

# AVA

## A10 wafer / A11 lug butterfly valves

Valve Size: 2 -20 inches (50-500mm)

Pressure Ratings: 16 bar



# SPECIFICATIONS

AVA Controls combines years of field application experience offering a high quality and reliable Series A10 and A11 butterfly valves.

**Applications:** A10 and A11 valves handle a wide range of conditions and media such as water, HVAC, Fire services, chemicals, food and beverages, power industries and utilities.

## Actuator Mounting flange(A)

Designed to ISO5211 for direct mounting of AVA handles, gear operators and actuators both electric and pneumatic.

## Body(B)

One piece body style with polyester coating for excellent corrosion resistance.

Extended neck length is easily for piping insulation.

## Disc and Stem Connection(C)

Features a high strength double-D split stem design produces the close tolerance. It eliminates stem components being exposed to the line media, such as disc screws and taper pins, which commonly result in vibration failures, corrosion, and leak paths.

## Disc(D)

Precision machined and hand polished disc to provide a minimum torque and longer seat life.

## Seat(E)

Unique tongue and groove seat design to body retention. Providing complete

isolation of flowing media from the body and making field replacement fast and simple.

The seat features a molded O-ring which eliminates the use of flange gaskets. The seat is designed to seal with slip-on or weld-neck flanges.

## Stem Bushing(F)

The heavy duty, non corrosive bushings support the stem and absorb side thrusts. The stem bushings are designed to lower valve seating torque and longer valve life.

## Stem Seal(G)

Stem seal is designed to self-adjusting, to prevent the external substances from entering the stem bore and the line media from coming in contact with the stem and body.

## Stem retaining Rings Assembly(H)

The stem is retained by means of two

stem retaining rings, retaining rings and washer. The stem retaining rings assembly prevents unintentional removal of the stem.

## Flange Locating Holes(I)

Provide quick and proper alignment during installation.

## Disc and Seat Seal

The spherically machined and hand polished disc is designed to bubble-tight shut off, minimum torque, and longer seat life.

## Materials Selection

BODY: Cast Iron

Ductile Iron

Cast Steel

Aluminum

DISC: Coated Ductile Iron

Nylon Coated Ductile Iron

316 Stainless Steel

Aluminum Bronze

Stem: Coated Carbon Steel

316 Stainless Steel

416 Stainless Steel

SEAT: NBR

EPDM

## Velocity Limits

### For on-off services

Fluids: 9m/s (30 ft/sec)

Gases: 54m/s (175 ft/sec)

## Pressure Ratings

For bi-directional bubble-tight shut off, disc in closed position:  
50mm-500mm, 16 bar

## Temperature Range of Seats

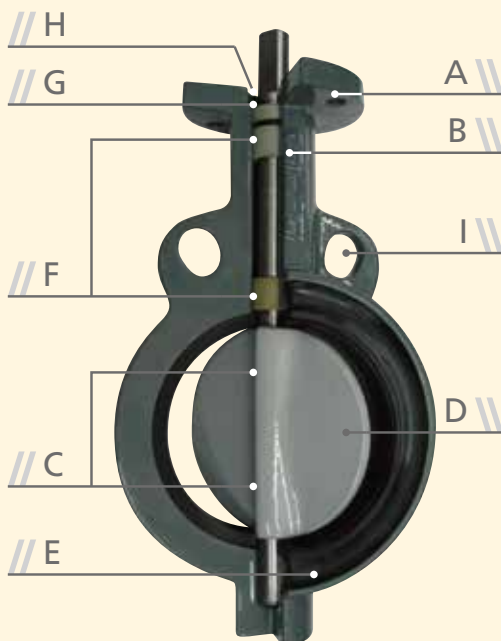
EPDM: -40°C to 120°C

NBR: -20°C to 100°C

## Design Features

AVA Controls, A10/A11 valves are designed to comply with ISO standards. The valves are designed to comply with ISO 5752 face-to-face and ISO 5211 actuator mounting flanges. All AVA valves are tested in accordance with BS5155, bodies are tested to 150% and seats are tested 110% of full pressure rating.

AVA product lines are international compatibility. These valves are compatible with most world flange standards- BS 10 Tables D and E, ANSI 125/150, DIN ND 10/16, BS4504 NP 10/16, AS2129 and JIS 10.

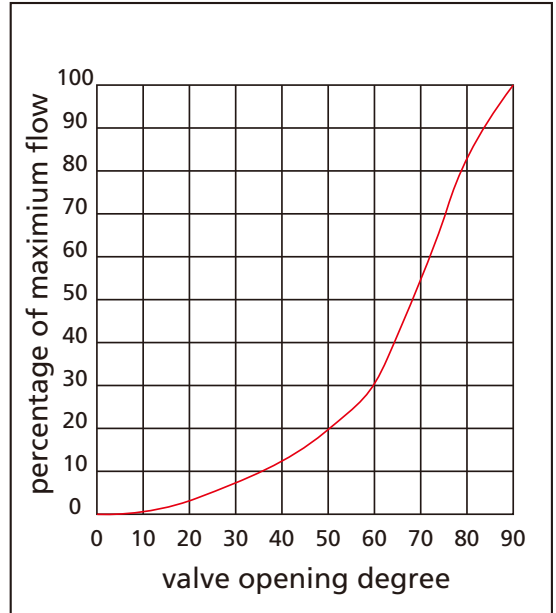


# SELECTION DATA

## Cv Values-Valve Sizing Coefficient

Valve Size		Disc Position (degrees)								
ins	mm	90°	80°	70°	60°	50°	40°	30°	20°	10°
2	50	145	115	85	62	43	27	16	7	1
2½	65	285	225	165	108	68	43	24	11	2
3	80	466	368	270	156	97	62	35	15	2
4	100	849	708	501	277	173	110	63	27	3
5	125	1362	1135	767	424	265	168	97	43	5
6	150	1869	1557	1035	573	358	227	130	57	6
8	200	3349	2870	1881	1092	687	425	243	103	12
10	250	5484	4570	2977	1727	1087	674	386	164	19
12	300	8158	6798	4437	2589	1610	1015	561	237	27
14	350	10433	8785	5880	3350	2128	1307	748	296	34
16	400	13826	11643	7788	4438	2819	1732	991	393	45
18	450	17386	14641	10166	5793	3679	2259	1294	512	59
20	500	22562	19000	12660	7215	4581	2814	1611	638	73

## A10/A11 Flow Characteristic



## Expected Seating/Unseating Torques Nm

Size		Full Rated Pressure Valve(Bar)			
inch	mm	3.5	7	10	16
2	50	12	12	12	14
2½	65	15	16	17	18
3	80	19	20	21	23
4	100	28	30	32	35
5	125	50	55	60	67
6	150	61	69	76	87
8	200	108	120	133	152
10	250	197	222	246	283
12	300	299	338	377	437
14	350	485	559	633	780
16	400	840	1011	1182	1524
18	450	962	1205	1448	1935
20	500	1174	1470	1767	2360

## Weights-kg

Size		Weights(Kg)	
inch	mm	A10	A11
2	50	2.4	2.9
2.5	65	3	3.7
3	80	3.4	5.4
4	100	5	7
5	125	6.6	11
6	150	7.7	12
8	200	13.2	18.3
10	250	20	25.2
12	300	27.3	34.3
14	350	41	56
16	400	61	96
18	450	79	122
20	500	128	202

## Valve Installation Instructions

1. Ensure the pipeline and the flange faces are clean.
2. Position the disc in the partially open position at 10 degree, maintaining the disc within the body face-to-face.
3. Place the valve body between flanges, center it and install flange bolts. No flange gaskets used. But do not tighten the bolts.
4. Before tightening flange bolts, carefully open the disc to the full open position to ensure the centered alignment and the unobstructed disc movement in full open and full close position.
5. Leave disc in full open position and tighten the bolts in sequence. Repeat a full close to full open rotation of the disc to ensure proper clearances.

# DIMENSIONS

## A10 Wafer

Size		A	B	C	D	E	F	G	H	J	K	Mounting Flange		
ins	mm											PCD	No Holes	Holes Dia.
2	50	53	93	130	43	90	32	14	10	75	32	70	4	10
2.5	65	66	107	143	46	90	32	14	10	88	47	70	4	10
3	80	79	123	155	46	90	32	14	10	102	65	70	4	10
4	100	103	151	170	52	90	32	16	11	130	91	70	4	10
5	125	126	178	190	56	90	32	19	13	155	112	70	4	10
6	150	151	205	210	56	90	32	19	13	182	146	70	4	10
8	200	210	260	243	60	150	32	22	16	234	194	125	4	14
10	250	252	314	282	68	150	50	30	22	287	242	125	4	14
12	300	302	370	310	78	150	50	30	22	341	292	125	4	14

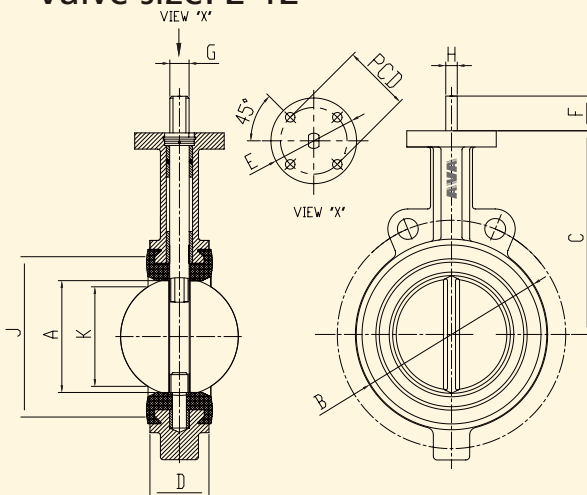
## A11 Lug

PCD		No. of holes		Bolt Size	
ANSI 150	NP16	ANSI 150	NP16	ANSI 150	NP16
120.6	125	4	4	15.9	M16
139.7	145	4	4	15.9	M16
152.4	160	4	8	15.9	M16
190.5	180	8	8	15.9	M16
215.9	210	8	8	19	M16
241.3	240	8	8	19	M20
298.4	295	8	8	19	M20
361.9	355	12	12	22.2	M24
431.8	410	12	12	22.2	M24

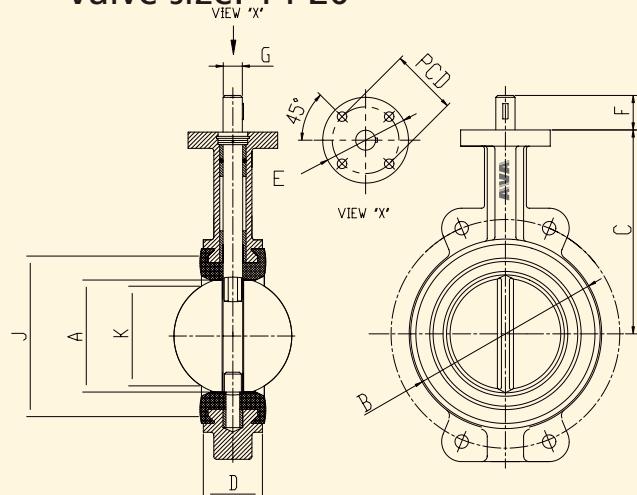
Size		A	B	C	D	E	F	G	J	K	Key Size	Mounting Flange		
ins	mm											PCD	No Holes	Holes Dia.
14	350	336	422	345	79	150	51	35	380	325	10x10	125	4	14
16	400	387	473	377	105	150	51	35	434	380	10x10	125	4	14
18	450	438	526	412	112	210	64	50	486	428	10x12	165	4	21
20	500	488	577	440	129	210	64	50	538	474	10x12	165	4	21

PCD		No. of holes		Bolt Size	
ANSI 150	NP16	ANSI 150	NP16	ANSI 150	NP16
476.2	470	12	16	25.4	M24
539.7	525	16	16	25.4	M27
577.8	585	16	20	28.6	M27
635	650	20	20	28.6	M30

## Valve size: 2-12"



## Valve size: 14-20"



The data presented in this bulletin is for general use only.

Consult AVA Controls representatives or factory for the specific performance data and material selection for your particular applications.



DISTRIBUTOR