



# **TECHNICAL BULLETIN #23**

## **Notes and Features for ACOUSTICAIR™ Low Noise Rotary Blowers**

### **Interchangeability with Existing Product Lines**

Model 4700 ACOUSTICAIR™ blowers are interchangeable with Roots Whispair® RCS-J models as follows:

<b>M-D</b>	<b>Roots</b>	<b>M-D</b>	<b>Roots</b>	<b>M-D</b>	<b>Roots</b>
4706-17T3	406 RCS-JV	4709-17T3	409 RCS-JV	4712-17T3	412 RCS-JV
4706-46L3 (or R3)	406 RCS-JH	4709-46L3 (or R3)	409 RCS-JH	4712-46L3 (or R3)	412 RCS-JH

Models 4100 and 5600 ACOUSTICAIR™ blowers are interchangeable with M-D PD PLUS® models as follows:

<b>ACOUSTICAIR™</b>	<b>PD PLUS®</b>	<b>ACOUSTICAIR™</b>	<b>PD PLUS®</b>	<b>ACOUSTICAIR™</b>	<b>PD PLUS®</b>
4109-17/46	4009-17/46	5607-17/46	5507-17/46	5614-17/46	5514-17/46
4109-57/81 †	4009-57/81	5607-57/81*	5507-57/81	5614-57/81	5514-57/81
4109-64/67 †	4009-64/67	5607-64/67*	5507-64/67	5614-64/67	5514-64/67
4112-17/46	4012-17/46	5611-17/46	5511-17/46	5618-17/46	5518-17/46
4112-57/81 ‡	4012-57/81	5611-57/81**	5511-57/81	5618-57/81	5518-57/81
4112-64/67 ‡	4012-64/67	5611-64/67**	5511-64/67	5618-64/67	5518-64/67

† Standard port fitting for gastight 4109 ACOUSTICAIR™ blowers is 4" FLG, 3" NPT is optional. To be interchangeable with standard gastight 4009 PD PLUS, optional 3" NPT port fittings are required.

‡ Standard port fitting for gastight 4109 ACOUSTICAIR™ blowers is 4" FLG, 3" NPT is optional. To be interchangeable with standard gastight 4009 PD PLUS, optional 3" NPT port fittings are required.

\* Standard port fitting for gastight 5607 ACOUSTICAIR™ blowers is 4" FLG, 4" NPT is optional. To be interchangeable with standard gastight 5507 PD PLUS, optional 4" NPT port fittings are required. Consult factory for replacement applications for 5507 PD PLUS with 6" flange port fittings.

\*\*Standard port fitting for gastight 5611 ACOUSTICAIR™ blowers is 6" FLG, 5" NPT is optional. To be interchangeable with standard gastight 5511 PD PLUS, optional 5" NPT port fittings are required.

### **Direction of Flow**

Unlike all other M-D blowers which allow bidirectional rotation, ACOUSTICAIR™ blowers, with pressure equalization injection ports and semi-elliptical (or "S") port located on the discharge side of the unit, are designed to operate unidirectionally, with dedicated inlet and discharge ports. As the blower is center timed, the blower can operate "in reverse"; however, the ACOUSTICAIR™ noise reduction features become ineffective. Therefore, when selecting and ordering an ACOUSTICAIR™ blower, it is important to specify the desired location of the inlet port, discharge port and drive shaft location. Standard configurations are as shown below. **All port and drive shaft locations, and rotation direction are described as facing blower drive shaft:**

#### **VERTICAL FLOW (46/81/67 series)**

Inlet: Top  
Discharge: Bottom  
Drive shaft location: Left  
Rotation: CCW

#### **HORIZONTAL FLOW (17/57/64 series)**

Inlet: Left  
Discharge: Right  
Drive shaft location: Top  
Rotation: CW

Opposites of the standard locations shown above are available by special order, with one exception:

**4700-17 (horizontal flow) ACOUSTICAIR™ models are available with top drive shaft location only.**

Flow configuration for 4700 ACOUSTICAIR™ models is field convertible, but requires disassembly and installation of different mounting feet. Consult factory.

4100 and 5600 ACOUSTICAIR™ models are not field convertible, and location of drive shaft and inlet port must be specified at time of order.



## **TECHNICAL BULLETIN #23 (cont.)**

### **Notes and Features for ACOUSTICAIR™ Low Noise Rotary Blowers**

#### **Port Fittings, Standard and Special**

ACOUSTICAIR™ models are available with the following standard and optional port fittings. For vertical flow blowers, inlet is assumed to be on top, and discharge on bottom. Bottom inlet is available, but must be specified.

<b>MODEL</b>	<b>STANDARD INLET</b>	<b>STANDARD DISCHARGE</b>	<b>OPTIONAL INLET</b>	<b>OPTIONAL DISCHARGE</b>
4109-17	3" NPT	3" NPT	4" FLG	4" FLG
4109-46	3" NPT	3" NPT	4" FLG	4" FLG
4109-57/64	4" FLG	4" FLG	4" NPT	4" NPT
4109-67/81	4" FLG	4" FLG	4" NPT	4" NPT
4112-17	4" NPT	4" NPT	4" FLG	4" FLG
4112-46	4" NPT	4" NPT	4" FLG	4" FLG
4112-57/64	4" FLG	4" FLG	4" NPT	4" NPT
4112-67/81	4" FLG	4" FLG	4" NPT	4" NPT
4706-17/46	4" NPT	4" NPT	—	—
4709-17/46	5" NPT	4" NPT	—	—
4712-17/46	6" FLG	5" FLG	—	—
5607-17	4" NPT	4" NPT	4" FLG	4" FLG
5607-46	4" NPT	4" NPT	4" FLG	3" FLG*
5607-57/64	4" FLG	4" FLG	4" NPT	4" NPT
5607-67/81	4" FLG	3" FLG*	4" NPT	4" NPT
5611-17/46	5" NPT	5" NPT	6" FLG	6" FLG
5611-57/81	6" FLG	6" FLG	5" NPT	5" NPT
5611-64/67	6" FLG	6" FLG	5" NPT	5" NPT
5614	6" FLG	6" FLG	—	—
5618	8" FLG	8" FLG	—	—

\* Flanged discharge (bottom) port fitting on vertical flow (46/67/81 series) model 5607 is 3" flange to allow for insertion of flange between end plates. Bottom inlet on model 5607-46/67/81 with flanged port fittings is not recommended.

Vertical flow (46/67/81 series) model 5607 with water cooled end plates ("E" suffix) will be supplied with 4" flanged discharge (bottom) port fittings. Bottom inlet on 5607-46E/67E/81E models with flanged port fittings is OK.

#### **Gastight Models**

As with the existing PD PLUS® models, 5600 ACOUSTICAIR™ models are available with lip/labyrinth seals or mechanical seals (single and double envelope gastight) versions for elevated pressure and gas handling applications.

4700 ACOUSTICAIR™ models are available with lip/piston ring seals only and are intended to be used in air applications only.