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1 Product Description

The flow control valve is based on the principle of a 3-way flow controller. The consumer is supplied with a certain volume flow and the remaining flow is fed to the tank.

1.1 Application

Possible applications are hydraulic motors or cylinders that are to be operated at a fixed speed regardless of the load. A pressure relief valve protects the consumer from excessive pressures. The valve is suitable for single-acting consumers.

1.2 Mounting location

The flow control valve is installed in the attachment tool or on the excavator close to the main control valve.

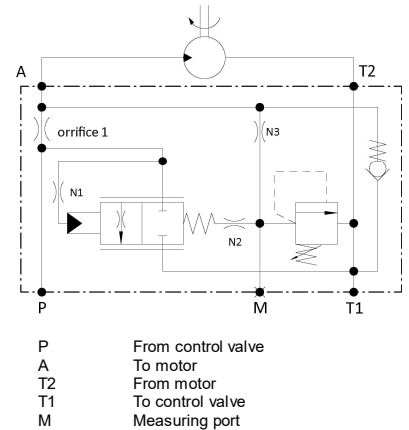
2 Function

The flow control valve must be supplied at connection P with a volume flow, which at least equals the set volume flow of the consumer to be operated.

The volume flow is directed from connection A to the motor. An orifice in the inlet port P determines the maximum volume flow fed to the consumer. The orifice is exchangeable and by this the flow can be set between 50 and 180 l/min according to customers requirements. If the inlet volume flow exceeds the set volume flow, a bypass pressure compensator opens in order to route the surplus volume flow back to the return line with only little loss.

Based on the principle of the pressure cut-off, the consumer devices are protected from excessive pressures with an adjustable pressure valve. The return line of the motor is connected to T2 and through the valve via connection T1 to the return line of the machine. An integrated check-valve prevents the motor from turning in the wrong direction and also ensures a cavitation-free flow when the consumer device stops suddenly.

Please note that the return pressure in the T-Line is added to the setting of the pressure valve.



2.1 Characteristics

- suitable for fixed displacement pumps
- Integrated 3-way pressure compensator
- Preset of the volume flow according to user requirements (50-180 l / min)
- Orifice for preset interchangeable

3 Technical Data

Criteria	Unit	Value
P, A, T1, T2		G 3/4" ISO 1179-1
M		G 1/4" ISO 1179-1
Mounting position		any
Weight	kg	13,5
Maximum pressure	bar	420
Operating pressure for attachment	bar	100-350
Maximum recommended tank pressure (T)	bar	< 5
Maximum inlet volume flow	l/min	320
Preset default outlet volume flow	l/min	135 +5
Consumers flow rate range	l/min	50 - 180
Hydraulic fluid		Mineral oil (HL, HLP) conforming with DIN 51524, other fluids upon request
Hydraulic fluid temperature range	°C	-20 bis +80
Ambient temperature	°C	< +50
Viscosity range	mm2/s	2,8 - 500
Degree of pollution		Filtering conforming with NAS 1638, class 9, with minimum retention rate $\beta_{10} \geq 75$

3.1 Aktuell Versions currently available

The versions listed below are standard. Further versions as part of the options given on the type code can be configured upon request. Minimum purchase quantities are required. **Minimum order 50 pieces per year with a lot size of 10 pieces.**

426.011.601.9: 140 l/min

426.011.614.9: 70 l/mi


4 Installation

4.1 General remarks

- Observe all installation and safety information of the construction machine manufacturer.
- Only technically permitted changes are to be made on the construction machine.
- The user has to ensure that the device is suitable for the respective application.
- Application exclusively for the range of application specified by the manufacturer.
- Before installation or dismantling, the hydraulic system is to be depressurized.
- Settings are to be made by qualified personnel only.
- May only be opened with the approval of the manufacturer, otherwise the warranty is invalidated.

4.2 Connection

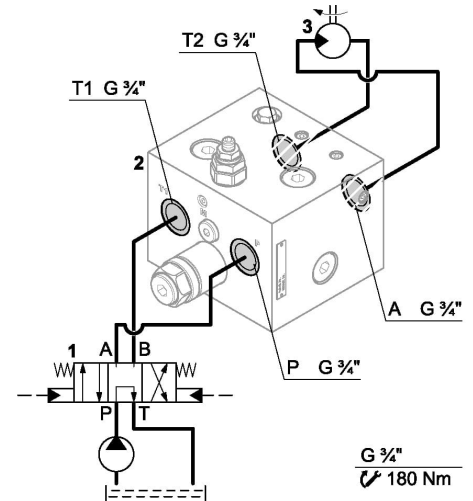


 **Note:** The included connection recommendations are not guaranteed. The functionality and the technical specifications of the construction machine must be checked. It must be ensured that the construction machine is suitable in terms of technology and safety for the operation of the attachment.

Hydraulic hoses are not to come into contact with the flow control valve because otherwise they are subject to thermal damaging.

Ensure that standards EN 563 and EN 982 are observed.

1 Main control valve
2 Flow Control Valve
3 Motor / Consumer device



4.3 Setting the pressure relief valve

During operation, the flow control valve can heat up to the oil temperature.

The counter-nut (2) is to be replaced after being used five times. Pressure cut-off valve is preset to 300 bar.

Pressure adjustment: 1 mm = 78 bar. Secured with locknut (2) 30 Nm.

Make sure that the flow control valve is depressurized.

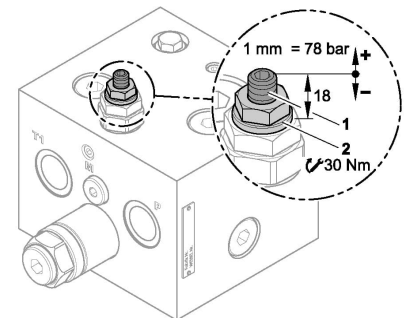
Undo the counter-nut (2).

Adjust maximum operating pressure of the attachment

Increase: Turn the set-screw (1) to the right.

Decrease: Turn the set-screw (1) to the left.

Tighten the counter-nut (2).

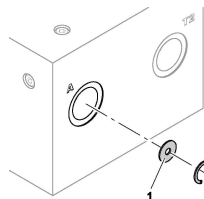


4.4 Volume flow

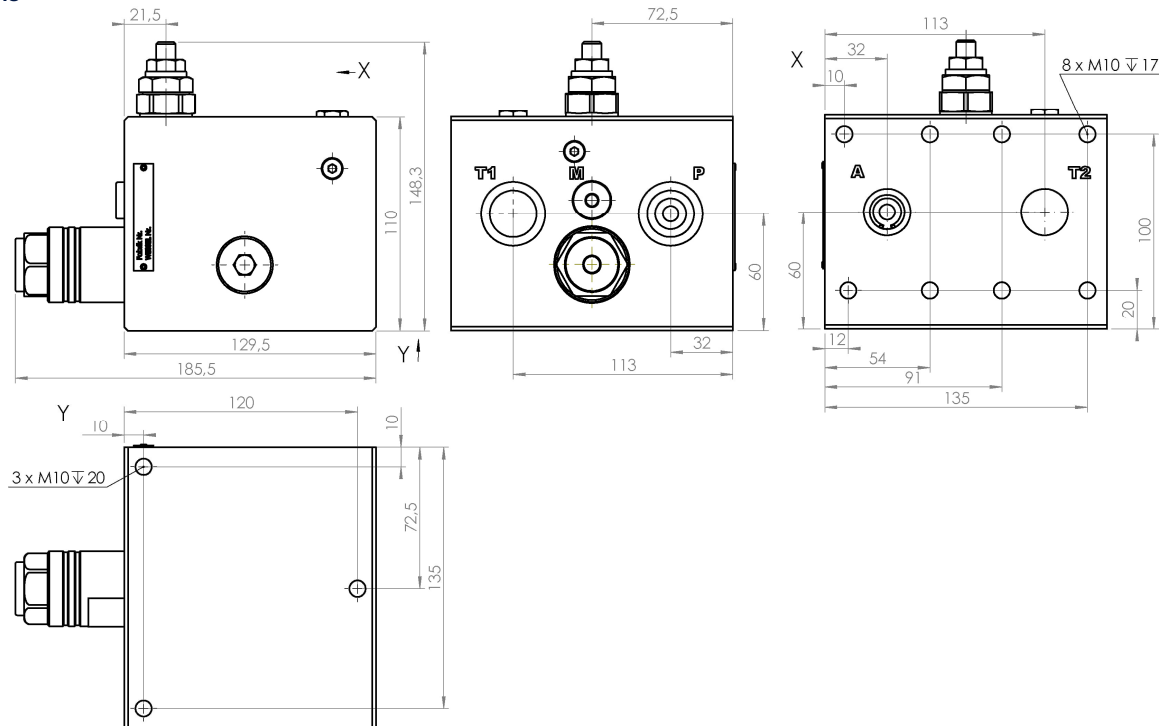
Standard version
preset volume flow:

- Part No. 426.011.601.9: 140 l/min.
- Part No. 426.011.614.9: 70 l/min.

Other volume flow presets obtainable by replacing the orifice (1)



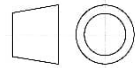
4.5 Dimensions



5 Notes, Standards and Safety Requirements

5.1 General remarks

- The views in drawings are shown in accordance with the European normal projection variant
- A comma (,) is used as a decimal point in drawings
- All dimensions are given in mm



5.2 Standards

The following standards are to be observed because of the surface temperatures on the load control valve:

- EN 563, Temperatures on surfaces that can be touched.
- EN 982, Safety-technical requirements for fluid-technical systems and their components.

6 Accessories