

Hydraulic Safety Valve Options

Required for all hydraulic lifts installed from November 2011



*12 months
on-site warranty*

All our work comes with the assurance that any callbacks are covered including parts and labour



*BS EN ISO 9001:2008
BS EN ISO 14001:2004
BS OHSAS 18001:2007*

A3 compliant or not *the options are yours!*

Compliance is a significant issue for lift owners and building managers, many of whom may not be fully aware of exactly how BS EN81-2 2009 A3 (unintended car movement) applies to their lifts.

As a result, it is entirely possible to purchase and have installed a safety valve that appears to do the job Amendment 3 requires but does not afford the legislative specification of this specific standard.

To help customers choose the best product to purchase and install, Hydratec can supply and fit an

unintended movement detection and arrest system that meets all of the regulatory requirements of BS EN81-2 2009 A3. We can also supply and fit safety valves that are suitable for installations not regulated by Amendment 3.

Almost all hydraulic equipment manufacturers have an A3 certified safety valve in their range. Hydratec maintain a range of Algi, Blain, Bucher and Hydronic Safety Valves in stock.

How does the safety valve work?

The safety valve is an electronically operated shut-off valve that prevents downward movement of the lift when it is de-energised. To enable the lift to move down, voltage has to be applied to the solenoid coil of the safety valve to open it. This must occur slightly before the main control valve receives its own down drive command to prevent poor starting. Similarly, at the end of the lift's downward travel, the safety valve must remain open until the lift comes to a controlled stop via the main valve and, shortly after this, the safety valve closes.

If the lift stops on the safety valve the floor levelling accuracy will be compromised and the stop will be unnecessarily harsh.

In the up direction the oil flow bypasses the safety valve so it has no effect.

Retrofitting of the safety valve

Apart from confirming that the safety valve has the correct time delays to ensure ride quality isn't compromised, retrofitting a safety valve introduces both pressure losses and increases into the system; pressure losses are created in the down direction after the safety valve whilst loadings on the motor and pump increase in the up direction. One of the dangers of retrofitting relates to overspeed protection. The safety valve creates an additional pressure loss between the cylinder and the valve.

Where the lift is fitted with a rupture valve, this throttling effect can compromise the operation of the rupture valve. Sizing of the safety valve is critical to ensure these losses are minimised and, after installation of the safety valve, the rupture valve (where fitted) should always be tested.

Safety valve installation options:

- **Safety Valve (aka Gate Lock Valve)** – operates as an electronic shut-off valve, energises to allow downward movement and de-energises at floor level, isolating the control valve. Any leakage through the control valve is isolated. Pressure switches need relocating to the Safety Valve. To prevent ride and stopping problems the safety valve must be timed to open before the down drive and closed after the control valve has closed.
- **Unintended movement device** – with a retro fit A3 interface unit combined with a Safety Valve the lift will have A3 Unintended Movement compliance.

What you need for YOUR safety valve to comply:

- A sensor unit that detects unintended movement of the car;
- A control module that processes the signal and interrupts the power supply to the stopping device;
- A stopping device that stops uncontrolled movement of the car;
- The provision of a fully certified Declaration of Conformity;
- Relocation of pressure switches onto the safety valve.

4 choices from leading manufacturers



ALGI Block Safety Valve

Flange or threaded connections ideally suited for retrofitting on ALGI AZSTB, AZRS and AZFR range of valves.

Flow ranges	Total (exc VAT)
Type 1.3 up to 500 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£925
Type 2.3 up to 800 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£1115

Available valve voltages:

12V DC, 24V DC, 42V DC, 48V DC, 80V DC, 110V DC, 185V DC, 230V AC



Blain L10 Pressure Lock Valve

Threaded connections

Flow ranges	Total (exc VAT)
L10 ½" Max Flow Rate 80 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£925
L10 ¾" Max Flow Rate 125 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£1016
L10 1½" Max Flow Rate 400 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£925
L10 2" Max Flow Rate 800 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£925
L10 2½" Max Flow Rate 1400 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£925

Available valve voltages:

12V DC, 24V DC, 42V DC, 48V DC, 80V DC, 110V DC, 185V DC, 230V AC



Bucher DSV

Metric fittings that need adaptors to convert to BSP threads.

Thread sizes

28L (DSV 175) 42L (DSV350) and 50S (DSV700)

Flow ranges	Total (exc VAT)
DSV175 15-250 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£925
DSV350 150-500 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£1115
DSV700 250-1000 l/min <i>Supply and fit as an Electronic Safety Valve (including support bracket)</i>	£1895

Available valve voltages:

115VAC, 230V AC



Hydronic HSV

For fitting directly to Hydronic valve with flange mounting or other valves with adaptors.

Flow ranges	Total (exc VAT)
HSV-150 15-150 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£862
HSV-350 150-440 l/min <i>Supply and fit as an Electronic Safety Valve</i>	£967

Available valve voltages:

48VDC, 115VAC, 230V AC



A3 Interface unit

The interface unit is comprised of a timing circuit to ensure the safety valve does not compromise the ride quality, a Variotech ENAS monitoring module, proximity switches with car mounting kit for signalisation, magnetic tape everything you need for installation. To get the control signals back from the car requires 3 spare ways in the trailing flexes.

The A3 interface is designed to retrofit to any controller with an existing safety (gate lock) valve to provide monitoring of unintended movement.

On existing lifts with no safety valve the client is able to have full A3 unintended movement protection with the interface unit combined with a safety valve. For package prices please contact us.



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we service your clients as you

Pricing	Total (exc VAT)
2 Floor <i>Supply only</i>	£725
Additional floors	£50
2 Floor <i>Supply and fit</i>	£1325
Additional floors	£100

Pricing assumes minimum of 3 spare ways in flexes back to controller. Cost does not include A3 valve as this depends on the valve manufacturer selected. For pricing of the package please contact us.