
MATERIALS AND APPLICATIONS SUITABILITY MATRIX

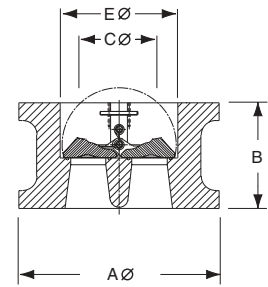
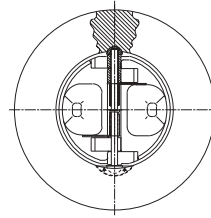


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WAFER TYPE BR

INSTALLATION DIMENSIONS

ANSI B16.5



Size inches	Pressure Rating	End Facing	A Ø inches	B inches	C Ø inches	E Ø inches	STUD SELECTION			APPROX WT*	
							No.	Dia	Length	lb	kg
1.5 (40mm)	150	RF	3.375	2	-	1.97	4	0.5	5	4	1.8
	300	RF/RJ-20	3.75	2	-	1.97	4	0.75	6.5	4	1.8
	600	RF/RJ-20	3.75	2	-	1.97	4	0.75	6.5	4	1.8
2 (50mm)	150	RF	4.125	2.375	-	2.25	4	0.625	6	7	3.2
	300	RF/RJ-23	4.375	2.375	-	2.25	8	0.625	6.875	8	3.2
	600	RF/RJ-23	4.375	2.375	-	2.25	8	0.625	6.875	8	3.2
	900	RF/RJ-24	5.625	2.75	-	2.25	8	0.875	8.75	18	8.2
	1500	RF/RJ-24	5.625	2.75	-	2.25	8	0.875	8.75	18	8.2
2500	RF/RJ-26	5.75	2.75	-	2.25	8	1	10	29	13.1	
2.5 (65mm)	150	RF	4.875	2.625	-	2.94	4	0.625	6.375	11	5
	300	RF	5.125	2.625	-	2.94	8	0.75	6.875	13	5
3 (80mm)	150	RF	5.375	2.875	2	3.42	4	0.625	7	14	6.4
	300	RF	5.875	2.875	2	3.42	8	0.75	8.125	17	7.7
	600	RF	5.875	2.875	2	3.42	8	0.75	8.125	17	7.7
	900	RF/RJ-31	6.625	3.25	2.375	3.42	8	0.875	9.5	26	11.8
	1500	RF/RJ-35	6.875	3.25	2.375	3.42	8	1.125	10.5	28	12.7
	2500	RF/RJ-32	7.75	3.375	2.375	3.42	8	1.25	12.25	35	15.9
4 (100mm)	150	RF	6.875	2.875	3.5	4.45	8	0.625	7	21	9.5
	300	RF	7.125	2.875	3.5	4.45	8	0.75	8.125	23	10.5
	600	RF/RJ-37	7.625	3.125	3.5	4.45	8	0.875	9.5	28	12.7
	900	RF/RJ-37	8.125	4	3.25	4.45	8	1.125	11	42	19.1
	1500	RF/RJ-39	8.25	4	3.25	4.45	8	1.25	12	45	20.5
2500	RF/RJ-38	9.25	4.125	3.25	4.45	8	1.5	14.625	64	29.1	
5 (125mm)	150	RF	7.75	3.375	0	5.875	8	0.75	7.375	28	12.7
	300	RF	8.5	3.375	0	5.875	8	0.75	8.125	31	14.1
6 (150mm)	150	RF	8.75	3.875	5.5	6.52	8	0.75	8.25	36	16
	300	RF	9.875	3.875	5.5	6.52	12	0.75	9.625	45	20
	600	RF/RJ-45	10.5	5.375	3.5	6.52	12	1	12.375	80	36
	900	RF/RJ-45	11.375	6.25	3.5	6.52	12	1.125	14	119	54
	1500	RF/RJ-46	11.125	6.25	3.5	6.52	12	1.375	16.75	116	52
2500	RF/RJ-47	12.5	6.25	3.5	6.52	8	2	20.5	154	70	
8 (200mm)	150	RF	11	5	6.75	8.13	8	0.75	9.75	80	36
	300	RF	12.125	5	6.75	8.13	12	0.875	11.125	88	40
	600	RF/RJ-49	12.625	6.5	6.625	8.13	12	1.125	14.5	160	72
	900	RF/RJ-49	14.125	8.125	5.125	8.13	12	1.375	17.125	271	122
	1500	RF/RJ-50	13.875	8.125	5.125	8.13	12	1.625	20.25	257	116
	2500	RF/RJ-51	15.25	8.125	5.625	8.13	12	2	24	293	132
10 (250mm)	150	RF	13.375	5.75	9.25	10.25	12	0.875	11	116	52
	300	RF	14.25	5.75	9.25	10.25	16	1	12.75	124	56
	600	RF/RJ-53	15.75	8.375	7.875	10.25	16	1.25	17.125	260	118
	900	RF/RJ-53	17.125	9.5	7.688	10.25	16	1.375	19	434	196
	1500	RF/RJ-54	17.125	9.75	7.25	10.25	12	1.875	23.5	449	203
2500	RF/RJ-55	18.75	10	7.5	10.25	12	2.5	30.5	480	217	
12 (300mm)	150	RF	16.125	7.125	10.25	11.82	12	0.875	12.25	215	97
	300	RF	16.625	7.125	10.25	11.82	16	1.125	14.625	217	98
	600	RF/RJ-57	18	9	9.125	11.82	20	1.25	18	360	164
	900	RF/RJ-57	19.625	11.5	8.125	11.82	20	1.375	21.75	644	293
	1500	RF/RJ-58	20.5	12	8.25	11.82	16	2	27.5	824	373
2500	RF/RJ-60	21.625	12	8.875	11.82	12	2.75	34.5	870	394	

VALVE SIZE	1.5" to 24"	26" to 60"	66" to 144"
FLANGE STANDARD	ANSI B16.5	ANSI B16.47 SERIES A (MSS SP44)	AWWA C207 (CLASS E 275 PSI)

DUAL PLATE CHECK VALVE TYPES

WAFER TYPE BR

ANSI B16.5

- Flange dims to ANSI B16.5 (MSS-SP44 >24")*
- Face to Face dims to API 594

API 605

- Flange dims to API 605**
- Face to Face dims to API 594

(Retainerless design supplied as standard†)

API 6A

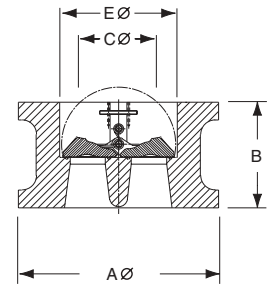
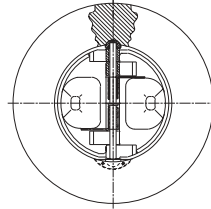
- Flange dims to API 6A
- Face to Face dims to API 6A

API 6D

- Flange dims to ANSI B16.5
- Face to Face dims to API 6D

EXTENDED BODY

- Flange dims to ANSI B16.5



FLANGED TYPE BFR

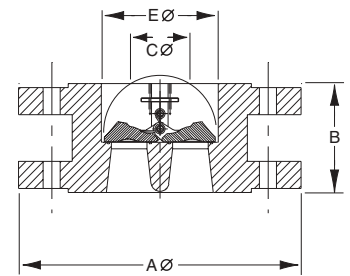
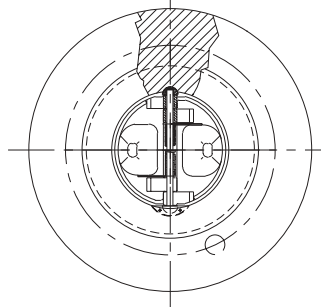
TYPE BFT

- Threaded Flanged Type also available

FLANGED LUG TYPE

- Flange dims to ANSI B16.5 (MSS-SP44 >24")*
- Face to Face dims to API 594

(Retainerless design supplied as standard†)



SOLID LUG TYPE BSR

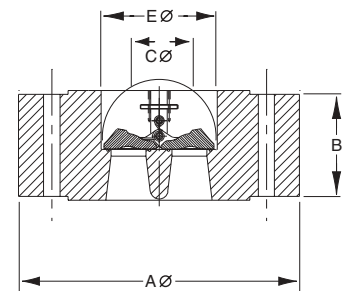
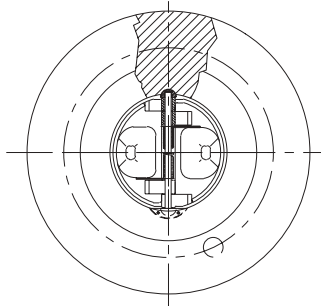
TYPE BTR

- Threaded Lug Type also available

SOLID LUG TYPE

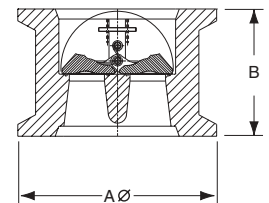
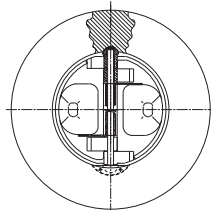
- Flange dims to ANSI B16.5 (MSS-SP44 >24")*
- Face to Face dims to API 594

(Retainerless design supplied as standard†)



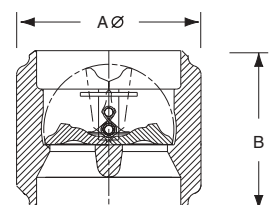
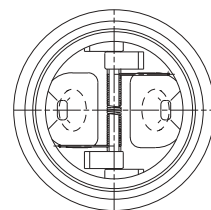
HUB ENDED TYPE BHR

(also available in full bore version - Type BH - with increased face to face dimension)



BUTTWELD END TYPE BWR

(Retainerless design supplied as standard†)



†On occasions, for technical or delivery reasons, Goodwin may offer valves with retainers. In such instances, this will be clearly indicated in the quotation.

*MSS-SP44 now superseded by ANSI B16.47 Series A

**API 605 now superseded by ANSI B16.47 Series B

Δ Outside profile of bodies may differ from those shown above.

TYPE BR
Wafer Retainerless



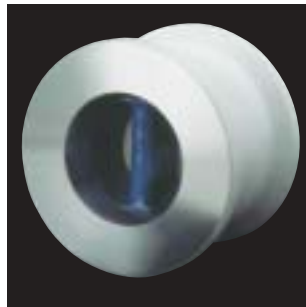
TYPE BFR
Flanged Retainerless



TYPE BSR
Solid Lug Retainerless



TYPE BHR
Hub-Ended Retainerless



TYPE BWR
Buttweld End Retainerless



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As part of our continuous product improvement policy we reserve the right to institute changes in any materials, designs and specifications within this catalog. E&OE

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TYPICAL CONSTRUCTIONS

CARBON STEEL BODY VALVES								API 600
Seal	Figure No	Body	Plates (1) (8)	Body Seat	Plate Seat	Wetted Parts (2)	Spring (3)	TRIM No.
Metal to metal	CEPPR-YE	A216 WCB/A105	A217 CA15	AS BODY	AS PLATE	410 SS	INCONEL X750®	
Metal overlay	CEEPR-YE	A216 WCB/A105	A217 CA15	410 SS	AS PLATE	410 SS	INCONEL X750®	1
Metal overlay	CEUPR-YE	A216 WCB/A105	A217 CA15	STELLITE 6®	AS PLATE	410 SS	INCONEL X750®	8
Metal overlay	CEUUR-YE	A216 WCB/A105	A217 CA15	STELLITE 6®	STELLITE 6®	410 SS	INCONEL X750®	5
Resilient (4)	CEVPR-YE	A216 WCB/A105	A217 CA15	VITON A®	AS PLATE	410 SS	INCONEL X750®	
Lined (5)	CAXPR/MM	A216 WCB/A105	BS 1400 AB2	CHLOROPRENE®	AS PLATE	MONEL 400®	MONEL K500®	
Metal to metal	OSPPR-YS	A352 LCC/A350 LF2	A351 CF8M	AS BODY	AS PLATE	316 SS	INCONEL X750®	
Metal overlay	OSSPR-YS	A352 LCC/A350 LF2	A351 CF8M	316 SS	AS PLATE	316 SS	INCONEL X750®	10
Metal overlay	OSUPR-YS	A352 LCC/A350 LF2	A351 CF8M	STELLITE 6®	AS PLATE	316 SS	INCONEL X750®	12
Metal overlay	OSUUR-YS	A352 LCC/A350 LF2	A351 CF8M	STELLITE 6®	STELLITE 6®	316 SS	INCONEL X750®	5
Resilient (4)	OSVPR-YS	A352 LCC/A350 LF2	A351 CF8M	VITON A®	AS PLATE	316 SS	INCONEL X750®	

STAINLESS STEEL BODY VALVES								API 600
Seal	Figure No	Body	Plates	Body Seat	Plate Seat	Wetted Parts	Spring (3)	TRIM No.
Metal to metal	SSPPR-YS	A351 CF8M / A182 F316	A351 CF8M	AS BODY	AS PLATE	316 SS	INCONEL X750®	10
Metal overlay	SSUPR-YS	A351 CF8M / A182 F316	A351 CF8M	STELLITE 6®	AS PLATE	316 SS	INCONEL X750®	12
Metal overlay	SSUUR-YS	A351 CF8M / A182 F316	A351 CF8M	STELLITE 6®	STELLITE	316 SS	INCONEL X750®	5
Resilient (4)	SSVPR-YS	A351 CF8M / A182 F316	A351 CF8M	VITON A®	AS PLATE	316 SS	INCONEL X750®	

IRON BODY VALVES							
Seal	Figure No	Body (6)	Plates (7) (8)	Body Seat	Plate Seat	Wetted Parts (7)	Spring (7)
Resilient (4)	XANPF-MM	A126 Cl. B	BS 1400 AB2	BUNA N®	AS PLATE	MONEL 400®	MONEL K500®
Lined (5)	XAXPF/MM	A126 Cl. B	BS 1400 AB2	CHLOROPRENE®	AS PLATE	MONEL 400®	MONEL K500®
Resilient (4)	9ANPF-MM	A395	BS 1400 AB2	BUNA N®	AS PLATE	MONEL 400®	MONEL K500®
Resilient (4)	9ANPF-II	A395	BS 1400 AB2	BUNA N®	AS PLATE	INCONEL 625®	INCONEL 625®
Lined (5)	9AXPF-MM	A395	BS 1400 AB2	CHLOROPRENE®	AS PLATE	MONEL 400®	MONEL K500®
Metal to metal	88PPF-SS	A 439 D2	A 439 D2	AS BODY	AS PLATE	316 SS	316 SS
Metal to metal	88PPF-II	A 439 D2	A 439 D2	AS BODY	AS PLATE	INCONEL 625®	INCONEL 625®
Resilient (4)	88NPF-SS	A 439 D2	A 439 D2	BUNA N®	AS PLATE	316 SS	316 SS
Resilient (4)	88NPF-II	A 439 D2	A 439 D2	BUNA N®	AS PLATE	INCONEL 625®	INCONEL 625®
Resilient (4)	8ANPF-II	A 439 D2	BS 1400 AB2	BUNA N®	AS PLATE	INCONEL 625®	INCONEL 625®

ALUMINIUM BRONZE BODY VALVES							
Seal	Figure No	Body (8)	Plates (8)	Body Seat	Plate Seat	Wetted Parts (9)	Spring
Metal to metal	AAPPR-MM	BS 1400 AB2	BS 1400 AB2	AS BODY	AS PLATE	MONEL 400®	MONEL K500®
Resilient (4)	AANPR-MM	BS 1400 AB2	BS 1400 AB2	BUNA N®	AS PLATE	MONEL 400®	MONEL K500®

DUPLEX STAINLESS STEEL BODY VALVES							
Seal	Figure No	Body	Plates	Body Seat	Plate Seat	Wetted Parts	Spring
Metal to metal	QQPPR-YI	UNS S31803	UNS S31803	AS BODY	AS PLATE	INCONEL 625®	INCONEL X750®
Metal overlay	QQUPR-YI	UNS S31803	UNS S31803	STELLITE 6®	AS PLATE	INCONEL 625®	INCONEL X750®
Resilient (4)	QQWPR-YI	UNS S31803	UNS S31803	VITON B®	AS PLATE	INCONEL 625®	INCONEL X750®

INCONEL STEEL BODY VALVES							
Seal	Figure No	Body	Plates	Body Seat	Plate Seat	Wetted Parts	Spring
Metal to metal	IIPPR-II	UNS N06625	UNS N06625	AS BODY	AS PLATE	INCONEL 625®	INCONEL 625®
Metal overlay	IUIPR-II	UNS N06625	UNS N06625	STELLITE 6®	AS PLATE	INCONEL 625®	INCONEL 625®
Inconel clad body (10)	OIIPR/II	A352 LCC	UNS N06625	INCONEL625® CLAD	AS PLATE	INCONEL 625®	INCONEL 625®

TITANIUM BODY VALVES							
Seal	Figure No	Body (11)	Plates (11)	Body Seat	Plate Seat	Wetted Parts	Spring
Metal to metal	TTPPR-TT	B348 Gr2 / B381 F2	B348 Gr2 / B381 F2	AS BODY	AS PLATES	B348 Gr2	TITANIUM
Resilient (4)	TTVPT-TT	B348 Gr2 / B381 F2	B348 Gr2 / B381 F2	VITON A®	AS PLATES	B348 Gr2	TITANIUM

See opposite page for applicable notes (1) to (11)

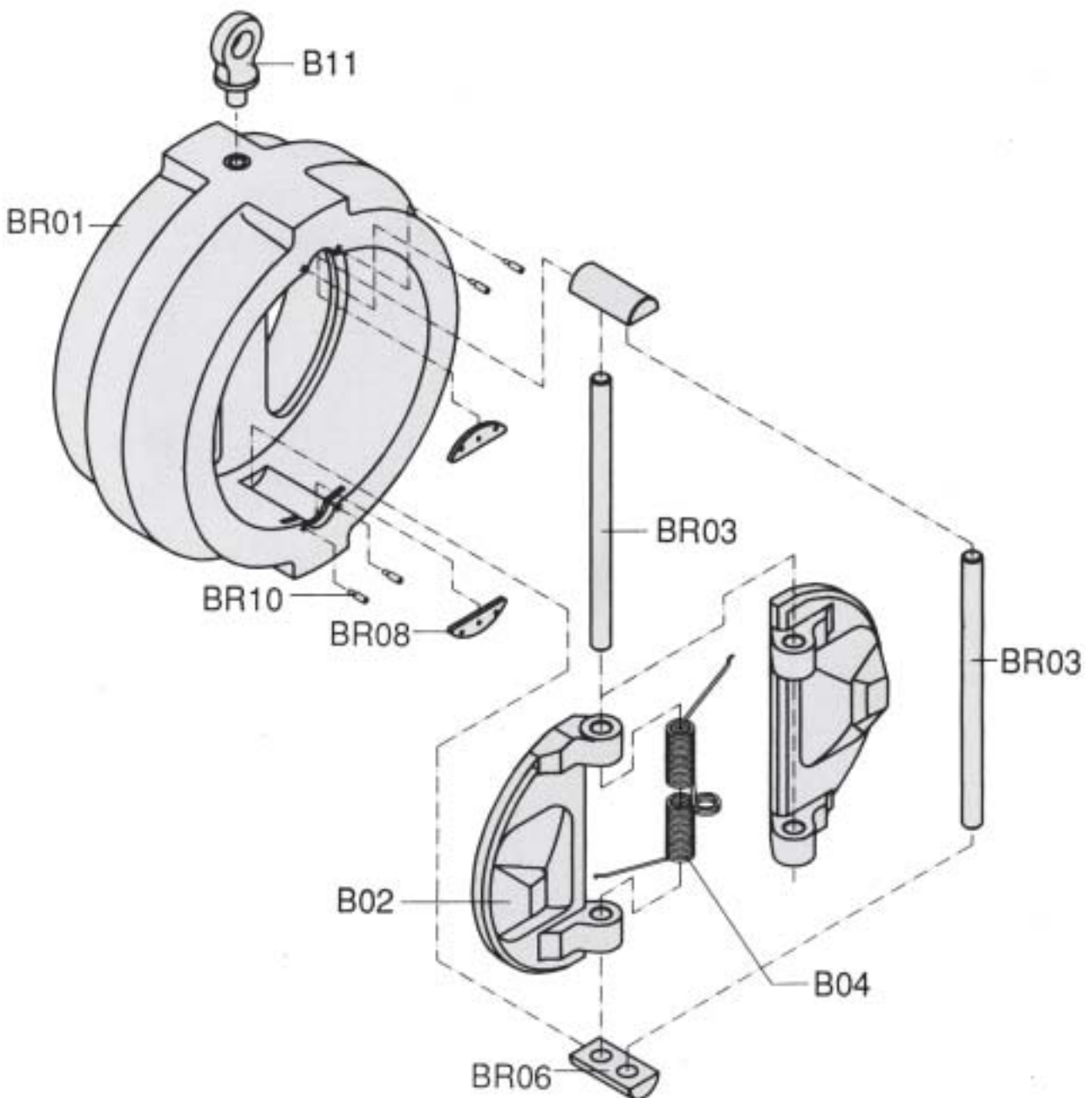
EXPLODED VIEWS AND SPARE PARTS

WAFER RETAINERLESS

TYPE BR

VALVE COMPONENTS

- BR01 - BODY
- * B02 - PLATE x 2
- * BR03 - HINGE/STOP PIN x 2
- * B04 - SPRING
- * BR06 - CARRIER x 2
- * BR08 - KEEPER PLATE x 2
- * BR10 - DOWEL x 4
- † B11 - EYEBOLT



(Some BR TYPE bodies are forged - as depicted in the exploded view)

* Spares Available

† 1 eye bolt supplied for valves 6" and larger. Eyebolt material is Carbon Steel