



Cert. No. LRQ 0963008

ISO 9001

spirax/sarco

TI-P133-14

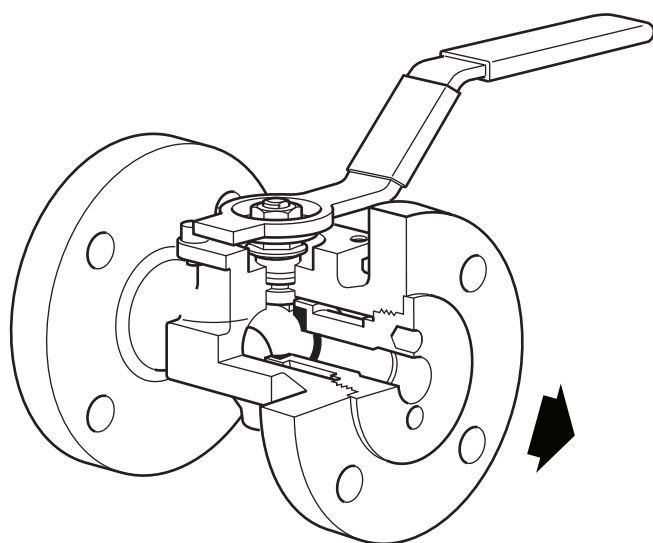
ST Issue 8

M21S ISO Ball Valve DN15 to DN100

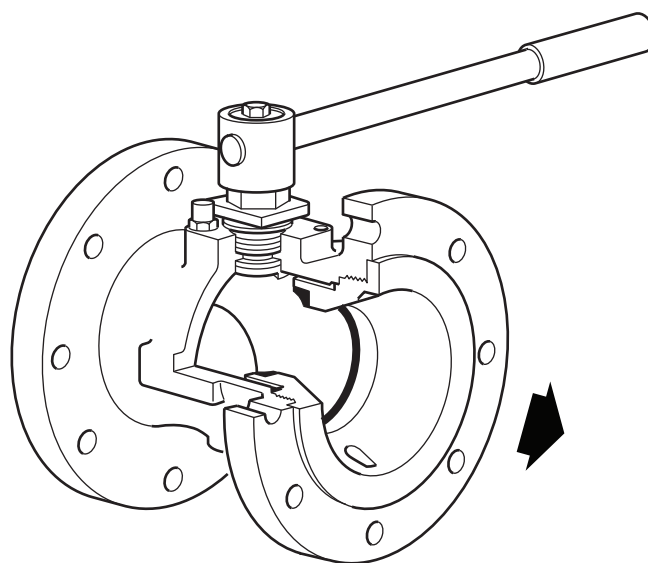
Sizes and pipe connections

DN15, DN20, DN25, DN32, DN40, DN50, DN65, DN80 and DN100.

Standard flange EN 1092 PN40 with face-to-face dimensions according to DIN 3202 F4.



DN15 to DN65



DN80 to DN100

Description

The M21S ISO is a reduced bore ball valve, with a single piece body, having ISO mounting as standard. It is an isolating valve, which can be used with the majority of industrial fluids, not a control valve.

Available types

M21S2 ISO	Zinc plated carbon steel body, R-PTFE seats, ISO mounting.
M21S3 ISO	Stainless steel body, R-PTFE seats, ISO mounting.

Standards

This product fully complies with the requirements of the European Pressure Equipment Directive 97/23/EC and carries the CE mark when so required.

Certification

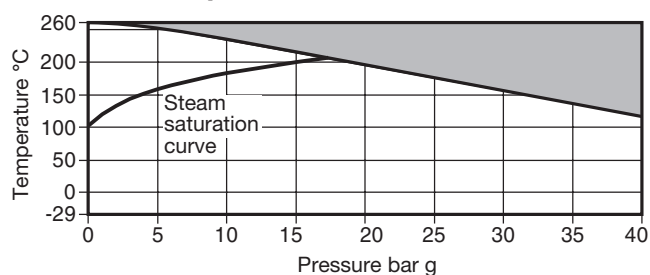
This product is available with certification to EN 10204 3.1.

Note: All certification / inspection requirements must be stated at the time of order placement.

Technical data

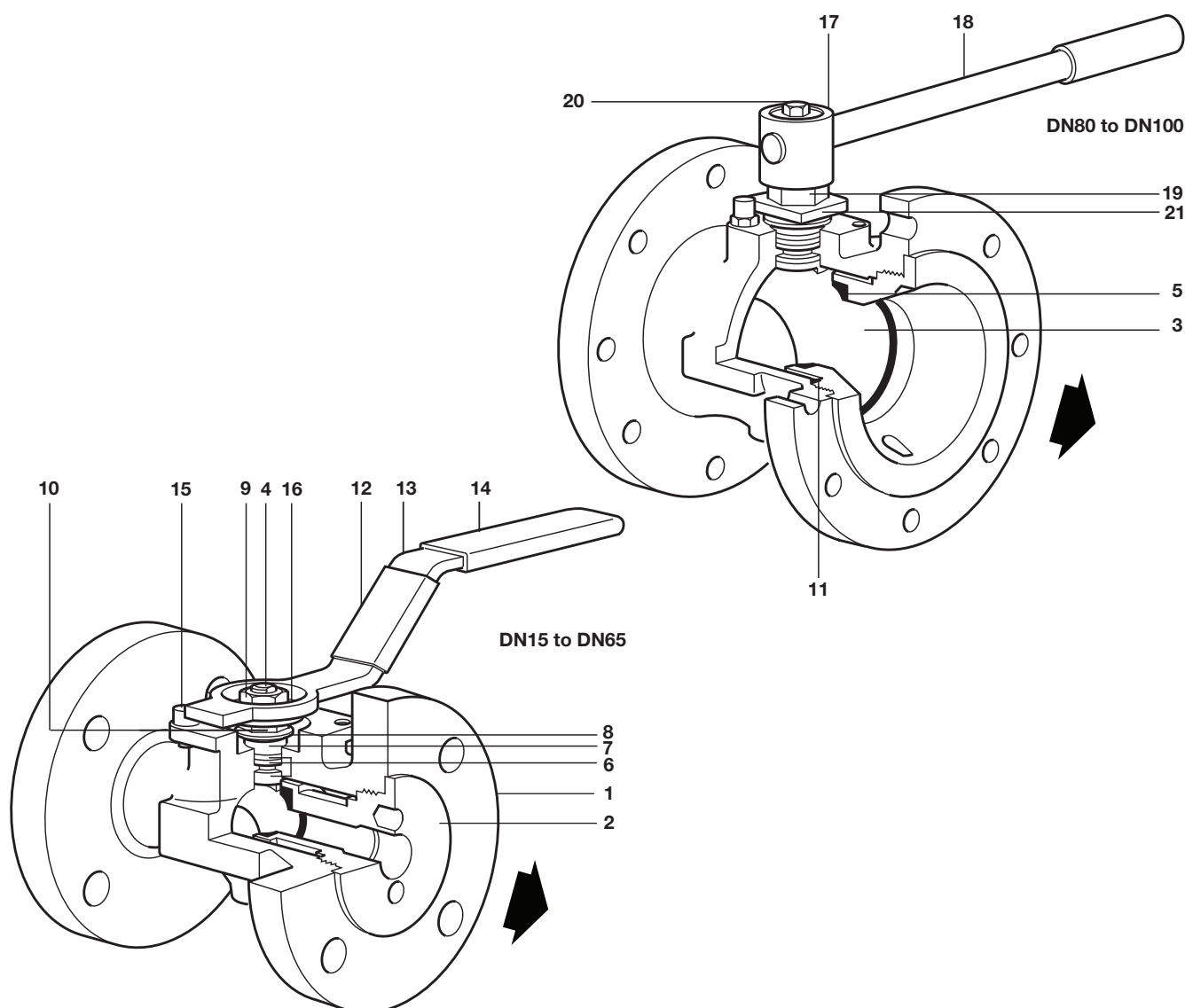
Flow characteristic	Modified linear
Port	Reduced bore
Leakage test procedure to ISO 5208 (Rate A) / EN 12266-1 (Rate A)	
Antistatic device	Complies with ISO 7121 and BS 5351

Pressure/temperature limits



The product **must not** be used in this region.

Body design conditions		PN40
PMA	Maximum allowable pressure	40 bar g @ 120°C
TMA	Maximum allowable temperature	260°C @ 0 bar g
Minimum allowable temperature		-29°C
PMO	Maximum operating pressure for saturated steam service	17.5 bar g
TMO	Maximum operating temperature	260°C @ 0 bar g
Minimum operating temperature		-29°C
Note: For lower operating temperatures consult Spirax Sarco		
ΔPMX		Maximum differential pressure is limited to the PMO
Designed for a maximum cold hydraulic test pressure of 60 bar g		



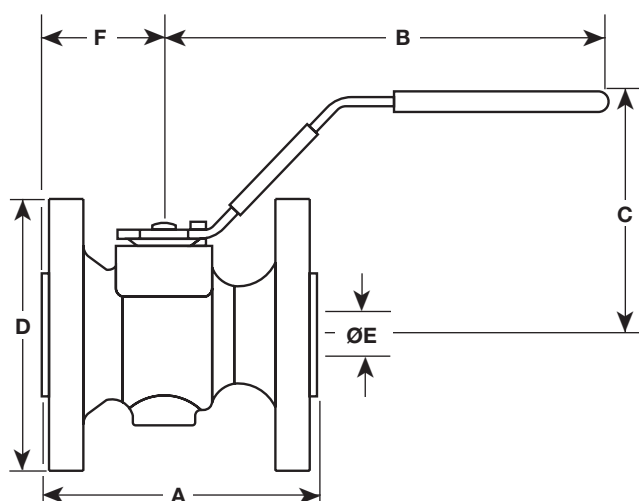
Materials

No.	Part	Material	
1	Body	M21S2	Zinc plated carbon steel
		M21S3	Stainless steel
2	Insert	M21S2	Zinc plated carbon steel
		M21S3	Stainless steel
3	Ball	Stainless steel	AISI 316
4	Stem	Stainless steel	AISI 316
5	Seat	Carbon and graphite reinforced PTFE	PDR 0.8
6	Stem seals	Antistatic R-PTFE	
7	Separator	Zinc plated carbon steel	SAE 12L14
8	Belleville washer	Stainless steel	AISI 301
9	Nut	Zinc plated carbon steel	SAE 12L14
10	Nut	Zinc plated carbon steel	SAE 12L14
11	Insert 'O' ring	Viton	
12	Name-plate	Stainless steel	AISI 430
13	Lever	Zinc plated carbon steel	SAE 1010
14	Grip	Vinyl	
15	Stop screw	Zinc plated carbon steel	SAE 12L14
16	Body name-plate	Stainless steel	AISI 430
17	Stem adaptor	Zinc plated SG iron	
18	Pipe handle	Zinc plated carbon steel	
19	Adaptor washer	Zinc plated carbon steel	SAE 1045
20	Bolt	Zinc plated carbon steel	Grade 5
21	Stop plate	Zinc plated carbon steel	

Dimensions/weights (approximate) in mm and kg

Flanged PN40 face to face DIN 3202 F4

Size	A	B	C	D	E	F	Weight
DN15	115	146	81	95	11	53	2.20
DN20	120	146	84	105	14	55	3.00
DN25	125	180	99	115	20	56	3.90
DN32	130	180	102	140	24	58	5.25
DN40	140	220	124	150	31	64	6.57
DN50	150	220	130	165	36	70	8.72
DN65	170	260	142	185	50	84	12.76
DN80	180	415	156	200	57	90	15.95
DN100	190	515	175	235	75	95	21.50

**K_v values**

DN	15	20	25	32	40	50	65	80	100
K _v	6	10	21	40	81	94	197	248	581

For conversion: $C_v(\text{UK}) = K_v \times 0.963$ $C_v(\text{US}) = K_v \times 1.156$ **Operating torque (N m)**

DN	15	20	25	32	40	50	65	80	100
Nm	7	9	13	19	23	25	60	100	180

The torque figures shown are for a valve at temperature and pressure corresponding to saturated steam at 17.5 bar, that is operated frequently.

Valves that are subject to long static periods, may require greater break-out torque.

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions supplied with the product.

How to order

Specify:	Size	Model	Seat	Material
		Seat material	S = Carbon graphite reinforced PTFE	
		Body material	2 = Zinc plated carbon steel	
			3 = Stainless steel	

Example: 1 off Spirax Sarco DN50 M21S2 ISO ball valve having flanged EN 1092 PN40 connections.

Spare parts

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

Available spares

Seat, stem seal and gasket set	5, 6, 11
--------------------------------	----------

How to order spares

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

Example: 1 - Seat, stem seal and gasket set for a Spirax Sarco DN50 flanged PN40 M21S2 ISO ball valve.

