

2023

Gas catalogue

made for generations.



Hawle Gas catalogue

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Welcome

... to the world of Hawle



A family company with a proud tradition and an eye on the future.

Hawle, a purely family-owned company founded in 1948 is the worldwide leader in the production of an extensive product range of valves and connecting pieces. Hawle is an innovation leader in the development of high-quality valve solutions. In compliance with European and additionally applicable standards, Hawle produces high-performance and durable quality fittings for the construction and the use of water pipelines, as well as the necessary accessories and the required equipment.

Our specialist area of water and wastewater systems also includes customised fittings for special applications and special conditions.

An excellent understanding of the manufacturing process and the production requirements, extensive knowledge in water supply, years of experience and a broad service program enables us to create the optimum product for pipeline connections in all areas of international water supply.

The unique **10 year quality guarantee** for Hawle products in the drinking water area confirms our leading position for innovation and quality.

The employees of our company, which has its registered office in Vöcklabruck (Austria), bring all their service and subject knowledge into the research, design, development as well as the production process.

Hawle products are exclusively produced in Europe in the most up-to-date production facilities. More than 98% of the raw materials used in the products come from Europe. Hawle products are manufactured by well-trained specialists, thus guaranteeing careful monitoring of the quality in each phase of the production process. The majority of the components are also produced by Hawle. So the functionality and the quality is assured and guaranteed in each production step.

Hawle stands for high quality, efficiency and durability. Therefore international customers trust in our products and technologies - for generations.

For more details go to **hawle.com**

Hawle - the best solution

a reliable partner

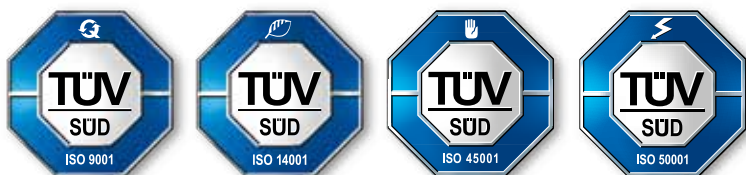
100% Hawle, 100% proven quality

We are constantly striving for improvements together with our partner companies all over the world. In order to achieve this we focus on the requirements of our customers, invest in the most up-to-date technology and offer professional service and technical support. Hawle has an excellent network of partners, which ensures an efficient and competent distribution of all our products. Our central warehouse in Frankenmarkt, Austria, supplies this network with numerous finished products, which are stored in over 10,000 pallet spaces.

The pipe connections which our technicians develop today will be used tomorrow for your secured water supply.

Hawle offers a competent, round-the-clock service. As soon as we receive your call we immediately put all our efforts into finding a solution to your problem.

made for generations.



Vöcklabruck plant
Austria



Frankenmarkt plant
Austria

Hawle - Guarantee and warranty



10-years quality guarantee

(Water for human consumption and natural gas)

E. Hawle Armaturenwerke GmbH (hereinafter referred to as "Hawle") guarantees the functional capability of all valves and fittings manufactured by Hawle with the original "Hawle" inscription, which are used as intended for water for human consumption in accordance with Directive 98/83/EC or for natural gas in accordance with ÖVGW (Austrian Association for the Gas and Water Industry) G 31, for a period of 10 (ten) years from the date of delivery from our works. However, the maximum guarantee period afforded by Hawle is 11 (eleven) years from the date of manufacture of the product. In the event of a guarantee claim, it is the responsibility of the customer to prove that the guarantee has not expired, e.g. by presenting the invoice or the original product label.

Should a valve or fitting lose its functional capability during the guarantee period, Hawle shall either repair the product or deliver an equivalent replacement product to the place of performance agreed with Hawle, at its discretion. Hawle will not assume any additional costs or damages incurred by the customer or third parties within the scope of this guarantee, in particular no costs in connection with disassembly and installation, location or reinstallation. Purely optical flaws that in no way impair tightness, tensile safety or the operation of the valve or fitting do not constitute a guarantee claim.

The guarantee also excludes, but is not limited to, wear parts and damage caused by improper storage, transport and assembly, non-compliance with instructions for use, failure to perform pressure tests, utilisation outside the limits of standard applications and general operating parameters, inadequate maintenance, subsequent manipulation or utilisation with unsuitable liquids or gases. The guarantee does not extend to extraordinary environmental conditions, vibrations or residues from the medium or similar external influences, nor to actions by third parties, accidents and other events over which Hawle has no control.

Please also note the exceptions and special regulations applicable to certain products in our catalogue and on our website Hawle.com.

This guarantee is subject exclusively to Austrian law to the exclusion of international conflict of law rules. Any warranty claims arising from the purchase contract shall not be restricted by this guarantee.

This guarantee applies to all deliveries as of 01.01.2019 for valves and fittings manufactured by Hawle which are used for water intended for human consumption in accordance with Directive 98/83/EC or for natural gas in accordance with ÖVGW (Austrian Association for the Gas and Water Industry) G 31. Any guarantees or warranties issued by Hawle prior to this effective date shall not be valid for any deliveries made thereafter.



2-year warranty

In addition to our quality guarantees, Hawle warrants in accordance with Austrian law that our products correspond to the relevant contract at the time of delivery. In the event of incorrect storage, transport, assembly, usage regulations not being observed, failure to pressure-test, insufficient maintenance, subsequent manipulation or usage for non-suitable fluids or gases there is not entitlement to warranty claims. The warranty period runs for a maximum of two years ex-works delivery. Please see the Hawle delivery conditions for further details of the warranty.



Hawle - Corrosion protection

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

The environmental friendly solvent and pollution free powder coating technology!



Epoxy Powder-Coated coating according to GSK:

- ⦿ Fulfils the requirements according to EN 14901 (pipes, fittings and accessories)
- ⦿ Minimum coated thickness 250 µm
- ⦿ Zero porosity
- ⦿ High adhesion to metal (min. 12 N/mm²)
- ⦿ High resilience (no cracking)
- ⦿ Smooth surface (makes incrustation more difficult)
- ⦿ Suitable for food use according to the guidelines for hygienic evaluation of organic coating in contact with drinking water (coating guideline) of the German Federal Health Office
- ⦿ High impact resistance
- ⦿ Bacteriological approval to DVGW recommendation W270
- ⦿ Regular quality tests according DIN 3476-1 - coating thickness, adhesion, spark-testing, impact resistance
- ⦿ Independant auditing of quality control systems by MPA Hannover in accordance with the test methods of **GSK** (**G**ütegemeinschaft **S**chwerer **K**orrosionsschutz - the association for high quality corrosion protection)
- ⦿ Hawle standard colour RAL 5012, RAL 1023

Hawle - Standard- and special applications

Standard applications:

Our products are intended for localised installation in natural gas pipelines made from PE, PVC or steel pipes.

Standard medium:

- **Natural gas**
In compliance with the requirements of the ÖVGW G 31

General operating parameters:

Natural gas:

Medium temperature: -10 °C to max. 50 °C

For the specific operating parameters of our products, please refer to the respective product pages of our catalogue and our website **Hawle.com**.

Special applications:

In case of deviating conditions of use or ambient conditions, please inform us right on your first inquiry about the specific operating conditions. If you have any questions regarding the suitability of products for certain operating conditions, please contact our Application Engineering department (phone: +43 (0) 7672 72576-0).

If our valves and fittings are used for other than the standard applications and without the approval granted by our Application Engineering department regarding the conditions of use, we cannot assume any liability.

Application instructions:

Valves and fittings should be stored in a cool, dry and low-dust environment protected from weather. Avoid exposure to direct sunlight or UV light, unless the valves and fittings are designed for use above ground. For the correct installation and maintenance of our valves and fittings, please observe our instructions as well as the pertinent European standards (EN), as well as the directives of the ÖVGW (the Austrian Association for Gas and Water) and/or comparable national technical standards.

Hawle - Gas - testing/ ordering designations

All Hawle shut-off valves (valves and house connection valves) are tested according to EN 12266-1 (DIN 3230-T5) (Fig. 1 and 2)

Tests performed during the production process:

1. Body and spindle connection leakage test:

Test pressure: 0.5 bar and 6 bar

Medium: air

2. Body mechanical strength:

Test pressure: 1,5 x times the operating pressure rating

Medium: water

3. Closed wedge leakage test:

Test pressure: 0,5 bar und 6 bar

Medium: air

Rotation welded ISO pipe fittings made from POM are tested for weld leak tightness (Fig.3)

Test pressure: 6 bar

Medium: air



Fig. 1



Fig. 2



Fig. 3

Required ordering specifications:

- | | |
|----------------------------|---|
| 1. Operating pressure: | Depending on the valve type PN 1, PN 5, PN 10 or PN 16 |
| 2. Flange bore: | PN 10 (standard) or PN 16 |
| 3. Installation situation: | PG-1 (underground installation) or PG-3 (installation in plant) |

When an installation situation (operating pressure) is not specified for an order, the tests are carried out to PG-1/DIN 3230-T 5 for max. 5 bar operating pressure.

Manipulation of products (changes, repairs, component replacements, loosening of joints made in the works, etc.) are not permitted and render the guarantee, warranty obligation and product liability invalid.

E3 Gate valve | Combi valves

Overview

Design features

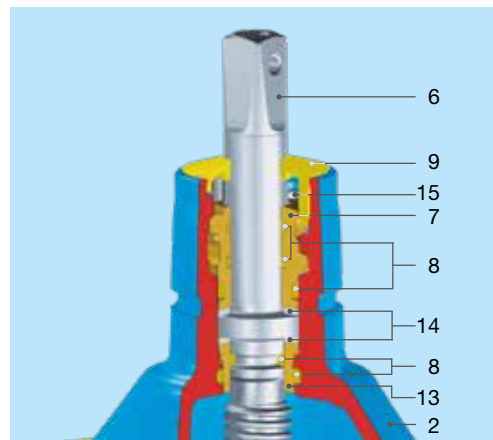
- Resilient seated gate valve according to EN 1171, EN 1074-1 and EN 1074-2 with smooth, straight-through bore
- Double bayonet O-ring carrier is connecting the spindle to the bonnet, allowing a fully encased, uniform epoxy powder coated bonnet for further improved corrosion protection
- Wedge guide made of wear resistant POM material in load optimized design minimizes attrition and ensures lowest torque actuation
- Wedge is flexible and fully linked in vulcanized elastomer to the wedge nut. This snug fit dampens vibration during opening and closing of the wedge
- Wedge nut has a long thread length allowing significantly higher torques than the standard before breaking
- O-rings, lip-seals mounted in the bonnet are replaceable under operating pressure
- Extended edge protection to avoid damages during transport, storage and assembly
- Sliding disks and ball bearing assure low friction performance of the spindle
- 100% suitable for buried installations

Material | Technical features

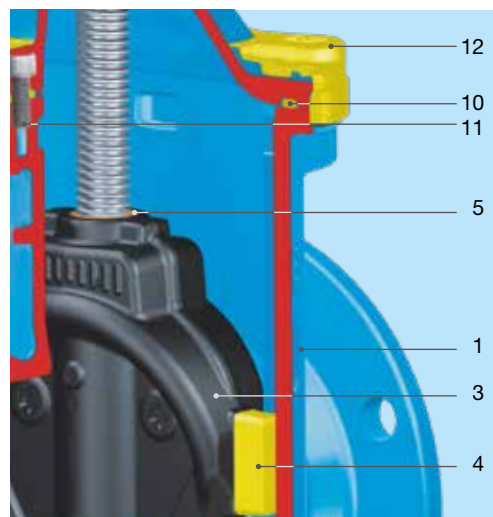
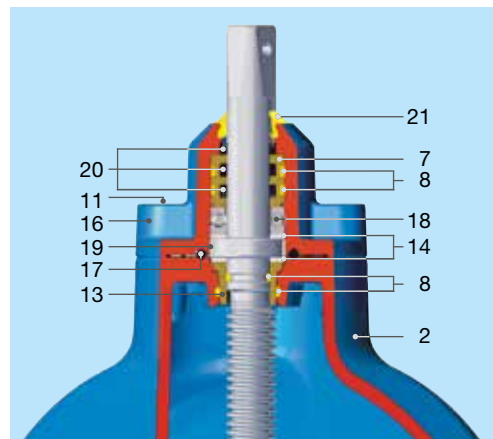
- 1,2 **Body (1), bonnet (2), centering flange (16)** made of ductile iron, 16 epoxy powder coated inside and out
- 3 **Wedge** made of ductile iron (DN 50 made of dezincification-resistant brass) with vulcanized elastomer all-over
- 4 **Wedge guide** made of wear-resistant plastic
- 5 **Wedge nut** made of dezincification-resistant brass
- 6 **Duplex stainless steel spindle** with rolled thread and flat-rolled anti-friction surface
- 7 **O-ring carrier** made of brass, DN 50 — 200 with double bayonet
- 8 **O-rings** made of elastomer
- 9 **Wiper ring** made of PE
- 10 **Bonnet gasket** made of elastomer
- 11 **Allen screws** made of stainless steel, encased into the body with interlacing gasket and sealing compounds, ensuring full corrosion protection
- 12 **Extended edge protection** made of PE
- 13 **Spindle bearing** made of dezincification resistant brass
- 14 **Sliding disks** made of POM
- 15 **Safety screw** made of stainless steel
- 17 **Centering flange gasket** made of elastomer
- 18 **Axial ball bearing** permanently lubricated
- 19 **Centering ring** made of POM
- 20 **Lip seals** made of elastomer
- 21 **Wiper ring** made of elastomer

DN 50 — 200

Spindle bearing with sliding disks



DN 250 — 400 Spindle bearing with ball bearing and additional sliding disks



E3 Valve

With flange DN 50 — 200, PN 10 | PN 16

Design features

- Resilient seated gate valve with smooth straight-through bore in compliance with EN 13774 (EN 1074-1 and 2)
- Flanges sized in accordance with EN 1092-2, drilled according to
EN 1092-2 | PN 10 standard (4005E3, 4705E3);
EN 1092-2 | PN 16 from DN 200 (4005E3, 4705E3)
Please specify on order - other standards on request
- **Wedge guide** with high glide characteristics; load-optimised design guarantees lowest wear and minimum closing torques
- **Wedge nut** allows high torque load through large dimensioning of the required thread length
- **O-rings, lip seals** mounted in rust-proof material on all sides
- **Edge protection** protects during transport and storage
- **Friction washers** (DN 50 to DN 200) guarantee low friction mounting of the spindle
- One extension spindle for several dimensions
- **100%** suitable for underground installation

Standard version: without handwheel and extension spindle

Design versions: with position indicator:
No. 4005STE3

Temperature range: operation: -10 °C to 50 °C
storage: -25 °C to 70 °C

No. 4005E3

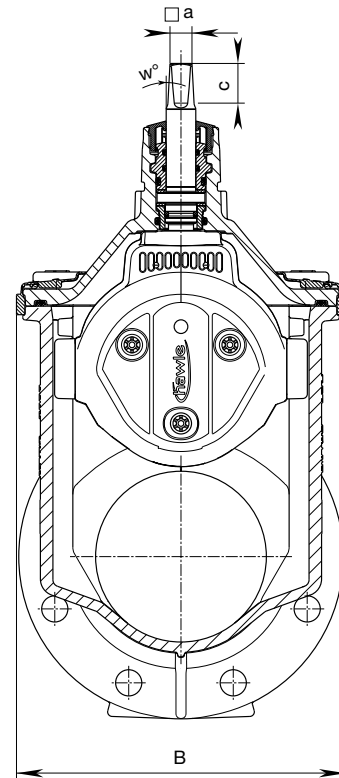
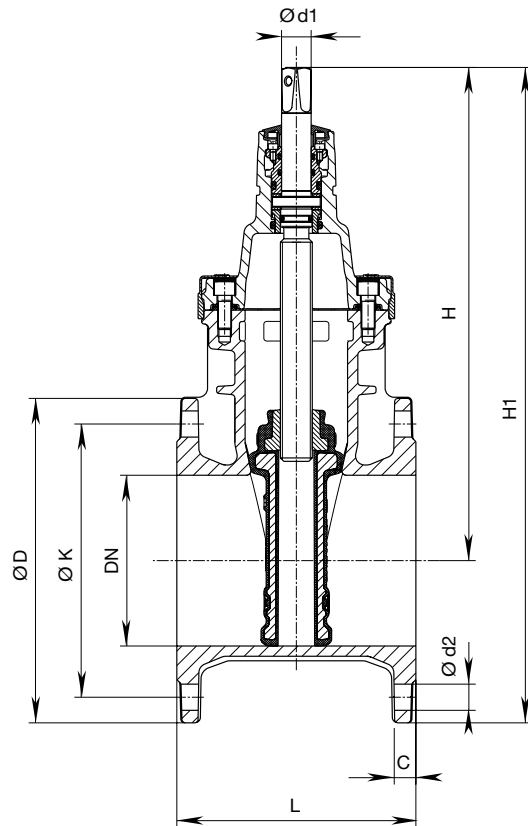
No. 4705E3



Order no.	Version	MOP (PN)	Dimensions/DN						
			50	65	80	100	125	150	200
4005E3	short EN 558-1 GR 14	16							
4705E3	long EN 558-1 GR 15	16							

Suitable accessories:

Handwheel:		No. 7800
Extension spindles:	rigid	No. 9000E2/E3
	telescopic	No. 9500E2/E3
Surface boxes:	rigid	No. 1755
Base plate:	No. 3481, No. 3490	



DN	MOP (PN)	Flange			Bolts			Spindle				Valve					Weight	
		Ø D	C	Ø K	Qty.	Thread	Ø d2	□ a	c	w°	Ø d1	H	H1	L short	L long	B	short	long
50	10 16	165	19	125	4	M 16	19	14,8	29,2	3°	20,5	234	316,5	150	250	143	10,0	11,5
65	10 16	185	19	145	4	M 16	19	17,3	33,8		24	305	397,5	170	270	180	15,5	17,5
80	10 16	200	19	160	8	M 16	19	17,3	33,8		24	312,5	412,5	180	280	180	16,5	20,0
100	10 16	220	19	180	8	M 16	19	19,3	37,2		24	343	453	190	300	212	20,5	25,5
125	10 16	250	19	210	8	M 16	19	19,3	34,9		26	421	546	200	325	289	33,0	37,5
150	10 16	285	19	240	8	M 20	23	19,3	34,9		26	433	576	210	350	289	37,0	43,5
200	10 16	340	20	295	8 12	M 20	23	24,3	47,3		30	541	711	230	400	356	60,5	71,5

E3 Valve

With flange DN 250 — 400, PN 10 | PN 16

Design features

- Resilient seated gate valve with smooth straight-through bore in compliance with EN 13774 (EN 1074-1 and 2)
- Flanges sized in accordance with EN 1092-2, drilled according to
EN 1092-2 | PN 10 standard (4005**E3**, 4705**E3**);
EN 1092-2 | PN 16 from DN 200 (4005**E3**, 4705**E3**)
Please specify on order - other standards on request
- **Wedge guide** with high glide characteristics; load-optimised design guarantees lowest wear and minimum closing torques
- **Wedge nut** allows high torque load through large dimensioning of the required thread length
- **O-rings, lip seals** mounted in rust-proof material on all sides
- **Edge protection** protects during transport and storage
- **Ball bearings** (DN 250 to DN 400) in the spindle seating minimizes closing forces
- Easy to actuate without bypass and without power boost - even for 16 bar differential pressure
- For the assembling of a position indicator it is necessary to remove the centering flange and mount the adapter for position indicator
- **100%** suitable for underground installation

- Standard version:** without handwheel and extension spindle
- Design versions:** with position indicator:
No. 4005**STE3**
- Temperature range:** operation: -10 °C to 50 °C
storage: -25 °C to 70 °C

No. 4005**E3**
No. 4705**E3**



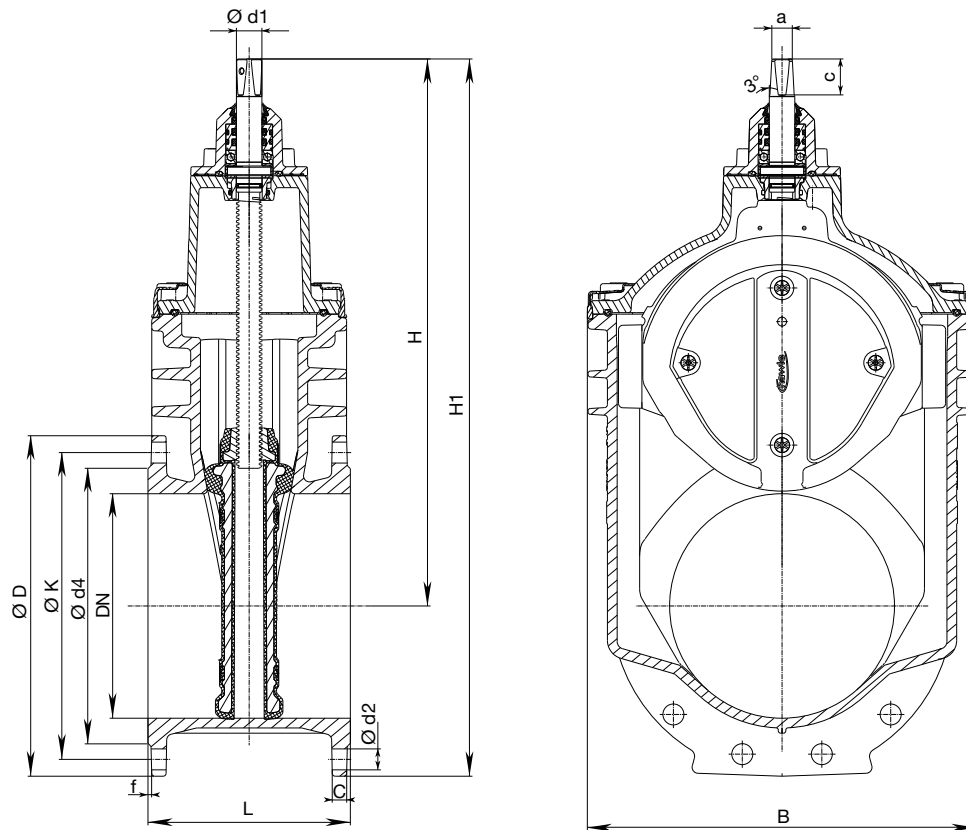
iii. DN 300

Order no.	Version	MOP (PN)	Dimensions/DN			
			250	300	350	400
4005 E3	short	16				
	EN 558-1 GR 14					
4705 E3	long	16				*
	EN 558-1 GR 15					

* in preparation

Suitable accessories:

- Handwheel: No. 7800
- Extension spindles: rigid No. 9000**E2/E3**
telescopic No. 9500**E2/E3**
- Surface boxes: rigid No. 1755
- Base plate: No. 3481, No. 3490



DN	MOP (PN)	Flange					Bolts			Spindle			Valve					Weight	
		Ø D	C	Ø K	Ø d4	f	Qty.	Thread	Ø d2	a	c	Ø d1	H	H1	L short	L long	B	short	long
250	10	400	22	350	319	3	12	M 20	23	27,3	48	34	649	849	250		432	99,0	
	16			355				M 24	28										
300	10	455	24,5	400	367	4	12	M 20	23	27,3	48	34	731	959	270	500	518	151,0	168,0
	16			410				M 24	28										
350	10	520	26,5	460	427	4	16	M 20	23	27,3	48	34	816	1076	290		604	206,5	
	16			470				M 24	28										
400	10	580	28	515	477	4	16	M 24	28	32,3	55	44	925	1215	310	600*	687	266,0	310*
	16			525				M27	31										

* in preparation



The specified pressure test for gas-valves is certified by an acceptance test certificate to EN 10204 -3.1.



E3 Valve for pe fusion

DN 50 — 200, PN 6 | PN 10

Design features

- Resilient seated gate valve with PE fusion tails in combination with PE pipes according to EN 1555-2, DIN 8074
- This resilient seated valve has PE tails screwed and sealed into the sockets
- High performance sealing of the PE tails within the sockets is assured by two separate seals and a support liner
- The valve can be connected to the PE pipeline by either butt fusion or electrofusion
- **Wedge guide** with high glide characteristics; load-optimised design guarantees lowest wear and minimum closing torques
- **Wedge nut** allows high torque load through large dimensioning of the required thread length
- **O-rings** mounted in rust-proof material on all sides
- **Edge protection** protects during transport and storage
- **Friction washers** guarantee low friction mounting of the spindle
- One extension spindle for several dimensions
- **100%** suitable for underground installation

Standard version: without handwheel and extension spindle

Temperature range: operation: -10 °C to 50 °C
storage: -25 °C to 70 °C

1 PE-fusion tail

Standard version PE 100-RC injection moulded

Support liner DN 50 made of POM, from DN 65 — DN 200 made of stainless steel for PE-fusion tail (see drawing)

2 Socket sealing made of elastomer

3 O-Ring made of elastomer

Material | technical features

- 1, 2 **Body** (1) and **Bonnet** (2) made of ductile iron, inside and outside epoxy powder coated, ring groove on head part for a pinless force-fitting connection of the extension spindles
- 3 **Stainless steel** spindle with rolled thread and flat-rolled sealed sliding surface
- 4 **Wedge** made of ductile iron, inside and out with vulcanized elastomer
- 5 **Wedge guide** made of wear-resistant plasti
- 6 **Wedge nut** made of dezincification-resistant brass
- 7 **O-ring bush** made of brass
- 8,16 **O-rings** made of elastomer
 - 9 **Back seal** made of elastomer
 - 10 **Retaining ring** made of POM
 - 11 **Wiper ring** made of elastomer
 - 12 **Bonnet gasket** made of elastomer
 - 13 **Allen screws** encased into the body with an enclosing gasket and wax, ensuring full corrosion protection
 - 14 **Edge protection** made of PE
 - 15 **Friction washers** made of POM
 - 17 **Socket sealing** made of elastomer
 - 18 **PE-fusion tail** Standard version PE 100 injection moulded, Support liner of stainless steel assembled in PE-fusion tail

No. 4055E3

No. 4056E3

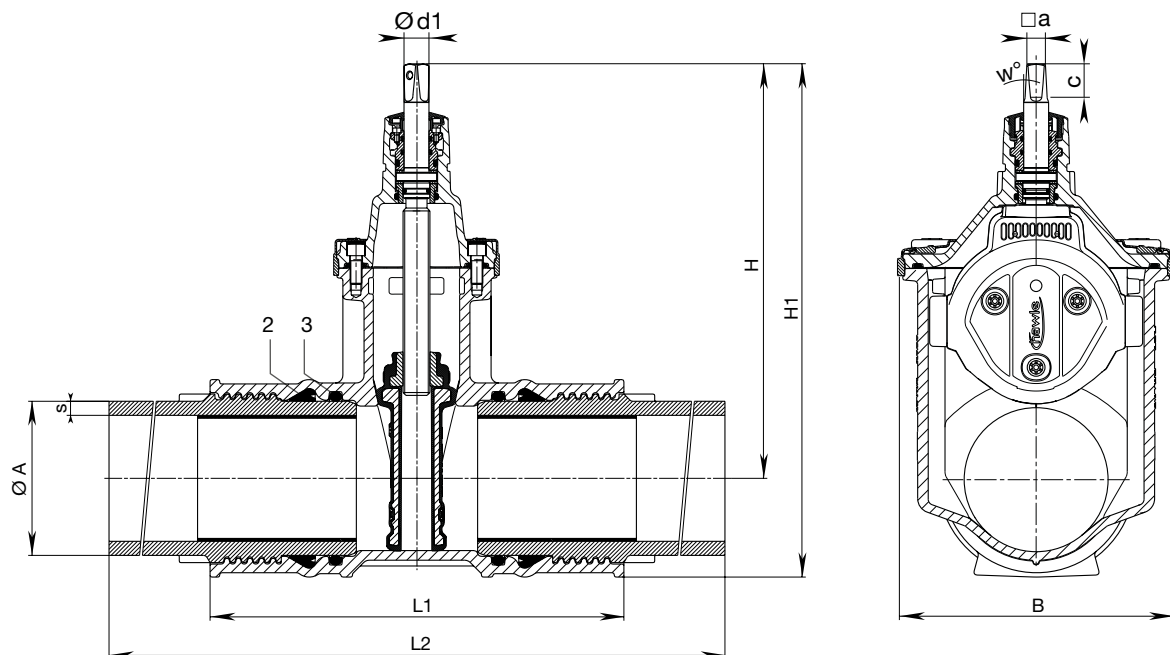


Order no.	MOP (PN)	Dimensions/DN Pipe Ø									
		50	65	80	100	100	150	150	200	200	
4055E3	10	63	75	90	110	125	160	180	200	225	
4056E3	6										

PE-fusion tail: No. 4055E3 PN 10 / SDR 11
No. 4056E3 PN 6 / SDR 17
(No. 4056E3 PN 6 / SDR 17.6 on request)

Suitable accessories:

Handwheel:		No. 7800
Extension spindles:	rigid	No. 9000E2/E3
	telescopic	No. 9500E2/E3
Surface boxes:	rigid	No. 1755
Base plate:		No. 3481, No. 3490



PE-fusion tail: No. 4055E3 PN 10 / SDR 11
 No. 4056E3 PN 6 / SDR 17
 (No. 4056E3 PN 6 / SDR 17.6 on request)

DN	Ø A	Valve with PE tails							Spindle				Weight
		s (SDR 17)	s (SDR 11)	H	H1	L1	L2	B	□ a	c	w°	Ø d1	
50	63	3,8	5,8	234	283	280	648	143	14,8	29,2	3°	20,5	11,0
65	75	4,5	6,8	305	361	295	657	180	17,3	33,8		24	17,0
80	90	5,4	8,2	313	377	310	668	180	17,3	33,8		24	19,0
100	110	6,6	10,0	343	419	340	710	213	19,3	37,2		24	26,0
100	125	7,4	11,4	343	428	395	761	213	19,3	37,2		24	30,5
125	140	8,3	12,7	421	513	390	756	285	19,3	34,9		26	31,5
150	160	9,5	14,6	433	536	430	796	285	19,3	34,9		26	50,0
150	180	10,7	16,4	433	548	458	814	285	19,3	34,9		26	57,5
200	200	11,9	18,2	541	679	514	900	357	24,3	47,3		30	88,0
200	225	13,4	20,5	541	679	514	900	357	24,3	47,3		30	90,0



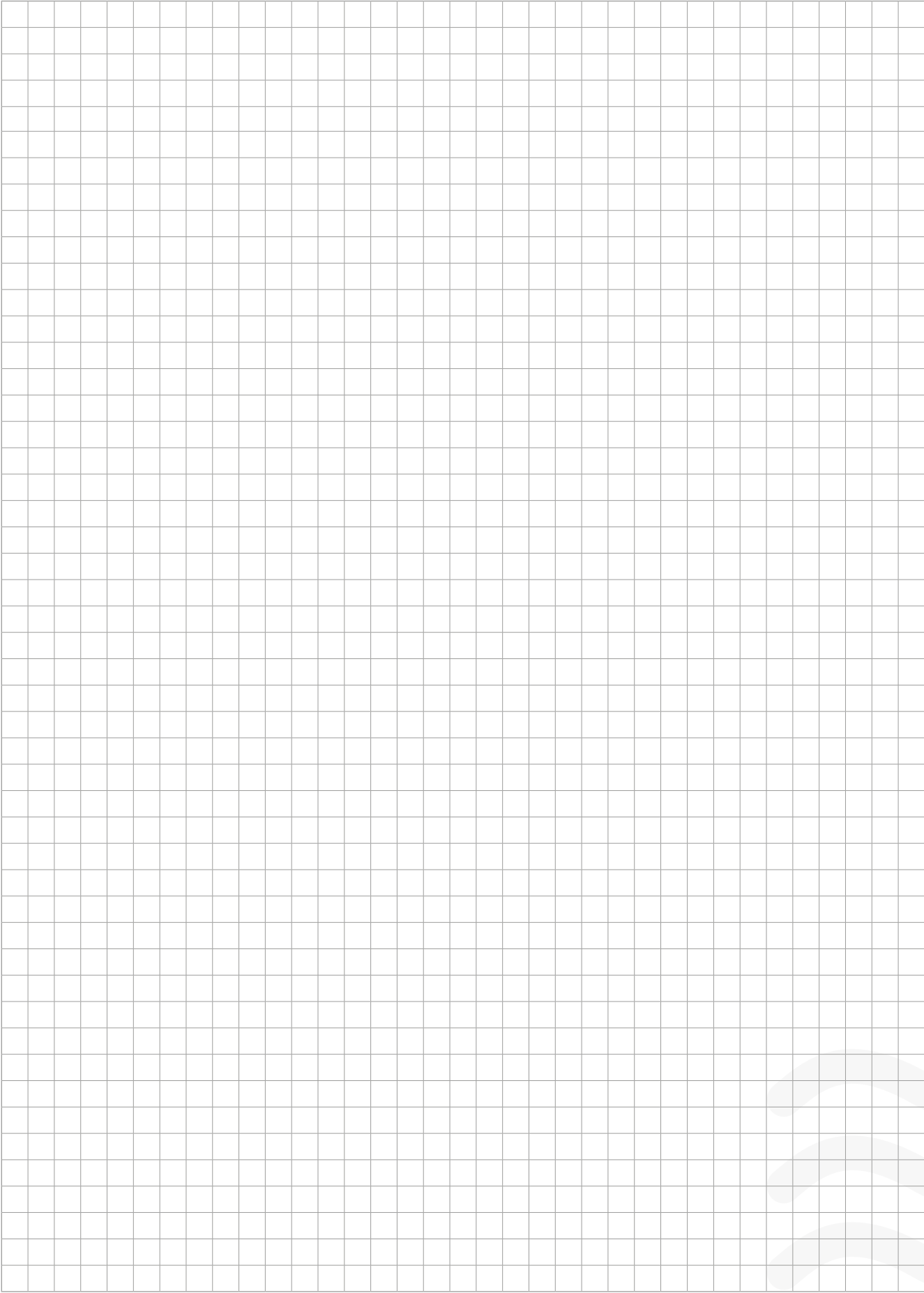
REG. No. G 1.475

The specified pressure test for gas-valves is certified by an acceptance test certificate to EN 10204 -3.1.



reliant on dimension external monitored

Notes



Flange connections

For PE pipes, restraint, PN 10

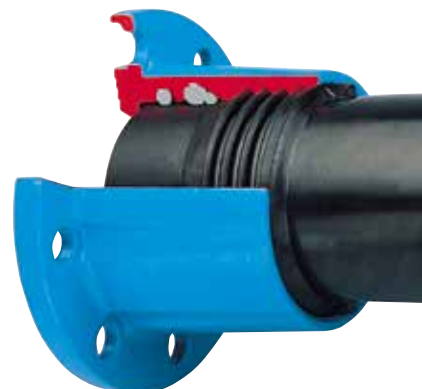
Design features

- For PE pipes according to EN 1555-2, DIN 8074
- Flange sized in accordance with EN 1092-2, drilled in accordance with EN 1092-2 | PN 10
- Flange adapter with PE fusion tail
- In a flange with a combined push-screw socket, a PE fusion socket is inserted from factory
- High performance sealing of the PE tail is assured by two separate seals and a stainless steel support liner within the tail
- The fusion of the valve in the PE line can take place through butt fusion or electrofusion socket; twisting is not permissible after fusion of the valve

Flange adapter with PE fusion tail

No. 0315

No. 0316

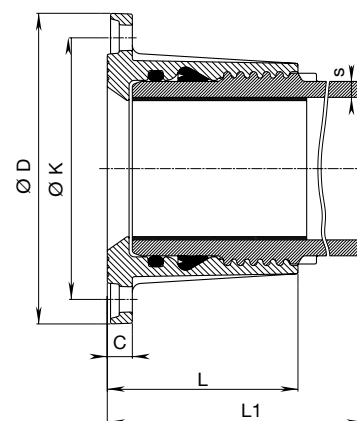


Material | technical features

- **Flange** made of ductile iron, epoxy powder coated
- **Fusion tail** made of PE 100
- **Support liners** made of stainless steel
- **Seals** made of elastomer
- **Grip ring** made of POM

Order no.	MOP (PN)	Flange DN / Ø Pipe						
		80 90	100 110	100 125	150 160	150 180	200 200	200 225
0315	10							
0316	6							

PE-fusion tail: No. 0315 PN 10 / SDR 11
No. 0316 PN 6 / SDR 17



Flange DN	Ø Pipe	Ø D	Ø K	C	L	L1	s SDR 17	s SDR 11	Bolts		Weight
									Qty.	Thread	
80	90	200	160	20	125	305	5,4	8,2	8	M 16	6,7
100	110	220	180	21	142	327	6,6	10,0	8	M 16	9,3
100	125	220	180	19	190	373		11,4	8	M 16	12,4
150	160	285	240	23	175	358	9,5	14,6	8	M 20	16,0
150	180	285	240	20	260	437		16,4	8	M 20	23,0
200	200	340	295	20	210	403		18,3	8	M 20	28,0
200	225	340	295	20	210	403	13,4	20,5	8	M 20	28,0

Universal pipe saddle

For steel and ductile iron pipes

Design features

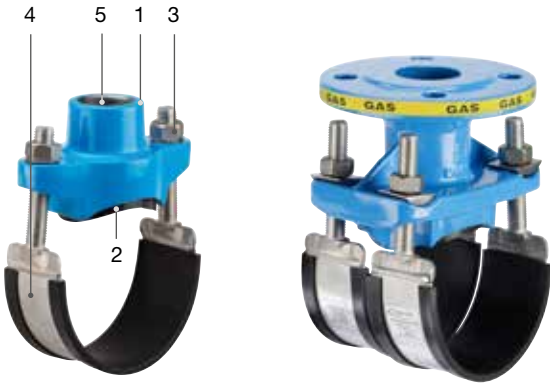
- Compact saddle body
- Favorable angle of contact
- Flexible padded wrap around strap for easy installation
- Optimum force transfer of the strap screw connection through strap and cylinder disks as bolt contact area
- The saddle seal is moulded to fit the pipe diameter and is prefixed in the saddle body
- All internal threads are fitted with a corrosion protection ring to prevent corrosion and incrustations

Material | technical features

- Saddle body** made of ductile iron, epoxy powder-coated
- Saddle seal** made of elastomer
- Nuts** free lying, (Molybdenum-coated)
No. 3505: made of stainless steel spherical bearings
No. 3515: on stainless steel cylinder disk screws M 16 - stainless steel
- Strap** made of passivated stainless steel, strength 1,5 with insulating elastomer rubber padding
- Corrosion protection ring** made of elastomer

No. 3505 Pipe saddle / internal thread

No. 3515 Pipe saddle / flange



Order no.	Internal thread / DN	MOP (PN)	Dimensions/DN									
			50	80	100	125	150	175	200	250	300	600
3505	1"	5										
	1¼"											
	2"											
3515	50	5										
	80											
	100											

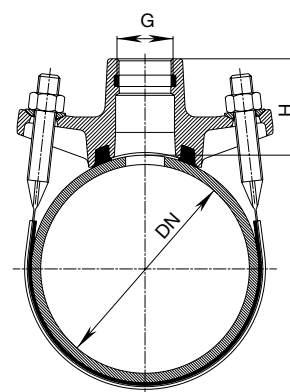
Please specify pipe material on order

Thread outlet G		Dimensions/DN							
		50	80	100	125	150	200	250	300
1"	Weight		2,40	2,50					
	H		61	61					
1¼"	Weight	2,30							
	H	64							
2"	Weight		2,45	2,50	3,80	3,90	4,40	5,00	5,10
	H		57	57	78	78	86	89	89

*Version with double strap

No. 3505 saddle clamp

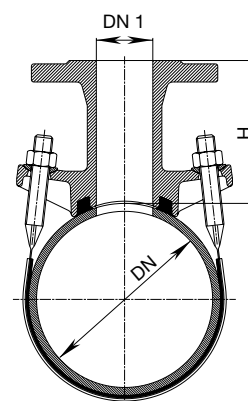
With internal threaded outlet ISO 228



Flange outlet DN 1		Dimensions/DN				
		100	150	200	250	600
50	Weight	6,60		7,70	7,90	
	H	114		145	153	
80	Weight		9,50	10,30		
	H		135	150		
100	Weight		11,10	11,80		18,30
	H		140	155		165

No. 3515 saddle clamp

With flanged outlet - EN 1092-2; all models have a double strap, flange drilling to EN 1092-2 | PN 10



Universal-H shut-off saddle

For steel, and ductile iron pipes

Design features

- Universal Shut-off saddle with internal thread outlet in accordance with DIN ISO 228-1 are to be used for assembly on cast-iron and steel pipes of DN 65 - DN 500.
- Adjustment to the main pipe is carried out via the Hawle strap and saddle seal (order No. 3113) in the corresponding nominal diameter.
- In combination with a drilling machine, the shut-off system allows simple, problem-free tapping of the main line, even in operating condition. During the tapping process, the passage is provisionally shut-off with a saddle blade after the withdrawal of the drilling spindle. The saddle blade is available as an accessory. Fittings can be connected after the drilling

Material | technical features

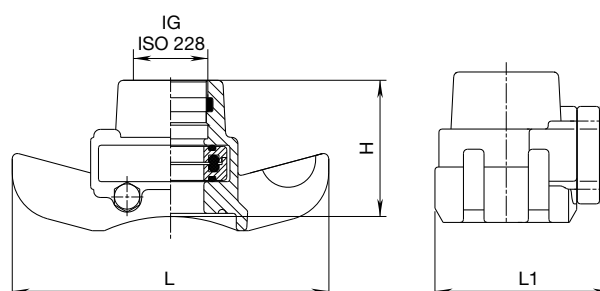
- **Saddle body** and **cover** made of ductile iron, epoxy powder-coated
- **Seals** made of elastomer
- **O-ring carrier** made of POM
- **Bolts** made of stainless steel

Suitable accessories

Saddle blade: No. 8401

No. 3815 Complete

No. 3815G Without strap and saddle seal



Order no.	MOP (PN)	Internal thread ISO 228 G	Dimensions/DN
			DN 65 – DN 500
3815G	5	1 1/4"	
		1 1/2"	
		2"	

DN	ISO 228	H	L	L1	Weight
65 – 500	1 1/4"	90	200	105	2,80
	1 1/2"				2,80
	2"				3,00

When ordering, please state DN, pipe Ø and pipe type; weight without strap

Design features

- Includes holding pieces, washers, nuts
- Tightening torque: min. 60 Nm / max. 80 Nm
- Made of passivated stainless steel
- DN 65 to 500

Pipe Ø	Control dimension „L“	e.g.: for main pipe - DN		Weight
		Steel	Cast iron	
93 – 102	410		80	0,76
112 – 122	455	100	100	0,82
166 – 177	595	150	150	0,95
216 – 227	735	200	200	1,07
268 – 280	880	250	250	1,21

Strap with saddle seal

No. 3113



When ordering, please state DN, pipe Ø and pipe type

Haku pipe saddle

For PE pipes | Ø 40 – 315



Design features

- For **PE pipes** according to EN 1555-2 and DIN 8074
- The HAKU sealing system is the optimal sealing solution for borings on plastic pipes
- The HAKU seal is in full contact with the entire diameter of the PE pipe and is glued onto the saddle for ease of assembly
- Several concentric seals with increasing diameter surround the outlet, relieving pressure exerted upon the drill hole and protects it from deformation
- The protective layer on PE pipes should be removed prior to mounting the saddle

Material | technical features

- 1, 2 **Saddle body** made of ductile iron, epoxy powder coated
- 3 **Seals** made of elastomer
- 4 **Bolts** (Molybdenum-coated) and **washers** made of stainless steel
- 5 **Corrosion protection ring** made of elastomer

No. 5255



Order no.	Pipe Ø	MOP (PN)	Internal thread outlet ISO 228		
			1"	1¼"	2"
5255	63	5			
	90				
	110				
	160				
	200				
	280				

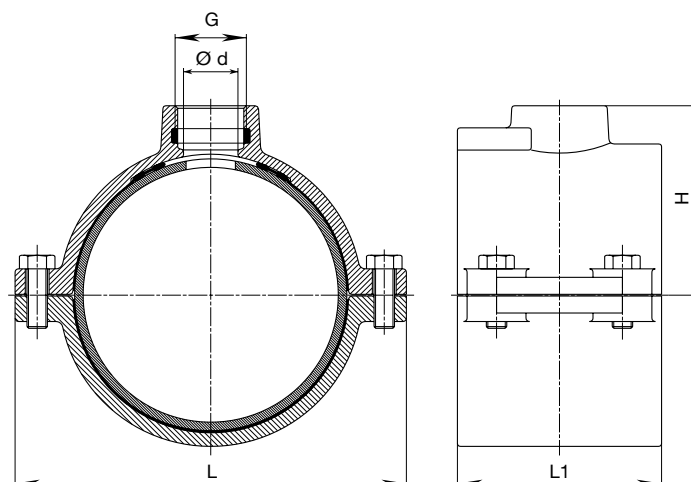
Pipe Ø	G ISO 228	Ød	H	L	L 1	Weight
63	1"	27	57	124	100	1,80
	2"	40+	68			2,10
90	2"	50	80	150	110	2,70
	1"	27	81			3,60
110	1¼"	33	85	170	120	3,60
	2"	50	90			3,60
125	2"	50	98	192	120	4,10
160	1"	27	106			5,90
	2"	50	116	230	120	6,20
200	1"	27	132			8,10
	2"	50	137	282	120	8,10
225	2"	50	150	310	120	9,60
280	2"	51	178	377	180	14,20

+ Drilling max. 35

Tightening torquesly

HAKU shut-off saddle assembly

Pipe Ø	Bolt dimensions	Tightening torque	
		Nm min.	Nm max.
63 – 110	M 10	50	60
125 – 160	M 12	60	70
200 – 225	M 14	70	80
280	M 16	80	90



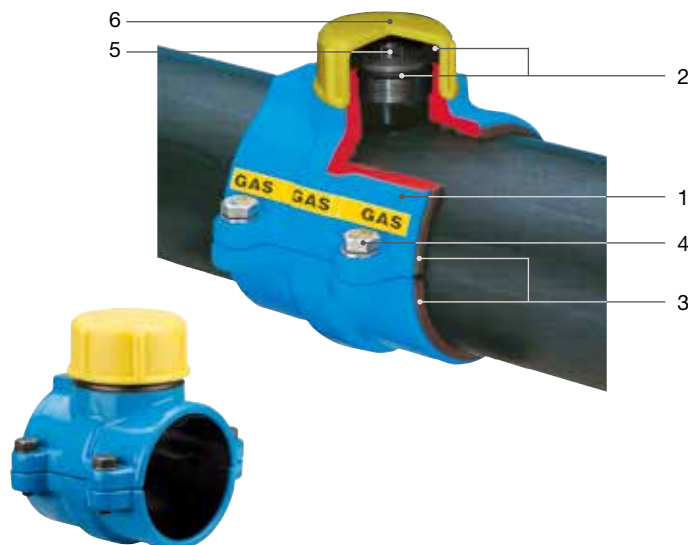
Haku pipe saddle

For bag positioning devices | Ø 90 – 280

Design features

- For **PE pipes** according to EN 1555-2 and DIN 8074
- The HAKU sealing system is the optimal sealing solution for borings on plastic pipes
- The HAKU seal is in full contact with the entire diameter of the PE pipe and is glued onto the saddle for ease of assembly
- Several concentric seals with increasing diameter surround the outlet, relieving pressure exerted upon the drill hole and protects it from deformation
- With cylindrical internal thread and external thread for bag positioning device – with stopper and cap

No. 5265



Material | technical features

- Saddle body** made of ductile iron, epoxy powder coated
- Seals** made of elastomer
- Rubber seals** of elastomer
- Bolts** (Molybdenum-coated) and **washers** made of stainless steel
- Stopper** - mounting square quadratic 22 mm
- Cap** - for covering the external thread

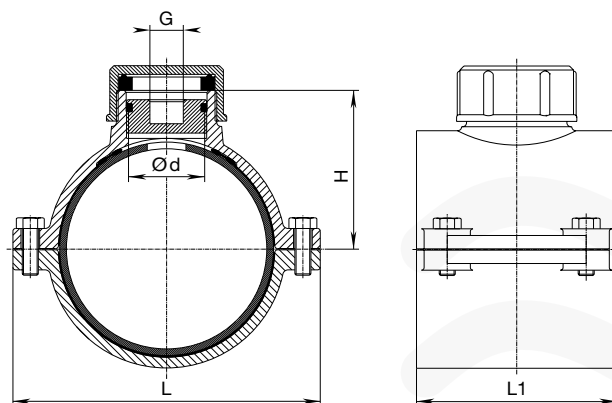
Order no.	Pipe Ø	MOP (PN)	Internal thread outlet ISO 228	External thread
			2"	2½"
5265	90	5		
	110			
	160			
	200			
	225			
	280			

Pipe Ø	Ød	H	L	L 1	Weight
90	57	82	150	110	3,70
110		92	170	120	4,60
160		118	230	120	7,70
200		137	282	120	6,30
225		150	310	120	9,50
280		178	377	180	12,60

Tightening torquesly

HAKU shut-off saddle assembly

Pipe Ø	Bolt dimensions	Tightening torque	
		Nm min.	Nm max.
90 – 110	M 10	50	60
160	M 12	60	70
200 – 225	M 14	70	80
280	M 16	80	90



Notes

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E-Valve

With flange, DN 25 – 40

Design features

- Resilient seated gate valve with smooth and straight-through bore in compliance with EN 13774 (EN 1074-1 and 2)
- A clear structure limited to only a few components
- Sealing system: the large elastomer surface in contact with the valve body ensure a tight valve with no leakage. Body and wedge designed to give minimal friction during opening and closing
- Flange sized and drilled according to EN 1092-2 | PN 10 standard
- One extension spindle for several dimensions
- **100%** suitable for underground installation

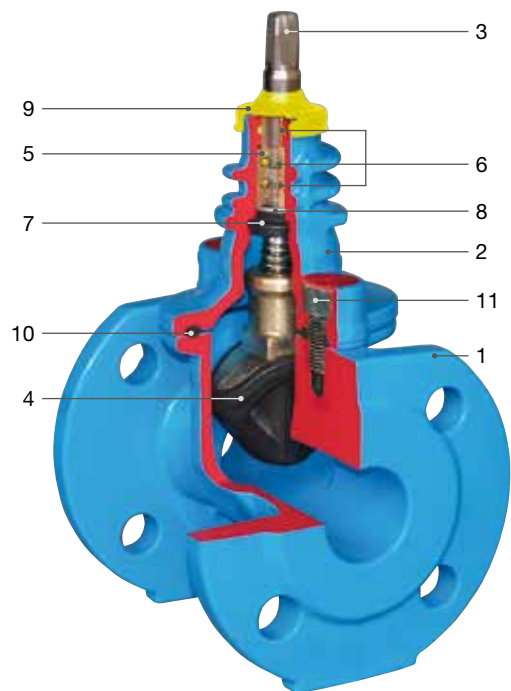
Standard version: without handwheel and extension spindle

Temperature range: operation: -10 °C to 50 °C
storage: -25 °C to 70 °C

Material | technical features

- 1,2 **Body** (1) and **Bonnet** (2) made of ductile iron, inside and outside epoxy powder coated, round thread on head part for a pinless force-fitting connection of the extension spindles
- 3 **Stainless steel spindle** with rolled thread and flat-rolled sealed sliding surface
- 4 **Wedge** made of brass, with vulcanised elastomer
- 5 **Spindle bearing** (O-ring carrier) made of brass
- 6 **O-rings** made of elastomer
- 7 **Back seal** made of elastomer
- 8 **Retaining ring** made of stainless steel
- 9 **Wiper ring** made of elastomer
- 10 **Bonnet gasket** made of elastomer
- 11 **Allen screws** encased into the body with an enclosing gasket and wax, ensuring full corrosion protection

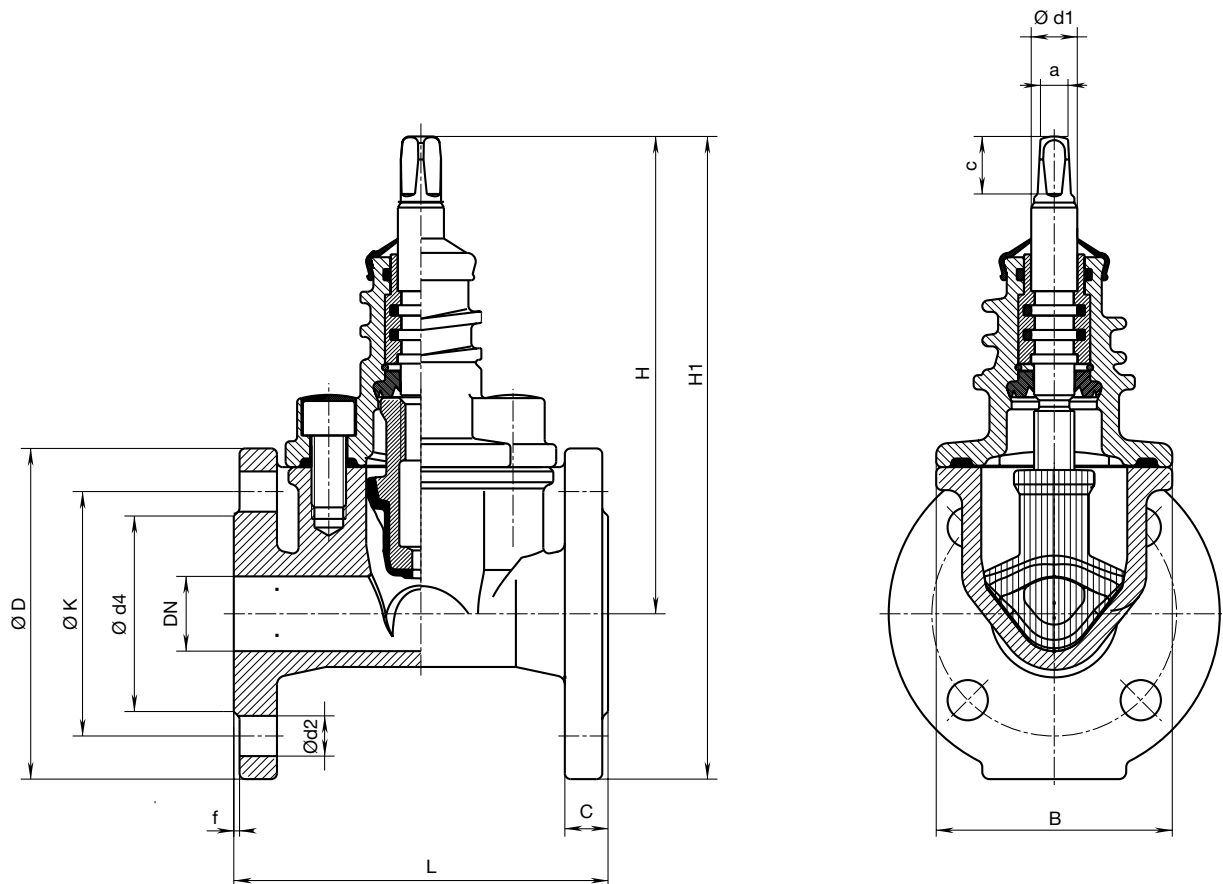
No. 4005



Order no.	Version	MOP (PN)	Dimensions/DN		
			25	32	40
4005	short	5			

Suitable accessories:

Handwheel:		No. 7800
Extension spindles:	rigid	No. 9101
	telescopic	No. 9601
Surface boxes:	rigid	No. 1755
Base plate:		No. 3490, No. 3481



DN	MOP (PN)	Flange					Bolts			Spindle			Valve				Weight
		Ø D	C	Ø K	Ø d4	f	Qty.	Thread	Ø d2	a	c	Ø d1	H	H1	L	B	
25	5	115	16	85	68	2	4	M 12	14	10,3	20	16	164	223	130	80	4,0
32		150	18	100	78	2	4	M 16	19				200	275	140	103	6,6
40		150	18	110	88	2	4	M 16	19				200	275	140	103	6,7



The specified pressure test for gas-valves is certified by an acceptance test certificate to EN 10204 -3.1.

Service valve for PE fusion

Made of ductile iron, DN 25 – 40

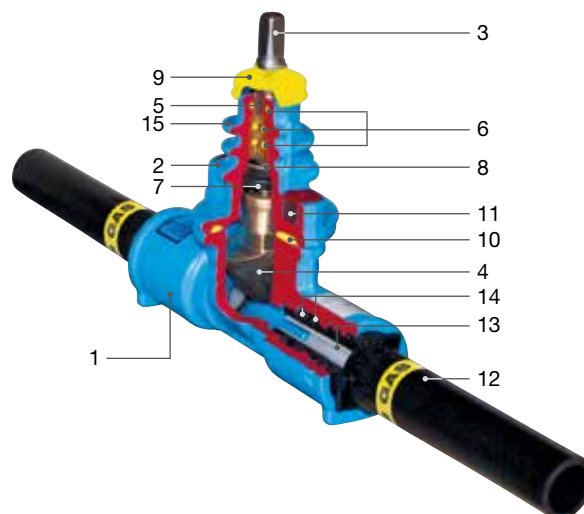
Design features

- Resilient seated gate valve with PE-fusion tails in combination with PE pipes according to EN 1555-2, DIN 8074
- This resilient seated valve has PE-fusion tails screwed into and sealed in the sockets
- The seal of the welding socket is guaranteed by two independent O-ring seals as well as a POM support liner in the welding socket
- The valve can be connected to the PE pipeline by either butt fusion or electrofusion
- One extension spindle for several dimensions
- **100%** suitable for underground installation

Standard version: without handwheel and extension spindle

Temperature range: operation: -10 °C to 50 °C
storage: -25 °C to 70 °C

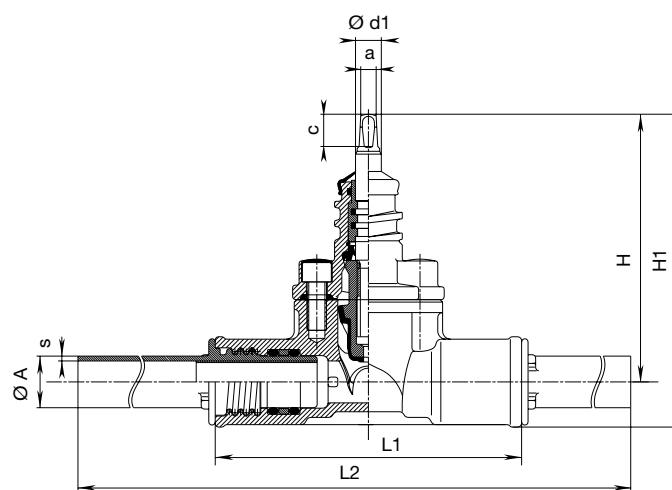
No. 4055



Material | technical features

- 1,2 **Body** (1) and **Bonnet** (2) made of ductile iron, inside and outside epoxy powder coated
- 3 **Stainless steel spindle** with rolled thread and flat-rolled sealed sliding surface
- 4 **Wedge** made of brass, with vulcanised elastomer
- 5 **Spindle bearing** (O-ring carrier) made of brass
- 6 **O-rings** made of elastomer
- 7 **Back seal** made of elastomer
- 8 **Retaining ring** made of stainless steel
- 9 **Wiper ring** made of elastomer
- 10 **Bonnet gasket** made of elastomer
- 11 **Allen screws** encased into the body with an enclosing gasket and wax, ensuring full corrosion protection
- 12 **PE-fusion tails** Standard version PE 100 injection moulded, **Support liner** made of POM for PE tails
- 13 **Support liner** made of POM
- 14 **Double O-ring seal** to the PE-fusion tail
- 15 **Screw fittings** for the extension spindles

Order no.	PE-fusion tail	MOP (PN)	Dimensions / DN		
			1" / d 32	1¼" / d 40	1½" / d 50
4055	PE 100 / SDR 11	10			



Suitable accessories:

Handwheel:		No. 7800
Extension spindles:	rigid	No. 9101
	telescopic	No. 9601
Surface boxes:	rigid	No. 1755
Base plate:	No. 3490, No. 3481	



REG. No. G 1.475 The specified pressure test for gas-valves is certified by an acceptance test certificate to EN 10204 -3.1.

DN	Ø A	Valve with PE-fusion tail					Spindle			Weight
		s	H	H1	L1	L2	a	c	Ø d1	
1"	32	3,0	164	192	196	518			14	3,07
1¼"	40	3,7	199	234	230	556	10,3	20	16	4,54
1½"	50	4,6	199	242	240	576			16	5,52

Service valve for PE fusion

Made of POM, DN 1" – 2"



Design features

- Resilient POM seated gate valve with PE-fusion tails in combination with PE pipes according to EN 1555-2, DIN 8074
- Sealing system: the contact between wedge and body is friction free. Therefore no scuffing or abrasion of the wedge
- Bonnet with body homogeneously connected through rotational welding, max. permissible actuation torque: 70 Nm
- Installation instruction: Tension-free underground installation – observe the installation directives ÖVGW G 52/2 or DVGW G 472
- One extension spindle for several dimensions
- **100%** suitable for underground installation

Standard version: with over-winding security (break-off equipped)
without handwheel and extension spindle

Temperature range: operation: -10 °C to 50 °C
storage: -25 °C to 70 °C

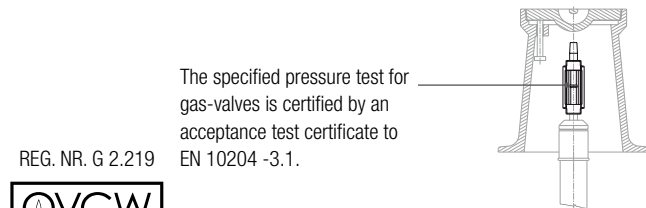
Material | technical features

- 1 **Body** made of POM
- 2 **Stainless steel spindle** with rolled thread and flat-rolled sealed sliding surface
- 3 **Wedge** made of brass, with vulcanised elastomer
- 4 **Multiple O-ring spindle seal**
- 5 **PE-fusion tails** Standard version PE 100 injection moulded, **Support liner** made of POM for PE tails
- 6 **Double O-ring seal** to the PE-fusion tail
- 7 **Screw fittings** for the extension spindles
- 8 **Spindle bearing**
- 9 **Spindle bundle** made of brass
- 10 **Back seal** made of elastomer

Suitable accessories:

Handwheel:		No. 7800
Extension spindles:	rigid	No. 9101
	telescopic	No. 9601
Surface boxes:	rigid	No. 1755
Base plate:		No. 3490, No. 3481

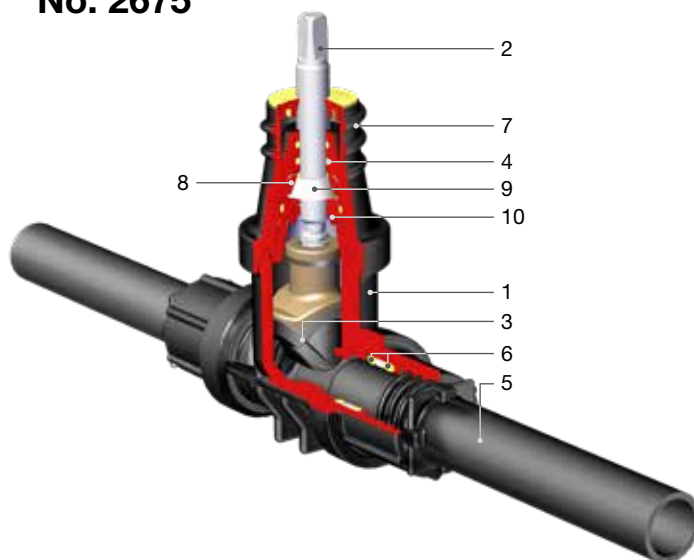
Over-winding security for extension spindles (break-off equipped) Order no. 7839 (included in standard Service Valve version)



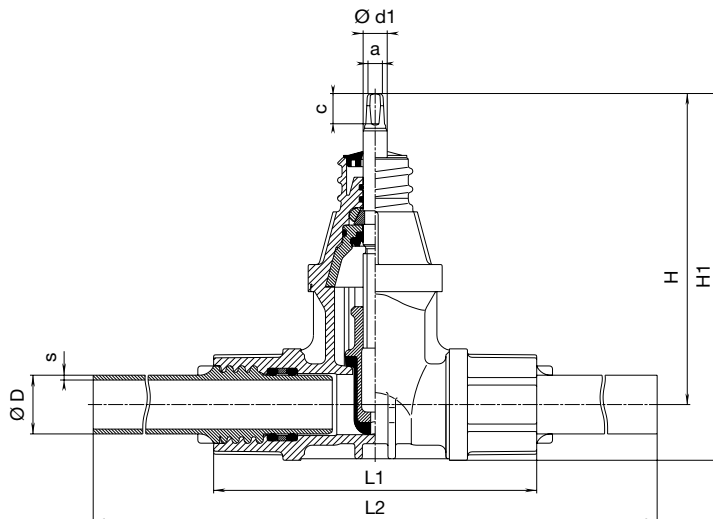
The specified pressure test for gas-valves is certified by an acceptance test certificate to EN 10204 -3.1.



No. 2675



Order no.	PE-fusion tail	MOP (PN)	Dimensions / DN		
			1" / d 32	1½" / d 50	2" / d 63
2675	PE 100 / SDR 11	10			



DN	Ø D	Valve with PE-fusion tail					Spindle			Weight
		s	H	H1	L1	L2	a	c	Ø d1	
1"	32	3,0	177	212	180	502			14	1,25
1½"	50	4,6	205	247	251	587	10,3	20	16	2,30
2"	63	5,8	221	271	271	639			16	3,10

Service valve

With ISO-fitting for PE pipe both ends, DN ¾" — 2"

Design features

- Resilient POM seated gate valve with ISO connection at both ends for push in connection with PE pipes according to EN 1555-2, DIN 8074
- Sealing system: the contact between wedge and body is friction free. Therefore no scuffing or abrasion of the wedge
- Bonnet with body homogeneously connected through rotational welding, max. permissible actuation torque: 70 Nm
- Support liners are required
- Installation instruction: Tension-free underground installation – observe the installation directives ÖVGW G 52/2 or DVGW G 472
- One extension spindle for several dimensions
- **100%** suitable for underground installation

Standard version: with over-winding security (break-off equipped) without handwheel and extension spindle

Temperature range: operation: -10 °C to 50 °C
storage: -25 °C to 70 °C

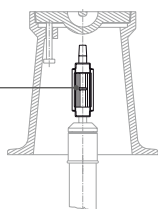
Material | technical features

- Body and grip ring** made of POM
- Stainless steel spindle** with rolled thread and flat-rolled sealed sliding surface
- Wedge** made of brass, with vulcanised elastomer
- Multiple O-ring spindle seal**
- O-rings** made of elastomer
- Dust cap** made of elastomer
- Threaded connection** for extension spindles
- Spindle bearing**
- Spindle bundle** made of brass
- Back seal** made of elastomer

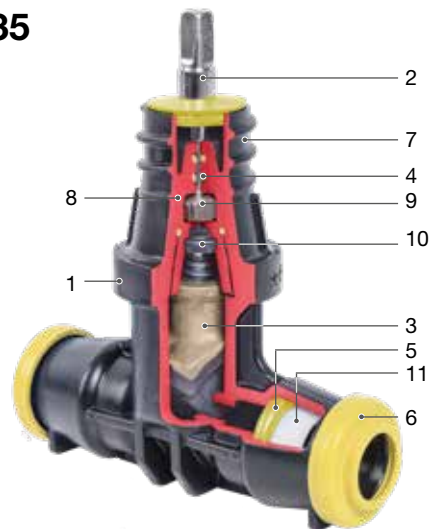
Suitable accessories:

Handwheel: No. 7800
Extension spindles: rigid No. 9101
telescopic No. 9601
Surface boxes: rigid No. 1755
Base plate: No. 3490, No. 3481

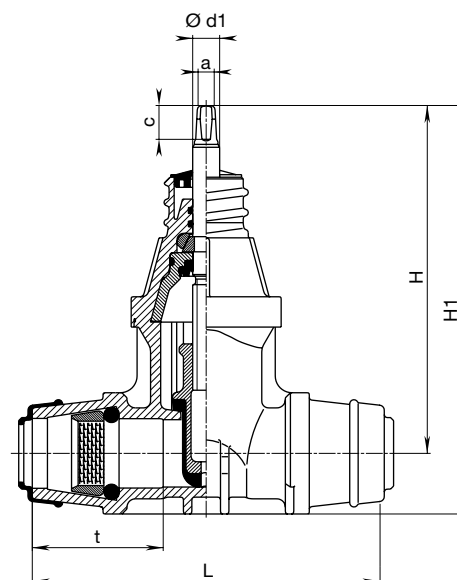
Over-winding security for extension spindles (break-off equipped) Order no. 7839 (included in standard Service Valve version)



No. 2635



Order no.	Version	MOP (PN)	Dimensions/DN			
			1"	1¼"	1½"	2"
2635	made of POM, with ISO-fitting for PE pipe both ends	4				



DN	Ø pipe ext.	Valve				Spindle			Weight
		t	L	H	H1	a	c	Ø d1	
¾"	25	52	152	177	205				0,85
1"	32	63	174	177	205				0,95
1¼"	40	78	208	205	241	10,3	20	16	1,50
1½"	50	92	246	205	247				1,65
2"	63	100	261	221	271				2,10

Notes

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

ISO-pipe-fitting

Fittings for PE pipes, DN 1/2" – 2"

Design features

- For PE pipes according to EN 1555-2 (DIN 8074 / 8075)
- The Hawle ISO pipe fitting is the ideal push connection for polyethylene pipes that has been tried and tested for decades.
- The function of the ISO pipe fitting is clear and simple: the O-ring made of highly elastic elastomer seals even when depressurized due to its pretension on the pipe.
- As the water pressure and pipe tension increase, the sealing and grip rings are compressed further into the conical chamber, thus increasing the sealing and gripping effect.
- The gripping and sealing functions only act on the outer diameter of the pipe.
- The joint is flexible and the fitting can be turned on the pipe without affecting the grip or seal. The installation of the fitting is quick and simple.
- The POM fitting in the new copolymer version is UV-stabilized and offers excellent long-term stability.
- The colored dust caps of the POM fitting indicate the different leading medium (gas, water) and offer protection against contamination.
- In POM fittings all internal threads are reinforced with a stainless steel ring.
- **Always** use support liner for PE pipes!
- Do not use the fitting again after dismantling!

Temperature range: operation: -10 °C to 50 °C
storage: -25 °C to 70 °C

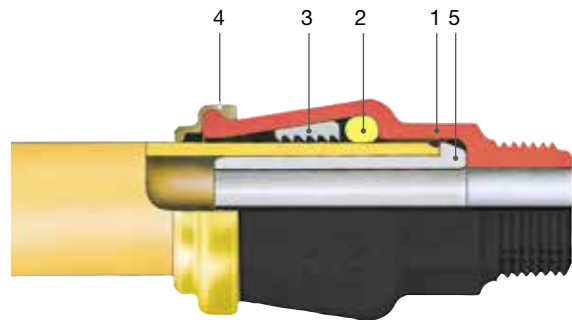
Material | technical features

- 1 **Body** made of POM
- 2 **O-ring gasket** made of elastomer
- 3 **Clamp ring** made of POM
- 4 **Protective cap** made of elastomer
- 5 **Support liner** made of POM

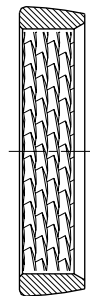
Suitable accessories:

Extractors: No. 6010
Support liner: No. 6031

Made of POM



Grip ring Interlocking teeth, made of POM



Instruction

ISO pipe fitting instruction for assembly and dismantling

Assembly - for gas always use **new fittings**

1

The sealing surface of the pipe must be smooth, clean and scratch-free!

2

Pipe cutter No. 6050

3

Always use support liner No. 6031

4

5

6

NO OIL !

Moisten with water or lubricants (see page 37)

7

8

9

10 Pressure test on installed line and exposed, unfilled connections

Dismantling

1

Extractors No. 6010

2

Pull out the pipe with a slight turn

3

Disassembled fittings should be recycled!

Max. torque for tightening the threads (observe pipe fitter rules acc. to national standards):

1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
20 Nm	25 Nm	40 Nm	42 Nm	42 Nm	45 Nm

ISO-pipe-fitting

Fittings for PE pipes, DN 1/2" – 2"

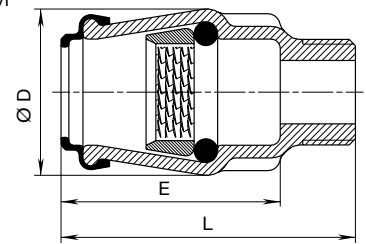
Design feature

- With external thread according to EN 10226-1
- For PE pipes according to EN 1555-2 (DIN 8074/8075)

Order no.	Ø Pipe	Thread	MOP (PN)	L	E	ØD	Weight
6125	25	3/4"	4	82	58	43	0,06
	32	1"		95	70	53	0,10
	40	1 1/4"		110	82	72	0,24
	50	1 1/2"		126	99	83	0,27
	63	2"		144	110	99	0,44

External thread

No. 6125 Made of POM



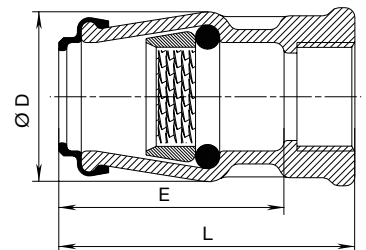
Design feature

- With internal thread according to ISO 228
- For PE pipes according to EN 1555-2 (DIN 8074/8075)

Order no.	Ø Pipe	Thread	MOP (PN)	L	E	ØD	Weight
6225	25	3/4"	4	76	58	44	0,08
	32	1"		91	70	53	0,12
	40	1 1/4"		109	82	72	0,23
	50	1 1/2"		127	99	83	0,34
	63	2"		135	108	103	0,47

Internal thread

No. 6225 Made of POM



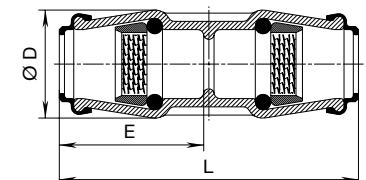
Design feature

- For PE pipes according to EN 1555-2 (DIN 8074/8075)

Order no.	Ø Pipe	MOP (PN)	L	E	ØD	Weight
6325	25	4	121	58	43	0,10
	32		145	70	53	0,15
	40		164	82	72	0,35
	50		200	99	83	0,57
	63		224	110	99	0,71

Connector

No. 6325 Made of POM



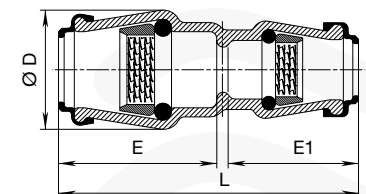
Design feature

- For PE pipes according to EN 1555-2 (DIN 8074/8075)

Order no.	Ø Pipe 1	Ø Pipe 2	MOP (PN)	L	E	E1	ØD	Weight
6335	32	25	4	134	70	58	53	0,13
	40	32		156	82	70	72	0,25
	50	32		172	99	70	83	0,32
	50	40		182	99	84	83	0,42
	63	40		204	110	84	99	0,53
	63	50		213	110	99	99	0,60

Connector reduced

No. 6335 Made of POM



ISO-pipe-fitting

Fittings for PE pipes, DN 1/2" – 2"

Design feature

- For PE pipes according to EN 1555-2 (DIN 8074/8075)

Order no.	Ø Pipe	MOP (PN)	L	E	Ø D	Weight
6425	25	4	73	58	43	0,10
	32		87	70	53	0,18
	40		104	82	72	0,37
	50		125	99	83	0,52
	63		144	110	99	0,80

Order no.	Ø Pipe 1	Ø Pipe 2	MOP (PN)	L	E	E1	Ø D	Weight
6491	40	32	4	102/87	84	70	72	0,27

Design feature

- With internal thread according to ISO 228
- For PE pipes according to EN 1555-2 (DIN 8074/8075)

Order no.	Ø Pipe	Thread	MOP (PN)	L	E	Ø D	Weight
6435	32	1"	4	87	70	53	0,14
	40	1 1/4"		103	82	72	0,28
	50	1 1/2"		137	99	83	0,42

Design feature

- With internal thread according to ISO 228
- For PE pipes according to EN 1555-2 (DIN 8074/8075)

Order no.	Ø Pipe	Thread	MOP (PN)	L	E	Weight
6525	32	1"	4	163	70	0,24
	40	1 1/4"		193	82	0,43
	63	2"		267	110	0,90

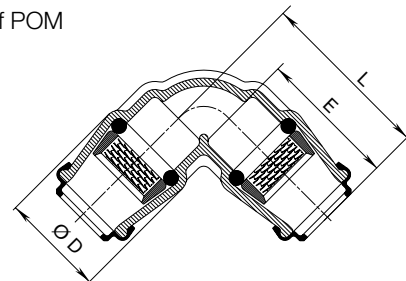
Order No.	Ø Pipe	MOP (PN)	L	E	Ø D	Weight
6223	32	16	75,0	70,0	53	0,09
	50		107	101	83	0,28
	63		117	111	99	0,40

Elbow 90°

No. 6425 Made of POM

Elbow 90° reduced

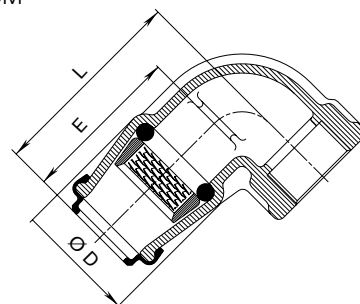
No. 6491 Made of POM



Elbow 90°

With internal thread

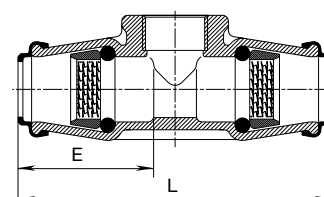
No. 6435 Made of POM



T-piece

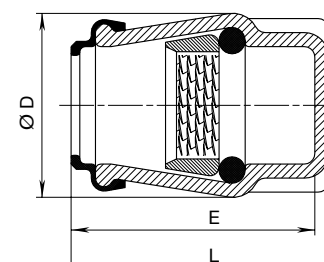
with threaded outlet

No. 6525 Made of POM



End stop

No. 6226 Made of POM



Extension spindle

Rigid or telescopic

Design features

- One extension spindle for several dimensions
- Protective cover with integrated locking mechanism
- No additional fixing (bolt/pin) necessary
- DN 50 to 200

Order no.	Version	Pipe cover (RD)	Dimensions/DN		
			50/65/80/100	125/150	200
9000E2/E3	rigid	1,00 m			
		1,25 m			
		1,50 m			
		2,00 m			
		2,50 m			
9500E2/E3	telescopic	1,30 - 1,80 m			
		1,35 - 1,80 m			
		2,50 - 3,50 m			

Suitable accessories

- **Extender for rigid spindle**
Order no. 7830 price for first meter
Order no. 7831 price for each additional half meter
- Please specify dimensions and length when ordering

For E3 Valve DN 50 — 200

No. 9000E2/E3

Rigid

No. 9500E2/E3

Telescopic



Design features

- Attachment of the extension spindle to the valve spindle takes place with a stainless steel splint
- DN 250 to 400

Order no.	Version	Pipe cover (RD)	Dimensions/DN		
			250	300	400
9000E2/E3	rigid	1,00 m			
		1,25 m			
		1,50 m			
		2,00 m			
		2,50 m			
9500E2/E3	telescopic	1,40 — 1,80 m			
		1,50 — 1,80 m			
		2,00 — 2,50 m			
		2,50 — 3,50 m			

* Body DN 400, with flange connection DN 450 or 500

For E3 Valve DN 250 — 400

No. 9000E2/E3

Rigid

No. 9500E2/E3

Telescopic



Extension spindle

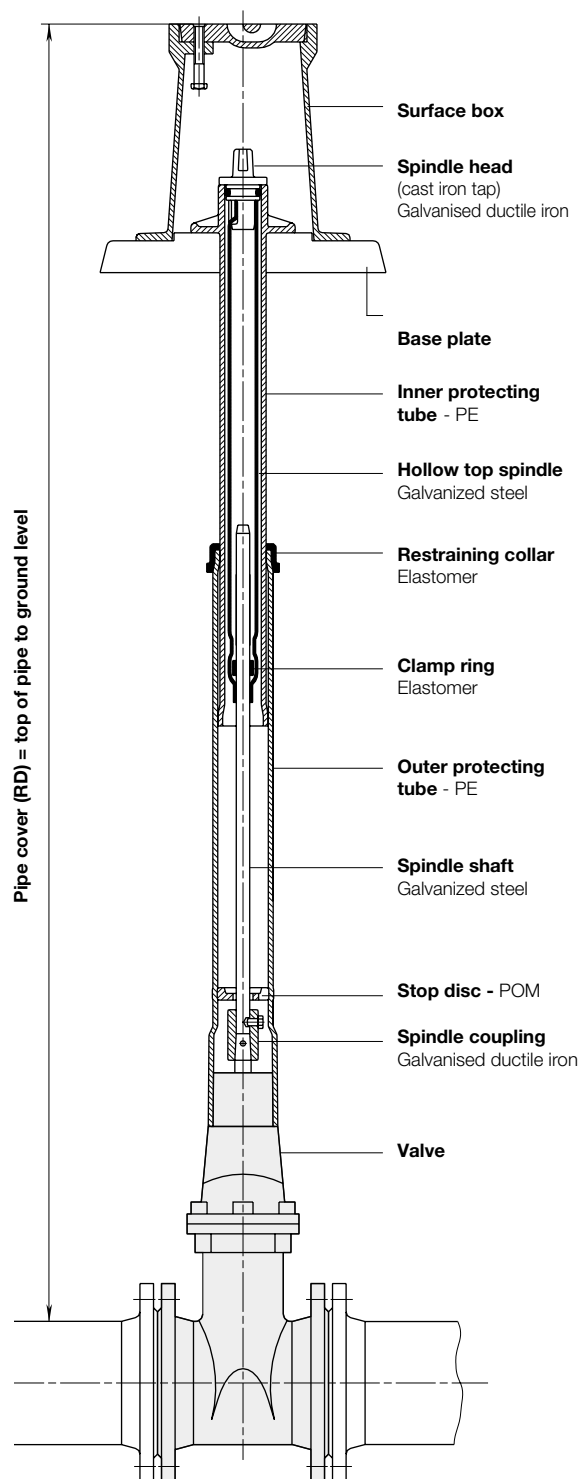
Rigid or telescopic

No. 9000E2/E3 / 9500E2/E3

All extension spindles (rigid or telescopic) of all types and dimensions are protected against dirt and surface water.

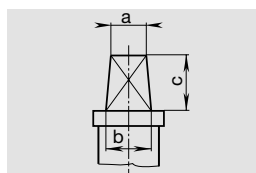
The telescopic extension spindle can be progressively adjusted to ground level. This is done by pushing or pulling the tube and the spindle shaft.

The telescopic effect protects the pipe and fitting from surface impact.



III. 9500E2/E3 DN 250 — 400

Spindle head | square



for service valves

a 13 mm

b 15 mm

c 24 mm

for gate valves

a 27 mm

b 32 mm

c 48 mm

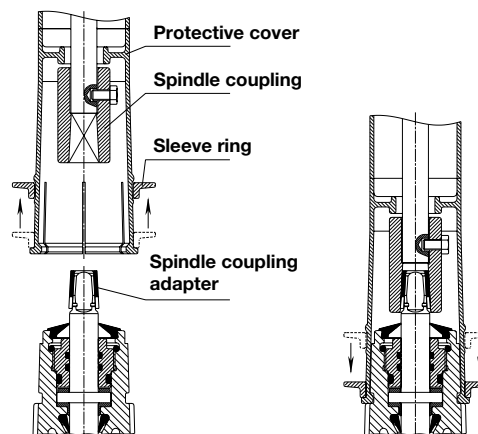
9000E2/E3	Weights extension spindles, rigid – DN						
Pipe cover (RD)	50/65/80/100	125/150	200	250	300	350	400
1,00 m	3,50	2,80	2,70	3,10	3,00		
1,25 m	4,50	3,70	3,50	4,70	4,30	4,20	3,55
1,50 m	5,50	4,80	4,50	6,00	5,80	5,40	5,00
2,00 m	7,45	6,60	6,50	9,00	8,70	8,45	7,80
2,50 m	9,40	8,60	8,50	12,20	12,00		9,67

9500E2/E3	Weights extension spindles, telescopic – DN						
Pipe cover (RD)	50/65/80/100	125/150	200	250	300	350	400
1,30 – 1,80 m	6,60	6,25					
1,35 – 1,80 m			6,10				
1,40 – 1,80 m				7,30			
1,50 – 1,80 m					6,90	6,70	6,30
2,00 – 2,50 m				11,00	10,50	10,20	9,70
2,50 – 3,50 m	12,80	12,00	11,90	15,30	14,90	14,50	14,20

* Body DN 400, with flange connection DN 450 or 500

Assembly instructions

Fig.: Assembly E2/E3 extension spindle DN 50 — 200



Extension spindle

Rigid or telescopic

Design features

- One extension spindle for several dimensions
- Threaded connection for attachment to the service valve
- No additional fixing (bolt/pin) necessary

Order no.	Version	Pipe cover (RD)	¾" - 2"
9101	rigid	0,75 m	
		1,00 m	
		1,25 m	
		1,50 m	
		2,00 m	
		2,50 m	
9601	telescopic	0,60 - 0,80 m	
		0,80 - 1,20 m	
		1,00 - 1,60 m	
		1,30 - 1,80 m	
		1,80 - 2,50 m	
		2,50 - 3,50 m	

Suitable accessories

- **Extender for rigid spindle**
Order no. 7830 price for first meter
Order no. 7831 price for each additional half meter
- Please specify dimensions and length when ordering

Overwind protection for extension spindles

Intentional break system (break-off equipped)

Order no. 7839 (included in standard Service Valve version)

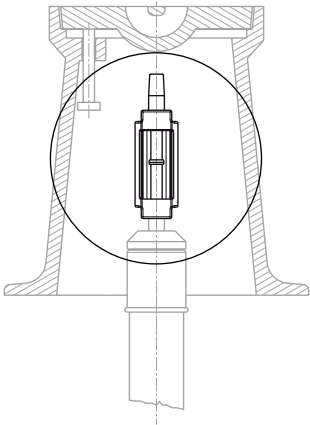
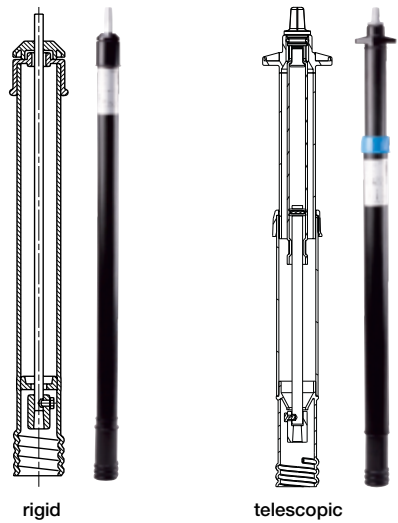
Extension spindle for service valves with threaded connection for spindle DN ¾" - 2"

No. 9101

Rigid

No. 9601

Telescopic



Support liner

For PE pipes



Design feature

- Specified for PE pipeline connections with ISO pipe fitting and house connection valve No. 2635

Class SDR 11 (PE 100 | PN 4)

Pipe out. Ø	Ø D	Ø C	Ø 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

Design features

- Non-decaying locating and warning tape with the message „BEWARE GAS PIPE“
- without metal insert

Roller to 250 meters

Design features

- For an easy installation
- Made of pure silicon (with a special solvent)
- Content: 400 ml
- Attention:** observe the safety-instruction label on the can

Design features

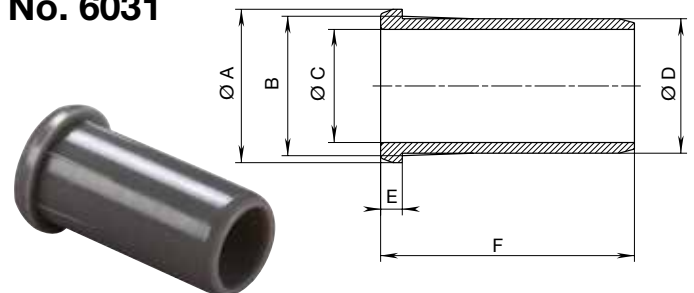
For surface boxes according to:

- DIN 4056 (gate valves)

Safe fixture of Hawle telescopic extension spindles for gate valves

Support liners made of POM for PE pipes

No. 6031



Warning tape

No. 0840



Mounting spray

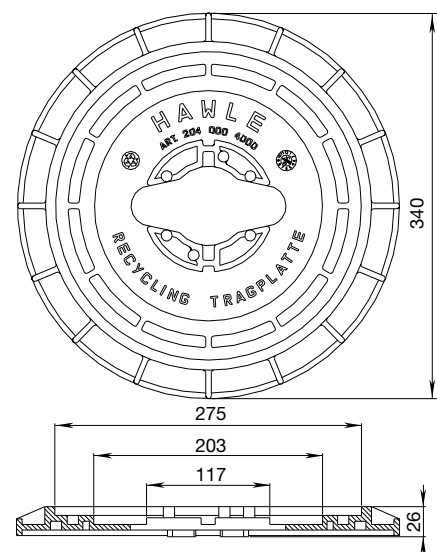
For PE and PVC pipes

No. 3443



Universal base plate

No. 3481



Accessories

Design features

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

Order no.	For surface box	Weight	
3490	No. 1755	1,70	

Design features

- For valve DN 20 — 400
- Surface box made of bitumen coated cast grey iron
- Square cover labelled “GAS”
- Withstands traffic according to DIN 3580

Material | technical features

- **Bolts** and **bridge** made of stainless steel

Order no.	Version	Weight	
1755	rigid	16,0	

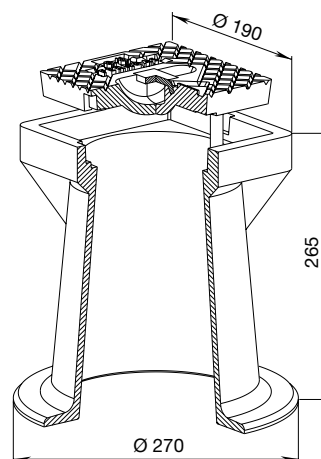
Base plate

No. 3490



Surface box

No. 1755



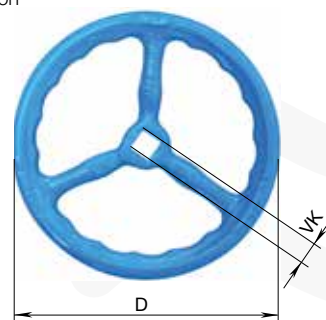
Order no.	DN	D	VK slider spindle	Weight	
7800	¾" - 2"	140	10,3	0,60	
	50	160	14,8	0,69	
	65-80	190	17,3	0,95	
	100	240	19,3	1,50	
	125 - 150	320	19,3	2,30	
	200	360	24,3	2,80	
	250 - 350*	486	27,3	4,80	
	400-500**	600	32,3	21,00	

Handwheel

No. 7800

- **For service valves, gate valves and combi valves**
Made of ductile iron, epoxy powder coated

- * DN 250 — 350 made of steel, epoxy powder coated
handwheel made of steel 2" up to DN 200 on request!
- ** DN 400 made of grey ductile iron



Design features

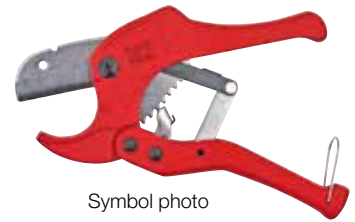
- Cut pipes square and straight
- The lever design minimises the force required

Order no.		For ØPipe	Weight	
6050	Type I:	up to 1¼" or Ø 40	0,30	
	Type II:	up to 2" or Ø 63	1,10	

Pipe cutter

Cuts PE- and PVC pipes

No. 6050



Design features

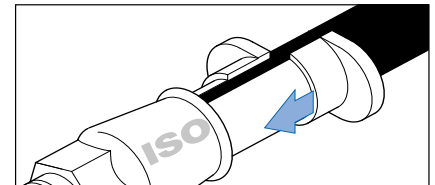
- First ensure that the grip ring is not under tension. When pushed in, the extractors separate the grip ring from the pipe, which can then be pulled out
- **Application:** for all Hawle products with ISO push-fit fittings

Order no.	Ø Pipe	DN	Qty. Extractors	Weight	
6010	20	½"	2	0,04	
	25	¾"	2	0,07	
	32	1"	2	0,09	
	40	1¼"	2	0,14	
	50	1½"	2	0,19	
	63	2"	2	0,36	

Extractors

For dismantling ISO push-fit fittings

No. 6010



Design features

- For shut-off saddles and shut-off adapters
- For under pressure drilling

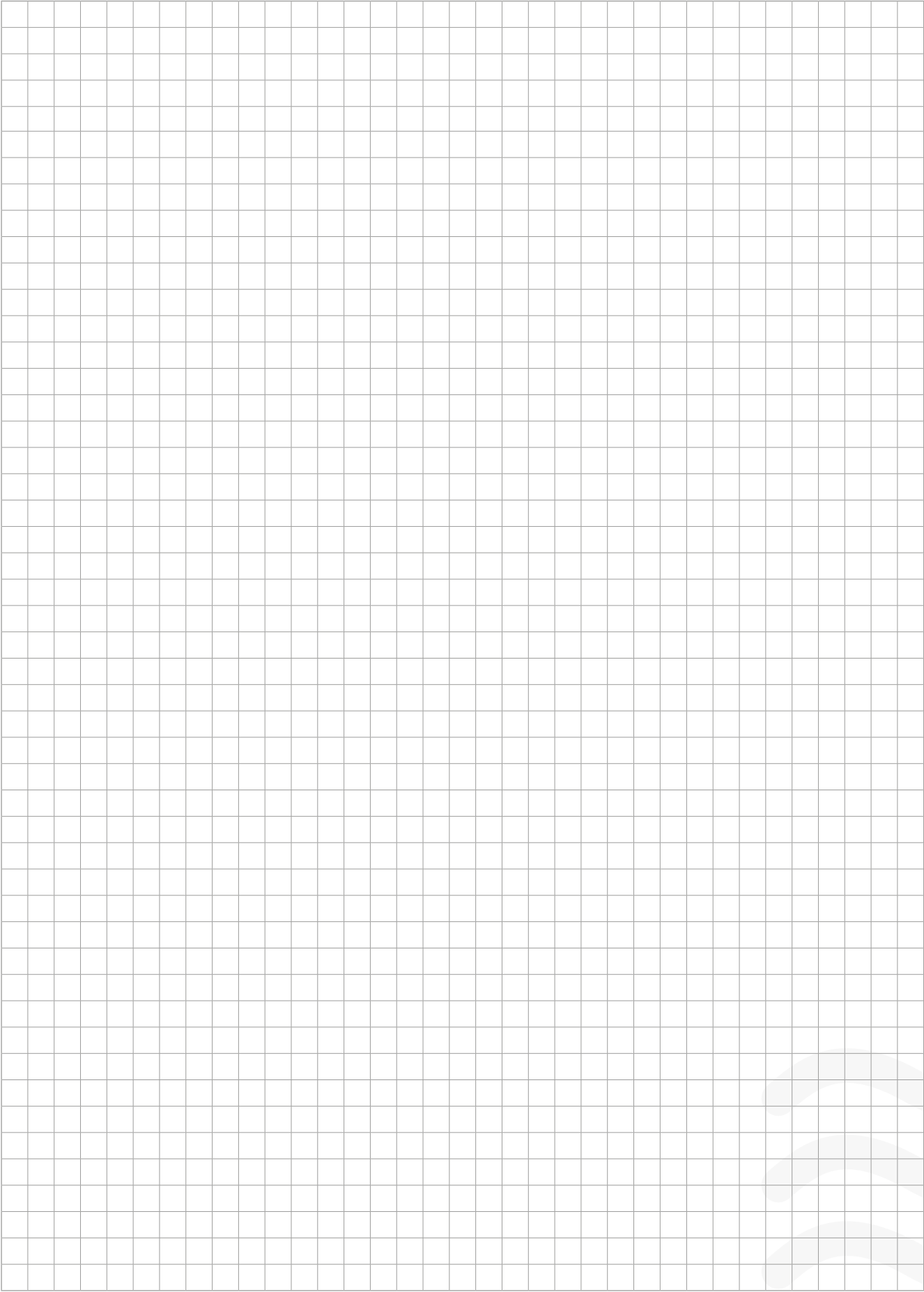
Order no.		Size	Weight	
8401	Model I:	For saddle 1" - 1¼"	0,41	
	Model II:	For saddle 1½" - 2"	0,43	

Saddle blade

No. 8401



Notes



Notes

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

Conditions of Sale 2019

Last updated January 2019 / valid as of 01.01.2019

1 General

1.1 All offers, sales transactions, deliveries and other services provided by E. Hawle Armaturenwerke GmbH (henceforth referred to as „Hawle“) to our customers as of 01.01.2019 are subject exclusively to the following Conditions of Sale.

1.2 Hawle shall not recognise any conflicting or deviating terms and conditions of the customer unless Hawle has expressly agreed to their validity in writing.

1.3 Supplements and amendments to these Conditions of Sale as well as ancillary agreements must be made in writing in order to be effective. This also applies to the waiver of the written form requirement.

1.4 In the event that individual provisions of these Conditions of Sale are or become invalid, the remaining provisions shall remain effective. Ineffective provisions shall automatically be replaced by legally effective provisions which come as close as possible to the economic intent of the contracting parties.

1.5 It is the responsibility of the customer to assess the technical and legal suitability of the goods offered by Hawle for the use intended by the customer or his buyers. The customer is also required to observe export and import restrictions.

1.6 Any administrative authorisations required for the import of goods into their country of destination or for the use intended by the customer or his buyers must be obtained by the customer in good time. In the event that such authorisations are not obtained in good time, delivery dates and periods shall be extended accordingly.

1.7 Hawle reserves the property rights and copyrights to the product catalogue sheets, drawings, product photos, cost estimates and other documents prepared by Hawle. These documents may not be disclosed to third parties without the prior permission of Hawle.

2 Conclusion of contract

2.1 All offers and price lists issued by Hawle are subject to change and non-binding, unless expressly agreed otherwise, and only become binding once Hawle has confirmed the order in writing or performed an action set by Hawle in fulfilment of the contract (e.g. delivery/shipment of the goods).

2.2 Following the confirmation of the order or the performance of an action in fulfilment of the contract by Hawle, the customer may withdraw from the contract only with the prior written consent of Hawle. Unilateral withdrawal from the contract on the part of the customer is not permitted.

3 Prices and terms of payment

3.1 All documents pertaining to an offer such as drawings, illustrations and weight specifications shall only be regarded as approximate unless they are expressly designated as being binding. This reservation applies in particular to obvious errors, typographical errors, printing errors and miscalculations.

3.2 Unless otherwise agreed, the prices quoted by Hawle are in EURO Ex Works Frankenmarkt (EXW, Incoterms 2010), excluding in particular packaging, transport costs, transport insurance, sales tax and export and import duties. Packaging, loading, transport costs and transport insurance as well as potential taxes and duties shall be invoiced separately by Hawle.

3.3 Any changes in wage costs due to collective or statutory regulations or internal agreements as well as changes in other costs relevant to the calculation of costs necessary for the provision of the service, such as the costs incurred for materials, energy, transport, third-party work, financing, etc., shall entitle Hawle to increase the prices accordingly. For this reason, the customer shall have neither the right to withdraw from the contract nor the right to assert that the basis of the transaction has ceased to exist. Orders confirmed by Hawle are exempt from potential price changes.

3.4 Unless otherwise agreed, net payment must be made by the customer within 30 days from the date of invoice. Payments will be offset against the oldest claim due in each respective case.

3.5 The possibility of offsetting payments against claims made by Hawle is excluded.

3.6 In the event that the customer defaults on payment, Hawle shall be released from all further service and delivery obligations and be entitled to withhold any outstanding deliveries or services or to demand advance payments or guarantees.

3.7 In the event that, upon conclusion of the contract, a significant deterioration in the financial circumstances of the customer occurs, or if circumstances become known which from Hawle's point of view are likely to reduce the creditworthiness of the customer, Hawle shall have the right to change due dates for outstanding claims, withhold deliveries to the customer and adjust conditions for future legal transactions with immediate effect.

4 Delivery

4.1 Orders confirmed by Hawle shall be fulfilled by Hawle as swiftly and diligently as possible. The delivery dates and periods announced by Hawle are merely intended to serve as a guideline and are always non-binding unless the stated delivery dates and periods have been expressly designated as binding by Hawle.

4.2 In the event of force majeure or any unforeseeable obstacle for which Hawle is not responsible, delivery dates and deadlines shall be reasonably extended by the duration of the impediment. This shall also apply if Hawle's sub-suppliers encounter such impediments. These include, in particular, official measures, strikes and lock-outs, natural disasters, market-related problems with material procurement as well as import and export restrictions.

4.3 Hawle deliveries may always be divided into sub-deliveries. Hawle is at liberty to make partial deliveries or provide partial services and to issue partial invoices to the customer.

4.4 National and international goods traffic is subject to the terms of delivery FCA, 4890 Frankenmarkt, Hawle dispatch warehouse (Incoterms 2010), unless another delivery clause has been explicitly agreed.

4.5 In the case of a sales shipment, the transfer of risk takes place once the purchased item has been handed over to the first carrier. Where acceptance of a service is required, Hawle's notification of readiness for acceptance shall be decisive for the transfer of risk.

4.6 The customer is obliged to accept the deliveries and services provided by Hawle as per contract. In the event of default of acceptance or a culpable breach of other obligations to cooperate on the part of the customer, Hawle is entitled to demand compensation from the customer for any damage incurred as a result, including any additional expenses.

Conditions of Sale 2019

Last updated January 2019 / valid as of 01.01.2019



4.7 Hawle is entitled to make changes to the technical design of the goods ordered, provided that these do not result in significant functional changes and the customer does not demonstrate the unreasonable nature of such changes. Unreasonableness is to be ruled out if the change constitutes a technical improvement or is caused by the further development of the state of the art or by legal or official measures.

4.8 In principle, the customer is not entitled to refunds or replacements. Refunds and replacements are only possible in exceptional cases and require the prior written consent of Hawle.

4.9 The goods delivered by Hawle to the customer are intended for use or resale in the customer's country of residence or in the country of the place of delivery.

5 Reservation of title

5.1 All goods delivered by Hawle remain the property of Hawle until payment has been made in full.

5.2 The customer is authorised to resell the goods in the regular course of business, even during the period in which the goods are subject to reservation of title. If, however, the customer is in default of payment to Hawle, Hawle may prohibit the resale of the goods subject to reservation of title.

5.3 The customer herewith cedes to Hawle all purchase price claims, including all ancillary rights, arising from a resale of the goods to his customers. Hawle accepts this assignment. These purchase price claims serve as security for the goods subject to retention of title.

6 Warranty

6.1 The customer must inspect the received goods with respect to quantity and quality immediately upon receipt. Written notices of defects must be submitted by the customer immediately after receipt of the delivery, but at the latest within 10 days from the date of delivery and prior to any handling or processing, otherwise excluding any warranty claims and/or claims for damages and/or avoidance on account of mistake, but do not entitle the customer to retain the invoiced amounts or portions thereof.

6.2 The warranty period for defects which were not detected during the inspection of the shipment is six months from the date of delivery and is neither extended nor interrupted by attempts at improvement; it also applies to partial deliveries. Notification of any such defects must be given in writing within 10 days from the date the defect was discovered, otherwise excluding warranty claims and/or claims for damages and/or avoidance on account of mistake, but do not entitle the customer to retain the invoiced amounts or portions thereof.

6.3 It has been agreed between Hawle and the customer that a hydrostatic pressure test in accordance with EN 805 is to be performed after laying a pipeline but prior to the main backfilling of the pipe trench or further constructional measures in shafts, plants or buildings which restrict accessibility to the valves and pipe fittings. If such a test is not performed, the customer or his customers shall be charged with contributory negligence of at least 50% in the event of damage. The customer agrees to inform his customers accordingly and to pass on this obligation to perform the described hydrostatic pressure test to his customers.

6.4 Possible warranty obligations generally cover the defective goods, but not the expenses otherwise associated with correcting the defect such as excavation costs, working hours and travel expenses.

6.5 The customer always bears the burden of proving that the delivered goods were defective at the time of delivery.

6.6 The place of performance for warranty obligations is always the place of delivery agreed for the original delivery.

6.7 Hawle shall be free to decide whether to fulfil possible warranty claims by means of replacements, improvement measures, price reductions or conversions.

7 Damages and liability

7.1 Any consulting provided by Hawle, whether verbal or in writing, is non-binding and does not release the customer from his obligation to examine the goods with respect to their suitability and the intended purpose. This applies above all, but not exclusively, to the suitability of the goods for the use intended by the customer or his customers, in particular to their suitability for the substances (gases and/or liquids) to be conveyed.

7.2 Hawle shall be liable for damages caused to the customer in the course of processing the business transaction in an amount not exceeding the value of the order placed with Hawle, and only in the event of gross negligence on the part of Hawle or gross negligence on the part of the executors working for Hawle, with the exception of personal injuries in which case Hawle shall be liable even in the event of minor negligence. The burden of proving gross negligence always lies with the injured party.

7.3 IN NO EVENT SHALL Hawle BE HELD LIABLE, WHETHER IN TORT OR CONTRACT, FOR INDIRECT DAMAGES, CONSEQUENTIAL DAMAGES, PURELY PECUNIARY LOSSES, FOREGONE PROFITS OR DAMAGES ARISING FROM DELAYS OR OUT OF THIRD PARTY CLAIMS.

7.4 The time limit for asserting claims for damages is one year from the date on which the customer gains knowledge of, or is subject to, negligent ignorance of the damage and the injuring party.

7.5 In the event that the customer himself is held liable under product liability law, he undertakes to immediately notify Hawle thereof by telephone or in writing and to immediately inform Hawle of the address of the claimant, failing which the customer's right of recourse against Hawle arising from product liability will cease to apply. Negotiations of claims arising from product liability with respect to Hawle products shall be conducted exclusively by Hawle.

8 Place of performance, court of jurisdiction, applicable law

8.1 The place of performance for both delivery and payment is always 4840 Vöcklabruck/Austria, even if a different place of delivery has been agreed individually.

8.2 The exclusive court of jurisdiction for all disputes arising from legal transactions between the customer and Hawle is the competent court in 4840 Vöcklabruck/Austria. Moreover, Hawle is also entitled to sue at the customer's registered office.

8.3 All legal transactions between the customer and Hawle are subject exclusively to Austrian substantive law, excluding international conflict of law rules. The application of the UN Convention on Contracts for the International Sale of Goods (CISG) is explicitly excluded.



E. Hawle Armaturenwerke GmbH

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