Warning: Only qualified personell should adjust or service valves. Unauthorised manipulation may result in injury, loss of life or damage to equipment. Prior to servicing internal parts, ensure that the electrical power is switched off, cylinder line is closed and residual pressure in the valve is reduced to zero.

Adjustments DOWN

Valves are already adjusted and tested. Check electrical operation before changing valve settings. Test that the correct solenoid is energised, by removing nut and raising solenoid slightly to feel pull.
Nominal Settings: Adjustments 7 & 9 approx. level with flange face. Two turns in either direction may then be necessary. Adjustments 6 & 8 turn all the way 'in' (clockwise), then 1.5 turns 'out' (c-clockwise). One final turn in either direction may be necessary.

---

6. **Down Acceleration:** When solenoids C and D are energised, the car will accelerate downwards according to the setting of adjustment 6. 'In' (clockwise) provides a softer down acceleration, 'out' (c-clockwise) a quicker acceleration.
7. **Down Speed:** With solenoids C and D energised as in 6 above, the full down speed of the car is according to the setting of adjustment 7. 'In' (clockwise) provides a slower down speed, 'out' (c-clockwise) a faster down speed.
8. **Down Deceleration:** When solenoid C is de-energised whilst solenoid D remains energised, the car will decelerate according to the setting of adjustment 8. 'In' (clockwise) provides a softer deceleration, 'out' (c-clockwise) a quicker deceleration. Attention: Do not close all the way in! Closing adjustment 8 completely (clockwise) may cause the car to fall on the buffers.
9. **Down Levelling:** With solenoid C de-energised and solenoid D energised as in 8 above, the car will proceed at its down levelling speed according to the setting of adjustment 9. 'In' (clockwise) provides a slower, 'out' (c-clockwise) a faster down levelling speed.

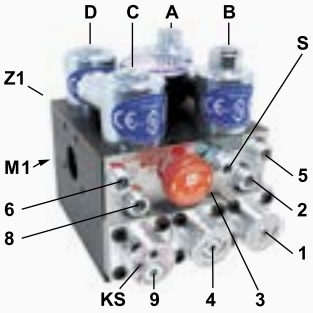
Down Stop: When solenoid D is de-energised with solenoid C remaining de-energised, the car will stop according to the setting of adjustment 8 and no further adjustment will be required.

KS Slack Rope Valve: Solenoids C and D must be de-energised! The KS is adjusted with a 3 mm Allan Key by turning the screw K 'in' for higher pressure and 'out' for lower pressure. With K turned all the way 'in', then half a turn back out, the unloaded car should descend when Manual Lowering H is opened. Should the car not descend, K must be backed off until the car just begins to descend, then backed off a further half turn to ensure that with cold oil, the car can be lowered as required.

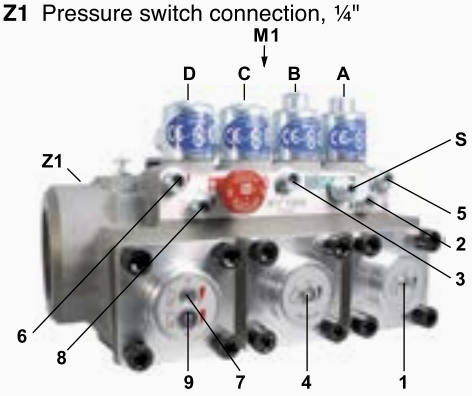
BLAIN EV100 Elevator Control Valves

Positions of Adjustments

Important: Length of ¾" thread on pump connections should not be longer than 14 mm!

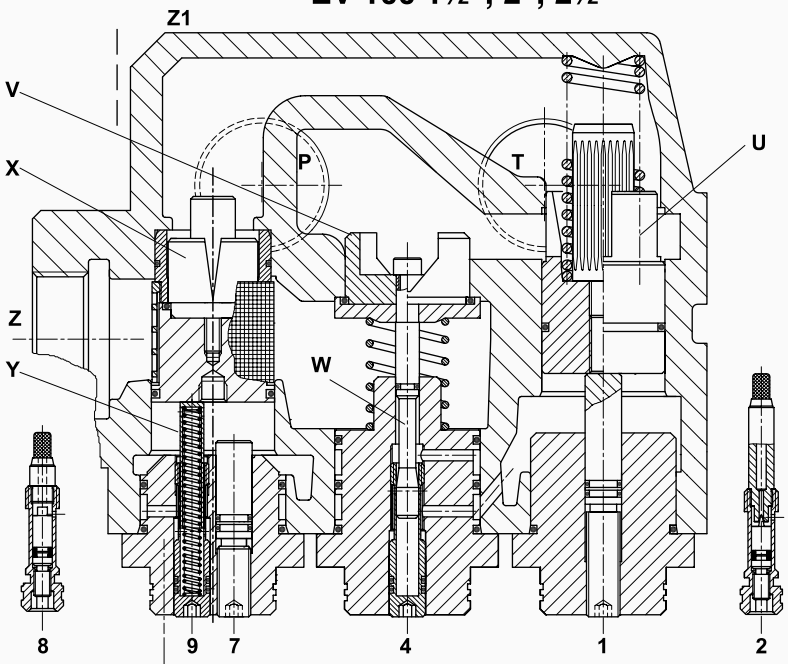


M1 Second pressure gauge connection, ½"
Z1 Pressure switch connection, ¼"

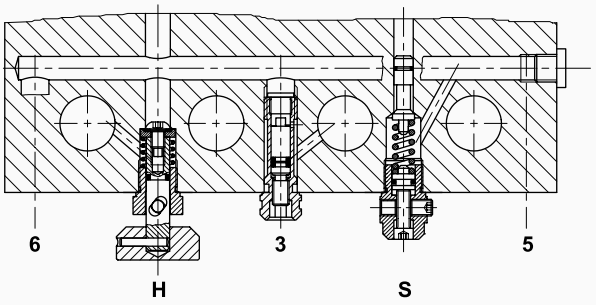


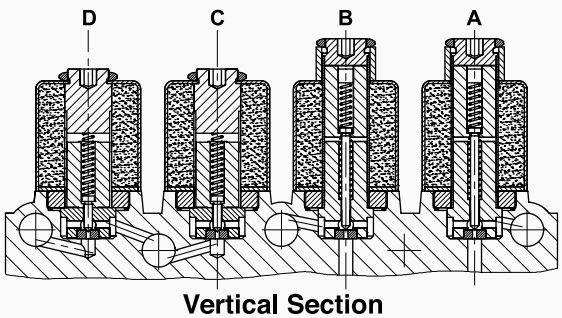
KSOption

EV 100 1½", 2", 2½"



Horizontal Sections





Vertical Section

Adjustments UP
1 By Pass
2 Up Acceleration
3 Up Deceleration
4 Up Levelling Speed
5 Up Stop

Adjustments DOWN
6 Down Acceleration
7 Down Full Speed
8 Down Deceleration
9 Down Levelling Speed

Control Elements
A Solenoid (Up Stop)
B Solenoid (Up Deceleration)
C Solenoid (Down Deceleration)
D Solenoid (Down Stop)
H Manual Lowering
S Relief Valve
U By Pass Valve
V Check Valve
W Levelling Valve (Up)
X Full Speed Valve (Down)
Y Levelling Valve (Down)

Valve Types	Elements Omitted
EV 0	**A**, **B**, **W**, **3**, **4** & **5**
EV 1	**B**, **W**, **3** & **4**
EV 10	**A** & **5**
EV 100	as shown

EV

Elevator Valves

Control Elements

A Solenoid (Up Stop)
B Solenoid (Up Deceleration)
C Solenoid (Down Deceleration)
D Solenoid (Down Stop)
H Manual Lowering
S Relief Valve
U By Pass Valve
V Check Valve
W Levelling Valve (Up)
X Full Speed Valve (Down)
Y Levelling Valve (Down)
F Filter

Adjustments UP

1 By Pass
2 Up Acceleration
3 Up Deceleration
4 Up Levelling Speed
5 Up Stop

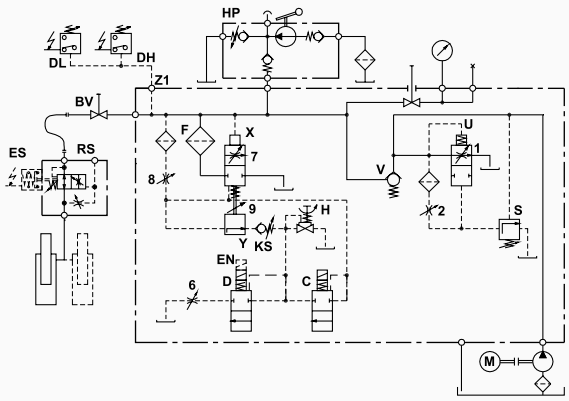
Adjustments DOWN

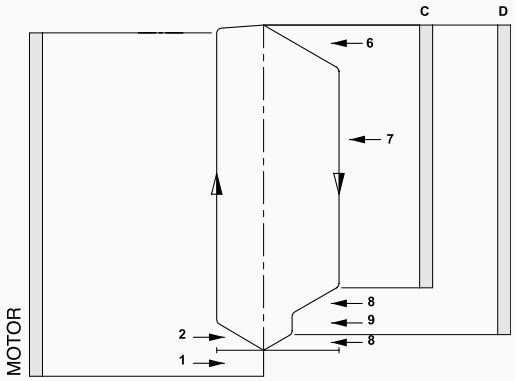
6 Down Acceleration
7 Down Full Speed
8 Down Deceleration
9 Down Levelling Speed

Hydraulic Circuit

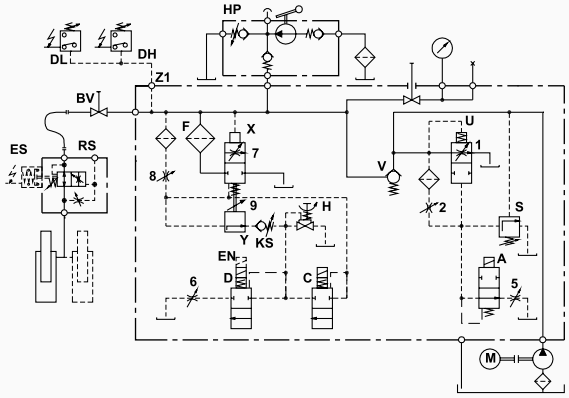
Electrical Sequence

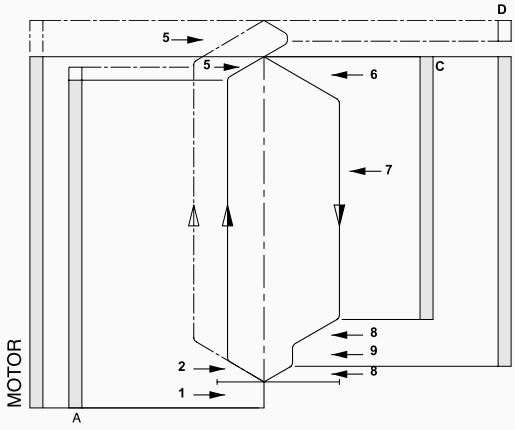
EV 0





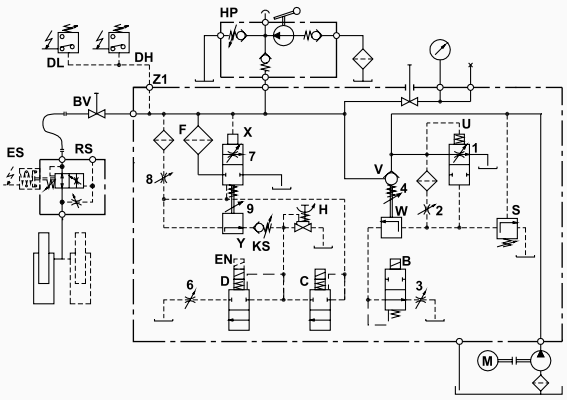
EV 1

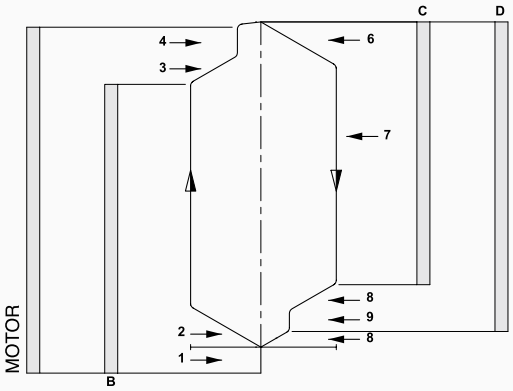




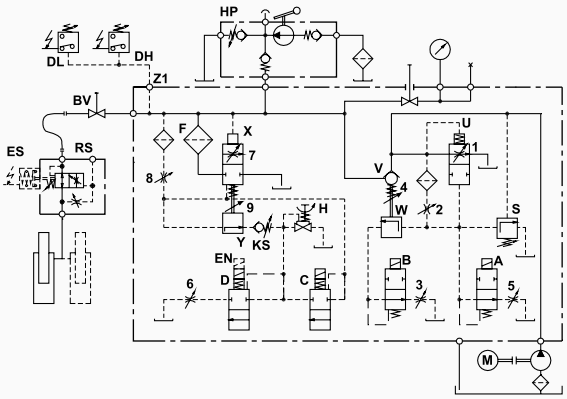
BLAIN EV100 Elevator Control Valves

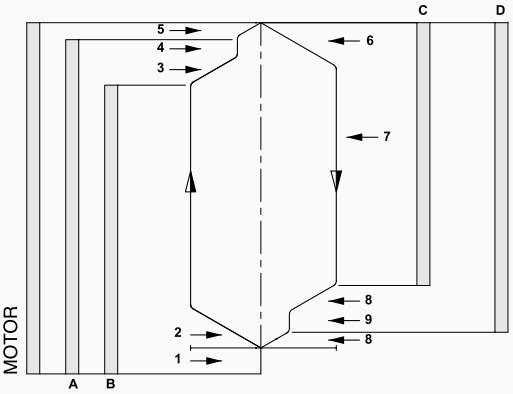
EV 10



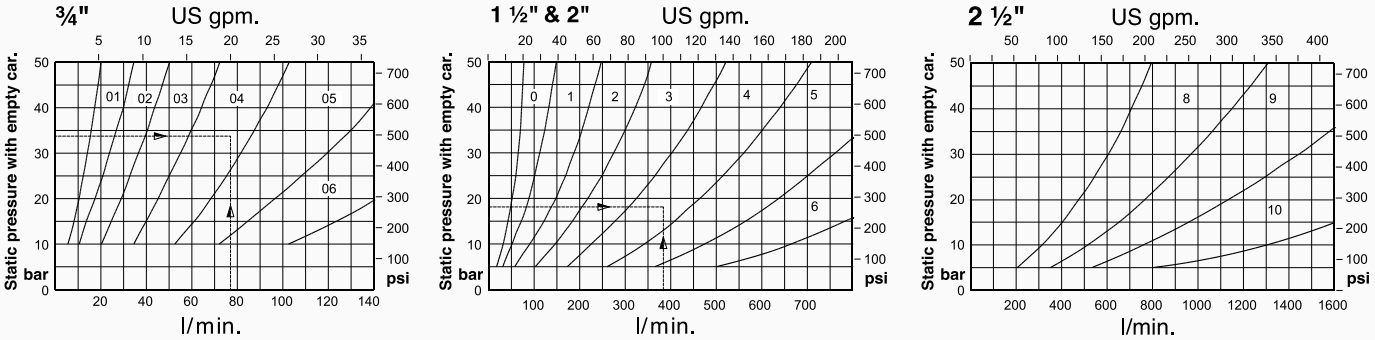


EV 100





Flow Guide Selection Charts for Down Direction



To order EV 100, state pump fl ow, empty car pressure (or fl ow guide size) and solenoid voltage.
Example order: EV 100, 380lpm, 18 bar (empty), 110 AC⊠ EV 100/4/110AC

Pos.	No.	Item
1	FS	Lock Screw - Flange
	FO	O-Ring - Flange
	1F	Flange - By Pass
	EO	0-Ring - Adjustment
	1E	Adjustment - By Pass
	UO	0-Ring - By Pass Valve
	U	By Pass Valve
	UD	Noise Suppressor
	UF	Spring - By Pass
2	2	Adjustment - Up Acceleration
3	3	Adjustment - Up Deceleration
4	EO	0-Ring - Adjustment
	4E	Adjustment - Up Levelling
	4F	Flange - Check Valve
	FO	0-Ring - Flange
	VF	Spring - Check Valve
	W	Up-Levelling Valve
	WO	0-Ring - Up Levelling Valve
	VO	Seal - Check Valve
	V	Check Valve
	W6	Screw - Check Valve
5	3	Adjustment - Up Stop
6	3	Adjustment - Down Acceleration
7	7F	Flange - Down Valve
	FO	0-Ring - Flange
	7O	0-Ring - Adjustment
	7E	Adjustment - Down Valve
	UO	0-Ring - Down Valve
	XO	Seal - Down Valve
	X	Down Valve
	XD	Noise Suppressor
	F	Main Filter
8	8	Adjustment - Down Deceleration
9	9E	Adjustment - Down Levelling
	EO	0-Ring - Adjustment
	9F	Spring - Down Valve
	Y	Down Levelling Valve
H	H	Manual Lowering - Self Closing
	HO	Seal - Manual Lowering
S	SE	Adjustment - Screw
	SM	Hexagonal
	MS	Grub Screw
	SO	0-Ring - Nipple
	SZ	Nipple
	SF	Spring
	SK	Piston
A+B	MM	Nut - Solenoid
	AD	Collar - Solenoid
	M	Coil - Solenoid (indicate voltage)
	AR	Tube - Solenoid 'Up'
	MO	0-Ring - Solenoid
	AN	Needle - 'Up'
	AF	Spring - Solenoid 'Up'
	AH	Seat Housing - 'Up'
	AS	Seat - Solenoid Up'
C+D	MM	Nut - Solenoid
	M	Coil - Solenoid (indicate voltage)
	DR	Tube - Solenoid 'Down'
	MO	0-Ring - Solenoid
	DF	Spring - Solenoid 'Down'
	DN	Needle - 'Down'
	DK	Core - Solenoid
	DG	Seat Housing with Screen-'Down'
	FD	Filter Solenoid
	DS	Seat - Solenoid 'Down'

Some parts occur more than once in different positions of the valve.

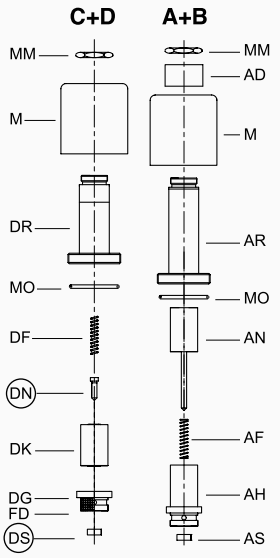
O-Ring-Size

No.	¾"	1 ½"	2 ½"
FO	26x2P	47x2.5P	58x3P *
EO	9x2P	9x2P	9x2P
UO	26x2V	39.34x2.62V	58x3V
WO	5.28x1.78V	5.28x1.78V	5.28x1.78V
VO	23x2,5V	42x3V	60x3V **
7O	5.28x1.78P	9x2P	9x2P
XO	13x2V	30x3V	47x3V
HO	5.28x1.78V	5.28x1.78V	5.28x1.78V
SO	5.28x1.78P	5.28x1.78P	5.28x1.78P
MO	26x2P	26x2P	26x2P

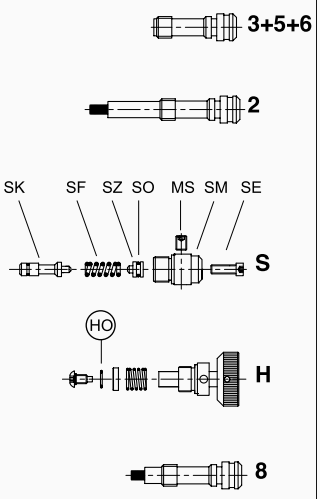
* FO by 4F 2½" is 67x2.5P
** 90 Shore

O-ring: V=FKM-Viton
P=NBR-Perbunan

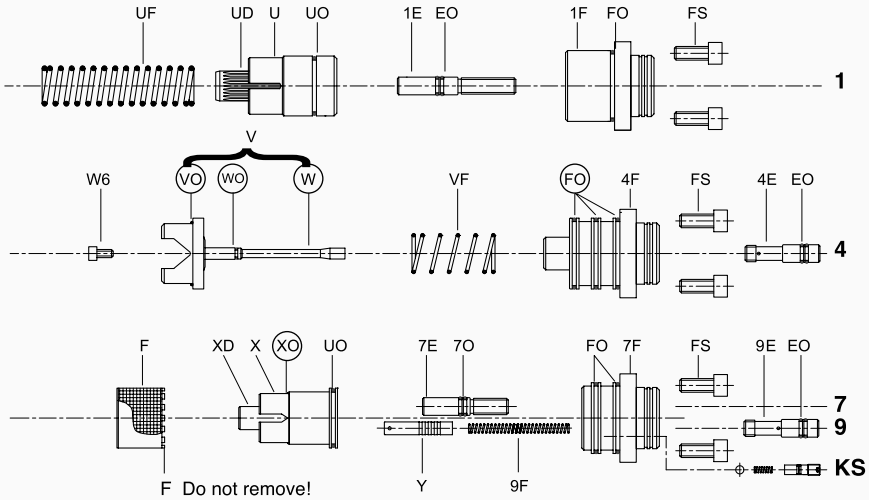
Solenoid Valves



Adjustments

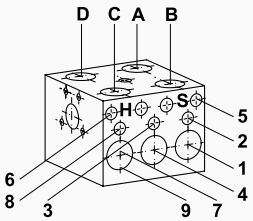


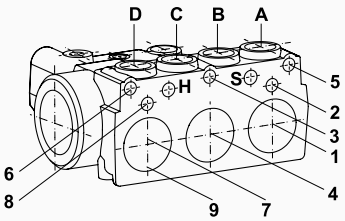
Flow Valves

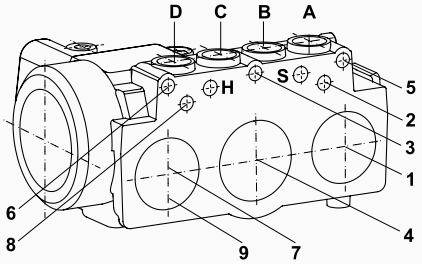


In case of down leakage, replace and test in the following order: (DS) & (DN), (XO), (VO), (WO), (FO) + (HO).

Taper threads: Do not exceed 8 turns of piping into the valve connections.







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