

Selecting an Excess Flow Valve

An excess flow valve (EFV) is an automatic shutoff valve through which pressurised gas or liquid flows, and it is essential for many pipeline applications. They are designed so that at normal flow rates the fluid will pass through unrestricted, however in the event of an dramatic increase of flow it will trigger the EFV to quickly close off the flow.

EFVs are designed for specific factory preset flow rate ranges and actuation points . We can also offer field adjustable models if necessary. Should a valve be actuated and shuts off flow, after the core issue has been identified and resolved the EFV will need to be reset. Some designs can be preset to sense the reduction in pressure, therefore resetting automatically, whilst others can be fitted with a manual reset option.



Installations that require an EFV can include CNG stations, hydrogen production and refuelling stations, gas analysers and high-pressure hydraulic systems. This is not an exclusive list and as a general rule of thumb, any system designer putting together an application that handles toxic, flammable or hazardous media should consider incorporating EFVs at the appropriate points.

Application Details

The nature of the media determines the construction material needed for the EFV. If the media is corrosive, abrasive or even at low/high temperatures this could affect the material required. Will the valve be in a remote or inaccessible location? Will it be exposed to extreme temperatures?

Pipework details can also be very important. How much space is needed for the installation? Will fittings be welded or will other connection arrangements be needed?

Specifications

Key pieces of information required for sizing an EFV are:

- The exact gas or liquid being transported (including density, specific gravity etc.)
- Line pressure
- Normal and maximum flow rates (in order to calculate the set point)

In addition it is also good to know the line size and temperature.

Custom Solutions

From design to manufacture we can help you meet your requirements. Below is just a small list of the custom options you can add to your EFV:

- Molex Plugs
- AMP Plugs
- Mounting Holes/Clips/Brackets
- Threaded Retainers
- Inline Filters
- Seals
- Jacketed Cable
- Strain Relief
- SS ID Tags
- Special Fittings
- Flanges
- Specialty Pistons/Materials
- Gauges
- Alarms
- Relays
- Digital Displays
- Quick Connects
- Oxygen Service
- Helium Leak Testing
- High Flow
- High Temperature
- Explosion Proof
- Water Proof
- Brady Labels