

Technical Recommendation

Air Bleed Screw SV 0112.15

Bleeding of return and return-suction filters

Bleeding the hydraulic system is an important step during commissioning or after a repair. Air in the system can change the control behavior of the proportional valves, cause start-up jumps on cylinders, vibrations in the system, damage to individual components or seals as well as accelerate aging of the pressure fluid.

For this reason, operating instructions for machines and systems contain appropriate instructions, such as that air must be exhausted before initial startup in order to carefully fill lines or housings of hydraulic components. Frequently, bleeding points are also provided so that the air can escape from the system while the machine is running.

Under Order No. SV 0112.15, ARGO-HYTOS offers a bleed screw with M12x1.5 screw-in thread for return and return-suction filters. On filters of this design, the bleed screw can be screwed into a connection provided for clogging indicators, for example, or integrated into the filter cover. The screw also remains in the filter housing during normal operation of the system.

On request, the filters are available with this accessory ex works. Retrofitting is also possible without any problems.

The air bleeding is carried out in a few steps:

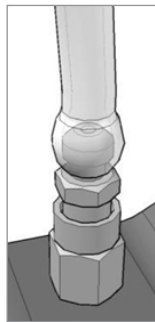


Fig. 1 - Bleed screw with attached transparent hose

First, a suitable, preferably transparent hose must be attached to the hose connection of the bleed screw (Fig. 1).

In addition, a container must be provided to collect the escaping hydraulic fluid. The end of the transparent hose must be inserted into this container.

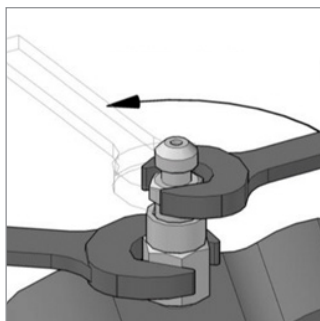


Fig. 2 - Opening the bleed screw

The bleed screw consists of an upper and a lower part. After starting the system, unscrew the upper part of the screw by approx. 0.5 turns (AF 10) while holding the lower part with a wrench (AF 17) so that it does not come loose from the filter housing (Fig. 2).

The upper part is now unscrewed from the lower part to expose an internal flow path.

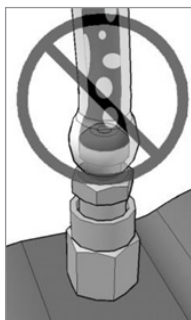


Fig. 3 - Escaping liquid is free of air bubbles

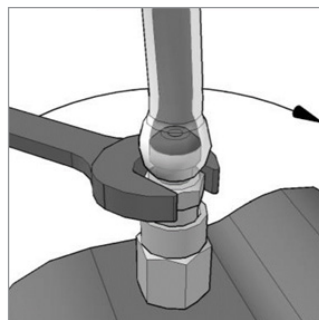


Fig. 4 - Closing the upper part of the screw

The air arriving at the return connection of the filter, which is gradually pushed out of the circuit, now escapes via the open screw. The hose discharges this oil-air mixture into the collection container.

As soon as constant air-free oil comes out of the hose (Fig. 3), the upper part of the screw can be closed again (Fig. 4) and the system can be switched off.

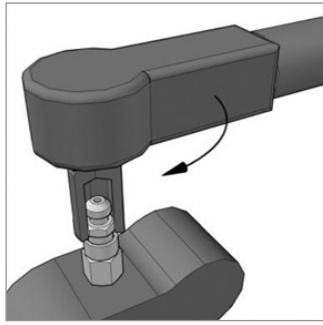


Fig. 5 - Tighten the upper part with the appropriate torque

After removing the hose from the connection, tighten the upper part with a torque of 20^{+5} Nm (AF 10) in the lower part (Fig. 5).

Finally, check whether the lower part of the screw (AF 17) is still firmly seated in the filter housing.

If present, the dust protection cap must be placed on the hose connection to protect it from dirt and damage.

After completion of bleeding out the air, the fluid level in the hydraulic tank must be checked for safety and corrected if necessary.

Dimensions

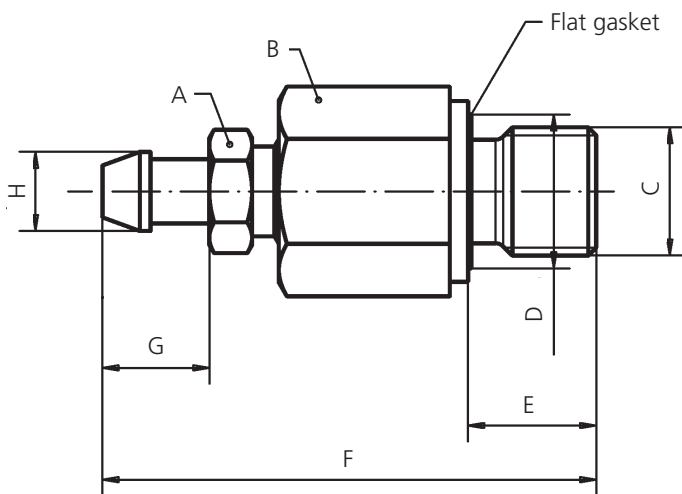


Fig. 6 - Air bleed screw SV 0112.15 (for connection P₁)

Measurements in mm

Type	A	B	C	D Ø	E	F	G	H Ø
SV 0112.15	AF 10	AF 17	M12 x 1.5	14.4	12	46	10	7.4

Measurements in inch

Type	A mm	B mm	C	D Ø	E	F	G	H Ø
SV 0112.15	AF 10	AF 17	M12 x 1.5	0.57	0.47	1.81	0.39	0.29