



ISO 9001

# SERIES 10 & 20

ECONOMICAL  
ONE-PIECE / TWO-PIECE BALL VALVES  
STAINLESS STEEL AND CARBON STEEL  
THREADED ENDS 1000/1500/2000 PSI

## FEATURES

- For General Industrial and Chemical Applications, provides Safe, Economical Performance
- Economical Compact Design
- Blow-Out Proof Stem
- Low Operation Torque
- Investment Cast Body Construction

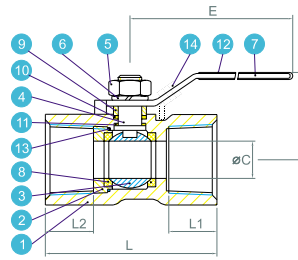
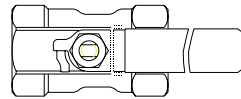
**FIG. 10-10 REDUCED PORT 1/4" TO 2" 1000 PSI**



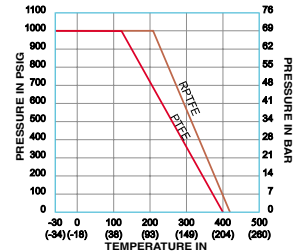
### MATERIALS LIST

NO.	PART NAME	MATERIAL	Q'TY
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	Stem Washer	SUS 304	1
7	Handle	SUS 304	1
8	Seat	PTFE	2
9	Gland	SUS 304	1
10	Stem Packing	PTFE	1
11	Thrust Washer	PTFE	1
12	Handle Sleeve	Vinyl	1
13	Joint Gasket	PTFE	1
14	Locking Device	SUS 304	1

Available as an option



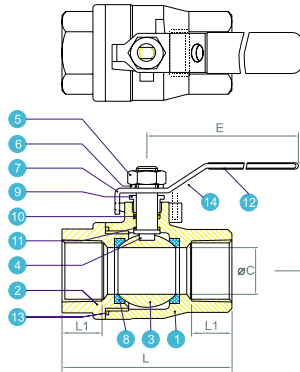
Pressure Vs. Temperature Chart



DIMENSIONS(mm)

SIZE	ØC	E	H	L	L1	L2	W(Kg)
1/4"	5.0	64	35	39	11.0	7.0	0.07
3/8"	7.0	70	37	44	11.0	8.0	0.10
1/2"	9.2	90	44	57	16.0	14.0	0.16
3/4"	12.5	90	47	58	15.0	10.7	0.25
1"	15.0	103	50	71	17.4	17.0	0.43
1 1/4"	20.0	103	57	78	19.0	16.7	0.70
1 1/2"	25.0	127	69	83	19.1	16.6	0.83
2"	32.0	127	75	100	22.5	19.7	1.50

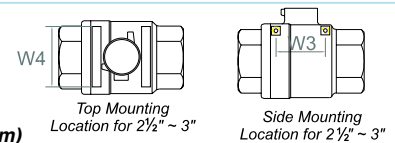
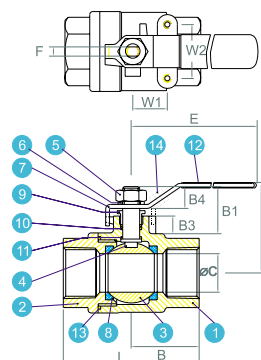
**FIG. 20-10 FULL PORT 1/4" TO 2" 1000 PSI**



DIMENSIONS(mm)

SIZE	ØC	E	H	L1	L	W(Kg)
1/4"	11.2	100	50	12	56	0.23
3/8"	12.6	100	50	13	56	0.23
1/2"	15.0	130	60	14	66	0.36
3/4"	20.0	130	64	16	72	0.47
1"	25.0	165	71	18	84	0.82
1 1/4"	32.0	165	78	20	94	1.17
1 1/2"	38.0	190	86	22	110	1.82
2"	50.0	190	95	25	126	2.83

**FIG. 20-20 FULL PORT 1/4" TO 3" 1000 PSI**



DIMENSIONS(mm)

SIZE	B	B1	B3	B4	ØC	E	F	H	L	W1	W2	W3	W4	W(kg)
1/4"	27.5	23	8	10	11.6	100	5.0	50	55	12.7	28.5	N/A	N/A	0.23
3/8"	27.5	23	8	10	12.7	100	5.0	50	55	12.7	28.5	N/A	N/A	0.23
1/2"	32.5	26	10	12	15.0	130	6.5	60	65	12.7	28.5	N/A	N/A	0.38
3/4"	37.0	26	11	12	20.0	130	6.5	64	74	22.4	35.0	N/A	N/A	0.52
1"	44.0	30	12	15	25.0	165	8.0	71	88	22.4	35.0	N/A	N/A	0.92
1 1/4"	51.0	37	12	15	32.0	165	8.0	78	102	25.4	38.1	N/A	N/A	1.32
1 1/2"	55.0	35	12	16	38.0	190	9.7	86	110	25.4	38.1	N/A	N/A	1.90
2"	62.5	31	10	16	50.0	190	9.7	95	125	25.4	38.1	N/A	N/A	3.12
2 1/2"	81.5	51	18	25	65.0	250	12.0	130	182	N/A	N/A	59	61	6.50
3"	89.0	49	18	25	80.0	250	12.0	148	178	N/A	N/A	70	71	9.30



ISO 9001

# SERIES 50

ECONOMICAL  
THREE-PIECE BALL VALVES  
1/4" TO 4" FULL PORT 800/1000 PSI

### DESIGN ADVANTAGES

- For general Industrial and Chemical applications.
- Three-piece swing-out design allows in-line maintenance.
- Full port orifice minimizes pressure drop and prolong life.
- Blow-out proof stem.
- Available in stainless steel and carbon steel.
- Investment cast body construction.

### VALVE FIG. NO. AND END CONNECTIONS:

- FIG. 50-10 THREADED END
- FIG. 50-20 SOCKET WELD
- FIG. 50-30 BUTT WELD
- FIG. 50-40 EXTENDED BUTT WELD
- FIG. 50-50 FLANGED END (PN 25/40 F1)

### SPECIFICATIONS

Construction : Three-Piece Body, Full Bore  
 Size : 1/4" to 4" ( DN 8 to DN 100 )  
 Body : CF8M, WCB / DIN 1.4408, 1.0619  
 Ball and Stem : 316 S.S.  
 Seat : PTFE  
 Pressure Rating : 800/1000 PSI

FIG. 50-10



FIG. 50-20



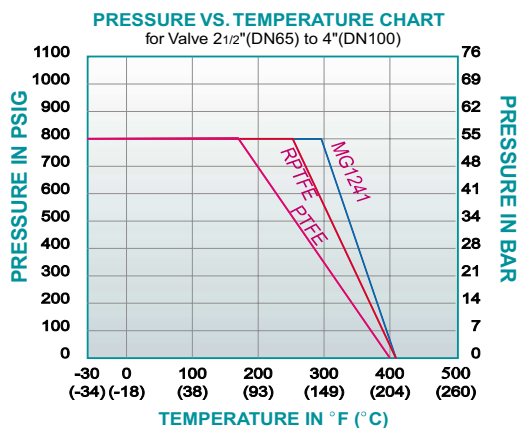
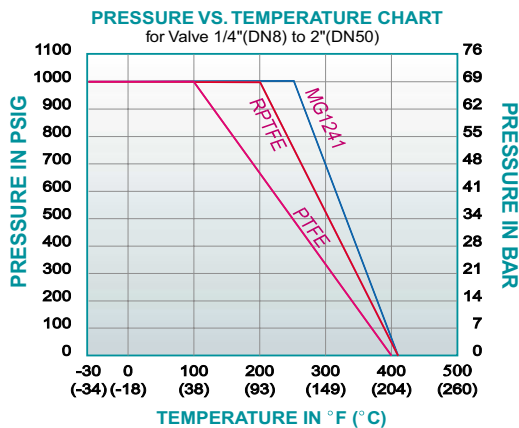
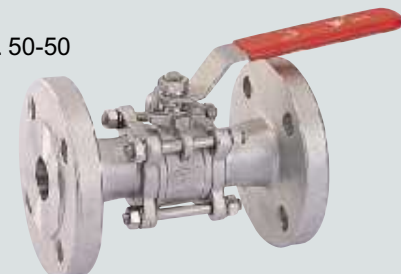
FIG. 50-30



FIG. 50-40

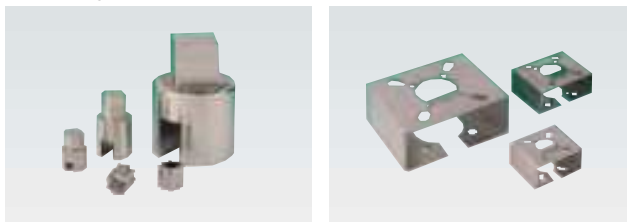


FIG. 50-50

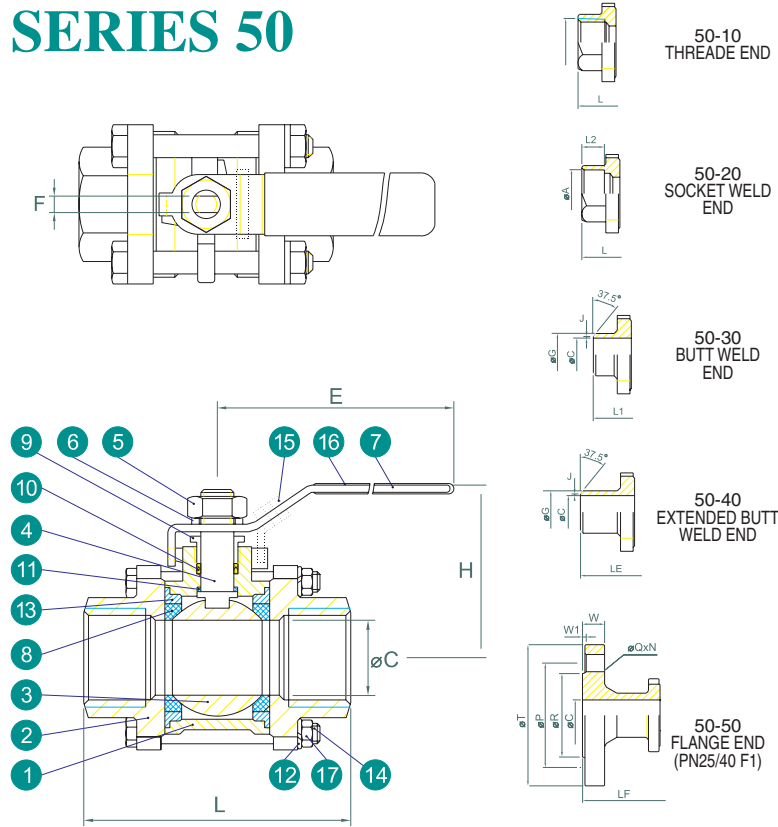


### OPTION

Mounting Brackets and Couplers



# SERIES 50



## MATERIALS LIST

NO.	PART NAME	MATERIAL	Q'TY
1	Body	CF8M WCB	1
2	End Cap	CF8M WCB	2
3	Ball	SUS 316	1
4	Stem	SUS 316	1
5	Stem Nut	SUS 304	1
6	Stem Washer	SUS 304	1
7	Handle	SUS 304	1
8	Seat	PTFE	2
9	Gland Nut	SUS 304	1
10	V-Ring Packing	PTFE	§
11	Stem Seal	PTFE	1
12	Bolt Washer	SUS 304	f
13	Joint Gasket	PTFE	2
14	Bolt	SUS 304	*
15	‡ Locking Device	SUS 304	1
16	Handle Sleeve	Vinyl	1
17	Bolt Nut	SUS 304	f

- § For 1/4" & 3/8" regular 1pc stem packing is used instead
- For 1/2" & 3" 1 set of v-ring packing consists of 2pcs of v-ring
- For 4" 1 set of v-ring packing consists of 3pcs of v-ring
- f For 1/4" to 2"-4pcs; For 2 1/2" & 3" -8pcs; For 4" -12pcs
- \* For 1/4" to 2"-4pcs of bolts (single ended external thread)
- For 2 1/2" to 3"-4pcs of studs (double ended external thread)
- For 4" -6pcs of studs (double ended external thread)
- ‡ Available as an option

## DIMENSIONS (mm)

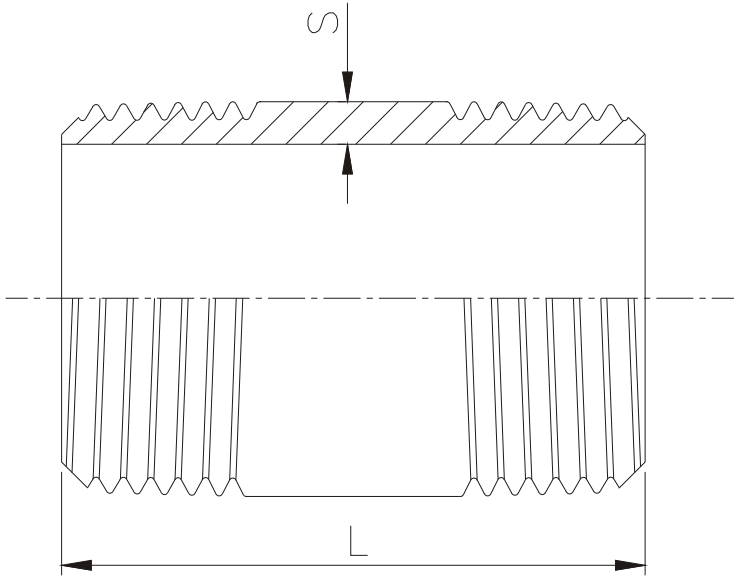
SIZE	øA	øC	E	F	øG	H	J	L	L1	L2	LE	LF	N	øP	øQ	øR	øT	W	W1	W(Kg)
1/4"	14.1	11.6	100	5.0	14.0	50	1.6	56.6	56.6	10	225	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.35
3/8"	17.6	12.7	100	5.0	17.5	50	1.6	56.6	56.6	10	225	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.33
1/2"	21.7	15.0	130	6.5	22.7	60	1.6	65.5	65.5	10	225	130	4	65	14	45	95	16	2	0.56
3/4"	27.3	20.0	130	6.5	27.5	64	1.6	76.2	76.2	13	225	150	4	75	14	58	105	18	2	0.75
1"	34.1	25.0	165	8.0	33.5	71	1.6	86	86	13	245	160	4	85	14	68	115	18	2	1.035
1 1/4"	42.8	32.0	165	8.0	42.0	78	1.6	102.8	102.8	13	255	180	4	100	18	78	140	18	2	1.74
1 1/2"	48.7	38.0	190	9.7	48.6	86	1.6	119	119	13	260	200	4	110	18	88	150	18	3	2.41
2"	61.0	50.0	190	9.7	60.5	95	1.6	131.4	131.4	16	275	230	4	125	18	102	165	20	3	3.66
2 1/2"	ANSI 73.5 PN 76.6	65.0	250	12.0	76.3	130	2.0	164	164	16	334	290	8	145	18	122	185	22	3	7.1
3"	90.0	80.0	250	12.0	90.0	148	2.0	182.5	182.5	16	354	310	8	160	18	138	200	24	3	10.5
4"	115.2	100	280	15.0	116.0	185	3.5	235.6	236.2	20	365	350	8	190	22	162	235	24	3	20.76

## HOW TO ORDER

50-10      05      S      P

VALVE TYPE		SIZE		BODY & END MATERIAL		SEAT	
50-10	Threaded End	01	1/4"	S	CF8M	P	Virgin PTFE
50-20	Socket Weld End	02	3/8"	W	WCB	R	R-PTFE
50-30	Butt Weld End	03	1/2"	L	316L S. S.	S	50/50 St. St. filled PTFE
50-40	Extended Butt Weld End	04	3/4"	F	304 S. S.	C	Carbon filled PTFE
50-50	Flanged End(PN 25/40 F1)	05	1"			M	MG1241
		06	1 1/4"			D	Delrin
		07	1 1/2"			U	UHMWPE
		08	2"				
		09	2 1/2"				
		10	3"				
		11	4"				

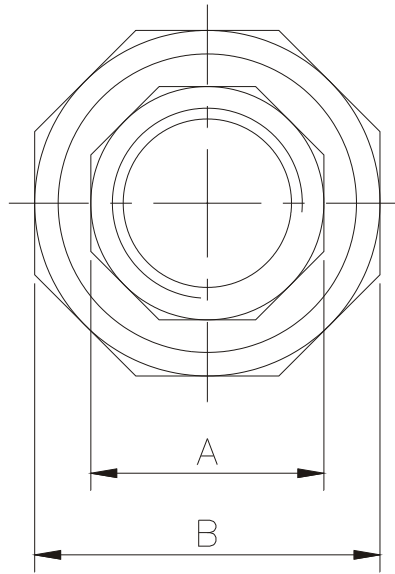
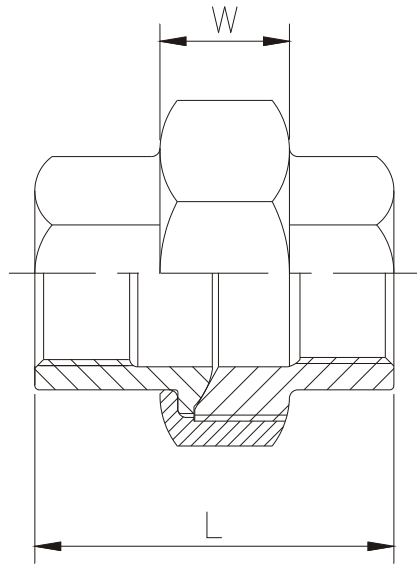
# BARREL NIPPLE



SIZE	1/4"		3/8"		1/2"		3/4"		1"		1-1/4"		1-1/2"		2"		2-1/2"		3"		4"	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
S	2	0.08	2	0.08	2.5	0.10	2.5	0.10	3.2	0.13	3.2	0.13	3.2	0.13	3.6	0.14	3.6	0.14	4	0.16	4.5	0.18
L	40	1.57	40	1.57	60	2.36	60	2.36	60	2.36	80	3.15	80	3.15	100	3.94	100	3.94	120	4.72	120	4.72

Tolerance: ±1.0mm

# UNION F/F

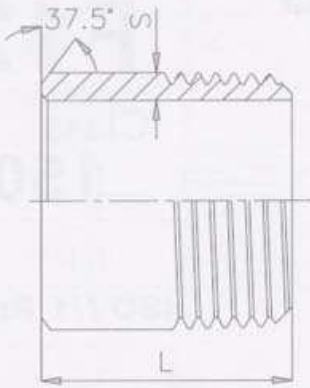


1/4"~3/8" Hexagon  
 1/2"~1" Octagon  
 1-1/4"~4" Decagon

SIZE	1/4"		3/8"		1/2"		3/4"		1"		1-1/4"		1-1/2"		2"		2-1/2"		3"		4"	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
L	34	1.34	38	1.50	40.5	1.59	45	1.77	51	2.01	58	2.28	59	2.32	64.01	2.52	71	2.80	84	3.31	97	3.82
A	17.3	0.68	21.5	0.85	26.5	1.04	31	1.22	38	1.50	47	1.85	53	2.09	66.80	2.63	83	3.27	97.03	3.82	123	4.84
B	28	1.1	34.54	1.36	39	1.54	45.8	1.80	55	2.17	63.2	2.49	71	2.8	86	3.39	106	4.17	123.95	4.88	154	6.06
W	12	0.47	13.97	0.55	15	0.59	15	0.59	17.02	0.67	20	0.79	20	0.79	22	0.87	24	0.94	28	1.10	33	1.30

Tolerance:L  $\pm 0.06\text{mm}$   
 A,B,W  $\pm 0.02\text{mm}$

# Welding Nipple



**F09**

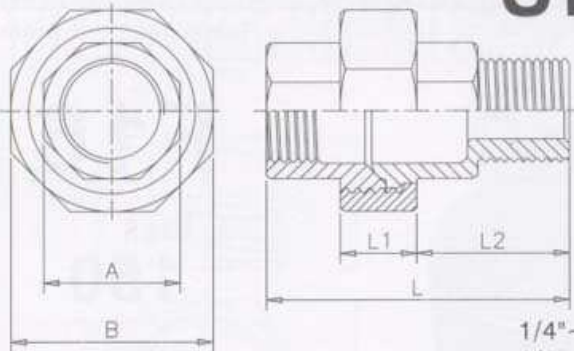
Class  
**150**

NPT  
ISO 7/1 R

SIZE	1/4"		3/8"		1/2"		3/4"		1"		1-1/4"		1-1/2"		2"		2-1/2"		3"		4"	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
S	2	0.08	2	0.08	2.5	0.10	2.5	0.10	3.2	0.13	3.2	0.13	3.2	0.13	3.6	0.14	3.6	0.14	4	0.16	4.5	0.18
L	30	1.18	30	1.18	35	1.38	40	1.57	40	1.57	50	2.00	50	2.00	50	2.00	60	2.36	70	2.76	80	3.15

Tolerance : ± 1.0mm

# Union M/F



1/4"~3/8" Hexagon  
1/2"~1" Octagon  
1-1/4"~3" Decagon

**F19**

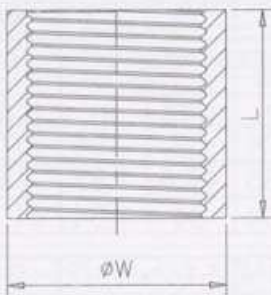
Class  
**150**

NPT  
ISO 7/1 Rp R

SIZE	1/4"		3/8"		1/2"		3/4"		1"		1-1/4"		1-1/2"		2"		2-1/2"		3"	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
A	17.3	0.68	21.5	0.85	26.5	1.04	31	1.22	38	1.50	47	1.85	53	2.09	66.8	2.63	83	3.27	97	3.82
B	28	1.1	34.5	1.36	39	1.54	46	1.81	55	2.17	63.2	2.49	71	2.79	86	3.39	106	4.17	124	4.88
L	45	1.77	53	2.09	53	2.09	60	2.36	66	2.60	74	2.91	74	2.91	83	3.27	92	3.62	104	4.09
L1	12	0.47	14.5	0.57	15	0.59	15	0.59	17	0.67	20	0.79	20	0.79	22	0.87	24	0.94	28	1.10
L2	21	0.83	26	1.02	26	1.02	29	1.14	32	1.26	34.5	1.36	34.5	1.36	39	1.54	43	1.69	48	1.89

Tolerance : L ± 1.5mm

# Coupling



**F22**

Class  
**150**

NPT  
ISO 7/1 Rp

SIZE	1/8"		1/4"		3/8"		1/2"		3/4"		1"		1-1/4"		1-1/2"		2"		2-1/2"		3"		4"	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
L	20	0.79	25	0.98	25	0.98	33	1.3	35	1.38	42	1.65	47	1.85	47	1.85	56	2.20	65	2.56	70	2.76	80	3.15
W	14	0.55	18.5	0.73	21.5	0.85	26	1.02	32	1.26	39	1.53	48	1.89	54	2.12	66.5	2.62	82	3.23	95	3.74	122	4.8

Tolerance : ± 1.0mm