



KEYSTONE SERIES GR RESILIENT SEATED BUTTERFLY VALVES

GRW/GRL

A heavy duty industrial resilient seated butterfly valve

GRW - Wafer body design

GRL - Lugged body design



FEATURES

- Wafer and lugged body design with face-to-face dimension, according to EN 558 Series 20 and API 609.
- Designed according to EN 593 and API 609.
- The seat is field replaceable and fully isolates the body and shaft from the flow.
- Primary shaft sealing exceeds the pressure rating of the valve and prevents leakage through shaft area to atmosphere.
- A secondary shaft sealing provides back-up safety.
- A molded-in O-ring in the seat for flange sealing eliminates the need for gaskets.
- Shaft seals prevent moisture penetrating into the shaft area.
- The two piece shaft allows for a thin disc and provides minimal obstruction to flow (up to DN 300/ NPS 12).
- Rounded polished disc edge gives full concentric sealing, lower torques, longer seat life and drop-tight shut-off.
- Body locating holes allow ease of installation and centering between the flanges.
- Extended body neck allows for pipe insulation.
- Top and bottom shaft bearings for optimized support and minimum friction and decreased torque.
- Top bushing absorbs actuator side thrust loads.
- All valves comply to Pressure Equipment Directive (2014/68/EU) Module B + D, CE Marking.
- Available approvals: NSF/ANSI 61, ACS, KIWA, WRAS, DVGW-G, ABS, CU-TR.

GENERAL APPLICATION

Water, air, dry bulk conveying etc. These valves are for any service where a drop-tight shut-off with maximum flow area is required.

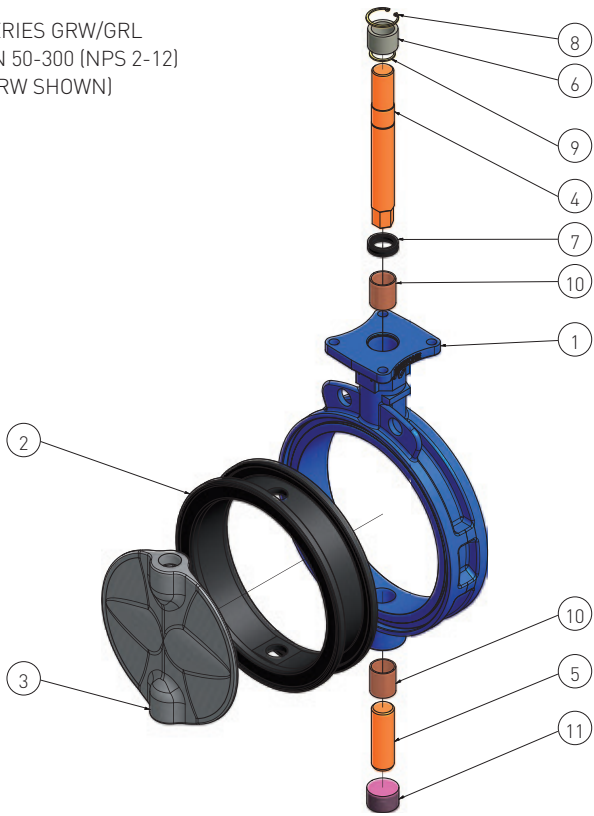
TECHNICAL DATA

Sizes:	DN 50 - 900 (NPS 2 - 36)
Pressure:	16 bar DN 50 - 300 (230 psi NPS 2 - 12) 10 bar DN 350 - 900 (150 psi NPS 14 - 36)
Reinforced seat:	16 bar DN 350 - 600 (230 psi NPS 14 - 24)
End of line:	10 bar DN 50 - 300 (150 psi NPS 2 - 12) 6 bar DN 350 - 900 (90 psi NPS 14 - 36)
Reinforced seat:	10 bar DN 350 - 600 (150 psi NPS 14 - 24)
Vacuum service:	0.4 bar (5.8 psia)
Temperature:	-40°C to +160°C (-40 °F to +320°F)
Flange accommodation:	PN 6/10/16 ASME 125/150 JIS 10K BS Table E AS4087 PN 16 AS2129 Table E

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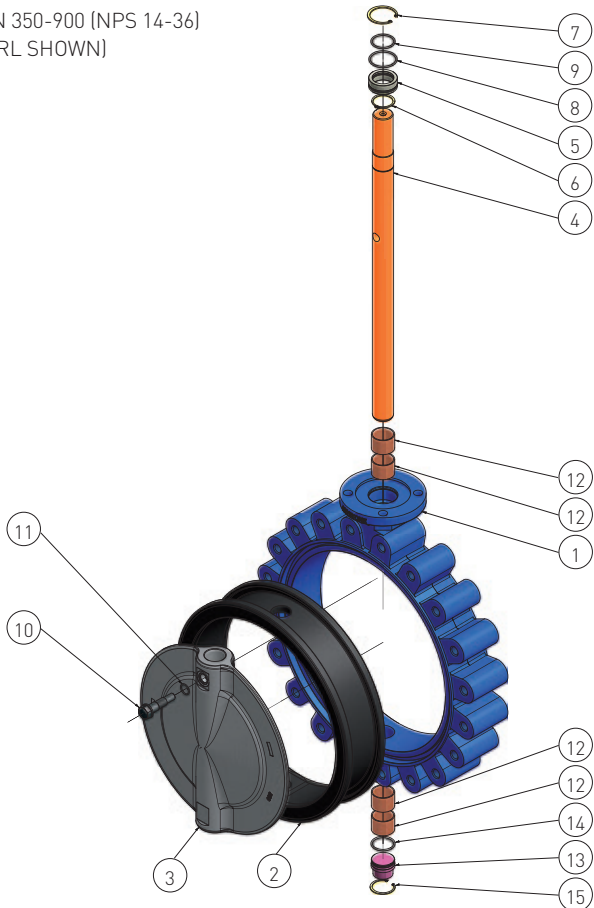
SERIES GRW/GRL
DN 50-300 (NPS 2-12)
(GRW SHOWN)



PARTS LIST

Item	Qty	Description
1	1	Body
2	1	Seat
3	1	Disc
4	1	Upper shaft
5	1	Lower shaft
6	1	Upper bushing
7	1	Packing
8	1	Body circlip
9	1	Shaft circlip
10	2	Upper and lower bearing
11	1	Plug

DN 350-900 (NPS 14-36)
(GRL SHOWN)



PARTS LIST

Item	Qty	Description
1	1	Body
2	1	Seat
3	1	Disc
4	1	Shaft
5	1	Bushing
6	1	Shaft circlip
7	1	Body circlip
8	1	Body O-ring
9	1	Shaft O-ring
10	1	Disc screw
11	1	Disc screw O-ring
12	4	Upper and lower bearing
13	1	Plug
14	1	Plug O-ring
15	1	Plug circlip

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MATERIAL SPECIFICATION

Part name	Material	Material specification	Remark
DN 50-300 (NPS 2-12)			
Body	Ductile iron	ASTM A536 Gr 65-45-12 ASTM A395 Gr 60-40-18	(Optional)
Disc	Super duplex 316 stainless steel 304 stainless steel Aluminium bronze Nickel aluminium bronze Ductile iron NYL Ductile iron CTD	ASTM A890 Gr 5A ASTM A351 Gr CF8M ASTM A351 Gr CF8 ASTM B148 UNS C95200 ASTM B148 UNS C95800 ASTM A536 Gr 65-45-12 ASTM A536 Gr 65-45-12	NYL = Nylon coating, max. temp. 60°C (140°F) CTD = Nickel plating
Shaft	316 stainless steel 431 stainless steel Super duplex Monel® K500	ASTM A276 Gr 316 ASTM A276 Gr 431 ASTM A276 UNS S32750 ASTM B865 UNS N05500	
Seat	EPDM EPDM E1 NBR NBR N1 HNBR White NBR Fluoroelastomer (FKM)		Food grade, NSF/ANSI 61, ACS KIWA, WRAS, ACS Food grade DVGW-G Food grade
Bushing	Polyester		
Packing	NBR		
Bearing	PTFE/steel		
Circlip	Stainless steel		
Plug	Carbon steel		
DN 350-900 (NPS 14-36)			
Body	Ductile iron	ASTM A536 Gr 65-45-12 ASTM A395 Gr 60-40-18	(Optional)
Disc	Super duplex Duplex 316 stainless steel 304 stainless steel Aluminium bronze Nickel aluminium bronze Ductile iron NYL Ductile iron CTD	ASTM A890 Gr 5A ASTM A890 Gr 4A ASTM A351 Gr CF8M ASTM A351 Gr CF8 ASTM B148 UNS C95200 ASTM B148 UNS C95800 ASTM A536 Gr 65-45-12 ASTM A536 Gr 65-45-12	NYL = Nylon coating, max. temp. 60°C (140°F) CTD = Epoxy coated, max. temp. 120°C (250°F)
Shaft	431 stainless steel Duplex Super duplex Monel® K500	ASTM A276 Gr 431 S43100 ASTM A276 UNS S31803 ASTM A276 UNS S32750 ASTM B865 UNS N05500	
Seat	EPDM EPDM E1 NBR NBR N1 HNBR White NBR Fluoroelastomer (FKM)		Food grade, NSF/ANSI 61, ACS KIWA, WRAS, ACS Food grade DVGW-G Food grade
Disc screw	Super duplex Duplex	ASTM A276 UNS S32750 ASTM A276 UNS S31803	
Disc screw O-ring	EPDM NBR FKM		
Plug	Carbon steel		
Plug O-ring	NBR		
Plug circlip	Stainless steel		
Bushing	Polyester		
Shaft/Body O-ring	NBR		
Bearing	PTFE/steel		
Shaft/Body circlip	Stainless steel		

NOTES

Valves with super duplex disc will have super duplex disc screw. All other discs will have a duplex disc screw. Monel® is a registered trademark of Special Metals Corporation.