

RESILIENT SEAT POLYETHYLENE RESTRAINT PN16

Version 2.0

Clover Resilient Seat Polyethylene Restraint Gate Valves are suitable for use in pressure and non-pressure water supply and sewerage applications.

SPECIFICATIONS

Diameter Range: DN90 - DN315

Nominal Pressure: 1,600kPa

End Connections: Polyethylene Restraint Joint AS/NZS4130

Maximum Operating Temperature: 40°

Compliance:

- WSA PS 281 "Gate Valves, Resilient Seated with Restrained Flexible Joints for Polyethylene Pipe in Pressure Applications – Drinking Water, Non-Drinking Water Supply and Sewerage"
- AS/NZS2638.2 "Gate valves for waterworks purposes - Resilient seated"
- AS/NZS4158 "Thermal-bonded polymeric coatings on valves and fittings for water industry purposes"
- AS1646 "Elastomeric seals for waterworks purposes"
- AS1831 "Ductile cast iron"
- EN12842 "Ductile iron fittings for PVC-U or PE piping systems. Requirements and test methods"
- AS/NZS4130 "Polyethylene (PE) pipes for pressure applications"
- AS/NZS4020 "Testing of products for use in contact with drinking water"
- ISO5211 "Industrial Valves - Part-turn actuator attachments"

WSAA Product Appraisal: PA11/21

Options & Accessories:

- Anti-clockwise and clockwise closing models available
- Handwheel
- Gearbox Operator (Spur & Bevel)
- ISO5211 Top Mounting Flange
- Lilac key-cap available for recycled water applications
- 316 Stainless steel tensile restraint ring

Recommended Specifications:

- Gate valves shall be Clover resilient seated non-rising spindle type with polyethylene (PE) restraint joint end connections conforming to WSA PS 281
- Gate valves shall close in an anti-clockwise / clockwise direction
- Gate valves shall be fitted with a keycap / handwheel
- Gate valve allowable operating pressure shall be 1,600kPa
- Protective coatings of gate valves shall be thermally applied polymeric type in accordance with AS/NZS4158
- Polyethylene restrained joints shall be fitted with a Grade C37710 Copper Alloy Tensile Restraint Ring / 316 Stainless Steel Tensile Restraint Ring



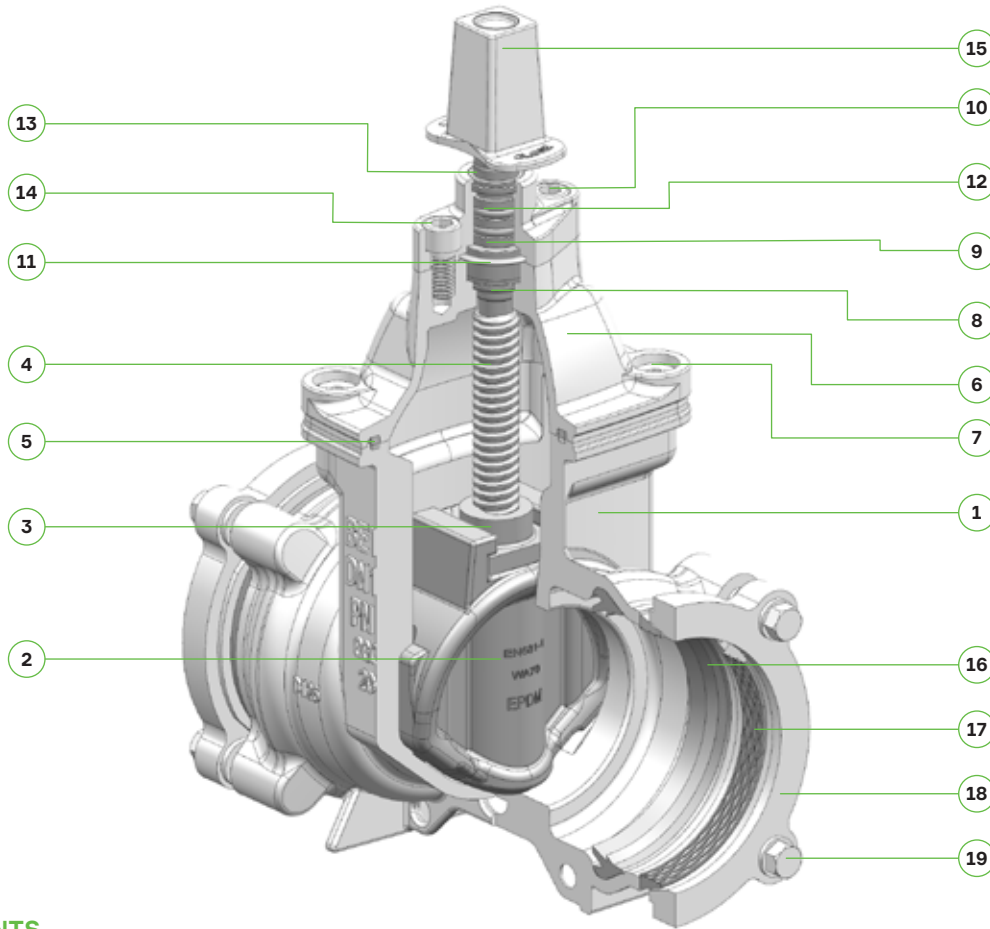
FEATURES

- 10 year manufacturers warranty
- No requirement for polyethylene welding during installation
- Fast installation under all weather conditions
- Low operating torque for fast and efficient operation
- Full bore design eliminates debris build up
- Key cap or handwheel operable
- High strength and impact resistant ductile iron body
- Thermally bonded polymeric coating for long life corrosion protection
- Isolated 316SS stainless steel fasteners encapsulated with hot-melt coating for long-life corrosion protection
- Ductile iron wedge encapsulated with vulcanised EPDM elastomer and integrated guide rails
- Forged stainless steel stem with wedge stop and rolled threads for high strength
- Suitable for installation in either horizontal or vertical position

APPLICATIONS

- Used to isolate flow within pipeline sections, pipeline equipment and offtakes
- Gate valves should not be used for the purposes of throttling or adjusting flow
- Potable and recycled water supply
- Irrigation and raw water
- Gravity and sewer rising mains
- Fire systems
- Stormwater and drainage
- Pressure and non-pressure
- Buried and above ground

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COMPONENTS

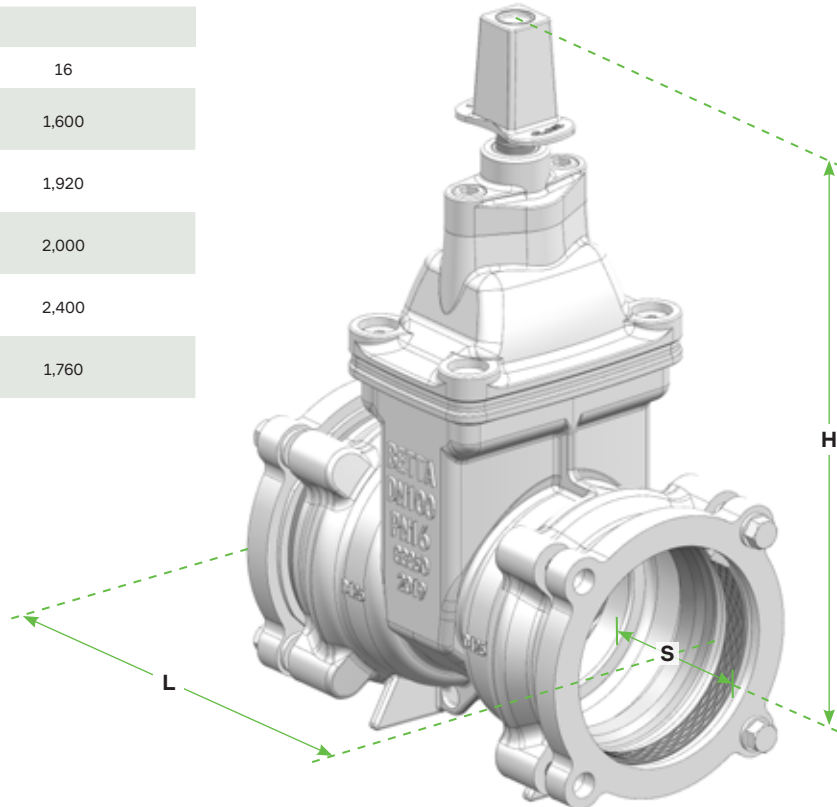
ITEM	PART NAME	MATERIAL	STANDARD/GRADE
1	Body	Ductile Iron/Polymeric Coating	AS1831 500-7/AS4158
2	Wedge	Ductile Iron (EPDM Encapsulated)	AS1831 500-7/AS1646 EPDM
3	Stem Nut	Copper Alloy (Dezincification Resistant)	AS1568 C48600
4	Spindle	Stainless Steel	ASTM A276/431
5	Body Gasket	EPDM Elastomer	AS1646/EPDM
6	Bonnet	Ductile Iron/Polymeric Coating	AS1831 500-7/AS4158
7	Body Bolt	Stainless Steel	ASTM A276/316
8	Thrust Washer	POM	
9	Thrust Collar	POM	
10	Bonnet Bolt	Stainless Steel	ASTM A276/316
11	O'Ring	NBR Elastomer	AS1646/NBR
12	Seal Kit	NBR Elastomer	AS1646/NBR
13	Dust Cover	EPDM Elastomer	AS1646/EPDM
14	Seal Retainer Housing	Stainless Steel	ASTM A276/316
15	Spindle Key Cap	Ductile Iron	AS1831 500-7
16	Seal Ring	EPDM Elastomer	AS1646/EPDM
17	Restraint Ring	Copper Alloy(Dezincification Resistant)	AS1568 C37710
18	Fixed Ring	Ductile Iron/Polymeric Coating	AS1831 500-7/AS4158
19	Ring Bolt	Stainless Steel	ASTM A276/316

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SPECIFICATIONS	SYM	UNITS	DN90	DN125	DN180	DN250	DN280	DN315
LENGTH (FACE TO FACE)	L	mm	245	260	355	420	450	460
HEIGHT (CENTRE TO KEYCAP)	H	mm	290	340	450	644	644	684
SOCKET DEPTH	S	mm	88	88	118	146	156	165
WEIGHT OF UNIT (KEYCAP FITTED)		kg	13	19	33	96	104	132
TURNS TO CLOSE (APPROX)		Turns	17	21	32	42	42	51
ACTUAL TORQUE TO SEAL (APPROX)		Nm	55	60	110	200	200	220
MAXIMUM OPERATING TORQUE	MOT	Nm	75	100	150	250	250	300
ISO5211 TOP MOUNTING FLANGE			F10	F10	F10	F14	F14	F14
PRODUCT CODE (ANTI-CLOCKWISE CLOSE)			VGGG090	VGGG125	VGGG180	VGGG250	VGGG280	VGGG315
PRODUCT CODE (CLOCKWISE CLOSE)			VGGG090C	VGGG125C	VGGG180C	VGGG250C	VGGG280C	VGGG315C

All dimensions are in millimetres.

PRESSURE	SYM	UNITS	
PRESSURE NOMINAL	PN	Nom	16
ALLOWABLE OPERATING PRESSURE	AOP	kPa	1,600
MAXIMUM ALLOWABLE OPERATING PRESSURE	MAOP	kPa	1,920
ALLOWABLE SITE TEST PRESSURE	ASTP	kPa	2,000
PRODUCTION TEST - BODY		kPa	2,400
PRODUCTION TEST - SEAT		kPa	1,760



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