



## Pro-Meter® A2K D2K H2K

### System Components

#### COMPONENTS REQUIRED FOR INSTALLATION

- Preassembled Pro-meter A2K D2K H2K System
- Clear air tubing 0.25 inch (6.35 mm)
- Cups for collecting material during bleed procedure - approx. 3.0 oz. (85.05 g)
- Dispense valve assembly

#### TOOLS REQUIRED FOR INSTALLATION

- Ratcheting wrenches
- Adjustable wrenches
- Box cutter - to cut crate tie straps
- Hammer - to open crate
- Metric hex keys
- Metric socket set
- Pry bar - to open crate

# Safety



**WARNING:**

- Safety glasses are to be worn at all times while installing, servicing, operating, or observing equipment. The sudden release of air or fluid can cause damage to eyes.
- Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.
- Relieve system air pressure, material pressure, and disconnect power prior to servicing Pro-Meter A2K D2K H2K components.
- Clean any material that has spilled. Be sure to follow all applicable safety and environmental guidelines when cleaning spilled material.



**WARNING:** Any material injected into flesh can cause severe injury or death. Keep body parts away from material discharge ports. If injection occurs, seek medical attention immediately.



**WARNING:** Operating faulty electrostatic equipment is hazardous and can cause electrocution, fire, or explosion. Make resistance checks part of your periodic maintenance program. If you receive even a slight electrical shock or notice static sparking or arcing, shut down all electrical or electrostatic equipment immediately. Do not restart the equipment until the problem has been identified and corrected.



**WARNING:** Relieve air and material pressure when equipment is not in use for prolonged periods of time. Do not allow pressure to remain static when equipment is idle as this may cause material to pack and harden.

# Setup and Calibration

## System Unpack

1. Attach suitable lifting device to dispense system eye bolts.  
**WARNING:** Ensure lifting device will safely support dispense system weight of 246 lbs. (111.6 kg).
2. M12 x 4 mounting holes are provided for installing the dispense system to a table, bench, floor, etc. utilizing customer supplied fasteners. Tighten mounting fasteners to specification in accordance with manufacturer's recommendations.

## Initial System Startup and Bleed Procedure

**WARNING:** In addition to the procedures detailed here, refer to the calibration/adjustment procedures in this manual and the *Operator's Card* prior to operating the Pro-Meter A2K D2K H2K.

1. Supply electrical power to Pro-Meter A2K D2K H2K. Refer to the *Electrical Circuit Drawing* for additional information.
2. Supply at least 80-100 psi (5.516-6.895 bar) of clean shop air to the air manifold ports. Refer to the *Pneumatic Circuit Drawing* and *Customer Product Manual* for additional information.  
 **CAUTION:** Utilize a desiccant, or equivalent drier, to ensure shop air is free of moisture.
3. Connect dispense system material supply lines to inlet/outlet valves. Refer to the *Fluid Circuit Drawing* and *Customer Product Manual* for additional information.
4. On systems equipped with a lead/lag plate, properly adjust the lead/lag plate. Refer to *Lead/Lag Adjustment* for additional information.
5. Ensure the bleed valves attached to the seal cartridge assemblies are closed.
6. Log into the HMI Control Panel. Refer to *HMI Control Panel Login* below for login information.
7. Proceed to *Level 2 Setup* HMI Control Panel Screen.
8. Select the *Level 1 Setup* push button to proceed to the *Level 1 Setup Menu* HMI Control Panel Screen.
9. Select the *Valve Setup* push button to proceed to the *Valve Setup* HMI Control Panel Screen.
10. Open the inlet valves by enabling the *High Vol Inlet* and *Low Vol Inlet* push buttons.
11. Ensure the outlet valves are closed.  
**NOTE:** The *High/Low Vol Outlets* push button should not be illuminated on the *Valve Setup* HMI Control Panel Screen.

12. Supply air pressure to the dispense system. Supply 80-100 psi (0.55-0.69 MPa, 5.52-6.89 bar).



**CAUTION:** Utilize a desiccant, or equivalent drier, to ensure shop air is free of moisture.

13. Connect clear tubing to bleed valve ports.



**CAUTION:** Tubing utilized should be 0.25 inch (6.35 mm).

14. Open bleed valves and allow them to remain open until air free material emerges.

**WARNING:** Utilize a suitable container to collect material bled from bleed valves.

15. Close bleed valves.

16. Select the *High/Low Vol Outlets* push button on the *Valve Setup* HMI Control Panel Screen to open the outlet valves.
  17. Select the *Level 1 Setup* push button on the *Valve Setup* HMI Control Panel Screen.
  18. From the *Level 1 Setup Menu*, select the *Setup Login* push button.
  19. From the *Setup Login* HMI Control Panel Screen, proceed to the *Main Menu* HMI Control Panel Screen.
  20. Click on the *Cycle Control* push button to proceed to the *Cycle Control* HMI Control Panel Screen.
  21. Enable the *Manual Shot* push button and then select the *Manual Dispense* push button to dispense material.
-  **WARNING:** Utilize a suitable container to collect material dispensed.
- NOTE:** The electric foot switch may also be utilized to dispense material.
22. Repeat steps 2 through 18 (as necessary) until material is air free.
  23. From the *Cycle Control Screen*, proceed to the *Main Menu* HMI Control Panel Screen.
  24. Select *Setup Login* push button to proceed to *Setup Login* HMI Control Panel Screen.
  25. Select the *Logout* push button to log out of the HMI Control Panel.

### **HMI Control Panel Login**

1. Proceed to *Main Menu* HMI Control Panel Screen.
2. Select *Setup Login* push button to proceed to *Setup Login* HMI Control Panel Screen.
3. Log into the HMI Control Panel using the default user name and password. The default user name is `S`. The default password is `2`.

**NOTE:**

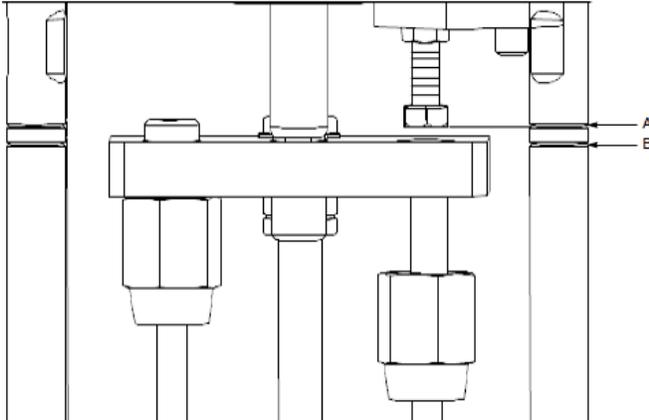
- Proceed to *Main Menu* HMI Control Panel Screen.
- Select *Setup Login* to proceed to *Setup Login* HMI Control Panel Screen.
- Select *Level 2 Setup* to proceed to *Level 2 Setup* HMI Control Panel Screen.

### Lead/Lag Adjustment (A2K and H2K Dispense Systems)

On systems equipped with a lag plate, it is imperative to correctly adjust the lead/lag bolt. Lead/lag adjustment is needed in instances where there is an extreme difference in viscosity regarding high and low volume materials. Adjustment of lead/lag optimizes the mix of material.



**CAUTION:** Ensure the lead/lag bolt is correctly adjusted prior to operating the dispense system. The carriage can come to rest at hard stop position (A) or home position (B). Adjusting the lead/lag bolt below the carriage hard stop position can cause severe damage to system components as the carriage will contact the lead/lag bolt.



### Pressure Sensor Calibration

Pressure sensors are individually calibrated and serial numbered at the factory.



**CAUTION:** If a pressure sensor requires replacement, pressure sensor calibration information has to be entered into the control panel.

1. Obtain factory serial number from pressure sensor.  
**NOTE:** The serial number is stamped on the pressure sensor.
2. Utilize calibration record as a basis to enter control panel calibration data.
3. Turn control panel OFF.
4. Install new pressure sensor.
5. Connect pressure sensor harness connector to the control panel.
6. Turn control panel ON.
7. Ensure internal meter pressure is at or near zero psi.
8. Log into HMI Control Panel. Refer to *HMI Control Panel Login* above for HMI Control Panel login information.
9. Proceed to *Pressure Sensor Calibration HMI Control Panel Screen*.
10. Enter the *0 psi Cal* value and the *Full Scale psi* value from the calibration sheet.
11. Adjust the *Zero Offset* until the *Scaled Pressure* reads zero.

### Proximity Switch Calibration (H2K Dispense System)

Calibration of the proximity switch is required to ensure recognition of carriage home position. Refer to the data captured from the HMI Setup Screens to calibrate the proximity switch. Refer to *Recording System Configuration Data* for additional information.



### **Recording System Configuration Data**

**CAUTION:** It is imperative to record default system settings prior to servicing certain system components. To prevent component damage and minimize downtime after replacing components, take photos of the HMI Setup Screens while the equipment is fully operational. The data reflected by the screen shots can be utilized to restore key system settings. Refer to the *HMI Screen Description Manual* for an overview of HMI Control Panel Screens.

Key system data to capture will appear on the following HMI Control Panel Screens:

- Interlock Setup
- Level 1 Setup Menu
- Level 2 Setup Menu
- Meter Setup
- Miscellaneous Pressure Setup
- Position Setup
- Pressure Limits Setup
- Pressure Sensor Calibration
- Purge Setup
- Shot Sequence Setup
- Shot Setup
- System Setup
- Valve Setup

### **Stroke Adjustment**

It may be necessary to adjust the stroke of the inlet and outlet valves. Loosen the stroke adjustment lock nuts and make fine adjustments to the stroke adjustment bolt until the desired shot pattern is achieved. Refer to the *Customer Product Manual* for an illustrative view of the stroke adjustment lock nut and bolt.



**CAUTION:** Be careful not to fully tighten stroke bolt as this may impact the operation of the valve.

## Troubleshooting

These troubleshooting procedures cover only the most common problems. If you cannot solve a problem with the information given here, contact your local Nordson® representative for help.

Problem	Possible Cause	Corrective Action
<b>Meter will not cycle</b>	Blocked material path	Ensure material is passing through all hoses.
	Dispense valve not opening	Ensure air is on. Inspect dispense valve for binding. Inspect dispense valve piston for binding. Inspect dispense valve piston O-ring for wear or damage. Ensure there is sufficient air pressure. Ensure dispense valve solenoid is functioning properly. Ensure stroke adjustment bolt is not fully tightened.
	Inlet/outlet valve not opening	Inspect valve for needle/ball binding. Inspect dispense valve piston for binding. Inspect dispense valve piston O-ring for wear or damage. Ensure there is sufficient air pressure. Ensure solenoid valve is functioning properly.
	Linear servo actuator not cycling	Inspect the power and controller connections are properly fastened. Be sure there is sufficient power to cycle the linear servo actuator shaft. Reference the linear servo actuator equipment literature provided with this manual.
	Pressure sensor reading low pressure	Inspect pressure sensor calibration. Inspect position of the pressure sensor to ensure the to ensure the part was installed properly. Ensure the pressure sensor is properly functioning. Be sure there are no leaks from the seal cartridge assembly.
	Seal cartridge assembly malfunction	Inspect for sufficient supply pressure. Inspect metering rod for binding. Inspect bearing for binding. Inspect metering rod for wear and debris.
	Supply equipment not cycling	Ensure there is sufficient air pressure. Reference supply equipment literature.
<b>Meter leakage</b>	Loose fitting	Isolate leak and tighten fitting.
	Material metering portion failure	Ensure all fittings and gauges are properly tightened.
	Seal failure	Tighten packing nut on pump. Ensure there is sufficient lubricant in the wet cup. Replace seal(s), if necessary.
	Valve seal failure	Replace seal (s). Replace or repair scored or damaged needle, if necessary. Replace or repair scored or damaged sealing face, if necessary.

Issued 06/17

Original copyright date 2017. Nordson and the Nordson logo All other are registered trademarks of Nordson Corporation.

Pro-Meter is a registered trademark of Nordson Corporation.

All other trademarks are the property of their respective owners.

