



Cert. No. LRQ 0963008

ISO 9001

## CE43 5" (DN125) to 8" (DN200) Carbon Steel Cage Design, Two Port Control Valves

### Description

The CE43 series is a range of carbon steel two port, cage trim, control valves conforming to ANSI B16.34, ASME VIII standards in sizes 5" to 8" (DN125 to DN200) available with ANSI and PN flange connections. When used in conjunction with a pneumatic linear actuator the 'C' series valve will provide characterised modulating or on/off control.

### Compatible actuators and positioners:

<b>Pneumatic actuators</b>	PN1000 series, spring-to-close
	PN2000 series, spring-to-open
<b>Positioners</b>	PP5 (pneumatic)
	EP5 (electropneumatic)
	SP2 (smart electropneumatic)

Refer to the relevant Technical Information Sheet for further details.

### Sizes and pipe connections

5", 6" and 8" (DN125, 150 and 200)  
Flanged to ANSI 150, ANSI 300, ANSI 600 (Raised face or ring type joint), PN16, PN25, PN40, PN63, and PN100 (Raised face with ANSI face-to-face dimension).

### Options

<b>Trim</b>	Equal %, linear, fast opening (on/off) characteristics, soft seat, hard faced, low noise and anti-cavitation (single and multi-cage).
<b>Stem seal</b>	PTFE chevron, graphite packing and bellows.
<b>Plug</b>	Balanced or unbalanced to ANSI Class IV, V or VI shut-off.

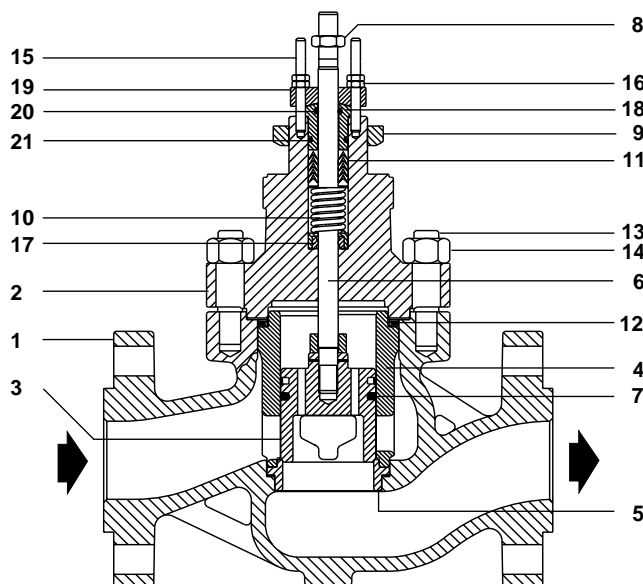
See 'C' series valve options Technical Information Sheet TI-F12-23.

### Technical data

<b>Plug design</b>	Unbalanced plug		
	PTFE sealed balanced plug		
	Graphite sealed balanced plug		
<b>Trim design</b>	Cage trim with equal percentage, linear and fast opening flow characteristic options.		
	Class IV	Metal-to-metal seat	IEC 534-4
<b>Leakage</b>	Class IV & V Hard face stellite		IEC 534-4
	Class VI PTFE soft seat		IEC 534-4
	CE valves Equal percentage		
<b>Flow characteristic</b>	CF valves Fast opening		
	CL valves Linear		
<b>Rangeability</b>	CM valves Modified equal percentage		
	50:1 Equal percentage		
<b>Travel</b>	30:1 Linear		
	5" and 6" (DN125 and DN150)	2½" (65 mm)	
	8" (DN200)	3" (75 mm)	

### Limiting conditions

<b>Body design conditions</b>	ANSI 300 and ANSI 600		
	Standard PTFE chevron stem seals	14°F to +482°F	(-10°C to +250°C)
<b>Design temperature</b>	Graphite packing stem seals	Standard bonnet	14°F to +572°F (-10°C to +300°C)
		Extended bonnet	14°F to +797°F (-10°C to +425°C)
	Graphite sealed balanced plug (Class IV)	797°F	(425°C)
	PTFE sealed balanced plug (Class VI)	356°F	(180°C)
<b>Designed for a maximum cold hydraulic test pressure of:</b>	(ANSI 300)	1110 psi g	(76.6 bar g)
	(ANSI 600)	2220 psi g	(153 bar g)
<b>Maximum differential pressure</b>	See relevant actuator TI		



### Materials

No.	Part	Material
1	Body	Carbon steel ASTM A216 WCB
2	Bonnet	Carbon steel ASTM A216 WCB
3	Valve plug	Stainless steel AISI 431 hardened
4	Valve cage	Stainless steel AISI 316 ENC
5	Valve seat	Stainless steel AISI 431
6	Valve stem	Stainless steel AISI 316
7	Valve plug sealing rings	PTFE and graphite or graphite
8	Lock-nut	Stainless steel AISI 316
9	Mounting nut	Zinc plated carbon steel
10	Gland spring	Stainless steel AISI 302
11	Gland seal	PTFE chevron or graphite
12	Bonnet gasket	Reinforced exfoliated graphite
13	Bonnet studs	Carbon steel ASTM A 193 B7
14	Bonnet nuts	Carbon steel ASTM A 194 2H
15	Stuffing box studs	Carbon steel ASTM A 193 B7
16	Stuffing box nuts	Carbon steel ASTM A 194 2H
17	Stem scraper	Glass filled PTFE
18	Stuffing box bush	Stainless steel AISI 316
19	Stuffing box ring	Stainless steel AISI 316
20	Valve stem wiper	Fluorelastomer
21	'O' ring	Fluorelastomer

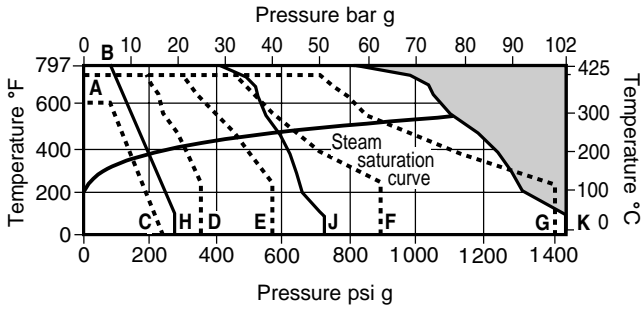
Local regulations may restrict the use of this product to below the conditions quoted.

In the interests of development and improvement of the product, we reserve the right to change the specification.

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## Operating range for body material and flange type only.

Note: See limiting conditions for stem and plug limitations.

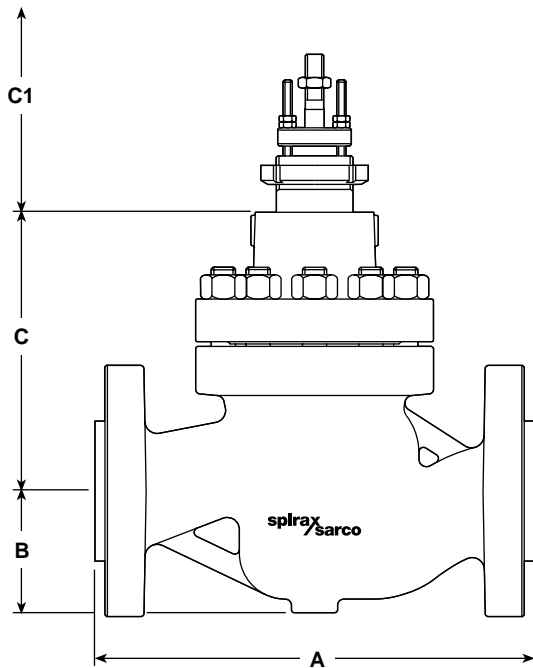


The product must not be used in this region.

A-C PN16, A-D PN25, A-E PN40, A-F PN63, A-G PN100  
B-H ANSI 150, B-J ANSI 300, B-J ANSI 600

## Dimensions (approximate) in inches and (mm)

Valve size	5" DN125	6" DN150	8" DN200
<b>A</b>			
ANSI 300 PN25 - PN40	16 <sup>3</sup> / <sub>8</sub> " (425)	18 <sup>5</sup> / <sub>8</sub> " (473)	22 <sup>3</sup> / <sub>8</sub> " (568)
ANSI 600 PN63 - PN100	18" (457)	20" (508)	24" (610)
<b>B</b>	6 <sup>1</sup> / <sub>2</sub> " (165)	7" (178)	8 <sup>1</sup> / <sub>4</sub> " (210)
<b>C</b>	11 <sup>3</sup> / <sub>8</sub> " (290)	13 <sup>6</sup> / <sub>16</sub> " (339)	14 <sup>5</sup> / <sub>8</sub> " (370)
<b>C1</b>			
Extended bonnet	16 <sup>11</sup> / <sub>16</sub> " (425)	18 <sup>11</sup> / <sub>16</sub> " (474)	19 <sup>14</sup> / <sub>16</sub> " (505)
Bellows sealed bonnet	27" (690)	29" (739)	30 <sup>1</sup> / <sub>4</sub> " (770)



## Weights (approximate) in lbs and (kg)

Valve size	5" DN125	6" DN150	8" DN200
Weights	264 (120)	396 (180)	660 (300)

## Valve flow coefficients at 100% lift

C<sub>v</sub> (US) for single stage trims (K<sub>vS</sub> shown in brackets).

Size	Equal % C <sub>v</sub> (K <sub>vS</sub> )	F <sub>L</sub>
5" (DN125)	293 (250)	0.85
6" (DN150)	386 (330)	0.85
8" (DN200)	560 (480)	0.85

Three reduced C<sub>v</sub> are available for equal percentage and linear trims, for further details see TI-F12-23 'C' series valve options.

For conversion C<sub>v</sub> (UK) = C<sub>v</sub> (US) x 0.833 K<sub>vS</sub> = C<sub>v</sub> (US) x 0.855

## Sizing

Please consult Spirax Sarco.

## Installation

The valve should be installed in a horizontal pipeline with the direction of flow as indicated by the arrow on the valve name-plate. The actuator position will depend on the type fitted to the valve. Full instructions are supplied with the product.

## 'C' series valve selection guide

Valve size	5", 6" and 8" DN125, 150 and 200	<b>5"</b>
Valve series	C = Cage trim	<b>C</b>
Valve characteristic	E = Equal percentage F = Fast opening L = Linear M = Modified equal percentage	<b>E</b>
Body material	4 = Carbon steel	<b>4</b>
Connections	2 = Butt weld 3 = Flanged	<b>3</b>
Stem sealing options	P = PTFE chevron H = Graphite B = Bellows	<b>P</b>
Seating options	T = AISI 431 hardened G = PTFE soft seat W = Hard faced stellite AISI 316	<b>T</b>
Type of trim	C = Standard cage P = Noise reducing perforated cage A = Anti-cavitation cage	<b>C</b>
Number of stages	1 = One 2 = Two 3 = Three Other = To be specified	<b>1</b>
Trim balancing	B = Balanced U = Unbalanced	<b>B</b>
Bonnet type	S = Standard H = Extended for high temperature L = Extended for low temperature	<b>S</b>
Reduced trim	0 = No Reduction 1 = 1 Reduction 2 = 2 Reductions 3 = 3 Reductions	<b>0</b>
C <sub>v</sub>	To be specified	<b>C<sub>v</sub> 293</b>
Connection type	To be specified	<b>ANSI 300</b>

**5" C E 4 3 P T C 1 B S 0 C<sub>v</sub> 293 ANSI 300**

## How to order

Example: 1 off 5" CE43PTC1BS0 C<sub>v</sub> 293 flanged to ANSI 300.

## Spare parts

See TI-F12-22