



Installation, Operation and Maintenance Instructions

Type 855BP Miniature Back Pressure Regulator

INSTALLATION

1. System piping should be the same pipe size as regulator ports. Locate regulator as close as possible to the device requiring over-pressurization protection.
2. Connect piping to proper ports using pipe sealant on male threads only. Do not allow sealant to enter interior of regulator. Regulator can be installed at any angle.
3. Two 1/8" NPT gauge ports are provided to allow for the connection of an upstream pressure gauge. Plug unused gauge ports. Panel-mounted units require a 1 - 3/16" diameter hole with a maximum panel thickness of 1/4".

OPERATION

1. The Type 855BP is a back pressure regulator that provides protection against over-pressurization on the upstream side of the pneumatic device(s) using regulated air.
2. Before turning on system pressure, pull regulator knob to unlock.
3. Turn regulator knob clockwise to reach maximum adjustable setpoint.
4. Apply desired maximum pressure to regulator (pressure at which excess pressure will be relieved).
5. Turn knob counterclockwise until pressure starts to relieve.
6. Adjust knob clockwise until relieving stops. Push knob down to lock.

MAINTENANCE

WARNING: SUPPLY PRESSURE MUST BE SHUT OFF BEFORE ATTEMPTING TO INSTALL OR DISASSEMBLE REGULATOR FOR SERVICING.

1. If supply is kept clean, regulator should provide long periods of uninterrupted service. If erratic performance occurs, it is likely that parts in the regulator need to be cleaned or replaced. See **Repair Kits** for the part number of repair kits that can be ordered from ControlAir.
2. **TO DISASSEMBLE: Reduce pressure in inlet and outlet lines to zero. Regulator can be serviced without removal from line.** Pull knob out to disengage lock, and turn knob counter-clockwise until it stops. This will remove any load on the range spring. Unscrew bonnet. Adjusting screw and nut are not retained, and may fall out. Remove range spring and spring guide.
3. **CLEANING:** Clean parts in warm water and soap, then dry. Replace any damaged parts. Blow out the body passages using clean, dry compressed air.
4. **TO REASSEMBLE:** Use exploded view on back page as a guide for the orientation and assembly of parts. Lubricate O-ring on valve seat with quality O-ring grease. Tighten valve seat into body. Tighten bonnet onto body. **Do not over-tighten, as it could strip bonnet threads.**

SPECIFICATIONS

| | | | |
|---------------------------------|--|--|------------------------|
| Relief Capacity: | 35 scfm (900 NI/min) depending on set point pressure and port size | | |
| Maximum System Pressure: | 250 psig (17.2 BAR) | | |
| Operating Temp: | 0° to +150° F (-18° to +60° C) | | |
| Porting: | Inlet and outlet – 1/4" NPT Gauge (2) – 1/8" NPT | | |
| Output Ranges: | 0-5 psig (0 – 0.4 BAR) 0-15 psig (0-1.0 BAR) | 0-30 psig (0-2.1 BAR) 0-60 psig (0-4.1 BAR) | 0-100 psig (0-6.9 BAR) |
| Materials: | | | |
| Spring/Adjusting Screw | Zinc-plated Steel | | |
| Body: | Epoxy Coated Zinc | | |
| Bonnet, Piston: | Acetal | | |
| Diaphragm, O-ring: | Nitrile | | |
| Valve Seat: | Aluminum | | |
| Weight: | 4.0 oz. (113 g) | | |

REPAIR KITS

Relieving Regulators: 449-871-230

ACCESSORIES

Panel Mounting Nut 442-734-040
Mounting Bracket 446-707-034

WARNING

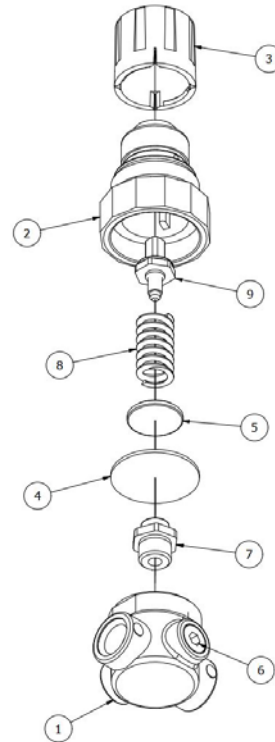
1. These products are intended for use with compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under Specifications.
2. Before using these products with fluids other than air, for non-industrial applications, life-support systems, or other applications not within published specifications, consult ControlAir LLC.

| Range PSIG (BAR) | Port Size NPT | Type 855 |
|-------------------------|----------------------|-----------------|
| 0-5 (0-0.4) | 1/4 | 855-BE |
| 0-15 (0-1) | 1/4 | 855-BA |
| 0-30 (0-2) | 1/4 | 855-BB |
| 0-60 (0-4) | 1/4 | 855-BC |
| 0-100 (0-7) | 1/4 | 855-BD |

MATERIALS OF CONSTRUCTION

| <u>No.</u> | <u>Part Description</u> | <u>Material</u> |
|------------|-------------------------|-------------------|
| 1 | Body | Zinc Alloy |
| 2 | Bonnet | Acetal |
| 3 | Knob | Acetal |
| 4 | Diaphragm* | Nitrile |
| 5 | Spring Guide | Delrin |
| 6 | Pipe Plugs | Steel |
| 7 | Seat | Aluminum |
| 8 | Range Spring | Zinc-plated Steel |
| 9 | Adjusting Screw Assy | Zinc-plated Steel |

Items marked with an asterisk (*) are included in the repair kit.



LIMITED WARRANTY & DISCLAIMER

ControlAir LLC products are warranted to be free from defects in materials and workmanship for a period of eighteen months from the date of sale, provided said products are used according to ControlAir LLC recommended usages. ControlAir LLC's liability is limited to repair, purchase price refund, or replacement in kind, at ControlAir LLC's sole option, of any products proved defective. ControlAir LLC reserves the right to discontinue manufacture of any product or change product materials, design or specifications without notice. Note: ControlAir does not assume responsibility for the selection, use, or maintenance of any product. Responsibility for the proper selection, use, and maintenance of any ControlAir product remains solely with the purchaser and end user.