



TI-P078-08
CH Issue 5

KA61, KA63 and KC63 Stainless Steel Self-acting Control Valves

Description

The KA and KC 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 EL7200 Series electric actuator with a suitable temperature transmitter and controller.

Available types

KA61 Normally open with screwed connections.

KA63 Normally open with flanged connections.

KC63 Normally open with stainless steel pressure balancing bellows with flanged connections.

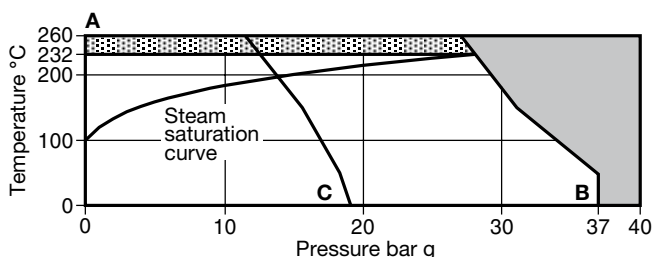
Standards

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



A - B The product **must not** be used in this region.

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

A - B Screwed, flanged EN 1092 PN40 and ASME (ANSI) 300.

A - C Flanged ASME (ANSI) 150.

Body design conditions	PN40
Maximum design pressure	37 bar g @ 50°C
Maximum design temperature	260°C @ 27.7 bar g
Minimum design temperature	-10°C
Maximum operating temperature	Fitted to a Spirax Sarco spacer 260°C
	Fitted directly to actuator 232°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	KA61	17.0	10.0	4.5	-	-	-
	KA63	17.0	10.0	4.5	3.0	2.0	1.5
	KC63	-	-	-	16.0	16.0	13.8

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

Sizes and pipe connections

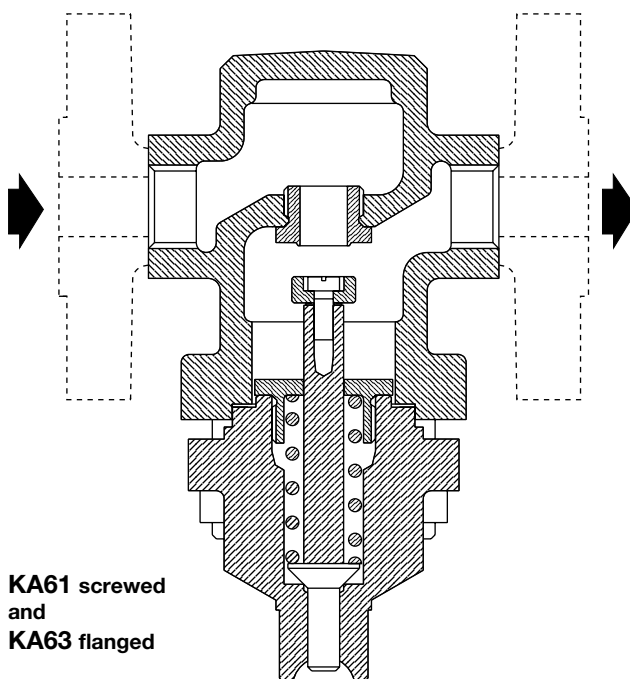
KA61 Screwed ½", ¾" and 1" BSP or NPT.

KA63 Flanged DN15, DN20, DN25, DN32, DN40 and DN50.

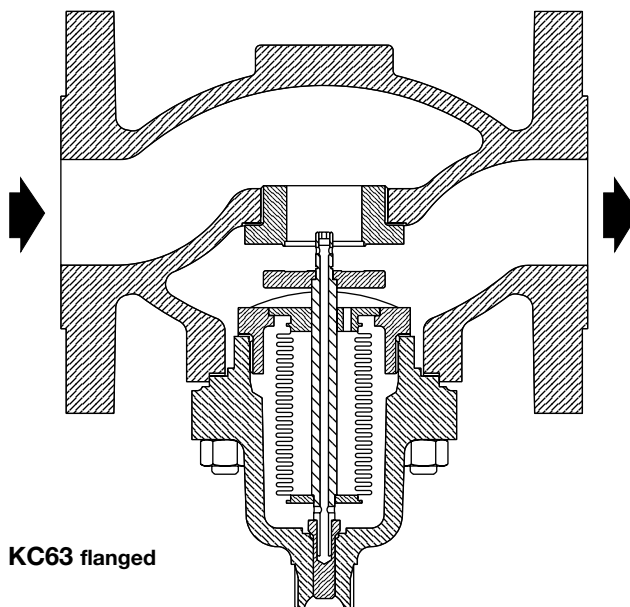
KC63 Flanged DN32, DN40 and DN50.

Flanged EN 1092 PN40 and ASME (ANSI) 300.

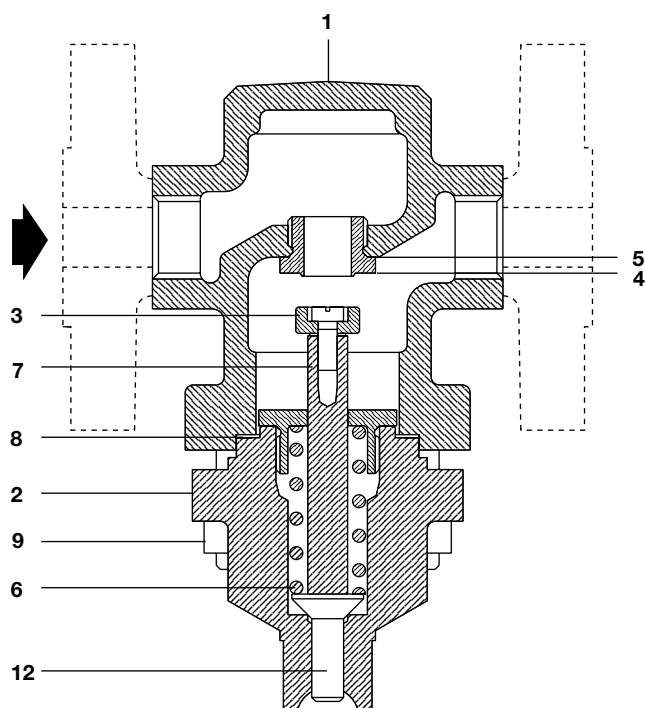
The following flanges are **available on request**: ASME (ANSI) 150.



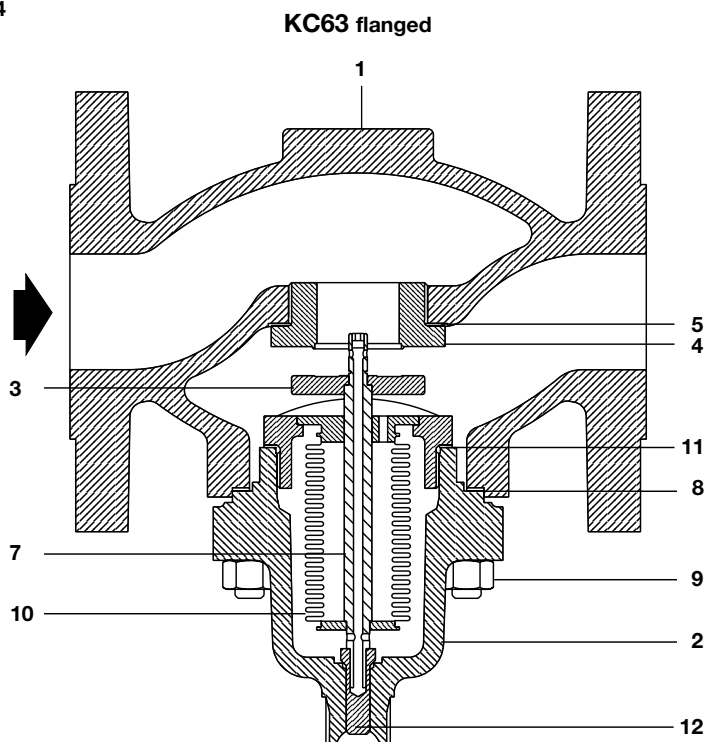
KA61 screwed
and
KA63 flanged



KC63 flanged



**KA61 screwed
and
KA63 flanged**



Materials

No.	Part	Material
1	Body	Stainless steel DIN 17445 G-X5 Ni Mo Nb 19-11-2 (WS14581)
2	Bonnet	Stainless steel DIN 17440 X5 Cr Ni Mo 17-12-2 (WS14401)
3	Head	Stainless steel BS 970 431 S29 ASTM A276 431
4	Seat	DN15 to DN25 Stainless steel BS 970 431 S29 ASTM A276 431
		DN32 to DN40 Stainless steel BS 3146 ANC2
		DN50 Stainless steel BS 970 431 S29 ASTM A276 431
5	Valve seat gasket	Reinforced exfoliated graphite
6	Return spring	Stainless steel BS 2056 302 S26
7	Pushrod	Stainless steel Z15 CN 16 02 (BS 970 431 S29)
8	Bonnet gasket	Reinforced exfoliated graphite
9	Bonnet nuts	Stainless steel DIN ISO 3506 A2-80
	Bonnet studs	Stainless steel DIN ISO 3506 A2-80
		DN15 - DN20 M10 x 30
		DN25 - DN40 M10 x 35
10	Bellows assembly	Stainless steel AISI 316L
11	Bellows gasket	Reinforced exfoliated graphite
12	Plunger	Stainless steel BS 970 431S29 ASTM A276 431

K_v values

Size	DN15	DN20	DN25	DN32	DN40	DN50
KA61 and KA63	2.90	4.64	9.80	16.48	23.70	34.00
KC63	-	-	-	16.48	16.48	34.00

For conversion: C_v (UK) = $K_v \times 0.963$ C_v (US) = $K_v \times 1.156$

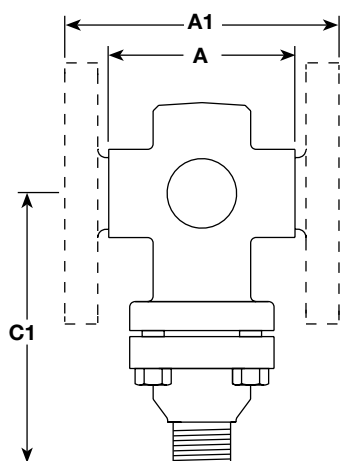
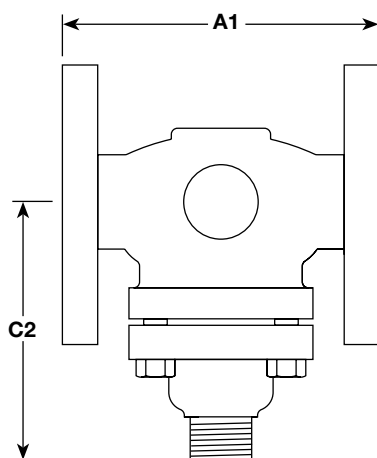
Capacities

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

Size	A	PN40 KA63/KC63	A1 ASME 300 KA63/KC63	C1 KA61/KA63	C2 KC63	Weight		
	KA61				KC63	KA61	KA63	KC63
DN15	90	133	130	120	-	1.6	4.6	-
DN20	104	154	150	120	-	1.9	6.6	-
DN25	138	161	162	129	-	3.5	8.3	-
DN32	-	182	184	132	152	-	9.0	9.1
DN40	-	200	205	132	152	-	11.3	10.1
DN50	-	234	235	133	187	-	14.9	15.0

KA61 and KA63**KC63****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 DN20 KA63 stainless steel control valve having flanged connections to EN 1092 PN40.

Spare parts

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

Available spares

KA61	Valve seat assembly	A, D, E, L
and	Set of all gaskets	E, L
KA63	Set of bonnet studs and nuts (set of 4)	S
	Valve seat assembly (excluding bellows and stem assembly)	A, B, C, D, E, L, U, G
KC63	Bellows and stem assembly	G, L, N, H
	Set of all gaskets	B, C, E, L, U, G
	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 DN20 KC63 stainless steel self-acting control valve.

