DN / pipe cover / year of construction

(see identification plate on back of the hydrant head)

| | Parts | Material |
|---|---|---|
| 1 | Hydrant head | G-Al |
| 1.1.1 | Identification plate | various |
| 1.2 | DN 80 C coupling DIN 14317 - C1 52 mm<br>DN 100 B coupling DIN 14318 - B1 75 mm | Al |
| 1.2.1 | DN 80 O-ring 64 x 4<br>DN 100 O-ring 79 x 4 | elastomer |
| 1.3 | DN 80 C cap DIN 14317 - C 4<br>DN 100 B cap DIN 14318 - B 4 | G-Al |
| 1.3.1 | DN 80 C flat seal ring DIN 14317 - C3<br>DN 100 B flat seal ring DIN 14318 - B3 | elastomer |
| 1.3.2 | Chain with S-hooks | A2 |
| 1.3.3 | Ring for chain | A2 |
| 1.4 | Air valve | POM |
| 1.5 | O ring bush | brass |
| 1.5.1 | O ring 32 x 4 | elastomer |
| 1.5.2 | O ring 25 x 3,5 | elastomer |
| 1.5.3 | Friction washer | POM |
| 1.6 | Cap | G-Al |
| 1.7 | Operating nut | G-Al |
| 1.7.1 | Washer DIN 125 - A 13 | A2 |
| 1.7.2 | Allen bolt DIN 912 - M 12 x 25 | A2 |
| 1.7.3 | Isolating cap | PE |
| 1.7.4 | Theft safety device | polystyrene |
| 1.8 | Head flange for hydrant head | G-Al |
| 1.8.1 | Washer DIN 433 - 13 | A2 |
| 1.8.2 | Allen bolt DIN 912 - M 12 x 40 | A2 |
| 1.8.3 | Fixing strap | A2 |
| 1.8.4 | Brace DIN 1481 - 8 x 16 | A2 |
| 1.9 | O ring 170 x 6 | elastomer |
| 2.1 | Spindle rigid | A2 |
| 2.1.1 | Pin DIN 94 - 4 x 25 | A2 |
| 2.2 | Stop nut | A2 |
| 2.3 | Stem nut | brass |
| 2.3.1 | Hexagonal bolt DIN 933 - M 8 x 10 | A2 |
| 2.4 | Friction washer | POM |
| 3.1 | Stand pipe | A2 |
| 3.2 | DN 80 B coupling DIN 14318 - B1 75 mm<br>DN 100 A coupling DIN 14319 - A1 110 mm | Al |
| 3.2.1 | DN 80 O ring 79 x 4<br>DN 100 O ring 116 x 4 | elastomer |
| 3.3 | DN 80 B cap DIN 14318 - B 4<br>DN 100 A cap DIN 14319 - A 4 | G-Al |
| 3.3.1 | DN 80 B flat seal ring DIN 14318 - B3<br>DN 100 A flat seal ring DIN 14319 - A3 | elastomer |
| 3.4 | Guide pin | A2 |
| 3.5 | Guide bush | POM |
| 6.1.2 | Fitting 1" / 90° | POM |
| 7.1 | Operating controls | A2 |
| 7.2 | Valve plug | brass/elastomer |
| 7.3 | Securing pin for valve plug | A2 |
| 7.4 | Flow former | PE |

# H4 Corrosion Free Hydrant - break away

| Order no. | Colour / RAL | DN | Outlet A | Outlet B | Outlet C | Weight kg | |
|---|---|---|---|---|---|---|---|
| 5195H4 | red* / 3003 | 80 | | 1 | 2 | 69,0 | ● |
| 5195H4B | blue** / 5003 | | | | | | ● |
| 5196H4 | red* / 3003 | 80 | | 2 | | 68,0 | ● |
| 5196H4B | blue** / 5003 | | | | | | ● |
| 5195H4 | red* / 3003 | 100 | 1 | 2 | | 72,0 | ● |
| 5195H4B | blue** / 5003 | | | | | | ● |
| 5196H4 | red* / 3003 | 100 | | 2 | | 69,0 | ● |
| 5196H4B | blue** / 5003 | | | | | | ● |

* standard colour red ** special colour blue - other colours on request

**Standard:** **ÖNORM F 2010 — DIN 3222**

**Tested acc. to:** ÖVGW / DVGW

**Max. working pressure:** 16 bar

**Standard pipe cover:** 1,50 m (on request 1,25 m and 1,00 m possible)

**Remaining water content:** "0" according DIN 3321

**Instructions for use:** see page I 8

**Theft indicator cap:** see page D 5/1

**Security cap:** see page D 4/2

**Operating key:** see page K 3/2

**Other pipe cover:** double flanged pipe see page L1/1

**Distance piece for break away line:** on request

## Design features:

- entirely of corrosion free materials
- O rings embedded in non-corrosive material (according DIN 3547-T1)
- minimum torque for operation
- noticeable stop at the limits when opening and closing
- hydrant head can be turned from 0° to 360°
- easy and quick repair of the break away line
- spare bolts Order no. 8841 for quick repair of the break away line are contained under the cap of the hydrant head
- safety bar for spindle housing in the area of the break away line
- automatic drain off system with pressure control
- drain outlet connection possible with PE pipe Ø 32 mm
- easy exchange of all inner parts
- several outlets on the stand pipe possible, positions on request
- outlets according to other standards possible

Design Award iF Winner 2001

**Hydrant head:** sea water proof tempered aluminium alloy, UV resistant coated

**Stand pipe:** thick walled stainless steel tube, polished

**Operating controls:** stainless steel

**Base:** cast stainless steel

**Rate of flow:** rate of flow Q ($m^3/h$) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222



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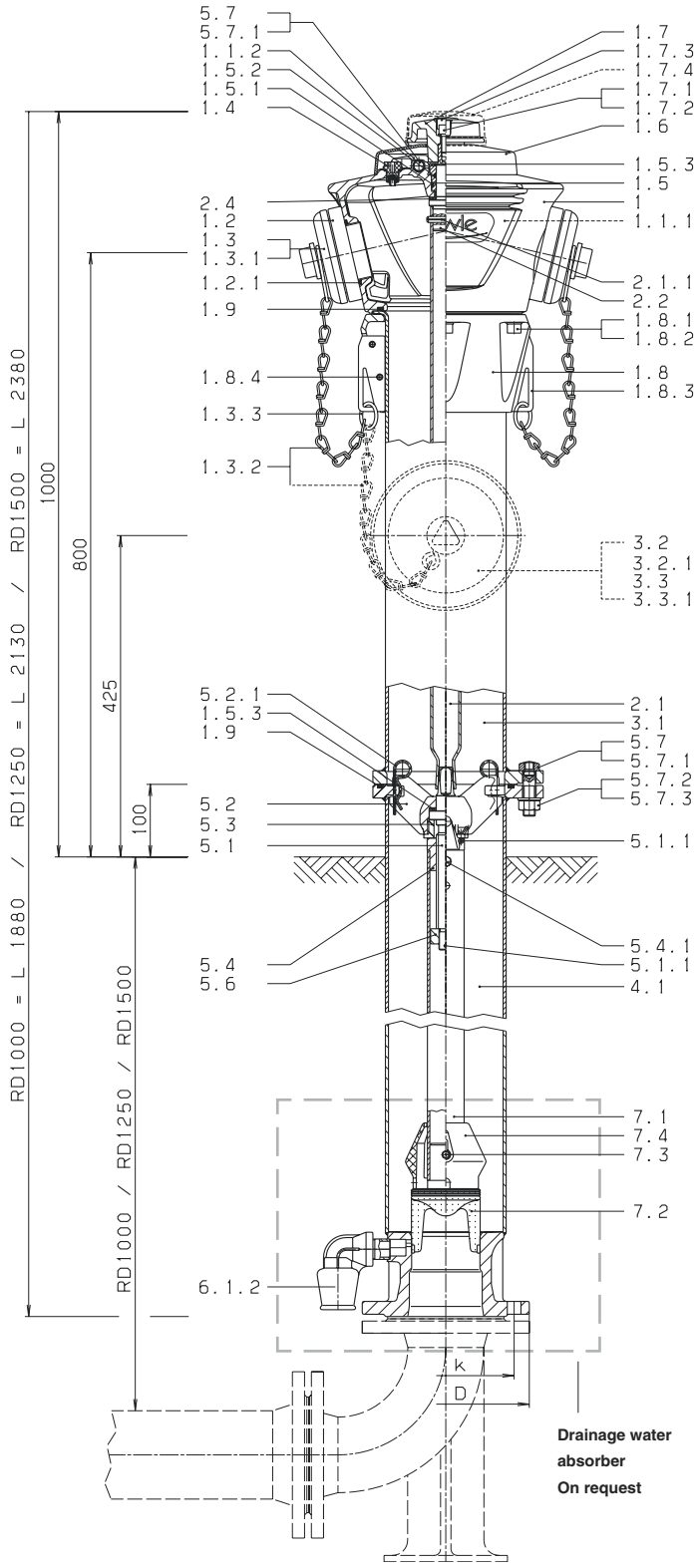
# *H4* Corrosion Free Hydrant - break away




**Required details for ordering spare parts:**
order no. / DN / pipe cover / year of construction

(see identification plate on back of the hydrant head)

| | Parts | Material |
|---|---|---|
| 1 | Hydrant head | G-Al |
| 1.1.1 | Identification plate | various |
| 1.1.2 | Bolt fastener | elastomer |
| 1.2 | DN 80 C coupling DIN 14317 - C1 52 mm<br>DN 100 B coupling DIN 14318 - B1 75 mm | Al |
| 1.2.1 | DN 80 O ring 64 x 4<br>DN 100 O ring 79 x 4 | elastomer |
| 1.3 | DN 80 C cap DIN 14317 - C 4<br>DN 100 B cap DIN 14318 - B 4 | G-Al |
| 1.3.1 | DN 80 C flat seal ring DIN 14317 - C3<br>DN 100 B flat seal ring DIN 14318 - B3 | elastomer |
| 1.3.2 | Chain with S-hooks | A2 |
| 1.3.3 | Ring for chain | A2 |
| 1.4 | Air valve | POM |
| 1.5 | O ring bush | brass |
| 1.5.1 | O ring 32 x 4 | elastomer |
| 1.5.2 | O ring 25 x 3,5 | elastomer |
| 1.5.3 | Friction washer | POM |
| 1.6 | Cap | G-Al |
| 1.7 | Operating nut | G-Al |
| 1.7.1 | Washer DIN 125 - A 13 | A2 |
| 1.7.2 | Allen bolt DIN 912 - M 12 x 25 | A2 |
| 1.7.3 | Isolating cap | PE |
| 1.7.4 | Theft safety device | polystyrene |
| 1.8 | Head flange for hydrant head | G-Al |
| 1.8.1 | Washer DIN 433 - 13 | A2 |
| 1.8.2 | Allen bolt DIN 912 - M 12 x 40 | A2 |
| 1.8.3 | Fixing strap | A2 |
| 1.8.4 | Brace DIN 1481 - 8 x 16 | A2 |
| 1.9 | O ring 170 x 6 | elastomer |
| 2.1 | Extension spindle | A2 |
| 2.1.1 | Brace DIN 1481 - 8 x 50 | A2 |
| 2.2 | Pin | A2 |
| 2.4 | Friction washer | POM |
| 3.1 | Stand pipe - upper part | A2 |
| 3.2 | DN 80 B coupling DIN 14318 - B1 75 mm<br>DN 100 A coupling DIN 14319 - A1 110 mm | Al |
| 3.2.1 | DN 80 O ring 79 x 4<br>DN 100 O ring 116 x 4 | elastomer |
| 3.3 | DN 80 B cap DIN 14318 - B 4<br>DN 100 A cap DIN 14319 - A 4 | G-Al |
| 3.3.1 | DN 80 B flat seal ring DIN 14318 - B3<br>DN 100 A flat seal ring DIN 14319 - A3 | elastomer |
| 4.1 | Stand pipe - lower part | A2 |
| 5.1 | Spindle break away | A2 |
| 5.1.1 | Pin DIN 94 - 4 X 25 | A2 |
| 5.2 | Spindle housing | brass |
| 5.2.1 | Spring clip | A2 |
| 5.3 | Securing bush | POM |
| 5.4 | Stem nut | brass |
| 5.4.1 | Hexagonal bolt DIN 933 - M 8 x 10 | A2 |
| 5.6 | Stop nut | A2 |
| 5.7 | Hexagonal bolt with break away line M 16 x 60 | A2 |
| 5.7.1 | Plug for bolt | PE |
| 5.7.2 | Washer DIN 125 - A 17 | A2 |
| 5.7.3 | Hexagonal nut DIN 934 - M 16 | A4 |
| 6.1.2 | Fitting 1" / 90° | POM |
| 7.1 | Shaft | A2 |
| 7.2 | Valve plug | brass/elastomer |
| 7.3 | Securing pin for valve plug | A2 |
| 7.4 | Flow former | PE |

| DN | Outlets | | | Pipe cover | Base flange according EN 1092-1, drilled to DIN 2501 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | RD | DN | D | k | Bolts | Qty. |
| 80 | | 1 | 2 | 1500<br>1250<br>1000 | 80 | 200 | 160 | M 16 | 8 |
| | | 2 | | | | | | | |
| 100 | 1 | 2 | | | 100 | 220 | 180 | | |
| | | 2 | | | | | | | |

# H4 Above Ground Hydrant - rigid type

| | |
|---|---|
| **Standard:** | **ÖNORM F 2010 — DIN 3222** |
| **Tested acc. to:** | ÖVGW / DVGW |
| **Max. working pressure:** | 16 bar |
| **Standard pipe cover:** | 1,50 m (on request 1,25 or 1,00 m possible) |
| **Remaining water content:** | "0" according DIN 3321 |
| **Instructions for use:** | see page I 8 |
| **Theft indicator cap:** | see page D 5/1 |
| **Security cap:** | see page D 4/2 |
| **Operating key:** | see page K 3/2 |
| **Other pipe cover:** | double flanged pipe see page L1/1 |

| Order no. | DN | Outlet | | | Weight kg | |
|---|---|---|---|---|---|---|
| | | A | B | C | | |
| **5051H4** | 80 | | 1 | 2 | 69,0 | ● |
| **5053H4** | 80 | | 2 | | 68,0 | ● |
| **5051H4** | 100 | 1 | 2 | | 72,0 | ● |
| **5053H4** | 100 | | 2 | | 70,0 | ● |

DN 150 on request

## Design features:

- inner parts entirely of corrosion free materials
- stand pipe, base and hydrant head with corrosion resistant coating
- several outlets on the stand pipe possible, positions on request
- O rings embedded in non-corrosive material (according DIN 3547-T1)
- minimum torque for operation
- noticeable stop at the limits when opening and closing
- hydrant head can be turned from 0° to 360°
- automatic drain off system with pressure control
- drain outlet connection possible with PE pipe Ø 32 mm
- easy exchange of all inner parts
- outlets according to other standards possible


Design Award
Winner 2001

| | |
|---|---|
| **Hydrant head:** | of grey iron, epoxy powder + UV resistant coated (as of June 2001 RAL 9006) |
| **Stand pipe:** | thick walled steel tube St. 37 DIN 2458/1615, galvanized, UV resistant coated (as of June 2001 RAL 5003) |
| **Operating controls:** | stainless steel |
| **Base:** | of ductile iron, epoxy powder coated (as of June 2001 RAL 5012) |
| **Rate of flow:** | rate of flow Q ($m^3/h$) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222 |



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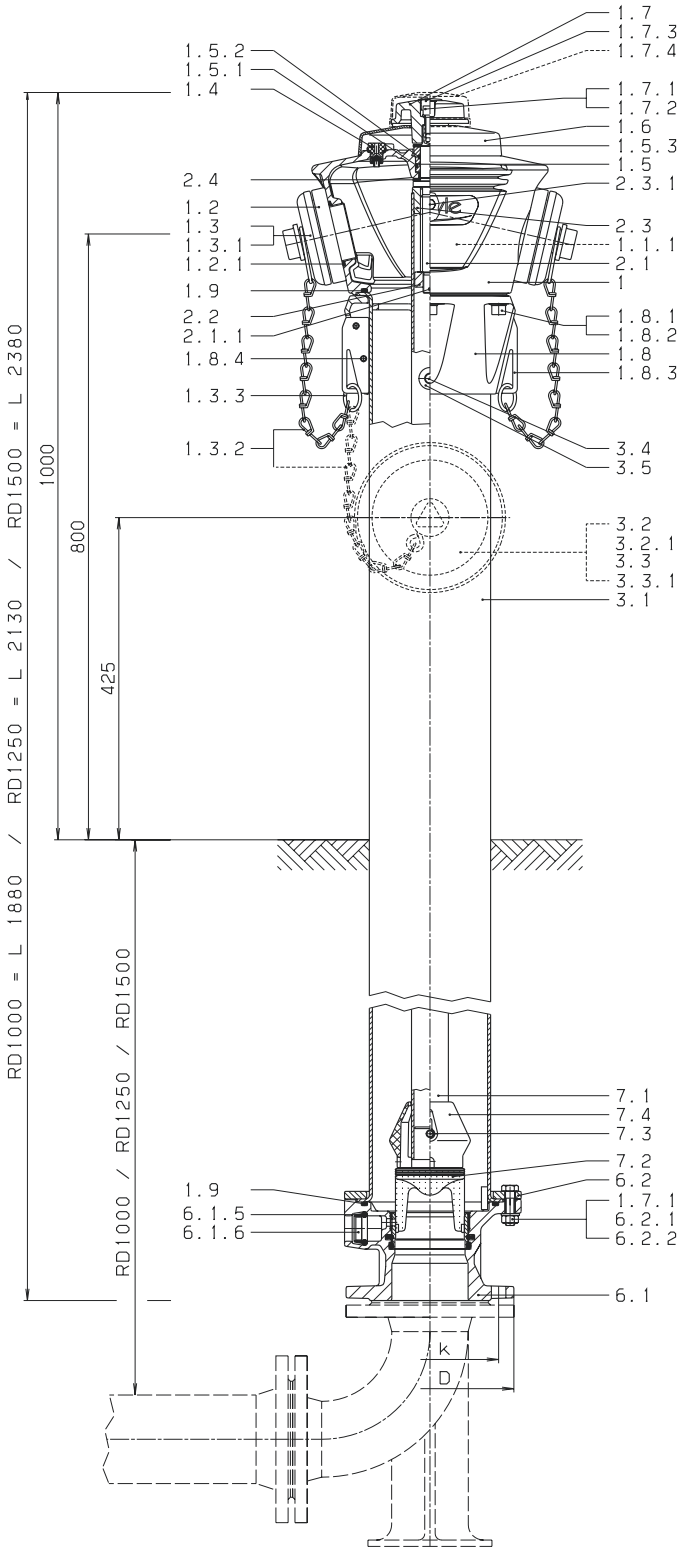
# *H4* Above Ground Hydrant - rigid type




| DN | Outlets | | | Pipe cover | Base flange according EN 1092-2, drilled to DIN 2501 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | RD | DN | D | k | Bolts | Qty. |
| 80 | | 1 | 2 | 1500<br>1250<br>1000 | 80 | 200 | 160 | M 16 | 8 |
| | | 2 | | | | | | | |
| 100 | 1 | 2 | | | 100 | 220 | 180 | | |
| | | 2 | | | | | | | |

**Required details for ordering spare parts:**
**order no. / DN / pipe cover / year of construction**
(see identification plate on back of the hydrant head)

| | Parts | Material |
|---|---|---|
| 1 | Hydrant head | grey iron |
| 1.1.1 | Identification plate | various |
| 1.2 | DN 80 C coupling DIN 14317 - C1 52 mm<br>DN 100 B coupling DIN 14318 - B1 75 mm | Al |
| 1.2.1 | DN 80 O ring 64 x 4<br>DN 100 O ring 79 x 4 | elastomer |
| 1.3 | DN 80 C cap DIN 14317 - C4<br>DN 100 B cap DIN 14318 - B4 | G-Al |
| 1.3.1 | DN 80 C flat seal ring DIN 14317 - C3<br>DN 100 B flat seal ring DIN 14318 - B3 | elastomer |
| 1.3.2 | Chain with S-hooks | A2 |
| 1.3.3 | Ring for chain | A2 |
| 1.4 | Air valve | POM |
| 1.5 | O ring bush | brass |
| 1.5.1 | O ring 32 x 4 | elastomer |
| 1.5.2 | O ring 25 x 3,5 | elastomer |
| 1.5.3 | Friction washer | POM |
| 1.6 | Cap | G-Al |
| 1.7 | Operating nut | G-Al |
| 1.7.1 | Washer DIN 125 - A 13 | A2 |
| 1.7.2 | Allen bolt DIN 912 - M 12 x 25 | A2 |
| 1.7.3 | Isolating cap | PE |
| 1.7.4 | Theft safety device | polystyrene |
| 1.8 | Head flange for hydrant head | G-Al |
| 1.8.1 | Washer DIN 433 - 13 | A2 |
| 1.8.2 | Allen bolt DIN 912 - M 12 x 40 | A2 |
| 1.8.3 | Fixing strap | A2 |
| 1.8.4 | Brace DIN 1481 - 8 x 16 | A2 |
| 1.9 | O ring 170 x 6 | elastomer |
| 2.1 | Spindle rigid | A2 |
| 2.1.1 | Pin DIN 94 - 4 x 25 | A2 |
| 2.2 | Stop nut | A2 |
| 2.3 | Stem nut | brass |
| 2.3.1 | Hexagonal bolt DIN 933 - M 8 x 10 | A2 |
| 2.4 | Friction washer | POM |
| 3.1 | Stand pipe | steel |
| 3.2 | DN 80 B coupling DIN 14318 - B1 75 mm<br>DN 100 A coupling DIN 14319 - A1 110 mm | Al |
| 3.2.1 | DN 80 O ring 79 x 4<br>DN 100 O ring 116 x 4 | elastomer |
| 3.3 | DN 80 B cap DIN 14318 - B4<br>DN 100 A cap DIN 14319 - A4 | G-Al |
| 3.3.1 | DN 80 B flat seal ring DIN 14318 - B3<br>DN 100 A flat seal ring DIN 14319 - A3 | elastomer |
| 3.4 | Guide pin | A2 |
| 3.5 | Guide bush | POM |
| 6.1 | Base | DCI |
| 6.1.5 | O ring 30,3 x 7,5 | elastomer |
| 6.1.6 | Clamp | POM |
| 6.2 | Head flange for base | steel |
| 6.2.1 | Hexagonal bolt DIN 933 - M 12 x 45 | A2 |
| 6.2.2 | Hexagonal nut DIN 934 - M 12 | A2 |
| 7.1 | Operating controls | A2 |
| 7.2 | Valve plug | brass/elastomer |
| 7.3 | Securing pin for valve plug | A2 |
| 7.4 | Flow former | PE |

# H4 Above Ground Hydrant - break away

| | |
|---|---|
| **Standard:** | **ÖNORM F 2010 — DIN 3222** |
| **Tested acc. to:** | ÖVGW / DVGW |
| **Max. working pressure:** | 16 bar |
| **Standard pipe cover:** | 1,50 m (on request 1,25 or 1,00 m possible) |
| **Remaining water content:** | "0" according DIN 3321 |
| **Instructions for use:** | see page I 8 |
| **Theft indicator cap:** | see page D 5/1 |
| **Security cap:** | see page D 4/2 |
| **Operating key:** | see page K 3/2 |
| **Other pipe cover:** | double flanged pipe see page L1/1 |

| Order no. | DN | Outlet | | | Weight kg | |
|---|---|---|---|---|---|---|
| | | A | B | C | | |
| **5095H4** | 80 | | 1 | 2 | 79,0 | ● |
| **5096H4** | 80 | | 2 | | 78,0 | ● |
| **5095H4** | 100 | 1 | 2 | | 82,0 | ● |
| **5096H4** | 100 | | 2 | | 79,0 | ● |

DN 150 on request

## Design features:

- inner parts entirely of corrosion free materials
- stand pipe, base and hydrant head with corrosion resistant coating
- O rings embedded in non-corrosive material (according DIN 3547-T1)
- minimum torque for operation
- noticeable stop at the limits when opening and closing
- hydrant head can be turned from 0° to 360°
- easy and quick repair of the break away line
- spare bolts Order no. 8841 for quick repair of the break away line are contained under the cap of the hydrant head
- safety bar for spindle housing in the area of the break away line
- several outlets on the stand pipe possible, positions on request
- automatic drain off system with pressure control
- drain outlet connection possible with PE pipe Ø 32 mm
- easy exchange of all inner parts
- outlets according to other standards possible


Design Award
Winner 2001

| | |
|---|---|
| **Hydrant head:** | of grey iron, epoxy powder + UV resistant coated (as of June 2001 RAL 9006) |
| **Stand pipe:** | thick walled steel tube St. 37 DIN 2458/1615, galvanized, UV resistant coated (as of June 2001 RAL 5003) |
| **Operating controls:** | stainless steel |
| **Base:** | of ductile iron, epoxy powder coated (as of June 2001 RAL 5012) |
| **Rate of flow:** | rate of flow Q ($m^3/h$) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222 |



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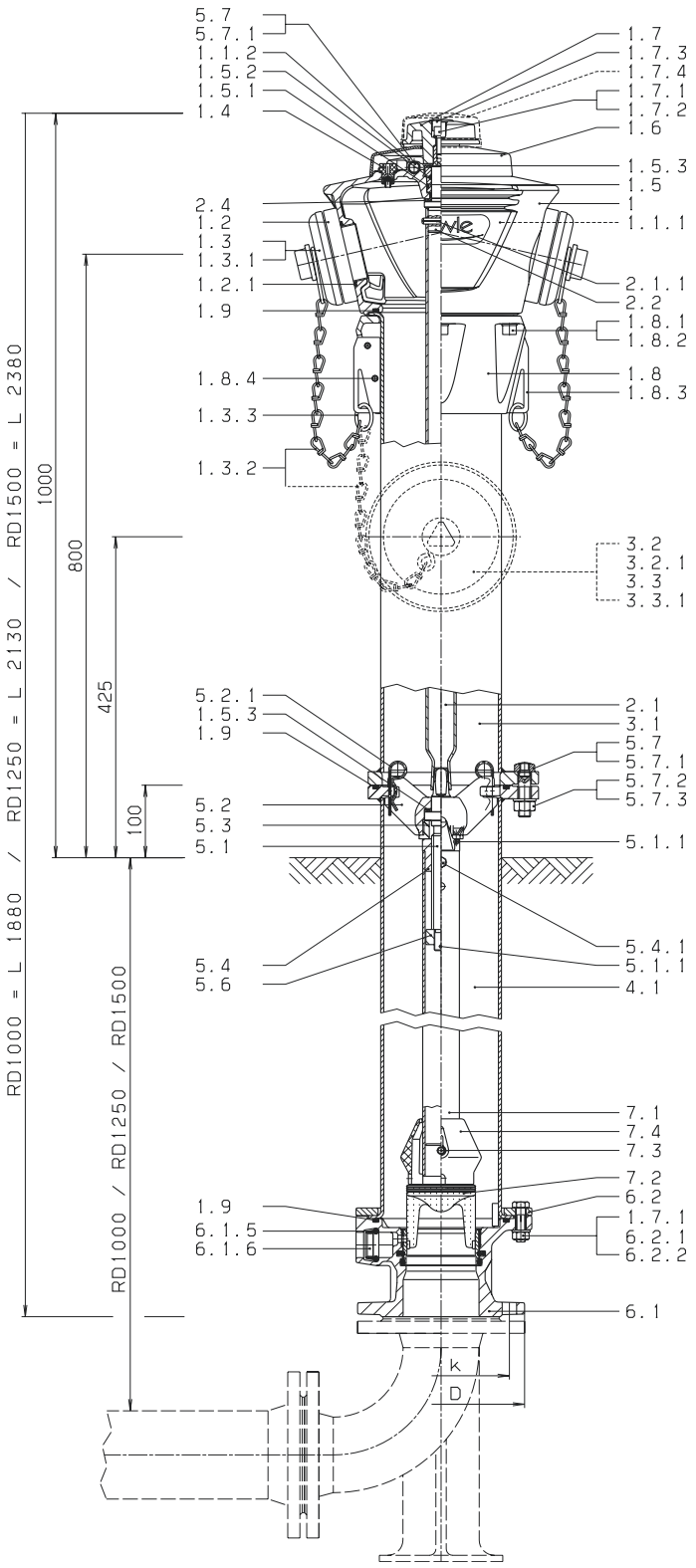
# *H4* Above Ground Hydrant - break away




| DN | Outlets | | | Pipe cover | Base flange according EN 1092-2, drilled to DIN 2501 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | RD | DN | D | k | Bolts | Qty. |
| 80 | | 1 | 2 | 1500<br>1250<br>1000 | 80 | 200 | 160 | M 16 | 8 |
| | | 2 | | | | | | | |
| 100 | 1 | 2 | | | 100 | 220 | 180 | | |
| | | 2 | | | | | | | |

**Required details for ordering spare parts:**
order no. / DN / pipe cover / year of construction
(see identification plate on back of the hydrant head)

| | Parts | Material |
|---|---|---|
| 1 | Hydrant head | grey iron |
| 1.1.1 | Identification plate | various |
| 1.1.2 | Bolt fastener | elastomer |
| 1.2 | DN 80 C coupling DIN 14317 - C1 52 mm<br>DN 100 B coupling DIN 14318 - B1 75 mm | Al |
| 1.2.1 | DN 80 O ring 64 x 4<br>DN 100 O ring 79 x 4 | elastomer |
| 1.3 | DN 80 C cap DIN 14317 - C 4<br>DN 100 B cap DIN 14318 - B 4 | G-Al |
| 1.3.1 | DN 80 C flat seal ring DIN 14317 - C3<br>DN 100 B flat seal ring DIN 14318 - B3 | elastomer |
| 1.3.2 | Chain with S-hooks | A2 |
| 1.3.3 | Ring for chain | A2 |
| 1.4 | Air valve | POM |
| 1.5 | O ring bush | brass |
| 1.5.1 | O ring 32 x 4 | elastomer |
| 1.5.2 | O ring 25 x 3,5 | elastomer |
| 1.5.3 | Friction washer | POM |
| 1.6 | Cap | G-Al |
| 1.7 | Operating nut | G-Al |
| 1.7.1 | Washer DIN 125 - A 13 | A2 |
| 1.7.2 | Allen bolt DIN 912 - M 12 x 25 | A2 |
| 1.7.3 | Isolating cap | PE |
| 1.7.4 | Theft safety device | polystyrene |
| 1.8 | Head flange for hydrant head | G-Al |
| 1.8.1 | Washer DIN 433 - 13 | A2 |
| 1.8.2 | Allen bolt DIN 912 - M 12 x 40 | A2 |
| 1.8.3 | Fixing strap | A2 |
| 1.8.4 | Brace DIN 1481 - 8 x 16 | A2 |
| 1.9 | O ring 170 x 6 | elastomer |
| 2.1 | Extension spindle | A2 |
| 2.1.1 | Brace DIN 1481 - 8 x 50 | A2 |
| 2.2 | Pin | A2 |
| 2.4 | Friction washer | POM |
| 3.1 | Stand pipe | steel |
| 3.2 | DN 80 B coupling DIN 14318 - B1 75 mm<br>DN 100 A coupling DIN 14319 - A1 110 mm | Al |
| 3.2.1 | DN 80 O ring 79 x 4<br>DN 100 O ring 116 x 4 | elastomer |
| 3.3 | DN 80 B cap DIN 14318 - B 4<br>DN 100 A cap DIN 14319 - A 4 | G-Al |
| 3.3.1 | DN 80 B flat seal ring DIN 14318 - B3<br>DN 100 A flat seal ring DIN 14319 - A3 | elastomer |
| 4.1 | Stand pipe | steel |
| 5.1 | Spindle break away | A2 |
| 5.1.1 | Pin DIN 94 - 4 X 25 | A2 |
| 5.2 | Spindle housing | brass |
| 5.2.1 | Spring clip | A2 |
| 5.3 | Securing bush | POM |
| 5.4 | Stem nut | brass |
| 5.4.1 | Hexagonal bolt DIN 933 - M 8 x 10 | A2 |
| 5.6 | Stop nut | A2 |
| 5.7 | Hexagonal bolt with break away line M 16 x 60 | A2 |
| 5.7.1 | Plug for bolt | PE |
| 5.7.2 | Washer DIN 125 - A 17 | A2 |
| 5.7.3 | Hexagonal nut DIN 934 - M 16 | A4 |
| 6.1 | Base | DCI |
| 6.1.5 | O ring 30,3 x 7,5 | elastomer |
| 6.1.6 | Clamp | POM |
| 6.2 | Head flange for base | steel |
| 6.2.1 | Hexagonal bolt DIN 933 - M 12 x 45 | A2 |
| 6.2.2 | Hexagonal nut DIN 934 - M 12 | A2 |
| 7.1 | Operating controls | A2 |
| 7.2 | Valve plug | brass/elastomer |
| 7.3 | Securing pin for valve plug | A2 |
| 7.4 | Flow former | PE |

# H4 Corrosion Free Hydrant with drop jacket

| | |
|---|---|
| **Standard:** | **ÖNORM F 2010 — DIN 3222** |
| **Tested acc. to:** | ÖVGW / DVGW |
| **Max. working pressure:** | 16 bar |
| **Standard pipe cover:** | 1,50 m (on request 1,25 m and 1,00 m possible) |
| **Remaining water content:** | "0" according DIN 3321 |
| **Security cap:** | see page D 4/2 |
| **Operating key:** | see page K 3/2 |
| **Other pipe cover:** | double flanged pipe see page L1/1 |

| Order no. | DN | Outlet A | Outlet B | Weight kg | |
|---|---|---|---|---|---|
| **5186** | 80 | | 1 | 82,0 | ● |
| **5186** | 100 | | 2 | 83,0 | ● |
| **5185** | 100 | 1 | 2 | 86,0 | ● |

## Design features:

- this above ground hydrant is convincing both in terms of technology and its non-corroding material and in terms of the optical effect of its remarkable and clear design.
- the “drop jacket technology” protects the upper outlets from unauthorized use. Only after the plastic jacket is unlocked and drops downwards the two indiviually lockable B-outlets can be opened.
- entirely of corrosion free materials
- new flow technique to the shut-off valve at the hydrant head
- simple locking and loosening of the drop jacket by means of snap. “Shock absorbers” prevent the drop jacket from bumping hard
- minimum torque for operation
- noticeable stop at the limits when opening and closing
- hydrant head can be turned from 0° to 360°
- easy and quick repair of the break away line
- spare bolts Order no. 8841 for quick repair of the break away line are stored in the head of the hydrant
- safety bar for spindle housing in the area of the break away line
- automatic drain-off system with pressure control
- drain outlet connection possible with PE pipe Ø 32 mm
- easy exchange of all inner parts


Design Award
Winner 2001

| | |
|---|---|
| **Hydrant head:** | sea water proof tempered aluminium alloy, UV resistant coated |
| **Drop jacket:** | shock-proof UV-resistant plastic |
| **Stand pipe:** | thick walled stainless steel tube, polished |
| **Operating controls:** | stainless steel |
| **Base:** | stainless steel |
| **Rate of flow:** | rate of flow Q ($m^3/h$) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222 |



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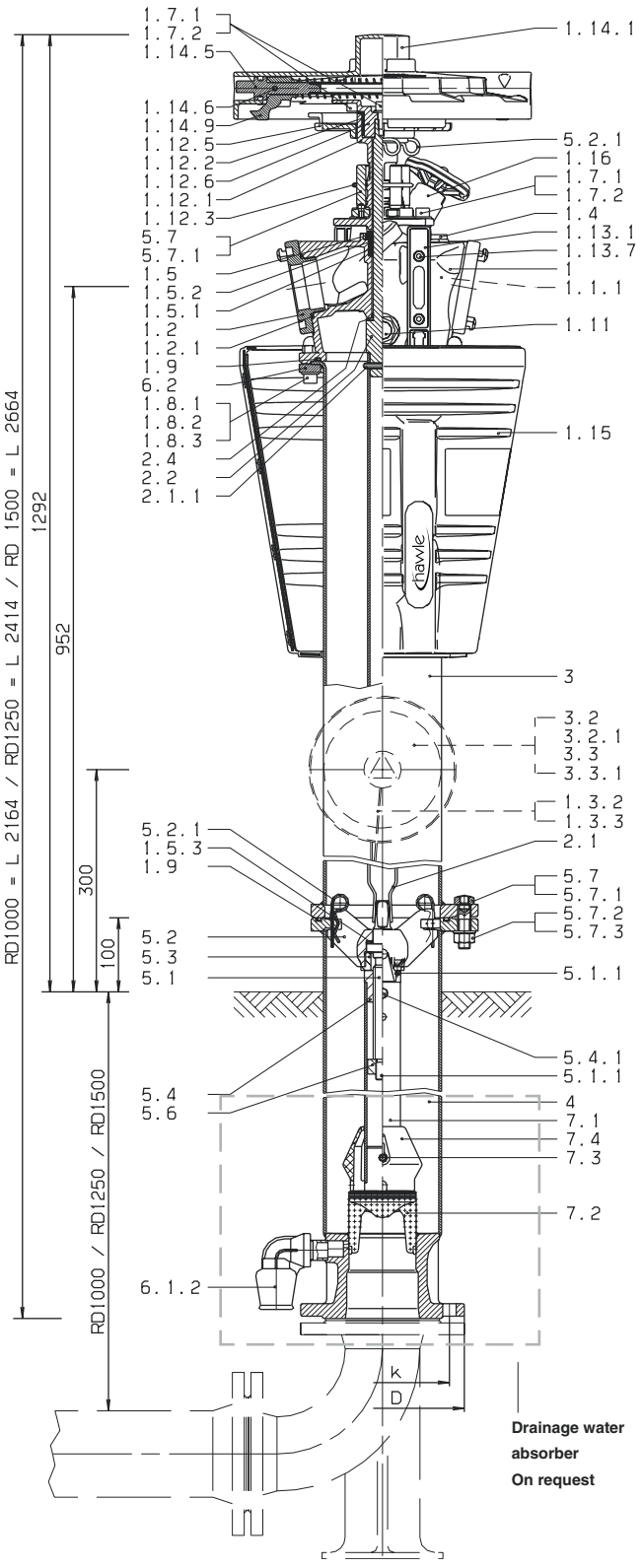
# *H4* Corrosion Free Hydrant with drop jacket




| DN | Outlets | | Pipe cover | Base flange according EN 1092-1, drilled to DIN 2501 | | | | |
|---|---|---|---|---|---|---|---|---|
| | A | B | RD | DN | D | k | Bolts | Qty. |
| 80 | | 2 | 1500 | 80 | 200 | 160 | M 16 | 8 |
| 100 | | 2 | 1250 | 100 | 220 | 180 | | |
| | 1 | 2 | 1000 | | | | | |

**Required details for ordering spare parts:**
order no. / DN / pipe cover / year of construction
(see identification plate on the back of the hydrant head)

| | Parts | Material |
|---|---|---|
| 1 | Hydrant head | G-Al |
| 1.1.1 | Identification plate | divers |
| 1.2 | B-coupling DIN 14318 - B1 75 mm | Al |
| 1.2.1 | O ring | elastomer |
| 1.3.2 | Grip ring | divers |
| 1.3.3 | Rope | A2 |
| 1.4 | Air valve | POM |
| 1.5 | O ring bush | brass |
| 1.5.1 | O ring 32 x 4 | elastomer |
| 1.5.2 | O ring 25 x 3.5 | elastomer |
| 1.5.3 | Friction washer | POM |
| 1.7.1 | Washer DIN 125 - A 13 | A2 |
| 1.7.2 | Allen bolt DIN 912 - M 12 x 25 | A2 |
| 1.8.1 | Washer DIN 125 - A13 | A2 |
| 1.8.2 | Allen bolt DIN 912 - M 12 x 40 | A2 |
| 1.8.3 | Cap nut DIN 1587 - M 12 | A2 |
| 1.9 | O ring 170 x 6 | elastomer |
| 1.11 | Pressure indicator | brass |
| 1.12.1 | Hood column | G-Al |
| 1.12.2 | Bearing bush | POM |
| 1.12.3 | O ring | elastomer |
| 1.12.5 | Hood lock | G-Al |
| 1.12.6 | Hood support | G-Al |
| 1.13.1 | Guide strip | POM |
| 1.13.7 | Allen bolt DIN 912 M 8 x 20 | A2 |
| 1.14.1 | Hood cover | G-Al |
| 1.14.5 | Spindle | 1.4021 |
| 1.14.6 | Straight pin | 1.4305 |
| 1.14.9 | Locking bar | brass |
| 1.15 | Drop jacket | ABS |
| 1.16 | Valve bonnet, complete | Al |
| 2.1 | Extension spindle | 1.4301 |
| 2.1.1 | Brace DIN 1481 - 8 x 50 | A2 |
| 2.2 | Pin for Extension spindle | 1.4301 |
| 2.4 | Friction washer | POM |
| 3 | Stand pipe, complete | 1.4541 |
| 3.2 | A coupling DIN 14319 - A1 110 mm | Al |
| 3.2.1 | O ring 116 x 4 | elastomer |
| 3.3 | A cap DIN 14319 - A 4 | Al |
| 3.3.1 | Flat seal ring | elastomer |
| 4 | Stand pipe | 1.4541 |
| 5.1 | Spindle | 1.4021 |
| 5.1.1 | Pin DIN 94 - 4 x 25 | A2 |
| 5.2 | Spindle housing | brass |
| 5.2.1 | Spring clip | A2 |
| 5.3 | Securing bush | POM |
| 5.4 | Stem nut | brass |
| 5.4.1 | Hexagonal bolt DIN 933 - M 8 x 10 | A2 |
| 5.6 | Stop nut | 1.4021 |
| 5.7 | Hexagonal bolt for break away M 16 x 60 | A2 |
| 5.7.1 | Plug for bolt | PE |
| 5.7.2 | Washer DIN 125 - A17 | A2 |
| 5.7.3 | Hexagonal nut DIN 934 - M16 | A4 |
| 6.1.2 | Fitting 1" / 90° | POM |
| 6.2 | Lock ring | G-Al |
| 7.1 | Shaft | A2 |
| 7.2 | Valve plug | brass/elastomer |
| 7.3 | Securing pin for valve plug | A2 |
| 7.4 | Flow former | PE |

# Freeflow below ground hydrant

**Standard:** DIN 3221
**Approved by:** DVGW
**max. operating pressure:** 16 bar
**Standard pipe cover:** 1,5 m

| Order no. | Version | PN | Pipe* | | |
|---|---|---|---|---|---|
| | | | 1,00 m | 1,25 m | 1,50 m |
| 5060 | Flange connection DN 80 | 16 | ● | ● | ● |
| 5061 | Spigot connection DN 80 | | ● | ● | ● |

* optional intermediate lengths possible (smallest pipe cover 0,85 m)
Overlengths up to 3 m on request

### Design features:

- free passage, high capacity with low pressure losses (153 $m^3/h$ with 1 bar pressure drop)
- stainless steel plate mechanism with fixed opening and closing points, which will not be affected by encrustation or pollution
- good corrosion protection by epoxy coating and non-corroding materials
- maintenance free
- suitable for installation by under pressure drilling, (installation afterwards)

### Connecting possibilities:

Flange connection:
EN piece, F piece, drilling clamp

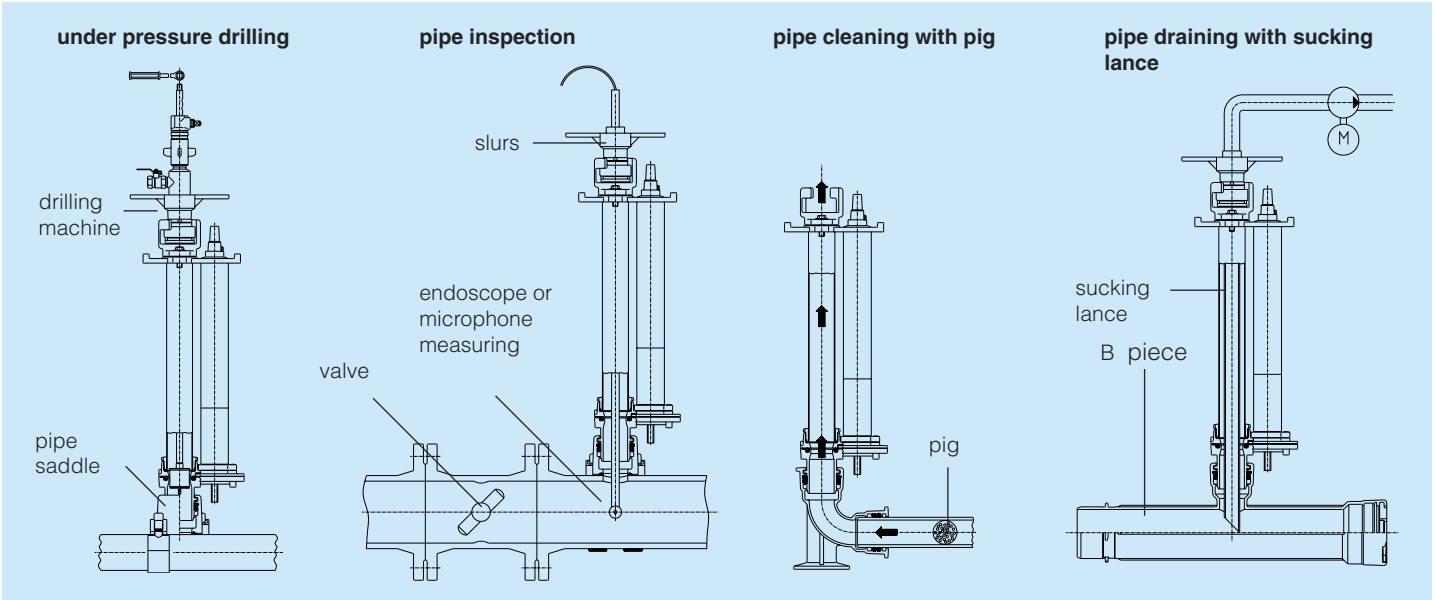
Spigot connection:
B piece, MMB piece, SM piece, MMN piece, hydrant clamp, electrofusion socket

### On request:

below ground extensions 100 – 500 mm

protection against dirt and twisting


## Further applications



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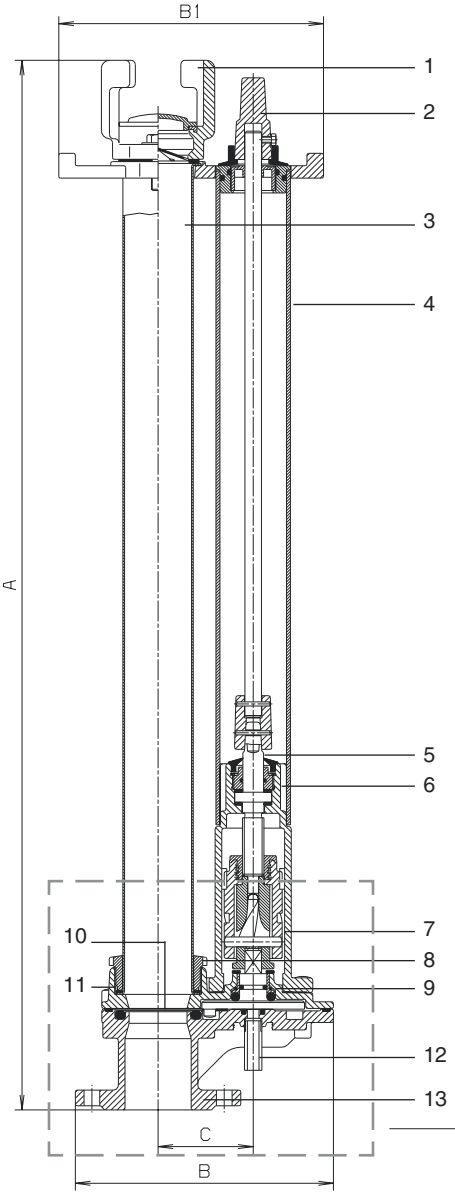
# Freeflow below ground hydrant




| | Parts | Material |
|---|---|---|
| 1 | Jaw coupling | DCI |
| 2 | Operating nut | DCI |
| 3 | Pipe | SS |
| 4 | Plastic protection pipe | PP |
| 5 | Spindle | SS |
| 6 | Gear | DCI |
| 7 | Plate drive | SS |
| 8 | Ring nut | PA |
| 9 | Driving worm | Ms |
| 10 | Valve plate | SS |
| 11 | Hydrant top | DCI |
| 12 | Drain connection | |
| 13 | Hydrant end with spigot or flange | DCI |

Recommendation
Drainage water absorber
Order no. 5062

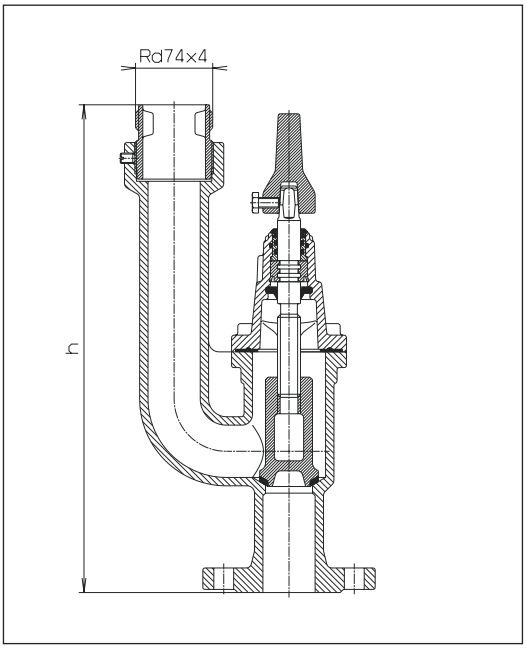
| Order no. | Connection | Pipe length | A | B | B 1 | C | Weight kg |
|---|---|---|---|---|---|---|---|
| **5060** | **Flange DN 80** | 1,00 m | 740 | 280 | 320 | 115 | 35,0 |
| | | 1,25 m | 990 | 280 | 320 | 115 | 37,5 |
| | | 1,50 m | 1240 | 280 | 320 | 115 | 39,5 |
| **5061** | **Spigot DN 80** | 1,00 m | 785 | 280 | 320 | 115 | 31,5 |
| | | 1,25 m | 1045 | 280 | 320 | 115 | 34,0 |
| | | 1,50 m | 1295 | 280 | 320 | 115 | 36,0 |

| Order no. | DN | Version | Total height / mm | Weight kg | |
|---|---|---|---|---|---|
| **5080** | **50** | **Round thread outlet** | 466 | 16,0 | ● |
| **5081** | **50** | **Bayonet coupling** | 555 | 19,0 | ● |

**with round thread outlet**

flange DN 50

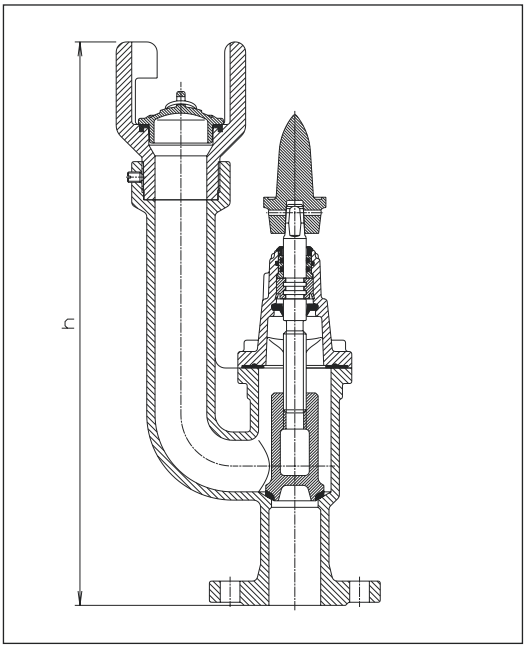
of grey iron, epoxy powder coated
without drainage outlet




**with bayonet coupling DN 50**

flange DN 50

of grey iron, epoxy powder coated
without drainage outlet




Illustrations, technical data, dimensions and weights are subject to alteration without notice.



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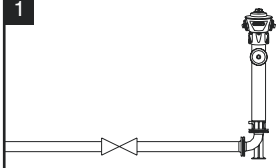
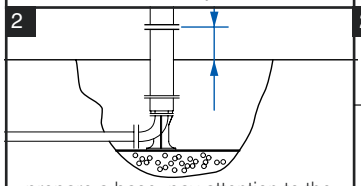
## ASSEMBLY

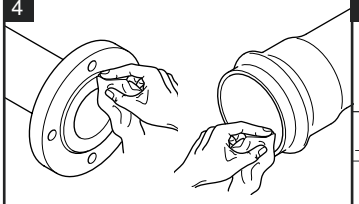
### Preperatory work

1

Advice: install a gate valve before the hydrant

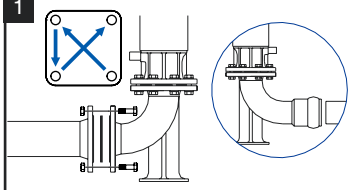
2

prepare a base. pay attention to the installation height (break-away hydrant: break-away line 12 ±6 cm above of the ground level)

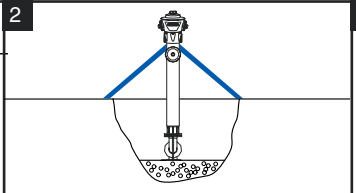
3

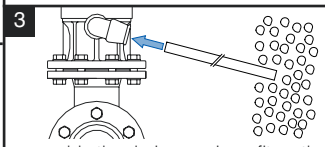
prepare a drainage pipe 1“ (1 - 3 m)

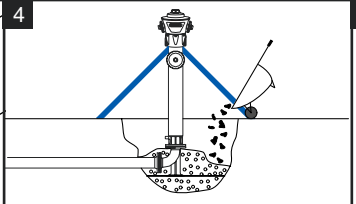
4

prepare a flange connection or sockets for the hydrant assembly

### Hydrant assembly

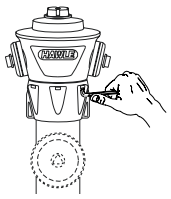
1

bolt the flanges crosswise or connect the sockets

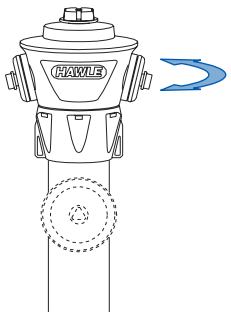
2

support the hydrant

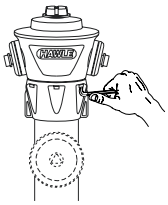
3

assemble the drainage pipe - fit on the rubble drain - pressure test - **flush**

4

backfill the excavation

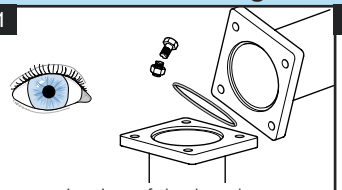
### Rotation of the hydrant head

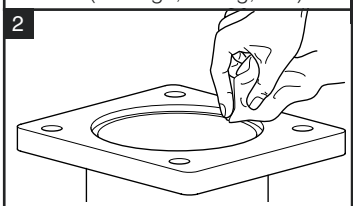
1

loosen the bolts at the tension ring

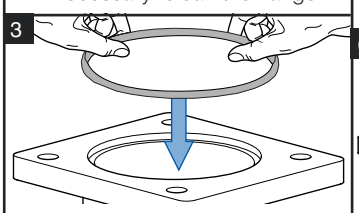
2

rotate the hydrant head to the required position

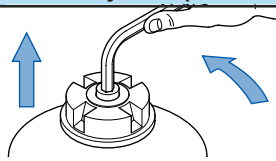
3

tighten the bolts

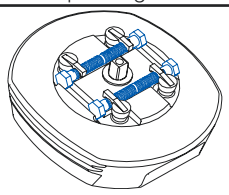
### Damage of the break away line (break away hydrant)

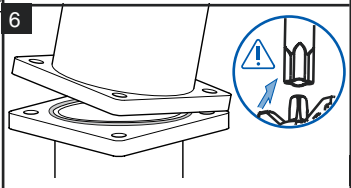
1

examination of the break-away line (damage, soiling, etc.)

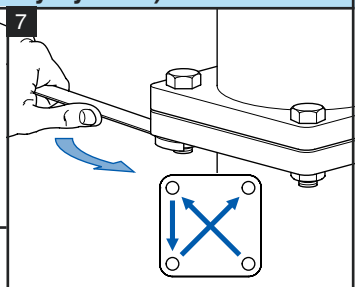
2

if necessary: clean the flange

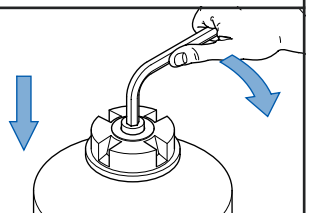
3

insert O ring

4

remove the cap and the operating nut

5

remove spare bolts, re-order bolts, replace them in cap

6

place stand pipe on base

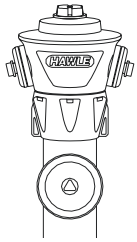
7

torque for tightening bolts: 60 Nm

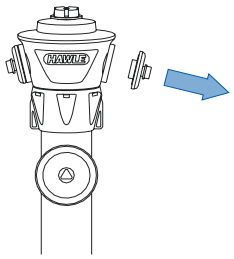
8

assemble the cap and the operating nut

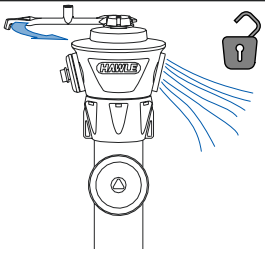
9
operation maintenance

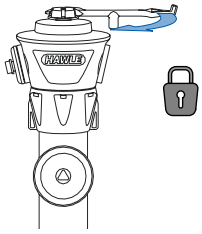
## OPERATION MAINTENANCE

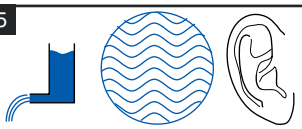
### Annual Inspection

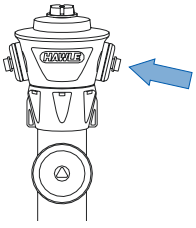
1

check, if the hydrant is closed

2

remove the cap

3

flush

4

close the hydrant

5

pay attention to the drainage noise (repair necessary?)

6

mount on the cap



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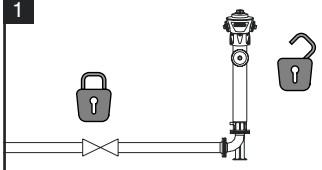
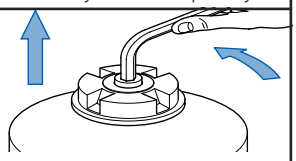
# Above ground hydrant Operating instructions

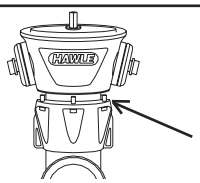
## Above Ground Hydrant - DRAINAGE UNTIGHT or CHANGE OF THE VALVE PLUG and Above Ground Hydrant telescopic - HEIGHT ADJUSTMENT

### rigid

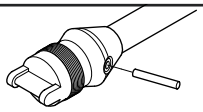
If the drainage is untight, point 5 is deleted.
If the valve plug has to be changed, point 4 is deleted.

1

close the supply
open the hydrant completely

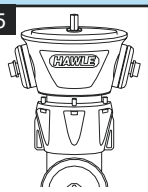
2

remove the operating nut
and the cap

3


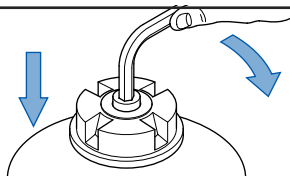
loosen the bolts, remove the head

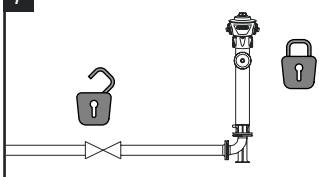
4

mark the position of the operating controls, rotate it by 180°.
Put the hydrant head on,
tighten the bolts.

or

5


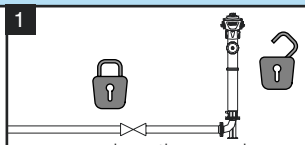
take out the operating controls, change the valve plug, insert the operating control, put head in place again, tighten the bolts

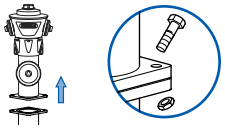
6

assemble the cap and the operating nut

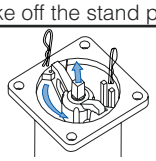
7

close the hydrant; open the supply

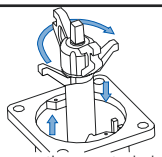
8
operation
maintenance

### break-away

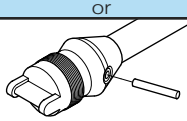
1

close the supply
open the hydrant completely

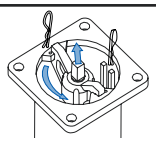
2

remove the bolts
take off the stand pipe

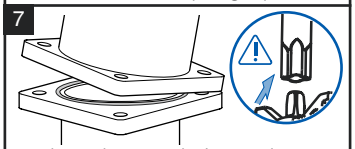
3

remove the spring clip; turn the spindle housing out of the anchoring

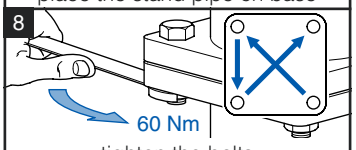
4

rotate the operating controls by 180°

or

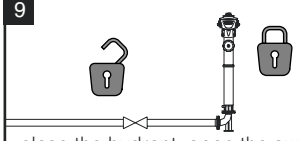
5

take out the operating controls, change the valve plug*, insert the operating control

6

lockthespindlehousing
connectthespringclip

7

place the stand pipe on base

8


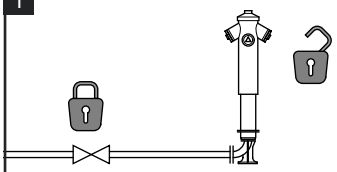
tighten the bolts

9

close the hydrant, open the supply

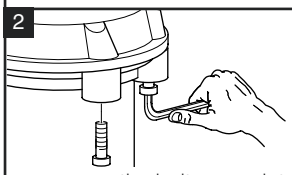
10
operation
maintenance

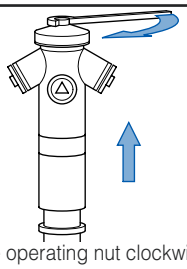
### telescopic

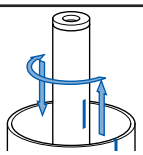
If the drainage is untight, point 5 is deleted.
If the valve plug has ro be changed, point 3 is deleted.
If the height of the telescopic hydrant has to be adjusted, point 4, 5 and 7 are deleted.

1

Attention: note the insert inside of the cap

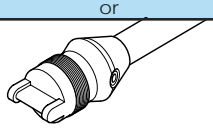
close the supply, open the hydrant completely

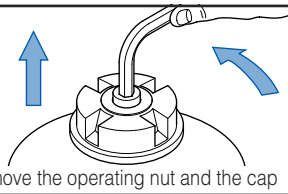
2

remove the bolts completely

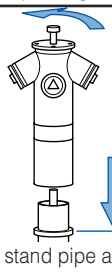
3

turn the operating nut clockwise and remove the stand pipe or adjust to the required height

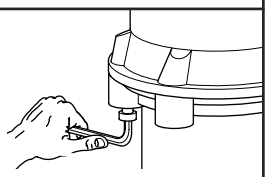
4

mark the position of the operating controls
lift and rotate it by 180°

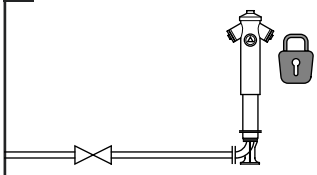
or

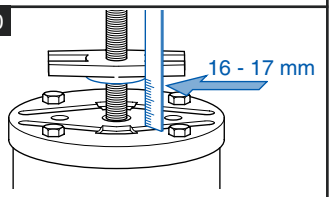
5

take out the operating controls, change the operating control, insert the operating control

6

remove the operating nut and the cap

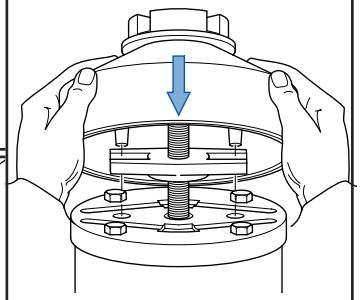
7

put on the stand pipe and by turning the spindle anticlockwise the initial situation is recovered

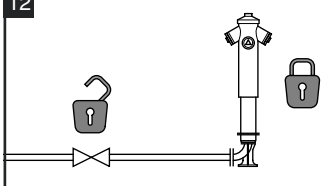
8

at height adjustment move up the clamp and the sealing ring; tighten the bolts

9

close the hydrant

10


adjust the lower edge of the stop nut to 16 - 17 mm

11


12

open the supply

13
operation
maintenance

## No. 8690
## Elypso Valve Bonnet (without illustr.)

**for Service Valves, Elypso Valves and Combination Valves**

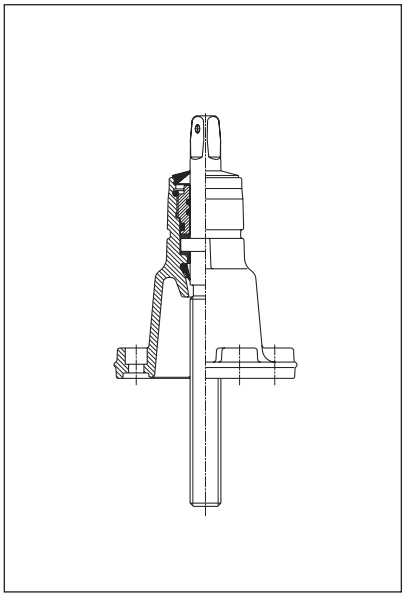
## No. 8690E2
## *E2* Elypso Valve Bonnet

**for E2 Valves and E2 Combi Valves**

**of ductile iron**
epoxy powder coated

with spindle, flat gasket and bolts

also available with anti clockwise closing



| DN | No. 8690 | | No. 8690E2 | |
|---|---|---|---|---|
| | | Weight | | Weight |
| ¾" | ● | 0,90 | | |
| 1¼"-1½" | ● | 1,30 | | |
| 2" | ● | 1,40 | | |
| 50 | ● | 2,00 | ● | 3,10 |
| 65 | ● | 2,60 | ● | 4,70 |
| 80 | ● | 3,20 | ● | 4,70 |
| 100 | ● | 4,50 | ● | 5,30 |
| 125 | ● | 5,80 | ● | 7,80 |
| 150 | ● | 5,90 | ● | 7,80 |
| 200 | ● | 11,00 | ● | 12,40 |
| 250 | ● | 14,00 | ● | 21,50 |
| 300 | ● | 29,50 | ● | 27,50 |
| 350 | ● | 36,00 | ● | 34,00 |
| 400 | ● | 48,00 | ● | 43,00 |
| 500 | | | ● | 95,00 |
| 600 | | | ● | 134,00 |

## No. 8700
## Elypso Valve Wedge (without illustr.)

**for Service Valves, Elypso Valves and Combination Valves**

DN ¾" — 2" of brass (Ms58)

DN 50 — 400 of ductile iron

outside rubberised with elastomer, suitable for potable water (inside bitumen coated)

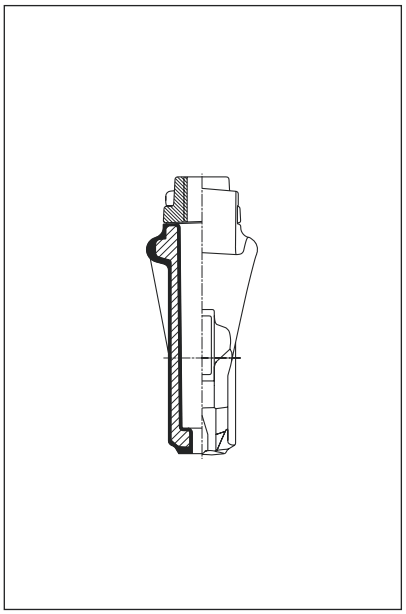
## No. 8700E2
## *E2* Elypso Valve Wedge

**for E2 Valves and E2 Combi Valves**

inside and outside rubberised with elastomer, suitable for potable water

DN 50 — 600 of ductile iron

also available with anti clockwise closing



| DN | No. 8700 | | No. 8700E2 | |
|---|---|---|---|---|
| | | Weight | | Weight |
| ¾" | ● | 0,25 | | |
| 1¼"-1½" | ● | 0,40 | | |
| 2" | ● | 0,50 | | |
| 50 | ● | 0,75 | ● | 0,70 |
| 65 | ● | 0,90 | ● | 1,60 |
| 80 | ● | 1,35 | ● | 1,60 |
| 100 | ● | 2,05 | ● | 2,30 |
| 125 | ● | 2,90 | ● | 5,20 |
| 150 | ● | 4,30 | ● | 5,20 |
| 200 | ● | 7,30 | ● | 9,30 |
| 250 | ● | 14,30 | ● | 13,00 |
| 300 | ● | 21,00 | ● | 21,00 |
| 350 | ● | 28,00 | ● | 30,00 |
| 400 | ● | 38,00 | ● | 40,00 |
| 500 | | | ● | 82,00 |
| 600 | | | ● | 130,00 |



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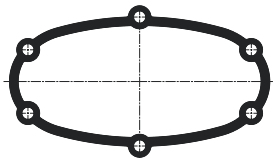
Telefax: +43 (0)7672 784 64
E-mail: hawle@hawle.at

# Spare Parts

## No. 8710
## Elypso Valve Flat Gasket
of elastomer, suitable for potable water
(without illustr.)

## No. 8710E2
## *E2* Elypso Valve Flat Gasket
of elastomer, suitable for potable water

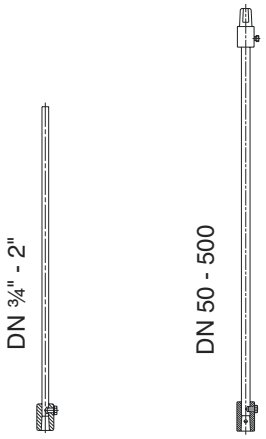


other dimensions on request

| DN | No. 8710 | Weight | No. 8710E2 | Weight |
|---|---|---|---|---|
| ¾" - 1" | ● | 0,010 | | |
| 1¼"- 2" | ● | 0,015 | | |
| 50 | ● | 0,010 | ● | 0,010 |
| 65 | ● | 0,025 | ● | 0,025 |
| 80 | ● | 0,022 | ● | 0,022 |
| 100 | ● | 0,030 | ● | 0,030 |
| 125 | ● | 0,035 | ● | 0,035 |
| 150 | ● | 0,030 | ● | 0,030 |
| 200 | ● | 0,080 | ● | 0,080 |
| 250 | ● | 0,180 | ● | 0,180 |
| 300 | ● | 0,175 | ● | 0,175 |
| 350 | ● | 0,210 | ● | 0,210 |
| 400 | ● | 0,250 | ● | 0,250 |
| 500 | | | ● | 0,350 |
| 600 | | | ● | 0,580 |

## No. 9620
## Spindle Shaft
**for all rigid type extension spindles**

please specify length, see page D 1




| DN | Square head dimension | Weight | |
|---|---|---|---|
| ¾" - 2" | 14 | 2,05 | ● |
| 50 | 20 | 3,60 | ● |
| 65 | 20 | 3,60 | ● |
| 80 | 20 | 3,60 | ● |
| 100 | 20 | 3,60 | ● |
| 200 | 20 | 4,10 | ● |
| 250 | 25 | 3,75 | ● |
| 300 | 25 | 3,55 | ● |
| 350 | 25 | 3,45 | ● |
| 400 - 500 | 25 | 3,10 | ● |

## Outer Protecting Tube
**for all rigid type extension spindles**

**No. 9631** for DN ¾" - 2"
Service Valves (threaded connection)

**No. 9630** for DN 50 - 300
Elypso and Combination Valves

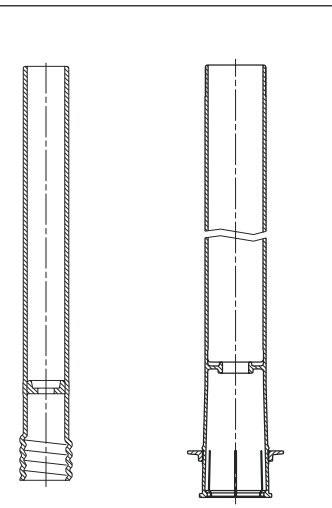
**No. 9630*E2*** for DN 50 - 200
E2 Elypso and E2 Combination Valves

## Outer and Inner Protecting Tube
**for all telescopic type extension spindles**

**No. 9691** for DN ¾" - 2"
Service Valves (threaded connection)

**No. 9591** for DN 50 - 300
Elypso and Combination Valves

**No. 9591*E2*** for DN 50 - 200
E2 Elypso and E2 Combination Valves



Illustr. No. 9631
DN ¾" - 2"

Illustr. No. 9630E2
DN 50 - 200

please specify length, see page D 1

| DN | No. 9631 | No. 9691 |
|---|---|---|
| ¾" - 2" | ● | ● |

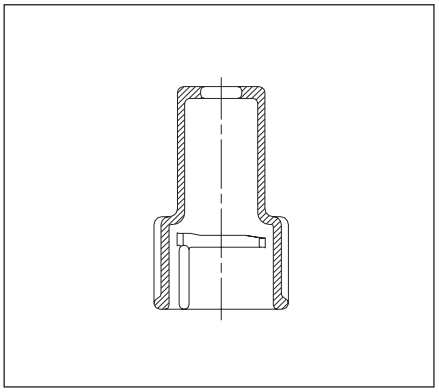
| DN | No. 9630 | No. 9591 |
|---|---|---|
| 50 - 100 | ● | ● |
| 125 - 150 | ● | ● |
| 200 | ● | ● |
| 250 | ● | ● |
| 300 | ● | ● |

| DN | No. 9630E2 | No. 9591E2 |
|---|---|---|
| 50 - 100 | ● | ● |
| 125 - 150 | ● | ● |
| 200 | ● | ● |

## No. 9640

### Protective Cover

**for extension spindles with bayonet connection** (old version of service valves)



| Weight kg | |
|---|---|
| 0,08 | ● |

---

## No. 9651

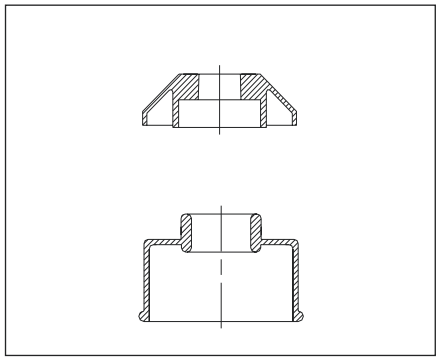
### Sealing cap

**for all rigid type extension spindles**

## No. 9650

### Cap

**for all rigid type extension spindles**



| DN | No. 9650 | No. 9651 |
|---|---|---|
| ¾" - 2" | ● | ● |
| 50 - 200 | ● | ● |
| 250 - 600 | ● | ● |

---

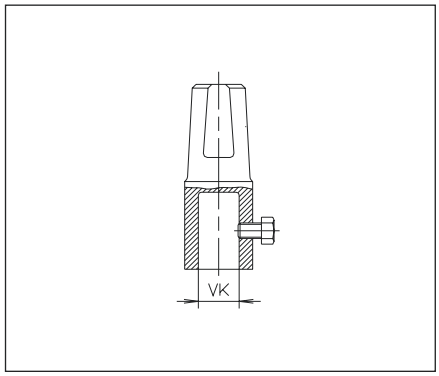
## No. 8670

### Spindle Head

**for rigid extension spindles for Elypso Valves**

of ductile iron

with set bolt




| DN | Square head dimension | Weight kg | |
|---|---|---|---|
| 50 - 200 | 20,5 | 0,65 | ● |
| 250 - 600 | 25,5 | 0,68 | ● |

---

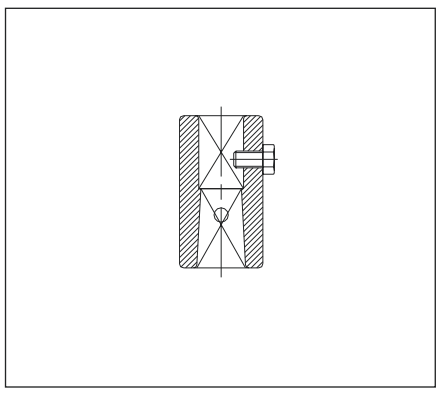
## No. 8660

### Spindle Coupling

**for all extension spindles**

of ductile iron

with set bolt



| DN | Weight kg | |
|---|---|---|
| ¾" - 2" | 0,15 | ● |
| 50 | 0,30 | ● |
| 65 | 0,30 | ● |
| 80 | 0,40 | ● |
| 100 - 150 | 0,40 | ● |
| 200 | 0,60 | ● |
| 250 - 350 | 0,80 | ● |
| 400 - 500 | 0,80 | ● |
| 500 - 600 | 1,44 | ● |



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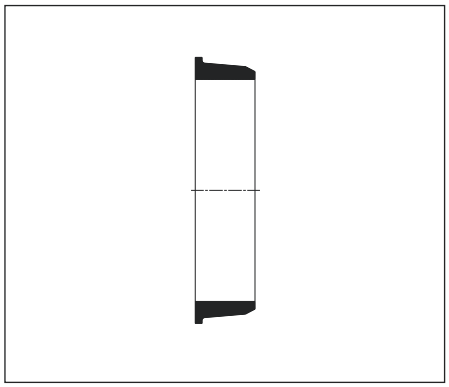
# Spare Parts

## No. 7500

### Sleeve Gasket

**for Spar Flange**
**No. 0101, 0102, 1001, 1002**

Please specify type of pipe and outside diameter



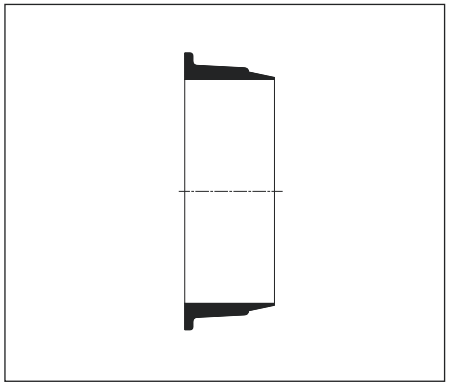
| DN | Weight kg | |
|---|---|---|
| 50 | 0,07 | ● |
| 60 | 0,11 | ● |
| 65 | 0,11 | ● |
| 80 | 0,14 | ● |
| 100 | 0,18 | ● |
| 125 | 0,23 | ● |
| 150 | 0,30 | ● |
| 200 | 0,50 | ● |
| 250 | 0,60 | ● |
| 300 | 0,90 | ● |
| 400 | 1,70 | ● |

## No. 7510

### Sleeve Gasket

**for Double Chamber Flange Adaptor**
**No. 7101, 7102, 7103, 7402**

Please specify type of pipe and outside diameter



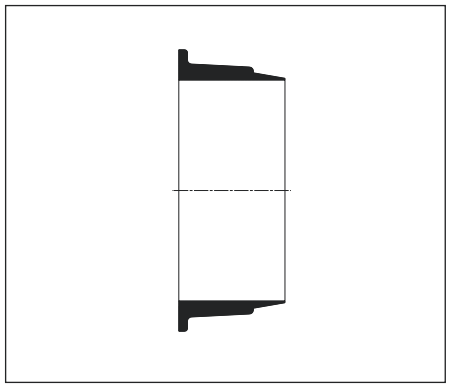
| DN | Weight kg | |
|---|---|---|
| 40 | 0,07 | ● |
| 50 | 0,09 | ● |
| 65 | 0,14 | ● |
| 80 | 0,17 | ● |
| 100 | 0,26 | ● |
| 125 | 0,30 | ● |
| 150 | 0,40 | ● |
| 200 | 0,60 | ● |
| 250 | 0,85 | ● |
| 300 | 1,20 | ● |
| 400 | 2,20 | ● |

## No. 7524

### Sleeve Gasket

**for Double Chamber Flange Adaptor**
**No. 5600, 5630** (PVC)

Please specify outside diameter of pipe



| DN | Pipe Ø mm | Weight kg | |
|---|---|---|---|
| 50 | 63 | 0,10 | ● |
| 65 | 75 | 0,13 | ● |
| 80 | 90 | 0,17 | ● |
| 100 | 110 | 0,20 | ● |
| 150 | 160 | 0,40 | ● |
| 200 | 200 | 0,70 | ● |
| 200 | 225 | 0,85 | ● |
| 250 | 250 | 1,30 | ● |
| 250 | 280 | 1,30 | ● |
| 300 | 315 | 1,50 | ● |
| 400 | 400 | 2,80 | ● |

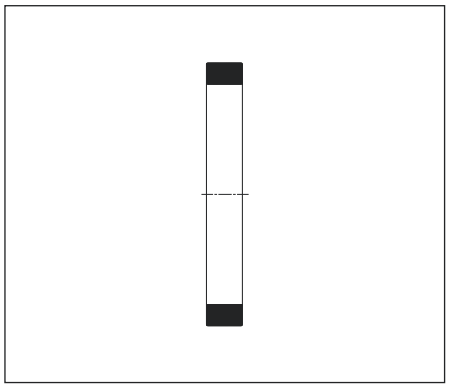
## No. 7532

### Sleeve Gasket

**for Flange Adaptor, restraint**
**No. 7602** (cast iron)

Please specify outside diameter of pipe

The gasket has grip ring segments glued to it



| DN | Pipe Ø mm | Weight kg | |
|---|---|---|---|
| 50 | 66 | 0,14 | ● |
| 60 | 77 | 0,14 | ● |
| 65 | 82 | 0,16 | ● |
| 80 | 98 | 0,25 | ● |
| 100 | 118 | 0,30 | ● |
| 125 | 144 | 0,40 | ● |
| 150 | 170 | 0,70 | ● |
| 200 | 222 | 1,30 | ● |
| 250 | 274 | 1,70 | ● |
| 300 | 326 | 2,00 | ● |

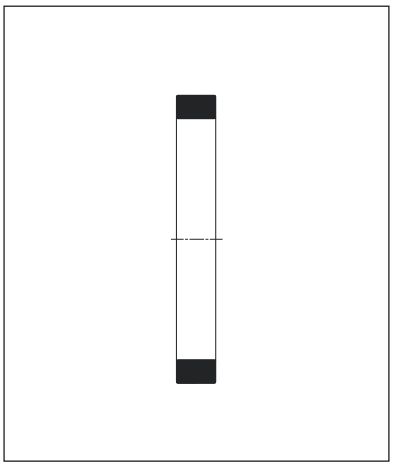
## No. 7531

### Sleeve Gasket

**for Flange Adaptor, restraint**
**No. 7601** (steel)

Please specify outside diameter of pipe

The gasket has grip ring segments glued to it



| DN | Pipe Ø mm | Weight kg | |
|---|---|---|---|
| 50 | 60 | 0,12 | ● |
| 80 | 89 | 0,21 | ● |
| 100 | 108 | 0,26 | ● |
| 100 | 114 | 0,26 | ● |
| 125 | 133 | 0,35 | ● |
| 150 | 159 | 0,65 | ● |
| 150 | 168 | 0,65 | ● |
| 200 | 219 | 1,20 | ● |

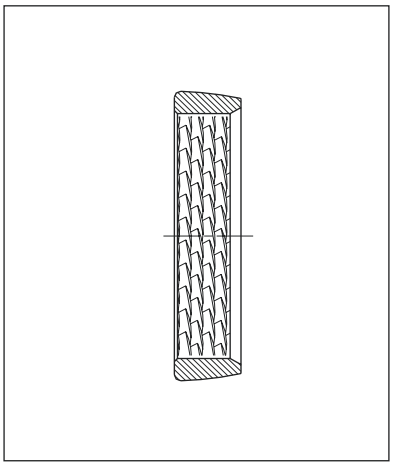
## No. 6932

### Grip ring „standard”

**for PE Pipes**

**for all Hawle products with ISO pipe push fit fittings**

Interlocking teeth



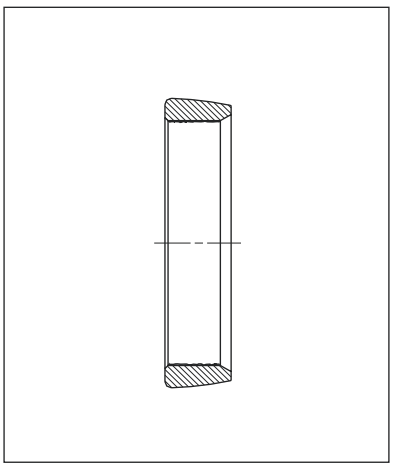
| DN | Pipe Ø mm | Weight kg | |
|---|---|---|---|
| 20 | ½" | 0,003 | ● |
| 25 | ¾" | 0,004 | ● |
| 32 | 1" | 0,007 | ● |
| 40 | 1¼" | 0,015 | ● |
| 50 | 1½" | 0,021 | ● |
| 63 | 2" | 0,032 | ● |
| 75 | | 0,044 | ● |
| 90 | | 0,049 | ● |
| 110 | | 0,098 | ● |
| 125 | | 0,134 | ● |
| 140 | | 0,155 | ● |
| 160 | | 0,181 | ● |

## No. 6931

### Grip ring „carborundum”

**for PVC pipes**

**for all Hawle products with ISO pipe push fit fittings**



| DN | Pipe Ø mm | Weight kg | |
|---|---|---|---|
| 20 | ½" | 0,004 | ● |
| 25 | ¾" | 0,005 | ● |
| 32 | 1" | 0,009 | ● |
| 40 | 1¼" | 0,016 | ● |
| 50 | 1½" | 0,025 | ● |
| 63 | 2" | 0,037 | ● |
| 75 | | 0,050 | ● |
| 90 | | 0,070 | ● |
| 110 | | 0,131 | ● |
| 125 | | 0,166 | ● |
| 140 | | 0,188 | ● |
| 160 | | 0,220 | ● |



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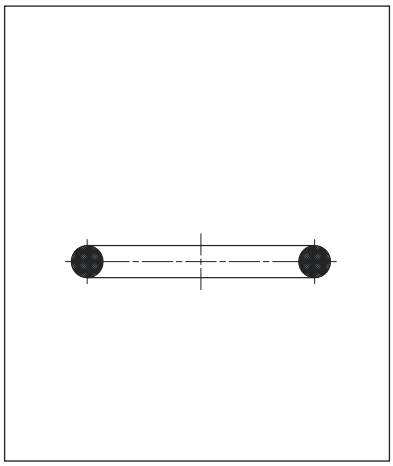
# Spare Parts

## No. 6940

### O ring

**of elastomer** (suitable for potable water)

**for all Hawle products with ISO pipe push fit fittings**

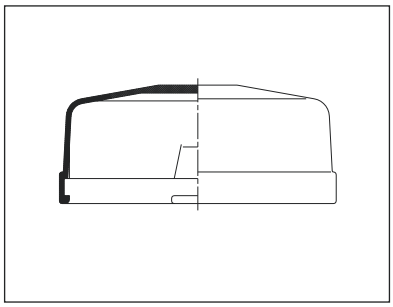


| Pipe Ø mm | DN | Weight kg | |
|---|---|---|---|
| **20** | ½" | 0,003 | ● |
| **25** | ¾" | 0,004 | ● |
| **32** | 1" | 0,006 | ● |
| **40** | 1¼" | 0,011 | ● |
| **50** | 1½" | 0,020 | ● |
| **63** | 2" | 0,030 | ● |
| **75** | | 0,040 | ● |
| **90** | | 0,040 | ● |
| **110** | | 0,070 | ● |
| **125** | | 0,100 | ● |
| **140** | | 0,113 | ● |
| **160** | | 0,140 | ● |

## No. 5417

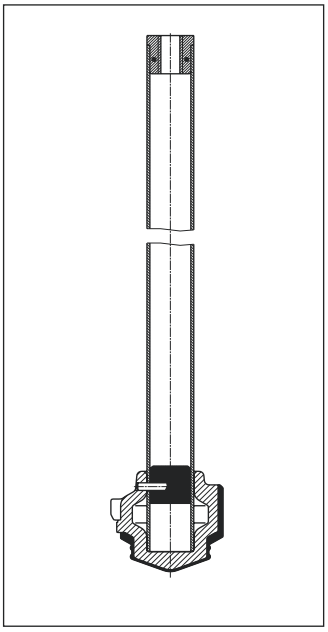
### Theft Indicator Cap

**for all above ground hydrants**



| | |
|---|---|
| **No. 5417** | ● |

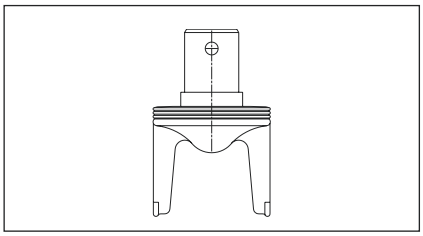
## Operating Controls for Hydrants



| Order No. | Operating Controls for | DN | Pipe cover | Weight kg | |
|---|---|---|---|---|---|
| **5430** | **Above Ground Hydrant - rigid** | **80** | 1,50 | 11,00 | ● |
| | | **100** | 1,50 | 11,80 | ● |
| | | **150** | 1,50 | 12,30 | ● |
| **5431** | **Above Ground Hydrant - break away** | **80** | 1,50 | 8,00 | ● |
| | | **100** | 1,50 | 8,80 | ● |
| | | **150** | 1,50 | 9,30 | ● |
| **5437** | **Above Ground Hydrant - break away with distance piece 250 mm** | **80** | 1,75 (250) | 8,90 | ● |
| | | **100** | 1,75 (250) | 9,70 | ● |
| **5438** | **Above Ground Hydrant - break away with distance piece 400 mm** | **80** | 1,90 (400) | 9,40 | ● |
| | | **100** | 1,90 (400) | 10,20 | ● |
| **5432** | **Above Ground Hydrant - telescopic** | **80** | 1,30 - 1,80 | 9,00 | ● |
| **5433** | **Below Ground Hydrant** | **80** | 1,25 | 5,00 | ● |
| | | **80** | 1,50 | 7,00 | ● |

## Valve plug

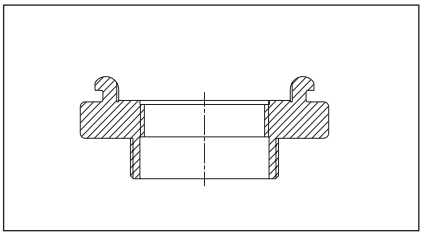
**for H4 above ground hydrants**



| Order no. | DN | Weight kg | |
|---|---|---|---|
| 5440 | 80-100 | 1,15 | ● |

## Coupling

**for above ground hydrants**

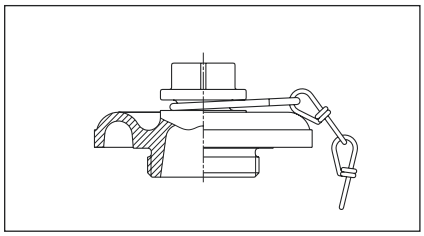


| Order no. | Type | Weight kg | |
|---|---|---|---|
| 5403 | A coupling 4" DIN 14319 | 1,60 | ● |
| 5404 | B coupling 2½" DIN 14318 | 0,40 | ● |
| 5405 | C coupling 2" DIN 14317 | 0,22 | ● |

## Cap

**for above ground hydrants**

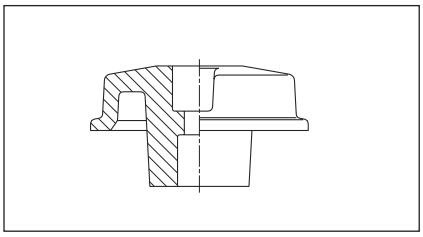
with chain and gasket



| Order no. | for | Weight kg | |
|---|---|---|---|
| 5400 | A coupling | 3,45 | ● |
| 5401 | B coupling | 1,45 | ● |
| 5402 | C coupling | 1,10 | ● |

## Operating Nut

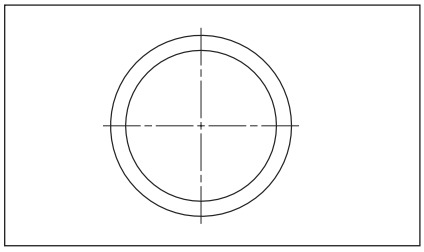
**for above ground hydrants**



| Order no. | Weight kg | |
|---|---|---|
| 5415 | 1,80 | ● |

## Flat gasket

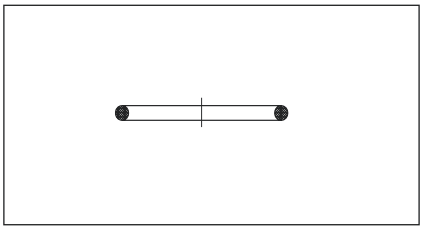
**for cap**



| Order no. | for | Weight kg | |
|---|---|---|---|
| 5406 | A-cap | 0,15 | ● |
| 5407 | B-cap | 0,09 | ● |
| 5408 | C-cap | 0,05 | ● |

## O ring

**for coupling**



| Order no. | for | Weight kg | |
|---|---|---|---|
| 5410 | A coupling | 0,006 | ● |
| 5411 | B coupling | 0,004 | ● |
| 5412 | C coupling | 0,003 | ● |



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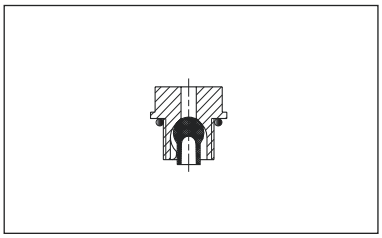
# Spare Parts

## Air Valve
**for above ground hydrant**

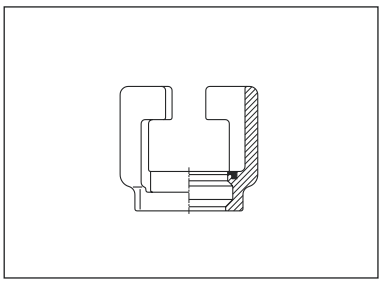
of POM



| Order no. | Thread | Weight kg | |
|---|---|---|---|
| **5180** | 3/8" | 0,02 | ● |

## Bayonet Coupling

without cap



| Order no. | for | Weight kg | |
|---|---|---|---|
| **5171** | Below ground hydrant DN 80 | 4,40 | ● |
| **5170** | Garden hydrant DN 50 | 2,70 | ● |

## Colour Repairs
**blue synthetic resin coating, UV resistant**

Attention! Not suitable for potable water

Colour repairs for potable water on request

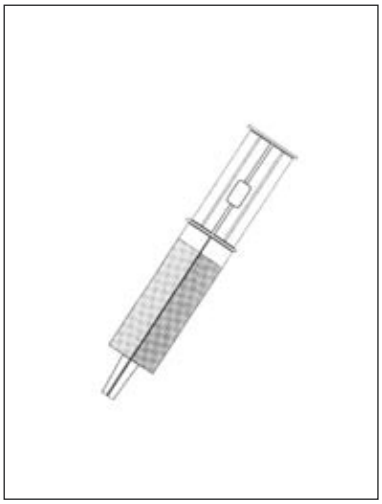
| Order no. | Contents of can | |
|---|---|---|
| **3441** | 1 kg | ● |

## Repair Cartridge
**for powder coated Hawle products**

For repairing minor mechanical damage caused by transport or installation.

**Cartridge with plunger**
Exact 1:1 proportional dosing of resin and hardener.
Good mixing is essential.

For repairing large areas we recommend No. 3441 (see above).



| Order no. | Cartridge content | |
|---|---|---|
| **3442** | 32 $cm^3$ | ● |


## No. 5800

## Drilling Machine

**for under pressure drilling**

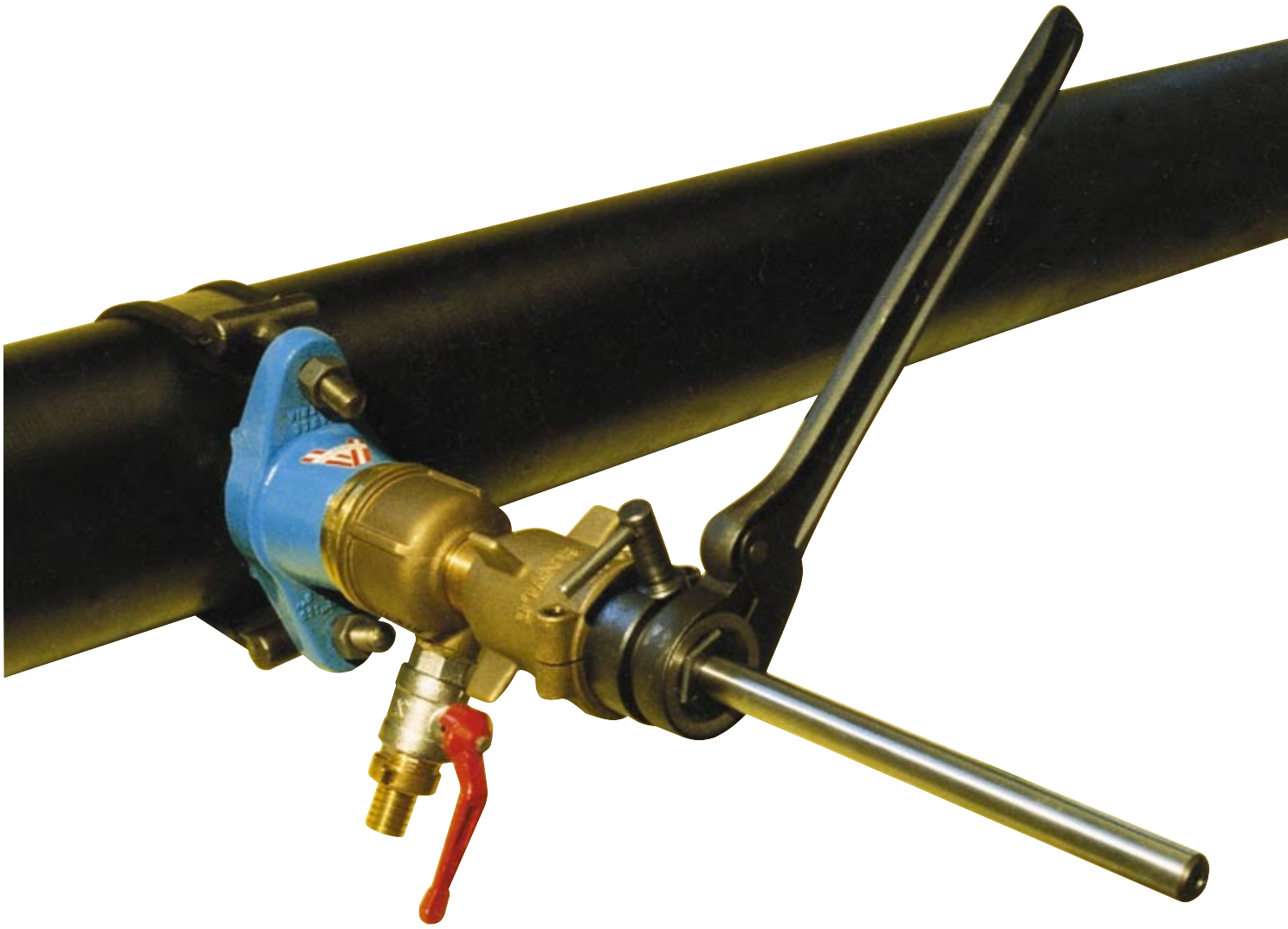
**Can be used for drilling pipes of steel, cast iron, AC or plastic.**

When drilling under pressure, swarf is washed out through a purpose - designed outlet.

Rotated by ratchet handle and fed by feed wing nut.

The ratchet is connected to the drill shaft with a simple locking device.

Pipe saddle adaptors and reducers are sealed with captivated rubber rings.





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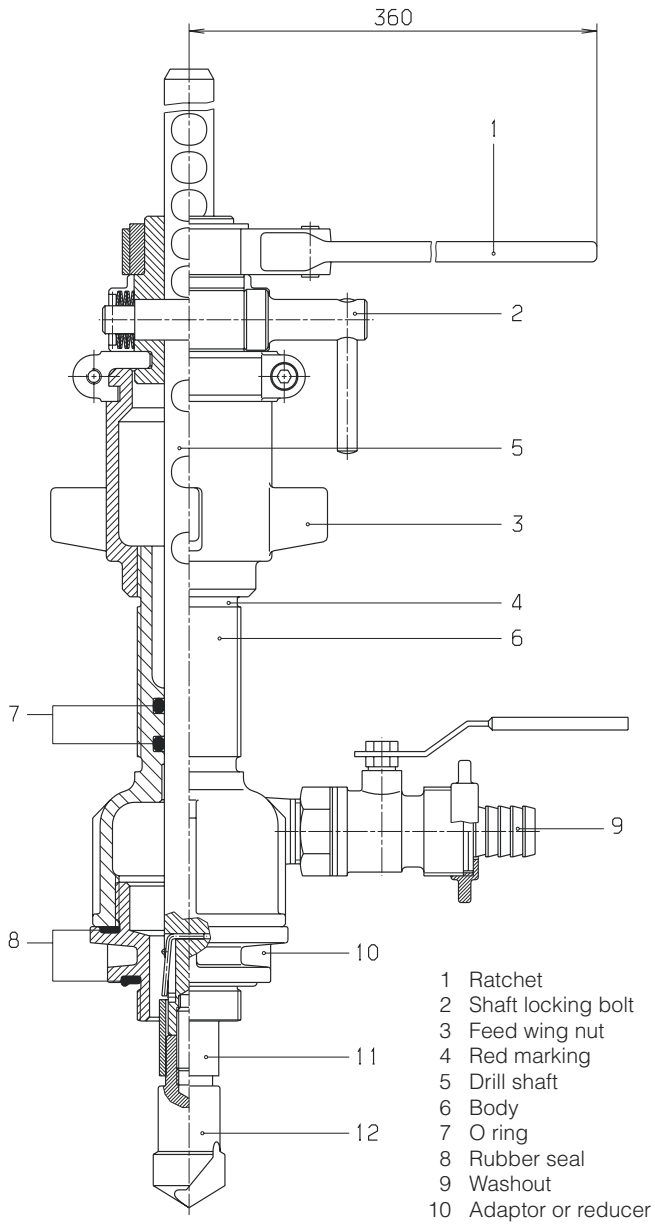
# Drilling Machine



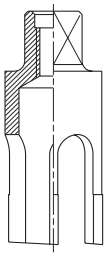

1 Ratchet
2 Shaft locking bolt
3 Feed wing nut
4 Red marking
5 Drill shaft
6 Body
7 O ring
8 Rubber seal
9 Washout
10 Adaptor or reducer
11 Hexagonal socket
12 Twist drill

No. 5800

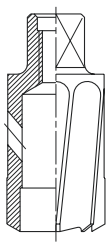
## Drilling Machine

**for under pressure drilling**

| | | |
|---|---|---|
| **No. 5820** | **Drilling Machine** | |
| **No. 5810** | **Case** | |
| **No. 5830** | **Ratchet** | |
| **No. 5840** | **Shaft** | |
| **No. 5850** | **Twist drill for steel-, CI and AC pipes** | |
| | Twist drill 1" - 24 Ø | |
| | Twist drill 1¼" - 29 Ø | |
| | Twist drill 1½" - 35 Ø | |
| | Twist drill 2" - 40 Ø | |
| **No. 5860** | **Cup drill for PVC pipes** | |
| | Cup drill 1" - 24 Ø | |
| | Cup drill 1¼" - 29 Ø | |
| | Cup drill 1½" - 35 Ø | |
| | Cup drill 2" - 40 Ø | |
| **No. 5890** | **Reducing adaptor with rubber seals** | |
| | 2" - 1" | |
| | 2" - 1¼" | |
| | 2" - 1½" | |
| | 2" - 2½" | |
| **No. 5900** | **Equal adaptor with rubber seals** | |
| | 2" - 2" | |
| **No. 5910** | **1 pc. Allen key size 5** | |
| **No. 5920** | **2 pcs. C spanner for adaptor** | |
| **No. 8401** | **Saddle blade for shut-off** | |
| | 1" - 1¼" | |
| | 1½" - 2" | |
| **No. 5800** | **Complete in case** | Weight: 17,5 kg |



**No. 5860**
**Cup drill**
**for PVC pipes**



**No. 5870**
**Cup drill**
**for steel and CI pipe**

| | |
|---|---|
| **Alternative to twist drill No. 5850** | |
| **No. 5870** | **Cup drill for steel and CI pipes** |
| | Cup drill 1" - 24 Ø |
| | Cup drill 1¼" - 29 Ø |
| | Cup drill 1½" - 35 Ø |
| | Cup drill 2" - 40 Ø |

**No. 5940 Adaptor** 2" - 1½"
**for ISO Combination Tapping Valve** (Page C 4/3)

# Motorised Drilling Machine

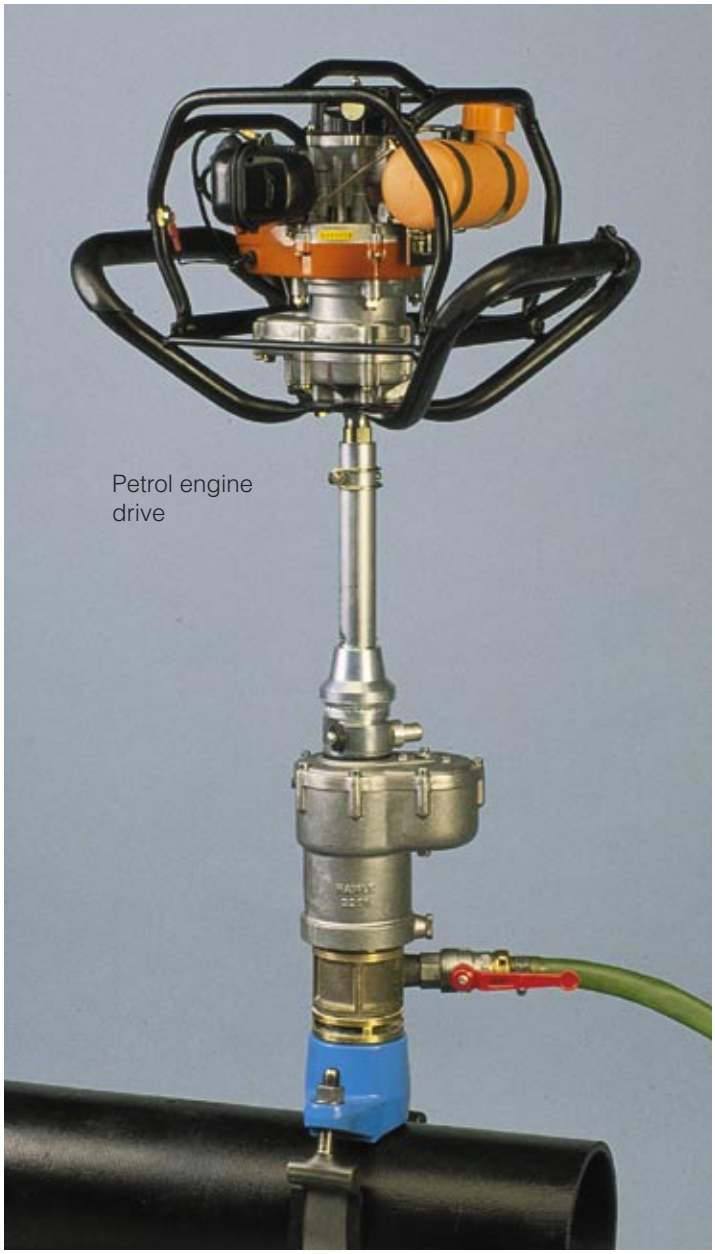
## One Powered Drilling Machine with Three Options

- hand ratchet
- petrol engine
- pneumatic

| | | |
|---|---|---|
| **No. 5805** | **Machine with handratchet**<br>Standard version (in metal case) | ● |
| **No. 5835** | **Petrol engine** including Adaptor<br>for drilling machine No. 5805 | ● |
| **No. 5836** | **Pneumatic** including Adaptor<br>(air consumption: 540 l/min) for drilling machine No. 5805 | ● |

- **Also for under pressure drillling**
- **For quick and simple drilling of CI, steel, AC and plastic pipes**
- **Motorised power and continous feed are necessary for driving the special carbide drills which are needed for cement lined cast iron pipes.**

Hand ratchet drive
(standard version)



Petrol engine
drive

Pneumatic drive



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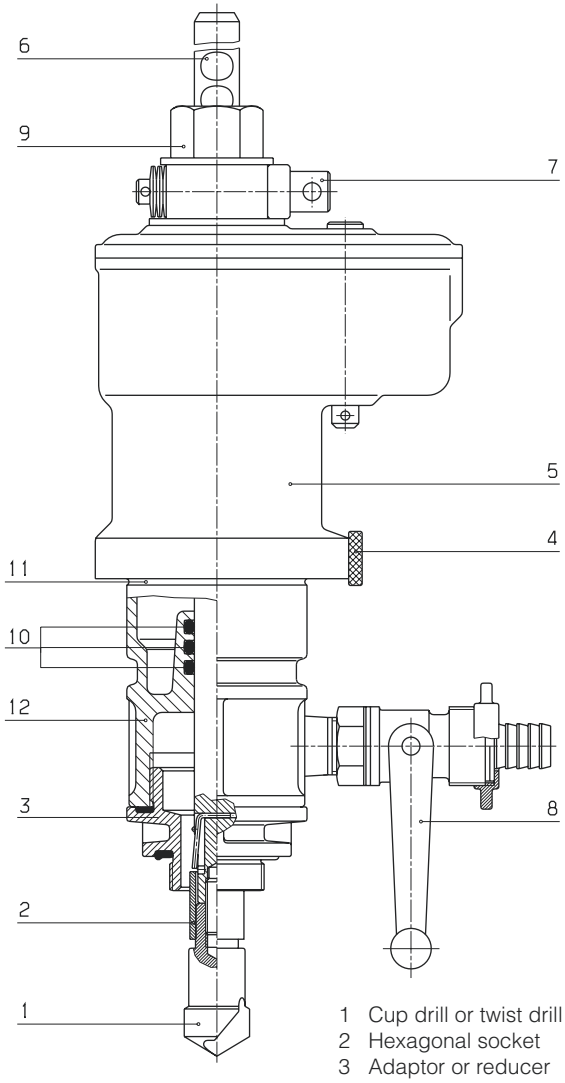
# Motorised Drilling Machine

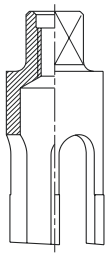



1 Cup drill or twist drill
2 Hexagonal socket
3 Adaptor or reducer
4 Knurled nut
5 Gear transmission
6 Shaft
7 Shaft locking bolt
8 Ball valve (washout)
9 Carrier
10 O ring
11 Red marking
12 Body

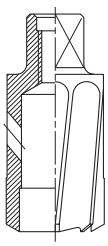
| | | |
|---|---|---|
| **No. 5825** | **Drilling Machine** | |
| **No. 5815** | **Case** | |
| **No. 5830** | **Ratchet** | |
| **No. 5840** | **Shaft** | |
| **No. 5845** | **Short Shaft** | |
| **No. 5850** | **Twist drill for steel, CI and AC pipes** | |
| | Twist drill 1" - 24 Ø | |
| | Twist drill 1¼" - 29 Ø | |
| | Twist drill 1½" - 35 Ø | |
| | Twist drill 2" - 40 Ø | |
| **No. 5860** | **Cup drill for PVC pipes** | |
| | Cup drill 1" - 24 Ø | |
| | Cup dril 1¼" - 29 Ø | |
| | Cup dril 1½" - 35 Ø | |
| | Cup dril 2" - 40 Ø | |
| **No. 5890** | **Reducing adaptor with rubber seals** | |
| | 2" - 1" | |
| | 2" - 1¼" | |
| | 2" - 1½" | |
| | 2" - 2½" | |
| **No. 5900** | **Equal adaptor with rubber seals** | |
| | 2" - 2" | |
| **No. 5920** | **2 pcs. C spanner for adaptor** | |
| **No. 8401** | **Saddle blade for shut off** | |
| | 1" - 1¼" | |
| | 1½" - 2" | |
| **No. 5805** | **Complete in case** | Weight: 22,5 kg |

| | | |
|---|---|---|
| **Alternative to twist drill No. 5850** | | |
| **No. 5870** | **Cup drill for steel and CI pipes** | |
| | Cup drill 1" - 24 Ø | |
| | Cup drill 1¼" - 29 Ø | |
| | Cup drill 1½" - 35 Ø | |
| | Cup drill 2" - 40 Ø | |

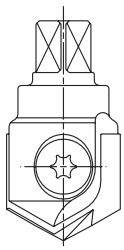
**No. 5940 Adaptor** 2" - 1½"
**for ISO Combination Tapping Valve** (Page C 4/3)



**No. 5860**
**Cup drill**
**for PVC pipes**



**No. 5870**
**Cup drill**
**for steel and CI pipes**



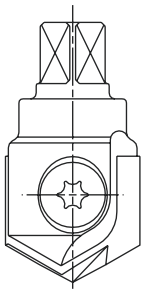
**No. 5855W**
**Carbide drill**
Continous feed and motorised drive are required

## Special equipment:

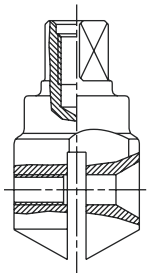
**for cast iron, cement lined cast iron, and AC pipes**

**No. 5805W**
**complete in case**
same as No. 5805, but instead of twist drill No. 5850 with carbide drill No. 5855

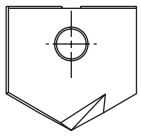
**WHM-drill complete**
**No. 5855W**



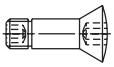
**WHM-**
**cutting tip holder**
**No. 5856**



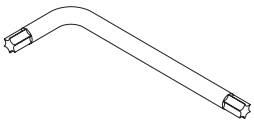
**WHM-**
**cutting tip**
**No. 5857**



**Set bolt**
**No. NN52**



**TORX-Pinkey**
**No. 5911**



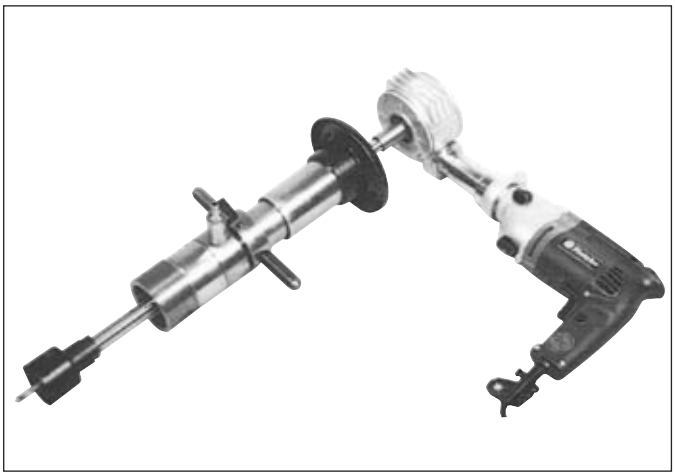
## WHM-drill for cement lined DCI pipes, standard coated DCI pipes and AC pipes

Continous feed and motorised power are necessary!

| | |
|---|---|
| **No. 5855W** | **WHM-drill complete** |
| | 1" - 24 Ø |
| | 1¼" - 29 Ø |
| | 1½" - 35 Ø |
| | 2" - 40 Ø |
| **No. 5856** | **WHM-cutting tip holder** including set bolt |
| | 1" - 1¼" |
| | 1½" - 2" |
| **No. 5857** | **WHM-cutting tip** |
| | 1" - 24 Ø |
| | 1¼" - 29 Ø |
| | 1½" - 35 Ø |
| | 2" - 40 Ø |
| **No. NN52** | **Set bolt** for WHM-cutting tip holder |
| | GWS 25 for 1" - 1¼" |
| | GWS 32 for 1½" - 2" |
| **No. 5911** | **TORX-Pin key** |

### Characteristic features:

- Easy and cost saving replacement of worn cutting tipswithout any technical efforts;
- ONE cutting tip holder for each TWO dimensions of cutting tips;
- Available as set for one dimension each and in single components for an individual demand;



## No. 5807

## TONISCO-Drilling Machine

Tonisco drilling machines are suitable for drilling up to 90 mm Ø.

Attention: 220 V - please observe safety regulations

Please ask for a special leaflet!

Illustrations, technical data, dimensions and weights are subject to alteration without notice.



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## Pipe Cutter

**cuts PE and PVC pipes**

Cuts pipes square and straight.

The lever design minimises the force required.

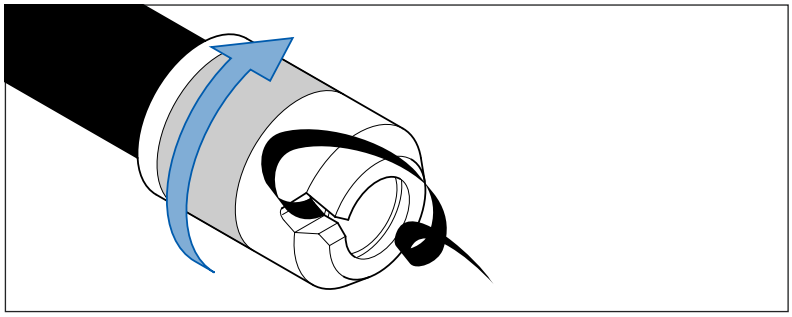
| Order no. | | for pipe Ø | Weight kg | |
|---|---|---|---|---|
| 6050 | Model I: | up to 1¼" or 40 Ø mm | 0,30 | ● |
| | Model II: | up to 2" or 63 Ø mm | 1,10 | ● |

## Chamfering Tool

**for beveling PE pipes**

For easy assembly of ISO push fit fittings the pipe should be beveled.
We recommend our precision-made steel chamfering tool. This provides the correct chamfer when turned clockwise a few times on the pipe end.

| Order no. | Pipe Ø mm | DN | Weight kg | |
|---|---|---|---|---|
| 6000 | 20 | ½" | 0,07 | ● |
| | 25 | ¾" | 0,07 | ● |
| | 32 | 1" | 0,10 | ● |
| | 40 | 1¼" | 0,17 | ● |
| | 50 | 1½" | 0,22 | ● |
| | 63 | 2" | 0,62 | ● |



## Saddle Blade

**for shut-off saddles and shut-off adaptors**

**for under pressure drilling**

| Oder no. | | Size | Weight kg | |
|---|---|---|---|---|
| 8401 | Model I: | for saddle 1" - 1¼" | 0,20 | ● |
| | Model II: | for saddle 1½" - 2" | 0,25 | ● |



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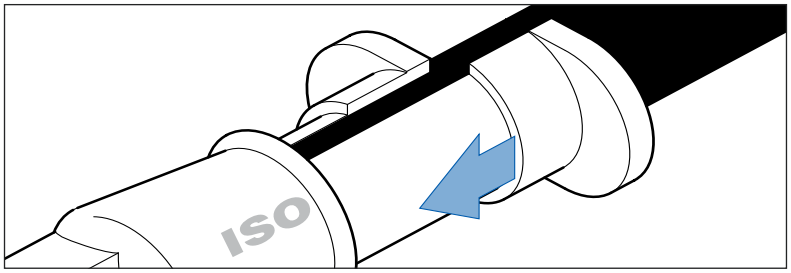
# Tools

## Extractors
**for dismantling ISO push fit fittings**

First ensure that the grip ring is not under tension. When pushed in, the extractors separate the grip ring from the pipe, which can then be pulled out.

**Application:**
for all Hawle products with ISO push fit fittings

| Order no. | Pipe Ø mm | DN | Qty. Extractors | Weight kg | |
|---|---|---|---|---|---|
| 6010 | 20 | ½" | 2 | 0,02 | ● |
| | 25 | ¾" | 2 | 0,04 | ● |
| | 32 | 1" | 2 | 0,05 | ● |
| | 40 | 1¼" | 2 | 0,07 | ● |
| | 50 | 1½" | 2 | 0,10 | ● |
| | 63 | 2" | 2 | 0,17 | ● |
| | 75 | | 3 | 0,26 | ● |
| | 90 | | 3 | 0,32 | ● |
| | 110 | | 3 | 0,40 | ● |
| | 125 | | 3 | 0,48 | ● |
| | 140 | | 3 | 0,54 | ● |
| | 160 | | 3 | 0,65 | ● |




## Hydrant-Master Universal Key

**lightweight - robust - practical**

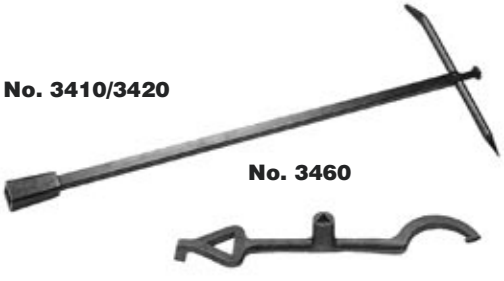
of aluminium and ductile iron
with reversible ratchet

- for opening and closing
- for operating coupling caps A + B + C
- for operating hose couplings B + C
- for breaking theft indicator caps

| Order no. | Weight kg | |
|---|---|---|
| 3461 | 1,65 | ● |

## Operating Key

| Order no. | for | Length mm | Weight kg | |
|---|---|---|---|---|
| 3410 | Service Valves | 830 | 2,00 | ● |
| 3420 | Valves and Below Ground Hydrants | 1227 | 4,10 | ● |
| 3460 | Above Ground Hydrants | 420 | 1,25 | ● |



## No. 8500

## Double Flanged Pipe

**FF**

EN 545

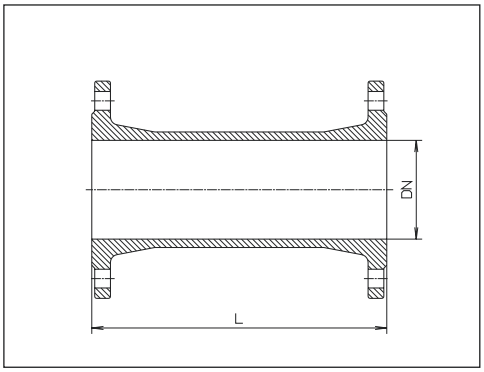
working pressure max. PN 16

of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coated

flanges according to EN 1092-2

standard drilling to DIN 2501 - PN 10

* also available drilled to DIN 2501 - PN 16 (please specify on order)




| DN | L | Weight kg | |
|---|---|---|---|
| 50 | 200 | 7,50 | ● |
| | 400 | 10,00 | ● |
| 65 | 200 | 9,50 | ● |
| | 400 | 13,00 | ● |
| 80 | 200 | 9,20 | ● |
| | 400 | 12,50 | ● |
| | 600 | 15,50 | ● |
| | 800 | 19,00 | ● |
| | 1000 | 22,00 | ● |
| 100 | 200 | 10,50 | ● |
| | 400 | 15,00 | ● |
| | 600 | 19,00 | ● |
| | 800 | 23,00 | ● |
| | 1000 | 27,00 | ● |
| 125 | 200 | 13,50 | ● |
| | 400 | 18,50 | ● |
| | 600 | 24,00 | ● |
| | 800 | 29,00 | ● |
| | 1000 | 34,50 | ● |
| 150 | 200 | 16,50 | ● |
| | 400 | 23,00 | ● |
| | 600 | 29,50 | ● |
| | 800 | 36,00 | ● |
| | 1000 | 42,50 | ● |
| *200 | 200 | 23,00 | ● |
| | 400 | 32,50 | ● |
| | 600 | 41,50 | ● |
| | 800 | 51,00 | ● |
| | 1000 | 60,00 | ● |

## No. 8550

## Double Flanged Taper

**FFR**

EN 545

working pressure max. PN 16

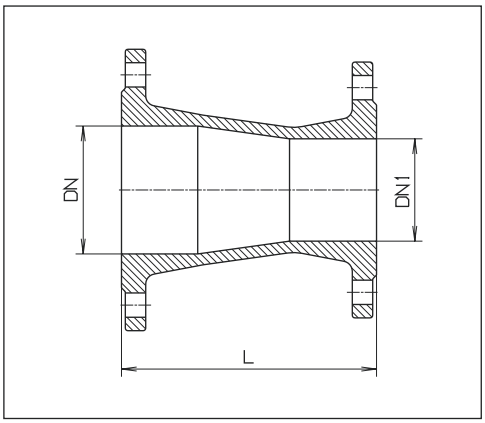
of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coated

flanges according to EN 1092-2

standard drilling to DIN 2501 - PN 10

* also available drilled to DIN 2501 - PN 16 (please specify on order)

\+ of grey iron




| DN | DN 1 | L | Weight kg | |
|---|---|---|---|---|
| 65 | 50 | 200 | 9,00 | ● |
| 80 | 50 | 200 | 7,40 | ● |
| | 65 | 200 | 8,20 | ● |
| 100 | 50 | 200 | 8,10 | ● |
| | 65 | 200 | 8,80 | ● |
| | 80 | 200 | 9,50 | ● |
| 125 | 65+ | 400 | 19,00 | ● |
| | 80 | 200 | 10,70 | ● |
| | 100 | 200 | 11,50 | ● |
| 150 | 80 | 200 | 12,20 | ● |
| | 100 | 200 | 12,80 | ● |
| | 125 | 200 | 14,00 | ● |
| *200 | 100 | 300 | 18,50 | ● |
| | 125 | 300 | 20,00 | ● |
| | 150 | 300 | 22,00 | ● |



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# Flanged Fittings

## No. 8540

### Double Flanged Bend 45°

**FFK 45°**

EN 545

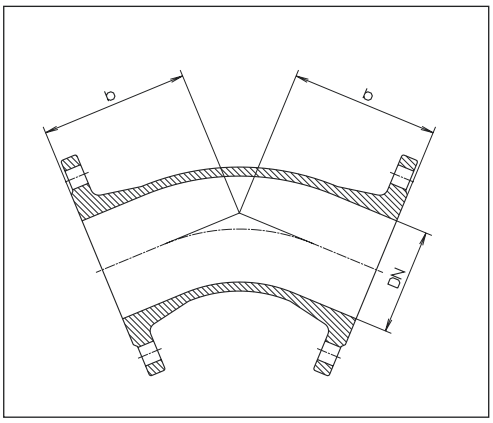
working pressure max. PN 16

of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coated

flanges according to EN 1092-2

standard drilling to DIN 2501 - PN 10

* also available drilled to DIN 2501 - PN 16 (please specify on order)




| DN | b | Weight kg | |
|---|---|---|---|
| **50** | 150 | 9,00 | ● |
| **65** | 165 | 12,00 | ● |
| **80** | 130 | 9,50 | ● |
| **100** | 140 | 11,50 | ● |
| **125** | 150 | 14,50 | ● |
| **150** | 160 | 18,50 | ● |
| ***200** | 180 | 27,50 | ● |

## No. 8530

### Double Flanged Bend 90°

**Q 90°**

EN 545

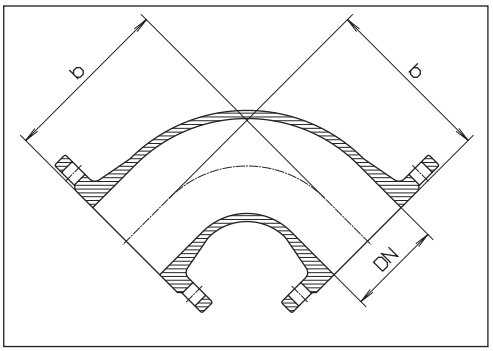
working pressure max. PN 16

of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coated

flanges according to EN 1092-2

standard drilling to DIN 2501 - PN 10

* also available drilled to DIN 2501 - PN 16 (please specify on order)




| DN | b | Weight kg | |
|---|---|---|---|
| **50** | 150 | 9,30 | ● |
| **65** | 165 | 9,70 | ● |
| **80** | 165 | 9,90 | ● |
| **100** | 180 | 12,00 | ● |
| **125** | 200 | 15,50 | ● |
| **150** | 220 | 20,50 | ● |
| ***200** | 260 | 31,00 | ● |

## No. 8510

### All Flanged Tee

**T**

EN 545

working pressure max. PN 16

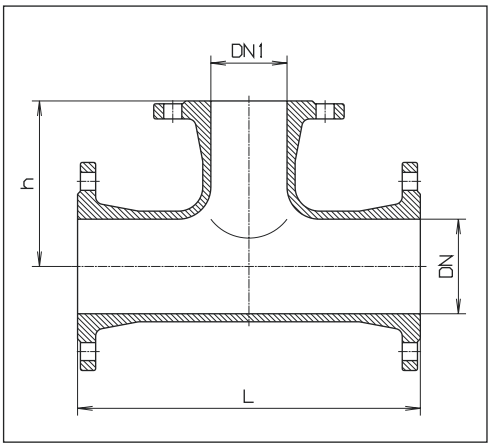
of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coated

flanges according to EN 1092-2

standard drilling to DIN 2501 - PN 10

* also available drilled to DIN 2501 - PN 16 (please specify on order)

+ of grey iron




| DN | DN 1 | L | h | Weight | |
|---|---|---|---|---|---|
| **50** | 50 | 300 | 150 | 12,50 | ● |
| **65** | 50 | 330 | 157 | 15,50 | ● |
| | 65 | 330 | 165 | 16,50 | ● |
| **80** | 50 | 330 | 160 | 14,00 | ● |
| | 65 | 330 | 165 | 14,70 | ● |
| | 80 | 330 | 165 | 16,00 | ● |
| **100** | 50 | 360 | 170 | 16,50 | ● |
| | 65 | 360 | 170 | 17,50 | ● |
| | 80 | 360 | 175 | 18,50 | ● |
| | 100 | 360 | 180 | 19,50 | ● |
| **125** | 50 | 400 | 185 | 21,50 | ● |
| | 65+ | 450 | 195 | 31,00 | ● |
| | 80 | 400 | 190 | 23,00 | ● |
| | 100 | 400 | 195 | 24,00 | ● |
| | 125 | 400 | 200 | 25,50 | ● |
| **150** | 50+ | 500 | 200 | 27,50 | ● |
| | 65+ | 500 | 207 | 39,00 | ● |
| | 80 | 440 | 205 | 29,00 | ● |
| | 100 | 440 | 210 | 29,50 | ● |
| | 125 | 440 | 215 | 31,00 | ● |
| | 150 | 440 | 220 | 32,00 | ● |
| ***200** | 80 | 520 | 235 | 42,50 | ● |
| | 100 | 520 | 240 | 43,00 | ● |
| | 125 | 520 | 245 | 44,00 | ● |
| | 150 | 520 | 250 | 46,50 | ● |
| | 200 | 520 | 260 | 50,00 | ● |

## No. 8740

## All Flanged Short Tee

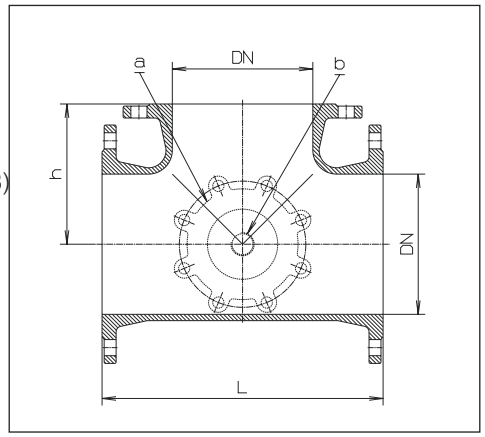
working pressure max. PN 16

of ductile iron GGG EN-GJS-400-18
according to EN 1563 (GGG 400 - DIN 1693)
epoxy powder coated

on request:
a) No. 8741
with vertical outlet DN 100 (surcharge)

b) No. 8742
with 1" thread (surcharge)

flanges according to EN 1092-2 standard drilling to DIN 2501 - PN 10 (DIN 2501 - PN 16 please specify on order)




| DN | L | h | Weight kg | |
|---|---|---|---|---|
| **200** | 400 | 200 | 45,0 | ● |
| **250** | 460 | 230 | 66,0 | ● |

## No. 8520

## All Flanged Crosses
**TT**

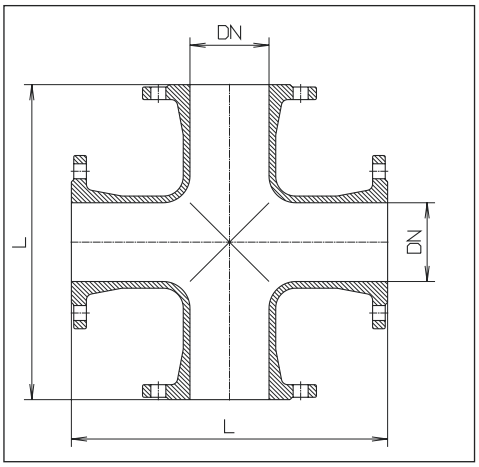
working pressure max. PN 16

of grey iron EN-GJL-250
according to EN 1561 (GG - DIN 1691)
epoxy powder coated

flanges according to EN 1092-2

standard drilling to DIN 2501 - PN 10

* also available drilled to DIN 2501 - PN 16 (please specify on order)




| DN | L | Weight kg | |
|---|---|---|---|
| **80** | 360 | 27,0 | ● |
| **100** | 400 | 34,0 | ● |
| **125** | 450 | 46,0 | ● |
| **150** | 500 | 60,0 | ● |
| **200*** | 600 | 93,0 | ● |

## No. 8750

## All Flanged Short Cross

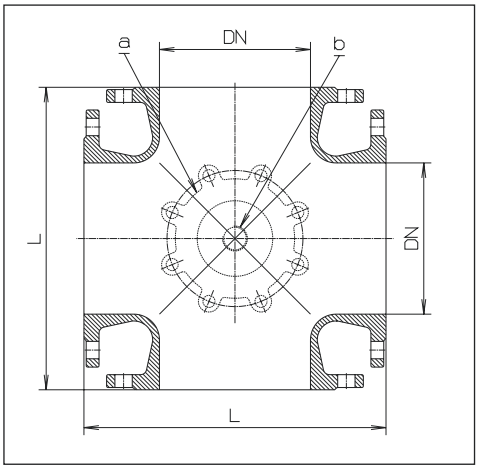
working pressure max. PN 16

of ductile iron EN-GJS-400-18
according to EN 1563 (GGG 400 - DIN 1693)
epoxy powder coated

on request:
a) No. 8751
with vertical outlet DN 100 (surcharge)

b) No. 8752
with 1" thread (surcharge)

flanges according to EN 1092-2
standard drilling to DIN 2501 - PN 10
(DIN 2501 - PN 16 please specify on order)




| DN | L | Weight kg | |
|---|---|---|---|
| **200** | 400 | 60,0 | ● |
| **250** | 460 | 91,0 | ● |
| **400** | 700 | 213,0 | ● |
| **500** | 830 | 352,0 | ● |



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E-mail: hawle@hawle.at

# Fittings

## No. 5049

### Double Flanged Duck Foot Bend 90°

**N**

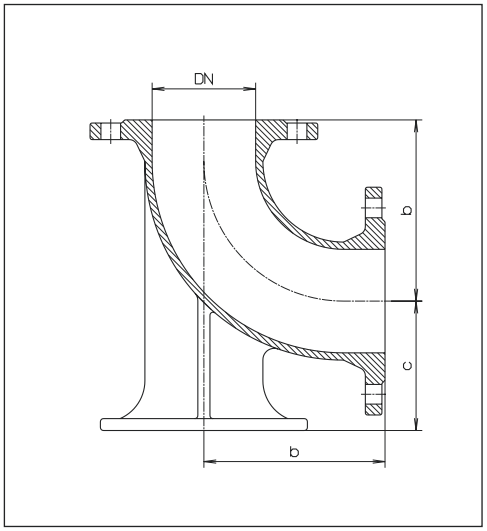
EN 545

working pressure max. PN 16

of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coated

flanges according to EN 1092-2

standard drilling to DIN 2501 - PN 10




| DN | b | c | Weight kg | |
|---|---|---|---|---|
| **80** | 165 | 110 | 13,5 | ● |
| **100** | 180 | 125 | 17,0 | ● |
| **150** | 220 | 160 | 29,5 | ● |

DN 80 also available with loose flange Order No. 5044

## No. 5046

### Flanged Duck Foot Bend with PVC socket 90°

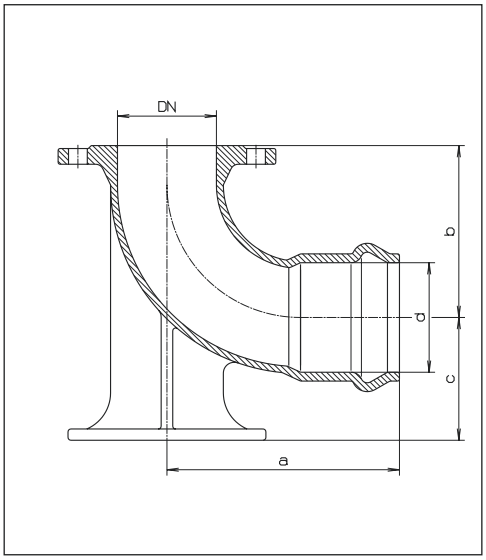
**EN-KS 90°**

working pressure max. PN 16

of grey iron EN-GJL-250 according to EN 1561 (GG - DIN 1691) epoxy powder coated

flanges according to EN 1092-2

standard drilling to DIN 2501 - PN 10




| DN | a | b | c | d | Weight kg | |
|---|---|---|---|---|---|---|
| **80** | 260 | 165 | 110 | 90 | 16,5 | ● |
| **100** | 280 | 180 | 125 | 110 | 19,5 | ● |

No. 5046 - No. 5045 see page L 2/5

## No. 5045

### Flanged Duck Foot Bend 90° „System 2000”,

**restraint, for PE and PVC pipes**

## No. NL44

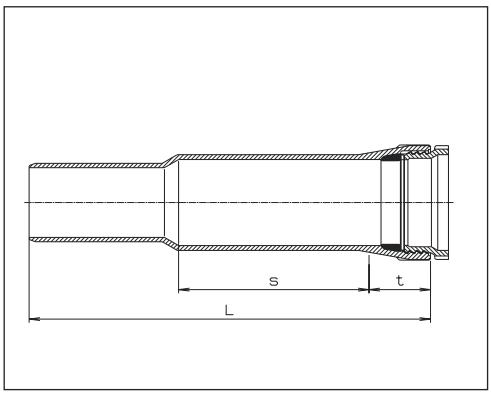
### Cut-in Socket Fitting

**EMS**

PN 16

for subsequent installation of valves and fittings in grey iron and ductile iron pipelines

of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) epoxy powder coated




| DN | L | t | s | Weight kg | |
|---|---|---|---|---|---|
| **80** | 465 | 84 | 155 | 12,5 | ● |
| **100** | 507 | 88 | 175 | 13,5 | ● |
| **125** | 550 | 91 | 185 | 19,5 | ● |
| **150** | 550 | 94 | 185 | 28,5 | ● |
| **200** | 590 | 100 | 195 | 36,5 | ● |

| Connector | |
|---|---|
| Pipe ∅ | |
| 63 | ● |
| 75 | ● |
| 90 | ● |
| 110 | ● |
| 125 | ● |
| 140 | ● |
| 160 | ● |
| 180 | ● |
| 200 | ● |
| 225 | ● |
| 250 | ● |
| 280 | ● |
| 315 | ● |
| 355 | ● |

| Double Socket Tee with flanged branch | | |
|---|---|---|
| Pipe ∅ | Flange DN | |
| 63 | 50 | ● |
| 75 | 65 | ● |
| 90 | 80 | ● |
| 110 | 50 | ● |
| | 80 | ● |
| | 100 | ● |
| 125 | 80 | ● |
| | 100 | ● |
| 140 | 80 | ● |
| | 100 | ● |
| | 125 | ● |
| 160 | 80 | ● |
| | 100 | ● |
| | 150 | ● |
| 180 | 80 | ● |
| | 150 | ● |
| 200 | 200 | ● |
| 225 | 80 | ● |
| | 100 | ● |
| | 200 | ● |

| All Socket Tee | | |
|---|---|---|
| Pipe ∅ A | Pipe ∅ B | |
| 63 | 63 | ● |
| 75 | 75 | ● |
| 90 | 90 | ● |
| 110 | 63 | ● |
| | 90 | ● |
| | 110 | ● |
| 125 | 90 | ● |
| | 110 | ● |
| | 125 | ● |
| 140 | 90 | ● |
| | 110 | ● |
| | 140 | ● |
| 160 | 90 | ● |
| | 110 | ● |
| | 160 | ● |
| 180 | 125 | ● |
| | 180 | ● |
| 200 | 200 | ● |
| 225 | 90 | ● |
| | 110 | ● |
| | 225 | ● |

**Assembly instructions and tensile load** see "page M 6/2"

**Material:**

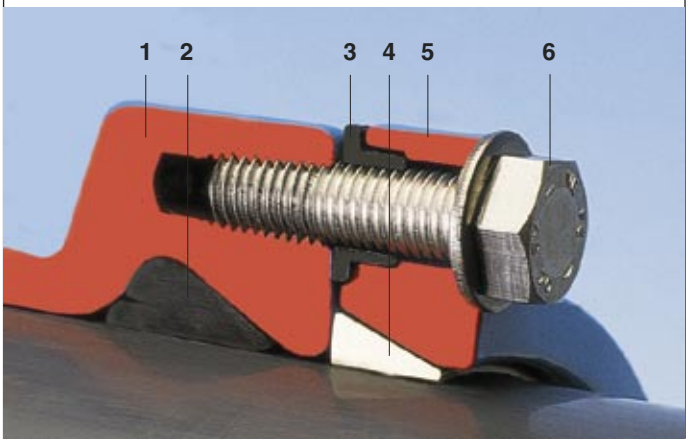
**Body (1), Lock ring (5)**
of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), epoxy powder coated

**Lip seal (2)** of elastomer, suitable for potable water

**Spacer bushes (3)** of PE

**Grip ring (4)** Ms 58 (from DN 300 Rg7)

**Bolts (6)** A 2 (stainless)




## for PE (PE 80/100) and PVC pipes up to PN 16

(DIN 8074, 8061 / 8062)

**total restraint -**

**minimal pipe insertion force - easy to dismantle**

for water and non aggressive effluent

The pipe is sealed with a lip seal.

Minimal pipe insertion force is requried for pushing the pipe end into the seal chamfer with an appropriate chamfer.

The pipe restraining system is separate from the sealing system and is activated by tightening the lock ring.

For thinwalled PE-pipes (up to 3mm wall thickness) and low internal pressure we recommend using a support liner (see page D 2/4).

### Connector No. 0430

Chamfer the pipe (by use of a connector as a sleeve: chamfer the pipe strongly)

### No. 8525 Double Socket Tee with flanged branch

**equal and reducing**

### No. 8515 All Socket Tee

**equal and reducing**



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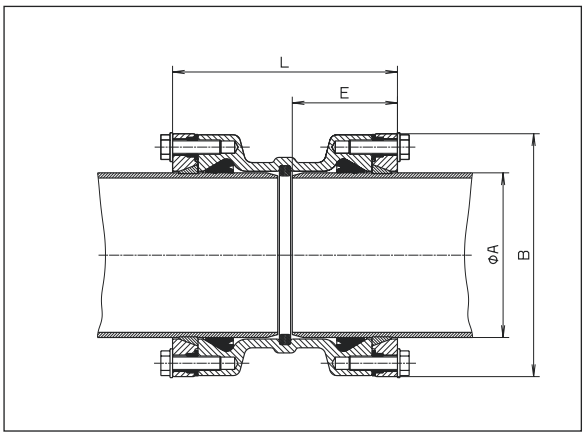
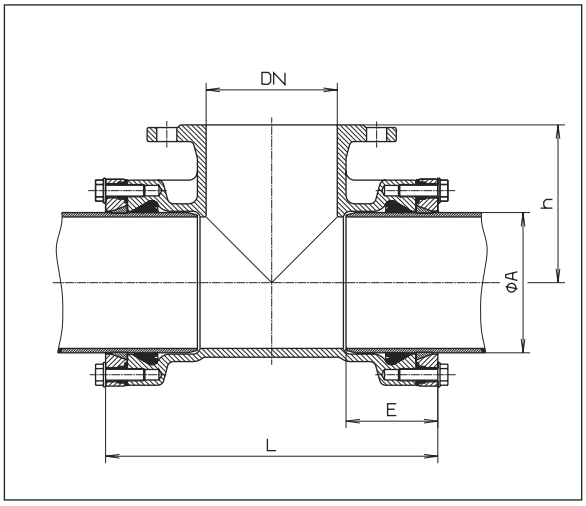
## No. 0430
## Connector



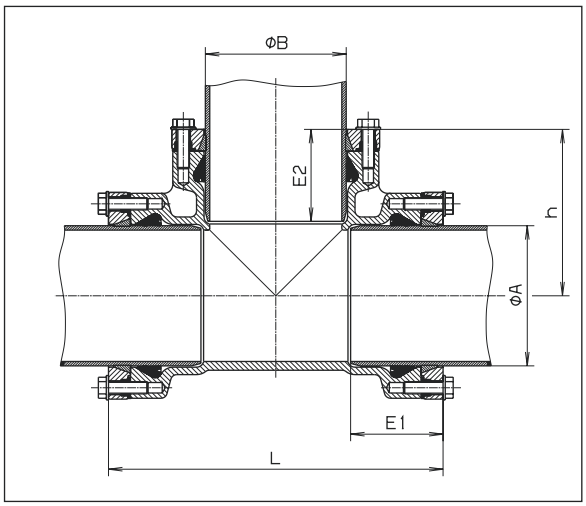

| Pipe ∅ A mm | L | E | B | Weight kg |
|---|---|---|---|---|
| **63** | 171 | 80 | 124 | 3,2 |
| **75** | 175 | 82 | 138 | 4,0 |
| **90** | 181 | 85 | 152 | 5,4 |
| **110** | 181 | 85 | 172 | 6,4 |
| **125** | 185 | 87 | 193 | 7,8 |
| **140** | 197 | 93 | 210 | 9,0 |
| **160** | 221 | 105 | 236 | 12,0 |
| **180** | 241 | 113 | 258 | 14,5 |
| **200** | 261 | 125 | 284 | 21,5 |
| **225** | 265 | 128 | 314 | 26,0 |
| **250** | 300 | 145 | 347 | 33,0 |
| **280** | 306 | 148 | 376 | 38,5 |
| **315** | 358 | 174 | 422 | 58,5 |
| **355** | 464 | 237 | 472 | 96,0 |

## No. 8525
## Double Socket Tee with flanged branch
equal and reducing




| ∅ A mm | DN | L | E | h | Weight kg |
|---|---|---|---|---|---|
| **63** | **50** | 236 | 83 | 100 | 8,0 |
| **75** | **65** | 250 | 85 | 110 | 9,0 |
| **90** | **80** | 268 | 85 | 140 | 11,0 |
| **110** | **50** | 240 | 85 | 150 | 10,0 |
| | **80** | 270 | 85 | 150 | 11,5 |
| | **100** | 290 | 85 | 150 | 12,0 |
| **125** | **80** | 274 | 87 | 160 | 14,0 |
| | **100** | 294 | 87 | 160 | 14,0 |
| **140** | **80** | 288 | 93 | 170 | 15,0 |
| | **100** | 308 | 93 | 170 | 15,5 |
| | **125** | 334 | 93 | 170 | 16,0 |
| **160** | **80** | 300 | 105 | 180 | 16,5 |
| | **100** | 320 | 105 | 180 | 17,0 |
| | **150** | 380 | 105 | 180 | 20,0 |
| **180** | **80** | 310 | 113 | 200 | 23,0 |
| | **150** | 415 | 113 | 200 | 31,0 |
| **200** | **200** | 480 | 130 | 220 | 47,0 |
| **225** | **80** | 356 | 130 | 220 | 33,5 |
| | **100** | 376 | 130 | 220 | 33,0 |
| | **200** | 488 | 130 | 230 | 55,0 |

## No. 8515
## All Socket Tee
equal and reducing




| ∅ A mm | ∅ B mm | L | E 1 | E 2 | h | Weight kg |
|---|---|---|---|---|---|---|
| **63** | **63** | 236 | 83 | 83 | 118 | 6,0 |
| **75** | **75** | 250 | 85 | 85 | 125 | 7,7 |
| **90** | **90** | 268 | 85 | 85 | 134 | 9,0 |
| **110** | **63** | 240 | 85 | 80 | 140 | 7,7 |
| | **90** | 270 | 85 | 85 | 145 | 8,9 |
| | **110** | 290 | 85 | 85 | 145 | 9,2 |
| **125** | **90** | 274 | 87 | 85 | 150 | 10,4 |
| | **110** | 294 | 97 | 85 | 150 | 10,7 |
| | **125** | 306 | 90 | 90 | 153 | 15,0 |
| **140** | **90** | 288 | 93 | 85 | 157,5 | 12,2 |
| | **110** | 305 | 93 | 85 | 160 | 12,5 |
| | **140** | 344 | 96 | 96 | 167 | 19,0 |
| **160** | **90** | 310 | 105 | 85 | 170 | 14,0 |
| | **110** | 330 | 105 | 85 | 170 | 14,5 |
| | **160** | 380 | 105 | 105 | 190 | 16,5 |
| **180** | **125** | 360 | 113 | 87 | 180 | 24,0 |
| | **180** | 415 | 113 | 113 | 207,5 | 29,0 |
| **200** | **200** | 460 | 128 | 128 | 230 | 35,0 |
| **225** | **90** | 356 | 128 | 85 | 200 | 29,5 |
| | **110** | 376 | 128 | 128 | 200 | 30,0 |
| | **225** | 488 | 130 | 130 | 244 | 55,0 |

| Bend | | | |
|---|---|---|---|
| Pipe ∅ | 90° | 45° | 30° |
| 63 | ● | ● | |
| 75 | ● | ● | |
| 90 | ● | ● | ● |
| 110 | ● | ● | ● |
| 125 | ● | ● | |
| 140 | ● | ● | |
| 160 | ● | ● | ● |
| 180 | ● | ● | |
| 200 | ● | ● | |
| 225 | ● | ● | |
| 250 | ● | ● | |
| 280 | ● | ● | |
| 315 | ● | ● | |

| End Cap | |
|---|---|
| Pipe ∅ | |
| 63 | ● |
| 75 | ● |
| 90 | ● |
| 110 | ● |
| 125 | ● |
| 140 | ● |
| 160 | ● |
| 180 | ● |
| 200 | ● |
| 225 | ● |
| 250 | ● |
| 280 | ● |
| 315 | ● |

| Duck Foot Bend | | |
|---|---|---|
| Pipe ∅ A | Flange DN | |
| 90 | 80 | ● |
| 110 | 100 | ● |

**for PE** (PE 80/100) **and PVC pipes up to PN 16**

(DIN 8074, 8061 / 8062)

**total restraint -**

**minimal pipe insertion force - easy to dismantle**

for water and non aggressive effluent

The pipe is sealed with a lip seal.

Minimal pipe insertion force is requried for pushing the pipe end into the seal chamfer with an appropriate chamfer.

The pipe restraining system is separate from the sealing system and is activated by tightening the lock ring.

For thinwalled PE-pipes (up to 3mm wall thickness) and low internal pressure we recommend using a support liner (see page D 2/4).

## Bend

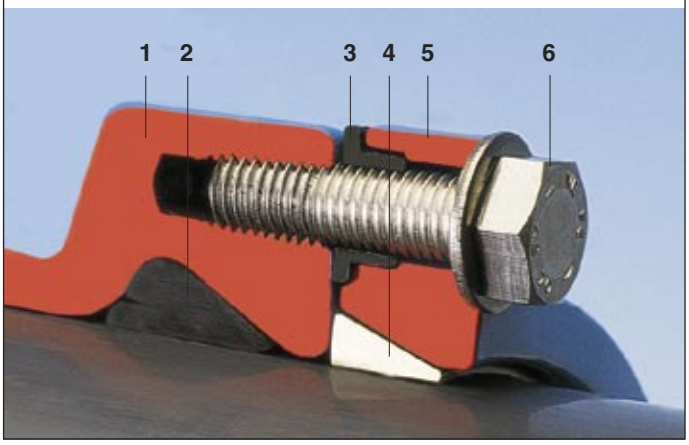
**No. 8535** 90°
**No. 8545** 45°
**No. 8555** 30°

**Assembly instructions and tensile load** see "page M 6/2"

**Material:**

**Body (1), Lock ring (5)**
of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693)
epoxy powder coated

| | |
|---|---|
| **Lip seal (2)** | of elastomer, suitable for potable water |
| **Spacer bushes (3)** | of PE |
| **Grip ring (4)** | Ms 58 from DN 300 Rg7 |
| **Bolts (6)** | A 2 (stainless) |




## End Cap
## No. 8075

with lateral 1" female threaded outlet

Threaded outlets
1¼" / 1½" / 2"
as well as axial version on request

## Duck Foot Bend
## No. 5045



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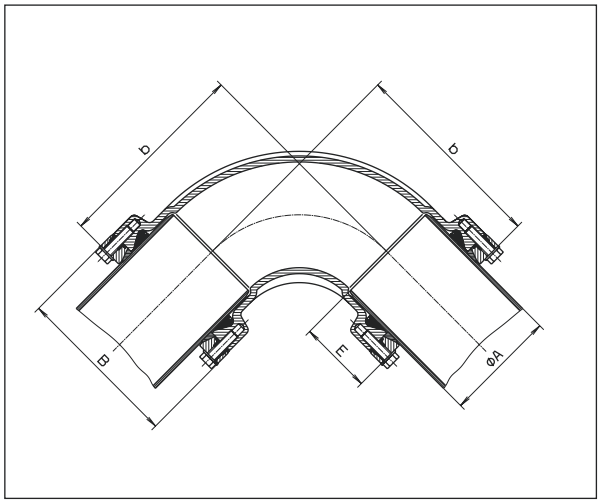
## Bend

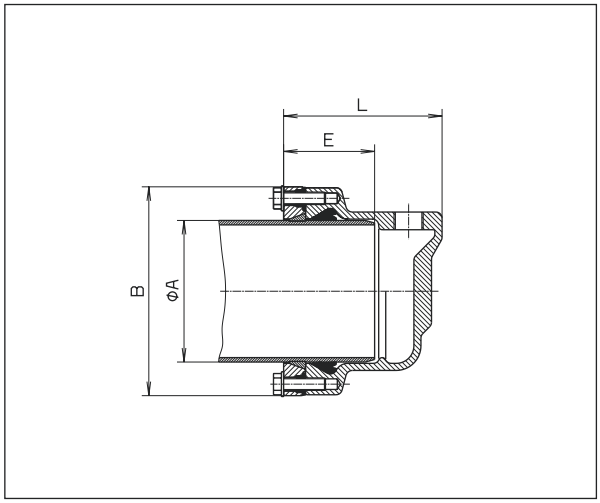
**No. 8535** 90°
**No. 8545** 45°
**No. 8555** 30°




| Pipe Ø mm | b | | | t | B | Weight kg | | |
|---|---|---|---|---|---|---|---|---|
| | 90° | 45° | 30° | | | 90° | 45° | 30° |
| **63** | 153 | 112 | | 80 | 124 | 4,2 | 3,7 | |
| **75** | 170 | 120 | | 82 | 138 | 5,5 | 4,5 | |
| **90** | 188 | 129 | 115 | 85 | 152 | 7,1 | 6,4 | 6,0 |
| **110** | 213 | 140 | 122 | 85 | 172 | 9,2 | 7,5 | 7,3 |
| **125** | 240 | 153 | | 87 | 193 | 11,7 | 9,9 | |
| **140** | 246 | 159 | | 93 | 210 | 15,0 | 12,3 | |
| **160** | 283 | 181 | 155 | 105 | 236 | 19,5 | 16,0 | 16,0 |
| **180** | 293 | 191 | | 113 | 258 | 24,0 | 19,5 | |
| **200** | 353 | 221 | | 125 | 284 | 37,5 | 30,0 | |
| **225** | 355 | 224 | | 128 | 314 | 43,0 | 39,0 | |
| **250** | 427 | 263 | | 145 | 347 | 57,0 | 43,5 | |
| **280** | 430 | 266 | | 148 | 376 | 69,0 | 55,0 | |
| **315** | 506 | 313 | | 174 | 422 | 101,0 | 67,0 | |

## End Cap

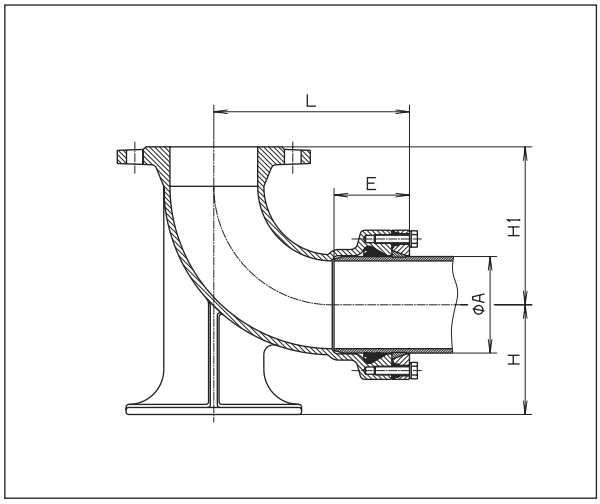
**No. 8075**




| Pipe Ø mm | L | E | B | Weight kg |
|---|---|---|---|---|
| **63** | 106 | 80 | 124 | 2,7 |
| **75** | 138 | 82 | 138 | 3,2 |
| **90** | 141 | 85 | 152 | 4,5 |
| **110** | 159 | 85 | 172 | 5,8 |
| **125** | 162 | 87 | 193 | 6,1 |
| **140** | 169 | 93 | 210 | 7,4 |
| **160** | 180 | 105 | 236 | 8,6 |
| **180** | 192 | 113 | 258 | 11,7 |
| **200** | 203 | 125 | 284 | 14,5 |
| **225** | 207 | 128 | 314 | 16,5 |
| **250** | 225 | 145 | 347 | 20,5 |
| **280** | 228 | 148 | 376 | 25,0 |
| **315** | 254 | 174 | 422 | 33,5 |

## Duck Foot Bend

**No. 5045**




| DN | Pipe Ø mm | L | E | H | H 1 | Weight kg |
|---|---|---|---|---|---|---|
| **80** | **90** | 210 | 85 | 110 | 165 | 12,7 |
| **100** | **110** | 223 | 85 | 125 | 180 | 16,0 |

## No. 9920
## Valve Actuator

In standard version 400 V, 50 Hz, three phase motor, easily adjustable limit switch, dual torque switch, signal output to control flasher, thermoswitch for motor protection, handwheel for emergency use.

Connection according: DIN 3210 GO resp. G1/2
Shaft coupling: DIN 3210 E
Enclosure of actuator: IP 67
Enclosure of switches: IP 66

Variations from the standard version on request.

symbolic photo

| E2 Elypso Valve | | Valve Actuator | | |
|---|---|---|---|---|
| DN | PN | Type | Weight kg | ● |
| 50-100 | 16 | SA 07.5 | 20,0 | ● |
| 125-200 | 16 | SA 10.1 | 23,5 | ● |
| 250-400 | 16 | SA 14.1 | 50,5 | ● |
| 500-600 | 16 | SA 14.5 | 60,0 | ● |

| DN | Valve Actuator U/min | ~ Closing time |
|---|---|---|
| 50-80 | 16 | 1,0 min |
| 100-125 | 16 | 1,5 min |
| 150-200 | 16 | 2,0 min |
| 250 | 16 | 2,5 min |
| 300-500 | 22 | 2,5 min |
| 600 | 16 | 4,5 min |

other closing times and versions on request

| Type | Lenght | Width | Height |
|---|---|---|---|
| SA 07.5 | 514 | 299 | 252 |
| SA 10.1 | 536 | 312 | 253 |
| SA 14.1 | 713 | 375 | 295 |
| SA 14.5 | 720 | 375 | 295 |

**Important:** The actuator should not be used with HAWLE **E2** Elypso Valve for partial flow control.

For using the actuator with HAWLE E2 Elypso Valves please specify the following details on order: 1. working pressure, 2. alignment of the valve, 3. how often the valve is to be opened and closed within 24 hours.

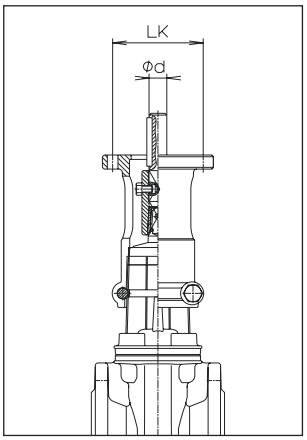
## No. 4000ELE2
## E2 Elypso Valve - short version

**with adaptor for actuator**

## No. 4700ELE2
## E2 Elypso Valve - long version

**with adaptor for actuator**
including bolts (stud bolts and nuts)
Connection suitable for valve actuator No. 9920

## No. 8630E2
## E2 Actuator




| DN | Ø Bolt-circle | Shaft Ø | Weight kg no. 4000ELE2 | | 4700ELE2 | | 8630E2 | |
|---|---|---|---|---|---|---|---|---|
| 50 | 102 | 20 | 15,0 | ● | 16,0 | ● | 3,8 | ● |
| 65 | 102 | 20 | 21,0 | ● | 22,5 | ● | 3,8 | ● |
| 80 | 102 | 20 | 22,5 | ● | 24,5 | ● | 3,8 | ● |
| 100 | 102 | 20 | 28,5 | ● | 31,5 | ● | 3,8 | ● |
| 125 | 102 | 20 | 39,0 | ● | 42,0 | ● | 3,8 | ● |
| 150 | 102 | 20 | 44,5 | ● | 50,0 | ● | 3,8 | ● |
| 200 | 102 | 20 | 69,5 | ● | 77,5 | ● | 5,3 | ● |
| 250 | 140 | 30 | 100,5 | ● | 122,0 | ● | 8,5 | ● |
| 300 | 140 | 30 | 148,0 | ● | 171,0 | ● | 8,5 | ● |
| 350 | 140 | 30 | 206,0 | ● | | | 8,5 | ● |
| 400 | 140 | 30 | 264,0 | ● | 303,0 | ● | 10,3 | ● |
| 450 | 140 | 30 | | | 335,0 | ● | 10,3 | ● |
| 500 | 140 | 30 | 483,0 | ● | 546,0 | ● | 20,0 | ● |
| 600 | 140 | 30 | 714,0 | ● | 814,0 | ● | 20,0 | ● |



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# Non Return Valve

| Order no. | Version | PN | Dimension/DN | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| 9830 | without lever and cou | 16 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

**Automatically closing of the disc reliably prevents a back flow of the medium.**

**The disc opens automatically, if the medium flows in the directionindicated by the arrow on the valve body.**

Face-to-face dimensions according EN 558-1 GR 48 (DIN 3202 T1 - F6)

Optional with lever and counterweight on request

opening pressure min.0,03 bar
closing pressure min. 0,1 bar (tight)

**Material:**

**Body and disc:**
of grey iron, epoxy powder coated

**Bolts, nuts and shaft:**
of stainless steel A2

**Disc lever-arm:**
ductile cast iron, epoxy powder coated

**Disc gasket:**
of elastomer, suitable for potable water

**Installation Instructions:**

- In general Non Return Valves are designed to be installed in horizontal pipe lines. An installation in sloping and vertical pipe lines is possible if the flow of the medium is upwards.
- Direction of flow has to be according to the arrow indicated on the body. Axle of the disc shaft has to be fully horizontal.



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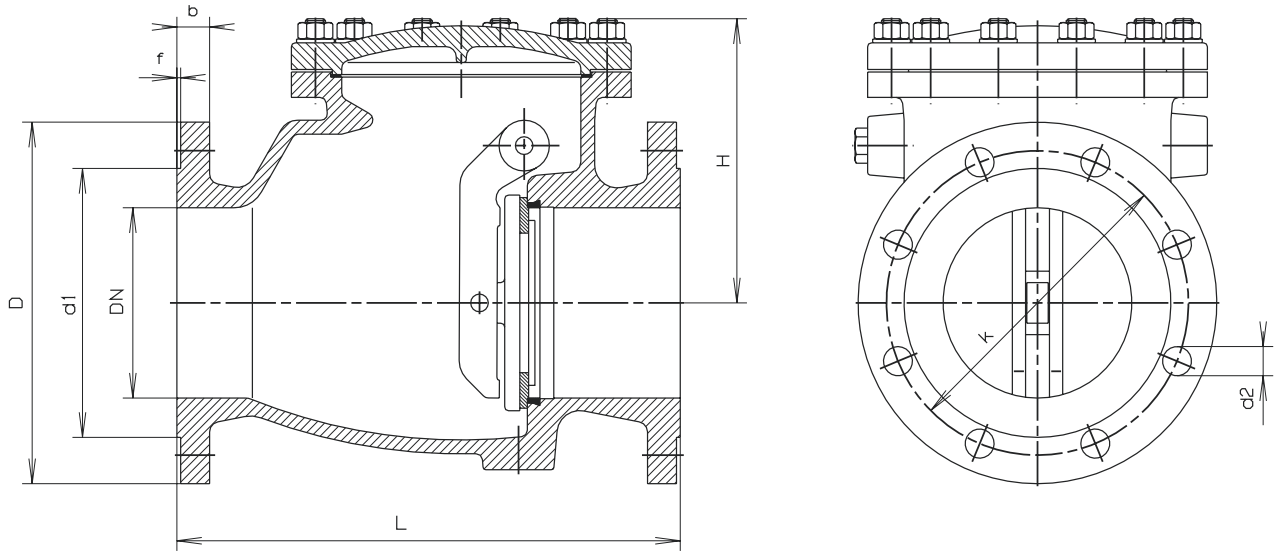
# Non Return Valve

## No. 9830

**without lever and counterweight**




**Flanges** to DIN EN 1092-2 (DIN 28605), drilled to DIN 2501-PN 10 (standard); for DIN 2501-PN 16 in sizes of DN 200 mm and above please specify on order; other standards on request!

| DN | PN | L | H | D | d 1 | k | d 2 | f | b | Bolts | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **40** | 16 | 180 | 119 | 150 | 88 | 110 | 18 | 3 | 18 | 4 x M 16 | 9,0 |
| **50** | 16 | 200 | 120 | 165 | 102 | 125 | 18 | 3 | 20 | 4 x M 16 | 11,0 |
| **65** | 16 | 240 | 141 | 185 | 122 | 145 | 18 | 3 | 20 | 4 x M 16 | 15,0 |
| **80** | 16 | 260 | 168 | 200 | 138 | 160 | 18 | 3 | 22 | 8 x M 16 | 21,0 |
| **100** | 16 | 300 | 175 | 220 | 158 | 180 | 18 | 3 | 24 | 8 x M 16 | 31,5 |
| **125** | 16 | 350 | 199 | 250 | 188 | 210 | 18 | 3 | 26 | 8 x M 16 | 46,0 |
| **150** | 16 | 400 | 217 | 285 | 212 | 240 | 22 | 3 | 26 | 8 x M 20 | 60,0 |
| **200** | 10 | 500 | 277 | 340 | 268 | 295 | 22 | 3 | 30 | 8 x M 20 | 120,0 |
| | 16 | | | | | | | | | 12 x M 20 | |
| **250** | 10 | 600 | 337 | 405 | 320 | 350 | 22 | 3 | 32 | 12 x M 20 | 180,0 |
| | 16 | | | | | 355 | 26 | | | 12 x M 24 | |
| **300** | 10 | 700 | 374 | 460 | 378 | 400 | 22 | 4 | 32 | 12 x M 20 | 270,0 |
| | 16 | | | | | 410 | 26 | | | 12 x M 24 | |

| Order no. | Version | PN | Dimension/DN | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| 9910 | with stainless steel double-screen | 16 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

**The fine-meshed double screen made from stainless steel reliably restrains all parts bigger than 0,5 mm (DN 40 - DN 150 mm ) or bigger than 0,6 mm Ø (DN 200 - 300 mm).**

Face-to-face dimension according to EN 558-1 GR 1 (DIN 3202 T1 - F1)

**Material:**

**Body and lid:**
grey iron, epoxy powder coated

**Bolts and nuts:**
stainless steel

**Double screen:**
stainless steel, standard
mesh-size: DN 40 – 150: ca. 0,5 mm
DN 200 – 300: ca. 0,6 mm

**Gasket:**
Klingerit

**Installation Instructions:**

- In general Strainers are designed to be installed in horizontal pipe lines. An installation in sloping and vertical pipe lines is possible if the flow of the medium is downwards.
- Direction of flow has to be according to the arrow indicated on the body whereby the lid has to look to the bottom.



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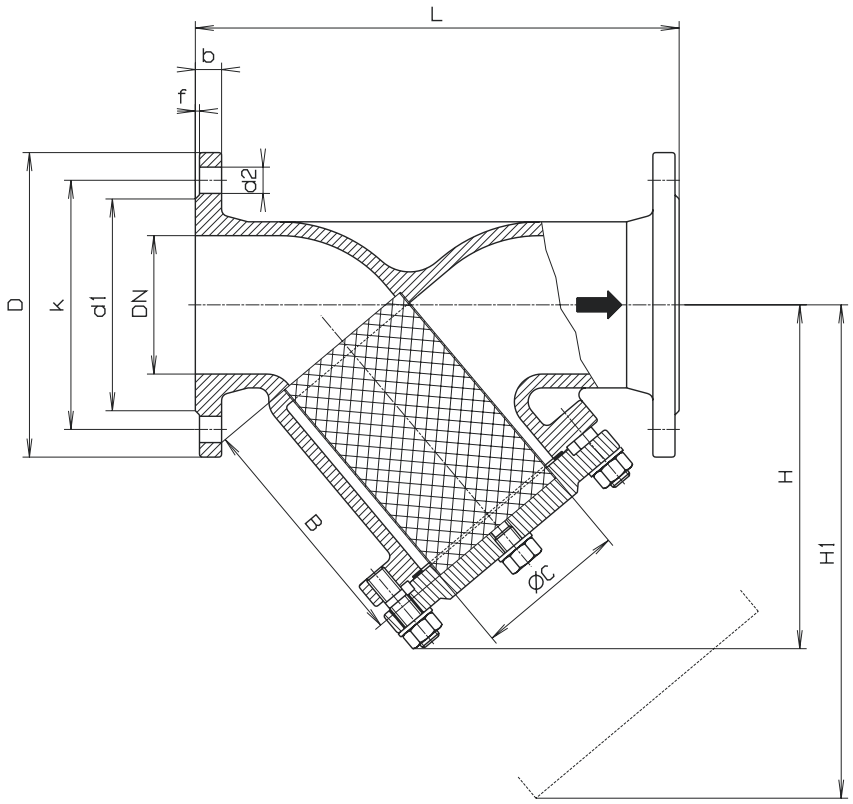
# Strainer

## No. 9910

### with stainless steel double-screen




**Flanges** to DIN EN 1092-2, drilled to DIN 2501-PN 10 (standard); for DIN 2501-PN 16 in sizes of DN 200 mm and above please specify on order; other standards on request!

| DN | PN | L | H | H 1 | D | d 1 | B | C | k | d 2 | f | b | Bolts | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40** | 16 | 200 | 150 | 240 | 150 | 88 | 114 | 50 | 110 | 18 | 3 | 18 | 4 x M 16 | 8,8 |
| **50** | 16 | 230 | 160 | 250 | 165 | 102 | 119 | 62 | 125 | 18 | 3 | 20 | 4 x M 16 | 11,0 |
| **65** | 16 | 290 | 180 | 285 | 185 | 122 | 134 | 79 | 145 | 18 | 3 | 20 | 4 x M 16 | 17,0 |
| **80** | 16 | 310 | 215 | 330 | 200 | 138 | 149 | 90 | 160 | 18 | 3 | 22 | 8 x M 16 | 19,5 |
| **100** | 16 | 350 | 235 | 365 | 220 | 158 | 169 | 110 | 180 | 18 | 3 | 24 | 8 x M 16 | 34,0 |
| **125** | 16 | 400 | 280 | 425 | 250 | 188 | 199 | 138 | 210 | 18 | 3 | 26 | 8 x M 16 | 42,5 |
| **150** | 16 | 480 | 320 | 480 | 285 | 212 | 224 | 160 | 240 | 22 | 3 | 26 | 8 x M 20 | 56,0 |
| **200** | 10 | 600 | 405 | 610 | 340 | 268 | 284 | 210 | 295 | 22 | 3 | 30 | 8 x M 20 | 110,0 |
| | 16 | | | | | | | | | | | | 12 x M 20 | |
| **250** | 10 | 730 | 540 | 915 | 405 | 320 | 434 | 258 | 350 | 22 | 3 | 32 | 12 x M 20 | 165,0 |
| | 16 | | | | | | | | 355 | 26 | | | 12 x M 24 | |
| **300** | 10 | 850 | 680 | 1110 | 460 | 370 | 555 | 308 | 400 | 22 | 4 | 32 | 12 x M 20 | 285,0 |
| | 16 | | | | | | | | 410 | 26 | | | 12 x M 24 | |

## No. 9940

## Pipeline Spacers (anti-friction)

Type and number of segments depends on the outside diameter of pipeline.

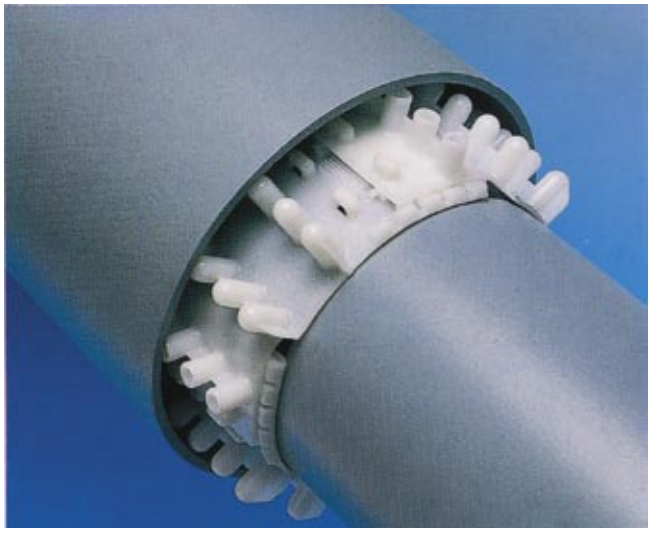
The height of the spacer segments depends on the inside diameter of the protective tube.

Special leaflets on request.

| O.D. Ø - **Pipeline** | **Type** | **Segment height / mm** | | | |
|---|---|---|---|---|---|
| | | **25** | **41** | **60** | **90** |
| 92* - 528 mm | Type "F" | ● | ● | ● | |
| | Type "G" | ● | ● | ● | |
| from 466 mm | Type "E" | ● | ● | | ● |
| **Order no. 9945** | Weight 1,80 kg | | | | ● |

* smaller diameters on request

**No. 9945 Application Tool for Pipeline Spacers**



### Cover range of simple elements

**Type F/G**

| OD Carrier pipe | | Elements to make one insulator | | Recommended distance between spacers m |
|---|---|---|---|---|
| **min** | **max** | **F** | **G** | |
| 92 | 115 | 1 | 1 | 2 |
| 116 | 152 | 2 | - | 2 |
| 153 | 188 | 2 | 1 | 2 |
| 189 | 224 | 3 | - | 2 |
| 225 | 260 | 3 | 1 | 2 |
| 261 | 295 | 4 | - | 2 |
| 296 | 376 | 4 | 1 | 2 |
| 314 | 376 | 5 | - | 2 |
| 377 | 446 | 6 | - | 2 |
| 447 | 528 | 7 | - | 2 |

**Type E**

| OD Carrier pipe | | Elements to make one insulator | Recommended distance between spacers m |
|---|---|---|---|
| **min** | **max** | | |
| 466 | 530 | 5 | 2 |
| 531 | 630 | 6 | 2 |
| 631 | 730 | 7 | 2 |
| 731 | 830 | 8 | 2 |
| 831 | 930 | 9 | 2 |
| 931 | 1030 | 10 | 2 |
| 1031 | 1159 | 11 | 2 |
| 1160 | 1360 | 13 | 1,5 |
| 1361 | 1600 | 15 | 1,2 |
| 1601 | 1799 | 17 | 1 |



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# Sundries

## No. 0820

### Warning Tape without metal insert

with the message "Beware Water Pipe"

## No. 0830

### Warning Tape with metal insert

Non-decaying locating and warning tape on non-metallic pipes for installing with the pipeline with the message "Beware Water Pipe"


**No. 0820**

| | |
|---|---|
| 250 - roll | ● |

**No. 0830**

| | |
|---|---|
| **A** up to 1000 m | ● |
| **B** 1250 to 5000 m | ● |
| **C** from 5000 | ● |

250 m - roll

## Indicator Plates

of plastic, impact resistant, weatherproof, with interchangeable characters

**No. 0850** for mains pipes

**No. 0860** for service valves

**No. 0870** for hydrants


| Order no. | Dimensions | Type | |
|---|---|---|---|
| **0850** | 200 x 140 | **L*** | ● |
| | | **V*** | ● |
| **0860** | 100 x 140 | **L*** | ● |
| | | **V*** | ● |
| **0870** | 200 x 250 | **L*** | ● |
| | | **V*** | ● |

L* = Blank

V* = Complete with inserts

## Numbers and Letters

**Inserts for indicator plates**

when ordering indicator plates, resp. numbers and letters, please specify the colour requested !

"blue" - water
"green" - waste water
"white" - hydrants
"yellow" - gas

| | | Numbers and Letters | | | 1-space blank | | | 5-space blank |
|---|---|---|---|---|---|---|---|---|
| | Order no. | 0880 | 0881 | 0882 | 0890 | 0891 | 0892 | 0900 |
| for No. | Size | 10 mm | 25 mm | 40 mm | 10 mm | 25 mm | 40 mm | 10 mm |
| 0850 | | ● | ● | ● | ● | ● | ● | ● |
| 0860 | | | ● | | | ● | | |
| 0870 | | ● | ● | ● | ● | ● | ● | ● |

## Wooden Box for Inserts

for clearly displayed storage of numbers and letters for indicator plates

**No. 0910** Empty

**No. 0911** Filled for approx. 160 plates

Please specify the colour requested !

"blue" - water
"green" - waste water
"white" - hydrants
"yellow" - gas

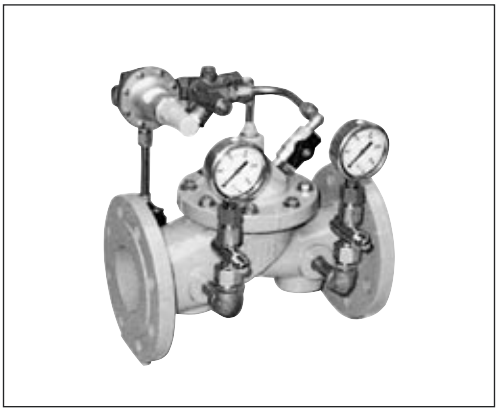
## Pressure Reducing Valve

of ductile iron
epoxy powder coated

PN 10 / PN 16

with 2 pressure gauge assemblies (glycerine pressure gauges)

inclusive valve position indicator



For DN 200 and higher please specify nominal pressure on order

| DN | Length | Weight kg | |
|---|---|---|---|
| 1¼" | 184 | 16,0 | ● |
| 1½" | 184 | 16,0 | ● |
| 50 | 230 | 16,0 | ● |
| 65 | 290 | 22,0 | ● |
| 80 | 310 | 23,0 | ● |
| 100 | 350 | 37,0 | ● |
| 125 | 400 | 60,0 | ● |
| 150 | 480 | 68,0 | ● |
| 200 | 600 | 124,0 | ● |
| 250 | 730 | 193,0 | ● |
| 300 | 850 | 334,0 | ● |
| 350 | 980 | 544,0 | ● |
| 400 | 1100 | 646,0 | ● |

up to DN 700 on request

## Float Valve

of ductile iron
epoxy powder coated

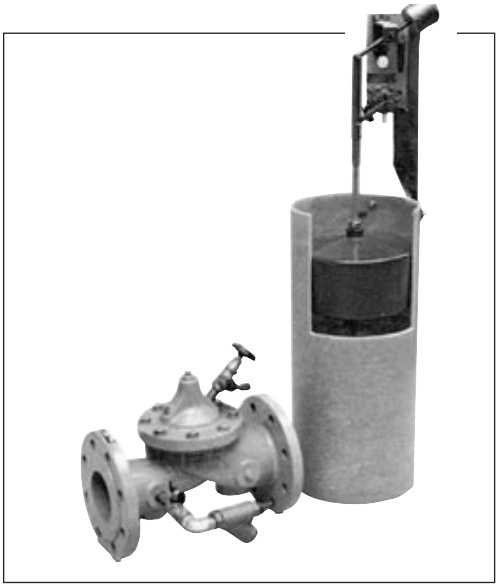
PN 10 / PN 16

consisting of:

main valve and pilot valve

(Connecting pipe between main valve and pilot valve not included; to be installed on site)

inclusive valve position indicator



For DN 200 and higher please specify nominal pressure on order

| DN | Length | Weight kg | |
|---|---|---|---|
| 1¼" | 184 | 10,0 | ● |
| 1½" | 184 | 10,0 | ● |
| 50 | 230 | 17,0 | ● |
| 65 | 290 | 23,0 | ● |
| 80 | 310 | 24,0 | ● |
| 100 | 350 | 38,0 | ● |
| 125 | 400 | 61,0 | ● |
| 150 | 480 | 68,0 | ● |
| 200 | 600 | 124,0 | ● |
| 250 | 730 | 193,0 | ● |
| 300 | 850 | 334,0 | ● |
| 350 | 980 | 544,0 | ● |
| 400 | 1100 | 646,0 | ● |

up to DN 700 on request

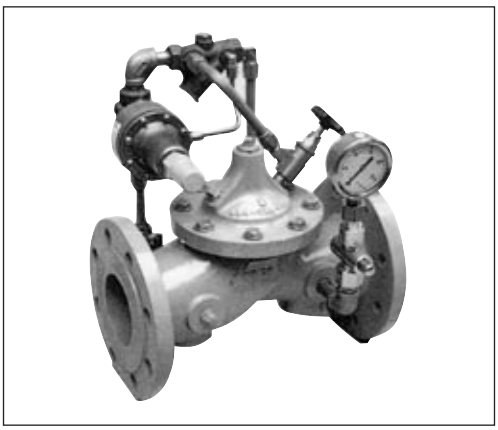
## Pressure Relief and Safety Valve

of ductile iron
epoxy powder coated

PN 10 / PN 16

with 1 pressure gauge assembly (glycerine pressure gauge)

inclusive valve position indicator



For DN 200 and higher please specify nominal pressure on order

| DN | Length | Weight kg | |
|---|---|---|---|
| 1¼" | 184 | 15,0 | ● |
| 1½" | 184 | 15,0 | ● |
| 50 | 230 | 16,0 | ● |
| 65 | 290 | 22,0 | ● |
| 80 | 310 | 23,0 | ● |
| 100 | 350 | 37,0 | ● |
| 125 | 400 | 60,0 | ● |
| 150 | 480 | 68,0 | ● |
| 200 | 600 | 124,0 | ● |
| 250 | 730 | 193,0 | ● |
| 300 | 850 | 334,0 | ● |
| 350 | 980 | 544,0 | ● |
| 400 | 1100 | 646,0 | ● |

up to DN 700 on request



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# Sundries

## Check Valve

of ductile iron
epoxy powder coated

PN 10 / PN 16

inclusive valve position indicator

For DN 200 and higher please specify nominal pressure on order

| DN | Length | Weight kg | |
|---|---|---|---|
| 1¼" | 184 | 8,0 | ● |
| 1½" | 184 | 8,0 | ● |
| 50 | 230 | 15,0 | ● |
| 65 | 290 | 21,0 | ● |
| 80 | 310 | 22,0 | ● |
| 100 | 350 | 36,0 | ● |
| 125 | 400 | 59,0 | ● |
| 150 | 480 | 67,0 | ● |
| 200 | 600 | 122,0 | ● |

up to DN 700 on request

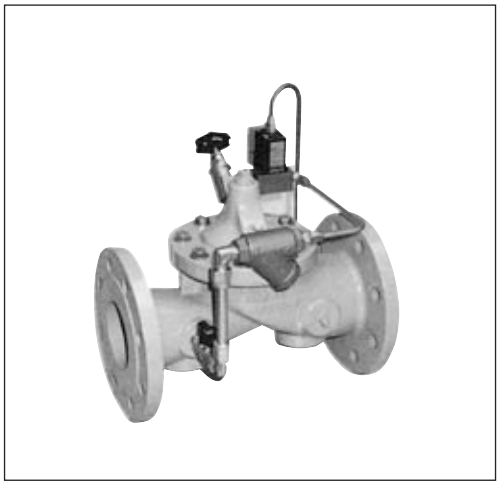
## Solenoid Controlled Valve

of ductile iron
epoxy powder coated

PN 10 / PN 16

including solenoid valve
220 V / 50 Hz (other voltages available)

inclusive valve position indicator



For DN 200 and higher please specify nominal pressure on order

| DN | Length | Weight kg | |
|---|---|---|---|
| 1¼" | 184 | 11,0 | ● |
| 1½" | 184 | 11,0 | ● |
| 50 | 230 | 15,0 | ● |
| 65 | 290 | 21,0 | ● |
| 80 | 310 | 22,0 | ● |
| 100 | 350 | 36,0 | ● |
| 125 | 400 | 59,0 | ● |
| 150 | 480 | 67,0 | ● |
| 200 | 600 | 122,0 | ● |
| 250 | 730 | 191,0 | ● |
| 300 | 850 | 332,0 | ● |
| 350 | 980 | 541,0 | ● |
| 400 | 1100 | 644,0 | ● |

up to DN 700 on request

## Pump Control Valve

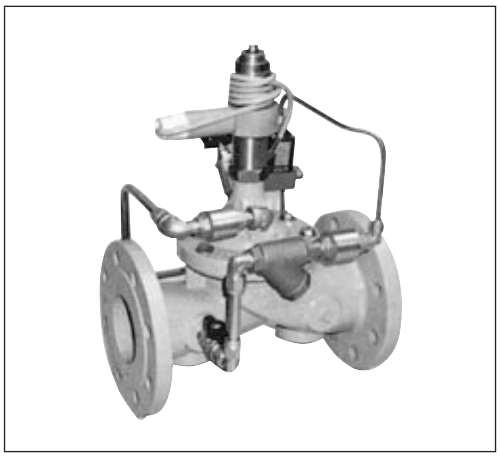
of ductile iron
epoxy powder coated

PN 10 / PN 16

with integral automatic non-return valve

dry-running protection at extra cost

inclusive valve position indicator



For DN 200 and higher please specify nominal pressure on order

| DN | Length | Weight kg | |
|---|---|---|---|
| 50 | 230 | 17,0 | ● |
| 65 | 290 | 23,0 | ● |
| 80 | 310 | 24,0 | ● |
| 100 | 350 | 38,0 | ● |
| 125 | 400 | 61,0 | ● |
| 150 | 480 | 69,0 | ● |
| 200 | 600 | 124,0 | ● |
| 250 | 730 | 193,0 | ● |
| 300 | 850 | 334,0 | ● |
| 350 | 980 | 544,0 | ● |
| 400 | 1100 | 656,0 | ● |

up to DN 700 on request

## Flow Control Valve

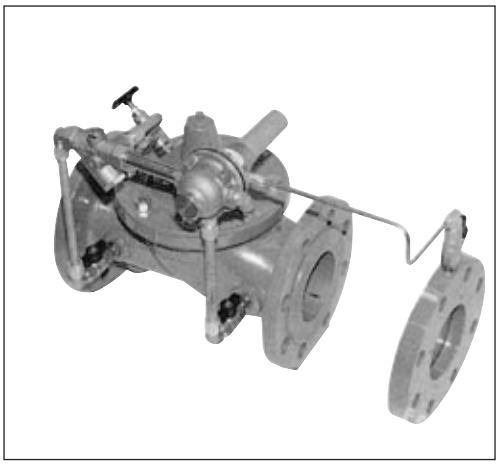
of ductile iron
epoxy powder coated

PN 10 / PN 16

for constant outlet flow

including orifice plate
(Length 25 mm)

inclusive valve position indicator



For DN 200 and higher please specify nominal pressure on order

| DN | Length excl. plate | Weight kg | |
|---|---|---|---|
| 32/40 | 184 | 16,0 | ● |
| 50 | 230 | 17,5 | ● |
| 65 | 290 | 23,0 | ● |
| 80 | 310 | 24,0 | ● |
| 100 | 350 | 38,0 | ● |
| 125 | 400 | 61,0 | ● |
| 150 | 480 | 69,0 | ● |
| 200 | 600 | 124,0 | ● |
| 250 | 730 | 193,0 | ● |
| 300 | 850 | 334,0 | ● |
| 350 | 980 | 543,0 | ● |
| 400 | 1100 | 646,0 | ● |

up to DN 700 on request

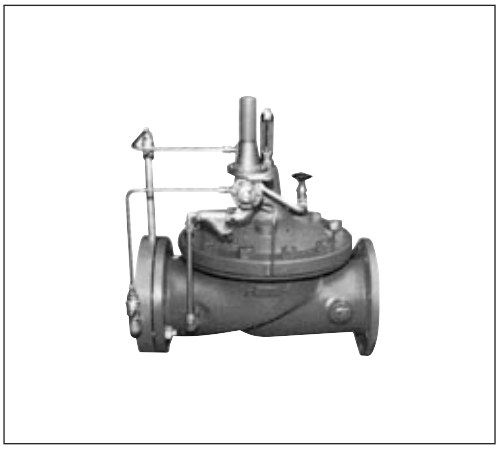
## Pipe Burst Safety Shut-Off Valve

of ductile iron
epoxy powder coated

for protection of pipework systems

including orifice plate

inclusive valve position indicator



For DN 200 and higher please specify nominal pressure on order

| DN | Length excl. plate | Weight kg | |
|---|---|---|---|
| 32/40 | 184 | 16,0 | ● |
| 50 | 230 | 17,0 | ● |
| 65 | 290 | 23,5 | ● |
| 80 | 310 | 24,0 | ● |
| 100 | 350 | 38,0 | ● |
| 125 | 400 | 61,0 | ● |
| 150 | 480 | 69,0 | ● |
| 200 | 600 | 124,0 | ● |
| 250 | 730 | 193,0 | ● |
| 300 | 850 | 334,0 | ● |
| 350 | 980 | 544,0 | ● |
| 400 | 1100 | 647,0 | ● |

up to DN 700 on request

## Back Flow Preventer

### with threaded outlet
### with flanged outlet

of ductile iron
epoxy powder coated

PN 10 / PN 16

Vacuum breaking and 100 % segregation of piping networks (without valves)

inclusive valve position indicator

For DN 200 and higher please specify nominal pressure on order

**No. 9760**

| DN | Length | Weight kg | |
|---|---|---|---|
| 1" | 238 | 8,0 | ● |
| 1½" | 305 | 13,0 | ● |

**No. 9761**

| DN | Length | Weight kg | |
|---|---|---|---|
| 65 | 511 | 72,0 | ● |
| 80 | 687 | 75,0 | ● |
| 100 | 765 | 135,0 | ● |
| 150 | 1019 | 185,0 | ● |
| 200* | 1289 | 330,0 | ● |

up to DN 700 on request



**E. Hawle Armaturenwerke GmbH**
A-4840 Vöcklabruck - AUSTRIA
Wagrainer Straße 13
www.hawle.at
Telefon: +43 (0)7672 725 76-0
Telefax: +43 (0)7672 784 64
E-mail: hawle@hawle.at

....smoothly, without a hitch!

## No. 3443

### Mounting-spray

**for PE and PVC pipes**

**for an easy installation**

made from pure silicon (with a special solvent)

suitable for potable water

**without CFCs**

400 ml

**Attention:**
observe the safety-instructions remarked on the tin


## No. 3444

### Fitting grease

**for potable and hot water fittings**

suitable for spindle crest with elastomers

Special grease type VR 69-252

**with DVGW-KTW-approval for potable water**

meets the requirements of DIN EN 200

100 g

## Valves and fittings for **PE and PVC** pipes (DIN 8074, 8061 / 8062) total restraint - up to PN 16

**E2 Elypso Valve**
**No. 4040E2**
DN 50-300

see page A 7/5

**E2 Elypso Valve**
**Flange/Socket end**
**No. 4041E2**
DN 50-300

see page A 7/7

**Flange Adaptor**
**No. 0400**
**equal and reducing**
DN 50-400

see page G 1/1 for PE
G 2/1 for PVC

**E2 Combi-T**
**No. 4343E2**
DN 50-200

see page B 1/5

**Double Socket Tee**
**with flanged branch**
**No. 8525**
**equal and reducing**
DN 50-200

see page L 2/3

**Connector**
**No. 0430**
DN 50-300

see page L 2/3

**Bend**
**No. 8535 90°**
**No. 8545 45°**
**No. 8555 30°**
DN 50-300

see page L 2/5

**All Socket Tee**
**No. 8515**
**equal and reducing**
DN 50-200

see page L 2/3

**Duck Foot Bend**
**No. 5045**
DN 80, DN 100

see page L 2/5

**End Cap**
**No. 8075**
DN 50-300

see page L 2/5

For thinwalled PE pipes (up to 3 mm wall thickness) and low internal pressure we recommend using a support liner.



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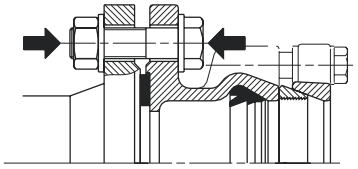
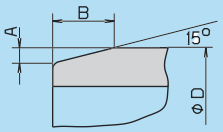
Telefax: +43 (0)7672 784 64
E-mail: hawle@hawle.at

## ASSEMBLY INSTRUCTIONS:

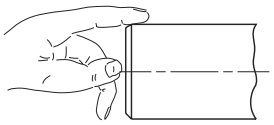
For flange adaptors: bolt the flange to the mating flange first.



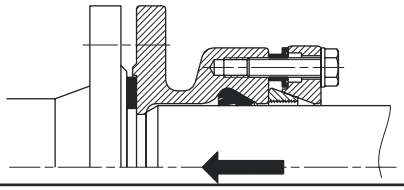
Chamfer the pipe
use lubricant
(see page M 5/2)
Do not use oil !



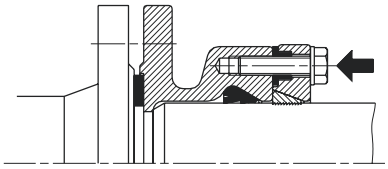

| Ø D | A | B |
|---|---|---|
| 63 - 40 | 2,5 | 10 |
| 160 - 180 | 4 | 16 |
| 200 - 225 | 5 | 20 |
| 250 - 315 | 7 | 25 |
| 355 - 450 | 9 | 35 |



Push the pipe to the end of the socket.
For thinwalled PE-pipes (up to 3 mm wall thickness) and low internal pressure we recommend using a support liner

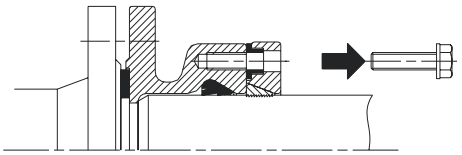


Tighten the lock ring bolts crosswise until lock ring is tight on bushes.

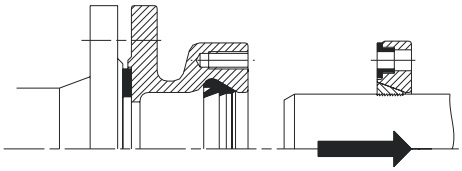


## DISMANTLING INSTRUCTIONS:

Ondo and remove lock ring bolts.



Twist and withdraw the pipe.



## TENSILE TESTING:

The following maximum tensile loads have been established.

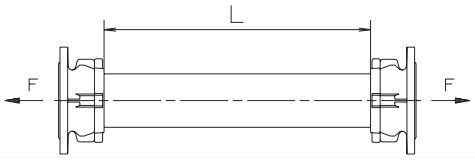
**Test data:** HAWLE test laboratory tensile testing machine

HDPE pipe (PE 80)DIN 8075 - ÖNORM B 5172 PN 10 (Gas PN 4)

Data established by use of a support liner and under 0 bar internal pressure. Room temperature: 23° C

Speed of tensile test (mm/min.): 0,1 x the free pipe length (L)

This table shows the maximum end load capacity of a SYSTEM 2000 connection, compared with the effective theoretical loads in a PE pipeline with 10 bar.
A SYSTEM 2000 connection provides a safety factor of **4 to 6 times**!




*1 kN = 100 kp

| Pipe Ø mm | Theoretical tensile load - (kN*) at 10 bar internal pressure | Max. tensile load established in tests - (kN*) |
|---|---|---|
| 63 | 3,15 | 20 |
| 75 | 4,42 | 28 |
| 90 | 6,37 | 38 |
| 110 | 9,50 | 56 |
| 125 | 12,27 | 63 |
| 140 | 15,40 | 66 |
| 160 | 20,10 | 98 |
| 180 | 25,45 | 130 |
| 200 | 31,40 | 145 |
| 225 | 39,80 | 153 |
| 250 | 49,10 | 233 |
| 280 | 61,60 | 215 |
| 315 | 77,80 | 270 |

- No flanges - no bolts
- Fewer joints
- Minimum labour costs
- Compact design
- Convertible gaskets for cast and ductile iron, PVC and PE pipes
- Sockets with integral Pipe-Lock
- Reduces your stock of fittings
- High corrosion resistance by fluidised bed epoxy powder coating

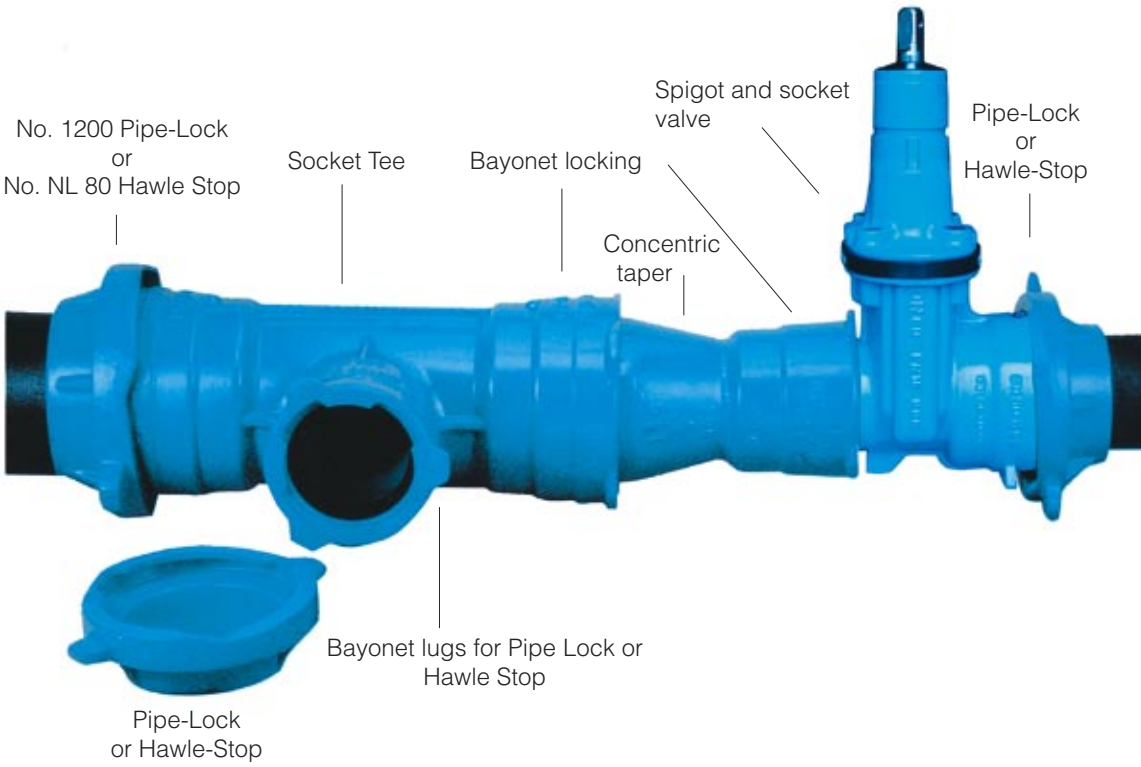
**DN 80 - DN 200**

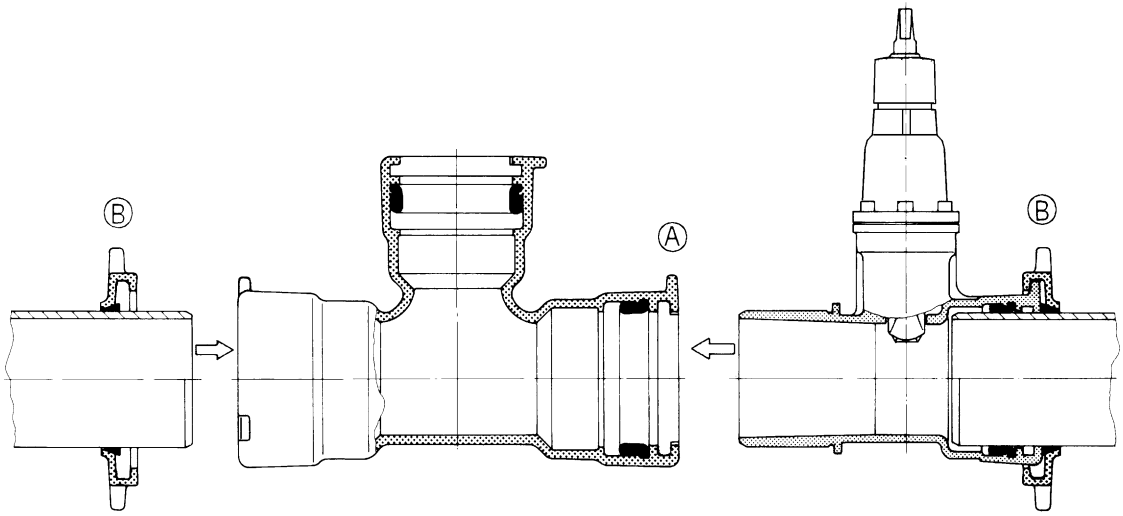
**NEW**

**EFFICIENT**

**RELIABLE**

Please ask for special leaflet




Ⓐ **Bayonet locking system** is available across the entire HAWLE range of fittings

Ⓑ **Lugs for restraining** plain ended pipe with the Pipe Lock Ring or Hawle Stop



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Telefax: +43 (0)7672 784 64
E-mail: hawle@hawle.at

## Range of fittings (other designs on request)
## Hawle-Sockets DN 80 - DN 200

**No. NL10E2** Socket Combi Tee with integral valve

**No. NL00E2** Spigot Socket Valve

**No. NL20** Socket Tee

**No. NL50** Collar without thread
**No. NL51** Collar with thread

**No. NL40** Concentric Taper

**No. NL44** Cut-in Socket Fitting

for inserting valves and fittings with socket seals into an existing pipeline

**No. NL30** Bend 90°
**No. NL32** Bend 45°
**No. NL33** Bend 30°
**No. NL34** Bend 22°

**No. NL60** Duckfoot Bend

**No. NL41** Flanged Spigot

**No. NL42** Flanged Socket

**No. NL47** Endcap

**All sockets convertible for PVC pipes with HAWLE special GKS gasket**

**Restraint Joints:**

**Ductile Iron Pipes:**
**Pipe-Lock Ring** (electroconductive) or
**HAWLE-Stop** (not electroconductive)

**PVC/PE-pipes:**
**HAWLE-Stop-PVC/PE**

WATER

# ZAK®-SYSTEM

hawle

# ZAK®-Description

## ZAK®-System

- the threadless, restraint jointing system for service connections
- integrated in Pipe Saddles, Service Valves and Fittings
- PN 16


***Simple installation:***

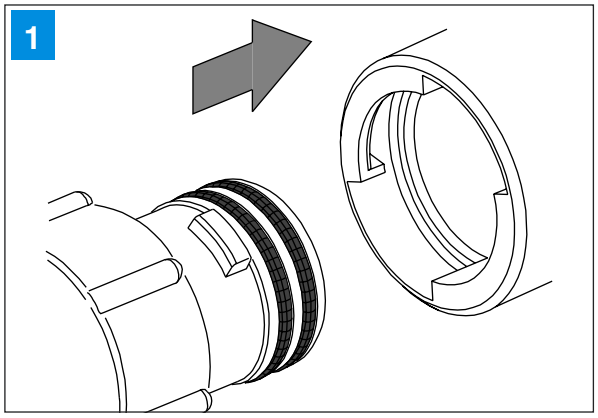
- ***push into***
- ***rotate for 90°***
- ***pull out***
- ***fit the snap ring***

**ZAK$_i$ -sockets d 34** for pipe drilling Ø 25 mm
ISO-push fit from PE-pipes Ø 25 mm - Ø 50 mm

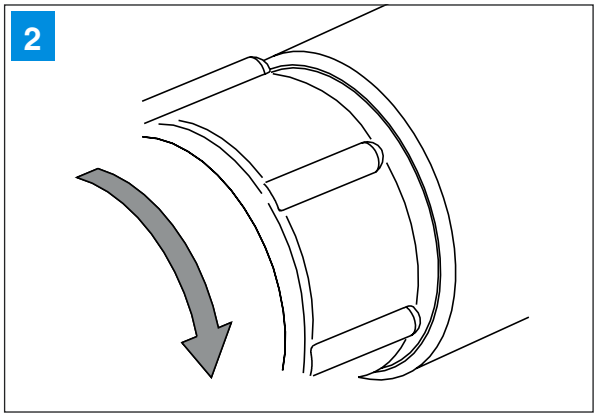
**ZAK$_i$ -sockets d 46** for pipe drilling Ø 35 mm
ISO-push fit from PE-pipes Ø 32 mm - Ø 63 mm

# ZAK®-Assembly, Dismantling

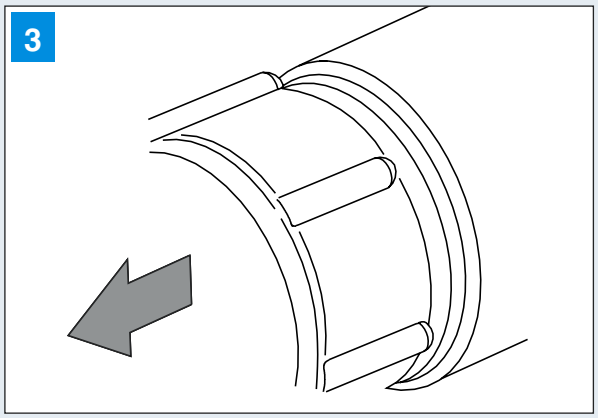
## ZAK®-System Assembly Instructions



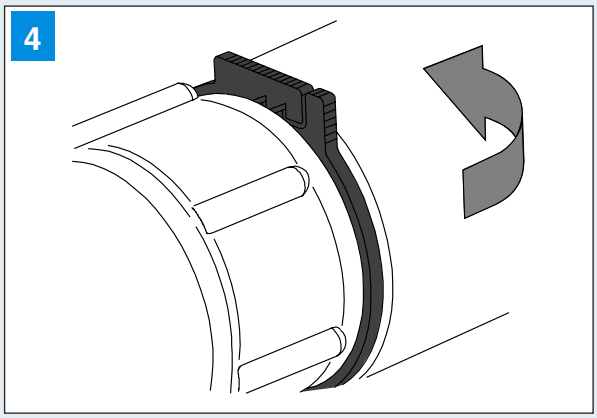

Grease the O rings of the spigot end. Push the **ZAK®**-spigot end into the **ZAK®**-socket to the stop.




Rotate the **ZAK®**-Fitting for 90° clockwise to the stop

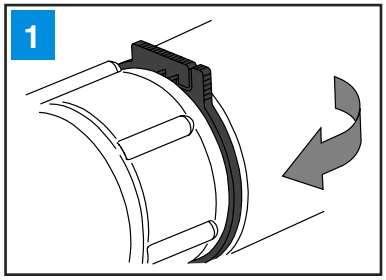



Pull out the **ZAK®**- Fitting to the stop (approx. 4 mm)

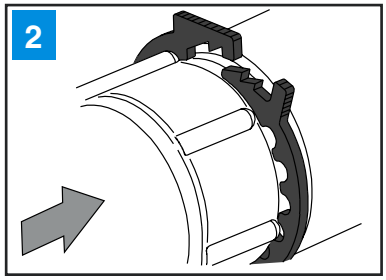



Fit the snap ring in the gap and close it.

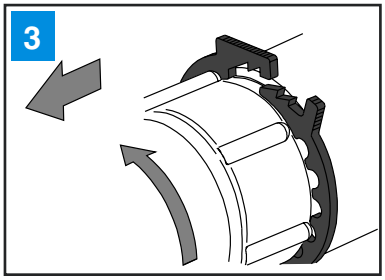
## ZAK®-System Dismantling Instructions




Open the snap ring, widen it and pull it back.




Push in the **ZAK®**- Fitting to the stop (approx. 4 mm)




Turn the **ZAK®**-Fitting for 90° counterclockwise to the stop and pull it out of the **ZAK®**-socket.

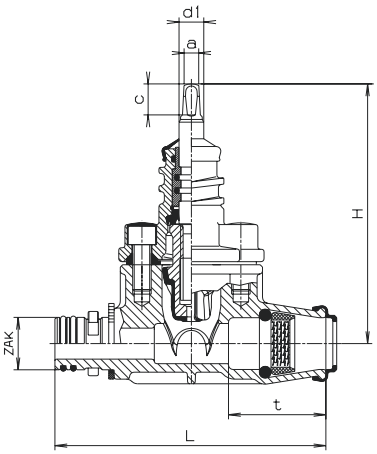
# ZAK®-Range

## ZAK®-Service Valve

mit ZAK®-Spigot and ISO Socket

for lateral tapping

**No. 2810**




**ZAK® 34**

| DN | PE pipe ∅ mm | H | L | t |
|---|---|---|---|---|
| ¾" | 25 | 168 | 173 | 52 |
| 1" | 32 | 168 | 175 | 63 |
| 1¼" | 40 | 168 | 205 | 76 |
| 1½" | 50 | 168 | 232 | 91 |

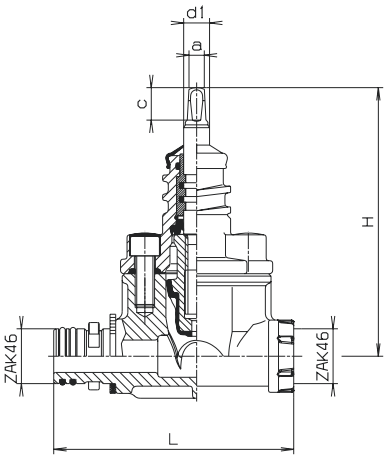
| DN | a | c | d1 | Weight |
|---|---|---|---|---|
| ¾" | 10,3 | 20 | 16 | 2,35 |
| 1" | 10,3 | 20 | 16 | 2,50 |
| 1¼" | 10,3 | 20 | 16 | 2,90 |
| 1½" | 10,3 | 20 | 16 | 3,15 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

## ZAK®-Service Valve

with ZAK®-Spigot and ZAK®-Socket

for lateral tapping

**No. 2811**




**ZAK® 46**

| DN | H | L |
|---|---|---|
| 1½" | 200 | 209 |

| DN | a | c | d1 | Weight |
|---|---|---|---|---|
| 1½" | 10,3 | 20 | 16 | 4,00 |

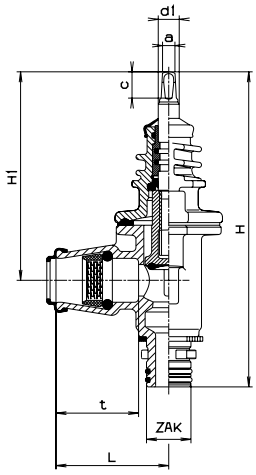
# ZAK®-Range

## ZAK®-Service Valve

with ZAK®-Spigot and ISO socket

for vertical tapping

No. 3160




**ZAK® 34**

| DN | PE pipe Ø mm | H | H 1 | L |
|---|---|---|---|---|
| ¾" | 25 | 240 | 159 | 80 |
| 1" | 32 | 240 | 159 | 86 |

**ZAK® 34**

| DN | t | a | c | d 1 | Weight |
|---|---|---|---|---|---|
| ¾" | 52 | 10,3 | 20 | 16 | 2,30 |
| 1" | 63 | 10,3 | 20 | 16 | 2,40 |

**ZAK® 46**

| DN | PE pipe Ø mm | H | H 1 | L |
|---|---|---|---|---|
| 1¼" | 40 | 272 | 190 | 106 |
| 1½" | 50 | 286 | 190 | 220 |

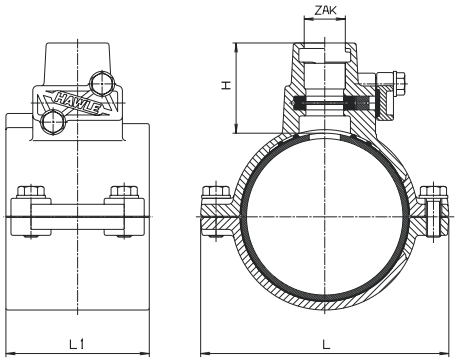
**ZAK® 46**

| DN | t | a | c | d 1 | Weight |
|---|---|---|---|---|---|
| 1¼" | 76 | 10,3 | 20 | 16 | 4,15 |
| 1½" | 91 | 10,3 | 20 | 16 | 4,25 |

## ZAK®-HAKU Shut-off Saddle

for lateral and vertical tapping
of PE and PVC pipes

No. 5320




**ZAK® 34,** for pipe drilling Ø 25 mm

| Pipe Ø mm | H | L | L 1 | Weight |
|---|---|---|---|---|
| 63 | 107 | 135 | 100 | 2,90 |
| 90 | 73 | 150 | 110 | 3,35 |
| 110 | 73 | 170 | 120 | 3,75 |
| 140 | 76 | 208 | 120 | 5,00 |
| 160 | 80 | 230 | 120 | 5,85 |
| 225 | 83 | 310 | 120 | 7,65 |

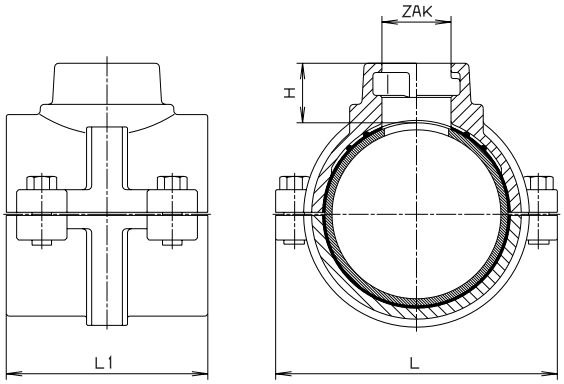
**ZAK® 46,** for pipe drilling Ø 35 mm

| Pipe Ø mm | H | L | L 1 | Weight |
|---|---|---|---|---|
| 90 | 72 | 150 | 110 | 3,55 |
| 110 | 74 | 170 | 120 | 4,00 |
| 140 | 79 | 208 | 120 | 5,20 |
| 160 | 74 | 230 | 120 | 5,95 |
| 225 | 86 | 310 | 120 | 7,70 |

## ZAK®-HAKU Pipe Saddle

for lateral and vertical tapping
of PE and PVC pipes

**No. 5260**




**ZAK® 46,** for pipe drilling Ø 35 mm

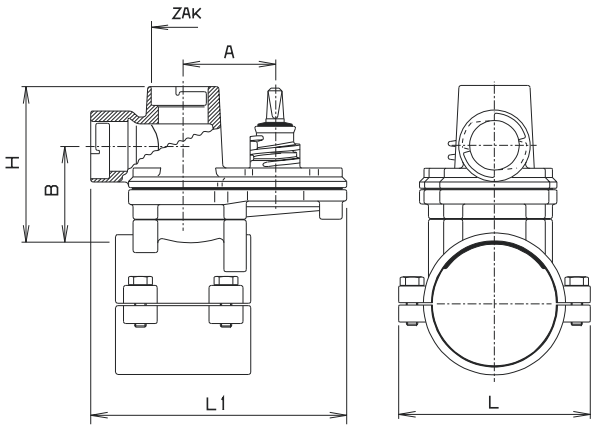
| Pipe Ø mm | H | L | L 1 | Weight |
|---|---|---|---|---|
| **63** | 46 | 135 | 100 | 1,90 |
| **90** | 46 | 150 | 110 | 3,00 |
| **110** | 46 | 170 | 120 | 3,10 |
| **125** | 39 | 190 | 120 | 3,80 |
| **140** | 39 | 205 | 120 | 4,80 |
| **160** | 39 | 230 | 120 | 5,00 |
| **225** | 39 | 300 | 120 | 7,00 |

## ZAK®-HAKU-Hawlinger

for lateral and vertical tapping
of PE and PVC pipes

**No. 2310**

No. 2305
only for vertical tapping (without illustr.)




**ZAK® 34,** for pipe drilling Ø 25 mm, Dimensiones No. 2310

| Pipe Ø mm | H | L | L1 | A | B | Weight |
|---|---|---|---|---|---|---|
| **63** | 125 | 155 | 175 | 68 | 75 | 6,80 |
| **90** | 125 | 155 | 175 | 68 | 75 | 6,90 |
| **110** | 125 | 170 | 175 | 68 | 75 | 7,30 |
| **125** | 125 | 190 | 175 | 68 | 75 | 7,20 |
| **140** | 125 | 205 | 175 | 68 | 75 | 8,10 |
| **160** | 125 | 230 | 175 | 68 | 75 | 9,00 |
| **225** | 125 | 305 | 175 | 68 | 75 | 11,10 |

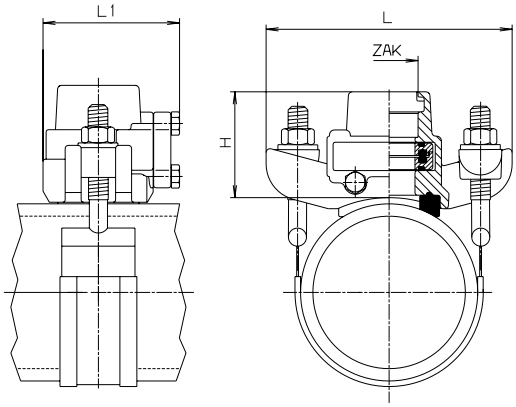
**ZAK® 46,** for pipe drilling Ø 35 mm

| Pipe Ø mm | H | L | L1 | A | B | Weight |
|---|---|---|---|---|---|---|
| **90** | 130 | 155 | 225 | 82 | 65 | 8,70 |
| **110** | 130 | 170 | 225 | 82 | 65 | 9,10 |
| **125** | 130 | 190 | 225 | 82 | 65 | 10,40 |
| **140** | 130 | 205 | 225 | 82 | 65 | 10,00 |
| **160** | 130 | 230 | 225 | 82 | 65 | 11,00 |
| **180** | 130 | 250 | 225 | 82 | 65 | 12,50 |
| **225** | 130 | 305 | 225 | 82 | 65 | 13,90 |

## ZAK®-Universal Shut-Off Saddle

for lateral and vertical tapping
of DCI, Steel- and AC pipes

**No. 3810** **complete** with straps and saddle seal
**No. 3810G** without straps and saddle seal
When ordering please state DN, pipe o.d. and pipe material




**ZAK® 34**, for pipe drilling Ø 25 mm — Weight without strap

| Pipe Ø mm | H | L | L1 | Weight |
|---|---|---|---|---|
| 65-500 | 83 | 200 | 112 | 2,50 |
| | | | | |
| | | | | |
| | | | | |

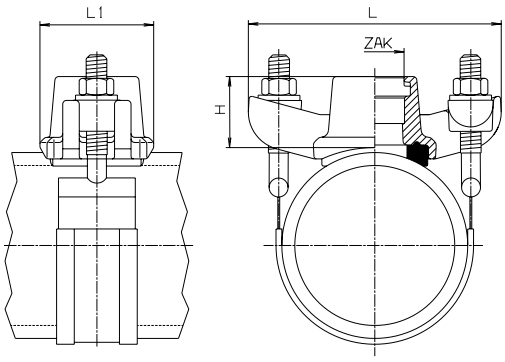
**ZAK® 46**, for pipe drilling Ø 35 mm

| Pipe Ø mm | H | L | L1 | Weight |
|---|---|---|---|---|
| 65-500 | 86 | 200 | 112 | 3,00 |
| | | | | |
| | | | | |
| | | | | |

## ZAK®-Universal Pipe Saddle

for lateral and vertical tapping
of DCI, Steel- and AC pipes

**No. 3540** **complete** with straps and saddle seal
**No. 3540G** without straps and saddle seal
When ordering please state DN, pipe o.d. and pipe material




**ZAK® 46**, for pipe drilling Ø 35 mm — Weight without strap

| Pipe Ø mm | H | L | L1 | Weight |
|---|---|---|---|---|
| 65-500 | 65 | 200 | 90 | 1,70 |
| | | | | |
| | | | | |
| | | | | |

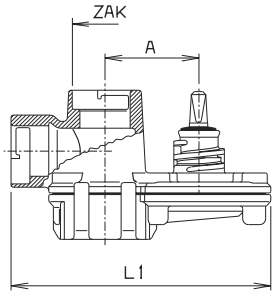
## ZAK®-Universal-Hawlinger

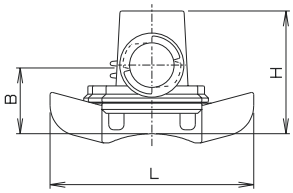
for lateral and vertical tapping
of DCI, Steel- and AC pipes

**No. 2410** **complete** with straps and saddle seal
**No. 2410G** without straps and saddle seal

When ordering please state DN, pipe o.d. and pipe material

No. 2405
only for
vertical
tapping
(without
illustr.)




Weight without strap

**ZAK® 34**, for pipe drilling Ø 25 mm, Dimensiones No. 2410G

| DN | H | L | L1 | A | B | Weight |
|---|---|---|---|---|---|---|
| **65-500** | 110 | 200 | 170 | 68 | 60 | 4,70 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**ZAK® 46**, for pipe drilling Ø 35 mm

| DN | H | L | L1 | A | B | Weight |
|---|---|---|---|---|---|---|
| **65-500** | 120 | 200 | 225 | 82 | 65 | 6,10 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

## Strap with Saddle Seal

inclusive grip pieces, washers and nuts
**for all ZAK®-Saddles and ZAK®-Hawlinger**

**No. 3110** DN 65-500

When ordering please state DN, pipe o.d. and pipe material

# ZAK®-Range

## ZAK®-ISO-Fittings for PE pipes

### ZAK®-Adaptor

No. 6160

| ZAK® | PE pipe ∅ mm | Weight |
|---|---|---|
| 34 | 20 | 0,30 |
| | 25 | 0,40 |
| | 32 | 0,50 |
| | 40 | 0,70 |
| | | |
| 46 | 32 | 0,70 |
| | 40 | 0,80 |
| | 50 | 1,20 |
| | 63 | 1,60 |

### ZAK®-Elbow 90° swivel type

No. 6465

| ZAK® | PE pipe ∅ mm | Weight |
|---|---|---|
| 34 | 32 | 1,60 |
| | 40 | 1,80 |
| | | |
| 46 | 32 | 1,70 |
| | 40 | 1,90 |
| | 50 | 2,30 |
| | 63 | 2,80 |
| | | |
| | | |

### ZAK®-Elbow 90° PE tail

No. 6479

| ZAK® | PE pipe ∅ mm | Weight |
|---|---|---|
| 34 | 32 | 0,80 |
| | 40 | 0,90 |
| | | |
| 46 | 32 | 1,00 |
| | 40 | 0,65 |
| | 50 | 0,85 |
| | 63 | 1,30 |
| | | |
| | | |

### ZAK®-Elbow 90°

No. 6480

| ZAK® | PE pipe ∅ mm | Weight |
|---|---|---|
| 34 | 20 | 0,40 |
| | 25 | 0,55 |
| | 32 | 0,80 |
| | 40 | 1,10 |
| | | |
| 46 | 32 | 0,90 |
| | 40 | 1,20 |
| | 50 | 1,65 |
| | 63 | 2,10 |

### ZAK®-PE tail

No. 6180

| ZAK® | PE pipe ∅ mm | Weight |
|---|---|---|
| 34 | 32 | 0,50 |
| | 40 | 0,95 |
| | | |
| 46 | 32 | 0,60 |
| | 40 | 0,60 |
| | 50 | 0,90 |
| | 63 | 1,20 |
| | | |
| | | |

### ZAK®-ISO fitting

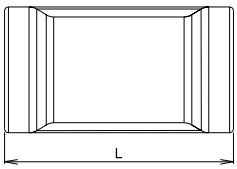
**sliceable with detachable socket**

No. 6170

| ZAK® | PE pipe ∅ mm | Weight |
|---|---|---|
| 34 | 32 | 1,05 |
| | 50 | 1,85 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

# ZAK®-Range

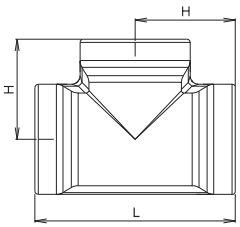
## ZAK®-Connector
**with double sockets**




**No. 6340**

| ZAK® | L | Weight |
|---|---|---|
| 46 | 120 | 1,00 |

## ZAK®-Tee piece
**all socketed**




**No. 6540**

| ZAK® | L | H | Weight |
|---|---|---|---|
| 46 | 120 | 60 | 1,40 |

## ZAK®-Reduction
**ZAK®-Socket 34**
**ZAK®-Spigot 46**

**No. 6350**

| ZAK® | L | Weight |
|---|---|---|
| 46-34 | 58 | 0,33 |

## ZAK®-Plug
**for ZAK®-adaptor**

**No. 6980**

| ZAK® | Weight |
|---|---|
| 34 | 0,75 |
| 46 | 1,10 |

## No. 6945 O-ring
**ZAK® 34 / ZAK® 46**

## No. 6970 Securityring
**ZAK® 34 / ZAK® 46**

## ZAK®-Drilling adaptor
**for Hawle drilling machines**

**No. 5895**

| ZAK® | Weight |
|---|---|
| 34 | 0,75 |
| 46 | 1,10 |

Illustrations, technical data, dimensions and weights are subject to alteration without notice.

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