Section 12

U.L. Listed Beverage Regulators
Cylinder Gas Pressure (CO₂) Regulators for Soft Drink and Beer dispensing systems.

R84 Regulator and C84 Regulator Configurations
for Soft Drink Carbonator Service, 1/4” PTF . . . . . . . . . .ALE-12-2
R81 Regulator and C81 Regulator Configurations
for Soft Drink Dispensing Systems, 1/4” PTF . . . . . . . . . .ALE-12-6
R82 Regulator for Beer Dispensing Systems, 1/4” PTF . .ALE-12-12
R84 Regulator and C84 Configurations
UL Listed, Cylinder Gas Pressure Regulator
1/4" PTF Port Size, CO₂ Regulator for Soft Drink Carbonator

- Underwriters Laboratories, Inc. listed (file number SA1089)
- Integral relief valve easily replaced without disassembly of regulator and without affecting relief pressure setting
- Back flow check valve, or manifold with integral check valve at each outlet, can be installed in regulator outlet port. Manifolds available with 3 or 5 outlets and include one outlet cap.
- Relieving diaphragm allows outlet pressure setting to be reduced even though the system is dead-ended. Pressure downstream of check valves will not be reduced.
- Easily replaceable valve cartridge contains valve, valve seat, valve spring, and filter element
- Two high pressure ports (inlet and primary gauge) and two regulated pressure ports (outlet and secondary gauge)
- Bonnet wrench hex same size as tank adapter - one wrench fits both

Technical Data
Fluid: Carbon dioxide. The R84 regulator is designed to be used exclusively as a carbonator regulator in soft drink dispensing systems to control cylinder gas (carbon dioxide) pressure to the carbonator tank. Other Norgren regulators (R81 for soft drink syrup containers, R82 for beer, R83 for industrial cylinder gases) are available for use in other systems.

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)
Materials:
- Body: Brass
- Bonnet: Zinc
- Valve cartridge: Teflon, brass, stainless steel
- Diaphragm: Acetal and nitrile
- Relief valve: Brass, polycarbonate, nitrile, aluminum
- Seals: Nitrile

NOTE
The integral relief valve on the R84 regulator does not meet the requirements of Paragraph 4.5c of NSDA Pamphlet TD02, Installation and Operational Procedures for Pressurized Soft Drink Dispensing Systems, dated July, 1980. The end cap on the relief valve is color coded red for visual identification and is for use only on the Norgren R84 regulator.

See Section ALE-25 for Accessories
**Ordering Information.** Models listed include integral relief valve with cracking pressure of 150 ± 5 psig (10.4 ± 0.33 bar), PTF threads, relieving diaphragm, 5 to 125 psig (0.34 to 8.6 bar) outlet pressure adjustment range†. A gauge is not included.

<table>
<thead>
<tr>
<th>Port</th>
<th>Model</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>R84-200-MNLA</td>
<td>1.3 (0.59)</td>
</tr>
</tbody>
</table>

† Outlet pressure can be adjusted to pressures in excess of, and less than, that specified. Do not use these units to control pressures outside of the specified range.

### Accessories

<table>
<thead>
<tr>
<th>Wall Mounting Bracket</th>
<th>Pipe Plug, Hex Socket 1/4” PTF</th>
<th>Hex Nipple 1/4” PTF male</th>
<th>Union Adapter with Cap 1/4” PTF to 1/4” tube (45° flare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strap Type: 5095-51</td>
<td>2891-97</td>
<td>18-006-067</td>
<td>18-006-068</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Adapter only: 18-006-027 Cap only: 3302-50</td>
</tr>
</tbody>
</table>

### Inlet Fittings

<table>
<thead>
<tr>
<th>2” (Ø 50 mm) diameter, 1/4” PTF connection</th>
<th>Nitrogen Service Cylinder Connector 0.906-14 RH external thread</th>
<th>Carbon Dioxide Service Cylinder Connector 0.830-14 RH internal thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 psig (1 bar), UL Listed: 18-013-082</td>
<td>QGA No. 580: 18-008-004</td>
<td>QGA No. 320: 18-008-002</td>
</tr>
<tr>
<td>30 psig (2 bar), UL Listed: 18-013-030</td>
<td></td>
<td>1.44” (37 mm) long nipple</td>
</tr>
<tr>
<td>60 psig (4 bar), UL Listed: 18-013-083</td>
<td></td>
<td>2.25” (57 mm) long nipple</td>
</tr>
<tr>
<td>100 psig (7 bar), UL Listed: 18-013-084</td>
<td></td>
<td>18-008-015</td>
</tr>
<tr>
<td>160 psig (11 bar), UL Listed: 18-013-085</td>
<td></td>
<td>Replacement gasket: 1390-02</td>
</tr>
<tr>
<td>300 psig (20 bar), UL Listed: 18-013-086</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000 psig (135 bar), UL Listed: 18-013-244</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3000 psig (205 bar), UL Listed: 18-013-087</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Single Outlet Fittings - Check Valves ††

Check Valve, 1/4” PTF male to 1/4” tube (45° flare): 16-009-001
Check Valve, 1/4” PTF male to 1/2-16 BSF: 16-009-002
Check Valve, 1/4” PTF male to 1/4” PTF female: 16-009-003

### Multiple Outlet Fittings - Manifolds with integral check valves ††

2 or 3 Port: 16-009-001
4 or 5 Port: 16-009-002
Manifold Extension: 16-009-003

†† The listed check valves and manifolds with integral check valves are designed for use with Norgren R84 regulators and C84 regulator configurations. They are not recommended for use with other regulators and regulator configurations unless separate pressure relief protection is provided in each of the outlet lines.
### Ordering Information - C84 Regulator Configurations

Models listed include PTF threads, relieving diaphragm, 5 to 125 psig (0.3 to 8.5 bar) outlet pressure adjustment range†.

<table>
<thead>
<tr>
<th>One Outlet (Model C84-700)</th>
<th>Four or Five Outlets (Model C84-666)</th>
</tr>
</thead>
<tbody>
<tr>
<td>![One Outlet Diagram]</td>
<td>![Four Outlets Diagram]</td>
</tr>
</tbody>
</table>

**Model C84-700 Includes:**
- R84-200-MNLA regulator with 150 psig (10.4 bar) integral relief valve (1)
- 18-013-244 inlet pressure gauge (1)
- 18-013-085 outlet pressure gauge (1)
- 18-008-002 cylinder connector (1)
- 16-009-001 check valve (1)

**Model C84-666 Includes:**
- R84-200-MNLA regulator with 150 psig (10.4 bar) integral relief valve (1)
- 18-013-244 inlet pressure gauge (1)
- 18-013-085 outlet pressure gauge (1)
- 18-008-002 cylinder connector (1)
- 3228-60 manifold (1)

† Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

**All Dimensions in Inches (mm)**

**R84 Regulator**

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

### Service Kits

<table>
<thead>
<tr>
<th>Item</th>
<th>Type</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service kits</td>
<td>Diaphragm, relieving</td>
<td>570-51</td>
</tr>
<tr>
<td></td>
<td>Valve cartridge and seal</td>
<td>5086-55</td>
</tr>
<tr>
<td>Kit, major</td>
<td>6309-04 *</td>
<td></td>
</tr>
<tr>
<td>Relief valve and seal</td>
<td>5779-54 ††</td>
<td></td>
</tr>
</tbody>
</table>

* Kit contains diaphragm, slip ring, valve cartridge, and o-rings.
†† Relief valve is marked 150 PSIG RELIEF VALVE and has a brass body with a red end cap.
WARNING

For safety in systems using Norgren 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 Norgren 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.
R81 Regulator and C81 Configurations
UL Listed, Cylinder Gas Pressure Regulator
1/4" PTF Port Size, CO₂ Regulator for Soft Drink Dispensing Systems

- 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.
- Integral relief valve easily replaced without disassembly of regulator and without affecting relief pressure setting
- Back flow check valve, or manifold with integral check valve at each outlet, can be installed in regulator outlet port. Manifolds available with 3 or 5 outlets and include one outlet cap.
- Relieving diaphragm allows outlet pressure setting to be reduced even though the system is dead-ended. Pressure downstream of check valves will not be reduced.
- Easily replaceable valve cartridge contains valve, valve seat, valve spring, and filter element
- Two high pressure ports (inlet and primary gauge) and two regulated pressure ports (outlet and secondary gauge)
- Diametrically opposite inlet ports facilitate manifolding for multiple dispensing applications. Each manifoldered regulator operates independently as though attached directly to the gas supply source.
- Bonnet wrench hex same size as tank adapter - one wrench fits both

Technical Data
Fluid: Carbon dioxide. The R81 regulator is designed for use in soft drink dispensing systems to control cylinder gas (carbon dioxide, nitrogen, air) pressure to the product containers. Other Norgren regulators (R84 for soft drink carbonators, R82 for beer, R83 for industrial cylinder gases) are available for use in other systems.
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)

Materials:
- Body: Brass
- Bonnet: Zinc
- Valve cartridge: Teflon, brass, stainless steel
- Diaphragm: Acetal and nitrile
- Relief valve: Brass, polycarbonate, nitrile, aluminum
- Seals: Nitrile

See Section ALE-25 for Accessories
Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

The listed check valves and manifolds with integral check valves are designed for use with Norgren R81 regulators and C81 regulator configurations. They are not recommended for use with other regulators and regulator configurations unless separate pressure relief protection is provided in each of the outlet lines.


** Check valves, or manifolds with integral check valves, must be installed in the outlet ports of the wye when the wye is installed in the outlet port of the Norgren R81 regulator.
## Cylinder Connected, One Regulator Configurations

<table>
<thead>
<tr>
<th>Model C81-700 (One Outlet)</th>
<th>Model C81-702 (One Outlet)</th>
<th>Model C81-651 (One Outlet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 100 psig range†</td>
<td>5 to 100 psig range†</td>
<td>5 to 100 psig range†</td>
</tr>
<tr>
<td><img src="image" alt="Model C81-700 Diagram" /></td>
<td><img src="image" alt="Model C81-702 Diagram" /></td>
<td><img src="image" alt="Model C81-651 Diagram" /></td>
</tr>
<tr>
<td>Model C81-700 Includes:</td>
<td>Model C81-702 Includes:</td>
<td>Model C81-651 Includes:</td>
</tr>
<tr>
<td>R81-200-LNKA regulator (1)</td>
<td>R81-200-LNKA regulator (1)</td>
<td>R81-200-LNKA regulator (1)</td>
</tr>
<tr>
<td>18-013-244 (2000 psi) inlet pressure gauge (1)</td>
<td>18-013-244 (2000 psi) inlet pressure gauge (1)</td>
<td>18-013-244 (2000 psi) inlet pressure gauge (1)</td>
</tr>
<tr>
<td>18-013-085 (160 psi) outlet pressure gauge (1)</td>
<td>18-013-084 (100 psi) outlet pressure gauge (1)</td>
<td>18-008-002 cylinder connector (1)</td>
</tr>
<tr>
<td>18-008-002 cylinder connector (1)</td>
<td>18-008-002 cylinder connector (1)</td>
<td>16-009-001 check valve (1)</td>
</tr>
<tr>
<td>16-009-001 check valve (1)</td>
<td>16-009-001 check valve (1)</td>
<td>16-009-002 check valve (1)</td>
</tr>
</tbody>
</table>

## Cylinder Connected, Two Regulator Configurations

<table>
<thead>
<tr>
<th>Model C81-254 (Two Outlets)</th>
<th>Model C81-652 (Two Outlets)</th>
<th>Model C81-573 (Four to Six Outlets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 to 50 psig range†</td>
<td>5 to 100 psig range†</td>
<td>5 to 100 psig range†</td>
</tr>
<tr>
<td><img src="image" alt="Model C81-254 Diagram" /></td>
<td><img src="image" alt="Model C81-652 Diagram" /></td>
<td><img src="image" alt="Model C81-573 Diagram" /></td>
</tr>
<tr>
<td>Model C81-254 Includes:</td>
<td>Model C81-652 Includes:</td>
<td>Model C81-573 Includes:</td>
</tr>
<tr>
<td>R81-200-LNEA regulator (1)</td>
<td>R81-200-LNKA regulator (1)</td>
<td>R81-200-LNKA regulator (2)</td>
</tr>
<tr>
<td>18-013-244 (2000 psi) inlet pressure gauge (1)</td>
<td>18-013-244 (2000 psi) inlet pressure gauge (1)</td>
<td>18-013-244 (2000 psi) inlet pressure gauge (1)</td>
</tr>
<tr>
<td>18-013-083 (60 psi) outlet pressure gauge (1)</td>
<td>18-013-084 (100 psi) outlet pressure gauge (1)</td>
<td>18-013-084 (100 psi) outlet pressure gauge (1)</td>
</tr>
<tr>
<td>18-008-002 cylinder connector (1)</td>
<td>18-008-002 cylinder connector (1)</td>
<td>18-008-002 cylinder connector (1)</td>
</tr>
<tr>
<td>16-009-001 check valve (1)</td>
<td>16-009-002 check valve (1)</td>
<td>3228-55 manifold (2)</td>
</tr>
<tr>
<td>16-009-001 check valve (1)</td>
<td>16-009-002 check valve (2)</td>
<td>3228-55 manifold (1)</td>
</tr>
<tr>
<td>16-009-001 check valve (1)</td>
<td>16-009-002 check valve (2)</td>
<td>3228-55 manifold (1)</td>
</tr>
</tbody>
</table>
## R81, C81 Beverage Regulators

### Wall Mounted, One Regulator Configurations

<table>
<thead>
<tr>
<th>Model C81-541 (One Outlet)</th>
<th>Model C81-554 (Two or Three Outlets)</th>
<th>Model C81-559 (Four or Five Outlets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 100 psig range†</td>
<td>5 to 100 psig range†</td>
<td>5 to 100 psig range†</td>
</tr>
</tbody>
</table>

**Model C81-541 Includes:**
- R81-200-LNKA regulator with 9.0 bar (130 psig) integral relief valve (1)
- 18-013-084 (100 psi) outlet pressure gauge (1)
- 18-006-027 half-union adapter (1)
- 18-006-068 half-union adapter with cap (1)
- 16-009-001 check valve (1)
- 5095-51 mounting bracket (1)

**Model C81-554 Includes:**
- R81-200-LNKA regulator with 9.0 bar (130 psig) integral relief valve (1)
- 18-013-084 (100 psi) outlet pressure gauge (1)
- 18-006-027 half-union adapter (1)
- 18-006-068 half-union adapter with cap (1)
- 16-009-001 check valve (1)
- 5095-51 mounting bracket (1)
- 18-006-067 hex nipple (1)
- 3228-54 manifold (1)
- 5095-51 mounting bracket (2)

**Model C81-559 Includes:**
- R81-200-LNKA regulator with 9.0 bar (130 psig) integral relief valve (1)
- 18-013-084 (100 psi) outlet pressure gauge (1)
- 18-006-027 half-union adapter (1)
- 18-006-068 half-union adapter with cap (1)
- 16-009-001 check valve (1)
- 5095-51 mounting bracket (1)
- 18-006-067 hex nipple (1)
- 3228-60 manifold (1)
- 5095-51 mounting bracket (2)

### Wall Mounted, Two Regulator Configurations

<table>
<thead>
<tr>
<th>Model C81-540 (Three or Four Outlets)</th>
<th>Model C81-570 (Four to Six Outlets)</th>
<th>Model C81-657 (Five or Six Outlets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 100 psig range†</td>
<td>5 to 100 psig range†</td>
<td>5 to 100 psig range†</td>
</tr>
</tbody>
</table>

**Model C81-540 Includes:**
- R81-200-LNKA regulator (2)
- 18-013-084 (100 psi) outlet pressure gauge (2)
- 18-006-067 hex nipple (1)
- 18-006-027 half-union adapter (1)
- 18-006-068 half-union adapter with cap (1)
- 16-009-001 check valve (1)
- 3228-54 manifold (1)
- 5095-51 mounting bracket (2)

**Model C81-570 Includes:**
- R81-200-LNKA regulator (2)
- 18-013-084 (100 psi) outlet pressure gauge (2)
- 18-006-067 hex nipple (1)
- 18-006-027 half-union adapter (1)
- 18-006-068 half-union adapter with cap (1)
- 2340-50 manifold extension (1)
- 3228-54 manifold (2)
- 5095-51 mounting bracket (2)

**Model C81-657 Includes:**
- R81-200-LNKA regulator (2)
- 18-013-084 (100 psi) outlet pressure gauge (2)
- 18-006-067 hex nipple (1)
- 18-006-027 half-union adapter (1)
- 18-006-068 half-union adapter with cap (1)
- 16-009-001 check valve (1)
- 3228-60 manifold (1)
- 5095-51 mounting bracket (2)

### Wall Mounted, Three Regulator Configuration

<table>
<thead>
<tr>
<th>Model C81-724 (Five to Eight Outlets)</th>
<th>Model C81-324 (Six to Nine Outlets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 100 psig range†</td>
<td>5 to 100 psig range†</td>
</tr>
</tbody>
</table>

**Model C81-724 Includes:**
- R81-200-LNKA regulator (2)
- 18-013-084 (100 psi) outlet pressure gauge (2)
- 18-006-067 hex nipple (1)
- 18-006-027 half-union adapter (1)
- 18-006-068 half-union adapter (1)
- 2340-50 manifold extension (1)
- 3228-56 manifold (1) - Same as 3228-54 but includes two caps
- 3228-60 manifold (1)
- 5095-51 mounting bracket (2)

**Model C81-324 Includes:**
- R81-200-LNKA regulator (3)
- 18-013-084 (100 psi) outlet pressure gauge (3)
- 18-006-067 hex nipple (2)
- 18-006-027 half-union adapter (1)
- 18-006-068 half-union adapter (1)
- 2340-50 manifold extension (1)
- 3228-54 manifold (3)
- 5095-51 mounting bracket (2)

† Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.
All Dimensions in Inches (mm)

R81 Regulator

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

Service Kits

<table>
<thead>
<tr>
<th>Item</th>
<th>Type</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service kits</td>
<td>Diaphragm, relieving</td>
<td>570-51</td>
</tr>
<tr>
<td></td>
<td>Valve cartridge and seal</td>
<td>5086-55</td>
</tr>
<tr>
<td></td>
<td>Kit, major</td>
<td>6309-04 *</td>
</tr>
<tr>
<td></td>
<td>Relief valve and seal</td>
<td>5779-55 †</td>
</tr>
</tbody>
</table>

* Kit contains diaphragm, slip ring, valve cartridge, and o-rings.
† Relief valve is marked 130 PSIG RELIEF VALVE and has a brass body with a black end cap.
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 Norgren 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.
Underwriters Laboratories, Inc. listed (file number SA1089)


Integral relief valve easily replaced without disassembly of regulator and without affecting relief pressure setting.

Back flow check valve, or manifold with integral check valve at each outlet, can be installed in regulator outlet port. Manifolds available with 3 or 5 outlets and include one outlet cap.

Relieving diaphragm allows outlet pressure setting to be reduced even though the system is dead-ended. Pressure downstream of check valves will not be reduced.

Easily replaceable valve cartridge contains valve, valve seat, valve spring, and filter element.

Two high pressure ports (inlet and primary gauge) and two regulated pressure ports (outlet and secondary gauge).

Diametrically opposite inlet ports facilitate manifolding for multiple dispensing applications. Each manifoded regulator operates independently as though attached directly to the gas supply source.

Bonnet wrench hex same size as tank adapter - one wrench fits both.

**Technical Data**

**Fluid:** Carbon dioxide. The R82 regulator is designed for use in beer dispensing systems to control cylinder gas (carbon dioxide) pressure to the beer keg. Other Norgren regulators (R81 for soft drink syrup containers, R84 for soft drink carbonators, R83 for industrial cylinder gases) are available for use in other systems.

- Maximum pressure: 3000 psig (207 bar)
- Operating temperature: 0°F to 140°F (-18°C 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)

See Section ALE-25 for Accessories
**R82 Beverage Regulators**

**Ordering Information.** Models listed include integral relief valve with cracking pressure of 60 ± 4 psig (4.1 ± 0.28 bar), PTF threads, relieving diaphragm, 2 to 45 psig (0.14 to 3.1 bar) outlet pressure adjustment range†. A gauge is not included.

<table>
<thead>
<tr>
<th>Port</th>
<th>Model</th>
<th>Weight lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>R82-200-ENEA</td>
<td>1.3 (0.59)</td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Wall Mounting Bracket</th>
<th>Pipe Plug, Hex Socket 1/4&quot; PTF</th>
<th>Hex Nipple 1/4&quot; PTF male</th>
<th>Union Adapter with Cap 1/4&quot; PTF to 1/4&quot; tube (45° flare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strap Type: 5095-51</td>
<td>2891-97</td>
<td>18-006-067</td>
<td>18-006-068 Adapter only: 18-006-027 Cap only: 3302-50</td>
</tr>
</tbody>
</table>

**Inlet Fittings**

<table>
<thead>
<tr>
<th>Ø 50 mm (2&quot;) diameter, 1/4&quot; PTF connection</th>
<th>Nitrogen Service Cylinder Connector 0.906-14 RH external thread</th>
<th>Carbon Dioxide Service Cylinder Connector 0.830-14 RH internal thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 psig (2 bar), UL Listed: 18-013-030</td>
<td>1.44&quot; (37 mm) long nipple</td>
<td>2.25&quot; (57 mm) long nipple</td>
</tr>
<tr>
<td>60 psig (4 bar), UL Listed: 18-013-083</td>
<td>18-006-015</td>
<td>Replacement gasket: 1390-02</td>
</tr>
<tr>
<td>100 psig (7 bar), UL Listed: 18-013-084</td>
<td>18-013-085</td>
<td></td>
</tr>
<tr>
<td>300 psig (20 bar), UL Listed: 18-013-086</td>
<td>18-013-087</td>
<td></td>
</tr>
<tr>
<td>3000 psig (205 bar), UL Listed: 18-013-244</td>
<td>18-013-087</td>
<td></td>
</tr>
</tbody>
</table>

**Inlet Fittings - Multiple Outlet Fittings - Manifolds with integral check valves ††**

<table>
<thead>
<tr>
<th>Single Outlet Fittings - Check Valves ††</th>
<th>Multiple Outlet Fittings - Manifolds with integral check valves ††</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Valve, 1/4&quot; PTF male to 1/4&quot; tube (45° flare): 16-009-001</td>
<td>2 or 3 outlets, 1/4&quot; PTF male to 1/4&quot; tube (45° flare): 3228-54</td>
</tr>
<tr>
<td>Check Valve, 1/4&quot; PTF male to 1/2-16 BSP: 16-009-002</td>
<td>2 or 3 outlets, 1/4&quot; PTF male to 1/2-16 BSP: 3228-55</td>
</tr>
<tr>
<td>Check Valve, 1/4&quot; PTF male to 1/4&quot; PTF female: 16-009-003</td>
<td>4 or 5 outlets, 1/4&quot; PTF male to 1/4&quot; tube (45° flare): 3228-60</td>
</tr>
<tr>
<td>Check Valve, 1/4&quot; PTF male to 1/2-16 BSP: 16-009-003</td>
<td>4 or 5 outlets, 1/4&quot; PTF male to 1/2-16 BSP: 3228-61</td>
</tr>
<tr>
<td>Manifold extension, 1/4&quot; PTF male to 1/4&quot; PTF female: 2340-50</td>
<td></td>
</tr>
</tbody>
</table>

† Outlet pressure can be adjusted to pressures in excess of, and less than, that specified. Do not use these units to control pressures outside of the specified range.

†† The listed check valves and manifolds with integral check valves are designed for use with Norgren R82 regulators. They are not recommended for use with other regulators unless separate pressure relief protection is provided in each of the outlet lines.
All Dimensions in Inches (mm)

**R82 Regulator**

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

5095-51 Strap Type Bracket

**Service Kits**

<table>
<thead>
<tr>
<th>Item</th>
<th>Type</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service kits</td>
<td>Diaphragm, relieving</td>
<td>570-51</td>
</tr>
<tr>
<td></td>
<td>Valve cartridge and seal</td>
<td>5086-55</td>
</tr>
<tr>
<td></td>
<td>Kit, major</td>
<td>6309-04 *</td>
</tr>
<tr>
<td></td>
<td>Relief valve and seal</td>
<td>5779-56 †</td>
</tr>
</tbody>
</table>

* Kit contains diaphragm, slip ring, valve cartridge, and o-rings.
† Relief valve is marked **60 PSIG RELIEF VALVE** and has a brass body with a natural (silver colored) aluminum end cap.

**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 Norgren 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.