



Cert. No. LRQ 0963008

ISO 9001

spirax/sarco

TI-P078-05

CH Issue 6

KX43 and KY43

Steel

Self-acting Control Valves

Description

The KX and KY range of two-port valves are used in conjunction with Spirax Sarco SA control systems to provide a self-acting temperature control unit.

Alternatively, they can be used as electrically actuated temperature control valves by fitting an EL3500 Series electric actuator with a suitable temperature transmitter and controller.

Available types

KX43 Normally closed

Normally closed. This valve incorporates a pressure balancing bellows, which enables the valve to operate against higher differential pressures.

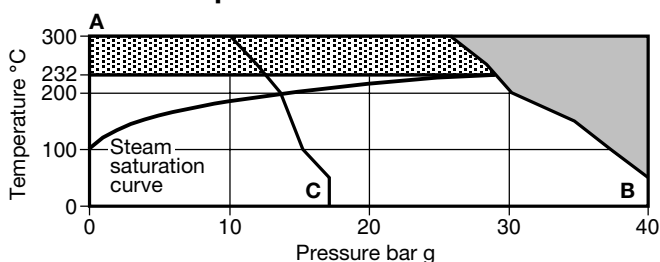
Standards

These products fully comply with the requirements of the European Pressure Equipment Directive 97/23/EC and carry the CE mark when so required.

Certification

As standard these products are available with a manufacturers' Typical Test Report. Additionally, at extra cost, certification to EN 10204 3.1 can be supplied. **Note:** All certification/inspection requirements must be stated at the time of order placement.

Pressure / temperature limits



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

▨ For use in this region a Spirax Sarco spacer is required. See TI-P033-01 for further details.

A - B Flanged EN 1092 PN40, ANSI 300 and BS 10 Table H.

A - C Flanged EN 1092 PN25 and ANSI 150.

Body design conditions		PN40
Maximum design pressure		40 bar g @ 120°C
Maximum design temperature		300°C @ 25.8 bar g
Minimum design temperature		-10°C
Maximum operating temperature	KX43	Fitted to a Spirax Sarco spacer 300°C
		Fitted directly to actuator 232°C
	KY43	Fitted directly to actuator 232°C
Minimum operating temperature		0°C

Note: For lower operating temperatures consult Spirax Sarco

Maximum differential pressure bar	Size	DN15	DN20	DN25	DN32	DN40	DN50
	KX43	12.0	7.0	3.5	2.3	1.7	1.1
	KY43	-	-	-	9.0	8.2	6.9

Designed for a maximum cold hydraulic test pressure of 60 bar g

Size and pipe connections

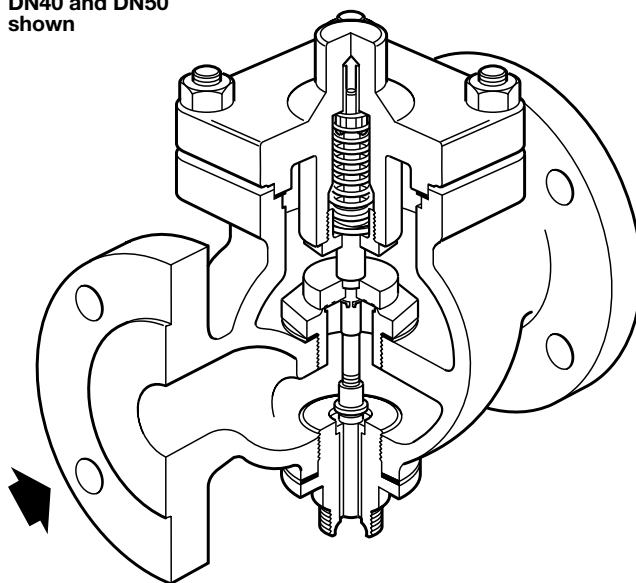
KX43 DN15, DN20, DN25, DN32, DN40 and DN50

KY43 DN32, DN40 and DN50

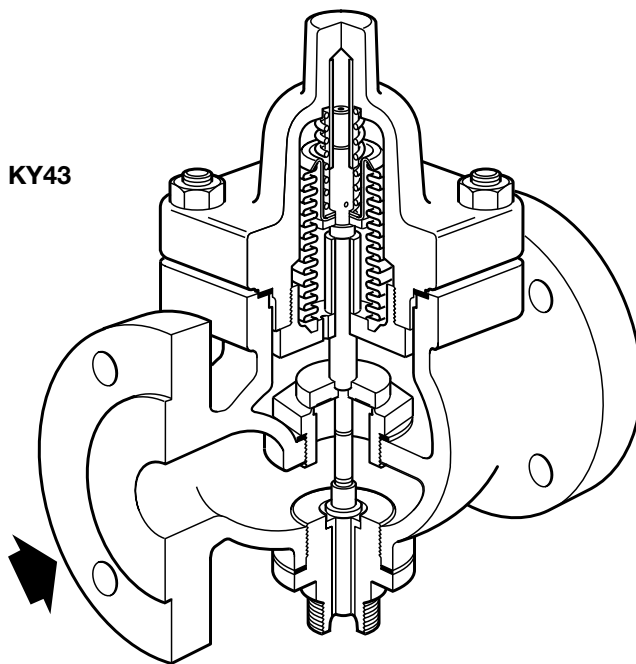
Flanged EN 1092 PN25 and PN40, ANSI 300 and BS 10 Table H.

The following flanges are **available on request**: ANSI 150.

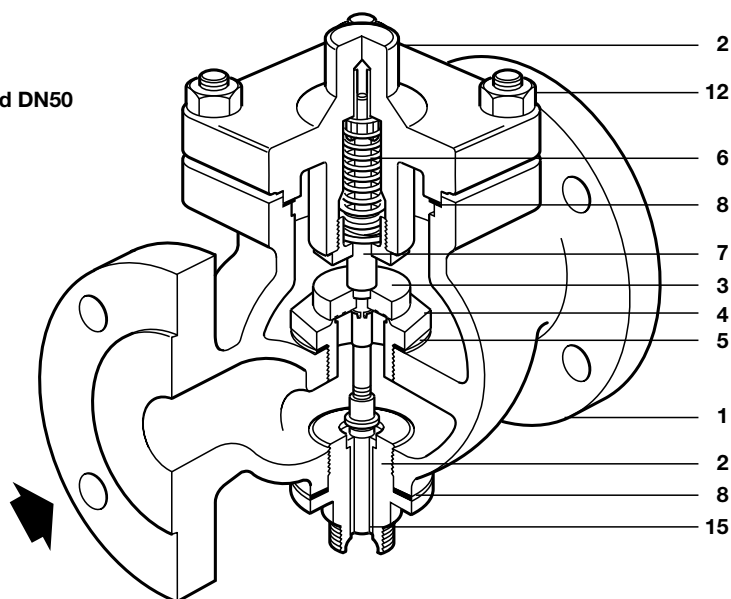
KX43
DN40 and DN50
shown



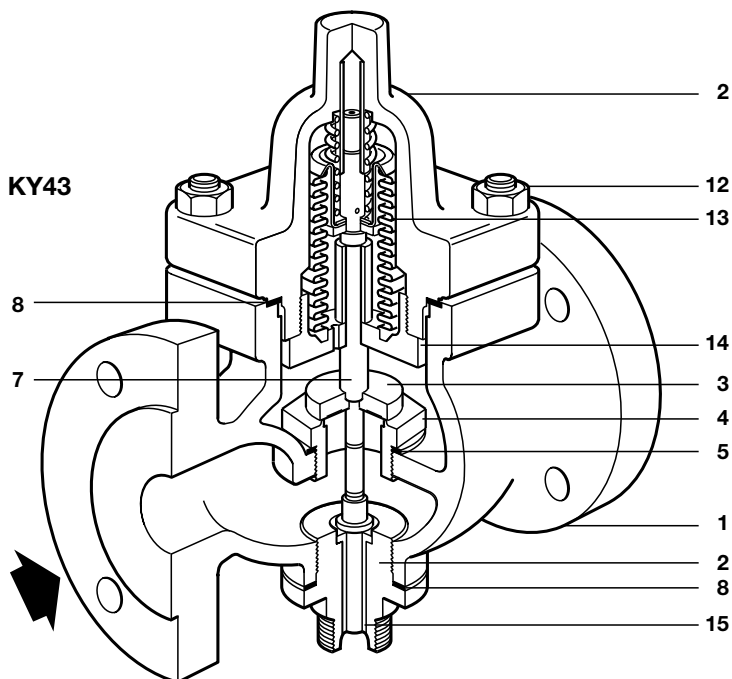
KY43



KX43
DN40 and DN50
shown



KY43



Materials

No. Part		Material	
1	Body	Steel	EN 10213-2 GP240 GH+N
2	Bonnet	DN15 to DN25	Steel
		DN32 to DN50	Steel
3	Valve head	Stainless steel	BS 970 431 S29
4	Valve seat ring	Stainless steel	BS 970 431 S29
5	Valve seat gasket	DN15 to DN25	Mild steel
		DN32 to DN50	Reinforced exfoliated graphite
6	Return spring	Stainless steel	BS 2056 302 S 26
7	Stem	Brass	BS 2872 CZ 121
8	Bonnet gasket	Reinforced exfoliated graphite	
12	Bonnet studs	Steel	BS 4439 Gr. 8.8
	Bonnet nuts	Steel	BS 3692 Gr. 8
13	Bellows	Phosphor bronze	EN 12449 Cu Sn 6
14	Bellows gasket	Reinforced exfoliated graphite	
15	Bonnet bush	Brass	BS 2874 CZ 121

Kv values

Size	DN15	DN20	DN25	DN32	DN40	DN50
KX and KY	2.90	4.64	9.80	16.48	23.7	34.0
For conversion:	$C_V \text{ (UK)} = K_V \times 0.963$ $C_V \text{ (US)} = K_V \times 1.156$					

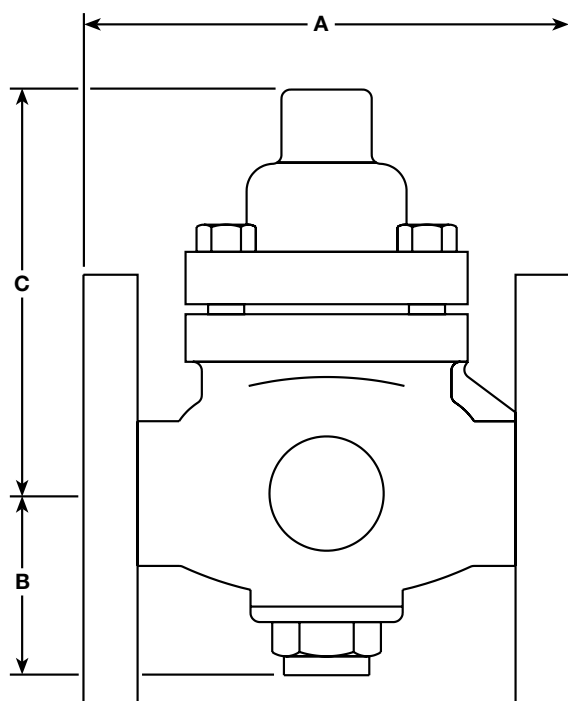
Capacities

For saturated steam sizing capacities see TI-GCM-08.
For water valve sizing capacities see TI-GCM-09.

Dimensions/weights (approximate) in mm and kg

KX43

Size	PN25 PN40 A	ANSI 150 A	ANSI 300 A	BS 10 H A	B	C	Weight
DN15	130	124	130	130	68	106	4.4
DN20	150	142	150	146	68	106	6.4
DN25	160	156	162	162	80	108	8.1
DN32	180	180	180	178	80	112	8.8
DN40	200	198	202	198	90	112	9.8
DN50	230	228	232	228	100	112	14.7



KY43

Size	PN25 PN40 A	ANSI 150 A	ANSI 300 A	BS 10 H A	B	C	Weight
DN32	180	180	180	178	80	154	9.2
DN40	200	198	202	198	90	154	10.2
DN50	230	228	232	228	100	154	15.1

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-S21-01) supplied with the product.

Installation note:

The valve should be fitted in a horizontal line with the actuator vertically below the pipeline.

How to order

Example: 1 off Spirax Sarco DN50 KX43 self-acting control 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

	Valve and seat assembly	A1, D1, E, J, F, L1
KX43	Set of all gaskets (DN25)	L1, L2, E
	(DN32 - DN50)	E, L1, L2, B, U, C
	Set of bonnet studs and nuts (set of 4)	S
KY43	Valve and seat assembly	A1, B, C, D1, E, L1, U
	Bellows and stem assembly	H, G, L1, B, C, U, J
	Set of all gaskets	B, C, U, G, L1, L2
	Set of bonnet studs and nuts (set of 4)	S

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 valve.

Example: 1 - Valve seat assembly for a Spirax Sarco DN40 KY43 self-acting control valve.

