

Advanjet[®] Jet Valves

3A8600B

HV-2000b, HV-9500b, HM-2600b

EN

For non-contact dispensing of viscous material in industrial environments. For professional use only.

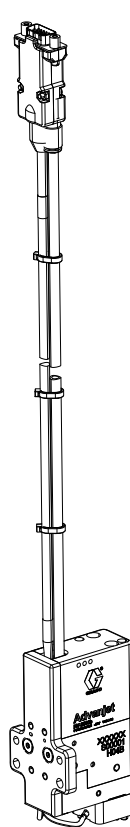
Not approved for use in explosive atmospheres or hazardous (classified) locations.

See page 3 for model information, including maximum working pressure.

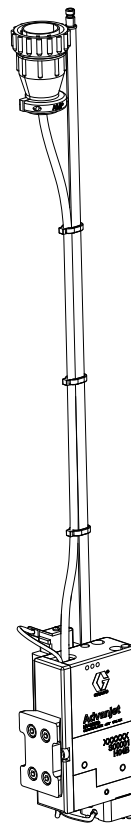


Important Safety Instructions

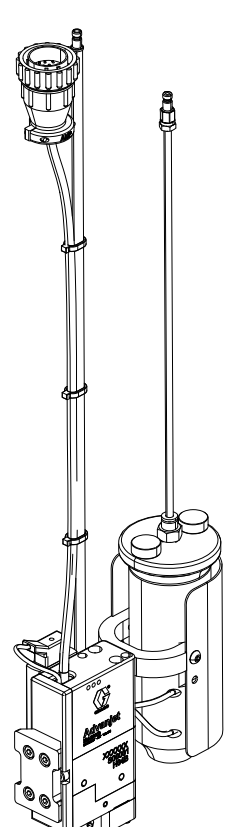
Read all warnings and instructions in this manual and all related manuals before using the equipment. Save these instructions.



HV-2000b



HV-9500b



HM-2600b

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Related Manuals





Manual in English	Description
3A5908	Jet Maintenance Tool Kits
3A5856	HV-2000C Jet Controller Setup and Operation
3A5937	Jet Dispensing Parameters Supplement
3A6166	HM-2600C Hotmelt Jet Controller Setup and Operation

Models

Model	Part	Description	Maximum Fluid Pressure psi (MPa, bar)	Maximum Jet Pressure psi (MPa, bar)
HV-2000b	26B961	HV-2000b Jet Valve, 10 watt, 15 pin connector	60 (0.41, 4.1)	90 (0.62, 6.2)
HV-9500b	26B951	HV-9500b Jet Valve, 40 watt, 28 pin connector		
	26B952	HV-9500b Jet Valve, 20 watt, 7 pin connector		
HM-2600b	26B971	HM-2600b Jet Valve, metal feed tube		
	26B972	HM-2600b Jet Valve, metal feed tube, low viscosity		
	26B973	HM-2600b Jet Valve, plastic feed tube		

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

 WARNING	
	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none">• Read Safety Data Sheets (SDSs) to know the specific hazards of the fluids you are using.• Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. Protective equipment includes but is not limited to:</p> <ul style="list-style-type: none">• Protective eyewear, and hearing protection.• Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.
	<p>BURN HAZARD</p> <p>Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none">• Do not touch hot fluid or equipment.

WARNING



EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Specifications** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Specifications** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.



PRESSURIZED EQUIPMENT HAZARD

Fluid from the equipment, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- Follow the **Pressure Relief Procedure** when you stop spraying/dispensing and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

Component Identification

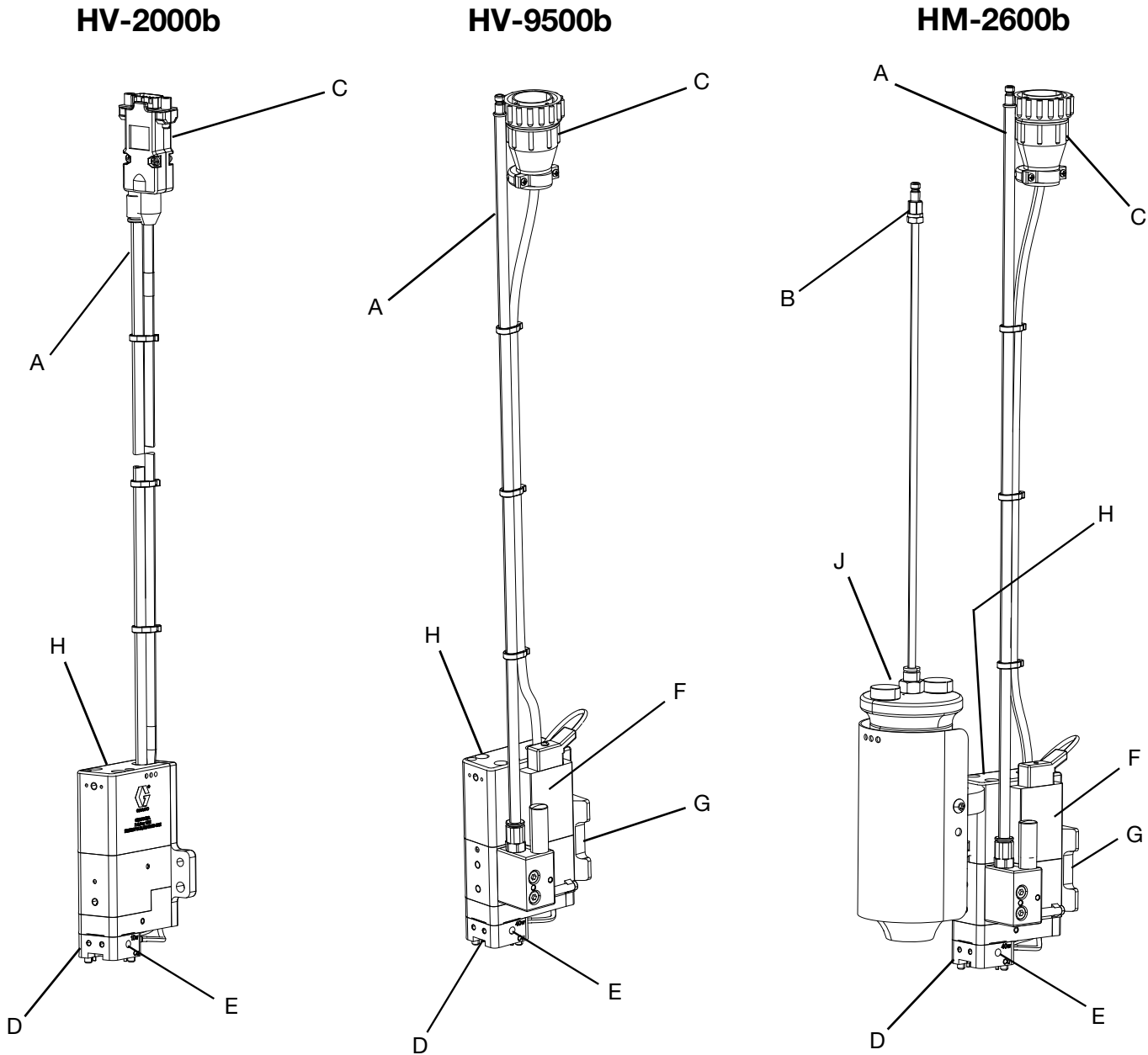


FIG. 1: HV-2000b, HV-9500b, and HM-2600b Components

Key:

- | | |
|----------------------------|-----------------|
| A Jet Pressure Air Inlet | H Top Cover |
| B Fluid Pressure Air Inlet | J Receiver Head |
| C Harness | |
| D Heater Block | |
| E Weep Hole | |
| F Solenoid Valve | |
| G Dovetail Bracket | |

Nozzle Components

NOTE: Nozzle components are sold separately. See **Tools and Accessories** on page 28.

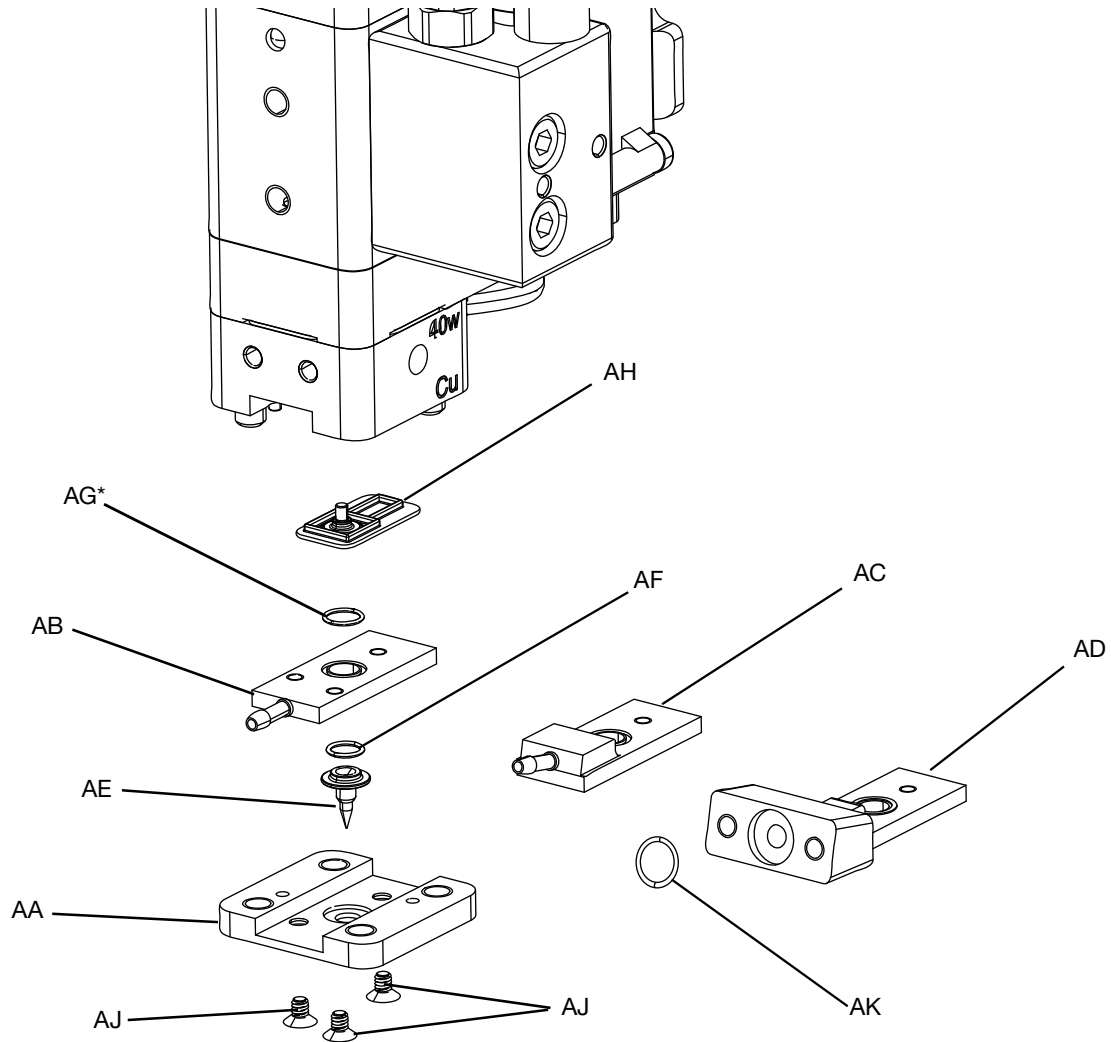


FIG. 2: Nozzle Components

Key:

- AA Nozzle Plate (bottom)
- AB Flat Barb Nozzle Plate (top)
- AC Tilted Barb Nozzle Plate (top)
- AD Tilted Face Seal Nozzle Plate (top)
- AE Nozzle
- AF O-Ring, Nozzle Insert
- AG O-Ring, Nozzle Plate*
- AH Diaphragm
- AJ Nozzle Plate Screws
- AK Tilted Face Seal O-Ring

* Not required with nozzle plates (top) that have an integrated metal o-ring.

Controller

NOTE: See the HM-2600C Jet Controller Setup and Operation manual for more information on the Jet controller. See **Related Manuals** on page 3.

HM-2600C Front Panel

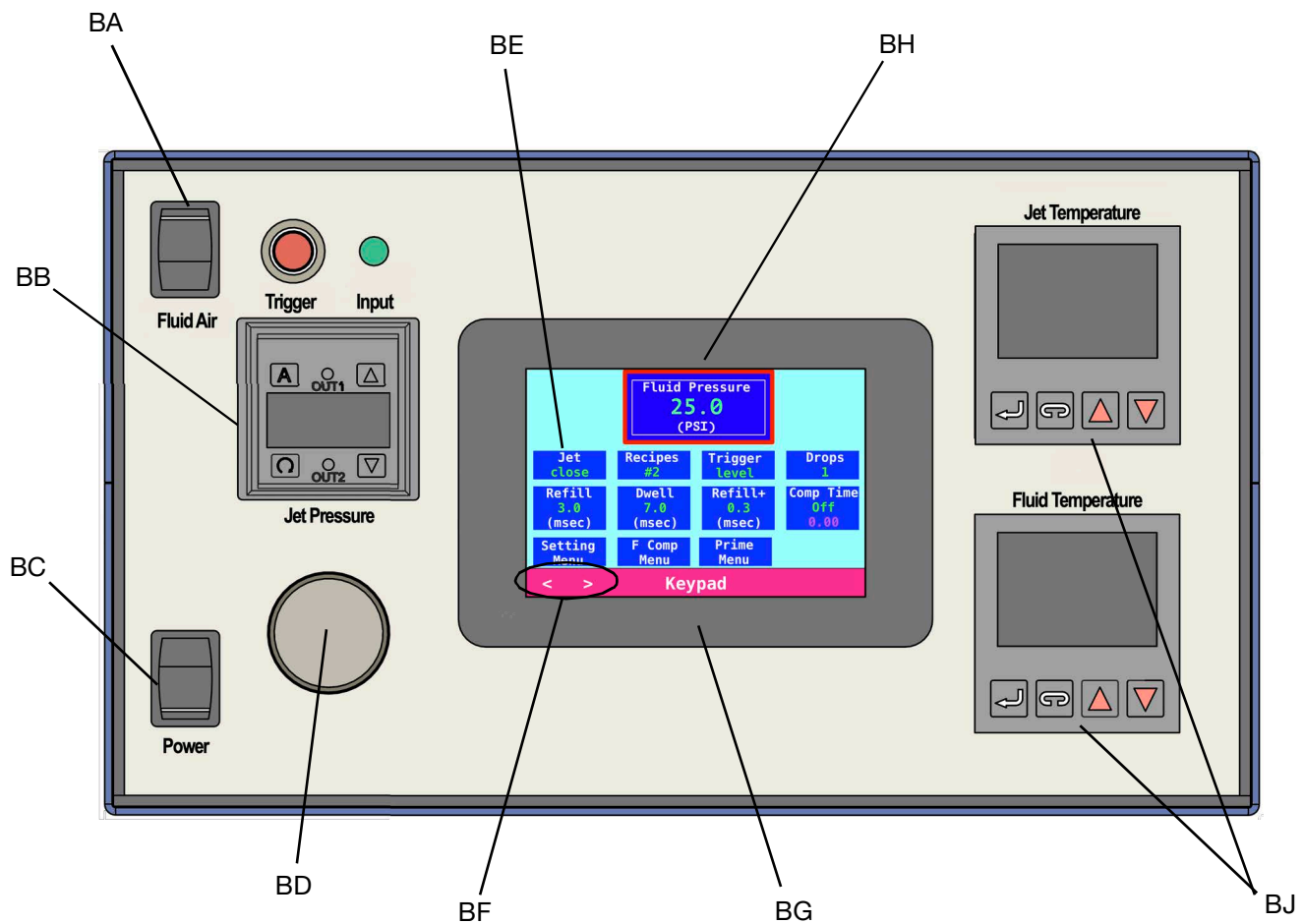


FIG. 3: Controller Front Panel

Key:

- BA Fluid Air Switch:** Provides quick ON/OFF control of fluid delivery pressure.
- BB Jet Pressure Gauge:** Displays Jet actuation pressure.
- BC Power Switch:** Turns the controller main power ON/OFF.
- BD Jet Pressure Controller:** Turn knob to regulate Jet actuation pressure.
- BE Jet OPEN/CLOSE:** Shows the status of the Jet as Open or Close.

- BF Key Pad Arrows:** Toggles between settings.
- BG Touch Panel:** Enter and edit jetting parameters, program and select dispensing recipes, and add special functions.
- BH Fluid Pressure:** Displays fluid delivery pressure. Tap the key pad arrows (BF) to adjust, or use the keypad to set.
- BJ Temperature Controllers:** Regulate fluid temperature for the dispensing nozzle.

HM-2600C Rear Panel

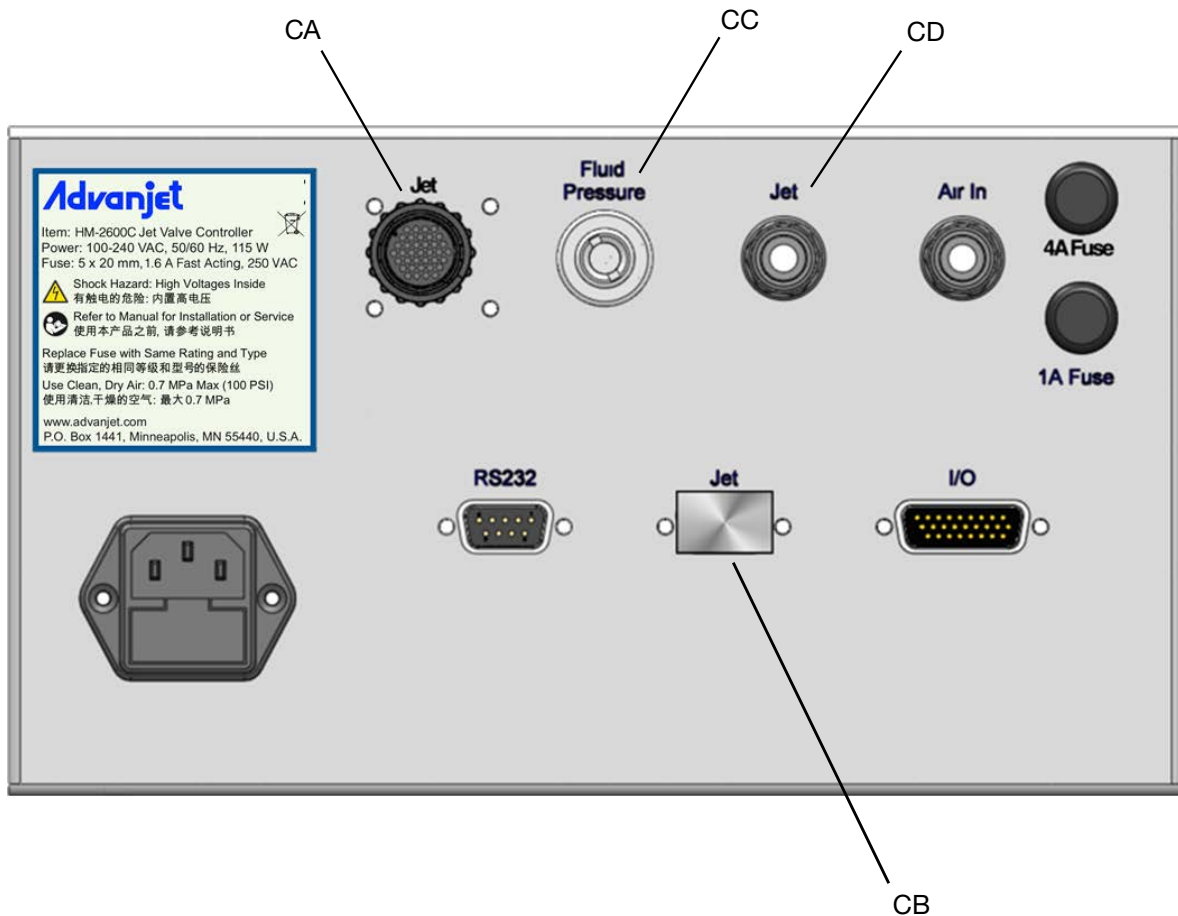


FIG. 4: Controller Rear Panel

Key:**CA Jet Harness Connector (HM-2600C)****CB Jet Harness Connector (HV-2000C)****CC Fluid Pressure Outlet:** Connects to the Fluid Pressure Air Inlet (B) on the Jet.**CD Jet Pressure Outlet:** Connects to the Jet Pressure Air Inlet (A) on the Jet.

Jet Cable Input/Output

HV-9500b

The HV-9500b Jet cable should be attached directly to the Jet and the user's controller.

40 Watt

The model 26B951 HV-9500b Jet Valves use a 28-pin CPC-28 connector cable. The table below describes the CPC-28 Jet Valve cable pin assignments.

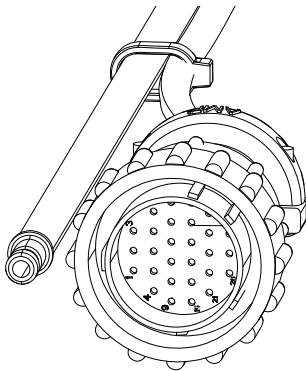


FIG. 5: 40 Watt CPC-28 Jet Cable Harness and Slip-Connect Jet Pressure Connector

20 Watt

The model 26B952 HV-9500b Jet Valves use a CPC-7 cable. The table below describes the CPC-7 cable pin assignments.

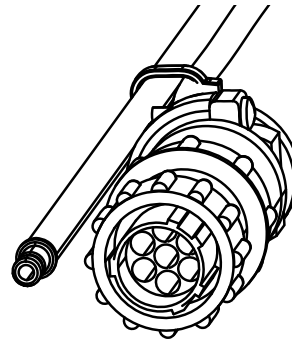


FIG. 6: 20 Watt CPC-7 Jet Cable Harness and Slip-Connect Jet Pressure Connector

Standard CPC-28 Jet Cable Pin Assignments	
Pin	Assignment
1	Solenoid
2	Solenoid
3	---
4	Heater
5	Heater
6	RTD
7	RTD
8-28	---

Optional CPC-7 Jet Cable Pin Assignments	
Pin	Assignment
1	Solenoid
2	Solenoid
3	---
4	Heater
5	Heater
6	RTD
7	RTD

HV-2000b

A 15-pin cable is supplied with the HV-2000b Jet Valve. The table below describes the Jet cable pin assignments.

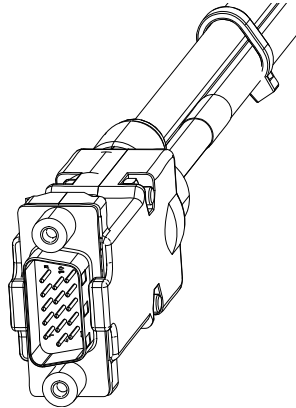


FIG. 7: HD-15 Jet Cable Harness Connector

HD-15 Jet Cable Pin Assignments	
Pin	Assignment
1	---
2	Solenoid
3	---
4	---
5	---
6	---
7	Solenoid
8	---
9	---
10	Heater
11	RTD (internally jumped to pin 15)
12	---
13	Heater
14	RTD
15	RTD (internally jumped to pin 11)

HM-2600b

A CPC-28 cable is supplied with all models of the HM-2600b Jet Valve. The table below describes the Jet cable pin assignments.

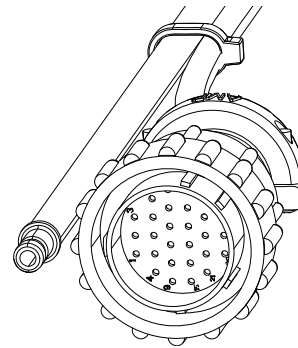


FIG. 8: CPC-28 Jet Cable Harness Connector

CPC-28 Jet Cable Pin Assignments	
Pin	Assignment
1	Solenoid
2	Solenoid
3	---
4	Jet Heater
5	Jet Heater
6	Jet RTD
7	Jet RTD
8	---
9	Hot Melt Heater A
10	Hot Melt Heater A
11	Melter RTD
12	Melter RTD
13	---
14	---
15	Hot Melt Heater B
16	Hot Melt Heater B
17-28	---

Installation

Install the Diaphragm and Nozzle Plate

NOTE: The diaphragm (AH) and nozzle plate (AA) are sold separately.

NOTICE

Make sure the Jet is OPEN before installing the diaphragm (AH) and nozzle plate (AA). Failure to OPEN the Jet before installing the diaphragm (AH) and nozzle plate (AA) can result in damage to the Jet.

1. Set the Jet Pressure to 40 psi (0.28 MPa).
2. OPEN the Jet by pressing the Jet OPEN/CLOSE button (BE) and using the Key Pad Arrows (BF) to toggle the setting to OPEN.
3. After the Jet Valve is OPEN, the diaphragm (AH) can be inserted into the heater block (D). First, align the diaphragm (AH) to the heater block (D) using the rectangular grooves. Gently press the diaphragm (AH) into the rectangular grooves until it is flush with the surface of the heater block (D).

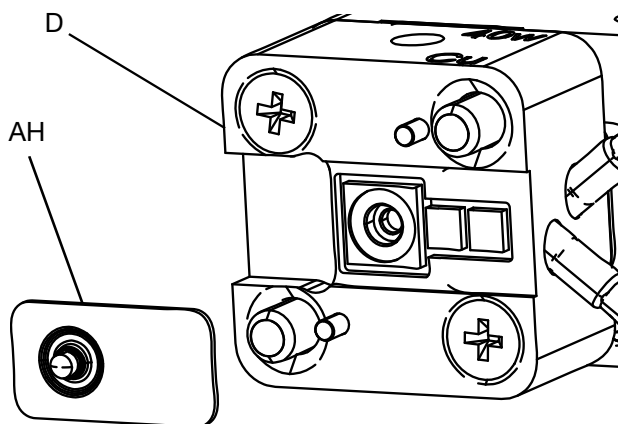


FIG. 9

4. After the diaphragm (AH) is inserted, the nozzle plate (AA) can be attached to the heater block (D). The nozzle plate (AA) has 2 locating pins to guide it onto the heater block (D). Align the nozzle plate (AA) to the locating pins on the heater block (D), with the fluid barb or tilted face seal facing toward the fluid syringe.

NOTE: A nozzle plate o-ring (AG) is required on any nozzle plates (top) that do not have an integrated metal o-ring.

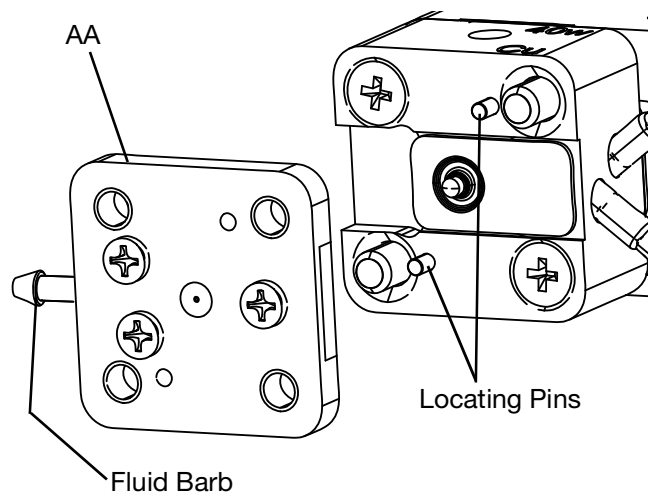


FIG. 10

5. Once the nozzle plate (AA) has been positioned on the heater block (D), tighten the two embedded screws with a 3 mm hex key. An optional torque wrench is available for this purpose. Torque to 2.0 N•m (18 in-lbs).
6. Before installing the fluid syringe, CLOSE the Jet by pressing the Jet OPEN/CLOSE button (BE) and using the Key Pad Arrows (BF) to toggle the setting to CLOSE.

Install Feed Tubes, HV-2000b and HV-9500b

NOTE: Feed tubes and syringe brackets are sold separately. See **Tools and Accessories** on page 28.

Rubber Feed Tube

1. Install the syringe bracket using the two screws included to attach to the Jet.
2. Attach the feed tube to the outlet of the syringe.

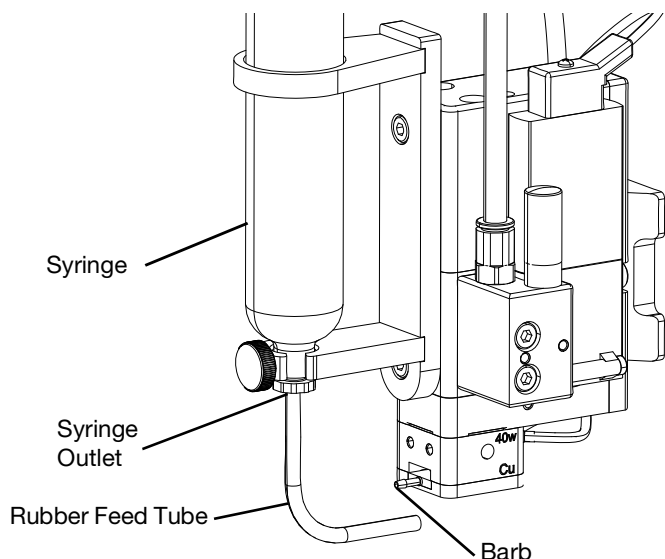


FIG. 11

3. Push the rubber feed tube over the barb of the nozzle plate (AA).
4. Secure the syringe to the bracket by tightening the thumbscrew.

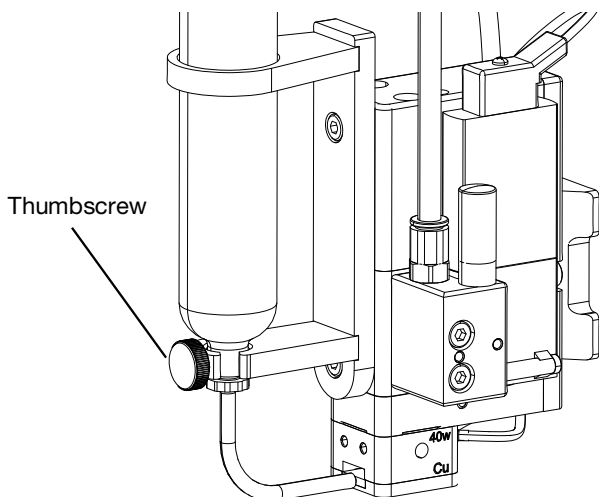


FIG. 12

Metal Feed Tube

NOTE: A tilted face seal nozzle plate (top) (AD) is required when using a metal feed tube.

1. Remove the lower syringe bracket from the syringe bracket.

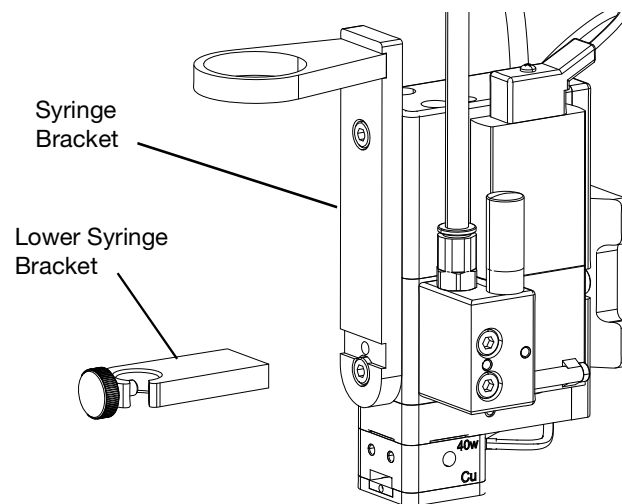


FIG. 13

2. Install the face seal o-ring (included with nozzle plate kit) into the recess on the tilted face seal nozzle plate (top) (AD).

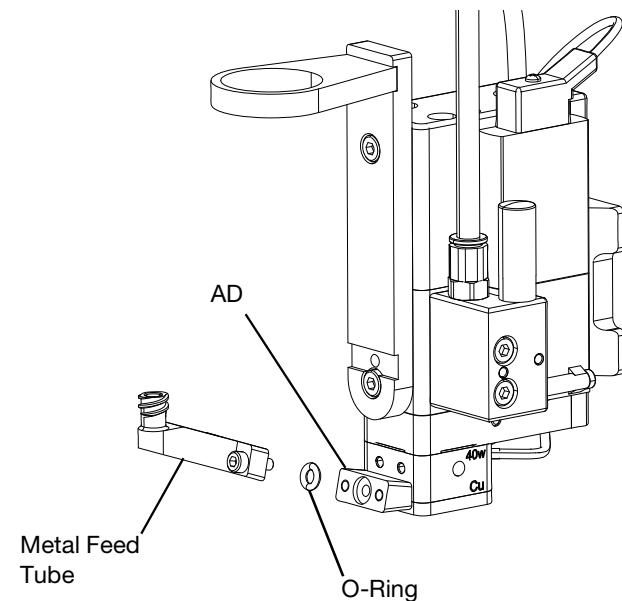


FIG. 14

3. Attach the metal feed tube to the tilted face seal nozzle plate (top) (AD) using the included fasteners. Torque the fasteners to 0.9 N•m (8.0 lbf-in.). An optional torque wrench is available for this purpose.

Installation

4. Install the syringe into the syringe bracket, and fasten the syringe to the metal feed tube.

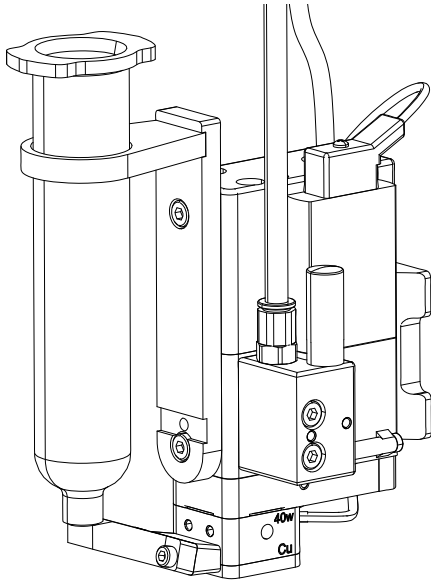


FIG. 15

2. Remove the lower feed tube cover by loosening the thumbscrew.

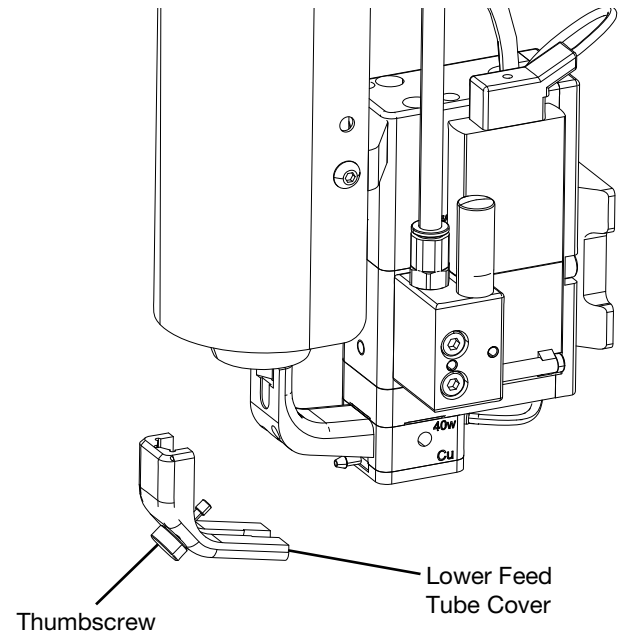


FIG. 17

Install Feed Tubes, HM-2600b

Rubber Feed Tube

1. Remove the receiver head (J) by loosening the thumbscrews.

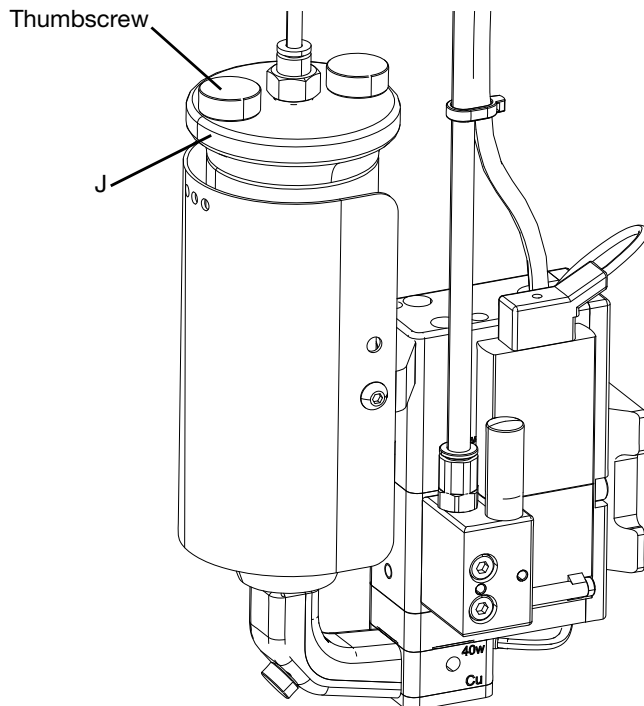


FIG. 16

3. Attach the stainless steel luer fitting to the green rubber feed tube.

NOTE: The 45 mm green rubber feed tube (FT09-2810) is sold separately and includes the stainless steel luer fitting.

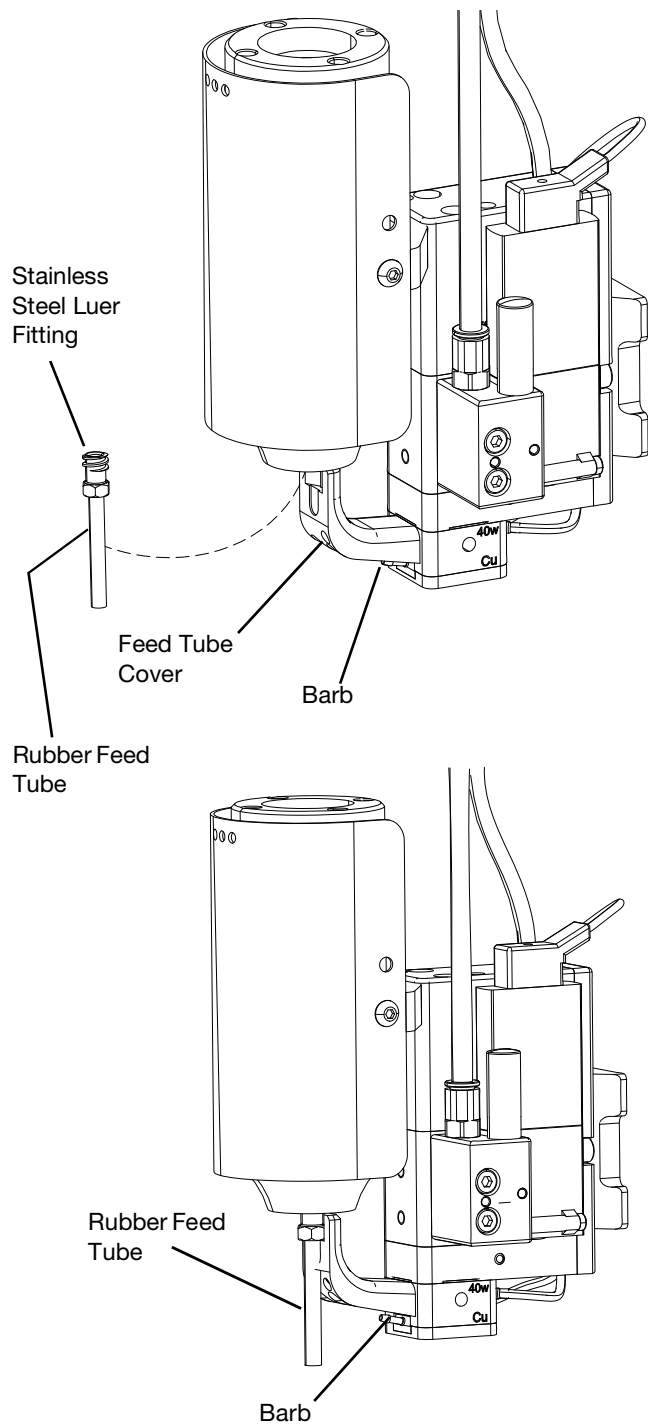


FIG. 18

4. Push the rubber feed tube over the barb of the nozzle plate (AA).
5. Position the assembled rubber feed tube into the luer pocket of the feed tube cover.
6. Reattach the lower feed tube cover and hand-tighten the thumbscrew.
7. Replace the receiver head (J).

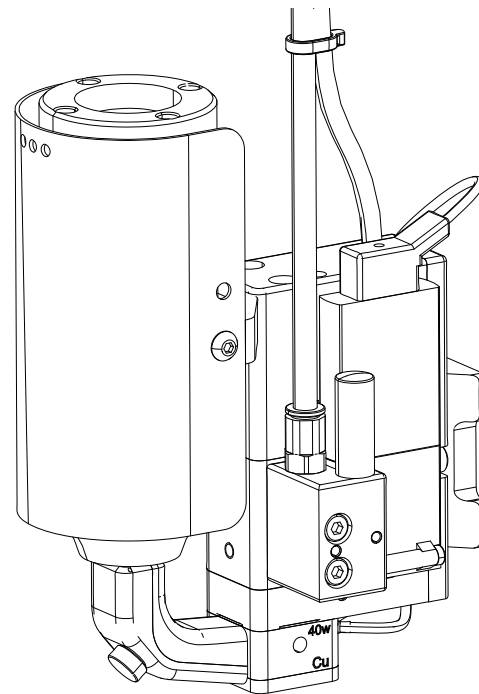


FIG. 19

Metal Feed Tube

NOTE: A tilted face seal nozzle plate (top) (AD) is required when using a metal feed tube.

1. Install the face seal o-ring into the recess on the tilted face seal nozzle plate (top) (AD).

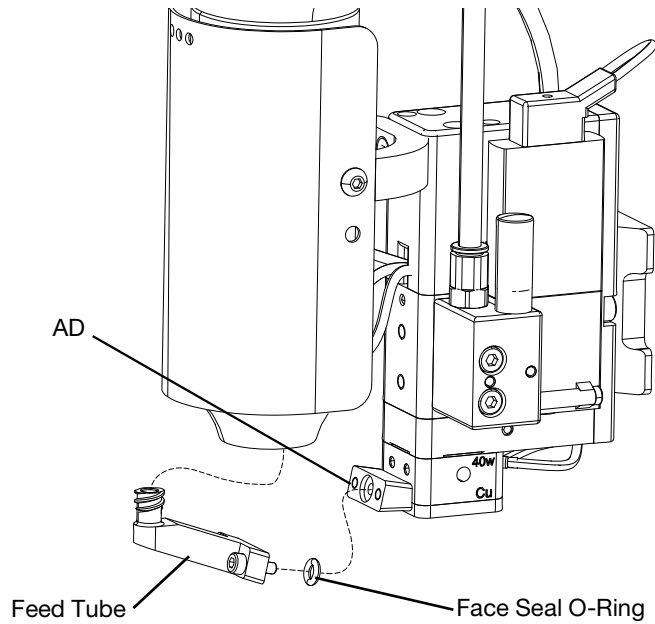


FIG. 20

2. Attach the metal feed tube to the tilted face seal nozzle plate (top) (AD) using the included fasteners. Torque the fasteners to 0.9 N•m (8.0 lbf-in.).

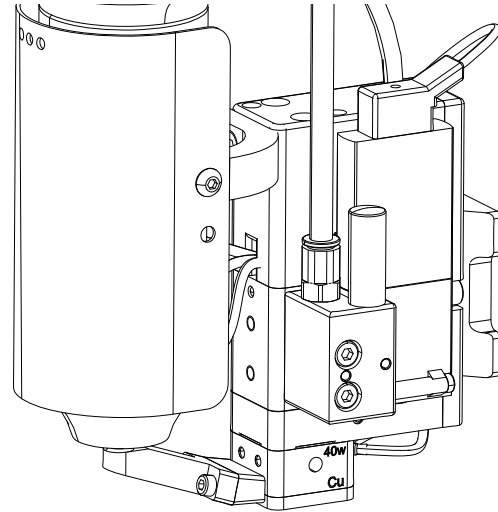


FIG. 21

3. Install the syringe into the syringe bracket, and fasten the syringe to the metal feed tube.
4. Replace the receiver head (J).

Install a PUR Syringe, HM-2600b



FIG. 22

- Turn ON the heaters:
 - Press (INDEX) until Run-Stop (r-S) is displayed on the Present Value (PV) line.
 - Use the arrows to select the **rUn** setting on the Set Value (SV) line.
 - Press (ENTER) to save the change. Heater is ON.
 - Press again to return to the main screen.
 - To preheat the PUR, enter the Jet Set Value and Fluid Set Value by pressing on the corresponding Temp Control panel. For most materials, the following values can be used:
 - Jet (nozzle): 130 °C (266 °F)
 - Fluid (melter): 110 °C (230 °F)
 - Keep the top cap and tip cover ON a fresh syringe of PUR, and insert it into the melter. Wait approximately 10 minutes to allow the PUR material to liquefy.
 - Remove the syringe top cap (save it to seal the used syringe for disposal).
 - Use a clean probe tool to remove the layer of cured material from the top of the melted PUR.
 - Have a waste container handy. Use a probe to lift the syringe and remove it from the melter.
- NOTE:** Hold the syringe as upright as possible to prevent hot melted PUR from spilling out.
-
- Hold the syringe as upright as possible to prevent hot melted PUR from spilling out and causing severe burns.
- Reinstall the top cap. Hold the syringe over the purge container and remove the tip cap, allowing the liquefied material to drip out. If the material does not flow freely, gently squeeze the syringe until material extrudes from the nozzle tip, allowing the liquefied material to flow freely. If the material still does not flow, poke a probe into the tip and clear it out.
 - Put the warmed syringe back in the melter. Push it down firmly to position the syringe tip in the feed tube, and turn it clockwise to engage the luer lock. Do not over-tighten.
 - Attach the receiver head (J) and tighten the thumbscrews.

Operation

Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as splashing fluid, follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing the equipment.

1. Turn the fluid air switch (BA) on the controller to the OFF position. This will relieve air pressure to the receiver head (J) (not included).
2. OPEN the Jet by pressing the Jet OPEN/CLOSE button (BE) and using the key pad arrows (BF) to toggle the setting to OPEN. This will open the Jet and relieve any fluid pressure between the fluid cartridge and nozzle (AE).

Prime the Jet

HV-2000b and HV-9500b

NOTE: The nozzle plate (AA) and diaphragm (AH) must be installed prior to priming the Jet.

1. Ensure the fluid pressure is OFF.
2. Set the fluid pressure to 0 psi.
3. Install the fluid syringe to the syringe bracket.
4. Install the receiver head (J) (not included) onto the fluid syringe, and connect to the fluid air supply.
5. OPEN the Jet.
6. Turn the fluid air pressure ON.
7. Slowly increase the fluid pressure until a steady stream of material is flowing from the nozzle (AE).
8. CLOSE the Jet.

HM-2600b

NOTE: Material must be up to working temperature and completely melted prior to priming the Jet. The nozzle plate (AA), diaphragm (AH), and feed tube must be installed and at temperature prior to priming the Jet.

1. Melt material in the syringe heater to the material manufacturers recommendation.
2. Ensure the nozzle heat is up to temperature according to the material manufacturers recommendation.
3. Ensure the fluid pressure is OFF.
4. Set the fluid pressure to 0 psi.
5. Install the fluid syringe to the syringe bracket.
6. Install the receiver head (J) (not included) onto the fluid syringe, and connect to the fluid air supply.
7. OPEN the Jet.
8. Turn the fluid air pressure ON.
9. Slowly increase the fluid pressure until a steady stream of material is flowing from the nozzle (AE).
10. CLOSE the Jet.

Cleaning the Jet

				
Material inside the applicator can be very hot. To avoid severe burns, wear protective gloves.				

NOTICE
Fluids that could damage the Jet's wetted parts (17-4 Stainless Steel, Tungsten Carbide, Ceramic, FKM, FFKM, and Silicone) should not be dispensed or used for cleaning. See Solvent and Diaphragm Compatibility on page 19 for details.
Not recommended are pre-mixed 2-part adhesives with a short pot life as these can harden in the nozzle plate (AA).
Cyanoacrylates are not compatible.

The nozzle plate (AA) and diaphragm (AH) must be clean and free of debris before installing onto the Jet. If the nozzle plate (AA) is not clean, it could affect the dispensing quality, or in the worst case, could plug the nozzle orifice (AE).

1. With appropriate hand protection in place, remove the nozzle plate (AA) using a 3 mm torque allen wrench. If the diaphragm (AH) has become stuck to the heater block (D), use a probe or an appropriate tool to carefully remove it.
2. Remove the diaphragm (AH) from the nozzle (AE).

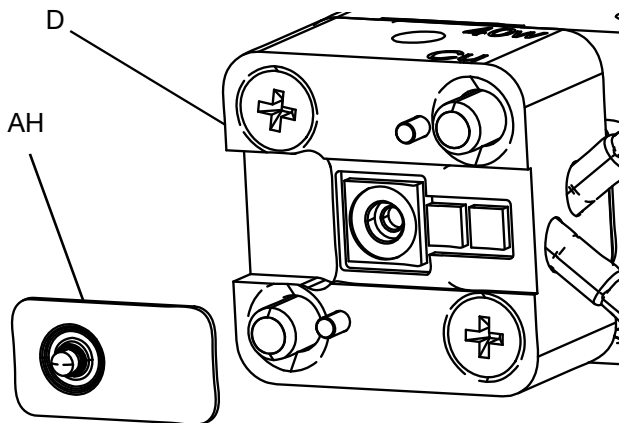


FIG. 23

3. Manually clean the diaphragm ((AH) with a cotton swab or an agitating brush that has been saturated with 91% isopropyl alcohol.
4. When the nozzle (AE) has cooled, set it in a container filled with isopropanol or acetone and place into an ultrasonic cleaner for 30 minutes.
5. Remove the nozzle (AE) from the ultrasonic cleaner and hand clean using appropriately sized nozzle cleaning wires and micro drills. Using a microscope or eye loupe, visually inspect the nozzle (AE) to verify cleanliness. The nozzle (AE) must be clean to ensure process success.

Solvent and Diaphragm Compatibility

NOTE: See **Diaphragm** on page 29 for a list of all available diaphragms.

Diaphragms are available in three different materials: silicone, FKM (fluoroelastomers), and FFKM (perfluoroelastomers). In general, if the diaphragm material is incompatible with a solvent, the diaphragm will exhibit slight swelling around the metal insert. If swelling occurs, the performance of the Jet will be adversely affected.

Use the following table as a guide for selecting an appropriate cleaning solvent.

Chemical	Silicone	FKM	FFKM
Acetone	✗	✗	✓
Ethanol	✓	✗	✓
Isopropanol	✓	✓	✓
Methyl Ethyl Ketone	✗	✗	✓
Toluene	✗	✓	✓
Xylene	✗	✓	✓

Recycling and Disposal

End of Product Life

At the end of a product's useful life, recycle it in a responsible manner.

Troubleshooting

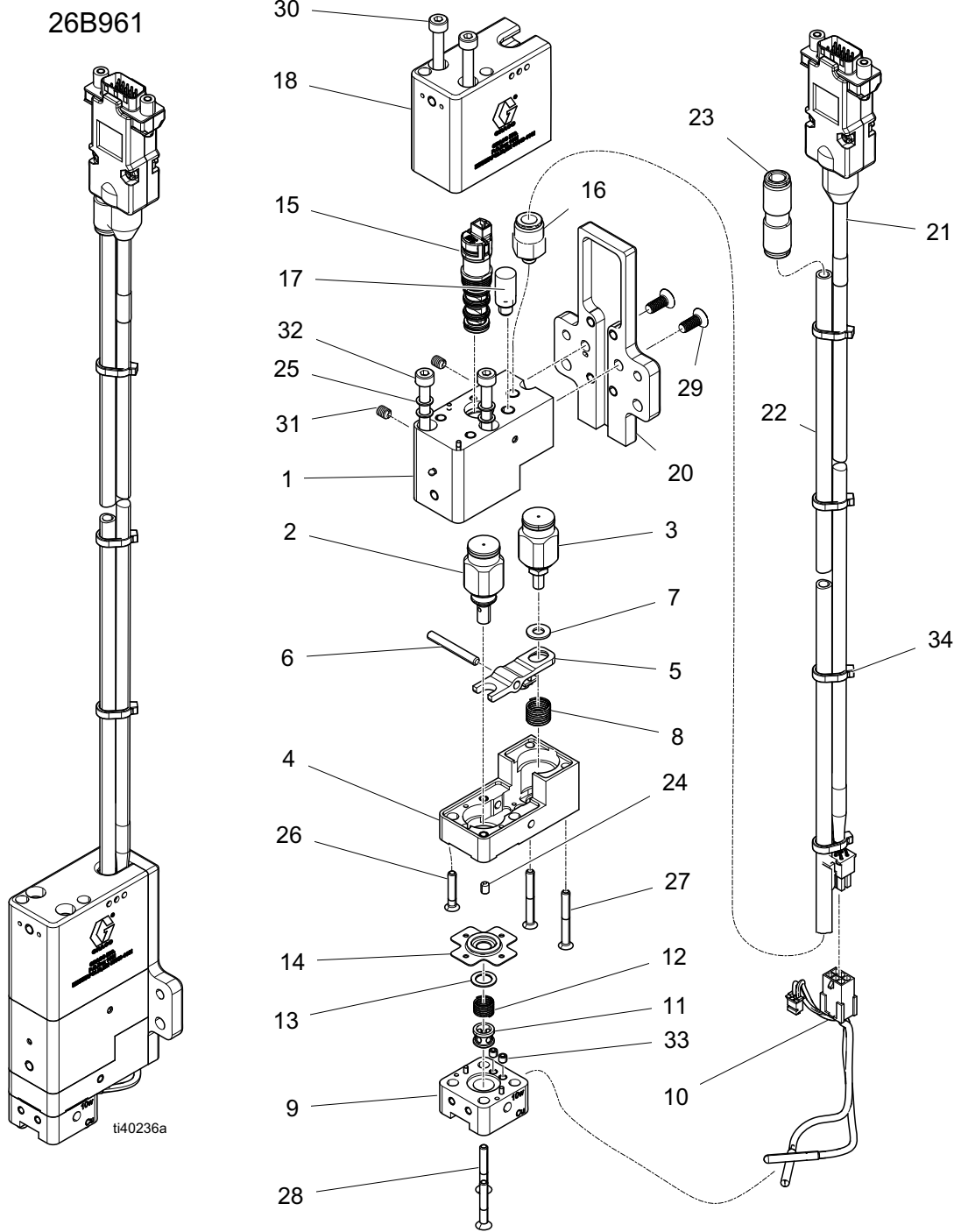


1. Follow **Pressure Relief Procedure** on page 18 before checking or repairing the Jet.
2. Check all possible problems and causes before disassembling the Jet.

Problem	Cause	Solution
No material coming out of Jet nozzle (AE).	Clogged nozzle (AE)	Clean nozzle (AE).
	Inadequate fluid pressure	Verify fluid pressure is ON.
		Verify the fluid pressure is high enough.
	Inadequate Jet pressure	Verify Jet pressure is ON.
		Verify the Jet pressure is high enough.
	Faulty solenoid	Replace the solenoid.
	Fluid nozzle heat is not ON	Turn the nozzle heat ON and verify the heater timer settings.
Fluid nozzle heat is not high enough	Verify the correct heat temperature is set.	
Material leaking from weep hole	No diaphragm (AH) installed	Verify the diaphragm (AH) is installed.
	Damaged diaphragm (AH)	Replace the diaphragm (AH).
Material leaking from the nozzle tip	Jet is OPEN	Verify the Jet is CLOSED.
	Jet pressure is too low	Verify the Jet pressure is above 40 psi (0.28 MPa).
	Fluid pressure is too high	Decrease the fluid pressure.

Parts

HV-2000b



HV-2000b

Ref.	Part	Description	Qty.
1	---	MANIFOLD, hv-2000b, clear	1
2	60-2266	CYLINDER, assembly, hammer	1
3*	---	CYLINDER, assembly, lever	1
4†	---	SPACER, precision, assembly	1
5	03-2281-00	LEVER	1
6†	---	PIN, pivot, lever	1
7*	---	WASHER, flat, m4, nylon, black	1
8	60-2103	SPRING, comp, .36odx.30id, 5.8lb/in	1
9❖	---	BLOCK, htr, cu, 10w	1
10❖	---	HARNESS, heater, jet, 10w	1
11❖	---	BEARING, pin, diaphragm	1
12❖	60-2102	SPRING, comp, .296odx.246id, 5.4lb/	1
13❖	---	WASHER, flat, #12, nylon, black	1
14❖	03-2261-00	SEAL, heater	1
15	60-2030	SOLENOID, main air	1
16	132159	FITTING, straight, M5, 6mm tubing	1
17	133421	MUFFLER, solenoid, M5	1
18★	---	COVER, HV-2000b, blue	1
20	---	PLATE, back, HV-2000b	1
21	06-4152-00	HARNESS, jet, 15p	1

Ref.	Part	Description	Qty.
22	---	TUBE, 6 mm od x 4 mm id, black	1
23	130364	FITTING, tube, 6 mm x 6 mm	1
24†	---	SCREW, set, M3-0.5 x 4, flat pt, ss	1
25	130355	WASHER, flat	4
26†	133496	SCREW, fhms, M3-0.5 x 14, ss	1
27†	130358	SCREW, fhms, M3-0.5 x 25, ss	2
28❖	130733	SCREW, fhms, M3-0.5 x 20, ss	2
29	127344	SCREW, fhscs, M4-0.7 x 10G, 316 ss	2
30★	130377	SCREW, shc, M4-0.7 x 40mm, ss	2
31	130360	SCREW, shs, M4-0.7 x 5, cup, pt, ss	2
32	130357	SCREW, shc, M4-0.7 x 55, ss	2
33❖	---	SCREW, shs, M3-0.5 x 3, flat pt, ss	2
34❖	84/0021/89	TIE, wrap	4

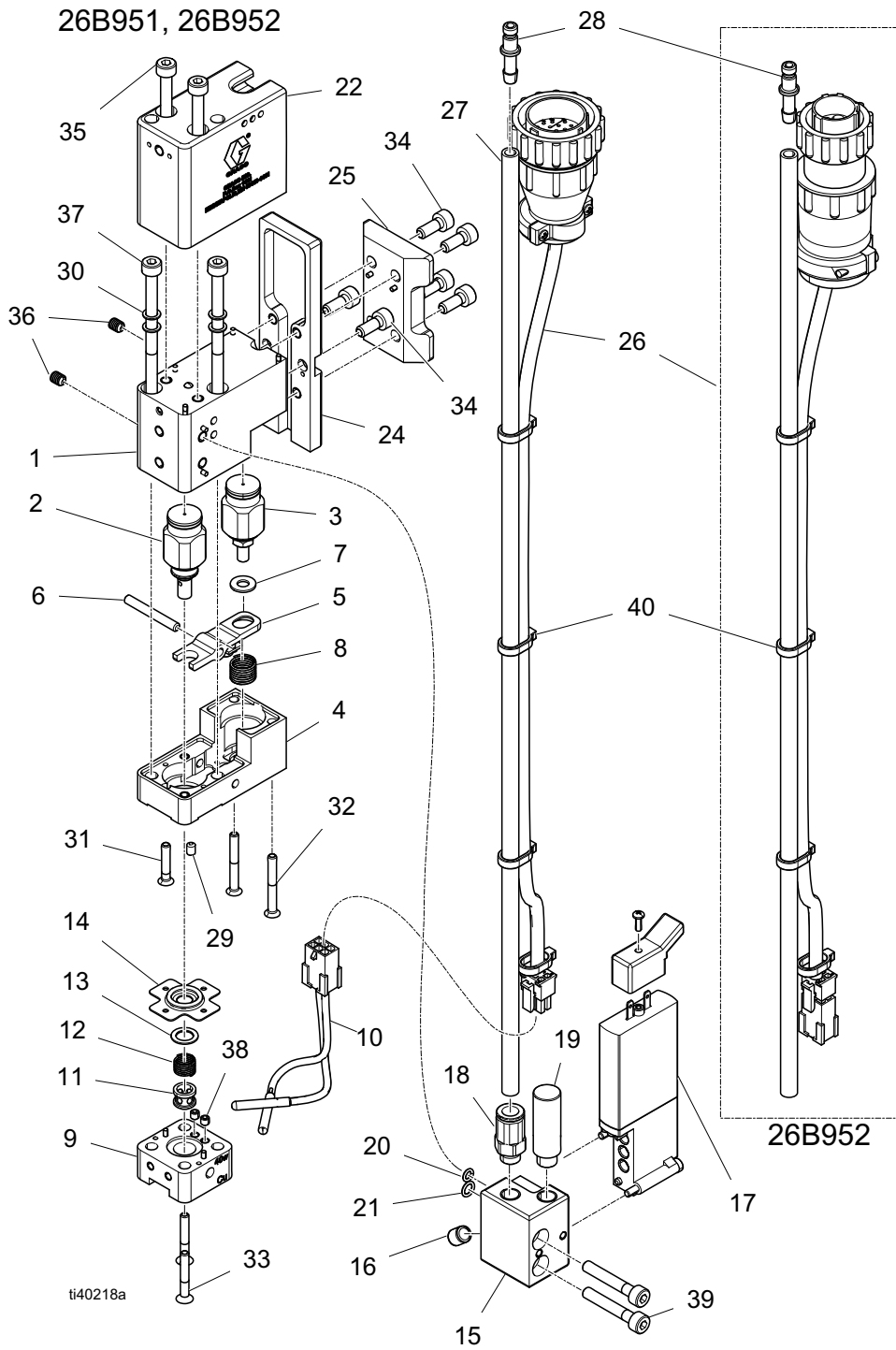
* Included in kit 60-2020.

❖ Included in kit 60-2349.

† Included in kit 60-2354.

★ Included in kit 09-4162-00.

HV-9500b



HV-9500b

Ref.	Part	Description	Qty.
1	---	MANIFOLD, hv-9500b, clear	1
2	60-2266	CYLINDER, assembly, hammer	1
3*	---	CYLINDER, assembly, lever	1
4❖	---	SPACER, precision, assembly	1
5	03-2281-00	LEVER	1
6❖	---	PIN, pivot, lever	1
7*	---	WASHER, flat, m4, nylon, black	1
8	60-2103	SPRING, comp	1
9†‡	---	BLOCK, htr, cu, 40w	1
	---	BLOCK, htr, cu, 20w	1
10†‡	---	HARNES, heater, jet, 40w	1
11†‡	---	BEARING, pin, diaphragm	1
12†‡	60-2102	SPRING, comp	1
13†‡	---	WASHER, flat, #12, nylon, black	1
14†‡	03-2261-00	SEAL, heater	1
15★	---	BLOCK, mount, valve	1
16★	133361	SCREW, shs	1
17★	60-2344	VALVE, power, 3/2way, fkm	1
18★	133358	FITTING, straight, m7, 6mm tubing	1
19★	127978	MUFFLER, solenoid, m7	1
20★	133359	O-RING	1
21★	133360	O-RING	1
22❁	---	COVER, top, cobalt blue	1
24	---	PLATE, back, HV-9500b	1
25	60-2310	BRACKET, dovetail, HV-9500b	1

Ref.	Part	Description	Qty.
26	06-1040-00	HARNES, jet, 40w	1
	06-1049-00	HARNES, jet, 20w	1
27★	---	TUBE	1.5
28★	---	FITTING, barb	1
29❖	---	SCREW, set, m3-0.5x4, flat pt, sst	1
30	130355	WASHER, flat, #6, ss	4
31❖	133496	SCREW, fhms, m3-0.5x14, ss	1
32❖	130358	SCREW, fhms, m3-0.5x25, ss	2
33†‡	130733	SCREW, fhms, m3-0.5x20, ss	2
34	131805	SCREW, shc, m4-0.7x10, ss	6
35❁	130377	SCREW, shc, m4-0.7x40mm, ss	2
36	130360	SCREW, shs, m4-0.7x5, cup pt, ss	2
37	130357	SCREW, shc, m4-0.7x55, ss	2
38†‡	---	SCREW, shs, m3-0.5x3, flat pt, ss	2
39★	131958	SCREW, shc, m4-0.7x25, ss	2
40★†	84/0021/89	TIE, wrap, 4', blk, nyl, perm	4
	‡		

* Included in kit 60-2020.

❖ Included in kit 60-2354.

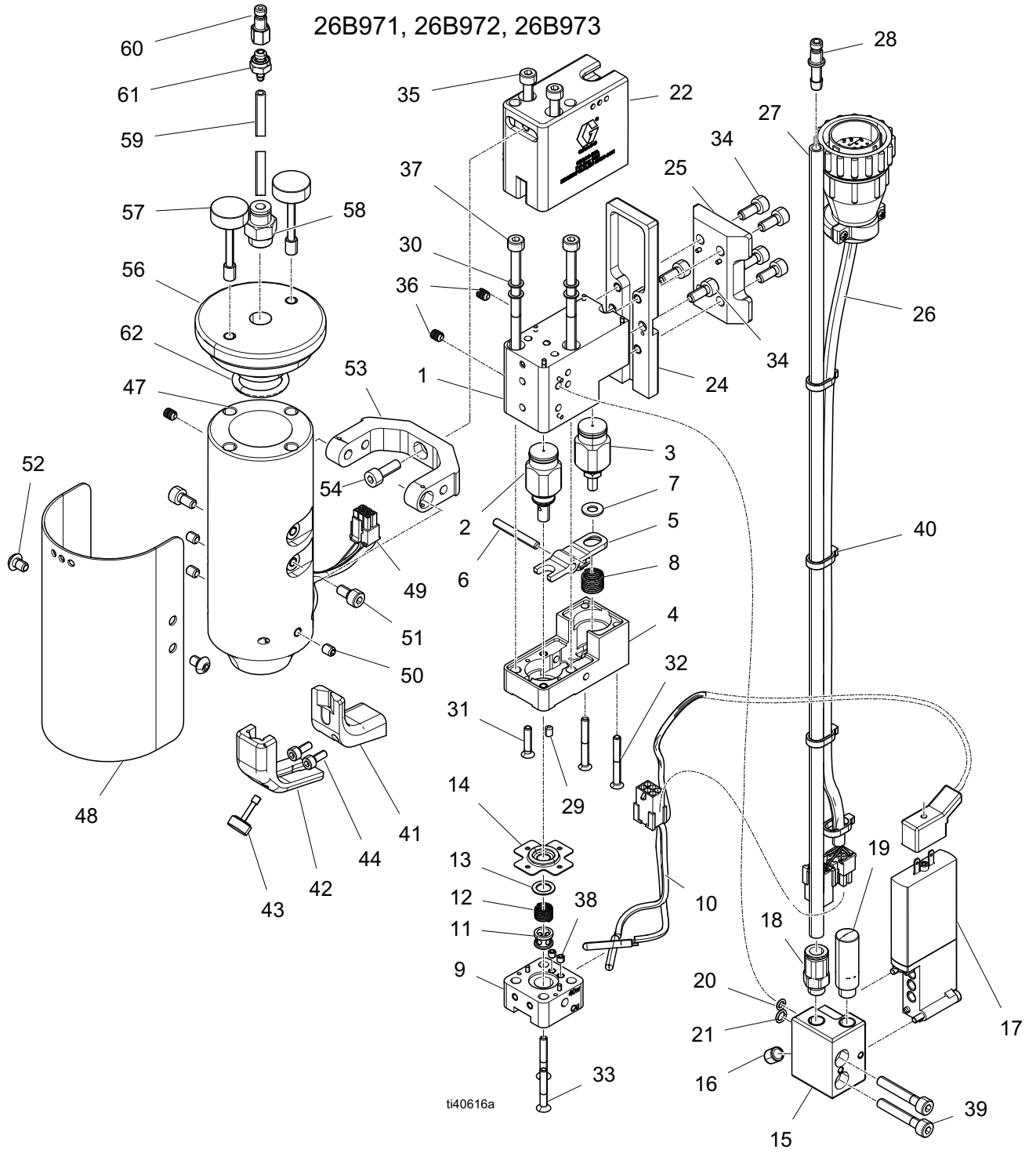
† Included in kit 60-2347 (40w).

‡ Included in kit 60-2348 (20w).

★ Included in kit 60-2345.

❁ Included in kit 09-4162-04.

HM-2600b



HM-2600b

Ref.	Part	Description	Qty.		
			26B971	26B972	26B973
1	---	MANIFOLD, HV-9500B, clear	1	1	1
2	60-2266	CYLINDER, assembly, hammer	1	1	1
3*	---	CYLINDER, assembly, lever	1	1	1
4❖	---	SPACER, precision, assembly	1	1	1
5	03-2281-00	LEVER	1	1	1
6❖	---	PIN, pivot, lever	1	1	1
7*	---	WASHER, flat, M4, nylon, black	1	1	1
8	60-2103	SPRING, comp, .36 od X .30 id, 5.8 lb/in	1	1	1
9†	---	BLOCK, heater, cu, 40w	1	1	1
10†	---	HARNESS, heater, jet, 40w	1	1	1
11†	---	BEARING, pin, diaphragm	1	1	1
12†	60-2102	SPRING, comp, .296 od X .246 id, 5.4lb	1	1	1
13†	---	WASHER, flat, #12, nylon, black	1	1	1
14†	03-2261-00	SEAL, heater	1	1	1
15‡	---	BLOCK, mount, valve	1	1	1
16‡	133361	SCREW, shs, M6-1 X 6mm, flat pt, 18-8	1	1	1
17‡	60-2344	VALVE, power, 3/2 way, fkm	1	1	1
18‡	133358	FITTING, straight, M7, 6mm tubing	1	1	1
19‡	127978	MUFFLER, solenoid, M7	1	1	1
20‡	133359	O-RING, 3mm id X 5mm od, vit	1	1	1
21‡	133360	O-RING, 4mm id X 6mm od, vit	1	1	1
22❁	---	COVER, jet, blank	1	1	1
24	---	PLATE, back, HV-9500b	1	1	1
25	60-2310	BRACKET, dovetail, HV-9500b	1	1	1
26	06-1040-00	HARNESS, jet, 40w	1	1	1
27‡	---	TUBE, 6mm od X 4mm id, pu, blk	1.5	1.5	1.5
28‡	---	FITTING, barb	1	1	1
29❖	---	SCREW, set, M3-0.5X4, flat pt, sst	1	1	1
30	130355	WASHER, flat, #6, ss	4	4	4
31❖	133496	SCREW, fhms, M3-0.5X14, ss	1	1	1
32❖	130358	SCREW, fhms, M3-0.5X25, ss	2	2	2
33†	130733	SCREW, fhms, M3-0.5X20, ss	2	2	2
34	131805	SCREW, shc, M4-0.7X10, ss	6	6	6
35❁	130377	SCREW, shc, M4-0.7X40mm, ss	2	2	2
36	130360	SCREW, shs, M4-0.7X5, cup pt, ss	2	2	2
37	130357	SCREW, shc, M4-0.7X55, ss	2	2	2
38†	---	SCREW, shs, M3-0.5X3, flat pt, ss	2	2	2
39‡	131958	SCREW, shc, M4-0.7X25, ss	2	2	2
40†‡	84/0021/89	TIE, wrap, 4", blk, nyl, perm	4	4	4
41★	---	COVER, feed tube, top, 2mm	---	---	1
42★	---	COVER, feed tube, bottom, 2mm	---	---	1
43★	---	SCREW, captive, M3	---	---	1
44★	---	SCREW, SHC, M3-0.5X8, ss	---	---	2
45	130454	ADAPTER, luer, barb, 1/8" id, sst	---	---	1
46	---	TUBE, assy, FKM, grn, 45MM	---	---	5
47	---	BASE, melter, 30ml	1	1	1

Ref.	Part	Description	Qty.		
			26B971	26B972	26B973
48	---	COVER, melter, 30ml	1	1	1
49	06-1042-00	HARNESS, heater, melter, 40W	1	1	1
50	131948	SCREW, set, M4-0.7X5, flat pt, ss	3	3	3
51	130747	SCREW, shc, M4X0.7X8mm, sst	2	2	2
52	---	SCREW, bhc, M4-0.7X6, SS	2	2	2
53	---	BRACKET, melter, 30m	1	1	---
	---	BRACKET, melter, 30ml, pft	---	---	1
54	---	SCREW, cap, socket head	1	1	1
56	03-2134-01	CAP, syringe, hm	1	1	1
57	03-2260-00	SCREW, captive, M5	2	2	2
58	114263	FITTING, connector, male	1	1	1
59	057253	TUBE, pu, 4mm OD X 2.4mm id, clr	0.833	0.833	0.833
60	130778	FITTING, qd, M, M5	1	1	1
61	130779	FITTING, barb, M, 3/32id, M5	1	1	1
62	---	O-RING, fkn, 18mm id X 3mm wide	1	1	1

* Included in kit 60-2020.

❖ Included in kit 60-2354.

† Included in kit 60-2347 (40w).

‡ Included in kit 60-2345.

★ Included in kit 60-2356.

✿ Included in kit 09-4173-00.

Tools and Accessories

Pivot Pin Tool, 60-2355

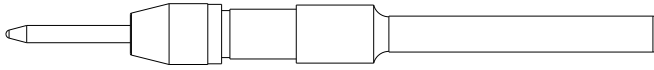


FIG. 24

Part	Description	Qty.
60-2355	TOOL, spacer, precision	1

Hammer Gap Tool, 09-4115-00

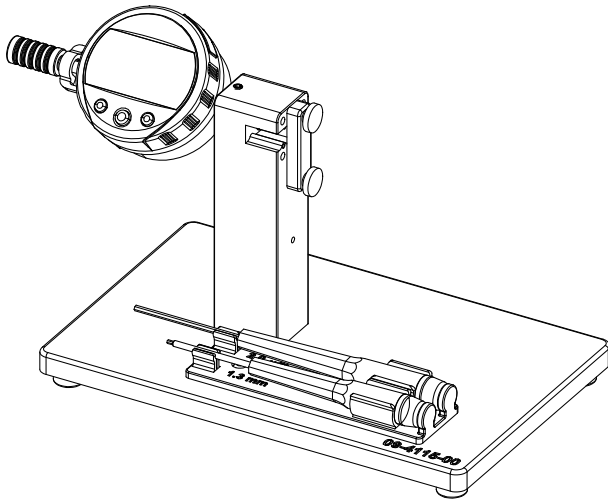


FIG. 25

Part	Description	Qty.
09-4115-00	KIT, tool, gap set	1

Nozzle Plate Torque Tool, 2.0 N•m, 60-2331

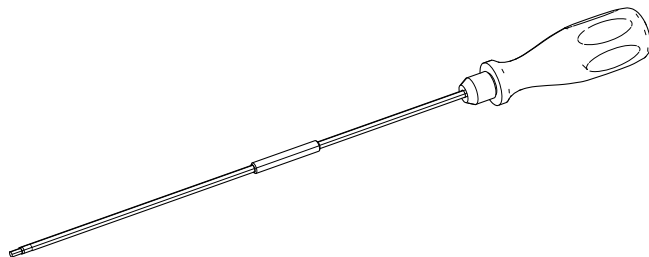


FIG. 26

Part	Description	Qty.
60-2331	KIT, tool, hex, 330 mm, 2.0 N•m	1

Metal Feed Tube Torque Tool 0.9 N•m, 60-2324

Used with metal feed tubes only.

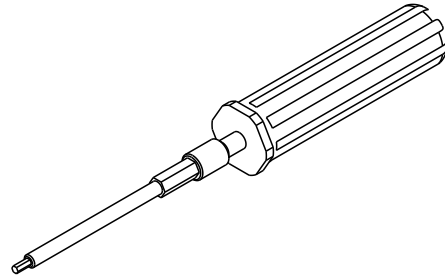


FIG. 27

Part	Description	Qty.
60-2324	KIT, tool, torque, metal feed tube	1

Solenoid Torque Tool, 60-2302

Used with HV-2000b Jet Valves only.

Part	Description	Qty.
60-2302	TOOL, torque, solenoid	1

Mating Dovetail Mount, 60-2311

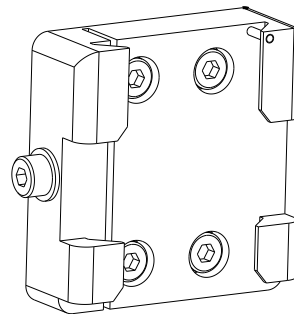
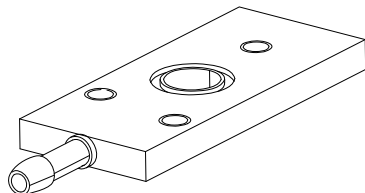


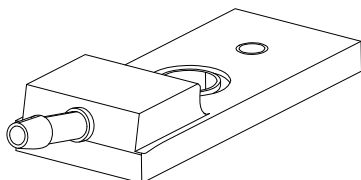
FIG. 28

Part	Description	Qty.
60-2311	KIT, clamp, dovetail	1

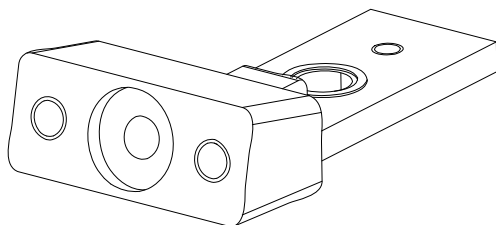
Nozzle Plate (Top)



03-2059-00 Shown



03-2264-00 Shown



03-4082-00 Shown

FIG. 29

Part	Type	Seal	Qty.
03-2059-00	Flat, 1/16 in. barb	O-Ring	1
03-2267-00	Flat, 2 mm barb	O-Ring	1
03-2264-00	Tilted, 1/16 in. barb	O-Ring	1
03-3066-00	Tilted, 1/8 in. barb	O-Ring	1
03-4082-00	Tilted, face seal	Integrated Metal O-Ring	1
03-4172-00	Tilted, 2 mm barb	Integrated Metal O-Ring	1
03-4180-00	Tilted, 1/16 in. barb	Integrated Metal O-Ring	1

Nozzle Plate (Bottom)

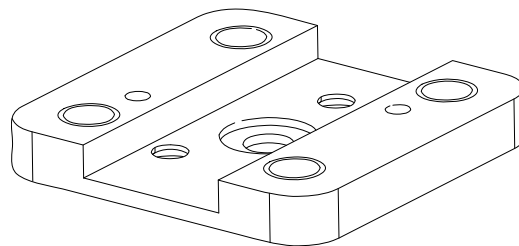


FIG. 30

Part	Type	Protective Height	Qty.
03-2058-00C	Flat, Countersink	NA	1
03-4090-03	Protective	3 mm	1
03-4090-06	Protective	6 mm	1

Diaphragm

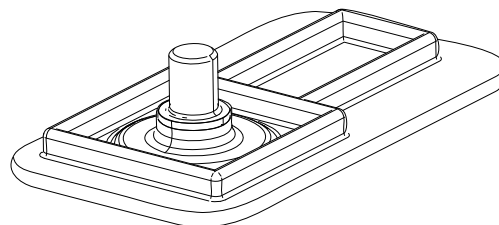


FIG. 31

Part	Size	Material	Diaphragm Shape	Qty.
AD09-2023	Ø 1.6 mm ball	Silicone	Flat	5
AD09-2026		FFKM		
AD09-2029		Silicone	Contoured	
AD09-2027		FKM		
AD09-2028		FFKM		
DK-111	Ø 3.0 mm ball	Silicone	Collared	5
DK-121		FKM		
DK-131		FFKM		
AD09-2033		Silicone	Flat	
AD09-2035		Silicone		
AD09-2034	FKM			
DK-211	Ø 3.0 mm ball	Silicone	Collared	5
DK-221		FKM		
DK-231		FFKM		

Tilted Face Seal O-Ring



FIG. 32

Part	Material	Qty.
NP09-2856	FKM	25

Nozzle Plate O-Ring



FIG. 33

Part	Material	Qty.
NP09-2820	Silicone	10
NP09-2854	Silicone	100
NP09-2850	FKM	10
NP09-2852	FKM	100

Nozzle Insert O-Ring

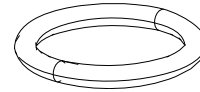


FIG. 34

Part	Material	Qty.
NP09-2830	Silicone	10
NP09-2855	Silicone	100
NP09-2851	FKM	10
NP09-2853	FKM	100

Nozzle Plate Screws, 60-2300

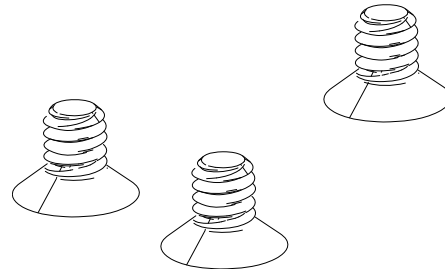


FIG. 35

Part	Description	Package Qty.
60-2300	KIT, screws, nozzle plate	100

Syringe Brackets

60-2336

Used with bulk feed tube assembly.

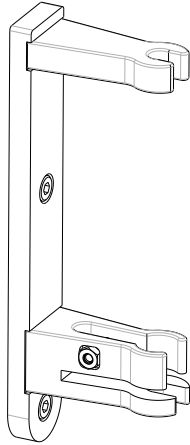


FIG. 36

Part	Description	Qty.
60-2336	KIT, mount, bulk feed	1

60-2341

Used with 6 oz rubber or metal feed tube.

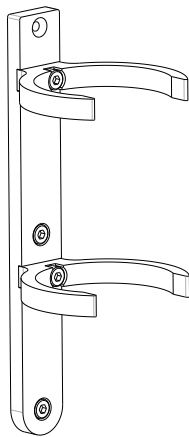


FIG. 37

Part	Description	Qty.
60-2341	KIT, mount, 6 oz	1

60-2342

Used with rubber or metal feed tube options.

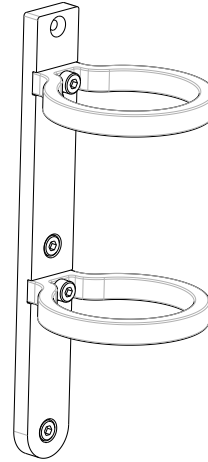


FIG. 38

Part	Description	Qty.
60-2342	KIT, mount, 150 cc	1

60-2360

Used with 35 mm rubber feed tube.

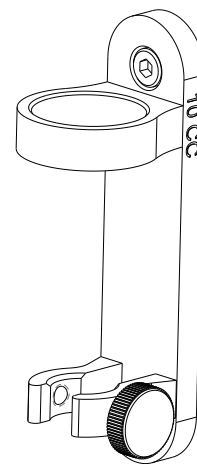


FIG. 39

Part	Description	Qty.
60-2360	KIT, mount, 10 cc	1

60-2361

Used with 35 mm rubber feed tube.

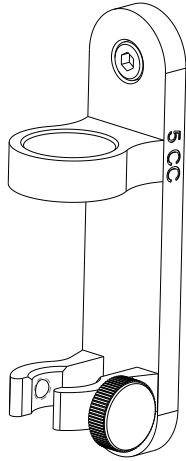


FIG. 40

Part	Description	Qty.
60-2361	KIT, mount, 5 cc	1

60-2335

Used with 55 mm rubber or metal feed tube.

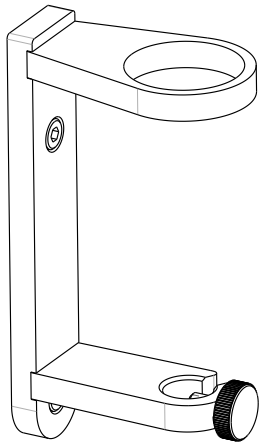


FIG. 41

Part	Description	Qty.
60-2335	KIT, mount, 30/55 cc	1

Feed Tubes

Metal Feed Tubes

Part	Description
09-4083-00	6 oz. metal feed tube
09-4130-00	Luer fitting metal feed tube
09-4151-00	Bulk feed metal feed tube
09-4084-01	1/8 npt female, metal feed tube
09-4084-02	G 1/8 female, metal feed tube

Rubber Feed Tubes

Part	Color	Material	Length	Qty.
FT09-2802	Black	Silicone	35 mm	50
FT09-2803	Clear	Tygon	35 mm	50
FT09-2811	Black	Silicone	55 mm	50
FT09-2809	Clear	Tygon	55 mm	50
FT09-2810*	Green	FKM	45 mm	50

* Used with HM-2600b.

Bulk Feed Tube Assembly, 09-3067-00

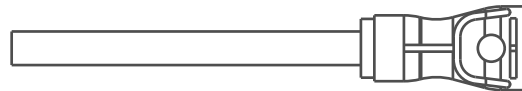


FIG. 42

Part	Description	Qty.
09-3067-00	TUBE, bulk feed, assembly	1

Feed Tube Cover Kit, 60-2357

Used with 55 mm rubber feed tubes.

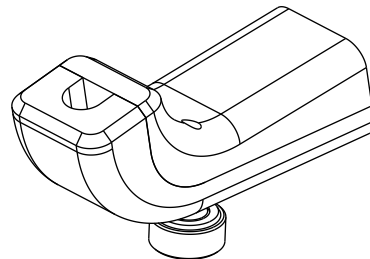


FIG. 43

Part	Description	Qty.
60-2357	KIT, cover, feed tube	1

Nozzles

Capillary Nozzles

Part	Material	Type	Ball Size	Length	Orifice (µm)
NK-21-050	Tungsten Carbide	Tapered Capillary	Ø 1.6 mm	3 mm	50
NK-21-075					75
NK-21-100					100
NK-21-125					125
NK-21-150					150
NK-21-200					200
NK-25-050	Tungsten Carbide and Ceramic	Tapered Capillary (Tungsten Carbide Hub with Ceramic Capillary)	Ø 3.0 mm	6 mm	50
NK-25-075					75
NK-25-100					100
NK-25-125					125
NK-25-150					150
NK-25-200					200
NK-26-050	Tungsten Carbide and Ceramic	Tapered Capillary (Tungsten Carbide Hub with Ceramic Capillary)	Ø 3.0 mm	10 mm	50
NK-26-075					75
NK-26-100					100
NK-26-125					125
NK-26-150					150
NK-26-200					200
NK-31-300	Tungsten Carbide	Tapered Capillary	Ø 3.0 mm	6 mm	300
NK-31-400					400
NK-31-500					500
NK-31-600					600
NK-32-125	Tungsten Carbide	Tapered Capillary	Ø 1.6 mm	6 mm	125
NK-32-200					200

Flat Nozzles

Part	Material	Type	Ball Size	Length	Orifice (µm)
NK-34-050	Tungsten Carbide	Flat	Ø 1.6 mm	Flat	50
NK-34-064					64
NK-34-075					75
NK-34-100					100
NK-34-125					125
NK-34-150					150
NK-34-200					200
NK-34-300					300
NK-35-064	Tungsten Carbide	Flat	Ø 3.0 mm	Flat	64
NK-35-075					75
NK-35-100					100
NK-35-125					125
NK-35-150					150
NK-35-200					200
NK-35-300					300
NK-35-400					400
NK-35-500					500
NK-35-600					600
NK-35-700	700				
NK-38-050	Ceramic	Flat	Ø 1.6 mm	Flat	50
NK-38-075					75
NK-38-100					100
NK-38-125					125
NK-38-150					150
NK-38-200					200
NK-39-064	Ceramic	Flat	Ø 3.0 mm	Flat	64
NK-39-075					75
NK-39-125					125
NK-39-200					200

Dimensions

Shown below are the mechanical dimensions of the Advanjet Jet Valves.

- The Advanjet Jet Valves can be mounted to a variety of robots when X-Y-Z motion is desired. It can also be mounted rigidly over a transporting mechanism like a conveyor belt or shuttle table.
- The Advanjet Jet Valves provide a dovetail rear mounting plate for rigid attachment to a robot's XYZ stage. An optional mating dovetail mount is available from Graco (P/N 60-2311). See **Tools and Accessories** on page 28.
- The dispense tip relative to the mounting holes and the rear mounting plate dimensions are shown in the following figures. It is highly recommended that any mounting scheme allow for vertical adjustment so the dispensing tip position relative to the dispensing surface can be easily adjusted for different nozzle lengths.

HV-2000b Jet

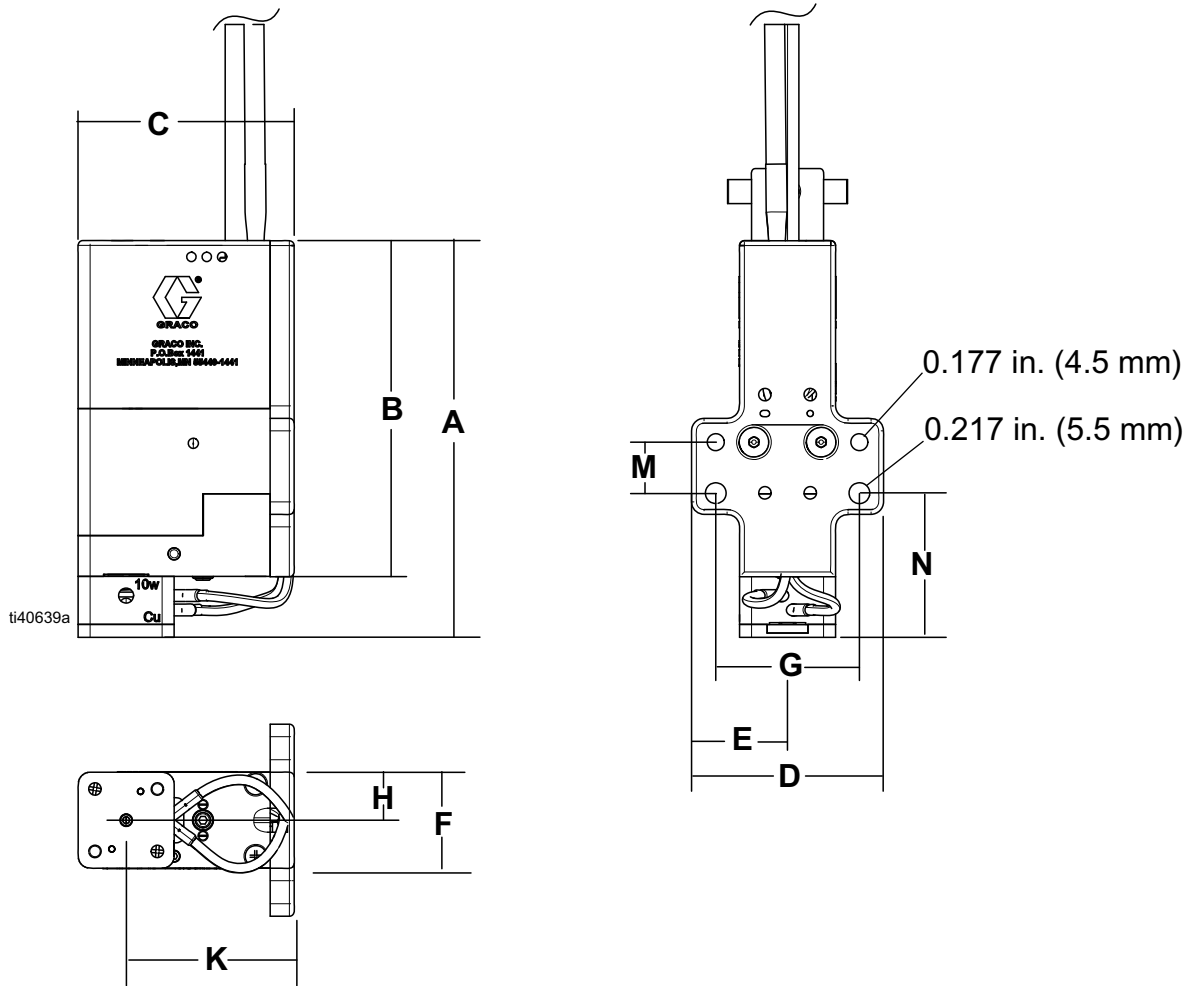


FIG. 44: HV-2000b Dimensions

Dimensions	
A	4.13 in. (104.9 mm)
B	3.50 in. (88.9 mm)
C	2.25 in. (57.2 mm)
D	2.00 in. (50.8 mm)
E	1.00 in. (25.4 mm)
F	1.00 in. (25.4 mm)

Dimensions	
G	1.50 in. (38.0 mm)
H	0.50 in. (12.7 mm)
K	1.75 in. (44.5 mm)
M	0.53 in. (13.5 mm)
N	1.50 in. (38.1 mm)

HV-9500b Jet

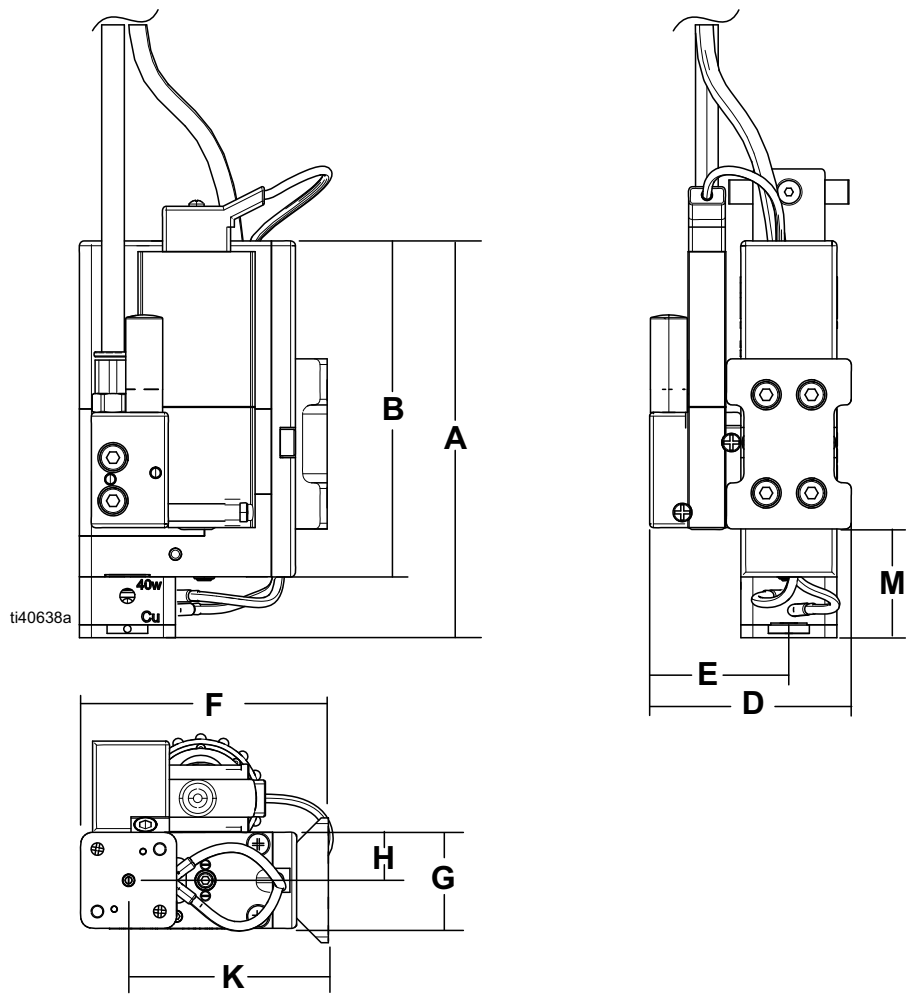


FIG. 45: HV-9500b Dimensions

	Dimensions
A	4.13 in. (104.9 mm)
B	3.50 in. (88.9 mm)
D	2.10 in. (53.3 mm)
E	1.45 in. (36.8 mm)
F	2.58 in. (65.5 mm)

	Dimensions
G	1.00 in. (25.4 mm)
H	0.50 in. (12.7 mm)
K	2.08 in. (52.8 mm)
M	1.14 in. (29.0 mm)

HM-2600b Jet

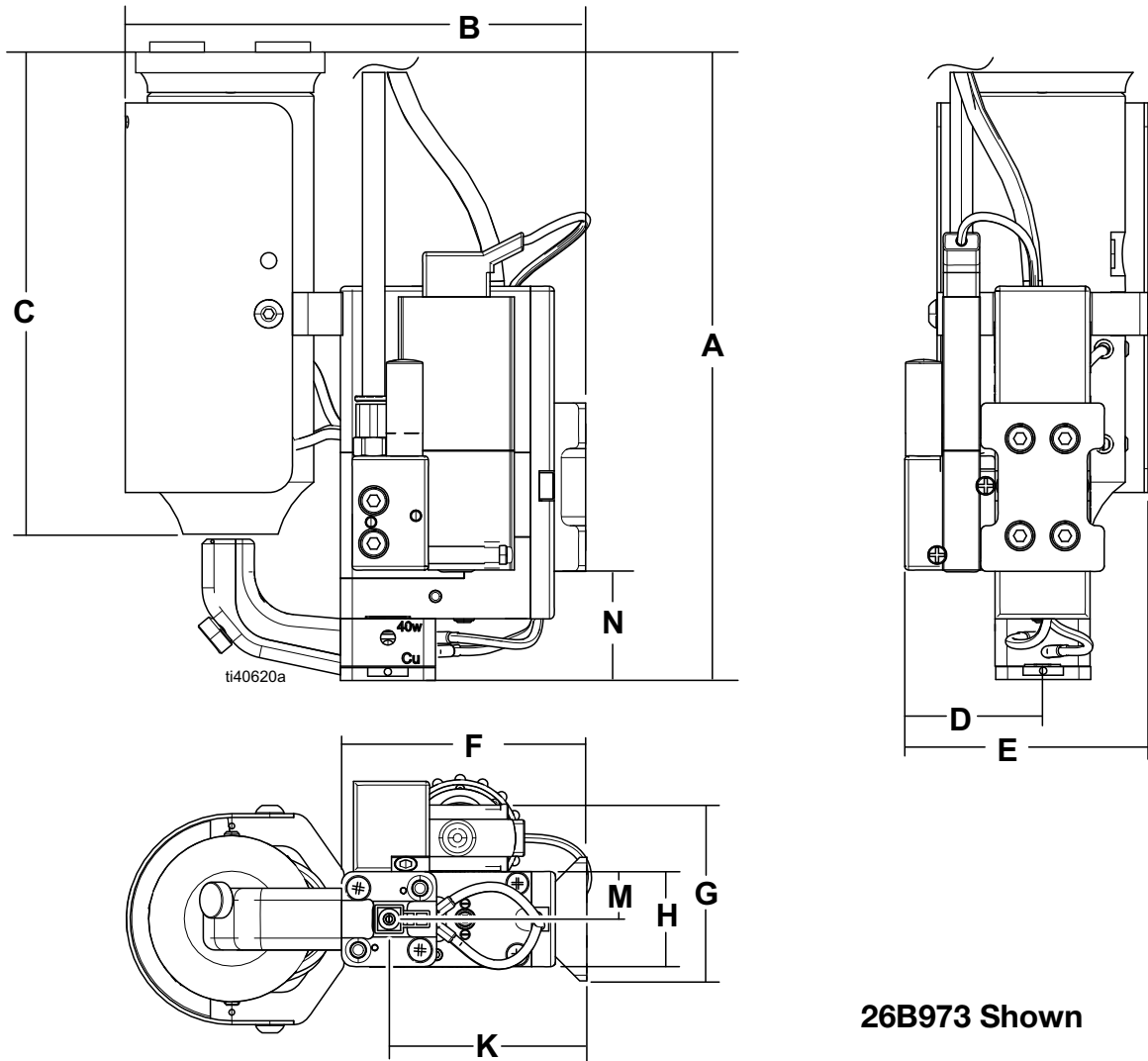


FIG. 46: HM-2600b Dimensions

Dimensions	
A	6.75 in. (171.5 mm)
B	4.84 in. (122.9 mm)
C	5.22 in. (132.6 mm)
D	1.45 in. (36.8 mm)
E	2.56 in. (65.0 mm)
F	2.58 in. (65.5 mm)

Dimensions	
G	2.10 in. (53.3 mm)
H	1.00 in. (25.4 mm)
K	2.08 in. (52.8 mm)
M	0.50 in. (12.7 mm)
N	1.13 in. (28.7 mm)

Technical Specifications

HV-2000b Jet

HV-2000b		
	US	Metric
Viscosity range	1-400k mPa-s (cp)	
Speed	Up to 300 drops/second	
Fluid syringes	5 cc, 10 cc, 30 cc, 55 cc, 150 cc, 6 oz	
Maximum fluid pressure	0.41 MPa (60 psi) Max	
Maximum nozzle heater temperature	158 °F	70 °C
Operating temperature	50 °F to 122 °F	10 °C to 50 °C
Controller interface	RS-232 and LCD Display with Keypad	
Wetted parts	Tungsten Carbide, Stainless Steel, Ceramic, FKM, Silicone, FFKM, Tygon	
Jet Pressure		
Minimum	0.27 MPa (40 psi)	
Maximum	0.62 MPa (90 psi)	
Size (with mounting bracket)		
Width	2.00 in.	50.8 mm
Height	4.13 in.	104.9 mm
Depth	2.25 in.	57.2 mm
Weight	0.94 lb	427.5 grams
Noise (dBa)		
Operating Noise	79.4 dBa at 40 psi (225 kPa)	
<i>Sound pressure measured 4.9 feet (1.5 meter) from applicator.</i>		
<i>Sound power measured per EN ISO 3746.</i>		

HV-9500b Jet

HV-9500b		
	US	Metric
Viscosity range	1-400k mPa-s (cp)	
Speed	Up to 250 drops/second	
Fluid syringes	5 cc, 10 cc, 30 cc, 55 cc, 150 cc, 6 oz	
Maximum fluid pressure	0.41 MPa (60 psi) Max	
Maximum nozzle heater temperature	158 °F	70 °C
Operating temperature	50 °F to 122 °F	10 °C to 50 °C
Controller interface	RS-232 and LCD Display with Keypad	
Wetted parts	Tungsten Carbide, Stainless Steel, Ceramic, FKM, Silicone, FFKM, Tygon	
Jet Pressure		
Minimum	0.27 MPa (40 psi)	
Maximum	0.62 MPa (90 psi)	
Size (including mounting bracket)		
Width	2.10 in.	53.3 mm
Height	4.13 in.	104.9 mm
Depth	2.58 in.	65.5 mm
Weight	1.15 lb	523 grams
Noise (dBa)		
Operating Noise	79.4 dBa at 40 psi (225 kPa)	
<i>Sound pressure measured 4.9 feet (1.5 meter) from applicator.</i>		
<i>Sound power measured per EN ISO 3746.</i>		

HM-2600b Jet

HM-2600b		
	US	Metric
Viscosity range	Up to 1,000,000 mPa·s (cp)	
Speed	Up to 250 drops/second	
Fluid syringe	30cc high temperature	
Maximum fluid pressure	0.41 MPa (60 psi)	
Maximum nozzle heater temperature	302 °F	150 °C
Maximum Fluid heater temperature (depends on maximum syringe temperature)	302 °F	150 °C
Operating temperature	50 °F to 122 °F	10 °C to 50 °C
Controller interface	RS-232 and LCD Display with Keypad	
Wetted parts	Stainless Steel, Tungsten Carbide, Ceramic, FKM, FFKM, Silicone, Tygon	
Jet Pressure		
Minimum	0.27 MPa (40 psi)	
Maximum	0.62 MPa (90 psi)	
Size (including mounting bracket)		
Width	2.56 in.	65.0 mm
Height	6.75 in.	171.5 mm
Depth	4.46 in.	113.4 mm
Weight	2.33 lb	1.06 kg
Noise (dBa)		
Operating Noise	79.4 dBa at 40 psi (225 kPa)	
<i>Sound pressure measured 4.9 feet (1.5 meter) from applicator.</i>		
<i>Sound power measured per EN ISO 3746.</i>		

California Proposition 65

CALIFORNIA RESIDENTS

 **WARNING:** Cancer and reproductive harm – www.P65warnings.ca.gov.

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Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

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Sealant and Adhesive Dispensing Equipment

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For patent information, see www.graco.com/patents.

TO PLACE AN ORDER, contact your Graco distributor, go to www.graco.com, or call to identify the nearest distributor.

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If calling from outside the USA: 0-1-330-966-3000

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Original instructions. This manual contains English. MM 3A8600

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