

HP600
High-Pressure Needle Valve

OPERATING MANUAL



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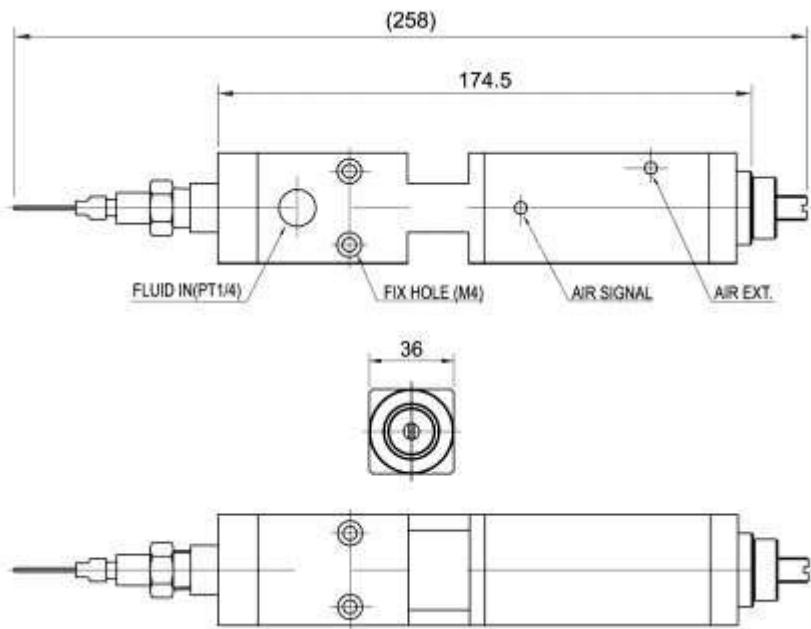
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SPECIFICATIONS:

- Operating Air Pressure: 56~75 PSI
- Fluid delivery pressure:
 - HP600S: 2,133 PSI
 - HP600L: 1,565 PSI
- Minimum Shot Size:
 - HP600S: 0.01cc
 - HP600L: 0.2cc
- Valve Type: Needle
- Weight: 1000g
- Driving part materials:
 - Cylinder Body CAP: AL Hard anodized
 - Piston: SUS303
 - Check body: SUSS303
- Wetted part materials:
 - Chamber: SUS303
 - CAP, CV Body: AL (Hard coated)
 - Seals: Acetal Teflon
- Connecting Ports Operating air input: M5xP0.8, 4mm
- Fitting 1/4" OD air hose
- Material Inlet: NPT1/4" (female)
- Material Outlet: NPT1/4" Luer lock (male)

DIMENSIONS:

NOTE: ALL DIMENSIONS ARE IN MM



OPERATION:

The HP600 is a high pressure, front closing dispensing valve. The valve is opened and closed by applying compressed air to the piston on top of the valve. In the air section you will find two air ports. The port closest to the center of the valve is air to open, and the port closest to the end of the valve is air to close.

Please use Fisnar 4-way controller model VC-1195A (110V) OR VCE-1195-LF (220V) to operate this valve.

Fluid is supplied to the valve through the female port in the stainless steel fluid section. Once the valve is connected to the fluid and air supply, it is ready to operate. First apply approximately 60 PSI to the air piston and cycle the valve. You will be able to see and hear the piston move.

If the piston does not cycle, apply more air pressure, but do not exceed 75 PSI. The valve will operate normally at 70 psi. If the piston still does not cycle, loosen the packing nut, cycle the valve, and then retighten the nut. When the piston is cycling properly, apply fluid pressure and shift the valve open. Keep the valve open until all the air has been purged out of the system and the flow of material is consistent. Cycle the valve several times to make sure it closes and stops the flow of material without dripping.

ADJUSTMENT:

The HP600 has a stroke adjuster and a locking nut at the rear end of the valve. This allows the user to adjust the flow of material through the valve by limiting the travel of the piston. Turning the adjuster clockwise will decrease the flow and counter-clockwise will increase the flow. If the stroke adjuster is turned all the way down, it will stop the flow of material entirely. Once the desired flow has been achieved, tighten the lock nut.

DISASSEMBLY:

In case of disassembly for cleaning the valve or replacing parts, refer to Technical Service Information on page 5.

- Disconnect air and material source supply.
- Disassemble needle adapter (2) from the end body (5).
- Unscrew 4 bolts (9) between drive body (13) and wet body (7).
- Carefully remove seat (6) from wet body (7).
- Unscrew packing nut (11) from wet body (7).

ASSEMBLY:

- Lubricate inside of drive body cylinder (13), push in shaft (16).
- Lubricate V- packing (10), push in to the bottom of wet body (7).
- Assemble packing nut (11) to end of wet body (7).
- Push the shaft (16) through the V- packing (10), and assemble drive body (13) with wet body (7).
- Insert the seat (3) to the top of the wet body (7) and push it.
- Insert seat (3) between end body (5) and needle adapter (2).
- Connect the airline and fluid line of the valve.

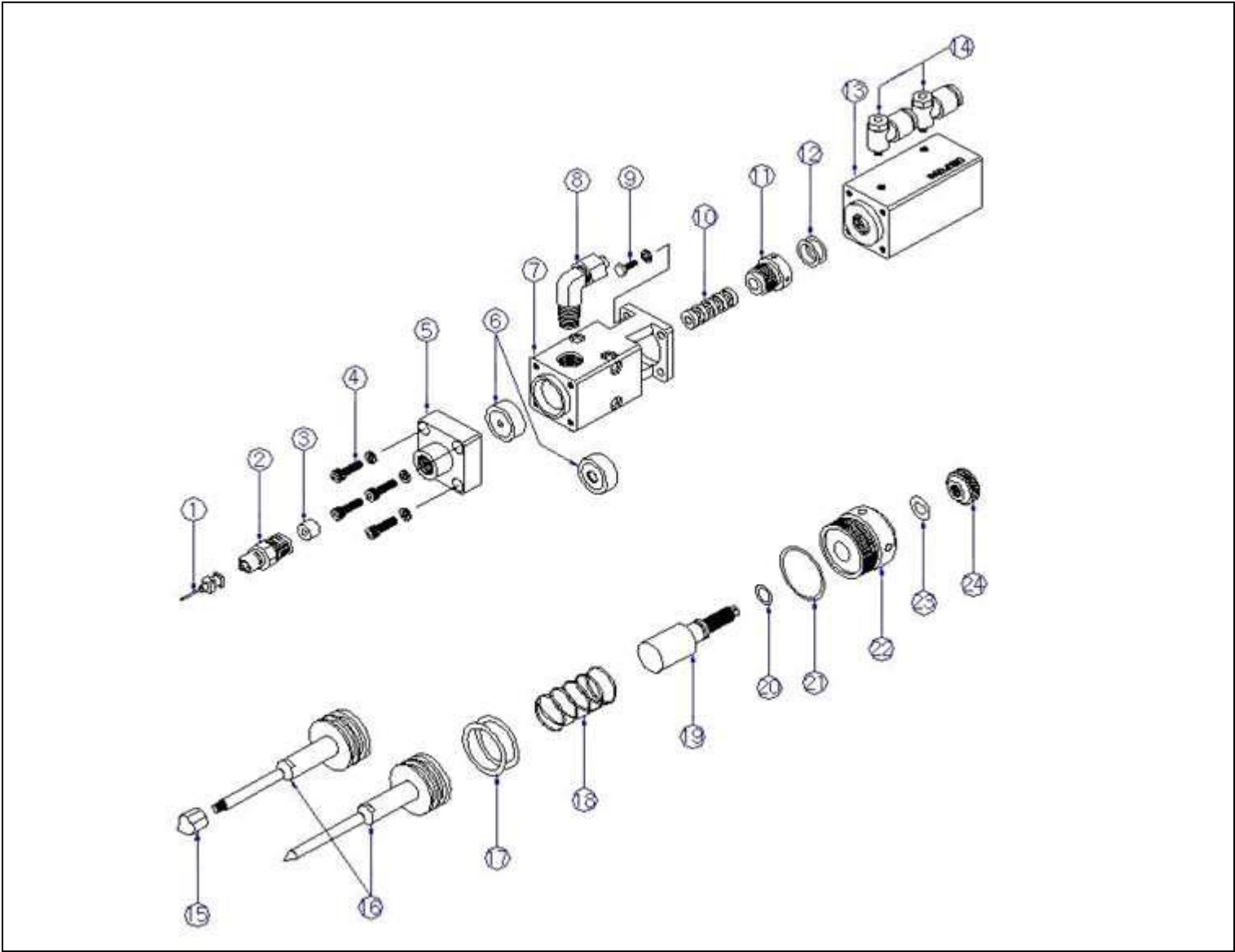
TROUBLESHOOTING:

| PROBLEM | POSSIBLE CAUSE |
|-------------------------------------|--|
| Material leaking from tip | Worn valve needle Worn or bad seal Worn o-ring on seat |
| Material seepage around packing nut | Worn packing Loose packing nut |
| Piston will not cycle | Packing nut too tight Stroke set too low Dried material in fluid body Operating air too low |
| Air seepage from air body assembly | Worn o-rings Loose assembly Bad air connection |
| Valve will not close | Dried material obstructing the needle Packing nut too tight Operating air too low |



TECHNICAL SERVICE INFORMATION

PRODUCT DESCRIPTION **HP600 High-Pressure Needle Valve**



PARTS LIST:

- | | | |
|-------------------------------------|------------------------------|--|
| 1. Needle | 9. Hexagon Bolt | 17. O-ring (P26) |
| 2. Needle Adapter (Stainless Steel) | 10. V-packing (Teflon) | 18. Spring |
| 3. Out Seat (Acetal) | 11. Packing Nut (Bronze) | 19. Stopper (Stainless Steel) |
| 4. Bolt (M4 X 15) | 12. O-ring (P12) | 20. O-ring (P9) |
| 5. End Body (Stainless Steel) | 13. Drive Body (Aluminum) | 21. O-ring (S30) |
| 6. Seat (Teflon) | 14. Air Inlet Fitting | 22. Drive Body Cap (Aluminum) |
| 7. Wet Body (Stainless Steel) | 15. Pusher (Stainless Steel) | 23. Stop Washer |
| 8. Fluid Inlet Fitting | 16. Shaft (Stainless Steel) | 24. Stopper Lock Nut (Stainless Steel) |

