



HDPE Plumbing & Trading  
Putting Water First



PE100 Gate Valve





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## PE100 Gate Valve

NEW

- 100 % Gate Valve.
- Patented TEGA.
- PE 100 SDR 11 PN 16 Bars
- Range: OD 63mm to 225mm
- Application: (Water & Gas)



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## Manufacturing Standards

This is a preview. To view the full content, please purchase this document.

BRITISH STANDARD

### Valves for water supply — Fitness for purpose requirements and appropriate verification tests —

Part 1: General requirements

BS EN  
1074-1:2000  
*Incorporating  
Amendment No. 1*

The European Standard EN 1074-1:2000 has the status of a British Standard

ICS 23.060.01; 91.140.60

**BSI**  
British Standards

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 12201-4

February 2012

ICS 23.060.01; 91.140.60

Supersedes EN 12201-4:2001, EN 13244-4:2002

English Version

### Plastics piping systems for water supply, and for drainage and sewerage under pressure - Polyethylene (PE) - Part 4: Valves

Systèmes de canalisations en plastique pour l'alimentation en eau et pour les branchements et les collecteurs d'assainissement avec pression - Polyéthylène (PE) - Partie 4: Robinets

Kunststoff-Rohrleitungssysteme für die Wasserversorgung und für Entwässerungs- und Abwasserdruckleitungen - Polyethylen (PE) - Teil 4: Armaturen

This European Standard was approved by CEN on 16 December 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

BS EN 12201-4:2012



BSI Standards Publication

### Plastics piping systems for water supply, and for drainage and sewerage under pressure — Polyethylene (PE)

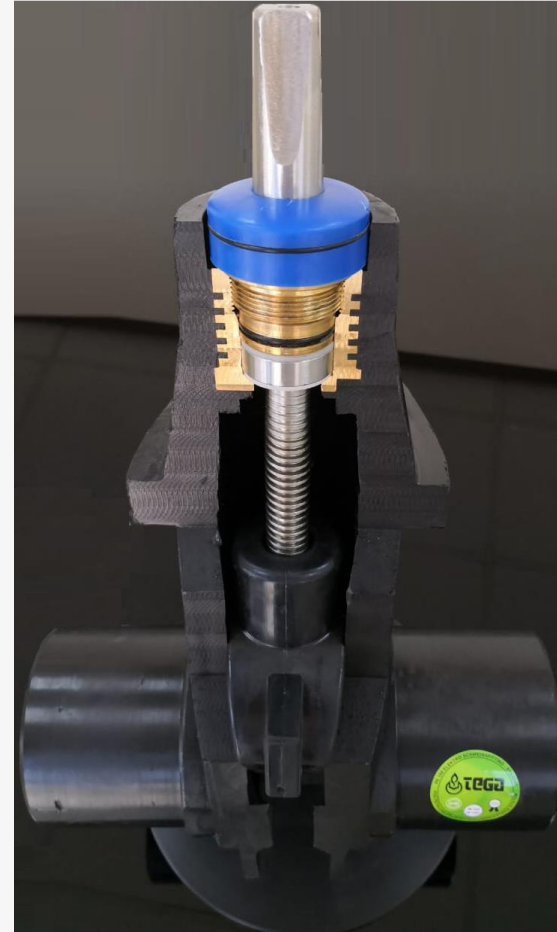
Part 4: Valves

# Gate Valve Testing

TEST	STANDARD	REQUIREMENT	FREQUENCY
Hydrostatic strength	EN 917	20°C -100 hrs 80°C -165 hrs 80°C -1000 hrs	Production Batch
Leak tightness under/after bending applied to the operating mechanism	EN 1680		Production Batch
Impact loading	EN 1705		Production Batch
Bending Resistance	EN 12100		
Leak tightness of seat and packing	ISO 5208		Each
Leak tightness under tensile load	ISO 10933		
Operating Torque Stop Resistance Actuation mechanism resistance	EN 28233		

# Gate Valve Components List

- Body PE 100 Material
- Bonnet PE100
- Protective Cap PE100 Blue
- Stem: Stainless Steel (304, 316, others on request)
- Wedge Coating (EPDM for Water/NBR for Gas)
- O rings (EPDM for Water/NBR for Gas)
- Bearing MS58
- NEW





## Certified Quality

## Taking our responsibility

- Economically
- Socially
- Ecologically

## Certified productions quality

# ISO 9001:2008 QMS

# ISO 14001:2004 EMS

BSOHSAS18001:2007 Health &amp; Safety

## Continuous quality control

Of both parts and end products

Each carrying batch and/or code / serial numbers

## Ensuring **full traceability** of all our valves

Each of our valves has its own serial, making the quality circle round.







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## DVGW-Baumusterprüfzertifikat DVGW type examination certificate

DW-6210CQ0493  
Registernummer  
registration number

<b>Anwendungsbereich</b> <i>field of application</i>	Produkte der Wasserversorgung <i>products of water supply</i>
<b>Zertifikatinhaber</b> <i>owner of certificate</i>	Tega Engineering Industry & Trade Inc. 1.Organize Sanayi Böl.Ural Cad.No 6, TR-06930 Sincan, Ankara
<b>Vertreiber</b> <i>distributor</i>	Tega Engineering Industry & Trade Inc. 1.Organize Sanayi Böl.Ural Cad.No 6, TR-06930 Sincan, Ankara
<b>Produktart</b> <i>product category</i>	Armaturen für die Wasserversorgung: Absperrarmaturen aus PE (6210)
<b>Produktbezeichnung</b> <i>product description</i>	Absperrarmatur aus PE 100
<b>Modell</b> <i>model</i>	PE100 Gate Valve
<b>Prüfberichte</b> <i>test reports</i>	Baumusterprüfung: 110079/14 vom 09.09.2015 (SKZ) KTW-Prüfung: KA 286/11 vom 17.10.2011 (TZW) Mikrobiologische Prüfung: MO 095/13 vom 05.07.2013 (TZW) KTW-Prüfung: KA 0116/15 vom 27.08.2015 (TZW) Mikrobiologische Prüfung: 415.975 vom 08.10.2015 (ÖFI) KTW-Prüfung: KR 0139/14 vom 30.07.2014 (TZW)
<b>Prüfgrundlagen</b> <i>test basis</i>	DVGW W 364 (01.06.2010) DVGW W 364-P/B1 (01.09.2014) BGA KTW (12.12.1985) UBA KTW (07.10.2008) DVGW W 270 (01.11.2007)
<b>Ablaufdatum / AZ</b> <i>date of expiry / file no.</i>	09.09.2020 / 13-0168-WNE

02.02.2016 GI A-1/2

Datum, Bearbeiter, BWS, Leiter der Zertifizierungsstelle  
Date, issued by, street, head of certification body

DVGW CERT GmbH ist von der DAKKS nach DIN EN ISO/IEC 17065:2013  
akkreditierte Stelle für die Zertifizierung von Produkten der Energie- und  
Wasserversorgung.

DVGW CERT GmbH is an accredited body by DAKKS according to DIN EN  
ISO/IEC 17065:2013 for certification of products for energy and water supply  
industry.





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## Comparison DI vs PE Gate Valve

Type	Traditional DI	New PE	Saving %
Supply	1 Valve DN100mm 2 Gaskets 2 Flange adaptors 2 Backing rings 16 Bolts 16 nuts 16 washers	1 Valve OD110mm	40%
Installation	4 Hours	0.5 Hours	87.5%
Actual Life time	Max. 15 Years	Min. 50 Years	70%
Operation	Corrosion	No corrosion	100%
Replacement Tenders	Needed	Not needed	100%
Standard Warranty	5 Years	10 Years	50%





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1 Pc Gate Valve + 2 Pcs Flange  
Adaptor + 2 Pcs Backing Ring + 2  
Pcs Gasket + 16 Pcs (Bolts,  
Washers, Nuts)

=

1 Pc PE Gate Valve



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Cost comparison of an  
average valve  
replacement:

NEW



**Estimated Purchase Price Comparison PE Valve vs.  
conventional DI Gate Valves**

Replacement with DI Gate Valve:	
Labour costs, equipment costs	319 USD
Bolts, Rings, Adaptors, Gaskets	106 USD
Costs of DI valve DN 100	106 USD
Tot. average replacing costs (solution for 15 20 years):	553 USD
Annual replacing costs, calculated over 20 years lifetime:	28 USD
Annual replacing costs, calculated over 15 years lifetime:	37 USD
Installing with PE Gate Valve:	
Labour costs, equipment costs	50 USD
Bolts, Rings, Adaptors, Gaskets	0.00 USD
Costs of PE valve OD 110	186 USD
Total average replace costs (solution for 50 years):	234 USD
Annual rep. costs, calculated over 50 years lifetime:	5 USD

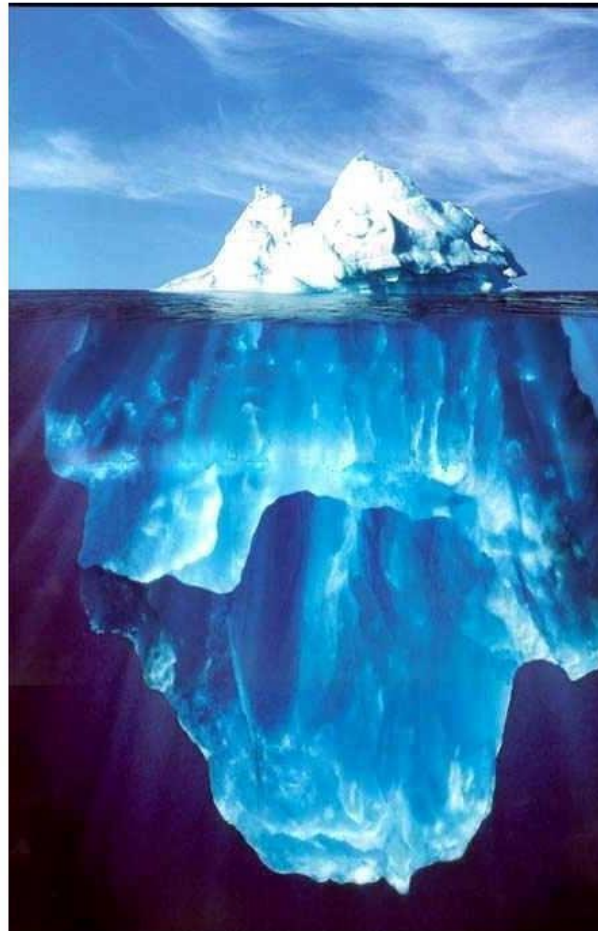


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## Cost Overview of repair:



Valve price

Alternative  
supply costs

Labour costs

Materials

Stock costs

Permits

Transport costs

Road Blocks

Thrust blocks

Machine costs

Water loss



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## Total Cost comparison PE Gate Valve vs. conventional DI Gate Valves

Other savings with PE Gate Valve:

Simpler and faster one-man installation = USD?

No water lose = USD?

Stock reduction (1 valve type instead of 3?, 5? 8?) = USD?

No new replacement after 20 years but only after min 50 years = USD?

Total extra savings: = USD?

**Conclusion: Using PE Gate Valve reduces The total operating costs (TOC) of a water or gas distribution system.**



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## Comparison DI vs PE Gate Valve

### Tradition

Heavy weight

Corrosion

Leakage Potential

Replacement

Torque tools needed



### Future

Fused joints, no more mechanical

Environmental friendly

Homogeneous network components

Lighter weight

Easier and faster installation

Longer life time

No corrosion

No replacement







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**Relaxes**

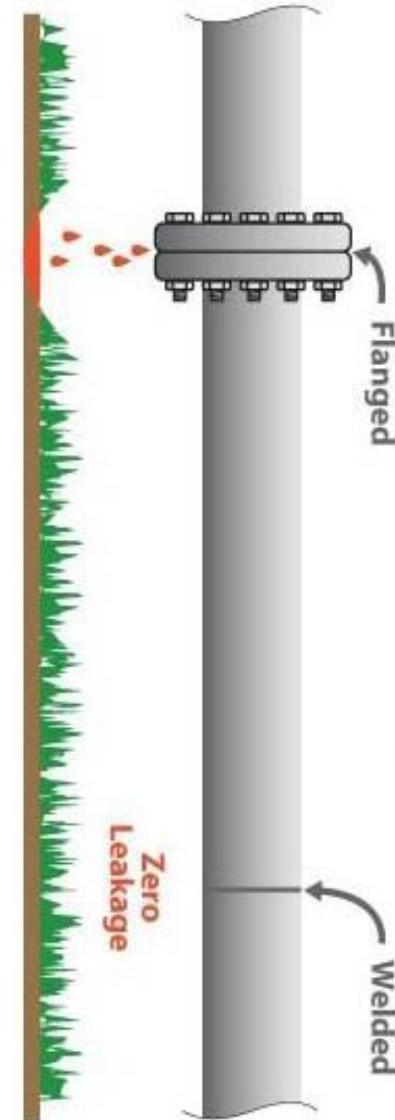
**Crack resistant at freezing zones installations**



# Jointing

Our PE gate valve is connected to the pipe by welded (BF/EF) joints.

Flanged Traditional Valve Joints	PE Welded Joints
Pressure is limited by the joint	Joints hold same pressure as pipe wall
Potential Leakage due to: Gasket slip/damage/over-Loose tightening Corrosion Improper bolts tightening Thermal effects Seismic movements	Zero Leakage
None homogeneous (4 different materials)	Homogeneous



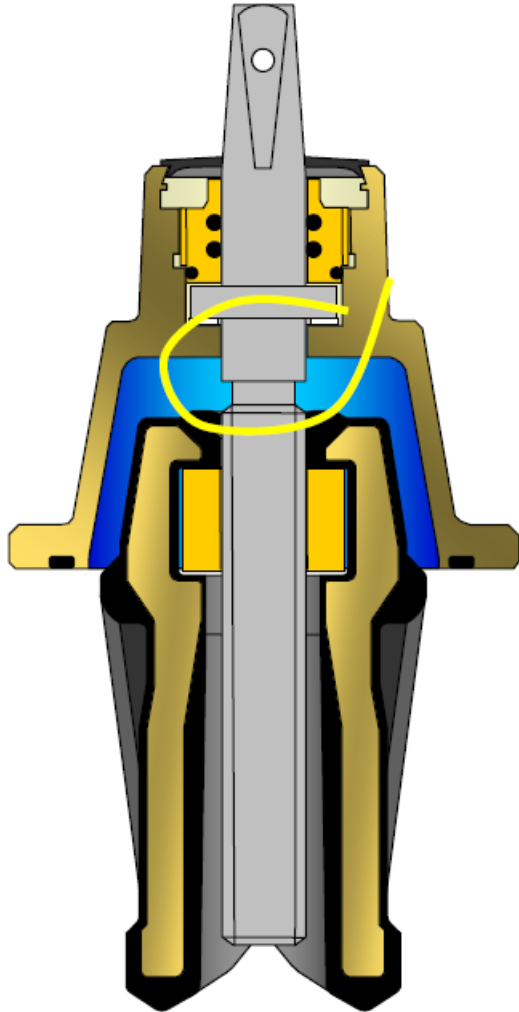


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## Fully replaceable stem seals under pressure



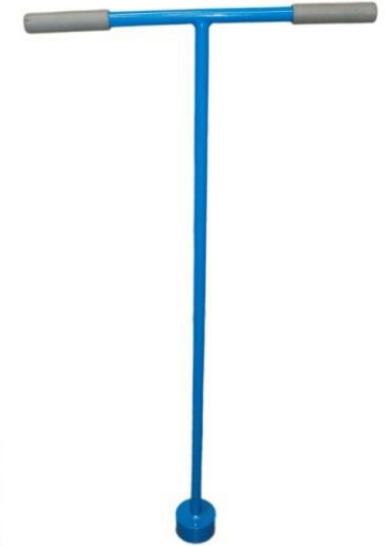
- Upper part of the wedge patented
- Enable under live operation pressure servicing to replace operational gaskets (No need to cut or dismantle)
- No interruption to the main line flow
- Save cost of valve cut/dismantle
- Relax with a peace of mind





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**Complete Valve accessories:**

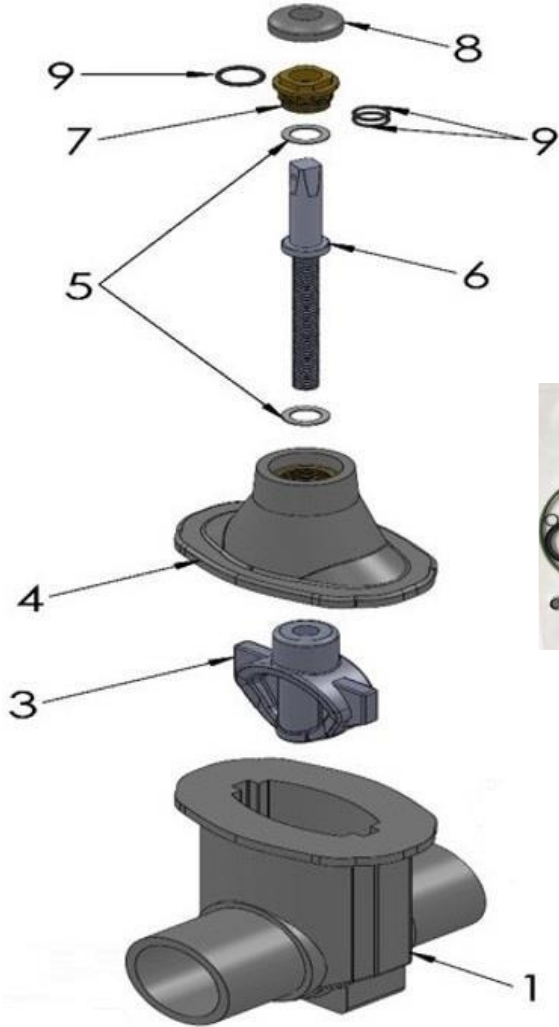
- Telescopic Spindle
- Top Cap
- Service Box
- Tee Op. Key
- Hand Wheel
- Designed to fit and secure.





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Spare parts are available



# CONTACT DETAILS

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- HDPE Plumbing & Trading (Pty) Ltd
- Physical address:
- Joanique Eco Park, 186 2nd Avenue
- Florentia, Alberton, Unit 17 & 18
- Phone number: +27 10 013 0346
- Mobile number: +27 78 741 4170
- Email: [donavan@hdpeplumbingtrade.co.za](mailto:donavan@hdpeplumbingtrade.co.za)



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