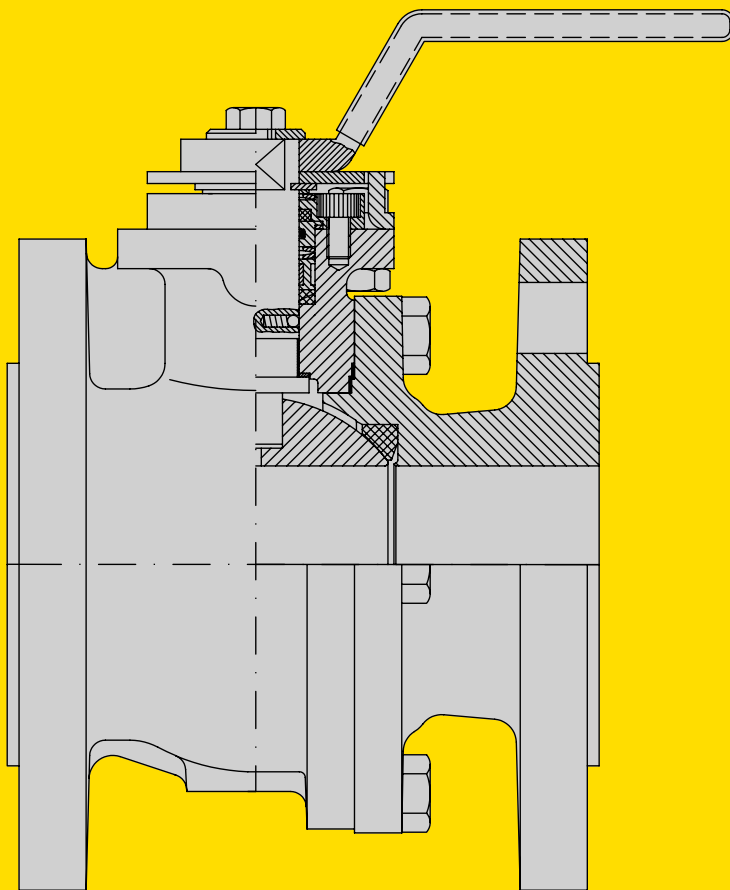


TWO- & THREE-PIECE BALL VALVES ALV-2



NOMINAL PRESSURE

ANSI Class 150-2500

PN 16-420

NOMINAL SIZE

1/2"-40"

DN 15-1000

MATERIALS

Carbon Steel

Alloy Steel

Stainless Steel

CONNECTIONS

Flanged

Welded Ends



AXELVALVES offers a wide range of ball valves to ANSI and DIN standards, designed for the chemical and petrochemical, oil and gas processing, steam generation industries.

APPLICATIONS

POWER

OIL & GAS

PETROCHEMICAL

CHEMICAL

MARINE

PULP & PAPER

CRYOGENICS

MINING

CONSTRUCTION

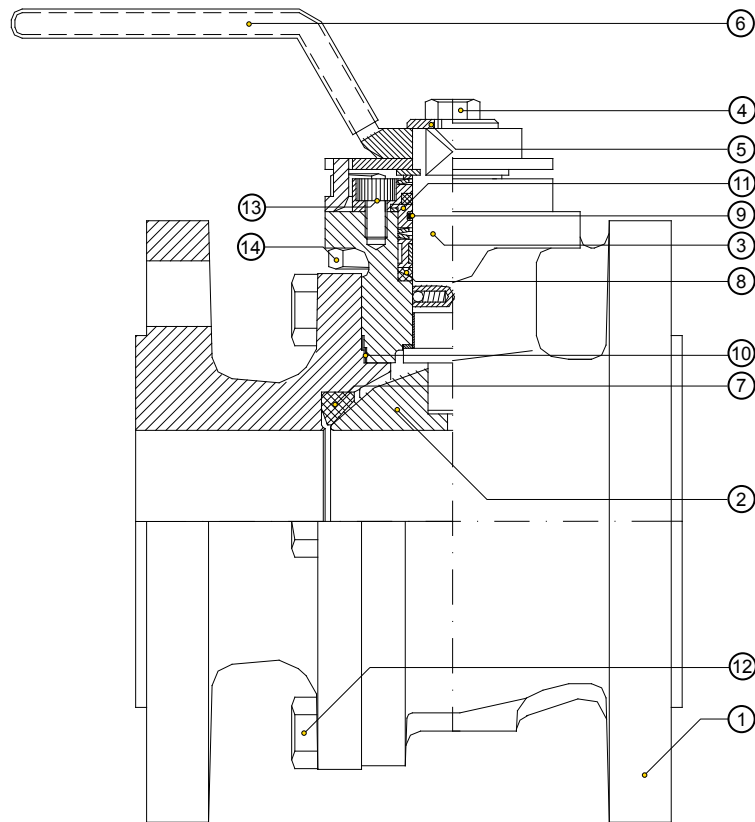
MARKING

Valves are identified by proper marking as required by MSS-SP25 with all informations of rating, size, valve body and trim material.

FEATURES

ALV-2 is a two piece ball valve that comes standard in stainless or carbon steel, with a soft seat in reinforced teflon. Other alloys and seat materials such as pure teflon or metallic seats are available on request.

- » Blow Out Proof Stem
- » Anti Static Design
- » Low Torque - low and even torque throughout the entire range of motion.
- » Zero Leakage - in flow directions at both high pressures and at vacuum
- » Materials - wide arrange of seats and seal
- » materials available
- » Free Floating Ball - the stem is engaged in a slot on the ball, meaning that the ball is free floating, making the valve leak tight within the pressure range
- » Fire Safe - ALV-2 is fire safe according to API607



STANDARD MATERIAL SPECIFICATION

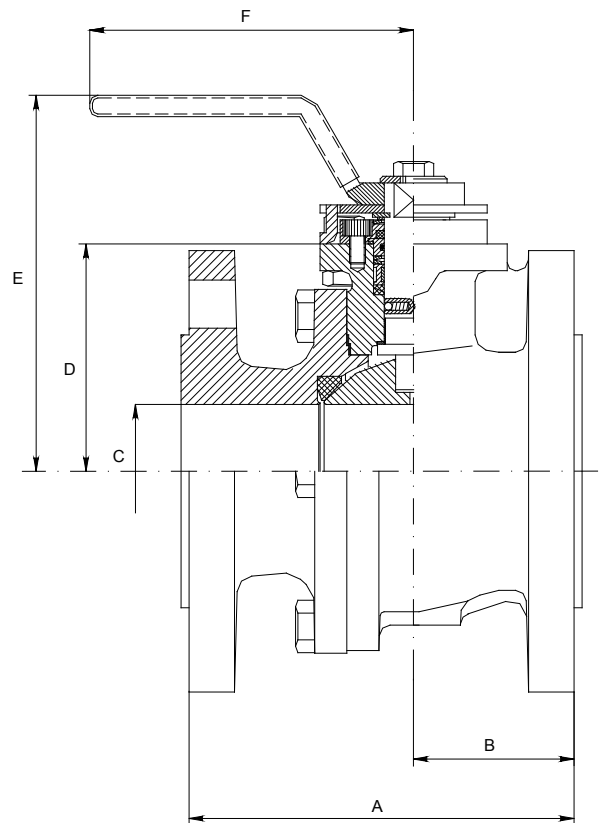
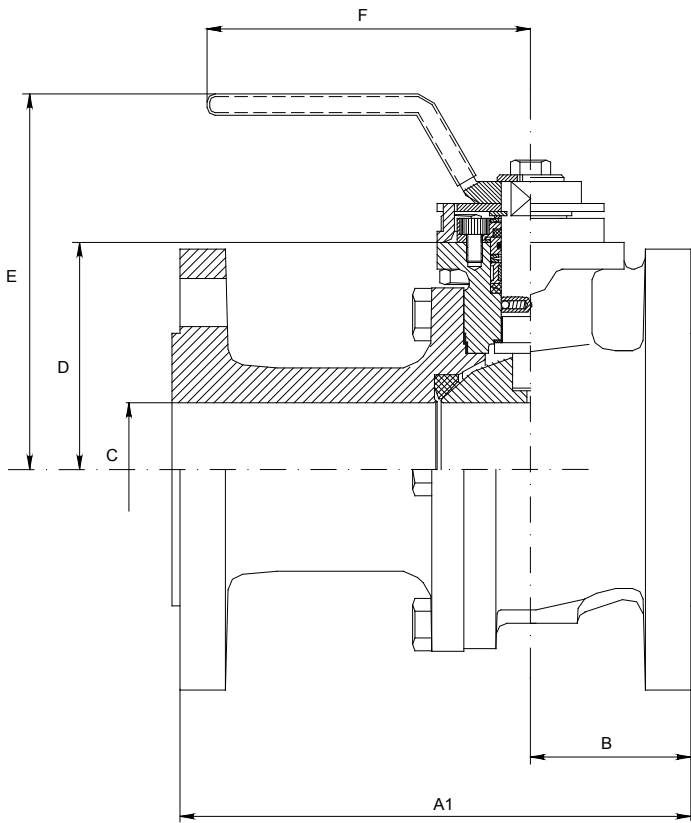
NO	PART	MATERIAL	
		CARBON STEEL	STAINLESS STEEL
1	Body	ASTM A1051	ASTM A182 F3161
		ASTM A216 WCB2	ASTM A351 CF8M2
2	Ball	ASTM A182 F304	ASTM A182 F316
3	Stem	ASTM A182 F304	ASTM A182 F316
4	Wrench Bolt	ASTM A193 B7	ASTM A193 B8
5	Washer	ASTM A182 F304	ASTM A182 F316
6	Handle	Carbon Steel	Carbon Steel
7	Seat Rings	Reinforced PTFE	Reinforced PTFE
8	Gland Packing	PTFE	PTFE
9	O-rings	Viton	Viton
10	Body Gasket	PTFE	PTFE
11	Guide Ring	ASTM A182 F316	ASTM A182 F316
12	Body Bolt	ASTM A193 B7	ASTM A193 B8
13	Gland Bolt	ASTM A193 B7	ASTM A193 B8
14	Stop Plate Nuts	ASTM A194 2H	ASTM A194 8

1 = 1/2"-2", DN 15-50

2 = 2 1/2"-24", DN 65-600

Other materials and material combinations available on request.

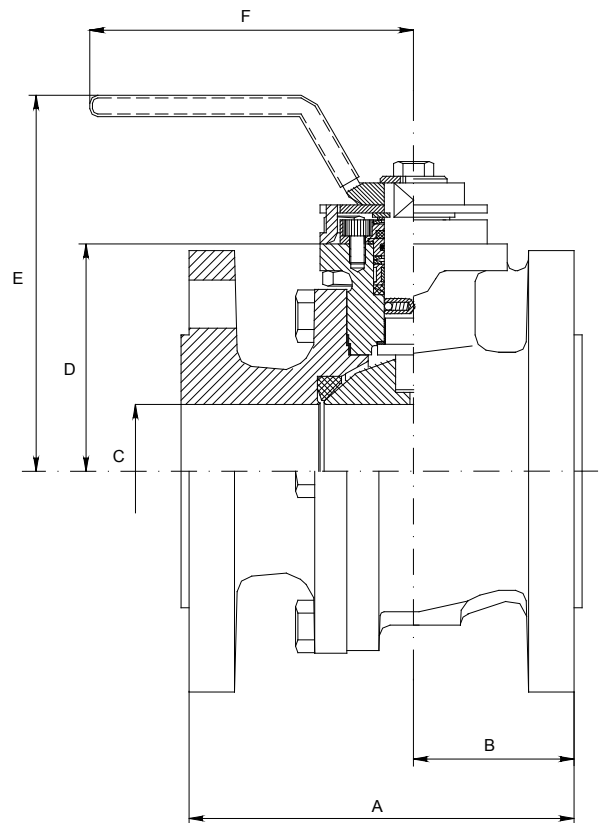
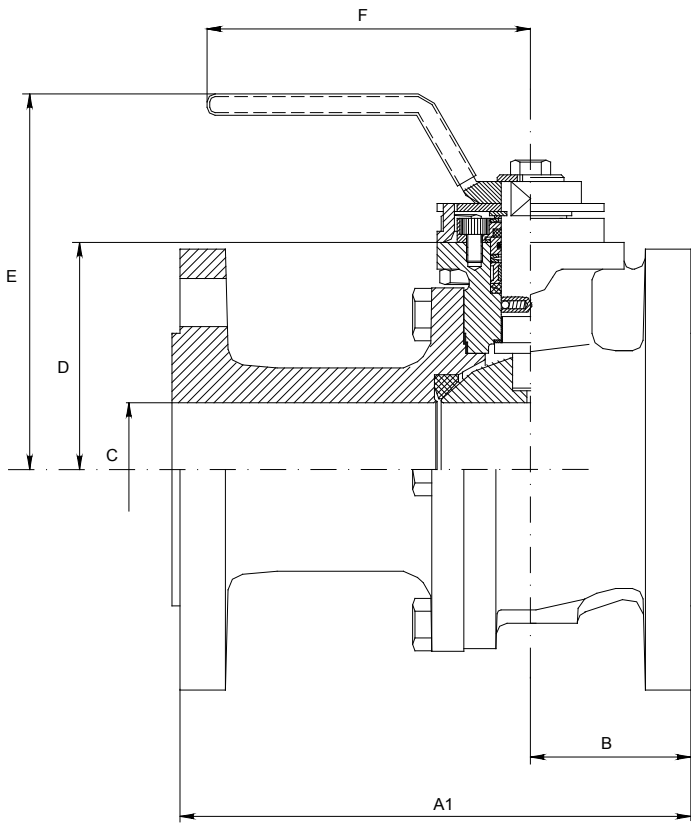
DIN - FULL BORE MEDIUM AND LONG PATTERN



DIMENSIONS

DIMENSIONS	SIZE									
	15	20	25	50	80	100	150	200	250	
	1/2"	3/4"	1"	2"	3"	4"	6"	8"	10"	
A	-	-	125	150	180	190	350	400	450	
A1	130	150	160	230	310	350	480	600	730	
C	14	19	25	47	76	98	152	203	254	
D	24,5	30,5	45	70	110	125,5	168	208	235	
E	90	96	127	155	209	220	259	300	-	
F	158	158	258	330	400	400	700	850	-	
PN16M	B	-	-	-	69	81	174	200	225	
	W. kg	-	-	-	23,7	29,7	82	120	190	
PN40M	B	-	-	59	65	69	82	153	200	225
	W. kg	-	-	5,1	13,7	25,8	34,5	96	140	200
PN16L	B	-	-	-	98	105	174	200	225	
	W. kg	-	-	-	26,5	37	89	133	210	
PN40L	B	54	61	59	96	98	105	153	200	225
	W. kg	2,8	4	5,4	16,5	27,5	39	102	153	224

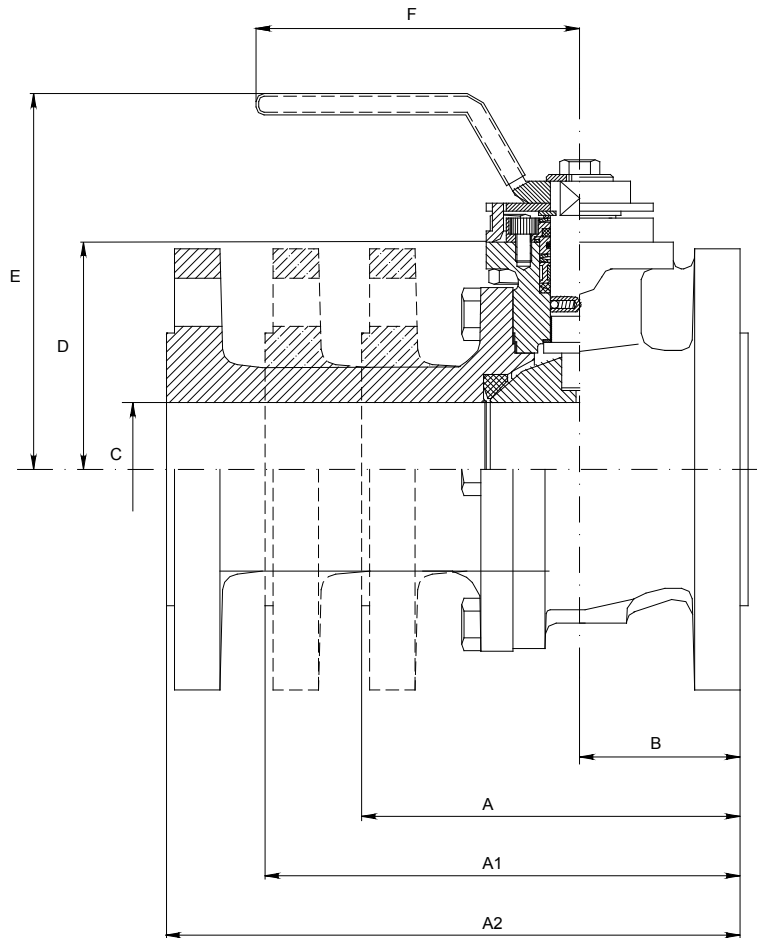
DIN - REDUCED BORE MEDIUM AND LONG PATTERN



Measurements in mm.

DIMENSIONS							
DIMENSIONS	50	80	100	150	200	250	
	2"	3"	4"	6"	8"	10"	
	A	150	180	190	350	400	450
A1	-	-	-	480	600	730	
B	65	75	85	115	129	154	
C	38	58	76	98	144	187	
D	63	75	85	115	129	154	
E	143	183	209	208	242	286	
F	330	330	400	400	-	-	
Weight kg	PN40RM	9	-	-	-	-	
	PN16RM	-	18	26	41	87	135
	PN16RL	-	-	-	47	99	154

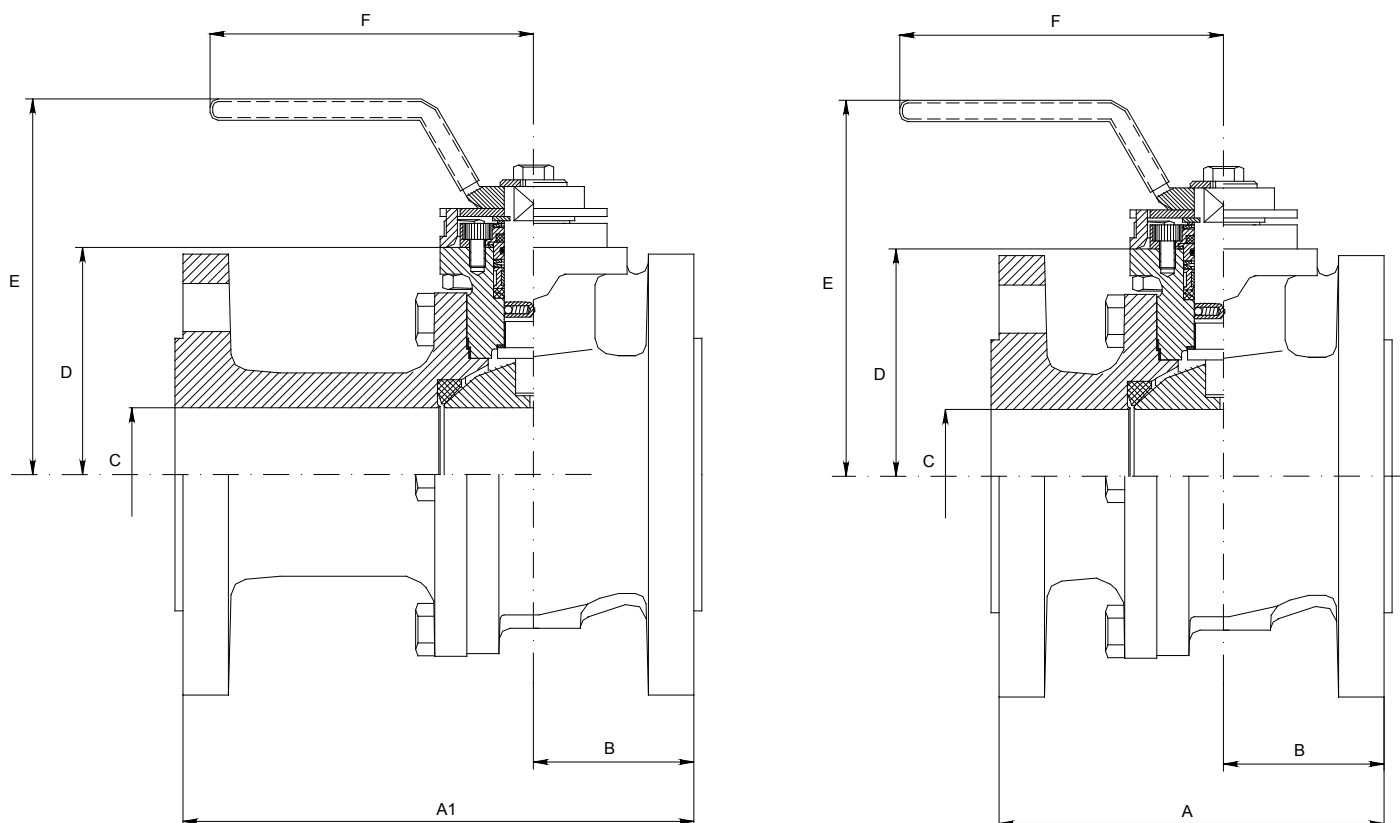
ANSI - FULL BORE MEDIUM AND LONG PATTERN



Measurements in mm.

DIMENSIONS										
DIMENSIONS	SIZE									
	15	20	25	50	80	100	150	200	250	
	1/2"	3/4"	1"	2"	3"	4"	6"	8"	10"	
A 150S	-	-	-	178	203	229	-	-	-	
A1 150M	108	117	127	203	241	305	394	457	533	
A2 300M	140	152,5	165	216	283	305	403	502	568	
C	14	19	25	51	76	102	152	203	254	
D	33	40,3	45	73,5	110	131	168	208	235	
E	99	110	125	158	209	225	259	305	-	
F	158	158	258	330	400	400	700	850	-	
ANSI 150S	B	-	-	-	76	87	113	-	-	-
	W. kg	-	-	-	13	25	41	-	-	-
ANSI 150M	B	45	47	54,5	76	87	113	174	200	225
	W. kg	2,5	4	4,2	13,5	25,5	43,5	98	133	208
ANSI 300M	B	54	62	66,5	96	118	135	190	245	250
	W. kg	3	6,3	7,6	16,5	32,5	58,5	126	179	270

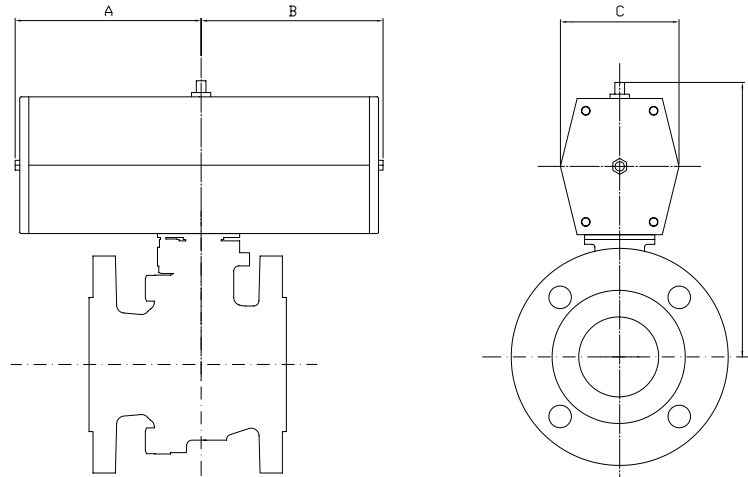
BALL VALVES / ALV-2
ANSI - REDUCED BORE



Measurements in mm.

DIMENSIONS						
DIMENSIONS	50	80	100	150	200	250
	2"	3"	4"	6"	8"	10"
A 150RS	178	203	229	267	292	330
A1 300RS	216	283	305	403	419	457
C	38	58	76	98	144	187
D	58	94	110	112,5	151	194
E	143	183	209	208	242	286
F	330	330	400	400	-	-
ANSI 150RS	B	72	88	104	115	129
	W. kg	10	19	29,5	41	86
ANSI 300RS	B	96	114	135	180	215
	W. kg	13	26,5	40	67	136

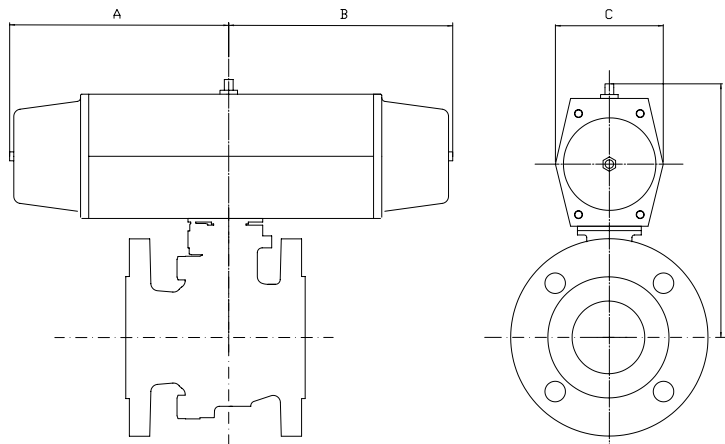
BALL VALVES / ALV-2 ACTUATOR SIZING



Measurements in mm.

DOUBLE ACTING ACTUATORS - RC200-DA

DIMENSIONS		SIZE							
		15	20	25	50	80	100	150	200
		1/2"	3/4"	1"	2"	3"	4"	6"	8"
Actuator Type	PN16	210-DA	210-DA	210-DA	220-DA	240-DA	250-DA	270-DA	280-DA
	PN40	210-DA	210-DA	210-DA	220-DA	250-DA	260-DA	270-DA	280-DA
	A	45	45	45	98	135/90	90/190	145	300
	B	98	98	98	98	135/190	190/190	300	300
	C	73	73	73	73	104/144	144/144	220	220
	D	135	141	175	200	310/310	375/375	548	588
	Weight kg	1,2	1,2	1,2	1,6	4,9/9,4	9,4/12,5	32,0	42,0



Actuator size for air 5.5 bar.

Measurements in mm.

SPRING RETURN ACTUATORS - RC200-SR

DIMENSIONS		SIZE							
		15	20	25	50	80	100	150	200
		1/2"	3/4"	1"	2"	3"	4"	6"	8"
Actuator Type	PN16	210-SR	210-SR	220-SR	230-SR	250-SR	260-SR	280-SR	280-SR
	PN40	210-SR	210-SR	220-SR	230-SR	260-SR	270-SR	280-SR	-
	A	45	45	150	65	90/285	285/145	510	510
	B	150	150	150	200	258/285	285/510	510	510
	C	73	73	73	104	144/144	144/220	220	220
	D	135	141	175	250	360/360	375/375	548	588
	Weight kg	1,5	1,5	2,2	4,2	12,4/18,5	18,5/45,0	68,0	68,0

Actuator size for air 5.5 bar.

PRESSURE AND TEMPERATURE RATINGS

MATERIALS

Group Material	Nominal Designation Steel	Carbon Steel	C-Mn Si	18 Cr - 8 Ni 18 Cr - 8 Ni	16 Cr - 12 Ni - 2 Mo	18 Cr - 13 Ni - 3 Mo	18 Cr - 9 Ni - 2Mo	18 Cr - 8 Ni	16 Cr - 12 Ni - 2 Mo
Product Forms	Forging Spec.- Gr	A105 A350 LF2	-	A182 F304 A182 F304H	A182 F316 A182 F316H	-	-	A182 F304L	A182 F316L
	Casting Spec.- Gr	A216-WCB	-	A351 CF3 A351 CF8	-	-	A351 CF3M A351 CF8M	-	-

PRESSURE TEST

MATERIAL		PRESSURE (PSIG) BY CLASSES							
Group	Item	150	300	400	600	900	1500	2500	4500
A105 A350 LF2	Working Pressure	285	740	990	1480	2220	3705	6170	11110
	Shell Test	450	1125	1500	2225	3350	5575	9275	16675
	Seat Test	315	815	1090	1630	2445	4075	6790	12225
A182 F304 A182 F304H A182 F316 A182 F316H	Working Pressure	275	720	960	1440	2160	3600	6000	10800
	Shell Test	425	1100	1450	2175	3250	5400	9000	16200
	Seat Test	305	795	1060	1585	2380	3960	6600	11880
A182 F304L A182 LF16L	Working Pressure	230	600	800	1200	1800	3000	5000	9000
	Shell Test	350	900	1200	1800	2700	4500	7500	13500
	Seat Test	255	660	880	1320	1980	3300	5500	9900

PRESSURE TEMPERATURE RATINGS - ACCORDING TO ASME/ANSI B16.34

SERVICE TEMP.	A1051 A350 LF22	A182 F316	A1051 A350 LF22	A182 F316	A1051 A350 LF22	A182 F316	A1051 A350 LF22	A182 F316	A1051 A350 LF22	A182 F316
	PN20	PN20	PN50	PN50	PN100	PN100	PN250	PN250	PN420	PN420
°C	BAR	BAR	BAR	BAR	BAR	BAR	BAR	BAR	BAR	BAR
-29 to 38	19,6	19,0	51,1	49,6	102,1	99,3	255,3	248,1	425,5	413,6
50	19,2	18,4	50,1	48,1	100,2	96,3	250,4	240,6	417,3	401,0
100	17,7	16,2	46,4	42,2	92,8	84,4	231,9	211,0	386,5	351,7
150	15,8	14,8	45,2	38,5	90,5	77,0	226,1	192,5	376,9	320,9
200	14,0	13,7	43,8	35,7	87,6	71,3	219,1	178,4	365,2	297,3
250	12,1	12,1	41,7	33,4	83,4	66,8	208,6	166,9	347,7	278,2
300	10,2	10,2	38,7	31,6	77,5	63,3	193,7	158,1	322,8	263,6
350	8,4	8,4	37,0	30,4	73,9	60,8	184,8	152,1	308,0	253,8
375	7,4	7,4	36,5	29,7	72,9	59,4	182,3	148,5	303,9	247,5
400	6,5	6,5	34,5	29,1	69,0	58,2	172,5	145,6	287,5	242,6
425	5,6	5,6	28,8	28,7	57,5	57,3	143,8	143,3	239,6	238,9
450	4,7	4,7	20,0	28,1	40,1	56,2	100,2	140,4	166,9	234,0
475	3,7	3,7	13,5	27,4	27,1	54,7	67,7	136,8	112,9	228,0
500	2,8	2,8	8,8	26,8	16,6	53,7	44,0	134,1	73,3	223,6
525	1,9	1,9	5,2	25,8	10,4	51,6	25,9	129,0	43,2	214,9

1 = Permissible, but not recommended for prolonged use above 400°C

2 = Not to be used over 300°C

MAX. WORKING PRESSURE AND PRESSURE TEST OF VALVES

PRESSURE CLASS OF VALVE		PN16	ANSI 150 PN20	PN25	PN40	ANSI 300 PN50	ANSI 400 PN68	ANSI 600 PN100	ANSI 8001	ANSI 900 PN150	ANSI 1500 PN250	ANSI 2500 PN420	API 2000	API 3000	API 5000	API 10000	
Max. Operating Pressure	-29 to 38°C	bar	16	19	25	40	49,6	66,2	99,3	138	149	248	414	138	207	345	690
Pressure Test ²	Hydrostatic Shell Test	bar	25	29	40	60	76	100	150	207	224	372	621	276	414	690	1035
	Hydrostatic Seat Test	bar	18	21	28	44	55	73	110	152	166	276	455	152	228	380	760
	Air Seat	bar±1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6

1 = Class 800 is not a normally tabulated ASME/ANSI B16.34 designation, but it is an intermediate class that is widely used for SW - BW - and threaded end valves.

2 = No visible leakage under all test pressure sequence

DESIGN AND APPLICABLE STANDARDS

- » According to Standards: ANSI, API, BS, DIN, GOST

MATERIAL CERTIFICATES

Axelvalves supply ALV-2 valves with test and material certificates in accordance to EN 10204 3.1B as standard. Heat codes are forged or cast on the valve material ensuring full traceability.

MOUNTING PAD - ISO 5211

The valves are equipped with top-flange according to ISO 5211 enabling direct mounting of pneumatic or electric actuators. No bracket or couplings are needed.

PNEUMATIC ACTUATORS

- » Double and single acting 90° actuators.
- » Max air pressure (instrument air): 10bar
- » Operating media: Air or inert gas (low pressure hydraulics are available on request)
- » Ambient temperature: -50°C - +150°C.
- » All types of pneumatic actuators are supplied with drive shaft with flats for manual operation. Manual override unit M1 is available as accessory for all actuator sizes.

AVAILABLE ON REQUEST

- » Bare Shaft - lever or gear operated
- » Electric or Pneumatic Operated
- » Stem Extension
- » Trunnion Mounted Ball
- » Cryogenic Service
- » High Temperature Service
- » High Pressure Service
- » Metal Seats
- » Welded or Screwed Connections
- » Special Dimensions
- » Special Materials

Please note, this is a condensed catalogue.

For further information, contact AXELVALVES.

Subject to change without prior notice.