

### Charging valve 434 100



#### Application

Multiple applications in compressed air systems.

#### Purpose

##### **Charging Valve with Return Flow**

The passing of compressed air to second air brake reservoir only when the rated pressure for the system in the first reservoir has been reached.

If the pressure in the first reservoir falls below that of the second reservoir there is a feedback supply of air from the second reservoir.

##### **Charging valve without return flow**

Residual pressure maintenance in lifting bellows of a lift axle to prevent the bellows from wrinkling when the lift axle is lowered. The passing of compressed air to auxiliary equipment (e. g. door actuation, auxiliary and parking braking systems, servo clutch, etc.) only when the rated pressure for the braking system has been reached.

##### **Charging valve with limited return flow**

The passing of compressed air to other consumers (e. g. auxiliary and parking braking systems) only when the rated pressure for the braking system has been reached. Also the protection of pressure for the motor vehicle in the event of the trailer's supply line failing.

If the pressure in the air reservoirs of the service braking system drops, part of the compressed air will return until the closing pressure (which is dependent on the opening pressure) is reached.

#### Maintenance

Special maintenance that extends beyond the legally specified inspections is not required.

#### Installation recommendation

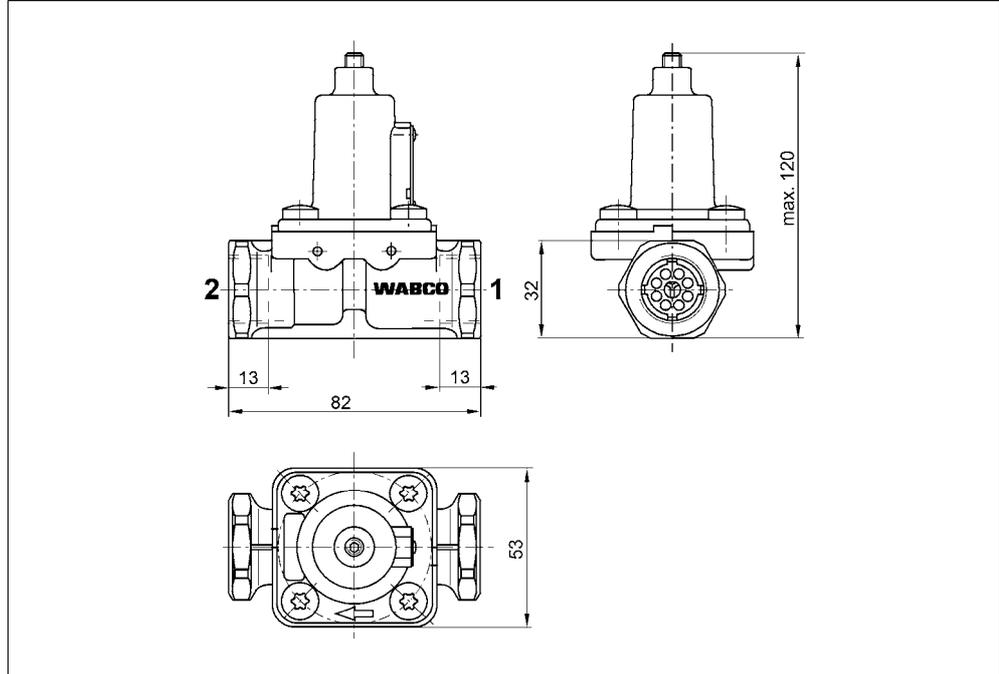
- Install the charging valve anywhere within the flow of the pipe lines.



Pay attention to the arrow on the housing that shows the direction of charge flow during the installation.

# Charging valve 434 100

## Installation dimensions



### Connections

1 Energy supply

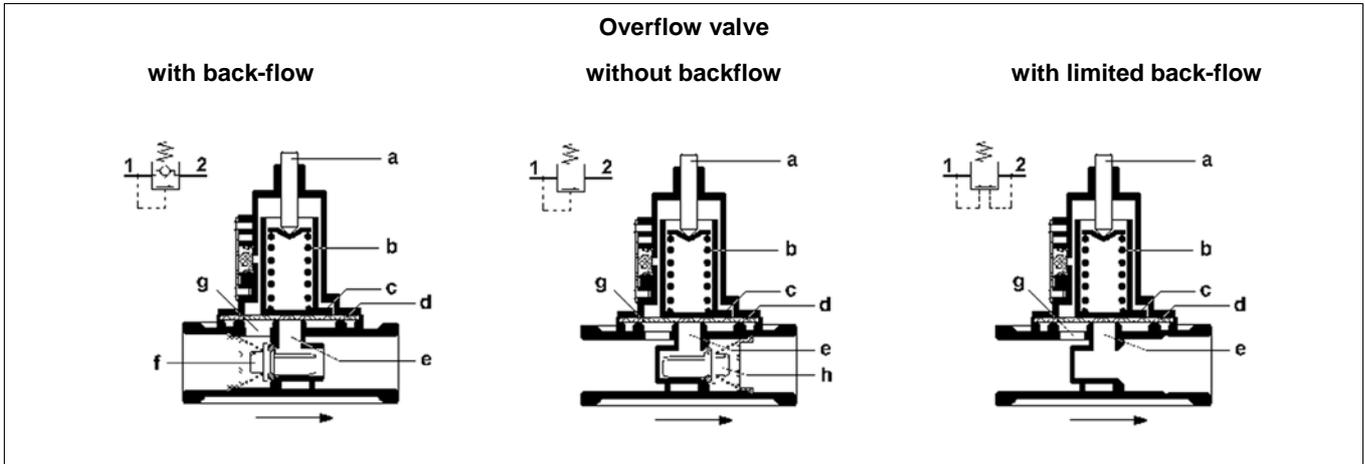
2 Energy delivery

## Technical data

<b>Order numbers</b>	<b>434 100 ... 0</b>
Max. operating pressure	13 bar
Nominal diameter	Ø 8 mm
Port threads	M 22x1.5
Permissible medium	Air
Operating temperature range	-40 °C to +80 °C
Weight	0.45 kg

Order number	Valve type	Charging pressure (Tolerance -0.3 bar)
434 100 024 0	with back-flow	6.0 bar
434 100 027 0	with back-flow	0.5 bar
434 100 122 0	without backflow	4.5 bar
434 100 124 0	without backflow	5.5 bar
434 100 125 0	without backflow	6.0 bar
434 100 126 0	without backflow	6.5 bar
434 100 222 0	with limited back-flow	6.2 bar (Closing pressure = Charging pressure -15 %)

## Operation



## Connections

1	Energy supply	2	Energy delivery
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**With all charging valves**, the compressed air passes in the direction of the arrow into the housing and through port (g) under diaphragm (d) which is pressed into its seat by adjusting spring (b) and piston (c). When the charging pressure has been reached, the force of the adjusting spring (b) is overcome so that the diaphragm (d) is lifted from its seat, opening port (e). The air flows directly or after opening of check valve (h) to the reservoirs or consumers in the direction of the arrow.

With **charging valves with return flow** the compressed air can flow back from the second reservoir after the opening of check valve (f) if the pressure in the first reservoir has dropped by more than 0.1 bar.

In the case of **charging valves without return flow**, return flow is not possible since non-return valve (h) is kept closed by the higher pressure in the second reservoir.

**Charging valves with limited return flow** allow the air to flow back until the closing pressure of diaphragm (d) is reached. When this is reached, adjusting spring (b) presses diaphragm (d) into its seat via piston (c), thus preventing any further pressure compensation in the direction opposite to the direction of the arrow.

The charging pressure can be adjusted on all types by turning adjusting screw (a). Turning clockwise increases charging pressure, turning anti-clockwise has the opposite effect.