



## Spring Return

### Automated Ball Valve Package

Series 90/93  
150# Flanged Ball Valve

Full Port Valve

Class 150

1/2" – 12"

316 SS Body, Ball & Stem

Belleville Washers

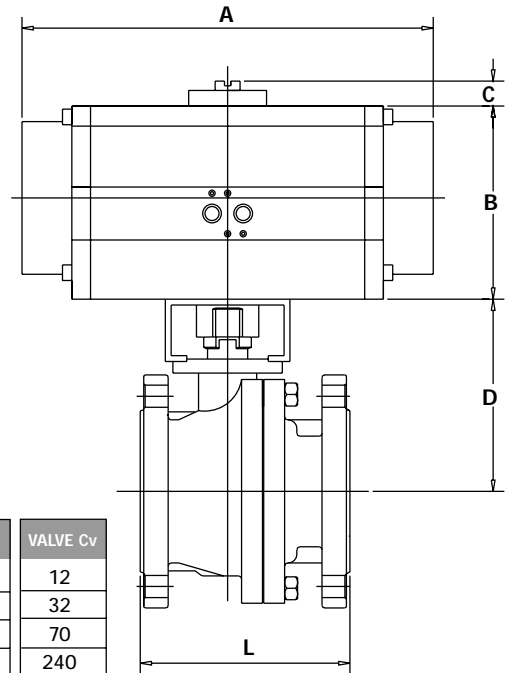
Chevron Packing

RTFE Seats

For 10" and 12", call factory



150# Flanged

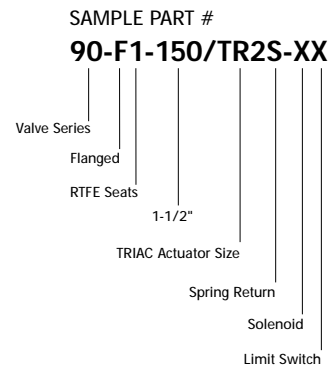


VALVE SIZE	A	B	C	D	L	VALVE Cv
1/2"	7.56	3.39	0.79	2.90	4.25	12
3/4"	7.56	3.39	0.79	3.17	4.63	32
1"	8.94	4.45	0.79	3.48	5.00	70
1-1/2"	8.94	4.45	0.79	5.70	6.50	240
2"	10.39	4.88	0.79	6.00	7.00	410
2-1/2"	13.23	6.18	0.79	6.45	7.50	680
3"	13.23	6.18	0.79	6.83	8.00	940
4"	16.26	6.93	1.18	7.42	9.00	1740
6"	26.68	10.08	1.18	10.67	15.50	-
8"	38.86	10.08	1.18	13.03	18.00	-

SERIES 90/93 150# Flanged

SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	90-F1-050/TR2S-XX
3/4"	90-F1-075/TR2S-XX
1"	90-F1-100/TR3S-XX
1-1/2"	90-F1-150/TR3S-XX
2"	90-F1-200/TR4S-XX
2-1/2"	90-F1-250/TR6S-XX
3"	90-F1-300/TR6S-XX
4"	93-F1-400/TR7S-XX
6"	93-F1-600/TRAS-XX
8"	93-F1-800/TRBS-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	90-F1-050/TR2S-XX
3/4"	90-F1-075/TR3S-XX
1"	90-F1-100/TR3S-XX
1-1/2"	90-F1-150/TR4S-XX
2"	90-F1-200/TR5S-XX
2-1/2"	90-F1-250/TR6S-XX
3"	90-F1-300/TR6S-XX
4"	93-F1-400/TR7S-XX
6"	93-F1-600/TRAS-XX
8"	93-F1-800/TRBS-XX



### OPTIONS

DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
NEMA 4 Solenoid	(A)	NEMA 4 Limit Switch (2) spdt	(A)
NEMA 7 Solenoid	(B)	NEMA 7 Limit Switch (2) spdt	(B)

Other options available - call for details  
Actuators are sized based on clean/clear fluid at full rated pressure of valves.

0998-90SR

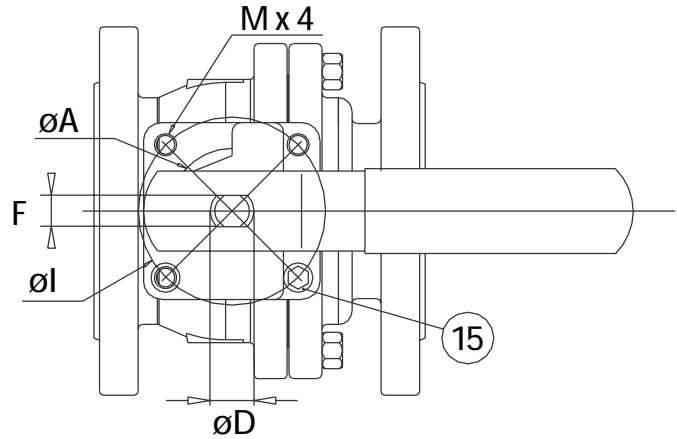
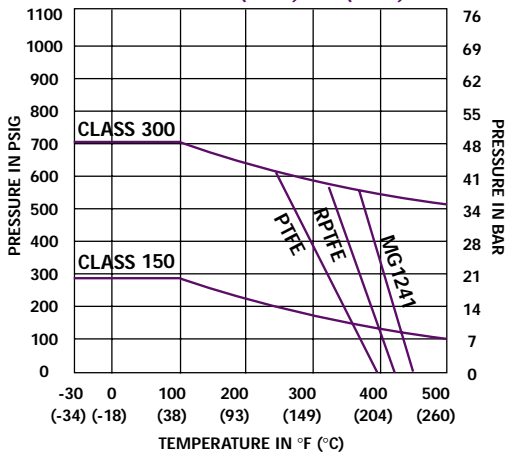


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# Series 90/93

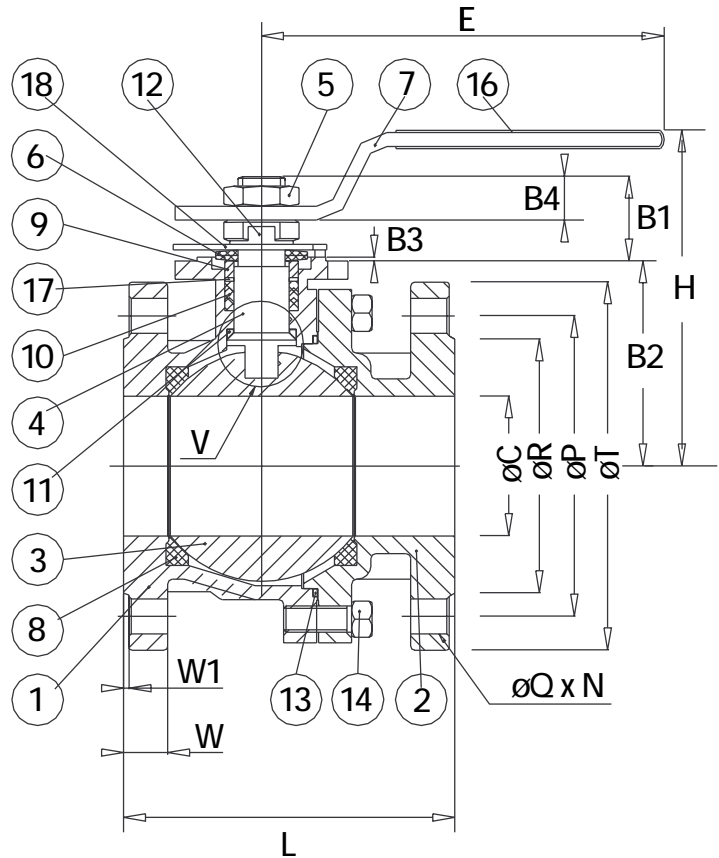
## High Performance, Full Port Split Body Ball Valve Series 90-20 (ANSI Class 300) Series 90-10 (ANSI Class 150)

**Pressure vs. Temperature Chart**  
for Valve 1/2" (DN15) to 2" (DN50)



### MATERIALS LIST

NO.	PART NAME	MATERIAL	QTY.
1	Body	ASTM A351 Gr. CF8M	1
2	Cap	ASTM A351 Gr. CF8M	1
3	Ball	SUS 316	1
4	Stem	SUS 316	1
5	Stem Nut	SUS 304	1
6	Belleville Washer	SUS301	2
7	Handle	SUS 304	1
8	Seat	PTFE	2
9	Gland	SUS304	1
10	V-Ring Packing	PTFE	§
11	Stem Seal	RPTFE	1
12	Lock Saddle	SUS 304	1
13	Joint Gasket	PTFE	1
14	Bolt (Stud & Nut)	SUS 304	‡
15	Stop Pin	SUS 304	1
16	Handle Nut	SUS304	1
17	Bushing	†	1
18	Locking Plate	SUS304	1



§ 1 set of v-ring packing consists of 3 pcs. of v-ring

‡ 50% Stainless steel powder filled PTFE

† For 1/2" to 1" - 4 pcs of bolt; For 1-1/2" & 2" 4 pairs of stud and nut

NOTE: Materials designated in the material list are our standard materials. Other options are available to suit different operating environment (see pressure vs. temperature chart for different seat options).

SIZE	B1	B2	B3	B4	øC	øD	E	F	H	øI	øK	L	*L	M	N	*N	øP	*øP	øQ	*øQ	øR	øT	*øT	*øT	W	*W	W1	ISO5211
1/2"	23.9	34	2	10.9	15.0	11.1	165	8.0	67	42	30	108	140	#12-24UNC	4	4	60.5	66.5	16	16	35	88.9	95	11.2	11.2	14.3	1.6	F04
3/4"	24.8	41	2	11.9	20.0	11.1	165	8.0	74	42	30	117	152	#12-24UNC	4	4	69.9	82.5	16	19	43	98.6	117	11.2	11.2	15.9	1.6	F04
1"	26.0	49	2	12.0	25.0	14.3	200	9.7	89	50	35	127	165	1/4"-20UNC	4	4	79.2	88.9	16	19	51	108	124	11.2	11.2	17.5	1.6	F05
1-1/2"	34.8	78	2	14.0	38.0	19.0	250	12.0	123	70	55	165	190	5/16"-18UNC	4	4	98.6	114.3	16	22	73	127	155	14.2	14.2	20.7	1.6	F07
2"	34.8	86	2	14.0	50.0	19.0	250	12.0	131	70	55	178	216	5/16"-18UNC	4	8	120.7	127.0	19	19	92	152	165	15.9	15.9	22.3	1.6	F07

\* Dimension for ANSI Class 300



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