

Underwriters Laboratories, Inc. listed (file number SA1089)

The R81 regulator and C81 regulator configurations with integral relief valve and outlet check valves meet the requirements of paragraphs 4.5 and 4.6 of NSDA Pamphlet TD02, Installation and Operational Procedures for Pressurized Soft Drink Dispensing Systems, dated July, 1980.

The R82 regulator with integral relief valve meets the requirements of Proposed Section 9.7, Draught Beer Dispensing Equipment and Related Components (Seventh Draft dated October 17, 1980), of ANSI-ASME F2.1-1975, Food, Drug, and Beverage Equipment.



R84

### Technical data

#### R84

##### Fluid:

Carbon dioxide.  
 Maximum pressure:  
 3000 psig (207 bar)

##### Operating temperature:

0° to 140°F (-18° to 60°C)  
 Integral relief valve cracking  
 pressure:  
 150 ± 5 psig (10.4 ± 0.33 bar)

#### R81

##### Fluid:

Carbon dioxide.  
 Maximum pressure:  
 3000 psig (207 bar)

##### Operating temperature:

0° to 140°F (-18° to 60°C)

##### Integral relief valve cracking pressure:

130 ± 4 psig (9.0 ± 0.28 bar)

#### R82

##### Fluid:

Carbon dioxide.

##### Maximum pressure:

3000 psig (207 bar)

##### Operating temperature:

0° to 140°F (-18° to 60°C)

##### Maximum outlet pressure adjustment limit:

Factory set at 40 to 45 psig  
 (2.8 to 3.1 bar)

##### Integral relief valve cracking pressure:

60 ± 4 psig (4.1 ± 0.28 bar)

### Materials

#### R84

Body: brass  
 Bonnet: zinc  
 Valve cartridge: PTFE, brass,  
 stainless steel  
 Diaphragm: acetal and nitrile  
 Relief valve: brass, polycarbonate,  
 nitrile, aluminum  
 Seals: nitrile

#### R81

Body: brass  
 Bonnet: zinc  
 Valve cartridge: PTFE, brass,  
 stainless steel  
 Diaphragm: acetal and nitrile  
 Relief valve: brass, polycarbonate,  
 nitrile, aluminum  
 Seals: nitrile

#### R82

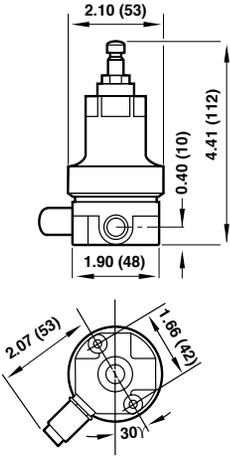
Body: brass  
 Bonnet: zinc  
 Valve cartridge: PTFE, brass,  
 stainless steel  
 Diaphragm: acetal and nitrile  
 Relief valve: brass, polycarbonate,  
 nitrile, aluminum  
 Seals: nitrile

### Ordering information

Models listed have PTF threads, integral relief valve, and relieving diaphragm.

Port	Model	Weight lb (kg)
1/4"	R84-200-MNLA	1.3 (0.59)
1/4"	R81-200-LNKA	1.3 (0.59)
1/4"	R82-200-ENEA	1.3 (0.59)

**R81 and R84 Regulator**



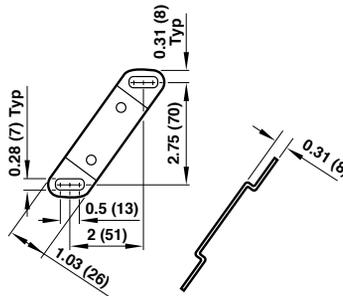
**Mounting Holes (2 Places)**  
0.18" (4.6mm) dia. by 0.39 (10mm) deep.  
Use 10-32 thread forming screws.

**R84 WARNING**

For safety in systems using Model R84 regulators, the following procedures must be followed.

1. Pressure relief valves of sufficient capacity must always be used in the secondary (outlet) lines downstream of each pressure regulator, whether as an integral part of the regulator, as is the case with Model R84 Regulator, or separately installed elsewhere in the outlet lines. Do not remove or attempt to adjust, plug, block or otherwise defeat the purpose of the relief valve. Do not replace a relief valve with any but an identical model. The relief valve used on the R84 regulator is preset and marked **150 PSIG RELIEF VALVE**. Replace only with the same 150 psig relief valve, part number 5779-54. The end cap on the 5779-54 relief valve is color coded red for visual identification. Failure to provide a pressure relief valve of sufficient capacity to hold outlet pressure below the lowest working pressure rating of any piece of equipment installed in the outlet lines can result in equipment damage and/or personal injury.
2. A back flow check valve must always be installed at the regulator or at each manifold outlet in liquid dispensing applications to prevent reverse flow through the regulator and possible introduction of liquids and other contaminants into the regulator.
3. Regulators must not be used where temperature or pressure may exceed those specified in the **Technical data** paragraph.
4. The accuracy of the indication of pressure gauges can change, both during shipment (despite care in packaging) and during the service life. If a pressure gauge is to be used in conjunction with these products and if inaccurate indications may be hazardous to personnel or property, the gauge should be calibrated before initial installation and at regular intervals during use. For gauge standards refer to ANSI B40.1.
5. These regulators are not intended for use in life support systems, beer dispensing systems, with soft drink product (syrup) containers, or industrial cylinder gas systems.

**5095-51 Strap Type Bracket**



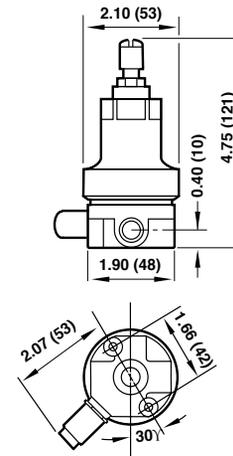
**R81 WARNING**

Soft drink dispensing systems must be designed, installed, and operated in accordance with the guidelines set forth in NSDA pamphlet TD02,

**Installation and Operational Procedures for Pressurized Soft Drink Dispensing Systems,**  
dated July, 1980 or subsequent revisions.

1. Pressure relief valves of sufficient capacity must always be used in the secondary (outlet) lines downstream of each pressure regulator, whether as an integral part of the regulator, as is the case with Model R81 Regulator, or separately installed elsewhere in the outlet lines. Do not remove or attempt to adjust, plug, block or otherwise defeat the purpose of the relief valve. Do not replace a relief valve with any but an identical model. The relief valve used on the R81 regulator is preset and marked **130 PSIG RELIEF VALVE**. Replace only with the same 130 psig relief valve, part number 5779-55. The end cap on the 5779-55 relief valve is color coded black for visual identification. Failure to provide a pressure relief valve of sufficient capacity to hold outlet pressure below the lowest working pressure rating of any piece of equipment installed in the outlet lines can result in equipment damage and/or personal injury.
2. A back flow check valve must always be installed at the regulator or at each manifold outlet in liquid dispensing applications to prevent reverse flow through the regulator and possible introduction of liquids and other contaminants into the regulator.
3. Regulators must not be used where temperature or pressure may exceed those specified in the **Technical data** paragraph.
4. The accuracy of the indication of pressure gauges can change, both during shipment (despite care in packaging) and during the service life. If a pressure gauge is to be used in conjunction with these products and if inaccurate indications may be hazardous to personnel or property, the gauge should be calibrated before initial installation and at regular intervals during use. For gauge standards refer to ANSI B40.1.
5. These regulators are not intended for use in life support systems, beer dispensing systems, soft drink carbonator systems, or industrial cylinder gas systems.

**R82 Regulator**



**Mounting Holes (2 Places)**  
0.18" (4.6 mm) dia. by 0.39" (10 mm) deep.  
Use 10-32 thread forming screws.

**R82 WARNING**

Beer dispensing systems must be designed, installed, and operated in accordance with the applicable guidelines such as the proposed Section 9.7,

**Draught Beer Dispensing Equipment and Related Components** (Seventh Draft dated October 17, 1980), of ANSI-ASME F2.1-1975, Food, Drug and Beverage Equipment or subsequent revisions.

1. Pressure relief valves of sufficient capacity must always be used in the secondary (outlet) lines downstream of each pressure regulator, whether as an integral part of the regulator, as is the case with Model R82 Regulator, or separately installed elsewhere in the outlet lines. Do not remove or attempt to adjust, plug, block or otherwise defeat the purpose of the relief valve. Do not replace a relief valve with any but an identical model. The relief valve used on the R82 regulator is preset and marked **60 PSIG RELIEF VALVE**. Replace only with the same 60 psig relief valve, part number 5779-56. The end cap on the 5779-56 relief valve is color coded silver for visual identification. Failure to provide a pressure relief valve of sufficient capacity to hold outlet pressure below the lowest working pressure rating of any piece of equipment installed in the outlet lines can result in equipment damage and/or personal injury.
2. A back flow check valve must always be installed at the regulator or at each manifold outlet in liquid dispensing applications to prevent reverse flow through the regulator and possible introduction of liquids and other contaminants into the regulator.
3. Regulators must not be used where temperature or pressure may exceed those specified in the **Technical data** paragraph.
4. The accuracy of the indication of pressure gauges can change, both during shipment (despite care in packaging) and during the service life. If a pressure gauge is to be used in conjunction with these products and if inaccurate indications may be hazardous to personnel or property, the gauge should be calibrated before initial installation and at regular intervals during use. For gauge standards refer to ANSI B40.1.
5. These regulators are not intended for use in life support systems, soft drink carbonator systems, with soft drink product (syrup) containers, or industrial cylinder gas systems.

Dimensions in inches (mm)