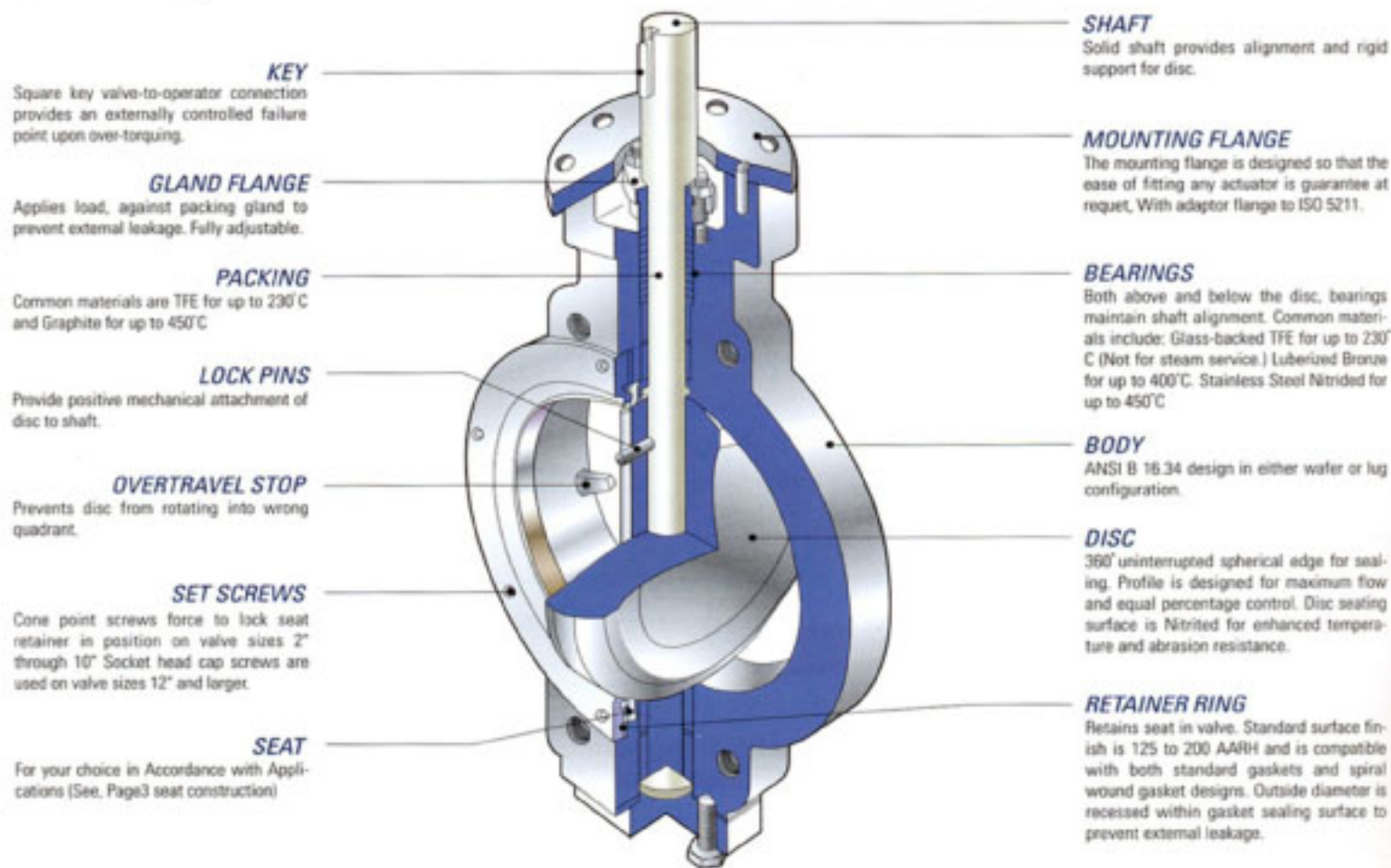


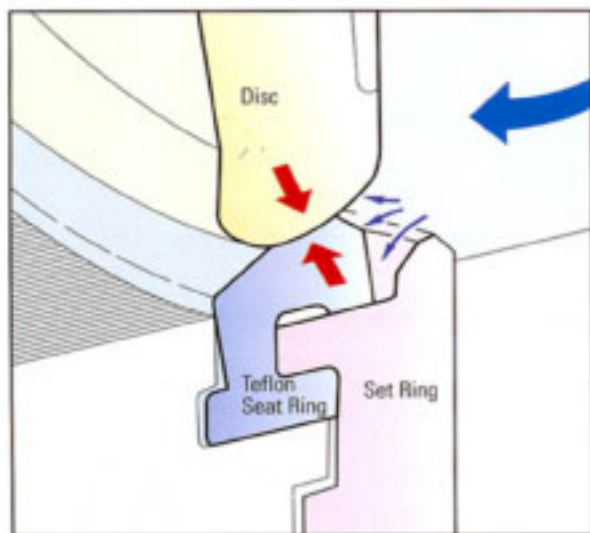
## HF - Series High Performance Butterfly Valve

### Valve Components



### Self-sealing mechanism ensures tight shutoff.

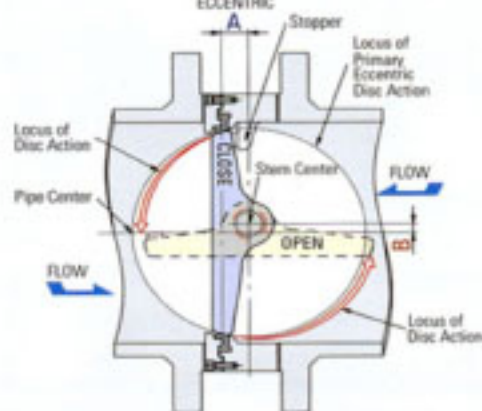
As illustrated below, fluid pressure to the disc and seat ring ensures a secure seal; in other words, the higher the pressure, the better the sealing performance. The sealing performance remains unchanged even when the flow direction changes from one way to the other.



### Double eccentric disc ensures longer service life, low seating torque and leak-tight shutoff.

Since the stem is eccentric from the seat ring (as indicated by **A** and **B**), the disc is in contact with the seat ring only when the valve is completely closed. The benefits from the double eccentric disc design include:

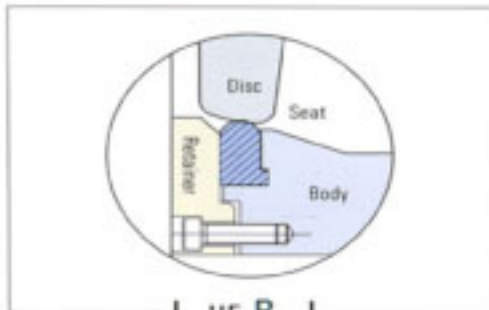
- Longer service life due to hard-to-wear seat ring.
- When in the closed position, the force of the disc on the seat ring ensures complete sealing.
- Easy operation with less seating torque.
- The offset stem design allows easy replacement of the seat ring without removing the stem.



## HF - Series High - Performance Butterfly Valve

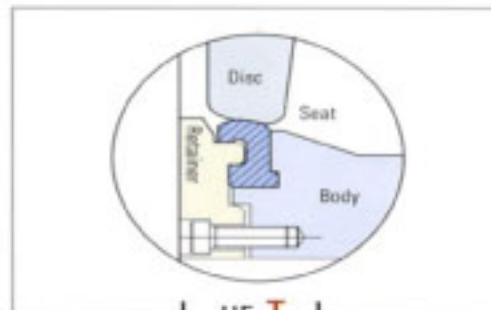
### Seat Construction

### HF - Series High-Performance Butterfly valve for Features



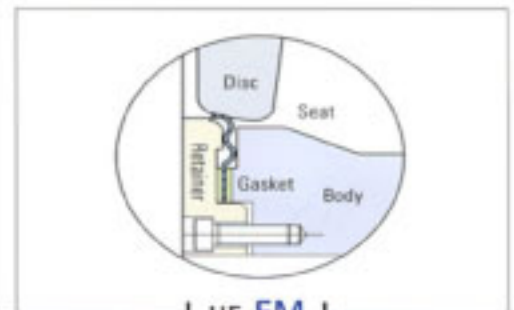
**HF-R**

EPDM / NBR / VITON  
Rubber Seat



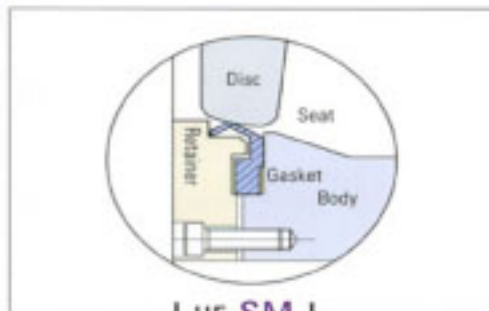
**HF-T**

PTFE / RTFE  
Teflon Seat



**HF-FM**

INCONEL 625 / St. steel 316  
Flat Metal seat



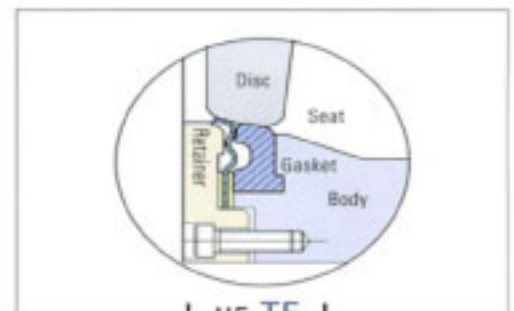
**HF-SM**

SF.St. steel 316 / MONEL  
Solid Metal Seat



**HF-RF**

Rubber / St. steel 316  
Fire Safe-Rubber+ Metal



**HF-TF**

Teflon / St. steel 316  
Fire Safe-Teflon+ Metal

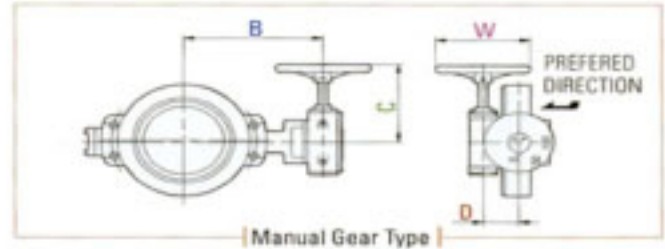
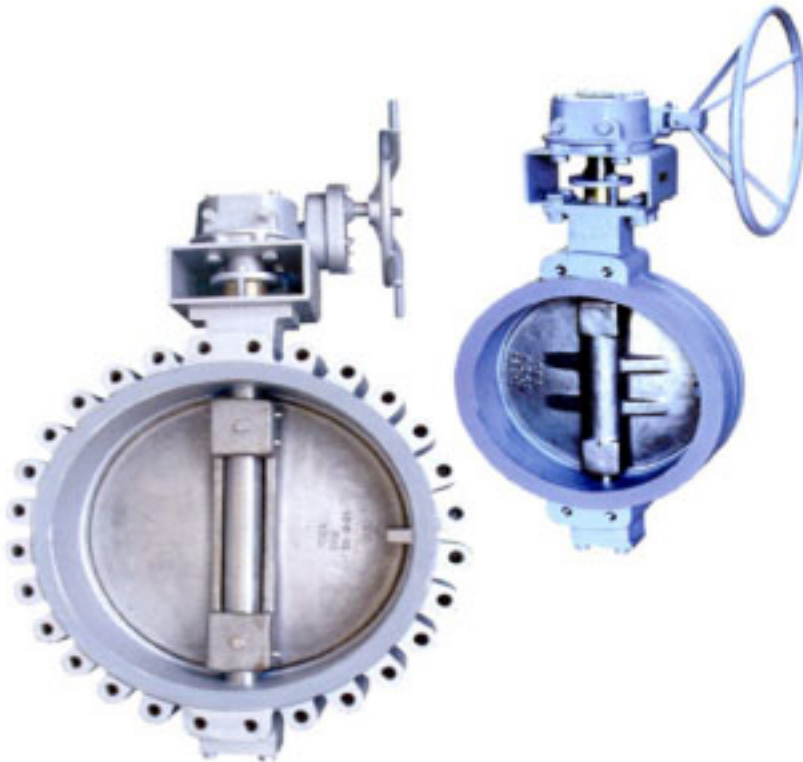
### Standard Specifications

Model Designation	HF-R	HF-T	HF-FM	HF-SM	HF-RF	HF-TF	
Seat ring	Rubber	Teflon	Flat Metal	Solid Metal	Rubber+Metal	Teflon+Metal	
Size Range	DN50 to DN1200		DN50 to DN1200		DN50 to DN1200		
Press. Rating	ANSI CLASS 150 & 300		ANSI CLASS 150 & 300		ANSI CLASS 150 & 300		
Body Connection	WAFLER / LUG / FLANGED / BUTT WELD END						
Applicable Flange	ANSI CLASS 150 & 300 / JIS 10K, 16K, 20K / ISO / BS / DIN PN 10, PN 16, PN 25, PN 40						
Geometry	Double Offset Giving Low Unseating and Seating Torque.						
Safety Feature	Anti Blow Out Device To API 609						
Face to Face	LUG and WAFLER type ; API std. 609 category B / ISO 5752 (25 Series)						
Design Base	API std.609 / BS 5155 / ANSI B 16.34 / ASME SEC VIII						
Seat Leak(Water)	None	None	Tight shut V	Tight shut V	None	None	
Working Temp.	- 10 to + 120°C	- 50 to + 200°C	- 80 to + 300°C	- 80 to + 450°C	- 10 to + 120°C	- 10 to + 200°C	
STD. Material	Body / Disc	STD; ASTM A216 WCB / ASTM A351 CF8M / ASTM B148 / DUPLEX St. steel					
	Stem	ASTM A479 Ty.304 / 316. ASTM A564 Ty. 630, AISI 420J2 / 403 / DUPLEX St. steel					
	Seat Ring	EPDM, VITON	PTFE, RTFE	316 St. steel/Inconel	316 St. steel	EPDM/VITON +316 St.	EPDM/VITON + Teflon
	Packing	PTFE / GRAPHITE / GRAFOIL / NON-ASBESTOS PACKING					
	Bearing	RTFE+316 St. steel / TFE+Fiberglass composite / Bronze / 316 St. steel / Steel					
Pressure tests	API std.598	API std.598	API std.598 / ANSI B16.104		API std.607 / BS 6755 Part2		
Seat lea test	MAX. 2.25 (23 kg/cm2G) as per API 598. Low Pressure test is available upon request						
Marking	API std.609 / MSS SP-25						
Top Flange	ISO 5211						
Actuator	Lever / Gear / Pneumatic Cylinder / Hydraulic Cylinder / Electric Motor						

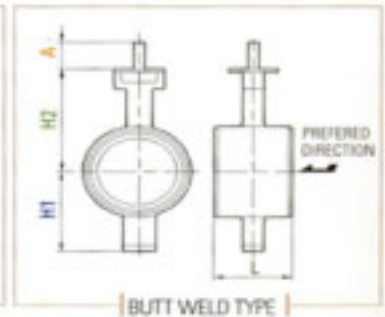
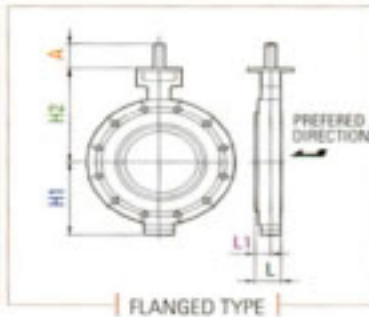
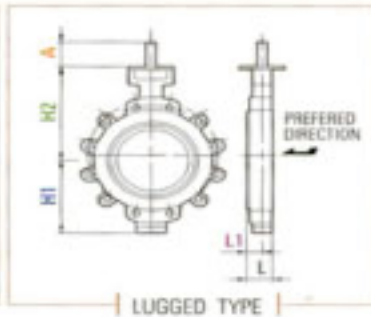
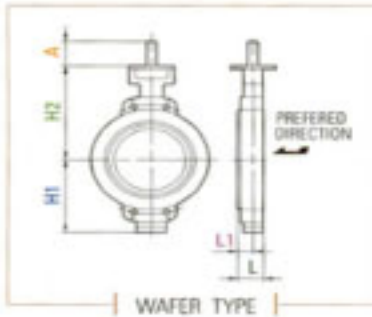
## HF - Series High - Performance Butterfly Valve

150LB

Dimension List



SIZE		B	C	D	ϕW	Approx. weight (kg)
mm	inch					
50	2	185	155	40	150	7
65	2 1/2	170	155	40	150	9
80	3	190	155	40	150	12
100	4	225	155	40	150	14
125	5	250	155	40	150	20
150	6	275	155	40	150	25
200	8	325	185	52	205	40
250	10	375	185	52	205	65
300	12	405	185	52	205	85
350	14	475	185	52	205	130
400	16	500	310	90	457	170
450	18	550	310	90	457	210
500	20	615	500	150	600	285
600	24	740	500	150	600	360
700	28	736	615	610	600	410
750	30	825	615	610	600	495
800	32	875	690	610	600	560
900	36	970	690	610	600	820
1000	40	995	750	750	600	1200
1050	42	1025	750	750	600	1340
1200	48	1115	750	750	600	1450



SIZE		H1	H2	A	L1	L (API 609-B)				Approx. weight (kg)			
mm	inch					WAFFER TYPE	LUGGED TYPE	S-FLANGED TYPE	BUTT WELD TYPE	WAFFER TYPE	LUGGED TYPE	S-FLANGED TYPE	BUTT WELD TYPE
50	2	25	31	33	24	43	43	-	-	5	10	15	-
65	2 1/2	26	32	33	27	46	46	-	-	6	13	19	-
80	3	127	159	34	29	48	48	48	180	8	19	24	15
100	4	151	194	34	31	54	54	54	190	12	26	35	22
125	5	160	225	34	37	57	57	57	200	18	32	40	25
150	6	177	242	34	37	57	57	57	210	21	35	48	31
200	8	195	237	34	41	64	64	64	230	35	40	56	48
250	10	227	277	64	46	71	71	71	250	60	65	70	45
300	12	266	325	79	53	81	81	81	270	75	97	115	68
350	14	293	352	79	61	92	92	92	290	110	109	135	95
400	16	336	425	79	64	102	102	102	310	150	159	165	145
450	18	356	443	79	75	114	114	114	330	180	208	235	195
500	20	391	482	79	81	127	127	127	350	250	270	340	225
600	24	463	550	109	97	154	154	154	390	330	410	485	310
700	28	567	661	129	104	165	165	165	430	385	510	520	450
750	30	597	676	129	102	165	165	165	450	450	560	690	720
800	32	627	722	129	117	190	190	190	470	510	620	790	880
900	36	687	795	175	125	200	200	200	510	775	810	1350	920
1000	40	716	815	175	135	216	216	216	550	1100	1060	1420	1510
1050	42	746	850	175	153	251	251	251	590	1240	1250	1520	1650
1200	48	840	995	199	162	276	276	276	630	1350	1350	1790	1900