



Cert. No. LRQ 0963008

ISO 9001

spirax sarco

TI-P133-39
ST Issue 6

M21S ISO Automation Ball Valve DN15 to DN100

Description

The M21S ISO Automation is a reduced bore ball valve, with a single piece body, having ISO mounting as standard (making it easy and safe to automate). It is an isolating valve, which can be used with the majority of industrial fluids, not a control valve. The valve is supplied without a handle (lever) and with a photochemical name-plate welded to the body. The M21S ISO Automation is available with EN 1092 PN40 flanges.

Available types

M21S2 ISO Automation	Zinc plated carbon steel body, PDR 0.8 seats reduced bore and ISO mounting.
M21S3 ISO Automation	Stainless steel body, PDR 0.8 seats, reduced bore and 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.

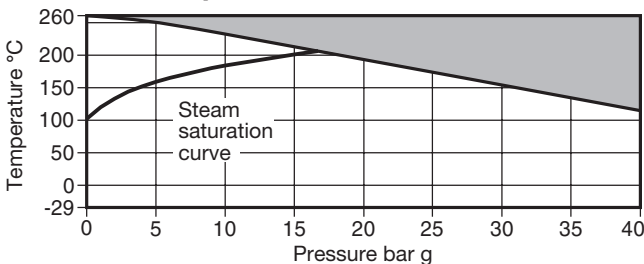
Sizes and pipe connections

DN15, DN20, DN25, DN32, DN40, DN50, DN65, DN80 and DN100. Standard flange EN 1092 PN40, Face-to-face dimensions according to DIN 3202 F4

Technical data

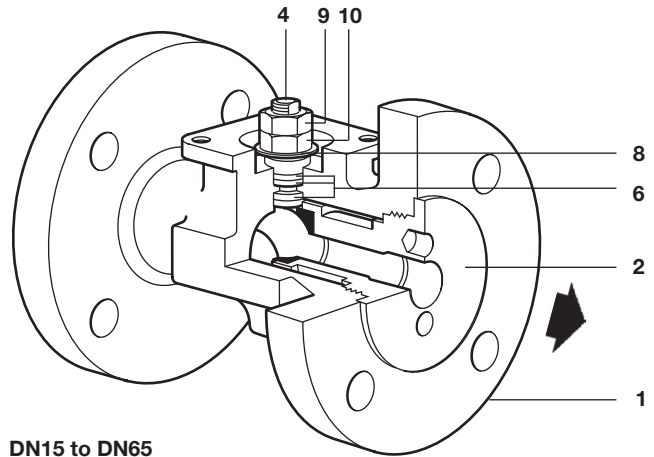
Flow characteristics	Modified linear
Port	Reduced bore
Leakage test procedure to ISO 5208 (Rate A) / EN 12266-1 (Rate A)	
Antistatic device	Complies with ISO 7121 and BS 5351

Pressure/temperature limits

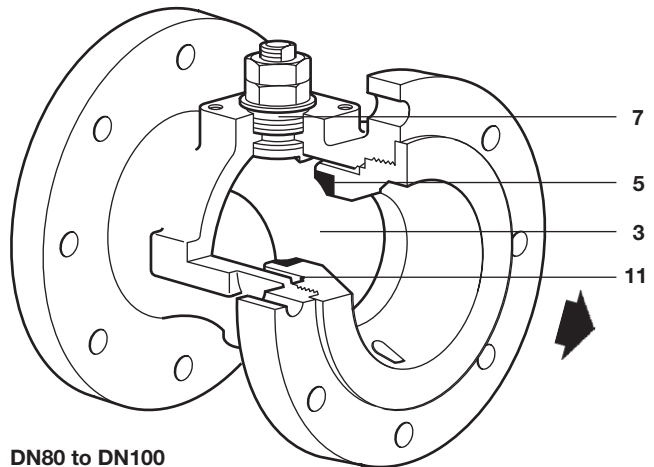


The product **must not** be used in this region.

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		



DN15 to DN65



DN80 to DN100

Materials

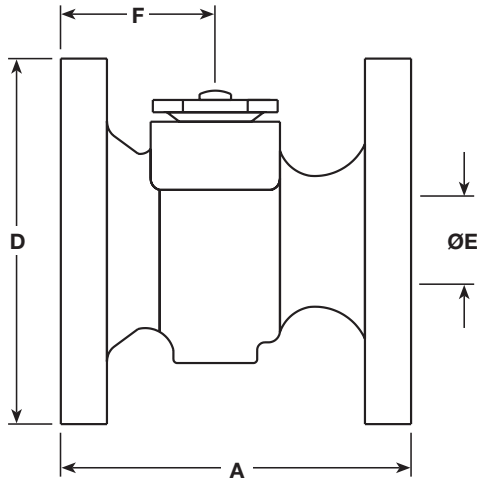
No.	Part	Material
1	Body	M21S2 Zinc plated carbon steel ASTM A216 WCB
		M21S3 Stainless steel ASTM A351 CF8M
2	Insert	M21S2 Zinc plated carbon steel SEA 1040
		M21S3 Stainless steel AISI 316
3	Ball	Stainless steel AISI 316
4	Stem	Stainless steel AISI 316
5	Seat	Carbon/graphite reinforced PTFE PDR 0.8
6	Stem seals	Antistatic R-PTFE
7	Separator	Zinc plated carbon steel SAE 12L14
8	Belleville washer	Stainless steel AISI 301
9	Stem nut	Zinc plated carbon steel SAE 12L14
10	Stem nut	Zinc plated carbon steel SAE 12L14
11	Insert 'O' ring	Viton
*12	Name-plate	Stainless steel AISI 430

*Note: Item 12 not shown.

Dimensions/weights (approximate) in mm and kg

Flanged PN40 face-to-face DIN 3202 F4

Size	A	D	E	F	Weight
DN15	115	95	11	53	2.00
DN20	120	105	14	55	2.80
DN25	125	115	20	56	3.50
DN32	130	140	24	58	4.50
DN40	140	150	31	64	5.60
DN50	150	165	36	70	7.70
DN65	170	185	50	84	11.20
DN80	180	200	57	90	14.50
DN100	190	235	75	95	20.00



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 torques (N m)

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

The torque figure 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 full Installation and Maintenance Instructions supplied with the product.

How to order

Specify:	Size	Seat material	S = Carbon graphite reinforced PTFE PDR 0.8
	Model	Body material	2 = Zinc plated carbon steel
	Seat Material		3 = Stainless steel

Example: 1 off Spirax Sarco DN50, flanged PN40 M21S2 ISO Automation ball valve.

Spare parts

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

Available spare

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 spare' and state the size and type of ball valve.

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

