

**PRODUCT / DESIGN DATA**

General Description	BUTTERFLY VALVE
Design Code	EN 593 & API 609
Type	Concentric
End Connection	Double Flanged type
Size Range	DN 40 - 1400, NPS 1,5" - 56"
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 13 ISO 5752 Table 1 - Series 13 API 609 Table 3C - Cat. B Class 150
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
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**TESTING PROCEDURES**

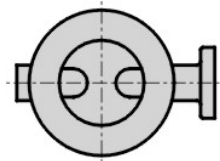
Shell strength test	EN 12266-1, P10 ISO 5208 API 598
Shell tightness test	EN 12266-1, P11 ISO 5208 API 598
Seat tightness test	EN 12266-1, P12, Rate A ISO 5208, Rate A API 598
Operability test	EN 12266-2, F20 ISO 5208 API 598

**FUNCTIONAL CHARACTERISTICS**

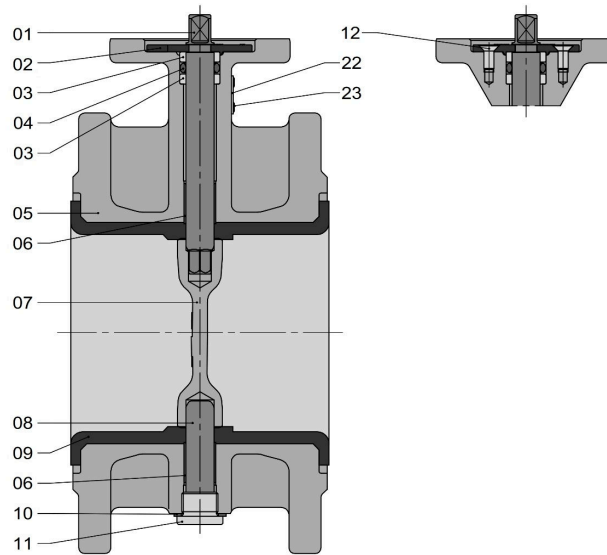
Application	Isolating, regulating, control valve
Flow velocity	Max. 5 m/s for liquids, max. 50 m/s for gases
Seat tightness rate	ISO 5208 rate A - Bi-directional bubble tight

**MARKING & CERTIFICATION**

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

**PREFERRED POSITION WHEN INSTALLED IN HORIZONTAL PIPELINE**

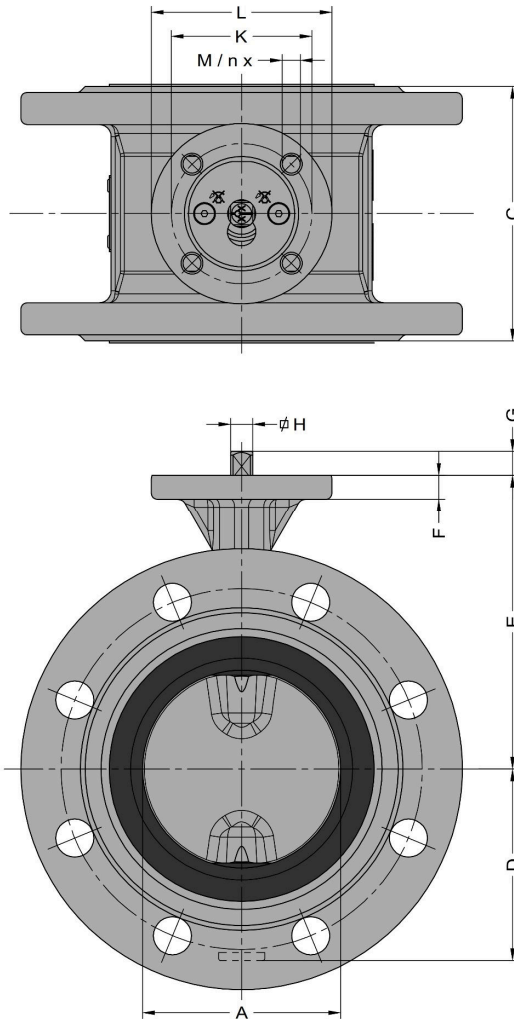
## PARTS LIST - EVFS-i 40-350 (1.5"-14")



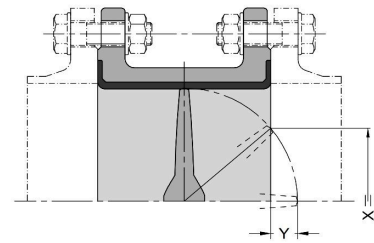
Item	Description	Material <sup>(1)</sup>	Standard	Comparable ASME
01	Shaft	Duplex SS Super Duplex SS Martensitic SS Aluminium Bronze Monel K500 <sup>*</sup>	1.4462, EN 10088 1.4501, EN 10272 1.4021, EN 10088 CuAl10Ni5Fe4, EN 12163 NA 18, BS 3076	SA 182, Grade F51 SA 479, UNS 32760 SA 276, Grade 420 SB 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 Austenitic SS Duplex SS Duplex SS Super Duplex SS Ductile Iron / Rilsan coated <sup>(2)</sup> 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 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		

<sup>(1)</sup> Other materials on request.<sup>(2)</sup> Other coating on request.

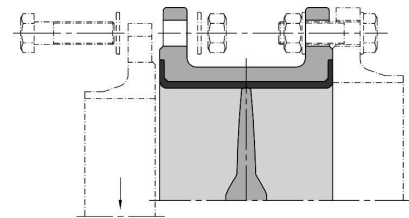
**DIMENSIONS - EVFS-i 40-350 (1.5"-14")**



IN LINE INSTALLATION

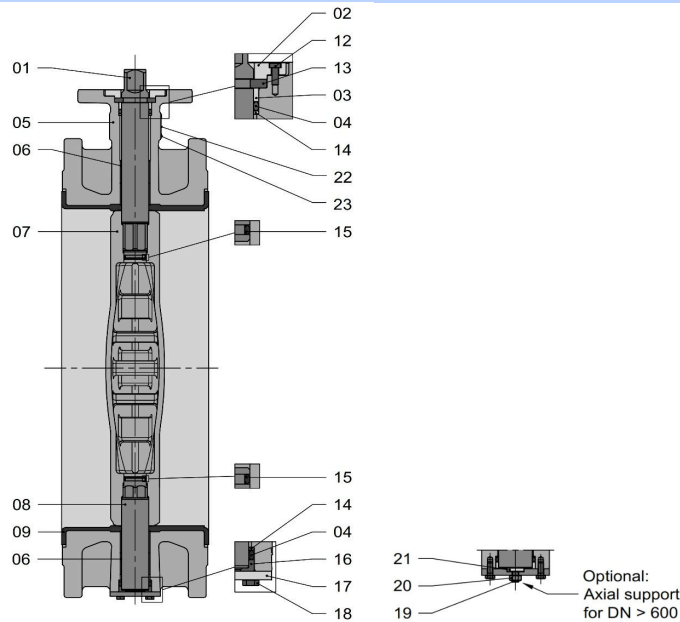


DEAD END SERVICE



DN	NPS	PS max [bar]	A	C	D	E	F	G	H	ISO 5211	K	L	M	n	X	Y	MASS ±kg
40	1.5"	16	40	106	58	113	12	10	9	F07	70	90	9	4	-	-	6
50	2"	16	50	108	63	118	12	10	9	F07	70	90	9	4	-	-	7
65	2.5"	16	65	112	71	126	12	10	9	F07	70	90	9	4	-	-	8
80	3"	16	80	114	78	133	12	10	9	F07	70	90	9	4	-	-	9
100	4"	16	100	127	98	147	12	12	11	F07	70	90	9	4	-	-	11
125	5"	16	125	140	109	160	12	16	14	F07	70	90	9	4	-	-	14
150	6"	16	150	140	133	180	14	16	14	F07	70	90	9	4	56	6	17
200	8"	16	200	152	158	204	14	19	17	F07	70	90	9	4	130	24	26
250	10"	16	250	165	194	245	15	24	22	F10	102	125	11	4	190	43	40
300	12"	16	300	178	219	270	15	24	22	F10	102	125	11	4	241	61	57
350	14"	16	336	190	236	315	15	24	22	F12	125	150	13	4	278	74	80

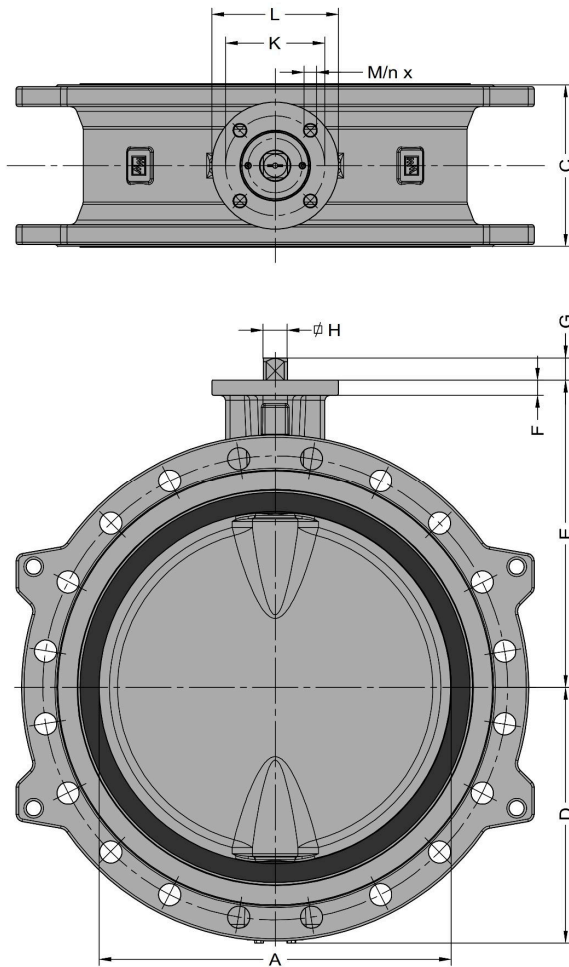
## PARTS LIST - EVFS-i 400-1000 (16"-40")



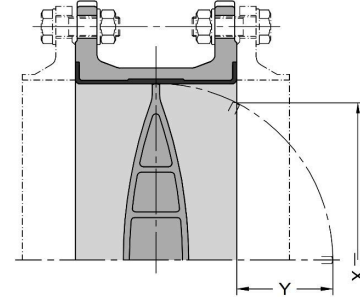
Item	Description	Material <sup>(1)</sup>	Standard	Comparable ASME
01	Shaft	Duplex SS Super Duplex SS Martensitic SS Aluminium Bronze Monel K500*	1.4462, EN 10088 1.4501, EN 10272 1.4021, EN 10088 CuAl10Ni5Fe4, EN 12163 NA 18, BS 3076	SA 182, Grade F51 SA 479, UNS 32760 SA 276, Grade 420 SB 150, C63000 -
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	Steel / PTFE Lining Bronze / PTFE Lining		
07	Disc	Austenitic SS Duplex SS Duplex SS Super Duplex SS Ductile Iron / Rilsan coated <sup>(2)</sup> 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	Bearing disc	Bronze	CC493K, EN 1982	
21	Hexagon nut	Steel - zinc plated		
22	Identification plate	SS		
23	Blind rivet	SS		

<sup>(1)</sup> Other materials on request.<sup>(2)</sup> Other coating on request.

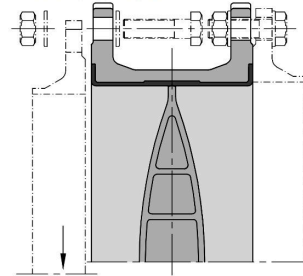
**DIMENSIONS - EVFS-i 400-1000 (16"-40")**



IN LINE INSTALLATION

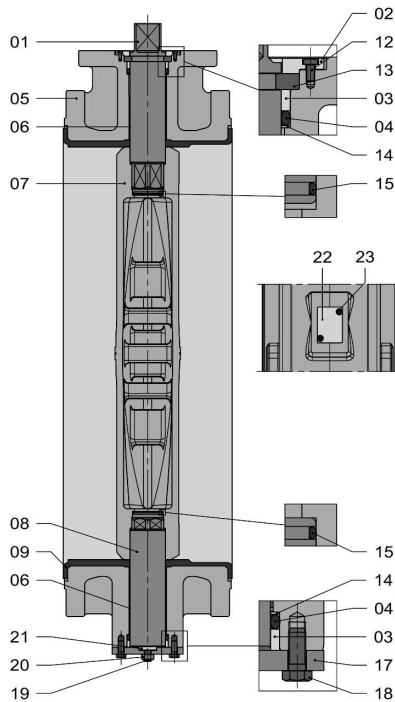


DEAD END SERVICE



DN	NPS	PS max [bar]	A	C	D	E	F	G	H	ISO 5211	K	L	M	n	X	Y	MASS ±kg
400	16"	16	386	216	305	363	25	28	27	F14	140	175	17	4	321	86	125
450	18"	16	436	222	330	388	25	28	27	F14	140	175	17	4	377	108	145
500	20"	10	486	229	373	460	25	28	27	F14	140	210	17	4	429	129	195
500	20"	16	486	229	373	460	25	37	36	F16	165	210	21	4	429	129	195
600	24"	10	586	267	423	510	25	37	36	F14	140	210	17	4	522	160	295
600	24"	16	586	267	423	510	25	37	36	F16	165	210	21	4	522	160	295
700	28"	10	686	292	520	560	25	37	36	F16	165	210	21	4	622	198	343
700	28"	16	686	292	520	560	25	48	46	F16	165	210	21	4	622	198	343
750	30"	10	736	<sup>Ⓢ</sup> 318	545	585	25	37	36	F16	165	210	21	4	665	210	475
750	30"	16	736	<sup>Ⓢ</sup> 318	545	585	25	57	55	F25	254	300	17	8	665	210	475
800	32"	10	786	318	570	610	25	48	46	F16	165	210	21	4	720	235	495
800	32"	16	786	318	570	610	25	57	55	F25	254	300	17	8	720	235	495
900	36"	10	886	330	640	690	30	48	46	F25	254	300	17	8	822	278	620
900	36"	16	886	330	640	690	30	57	55	F25	254	300	17	8	822	278	620
1000	40"	10	986	410	690	740	30	57	55	F25	254	350	17	8	896	288	905
1000	40"	16	986	410	690	740	30	77	75	F30	298	350	21	8	896	288	905

<sup>Ⓢ</sup> Manufacturer's standard

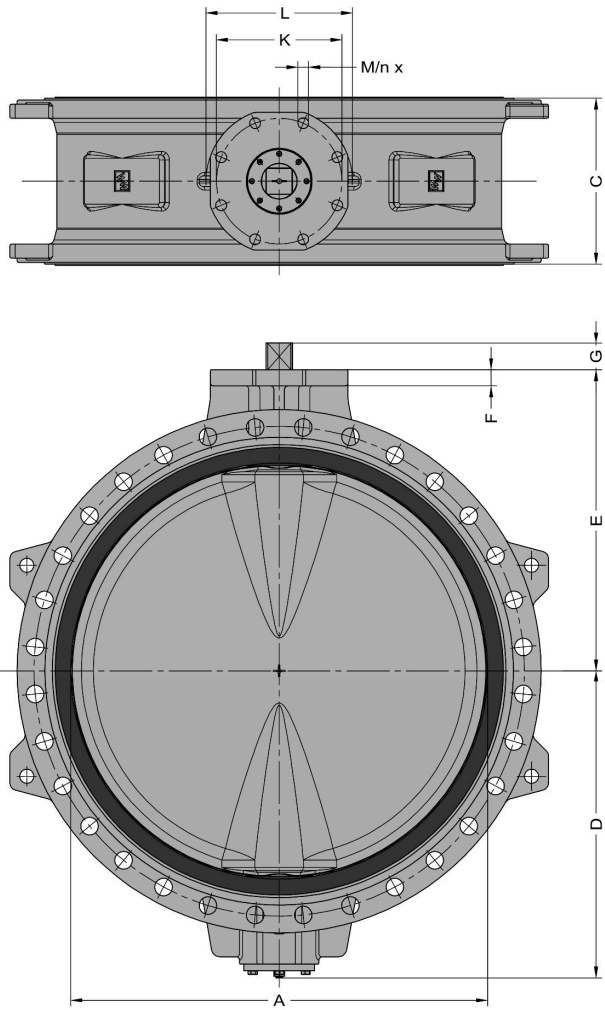
**PARST LIST – EVFS-i 1200-1400 (48"-56")**


Item	Description	Material <sup>(1)</sup>	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 <sup>(2)</sup> 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	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
17	Cover plate	Steel - zinc plated		
18	Hexagon head bolt	Steel - zinc plated		
19	Hex. socket set screw	Steel - zinc plated		
20	Bearing disc	Bronze	CC493K, EN 1982	
21	Hexagon nut	Steel - zinc plated		
22	Identification plate	SS		
23	Blind rivet	SS		

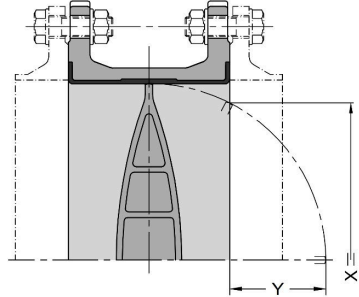
<sup>(1)</sup> Other materials on request.

<sup>(2)</sup> Other coating on request.

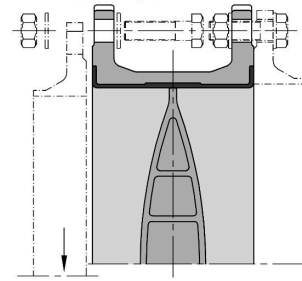
**DIMENSIONS - EVFS-i 1200-1400 (48"-56")**



IN LINE INSTALLATION



DEAD END SERVICE



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	470	870	855	35	57	55	F30	298	415	21	8	1088	358	1355
1200	48"	16	1186	470	870	855	35	77	75	F35	356	415	31	8	1088	358	1355
1400	56"	10	1386	530	966	955	40	77	75	F30	298	415	21	8	1280	428	1785
1400	56"	16	1386	530	966	955	40	92	90	F35	356	415	31	8	1280	428	1785