

spirax sarco®

M20

Ball Valve 1" to 6"

Description

M20 is a reduced bore ball valve, with a single piece body design which can be used with the majority of industrial fluids. The M20 is antistatic and firesafe as standard.

Available types

M20V2 Zinc plated carbon steel body, PTFE seats.

M20V3 Stainless steel body, PTFE seats.

M20C2 Zinc plated carbon steel body, R-PTFE seats.

M20C3 Stainless steel body, R-PTFE seats.

Options

- Self-venting ball.
- Extended stems 50 mm (2") and 100 mm (4") to allow full insulation.

Sizes and pipe connections

1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4", 6"

Standard flange BS 4504 PN40, ANSI 150 and ANSI 300

Technical data

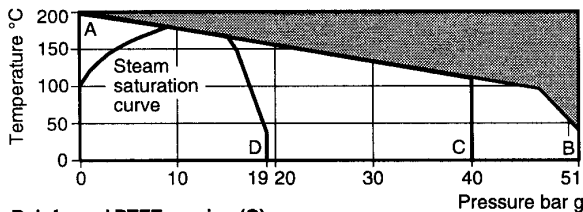
Flow characteristic	Modified linear
Port	Reduced bore
Leakage	Test procedure to ISO 5208 (rate A)
Antistatic	Complies with ISO 7121 and BS 5351
Firesafe	Designed to API 6FA-1985

Limiting conditions

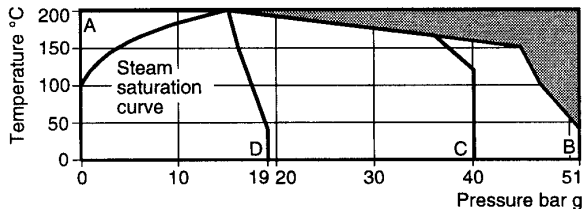
Body design conditions	392°F @ 0 psig	ANSI 300
Maximum operating temperature	M20V 392°F @ 0 psig (200°C @ 0 barg)	
	M20C 392°F @ 215 psig (200°C @ 15 barg)	
Maximum operating pressure	735 psig @ 110°F (51 barg @ 45°C)	
	M20V 150 psig (10 barg)	
Maximum saturation steam pressure	M20C 220 psig (15 barg)	
	1130 psig (78 barg)	Carbon steel body
Cold hydraulic test pressure	1085 psig (75 barg)	Stainless steel body

Operating range

Virgin PTFE version (v)



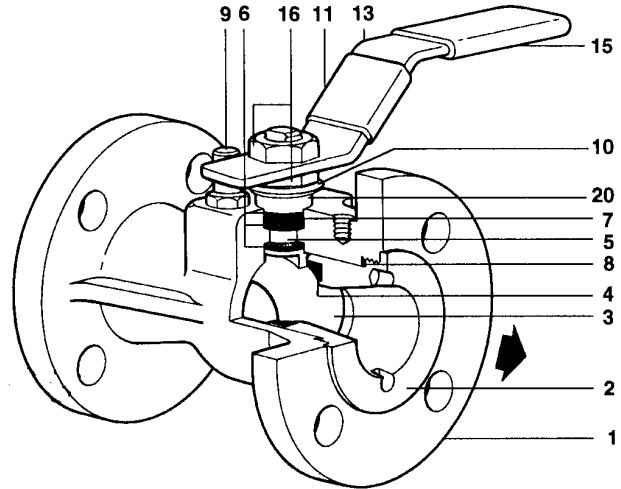
Reinforced PTFE version (C)



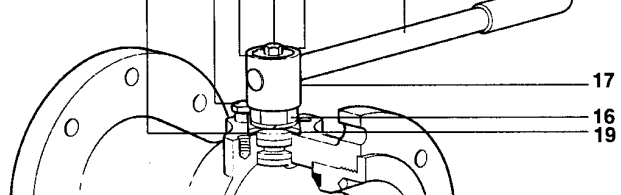
The product must not be used in this region.

A - B Flanged ANSI 300 A - D Flanged ANSI 150
A - C Flanged BS 4504 PN40

1" to 2-1/2"



3" to 6"



Materials

No	Part	Material	
1	Body	M20_2	Zinc plated carbon steel ASTM A216 WCB
		M20_3	Stainless steel ASTM A351 CF8M
2	Insert	M20_2	Zinc plated carbon steel SAE 1040
		M20_3	Stainless steel AISI 316
3	Ball	Stainless steel	AISI 316
4	Seat	M20C	Carbon reinforced PTFE
		M20V	PTFE
5	Stem	Stainless steel	AISI 316
6	Stem seals	Carbonreinforced PTFE	
7	Stem seal	Graphite	
8	Insert 'O' ring	Viton	
9	Stop screw	Zinc plated carbon steel	SAE 12L14
10	Belleville washer	Stainless steel	AISI 301
11	Name-plate	Stainless Steel	AISI 430
12	Cap screw	Zinc plated carbon steel	Grade 5
13	Lever	Zinc plated carbon steel	SAE 1010
14	Pipe handle	Zinc plated carbon steel	
15	Grip	Vinyl	
16	Gland nuts	Zinc plated carbon steel	SAE 12L14
17	Stem adaptor	Zinc plated cast iron	
18	Support washer	Zinc plated carbon steel	
19	Stop plate	Zinc plated carbon steel	Grade 5
20	Separator	Zinc plated carbon steel	

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Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.
In the interests of development and improvement of the product, we reserve the right to change the specification.

Dimensions / weights (approximate) in mm and kg

Flanged BS 4504 PN40

Size	A3	B1	C1	D2	E	F	Weight
DN25	165	205	106	115	21	50	5.0
DN32	178	205	109	140	23	52	6.4
DN40	190	213	126	150	30	64	8.8
DN50	216	213	134	165	37	70	11.0
DN65	241	258	146	185	51	74	17.0
DN80	283	410	168	200	63	94	25.0
DN100	305	510	180	235	76	100	30.0
DN150	403	700	246	300	111	137	63.0

Flanged ANSI 150

Size	A2	B1	C1	D1	E	F	Weight
DN25	127	205	106	108	21	50	3.3
DN32	140	205	111	117	23	52	4.0
DN40	165	213	126	127	30	63	5.8
DN50	178	213	134	152	37	69	8.6
DN65	191	258	146	178	51	72	13.2
DN80	203	410	168	190	63	92	18.7
DN100	229	510	180	229	76	98	27.8
DN150	267	700	246	279	111	137	44.0

Flanged ANSI 300

Size	A4	B4	C4	D3	E	F	Weight
DN25	165	205	106	124	21	50	5.0
DN32	178	205	110	133	23	52	6.0
DN40	190	213	126	156	30	63	8.8
DN50	216	213	134	165	37	69	11.0
DN65	241	258	146	190	51	72	17.0
DN80	283	410	168	210	63	92	25.0
DN100	305	510	180	254	76	98	40.0
DN150	403	700	246	318	111	137	63.0

Cv values

1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
35	46	94	120	239	351	699	1099

Operating torque (ft/lb)

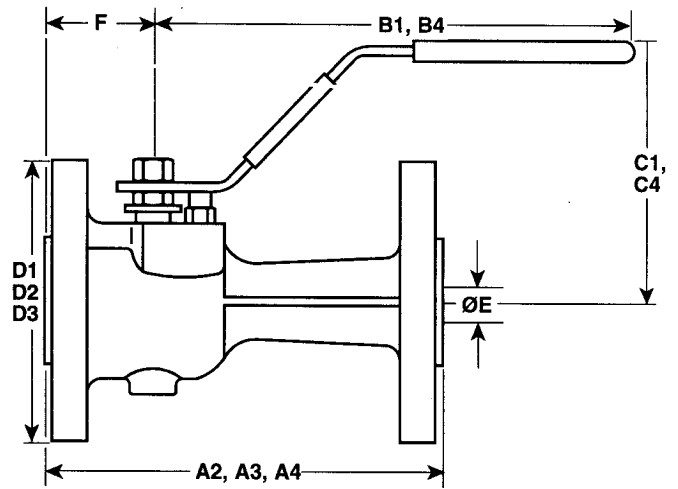
1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"
10.3	14.7	25.8	36.8	51.6	59	95.8	258

The torque figures shown are for a valve at maximum operating pressure that is operated frequently.

Valves that are subject to long static periods may require at least 75% greater break out torque.

Maintenance

Full Installation and Maintenance Instructions are provided with the product.



How to order

Specify:	Size	Model	Seats	Body material
			V = Virgin PTFE	
			C = Reinforced PTFE	
			2 = Carbon steel	
			3 = Stainless steel	

Example: Spirax Sarco 2", flanged ANSI 150 M20C3 ball valve.

Spare parts

The spare parts available are shown in heavy outline. Parts drawn in broken line are not supplied as spares.

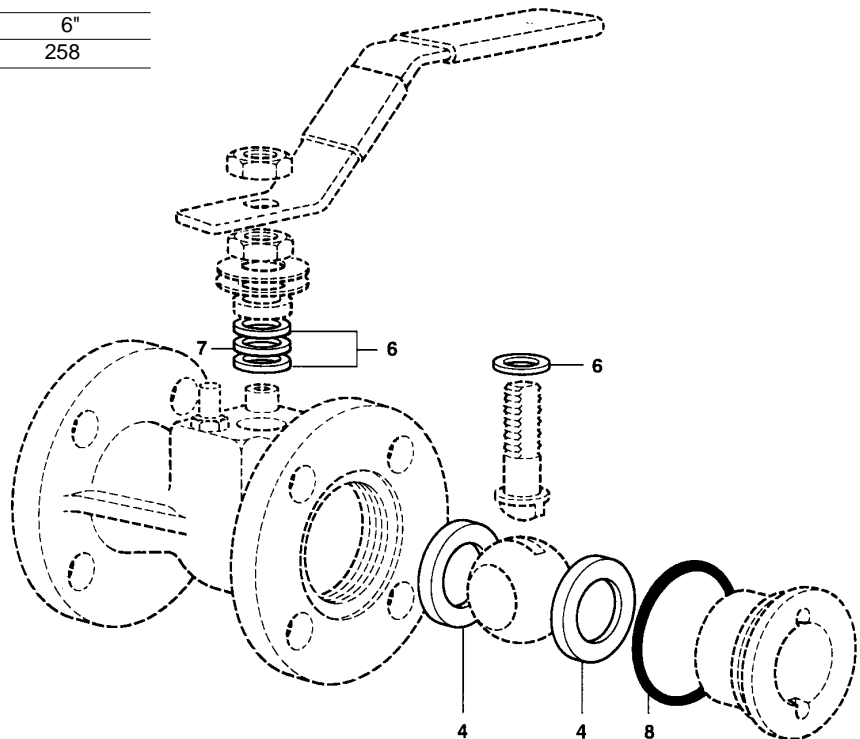
Available spare

Seat, stem seals and gasket set	4, 6, 7, 8
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How to order spares

Always order spares by using the description given in the column headed 'Available spare' and stating the size and type of ball valve.

Example: 1-Seat, stem seals and gasket set for 2" ANSI 150 M20C3 ball valve.



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