

# RELIEF VALVES

## V Series



Type V/50



Type V/60



Type V/20-2

# V Series Relief Valves

## V/50 and V/60 Series Spring-Loaded Relief Valves

The spring-loaded relief valves are designed to keep line pressure below preset values. They are mounted downstream of regulators and perform the specific function of releasing small amounts of gas in the event of the regulator not closing perfectly.

Thanks to their effective release capacity and compact size, the V/ series relief valves are ideal for use in civil and industrial equipment.

The valves are extremely easy to install and are designed for ready and easy maintenance.

The V/50 and V/60 series relief valves are especially designed for use with low pressures.

Special care and attention has been given to their construction features in order to ensure a very low hysteresis value as well as maximum operation accuracy and sensitivity.

The main features are as follows:

- **Easy installation and maintenance**
- **Release capacity**
- **Accuracy and sensitivity**

## Operation

Whenever gas pressure under diaphragm (D) is higher than the force exerted by spring (M), diaphragm is raised causing sleeve (O), which is integral with the diaphragm itself, to move and thereby open the release orifice.

In order to check the efficiency of the relief valve, pull up valve opening stem (S).

Valve setting is carried out by adjusting the compression of spring (M) through the appropriate ring (G).

Valve set point should generally be at an intermediate value between active regulator or monitor and slam-shut valve (if fitted) set points.

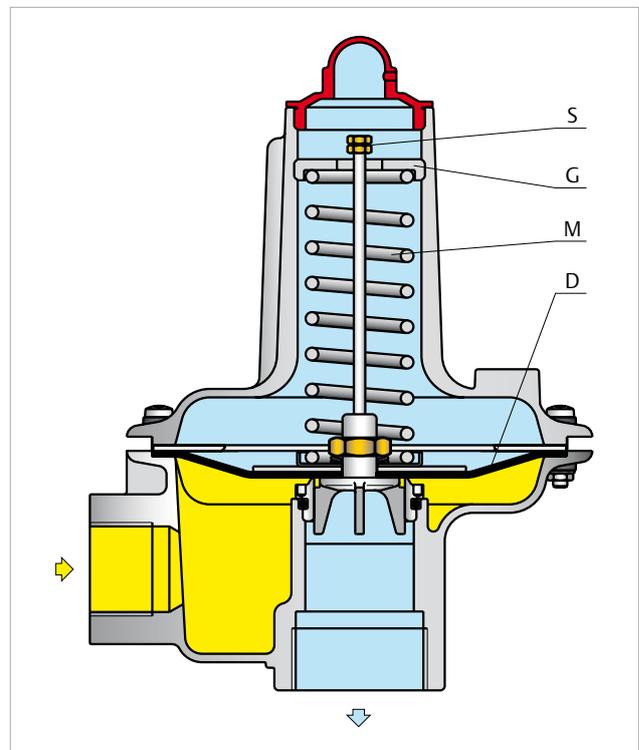
In all other cases, it is recommended that relief valve be set at a value at least 15% higher than the working pressure of the equipment.

## Installation and Assembly

The relief valve is normally installed downstream of the regulator. Gas is released into the atmosphere at an appropriate height, according to effective standards.

Gas release pipe diameter must not be less than valve outlet pipe diameter.

Relief valve efficiency and performance are in no way affected by direction of installation.



# V Series Relief Valves

## Features

**Applications** The relief valves V/50 and V/60 series can be used with natural gas, manufactured gas, air, propane and other gases, as long as they do not contain a high percentage of benzol.

**Type**  
 V/50 and V/60: for very low pressure applications  
 V/51 and V/61: for low pressure applications  
 V/52 and V/62: for middle pressure applications

**Technical Features**  
 V/50 Allowable pressure PS : 4 bar  
 V/60 Allowable pressure PS : 2,5 bar

Type	Set Range $W_h$ bar
V/50	0.025 ÷ 0.08
V/51	0.075 ÷ 0.75
V/52	0.70 ÷ 2.00
V/60	0.025 ÷ 0.09
V/61	0.08 ÷ 0.75
V/62	0.70 ÷ 2.00

### Seat diameter

V/50 32 mm

V/60 40 mm

### Threaded connections

V/50 inlet - outlet 1" x 1 1/2" BSP

V/60 inlet - outlet 1 1/2" x 2" BSP

### Temperature

Standard version

Working -10 °C +60 °C

Low temperature version

Working -20 °C +60 °C

## Materials

Body/Cover Aluminium  
 Valve seat Brass  
 Diaphragm Fabric NBR nitrile rubber  
 Gaskets NBR nitrile rubber

## Dimensions (mm)

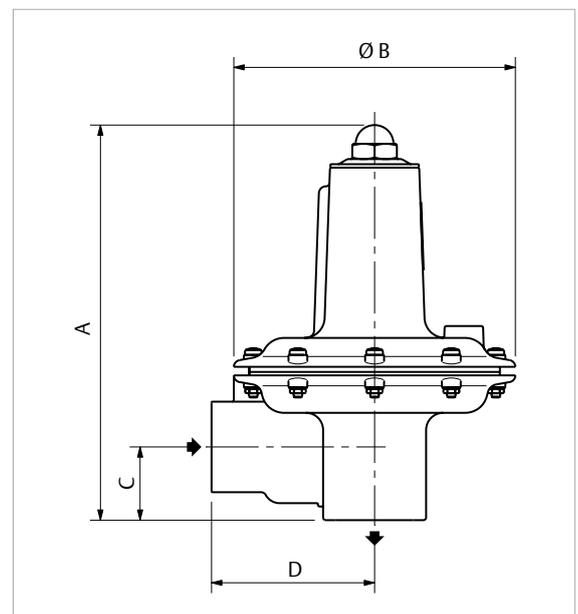
Type	V/50	V/60
A	236	258
B	164	198
C	43	70
D	95	110
Weight (Kg)	1.3	1.9



V/50



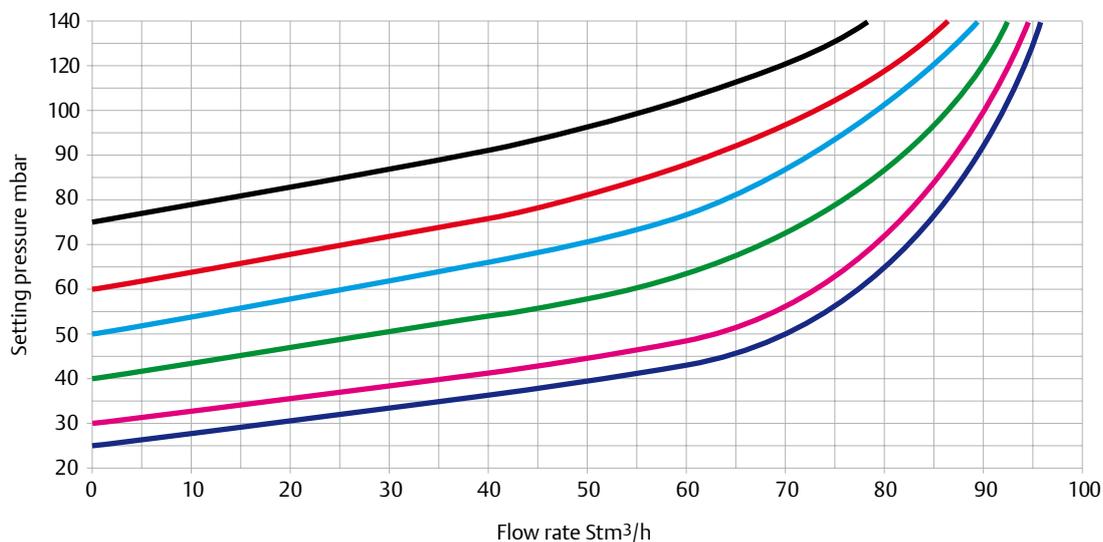
V/60



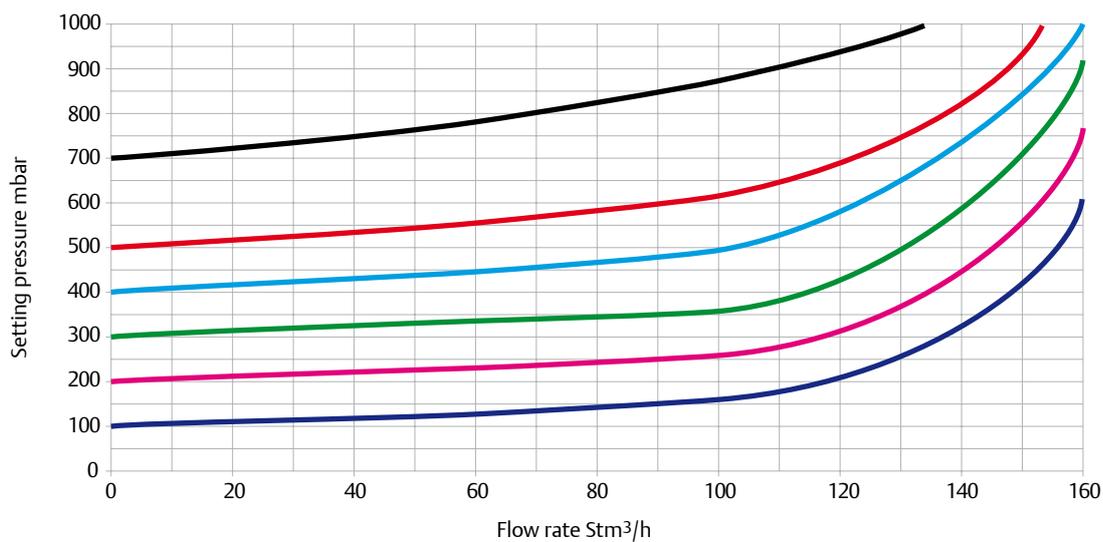
# V Series Relief Valves

## V/50 - V/51 - V/52 Flow Rate Curves

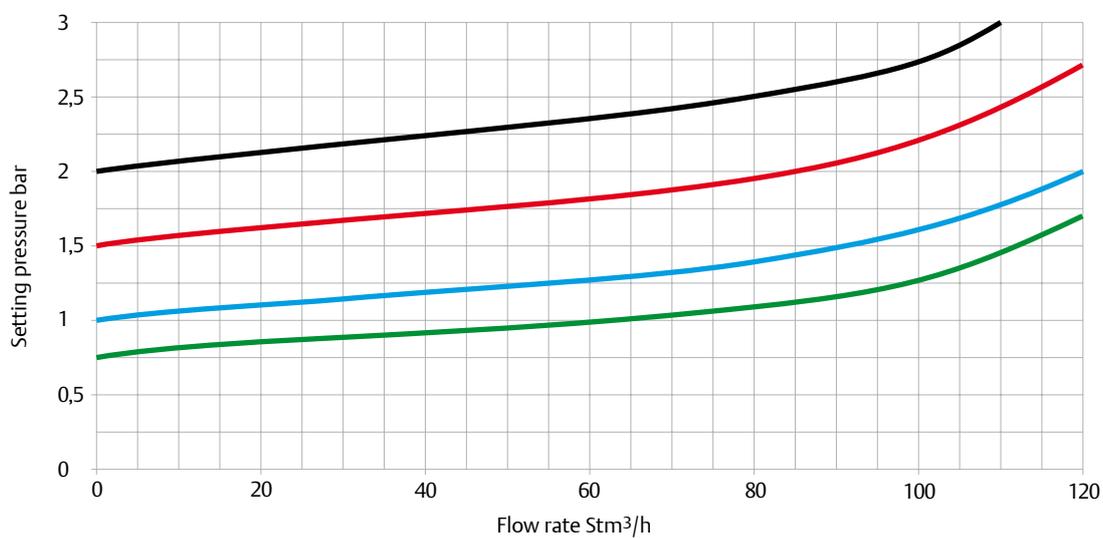
V/50



V/51

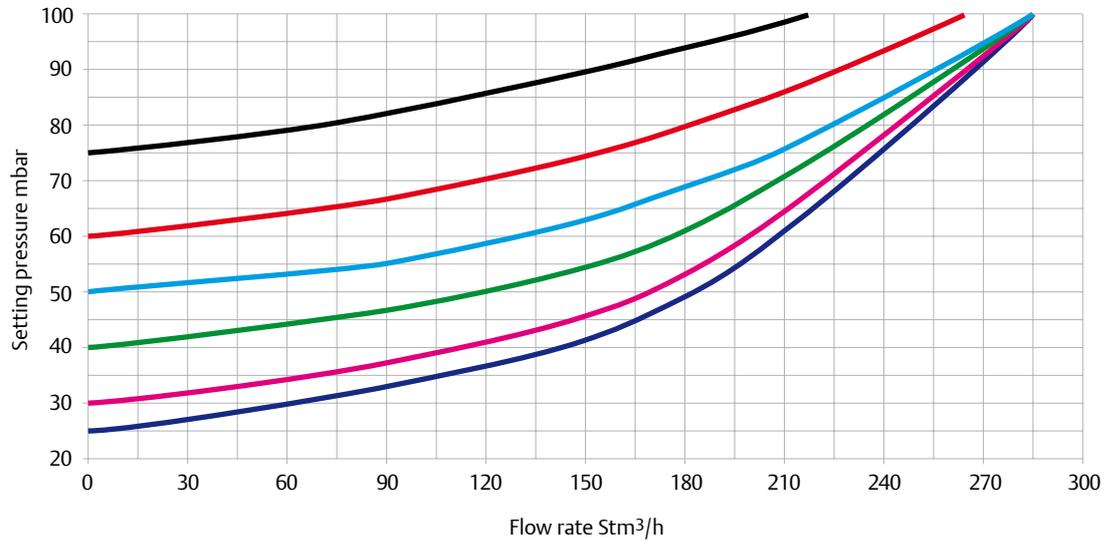


V/52

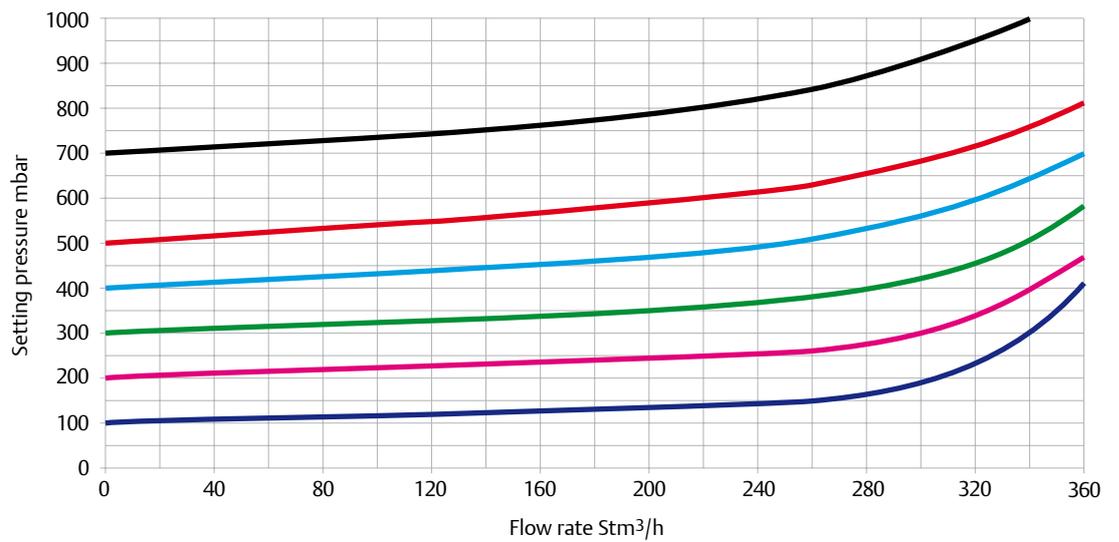


## V/60 - V/61 - V/62 Flow Rate Curves

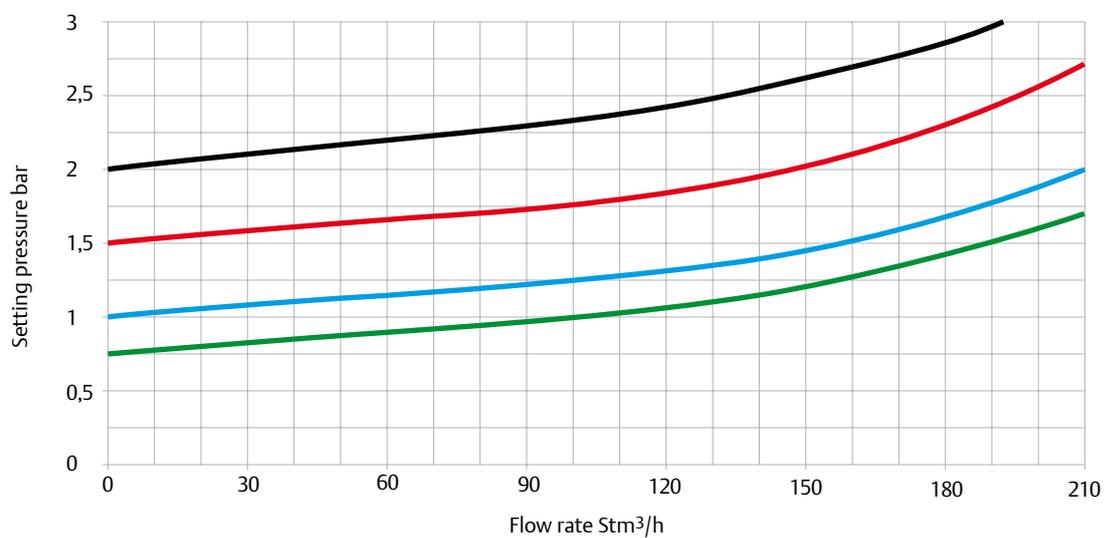
V/60



V/61



V/62



# V Series Relief Valves

## V/20-2 Model Spring-Loaded Relief Valves

The V/20-2 relief valves are designed for use at medium and high pressures and cover a wide range of setting values (1.5 to 40 bar). To change setting, simply replace the spring with the one appropriate for the desired value.

### Operation

Whenever gas pressure under pad (O) is higher than the force exerted by spring (M) in the opposite direction, pad older device (P) is raised, thereby causing the release orifice to open.

Setting is carried out by adjusting the compression of spring (M) through the appropriate ring (G).

It is recommended that relief valve be set at a value at least 15% higher than the operating pressure of the station.

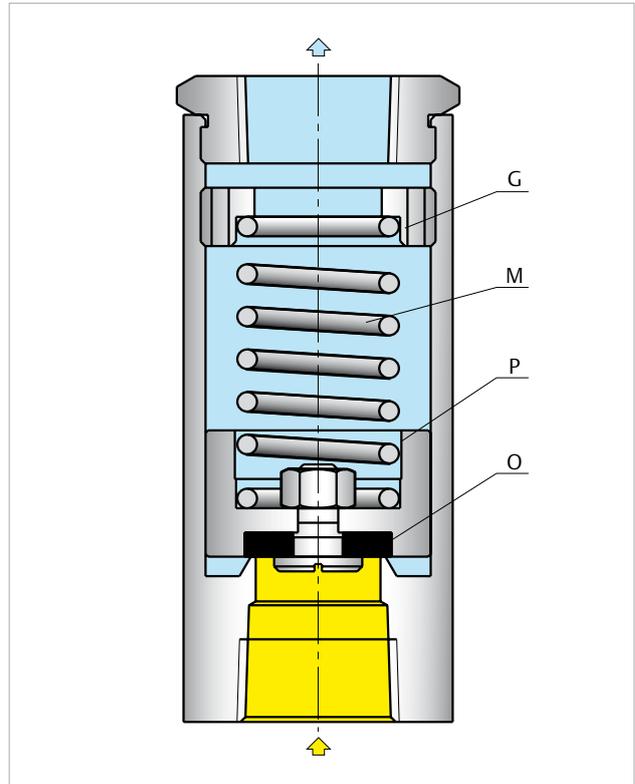
### Installation and Assembly

The relief valve is normally installed downstream of the regulator.

Gas is released into the atmosphere at an appropriate height, according to effective standards.

Gas release pipe diameter must not be less that valve outlet pipe diameter.

Relief valve efficiency and performance are in no way affected by direction of installation.



Installation on Skid

# V Series Relief Valves

## Features

**Applications** The relief valves V/20-2 can be used with natural gas, manufactured gas, air, propane and other gases, as long as they do not contain a high percentage of benzol.

**Technical Features** Allowable pressure PS : 100 bar  
Set range  $W_h$  : 1.5 ÷ 40 bar

**Seat diameter**  
25,4 mm (1")

**Threaded connections**  
Inlet - outlet 1" NPT

**Temperature**  
Standard version  
Working -10 °C +60 °C  
Low temperature version  
Working -20 °C +60 °C

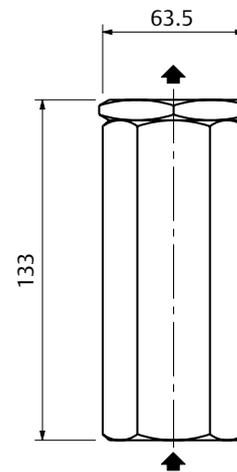
**Materials**

Body	Brass
Pad retainer	Brass
Pad holder	Brass
Adjusting ring	Brass
Pad	NBR nitrile rubber

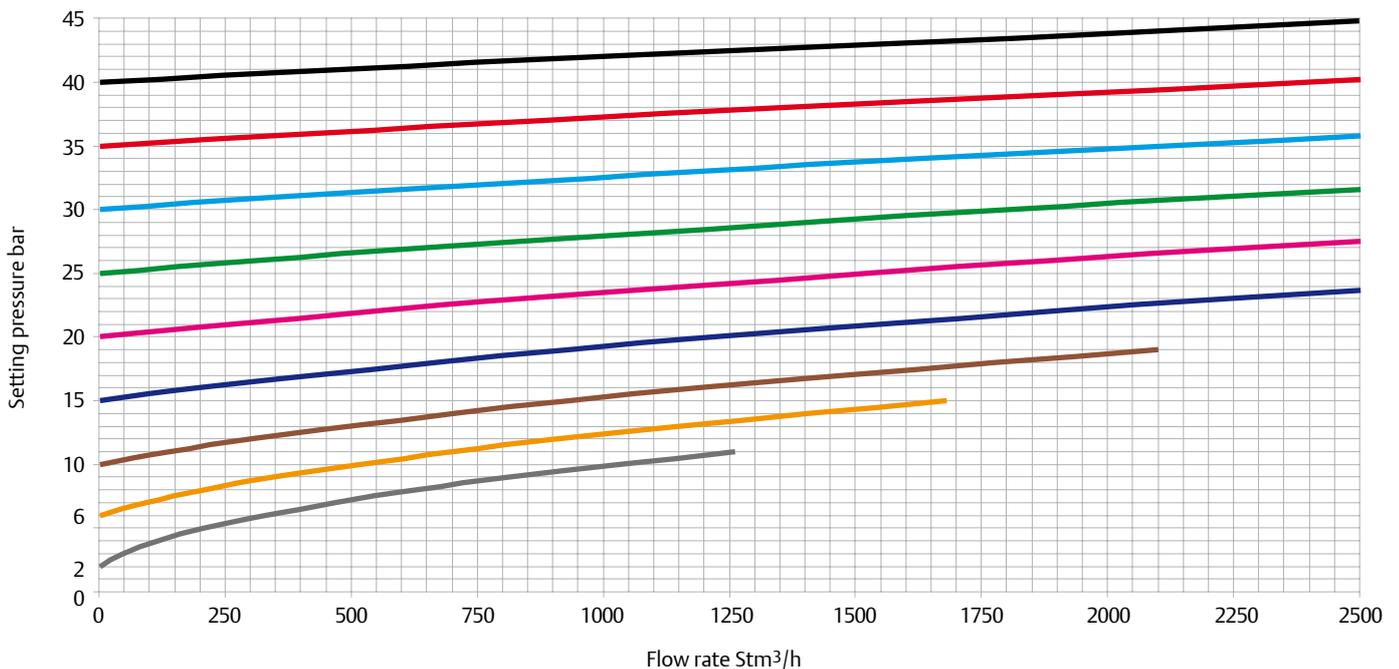


V/20-2

Dimensions (mm) - Weight 1,6 Kg



## Flow Rate Curves



**Natural Gas Technologies**

**Emerson Process Management  
Regulator Technologies, Inc.**

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