

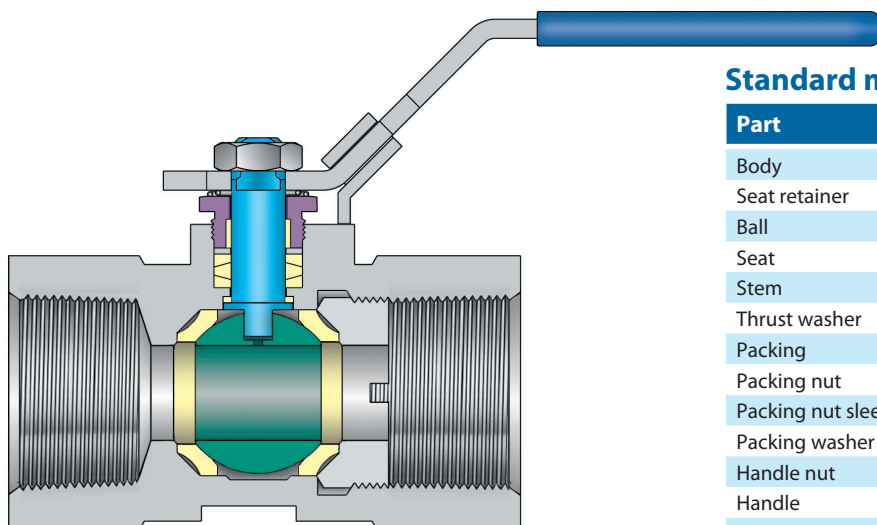


# Memoryseal™ HB-2000 resilient-seated ball valves

## Quick sheet

### One-piece, carbon, stainless, and alloy 20 steel

Reduced port, NPS ¼ – 2 (DN 8–50), 2000 WOG, threaded



### Design features

- Exclusive Memoryseal™ seats compensate automatically for wear and fluctuations of pressure and temperature.
- Modified PTFE (MPTFE) or Reinforced PTFE (RPTFE) seat material available.
- Multiple solid cup and cone type PTFE stem seal or graphite packing.
- Adjustable self locking threaded gland NPS ½ – 2 (DN 15 – 50).
- Stem guide in gland bushing prevents side thrust.
- Long cycle life.
- Low, uniform torques.
- Blowout-proof stem.
- Thrust washer prevents galling, reduces torque and provides secondary stem seal.
- One-piece heavy wall body for high structural strength to ASME B16.34.
- Full size packing chamber.



### Standard materials

Part	Carbon steel	Stainless steel	Alloy 20
Body	WCB	CF8M	Alloy 20
Seat retainer	WCB	SS 316	Alloy 20
Ball		SS 316	Alloy 20
Seat		MPTFE/RPTFE	
Stem		SS 316	Alloy 20
Thrust washer		RPTFE	
Packing		PTFE	
Packing nut		SS 304	
Packing nut sleeve		RPTFE	
Packing washer		SS 316	
Handle nut		Stainless steel	
Handle		Stainless steel	
Coil spring		Stainless steel	

Note: Other materials available

- Protective metal washer for packing rings.
- Stainless steel handle with safety clip. Oval handwheel also available with safety clip.
- Fire tested in accordance with API 607 Rev. 5/ISO 10497.

### Applications

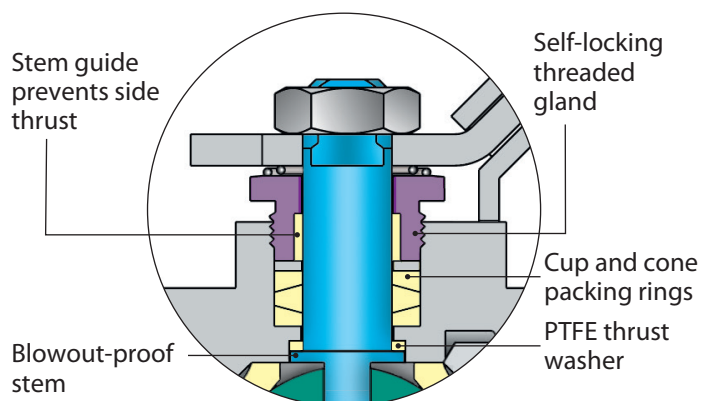
A rugged low-cost ball valve for many industrial, commercial, and original equipment manufacturers.

For water, oil, gas and saturated steam up to 150 psig (10.3 bar).

### Pressure-temperature ratings

Medium	Service conditions
WOG	2000 psig @ 100°F (138 bar @ 38°C)
WOG	100 psig @ 450°F (7 bar @ 232°C)

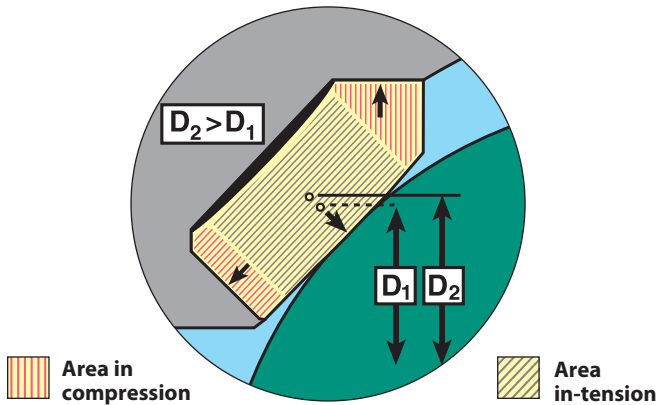
### HB-2000 stem seal design



## Velan Memoryseal™ ball valve technology

The Velan sealing memory is induced into the seats during the assembly process. When the ball is inserted into the valve body during assembly, it partially flattens the seat, creating a tensile stress in the center of the seat.

As a result, the seat core increases in diameter from  $D_1$  to  $D_2$  and, like a stretched elastic band, pushes against the ball. This ensures reliable sealing even at vacuum or low pressures.

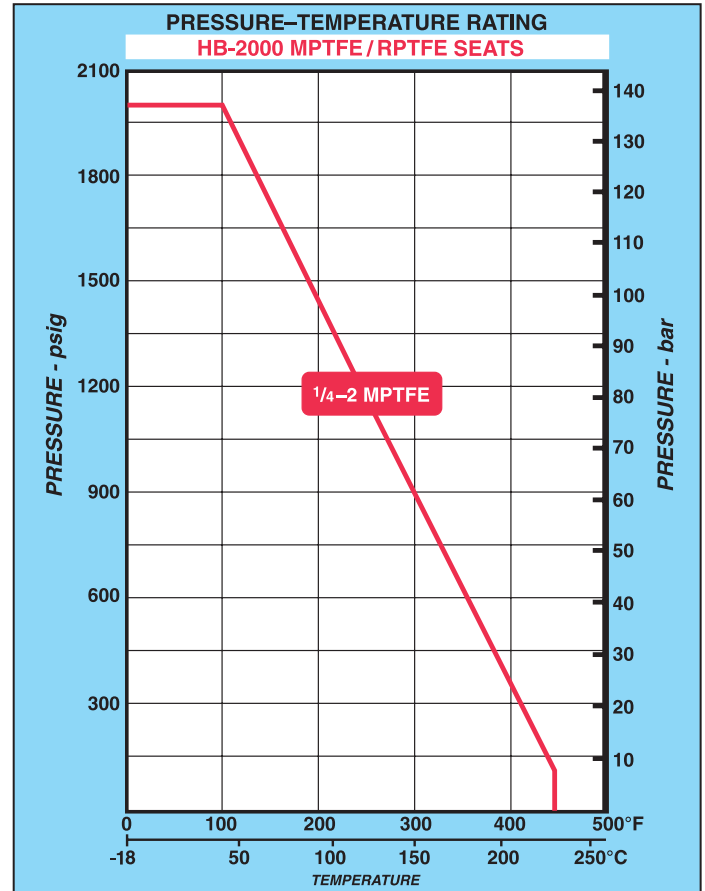
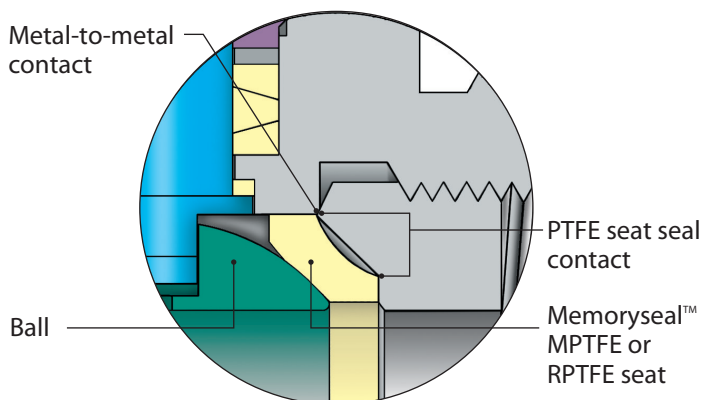


### Benefits of Velan concave-convex flexible, in-tension seats with induced sealing memory

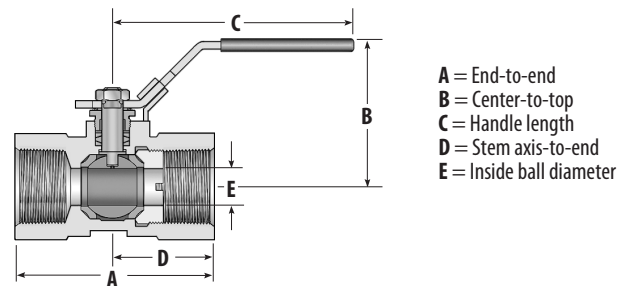
- Greater strength
- Less fatigue
- High cycle life
- Uniform torque
- Eliminate cold flow effects
- Compensate for temperature fluctuations
- Positive bi-directional shutoff
- **Larger flexible area** for superior sealing

## Superior body seal designs

All body seal designs incorporate a secondary metal-to-metal contact area in addition to the primary gasket designs. This one-piece valve uses metal-to-metal contact.



Note: Above chart shows sizes in NPS.



### Dimensions, weights, and Cvs

Size NPS DN	Reduced port					Weight lb/kg	Cv
	A	B	C	D	E		
1/4	1.58	1.26	2.67	0.83	0.2	0.3	2.5
8	40	32	68	21	5	0.1	
3/8	1.75	1.36	3.24	0.90	0.29	0.3	3.5
10	44	35	82	23	7	0.1	
1/2	2.43	1.98	3.82	1.30	0.36	0.8	4.8
15	62	50	97	33	9	0.4	
3/4	2.75	2.27	3.99	1.43	0.50	1.1	9.5
20	70	58	101	36	13	0.5	
1	3.38	2.53	4.02	1.73	0.63	1.9	14
25	86	64	102	44	16	0.9	
1 1/4	3.69	3.33	6.11	1.94	0.75	3.2	33
32	94	85	155	49	19	1.5	
1 1/2	4	3.42	6.11	2.09	0.93	4.1	45
40	102	87	155	53	24	1.9	
2	4.5	4.14	7.05	2.27	1.21	6.7	58
50	114	105	179	58	31	3	

Notes: Dimensions shown in inches and mm. Kv is the metric equivalent of Cv.  $K_v = C_v \times 0.85$