



E3 - Gate Valve

Explanations

The scope of medium can be restricted within the product data sheets. In case of any inquiry or order point out the medium of each project. In case of any questions, don't hesitate to contact our application engineers.



potable water products



In general our products are subject to the statutory warranty period of two years from the day of delivery by Hawle. Due to the high quality of Hawle products we are able to offer you an extended warranty period of 5 years for our products. Further information for potable water products: www.hawle.de/en/warranty-extension



further information of „10 years quality warranty“ for potable water products : www.hawle.de/en/10-years-quality-warranty/

Design of the “E3” Gate Valve for Potable Water

In 1957, Hawle invented the resilient-seated gate valve with O-ring sealing of the gate valve spindle, and applied for a patent. Today, this type of gate valve has become the standard in potable water and gas supply.

Numerous design variants were gradually developed on the basis of this patent. Examples of these include exchange gate valves, combi gate valves, gate valves with PE fusion and service valves with push-fit sockets, etc. Hawle gate valves are characterised by their smooth operation, long service life and wide range of variants.

Gate Valves for Potable Water

In the case of Hawle potable water gate valves, shut-off is achieved by means of a resilient- seated wedge made of cast iron (GJS-400) with EDPM vulcanisation. The sealing system is likewise composed of an EPDM rubber gasket.

Design of the “E3” Gate Valve for Potable Water

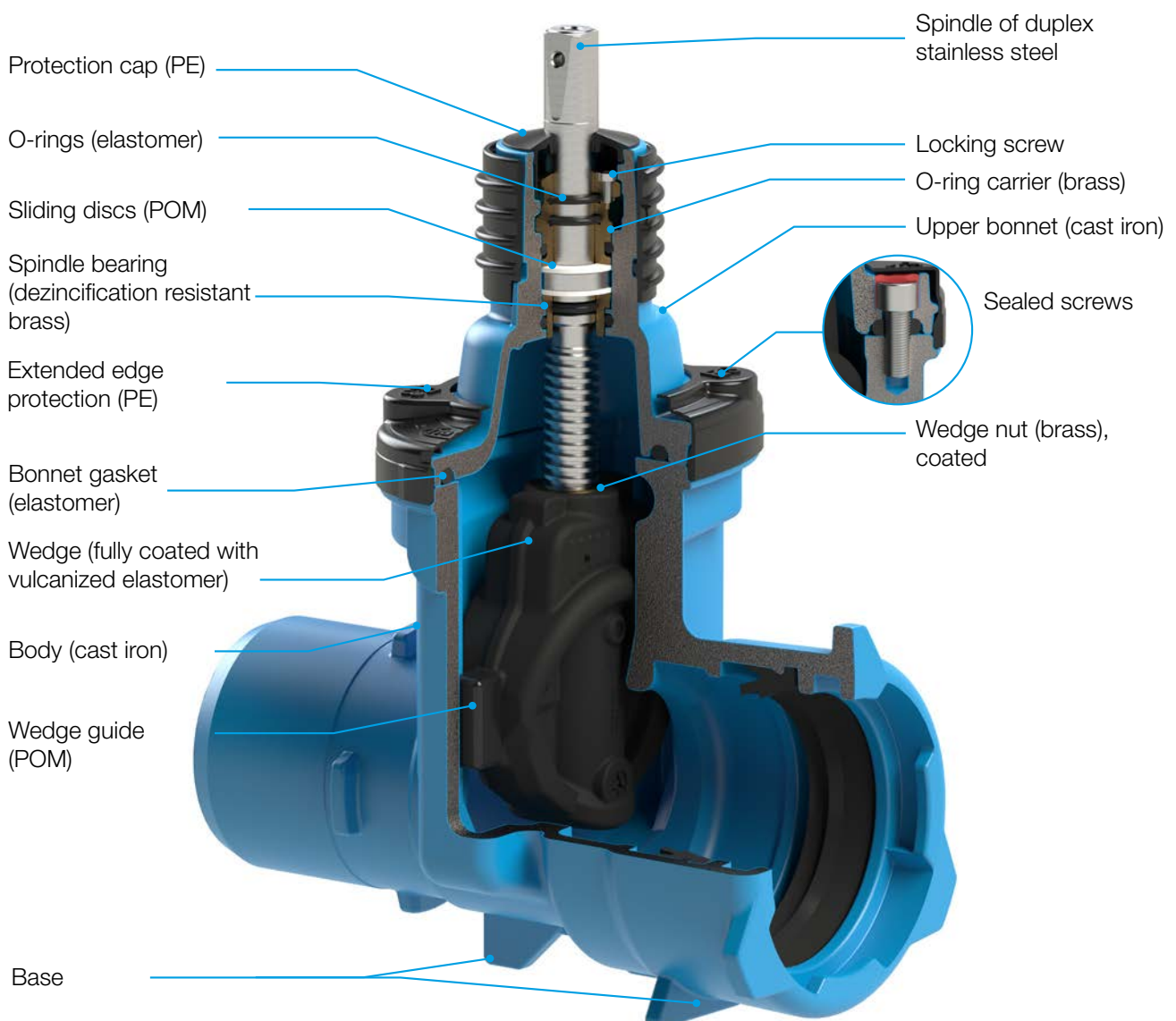
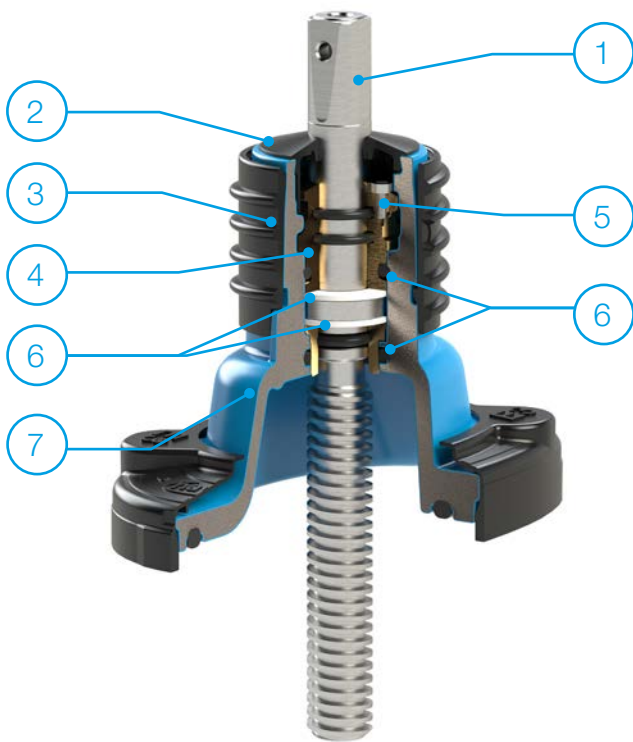


Image: Hawle Spigot end gate valve “E3”, Order No. 451-00

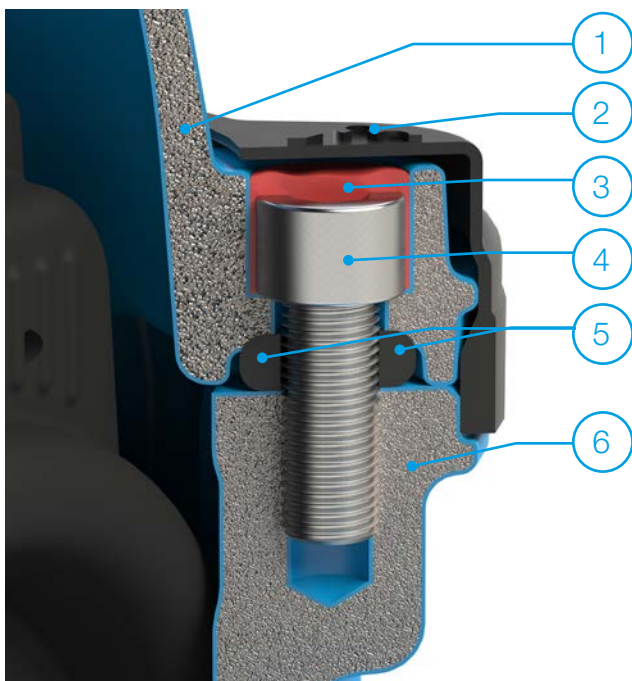
Design of the “E3” Gate Valve for Potable Water

Upper Section of the “E3” Gate Valve for Potable Water



1	Spindle with large collar for minimum surface load	Duplex Stainless steel
2	Protection cap	PE
3	Round thread adapter	PE
4	O-ring carrier with double bayonet connection	Brass
5	Locking screw	Stainless steel
6	Generously dimensioned spindle seal	Elastomer
7	Sliding discs	POM

Screw Connection of the Upper Bonnet and Body



1	Upper Bonnet	GJS-400
2	Extended edge protection ring	PE
3	Sealing compound	
4	Sealed screw	Stainless steel
5	bonnet gasket	Elastomer
6	Body	Cast iron

Design of the “E3” Gate Valve for Potable Water

Wedge of the “E3” Gate Valve for Potable Water



- Wedge nut stop in the upper bonnet
Brass on brass,
No pressure marks on the Hawle epoxy powder coating
- Wedge guides constructed of wear-resistant POM,
Load-optimised design guarantees minimum wear and
minimal closing torques
- Hexagon screws of corrosion-resistant steel enclosed
by upper seal
- Entire wedge surface 100% vulcanized without any
exposed areas for maximum corrosion protection
- Restraint connection of wedge and wedge nut
- Elastomeric embedding of wedge nut with shock-
absorbing elastomeric layer between wedge and
wedge nut:
 - Flexible
 - Vibration damping
 - Free of play
- The wedge nut has a long thread length allowing
significantly higher torques than the standard before
breaking. The length of the wedge nut is $\geq 1.2 \times$ diameter
of the spindle

Additional Advantages of the E3 Gate Valve

- Can be installed on existing E2 bodies
- Full compatibility with:
 - E2 electric drives
 - Extension spindles
 - Hand wheels, etc.
- Availability of spare parts guaranteed for decades!

General Information on the “E3” Gate Valve for Potable Water

Technical Features

- Resilient-seated gate valve with fully vulcanized wedge
- O-ring carrier with double bayonet connection (till DN 200)
- O-ring can be replaced under pressure
- Duplex Stainless steel spindle
- Wedge and wedge nut fully vulcanized
- Piggable due to bore conforming to nominal diameter
- Extended edge protection
- Designed according to DIN EN 1074, -1 and -2
- Smooth operation due to centrally located wedge guide made of durable plastic
- Restraint connection and elastomeric embedding allow the wedge nut to be flexible, vibration-damping and connected to the wedge without play
- 100% corrosion protection
- E3 gate valve upper components are fully compatible with all E2 bodies and accessories
- Pinless fastening of the extension spindle by means of a round-thread connection up to DN 200

Technical Data

Body:	GJS-400
Upper bonnet:	GJS-400, with countersunk and sealed screws
Corrosion protection:	Hawle epoxy powder coating
Wedge/Sealings:	GJS-400, interior and exterior of EPDM acc. to the German Association for Gas and Water (DVGW) Worksheet 270 in the potable water sector
Spindle:	Collar spindle made of duplex stainless steel with rolled, thread and flat-rolled anti-friction surface
Spindle sealing:	Replaceable brass O-ring carrier
Extended edge protection:	PE
Round thread adaptor:	PE (for pinless fastening of the extension spindle)
Medium:	Potable water
Maximum operating pressure of water:	10 bar* / 16 bar* / 25 bar*

* Depending on nominal diameter and order number

Spindle Revolutions and Maximum Required Closing Torque of the „E3 Gate Valve“

DN	50	65	80	100	125	150	200	250	300
Revolutions	10	13	16	20	25	30	34	42	50
Lift (mm)	50	65	80	100	125	150	200	250	300
Max. closing torque at 16 bar (Nm)	30	35	35	40	50	50	70	90	120
Spindle square (mm)	14,3	17,3	17,3	19,3	19,3	19,3	24,3	27,3	27,3

BAIO® System: E3 - Gate Valve for Potable Water



437-00
Combi-T gate valve - BAIO®
system



438-00
Combi III gate valve „E3“ - BAIO®
system



439-00
Combi IV gate valve „E3“ - BAIO®
system




450-00
Gate valve „E3“ with sockets -
BAIO® system



451-00
Gate valve „E3“ with spigot/
socket - BAIO® system

max. operating pressure

No.:	description		dimension
437-00	Combi-T gate valve „E3“	16 bar	DN 80 - DN 200
438-00	Combi III gate valve „E3“	16 bar	DN 100 - DN 200; Horizontal outlet: 2 x ZAK 46; 2 x IG 1 1/2“;
439-00	Combi IV gate valve	16 bar	DN 100 - DN 200 vertical outlet: BAIO® DN 80 or flange DN 100
450-00	Gate valve „E3“ with sockets	16 bar	DN 80 - DN 300
451-00	Gate valve „E3“ with spigot/socket	16 bar	DN 80 - DN 300

Flange System: E3 - Gate Valve for Potable Water



400-00
Flanged gate valve „E3“, short



401-00
Flanged gate valve „E3“ PN 25,
short



411-00
Exchange gate valve with loose
flanges, long



412-00
Exchange gate valve „E3“ with
loose flanges, short




413-00
Exchange gate valve „E3“,
face-to-face dimension 600 mm



415-00
Reducing gate valve „E3“

max. operating pressure

No.:	description		dimension
400-00	Flanged gate valve „E3“, short	16 bar	DN 20 - DN 600
401-00	Flanged gate valve „E3“ PN 25, short	25 bar	DN 50 - DN 200
411-00	Exchange gate valve with loose flanges, long	16 bar	DN 40 - DN 400
412-00	Exchange gate valve „E3“ with loose flanges, short	16 bar	DN 80 - DN 200
413-00	Exchange gate valve „E3“, face-to-face dimension 600 mm	16 bar	DN 80 - DN 200
415-00	Reducing gate valve „E3“	16 bar	DN 65 - DN 300

Flange System: E3 - Gate Valve for Potable Water



434-00
Combi-T gate valve „E3“,
flanged ends



442-01
Combi-IV gate valve „WS“ with
vertical reducing flange



442-02
Combi-IV gate valve „WS/T“ with
double flanged taper



445-00
Combi-III gate valve with flanges




447-00
Combi-III gate valve „WS“ with
vertical reducing flange



447-01
Combi-III gate valve „WS/T“ with
double flanged taper

max. operating pressure

No.:	description		dimension
434-00	Combi-T gate valve „E3“, flanged ends	16 bar	DN 80 - DN 200
442-01	Combi-IV gate valve „WS“ with vertical reducing flange	16 bar	DN 100 - DN 200 vertical outlet: DN 65 or DN 80
442-02	Combi-IV gate valve „WS/T“ with double flanged taper	16 bar	DN 100 - DN 200 vertical outlet: DN 65 or DN 80
445-00	Combi-III gate valve with flanges	16 bar	DN 80 - DN 200
447-00	Combi-III gate valve „WS“ with vertical reducing flange	16 bar	DN 100 - DN 200 vertical outlet: DN 65 or DN 80
447-01	Combi-III gate valve „WS/T“ with double flanged taper	16 bar	DN 100 - DN 200 vertical outlet: DN 65 or DN 80

Flange System: E3 - Gate Valve for Potable Water



448-00
Combi-II gate valve „WS“ with vertical reducing flange



448-01
Combi-II gate valve „WS/T“ with double flanged taper




470-00
Flanged gate valve „E3“, long



471-00
Gate valve „E3“ PN 25, long

max. operating pressure

No.:	description		dimension
448-00	Combi-II gate valve „WS“ with vertical reducing flange	16 bar	DN 65 - DN 200
448-01	Combi-II gate valve „WS/T“ with double flanged taper	16 bar	DN 65 - DN 200
470-00	Flanged gate valve „E3“, long	16 bar	DN 50 - DN 300
471-00	Gate valve „E3“ PN 25, long	25 bar	DN 150 - DN 300

PE Fusion End Gate Valve: E3 - Gate Valve for Potable Water



405-00
Gate valve „E3“ with PE fusion ends



409-00
Gate valve „E3“ flange/PE fusion end




453-00
Gate valve „E3“ type D with PE fusion ends



454-00
Gate valve „E3“ with steel welding ends

max. operating pressure

No.:	description		dimension
405-00	Gate valve „E3“ with PE fusion ends	16 bar	DN 50 - DN 200
409-00	Gate valve „E3“ flange/PE fusion end	16 bar	DN 50 - DN 200
453-00	Gate valve „E3“ type D with PE fusion ends	16 bar	DN 80 - DN 200
454-00	Gate valve „E3“ with steel welding ends	16 bar	DN 80 - DN 200



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