

spirax sarco

KX31 and KX33

Cast Iron

Self-acting Control Valves

Description

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

Available types

KX31 Normally closed with screwed connections.

KX33 Normally closed with flanged connections.


Optional extras

Fixed bleed bypass on DN15 to DN50 valves for water systems:

KX31B and KX33B

The 'B' denotes the internal fixed bleed, if requested.

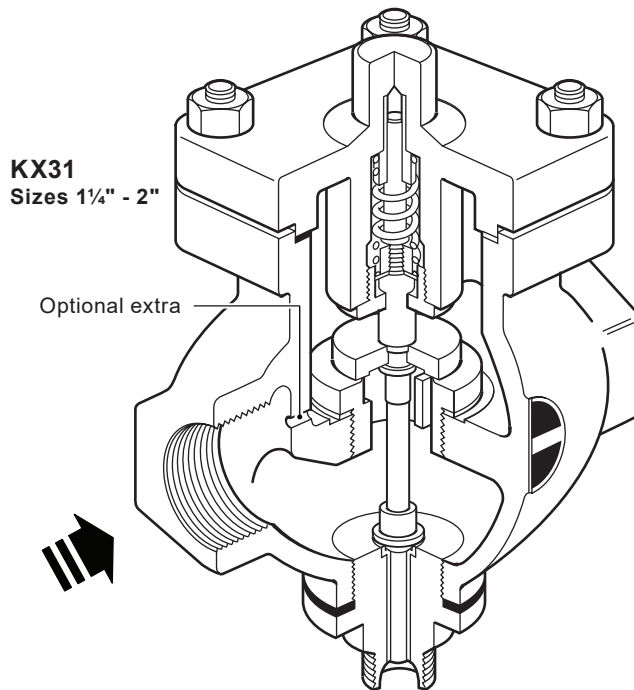
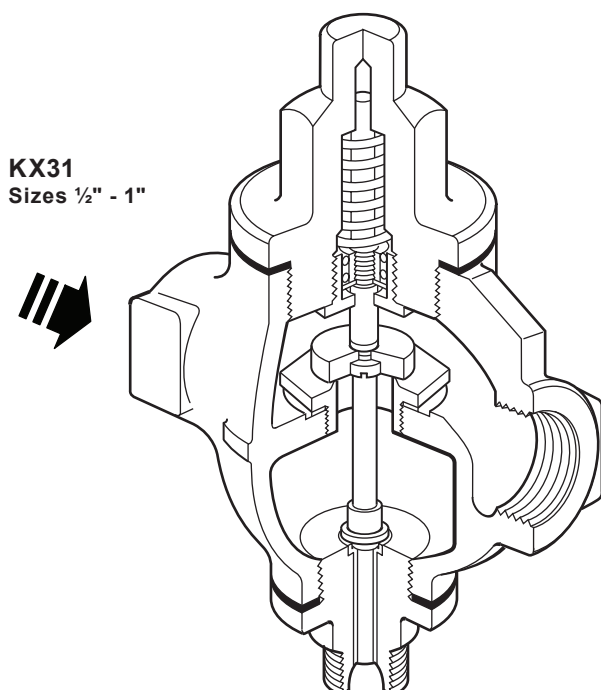
Standards

These products fully comply with the requirements of the European Pressure Equipment Directive 2014/68/EU and carry the  mark when so required.

Certification

As standard these products are available with a manufacturers' Typical Test Report.

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



Sizes and pipe connections

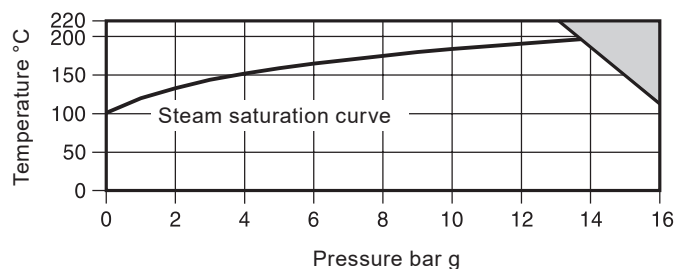
KX31 1/2", 3/4", 1", 1 1/4", 1 1/2" and 2"

Screwed BSP T Rp (ISO 7-1) or NPT.

KX33 DN15, DN20, DN25, DN32, DN40 and DN50

Flanged EN 1092 PN16 and BS 10 Table F.

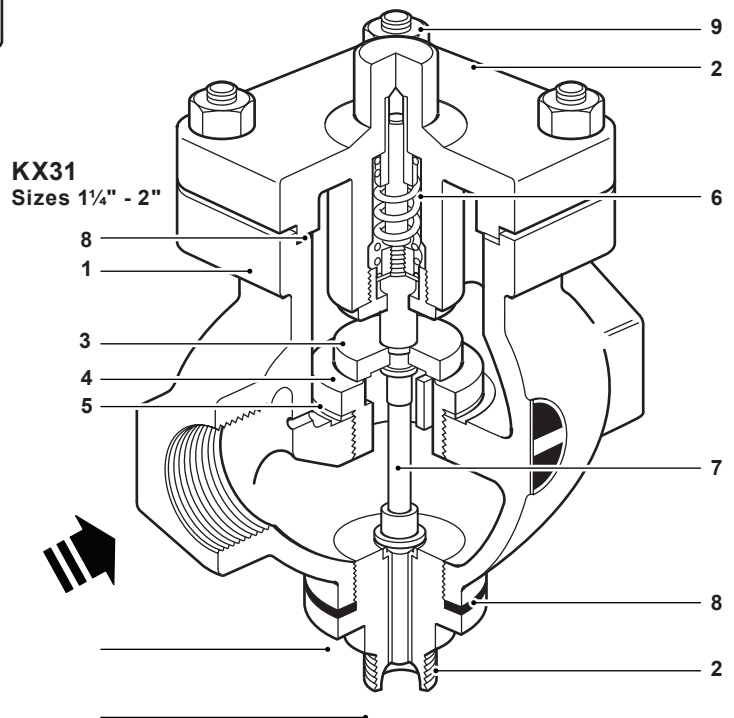
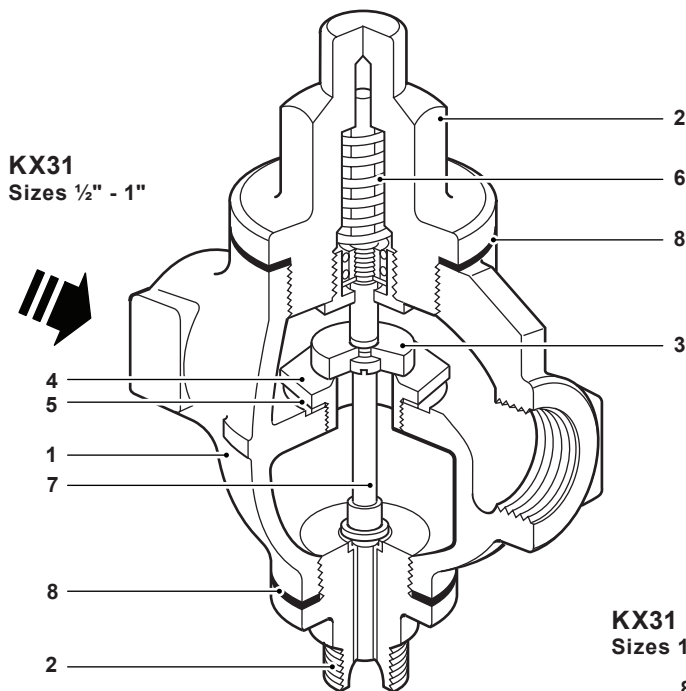
Pressure/temperature limits



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

Body design conditions	PN16						
Maximum design pressure	16 bar g @ 120 °C						
Maximum design temperature	220 °C @ 13 bar g						
Minimum design temperature	-10 °C						
Maximum operating temperature	220 °C						
Minimum operating temperature	0 °C						
Note: For lower operating temperatures consult Spirax Sarco							
	Size	DN15	DN20	DN25	DN32	DN40	DN50
Maximum differential pressure bar	KX31	12.0	7.0	3.5	2.3	1.7	1.1
	KX33	12.0	7.0	3.5	2.3	1.7	1.1
Designed for a maximum cold hydraulic test pressure of		24 bar g					

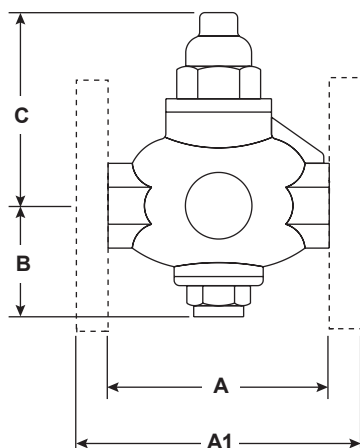
Materials



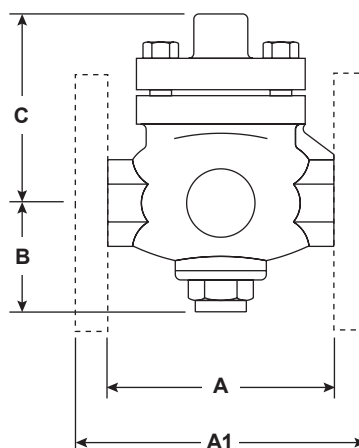
No.	Part	Material	
1	Body	Cast iron	DIN 1691 GG25
2	Bonnet	Cast iron	DIN 1691 GG25
3	Valve head	Stainless steel	BS 970 431 S29
4	Valve seat ring	Stainless steel	BS 970 431 S29
5	Valve seat gasket	DN15 - DN25	Mild steel BS 1449 CS 4
		DN32 - DN50	Reinforced exfoliated graphite
6	Return spring	Stainless steel	BS 2056 302 S 26
7	Stem	Brass	BS 2874 CZ 121
8	Bonnet gaskets	Reinforced exfoliated graphite	
	Bonnet studs	Steel	BS 4439 Gr. 8.8
9	Bonnet nuts	DN32 - DN40	M10 BS 3692 Gr. 8
		DN50	M12 BS 3692 Gr. 8

Dimensions/weights (approximate) in mm and kg

**KX31 and KX33
DN15 - DN25**



**KX31 and KX33
DN32 - DN50**



	NPT / BSP	PN16	BS 10 'F'			Weight	
Size	A	A1	A1	B	C	KX31	KX33
DN15-1/2"	90	130	130	68	106	1.5	3.4
DN20-3/4"	104	150	147	68	106	1.8	4.4
DN25-1"	136	160	157	80	108	3.3	5.8
DN32-1 1/4"	144	180	180	80	112	5.3	8.9
DN40-1 1/2"	150	200	200	90	112	6.4	11.1
DN50-2"	180	230	230	100	112	7.9	13.1

Kv values

DN	15	20	25	32	40	50	For conversion: Cv (UK) = Kv x 0.963 Cv (US) = Kv x 1.156
Kv	2.90	4.64	9.80	16.48	23.70	34.0	

Capacities

For saturated steam sizing capacities see TI-GCM-08.

For water valve sizing capacities see TI-GCM-09.

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions 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 2" KY31 self-acting control valve having screwed BSP connections.

Spare parts

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

Available spares

Valve and seat assembly		A1, D1, E, J, F, L1
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

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 and seat assembly for a Spirax Sarco DN40 KX33 self-acting control valve.

