PRODUCT / DESIGN DATA

General Description	BUTTERFLY VALVE
Design Code	EN 593 & API 609
Type	Concentric
End Connection	Wafer type – Mono flange
Size Range	DN 80 - 1200, NPS 3"- 48"
End connection	EN 1092 PN 6, 10 and 16 ASME B16.5 cl. 150 / B16.47 cl. 150 MSS SP 44 cl. 150 AWWA C207 cl. B, D and E BS 10 table D and E JIS 5K/10K/16K
Body Material	See Parts List
Body Seat	Non replaceable rubber lining, vulcanized, bonded to the body
Trim Material	See Parts List
Design pressure PS	10/16 bar - optional 20 bar
Design temperature TS	Min. -20 °C (-4 °F) to max. +200 °C (392 °F), depending on materials selected
Face to Face	EN 558 Table 2 - Series 20 ISO 5752 Table 1 - Series 20 API 609 Table 2 - Cat. A
Shaft Seal Design	O-ring
Driving Shaft	With indication for position of the disc



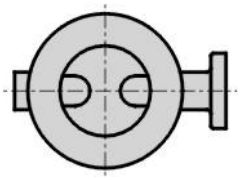
OPTIONS

Anti-Static Design	Compliant with EN 736/3 and API 609

TESTING PROCEDURES

Shell strength test	EN 12266-1, P10 ISO 5208 API 598
Shell tightness test	EN 12266-1, P11 ISO 5208 API 598
Seat tightness test	EN 12266-1, P12, Rate A ISO 5208, Rate A API 598
Operability test	EN 12266-2, F20 ISO 5208 API 598

PREFERRED POSITION WHEN INSTALLED IN HORIZONTAL PIPELINE



FUNCTIONAL CHARACTERSTICS

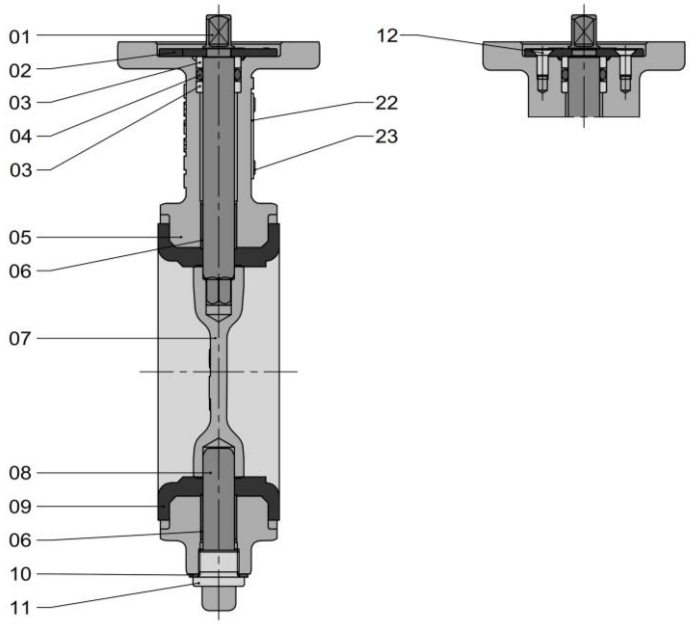
Application	Isolating, regulating, control valve
Flow velocity	Max. 5 m/s for liquids, max. 50 m/s for gases
Seat tightness rate	ISO 5208 rate A - Bi-directional bubble tight

MARKING & CERTIFICATION

Marking	EN 19, MSS SP 25
Certification	EN 10204 - 2.2, 3.1, 3.2

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PARTS LIST – EVMS-i 80-350 (3"-14")

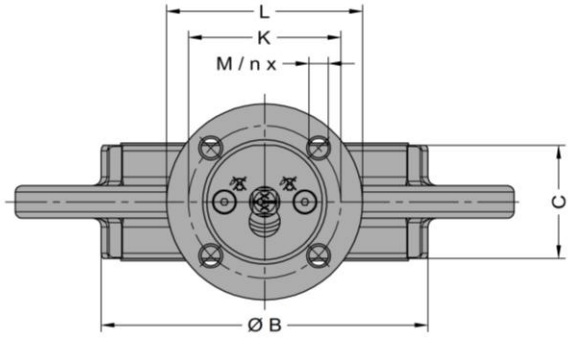


Item	Description	Material [1]	Standard	Comparable ASME
01	Shaft	Duplex SS Super Duplex SS Martensitic SS Aluminium Bronze Monel K500®	1.4462, EN 10088 1.4501, EN 10272 1.4021, EN 10088 CuAl10Ni5Fe4, EN 12163 NA 18, BS 3076	SA 182, Grade F51 SA 479, UNS 32760 SA 276, Grade 420 SB 150, C63000 -
02	Anti-blow-out cover	POM Steel - zinc plated	Polyoxymethylene, ISO 29988-1	
03	Radial bearing	POM Bronze	Polyoxymethylene, ISO 29988-1 CC493K, EN 1982	
04	O-ring	EPDM NBR FPM		
05	Body	Ductile Iron Ductile Iron (low temp.) Carbon Steel Bronze Bronze Bronze	5.3106, EN 1563 (JS1030) 5.3103, EN 1563 (JS1049) 1.0619, EN 10213 2.1096.01, DIN 1705 (CC491K, EN 1982) 2.1086.01, DIN 1705 (CC482K, EN 1982) CC493K, EN 1982	SA 395, 60-40-18 - SA 216, WCB SB 584, C83600 SB 584, C90500 SB 584, C93200
06	Bearing	Steel / PTFE Lining Bronze / PTFE Lining		
07	Disc	Martensitic SS Martensitic SS Austenitic SS Duplex SS Duplex SS Super Duplex SS Ductile Iron / Rilsan coated [2] Aluminium Bronze Bronze Bronze	- 1.4405, EN 10213 1.4408, EN 10213 1.4517, EN 10213 1.4470, EN 10213 1.4469, EN 10213 5.3106, EN 1563 (JS1030) CC333G, EN 1982 2.1096.01, DIN 1705 (CC491K, EN 1982) 2.1086.01, DIN 1705 (CC482K, EN 1982)	SA 352, CA6NM - SA 351, CF8M SA 351, CD-4MCu SA 351, Grade 4A SA 995, Grade 5A/6A SA 395, 60-40-18 SB 148, C95800 SB 584, C83600 SB 584, C90500
08	Shaft	See Item 01	See Item 01	See Item 01
09	Lining	EPDM NBR FPM Silicone		
10	Seal ring	SS/NBR		
11	Plug	Steel - zinc plated		
12	Hex sch screw	Steel - zinc plated		
22	Identification plate	SS		
23	Blind rivet	SS		

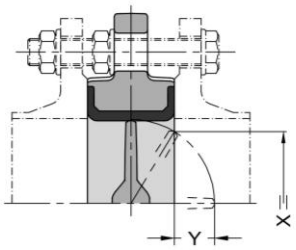
[1] Other materials on request.
[2] Other coating on request.

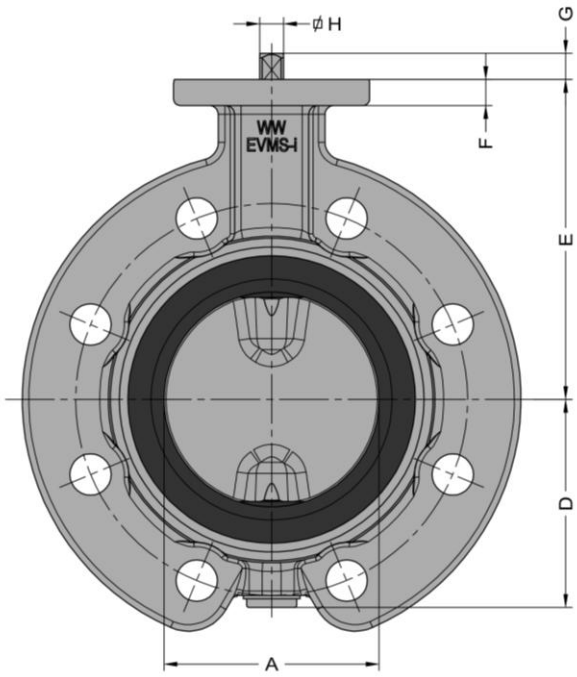
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DIMENSIONS – EVMS-i 80-350 (3"-14")

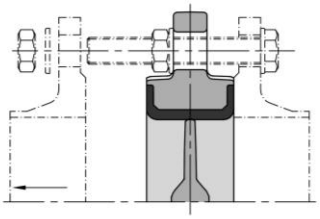


IN LINE INSTALLATION





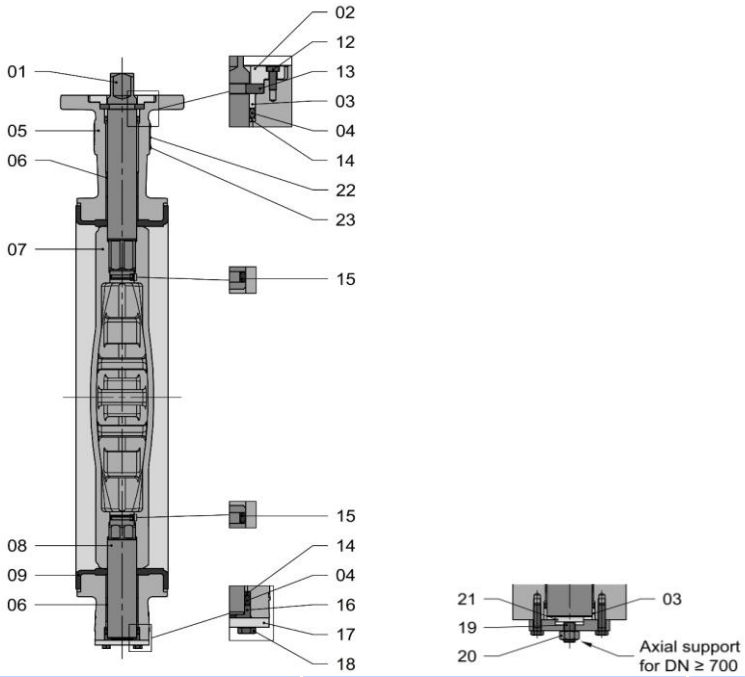
DEAD END SERVICE



DN	NPS	PS max [bar]	A	B	C	D	E	F	G	H	ISO 5211	K	L	M	n	X	Y	MASS ±kg
80	3"	16	80	130	46	78	133	12	15	9	F07	70	90	9	4	67	18	5
100	4"	16	100	150	52	98	147	12	15	11	F07	70	90	9	4	87	25	7
125	5"	16	125	182	56	109	160	12	16	14	F07	70	90	9	4	113	35	9
150	6"	16	150	210	56	133	180	14	16	14	F07	70	90	9	4	140	48	11
200	8"	16	200	262	60	158	204	14	19	17	F07	70	90	9	4	191	70	17
250	10"	16	250	315	68	194	245	15	24	22	F10	102	125	11	4	242	92	28
300	12"	16	300	371	78	219	270	15	24	22	F10	102	125	11	4	289	111	42
350	14"	16	336	405	78	238	315	15	24	22	F12	125	150	13	4	328	130	53

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PARTS LIST – EVTLS-i 400-1000 (16"-40")

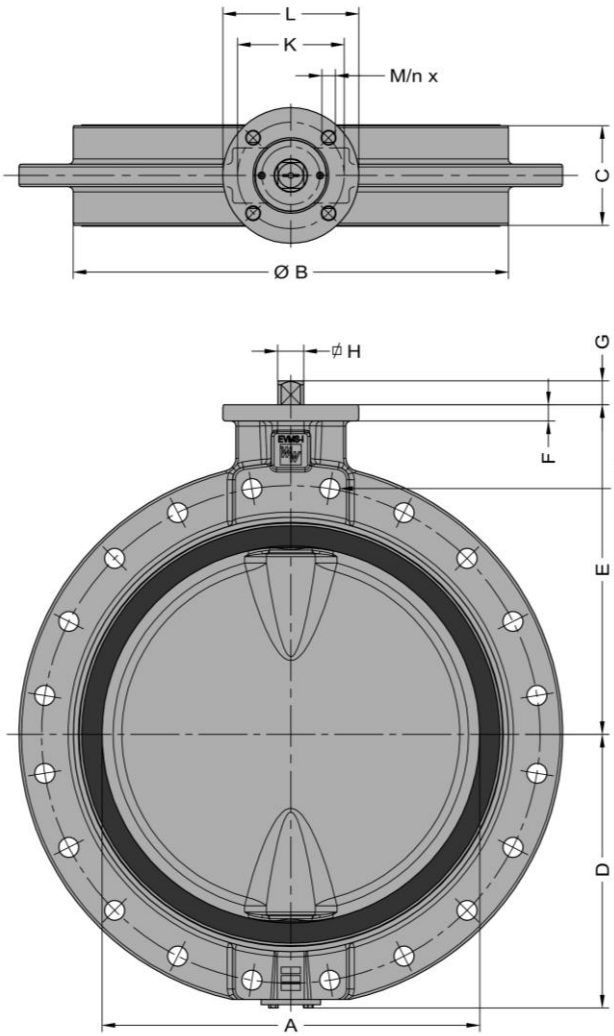


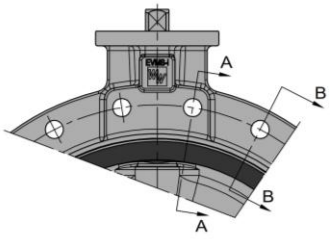
Item	Description	Material [1]	Standard	Comparable ASME
01	Shaft	Duplex SS Super Duplex SS Martensitic SS Aluminium Bronze Monel K500®	1.4462, EN 10088 1.4501, EN 10272 1.4021, EN 10088 CuAl10Ni5Fe4, EN 12163 NA 18, BS 3076	SA 182, Grade F51 SA 479, UNS 32760 SA 276, Grade 420 SB 150, C63000 -
02	Anti-blow-out cover	POM Steel - zinc plated	Polyoxymethylene, ISO 29988-1	
03	Radial bearing	POM Bronze	Polyoxymethylene, ISO 29988-1 CC493K, EN 1982	
04	O-ring	EPDM NBR FPM		
05	Body	Ductile Iron Ductile Iron (low temp.) Carbon Steel Bronze Bronze Bronze Aluminium Bronze	5.3106, EN 1563 (JS1030) 5.3103, EN 1563 (JS1049) 1.0619, EN 10213 2.1096.01, DIN 1705 (CC491K, EN 1982) 2.1086.01, DIN 1705 (CC482K, EN 1982) CC493K, EN 1982 CC333G, EN 1982	SA 395, 60-40-18 - SA 216, WCB SB 584, C83600 SB 584, C90500 SB 584, C93200 SB 148, C95800
06	Bearing	St. / PTFE Lining Bronze / PTFE Lining		
07	Disc	Austenitic SS Duplex SS Duplex SS Super Duplex SS Ductile Iron / Rilsan coated [2] Aluminium Bronze Bronze Bronze	1.4408, EN 10213 1.4517, EN 10213 1.4470, EN 10213 1.4469, EN 10213 5.3106, EN 1563 (JS1030) CC333G, EN 1982 2.1096.01, DIN 1705 (CC491K, EN 1982) 2.1086.01, DIN 1705 (CC482K, EN 1982)	SA 351, CF8M SA 351, CD-4MCu SA 351, Grade 4A SA 995, Grade 5A/6A SA 395, 60-40-18 SB 148, C95800 SB 584, C83600 SB 584, C90500
08	Shaft	See Item 01	See Item 01	See Item 01
09	Lining	EPDM NBR FPM Silicone		
12	Hex shc screw	Steel - zinc plated		
13	Axial bearing	POM	Polyoxymethylene, ISO 29988-1	
14	Support ring	POM Bronze	Polyoxymethylene, ISO 29988-1 CC493K, EN 1982	
15	O-ring	See Item 04	See Item 04	See Item 04
16	Axial bearing	POM	Polyoxymethylene, ISO 29988-1	
17	Cover plate	Steel - zinc plated		
18	Hexagon head bolt	Steel - zinc plated		
19	Hex. socket set screw	Steel - zinc plated		
20	Hexagon nut	Steel - zinc plated		
21	Bearing disc	POM Bronze	Polyoxymethylene, ISO 29988-1 CC493K, EN 1982	
22	Identification plate	SS		
23	Blind rivet	SS		

[1] Other materials on request.
[2] Other coating on request.

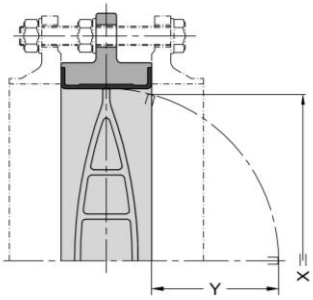
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DIMENSIONS – EVMS-i 400-1000 (16"-40")

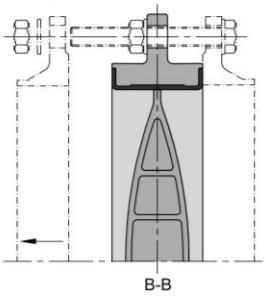




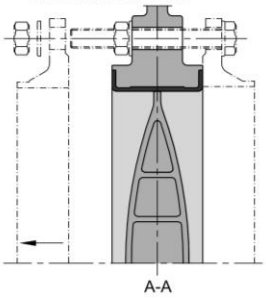
IN LINE INSTALLATION



DEAD END SERVICE



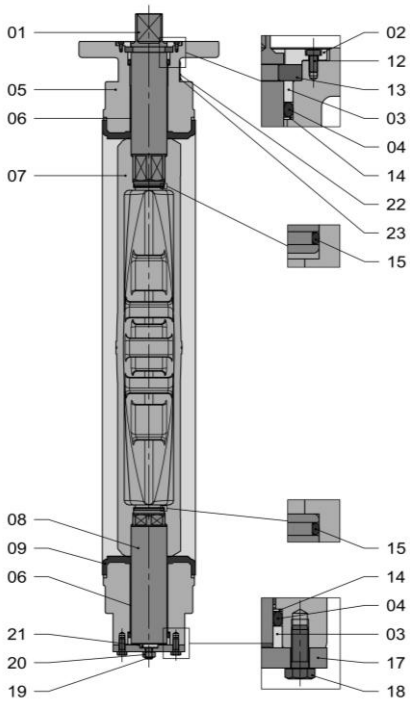
DEAD END SERVICE



DN	NPS	PS max [bar]	A	B	C	D	E	F	G	H	ISO 5211	K	L	M	n	X	Y	MASS ±kg
400	16"	16	386	470	102	306	363	25	28	27	F14	140	175	17	4	374	143	83
450	18"	16	436	522	114	331	388	25	28	27	F14	140	175	17	4	422	162	98
500	20"	10	486	576	127	374	460	25	28	27	F14	140	210	17	4	470	180	139
500	20"	16	486	576	127	374	460	25	37	36	F16	165	210	21	4	470	180	137
600	24"	10	586	672	154	424	510	25	37	36	F14	140	210	17	4	566	216	199
600	24"	16	586	672	154	424	510	25	37	36	F16	165	210	21	4	566	216	195
700	28"	10	686	776	165	525	560	25	37	36	F16	165	210	21	4	667	261	255
700	28"	16	686	776	165	525	560	25	48	46	F16	165	210	21	4	667	261	253
800	32"	10	786	880	190	575	610	25	48	46	F16	165	210	21	4	764	299	340
800	32"	16	786	880	190	575	610	25	57	55	F25	254	300	17	8	764	299	377
900	36"	10	886	980	203	645	690	30	48	46	F25	254	300	17	8	862	342	479
900	36"	16	886	980	203	645	690	30	57	55	F25	254	300	17	8	862	342	466
1000	40"	10	986	1085	216	695	740	30	57	55	F25	254	350	17	8	962	385	608
1000	40"	16	986	1085	216	695	740	30	77	75	F30	298	350	21	8	962	385	643

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PARST LIST – EVMS-i 1200 (48")

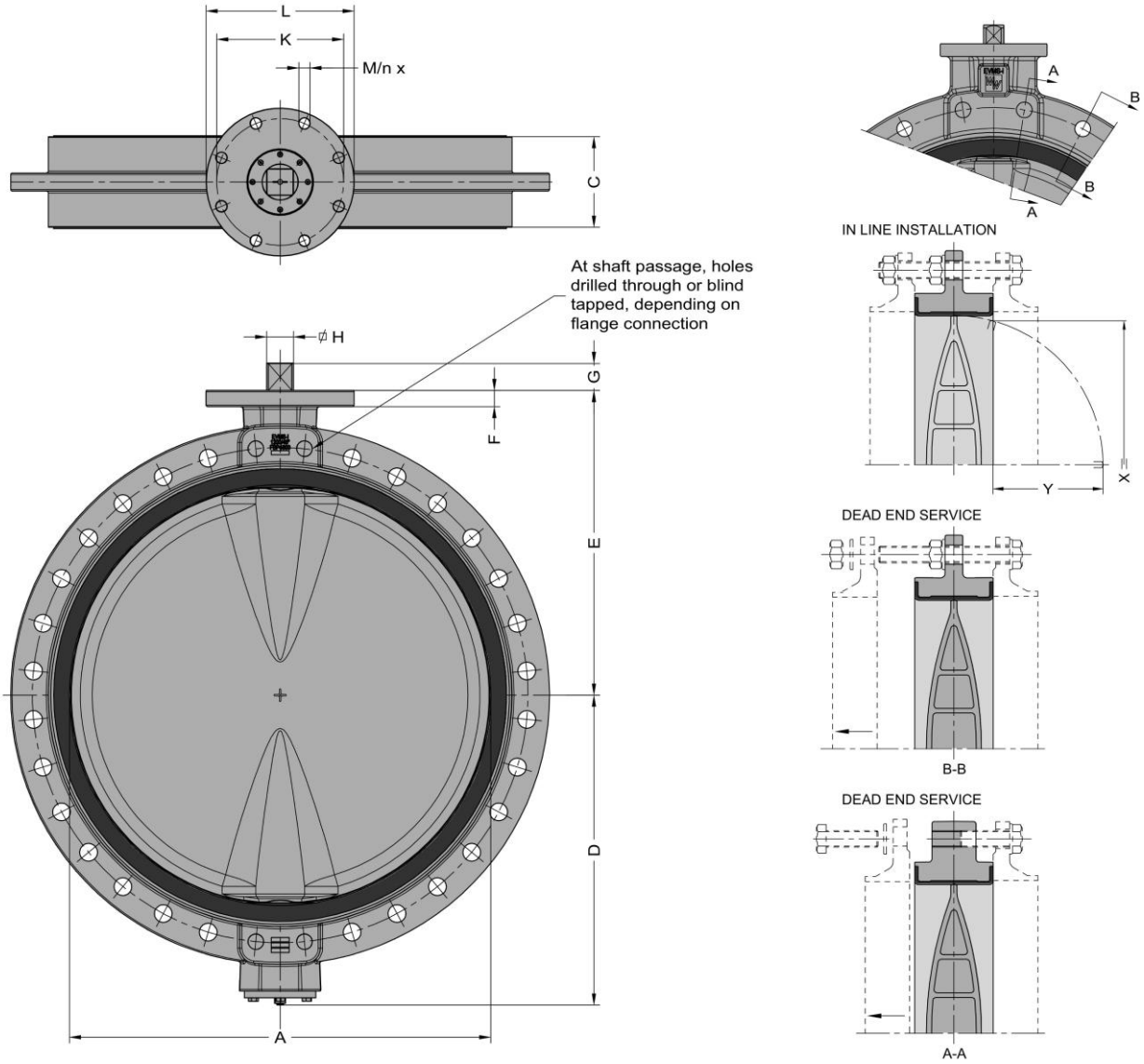


Item	Description	Material [1]	Standard	Comparable ASME
01	Shaft	Duplex SS Super Duplex SS Martensitic SS Aluminium Bronze Monel K500	1.4462, EN 10088 1.4501, EN 10272 1.4021, EN 10088 CuAl10Ni5Fe4, EN 12163 NA 18, BS 3076	SA 182, Grade F51 SA 479, UNS 32760 SA 276, Grade 420 SB 150, C63000 -
02	Anti-blow-out cover	POM Steel - zinc plated	Polyoxymethylene, ISO 29988-1	
03	Radial bearing	POM Bronze	Polyoxymethylene, ISO 29988-1 CC493K, EN 1982	
04	O-ring	EPDM NBR		
05	Body	Ductile Iron Ductile Iron (low temp.) Carbon Steel Aluminium Bronze Aluminium Bronze Bronze Bronze Bronze	5.3106, EN 1563 (JS1030) 5.3103, EN 1563 (JS1049) 1.06019, EN 10213 CC333G, EN 1982 - 2.1096.01, DIN 1705 (CC491K, EN 1982) 2.1086.01, DIN 1705 (CC482K, EN 1982) CC493K, EN 1982	SA 395, 60-40-18 - SA 216, WCB SB 148, C95800 SB 148, C95500 SB 584, C83600 SB 584, C90500 SB 584, C93200
06	Bearing	Steel / PTFE Lining Bronze / PTFE Lining		
07	Disc	Austenitic SS Duplex SS Super Duplex SS Ductile Iron / Rilsan coated [2] Aluminium Bronze Aluminium Bronze	1.4408, EN 10213 1.4517, EN 10213 1.4469, EN 10213 5.3106, EN 1563 (JS1030) CC333G, EN 1982 -	SA 351, CF8M SA 351, CD-4MCu SA 995, 5A/6A SA 395, 60-40-18 SB 148, C95800 SB 148, C95500
08	Shaft	See Item 01	See Item 01	See Item 01
09	Lining	EPDM NBR FPM		
12	Hex. shc screw	Steel - zinc plated		
13	Axial bearing	POM Bronze	Polyoxymethylene, ISO 29988-1 CC493K, EN 1982	
14	Support ring	POM Bronze	Polyoxymethylene, ISO 29988-1 CC493K, EN 1982	
15	O-ring	See Item 04	See Item 04	See Item 04
17	Cover plate	Steel - zinc plated		
18	Hexagon head bolt	Steel - zinc plated		
19	Hex. socket set screw	Steel - zinc plated		
20	Hexagon nut	Steel - zinc plated		
21	Bearing disc	POM Bronze	Polyoxymethylene, ISO 29988-1 CC493K, EN 1982	
22	Identification plate	SS		
23	Blind rivet	SS		

[1] Other materials on request.
[2] Other coating on request.

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DIMENSIONS - EVMS-i 1200 (48")



DN	NPS	PS max [bar]	A		C	D	E	F	G	H	ISO 5211	K	L	M	n	X	Y	MASS ±kg
1200	48"	10	1186		254	874	855	35	57	55	F30	298	415	21	8	1158	466	940
1200	48"	16	1186		254	874	855	35	77	75	F35	356	415	31	8	1158	466	1037

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