

iFlow™ Air Flow Verification Kit



Description

The iFlow Air Flow Verification Kit is used with the Nordson iControl system to test the iFlow digital flow modules for correct flow-rate and atomizing air flow, and to adjust the precision regulators that supply air to the iFlow modules.

The kit consists of a manometer, 4-mm tubing, and an orifice assembly consisting of a 4-mm tube connector, tee, precision orifice, and 8-mm quick disconnect adapter.

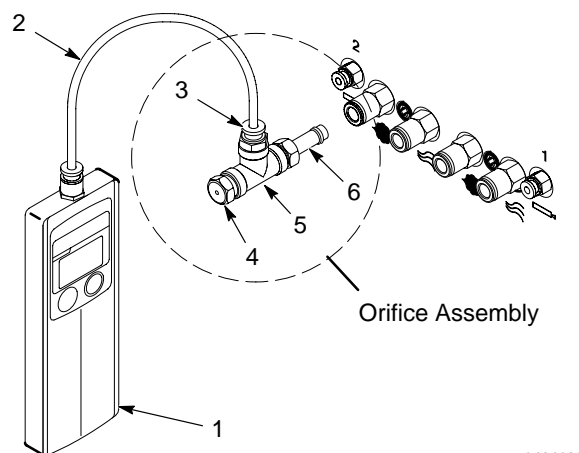
Air Flow Test Procedure

Use this procedure to test flow-rate and atomizing air flows.

1. Disconnect the air tubing from the flow-rate or atomizing air fitting and plug in the orifice assembly.
2. Turn on the manometer. If desired, change the scale to read bar instead of psi. Refer to manometer documentation for instructions on how to do this.
3. Open the Gun Control/Status screen for the gun being tested.
4. Touch the Trigger Mode button to toggle to Manual mode. 
5. Set the desired air flow.
6. Touch the Manual Trigger button to trigger the gun on. 
7. Note the manometer reading.
8. Refer to the *Flow to Pressure* chart on the following page. Compare the manometer reading with the min/max acceptable range for the air flow.

If the manometer reading is within the acceptable range then the digital flow module is working correctly.

If the reading is not within the acceptable range refer to the *Troubleshooting* procedures in your *iControl Integrated Control System* manual.



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Figure 1 Air Flow Test

1. Manometer
2. Clear tubing (4-mm)
3. 4-mm tube connector
4. Orifice
5. Tee
6. 8-mm quick disconnect adapter



CAUTION: Handle the orifice assembly with care. Store the orifice assembly in its own container and avoid dropping it. Rough handling can damage the orifice and result in inaccurate pressure readings. If the orifice is enlarged by as little as 0.001 in. the resulting pressure readings at the manometer will be low. This might lead you to believe that the iFlow module is not within specifications.

Table 1 Flow to Pressure Chart

Air Flow Setting m ³ /hr (scfm)	Manometer Reading Minimum bar (psi)	Manometer Reading Maximum bar (psi)
0.00	0	0
0.85 (0.50)	0.1 (1)	0.2 (3)
1.25 (0.75)	0.1 (2)	0.3 (5)
1.65 (1.00)	0.3 (5)	0.5 (7)
2.10 (1.25)	0.5 (8)	0.7 (10)
2.50 (1.50)	0.8 (11)	1.0 (14)
2.95 (1.75)	1.0 (14)	1.2 (17)
3.35 (2.00)	1.2 (18)	1.5 (21)
3.75 (2.25)	1.4 (21)	1.7 (24)
4.20 (2.50)	1.7 (25)	1.9 (28)
4.60 (2.75)	2.0 (29)	2.2 (32)
5.05 (3.00)	2.3 (33)	2.5 (36)
5.50 (3.25)	2.5 (37)	2.8 (40)
5.95 (3.50)	2.8 (41)	3.0 (44)
6.35 (3.75)	3.0 (45)	3.3 (48)
6.80 (4.00)	3.4 (49)	3.6 (52)

Air Pressure Adjustment Procedure

Use this procedure to adjust the precision regulators that supply air to the iFlow modules when replacing a regulator or installing an upgrade kit to add more spray guns to a system.

If adding guns to a system, the installation must be complete and the iControl system configured (Gun Configuration) so that the new guns are recognized before performing this procedure.

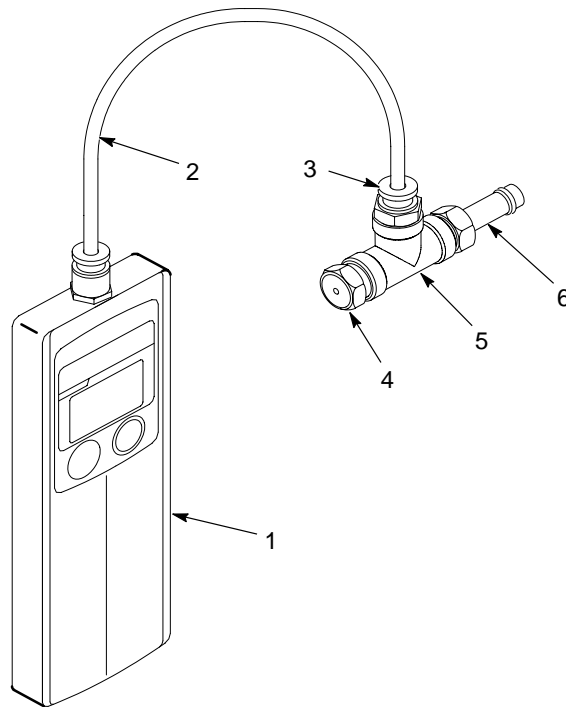
1. Disconnect the 4-mm gun air tubing from the gun air output fitting of an iFlow module supplied by the new regulator.
2. Connect the manometer to the gun air fitting by removing the orifice assembly from the clear 4-mm tubing and plugging the tubing into the fitting.
3. On the iControl screen, touch the appropriate Gun button to open the Gun Control/Status screen for the gun connected to the iFlow module.
4. Set the flow-rate and atomizing air flows to 1 SCFM (1.70 m³/h).
5. Toggle the Trigger Mode to Manual and trigger the gun on. The manometer should show a pressure reading.
6. Pull out the regulator knob and adjust it to slightly more than 85 psi (5.86 bar). The manometer reading should occasionally bounce to 86 psi, but never fall below 85.
7. Push in the regulator knob to lock the setting.

Kit Parts List

Refer to Figure 2.

Item	Part	Description	Quantity	Note
-	1039881	KIT, tester, iFlow	1	
1	1039883	• MANOMETER, digital, -0.1-1 MPA	1	
2	900617	• TUBING, polyurethane, 4 mm OD, clear	AR	A
3	971108	• CONNECTOR, male, 4 mm tube x 1/4 in. unithread	1	
4	1039885	• ORIFICE, 0.070 in., 1/4 in. NPT	1	
5	973260	• TEE, pipe, hydraulic, 1/4 in. NPT, steel, zinc	1	
6	1039884	• ADAPTER, 8 mm tube x 1/4 in. RPT	1	

NOTE A: Order in increments of one foot.
AR: As Required



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Figure 2 iFlow Test Kit

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