EV 100
Quick adjustment procedure (empty car)

SOLENOID COILS

During adjustment of the EV 100 valve, instead of making a full floor to floor travel to check operation much time can be saved by removing the securing nuts of the coil and switching to deceleration or to acceleration by lifting or replacing the appropriate coil by hand, allowing several adjustment corrections during one car travel between floors.

Once removed from the solenoid tube the energised coil may begin to overheat after about 10 secs.

if the coil becomes too hot to hold, it should be replaced, back over the solenoid tube and any further adjustment carried out with the elevator making normal floor to floor runs.

UP TRAVEL

PRE-SETTINGS		EV 100 ¾“	EV 100 1½“ - EV 100 2½“	
Adjustment No. **1**	level with flange face			5 mm Socket key
Adjustment No. **2**	all the way ‘in’	then 1,5 turns ‘out’	then 2 turns ‘out’	3 mm Socket key
Adjustment No. **4**	level with flange face			5 mm Socket key
Adjustment No. **3**	all the way ‘in’	then 1,5 turns ‘out’	then 2,5 turns ‘out’	3 mm Socket key
Adjustment No. **5**	all the way ‘in’	then 1,5 turns ‘out’	then 2,5 turns ‘out’	3 mm Socket key
Adjustment No. **S**	all the way ‘in’	then 1,5 turns ‘out’	then 1,5 turns ‘out’	3 mm Socket key

Adjustment No. 1 Pilot pressure setting

Disconnect coil **A**. Energise Motor (pump).
If the car moves upwards turn No. **1** ‘out’ until the car stops. If the car does not move, turn No. **1** ‘in’ until the car begins to move, then turn No. **1** ‘out’ until the car stops.
DO NOT UP-LEVEL WITH THIS ADJUSTMENT !

Adjustemt No. 2 Up acceleration

Reconnect coil **A**. Energise Motor and **A** and **B** coils (normal ‘up’ call).
Observe the up acceleration. If it is too quick, turn No. **2** ‘in’ ½ turn. If it is too long, turn No. **2** ‘out’ ½ turn. Repeat until acceleration is satisfactory.

Adjustment No. 4 Up levelling

Disconnect coil **B**. Energise Motor and coil **A** (normal ‘up-level’ call).
With adjustment No. **4** level with the face of the flange the car will up level. If the leveling speed is too fast, turn No. **4** ‘in’ until the speed is as required. If the speed is too slow turn No. **4** ‘out’.

Adjustment No. 3 Up deceleration

With coil **B** still disconnected. Energise Motor and coil **A** (normal ‘up-level’ call).
The car will travel upwards at levelling speed. Turn No. **3** ‘in’ until the car starts to up level faster, then turn No. **3** ‘out’ until the original levelling speed is observed. Reconnect coil **B** and place a normal up call.
Observe the deceleration of the car. If it is too long, turn No. **3** ‘out’ ¼ turn; if it is too short, turn No. **3** ‘in’ ¼ turn. Repeat until deceleration is satisfactory.

Adjustment No. 5 Up soft stop

Disconnect coil **A**. Energise Motor.
The car should not move. Turn No. **5** ‘in’ until the car starts upwards then turn No. **5** ‘out’ until the car stops.Reconnect coil **A**. Energise Pump-Motor and **A**. The car will travel upwards at levelling speed.
Lift **A** coil by hand briefly and observe the stopping of the car. If the stop is too hard turn No. **5** ‘in’ ¼ turn. If the stop is too soft, turn No. **5** ‘out’, ¼ turn. Repeat until the stop is satisfactory.

S Pressure relief valve

Turn **S** screw ‘out’ until about 2 mm of the screw head is showing. Close the ball valve in the cylinder line and open the manual lowering **H** to lower valve pressure down to zero. Place an up call, energising motor and coils **A** and **B**. The relief pressure will show on the pressure gauge. To increase the relief valve setting, turn **S** ‘in’.
To decrease the relief valve setting, turn **S** ‘out’, then open the manual lowering for ½ second with the pump still running to release locked in pressure, before observing the pressure gauge reading.

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DOWN TRAVEL

PRE-SETTINGS				
Adjustment No. **8**	all the way 'in'	then 1 turns 'out'	then 1,5 turns 'out'	3 mm Socket key
Adjustment No. **6**	all the way 'in'	then 1,5 turns 'out'	then 1,5 turns 'out'	3 mm Socket key
Adjustment No. **7**	3 mm under the flange face			5 mm Socket key
Adjustment No. **9**	level with flange face			5 mm Socket key

Adjustment No. 8 Down deceleration

Place down call (coils **C** and **D** energised).
As the car approaches full speed, remove coil **C** by hand briefly from the solenoid and observe the deceleration of the car. If the deceleration is too long, turn No. **8** 'out' ¼ turn; if it is too short, turn No. **8** 'in' ¼ turn.
Repeat until deceleration is satisfactory.

Adjustment No. 6 Down acceleration

Turn No. **6** all the way 'in'. Place down call (coils **C** and **D** energised).
The car will not move. Turn No. **6** 'out' slowly until the car accelerates downwards.
If the acceleration is too long, turn No. **6** 'out' ¼ turn. If it is too short, turn No. **6** 'in' ¼ turn.

Adjustment No. 7 Down full speed

Place down call (coils **C** and **D** energised).
Observe full down speed. Turn No. **7** 'in' for slower, 'out' for faster speed.

Adjustment No. 9 Down levelling speed

Disconnect coil **C**. Place down call (**D** energised).
Observe down levelling speed. Turn No. **9** 'in' for slower, 'out' for a fast down levelling speed.

Note: The manually operated down speed and the **D** coil operated down levelling speed are the same.

Much time can be saved by removing the appropriate coil from time to time during the adjustment procedure rather than allowing the car to move between two floors while adjusting individual controls. By doing this one can make several adjustments & corrections.

Warning: If the coil is removed from the solenoid valve, it overheats after approximately 10 seconds. The maximally permitted temperature of the coil amounts to 120°C (see (i) down).

(a) Firstly, place the appropriate allen key in the adjustment that needs to be changed.

(b) Put the elevator into operation.

(c) Raise the appropriate coil by hand and observe the reaction of the elevator.

(d) Make the adjustment accordingly.

(e) Place the coil back over the solenoid tube, until the elevator has again reached its speed.

(f) Raise the coil again in order to test how the elevator functions with the new adjustment.

(g) Repeat this process as long as it is necessary. Normally, this process can be repeated 2 to 5 times during one car travel between floors. When the coil is energized, it should be held in the hand. Energized coils shouldn't be left to one side, otherwise its overheating may not be felt.

(h) If the coil becomes too hot to hold, it must be replaced back over the solenoid tube and any further adjustment carried out with the elevator making normal floor to floor runs.

(i) Place a steel bolt, approximately 14-17 mm in diameter and 50 mm in length, or a tool through the coil to slow the rate of heating.

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