



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 seal.

Design of the “E3” Gate Valve for Potable Water

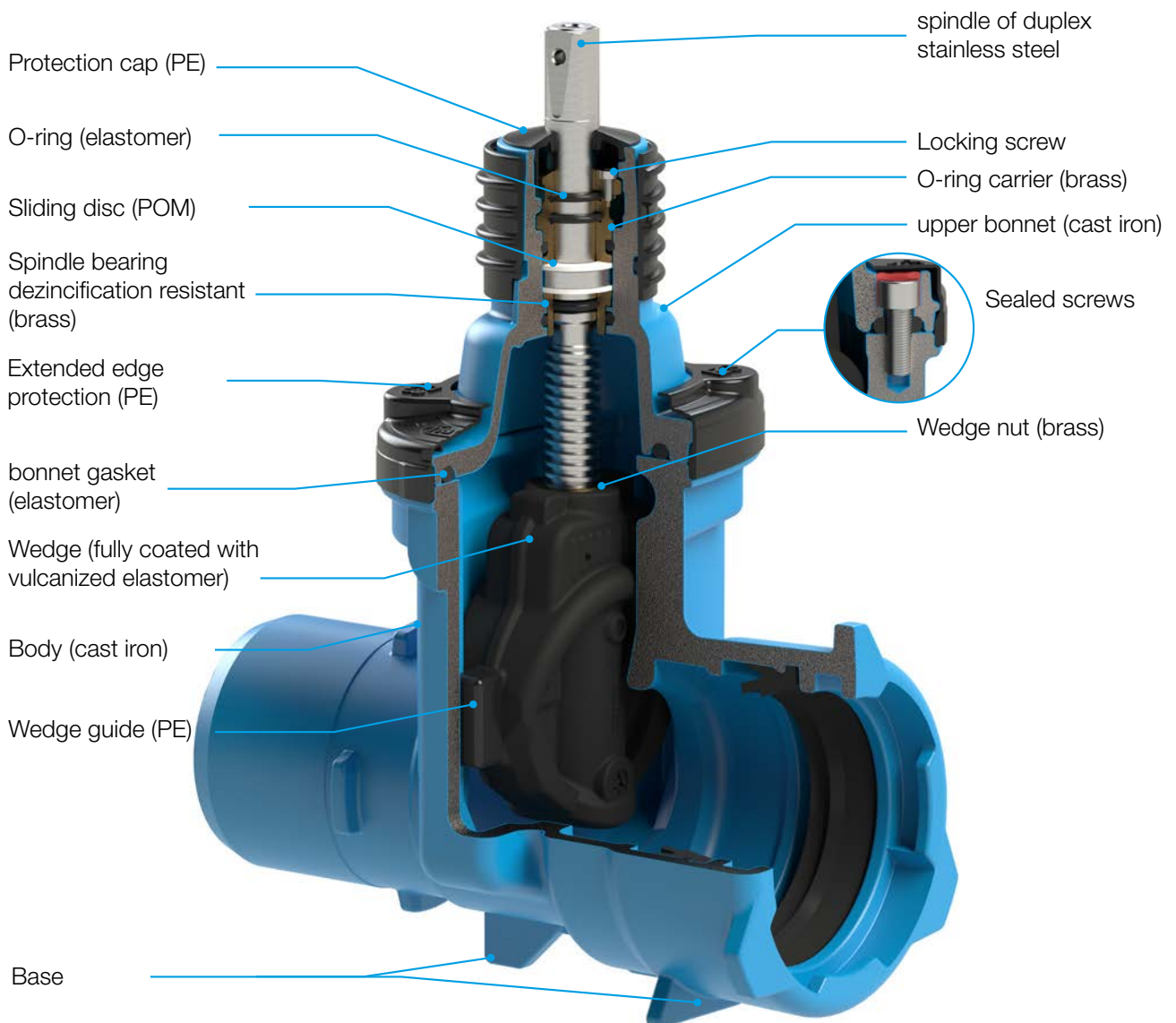
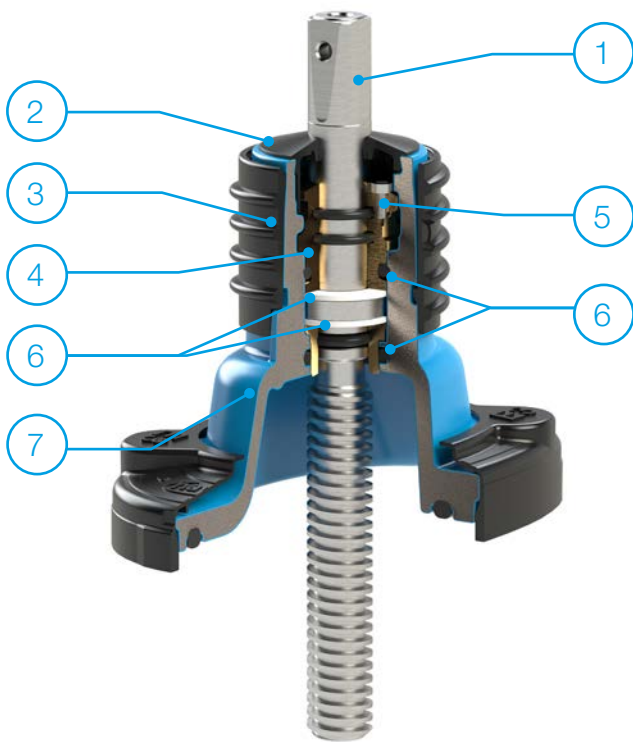


Image: Hawle Spigot end gate valve “E3”, Order No. 451-00

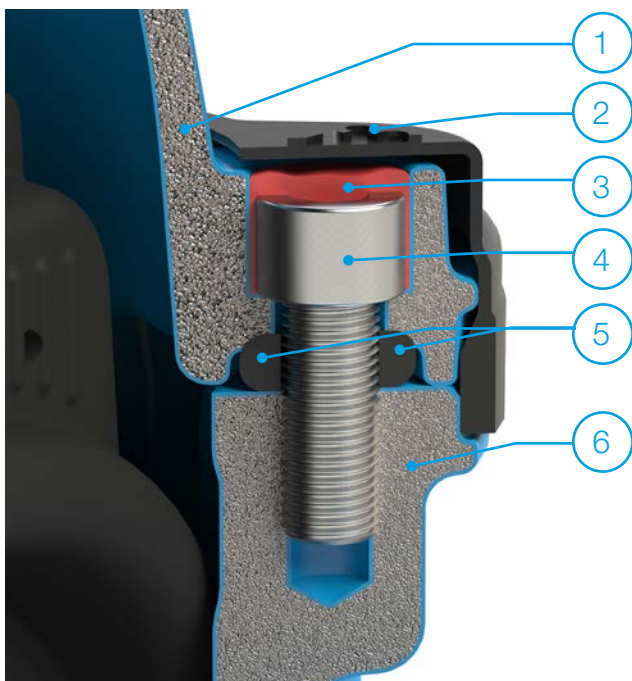
Design of the “E3” Gate Valve for Potable Water

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



| | | |
|---|--|-----------------|
| 1 | Spindle with large collar for minimum surface load | 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 („spindle extension“ not possible) | |
| 7 | Sliding discs | POM |

Screw Connection of the Upper Bonnet and Body



| | | |
|---|-------------------------------|-----------------|
| 1 | Upper Bonnet | Cast iron |
| 2 | Extended edge protection ring | PE |
| 3 | Wax | |
| 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 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 with shock-absorbing elastomeric layer between wedge and wedge nut:

- Flexible
- Vibration damping
- Free of play

Wedge nut thread length:
1.2 x diameter

Extensive wedge nut support for minimum surface load

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 made of durable plastic
- O-ring carrier with double bayonet connection
- O-ring can be replaced under pressure
- 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, DIN EN 13774:2003-07 and ISO 7259
- Smooth operation due to centrally located wedge guide
- 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 stearin 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 stainless steel with rolled, burnished thread |
| Spindle sealing: | Replaceable brass O-ring carrier acc. to ISO 7259 - 1998 |
| 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 „E3“ - 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; *2 x ZAK 46; *2 x female thread 1 1/2"; **BAIO® DN 80; **Flange DN 100 (*vertical outlet, **upper outlet) |
| 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 65 - DN 200 |
| 442-02 | Combi-IV gate valve „WS/T“ with double flanged taper | 16 bar | DN 65 - DN 200 |
| 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 65 - DN 200 |
| 447-01 | Combi-III gate valve „WS/T“ with double flanged taper | 16 bar | DN 65 - DN 200 |

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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