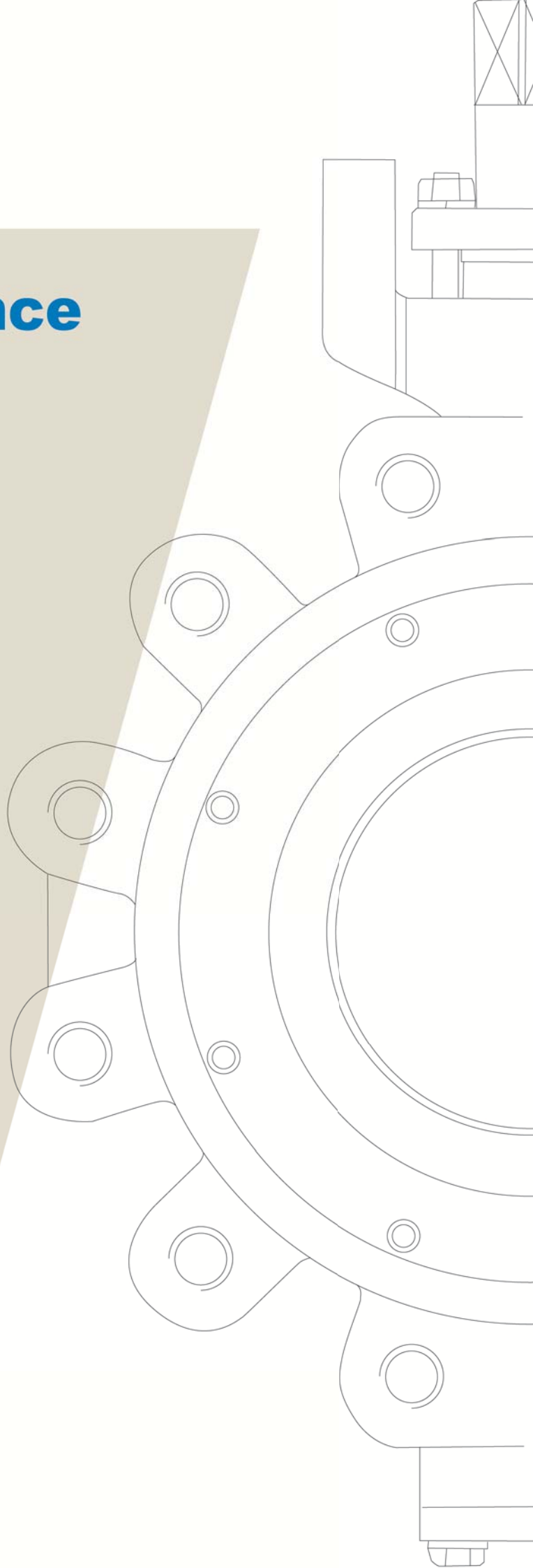
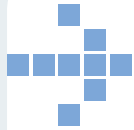


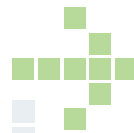
# **AV.300 Series High-Performance Butterfly Valve**





## Feature

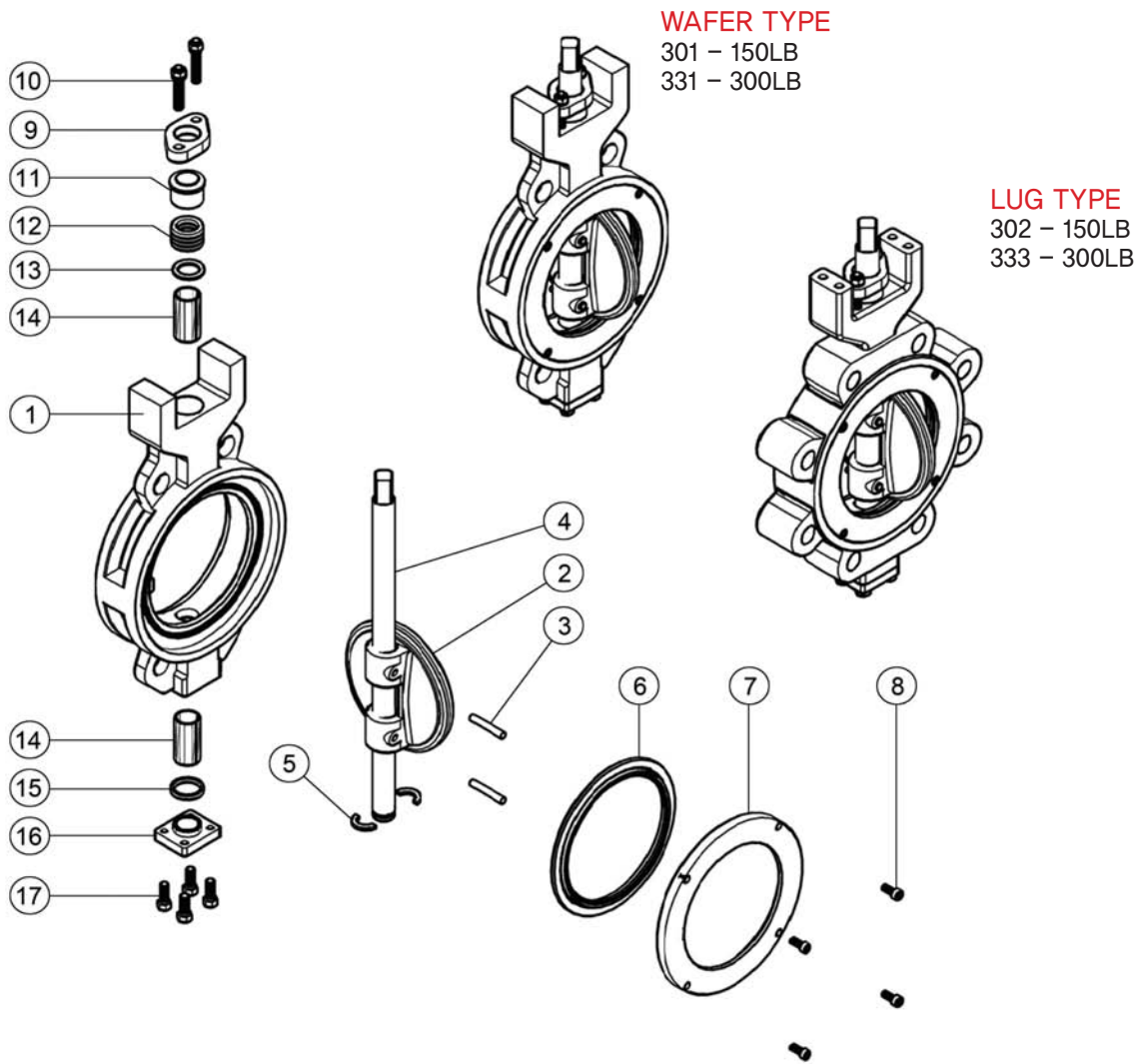
- 1 Wafer & lug bodies butterfly valve for bi-directional dead-end service are offered as standard in full ANSI Class 150 and 300 ratings.  
The design of Double offset sealing assure smooth low-torque operation and reduce seat wear.  
Extended neck length allows adequate insulation and is easily accessible for mounting actuators.
- 2 Valve has a disc stopper to prevent disc over-travel of disc, minimizing possible seat damage with extending the service life of valve operator.
- 3 The disc has been hydromechanically designed to maximize flow and minimize resistance, providing a high Cv value.  
The disc is spherically machined and hand polished disc edge provides bubble-tight shut-off at minimum torque.
- 4 One piece through stem design achieves high strength and positive disc control Optional mounting Plate is available to international standard.  
Non-lubricated, Coated bearings securely support the stem and minimize bearing friction and operating torque.
- 5 Securing the butterfly disc to the valve shaft and permitting accurate disc closure for consistent sealing and positive shut off.
- 6 V-Packings are designed to give excellent resistance to pressure and effective at both low and high pressures with little or no gland adjustment required.  
Grafoil packings are also available for high temperature applications and are standard on fire-safe valve & Metal Seat.
- 7 All valves shall be tested for leakage at rated internal pressure, and We can accomplish Zero defects through a wider range testing process
- 8 With a locking spring loaded, lever operator has directional pointer for valve disc position indication with easy-grip handle



## Design Standard

1. Valve Nominal Diameter : 2" (50A) ~ 60" (1500A)
2. Face To face Dimension
  - API 609 Category B
  - MSS SP-68
  - DIN 3202
  - ISO 5752
  - BS 5155
3. End Connexion
  - Wafer, Lug
4. Testing
  - API 598, MSS SP-61, BS 6755
  - ANSI B 16.104
5. Temperature : from -50°C up to +260°C  
(up to +380°C for HT version)
6. The working temperature depends on the media and on the material of the seat
7. Maximum working pressure :  
Class 150 / 300, at ambient temperature
  - AV.301/302 : CLASS 150 / PN 20
  - AV.331/332 : CLASS 300 / PN 50
8. Vacuum service down to 0 absolute bar
9. Maximum fluid velocity,  
under Maximum working pressure. :
  - 4 m/s for liquids
  - 40 m/s for clean gases

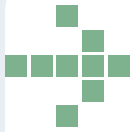
# AV\_300 Series



## Materials

No	Part	Material	Material Standards
1	Body	Carbon Steel	ASTM A216-WCB
		Stainless Steel	ASTM A351-CF8 / CF8M
2	Disc	Stainless Steel	ASTM A 351-CF8 /CF8M
		Hardfacing	Stellite or ENP
3	Disc Pin	316 Stainless Steel	ASTM A276-316
4	Stem	17-4PH	ASTM A564-630
		Stainless Steel	ASTM A276-316 /304
5	Stem Retainer	Stainless Steel	ASTM A240-304
		17-4PH	ASTM A564-630
6	Seat	PTFE	Polytetrafluoroethylene
		RTFE	Reinforced Polytetrafluoroethylene
		316 Stainless Steel	ASTM A240-316L
		Fire-safe	RTFE / 316 Stainless Steel

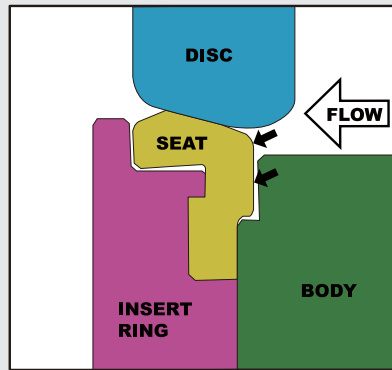
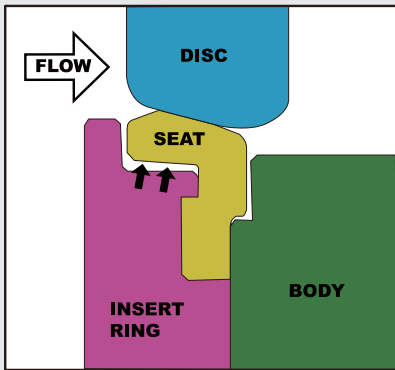
No	Part	Material	Material Standards
7	Insert Ring	Carbon Steel	ASTM A36
		Stainless Steel	ASTM A240-304 / 316
8	Wrench Bolt	304/316 Stainless Steel	
9	Gland Bridge	Stainless Steel	ASTM A351-CF8
10	Stud Bolt	304 /316 Stainless Steel	
11	Gland	304 /316 Stainless Steel	
12	Packing	PTFE or Grafoil	
13	Packing Retainer	304 / 316 Stainless Steel	
14	Upper&Lower Bushing	RTFE / 316 Stainless Steel	
		316 Stainless Steel	
15	Bottom Packing	PTFE or Grafoil	
16	Bottom Cover	Carbon Steel	ASTM A36
		Stainless Steel	ASTM A240-304 / 316
17	Hex. Bolt	304 / 316 Stainless Steel	



# Seat Explanation

## TEFLON SEAT

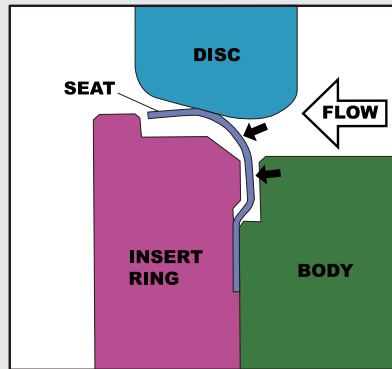
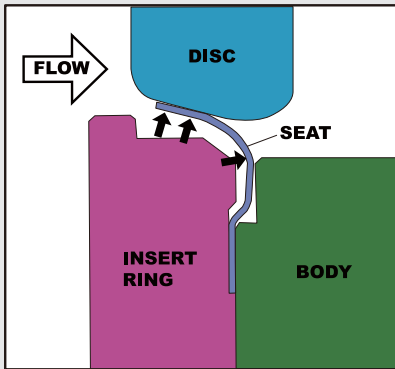
SEAT MATERIAL : PTFE & RTFE



Blowout Proof Stem Design  
Lower Operating Torque  
Tight Shutoff  
Bi-Direction Application  
Leakage Class VI(Zero)

## METAL SEAT

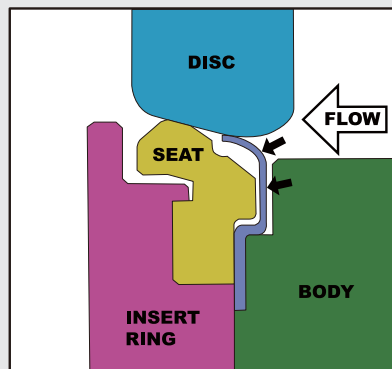
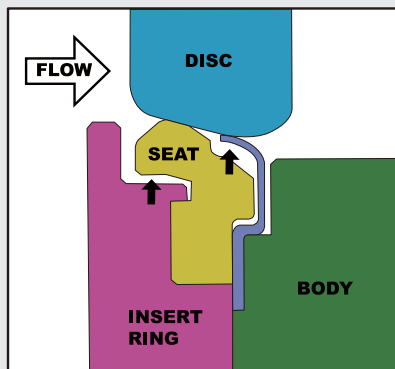
SEAT MATERIAL : 316L & INCONEL



Blowout Proof Stem Design  
Inherent Fire Safe Design  
Suitability for High  
-Temperature Service  
Leakage Class IV, V

## FIRE-SAFE

During and after a fire, when the soft(Teflon) seat material has burned away, the metal seat activates automatically and prevents excessive flow.



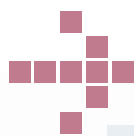
Blowout Proof Stem Design  
Tight Shutoff  
Bi-Direction Application  
Inherent Fire Safe Design  
Leakage Class VI(Zero)



## ANSI/FCI 70-2 Control Valve Seat Leakage

ANSI B16.104-1976	Maximum Leakage			Test Medium	Pressure and Temperature
Class VI	Nominal Port Diameter(in.)	Bubbles per Minute <sup>3</sup>	ml.per Minute	Air or Nitrogen	Service ΔP or 50psig [3.4bar differential whichever is lower, 10°C to 52°C
	2	3	0.45		
	2 1/2	4	0.6		
	3	6	0.9		
	4	11	1.7		
	6	27	4		
	8	45	6.75		
Class V	5x10 <sup>-4</sup> ml/min/psig/in. port dia. [5x10 <sup>-12</sup> m <sup>3</sup> /ec/bar differential/mm port dia.]			Water	Service ΔP t 10°C to 52°C
Class IV	0.01% valve capacity at full travel			Air or Water	Service ΔP or 50psig [3.4bar differential whichever is lower, 10°C to 52°C

1. Polymer and fire-safe seats provide ANSI Class VI shut off.
2. Metal seats provide ANSI Class IV shut off
3. Using the ANSI/FCI specified calibrated measuring device



## Recommended Standards and Specification



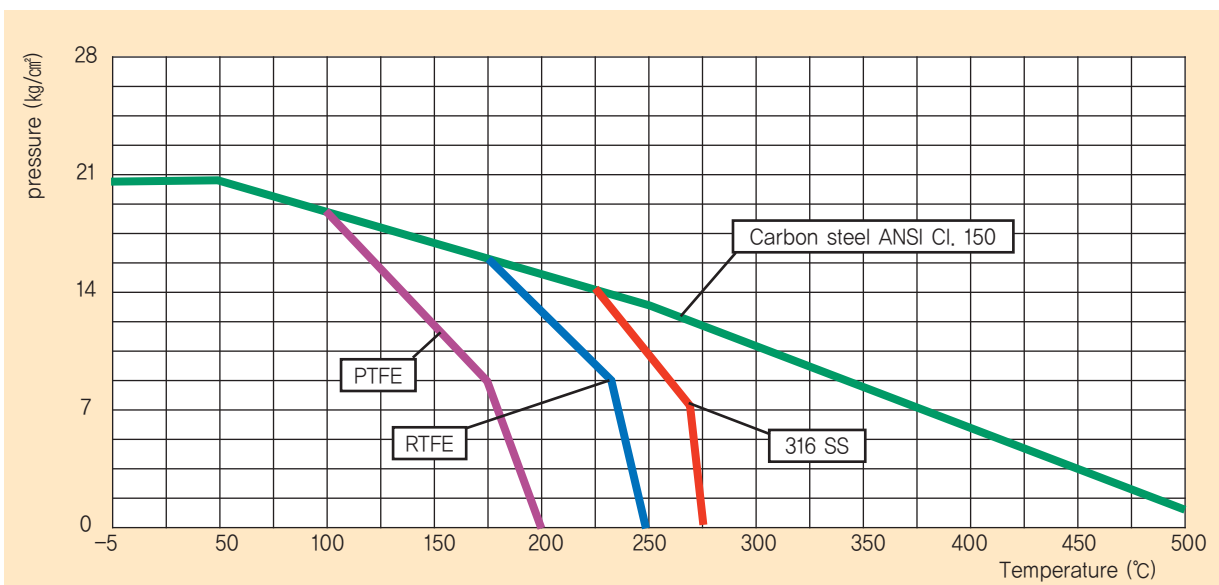
ANSI	B16.34 B31.1 B31.3 B16.47 B16.5	Steel valves Power piping(sect 107) Chemical plant and petroleum refinery piping Large Diameter Steel Flange Steel pipe flanges and flange fitting
MSS	SP-6 SP-25 SP-44 SP-55 SP-61 SP-67 SP-68	Standard finishes for pipe flanges Standard marking systems for valves Steel pipe Line Flangees Quality standard fot steel casting Pressure testing of steel valves Butterfly valves High pressure offset disc butterfly valves
API	609 607 598	Butterfly valves (most models) Fire test for soft seated quarter-turn valves Valve inspection and test
BS	5146 4504	Inspection and test of steel valves for the petroleum petrochemical and allied industries Flanges and bolting for pipes, valve and fitting
ISO	5752 2084	Metal valves for use in flanged pipe system Pipeline flanges for general use
JIS	2215	Basic dimension for steel pipe flange

# AV.301 & 302

## Torque & Pressure

VALVE SIZE		TEFLON SEAT						METAL SEAT	
		10 Bar	150 psi	16 Bar	225 psi	20Bar	285 psi		
inch	mm	N · m	lb · in	N · m	lb · in	N · m	ib · in	N · m	lb · in
2	50A	18	159	21	186	23	204	45	398
2.5	65A	21	186	27	239	33	292	60	531
3	80A	33	292	43	381	54	478	87	770
4	100A	49	434	63	558	79	699	119	1053
5	125A	67	593	91	805	107	947	160	1416
6	150A	84	743	110	974	137	1213	206	1823
8	200A	137	1213	187	1655	225	1991	338	2992
10	250A	210	1859	295	2611	368	3257	552	4886
12	300A	347	3071	488	4319	608	5381	912	8072
14	350A	551	4877	767	6789	957	8470	1435	12701
16	400A	618	5470	1140	10090	1140	10090	1710	15135
18	450A	878	7771	1390	12303	1731	15321	2597	22985
20	500A	1219	10789	1670	14781	2000	17701	3000	26552
22	550A	1587	14046	2341	20720	2705	23941	4058	35916
24	600A	1886	16693	2775	24561	3328	29455	4992	44183
26	650A	2523	22330	3710	32836	4449	39377	6229	55131
28	700A	2979	26366	4368	38660	5038	44590	7053	62424
30	750A	3300	29207	4780	42307	5936	52538	8311	73559
32	800A	3940	34872	5933	52511	7069	62566	9896	87587
36	900A	5558	49192	7662	67814	8667	76709	12134	107395

## Temperature Rating

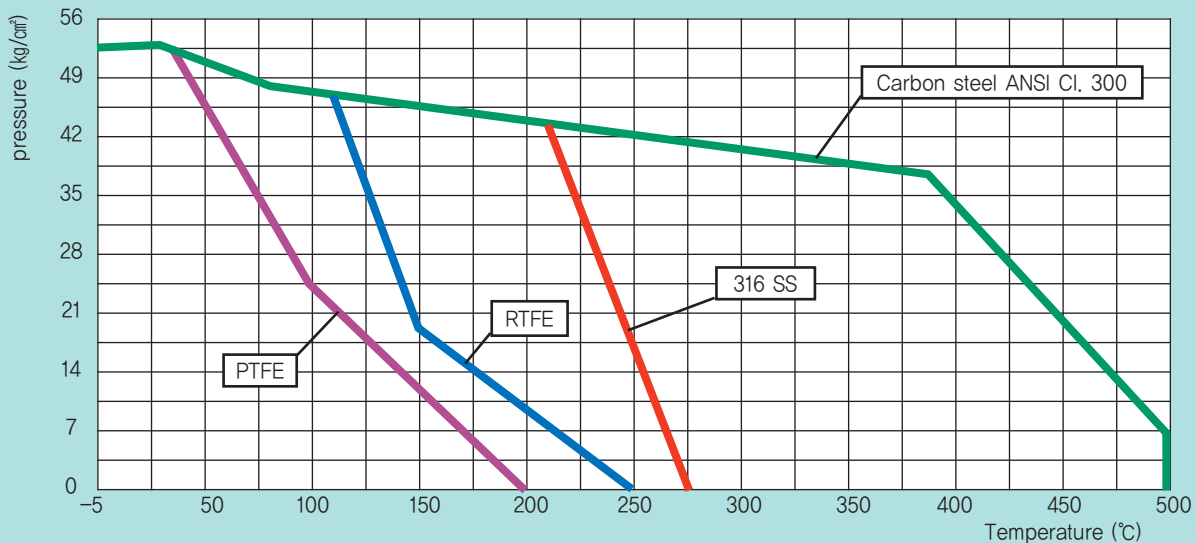


## AV.331 & 332

### Torque & Pressure

VALVE SIZE		TEFLON SEAT						METAL SEAT					
		25 Bar	400 psi	40 Bar	500 psi	50 Bar	740 psi	25 Bar	400 psi	40 Bar	500 psi	50 Bar	740 psi
inch	mm	N.m	lb · in	N · m	lb · in	N.m	lb · in	N · m	lb · in	N · m	lb · in	N · m	lb · in
2	50A	26	230	41	363	52	460	52	460	74	655	93	823
2.5	65A	39	345	62.3	551	77.9	689	58.4	517	93.5	828	116.9	1035
3	80A	60	531	90	797	113	1000	90	797	135	1195	169	1496
4	100A	93	823	123	1089	148	1310	139	1230	185	1637	222	1965
5	125A	117	1036	160	1416	191	1690	175	1549	240	2124	287	2540
6	150A	159	1407	255	2257	319	2823	239	2115	382	3381	478	4231
8	200A	293	2593	451	3992	541	4788	440	3894	676	5983	811	7178
10	250A	446	3947	686	6072	824	7293	669	5921	1029	9107	1236	10940
12	300A	732	6479	1169	10347	1460	12922	1098	9718	1754	15524	2190	19383
14	350A	1126	9966	1722	15241	1964	17383	1688	14940	2583	22861	2946	26074
16	400A	1691	14967	2312	20463	2647	23428	2536	22445	3468	30694	3970	35137
18	450A	2001	17710	2057	18206	3485	30845	3001	26561	4280	37881	4531	40103
20	500A	2656	23508	3881	34350	4624	40926	3983	35253	5821	51520	6937	61398
24	600A	3895	34474	5356	47405	6685	59167	5453	48263	7499	66372	9358	82825

### Temperature Rating





# AV.301 & 302

## Dimension

Dimension – “Q1” “Q2” is the dimension ensuring the pipes or flanges are properly aligned so that the valve disc does not contact them in any setting Misalignment will result in damage to the valve.

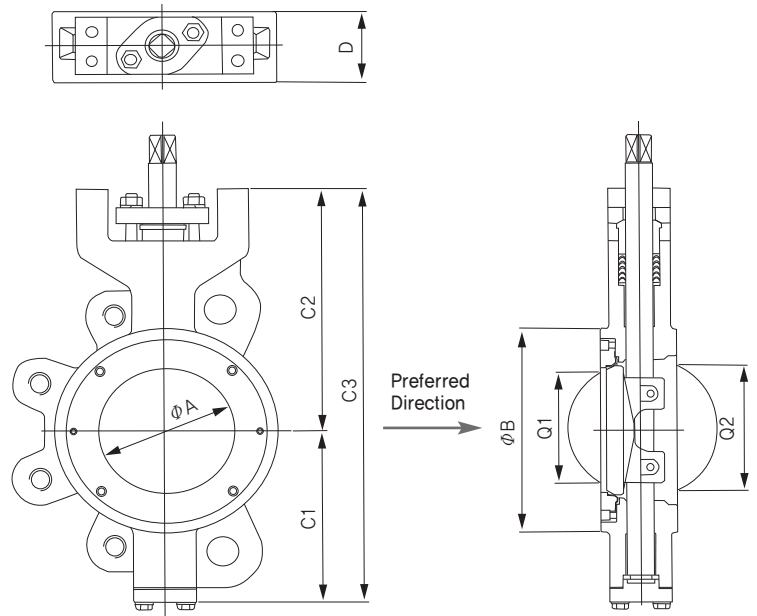
### Applicable Flange Standard

- ANSI CL. 150
- ISO/DIN PN 10/ 16/ 20
- JIS 10K/ 16K/ 20K

All dimensions are approximate, pls contact the factory for more details.

AV.301 – WAFER TYPE CL. 150

AV.302 – LUG TYPE CL. 150

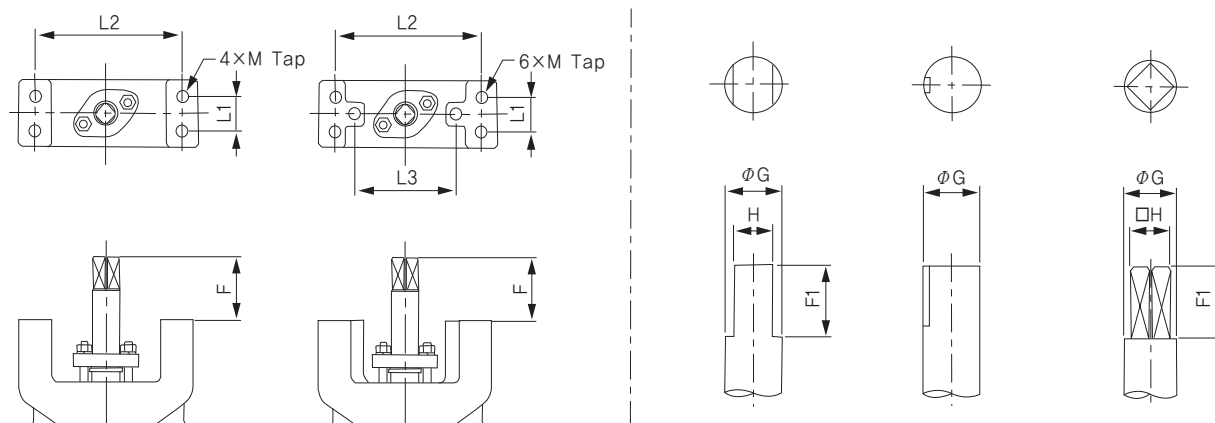


VALVE SIZE		AV301 & 302 Dimension							
inch	mm	$\phi A$	$\phi B$	C1	C2	C3	D	Q1	Q2
2	50A	$\phi 47$	$\phi 104$	95	150	245	44	$\phi 32$	$\phi 46$
2.5	65A	$\phi 64$	$\phi 120$	115	170	285	46	$\phi 54$	$\phi 65$
3	80A	$\phi 75$	$\phi 130$	116	175	291	48	$\phi 65$	$\phi 76$
4	100A	$\phi 95$	$\phi 156$	130	185	315	54	$\phi 86$	$\phi 97$
5	125A	$\phi 113$	$\phi 186$	148	208	356	57	$\phi 102$	$\phi 116$
6	150A	$\phi 140$	$\phi 213$	162	222	384	57	$\phi 132$	$\phi 144$
8	200A	$\phi 190$	$\phi 266$	202	265	467	64	$\phi 181$	$\phi 192$
10	250A	$\phi 238$	$\phi 324$	232	300	532	71	$\phi 228$	$\phi 242$
12	300A	$\phi 280$	$\phi 372$	262	330	592	81	$\phi 270$	$\phi 285$
14	350A	$\phi 321$	$\phi 418$	294	365	659	92	$\phi 310$	$\phi 326$
16	400A	$\phi 365$	$\phi 480$	346	424	770	102	$\phi 355$	$\phi 370$
18	450A	$\phi 419$	$\phi 536$	376	454	830	114	$\phi 407$	$\phi 425$
20	500A	$\phi 469$	$\phi 590$	406	479	885	127	$\phi 457$	$\phi 475$
22	550A	$\phi 509$	$\phi 644$	465	520	985	154	$\phi 494$	$\phi 514$
24	600A	$\phi 553$	$\phi 694$	490	555	1045	154	$\phi 537$	$\phi 558$
26	650A	$\phi 602$	$\phi 740$	520	585	1105	165	$\phi 582$	$\phi 608$
28	700A	$\phi 657$	$\phi 804$	549	615	1164	165	$\phi 638$	$\phi 664$
30	750A	$\phi 710$	$\phi 860$	585	650	1235	190	$\phi 670$	$\phi 714$
32	800A	$\phi 760$	$\phi 910$	625	675	1300	190	$\phi 740$	$\phi 764$
36	900A	$\phi 872$	$\phi 1012$	675	740	1415	203	$\phi 855$	$\phi 878$



# AV.300 Series

## Top View & Stem



Valve Size  
2" - 20"  
(50A - 500A)

Valve Size  
22" - 32"  
(550A - 800A)

Valve Size  
2" - 6"  
(50A - 150A)

Valve Size  
8" - 36"  
(200A - 900A)

Valve Size  
2" - 20"  
(50A - 500A)

VALVE SIZE		TOP VIEW				STANDARD						OPTION				
inch	mm	L1	L2	L3	M	Flat Stem			keyed Stem			Square Stem				
						F	F1	$\phi G$	H	F	$\phi G$	KEY SIZE	F	F1	$\phi G$	$\square H$
2	50A	18	98	-	M10	61	31	$\phi 14$	10	-	-	-	34	16	$\phi 13.2$	$\square 11$
2.5	65A	18	98	-	M10	61	31	$\phi 16$	12	-	-	-	34	16	$\phi 14$	$\square 11$
3	80A	18	98	-	M10	61	31	$\phi 16$	12	-	-	-	34	16	$\phi 14$	$\square 11$
4	100A	22	98	-	M10	61	31	$\phi 19$	15	-	-	-	38	21	$\phi 18$	$\square 14$
5	125A	22	98	-	M10	61	31	$\phi 19$	15	-	-	-	41	23	$\phi 21$	$\square 17$
6	150A	22	98	-	M10	61	31	$\phi 19$	15	-	-	-	41	23	$\phi 21$	$\square 17$
8	200A	28	116	-	M12	-	-	-	-	80	$\phi 28$	8x7-50L	49	29	$\phi 27$	$\square 22$
10	250A	28	116	-	M12	-	-	-	-	80	$\phi 32$	10x8-50L	54	33	$\phi 32$	$\square 27$
12	300A	36	158	-	M16	-	-	-	-	95	$\phi 35$	10x8-60L	59	33	$\phi 34$	$\square 27$
14	350A	36	158	-	M16	-	-	-	-	95	$\phi 42$	12x8-60L	66	40	$\phi 40$	$\square 32$
16	400A	44	204	-	M20	-	-	-	-	121	$\phi 48$	14x9-75L	81	45	$\phi 46$	$\square 36$
18	450A	44	204	-	M20	-	-	-	-	121	$\phi 48$	14x9-75L	81	45	$\phi 46$	$\square 36$
20	500A	44	204	-	M20	-	-	-	-	121	$\phi 60$	18x11-75L	87	52	$\phi 58$	$\square 46$
22	550A	44	288	220	M20	-	-	-	-	135	$\phi 60$	18x11-85L	-	-	-	-
24	600A	44	288	220	M20	-	-	-	-	155	$\phi 60$	18x11-100L	-	-	-	-
26	650A	68	328	254	M20	-	-	-	-	155	$\phi 75$	22x14-100L	-	-	-	-
28	700A	68	328	254	M20	-	-	-	-	155	$\phi 75$	22x14-100L	-	-	-	-
30	750A	68	328	254	M20	-	-	-	-	155	$\phi 80$	22x14-105L	-	-	-	-
32	800A	68	328	254	M20	-	-	-	-	155	$\phi 80$	22x14-105L	-	-	-	-
34	850A	68	328	254	M20	-	-	-	-	185	$\phi 90$	25x14-130L	-	-	-	-
36	900A	68	328	254	M20	-	-	-	-	185	$\phi 90$	25x14-130L	-	-	-	-

# AV.331 & 332

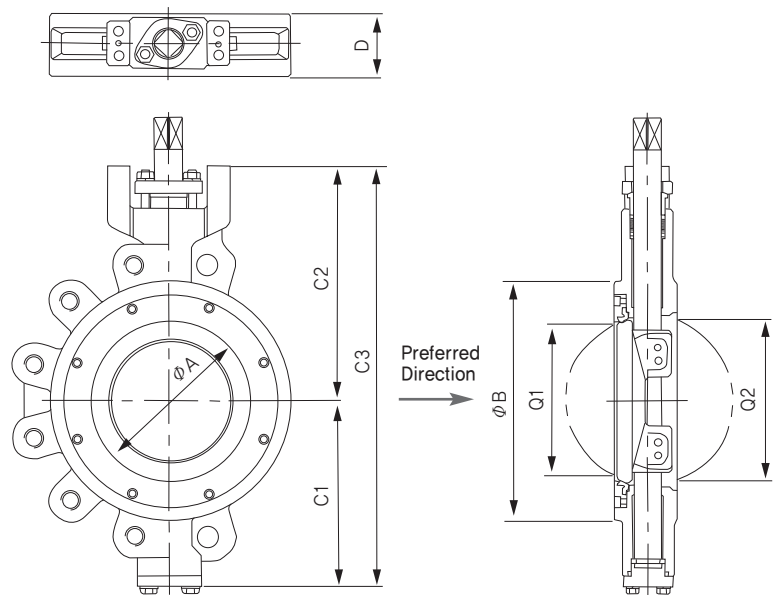
## Dimension

Dimension – "Q1" "Q2" is the dimension ensuring the pipes or flanges are properly aligned so that the valve disc does not contact them in any setting Misalignment will result in damage to the valve.

Applicable Flange Standard  
 – ANSI CL. 300  
 – ISO/DIN PN 25/40/50

All dimensions are approximate, pls contact the factory for more details.

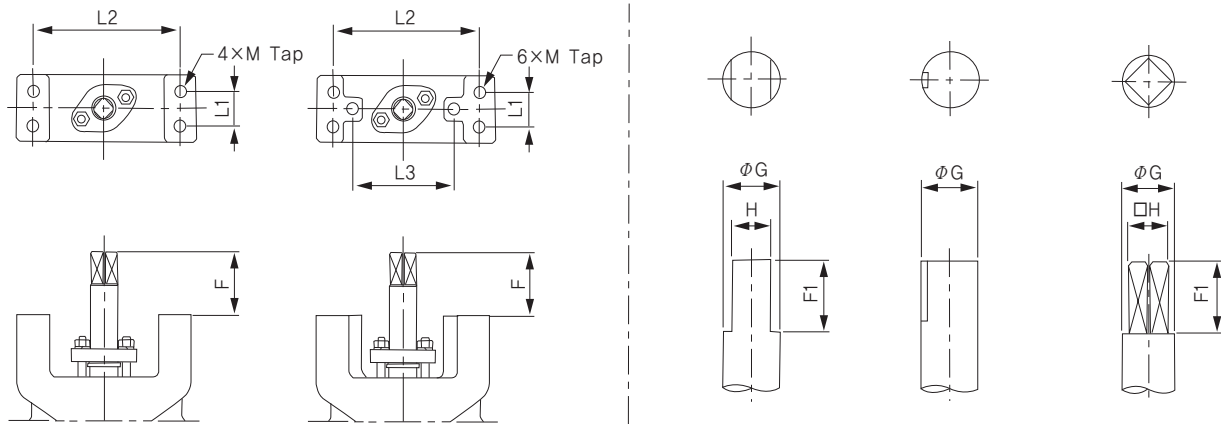
AV.331 – WAFER TYPE CL.300  
 AV.332 – LUG TYPE CL.300



VALVE SIZE		AV331 & 332 Dimension							
inch	mm	φA	φB	C1	C2	C3	D	Q1	Q2
2	50A	φ47	φ104	95	150	245	44	φ32	φ46
2.5	65A	φ64	φ120	115	170	285	46	φ54	φ65
3	80A	φ75	φ130	116	175	291	48	φ65	φ76
4	100A	φ95	φ156	130	185	315	54	φ86	φ97
5	125A	φ113	φ190	155	210	365	59	φ102	φ115
6	150A	φ140	φ220	185	245	430	59	φ122	φ143
8	200A	φ186	φ280	217	275	492	73	φ178	φ190
10	250A	φ228	φ336	250	320	470	83	φ218	φ232
12	300A	φ276	φ390	292	355	647	92	φ266	φ280
14	350A	φ315	φ436	323	405	728	117	φ304	φ316
16	400A	φ359	φ502	386	450	836	133	φ345	φ359
18	450A	φ405	φ560	425	488	913	149	φ391	φ406
20	500A	φ447	φ614	455	525	980	159	φ439	φ448
24	600A	φ549	φ724	545	600	1145	181	φ519	φ540

# AV.300 Series

## Top View & Stem



Valve Size  
2" – 16"  
(50A – 400A)

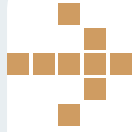
Valve Size  
18" – 24"  
(450A – 600A)

Valve Size  
2" – 6"  
(50A – 150A)

Valve Size  
8" – 24"  
(200A – 600A)

Valve Size  
2" – 20"  
(50A – 500A)

VALVE SIZE		TOP VIEW				STANDARD							OPTION			
inch	mm	L1	L2	L3	M	Flat Stem		keyed Stem			Square Stem					
						F	F1	φG	H	F	φG	KEY SIZE	F	F1	φG	□H
2	50A	18	98	-	M10	61	31	φ14	10	-	-	-	34	16	φ13.2	□11
2.5	65A	18	98	-	M10	61	31	φ16	12	-	-	-	34	16	φ14	□11
3	80A	18	98	-	M10	61	31	φ16	12	-	-	-	34	16	φ14	□11
4	100A	22	98	-	M10	61	31	φ19	15	-	-	-	38	21	φ18	□14
5	125A	22	98	-	M10	61	31	φ19	15	-	-	-	41	23	φ21	□17
6	150A	22	98	-	M10	61	31	φ19	15	-	-	-	41	23	φ21	□17
8	200A	28	116	-	M12	-	-	-	-	80	φ32	10x8-50L	54	33	φ32	□27
10	250A	36	158	-	M16	-	-	-	-	95	φ35	10x8-60L	59	33	φ34	□27
12	300A	36	158	-	M16	-	-	-	-	95	φ42	12x8-60L	66	40	φ40	□32
14	350A	44	204	-	M16	-	-	-	-	121	φ48	14x9-75L	81	45	φ46	□36
16	400A	44	204	-	M16	-	-	-	-	121	φ60	18x11-75L	87	52	φ58	□46
18	450A	44	204	254	M20	-	-	-	-	155	φ60	18x11-100L	-	-	-	-
20	500A	60	204	254	M20	-	-	-	-	155	φ75	22x14-100L	-	-	-	-
24	600A	60	328	254	M20	-	-	-	-	155	φ80	22x14-100L	-	-	-	-



# Cv-Valve

VALVE SIZE		Class	Degree of Disc Rotation(Cv)								
inch	mm		10	20	30	40	50	60	70	80	90
2	50	150~300	2	7	13	21	31	46	64	84	92
2.5	65	150~300	4	12	21	35	51	75	105	137	150
3	80	150~300	6	20	36	60	88	132	182	238	260
4	100	150~300	14	36	64	106	162	235	326	414	460
5	125	150~300	22	60	105	175	260	390	540	670	760
6	150	150	40	100	165	265	400	600	805	1025	1150
		300	30	76	125	200	305	460	615	785	880
8	200	150	65	170	290	485	735	1080	1490	1850	2100
		300	60	155	265	440	665	980	1350	1675	1900
10	250	150	100	260	445	735	1120	1680	2270	2850	3200
		300	90	230	390	645	980	1470	1985	2495	2800
12	300	150	150	385	660	1080	1645	2520	3385	4185	4700
		300	130	335	575	945	1435	2200	2955	3650	4100
14	350	150	190	470	810	1335	1950	2850	4060	5105	5800
		300	180	445	770	1265	1850	2705	3850	4840	5500
16	400	150	250	650	1110	1820	2720	3900	5670	7100	8000
		300	235	615	1055	1730	2585	3705	5385	6745	7600
18	450	150	340	850	1460	2265	3520	5300	7400	9280	10500
		300	320	800	1375	2265	3320	5000	6980	8750	9900
20	500	150	430	1100	1940	3200	4800	7000	9900	12390	14000
		300	400	1020	1800	2970	4460	6500	9190	11500	13000
24	600	150	650	1700	2940	4830	7300	10700	14900	18500	21000
		300	605	1580	2730	4485	6780	9940	13840	17180	19500
26	650	150	780	2000	3500	5700	8600	12700	17700	22100	25000
28	700	150	800	2350	4100	6700	10000	14700	20550	25600	29000
30	750	150	980	2750	4700	7800	11700	17000	23700	29600	33500
32	800	150	1150	3300	5700	9400	14000	20900	29100	36200	41000
36	900	150	1500	4200	7600	12500	18800	28000	38900	48600	55000
40	1000	150	2000	6500	7900	6000	24000	35700	49500	61800	70000
44	1100	150	2500	6700	12000	19800	29800	44300	61300	76600	87000
48	1200	150	3050	8200	14500	23700	35800	53000	73600	92000	104000

## LIQUIDS

$$Q = \frac{C_v}{1.17} = \sqrt{\frac{\Delta P}{G}}$$

## GASES

$$\textcircled{1} \Delta P < \frac{P_1}{2}$$

$$Q = 272 C_v \sqrt{\frac{\Delta P(P_1 + P_2)}{G(273 + T)}}$$

$$\textcircled{2} \Delta P \geq \frac{P_1}{2}$$

$$Q = \frac{236 C_v P_1}{\sqrt{G(273 + T)}}$$

## STEAM

$$\textcircled{1} \Delta P < \frac{P_1}{2}$$

$$W = \frac{13.5 C_v \sqrt{\Delta P(P_1 + P_2)}}{K}$$

$$\textcircled{2} \Delta P \geq \frac{P_1}{2}$$

$$W = \frac{11.9 C_v P_1}{K}$$

## STEAM IN GENERAL

$$W = 1210 C_v \sqrt{\frac{\Delta P}{V_1 + V_2}}$$

Q : Volume rate of Flow (Liquid)

W : Volume rate of Flow (Steam kg/h)

P<sub>1</sub> : Inlet Pressure (Liquid kgf/cm<sup>2</sup>)

P<sub>2</sub> : Outlet Pressure (Liquid kgf/cm<sup>2</sup>)

G : Specific Gravity of Fluid (Water & Air = 1)

V<sub>1</sub> : Specific Volume (cm<sup>3</sup>/g...P<sub>1</sub>)

V<sub>2</sub> : Specific Volume (cm<sup>3</sup>/g...P<sub>2</sub>)



## Handle Capacity

Size		RTFE/PTFE			Metal & Fire-safe
Handle	Valve	10kg/cm <sup>2</sup>	16kg/cm <sup>2</sup>	20kg/cm <sup>2</sup>	
240	2	Yes	Yes	Yes	Yes
265	2 1/2	Yes	Yes	Yes	Yes
265	3	Yes	Yes	Yes	Yes
265	4	Yes	Yes	Yes	Yes
265	5	Yes	Yes	Yes	Yes
265	6	Yes	Yes	Yes	Yes

Above (Following) information in this chart is based on the Max. Working Pressure. It shall be usually recommended that lever operators be used for valves 6"



## Extension Brackets For Various Temperature

Pipeline fluid Temperature	Handle	Gear	Pneumatic Std. Actu.
-38°C to 190°C	None	None	None
191°C to 238°C	100	None	None
239°C to 293°C	150	100	100
294°C to 343°C	150	100	100
344°C to 385°C	150	150	150
386°C to 440°C	200	200	200
441°C to 496°C	250	200	200
497°C to 538°C	250	250	250

1. By standardizing on the external temperature as 21°C, the values over 38°C in the above (following) temperature range chart shall be multiplied by 2.0 in case ambient temperature is 38°C above.
2. All valves need to be insulated or not.
3. The standard bracket structure shall be the stem extension type.
4. The construction of the actuator shall be suitable for continuous exposure to ambient temperatures Regardless of extension length, all valve operators & actuators shall be properly operated.



Picture

**AV.300 SERIES**

Double Offset Butterfly Valve



# AV.300 Series

## AV.300 SERIES

### Double Offset Butterfly Valve







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