V-30

Single Seat Control Valve

- **Good tightness for shut-off**
- **For large flow variations**

General

Control and shut-off of liquids, gases and steam.

Technical data

Type	V-30
-Actuator	V-30P pneumatic V-30H hydraulic
Made by	BTG
Characteristic	Logarithmic
Control range	30:1
Pressure class	10 - 40
Temperature	400°C / 750°F max.
Materials	
-Body, bonnet	SS1306 temp < 400°C / 750°F SS2324 temp < 300°C / 570°F
-Plug, seat	SS2324 [1]
-Stem	SS2303 (SS1306) SS2324 (SS2324)
-Stem guide	SS2940 nitr. (SS1306) Monel (SS2324)
-Stuffing box packing	Expanded graphite
-Bonnet packing	Steel-reinforced graphite
Size	20 - 50 (see Tables 1 and 2)
Flanges	SMS, DIN
Stroke	20 mm / 0.79”
Stem	∅ 16 mm / 0.6” (2 cm^2 / 0.31 sq. in)
Pressure drop	Δp max. 15 bar / 225 psi [2]
Weight	See Table 2

1) Stellited on special order.
2) For size 50 and K_V > 25 max. 10 bar / 150 psi

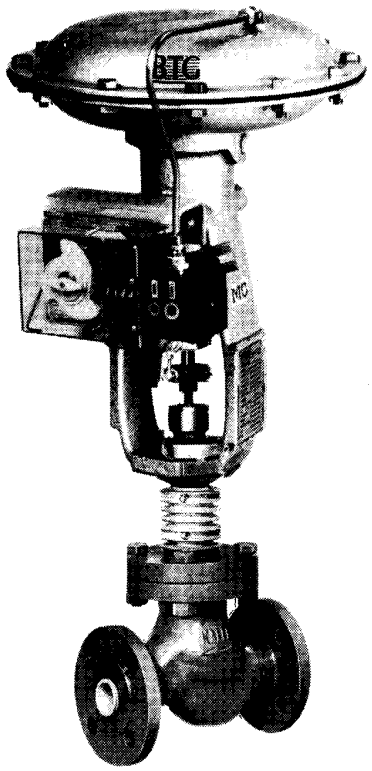

Fig 1 V-30P – MO/MC

Actuators

V-30P Pneumatic	MO/MC diaphragm actuator size 9 or 11 with positioner for 0.2-1.0 bar / 3-15 psi standard signal, “split range” possible. MO increasing signal opens, MC increasing signal closes valve.
V-30P Electric	Through use of I/P converter, e.g. MPI
V-30H Hydraulic	By ”Källe” hydraulic controller with actuating cylinder (direct or wire control).
Accessories	Counter spring or counter weight assy., brake pulley, control wire.

Capacity.

Table 1 Capacity of V-30 single seat control valve

D	E	A B C	0.1 19. 0.25	0.2 19. 0.5	0.3 25. 0.7	0.5 25. 1.3	0.8 31. 2.1	1.1 38. 2.9	1.8 47. 4.7	3.1 62 8.1	4.90 79. 12.9	7. 95. 18.4	12.6 126. 33.	19.6 157. 51.5
20	20		▬	▬	▬	▬	▬	▬	▬	▬				
	25		▬	▬	▬	▬	▬	▬	▬	▬	▬			
	32		▬	▬	▬	▬	▬	▬	▬	▬	▬	▬		
	40		▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	
	50		▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬

▬ Standard
A : Bore area (cm^2)
B : Seat circumference (mm)
C : Capacity K_v *
D : Stroke (mm)
E : Size

K_v * m^3/h water at Δp = 1 bar / 15 psi and fully open valve

Table 2 Standards Cross-Reference

Materials	Approx equivalent to	
	ASTM	DIN
SS1306	A216WCA	GS 38.1
SS2303	420	1.4021
SS2324	329	1.4460
SS2940	125 MCD	1.8507

Dimensions – Weights

Table 3 Dimensions in mm and weight in kg – see also figs 3-6

Size		H2		H3						D		A				B	
	H1	a	b	a	b	H4	H5	H6	L	a	b	MO9	MO11	MC9	MC11	C	E
20	200	604	614	400	416	560	430	485	190	280	330	34.5	39.5	31.0	37.0	18.0	14.0
25	200	604	614	400	416	560	430	485	200	280	330	36.5	41.5	33.0	37.0	20.0	16.0
32	215	604	614	400	416	580	450	510	230	280	330	38.5	43.5	35.0	39.0	22.0	18.0
40	215	604	614	400	416	580	450	510	230	280	330	40.0	45.0	36.5	40.5	23.5	19.5
50	230	604	614	400	416	600	470	570	250	280	330	46.5	51.5	43.0	47.0	30.0	26.0

a : Actuator, size 9
b : Actuator, size 11
A : ~ Weight
B : Lever
C : for counter spring
E : for counter weight
D : Actuator size
Counter weight : Depending on process data and valve size.

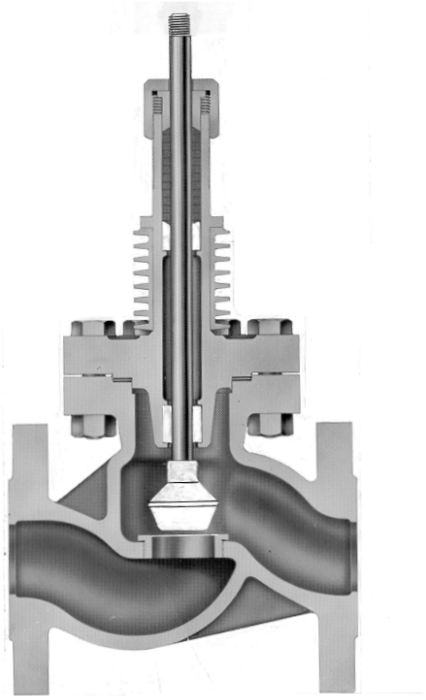

Fig 2 V-30 – sectional drawing

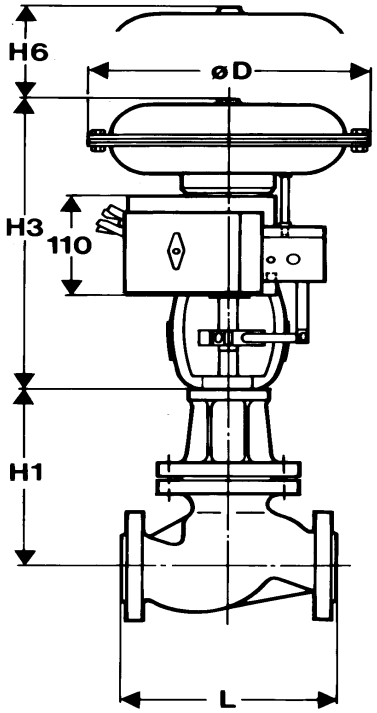

Fig 4 V-30P – with MC and positioner

Dimensional drawings

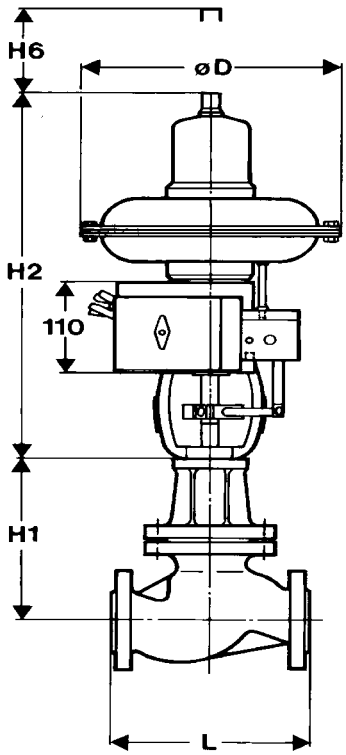

Fig 3 V-30P – with MO and positioner

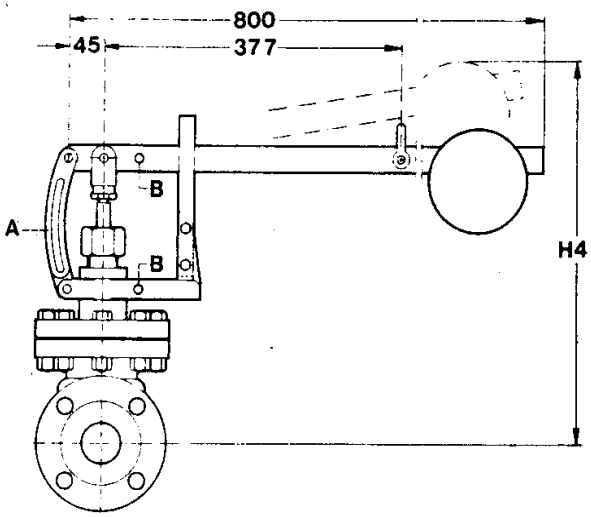

Fig 5 V-30H – with lever and counter weight

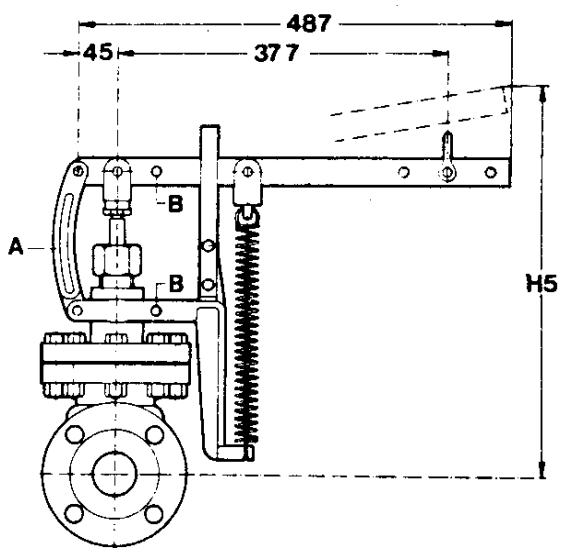

Fig 6 V-30H – with lever and counter spring

CCI Valve Technology AB
Box 603, SE-661 29 Säffle, Sweden
Phone +46 533 689 600, Fax +46 533 689 601
e-mail: info@ccivalve.se, www.ccivalve.com

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