

# BALL VALVES & BALL VALVES WITH SIGHT GLASS (BVSG)


 ■ BALL VALVE


 ■ BALL VALVE WITH SIGHT GLASS

## Applications

Ball valves are used in a wide variety of air conditioning and refrigeration applications. They can be used for both liquid and gas applications. This type of valve is commonly used for isolating purposes. All valves are suitable for CO<sub>2</sub>, HCFC and HFC refrigerants along with their associated oils.

The new product combines the traditional ball valve with a sight glass and moisture indicator. A typical location for this combination product is in the liquid refrigerant line. The ball valve is used for isolating purposes; the sight glass for a visual display inside the line and the moisture indicator monitors the moisture content in the system.

## Main Features

### Construction Features

- Bi-directional flow
- Indicator on stem shows valve position - open or closed
- Positive stem stop ensures precise positioning in the open or closed position
- Blow-out proof stem
- Ball cavity vented to prevent over-pressure
- Vented seal cap
- Schrader valve option
- Mounting pad
- Large clear sight glass (BVSG only)
- Positive colour contrast indicator (BVSG only)
- Plastic protection cap for sight glass supplied as standard (BVSG only)

## Sealing integrity features

- Premium quality PTFE ball seals
- Double O-ring stem seal design
- Premium quality neoprene stem O-ring seals
- Neoprene cap seal – acts as a secondary seal
- Hermetically sealed sight glass (BVSG only)

## Technical Specification

Allowable operating temperature = -40°C to +120°C

Allowable operating pressure = 0 to 48 barg

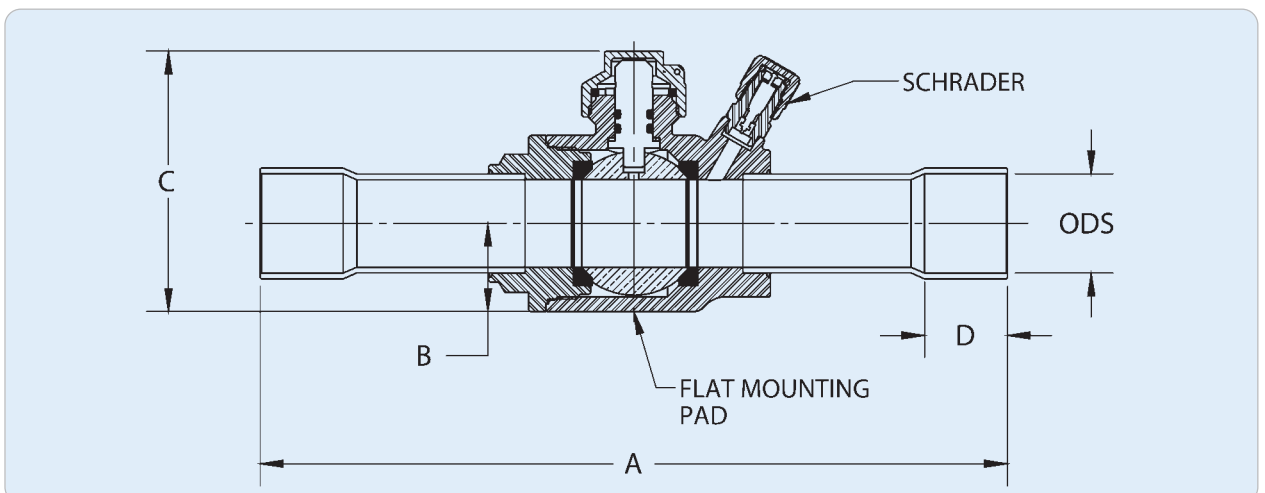
(higher pressures available on request)

## Materials of Construction

The valve body, valve body adaptor, ball and seal cap are made from brass. The stem is made from plated steel. The pipe extensions are made from copper. The ball seals are made from virgin PTFE, stem O-rings and cap seal from neoprene.

## Installation – Main Issues

The valve body must be protected against excessive heat during installation to prevent damage to the seals. Full details are provided in the installation sheet, included with each valve.



**Ball Valves Imperial**

Part No		ODS (inch)	Dimensions (mm)					Port Size (mm)	Weight (kg)	MWP (barg)	Kv Value (m <sup>3</sup> /hr)	CE Cat
Standard	Schrader Valve		A	B	C	D	Mounting pad hole thread details -2 off					
907202	937202	1/4	165	16	54	8	8-36 UNF-2B X 20 mm pitch	12.70	0.33	48	1.81	SEP
907203	937203	3/8	165	16	54	8	8-36 UNF-2B X 20 mm pitch	12.70	0.33	48	3.70	SEP
907204	937204	1/2	165	16	54	10	8-36 UNF-2B X 20 mm pitch	12.70	0.33	48	6.02	SEP
907205	937205	5/8	165	16	54	13	8-36 UNF-2B X 20 mm pitch	12.70	0.33	48	11.95	SEP
907306	937306	3/4	184	21	67	16	8-36 UNF-2B X 32 mm pitch	19.05	0.62	48	18.06	SEP
907307	937307	7/8	184	21	67	19	8-36 UNF-2B X 32 mm pitch	19.05	0.64	48	26.06	SEP
907409	937409	1 1/8	216	25	76	23	10-32 UNF-2B X 40 mm pitch	25.40	0.95	48	52.72	SEP
907511	937511	1 3/8	235	31	94	25	10-32 UNF-2B X 48 mm pitch	31.75	1.52	48	73.27	Cat I
907613	937613	1 5/8	254	39	109	28	1/4"-28 UNF-2B X 60 mm pitch	38.10	2.44	48	182.32	Cat I
907617	937617	2 1/8	289	47	132	34	1/4"-28 UNF-2B X 75 mm pitch	50.80	4.58	48	245.10	Cat I
907721	937721	2 5/8	327	47	132	37	1/4"-28 UNF-2B X 75 mm pitch	50.80	5.04	48	204.68	Cat I
907721FP	937721FP	2 5/8	365	60	154	37	1/4"-28 UNF-2B X 75 mm pitch	63.50	8.73	48	258.86	Cat I
907725	937725	3 1/8	365	60	154	42	1/4"-28 UNF-2B X 75 mm pitch	63.50	8.73	48	278.64	Cat I
907825FP	-	3 1/8	420	72	178	43	5/16-24 UNF-2B X 104 mm pitch	80.00	18.20	48	361.20	Cat I
907829	-	3-5/8	420	72	178	43	5/16-24 UNF-2B X 104 mm pitch	80.00	18.20	48	439.46	Cat I
907833	-	4-1/8	420	72	178	56	5/16-24 UNF-2B X 104 mm pitch	80.00	18.20	48	447.20	Cat I

**Ball Valves Metric**

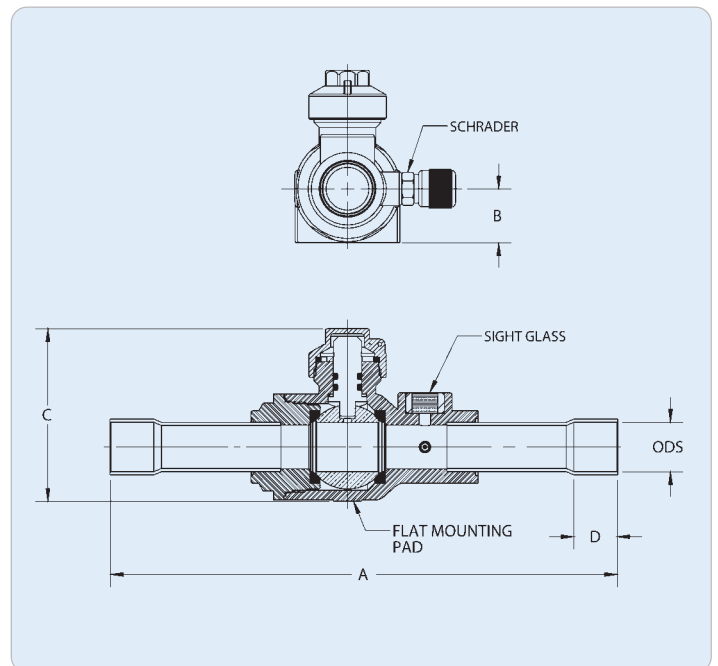
Part No		ODS (mm)	Dimensions (mm)					Port Size (mm)	Weight (kg)	MWP (barg)	Kv Value (m <sup>3</sup> /hr)	CE Cat
Standard	Schrader Valve		A	B	C	D	Mounting pad hole thread details -2 off					
907206M	937206M	6	165	16	54	8	8-36 UNF-2B X 20 mm pitch	12.70	0.33	48	1.81	SEP
907210M	937210M	10	165	16	54	8	8-36 UNF-2B X 20 mm pitch	12.70	0.33	48	3.70	SEP
907212M	937212M	12	165	16	54	10	8-36 UNF-2B X 20 mm pitch	12.70	0.33	48	6.02	SEP
907205	937205	16	165	16	54	13	8-36 UNF-2B X 20 mm pitch	12.70	0.33	48	11.95	SEP
907318M	937318M	18	184	21	67	17	8-36 UNF-2B X 32 mm pitch	19.05	0.62	48	18.06	SEP
907307	937307	22	184	21	67	20	8-36 UNF-2B X 32 mm pitch	19.05	0.64	48	26.06	SEP
907428M	937428M	28	216	25	76	24	10-32 UNF-2B X 40 mm pitch	25.40	0.95	48	52.72	SEP
907511	937511	35	235	31	94	25	10-32 UNF-2B X 48 mm pitch	31.75	1.52	48	73.27	Cat I
907642M	937642M	42	254	39	109	28	1/4"-28 UNF-2B X 60 mm pitch	38.10	2.44	48	182.32	Cat I
907617	937617	54	289	48	132	35	1/4"-28 UNF-2B X 75 mm pitch	50.80	4.58	48	245.10	Cat I
907764M	937764M	64	327	48	132	35	1/4"-28 UNF-2B X 75 mm pitch	50.80	5.04	48	204.68	Cat I
907764MFP	937764MFP	64	365	60	154	35	1/4"-28 UNF-2B X 75 mm pitch	63.50	8.73	48	258.86	Cat I
907776M	937776M	76	365	60	154	43	1/4"-28 UNF-2B X 75 mm pitch	63.50	8.73	48	278.64	Cat I
907889M	-	89	420	72	178	43	5/16-24 UNF-2B X 104 mm pitch	80.00	18.20	48	361.20	Cat I
9078108M	-	108	420	72	178	58	5/16-24 UNF-2B X 104 mm pitch	80.00	18.20	48	439.46	Cat I

**Ball Valve with Sight Glass**

Part No		ODS (inch)	ODS (mm)	Dimensions (mm)					Port Size (mm)	Weight (kg)	MWP (barg)	Kv Value (m <sup>3</sup> /hr)	CE Cat
Standard	Schrader Valve			A	B	C	D	Mounting pad hole thread details -2 off					
907202SG	937202SG	1/4	–	185	16	55	8	8-36 UNF-2B X 20 mm pitch	12.70	0.42	48	1.81	SEP
907203SG	937203SG	3/8	–	185	16	55	8	8-36 UNF-2B X 20 mm pitch	12.70	0.42	48	3.70	SEP
907204SG	937204SG	1/2	–	185	16	55	10	8-36 UNF-2B X 20 mm pitch	12.70	0.42	48	6.02	SEP
907205SG	937205SG	5/8	16	185	16	55	13	8-36 UNF-2B X 20 mm pitch	12.70	0.42	48	11.95	SEP
907306SG	937306SG	3/4	–	211	21	67	19	8-36 UNF-2B X 32 mm pitch	19.05	0.80	48	18.06	SEP
907307SG	937307SG	7/8	22	211	21	67	20	8-36 UNF-2B X 32 mm pitch	19.05	0.80	48	26.06	SEP
907409SG	937409SG	1 1/8	–	237	26	76	24	10-32 UNF-2B X 40 mm pitch	25.40	1.20	48	52.72	SEP

**Moisture Colour Table**

Refrigerant	Moisture content (parts per million)			
	Temp (°C)	Indicator Colour		
		Green	Chartreuse	Yellow
R404A	24	below 20	20-100	above 100
	38	below 35	35-130	above 130
	52	below 45	45-200	above 200
R410A	24	below 20	20-100	above 100
	38	below 30	30-120	above 120
	52	below 50	50-150	above 150
R134a	24	below 30	30-90	above 90
	38	below 50	50-120	above 120
	52	below 70	70-150	above 150
R22	24	below 20	20-85	above 85
	38	below 30	30-90	above 90
	52	below 45	45-110	above 110
R744	24	below 15	15-80	above 80
	38	below 20	20-90	above 90
	52	below 35	35-110	above 110



# HIGH PRESSURE BALL VALVES

The function of a Ball Valve is to provide isolation in liquid and gas applications with single or bi-directional flow, where little restriction is desired.

### Applications

Ball valves are used in a wide variety of air conditioning and refrigeration applications. They can be used for both liquid and gas applications. This type of valve is commonly used for isolating purposes. All valves are suitable for use with HCFC, HFC and CO<sub>2</sub> refrigerants and their associated oils.

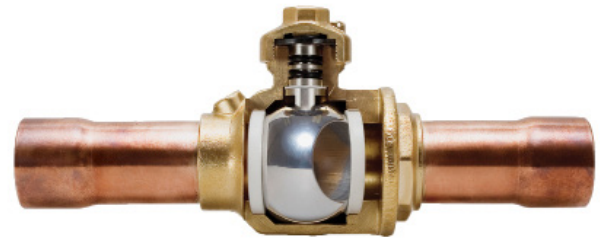
### Main Features

#### Construction Features

- Bi-directional flow
- Indicator on stem shows valve position - open or closed
- Positive stem stop ensures precise positioning in the open or closed position
- Blow-out proof stem
- Ball cavity vented to prevent over-pressure
- Vented seal cap
- Mounting pad

#### Sealing Integrity Features

- Sealing materials optimised for CO<sub>2</sub>
- Premium quality TFM™ ball seals
- Double O-ring stem seal design
- Premium quality neoprene stem O-ring seals
- PTFE cap seal - acts as a secondary seal



#### Technical Specification

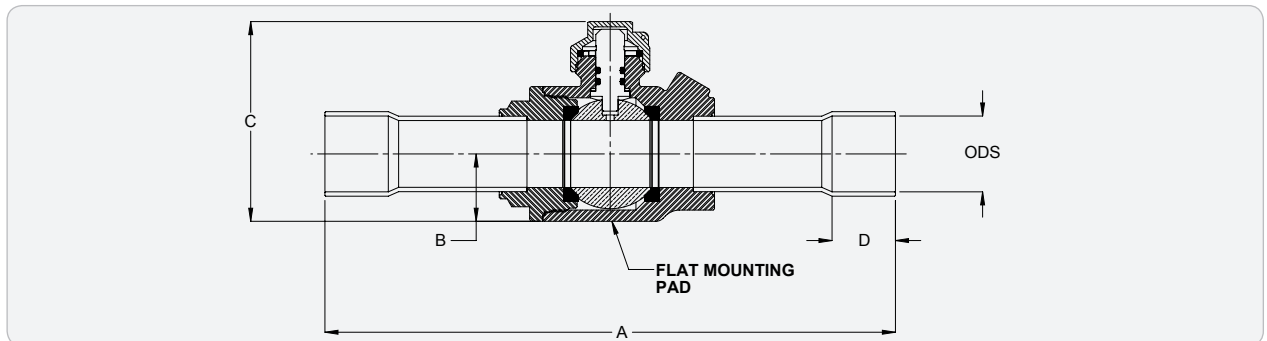
Allowable operating temperature = -40°C to +120°C  
 Allowable operating pressure = 0 to 120 barg

#### Materials of Construction

The valve body, valve body adaptor, ball and seal cap are made from brass. The stem is made from stainless steel. The pipe extensions are made from K65 copper. The ball seals are made from TFM™, stem O-rings from neoprene and cap seal from PTFE.

#### Installation - Main Issues

The valve body must be protected against excessive heat during installation to prevent damage to the seals. Full details are provided in the installation sheet, included with each valve.



Part No		ODS (inch)	ODS (mm)	Dimensions (mm)					Port Size (mm)	Weight (kg)	MWP (barg)	Kv Value (m <sup>3</sup> /hr)	CE Cat
Imperial	Metric			A	B	C	D	Mounting pad hole thread details -2 off					
-	907206MTH	-	6	165	16	54	8	8-36 UNF-2B X 20 mm pitch	12.70	0.33	120	1.81	SEP
907202TH	-	1/4	-	165	16	54	8	8-36 UNF-2B X 20 mm pitch	12.70	0.33	120	1.81	SEP
907203TH	-	3/8	-	165	16	54	8	8-36 UNF-2B X 20 mm pitch	12.70	0.33	120	3.70	SEP
-	907210MTH	-	10	165	16	54	8	8-36 UNF-2B X 20 mm pitch	12.70	0.33	120	3.70	SEP
-	907212MTH	-	12	165	16	54	10	8-36 UNF-2B X 20 mm pitch	12.70	0.33	120	6.02	SEP
907204TH	-	1/2	-	165	16	54	10	8-36 UNF-2B X 20 mm pitch	12.70	0.33	120	6.02	SEP
907205TH	-	5/8	16	165	16	54	13	8-36 UNF-2B X 20 mm pitch	12.70	0.33	120	11.95	SEP
-	907318MTH	-	18	184	21	67	17	8-36 UNF-2B X 32 mm pitch	19.05	0.62	120	18.06	SEP
907306TH	-	3/4	-	184	21	67	16	8-36 UNF-2B X 32 mm pitch	19.05	0.62	120	18.06	SEP
907307TH	-	7/8	22	184	21	67	19	8-36 UNF-2B X 32 mm pitch	19.05	0.64	120	26.06	SEP
-	907428MTH	-	28	216	25	76	24	10-32 UNF-2B X 40 mm pitch	25.40	0.95	120	52.72	SEP
907409TH	-	1-1/8	-	216	25	76	23	10-32 UNF-2B X 40 mm pitch	25.40	0.95	120	52.72	SEP
907511TH	-	1-3/8	35	235	31	94	25	10-32 UNF-2B X 48 mm pitch	31.75	1.52	120	73.27	Cat I
907613TH	-	1-5/8	-	254	39	109	28	1/4"-28 UNF-2B X 60 mm pitch	38.10	2.44	120	182.32	Cat I
-	907642MTH	-	42	254	39	109	28	1/4"-28 UNF-2B X 60 mm pitch	38.10	2.44	120	182.32	Cat I