

STAINLESS STEEL THREE-PIECE, FIRE SAFE

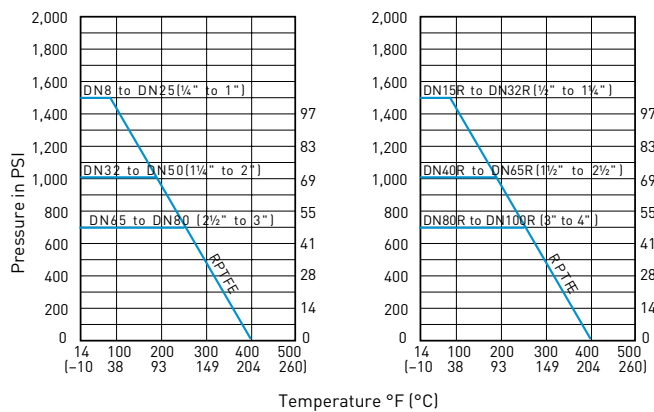
BV2 – 3 F/R FS



STANDARD SERIES 81F FEATURES

- Patented “Sealmaster™” stem arrangement
- Double stem sealing to comply with TA-LUFT requirements
- Blow out proof stem
- Built-in ISO 5211 mounting pad for easy automation
- Anti-static devices for ball-stem-body
- Semi-encapsulated ball seats for cold flow resistance
- Easy to interface with all TV’s ball valve accessories
- Investment casting for body and end caps
- Pressure balance hole in ball slot
- Independently 8-12 end cap bolts for superior integrity and high level of flexibility
- Encapsulated body gasket to seal off any possible leak path
- Face to face comply to ANSI B16.10 for #150 & #300 flanged ball valve
- Secondary metal to metal seating surface
- Fire safe certified to API 607 4th edition up to 3"

PRESSURE/TEMPERATURE CHART



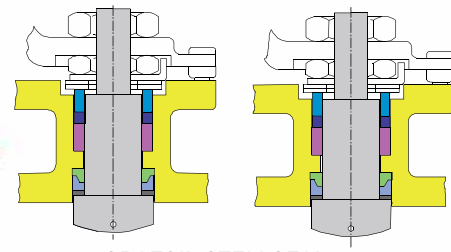
STAINLESS STEEL THREE-PIECE, FIRE SAFE

FIRE TESTED TO API 607 4TH EDITION ON TV'S 81F SOFT-SEATED 3PC BALL VALVE UP TO 3" (DN 80)

Plant fires are serious concern for soft-seated ball valve especially when the flammable fluids or dangerous gases are in service. The possible flammable fluid leakage during the fire consequently increases the fire magnitude and worsens the situation.

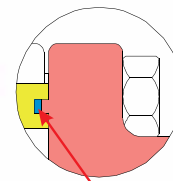
TV's floating ball valves are designed to be fire safe to minimize both external and internal fluid leakage after plant fires due to:

1. Contact between ball & end cap fire safe lip for through leakage prevention. During a fire, the soft seats are destroyed and the ball is free to move to downstream to form metal to metal contact between the ball and the end cap fire safe lip. This lip is integral part of the end connection which has very tight clearance with the ball. (See fig. #1 & #2)
2. To maintain the integrity between end cap and body, our independent end cap bolts are screwed to body instead of using through bolts to attach the end caps and center section of the valve. It eliminates the end cap bolts from thermal expansion and contraction resulted from the fire and make fire resistance grafoil body gasket (encapsulated to body groove) to function as the way it should be and prevent the line fluid permeation and resultant leakage to external. (See fig. #3& #4)
3. Stem packing, seal arrangement remained unaffected due to grafoil material for fire resistance (see figure #5 & #6).

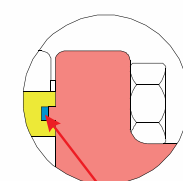


#5 Before fire

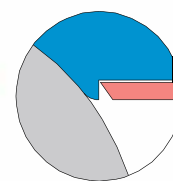
#6 After fire



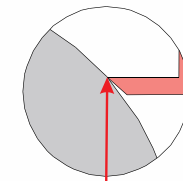
#3 Before fire



#4 After fire

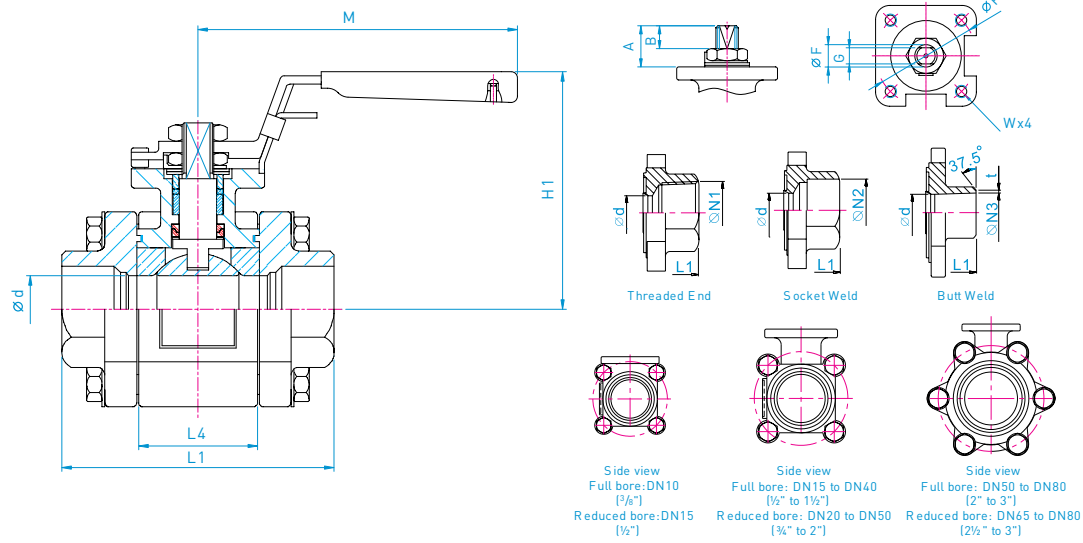


#1 Before fire



#2 After fire

STAINLESS STEEL THREE-PIECE, FIRE SAFE



FULL PORT DIMENSIONS (MM)

Size	DN	Ød	A	B	G	ØP	ØF	W	H1	L1	L4	M	ØN1	ØN2	ØN3	t	Wt (kg)
3/8"	10	12.7	12.7	5.6	5.0	36	8.0	M5	66	66.6	21.2	115	NPT	17.5	13.5	0.5	0.62
1/2"	15	15.0	15.0	9.3	6.3	42	9.7	M5	84	71.6	25.2	135	or	22.4	16.8	0.5	0.88
3/4"	20	20.0	20.0	12.5	6.3	42	9.7	M5	88	96.6	32.3	135	BSPT	27.4	22.0	0.5	1.40
1"	25	25.0	21.4	13.4	8.0	50	11.2	M6	98	109.0	42.3	165	or	34.2	27.6	0.5	1.96
1 1/4"	32	31.8	21.7	13.8	8.0	50	11.2	M6	101	117.0	49.4	165	BSPP	43.0	36.1	0.5	2.72
1 1/2"	40	38.1	25.6	15.6	9.5	70	16.0	M8	117	129.0	57.2	200	or	49.0	41.9	0.5	4.04
2"	50	50.8	24.2	15.3	9.5	70	16.0	M8	125	142.0	71.4	200	DIN	61.1	54.5	1.0	6.56
2 1/2"	65	65.0	42.2	24.7	17.0	102	22.3	M10	165	174.0	89.0	250	2999	77.1	70.9	1.0	N/A
3"	80	80.0	35.4	24.	17.0	10	22.3	M10	174	193.0	108.5	250		90.2	81.1	1.6	N/A

REDUCED PORT DIMENSIONS (MM)

Size	DN	Ød	A	B	G	ØP	ØF	W	H1	L1	L4	M	ØN1	ØN2	ØN3	t
1/2"	15	12.7	12.7	5.6	5.0	36	8.0	M5	66	66.6	21.2	115	NPT	22.4	16.8	0.5
3/4"	20	15.0	15.0	9.3	6.3	42	9.7	M5	84	71.6	25.2	135	or	27.4	22.0	0.5
1"	25	20.0	20.0	12.5	6.3	42	9.7	M5	88	96.6	32.3	135	BSPT	34.2	27.6	0.5
1 1/4"	32	25.0	21.4	13.4	8.0	50	11.2	M6	98	109.0	42.3	165	or	43.0	36.1	0.5
1 1/2"	40	31.8	21.7	13.8	8.0	50	11.2	M6	101	117.0	49.4	165	BSPP	49.0	41.9	0.5
2"	50	38.1	25.6	15.6	9.5	70	16.0	M8	117	129.0	57.2	200	or	61.1	54.5	1.0
2 1/2"	65	50.8	24.2	15.3	9.5	70	16.0	M8	125	142.0	71.4	200	DIN	77.1	70.9	1.0
3"	80	65.0	42.2	24.7	17.0	102	22.3	M10	165	174.0	89.0	250	2999	90.2	81.1	1.6

N/A = Not Available