



**49124589**  
Revision A  
August 2015

## **PacE Flow Controller**

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# **Installation and User Manual**



**Save These Instructions**

***IR*** Ingersoll Rand®

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**! WARNING**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

This document and other information from the Company, its subsidiaries and authorized distributors provide product and / or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application including consequences of any failure, and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, include without limitation, product features, specifications, designs, availability and pricing are subject to change by the company and its subsidiaries at any time without notice.

**NOTICE**

**Units can be supplied with air flow direction from left to right or right to left orientations. It is not recommended to reverse flow direction in the field unless absolutely necessary.**

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## INSTALLATION

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**Please read these instructions before installing this product.**

**IMPORTANT INSTALLATION INSTRUCTIONS FOR:  
PACE 0.5", 1" and 2"**

1. DO NOT install the unit until you have read this entire product information sheet.
2. Product is specifically designed for clean, dry, compressed air service, and use with any other fluid (liquid or gas) is a misapplication. For example, use with, or injection of certain hazardous liquids or gases in the system (such as alcohol or liquid petroleum gas) could be harmful to unit or result in combustible condition or hazardous external leakage. Manufacturer's warranties are void in the event of misapplication and manufacturer assumes no responsibility for any resulting loss. Maximum inlet pressure rating is 300 psig (21 bar) and a control range of 0-160 psi (11 bar). Temperature range is -4 °F to 176 °F (-20 °C to 80 °C).
3. INSTALL upstream of and as close as possible to where controlled compressed air is needed.
4. INSTALL with air flow in direction into "Inlet" and out "System"(as noted on chassis housing).
5. DO NOT restrict the air flow with undersize piping or fittings, unless maximum air flow is not needed.
6. INSTALLATION of a 5 micron rated filter upstream of controller is recommended.
7. WITH THE INDICATOR DIAL in the OFF position, allow the inlet side pressure to slowly build and settle to full pressure.
8. DO NOT fill tank on inlet side of system to full pressure and then open ball valve blasting full pressure to inlet of PacE Flow Controller. This may cause system damage. Always throttle valve to slowly increase pressure to controller.
9. TO CONTROL SYSTEM AIR turn adjustment knob clockwise to raise the controlled air pressure and counter clockwise to lower controlled air pressure.

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## OPERATION

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**To Operate:** Once unit has been installed and all safety requirements have been adhered, you are ready to begin.

Using the adjustment dial on the front of the PacE, turn knob from the off position slowly in a clock wise motion to the desired setting. Note that as a best practice a 10 psi (7 bar) delta should be set between the Inlet Pressure and System Pressure gauges.

The indication numbers on the dial face are for reference only and are not to be used an accurate indication of the system set pressure.

If a higher System Pressure is initially set than desired, simply turn the dial counter clock wise until the desired System Pressure is achieved. Note: When dialing the pressure to a lower setting excess air pressure will be exhausted around the front dial. This will continue until the System Pressure is satisfied.

The PacE is designed to react quickly to meet flow demands. As a function of meeting this demand, the unit will consume a small amount of air .05 cfm (0.025 dm<sup>3</sup>/s).

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## ADJUSTMENT OF MEASURING SYSTEM

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Units are preadjusted at the factory and should require no additional calibration at time of installation.

Front Dial Indicator is for reference only and has no bearing on unit functionality or actual Inlet or System Pressure. Gauges (supplied) should be utilized to

determine actual setting.

In the unlikely event that a unit needs readjustment of its measuring system, please follow the following recommendations.

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## READJUSTMENT OF MEASURING SYSTEM

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1. INSTALL controller on air line with at least 110 psi (7.5 bar) air pressure at the inlet port.
2. REMOVE lock button "A" (Figure "B") from unit revealing adjustment screw.
3. TURN adjusting knob to 100psi (7 bar) setting.
4. CHECK the gauge for 100 psig (7 bar) reading. If the gauge reads other than 100 psig (7 bar) adjust screw "A" (Figure "B") with a screwdriver while holding the adjusting knob on 100 psi (7 bar) setting. If more than one half turn of screw "A" (Figure "B") is required to achieve 100 psig (7 bar).
5. TO CHECK ADJUSTMENT: when dial and gauge are reading the same (100 psi  $\pm$ 2 psi; 7 bar  $\pm$ 0.14 bar), turn adjusting knob to 20 psi (1.4 bar). Unit is adjusted when gauge reads 20 psig  $\pm$ 5 psig (1.4 bar  $\pm$ 0.34 bar). The  $\pm$ 2 psi and  $\pm$ 5 psig are accepted tolerances of the most commonly used gauges.
6. DO NOT adjust screw "A" (Figure "B") more than one half turn when adjusting unit. If more than one half turn is required to adjust it, additional problems with the unit are involved and unit should be returned to the vendor.
7. DIAL STOP SET can be used to prevent over pressurization. To utilize the stop set, remove the hold down screw "B" (Figure "B"), lift the hold down washer "C" (Figure "B"). The stop set is located under the dial face. Lift and turn the stop set to desired set point, then replace the dial face, hold down washer and hold down screw.

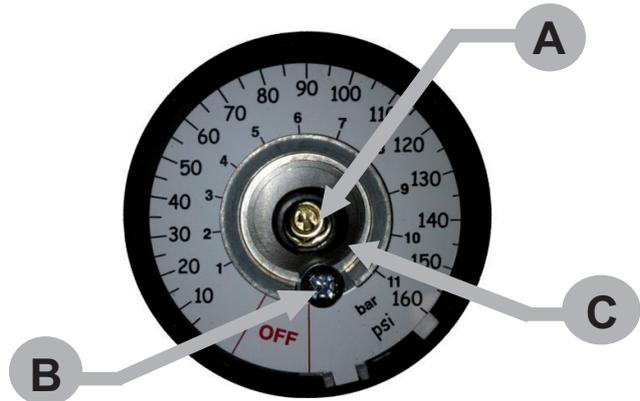


FIGURE "B"

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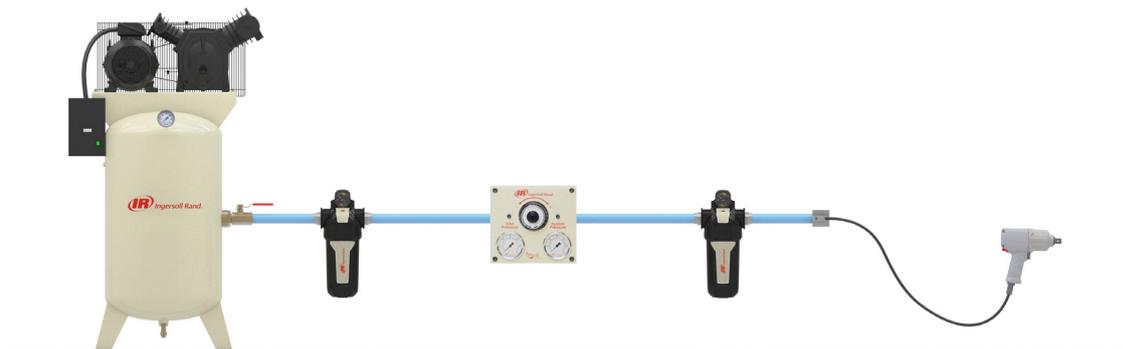
## TYPICAL INSTALLATION

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### FOR ROTARY COMPRESSOR



### FOR RECIPROCATING COMPRESSOR

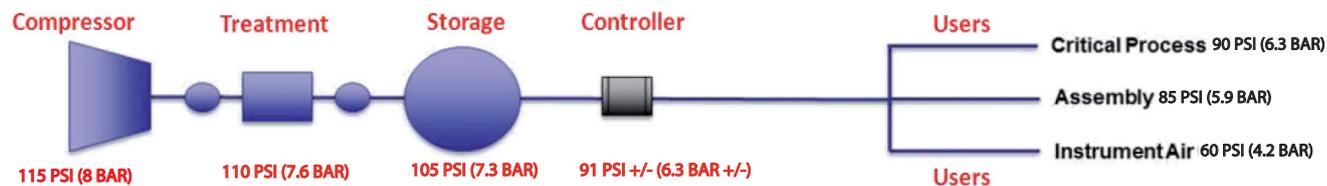


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## TYPICAL INSTALLATION

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- Install downstream of air treatment and primary storage units
- As close to last piece of air treatment or tank to maximize impact
- Regulate pressure down to just above maximum demand side user pressure



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## MAINTENANCE

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### IMPORTANT MAINTENANCE INSTRUCTIONS FOR PACE FLOW CONTROLLER

1. BEFORE ATTEMPTING TO SERVICE THIS UNIT, READ THIS ENTIRE PRODUCT INFORMATION SHEET AND TURN OFF AIR SUPPLY AND VENT BOTH SIDES OF CONTROLLER.
2. FOR TROUBLE-FREE OPERATION, clean dry air and proper lubrication of the PacE Controller is essential. We recommend a 5 micron pre-filter for maximum performance. Unit is factory lubricated and should not be field lubricated.
3. MAINTENANCE SERVICE KITS are available for PacE 0.5", 1" and 2". Service should not be attempted without proper tools, safety and mechanical knowledge.

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## TROUBLESHOOTING

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When any of the following symptoms occur, contact technical services for recommendations:

- A. Excessive relief venting
  - a. Unit is designed to bleed excess air pressure around the control knob, until system pressure has settled. Note: Unit has a constant bleed of approximately .05cfm to maintain ability to react to system demands without delay.
  - b. Secondary compressor in system side, causing over pressurization. See Typical Installation Diagram
  - c. Dial indicator was dialed above system requirements and then dialed down causing venting until system pressure has settled to match dial reading.
- B. Inability to attain high secondary pressure
  - a. Increase system pressure by slowly turning front dial clockwise until desired pressure is achieved on gauge. Turn dial slow and allow system pressure to adjust and settle before increasing.
  - b. Blockage due to lack of lubrication or dirty air supply. Lack of lubrication is typically caused by excessive moisture in air stream and /or lack of appropriate filtration. 5 micron pre-filter is recommended for maximum product performance.
- C. System pressure does not match dial indicator
  - a. Adjustment may be required (See Adjustment of Measuring System section of this guide for details)
- D. Dial does not turn freely or is loose to the touch
  - a. Adjust black thumb screw on front of dial face until desired dial tension is achieved.
- E. Unit not adjusting during cold weather
  - a. If operating below freezing (32 °F/ 0° C) no moisture should be allowed into controller inlet.

The above Symptoms are often caused by improper application, dirty and/or wet air supply. Only supply clean dry air to inlet, achieved by a 5 micron pre-filter.

## ORDER INFORMATION AND REPLACEMENT PARTS

### Pace Flow Controller (NPT)

CCN	Description
49124365	PACE, 1/2" NPT, LEFT TO RIGHT FLOW
49124373	PACE, 1" NPT, LEFT TO RIGHT FLOW
49124381	PACE, 2" NPT, LEFT TO RIGHT FLOW
49124399	PACE, 1/2" NPT, RIGHT TO LEFT FLOW
49124407	PACE, 1" NPT, RIGHT TO LEFT FLOW
49124415	PACE, 2" NPT, RIGHT TO LEFT FLOW

### Pace Flow Controller (BSP)

CCN	Description
49124423	PACE, 1/2" BSP, LEFT TO RIGHT FLOW
49124431	PACE, 1" BSP, LEFT TO RIGHT FLOW
49124449	PACE, 2" BSP, LEFT TO RIGHT FLOW
49124456	PACE, 1/2" BSP, RIGHT TO LEFT FLOW
49124464	PACE, 1" BSP, RIGHT TO LEFT FLOW
49124472	PACE, 2" BSP, RIGHT TO LEFT FLOW

### Replacement Kits and Parts

CCN	Description
49124480	KIT, O-RING REPLACEMENT, 1/2" PACE
49124498	KIT, O-RING REPLACEMENT, 1" PACE
49124506	KIT, O-RING REPLACEMENT, 2" PACE
49124512	KIT, REPLACEMENT DIAL KNOB
49124522	GAUGE, REPLACEMENT



A series of horizontal lines for writing, spanning the width of the page. The lines are evenly spaced and extend from the left margin to the right edge of the page. There are 25 lines in total, starting from the top margin and ending near the bottom of the page.

