

# VT VALVE

## MAX & SB SERIES



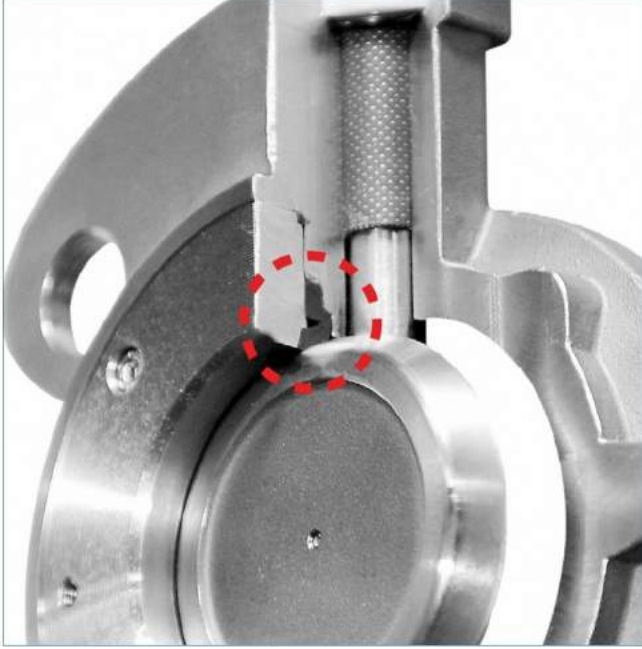
### HIGH PERFORMANCE BUTTERFLY VALVE



### HIGH PERFORMANCE SEGMENT VALVE & CONTROL VALVE

#### SIZE RANGE

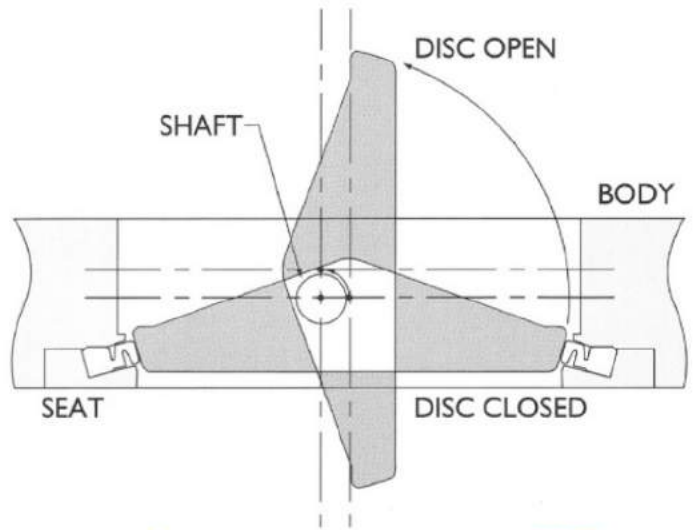
2" thru 48" (20A ~ 1200A), Optional thru 120"  
ANSI Class 150/300, JIS10K / 20K



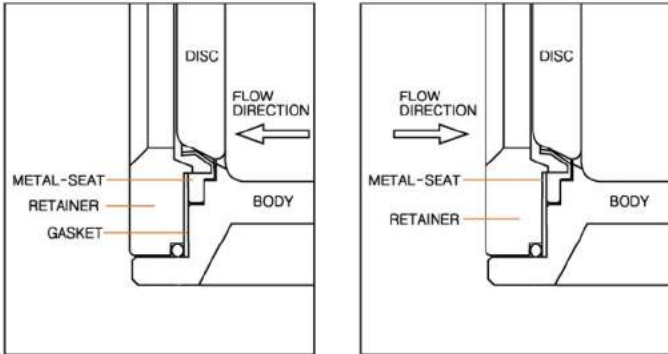
Structural Characteristics of the VTV - MAX High Performance Butterfly Valve Seat Design

**Eccentric Double Offset Design Seating**

The double offset shaft/disc design ensures bidirectional sealing throughout the full pressure of the valve. The cam-like action produced by the offset stem and disc, effectively lifts the disc off the seat during the initial opening of the valve, reducing seat wear and eliminating seat deformation at the top and bottom. When the disc is in the open position, there is no contact between the disc and seat. Operating torques are reduced and seat life is extended

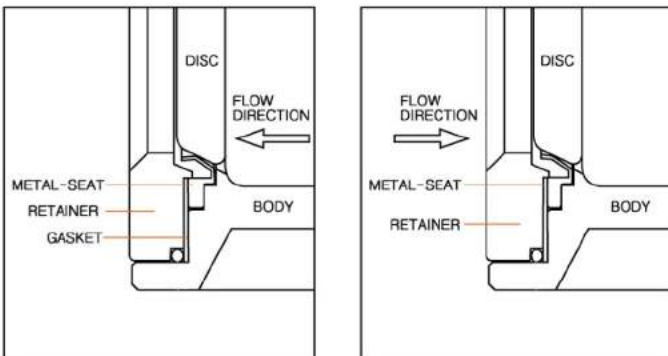


**Soft Seat**



Seat Material Maximum Working Temperature  
 PTFE - SEAT 190°C (375°F) TFM - SEAT 246°C (475°F)  
 RTFE - SEAT 230°C (446°F) PEEK - SEAT 270°C (529°F)

**Metal Seat**



Seat Material Maximum Working Temperature  
 METAL - SEAT 450°C  
 Class VI of ANSI / FCI 70 - 2 Class VI Leakage Rate



HP BUTTERFLY VALVE WITH PNEUMATIC ACTUATED



HP BUTTERFLY VALVE WITH ELECTRIC ACTUATED



LEVER



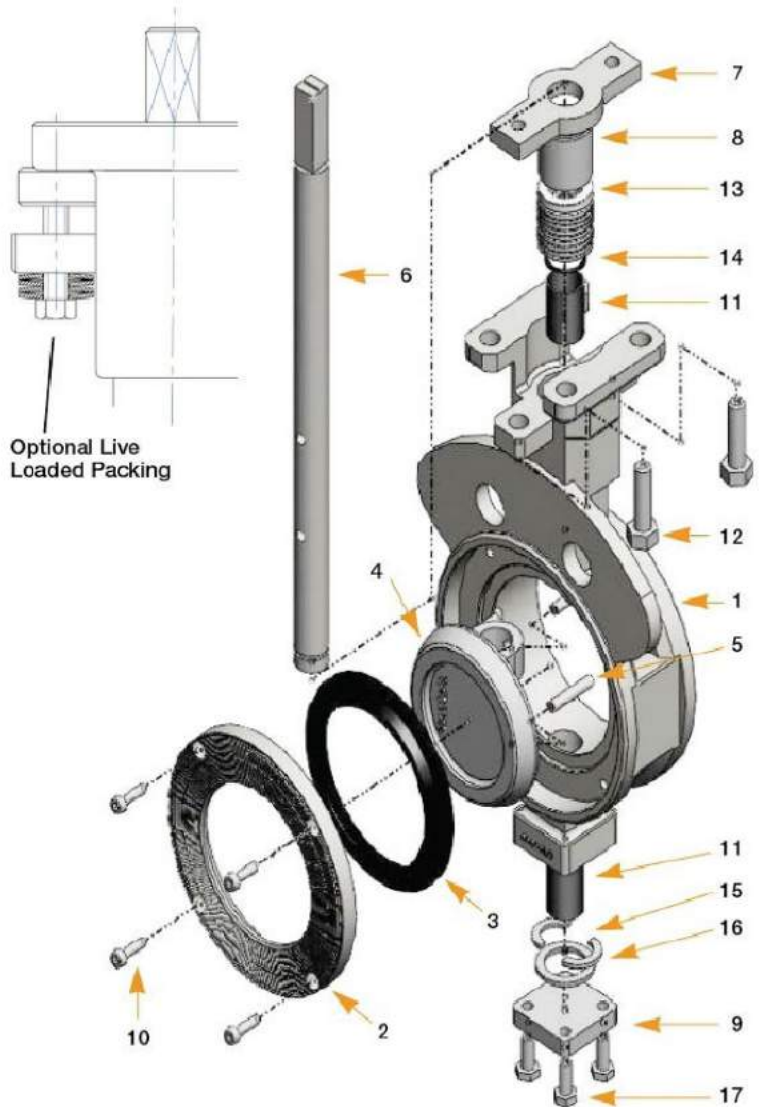
GEAR

# HOW TO ORDER

1	2	3	4	5	6	7	8	9		10
W	1	M	V	050	W	W	2	G	/	-

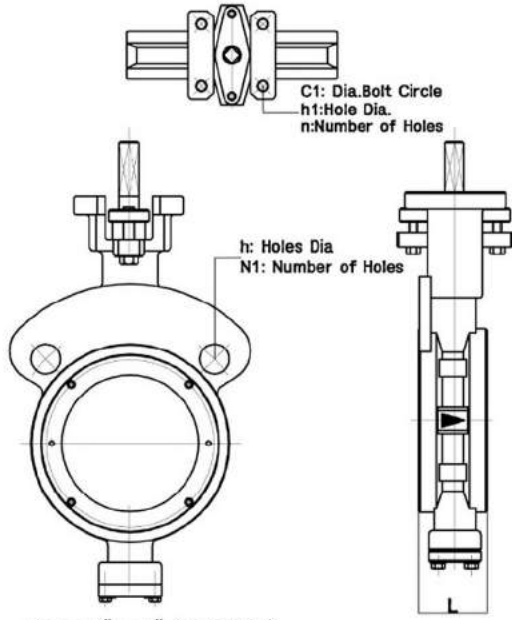
## EXPLODED VIEW

1	VALVE TYPE	L	Lugged Type
		W	Wafer Type
2	PRESSURE RATING	1	ASME Class 150
		2	ASME Class 300
3	SEAT MATERIAL	P	PTFE
		R	RTFE
		M	Metal - SS316L
4	PACKING CONSTRUCTION	V	V-Packing - Temp. Max. 230 Deg C
		G	Graphite - Temp. Max. 450 Deg C
5	VALVE SIZE	XXX	eq. 2" = 050
6	BODY MATERIAL	A	ASTM A351 Gr. CF8
		W	ASTM A351 Gr. CF8M
		C	Carbon Steel
7	DISC MATERIAL	L	ASTM A351 Gr. CF8
		W	ASTM A351 Gr. CF8M
8	STEM & PIN MATERIAL	1	17 - 4PH
		2	SS316
9	OPERATED TYPE	L	Lever (Up to 8")
		G	Gear (8" & above)
		P	Pneumatic Actuator
		E	Electric Actuator
10	ACCESSORIES	XXX	eq. Positioner / Solenoid / Limit switch

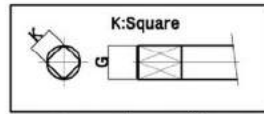


1	BODY	A216-WCB	Stainless steel ASTM A351 Gr. CF8	Stainless steel ASTM A351 Gr. CF8M
2	SEAT RETAINER	A216-WCB	Stainless steel ASTM A351 Gr. CF8	Stainless steel ASTM A351 Gr. CF8M
3	SEAT		PTFE	RTFE
4	DISC		Stainless steel ASTM A351 Gr. CF8	Stainless steel ASTM A351 Gr. CF8M
5	DISC PIN		Stainless steel SS316	
6	STEM	17 - 4PH	Stainless steel SS304	Stainless steel SS316
7	PACKING GLAND		Stainless steel ASTM A351 Gr. CF8	
8	PACKING FOLLOWER		Stainless steel ASTM A351 Gr. CF8	
9	BOTTOM COVER		Stainless steel ASTM A351 Gr. CF8	
10	RETAINER BOLT		Stainless steel SS316 - A193. GR. B8M	
11	STEM BEARING		RTFE	
12	GLAND BOLT		Stainless steel SS316 - A193. GR. B8M	
13	PACKING		V-Packing PTFE	
14	PACKING RETAINER		Viton	
15	SHAFT RETAINER		Stainless steel SS316 - A193. GR. B8M	
16	BOTTOM PACKING		PTFE	
17	BOTTOM BOLT		Stainless steel SS316 - A193. GR. B8M	

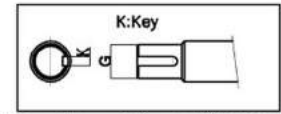
Mounting Base-ISO 5211



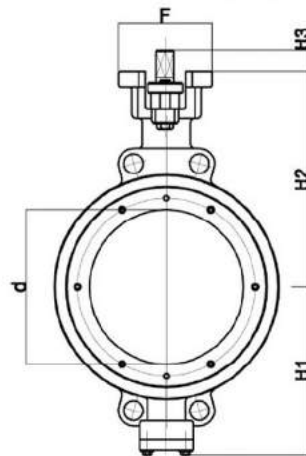
SIZE : 2" ~ 8" (Bolt Hole)



Valve Size : 2" ~ 16" (CLASS 150)  
2" ~ 14" (CLASS 300)

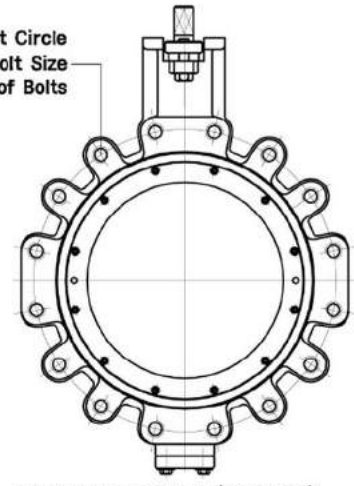


Valve Size : 18" ~ 24" (CLASS 150)  
16" ~ 24" (CLASS 300)



SIZE : 10" ~ 16" (Bolt Hole)  
SIZE : 18" ~ 24" (Bolt Tap)

C: Dia. Bolt Circle  
T: Bolt Size  
N2: Number of Bolts



LUGGED-Body Style (Bolt Tap)

Note :

1. Face to face Dimension : Comply to API 609 Category B, ISO 5752 Short
2. End Connection Flange Dimension : Comply to ANSI B16.5

ANSI Class 150 High Performance Butterfly Valve (mm)

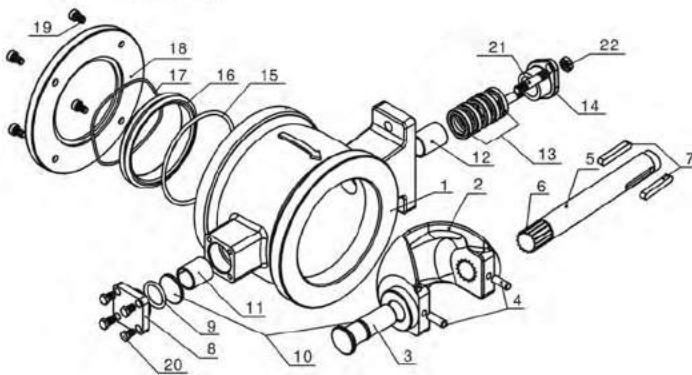
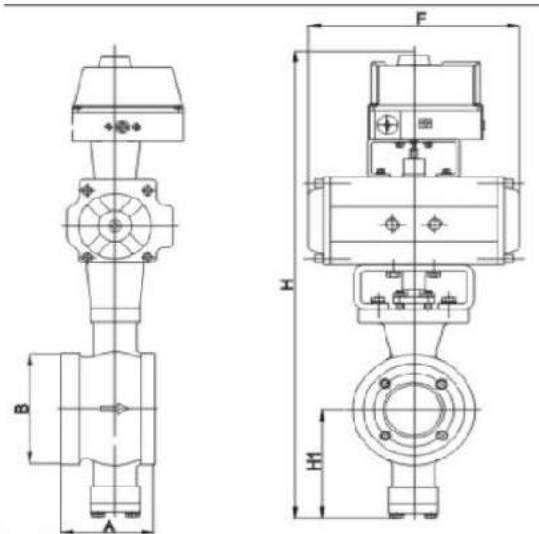
SIZE		d	L	H1		H2	H3	F	G	K	Flange Dimension				Mounting Base				
inch	mm			Water	Lug						C	H	T	N1	N2	C1	n	h1	ISO
2	50	49	43	83	83	123	35	70	13	11	120.7	19.1	5/8" - 11unc	2	4	70	4	10	F07
2.5	65	62	47	94	95	144	35	70	13	11	139.7	19.1	5/8" - 11unc	2	4	70	4	10	F07
3	80	73	48	102	105	154	35	70	16	11	152.4	19.1	5/8" - 11unc	2	4	70	4	10	F07
4	100	95	54	117	121	174	35	70	16	11	190.5	19.1	5/8" - 11unc	2	8	70	4	10	F07
5	125	122	57	135	140	193	35	70	19	14	215.8	22.2	3-4" - 10unc	2	8	70	4	10	F07
6	150	141	57	155	161	213	35	70	22	17	241.3	22.2	3-4" - 10unc	2	8	70	4	10	F07
8	200	194	65	197	182	250	50	115	28	22	298.5	22.2	3-4" - 10unc	2	8	102	4	12	F10
10	250	238	72	228	228	275	50	115	35	22	362.0	25.4	7/8" - 9unc	4	12	125	4	12	F12
12	300	278	81	260	260	306	50	130	35	27	431.8	25.4	7/8" - 9unc	4	12	125	4	17	F12
14	350	318	92	290	290	330	50	130	38	27	476.3		1" - 8unc	4	12	125	4	17	F12
16	400	360	102	330	330	390	55	165	45	36	539.8		1" - 8unc	4	16	165	4	23	F16
18	450	433	114	360	360	425	80	165	50	16*10	577.9		1.1/8" - 8unc	4	16	165	4	23	F16
20	500	470	127	390	390	450	80	165	55	16*10	635.0		1.1/8" - 8unc	4	20	165	4	23	F16
22	550	520	154	425	425	495	80	250	60	18*11	692.2		1.1/4" - 8unc	4	20	165	4	23	F16
24	600	580	154	440	440	510	110	250	65	20*12	749.3		1.1/4" - 8unc	6	20	254	4	23	F25

ANSI Class 300 High Performance Butterfly Valve (mm)

SIZE		d	L	H1		H2	H3	F	G	K	Flange Dimension				Mounting Base				
inch	mm			Water	Lug						C	H	T	N1	N2	C1	n	h1	ISO
2	50	49	43	83	83	123	35	70	13	11	127.0	19.1	5/8" - 11unc	2	8	70	4	10	F07
2.5	65	62	47	94	95	144	35	70	13	11	149.4	22.2	3/4" - 10unc	2	8	70	4	10	F07
3	80	73	48	102	105	154	35	70	16	11	168.1	22.2	3/4" - 10unc	2	8	70	4	10	F07
4	100	95	54	117	121	174	35	70	16	11	200.2	22.2	3/4" - 10unc	2	8	70	4	10	F07
5	125	122	57	135	140	193	35	70	19	14	235.0	22.2	3/4" - 10unc	2	8	70	4	10	F07
6	150	141	59	155	161	213	35	70	22	17	269.7	22.2	3/4" - 10unc	2	12	70	4	10	F07
8	200	194	73	210	210	250	50	115	30	22	330.2	25.4	7/8" - 9unc	2	12	102	4	12	F10
10	250	238	83	240	240	280	50	115	35	27	387.4	28.6	1" - 8unc	4	16	125	4	12	F12
12	300	278	92	270	270	320	50	130	38	27	450.9	31.8	1.1/8" - 8unc	4	16	125	4	17	F12
14	350	318	117	320	320	370	55	165	45	36	514.4		1.1/8" - 8unc	4	20	125	4	17	F12
16	400	359	122	360	360	420	80	165	50	16*10	571.5		1.1/4" - 8unc	4	20	165	4	23	F16
18	450	430	149	400	400	460	80	165	65	20*12	628.7		1.1/4" - 8unc	4	24	165	4	23	F16
20	500	468	159	450	450	500	80	165	65	20*12	685.8		1.1/4" - 8unc	4	24	165	4	23	F16
24	600	578	181	520	520	570	110	250	80	22*14	812.8		1.1/2" - 8unc	6	24	254	4	23	F25

## SERVICE

Segment ball is quarter turn control valve mainly recommended for throttle service, but it is also applicable for shut off service. Segment ball is in V-notch design with strong cutting force and self-cleanness, especially suitable for control of medium containing fibre and tiny solids. Therefore, it is widely used in the control systems in industries such as pulp and paper, petrochemistry, petroleum, chemical fibre, power, metallurgy, pharmacy, environmental protection etc.



DN	Code				
	A	B	F	H1	H
25	62	68	178	87	515
32	62	78	178	87	515
40	62	85	178	87	525
50	75	100	214	97	550
65	90	120	246	112	585
80	100	130	246	112	600
100	115	158	295	122	625
125	129	180	340	142	650
150	160	216	398	165	750
200	200	268	478	195	850
250	240	325	562	237	970

### PARTS LIST

No.	Name	Material
1	Body	CF8   CF8M
2	Ball	CF8   CF8M with Hard Chromium
3	Lower Shaft	17-4PH
4	Cylindrical Pin	17-4PH
5	Upper Shaft	17-4PH
6	Spline	17-4PH
7	Flat Key	17-4PH
8	Cover plate	CF8   CF8M
9	O-ring	Viton
10	Gasket	PTFE
11	Self-Lubrating Bearing	Composite Material
12	Self-Lubrating Bearing	Composite Material
13	Paeking	PTFE
14	Gland	CF8
15	O-ring	Viton
16	Seat	SS316L
17	Wavy Spring	SS316
18	Retainer	SS304   SS316
19	Socket Head Screw	SS304   SS316
20	Hexagon Screw	SS304   SS316
21	Stud	SS304   SS316
22	Hexagon Nut	SS304   SS316

## Maximum Allowable Differential Pressure & Rated CV

DN	Wafer connection		Wafer connection		Rated Cv
	Max.shut off dp. (bar)	Max.control dp. (bar)	Max.shut off dp. (bar)	Max.control dp. (bar)	
25	50	35	40	35	27
32	50	35	40	35	47
40	50	35	40	35	70
50	50	35	40	35	110
65	50	35	40	35	170
80	50	35	40	35	280
100	40	25	40	25	410
125	40	25	40	25	750
150	40	25	40	25	980
200	35	25	35	25	1720
250	35	20	35	20	2900
300			30	10	3800
350			30	10	7000
400			30	10	9800
450			30	10	12000
500			30	10	23000

## HOW TO ORDER

<b>SB</b>	<b>080</b>	<b>F1</b>	<b>16</b>	<b>C</b>	<b>C</b>	<b>1</b>	<b>V</b>
1	2	3	4	5	6	7	8

### 1 VALVE TYPE

SB | Segment Ball Valve

### 2 VALVE SIZE

80 | DN 80 / 3"  
 100 | DN 100 / 4"  
 150 | DN 150 / 6"  
 200 | DN 200 / 8"  
 250 | DN 250 / 10"  
 XXX | DN XXX

### 3 CONNECTION TYPE

F1 | FLANGELESS / WAFER

### 4 PRESSURE RATING

10 | JIS 10K  
 16 | PN 16  
 150 | ANSI 150

### 5 BODY MATERIAL

C | CFB + STELLITE  
 F | CF8M + STELLITE

### 6 BALL MATERIAL

C | CFB  
 F | CF8M

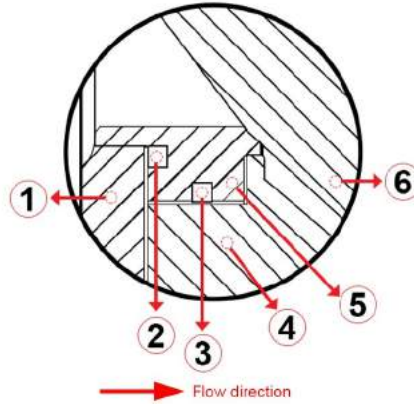
### 7 SEAT

1 | METAL - SS316L  
 2 | RTFE

### 8 O RING

V | VITON

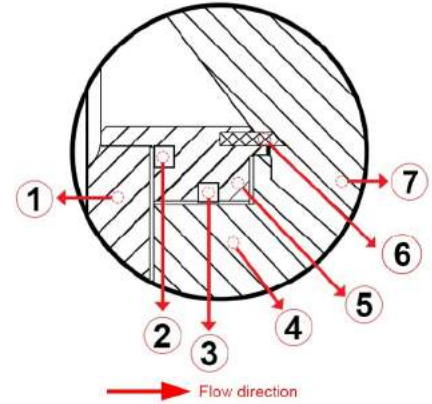
### METAL - SEATED



### METAL SEATED

No.	Name	Temp. Range
1	Retainer	
2	Spring	
3	O - Ring	
4	Valve Body	-20~160 -20~230
5	Metal Seat	
6	Ball	

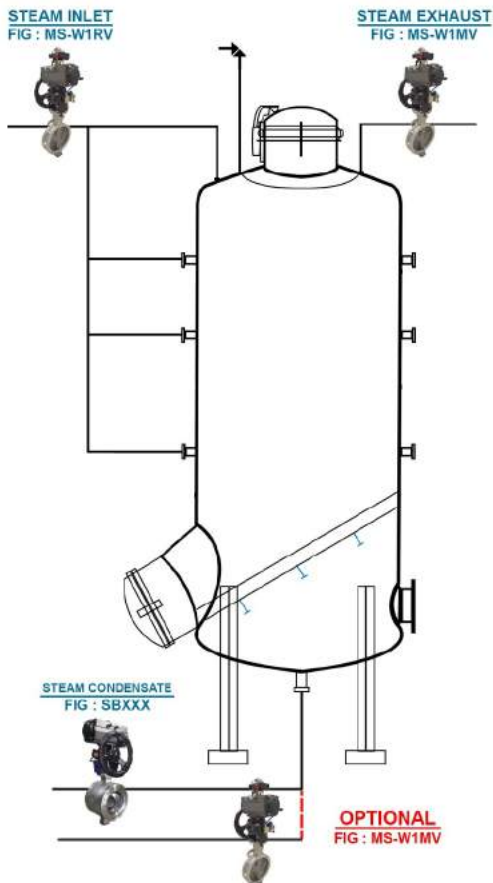
### PTFE - SEATED



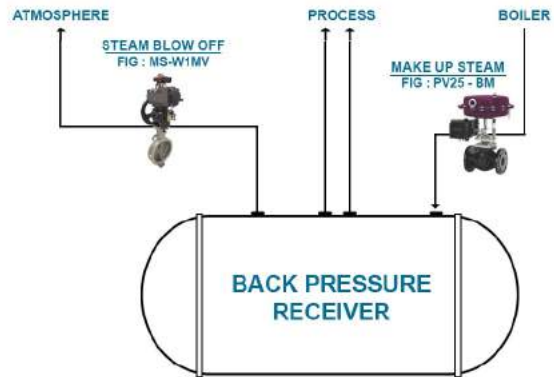
### PTFE - SEATED

No.	Name	Temp. Range
1	Retainer	
2	Spring	
3	O - Ring	
4	Valve Body	-20~160
5	Seat Ring	
6	PTFE	
7	BALL	

### VTV MAX AT VERTICAL STERILIZER SYSTEM



### VTV MAX & ADCA CONTROL VALVE BPR SYSTEM



### VTV MAX AT HORIZONTAL STERILIZER SYSTEM

