

# Series 82/83 and F82/F83

## Full Port Ball Valves

Offer maximum flow capacity, minimum pressure loss and optional fire safe design

*Series 82 - ANSI 150#  
Flanged Full Port Ball Valve*

*Series 83 - ANSI 300#  
Flanged Full Port Ball Valve*



VALBOL series 82 & 83 Flanged, Full Port Valves are designed to meet all standards in a wide variety of industries including chemical processing, petrochemical, oil and gas production, pulp and paper and others. Capable of handling a wide range of liquids, suspended solids and gases in these industries, these valves offer all the advantages inherent in a ball valve; quick, quarter-turn operation, visual indication of the valve position, straight uninterrupted flow path, and compact size. Plus, the full port feature minimizes the pressure drop across the valve, very important for critical process applications, while maximizing flow capability for general line services.

Designed with fire safety in mind, their rugged construction facilitates inspection and repair while insuring long life and excellent service. Like all Valbol ball valves, they offer tighter shutoff, high cycle life, low torque operation, and the ability to automate with a choice of pneumatic or electric actuation.

When you consider these and other features that we have built in as standard to our 82 and 83 Series Valves, you will realise why VALBOL is a quality valve. Machined into the seat area of the body cavity are raised metal lips which perform as Secondary Metal Seats that provide Fire safety. Also in normal service they help support the seat to prevent them from deforming and help shield them from abrasive media. If the valve should be subjected to a fire, the lip acts like a dam to prevent the softening downstream seat from being forced into the port and creating a leak. When the seat is totally sublimated in a fire, the lip acts as a secondary seat forming the metal to metal seal with the ball.

The Unique Stem Sealing Design Automatically compensates for normal wear as well as for seal expansion and contraction cause by temperature fluctuations.

Blowout-Proof Stem.

Machined Secondary Metal Seat Provides fire rating to API 607.

## Specifications

Sizes: 1/2", 3/4", 1", 1.1/4", 1 1/2", 2", 2.1/2", 3", 4", 6", 8", 10" & 12"

Flanges: Series 82 - ANSI 150# flanges, Series 83 - ANSI 300# Flanges.

Body: One-piece (1/2" - 2") and two-piece (2 1/2", 12")  
Construction available in 316 - stainless steel ASTM A351 GR. CF8M or carbon steel ASTM A216, GR. WCB.

Body Studs: ASTM A193 GRB7 (2 1/2", 12 only)

Nut: ASTM A194 GR2H (2 1/2", 12 only)

Ball and Stem: 316 stainless steel.

Seats: TFE seats, Reinforced TFE seats & C/fill.

Body Seal: TFE (82 & 83) or PTFE coated S.S. (1/2" - 2" F82 & F83). Graphite (2 1/2", 12" F82 & F83)

Operation: 1/2" - 6" Valves are supplied with a handle operator. 8" - 12" requires a gear operator.

Gear operators are sold separately. Pneumatic and electric actuators are available.

Trunnion mounted ball: Standard 83 valve in sizes 8", 10" & 12" are trunnion mount.

## Standards

ANSI B16.10 Face to face dimensions.

ANSI B16.5 150# and 300# flange dimensions.

ANSI B16.34, ANSI B31.1, ANSI B31.3. MSS SP-72.

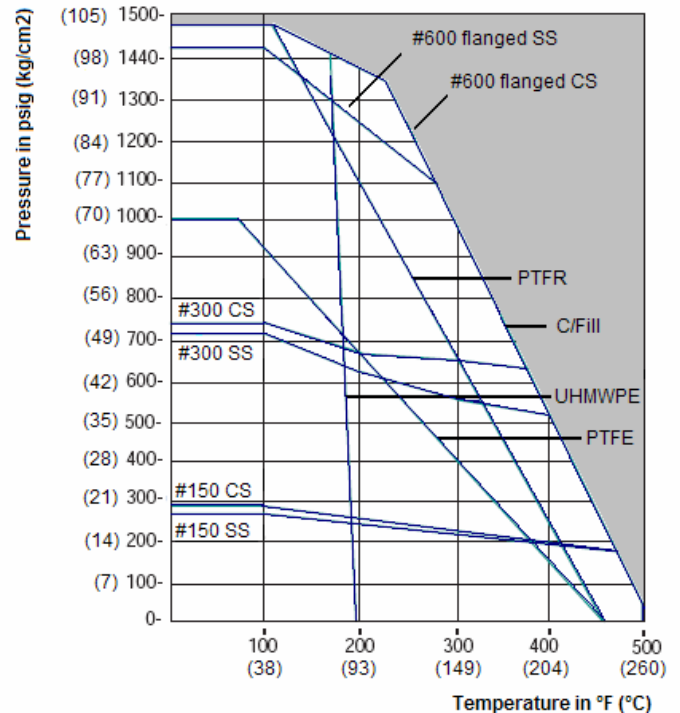
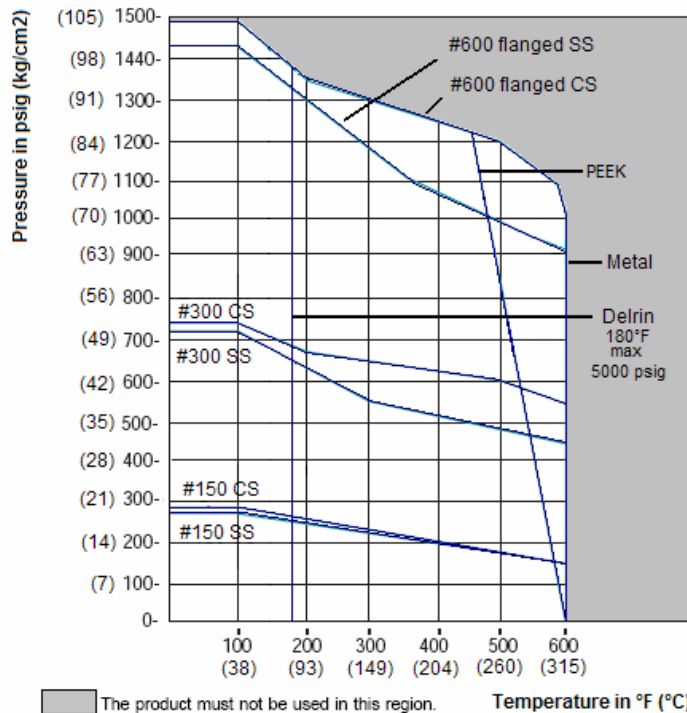
BS 5251, Anti-static, fire rating, available as option.

API 607 tested

NACE MR-01-75

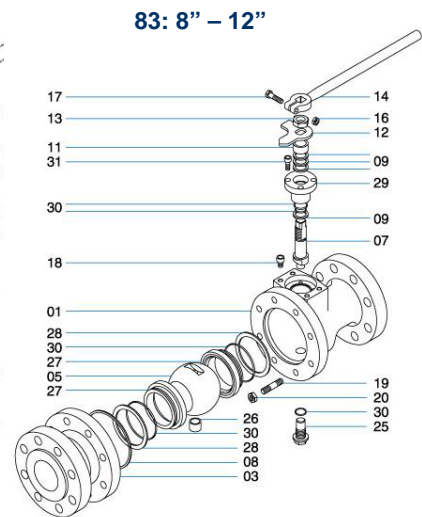
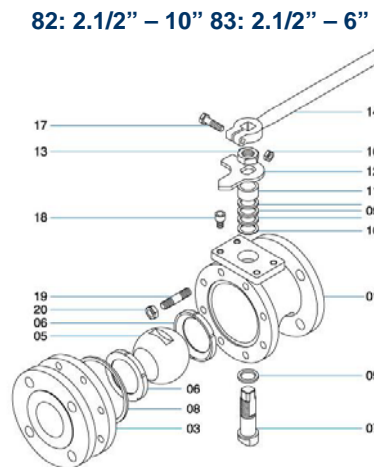
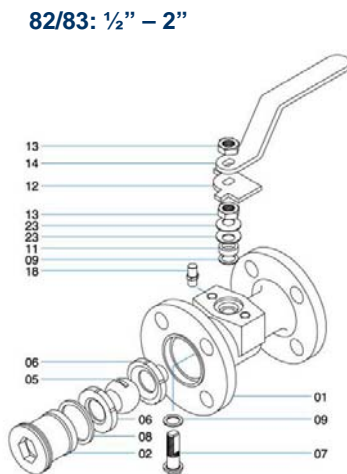
API 6D, Pipeline valves

# Pressure / Temperature Rating



Maximum working pressure temperature is limited by both flange rating seat and body seal capacity.

## Parts Identification

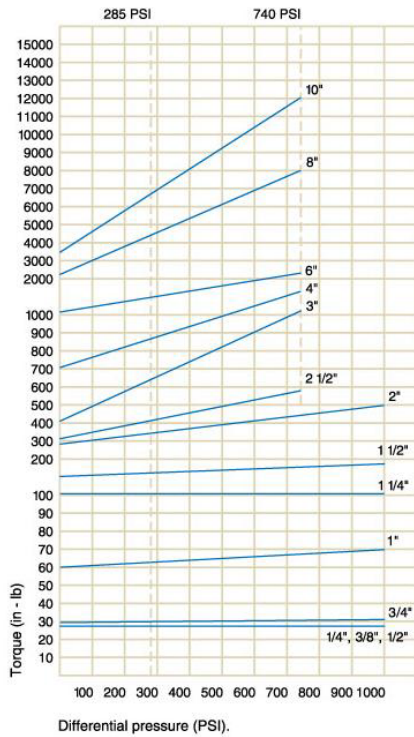


- |                     |                      |                            |
|---------------------|----------------------|----------------------------|
| 01 Body             | 11 Follower          | 25 Inferior trunnion guide |
| 02 End plug         | 12 Stop plate        | 26 Stem seal follower      |
| 03 Body tail piece  | 13 Retaining nuts    | 27 Seat insert             |
| 05 Ball             | 14 Wrench / Handle   | 28 Spring plate            |
| 06 Seat             | 16 Hex nut           | 29 Stem seal follower      |
| 07 Stem             | 17 Hex bolt          | 30 O' ring                 |
| 08 Body seal        | 18 Stop screw        | 31 Bolt                    |
| 09 Thrust bearing   | 23 Bellville washers | 32 Trunnion guide          |
| 10 Centering washer |                      | 33 Upper flange            |

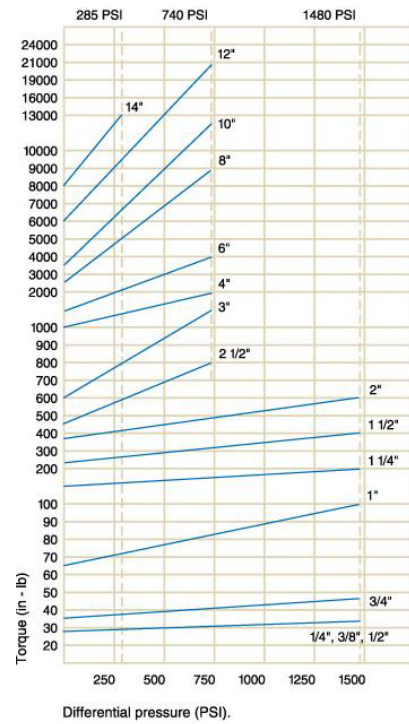
# Automation

VALBOL offers a complete line of pneumatic and electric automation packages for Series 82 & 83 valves. Both pneumatic and electric packages are offered for on/off or proportional control. Available options include Top mounted limit switches - Proximity switches - Single and double acting pneumatic actuators - TYPE 4, 4x, 7 and 9 enclosures - Remote position indication - Positioners. Before an actuator can be sized for any given valve application the operating torque required for the valve must be determined. The operating torque of a ball valve is influenced by a number of factors, some are design and materials related, others are application and service conditions. Design related factors include the type and material of the valve seats, while application factors include system differential pressure, media and frequency of operation. For complete valve operating torque data refer to the torque curves given for each seat material, and provide the correction factor for media and the type of service such as on-off operation, cycle frequency, etc. **Torques shown are for Standard port valves, for sizing full port valves use the immediate larger diameter of the standard valve.**

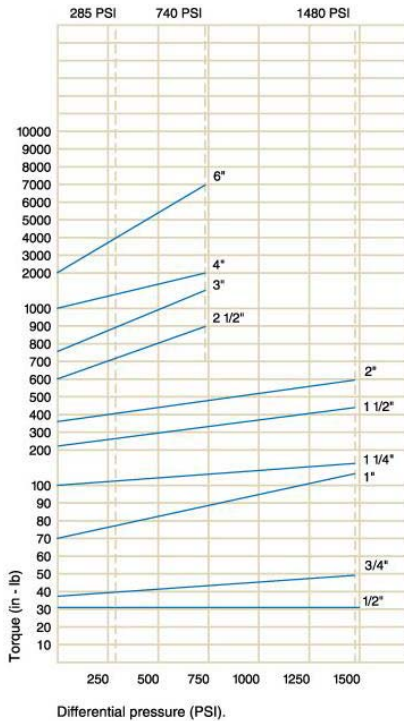
## PTFE Seats



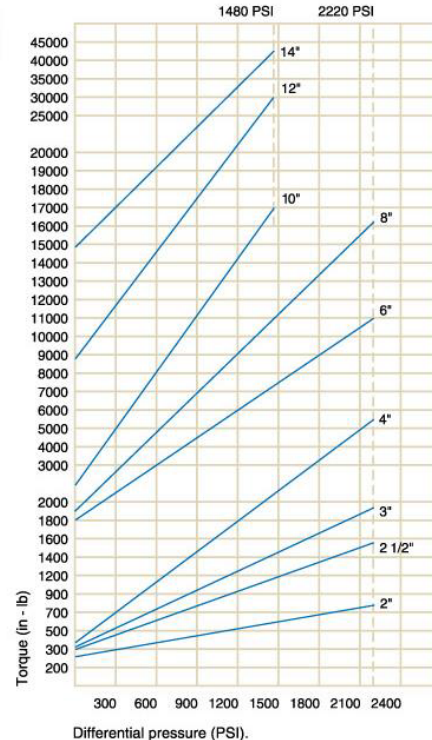
## Reinforced PTFE Seats



## C/FILL

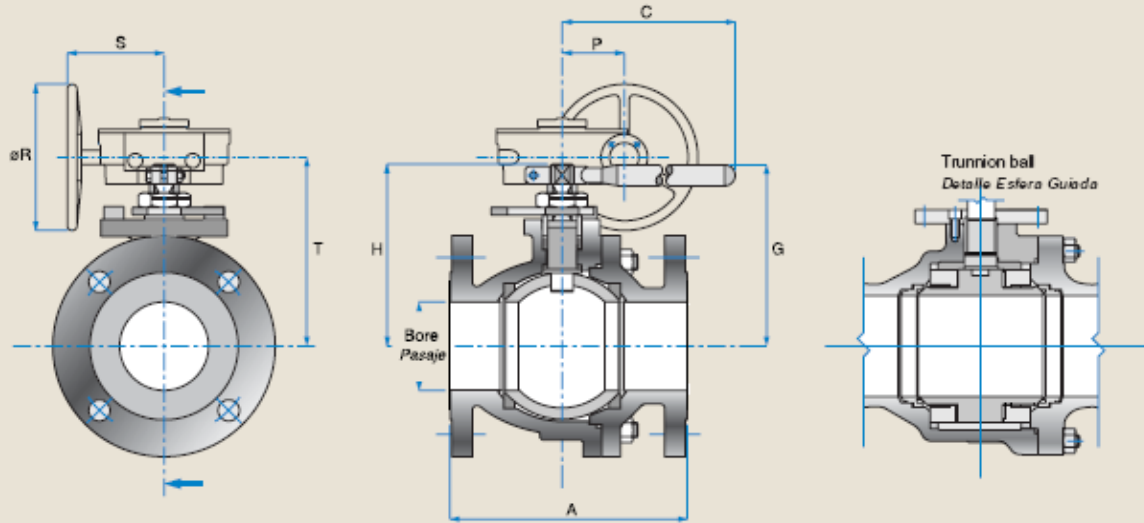


## Metal w/Nylon Insert



# Dimensions

Ball valve, full bore, two piece design, blowout-proof stem. *Válvula Esférica Bridada de Pasaje Total.*



**Note:**  
 Model 82 Flanged ANSI 150  
 Model 83 Flanged ANSI 300  
 Model 84 Flanged ANSI 600  
 Model 85 Flanged ANSI 900

**Nota:**  
 Modelo 82 Bridado ANSI 150  
 Modelo 83 Bridado ANSI 300  
 Modelo 84 Bridado ANSI 600  
 Modelo 85 Bridado ANSI 900

**Dimensions. Dimensiones.**

Size Tamaño	Bore Pasaje	Mod. 82 A	Mod. 83 A	Mod. 84 A	Mod. 85 A	C	G	H	P	eR	S	T	Mod. 82 kg	Mod. 83 kg	Mod. 84 kg	Mod. 85 kg
1/2"	0.58	4.25	5.50	6.50	-	5.12	3.35	1.80	-	-	-	-	1.80	2.50	2.70	-
DN 15	14.3	107.9	139.7	165.1	-	130.0	85.0	40.5	-	-	-	-	-	-	-	-
3/4"	0.81	4.62	6.00	-	-	5.79	4.37	2.19	-	-	-	-	2.50	4.00	5.00	-
DN 20	20.8	117.4	152.4	-	-	147.0	111.1	55.6	-	-	-	-	-	-	-	-
1"	1.00	5.00	6.50	8.50	-	5.00	3.69	2.38	-	-	-	-	3.50	5.00	6.00	-
DN 25	25.4	127.0	165.1	215.9	-	127.8	93.7	60.5	-	-	-	-	-	-	-	-
1 1/4"	1.25	5.50	7.00	-	-	5.75	4.90	3.34	-	-	-	-	6.50	8.00	-	-
DN 32	31.7	139.7	177.8	-	-	146.0	124.2	84.8	-	-	-	-	-	-	-	-
1 1/2"	1.50	6.50	7.50	9.50	12.00	5.75	4.59	3.06	-	-	-	-	6.50	9.00	11.00	45.00
DN 40	38.1	165.1	190.5	241.3	304.8	146.0	116.6	77.2	-	-	-	-	-	-	-	-
2"	2.00	7.00	8.50	11.50	14.50	10.24	5.05	4.57	-	-	-	-	9.18	17.00	19.70	55.00
DN 50	50.8	177.8	215.9	292.1	368.3	260.0	126.2	116.1	-	-	-	-	-	-	-	-
2 1/2"	2.50	7.50	9.50	13.00	16.50	18.31	5.91	5.71	-	-	-	-	18.50	25.00	40.00	60.00
DN 65	63.5	190.5	241.3	330.2	419.1	465.0	150.1	145.1	-	-	-	-	-	-	-	-
3"	3.00	8.00	11.12	14.00	15.00	18.31	7.13	6.93	-	-	-	-	24.00	33.00	45.00	75.00
DN 80	76.2	203.2	262.6	355.6	381.0	465.0	181.1	176.1	-	-	-	-	-	-	-	-
4"	4.00	9.00	12.00	17.00	18.00	18.31	7.13	6.93	3.35	17.71	9.45	8.46	34.50	55.00	105.00	130.00
DN 100	101.2	226.6	304.8	431.8	457.2	465.0	181.1	176.1	85.1	450.0	240.0	215.0	-	-	-	-
6"	6.00	15.50	15.87	22.00	24.00	21.30	10.3	9.99	3.35	17.71	9.45	10.65	80.00	101.00	211.00	290.00
DN 150	152.4	393.7	403.2	558.8	609.6	541.0	261.8	253.8	85.1	450.0	240.0	270.6	-	-	-	-
8"	8.00	18.00	16.50	26.00	29.00	-	-	16.54	4.92	23.62	12.28	16.54	159.00	-	329.00	-
DN 200	203.2	457.2	419.1	660.4	736.3	-	-	420.0	125.0	600.0	312.0	420.0	-	-	-	-
10"	10.00	21.00	22.37	31.00	-	-	-	17.72	7.87	35.43	16.77	17.72	-	-	610.00	-
DN 250	254.0	533.4	566.3	787.4	-	-	-	450.0	200.0	900.0	426.0	450.0	-	-	-	-
12"	12.00	24.00	25.50	33.00	-	-	-	18.23	7.87	35.43	16.77	18.23	-	522.00	803.00	-
DN 300	304.8	609.6	647.7	836.2	-	-	-	463.0	200.0	900.0	426.0	463.0	-	-	-	-

**Notes:**  
 1) Series 600 2" and above trunnion ball.  
 Series 300 10" and above trunnion ball.  
 2) Above 6" series 150 and 300 - 4" series 600 and 900. Gear box recommended.  
 3) Series 150-300 2" to 8" trunnion ball optional.  
 4) Model 84/85 BW ends optional.  
 5) 1/2"-2" models 82/83/84/85 one piece design.

**Notas:**  
 1) Serie 600 2" y mayores Esfera Guiada.  
 Serie 300 10" y mayores Esfera Guiada.  
 2) Mayores a 6" series 150/300 y 4" series 600/900, recomendamos usar caja de engranajes.  
 3) Serie 150-300 2" a 8" Guiada Opcional.  
 4) Modelos 84/85 extremos biselados opcional.  
 5) 1/2"-2" modelos 82/83/84/85 cuerpo enterizo.

## Instructions to order

1. Model	2. Size	3. Options	4. Body	5. Ball & Stem	6. Seat	7. Body Seals	8. Ends	9. Operator
<b>82</b> <b>83</b>	05- DN15 (1/2") 07- DN20 (3/4") 10- DN25 (1") 12- DN32 (1.1/4") 15- DN40 (1.1/2") 20- DN50 (2") 25- DN65 (2.1/2") 30- DN80 (3") 40- DN100 (4") 60- DN150 (6") 80- DN200 (8") AO- DN250 (10") A2- DN300 (12")	0-Standard 1-More than one A-Antistatic E-Steam Service F-Fire Safe G-Locking handle J-Extended Stem P-Relief hole Q-Vacuum Service R-Spring return handle S-SS bolting & accs. V-Blind Flanges X-Oxygen service Z-Cryogenic service	4 - C. Steel 6 - SS316	4 - C. Steel 6 - SS316 7 - Monel 8 - SS304 A - Alloy 20 C - Hastelloy	B-Metal "B" G-Metal round P-C/Fill R-PTFR T-PTFE U-Uhmwpe H-Peek	A - Silicone B - Nitrile Buna E - EPR G - Graphoil N - Neoprene R - PTFR S - Metal TFE T - PTFE V - Viton	F-Flanges FF R-Flanges RF	A - Actuator C - Gear Box M - Wrench N - Bare stem

### Example

1	2	3	4	5	6	7	8	9
82	40	F	4	6	R	T	R	M

## Cv. Data

Valve Size	Cv (USGPM)
1/2"	32
3/4"	54
1"	105
1.1/2"	275
2"	460
2.1/2"	780
3"	1330
4"	2420
6"	5400
8"	10000
10"	18500
12"	26800



API 6D 0395



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