

MAC

*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

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HAWLE-Manufacturing plants in Austria



I: Vöcklabruck



II: Frankenmarkt

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

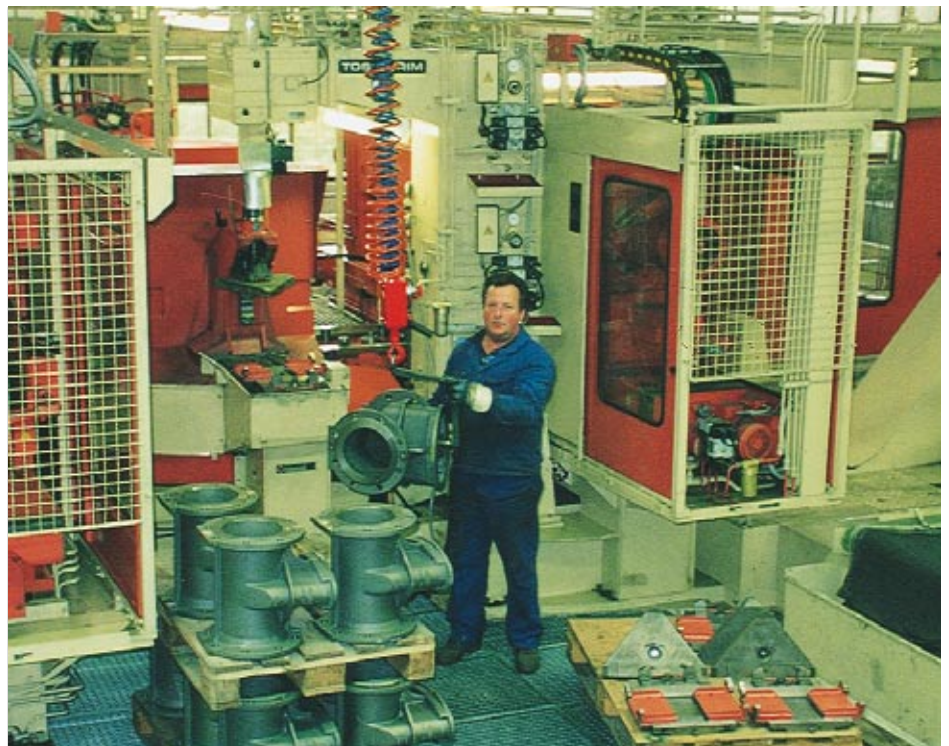
Licensees all over the world use HAWLE-know-how.

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

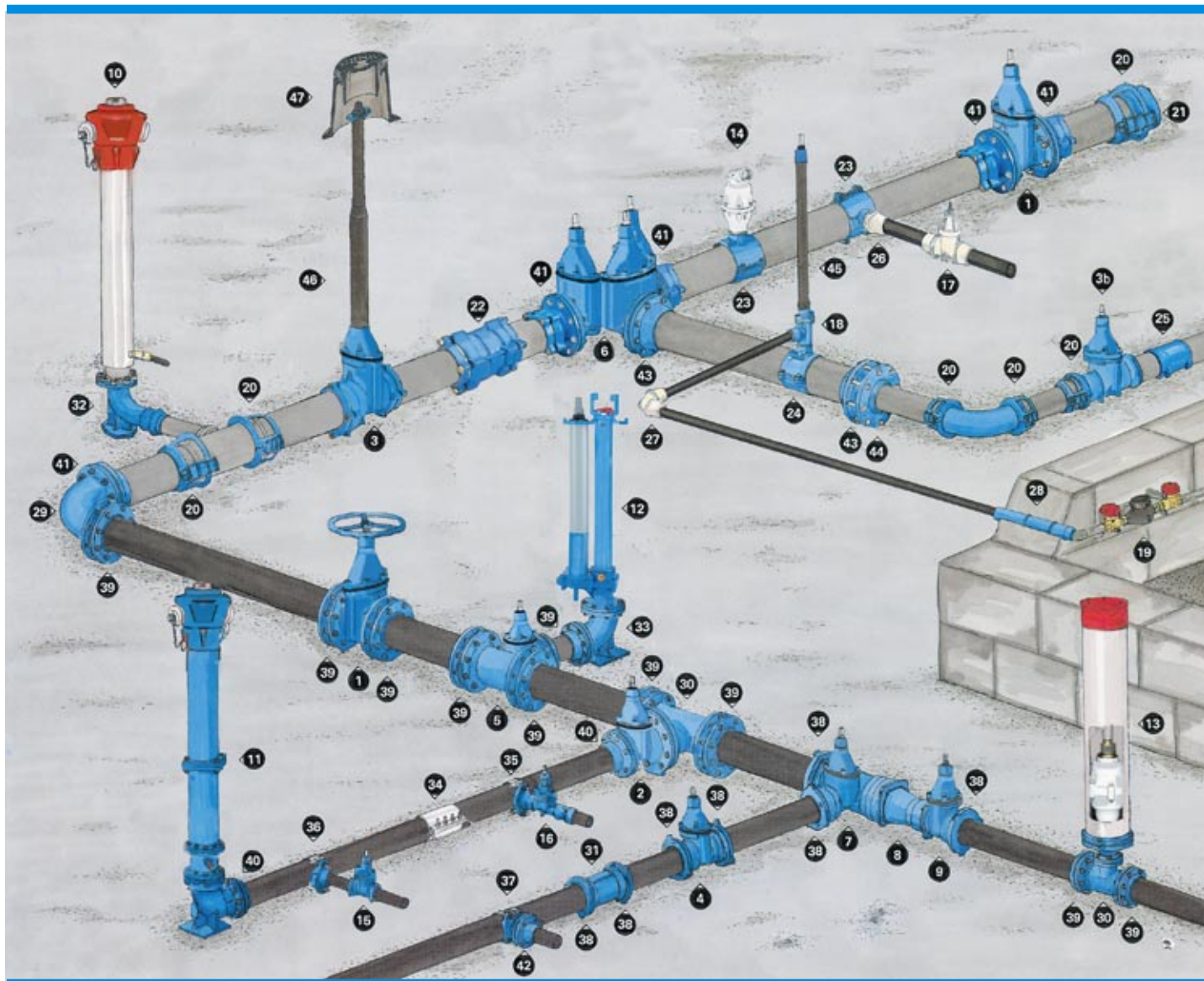
HAWLE recognized for innovation:

- 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



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

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

4. 2004



Fluidised bed
Epoxy powder coating at 200° C

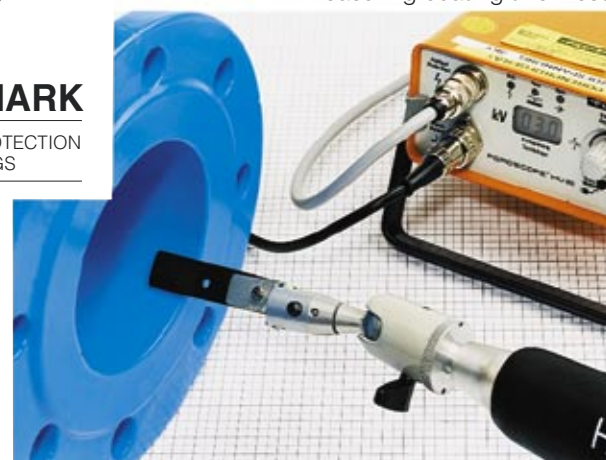


RAL QUALITY MARK

HIGH QUALITY CORROSION PROTECTION
FOR VALVES AND FITTINGS



Measuring coating thickness



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

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/mm²)
- 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** (Gütegemeinschaft **S**chwerer **K**orrosionsschutz - the association for high quality corrosion protection)
- HAWLE Standardcolour RAL 5012

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 waived 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

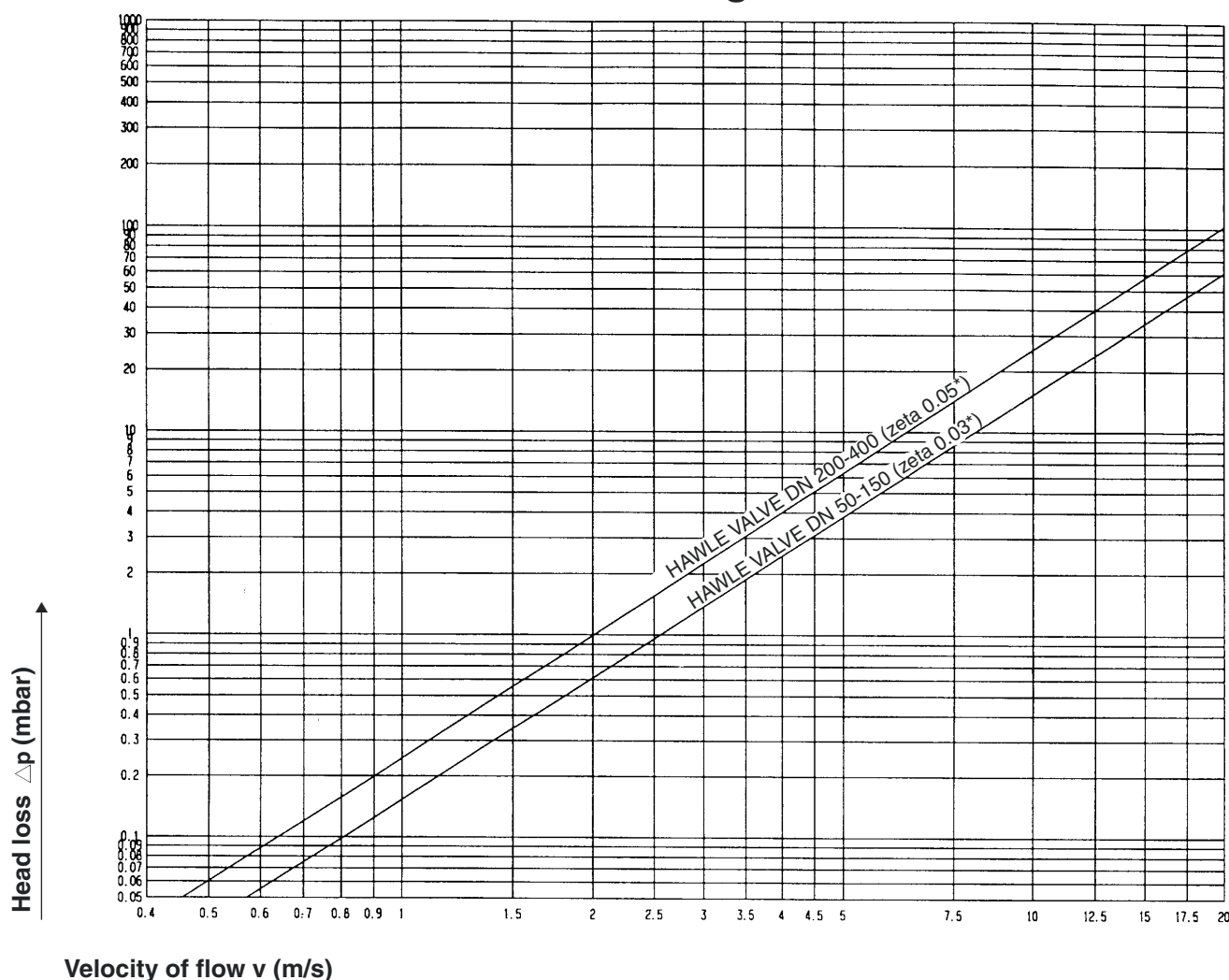
Hawle-products are produced according to the latest state of the art technology.

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.

Head loss diagramm



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

Table of flow capacity of HAWLE valves (m³/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

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 **HAWLE^A** 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

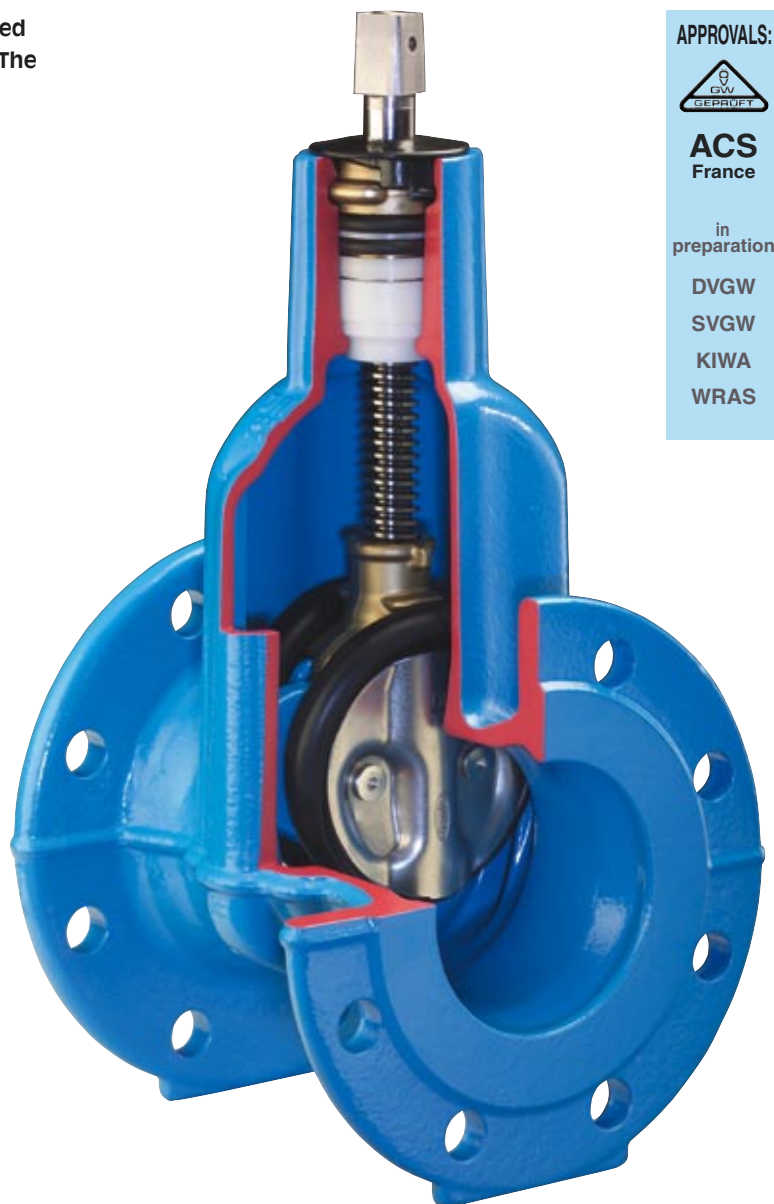
of ductile iron EN-GJS-400/500 / 1.4301 elastomer (suitable for potable water) in sandwich design with two separate rubber gaskets. This new wedge and sealing geometry as well as the special wedge guide ensure low closing torques in every situation.

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 **HAWLE^A** valve -
the revolution in valve technology



APPROVALS:



ACS
France

in
preparation

DVGW
SVGW
KIWA
WRAS

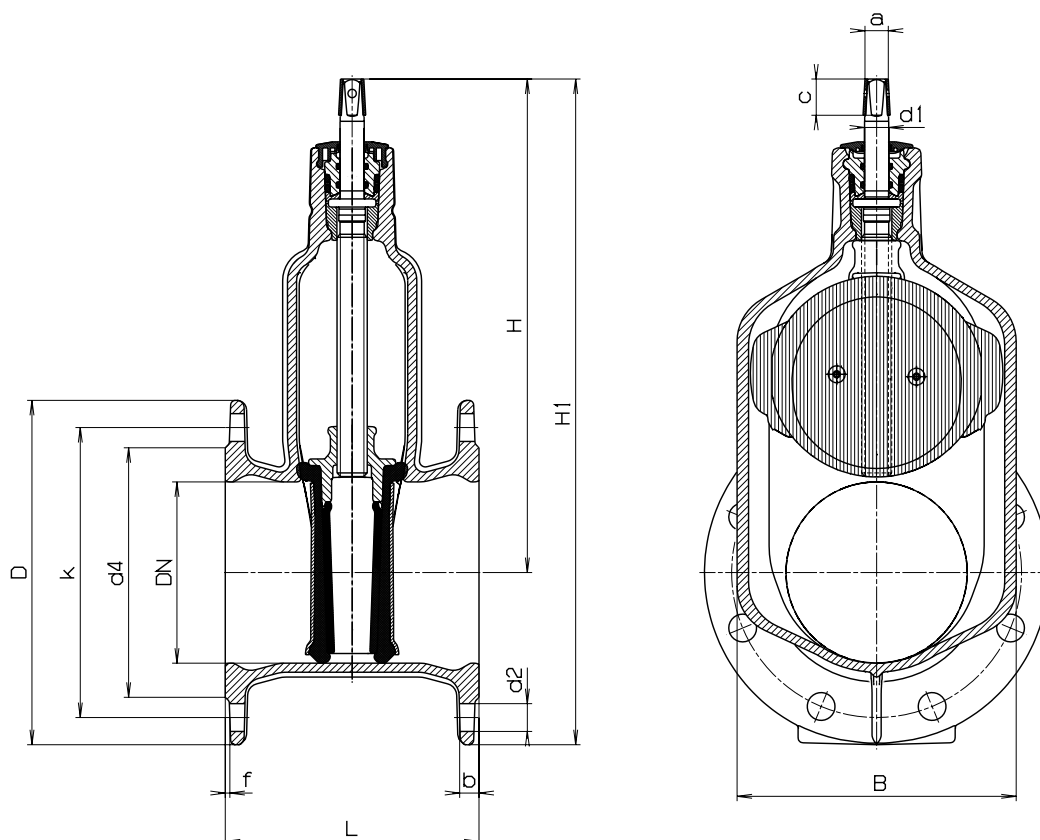
HAWLEA Valve Flanged Ends

Standard version: without handwheel and extension spindle

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

Suitable accessories:

- 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 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 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 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	340	17	295	264	4	8	M 20	23	24,3	38	25	509	679	230	400	282	41,0	46,5
	16						12												

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

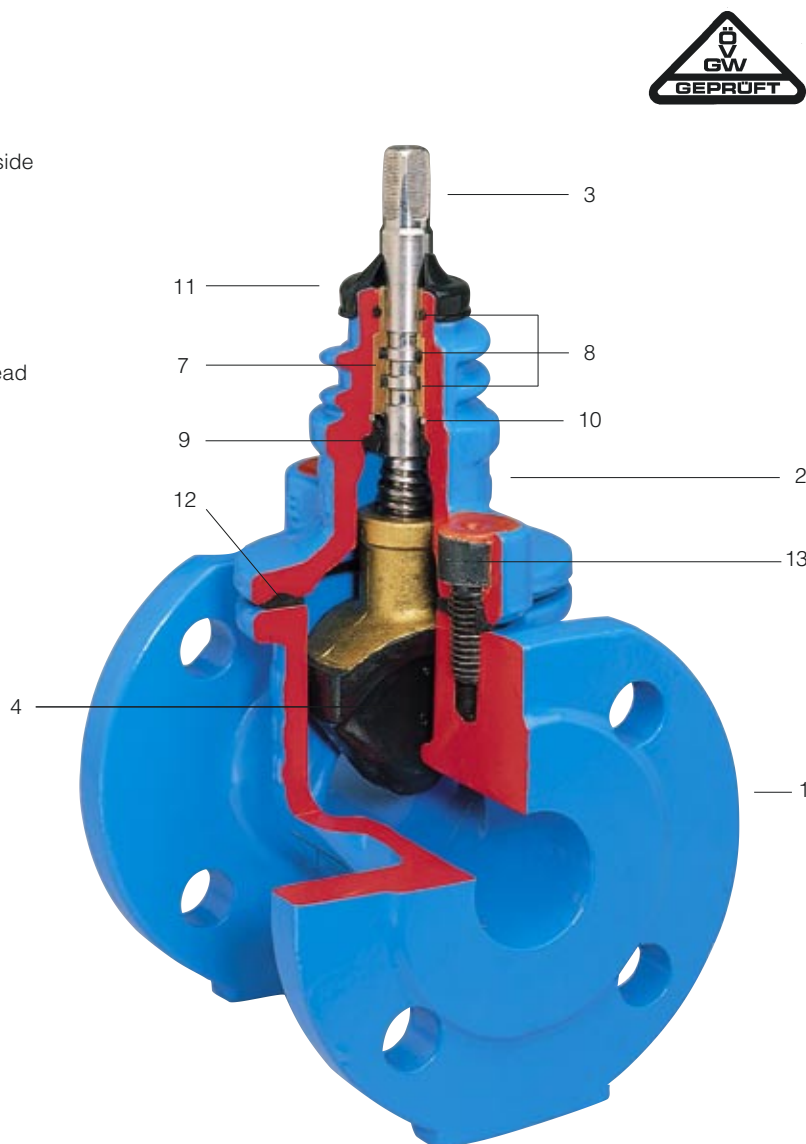
9 **Back seal** of elastomer (suitable for potable water)

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)

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.

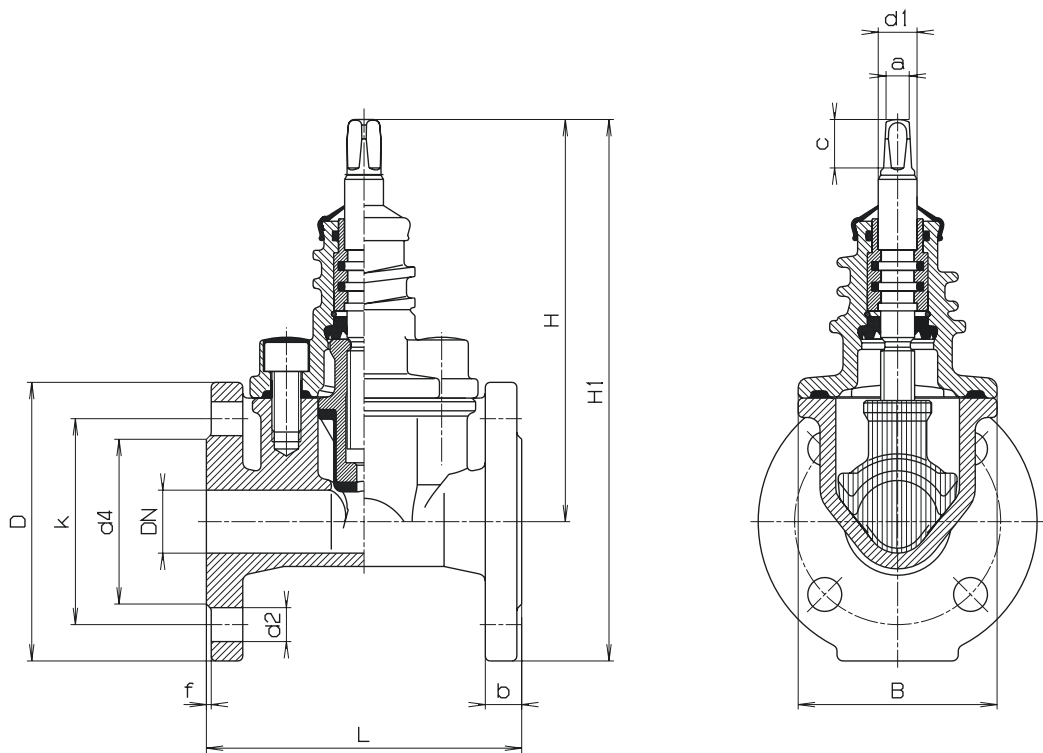
Standard version:
Drilled to PN 10 - DIN 2501;
Without handwheel and extension spindle

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



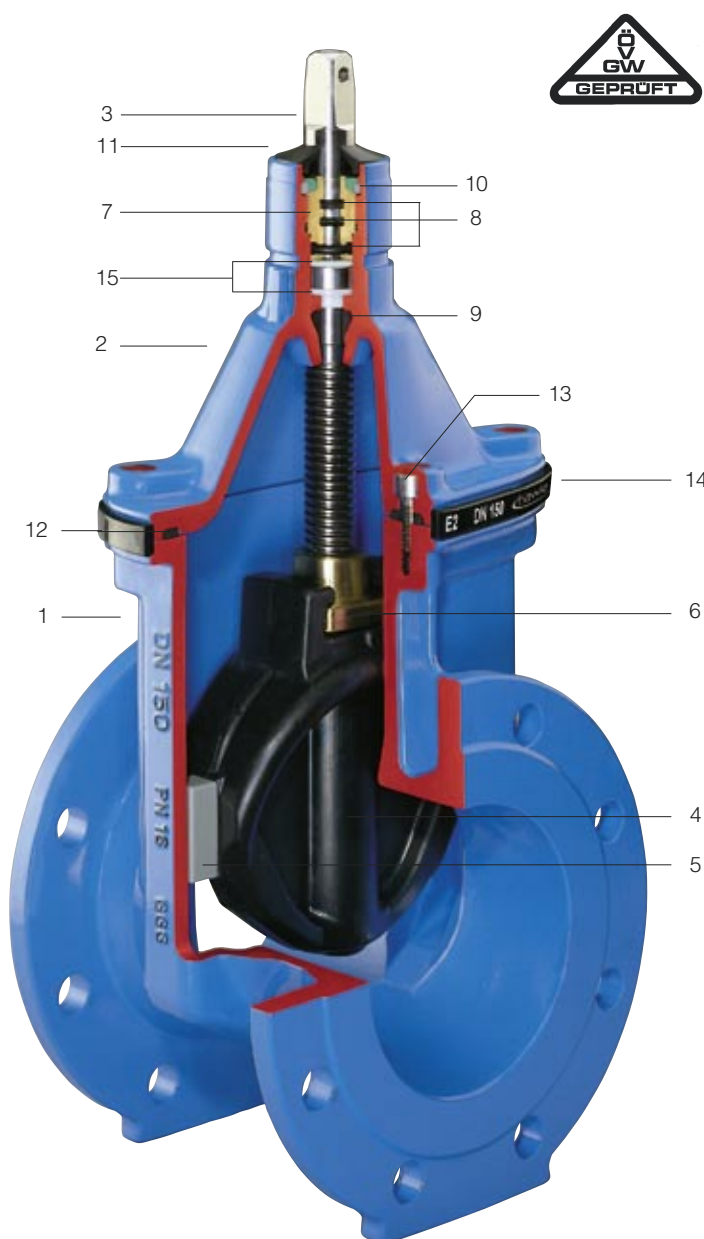
DN	PN	Flange					Bolts			Spindle			Valve					Weight kg	
		D	b	k	d 4	f	Qty.	Thread	d 2	a	c	d1	H	H1	L		B	short	long
															short	long			
20	10	115	16	75	58	2	4	M 12	14	10,3	20	16	164	223	130		80	4,5	
	16																		
25	10	115	16	85	68	2	4	M 12	14	10,3	20	16	164	223	130		80	4,5	
	16																		
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																		

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 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



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 !

E2 Valve Flanged Ends DN 50-200

Standard version: without handwheel and extension spindle

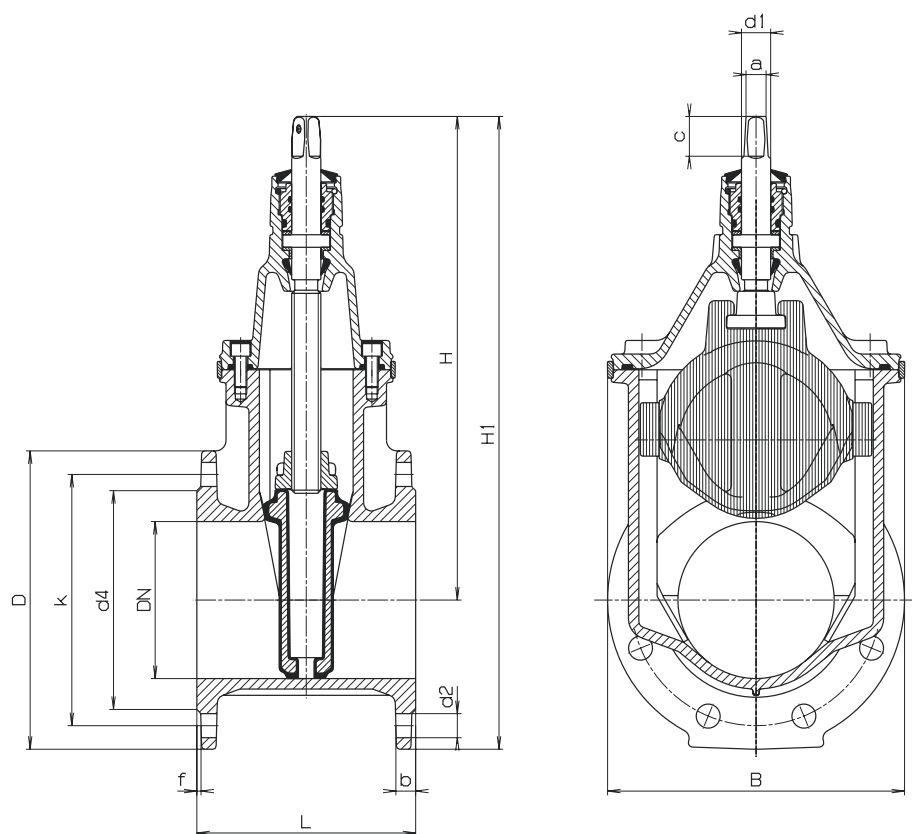
Design versions: for electric actuator: No. 4000ELE2;
with position indicator: No. 4000STE2

Special versions: on request!

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

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

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 under pressure (according to 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			B	short	long	BS 5163
															short	long	BS 5163				
50	10	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
	16																				
65	10	185	19	145	118	3	4	M 16	19	17,3	35	25	328	420	170	270		180	17,0	18,5	
	16																				
80	10	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
	16																				
100	10	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
	16																				
125	10	250	19	210	183	3	8	M 16	19	19,3	38	28	450	575	200	325		285	35,0	38,0	
	16																				
150	10	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
	16																				
200	10	340	20	295	264	3	8	M 20	23	24,3	48	32	563	733	230	400	292	357	64,0	72,0	67,5
	16						12														

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

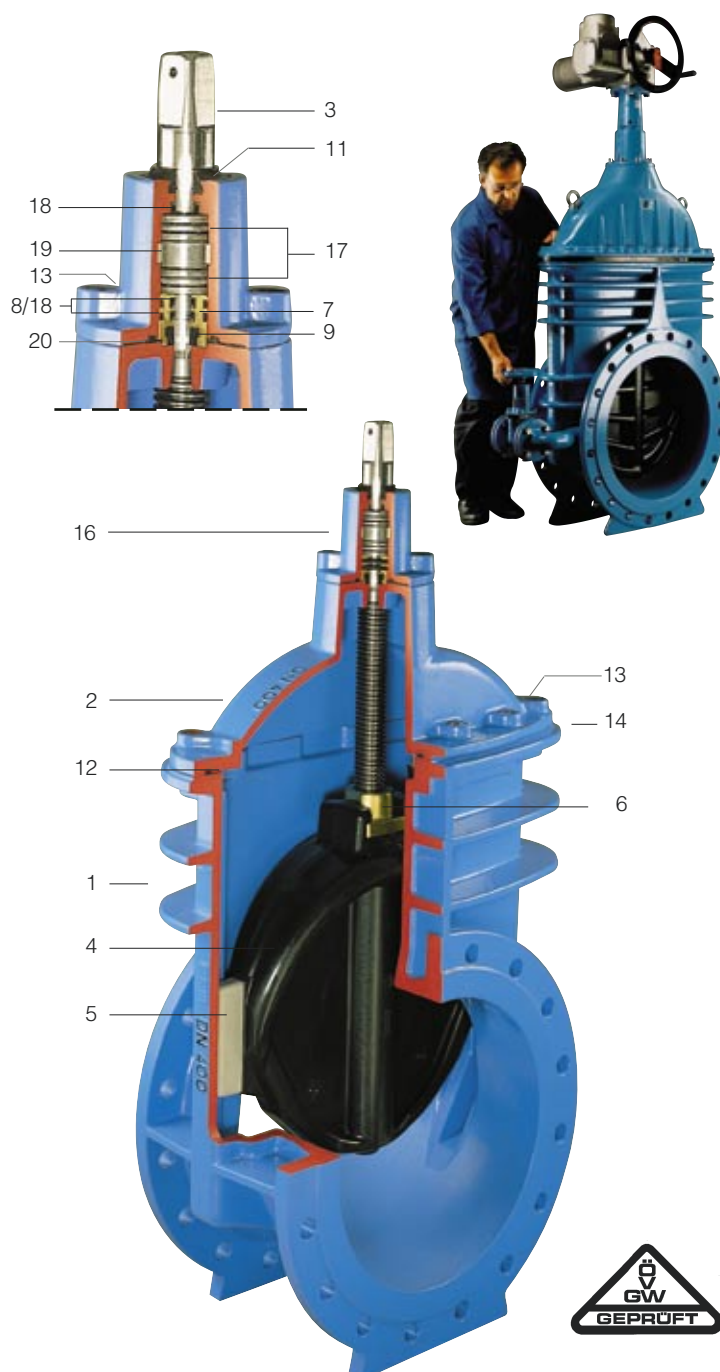
13 Allen screws St 8.8 DIN 912 absolutely corrosion protected by being sunk into the body and sealed, and by passing through bonnet gasket

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



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 !

E2 Elypso Valve Flanged Ends DN 250-600

Standard version: without handwheel and extension spindle

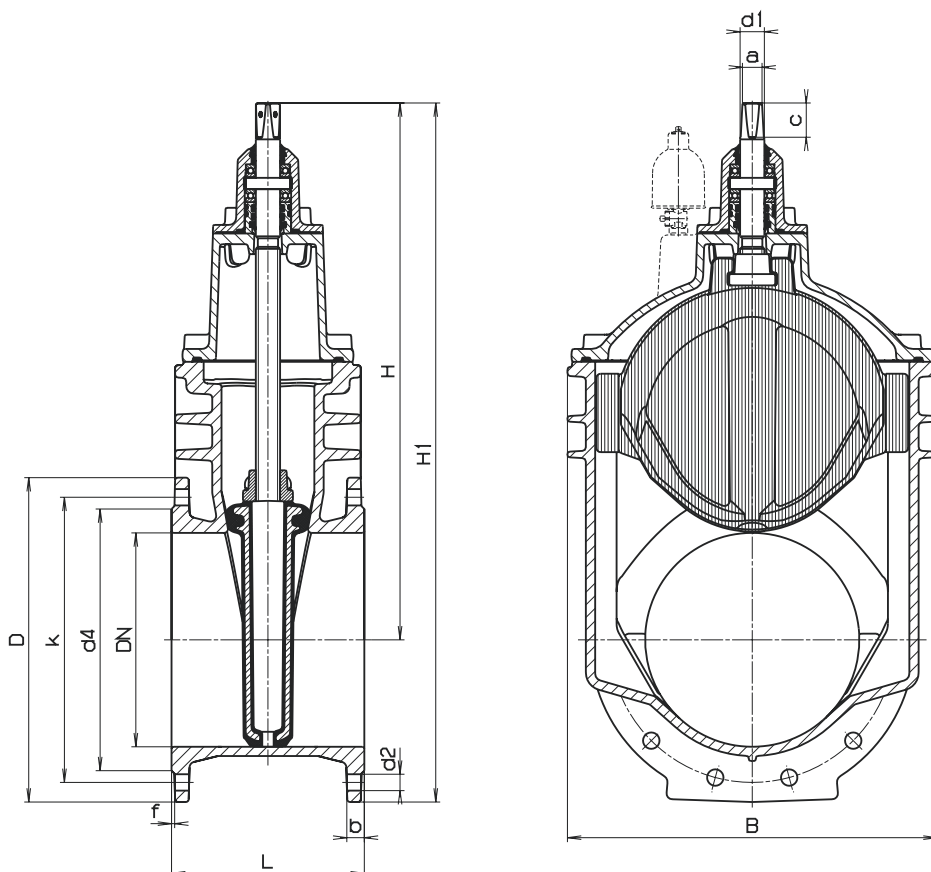
Design versions: for electric actuator: No. 4000ELE2;
with position indicator: No. 4000STE2

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			B	short	long	BS 5163
															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												

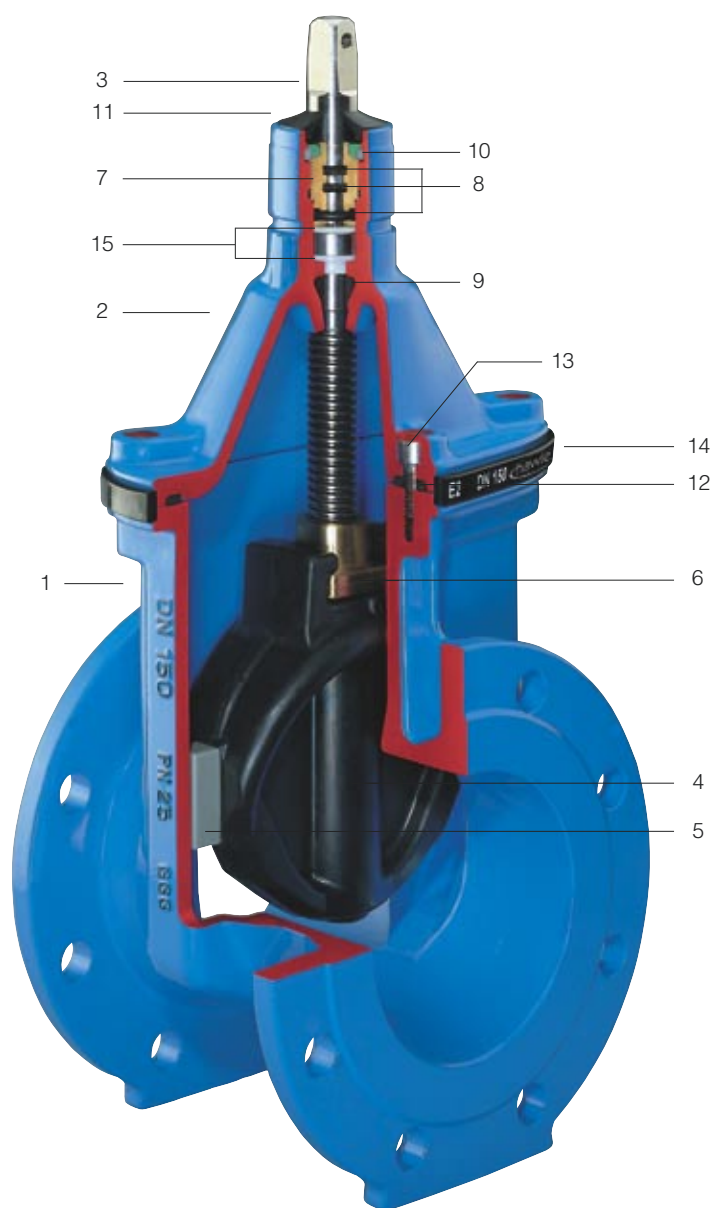
* Body: DN 400 - flange connection: DN 450 &/or 500

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 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 25 (standard);
For DIN 2501-PN 16 in sizes of DN 200 mm and above please specify on order - other standards on request !

E2 Valve Flanged Ends „PN 25”

Standard version: without handwheel and extension spindle

Design versions: for electric actuator: Nr. 4000ELE2;
with position indicator: No. 4000STE2

Special versions: on request!

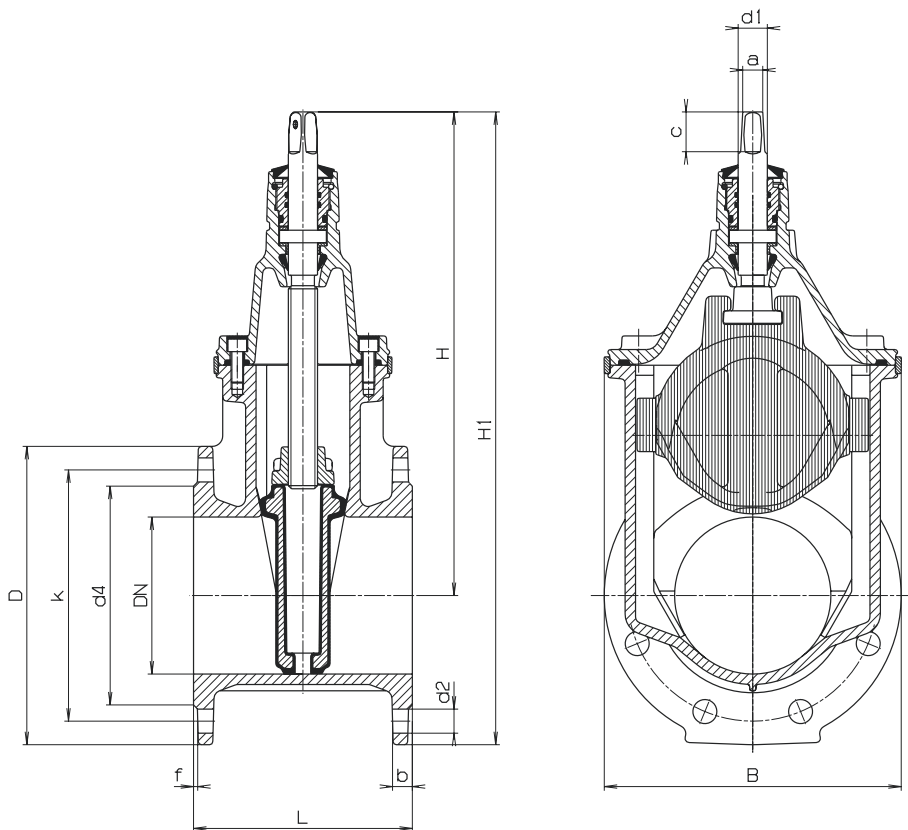
Suitable accessories: **Handwheel:** No. 7800

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

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

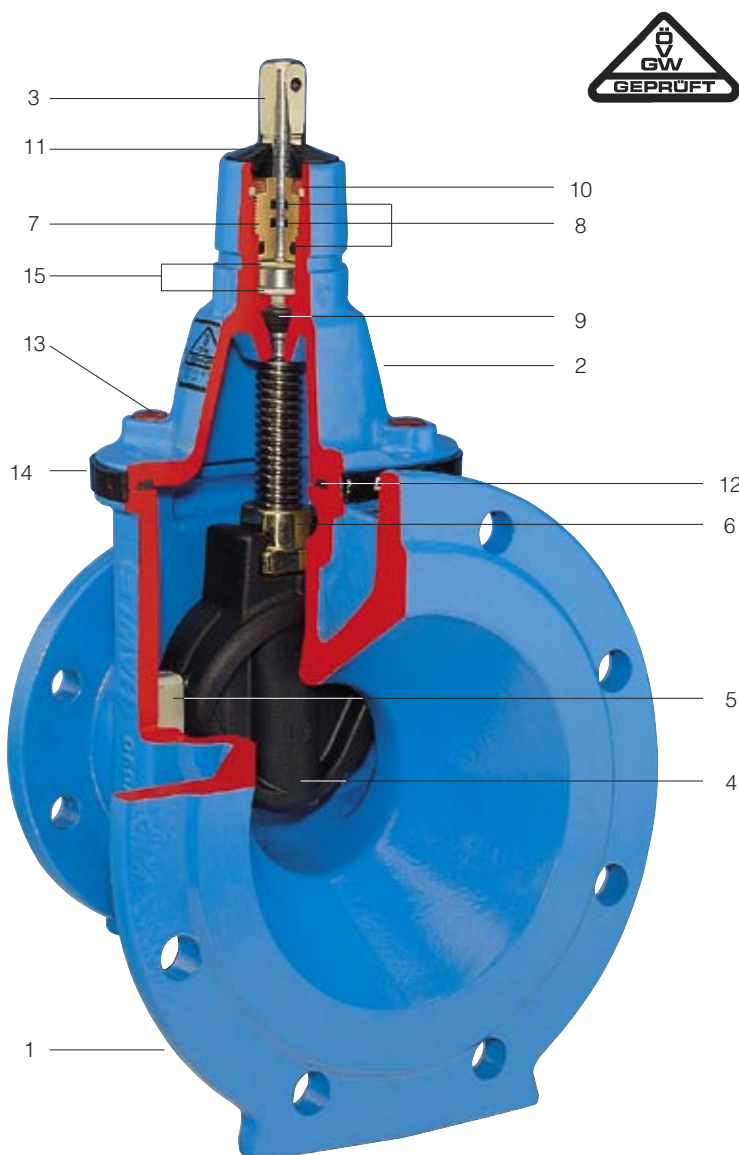
epoxy powder coated

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 !

E2 Elypso Reducing Valve

Standard version: without handwheel and extension spindle

Design versions: for electric actuator: No. 4150ELE2;
with position indicator: No. 4150STE2

Special versions: on request !

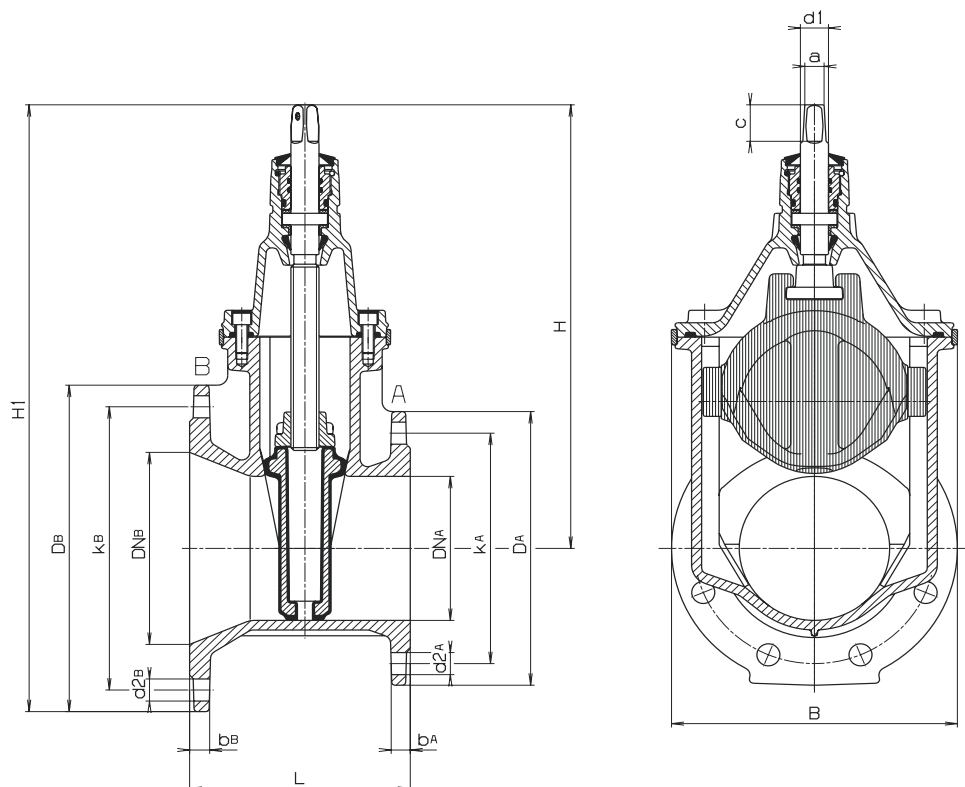
Suitable accessories: **Handwheel:** No. 7800

Extension Spindles: rigid No. 9000E2, for DN 250 and higher No. 9000
telescopic No. 9500E2, 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 nb^* , na^* = bolts per flange

DN	PN	Flange A					Flange B					Valve				Spindle			Weight kg
		DA	ba	KA	d2A	na*	DB	bb	KB	d2B	nb*	H	H 1	L	B	a	c	d 1	
100 - 65	$\frac{10}{16}$	185	19	145	19	4	220	19,0	180	19	8	328	438	180	180	17,3	35	25	19,0
100 - 80	$\frac{10}{16}$	200	19	160	19	8	220	19,0	180	19	8	336	446	190	180	17,3	35	25	20,0
150 - 80	$\frac{10}{16}$	200	19	160	19	8	285	19,0	240	23	8	336	479	200	180	17,3	35	25	24,0
125 - 100	$\frac{10}{16}$	220	19	180	19	8	250	19,0	210	19	8	373	498	200	213	19,3	38	25	25,5
150 - 100	$\frac{10}{16}$	220	19	180	19	8	285	19,0	240	23	8	373	516	210	213	19,3	38	25	28,0
200 - 100	$\frac{10}{16}$	220	19	180	19	8	340	20,0	295	23	$\frac{8}{12}$	373	543	210	213	19,3	38	25	32,0
200 - 150	$\frac{10}{16}$	285	19	240	23	8	340	20,0	295	23	$\frac{8}{12}$	462	632	220	285	19,3	38	28	46,5
250 - 150	$\frac{10}{16}$	285	19	240	23	8	400	22,0	$\frac{350}{355}$	$\frac{23}{28}$	12	462	662	230	285	19,3	38	28	52,5
300 - 150	$\frac{10}{16}$	285	19	240	23	8	455	24,5	$\frac{400}{410}$	$\frac{23}{28}$	12	462	690	240	285	19,3	38	28	57,0
250 - 200	$\frac{10}{16}$	340	20	295	23	$\frac{8}{12}$	400	22,0	$\frac{350}{355}$	$\frac{23}{28}$	12	563	763	240	357	24,3	48	32	68,0
300 - 200	$\frac{10}{16}$	340	20	295	23	$\frac{8}{12}$	455	24,5	$\frac{400}{410}$	$\frac{23}{28}$	12	563	791	250	357	24,3	48	32	74,0
300 - 250	$\frac{10}{16}$	400	22	$\frac{350}{355}$	$\frac{23}{28}$	12	455	24,5	$\frac{400}{410}$	$\frac{23}{28}$	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.

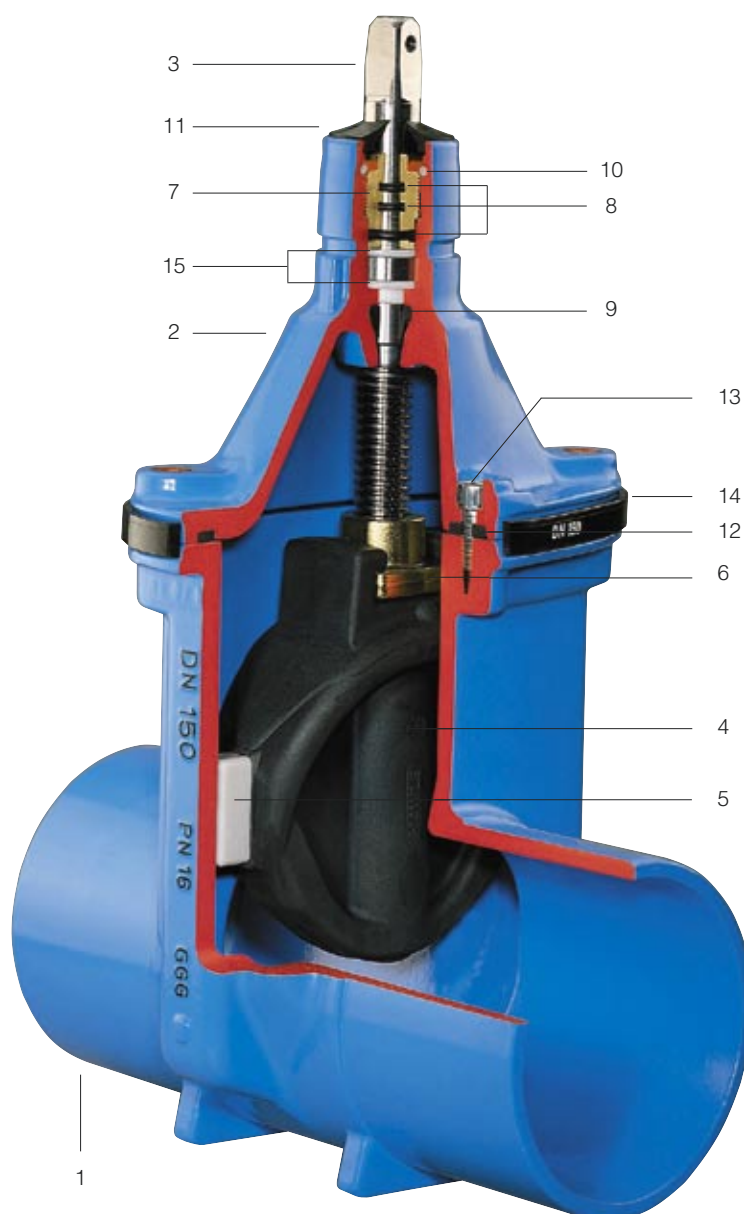
Makes easy the replacement of old valves with flanged ends; if Hawle flanges are used on the valve spigot ends, then flat gaskets are not necessary.

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



E2 Valve Spigot Ends

Standard version: without handwheel and extension spindle

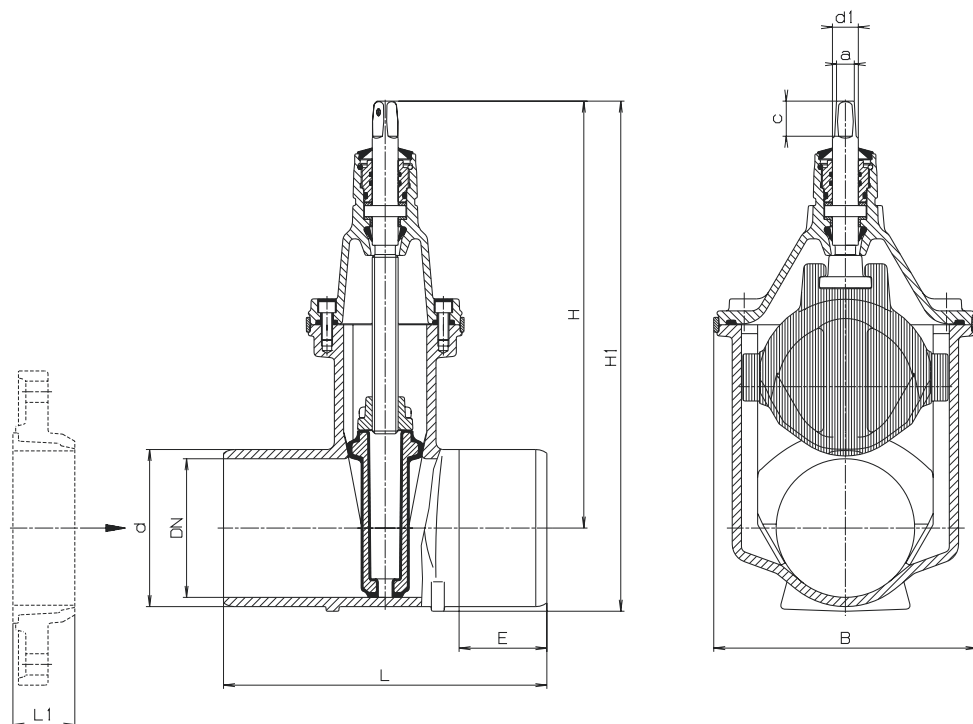
Special versions: for example: **restraint type on request !**

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

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

Order no.	Application	PN	Dimensions/DN						
			80	100	125	150	200	250	300
4500E2	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						●*	●*

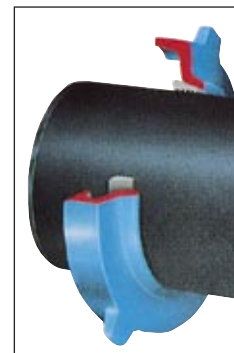
of ductile iron, epoxy powder coated
locking ring of ductile iron

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.

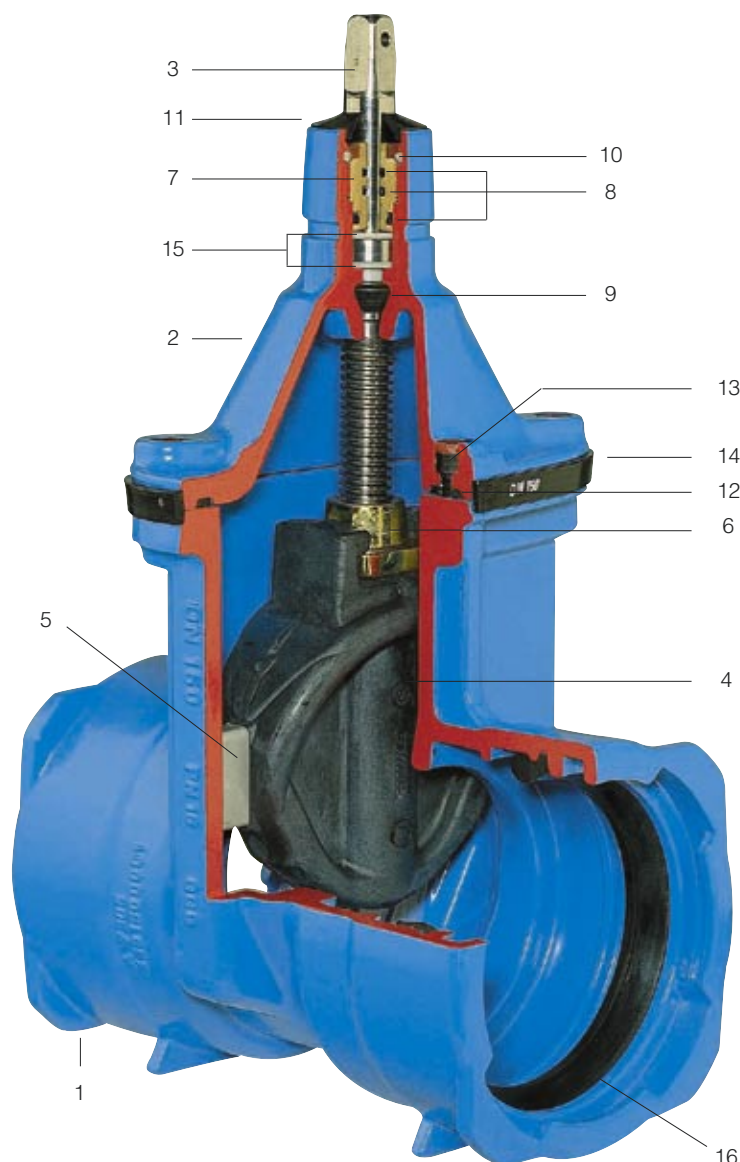


Resilient seated gate valve with sockets for cast iron pipes

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



E2 Elypso Valve Socket Ends for ductile cast iron pipes

Standard version: without handwheel and extension spindle

Design versions: for electric actuator: No. 4500ELE2
with position indicator: No. 4500STE2

Special versions: on request!

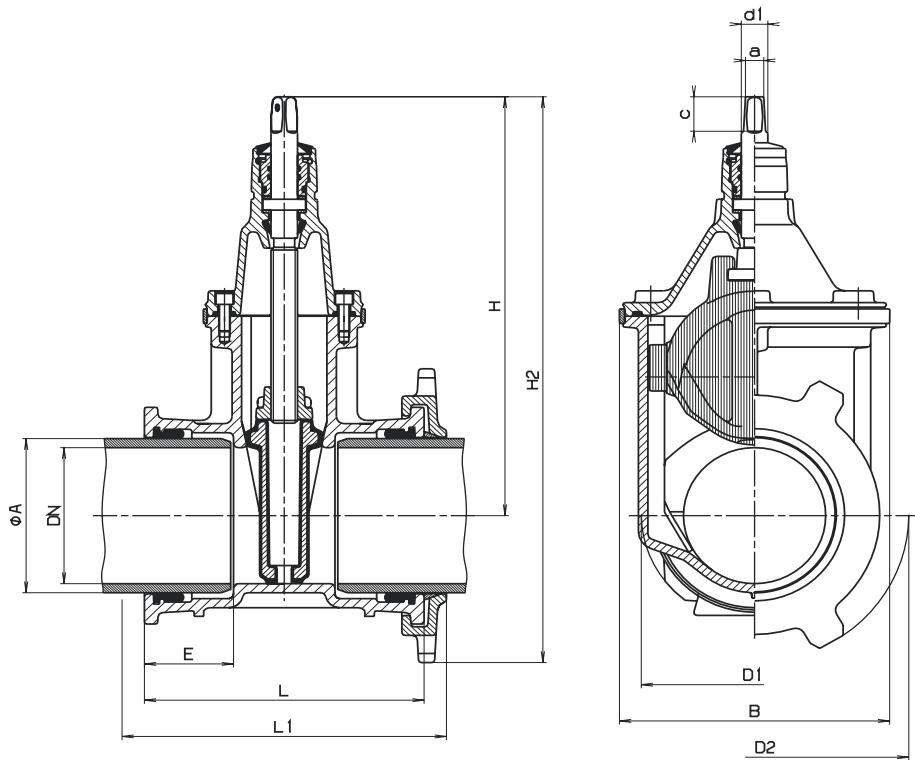
Suitable accessories: **Handwheel:** No. 7800

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

for ductile cast iron pipes and pipes with VRS-Socket

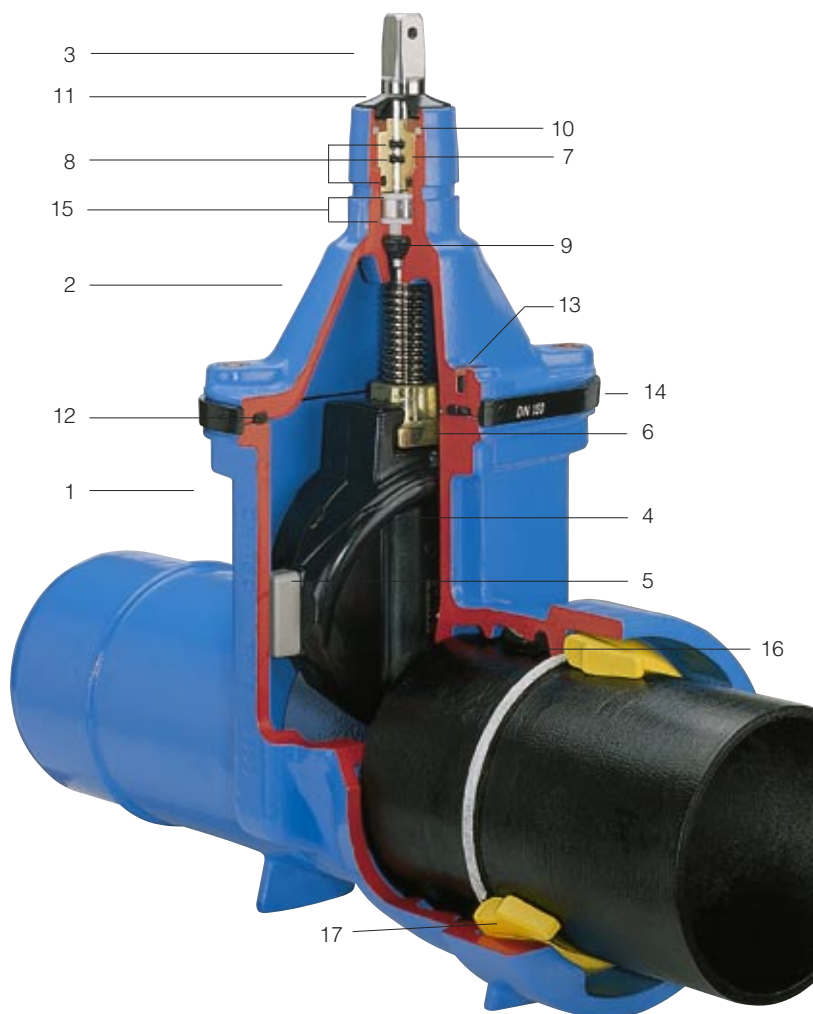
Order no.	Version	Application	PN	Dimensions/DN					
				80	100	150	200	250	300
4027E2	Socket - Spigot	for water and non aggressive waste water other applications on request	16	•	•	•	•	•	•

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!

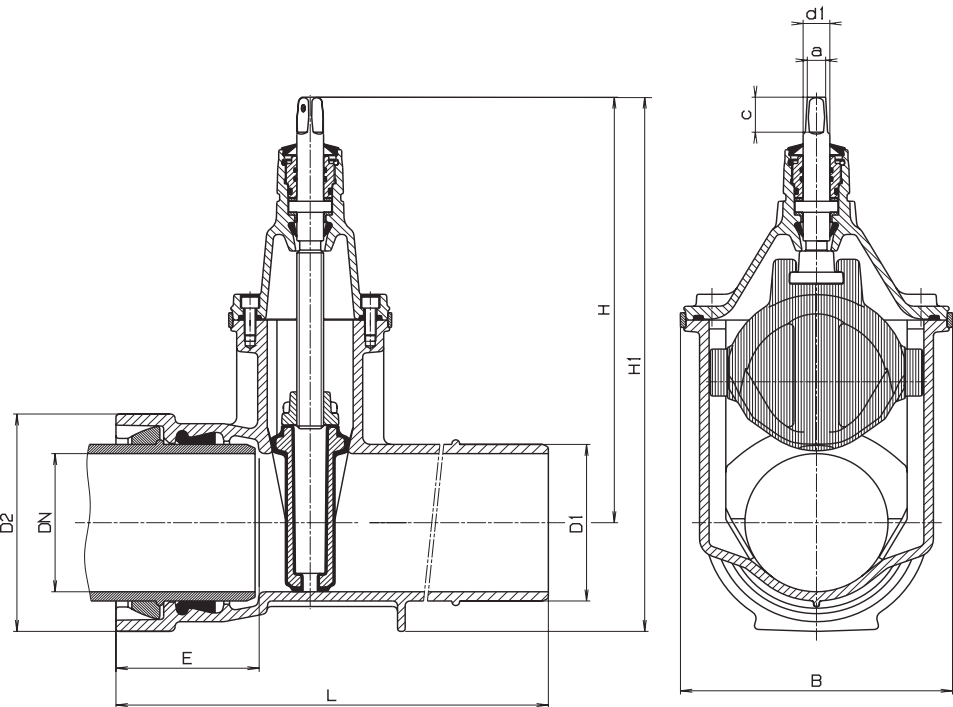


E2 VRS-Socket Valve

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	V a l v e							S p i n d l e			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

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



Material and design features:

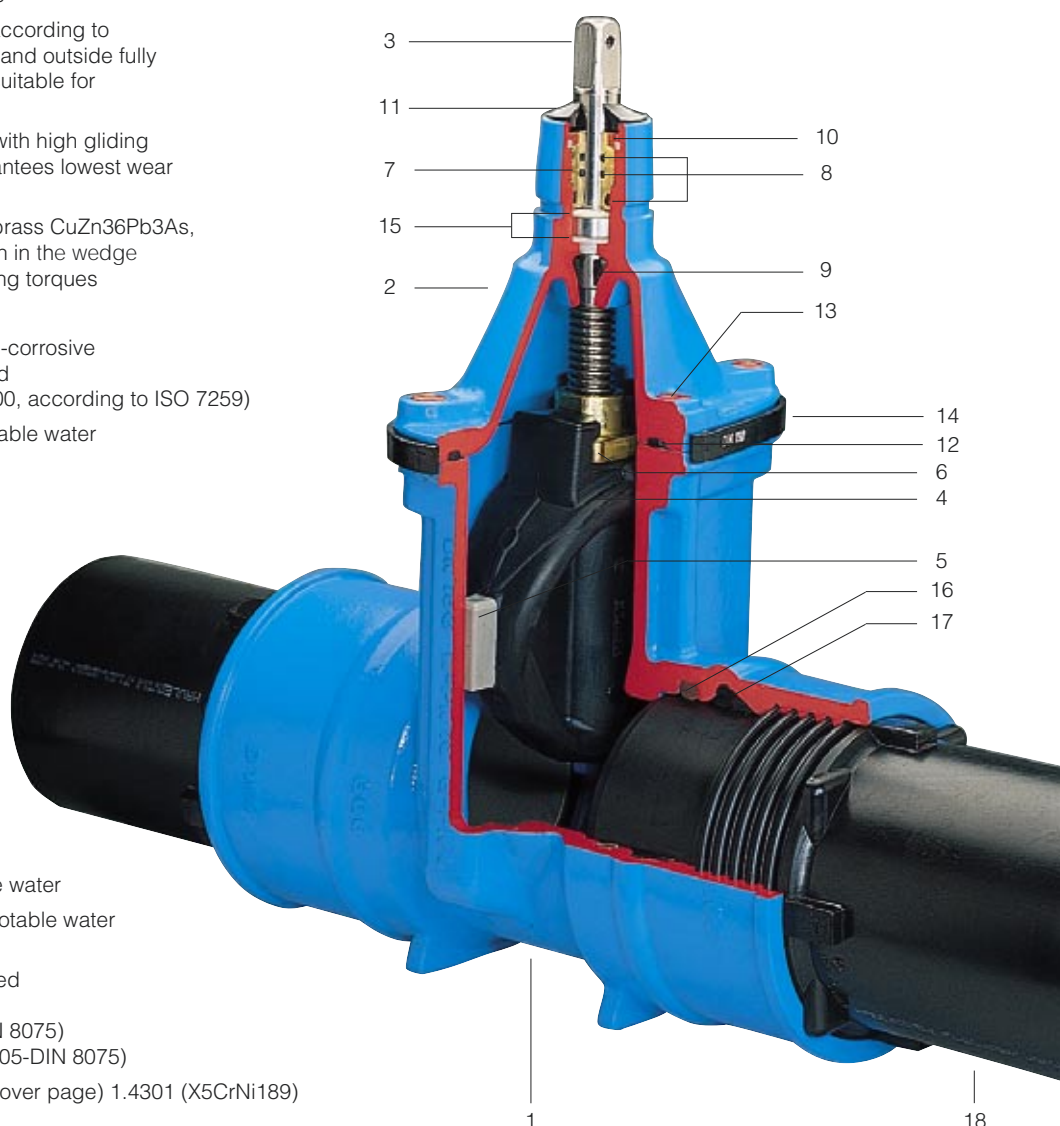
- 1/2 **Body (1) and bonnet (2)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft Schwerer Korrosionsschutz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



E2 Elypso Valve for PE fusion

- Standard version:

without handwheel and extension spindle
- Design versions:

for electric actuator: No. 4050ELE2, No. 4051ELE2
with position indicator: No. 4050STE2, No. 4051ELE2
- Special versions:

on request
- Suitable accessories:

Handwheel:

No. 7800

Extension Spindles:

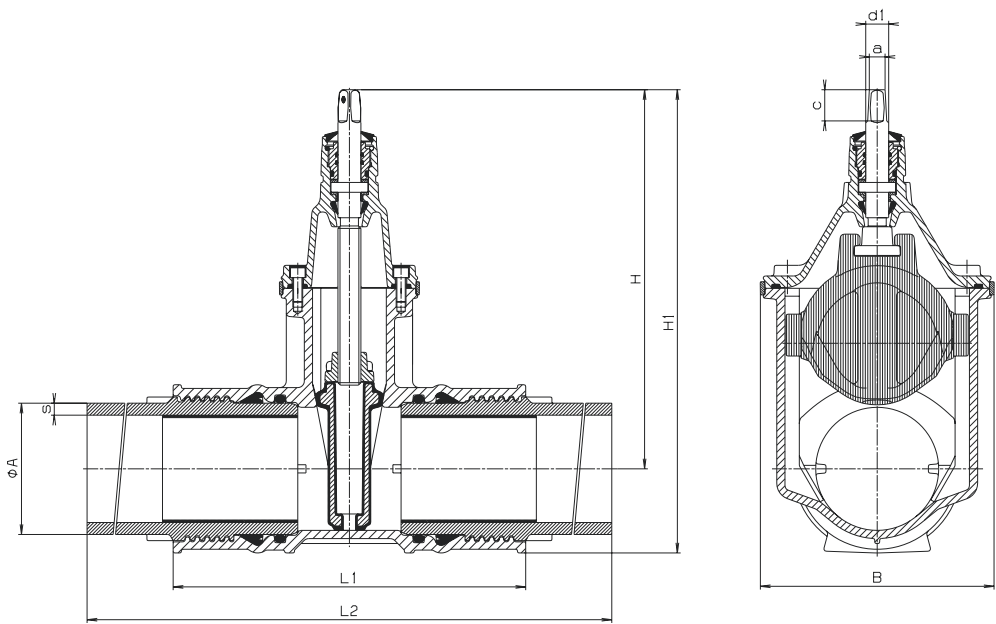
rigid No. 9000E2, up to DN 40 No. 9101
Teleskopisch No. 9500E2, up to DN 40 No. 9601

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

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

4. 2004

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

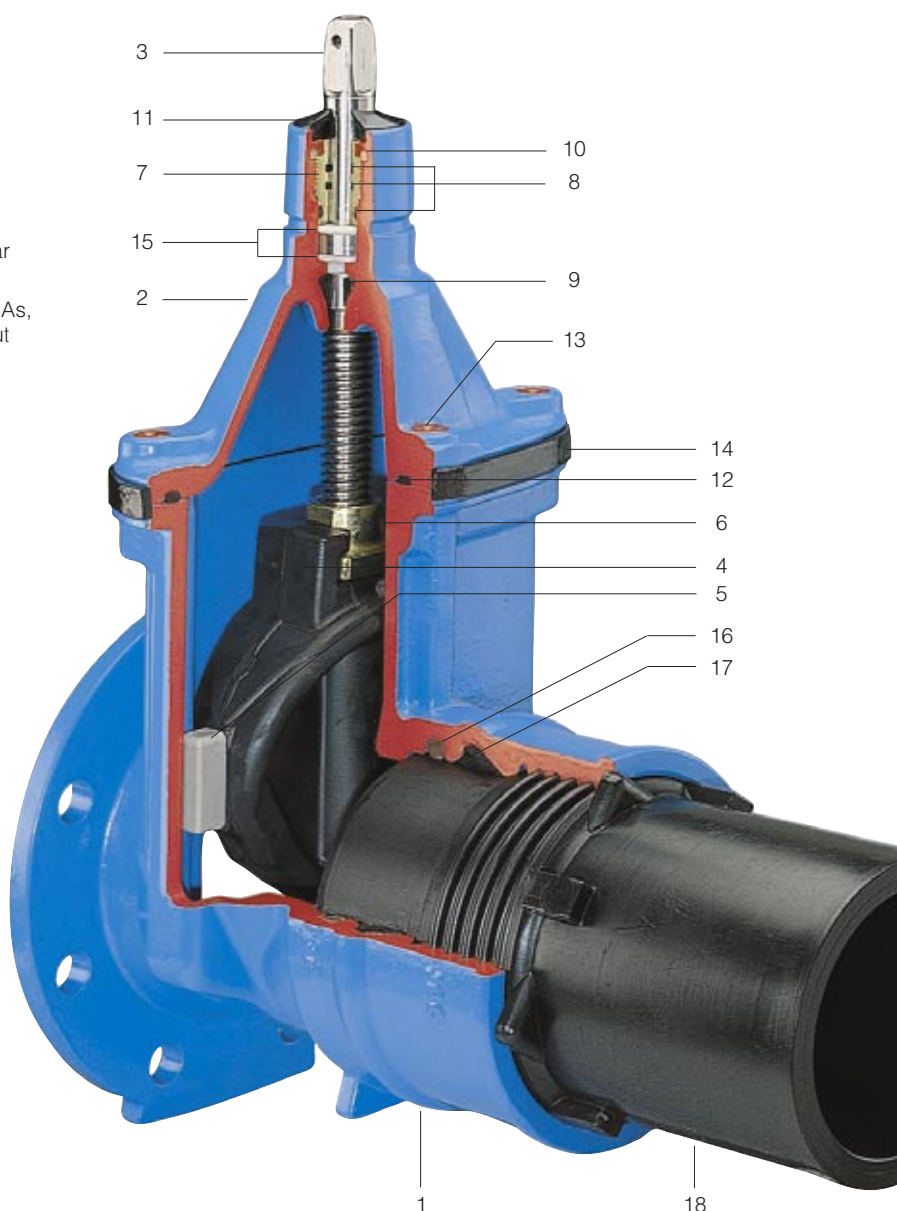
Material and design features:

- 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.



E2 Elypso Valve Flange/PE tail

Standard version: without handwheel and extension spindle

Design versions: for electric actuator: No. 4090ELE2, No. 4091ELE2
with position indicator: No. 4090STE2, No. 4091STE2

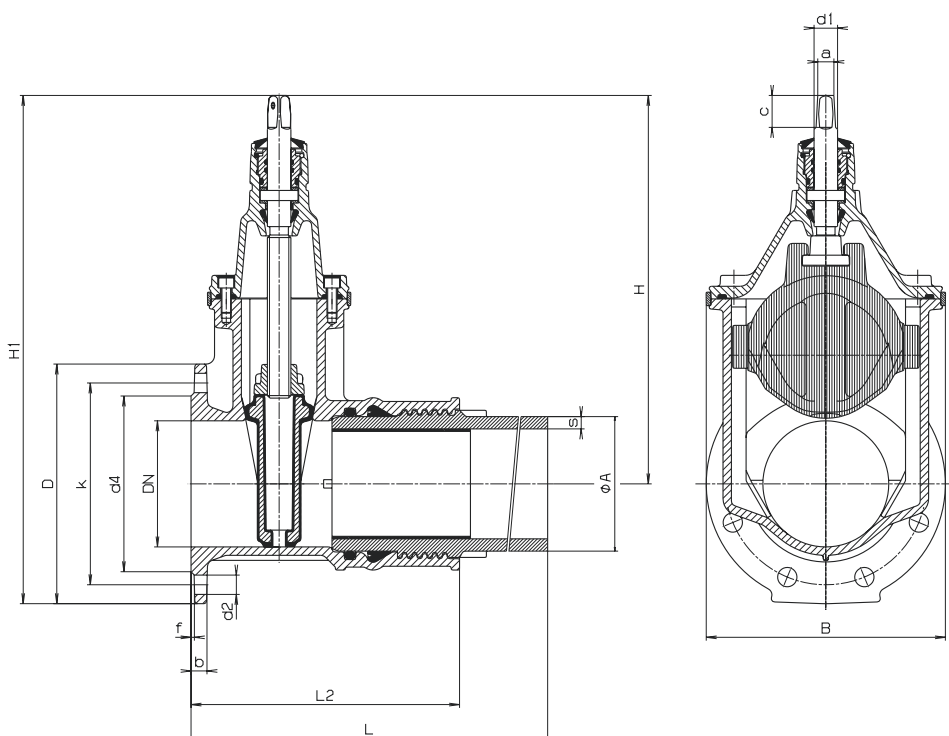
Special versions: on request!

Suitable accessories: **Handwheel:** No. 7800
Extension Spindles: rigid No. 9000E2
telescopic No. 9500E2

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 to 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 63	65 75	80 90	100 110	100 125	125 125	125 140	150 160	150 180	200 200	200 225	250 250	250 280	300 315
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:

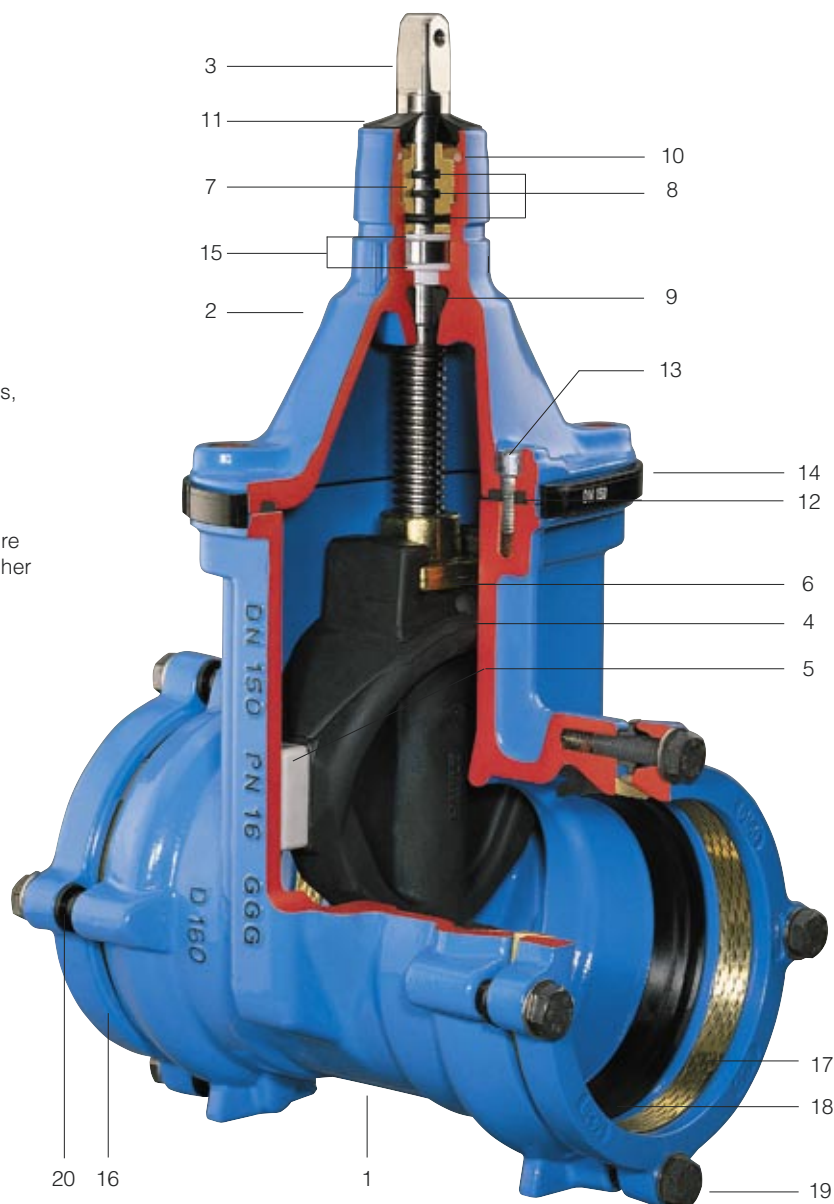
- 1/2/16 **Body (1) bonnet (2) and lock ring (16)** of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693) inside and outside epoxy powder coated according to DIN 30677-T2 in accordance with DIN 3476 and all quality and test requirements of RAL quality mark 662 (GSK - Gütegemeinschaft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

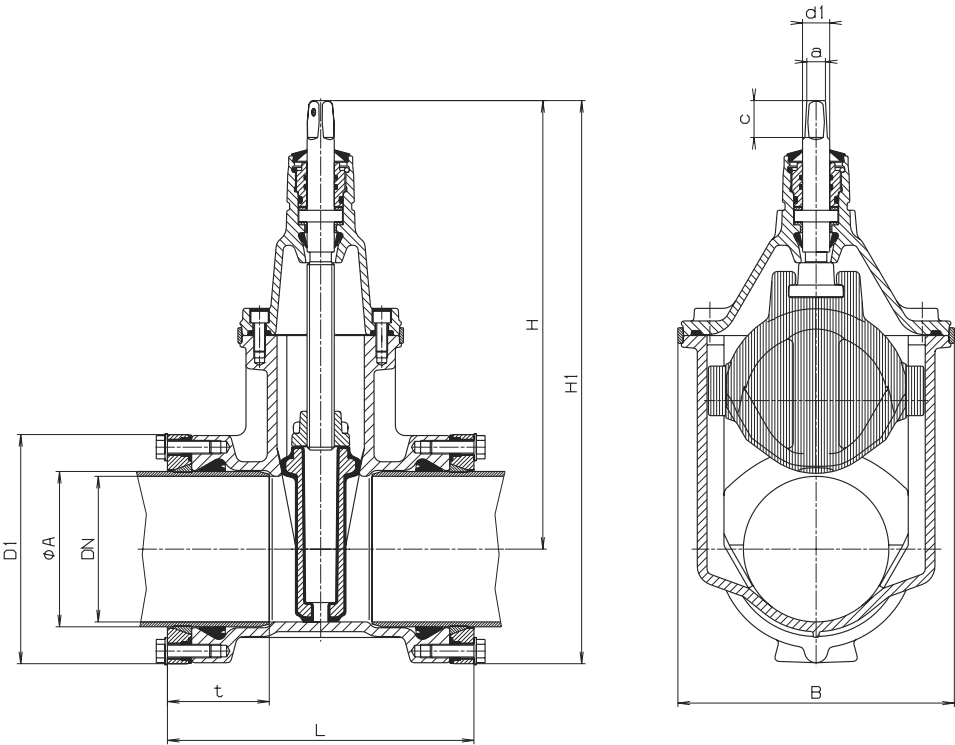
see page M 6/2
see page M 6/2

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 63	65 75	80 90	100 110	100 125	125 140	150 160	150 180	200 200	200 225	250 250	250 280	300 315
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)

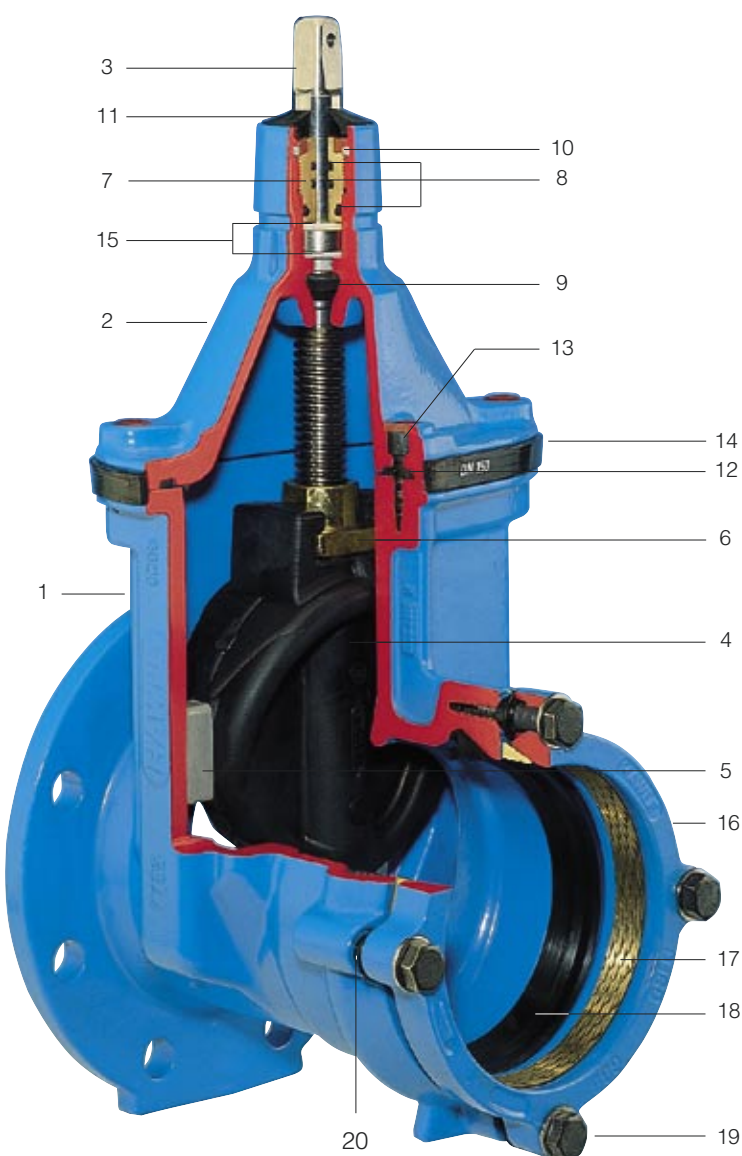
20 **Spacer bushes** of PE

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 !

E2 Valve Flange/socket SYSTEM 2000

Standard version: without handwheel and extension spindle

Design versions: for electric actuator: No.4041E2;
with position indicator: No. 4041STE2

Special versions: on request

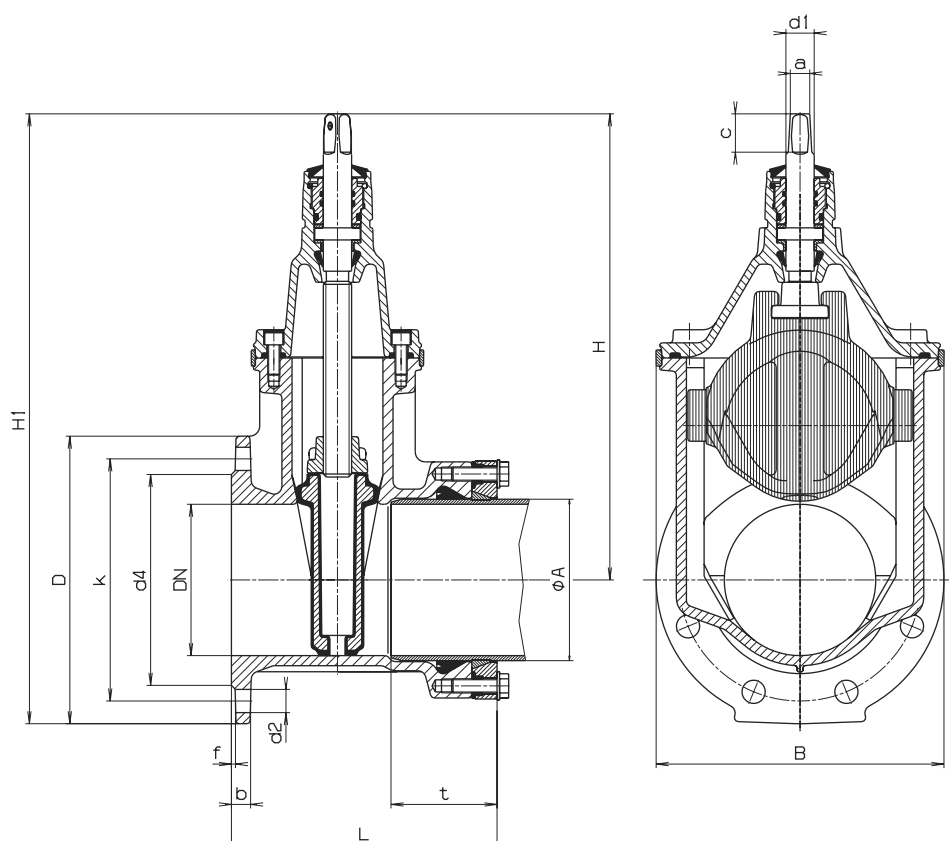
Suitable accessories: **Handwheel:** No. 7800

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:

- 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

for PVC-pipes to DIN 8061/8062

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

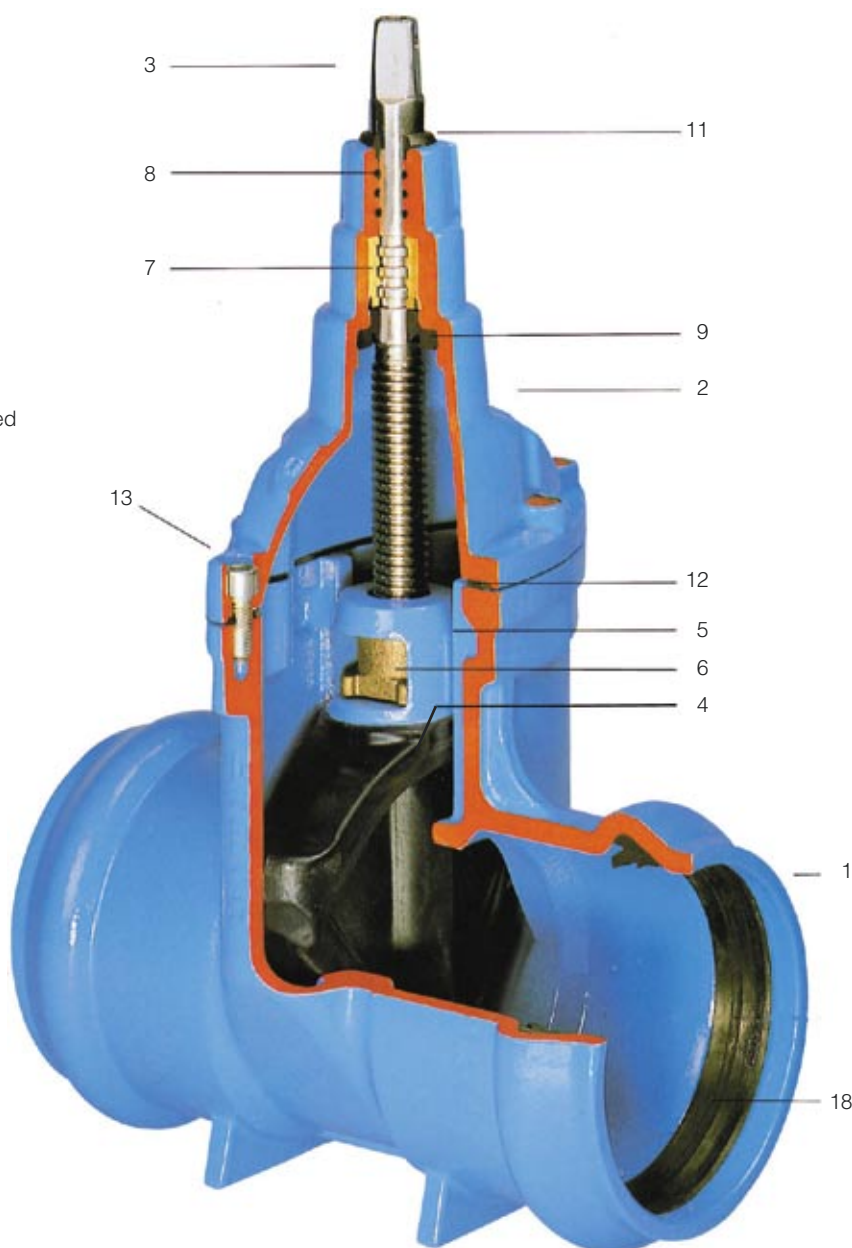
Resilient seated gate valve with socket ends for PVC-pipes

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



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.

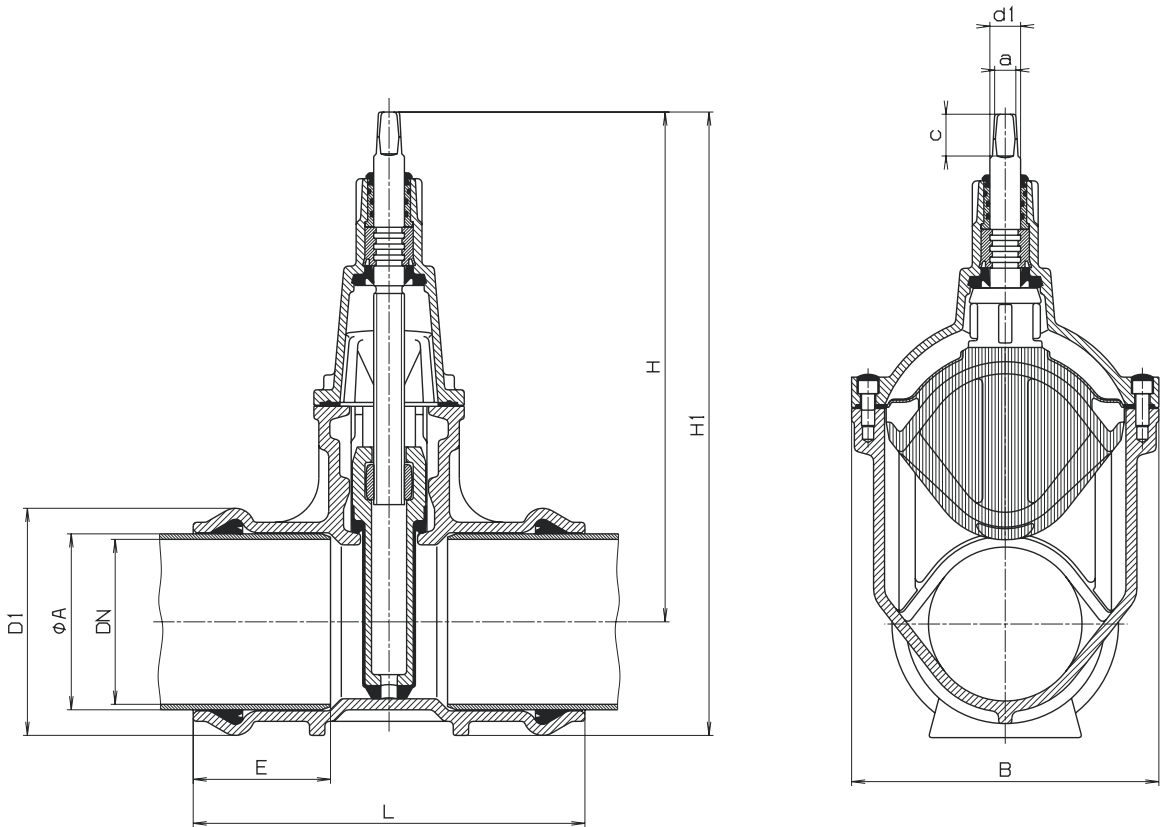
Standard version:
Without handwheel or extension spindle

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

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

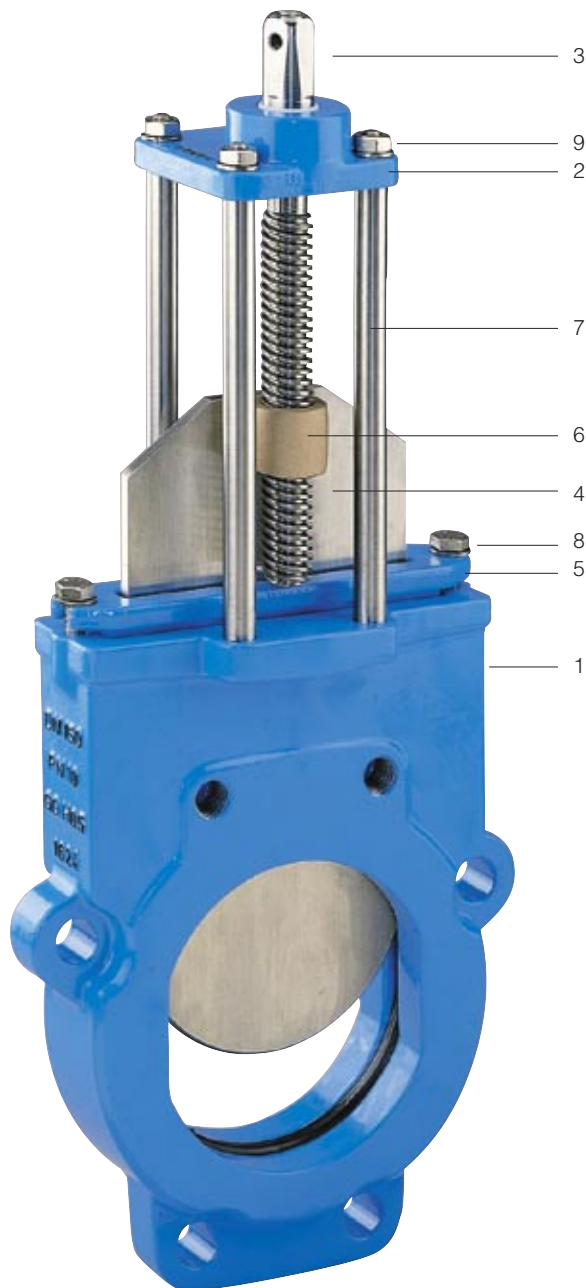


illustration DN 50 - 200

Flanges according to EN 1092-2, PN 10

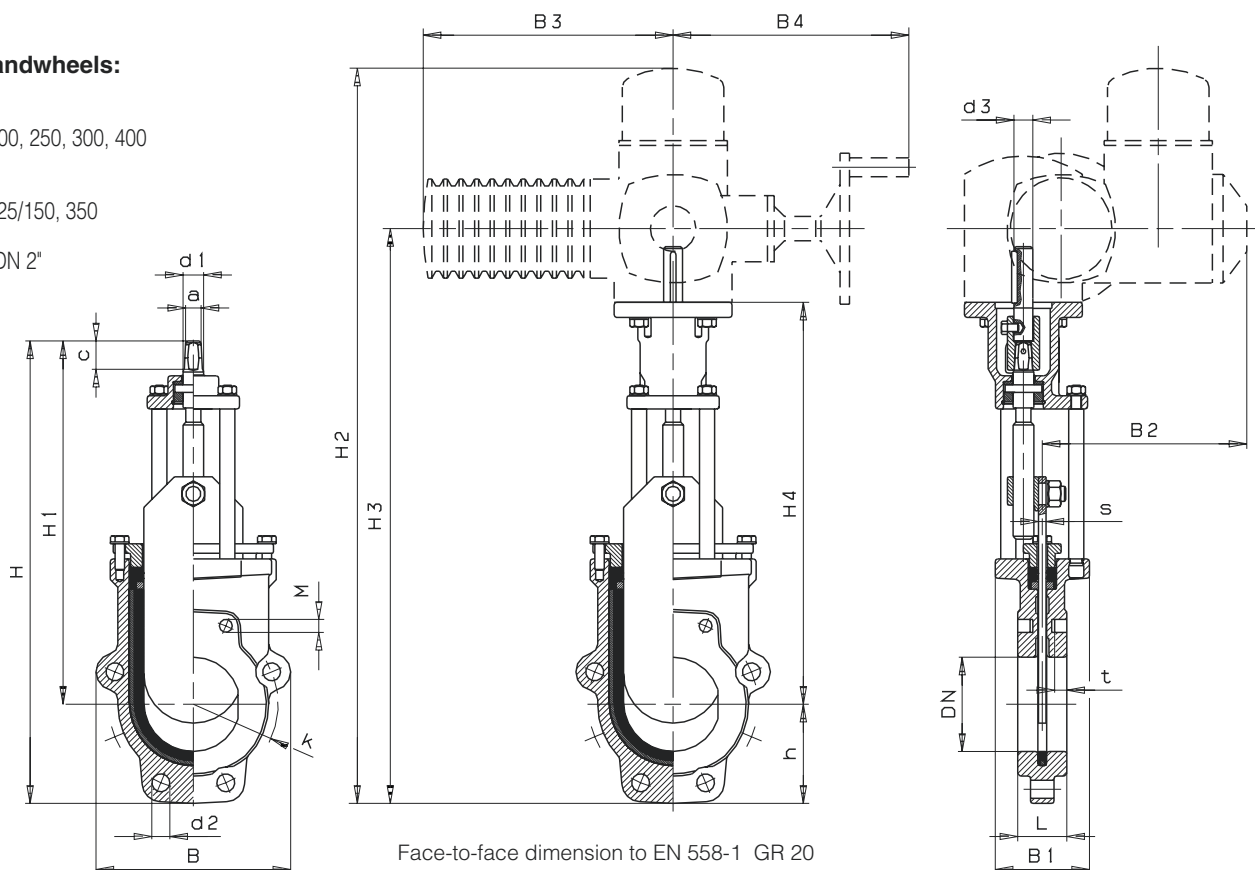
Knife Gate Valve

suitable handwheels:

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

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

* = No. 7800 DN 2"



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
	Qty.	2	2	6	6	6	6	6	8	8	10	10
- Through bore 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
	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
				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 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 !



E2 Combi-T

Standard version: without handwheel and extension spindle

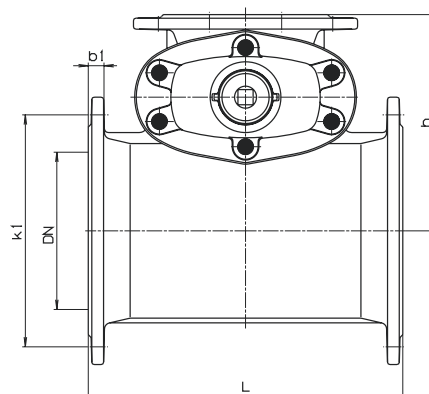
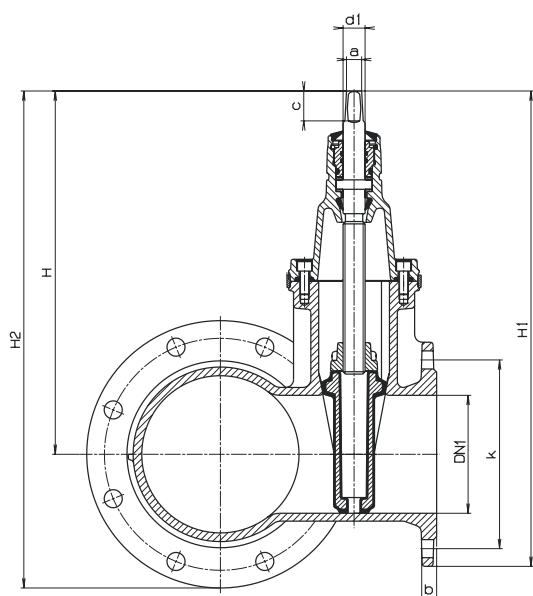
Design versions: for electric actuator: No. 4340ELE2;
with position indicator: No. 4340STE2

Special versions: on request

Suitable accessories: **Handwheel:** No. 7800
Extension Spindles: rigid No. 9000E2
telescopic No. 9500E2
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 to 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

E2 Combi-T SYSTEM 2000

Design features:

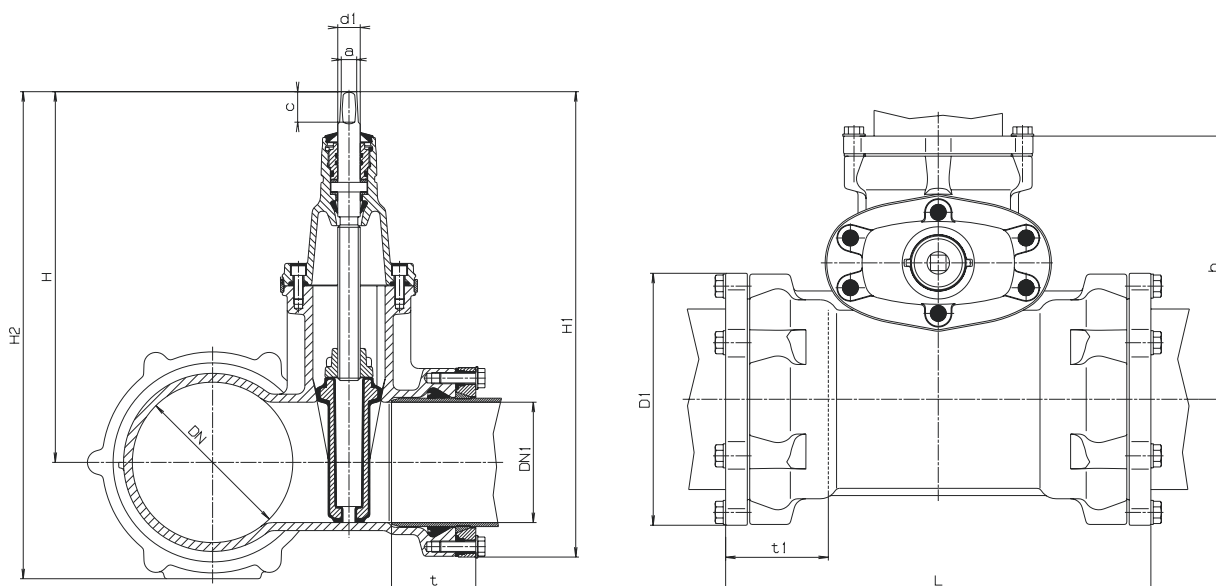
- easy retrofitting of position indicator and automatic actuator on the standard bonnet
- one extension spindle for several dimensions
- optimally placed wedge guide of wear resistant plastic guarantees lowest wear and tear and lowest closing torques, suitable for frequent operations at a differential 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. 4343ELE2
with position indicator: No. 4343STE2

Special versions: on request!

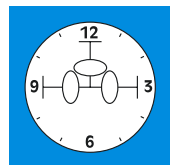
Suitable accessories: **Handwheel:** No. 7800
Extension Spindles: rigid No. 9000E2
telescopic No. 9500E2
Surface Boxes: rigid No. 1750, telescopic No. 2050



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

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



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



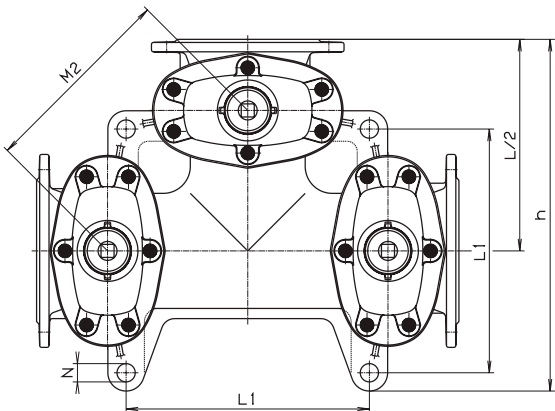
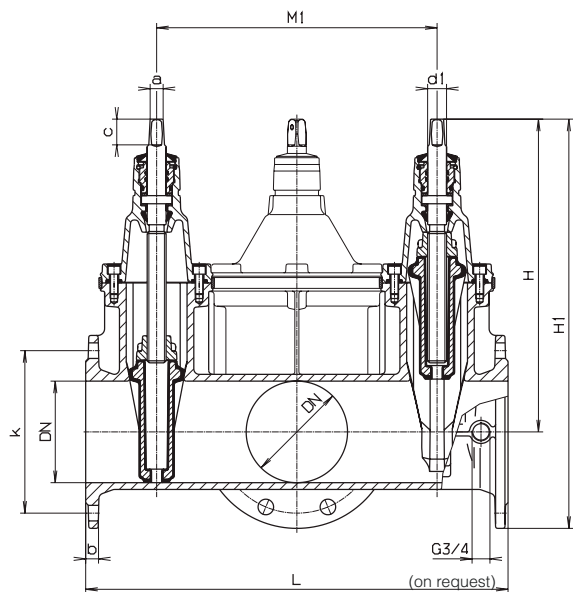
No. 4460E2 Flange Tee piece with 2 valves and vertical centre outlet

E2 Combi-III

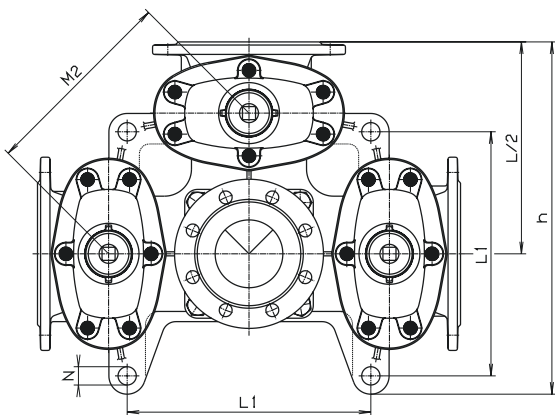
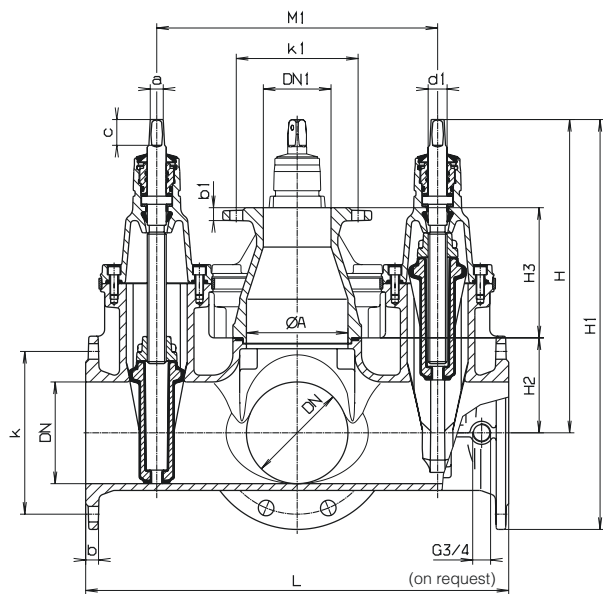
The wedge and the bonnet can be
interchanged between various HAWLE
E2 Elypso and E2 combination valves.

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

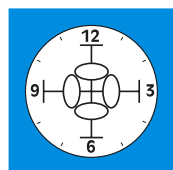


DN	E2 Combi III with vertical centre outlet																Spindle			Weight (no. of valves)	
	Ø A	DN 1	L	L 1	H	H 1	H 2	H 3	b	b 1	k	k 1	M 1	M 2	h	N	a	c	d 1	2	3
100	100	100	555	212	373	483	90	+	19	+	180	+	365	258	411	27	19,3	38	25	71,0	76,0
150	150	100	625	360	462	605	140	192	19	19	240	180	415	293,5	520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

* 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	16	2	●	●	●	●	●	
				3	●	●	●	●	●	
				4	●	●	●	●	●	
4410E2	with vertical outlet	other applications on request		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



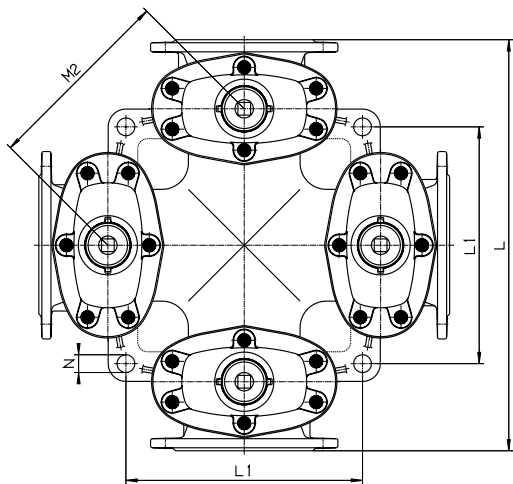
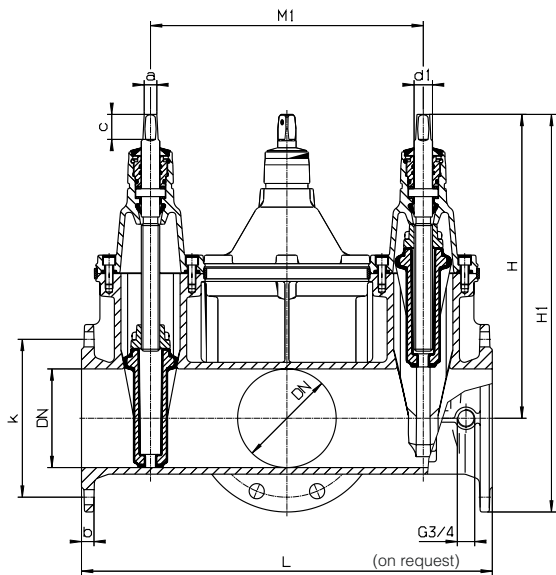
No. 4400E2 Cross connection
with 3 valves

E2 Combi-IV

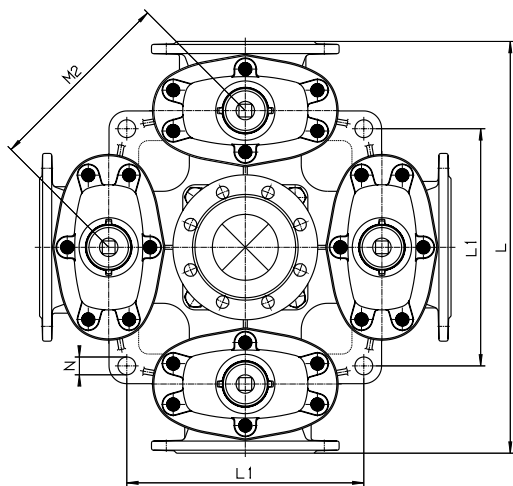
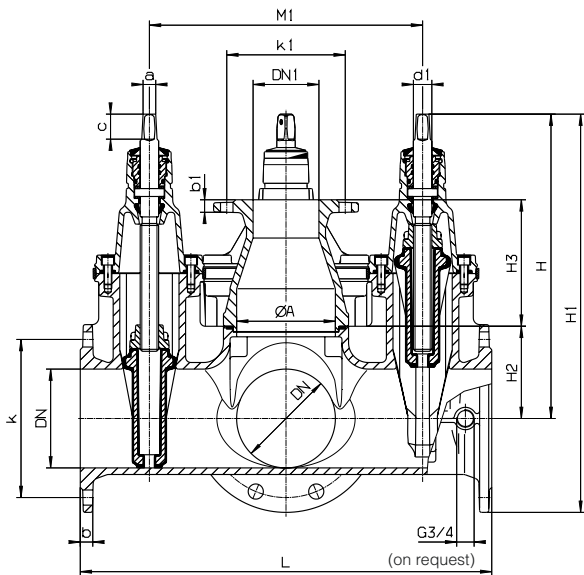
The wedge and the bonnet can be
interchanged between various HAWLE
E2 Elypso and E2 combination valves.

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	<div>100 150*</div>	625	360	462	605	140	192	19	19	240	<div>180 240</div>	415	293,5	27	19,3	38	28	145,0	155,0	165,0
200	200	<div>100 200*</div>	695	445	563	733	180	192	20	<div>19 20</div>	295	<div>180 295</div>	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				
				3/4"	1"	1 1/4"	1 1/2"	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)

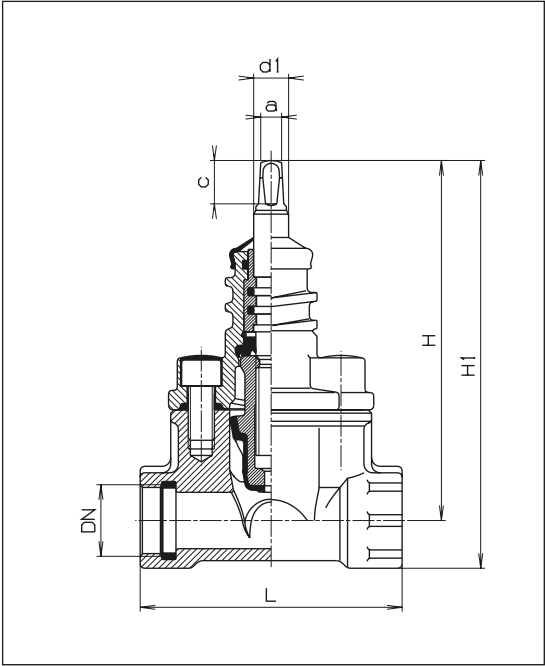
No. 2510



Service Valve

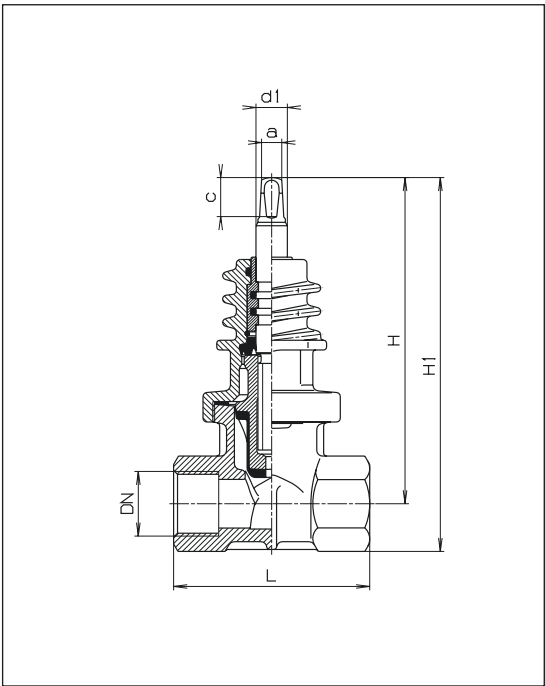
Suitable handwheel: No. 7800
Suitable extension spindles: rigid No. 9101,
telescopic No. 9601

Suitable surface boxes: rigid No. 1550 light duty,
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 1 male thread Dimensions for connection see table overleaf	for water, other applications on request	16	●	●	●*	●
				●	●	●	●

* 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.

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 through flat gasket

Sealing system:

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

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

No. 2520



No. 2800



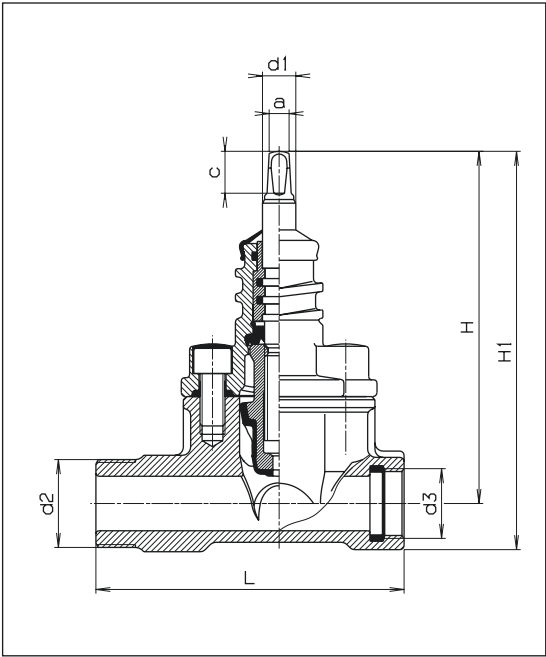
STRUCTURE
of grip ring
for PE pipes

Service Valve

Suitable handwheel: No. 7800

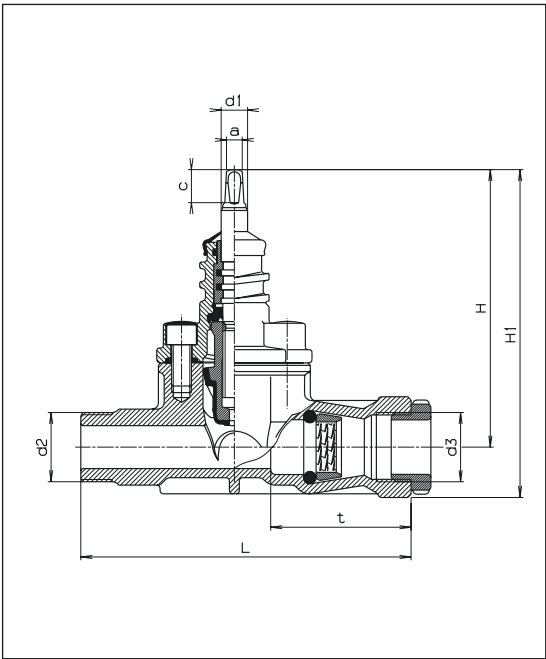
Suitable extension spindles: rigid No. 9101,
telescopic No. 9601

Suitable surface boxes: rigid No. 1550 light duty,
rigid No. 1650 heavy duty
telescopic No. 1850



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					
				1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
2600	grey iron / ductile iron ISO-fitting for PR pipe both ends	for cold water, other applications on request	16		•	•*	•	•	•
2630	of POM 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.

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

No. 2600



STRUCTURE of grip ring for PE pipes

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.



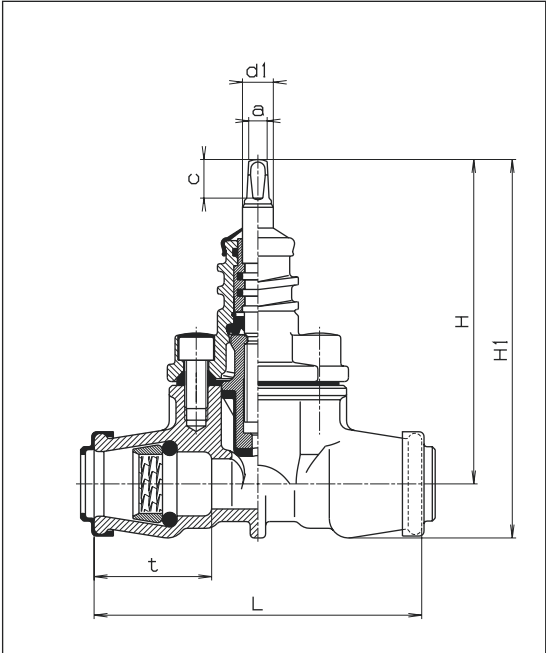
No. 2630

Service Valve

Suitable handwheel: No. 7800

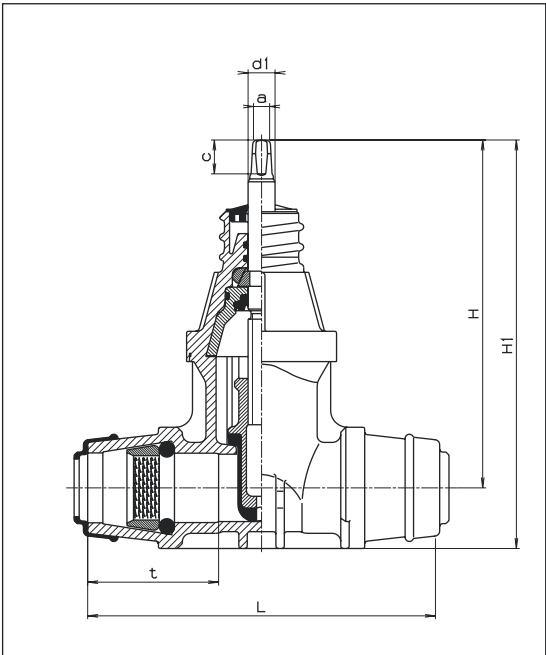
Suitable extension spindles: rigid No. 9101,
telescopic No. 9601

Suitable surface boxes: rigid No. 1550 light duty,
rigid No. 1650 heavy duty
telescopic No. 1850



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

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
MFR-group 010 (DIN 8075)
(PE 100 MFR group 05-DIN 8075 on request)

Support liner: stainless steel 1. 4301 (X5CrNi189)

Wedge: DN 1" CuZn39Pb3 (Ms 58)
DN 1¼" - 2" CuSn7ZnPb (Rg 7)
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.



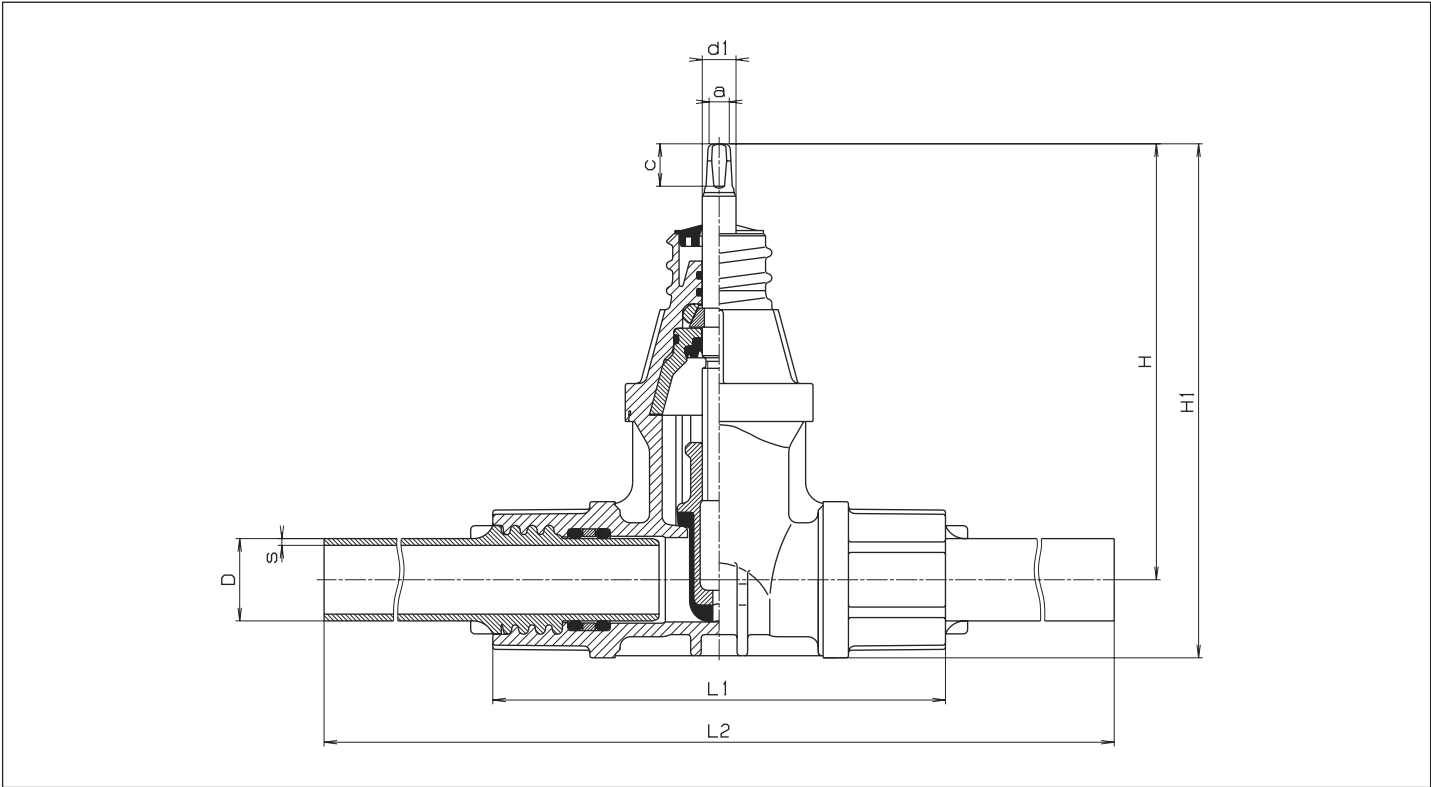
Service Valve for PE fusion

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

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 <u>only for</u> 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 <u>only for</u> 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

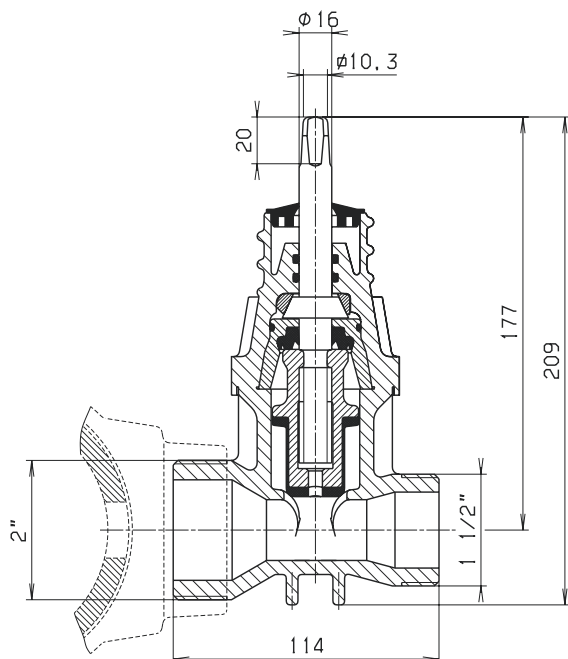
For technical details and instructions for use, see over page.



ISO Combination Tapping Valve

Suitable handwheel: No. 7800
Suitable extension spindles: rigid No. 9101,
 telescopic: No. 9601

Suitable surface boxes: rigid No. 1550 light duty,
 rigid No. 1650 heavy duty,
 telescopic: No. 1850



No. 2681

Tapping Valve DN 1"

with 2" male iron thread for mounting onto saddle
and 1 1/2" 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
 tensile strength 7000 N/cm²

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

Spindle: stainless steel 1.4021 (X20Cr13)

No. 6221F

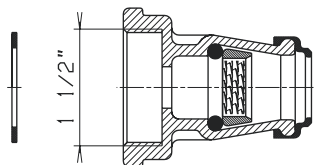
ISO push-fit fitting

POM

female thread 1 1/2"

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.



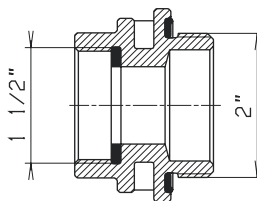
No. 5940

Adaptor

G-CuSn7ZnPb (Rg7)

female thread 1 1/2"
 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:

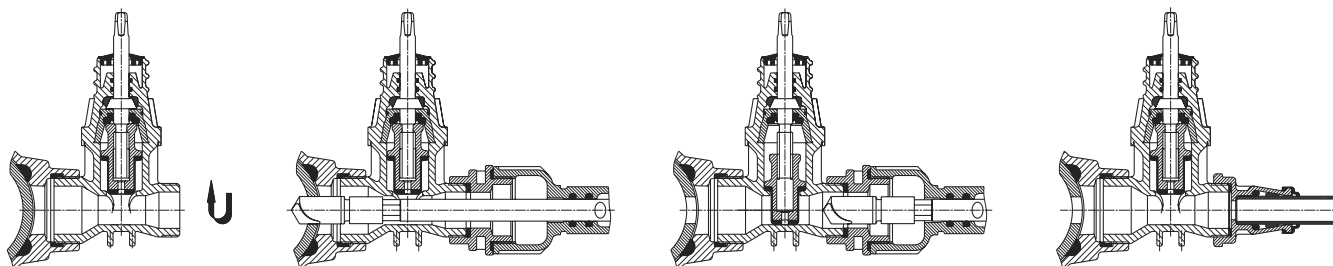
Open the valve completely; if
 necessary use adaptor no. 5940.

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.

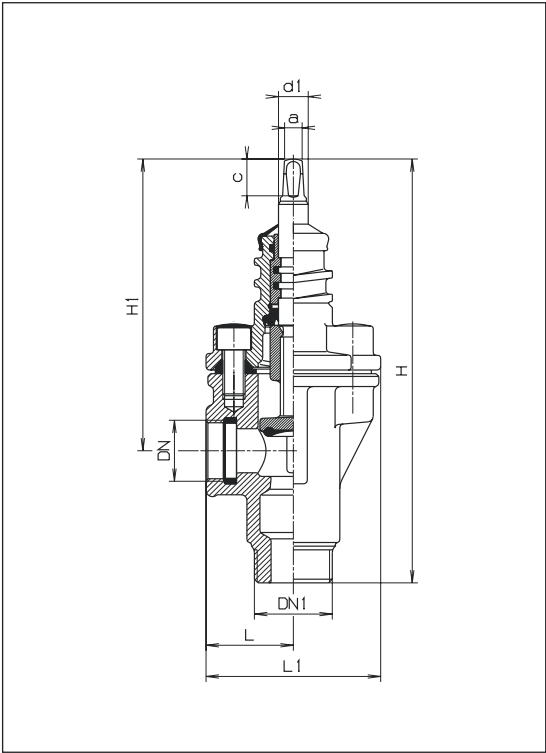


Service Valve

Suitable handwheel: No. 7800

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

Suitable surface boxes: rigid No. 1550 light duty,
rigid No. 1650 heavy duty
telescopic No. 1850



No. 3120
Service Valve
with female thread outlet

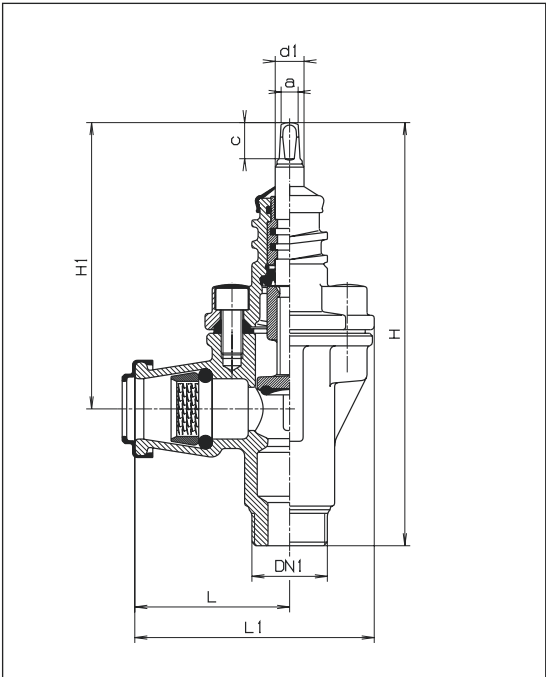
No. 3128
Service Valve
with female thread outlet and automatic drainage device
(not shown)

* 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

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

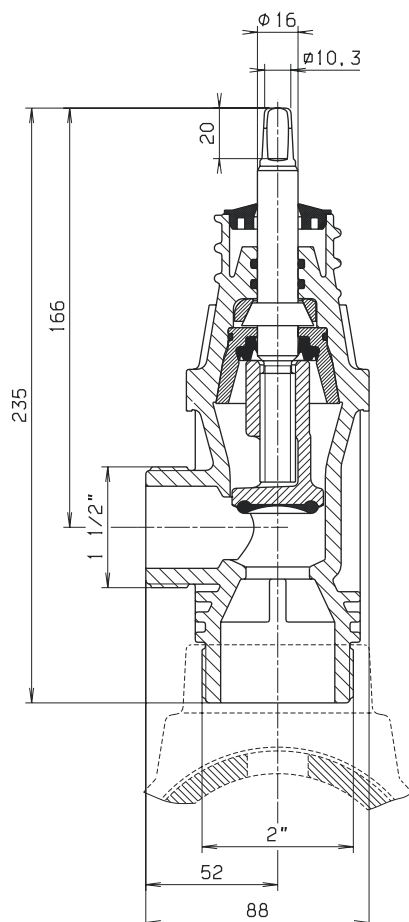
- one valve with 5 ISO push-fit fittings for PE pipes (pipe Ø 25/32/40/50/63 mm) - reduces stockkeeping
- a robust design of POM
- totally corrosion-free



ISO Combination Service Valve

Suitable handwheel: No. 7800
Suitable extension spindles: rigid No. 9101,
telescopic: No. 9601

Suitable surface boxes: rigid No. 1550 light duty,
rigid No. 1650 heavy duty,
telescopic: No. 1850



ISO Combination Service Valve DN 1"

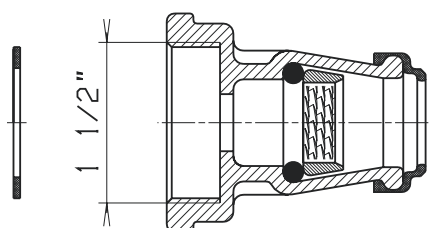
with 2" male thread for mounting onto saddle
and 1½" male thread only for ISO push-fit fitting
No. 6221F

Sealing system:

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

Materials:

Body: POM
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:

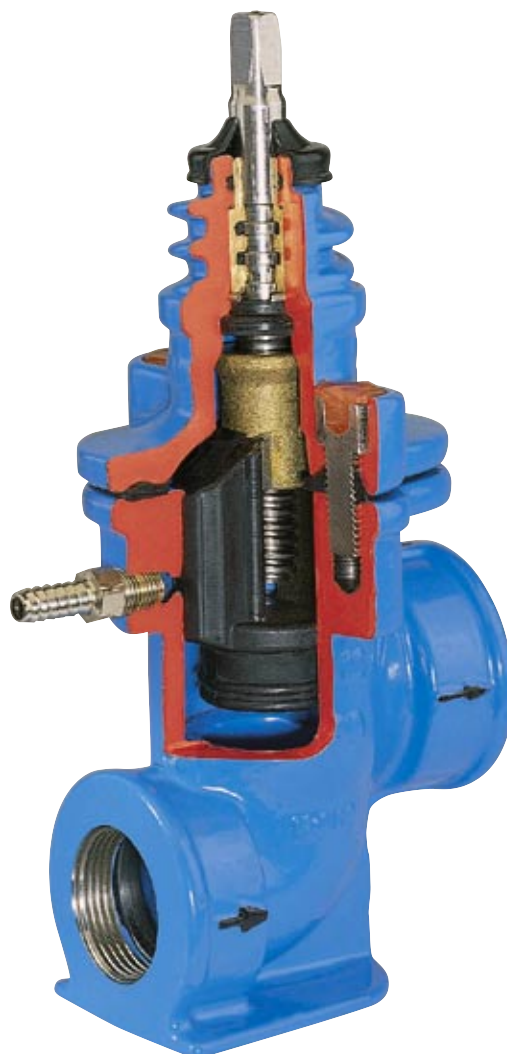
Body and Bonnet:

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.

Service Valve

Suitable handwheel: No. 7800
Suitable extension spindles: rigid No. 9101,
telescopic No. 9601

Suitable surface boxes: rigid No. 1550 light duty,
rigid No. 1650 heavy duty
telescopic No. 1850

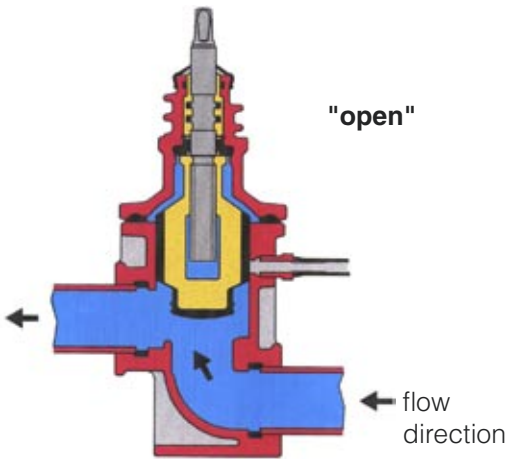
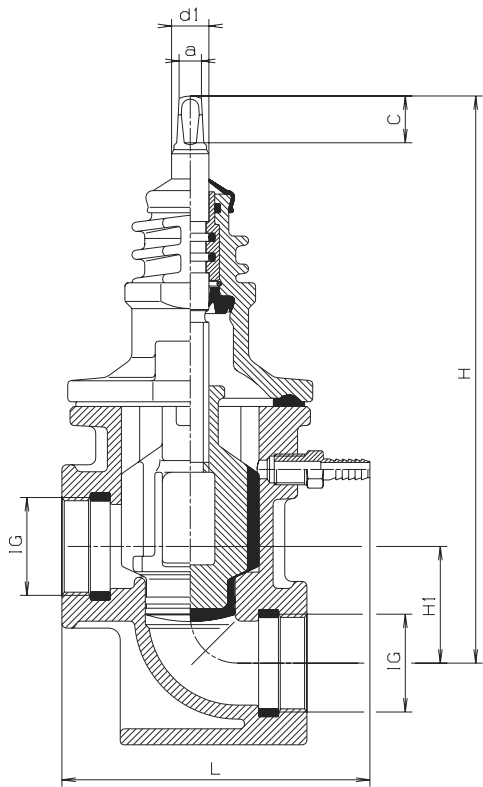
No. 2491

with threaded drainhole* and automatic draining

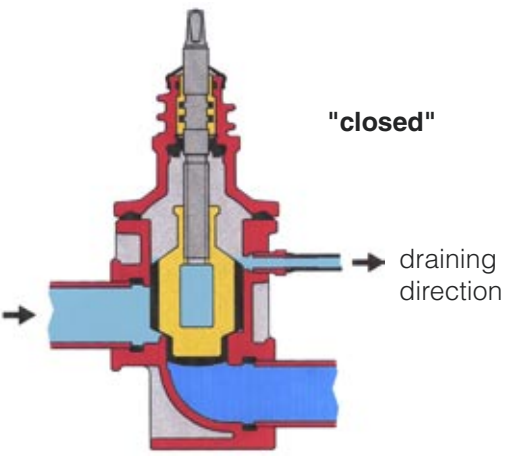
Note (arrow) installation direction

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

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

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

Order no.	Version	Application	PN	male thread			
					1¼"	1½"	2"
2200	Hawlinger Adaptor Valve for use with any pipe saddle	for water 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.



Hawlinger Pipe Drilling Saddle

Suitable extension spindles: on request

No. 2402

Universal-Hawlinger

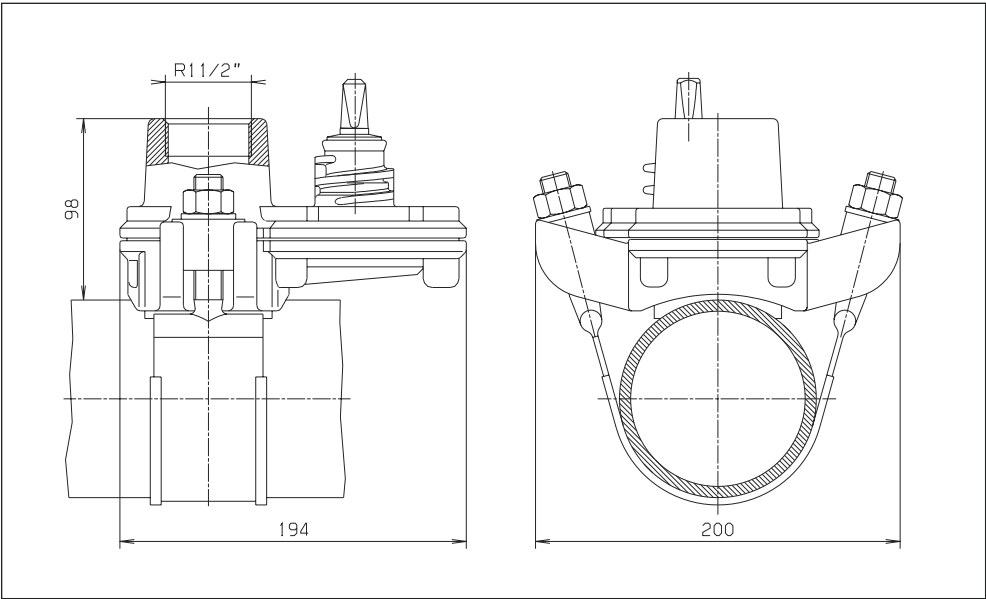
for DCI, steel and AC pipes

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

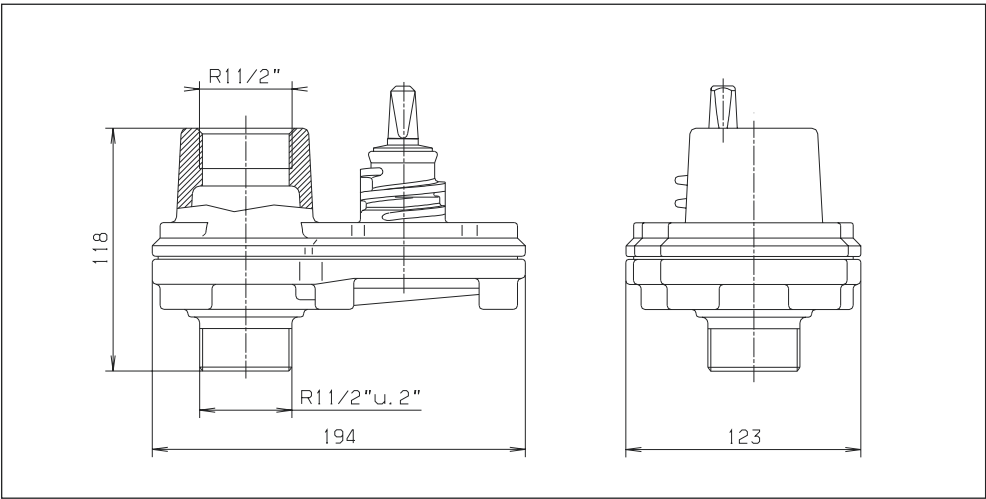
Hawlinger Adaptor Valve

- 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

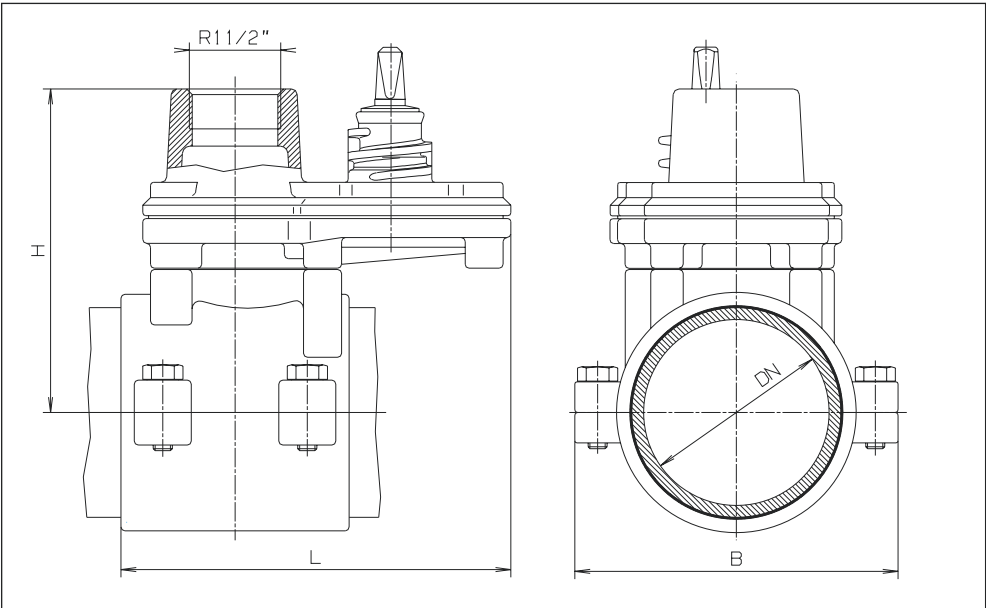
for PVC and PE pipes

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



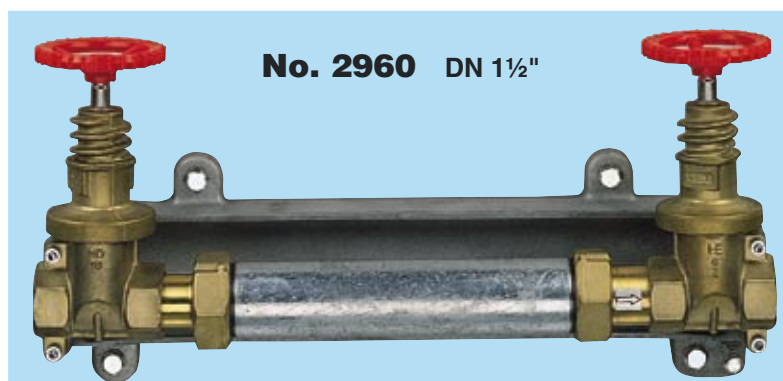
Order no.	DN	Valve connection	k_v value m³/h bei 1 bar Δp	for water meter ÖNORM B 2535 DIN-ISO 4064	
2961	1"	2 female threads G 1 ISO 228	11,4	3(5) m³/h - 7(10) m³/h	●
	1¼"*	2 male threads R 1¼" DIN 2999	11,4	3(5) m³/h - 7(10) m³/h	●
2960	1½"	2 female threads G 1½ ISO 228	32,1	20 m³/h	●
	2" **	2 female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

for cold water up to 30° C - PN 16

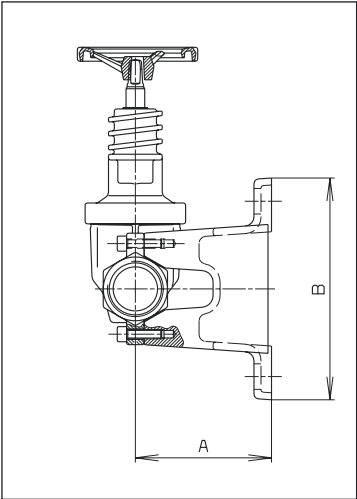
Special versions: * DN 1¼" with female thread G 1¼ ISO 228
** DN 2" without meter substitution connector

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



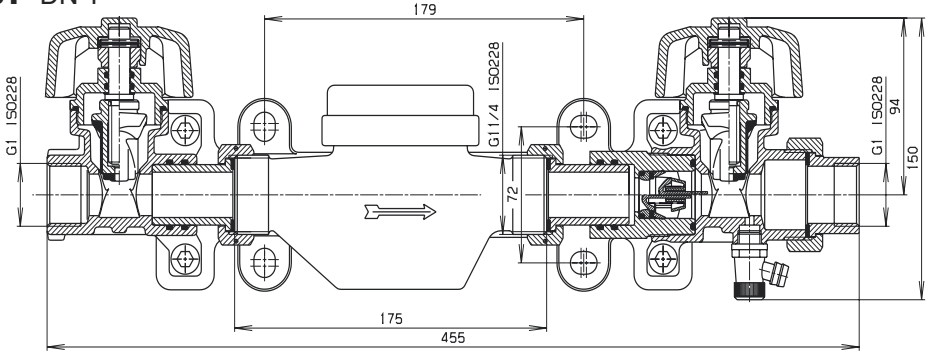
Water Meter Console



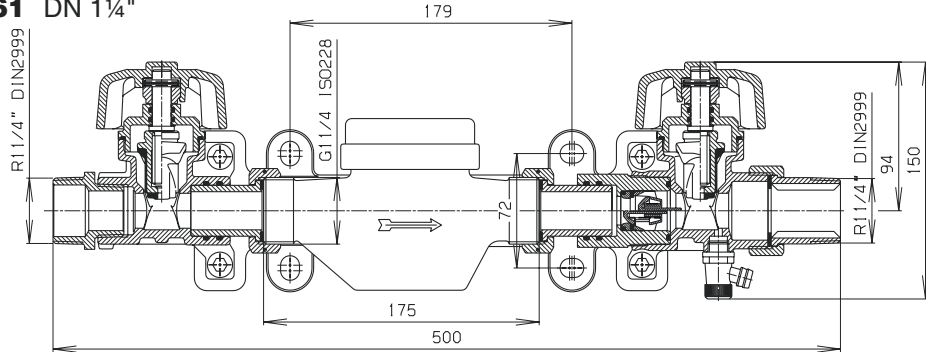
DN	Meter connection	A mm	Weight kg
1"	1 1/4"	90	4,40
1 1/4"	1 1/4"	90	4,60
1 1/2"	2"	115	11,50
2"	Flange DN 50	115	21,50

DN	Wall plate	
	L mm	B mm
1"	300	100
1 1/4"	300	100
1 1/2"	590	190
2"	590	190

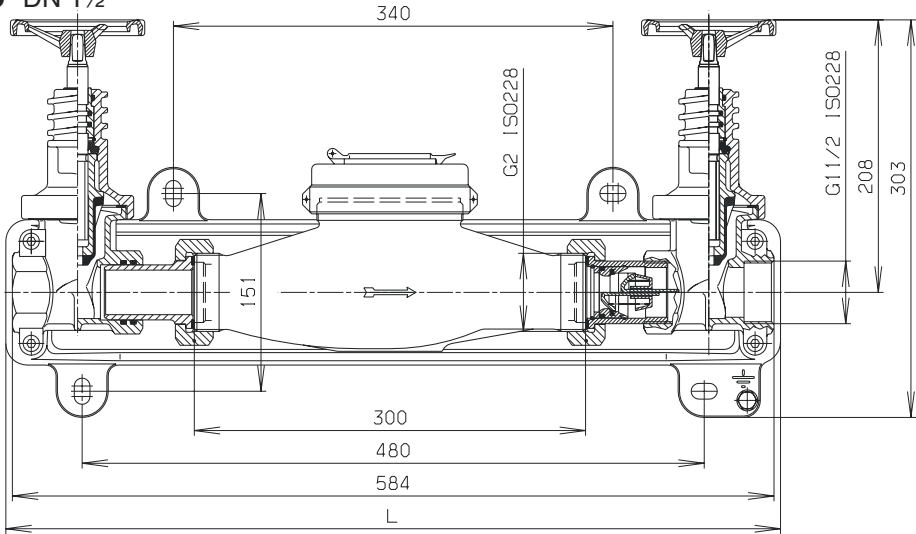
No. 2961 DN 1"



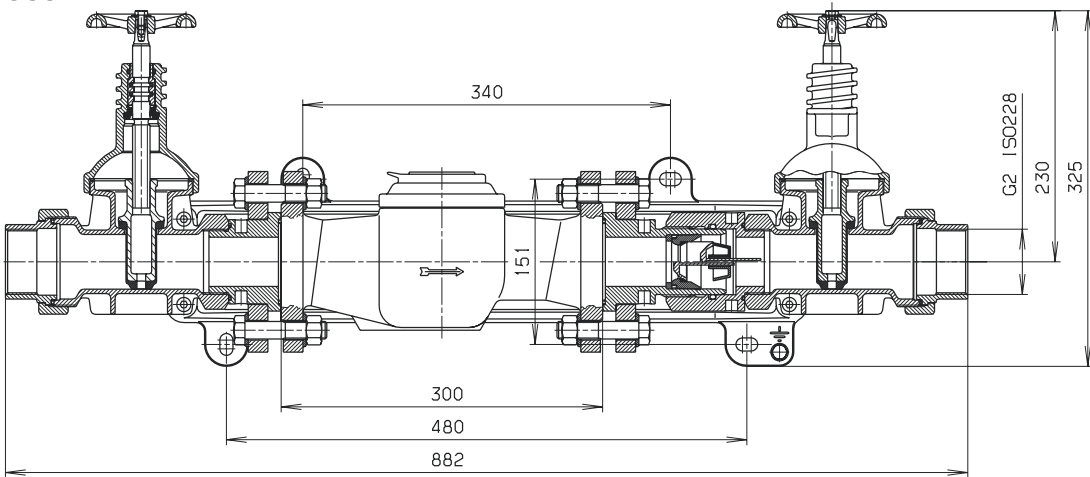
No. 2961 DN 1 1/4"



No. 2960 DN 1 1/2"



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	●

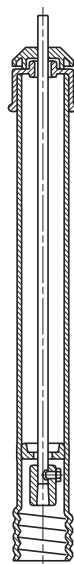
Extender for rigid spindle

Order no. 7830 price for 1st m

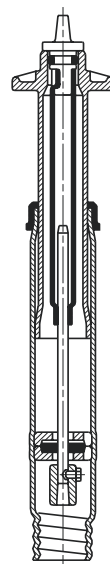
Order no. 7831 price for each additional 0.5 m
please specify dimension and length

for Service Valves

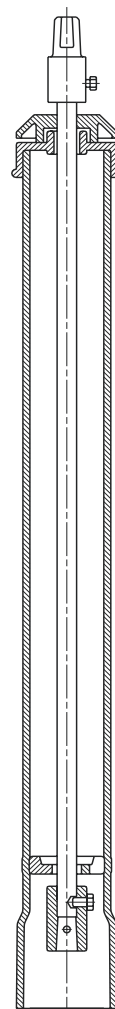
for Elypso and Combi Valves



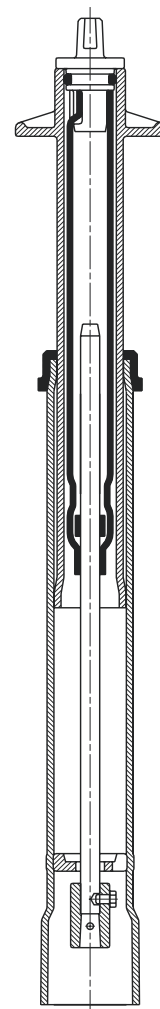
rigid



telescopic



rigid



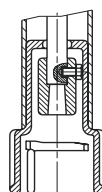
telescopic

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	●

Bayonet



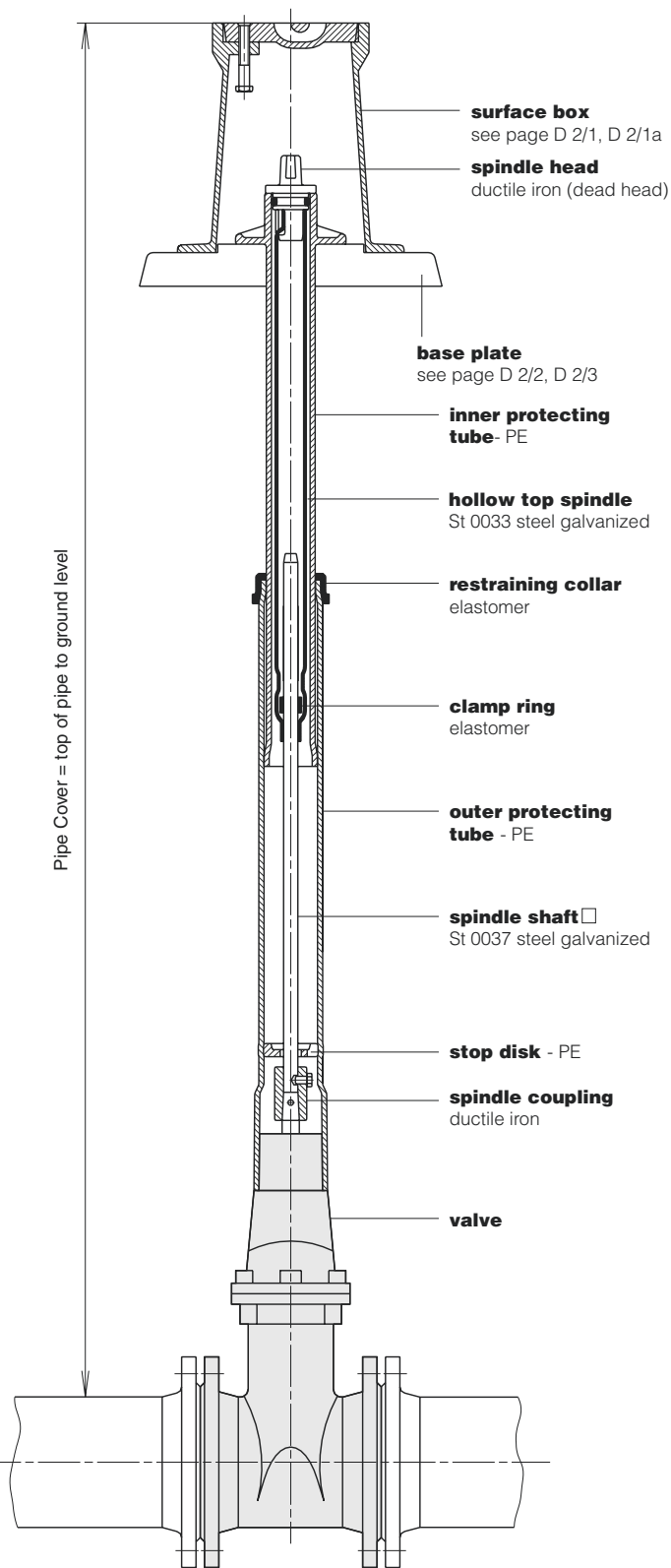
Bayonet connection (old)

Extension Spindles

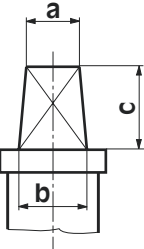
rigid or telescopic

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
		b	15 mm
		c	24 mm
for Elypso and Combi Valves		a	27 mm
		b	32 mm
		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

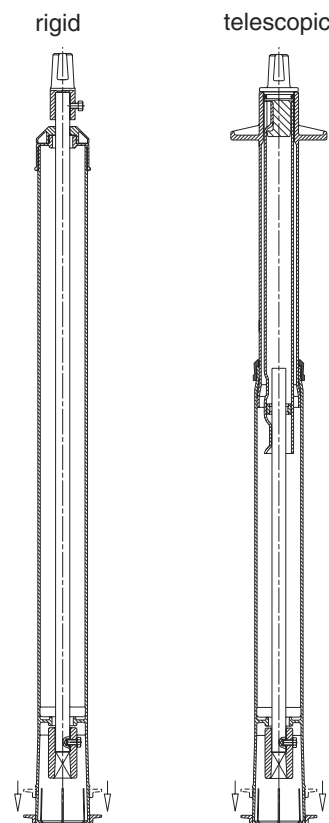
DN	Weight kg for Order no.						
	9050	9090	9100	9110	9120	9600	9610
¾" - 1½"	1,60	2,10	2,50	3,40	4,30	3,50	5,05

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

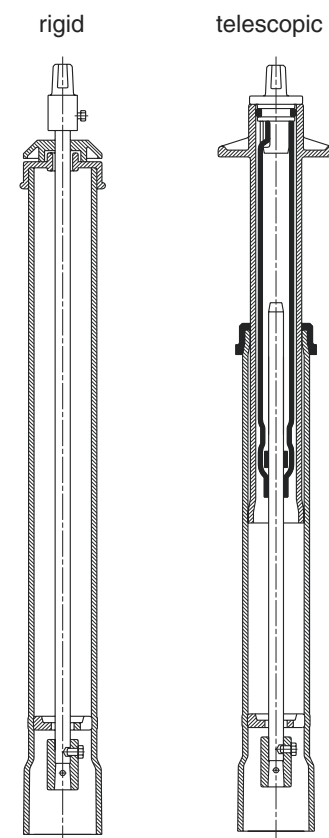
Order no.	Version	Pipe cover depth	for dimensions/DN		
			50/65/80/100	125/150	200
8980E2	rigid	1,00 m	●	●	●
8990E2	rigid	1,25 m	●	●	●
9000E2	rigid (standard)	1,50 m	●	●	●
9010E2	rigid	2,00 m	●	●	●
9020E2	rigid	2,50 m	●	●	●
9500E2	telescopic	1,30 - 1,80 m	●	●	
9500E2	telescopic	1,35 - 1,80 m			●
9510E2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



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



E2 Extension Spindles

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

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

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

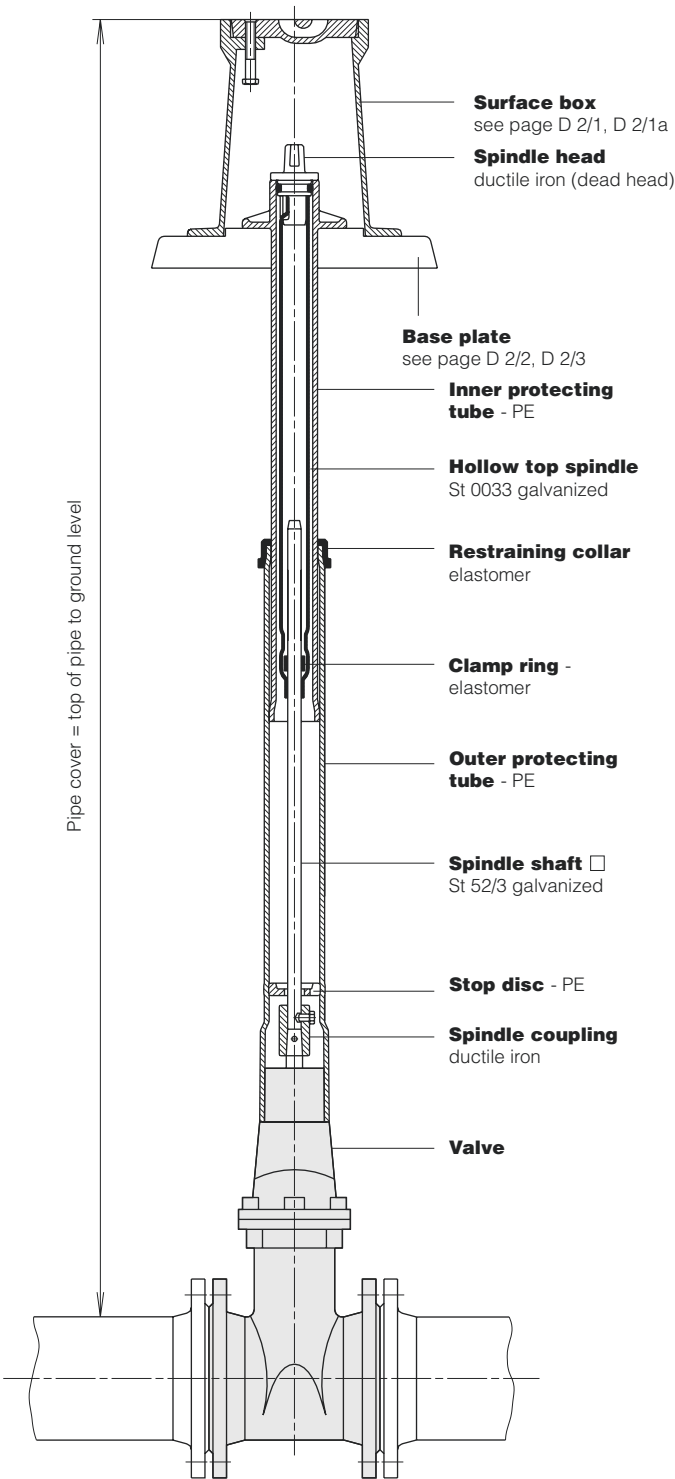


Illustration: T  lescopique Extension Spindle DN 250 - 600

		Spindle head
for Service Valves		a 13 mm b 15 mm c 24 mm
for Valves and Combi Valves		a 27 mm b 32 mm c 48 mm

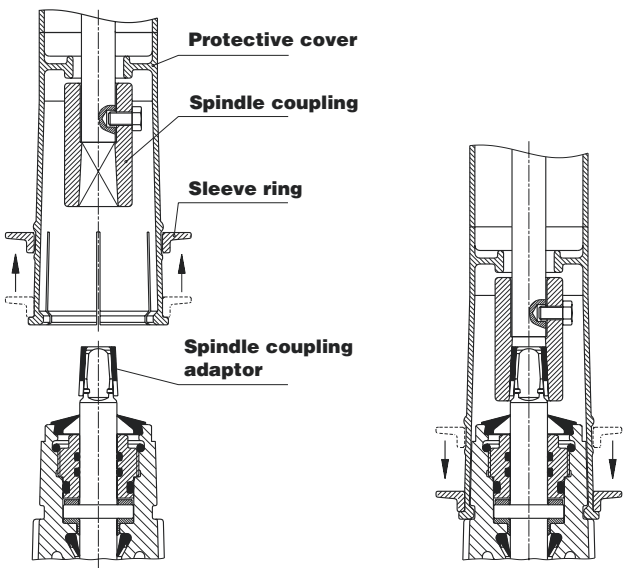
Weight of Extension Spindle for E2 Valves and E2 Combi Valves DN 50 - 200

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



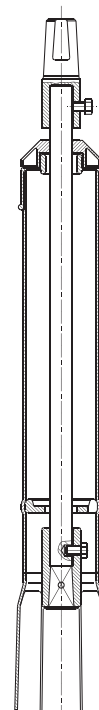
rigid or telescopic

for Hawle-A Valves DN 80 - 200

- Protection cover with integrated anti twist device
- Fixing pin of brass

All extension spindles (rigid and telescopic) are protected against dirt and surface water.

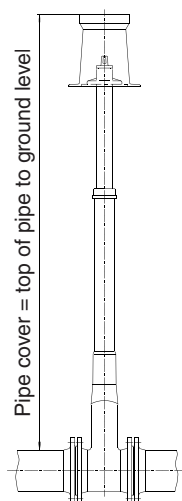
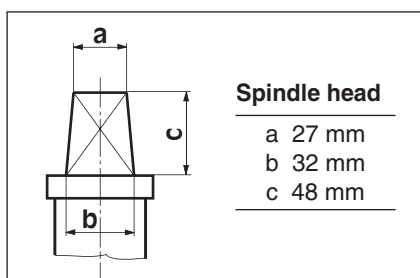
Order no.	Version	RD= Pipe cover depth	for dimensions/DN			
			80	100	150	200
8980A	rigid	1,00 m	●	●	●	●
8990A	rigid	1,25 m	●	●	●	●
9000A	rigid (standard)	1,50 m	●	●	●	●
9570A	rigid	total length 2,00 m	●	●	●	●
		DN 80/100 RD 2,37 m DN 150 RD 2,45 m DN 200 RD 2,53 m				
9500A	telescopic	1,30 - 1,80 m	●	●	●	●
9500A	telescopic	1,35 - 1,80 m				●
9510A	telescopic	2,00 - 2,50 m	●	●	●	●



rigid

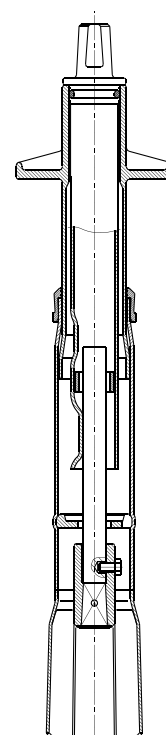
Weight Extension Spindles

Order no.	dimension/DN			
	80	100	150	200
8980A	3,20	3,30	2,95	2,80
8990A	4,10	4,20	3,90	3,75
9000A	5,10	5,25	4,90	4,75
9570A	8,80	8,85	8,85	8,90
9500A	6,50	6,60	6,25	
9500A				6,00
9510A	9,10	9,20	8,90	8,55



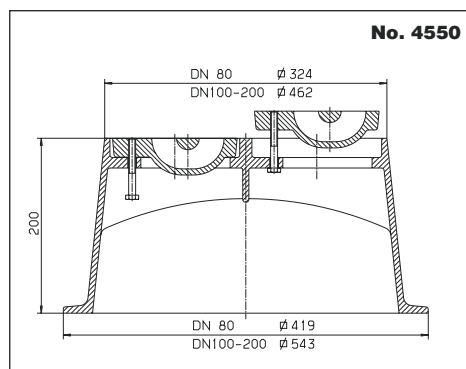
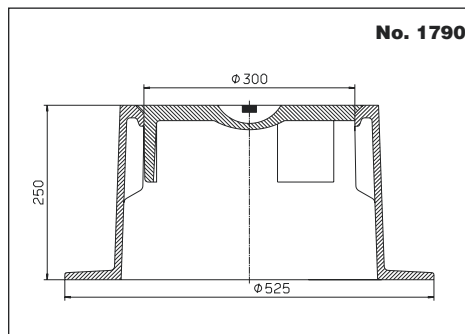
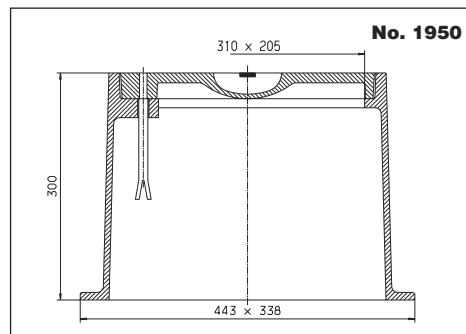
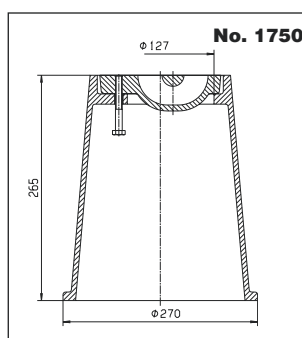
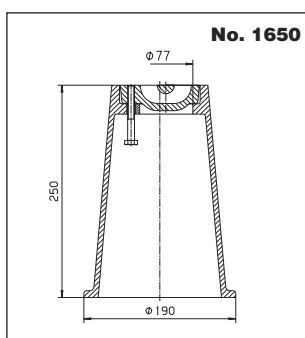
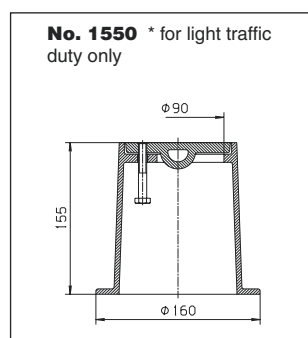
The **telescopic extension spindle** can be progressively adjusted to the ground level. This is done by pushing or pulling the tube and the spindle shaft.

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



telescopic

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	●



max. load 200 kN
(excluding No. 1550)

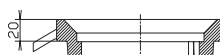
- + E-type DN 80-150
E2-type DN 80
- ++ E-type DN 200
E2-type DN 100-200



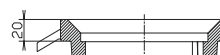
Conversion Rings

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

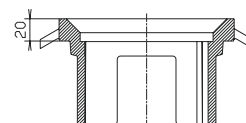
No. 1560



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	●

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



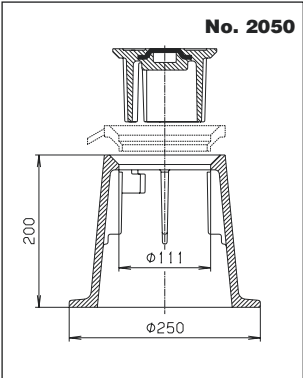
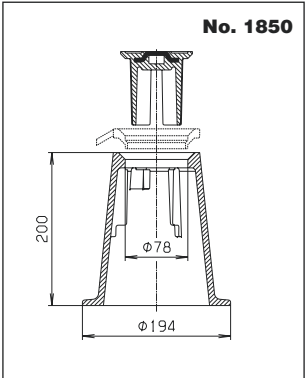
max. load 200 kN

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.

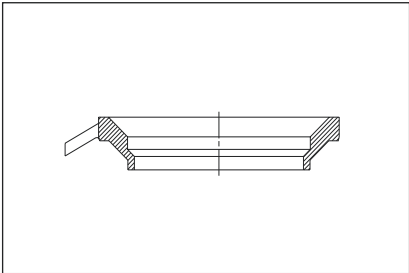
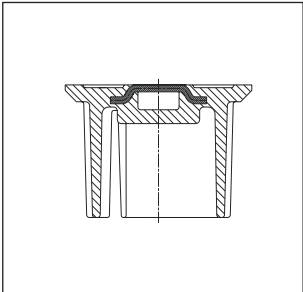
The design enables the lid to be easily removed.



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	●

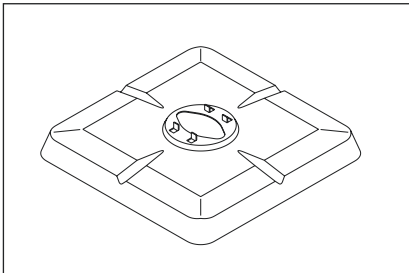


Extension Rings

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	●

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

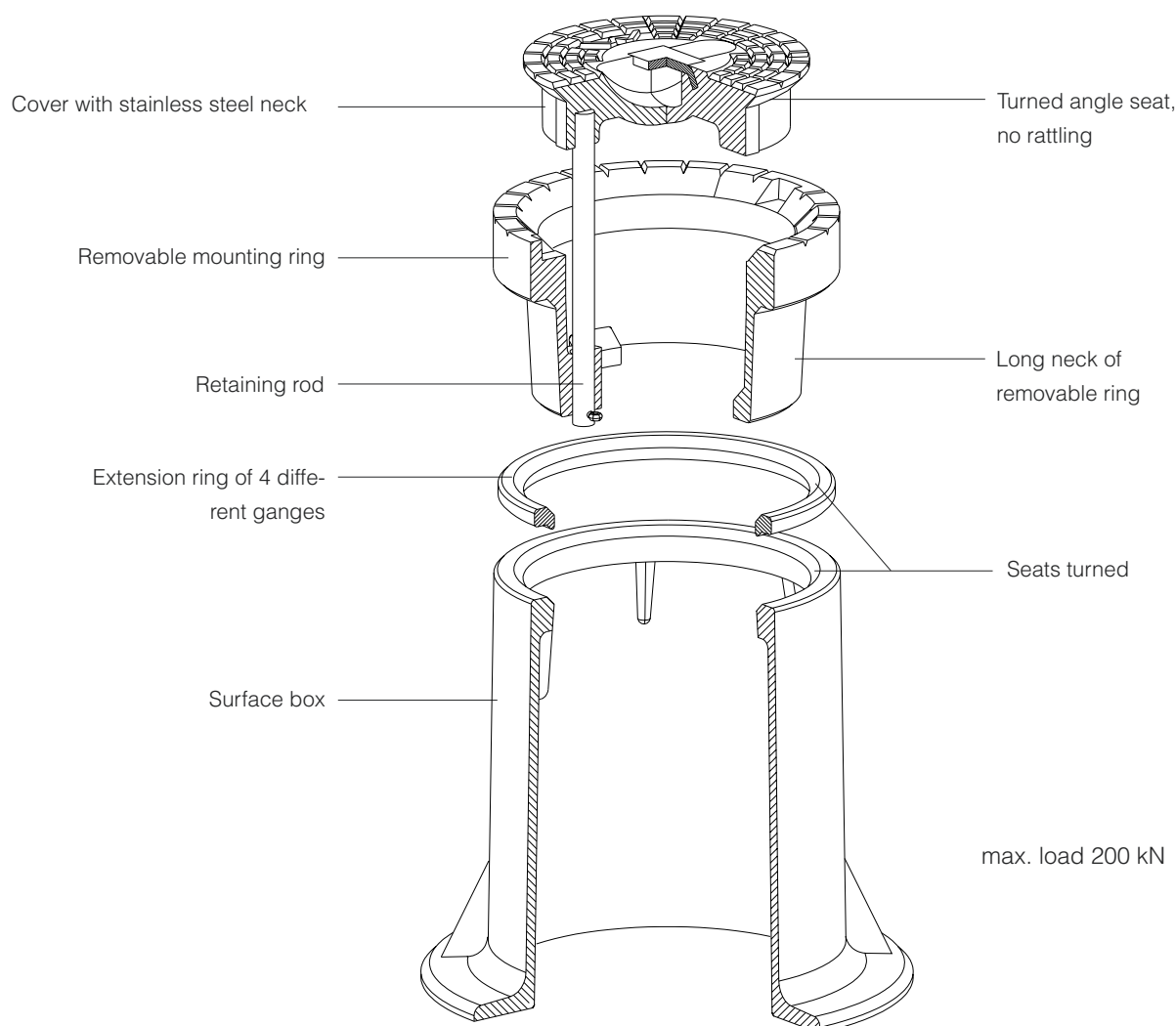
Surface Boxes

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)

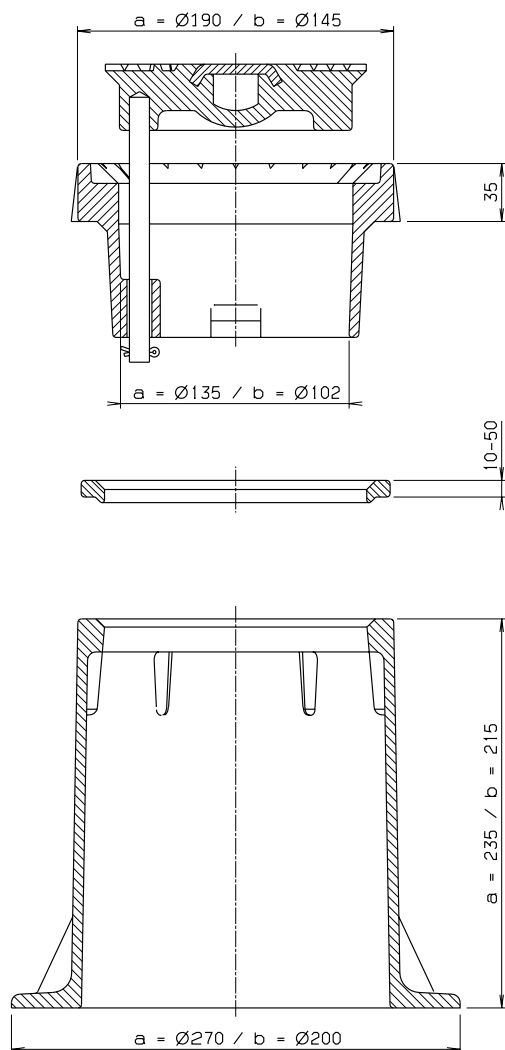


Advantages:

- 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).

Height adjustable Surface Box to DIN

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



Puller No. 5971

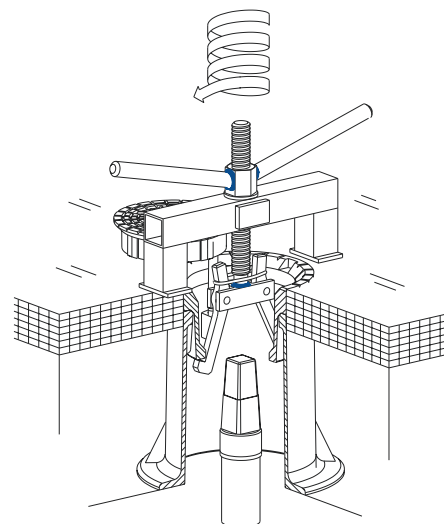


Illustration 1

Extension ring for sloping roads

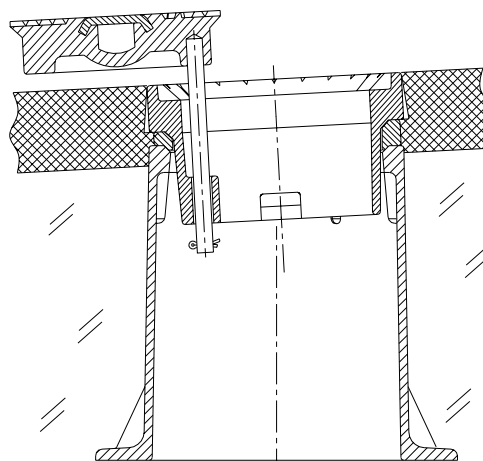


Illustration 2

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

- retaining rod and cover neck of stainless steel

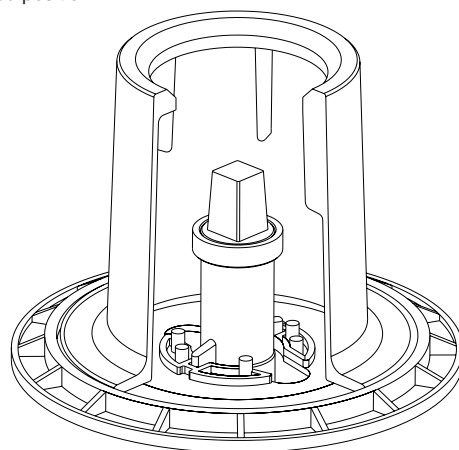
Angle seats are turned!

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

of recycled plastic

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

Fitted position:

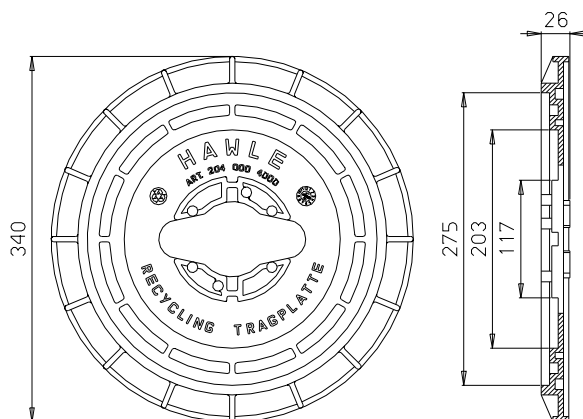


Universal Base Plate No. 3481

for surface boxes according:

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

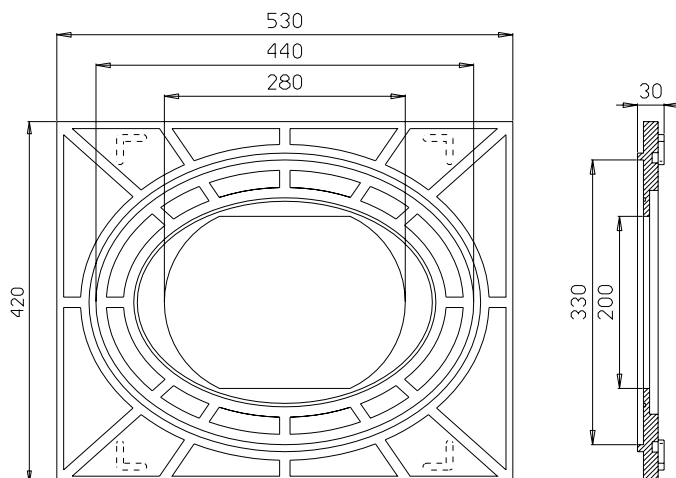
Safe fixture of HAWLE Telescopic Extension
Spindles for Gate Valves, Combi-T and
Service Valves



Base Plate No. 3482

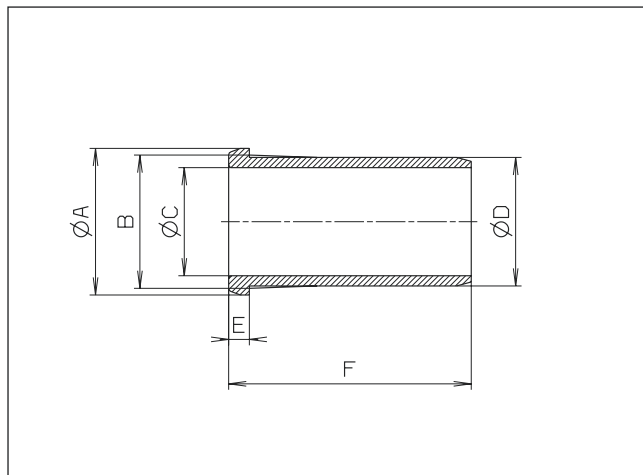
for surface boxes according:

DIN 4055 (for Below Ground Hydrants)



Support liners for PE Pipes

No. 6031 Support liner for ISO Pipe Fittings of POM



CLASS SDR 11 PE 80 - PN 10

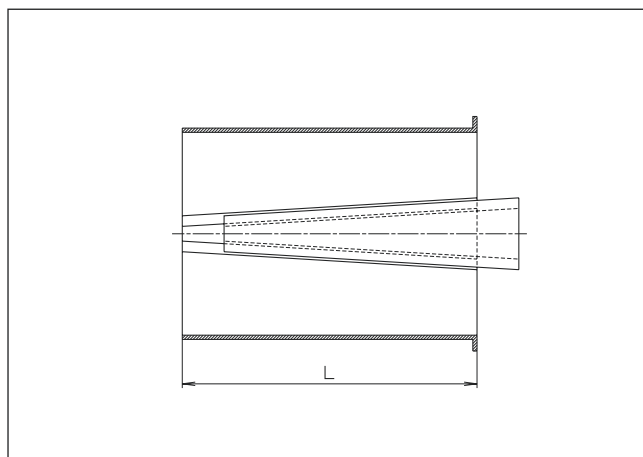
Pipe o.d. Ø	D	C	A	F	E	B	
20	15,4	10,3	19,5	42	4	16,5	●
25	19,8	14,3	24,5	52	5	20,9	●
32	25,2	19,3	31,5	62	6	26,5	●
40	31,6	25,3	39,5	72	7	33,2	●
50	39,6	32,7	49,5	82	7	41,5	●
63	50	42,1	62,5	91	8	52,2	●

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

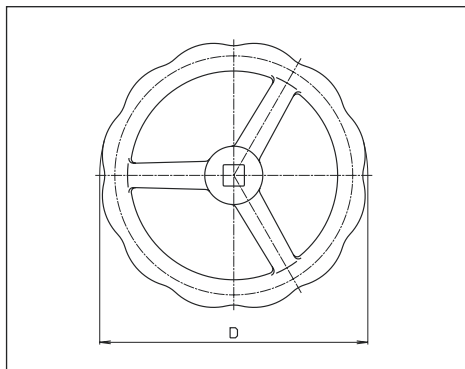
No. 7840 Handwheel for Knife Gate Valve No. 3600

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	3/4" - 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

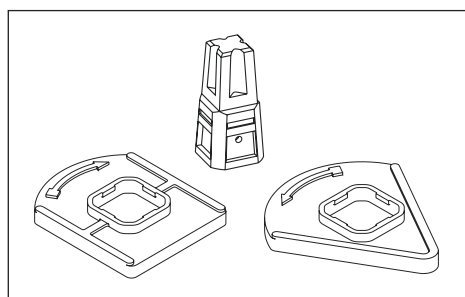
Direction Indicator

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

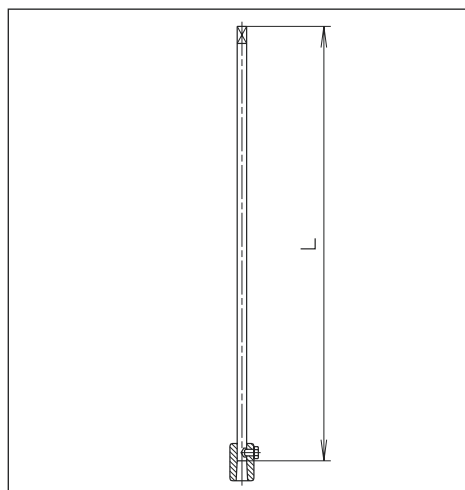
No. 7821 price for each additional 0,5 m

Material: stainless steel

No. 7825 price for 1st m

No. 7826 price for each additional 0,5 m

Please specify total length on order

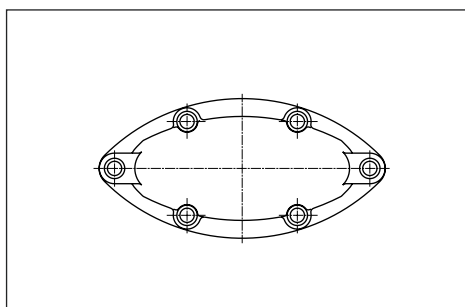


DN	No. 7820 No. 7821	No. 7825 No. 7826
3/4" - 2"	●	
50	●	●
65	●	●
80	●	●
100 - 150	●	●
200	●	●
250 - 300	●	●
400 - 500	●	●
500 - 600		●

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	●

Accessories

No. 4000STE2

E2 Elypso Valve - short version

with position indicator

No. 4700STE2

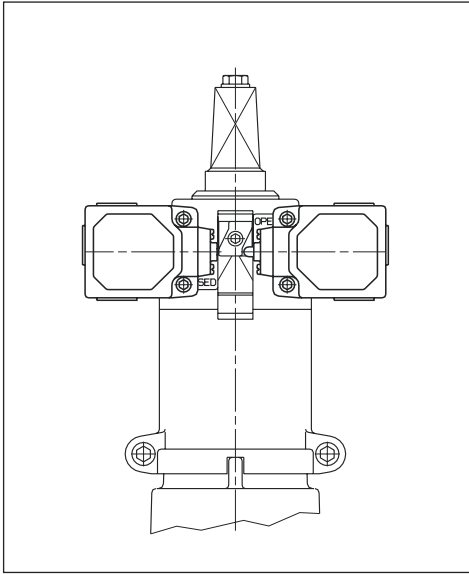
E2 Eypso Valve - long version

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

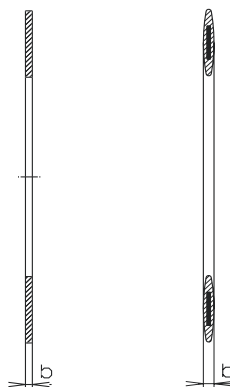
of elastomer, suitable for potable water

Standard version PN 10

PN 16 and PN 25 on request

No. 3470

No. 3390



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

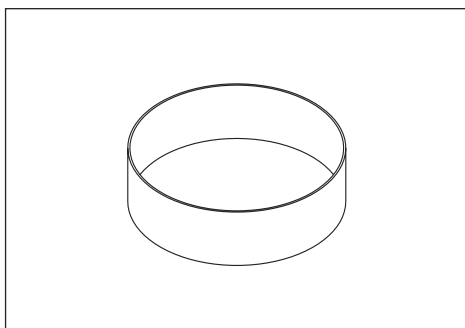
for flange adaptors

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	●

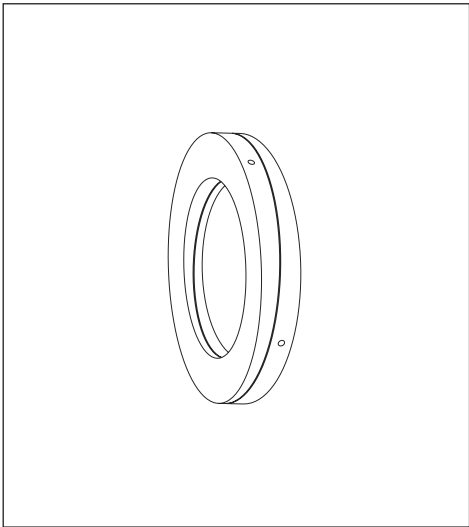
Accessories

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

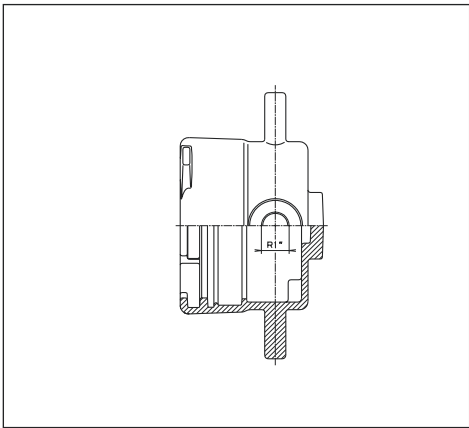
Endcap

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

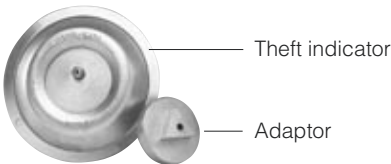
(for Hawle Hydrants supplied before please
specify in your inquiry)



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

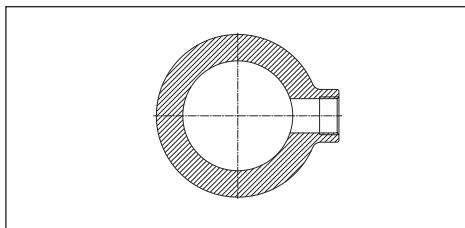


No. 8580

Wafer Tee Piece 1 threaded outlet

PN 16

of grey iron
epoxy powder coated



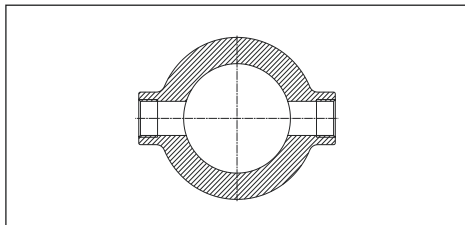
DN	Thread	Height	Weight	
80	1 1/4"	60	3,90	●
100	1 1/4"	60	4,20	●
150	1 1/4"	60	7,90	●

No. 8590

Wafer Tee Piece 2 threaded outlets

PN 16

of grey iron
epoxy powder coated



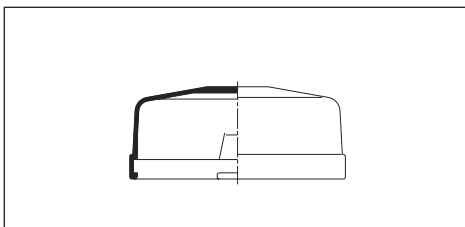
DN	Thread	Height	Weight	
100	1 1/4"	60	4,30	●
125	1 1/4"	60	6,30	●
150	1 1/4"	60	7,80	●
250	1 1/4"	90	19,20	●

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	●
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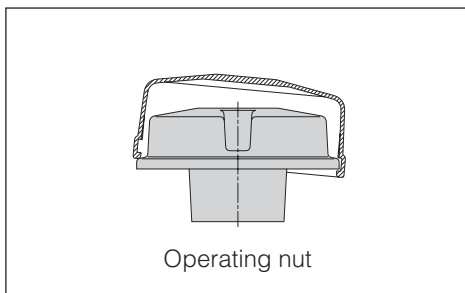
Conversion Kits for Theft Indicator Cap

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



No. 5416	●
No. 5418	●
No. 5419	●

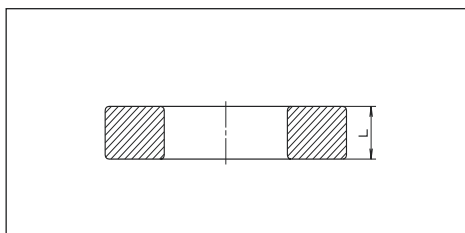
No. 8615

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

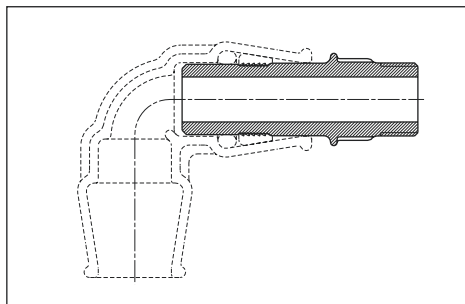
No. 6630 equal ends

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	3/4"	3/4"	92	0,04	●
	1"	1"	105	0,05	●
	1 1/4"	1 1/4"	123	0,10	●
	1 1/2"	1 1/2"	144	0,20	●
	2"	2"	160	0,35	●
6631	1"	1 1/4"	111	0,06	●
	1"	1 1/2"	117	0,07	●
	1"	2"	126	0,12	●

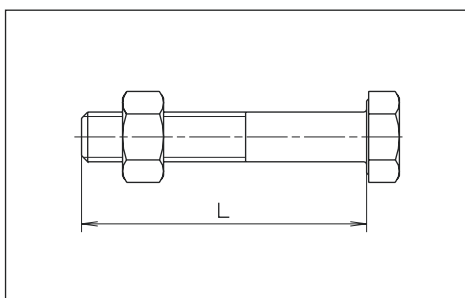
Accessories

Nut and Bolt

No. 8810 electro galvanized

No. 8830 A 2 corrosion proofing

No. 8840 A 4 corrosion and acid proofing

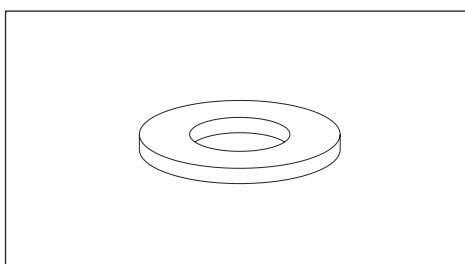


Bolt Length L	No. 8810		No. 8830		No. 8840	
	M 16	M 20	M 16	M 20	M 16	M 20
60	●	●	●	●	●	●
70	●	●	●	●	●	●
80	●	●	●	●	●	●
90	●	●	●	●	●	●
100	●	●	●	●	●	●
110	●	●				
120	●	●				
130		●				
140		●				
150		●				

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

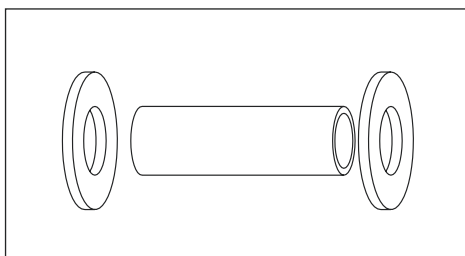
for electrical insulation of bolts for prevention of electrolytic corrosion

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

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"



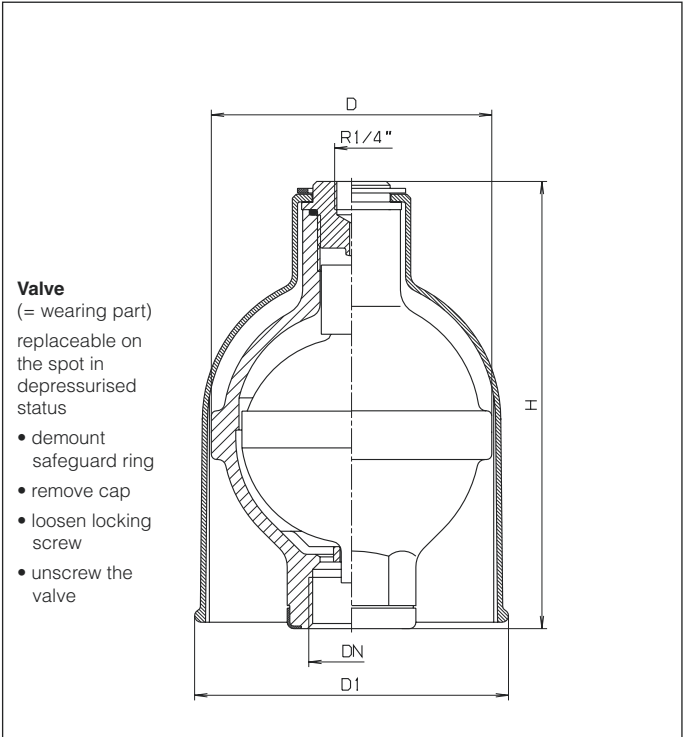
No. 9874
DN 2"



No. 9876
DN 2"



Automatic Air Valve



DN 1"

for small air discharge

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

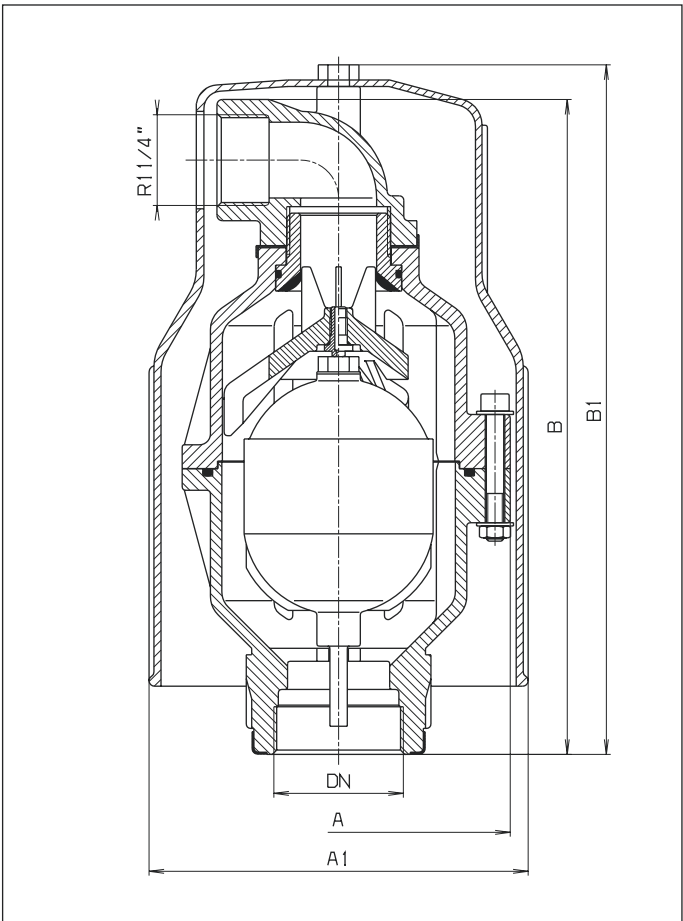
Test pressure:
Body 24 bar

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

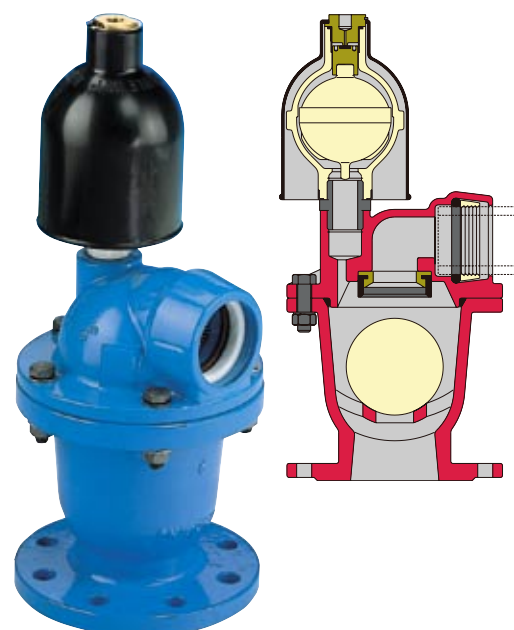
DN	PN	Working pressure	Size of the opening	Ø A	Ø A 1	B	B 1	Weight kg
2"	6	0,1 - 6	900/2,0 mm²	160	175	305	320	2,80
2"	16	1 - 16	900/2,0 mm²	160	175	305	320	2,80

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)	●	●		

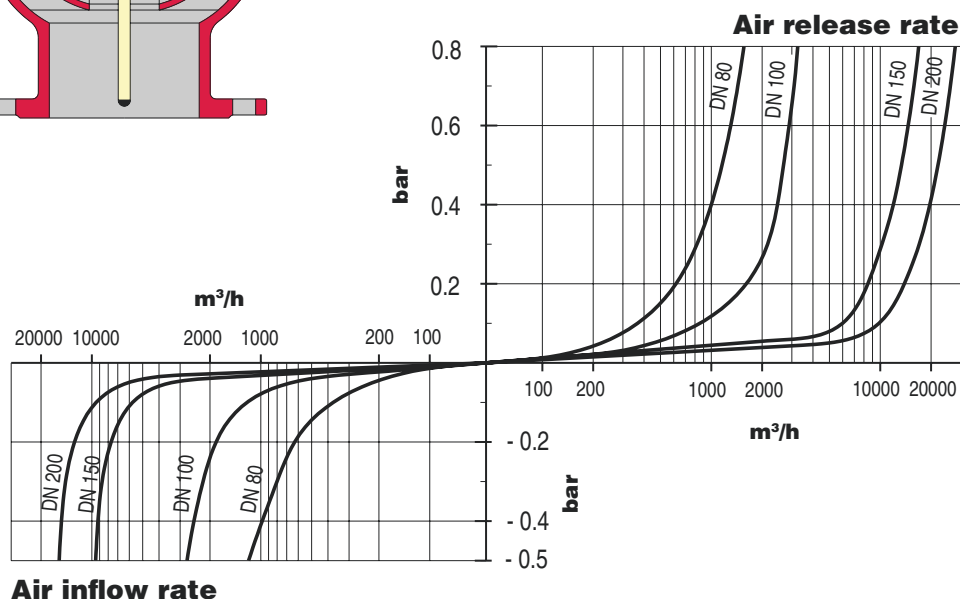
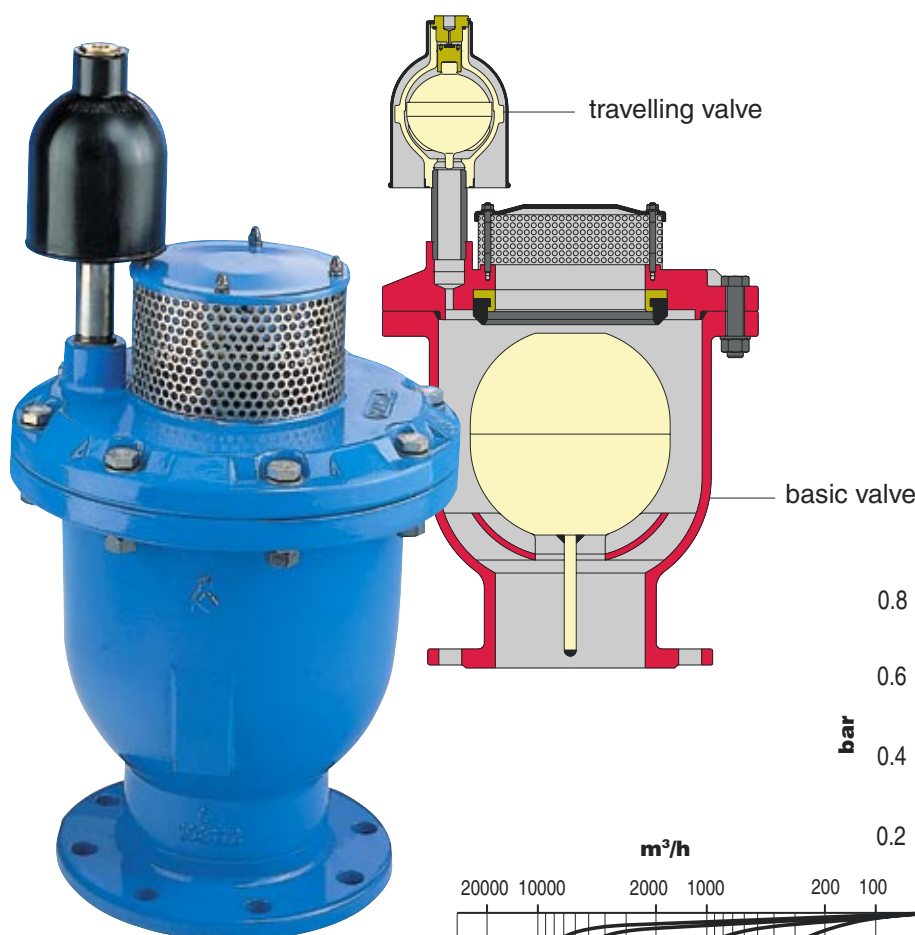
for cold water

- automatic
- all mechanical parts made from corrosion resistant materials

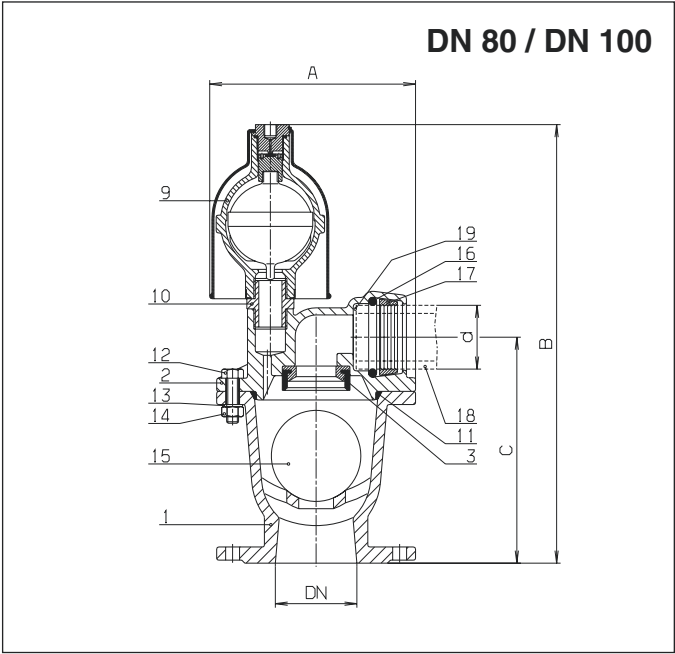
DN 80 / DN 100



DN 150 / DN 200



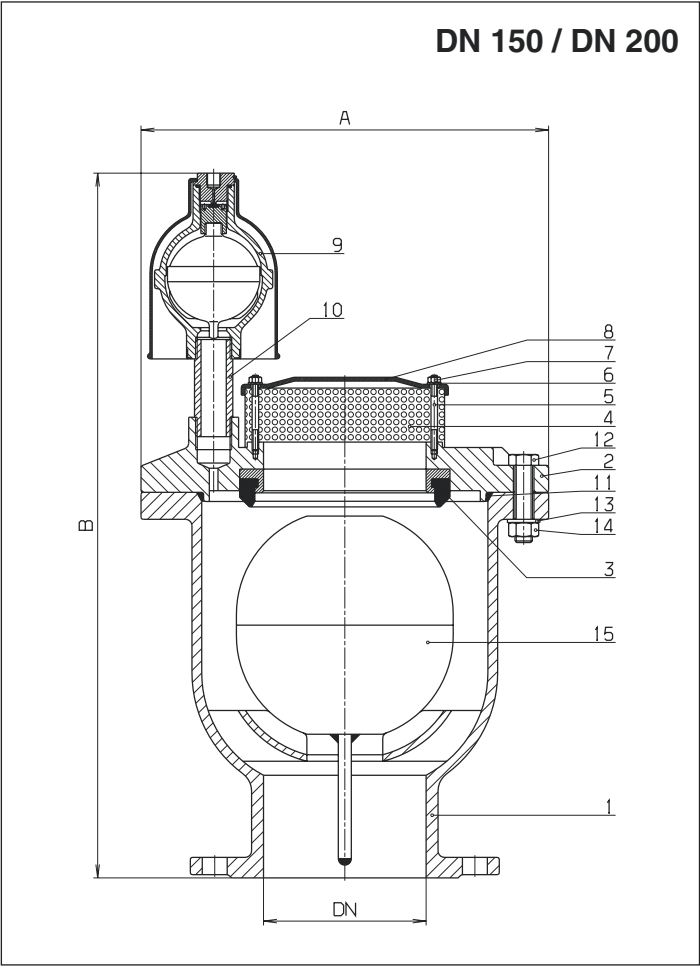
Automatic Air Valve



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
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 !



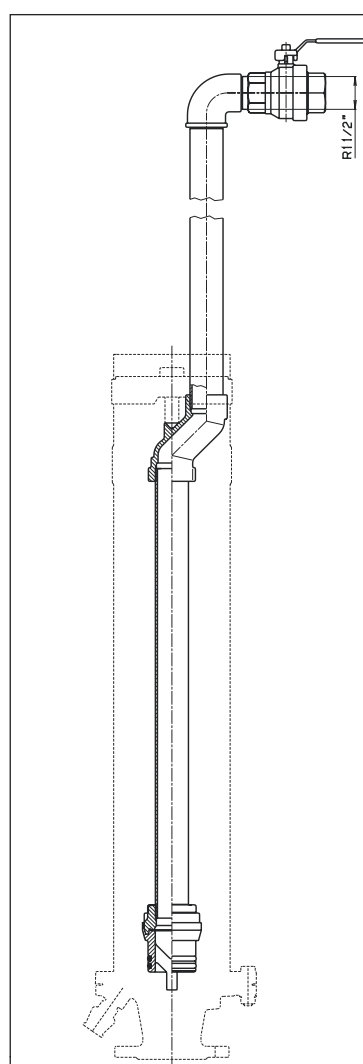
DN	A	B	C	d	Weight kg
80	212	455	230	63	17,0
100	250	505	260	75	26,0
150	387	686	-	-	69,0
200	387	686	-	-	77,0

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 m³/h	3250 m³/h	16900 m³/h	27800 m³/h
Size of the opening	1810/1,77 mm²	3320/1,77 mm²	17670/1,77 mm²	17670/1,77 mm²
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			

Order no.	Working pressure	DN	Installation depth		L= total length*	Weight kg	
			above-ground (fig. 1)	below-ground (fig. 2)			
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)



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.

*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).

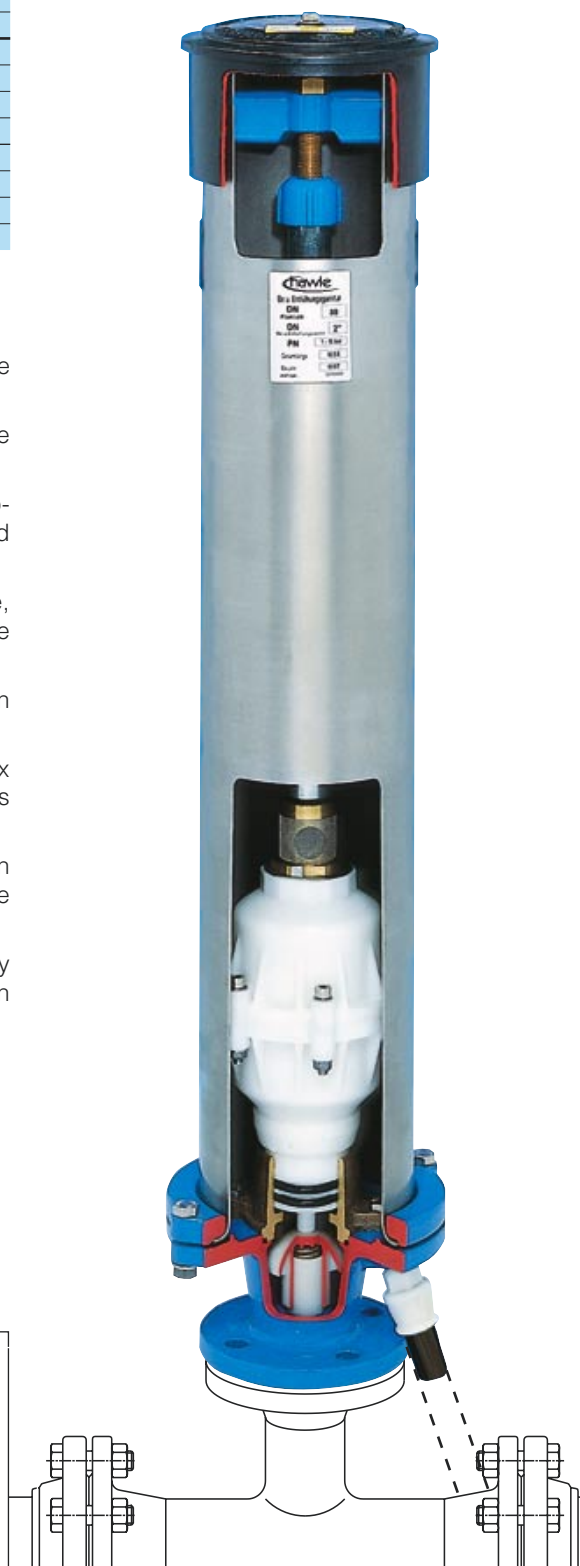
Max. air release capacity: 3,2 m³/min

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

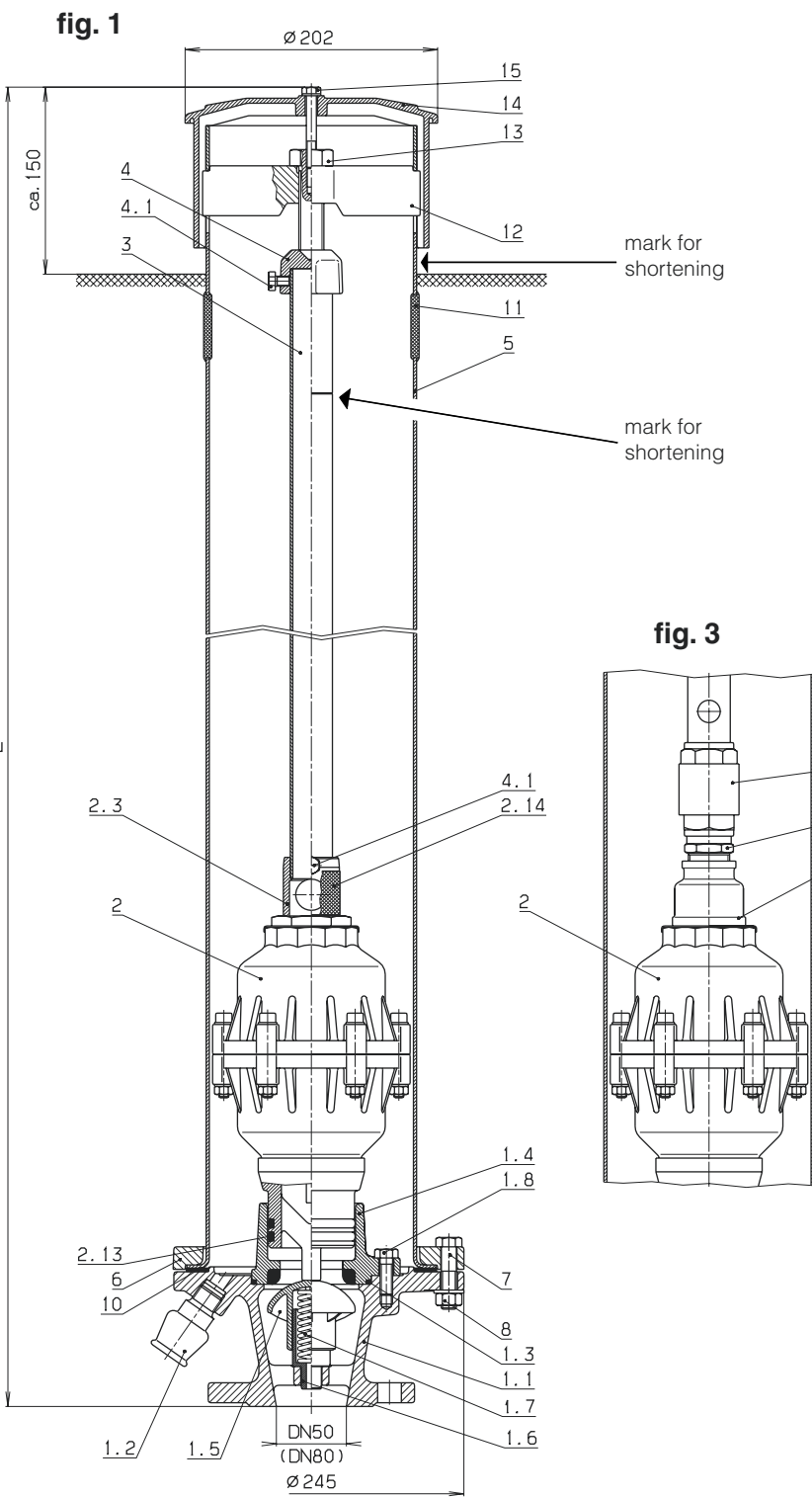
Air valve for releasing air only: on request
(minimum pressure required: 0,3 bar)

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

L= Total length of the hydrant



Combined Air Release Valve



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

Surface box Order no. 1790	
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

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:

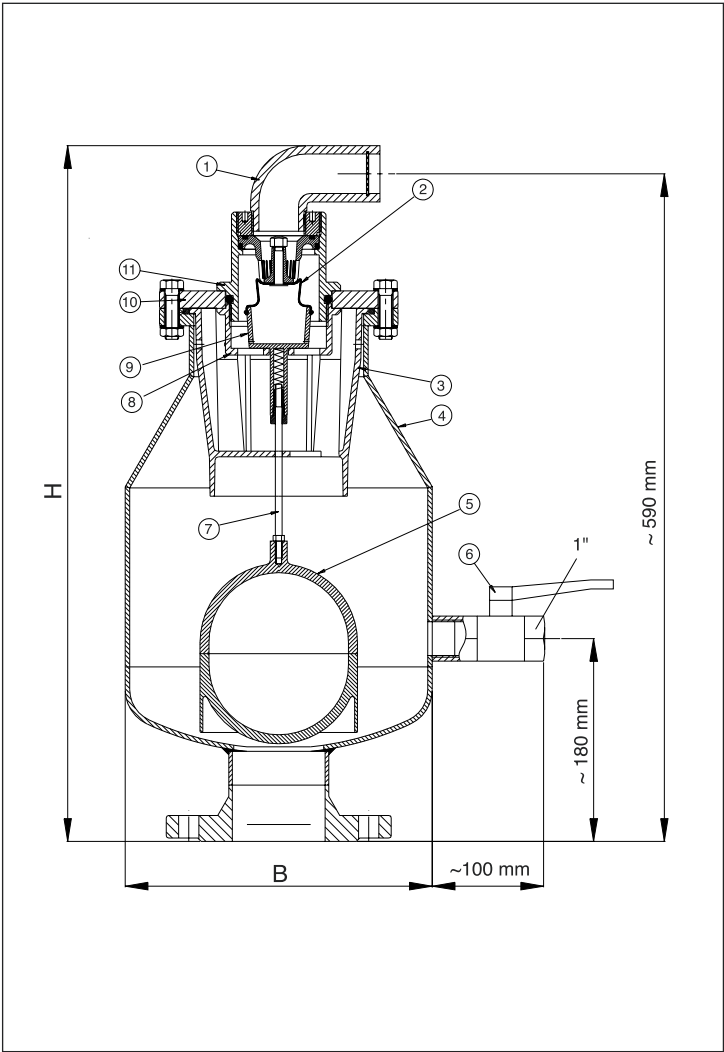
- direct automatic air inflow and release valve for wastewater
- operates automatically
- max. air release capacity: 230 m³/h
- max. size of the opening: 480 mm²
- sealing face is not in contact with the wastewater
- the two joints facilitate easy and excellent flushing at maintenance (above joint = 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.

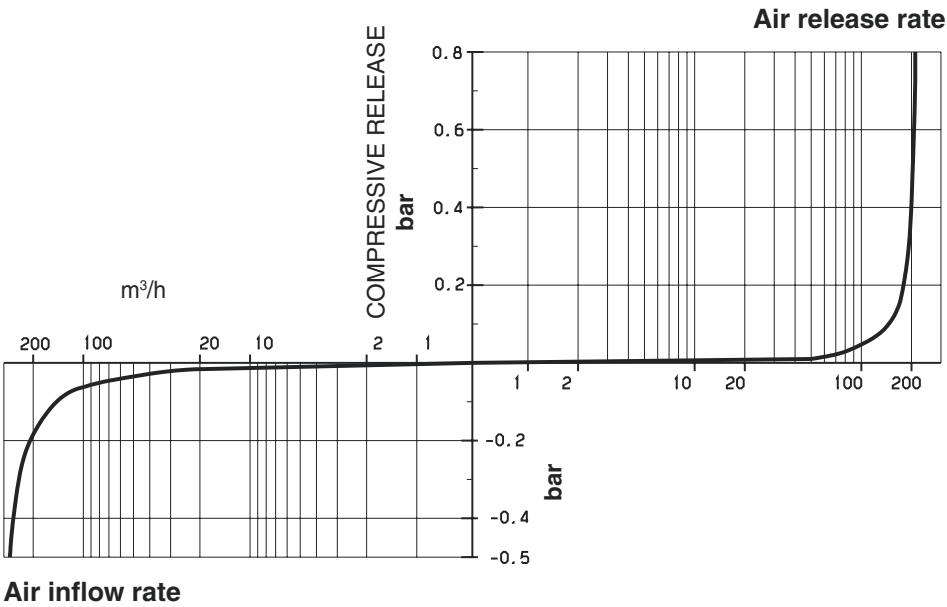
Automatic Air Valve for wastewater



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 St 1.4571 No. 9863 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	No. 9864 St 1.4571 No. 9863 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



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 of 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).

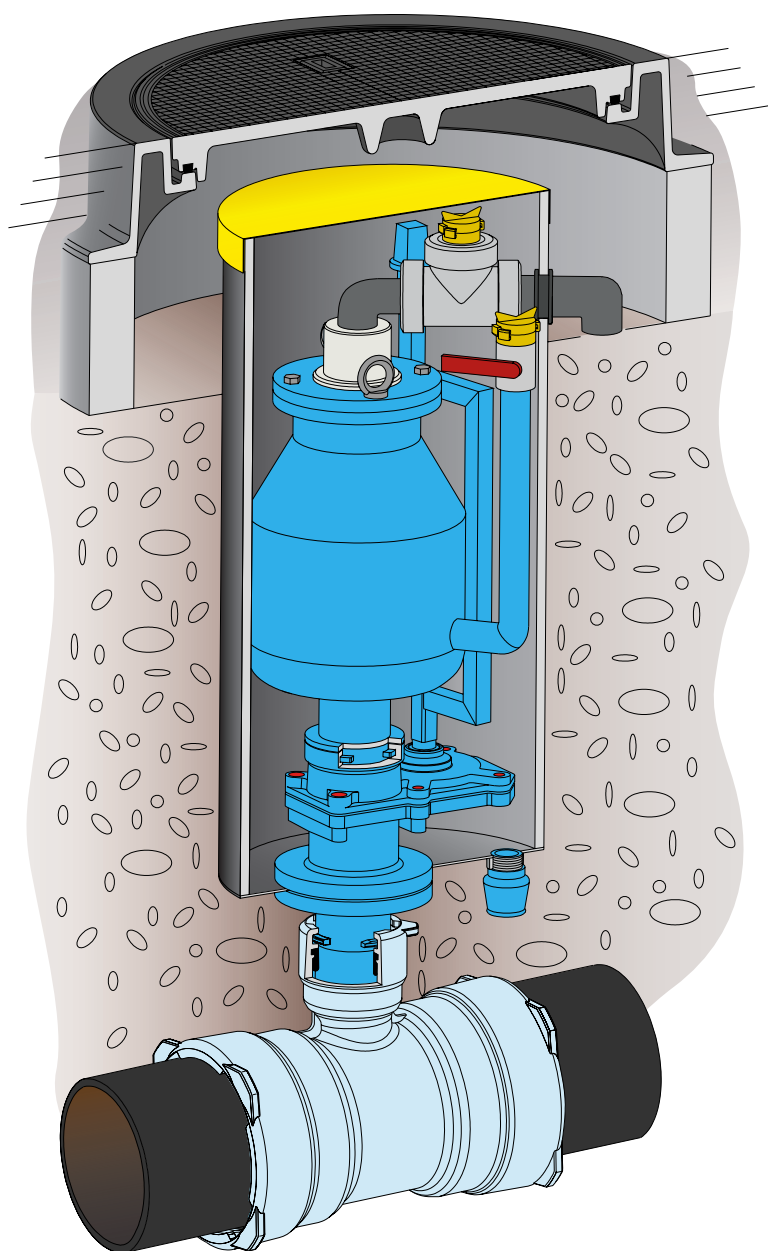
All maintenance and service work can be done from the road surface, thus avoiding the dangers arising shafts.

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).

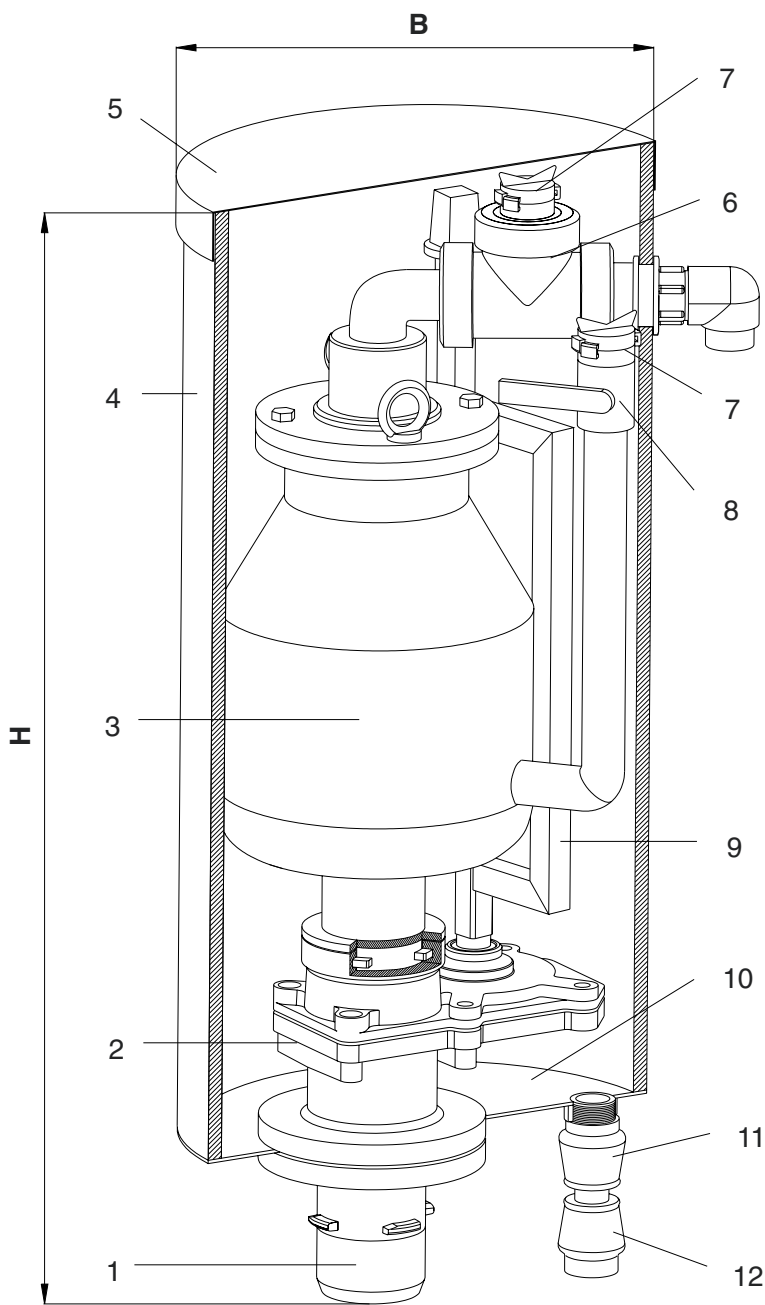
For reasons of easier installation we recommend the use of the spigot end version. Please use dirt protection and locking device !

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

Application: Waste water from private homes.



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

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

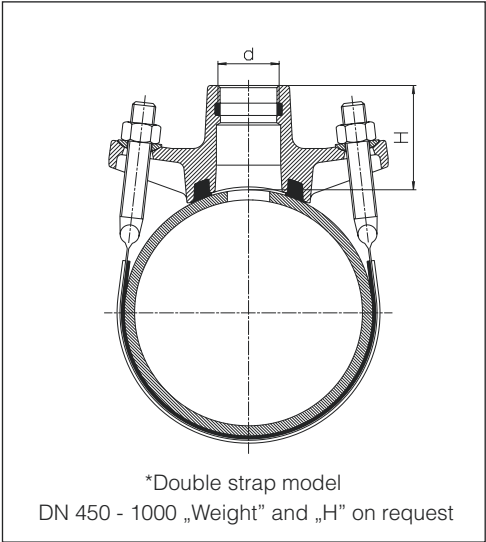


Universal Pipe Saddle, Undrilled Saddle

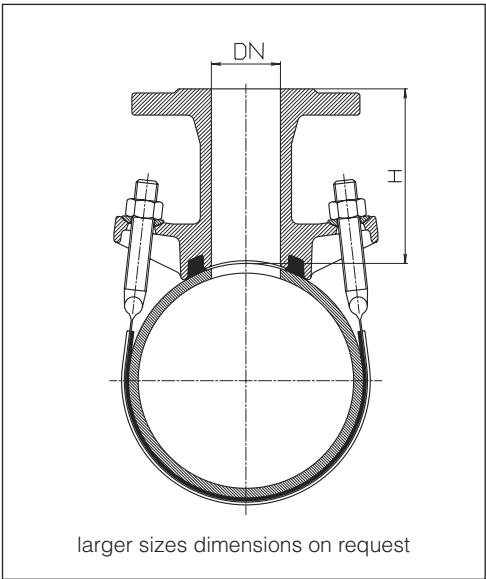
Material		Strap insulation:	elastomer
Saddle body:	ductile iron, epoxy powder coated	Bolts:	M 16 - stainless steel 1.4408 DIN 17006 (G-X6 Cr NiMo 18 10)
Saddle seal:	elastomer, suitable for potable water	Nuts:	DIN 934, rust & acid proof steel 1.4401, DIN 17006 (X5 CrNiMo 18 10) molybdenum coating
Strap: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

No. 3500 Universal Pipe Saddle with female threaded outlet

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



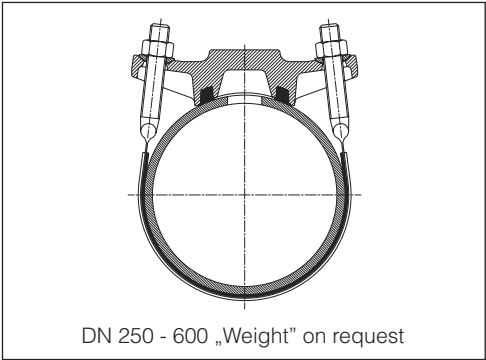
Threaded outlet		Dimensions/DN										
		50	65	80	100	125	150	200	250	300	350	400
1"	Weight	2,30	2,20	2,40	2,50	3,30	3,40	3,90	4,60	4,70		
	H	64	64	61	61	78	78	86	89	89		
1¼"	Weight	2,30	2,20	2,40	2,50	3,40	3,50	4,10	4,60	4,70		
	H	64	64	61	61	78	78	86	89	89		
1½"	Weight			2,40	2,50	3,60	3,60	4,20	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

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

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

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:

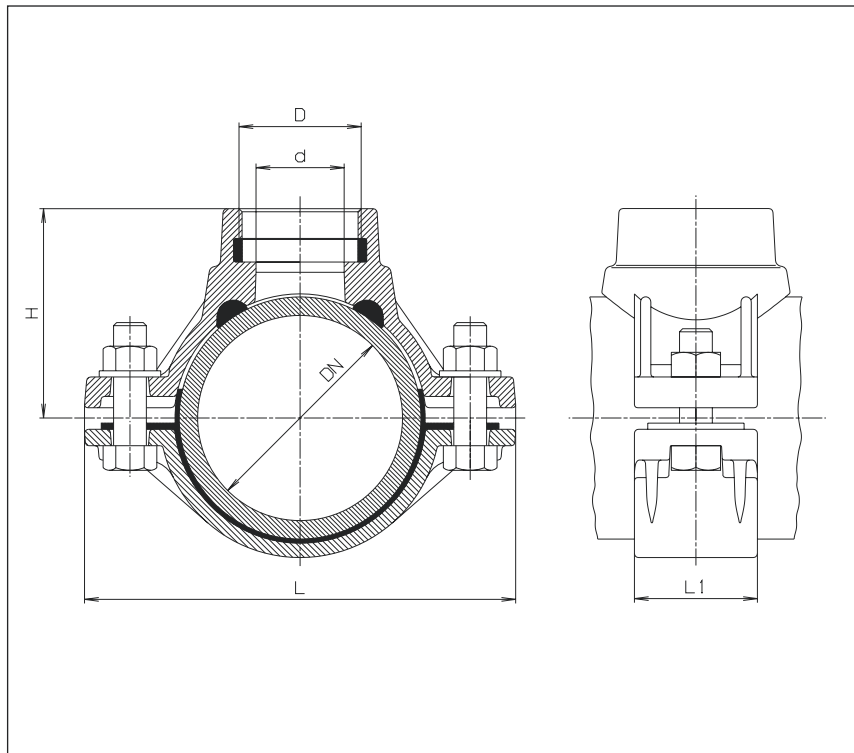
- Saddle body:**
of ductile iron, EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693)
epoxy powder coated
strap width 50 % greater than DIN-requirements (DIN 3543 part 2)
- Rubber insert:**
of elastomer
- O ring:**
of elastomer, suitable for potable water
- Protecting ring:**
of elastomer, suitable for potable water
- Bolts, nuts and washers:**
M 16 - Delta-Magni coated, therefore highest corrosion protection



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)

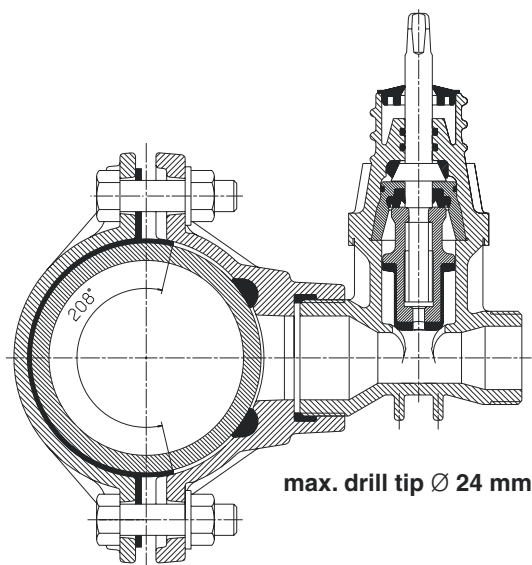
After drilling, retract the drill

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

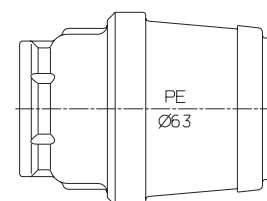
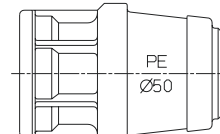
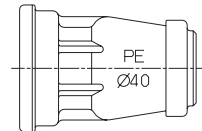
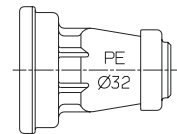
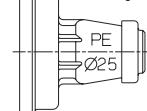
Push the PE pipe in - **finished**

DCI or steel pipe



max. drill tip Ø 24 mm

PE pipe connection



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:

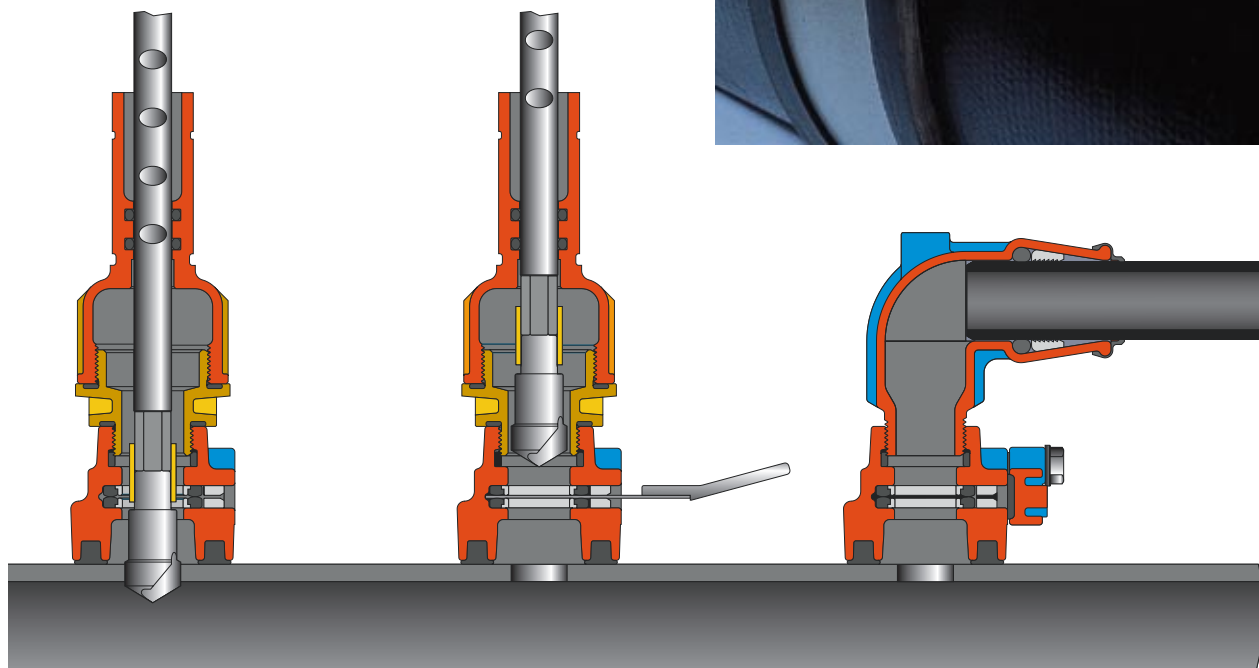
drill the pipe with a drilling machine (Hawle drilling machines, see special leaflets) — retract the drill

Shut-off:

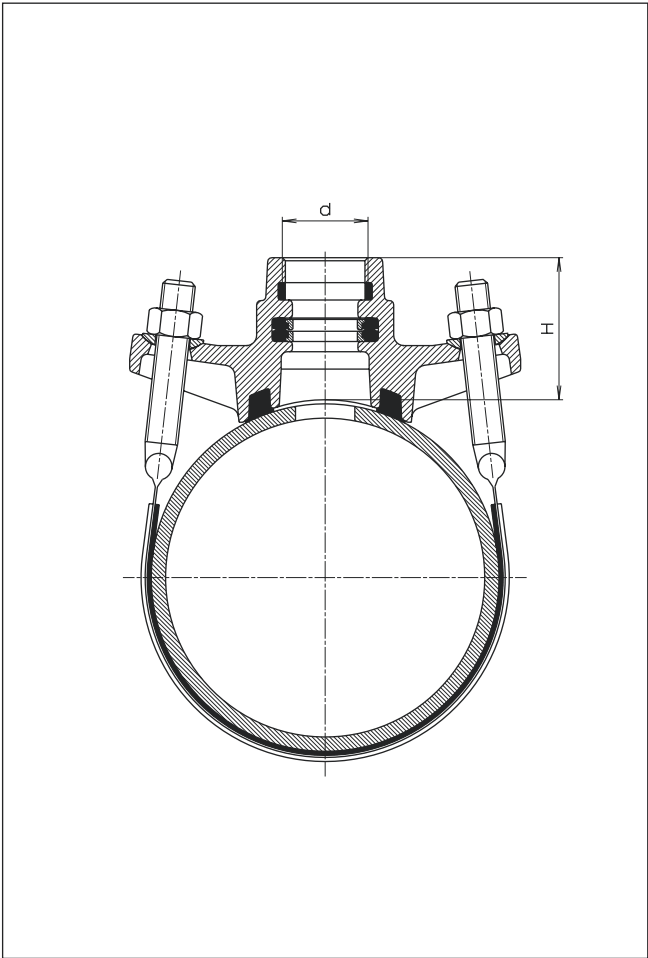
lubricate the saddle blade (Order no. 8401) — insert it — shut-off

Connection:

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



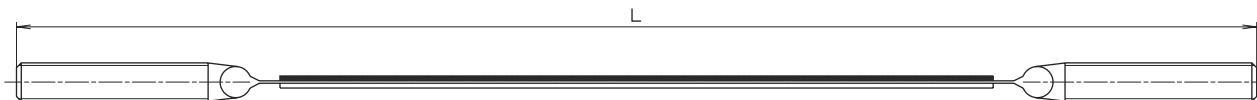
Shut-Off Saddle with O ring



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



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.

The **HAWLE-COMPACT SADDLE**

for under pressure drilling

Combines efficiency and
technical perfection

Suitable for renovation and
new installations

For drilling instructions see over page.

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"	●	●	●	●	●
			1 1/4"	●	●	●	●	●
			1 1/2"	●	●	●	●	●
			2"	●	●	●	●	●
3382	Rubber insert for adapting to steel pipes			●	●	●	●	●

for DCI and steel pipes

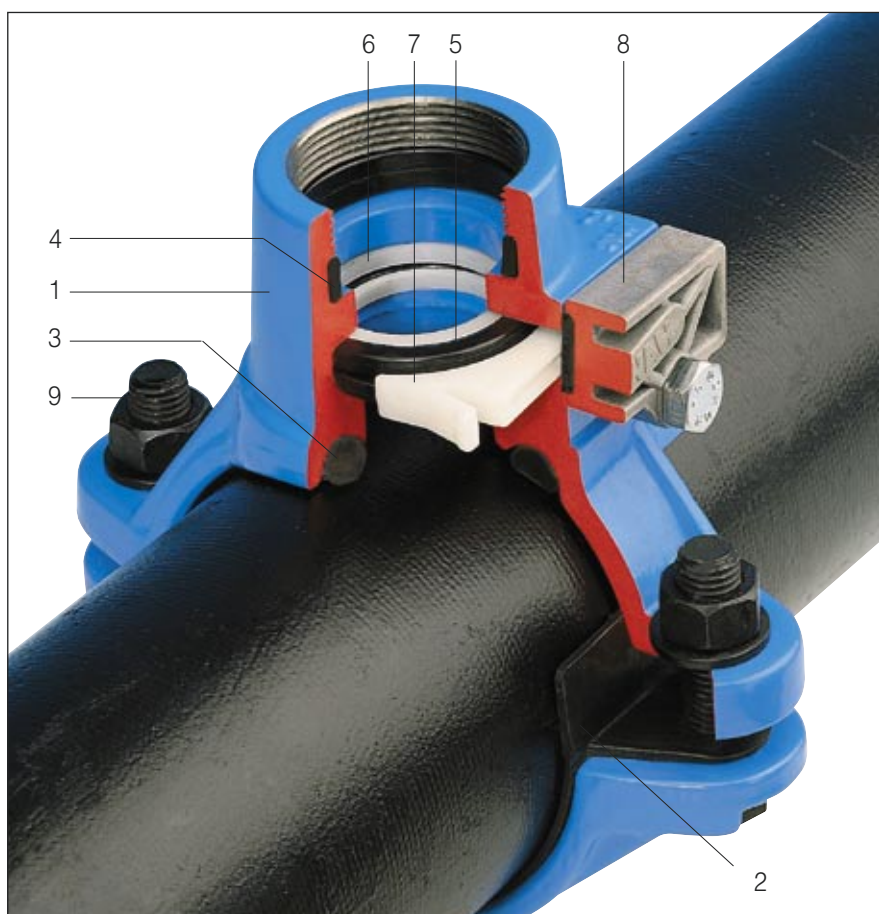
Please specify pipe material and outside diameter on order

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 shields against corrosion and encrustation and therefore prevents reduction in the flow section

Material:

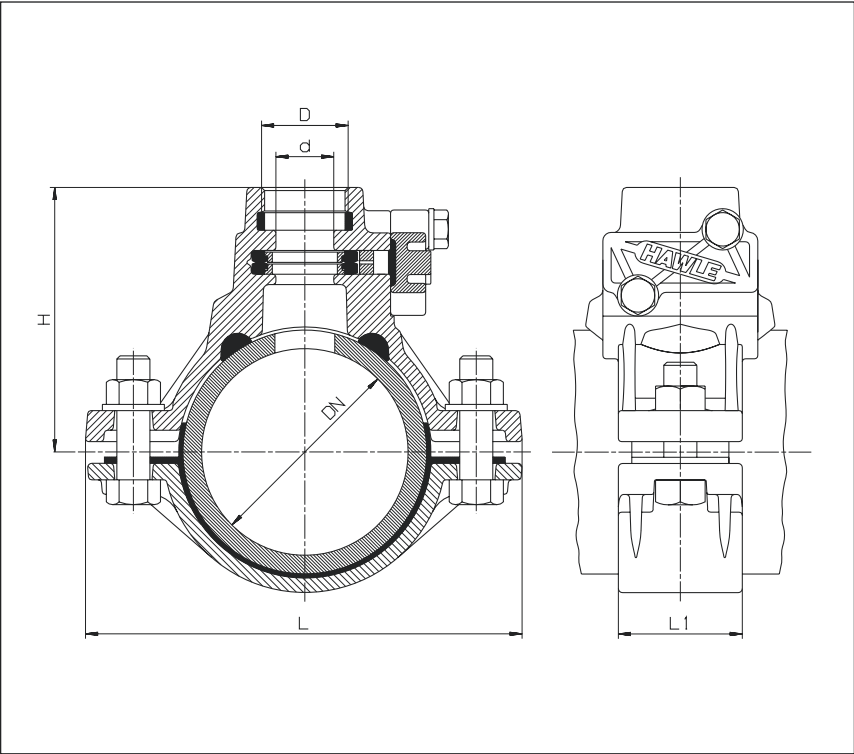
- Saddle body:**
of ductile iron, EN-GJS-400-18
according to EN 1563 (GGG 400
- DIN 1693)
strap width 50 % greater than
DIN-requirements (DIN 3543 part 2)
- Rubber insert:** of elastomer
- O ring:** of elastomer, suitable
for potable water
- Protecting ring:** of elastomer, suitable
for potable water
- Seal:** of elastomer, suitable
for potable water
- O ring carrier:** of POM
- Backing plate:** of POM
- Sealing cover:** of POM, reinforced
- Bolts, nuts and washers:**
M 16 - Delta-Magni coated,
therefore highest corrosion
protection



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:

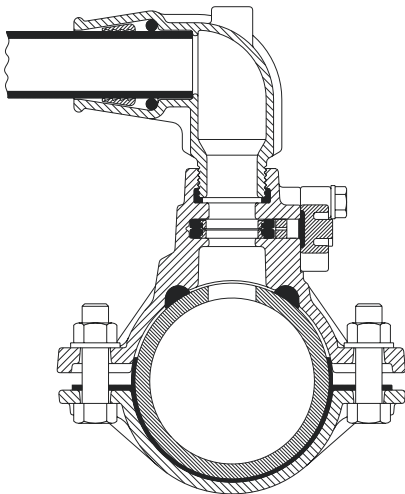
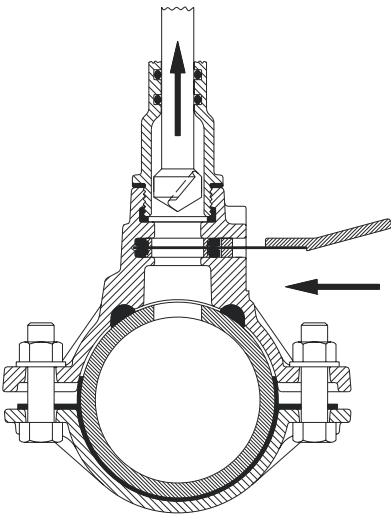
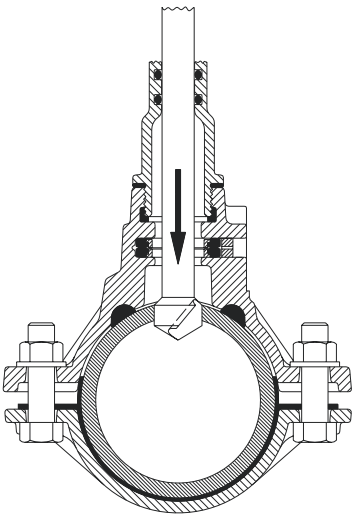
drill the pipe with a drilling machine (for Hawle drilling machines, see special leaflets) — retract the drill

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:

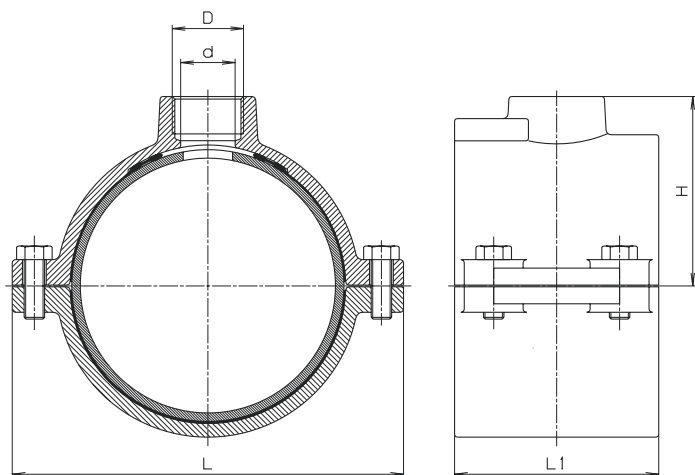
d 40	EN-GJL-250 (GG 250) - EN 1561, epoxy powder coated
d 50 - 500	EN-GJS-400-18 (GGG 400) - EN 1563 epoxy powder coated
Rubber seals:	elastomer, suitable for potable water
Bolts and washers:	stainless steel - A 2

HAKU Saddle

No. 5250 HAKU Saddle

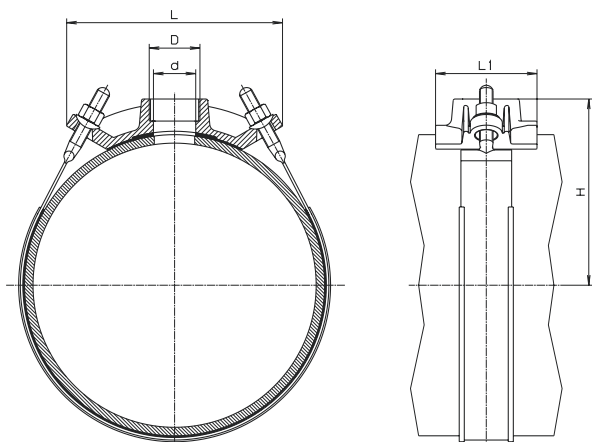
Pipes	ÖNORM	DIN
PE	B 5170	8072
PE	B 5172	8074
PVC	B 5182	8061/62 resp.19532

Pipe Ø mm 40 - 315



+ max. 35 mm drill tips

*** Pipe Ø 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 Ø mm	D	d Ø	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			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			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

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
and **PVC-pipes** according to DIN 8061/8062

PN 10 (SDR 11) and PN 16 (SDR 7.4)
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

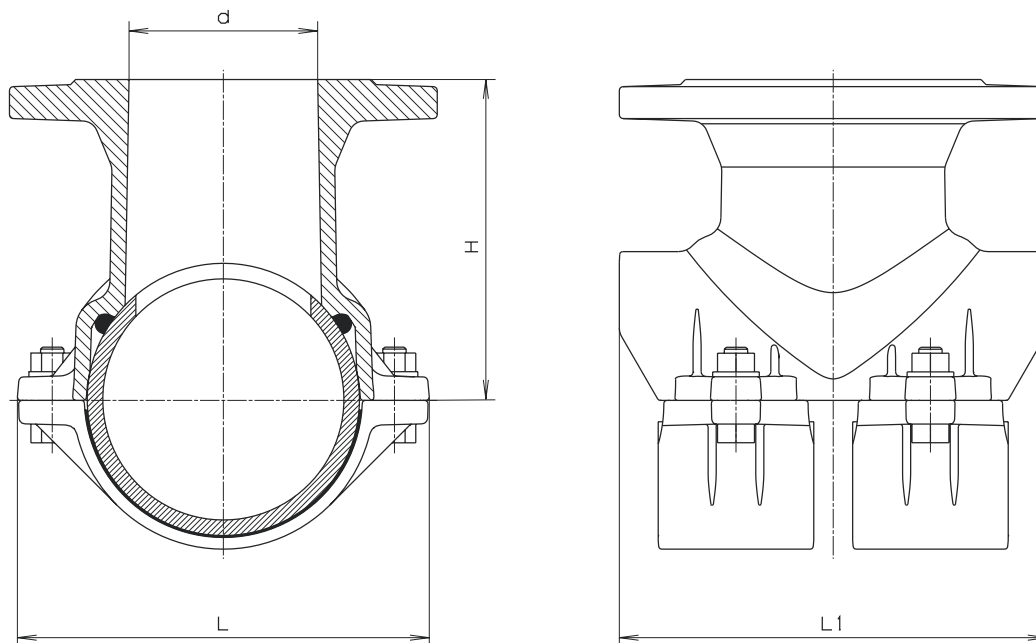
HAKU Pipe Saddle with flanged outlet

for **PE-pipes** according to DIN 8074
and **PVC-pipes** according to DIN 8061/8062

PN 10 (SDR 11) and PN 16 (SDR 7.4)
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

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.

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

HAKU Shut-Off Saddle, Shut-Off Adaptor

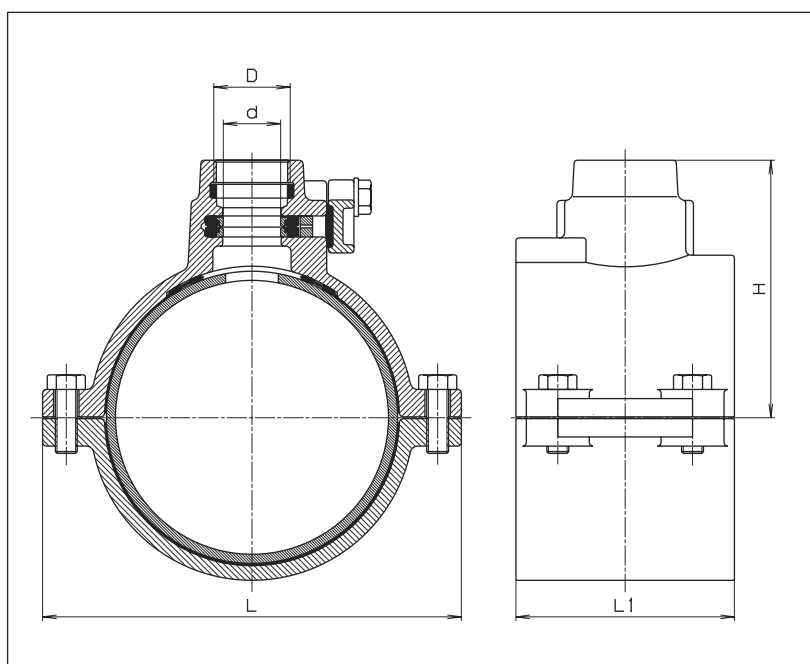
Drilling instructions:

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

No. 5310 HAKU Shut-Off Saddle



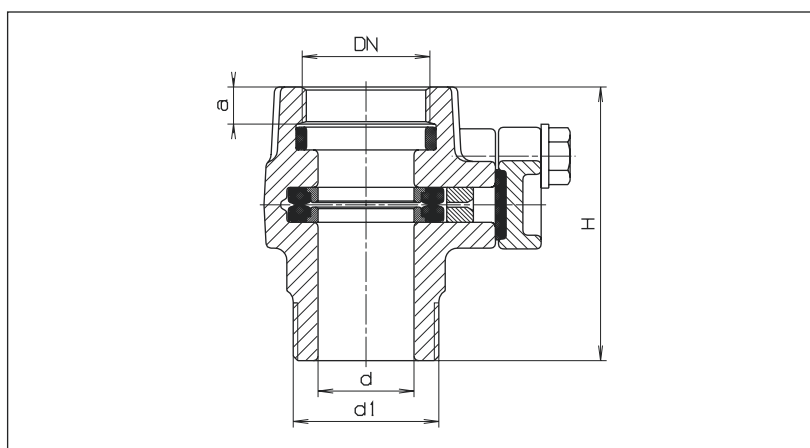
Pipe Ø mm	D	d Ø	H	L	L 1	Weight kg
63	1"	28	84	124	100	2,5
	1¼"	32	87			2,4
75	1"	28	91	135	110	2,8
	1¼"	32	94			2,6
	1½"	43	91			3,3
	2"	43	95			3,0
90	¾"	24	100	150	110	3,0
	1"	28	100			3,0
	1¼"	32	103			2,5
	1½"	43	101			3,6
	2"	43	105			3,4
110	1"	28	110	170	120	3,6
	1¼"	32	113			3,6
	1½"	43	113			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

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

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

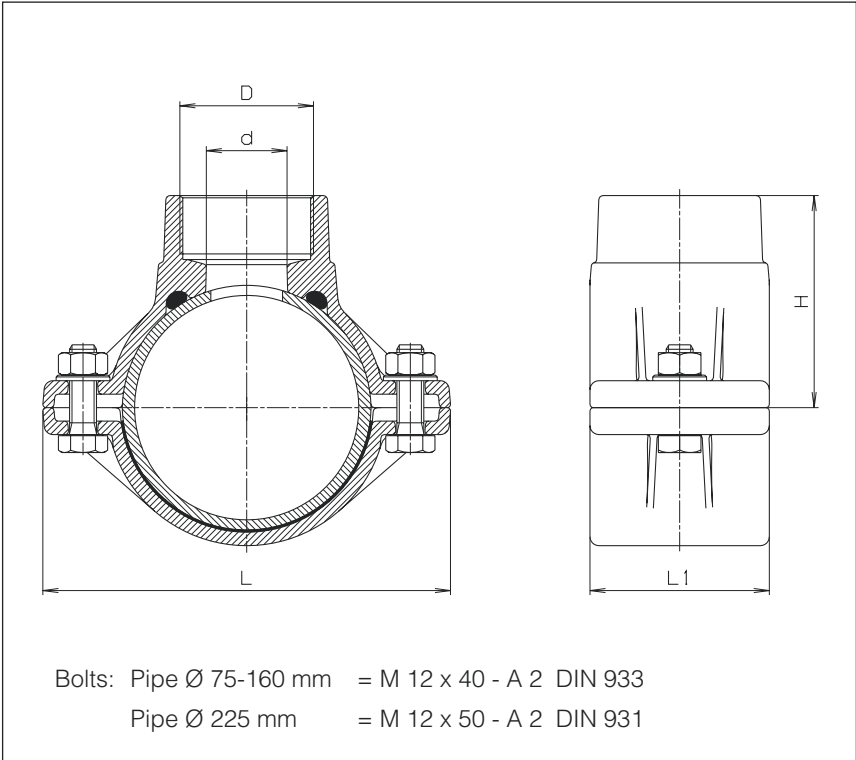
Nuts: molybdenum coating



HAWEX Pipe Saddle

No. 5270

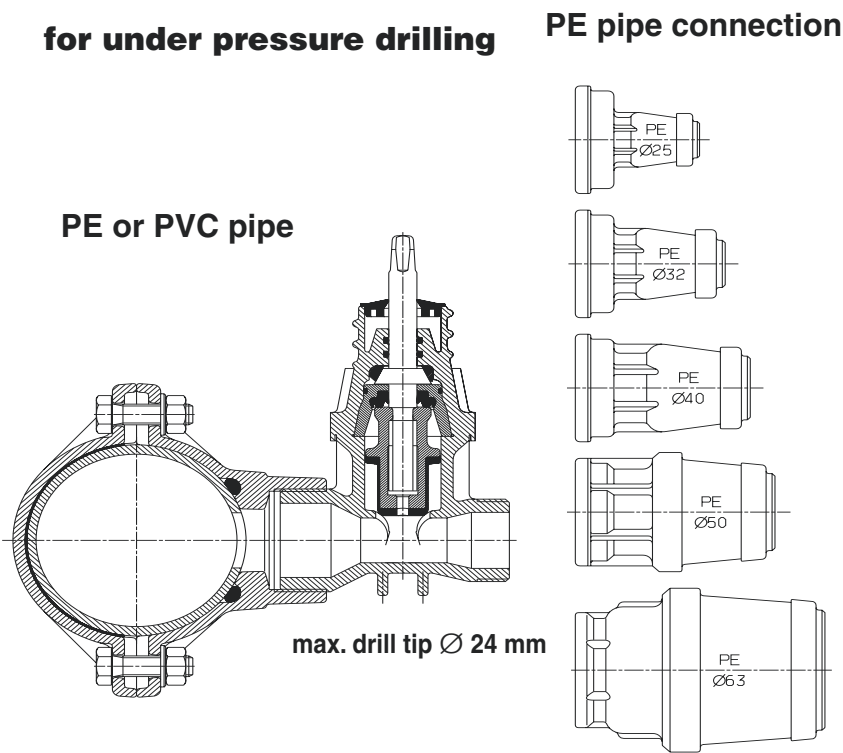
HAWEX Pipe Saddle with threaded outlet



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**



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.

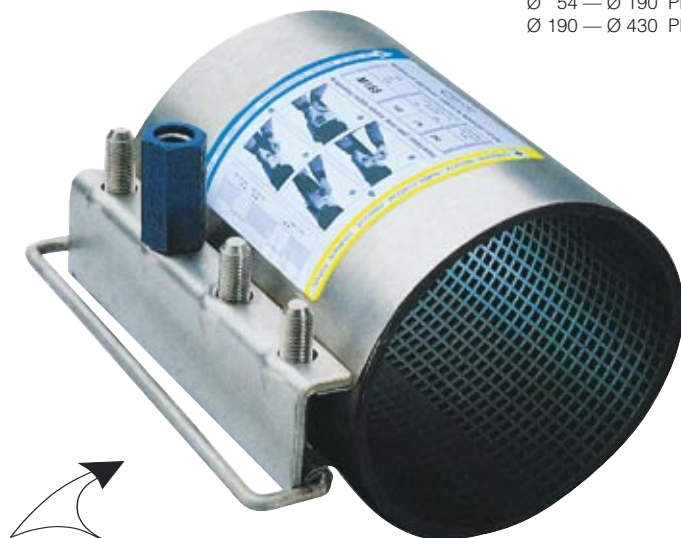
Pipe repair clamps cannot be used for restraint connections.

Special version such as larger diameters and other lengths on request.

for steel, DCI, AC and PVC pipes

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 „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.

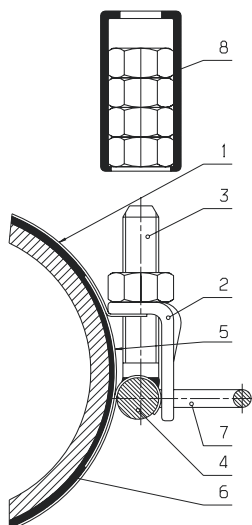
No. 0751

tested under normal conditions:
Ø 87 — Ø 186 PN 16
Ø 208 — Ø 430 PN 10
Ø 425 — Ø 471 PN 6



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

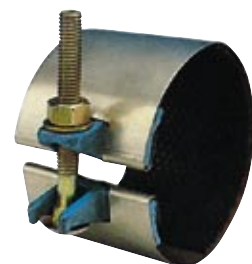
for Pipe diameter of
21 — 64 mm, length 76 mm

Band: stainless steel 1.4301

Gasket: Elastomer

Lug: malleable iron

Bolts: electro galvanized, imperial threads



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		AC-PN 16		PVC	OD
					raw	machined	raw	machined		
K 54	54-58	150	50						1,1	●
M 54		200							1,5	●
K 58	58-64	150	50						1,1	●
M 58		200							1,5	●
K 63	63-68	150		50					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			1,3	●
M 75		200							1,7	●
K 82	82-91	150	80	65					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	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			1,5	●
M 115		200							2,1	●
K 120	120-130	150			100	100		100	1,7	●
M 120		200							2,2	●
K 131	131-141	200	125				100		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	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	3,6	●
M 178		250							4,5	●
L 178		315							5,7	●
K 190	190-202	200					150	150	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					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	5,4	●
M 250		315							6,8	●
L 250		380							8,1	●
K 269	269-281	250	250	250					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	6,0	●
M 306		315							7,8	●
L 306		380							9,2	●
K 315	315-327	250	300	300					6,2	●
M 315		315							7,8	●
L 315		380							9,5	●
K 345	345-357	250	350		300	300			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		AC-PN 16		PVC		
					raw	machined	raw	machined	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				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	●

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

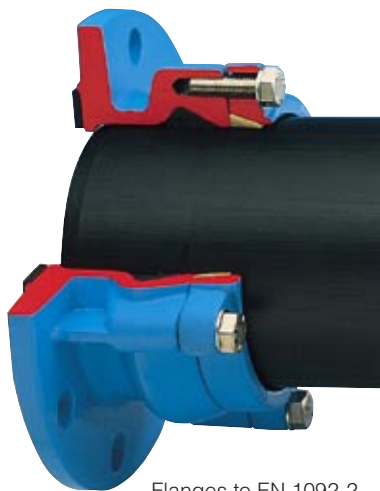
Lip seal: Elastomer, suitable
for potable water
(durably lubricated)

Flat gasket: Elastomer

Grip ring: Ms 58
(up to DN 300 Rg7)

Hexagonal bolts: A 2
stainless

For thinwalled PE-pipes (up to 3mm wall thickness) and low internal pressure we recommend using a support liner (see page D2/4).



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.

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

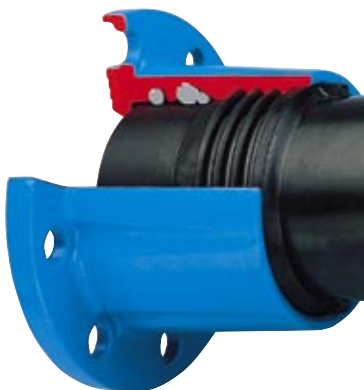
Material:

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 pipeline 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 Ø 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

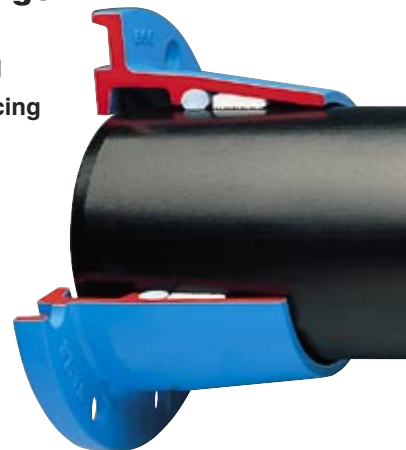
No. 5500 equal

No. 5530 reducing

up to PN 16

Material:

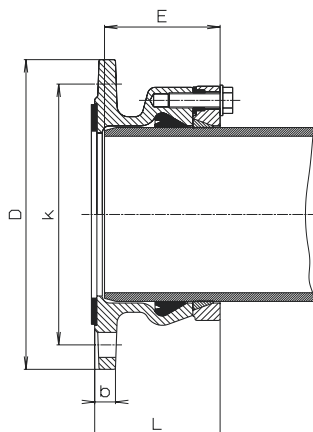
Flange:
see above table,
epoxy powder coated
Grip ring: POM
Seal ring: Elastomer,
suitable for potable
water



Assembly instructions: chamfer the pipe 30° and moisten, and push into the socket until it stops.

Flanged Connections for PE pipes, restraint

No. 0400



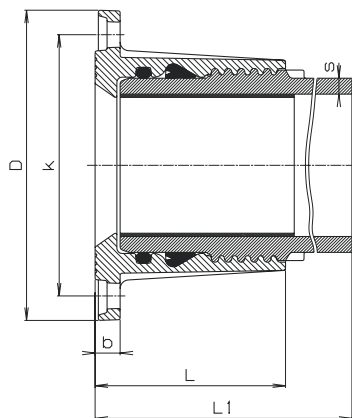
No. 0400 / No. 5500

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



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



for PVC pipes according to EN 1452-2, DIN 8061/8062
standard version: PN 10 - DIN 2501

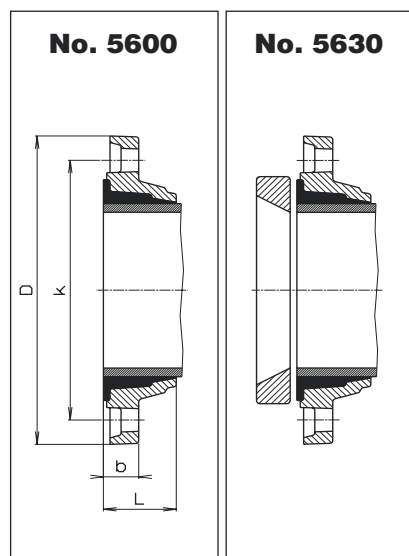
Flange DN	Pipe Ø mm	Flange Adaptor "System 2000"		Double Chamber Flange Adaptor			
				equal		reducing	
		No. 0400		No. 5600		No. 5630	
50	63	●	S	●	G		
60	63	●	S				
60	75	●	S	●	G		
65	63	●	S				
65	75			●	G		
80	75	●	S			●	G
80	90	●	S	●	G		
100	90	●	S				
100	110	●	S	●	G		
100	125	●	S				
125	110	●	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

Assembly: Cut the pipe end square, do not chamfer or moisten – push the flange onto the pipe and then push the gasket on.

Flanged Connections for PVC pipes



No. 5600

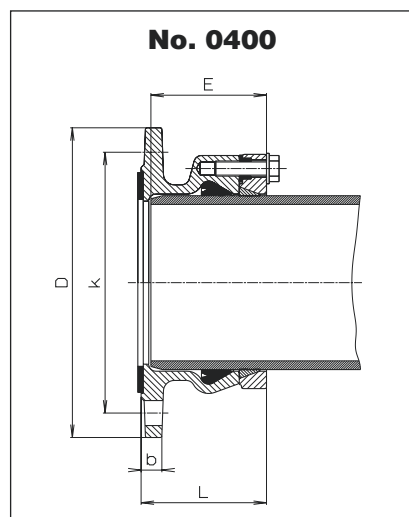
Flange DN	Pipe Ø mm	D	K	b	L (assembled)	Bolts		Weight kg
						Qty.	Thread	
50	63	165	125	24	54	4	M 16	2,0
60	75	175	135	24	54	4	M 16	2,6
65	75	185	145	24	54	4	M 16	3,0
80	90	200	160	25	60	8	M 16	3,2
100	110	220	180	26	62	8	M 16	4,1
150	160	285	240	29	66	8	M 20	6,7
200	200	340	295	31	93	8	M 20	9,4
200	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



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

to EN 545

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.

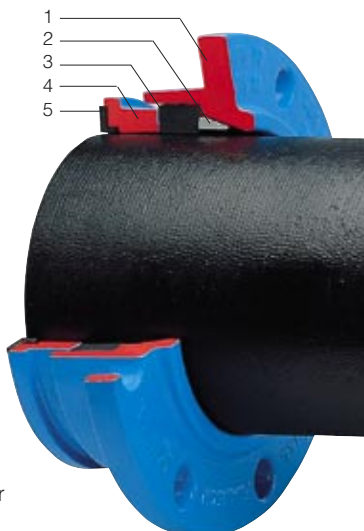
The resilience of the connection prevents tension in the pipe and minimises the danger of breakage.

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.

Flange DN	Pipe Ø mm	Double Chamber Flange Adaptor		Double Chamber Flange Adaptor		Spar Flange see picture over page	
		standard	reducing	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:

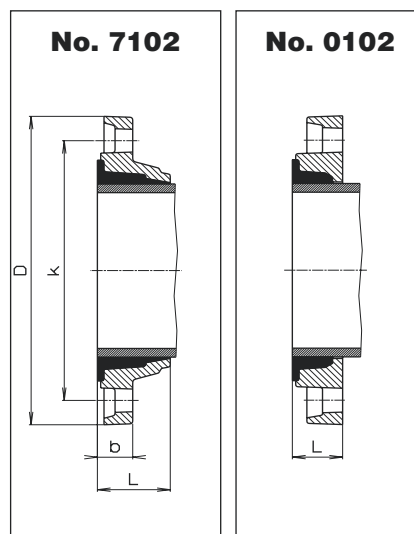
- * also available in PN 16
- S of ductile iron
- G of grey iron
- x see picture G 4/1

Standard version: drilled to PN 10 - DIN 2501

Note: do not chamfer the pipe

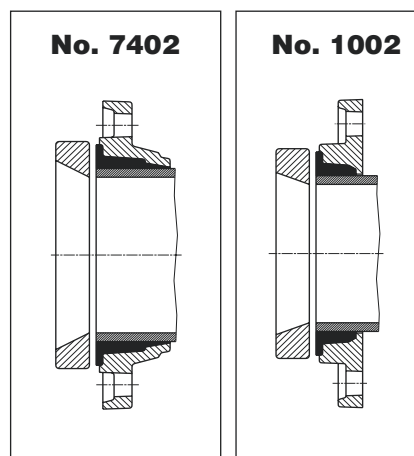
special dimensions: on request

Flanged Connections for DCI pipes



No. 7102 / No. 0102

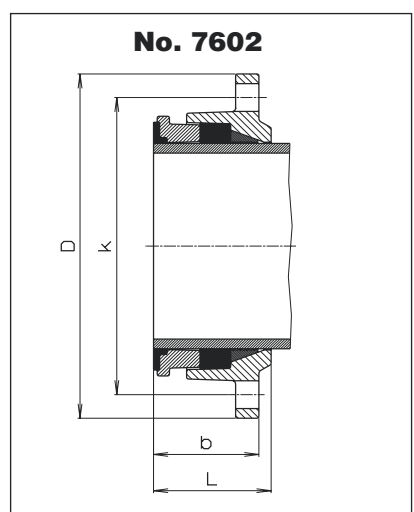
Flange DN	Cl pipe Ø mm	D - No.		K	b - No.		~ L (assembled) - No.		Bolts		Weight- No.	
		7102	0102		7102	7102	0102	0102	Qty.	Thread	7102	0102
50	66	165	165	125	22	56	35		4	M 16	1,8	2,2
60	77	175	175	135	28	56	35		4	M 16	3,1	2,4
60	82		175	135			35		4	M 16		3,0
65	82	185		145	29	58			4	M 16	3,4	
80	98	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

Flange DN	Cl pipe Ø mm	D - No.		K	b with reducer		~ L with reducer		Bolts		Weight - No.	
		7402	1002		7402	7402	1002	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

Flange DN	Cl 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.

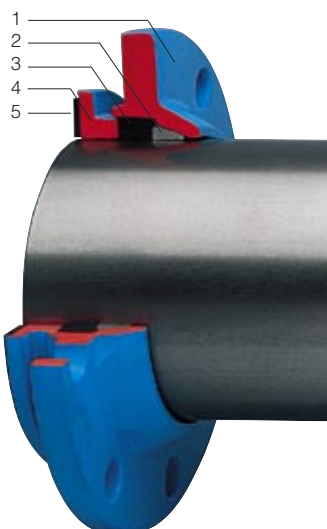
The resilience of the connection prevents tension in the pipe and minimises the danger of breakage.

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 Ø mm	Double Chamber Flange Adaptor		Flange Adaptor restraint		Spar Flange picture see over page			
		Order no. 7101		Order no. 7601		standard		reducing	
						Order no. 0101		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		

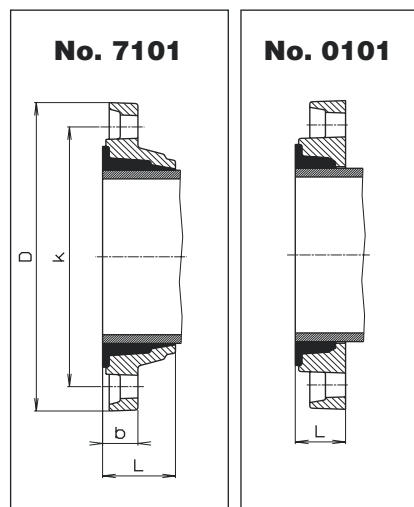
Explanation:

- * 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

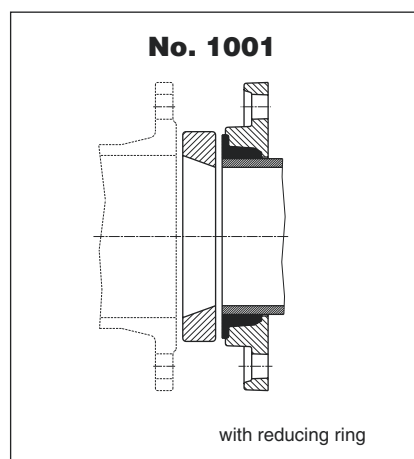
special dimensions: on request

Flanged Connections for steel pipes



No. 7101 / No. 0101

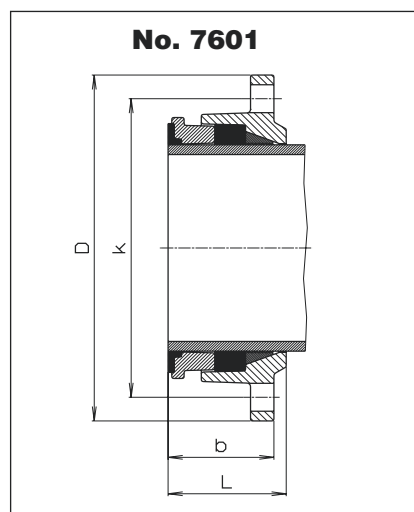
Flange DN	Steel Pipe Ø mm	D - No.		K	b - No.		~ L (assembled)		Bolts		Weight kg - No.	
		7101	0101		7101	7101	0101	Qty.	Thread	7101	0101	
40	48		150	110			30	4	M 16		0,9	
50	56-57	165		125	26	54		4	M 16	2,6		
50	59/61	165		125	26	54		4	M 16	2,6		
60	67		175	135			37	4	M 16		2,5	
65	76	185		145	28	56		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.

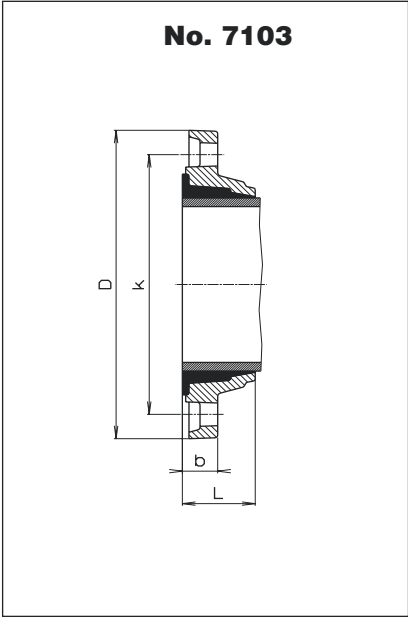
The resilience of the connection prevents tension in the pipe and minimises the danger of breakage.

standard version: drilled to PN 10 - DIN 2501

Note: do not chamfer the pipe

special dimensions: on request

Flanged Connections for AC pipes



No. 7103

Flange DN	Ø 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	●

Reducing, Transition Flanges

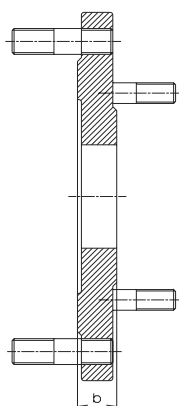
No. 0801

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

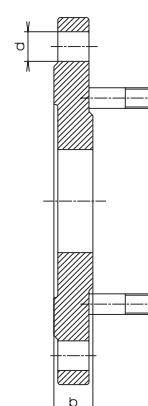
No. 0802

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

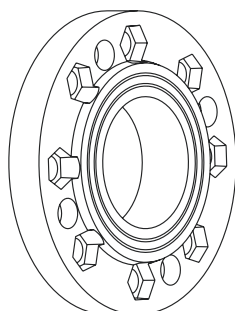
No. 0800

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 63	65 75	80 90	100 110	125 140	150 160	200 200	200 225	250 280	300 315
Restraint Clamp	1254	PN 10 *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

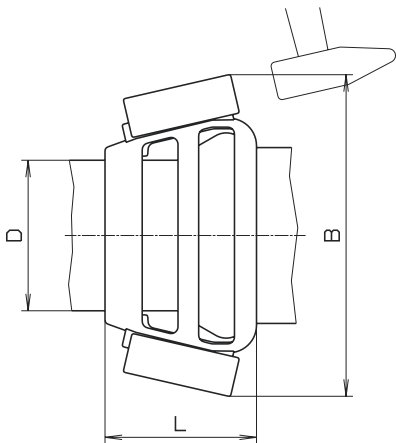
Grip ring: Ms 58 (CuZn36Pb3)

Bolts: A 2 DIN 933

Seal: elastomer, suitable for potable water



Restraint Systems for PVC pipes



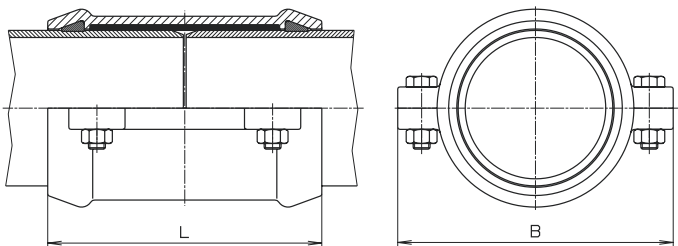
No. 1254 Restraint Clamp

The Restraint Clamp for all 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 griping effect.

The joint is flexible and the fitting can be turned on the pipe without affecting the grip or seal. The fitting can be dismantled if required. Assembly is quick and simple.

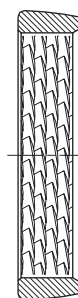
The HAWLE ISO Pipe Fitting of POM has been developed from the grey iron version.

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"**

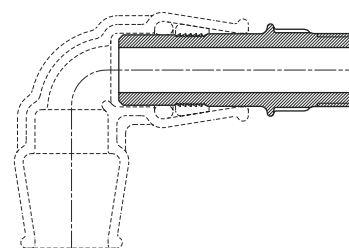
Push Fit Swivel Converter

of POM

with male thread end

every fitting in the range can be converted to a swivel male thread outlet.

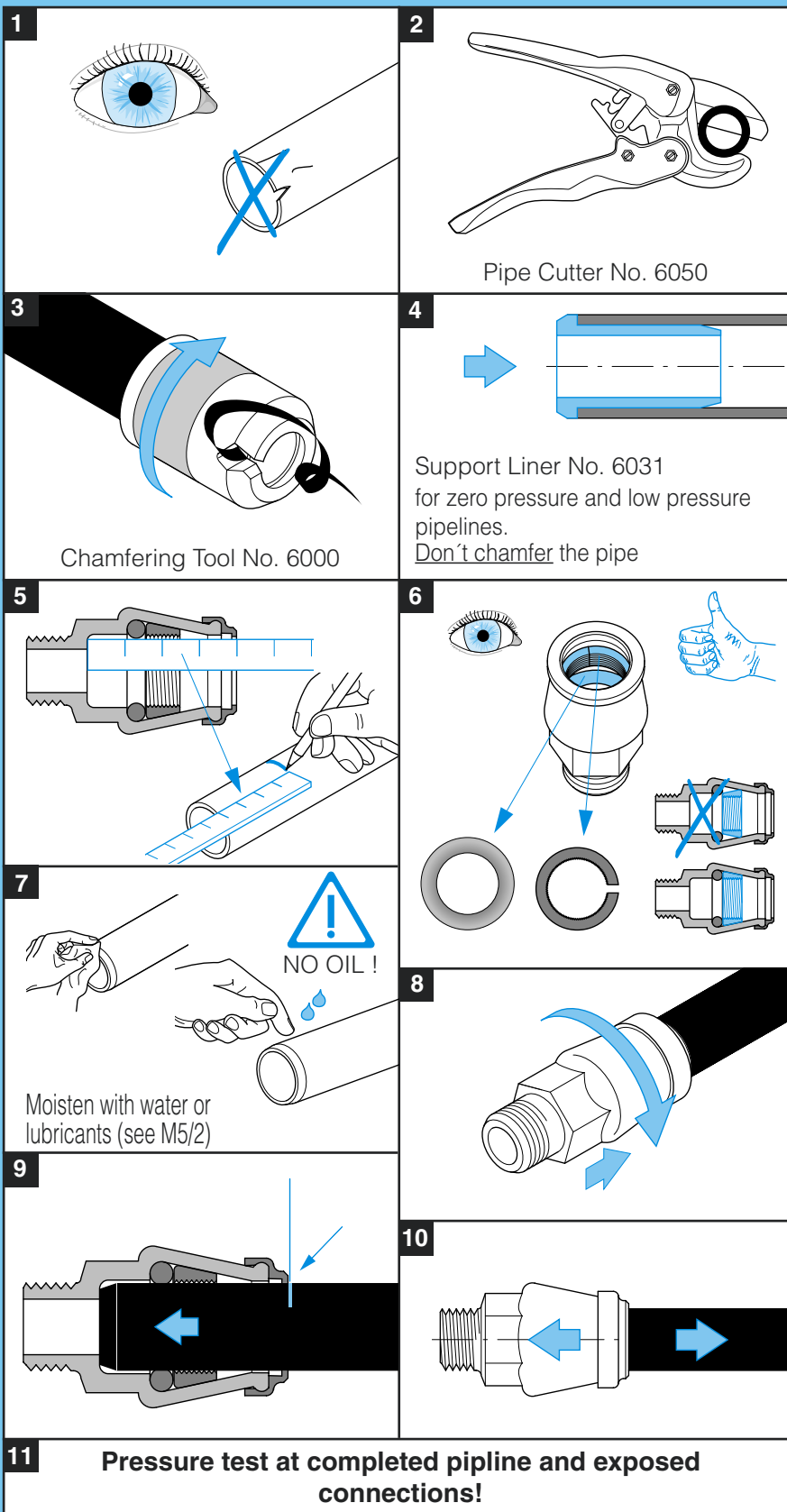
see page D 5/1



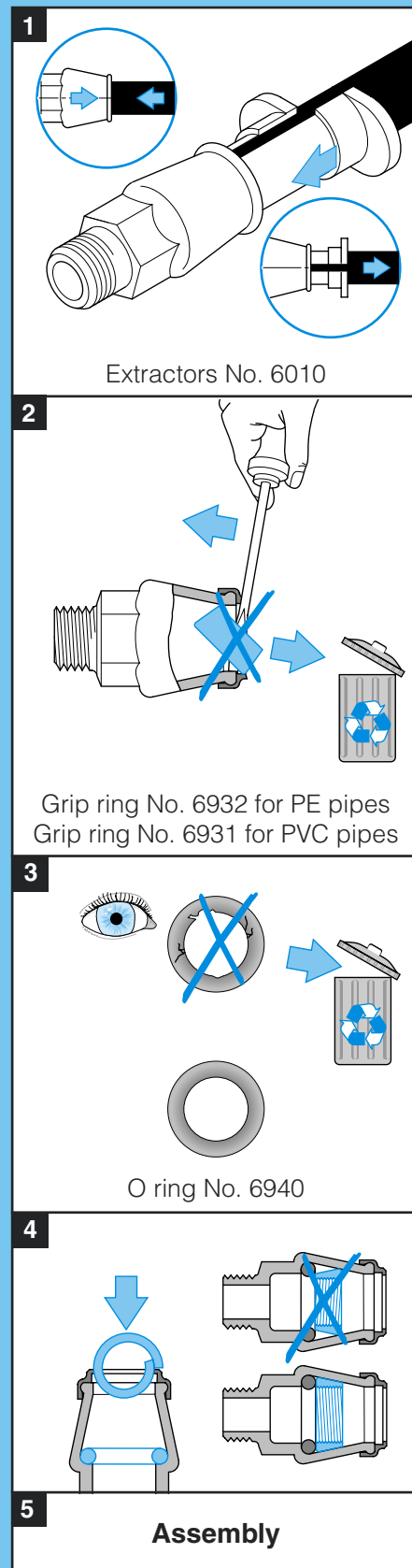
ISO Pipe Fitting Instruction for Assembly and Dismantling

ASSEMBLY

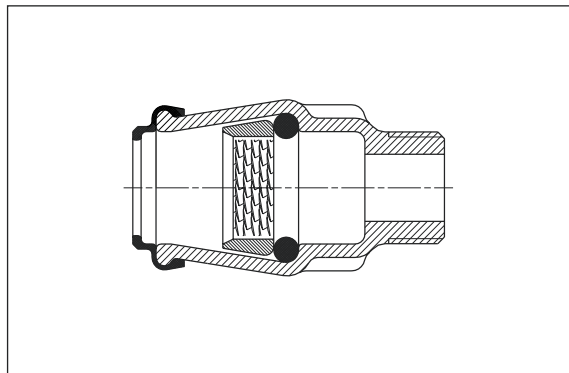
for Gas always **new Fittings**



DISMANTLING



Male Adaptor



No. 6100 of grey iron (32/1" of ductile iron)

No. 6120 of POM

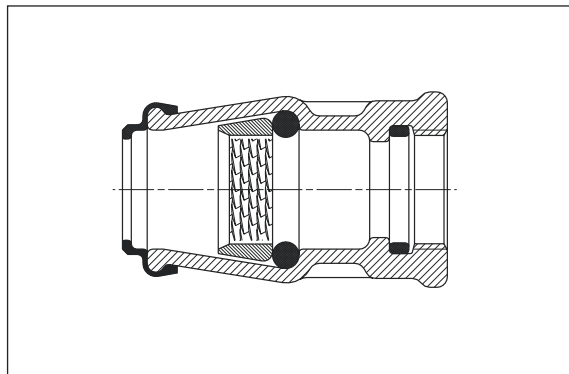
Special dimensions

No. 6110 of grey iron

Pipe Ø mm	Thread	Order No. 6100		Order No. 6120	
			Weight kg		Weight kg
20	1/2"	●	0,16	●	0,04
25	3/4"	●	0,24	●	0,06
32	1"	●	0,35	●	0,10
40	1 1/4"	●	0,63	●	0,21
50	1 1/2"	●	0,93	●	0,28
63	2"	●	1,45	●	0,44

Pipe Ø mm	Thread	Order No. 6110	
			Weight kg
32	1 1/4"	●	0,39
32	2"	●	0,67
40	1"	●	0,64
40	1 1/2"	●	0,66
40	2"	●	0,72
50	1 1/4"	●	0,90
50	2"	●	0,95
63	1 1/4"	●	1,40
63	1 1/2"	●	1,45
75	2"	●	2,50

Female Adaptor



No. 6200 of grey iron

No. 6220 of POM

Special dimensions

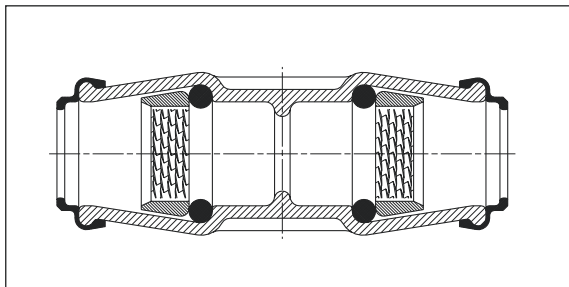
No. 6210 of grey iron

Pipe Ø mm	Thread	Order No. 6200		Order No. 6220	
			Weight kg		Weight kg
20	1/2"	●	0,16	●	0,06
25	3/4"	●	0,24	●	0,08
32	1"	●	0,42	●	0,12
40	1 1/4"	●	0,70	●	0,23
50	1 1/2"	●	1,00	●	0,34
63	2"	●	1,70	●	0,47
75	2 1/2"	●	3,20		
90	3"	●	3,60		

Pipe Ø mm	Thread	Order No. 6210	
			Weight kg
32	1 1/4"	●	0,57
40	1"	●	0,77
50	1 1/4"	●	1,10
90	2"	●	4,00

ISO Pipe Fitting

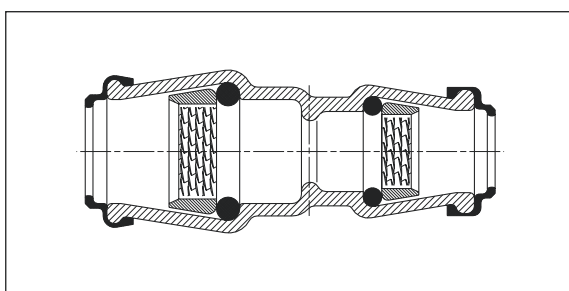
Connector



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		

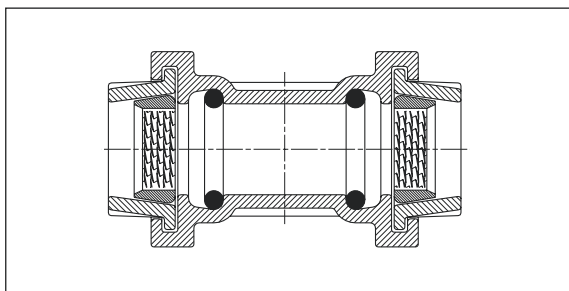
Connector Special dimensions



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

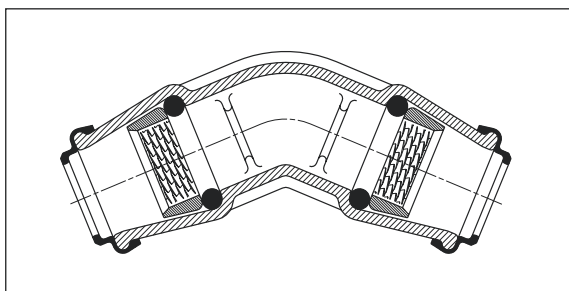


No. 6301 of grey iron

Pipe Ø mm	Order No. 6301	
		Weight kg
32	●	1,10
40	●	1,90
50	●	2,10
63	●	3,20

Attention: no stop !

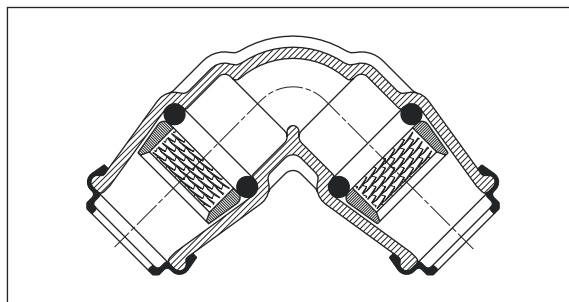
Elbow 45°



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

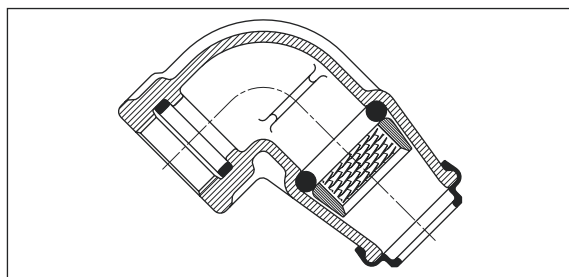
Special dimensions

No. 6490 of POM

Pipe Ø mm	Order No. 6400		Order No. 6420	
		Weight kg		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

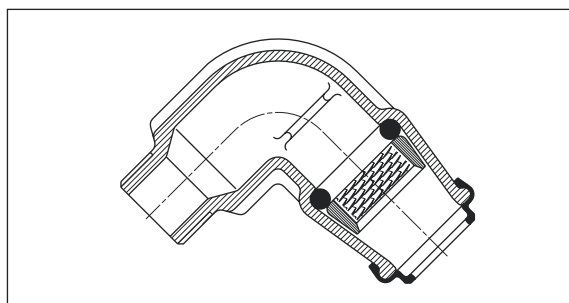


No. 6410 of grey iron

No. 6430 of POM

Pipe Ø mm	Thread	Order No. 6410		Order No. 6430	
			Weight kg		Weight kg
20	1/2"			●	0,07
25	3/4"	●	0,38	●	0,10
32	1"	●	0,65	●	0,14
40	1 1/4"	●	0,98	●	0,28
50	1 1/2"	●	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)

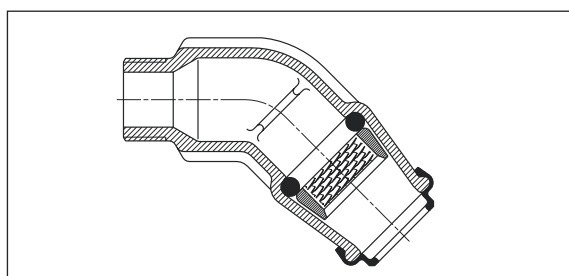
Special dimensions

No. 6470 of grey iron

Pipe Ø mm	Thread	Order No. 6460	
			Weight kg
25	3/4"	●	0,40
32	1"	●	0,65
40	1 1/4"	●	1,10
50	1 1/2"	●	1,70
63	2"	●	2,25

Pipe Ø mm	Thread	Order No. 6470	
			Weight kg
32	1 1/4"	●	0,60
32	1 1/2"	●	0,90
40	1 1/2"	●	1,10

Elbow 45° with male thread



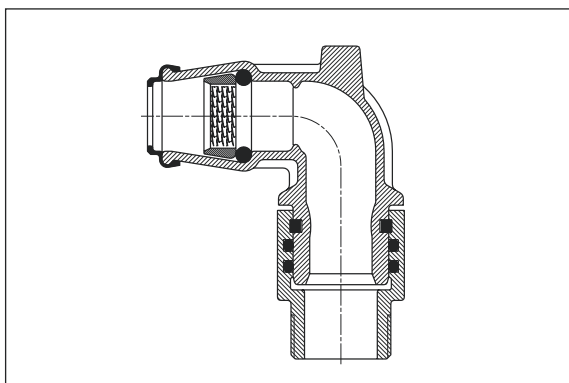
No. 6411 of grey iron

Pipe Ø mm	Thread	Order No. 6411	
			Weight kg
32	1"	●	0,60
50	1 1/2"	●	1,45
63	2"	●	1,90

ISO Pipe Fitting

Elbow 90°

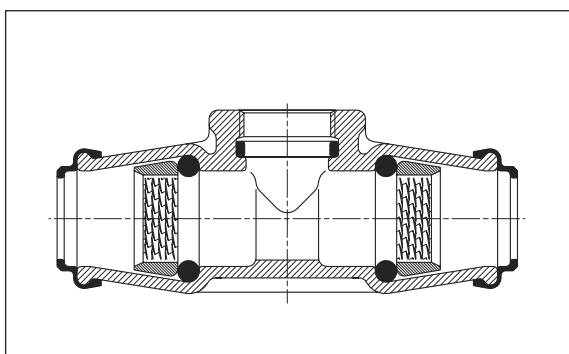
Swivelling fitting, with male Thread



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

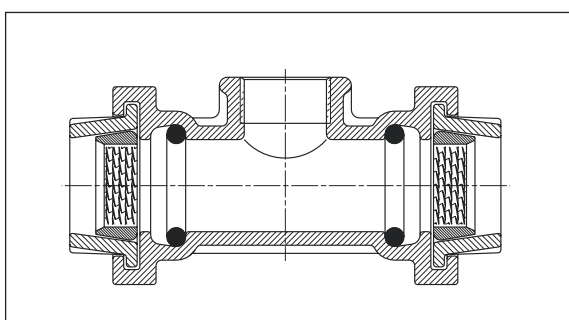
Special dimensions

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

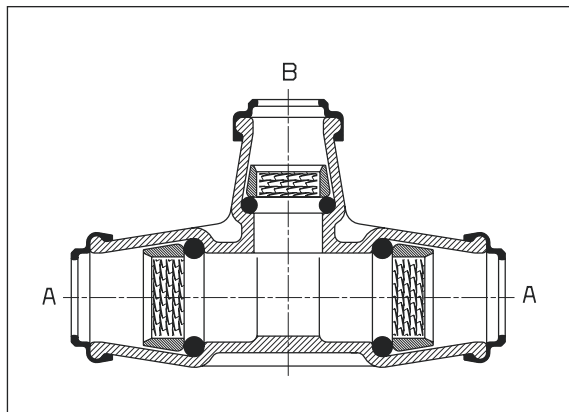


No. 6501 of grey iron

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

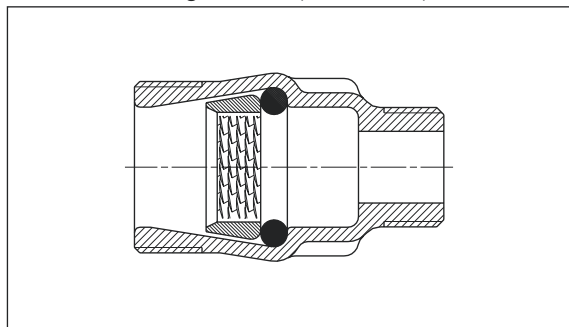
No. 6531 of grey iron

Pipe Ø A mm	Pipe Ø B mm	Order No. 6530		Order No. 6550	
			Weight kg		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

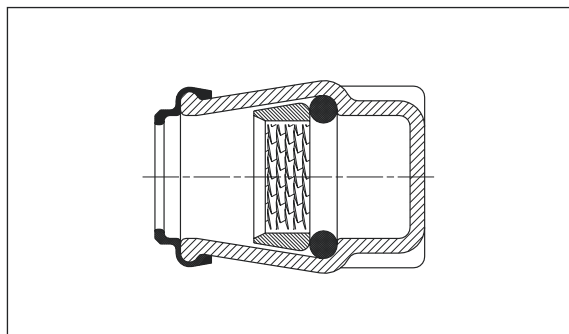
for wall inlet fitting No. 690 (old version)



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

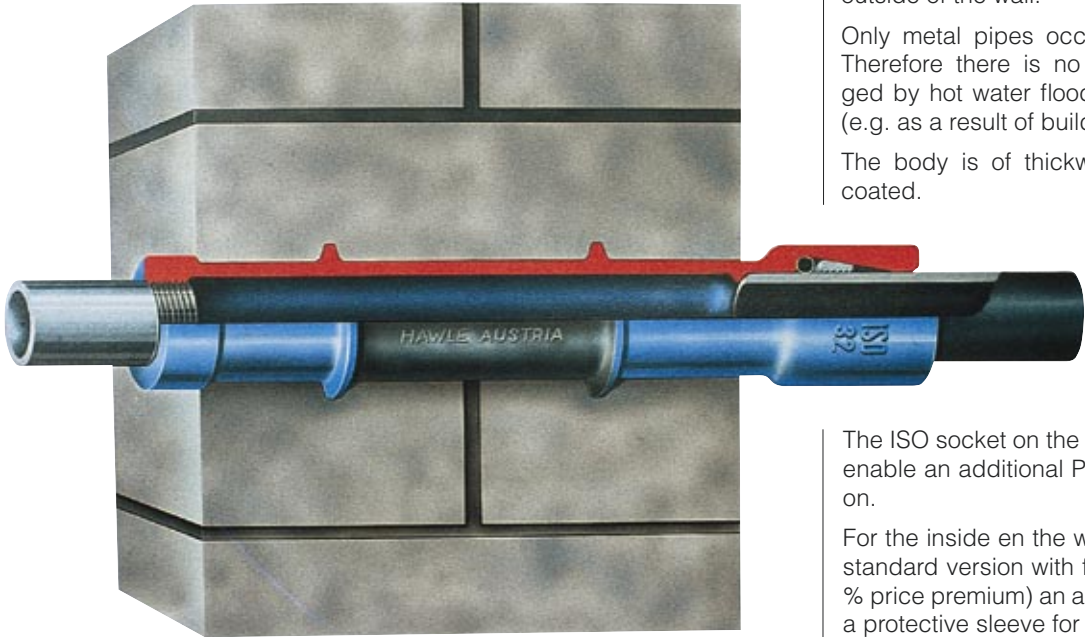


No. 6223 of POM

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

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 risk of 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 of 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.

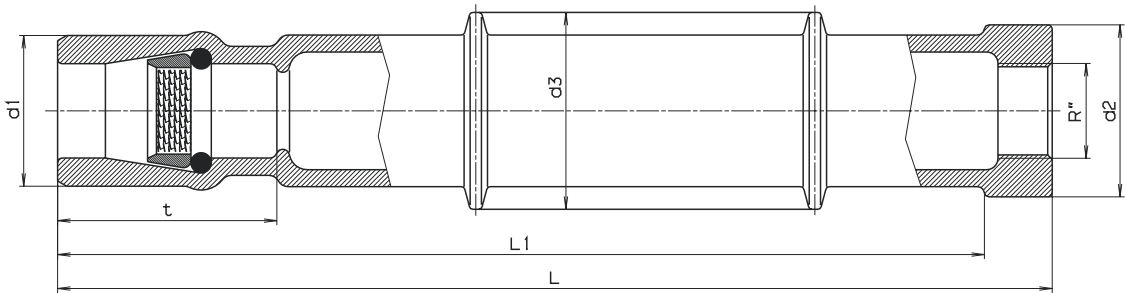
No. 6990
of ductile iron, epoxy coated

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

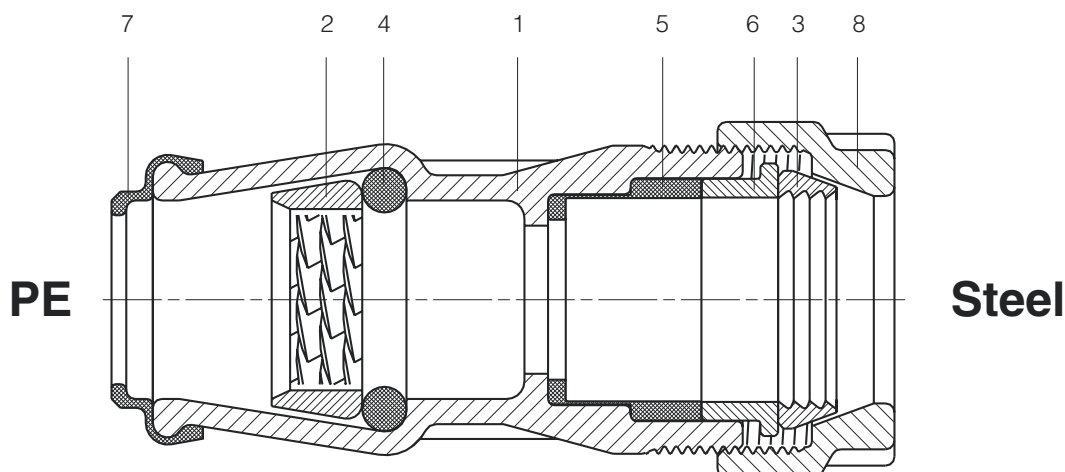
Assembly instruction:
see page H 1/2



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)	
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

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

Order no.	Colour / RAL	DN	Outlet			Weight kg	
			A	B	C		
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:

Tested acc. to:

Max. working pressure:

Standard pipe cover:

Remaining water

content:

ÖNORM F 2010 — DIN 3222

ÖVGW / DVGW

16 bar

1,50 m (on request 1,25 m
and 1,00 m possible)

"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 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

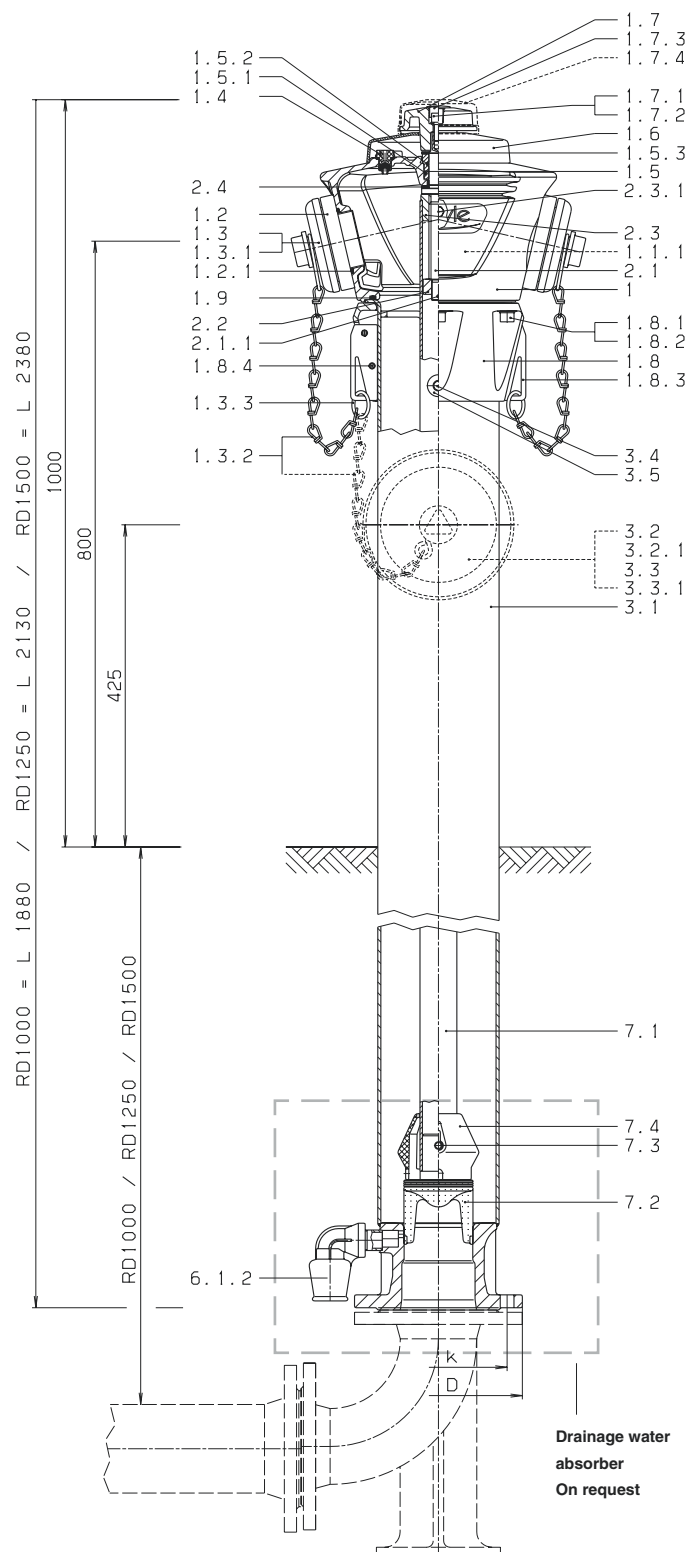
Operating controls: stainless steel

Base: cast stainless steel

Rate of flow: rate of flow Q (m³/h) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222



H4 Corrosion Free Hydrant - rigid type



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 DN 100 B coupling DIN 14318 - B1 75 mm	Al
1.2.1 DN 80 O-ring 64 x 4 DN 100 O-ring 79 x 4	elastomer
1.3 DN 80 C cap DIN 14317 - C 4 DN 100 B cap DIN 14318 - B 4	G-Al
1.3.1 DN 80 C flat seal ring DIN 14317 - C3 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 DN 100 A coupling DIN 14319 - A1 110 mm	Al
3.2.1 DN 80 O ring 79 x 4 DN 100 O ring 116 x 4	elastomer
3.3 DN 80 B cap DIN 14318 - B 4 DN 100 A cap DIN 14319 - A 4	G-Al
3.3.1 DN 80 B flat seal ring DIN 14318 - B3 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

DN	Outlets			Pipe cover RD	Base flange according EN 1092-1, drilled to DIN 2501				
	A	B	C		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							

Order no.	Colour / RAL	DN	Outlet			Weight kg	
			A	B	C		
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

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

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 (m³/h) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222

Standard:

Tested acc. to:

Max. working pressure:

Standard pipe cover:

Remaining water content:

ÖNORM F 2010 — DIN 3222

ÖVGW / DVGW

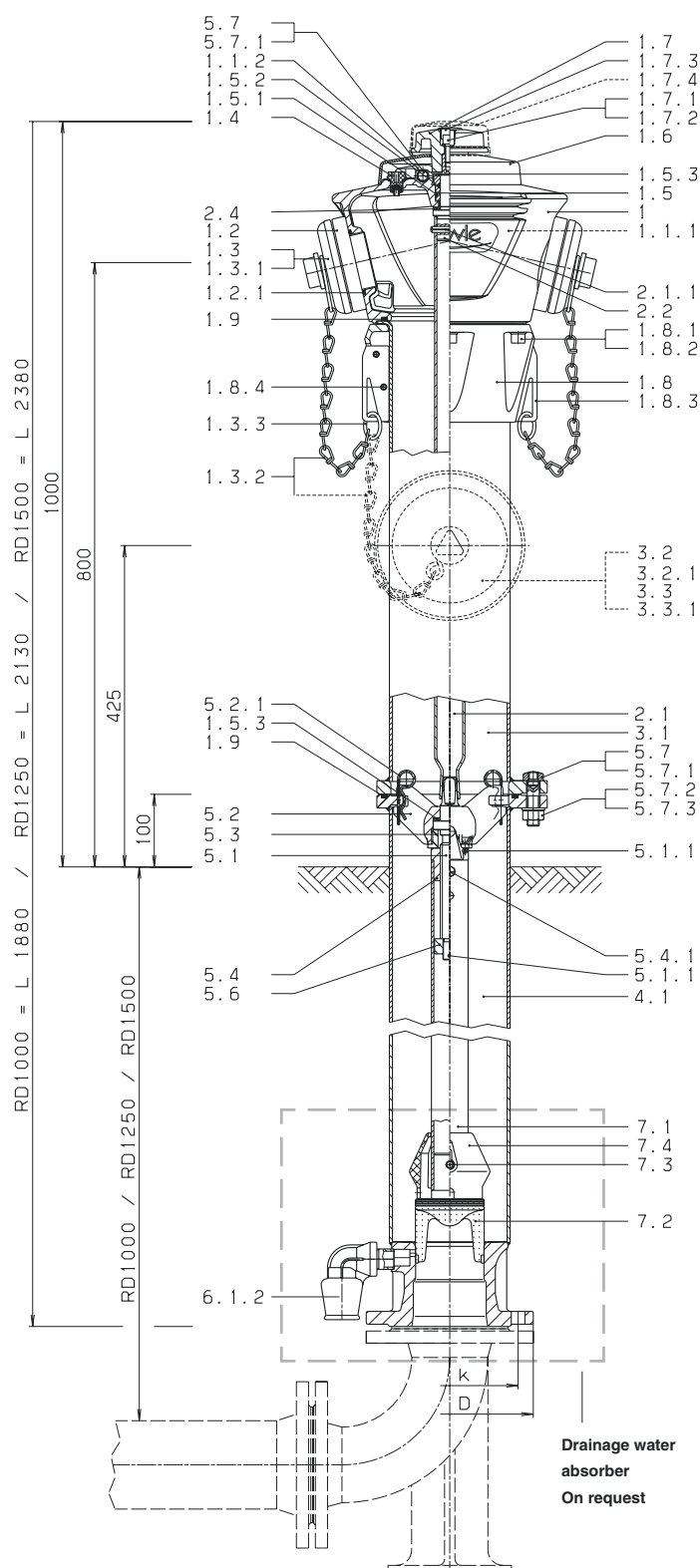
16 bar

1,50 m (on request 1,25 m and 1,00 m possible)

"0" according DIN 3321



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 DN 100 B coupling DIN 14318 - B1 75 mm	Al
1.2.1 DN 80 O ring 64 x 4 DN 100 O ring 79 x 4	elastomer
1.3 DN 80 C cap DIN 14317 - C 4 DN 100 B cap DIN 14318 - B 4	G-Al
1.3.1 DN 80 C flat seal ring DIN 14317 - C3 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 DN 100 A coupling DIN 14319 - A1 110 mm	Al
3.2.1 DN 80 O ring 79 x 4 DN 100 O ring 116 x 4	elastomer
3.3 DN 80 B cap DIN 14318 - B 4 DN 100 A cap DIN 14319 - A 4	G-Al
3.3.1 DN 80 B flat seal ring DIN 14318 - B3 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	Qty.
80		1	2	1500 1250 1000	80	200	160	M 16	8
		2							
100	1	2		1000	100	220	180	M 16	8
		2							

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

4. 2004

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 L 1/1

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

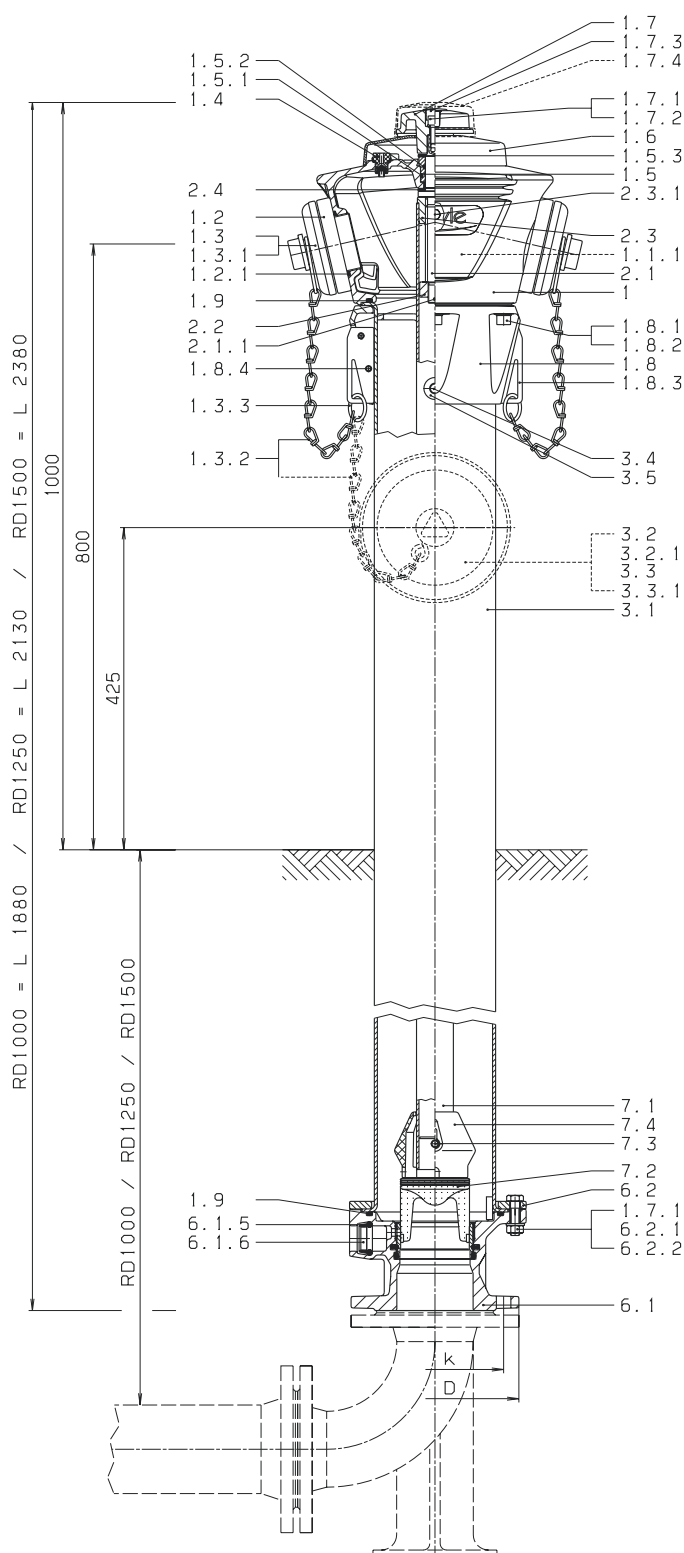
Design features:

- 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

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 (m³/h) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222



H4 Above Ground Hydrant - rigid type



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 DN 100 B coupling DIN 14318 - B1 75 mm	Al
1.2.1 DN 80 O ring 64 x 4 DN 100 O ring 79 x 4	elastomer
1.3 DN 80 C cap DIN 14317 - C4 DN 100 B cap DIN 14318 - B4	G-Al
1.3.1 DN 80 C flat seal ring DIN 14317 - C3 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 DN 100 A coupling DIN 14319 - A1 110 mm	Al
3.2.1 DN 80 O ring 79 x 4 DN 100 O ring 116 x 4	elastomer
3.3 DN 80 B cap DIN 14318 - B4 DN 100 A cap DIN 14319 - A4	G-Al
3.3.1 DN 80 B flat seal ring DIN 14318 - B3 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

DN	Outlets			Pipe cover RD	Base flange according EN 1092-2, drilled to DIN 2501				
	A	B	C		DN	D	k	Bolts	Qty.
80		1	2	1500 1250 1000	80	200	160	M 16	8
		2							
100	1	2		1000	100	220	180	M 16	8
		2							

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 L 1/1

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

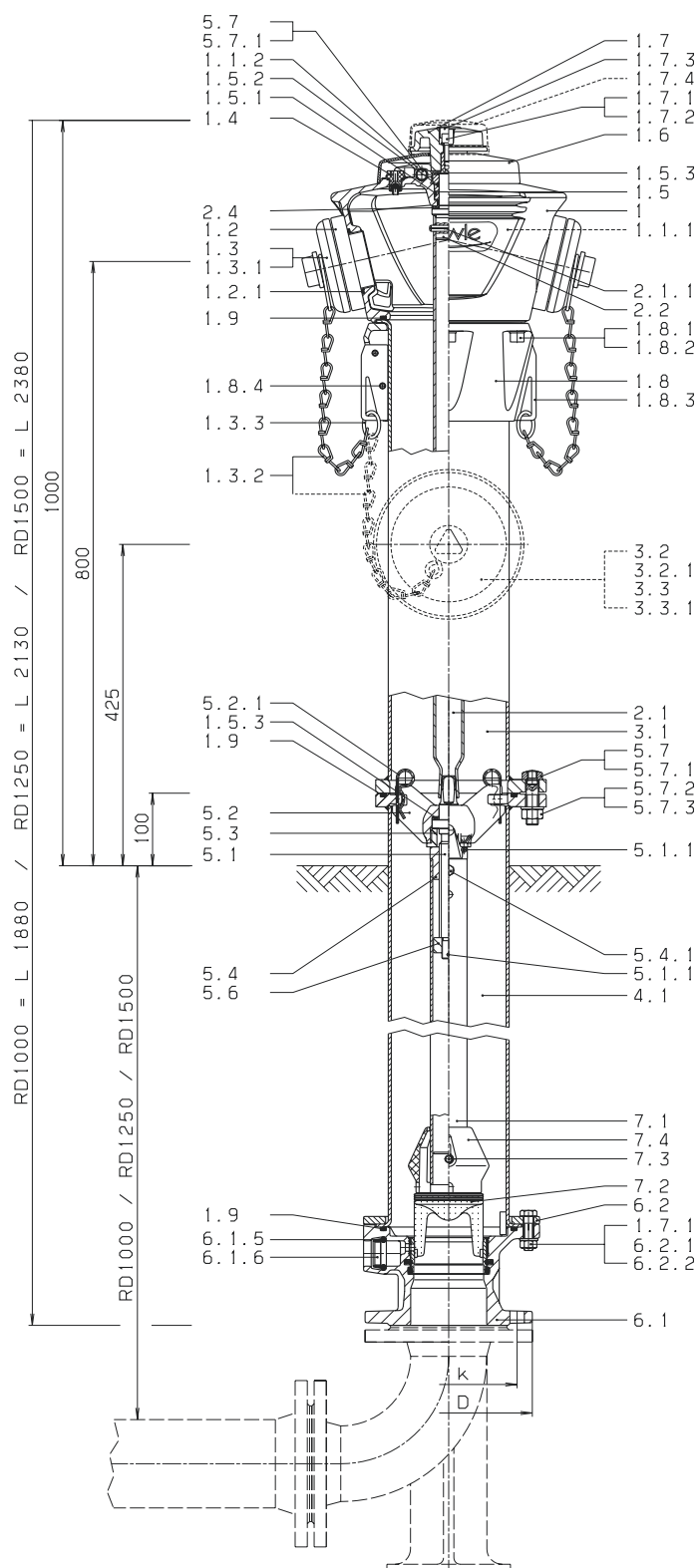
Design features:

- 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

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 (m³/h) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222



H4 Above Ground 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	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 DN 100 B coupling DIN 14318 - B1 75 mm	Al
1.2.1 DN 80 O ring 64 x 4 DN 100 O ring 79 x 4	elastomer
1.3 DN 80 C cap DIN 14317 - C 4 DN 100 B cap DIN 14318 - B 4	G-Al
1.3.1 DN 80 C flat seal ring DIN 14317 - C3 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 DN 100 A coupling DIN 14319 - A1 110 mm	Al
3.2.1 DN 80 O ring 79 x 4 DN 100 O ring 116 x 4	elastomer
3.3 DN 80 B cap DIN 14318 - B 4 DN 100 A cap DIN 14319 - A 4	G-Al
3.3.1 DN 80 B flat seal ring DIN 14318 - B3 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

DN	Outlets			Pipe cover	Base flange according EN 1092-2, drilled to DIN 2501				
	A	B	C		RD	DN	D	k	Bolts
80		1	2	1500 1250 1000	80	200	160	M 16	8
		2							
100	1	2							
		2			100	220	180		

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

4. 2004

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		Weight kg	
		A	B		
5186	80		1	82,0	●
5186	100		2	83,0	●
5185	100	1	2	86,0	●

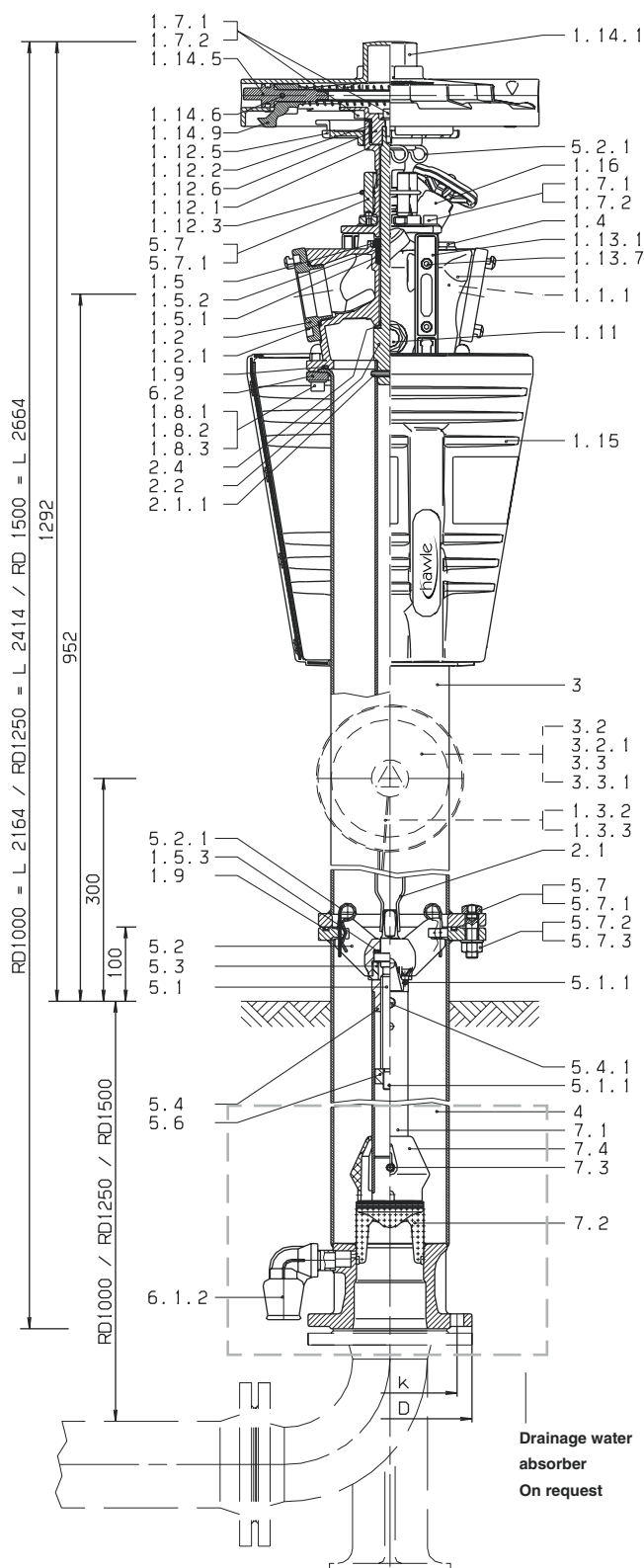
Design features:

- 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 individually 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

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 (m³/h) at a differential pressure of 1 bar is for all HAWLE H4-Hydrants higher than requested by ÖNORM F 2010 and DIN 3222



H4 Corrosion Free Hydrant with drop jacket



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

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 1250 1000	80	200	160	M 16	8
100		2		100	220	180		
	1	2						

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

4. 2004

Standard: DIN 3221
Approved by: DVGW
max. operating pressure: 16 bar
Standard pipe cover: 1,5 m

Design features:

- free passage, high capacity with low pressure losses (153 m³/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:

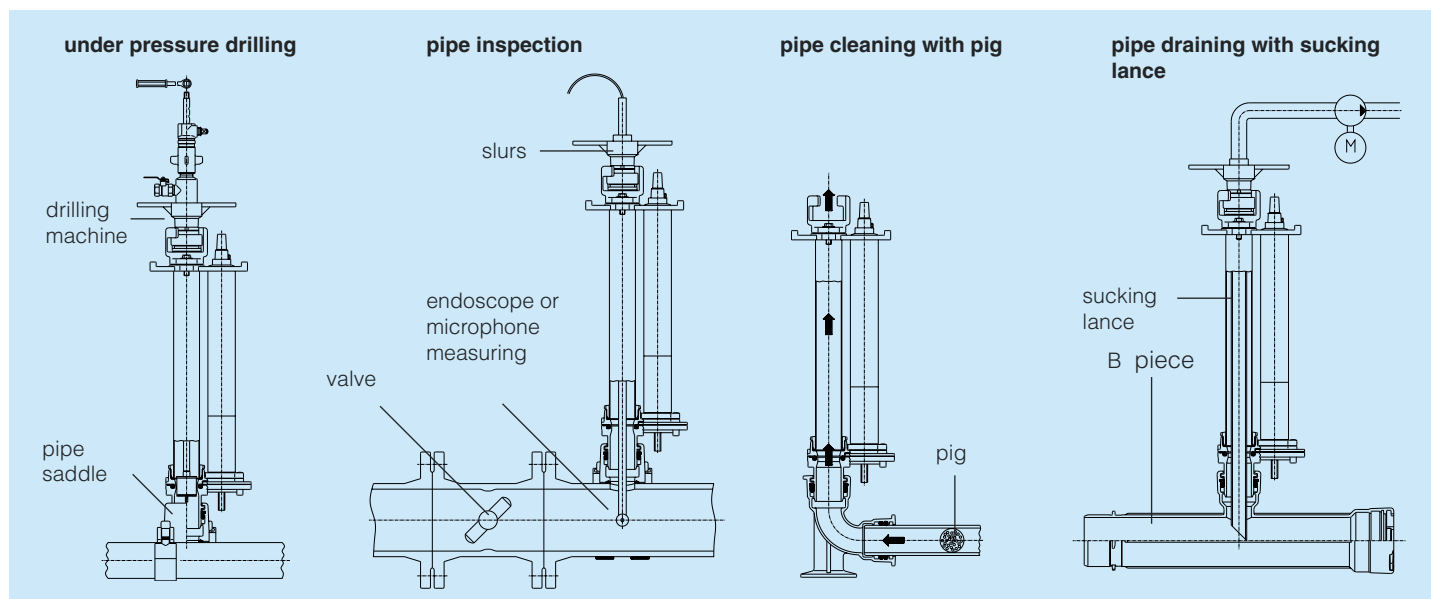
below ground extensions 100 – 500 mm
 protection against dirt and twisting

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		●	●	●

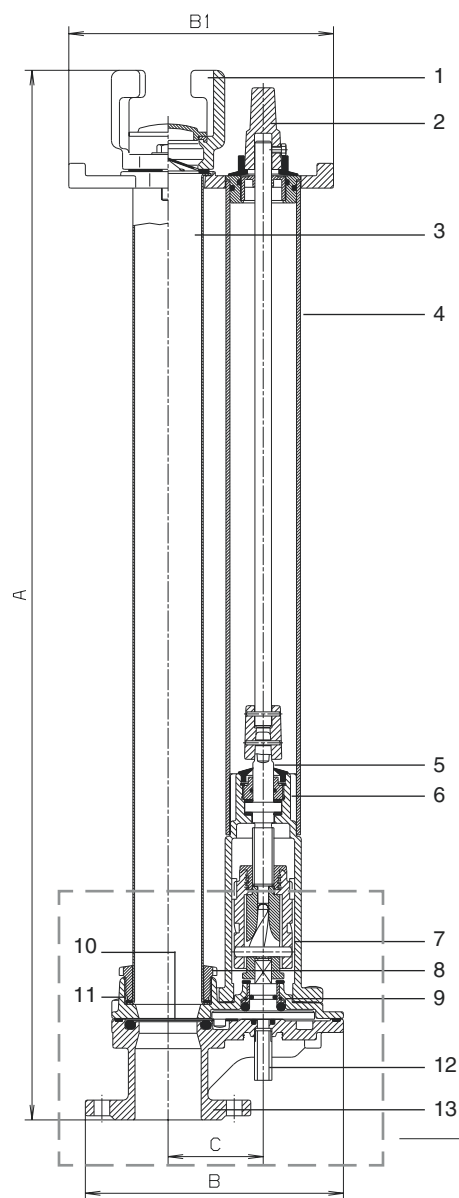
* optional intermediate lengths possible (smallest pipe cover 0,85 m)
 Overlengths up to 3 m on request



Further applications



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



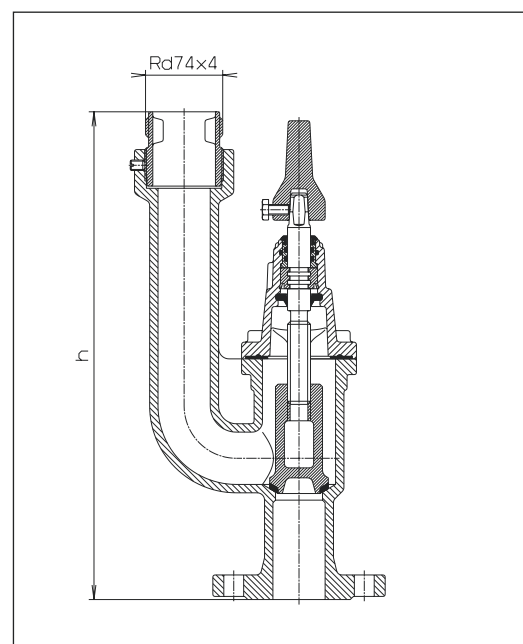
Order no.	Connection	Pipe length	A	B	B 1	C	Weight kg
5060	Flange DN 80	1,00 m	740	280	320	115	35,0
		1,25 m	990	280	320	115	37,5
		1,50 m	1240	280	320	115	39,5
5061	Spigot DN 80	1,00 m	785	280	320	115	31,5
		1,25 m	1045	280	320	115	34,0
		1,50 m	1295	280	320	115	36,0

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

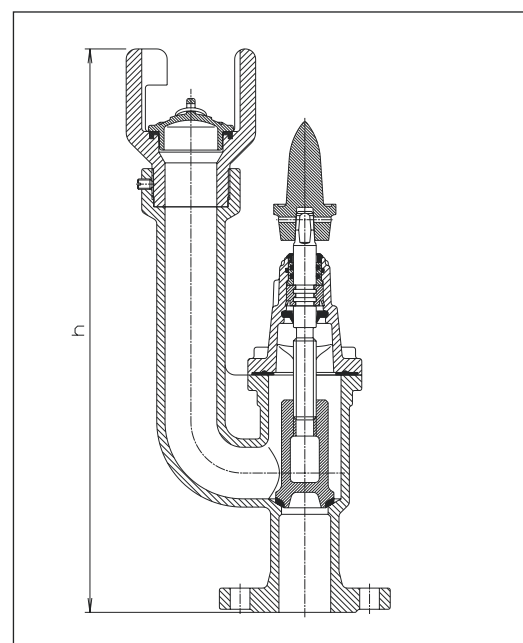
of grey iron, epoxy powder coated
without drainage outlet



with bayonet coupling DN 50

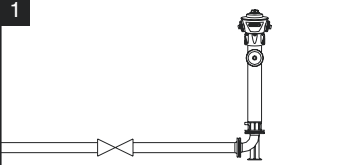
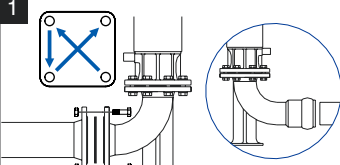
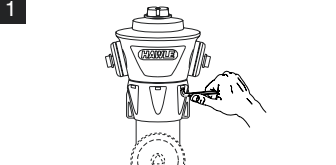
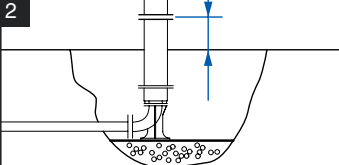
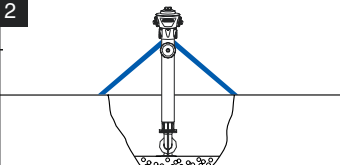
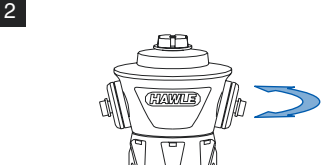
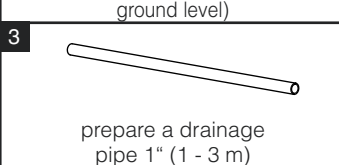
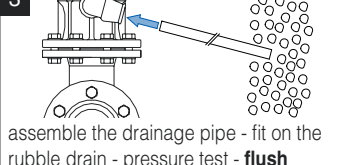
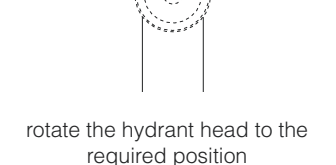

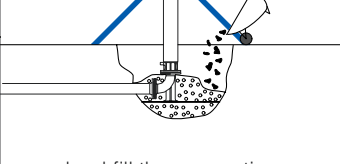
flange DN 50

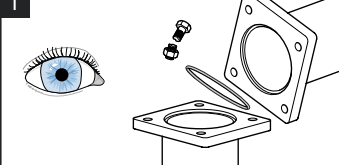
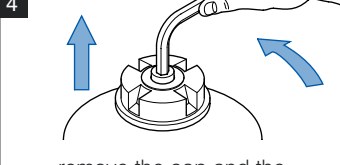
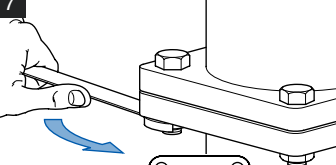
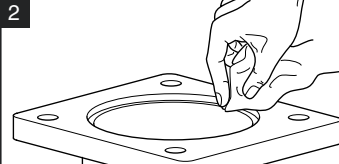
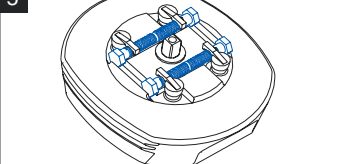
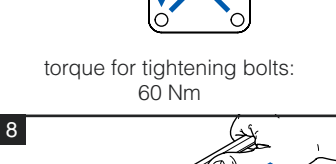
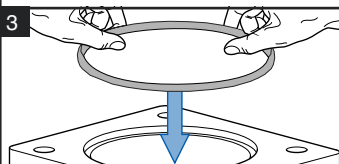
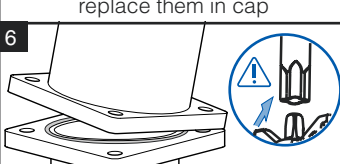
of grey iron, epoxy powder coated
without drainage outlet



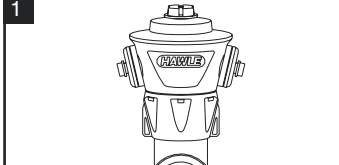
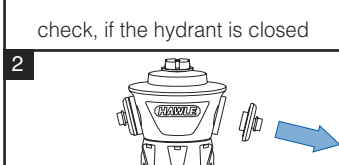

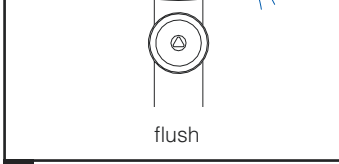
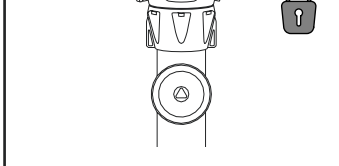

Illustrations, technical data, dimensions and weights are subject to alteration without notice.

ASSEMBLY

Preparatory work	Hydrant assembly	Rotation of the hydrant head
1  <p>Advice: install a gate valve before the hydrant</p>	1  <p>bolt the flanges crosswise or connect the sockets</p>	1  <p>loosen the bolts at the tension ring</p>
2  <p>prepare a base. pay attention to the installation height (break-away hydrant: break-away line 12 ± 6 cm above of the ground level)</p>	2  <p>support the hydrant</p>	2  <p>rotate the hydrant head to the required position</p>
3  <p>prepare a drainage pipe 1" (1 - 3 m)</p>	3  <p>assemble the drainage pipe - fit on the rubble drain - pressure test - flush</p>	3  <p>tighten the bolts</p>
4  <p>prepare a flange connection or sockets for the hydrant assembly</p>	4  <p>backfill the excavation</p>	

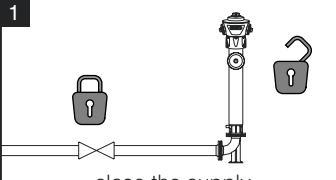
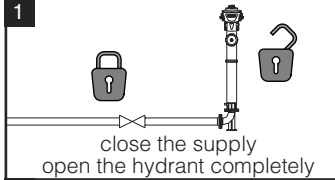
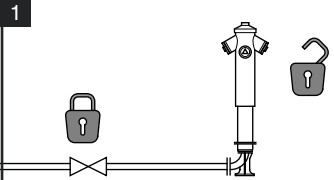
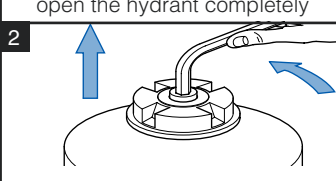
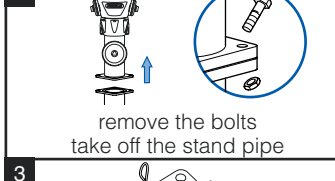
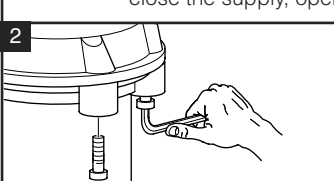
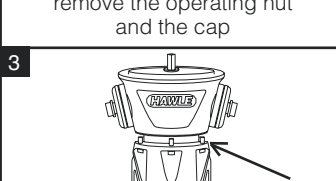
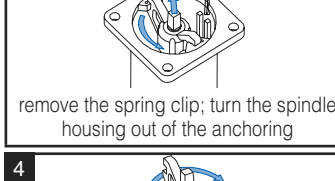
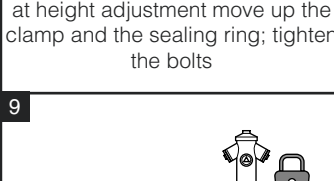
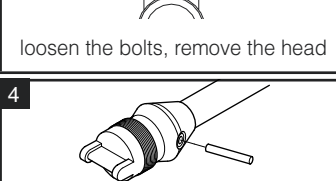
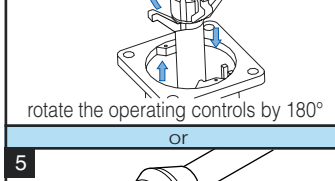
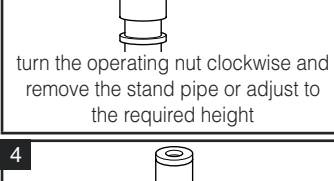
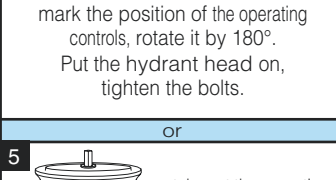
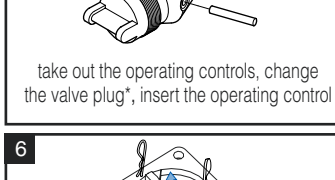
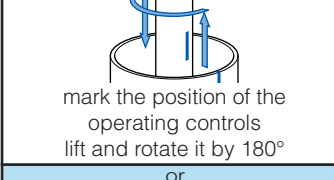
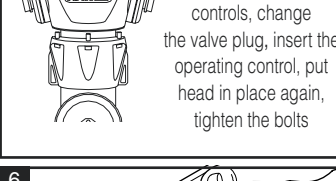
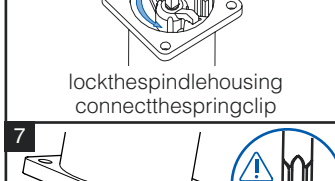
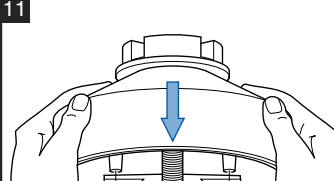
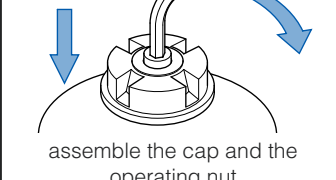
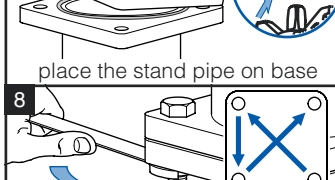
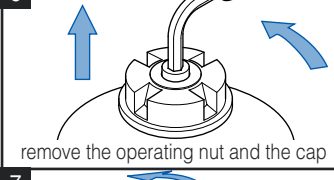
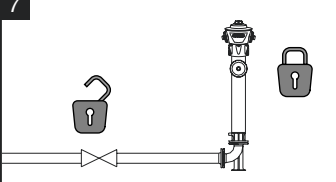
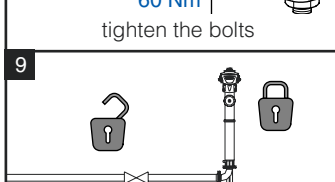
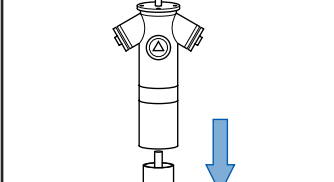
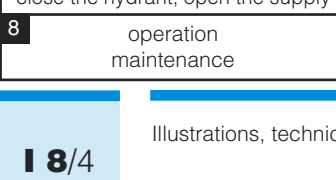
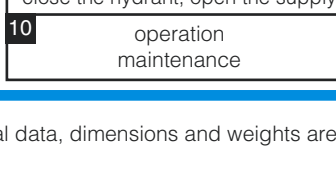
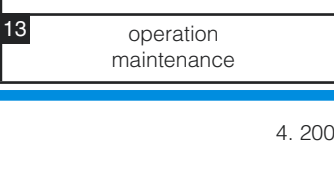



Damage of the break away line (break away hydrant)		
1  <p>examination of the break-away line (damage, soiling, etc.)</p>	4  <p>remove the cap and the operating nut</p>	7  <p>torque for tightening bolts: 60 Nm</p>
2  <p>if necessary: clean the flange</p>	5  <p>remove spare bolts, re-order bolts, replace them in cap</p>	8  <p>assemble the cap and the operating nut</p>
3  <p>insert O ring</p>	6  <p>place stand pipe on base</p>	9 <p>operation maintenance</p>

OPERATION MAINTENANCE

Annual Inspection
1  <p>check, if the hydrant is closed</p>
2  <p>remove the cap</p>
3  <p>flush</p>
4  <p>close the hydrant</p>
5  <p>pay attention to the drainage noise (repair necessary?)</p>
6  <p>mount on the cap</p>

Above ground hydrant Operating instructions

Above Ground Hydrant - DRAINAGE UNTIGHT or CHANGE OF THE VALVE PLUG and Above Ground Hydrant telescopic - HEIGHT ADJUSTMENT

rigid		break-away		telescopic	
If the drainage is untight, point 5 is deleted. If the valve plug has to be changed, point 4 is deleted.				If the drainage is untight, point 5 is deleted. If the valve plug has to 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  close the supply open the hydrant completely		1  close the supply open the hydrant completely		1  close the supply, open the hydrant completely Attention: note the insert inside of the cap	
2  remove the operating nut and the cap		2  remove the bolts take off the stand pipe		2  remove the bolts completely	
3  loosen the bolts, remove the head		3  remove the spring clip; turn the spindle housing out of the anchoring		8  at height adjustment move up the clamp and the sealing ring; tighten the bolts	
4  mark the position of the operating controls, rotate it by 180°. Put the hydrant head on, tighten the bolts.		4  rotate the operating controls by 180°		3  turn the operating nut clockwise and remove the stand pipe or adjust to the required height	
5  take out the operating controls, change the valve plug*, insert the operating control, put head in place again, tighten the bolts		5  take out the operating controls, change the valve plug*, insert the operating control		4  mark the position of the operating controls lift and rotate it by 180°	
6  lock the spindle housing connect the spring clip		6  lock the spindle housing connect the spring clip		10  adjust the lower edge of the stop nut to 16 - 17 mm	
7  assemble the cap and the operating nut		7  place the stand pipe on base		5  take out the operating controls, change the operating control, insert the operating control	
8  close the hydrant; open the supply		8  60 Nm tighten the bolts		6  remove the operating nut and the cap	
9  operation maintenance		9  close the hydrant, open the supply		11  open the supply	
		10  operation maintenance		12  operation maintenance	
				13  operation maintenance	

No. 8690

Elypso Valve Bonnet (without illustr.)

for Service Valves, Elypso Valves and Combination Valves

No. 8690E2

E2 Elypso Valve Bonnet

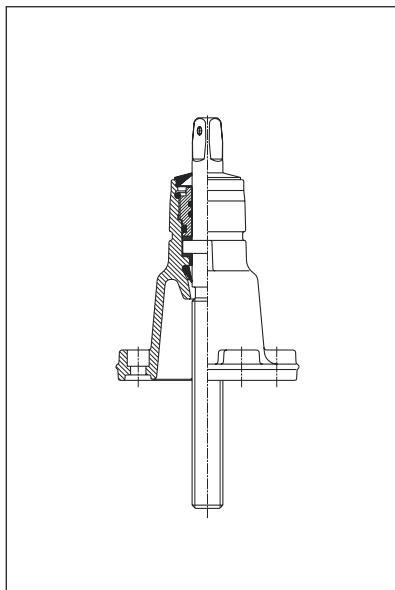
for E2 Valves and E2 Combi Valves

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)

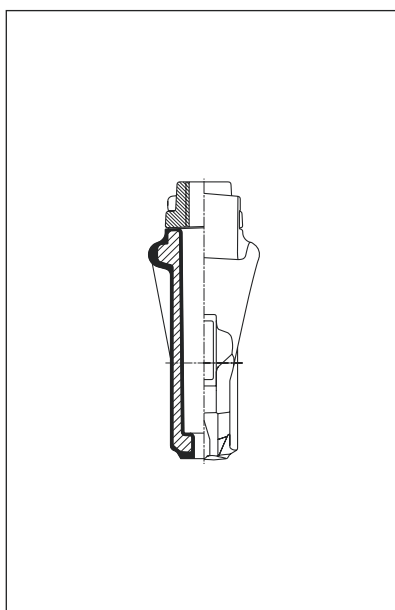
No. 8700E2

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



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

also available with anti clockwise closing

Spare Parts

No. 8710

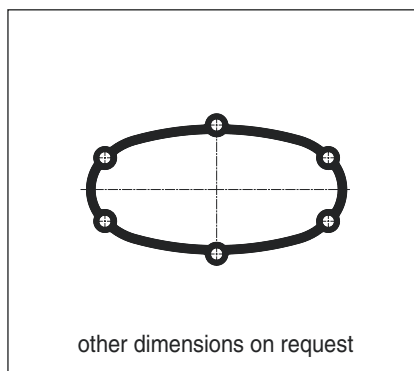
Elypso Valve Flat Gasket

of elastomer, suitable for potable water
(without illustr.)

No. 8710E2

E2 Elypso Valve Flat Gasket

of elastomer, suitable for potable water



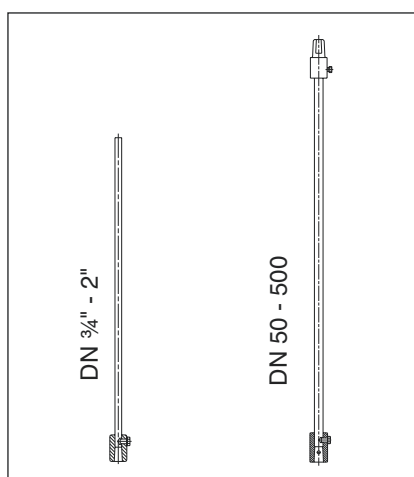
DN	No. 8710 Weight	No. 8710E2 Weight
¾" - 1"	● 0,010	
1¼" - 2"	● 0,015	
50	● 0,010	● 0,010
65	● 0,025	● 0,025
80	● 0,022	● 0,022
100	● 0,030	● 0,030
125	● 0,035	● 0,035
150	● 0,030	● 0,030
200	● 0,080	● 0,080
250	● 0,180	● 0,180
300	● 0,175	● 0,175
350	● 0,210	● 0,210
400	● 0,250	● 0,250
500		● 0,350
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. 9630E2 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"

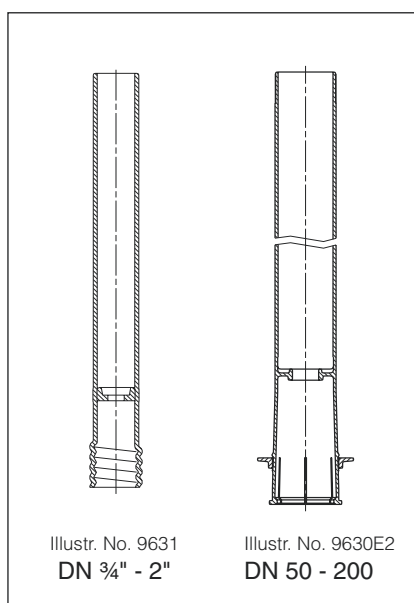
Service Valves (threaded connection)

No. 9591 for DN 50 - 300

Elypso and Combination Valves

No. 9591E2 for DN 50 - 200

E2 Elypso and E2 Combination Valves



please specify length, see page D 1

DN	No. 9631	No. 9691
¾" - 2"	●	●

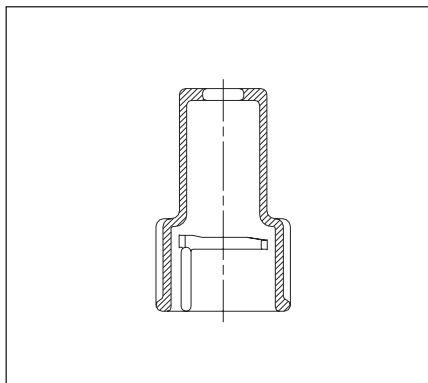
DN	No. 9630	No. 9591
50 - 100	●	●
125 - 150	●	●
200	●	●
250	●	●
300	●	●

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)

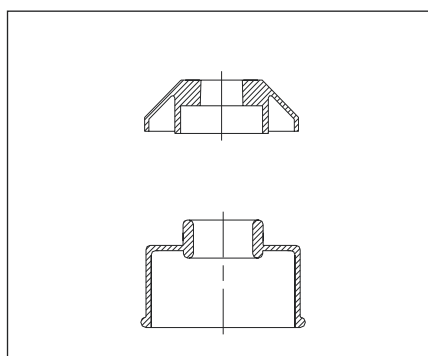


Weight kg	
0,08	●

No. 9651

Sealing cap

for all rigid type extension spindles



DN	No. 9650	No. 9651
3/4" - 2"	●	●
50 - 200	●	●
250 - 600	●	●

No. 9650

Cap

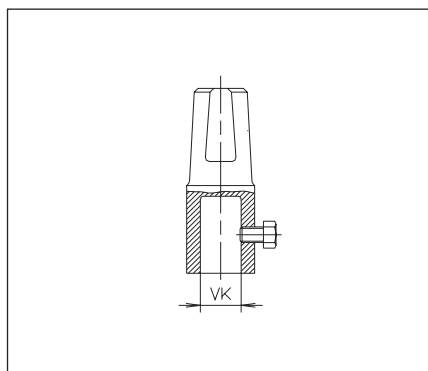
for all rigid type extension spindles

No. 8670

Spindle Head

for rigid extension spindles for Elypso Valves

of ductile iron
with set bolt



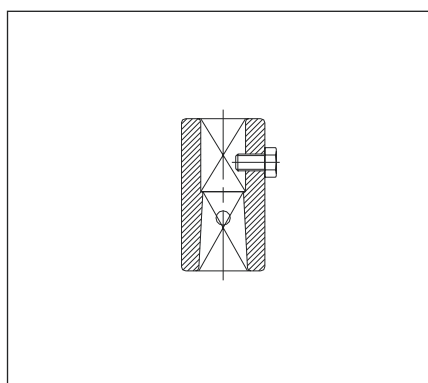
DN	Square head dimension	Weight kg	
50 - 200	20,5	0,65	●
250 - 600	25,5	0,68	●

No. 8660

Spindle Coupling

for all extension spindles

of ductile iron
with set bolt



DN	Weight kg	
3/4" - 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	●

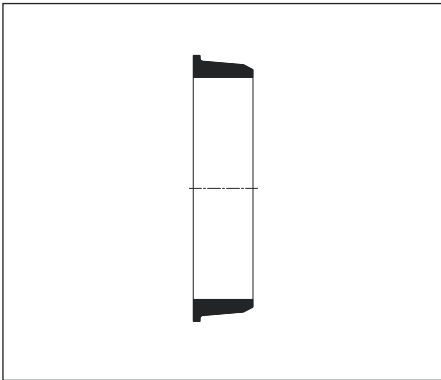
Spare Parts

No. 7500

Sleeve Gasket

for Spar Flange
No. 0101, 0102, 1001, 1002

Please specify type of pipe and outside diameter



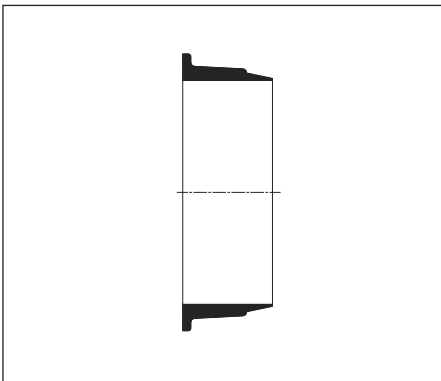
DN	Weight kg	
50	0,07	●
60	0,11	●
65	0,11	●
80	0,14	●
100	0,18	●
125	0,23	●
150	0,30	●
200	0,50	●
250	0,60	●
300	0,90	●
400	1,70	●

No. 7510

Sleeve Gasket

for Double Chamber Flange Adaptor
No. 7101, 7102, 7103, 7402

Please specify type of pipe and outside diameter



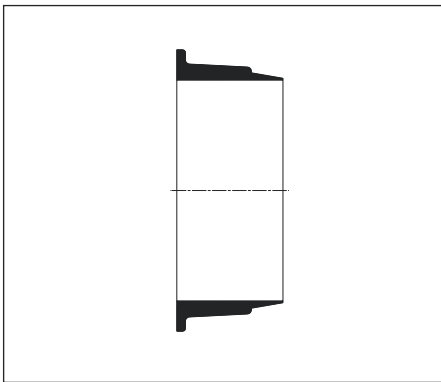
DN	Weight kg	
40	0,07	●
50	0,09	●
65	0,14	●
80	0,17	●
100	0,26	●
125	0,30	●
150	0,40	●
200	0,60	●
250	0,85	●
300	1,20	●
400	2,20	●

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	●

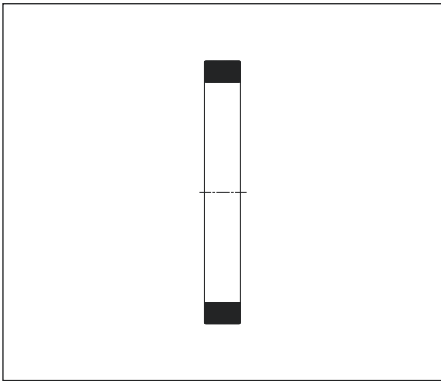
No. 7532

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

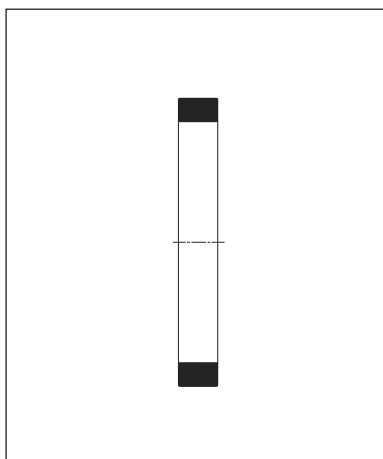
Sleeve Gasket

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	●

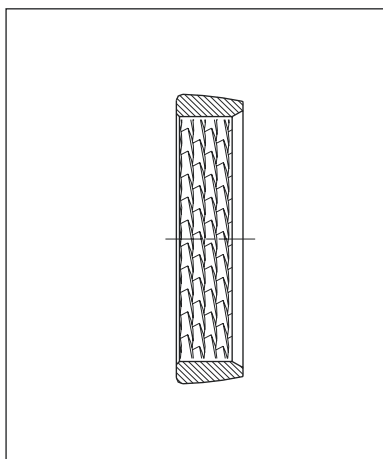
No. 6932

Grip ring „standard”

for PE Pipes

for all Hawle products with ISO pipe
push fit fittings

Interlocking teeth



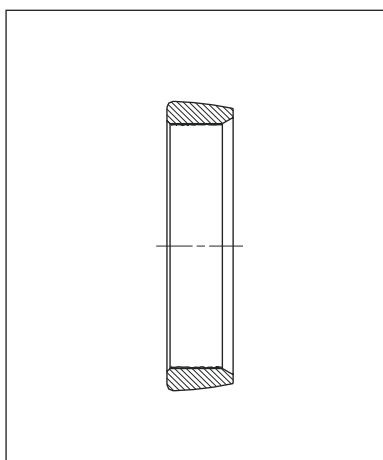
DN	Pipe Ø mm	Weight kg	
20	1½"	0,003	●
25	¾"	0,004	●
32	1"	0,007	●
40	1¼"	0,015	●
50	1½"	0,021	●
63	2"	0,032	●
75		0,044	●
90		0,049	●
110		0,098	●
125		0,134	●
140		0,155	●
160		0,181	●

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	1½"	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	●

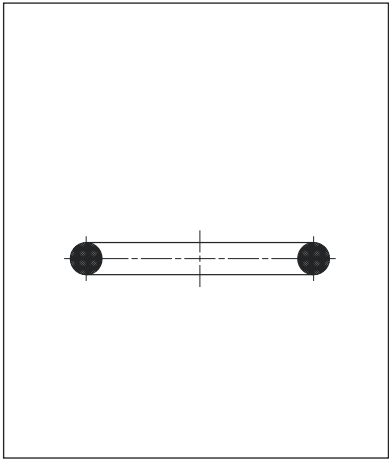
Spare Parts

No. 6940

O ring

of elastomer (suitable for potable water)

for all Hawle products with ISO pipe push fit fittings

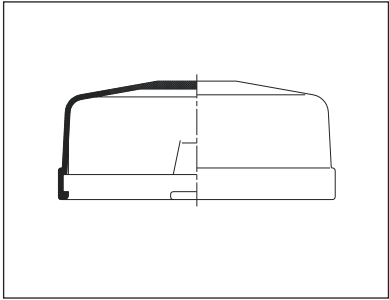


Pipe Ø mm	DN	Weight kg	
20	½"	0,003	●
25	¾"	0,004	●
32	1"	0,006	●
40	1¼"	0,011	●
50	1½"	0,020	●
63	2"	0,030	●
75		0,040	●
90		0,040	●
110		0,070	●
125		0,100	●
140		0,113	●
160		0,140	●

No. 5417

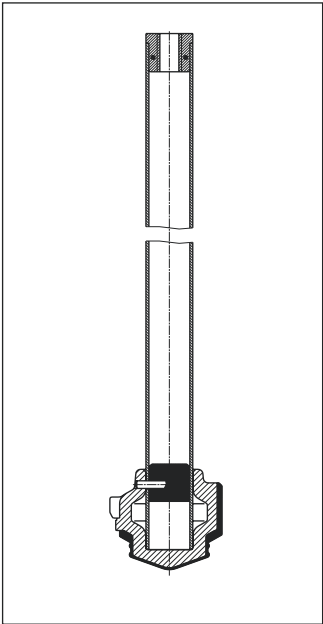
Theft Indicator Cap

for all above ground hydrants



No. 5417	●
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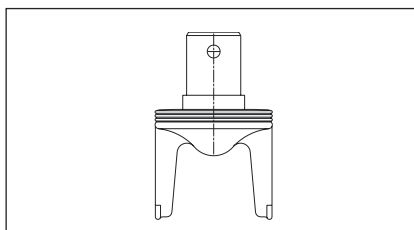
Operating Controls for Hydrants



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

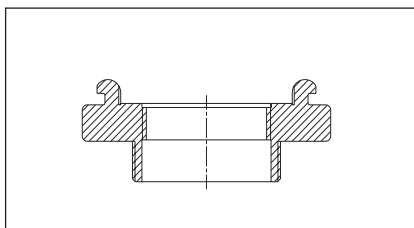
for H4 above ground hydrants



Order no.	DN	Weight kg	
5440	80-100	1,15	●

Coupling

for above ground hydrants

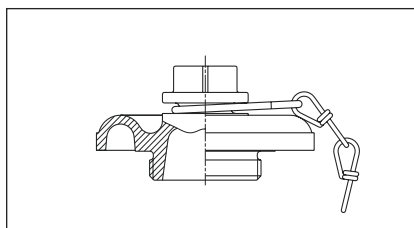


Order no.	Type	Weight kg	
5403	A coupling 4" DIN 14319	1,60	●
5404	B coupling 2½" DIN 14318	0,40	●
5405	C coupling 2" DIN 14317	0,22	●

Cap

for above ground hydrants

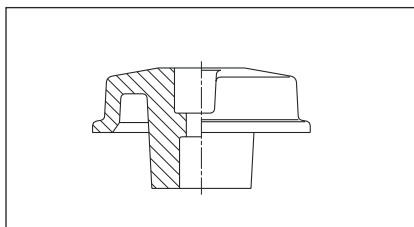
with chain and gasket



Order no.	for	Weight kg	
5400	A coupling	3,45	●
5401	B coupling	1,45	●
5402	C coupling	1,10	●

Operating Nut

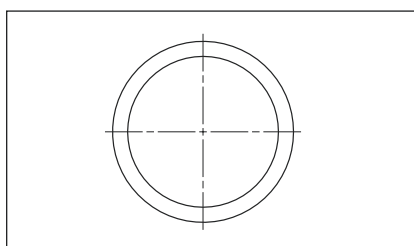
for above ground hydrants



Order no.	Weight kg	
5415	1,80	●

Flat gasket

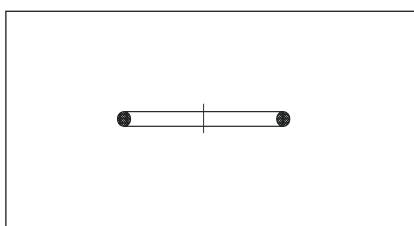
for cap



Order no.	for	Weight kg	
5406	A-cap	0,15	●
5407	B-cap	0,09	●
5408	C-cap	0,05	●

O ring

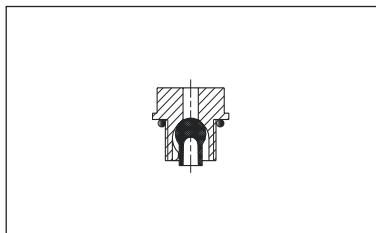
for coupling



Order no.	for	Weight kg	
5410	A coupling	0,006	●
5411	B coupling	0,004	●
5412	C coupling	0,003	●

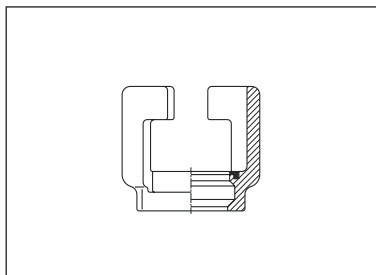
Spare Parts

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

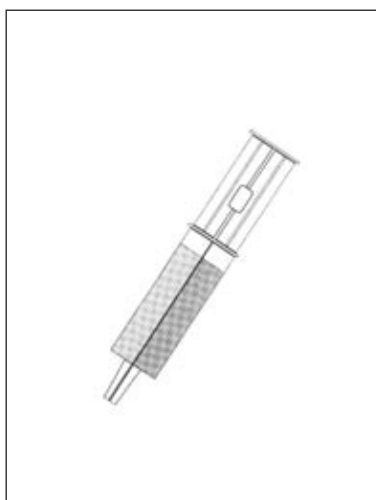
For repairing minor mechanical damage caused by transport or installation.

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**

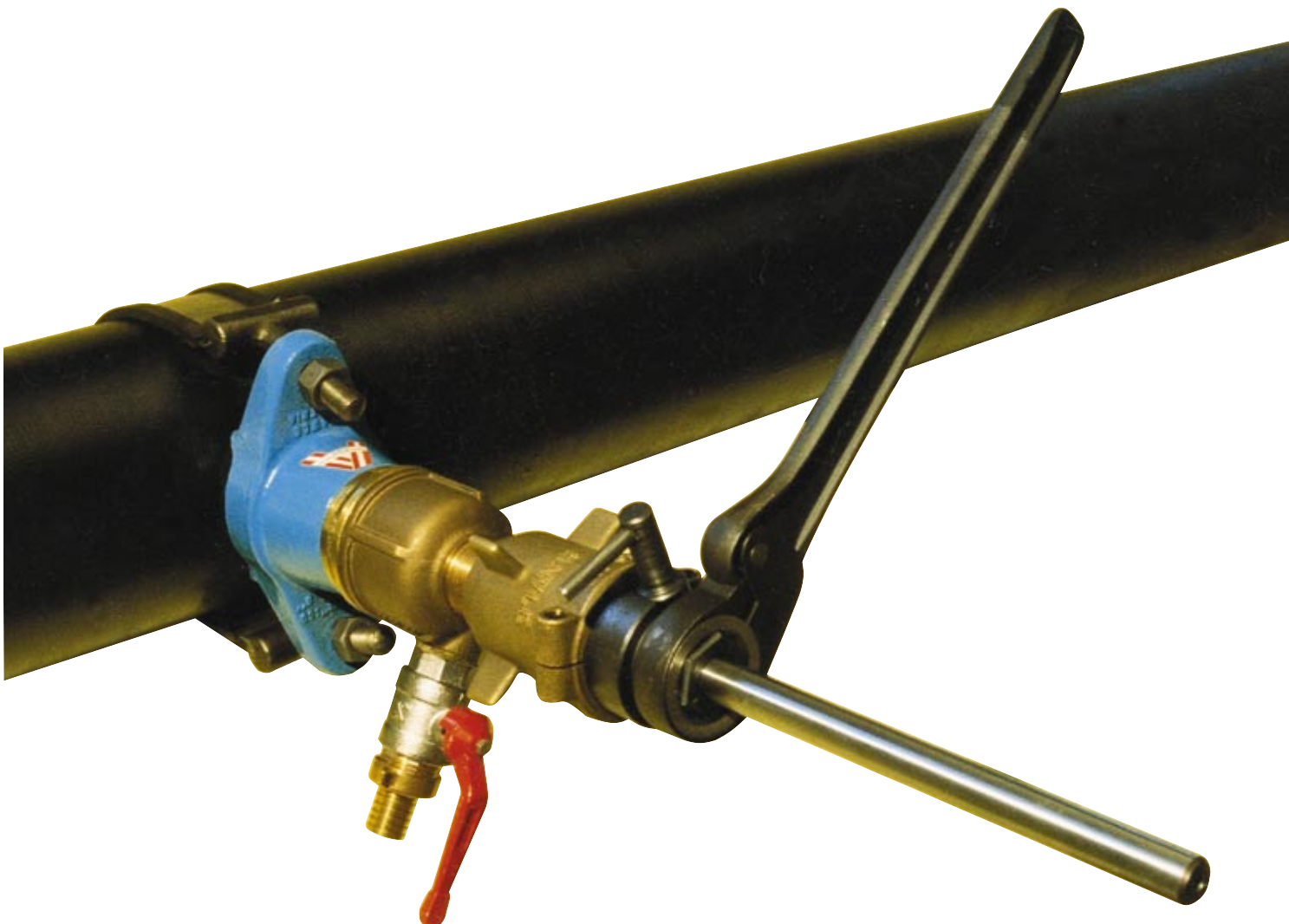
Can be used for drilling pipes of steel, cast iron, AC or plastic.

When drilling under pressure, swarf is washed out through a purpose - designed outlet.

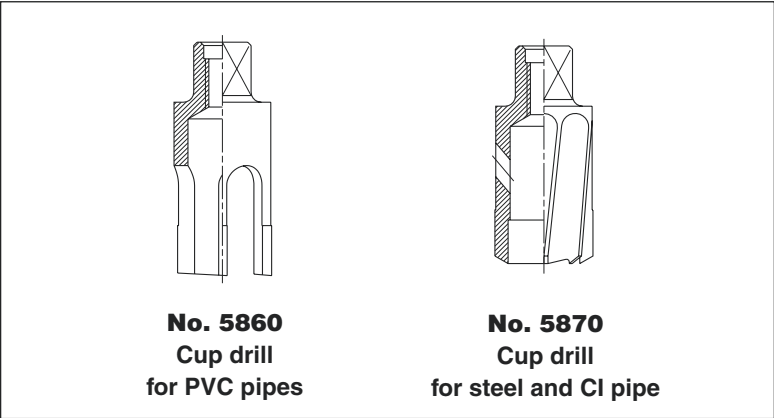
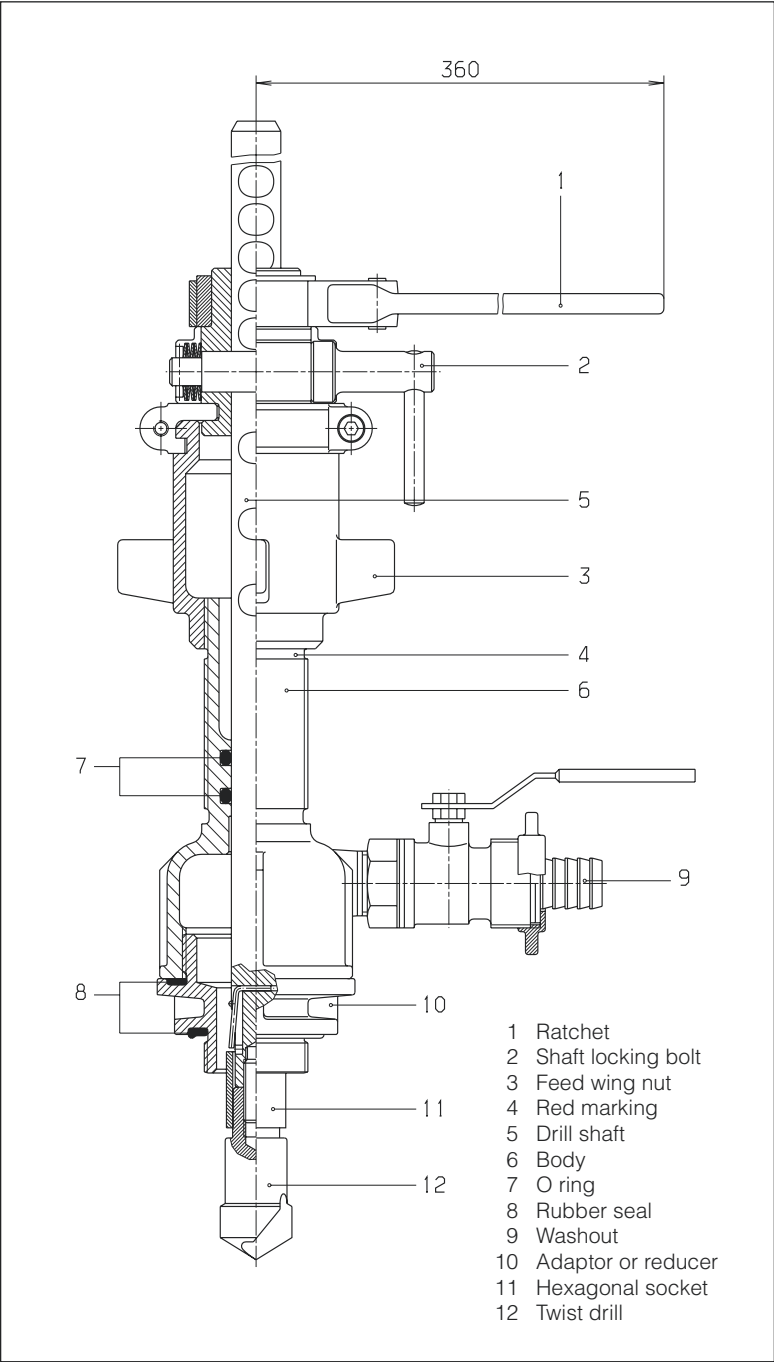
Rotated by ratchet handle and fed by feed wing nut.

The ratchet is connected to the drill shaft with a simple locking device.

Pipe saddle adaptors and reducers are sealed with captivated rubber rings.



Drilling Machine



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	
No. 5860	Cup drill for PVC pipes	
	Cup drill 1" - 24 Ø	
	Cup drill 1¼" - 29 Ø	
	Cup drill 1½" - 35 Ø	
No. 5890	Reducing adaptor with rubber seals	
	2" - 1"	
	2" - 1¼"	
	2" - 1½"	
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

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	
No. 5940	Adaptor 2" - 1½"	
	for ISO Combination Tapping Valve (Page C 4/3)	

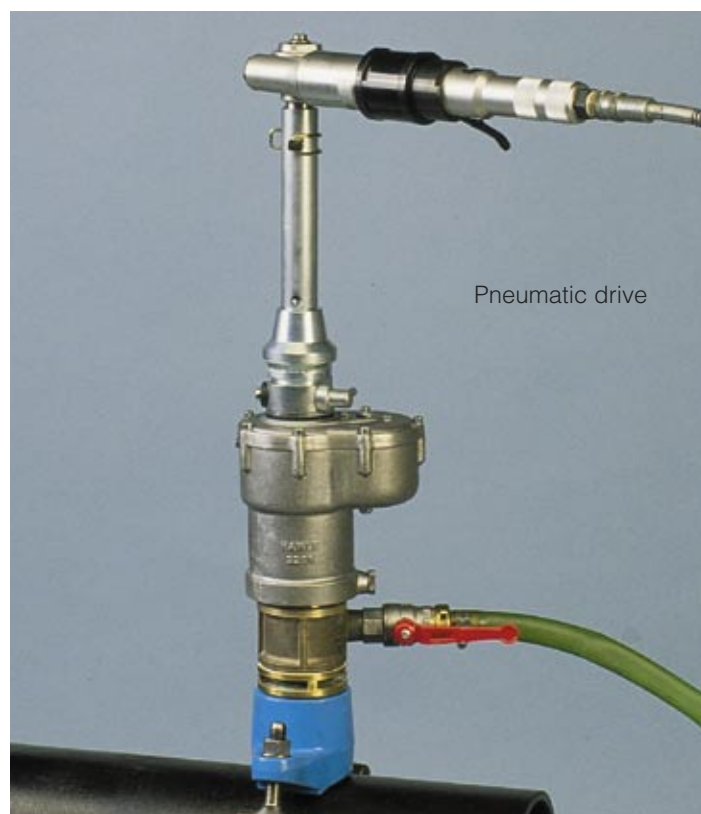
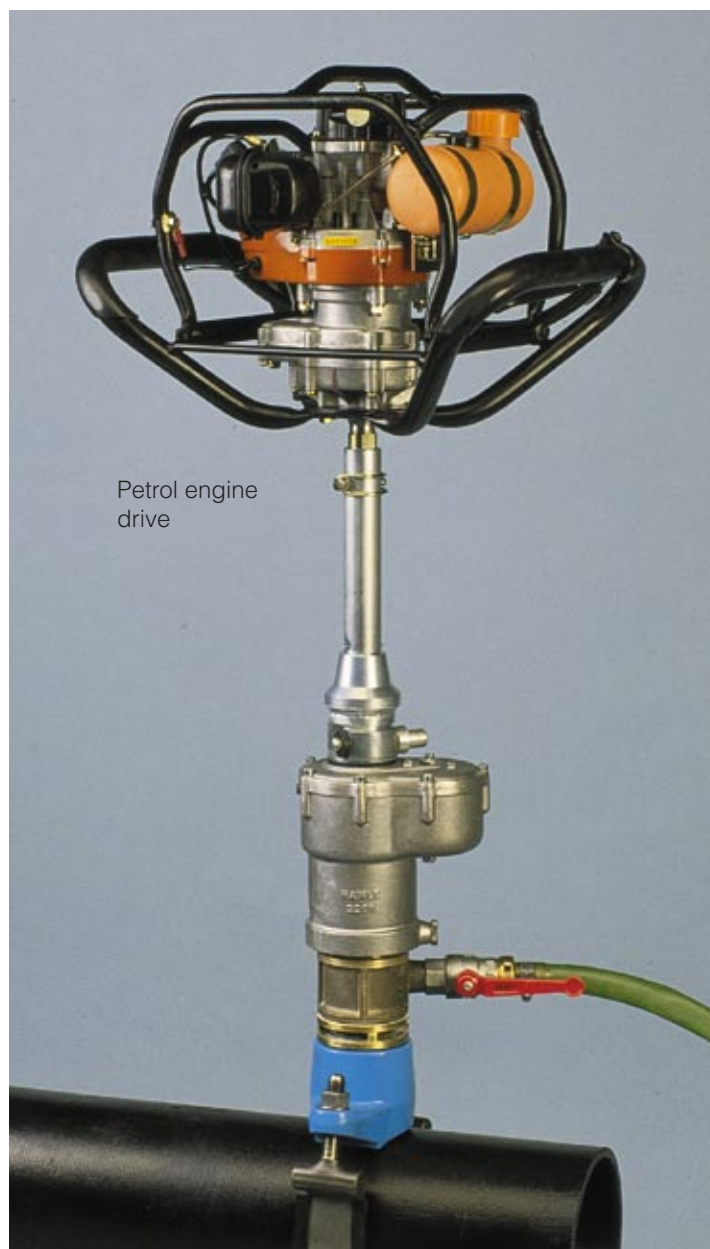
One Powered Drilling Machine with

Three Options

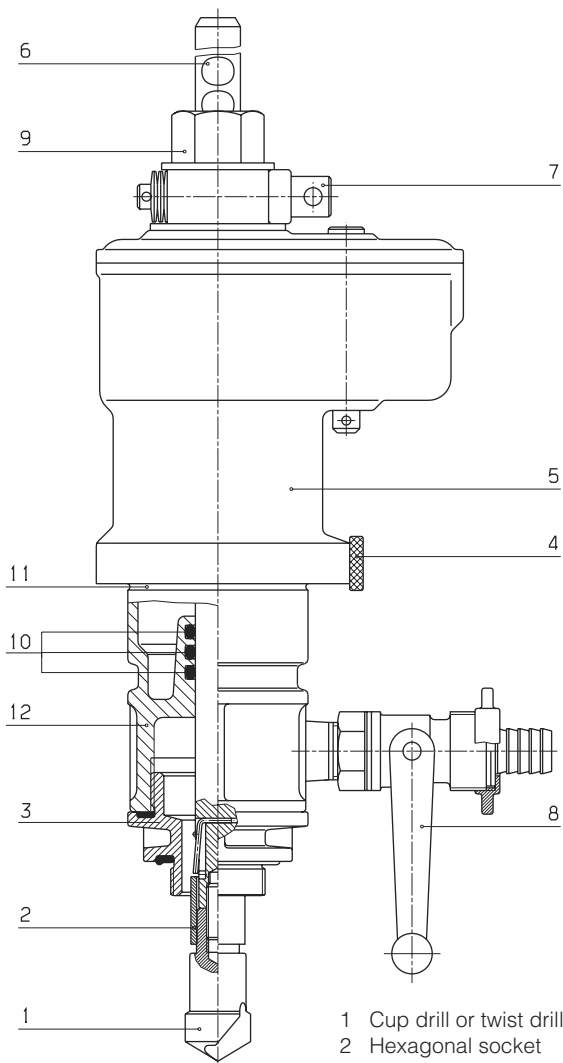
- hand ratchet
- petrol engine
- pneumatic

- Also for under pressure drilling
- For quick and simple drilling of CI, steel, AC and plastic pipes
- Motorised power and continuous feed are necessary for driving the special carbide drills which are needed for cement lined cast iron pipes.

No. 5805	Machine with handratchet Standard version (in metal case)	●
No. 5835	Petrol engine including Adaptor for drilling machine No. 5805	●
No. 5836	Pneumatic including Adaptor (air consumption: 540 l/min) for drilling machine No. 5805	●

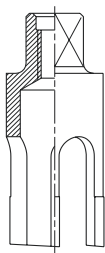


Motorised Drilling Machine

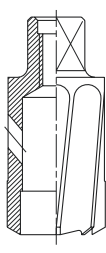


No. 5825	Drilling Machine	
No. 5815	Case	
No. 5830	Ratchet	
No. 5840	Shaft	
No. 5845	Short Shaft	
No. 5850	Twist drill for steel, CI and AC pipes	
	Twist drill 1" - 24 Ø	
	Twist drill 1¼" - 29 Ø	
	Twist drill 1½" - 35 Ø	
	Twist drill 2" - 40 Ø	
No. 5860	Cup drill for PVC pipes	
	Cup drill 1" - 24 Ø	
	Cup 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. 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

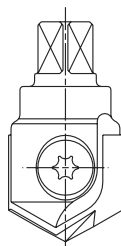
Alternative to twist drill No. 5850	
Cup drill for steel and CI pipes	
Cup drill 1" - 24 Ø	
No. 5870	Cup drill 1¼" - 29 Ø
Cup drill 1½" - 35 Ø	
Cup drill 2" - 40 Ø	
No. 5940 Adaptor 2" - 1½"	
for ISO Combination Tapping Valve (Page C 4/3)	



No. 5860
Cup drill
for PVC pipes



No. 5870
Cup drill
for steel and CI pipes

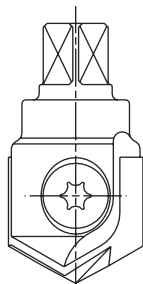


No. 5855W
Carbide drill
Continuous feed and motorised drive are required

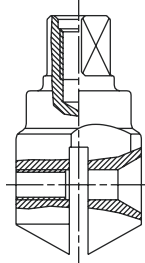
Special equipment:
for cast iron, cement
lined cast iron, and AC
pipes

**No. 5805W
complete in case**
same as No. 5805, but instead
of twist drill No. 5850 with
carbide drill No. 5855

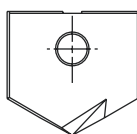
**WHM-drill complete
No. 5855W**



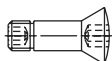
**WHM-
cutting tip holder
No. 5856**



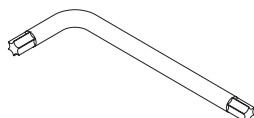
**WHM-
cutting tip
No. 5857**



**Set bolt
No. NN52**



**TORX-Pinkey
No. 5911**



**WHM-drill for cement lined DCI pipes,
standard coated DCI pipes and AC pipes**

Continuous feed and motorised power are necessary!

	WHM-drill complete
No. 5855W	1" - 24 Ø
	1¼" - 29 Ø
	1½" - 35 Ø
	2" - 40 Ø
	WHM-cutting tip holder including set bolt
No. 5856	1" - 1¼"
	1½" - 2"
	WHM-cutting tip
No. 5857	1" - 24 Ø
	1¼" - 29 Ø
	1½" - 35 Ø
	2" - 40 Ø
	Set bolt for WHM-cutting tip holder
No. NN52	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 tips without 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;

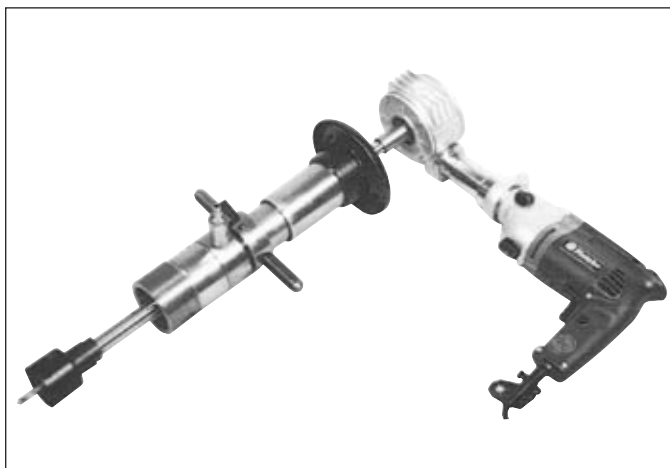
No. 5807

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.

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	●



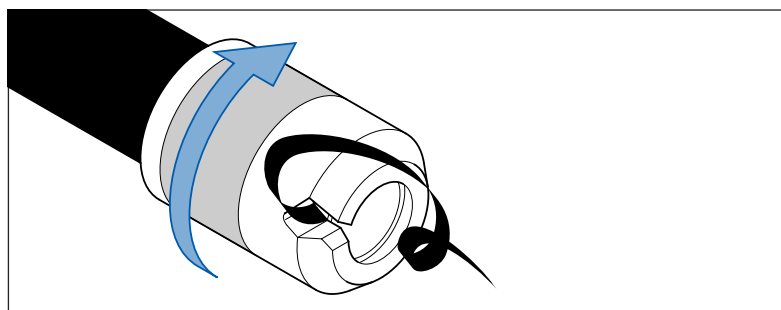
Chamfering Tool

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	●

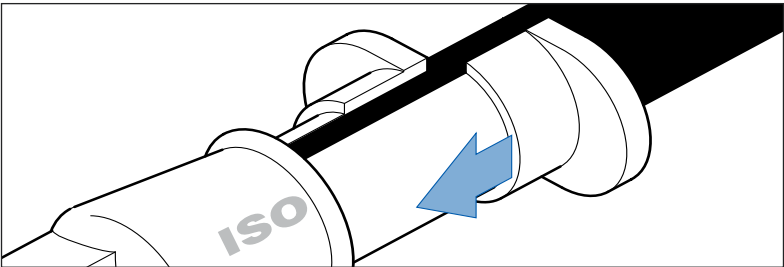


Extractors
for dismantling ISO push fit fittings

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	1/2"	2	0,02	●
	25	3/4"	2	0,04	●
	32	1"	2	0,05	●
	40	1 1/4"	2	0,07	●
	50	1 1/2"	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	●



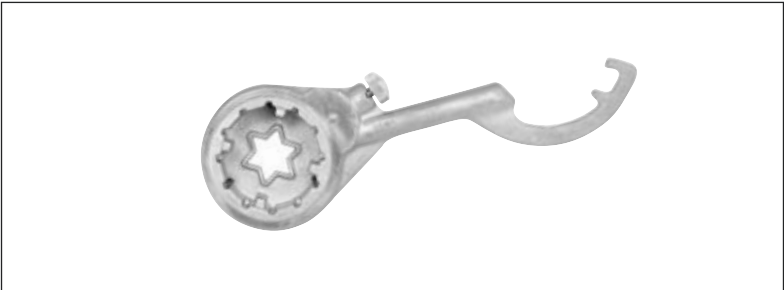
Hydrant-Master Universal Key

lightweight - robust - practical

of aluminium and ductile iron
with reversible ratchet

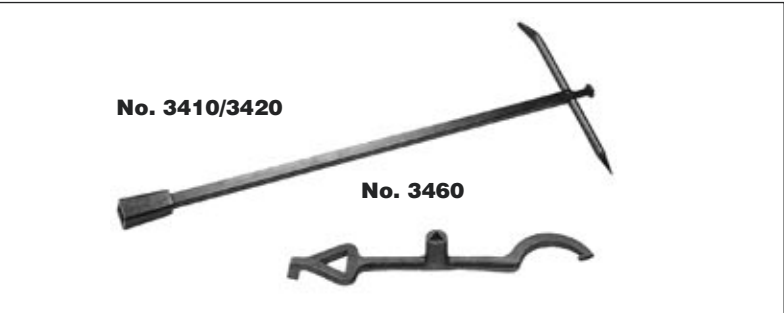
- for opening and closing
- for operating coupling caps A + B + C
- for operating hose couplings B + C
- for breaking theft indicator caps

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

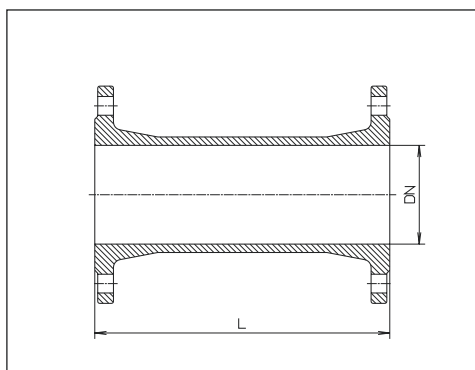
working pressure max. PN 16

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	●
100	1000	22,00	●
	200	10,50	●
	400	15,00	●
	600	19,00	●
125	800	23,00	●
	1000	27,00	●
	200	13,50	●
	400	18,50	●
150	600	24,00	●
	800	29,00	●
	1000	34,50	●
	200	16,50	●
*200	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

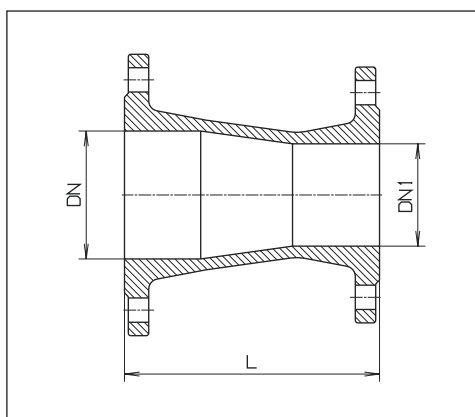
of ductile iron EN-GJS-400-18
according to EN 1563 (GGG 400 -
DIN 1693) epoxy powder coated

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	●

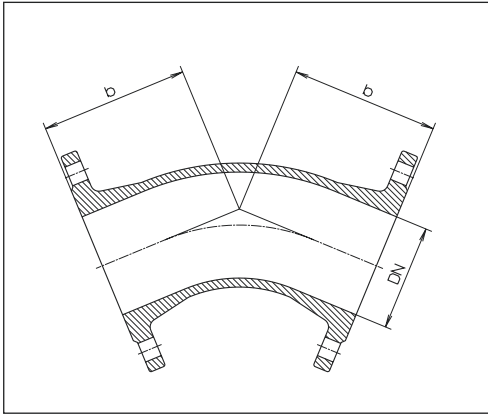
Flanged Fittings

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)



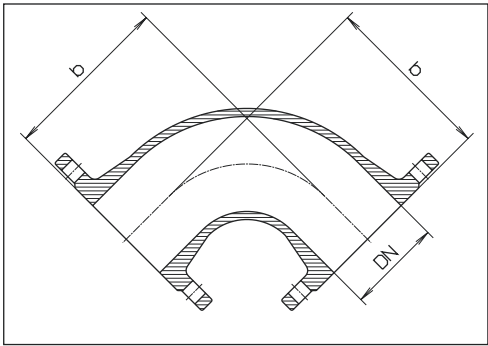
DN	b	Weight kg	
50	150	9,00	●
65	165	12,00	●
80	130	9,50	●
100	140	11,50	●
125	150	14,50	●
150	160	18,50	●
*200	180	27,50	●

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)



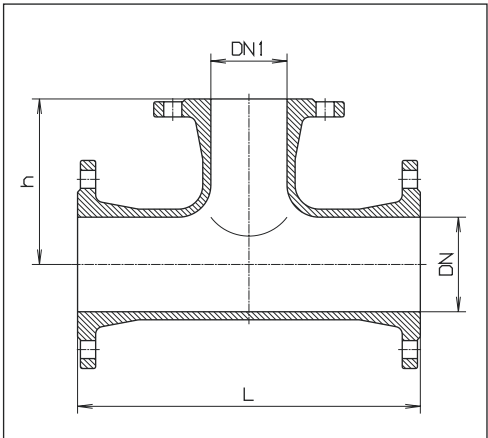
DN	b	Weight kg	
50	150	9,30	●
65	165	9,70	●
80	165	9,90	●
100	180	12,00	●
125	200	15,50	●
150	220	20,50	●
*200	260	31,00	●

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	●
	50	330	157	15,50	●
65	65	330	165	16,50	●
	50	330	160	14,00	●
80	65	330	165	14,70	●
	80	330	165	16,00	●
	50	360	170	16,50	●
100	65	360	170	17,50	●
	80	360	175	18,50	●
	100	360	180	19,50	●
	50	400	185	21,50	●
125	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:

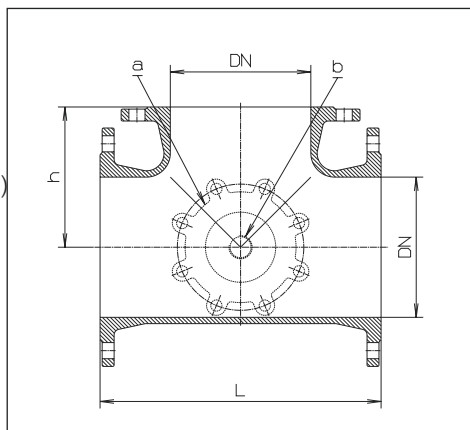
a) No. 8741

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

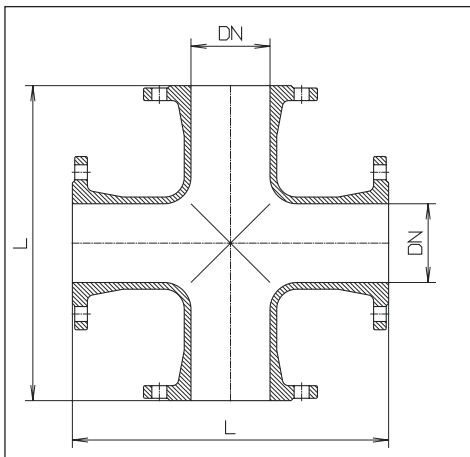
working pressure max. PN 16

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:

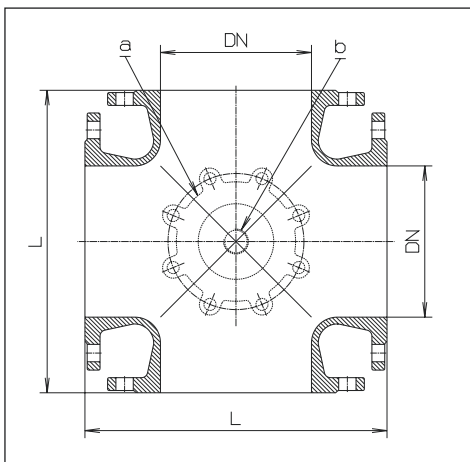
a) No. 8751

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	●

Fittings

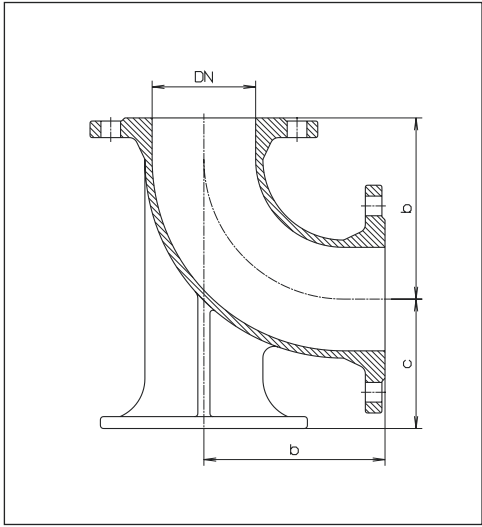
No. 5049

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	●

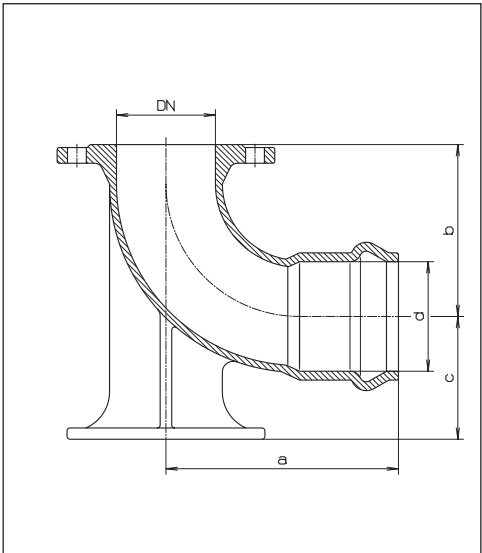
DN 80 also available with loose flange
Order No. 5044

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

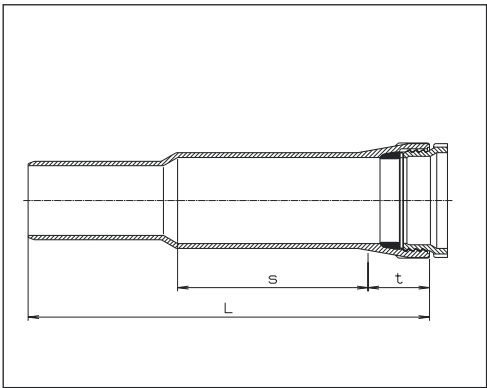
No. NL44

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		Double Socket Tee with flanged branch			All Socket Tee		
Pipe Ø		Pipe Ø	Flange DN		Pipe Ø A	Pipe Ø B	
63	●	63	50	●	63	63	●
75	●	75	65	●	75	75	●
90	●	90	80	●	90	90	●
110	●	110	50	●	110	63	●
125	●		80	●		90	●
140	●		100	●		110	●
160	●	125	80	●	125	90	●
180	●		100	●		110	●
200	●	140	80	●		125	●
225	●		100	●	140	90	●
250	●		125	●		110	●
280	●	160	80	●		140	●
315	●		100	●	160	90	●
355	●		150	●		110	●
		180	80	●	180	160	●
			150	●		125	●
		200	200	●		180	●
			80	●	200	200	●
		225	100	●		90	●
			200	●		110	●
					225	225	●

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 required 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)



Assembly instructions and tensile load see "page M 6/2"

Material:

Body (1), Lock ring (5)

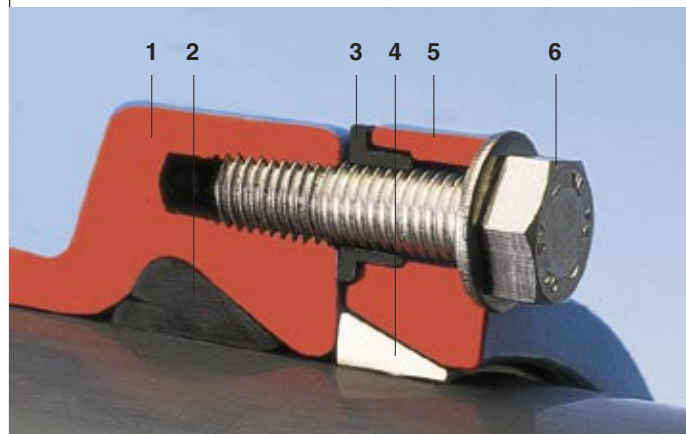
of ductile iron EN-GJS-400-18 according to EN 1563 (GGG 400 - DIN 1693), epoxy powder coated

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)



No. 8525 Double Socket Tee with flanged branch equal and reducing

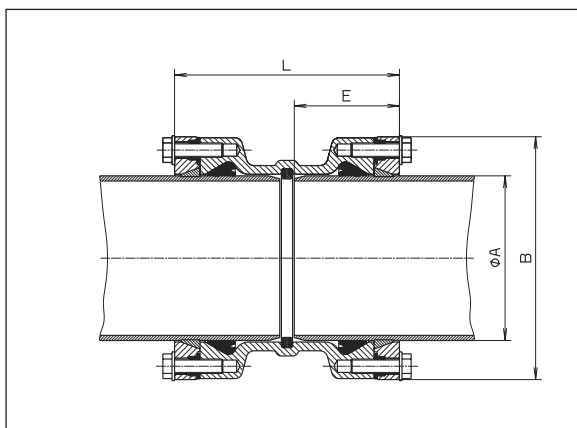


No. 8515 All Socket Tee equal and reducing



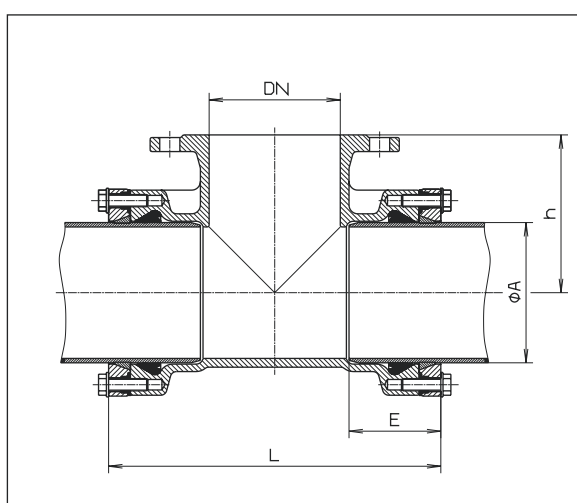
Fittings **SYSTEM 2000**

No. 0430 Connector



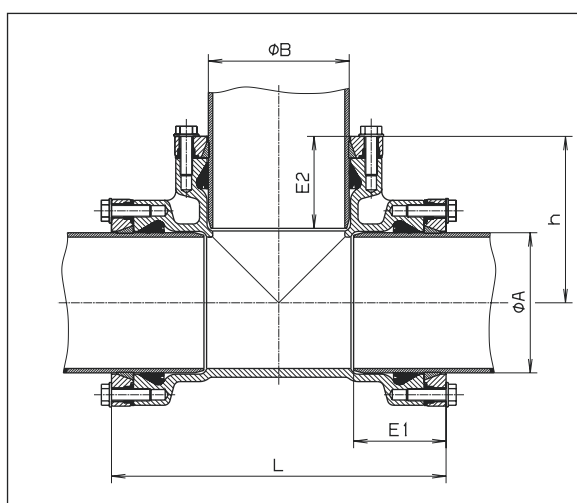
Pipe Ø A mm	L	E	B	Weight kg
63	171	80	124	3,2
75	175	82	138	4,0
90	181	85	152	5,4
110	181	85	172	6,4
125	185	87	193	7,8
140	197	93	210	9,0
160	221	105	236	12,0
180	241	113	258	14,5
200	261	125	284	21,5
225	265	128	314	26,0
250	300	145	347	33,0
280	306	148	376	38,5
315	358	174	422	58,5
355	464	237	472	96,0

No. 8525 Double Socket Tee with flanged branch equal and reducing



Ø 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
	80	288	93	170	15,0
140	100	308	93	170	15,5
	125	334	93	170	16,0
	80	300	105	180	16,5
160	100	320	105	180	17,0
	150	380	105	180	20,0
	80	310	113	200	23,0
180	150	415	113	200	31,0
	200	480	130	220	47,0
	80	356	130	220	33,5
225	100	376	130	220	33,0
	200	488	130	230	55,0

No. 8515 All Socket Tee equal and reducing



Ø A mm	Ø 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
	90	356	128	85	200	29,5
225	110	376	128	128	200	30,0
	225	488	130	130	244	55,0

Bend				End Cap		Duck Foot Bend		
Pipe Ø	90°	45°	30°	Pipe Ø		Pipe Ø A	Flange DN	
63	●	●		63	●	90	80	●
75	●	●		75	●	110	100	●
90	●	●	●	90	●			
110	●	●	●	110	●			
125	●	●		125	●			
140	●	●		140	●			
160	●	●	●	160	●			
180	●	●		180	●			
200	●	●		200	●			
225	●	●		225	●			
250	●	●		250	●			
280	●	●		280	●			
315	●	●		315	●			

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 required 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)

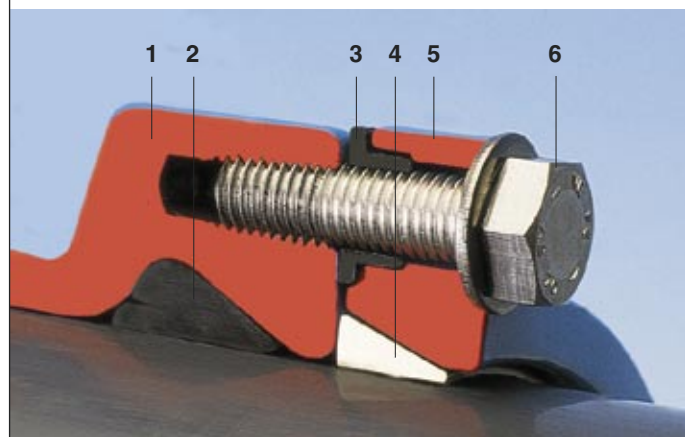
of PE

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



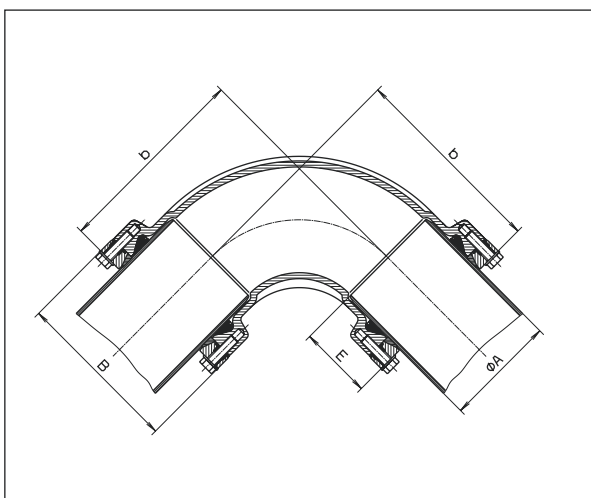
Fittings SYSTEM 2000

Bend

No. 8535 90°

No. 8545 45°

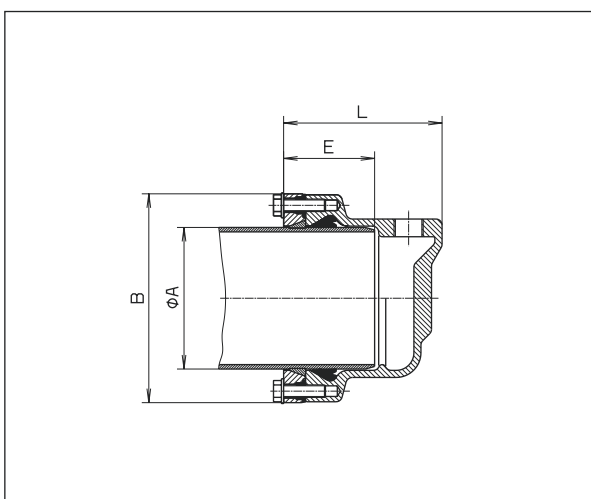
No. 8555 30°



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

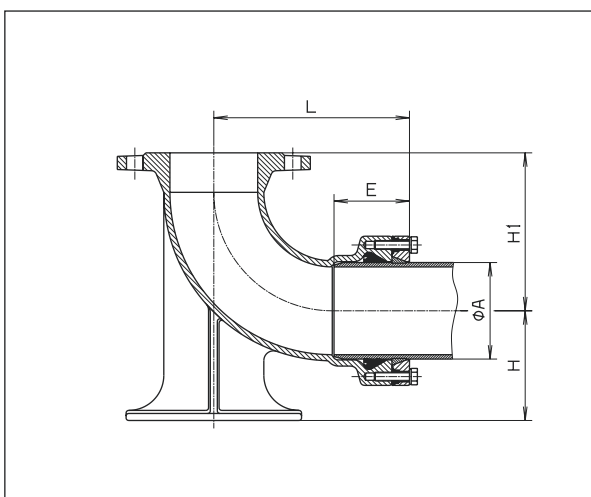
No. 8075



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

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.

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

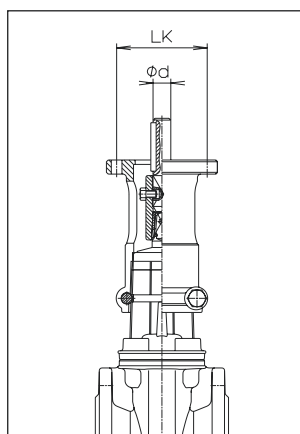
No. 4000ELE2 E2 Elypso Valve - short version

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



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	●

No. 8630E2 E2 Actuator

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 direction indicated 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



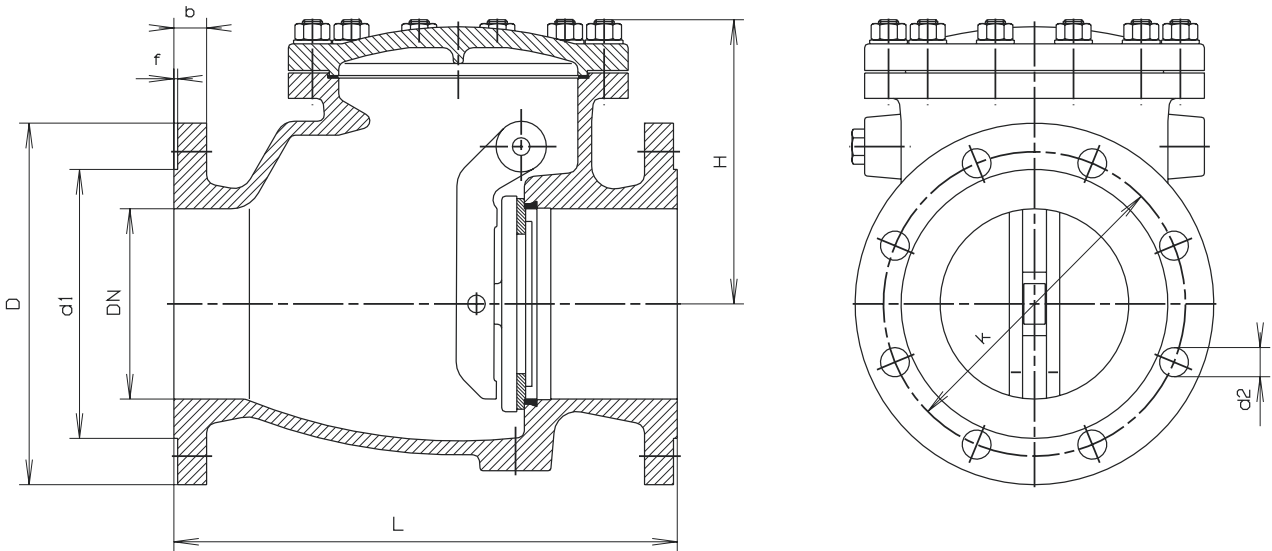
Installation Instructions:

- 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.

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



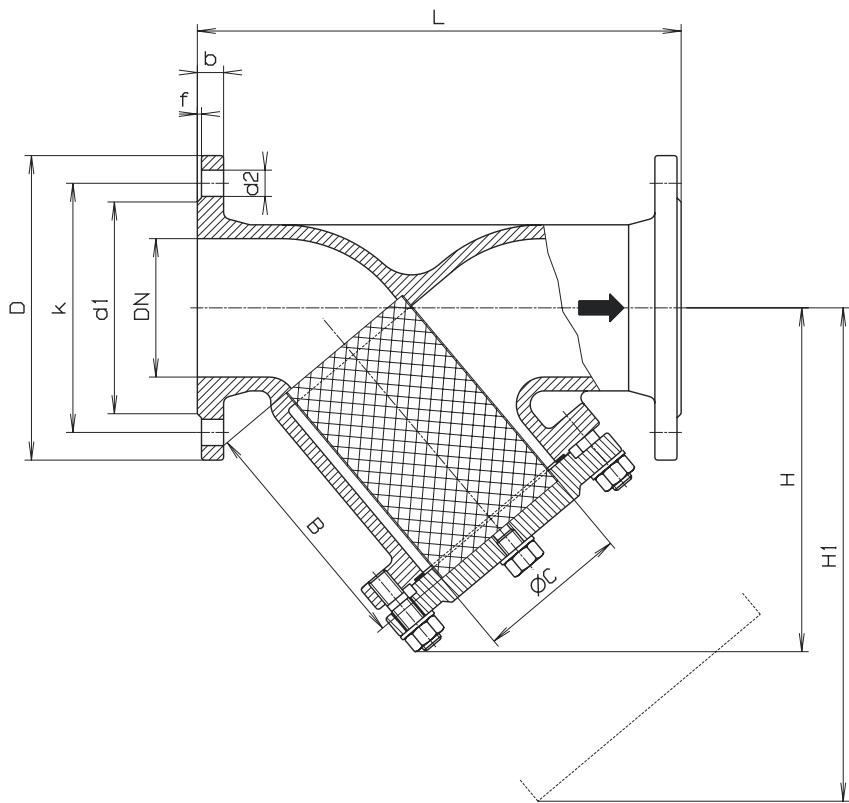
Installation Instructions:

- 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.

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

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

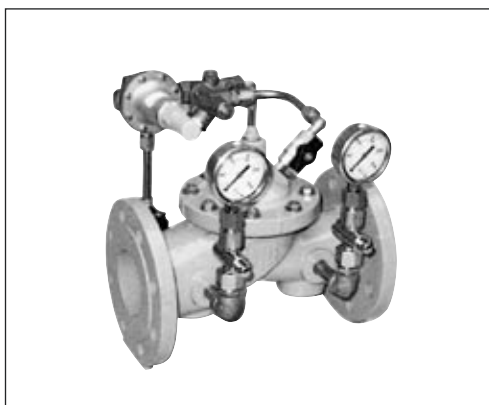
Pressure Reducing Valve

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

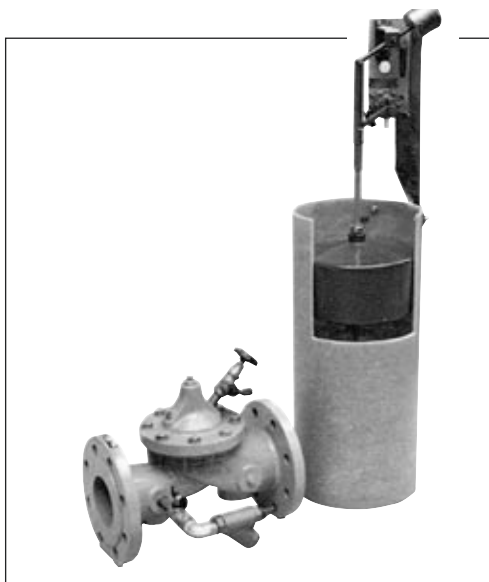
PN 10 / PN 16

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

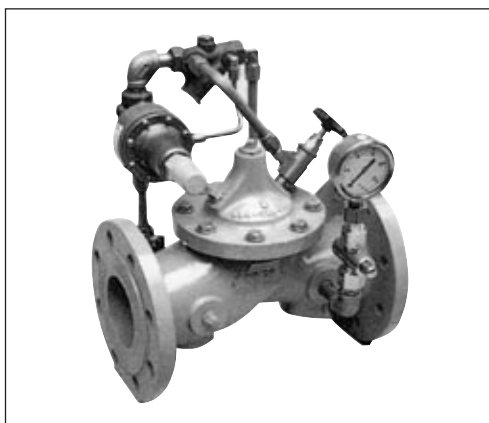
Pressure Relief and Safety Valve

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

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



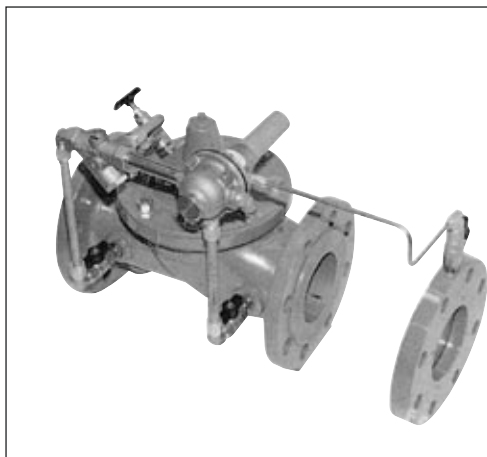
For DN 200 and higher please specify nominal pressure on order

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



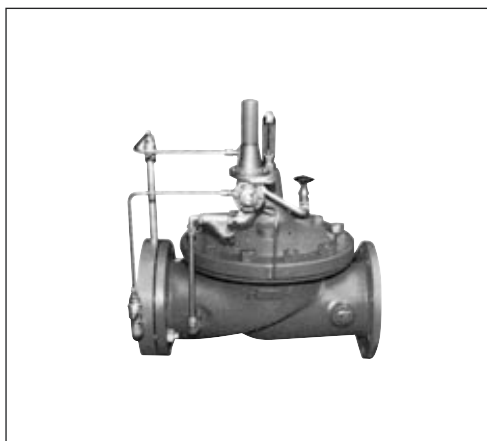
For DN 200 and higher please specify nominal pressure on order

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

....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

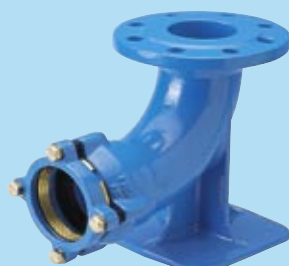
see page L 2/3



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

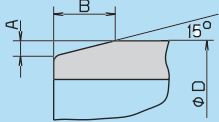


For thinwalled PE pipes (up to 3 mm wall thickness) and low internal pressure we recommend using a support liner.

ASSEMBLY INSTRUCTIONS:

For flange adaptors: bolt the flange to the mating flange first.

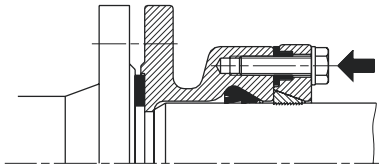
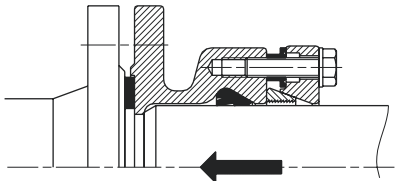
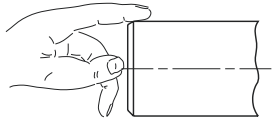
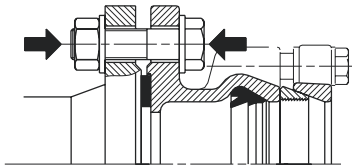
Chamfer the pipe
use lubricant
(see page M 5/2)
Do not use oil !



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

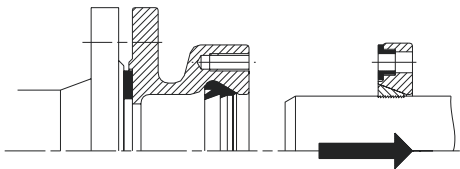
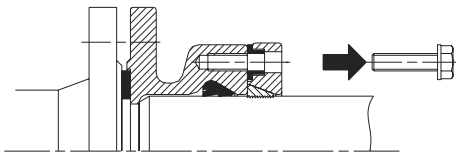
Tighten the lock ring bolts crosswise until lock ring is
tight on bushes.



DISMANTLING INSTRUCTIONS:

Ondo and remove lock ring bolts.

Twist and withdraw the pipe.



TENSILE TESTING:

The following maximum tensile loads have been
established.

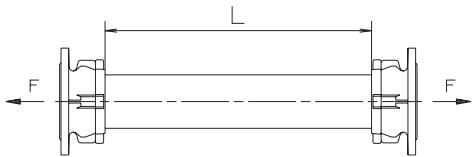
Test data: HAWLE test laboratory tensile testing machine
HDPE pipe (PE 80) DIN 8075 - ÖNORM B 5172 PN 10 (Gas PN 4)

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!**



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

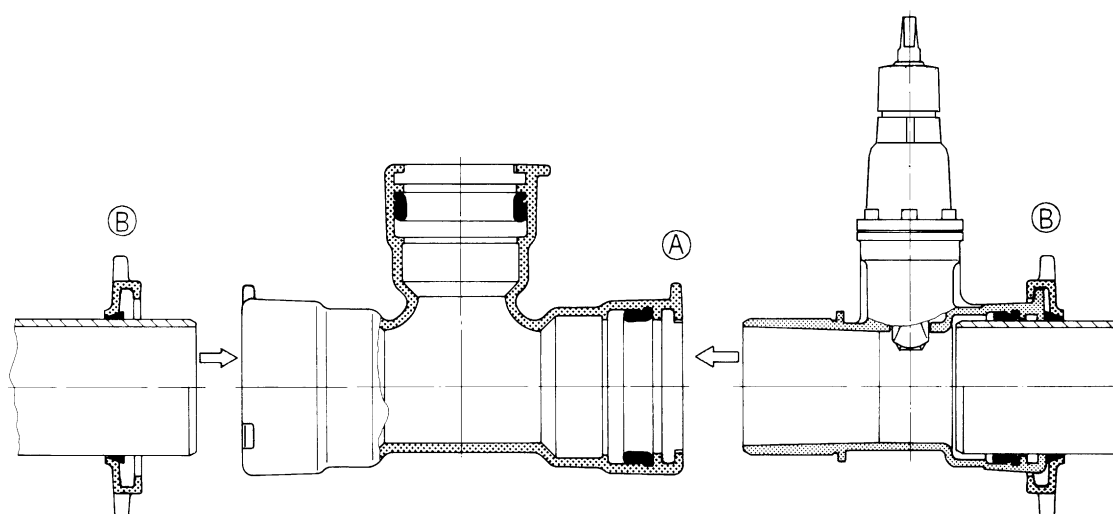
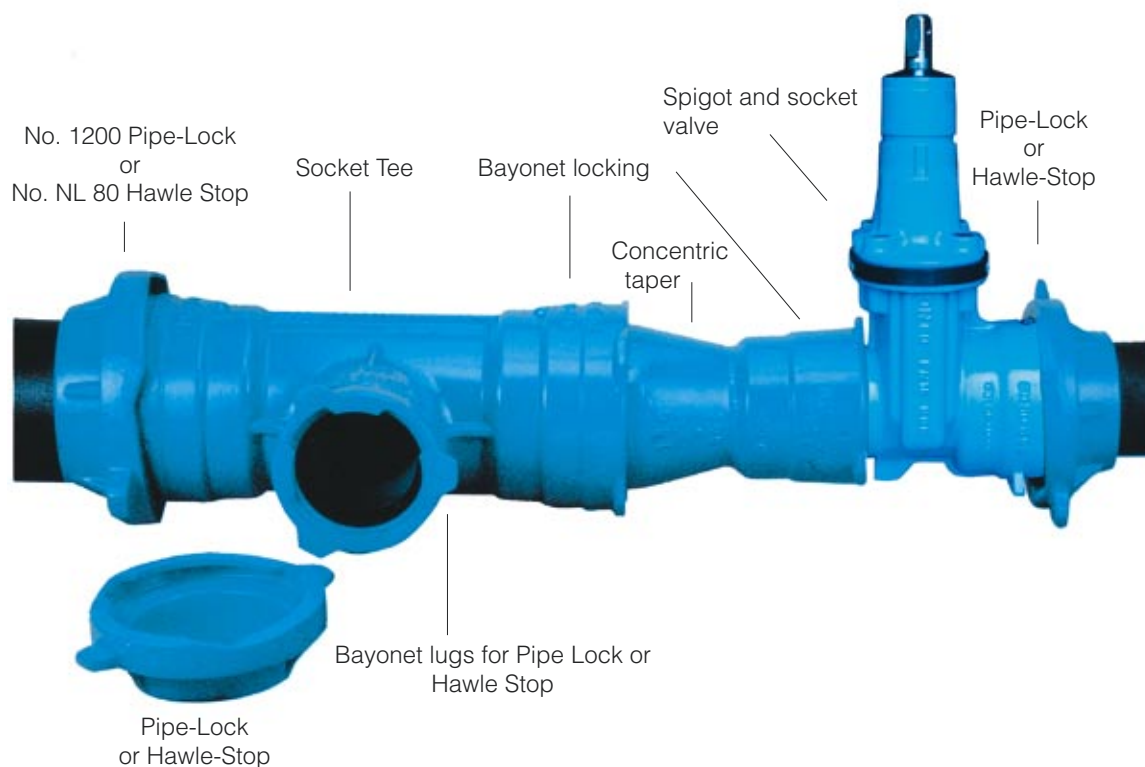
DN 80 - DN 200

NEW

EFFICIENT

RELIABLE

Please ask for special leaflet



- (A) **Bayonet locking system** is available across the entire HAWLE range of fittings
- (B) **Lugs for restraining** plain ended pipe with the Pipe Lock Ring or Hawle Stop

BAIO®-Combi-System

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



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_f -sockets d 34

for pipe drilling Ø 25 mm

ISO-push fit from PE-pipes Ø 25 mm - Ø 50 mm

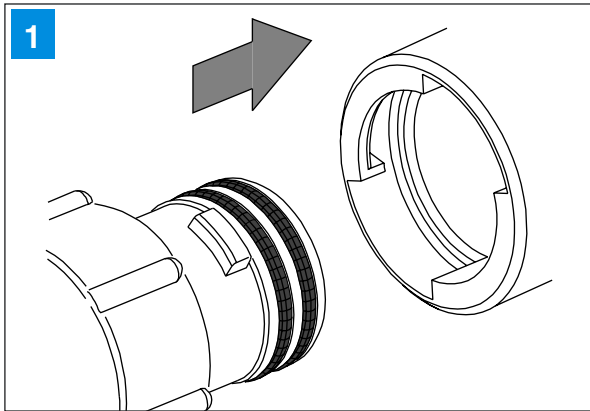
ZAK_f -sockets d 46

for pipe drilling Ø 35 mm

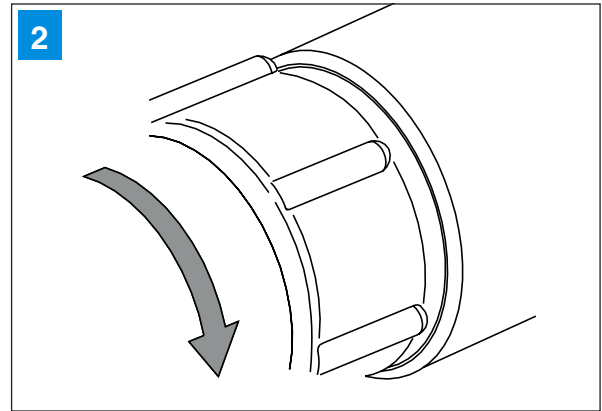
ISO-push fit from PE-pipes Ø 32 mm - Ø 63 mm

ZAK®-Assembly, Dismantling

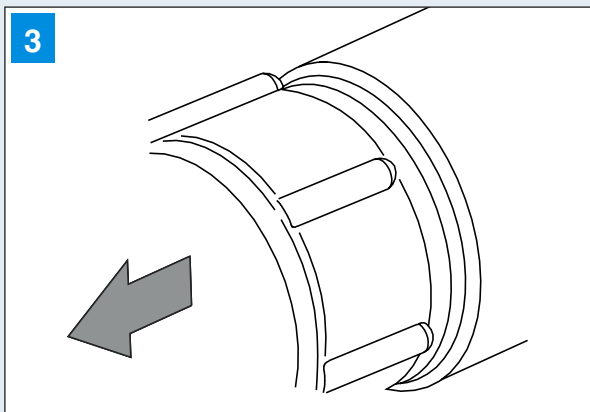
ZAK®-System Assembly Instructions



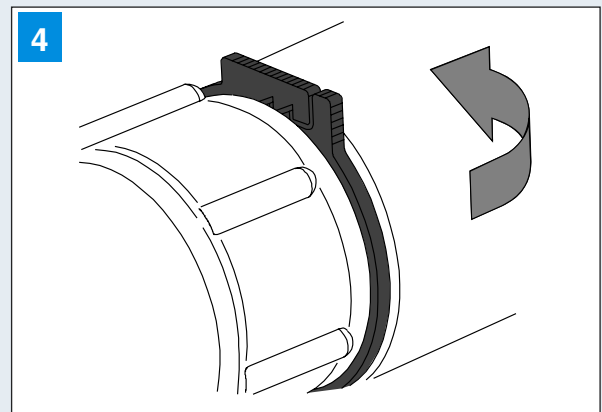
Grease the O rings of the spigot end. Push the **ZAK®**-spigot end into the **ZAK®**-socket to the stop.



Rotate the **ZAK®**-Fitting for 90° clockwise to the stop

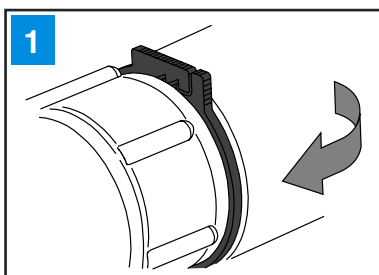


Pull out the **ZAK®**- Fitting to the stop (approx. 4 mm)

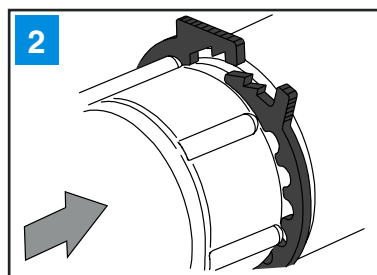


Fit the snap ring in the gap and close it.

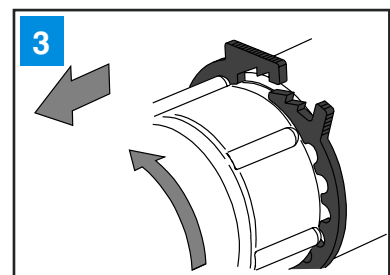
ZAK®-System Dismantling Instructions



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

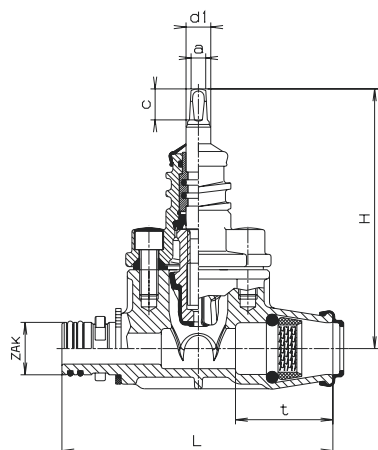
ZAK®-Service Valve

mit ZAK®-Spigot and ISO Socket

for lateral tapping



No. 2810



ZAK® 34

DN	PE pipe Ø mm	H	L	t
¾"	25	168	173	52
1"	32	168	175	63
1¼"	40	168	205	76
1½"	50	168	232	91

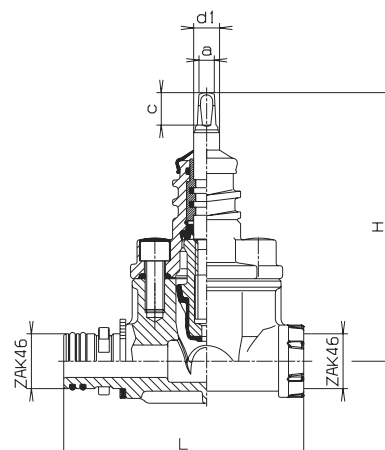
DN	a	c	d1	Weight
¾"	10,3	20	16	2,35
1"	10,3	20	16	2,50
1¼"	10,3	20	16	2,90
1½"	10,3	20	16	3,15

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

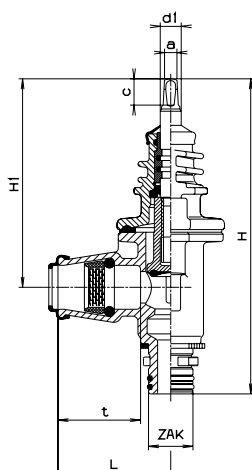
ZAK®-Service Valve

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

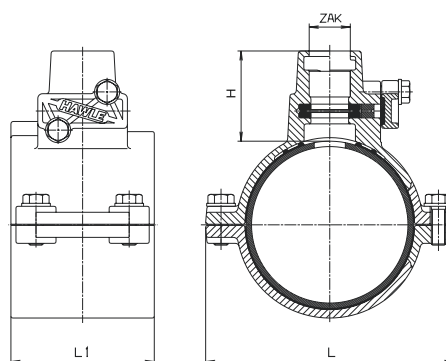
DN	t	a	c	d 1	Weight
1¼"	76	10,3	20	16	4,15
1½"	91	10,3	20	16	4,25

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

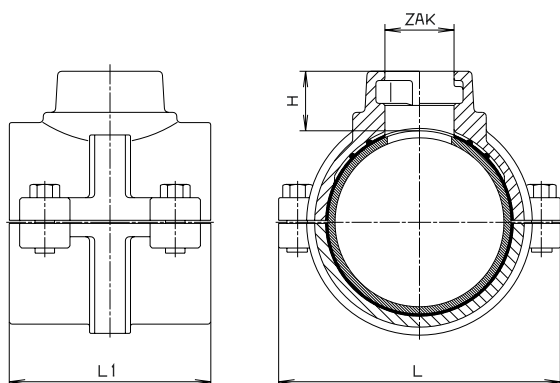
ZAK® 46, for pipe drilling Ø 35 mm

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-Hawling

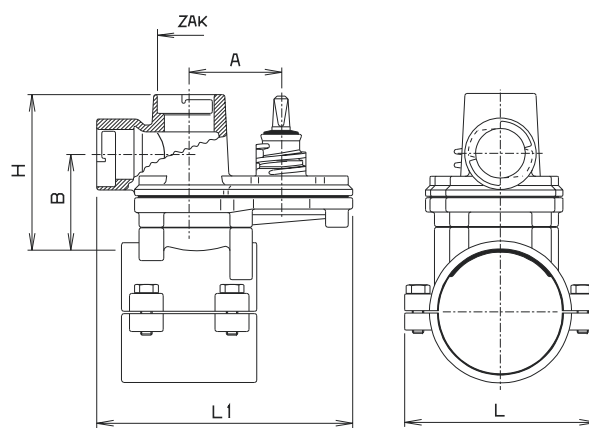
for lateral and vertical tapping
of PE and PVC pipes

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®-Range

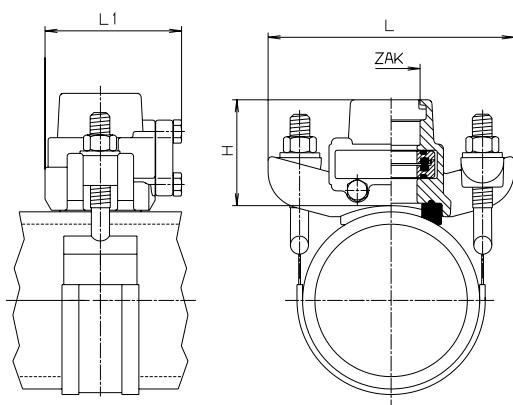
ZAK®-Universal Shut-Off Saddle

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

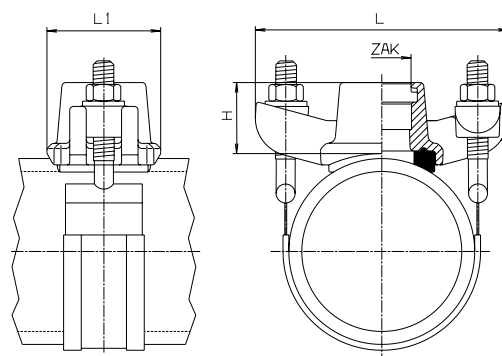
ZAK®-Universal Pipe Saddle

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

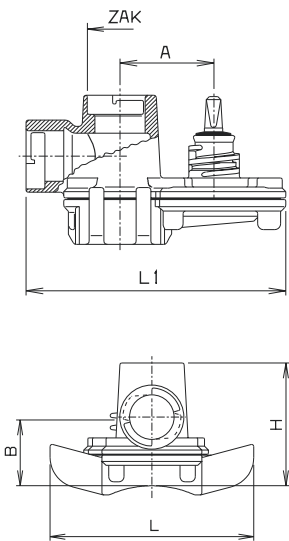
for lateral and vertical tapping
of DCI, Steel- and AC pipes

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 Ø 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 Ø 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 Ø 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 Ø 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 Ø 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

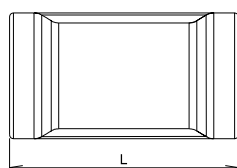


No. 6170

ZAK®	PE pipe Ø mm	Weight
34	32	1,05
	50	1,85

ZAK®-Range

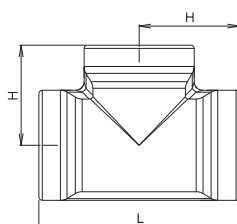
ZAK®-Connector with double sockets



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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