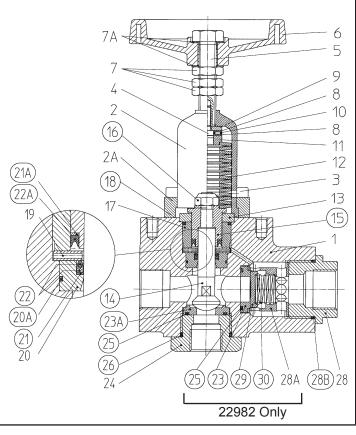
## Models 22982 22982R

# Industrial Unloader/ Regulator



### 22982 = Unloader 22982R = Regulator

**Operating Specifications** 

Maximum Pressure: 3000 PSI (200 bar) Minimum Pressure: 580 PSI (40 bar) Maximum Flow: 52.8 GPM (200 l/m) Minimum Flow: 2.1 GPM (8 I/m) Maximum Temperature: 160 °F (70 °C) Inlet Port: 1" FBSP 1" FBSP **Outlet Port:** Bypass: 3/4" FBSP 15.4 lbs. (7 kg) Weight:

Repair Kits:

Unloader Repair Kit Parts Included:

14, 15, 16, 18, 20A, 21, 21A, 22,

22A, 23, 25, 26, 28B, 29, 30

Regulator Repair Kit Parts Included:

09811R 14, 15, 16, 18, 20A, 21, 21A,

22, 22A, 25, 26, 28B

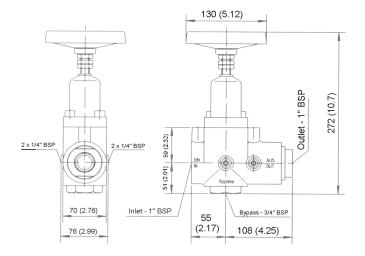
| Item Part#             |         | Description             | Qty              |
|------------------------|---------|-------------------------|------------------|
| 1                      | 13245   | Casing                  | 1                |
| 2                      | 04843*  | Spring Guide            | 1                |
| 2A<br>3<br>4<br>5<br>6 | 04844*  | Flange for Spring Guide | 1                |
| 3                      | 07381   | Inner Hexagon Screw     | 4                |
| 4                      | 08503   | Inner Hexagon Screw     | 1                |
| 5                      | 08504   | Stud Bolt               | 1                |
| 6                      | 08505   | Hand Wheel              | 1                |
| 7                      | 08506** | Hexagon Nut             | 3                |
| 7A                     | 08882   | Disc                    | 3<br>2<br>2<br>1 |
| 8                      | 08507   | Disc                    | 2                |
| 9                      | 08508   | Bearing Part 1          |                  |
| 10                     | 12323   | Axial Bearing           | 1                |
| 11                     | 08510   | Bearing Part 2          | 1                |
| 12                     | 08512   | Spring Plate            | 16               |
| 13                     | 05703   | Centering Disc          | 1                |
| 14                     | 13247   | Piston                  | 1                |
| 15                     | 05704   | Seal Support            | 1                |
| 16                     | 04036   | Hexagon Nut             | 1                |
| 17                     | 05705   | Cylinder                | 1                |
| 18                     | 13012   | O-Ring                  | 1                |
|                        |         |                         |                  |

| Item | Part#      | Description               | Qty |
|------|------------|---------------------------|-----|
| 19   | 13250      | Spacer Ring               | 1   |
| 20   | 13251      | Seal Adapter              | 1   |
| 20A  | 07281      | O-Ring                    | 1   |
| 21   | 07840      | Support Ring              | 1   |
| 21A  | 07904      | Support Ring              | 1   |
| 22   | 13254      | Seal Pack                 | 1   |
| 22A  | 08087      | Grooved Seal Ring         | 1   |
| 23   | 13256      | Valve Seat, 22982 Only    | 1   |
| 23A  | 05706      | Bypass Valve seat         | 1   |
| 24   | 13257      | Bypass Valve Plug         | 1   |
| 25   | 12057      | O-Ring, 22982 Only        | 2   |
| 25   | 12057      | O-Ring, 22982R Only       | 1   |
| 26   | 12055      | O-Ring                    | 1   |
| 28   | 13258      | Kick-Back Valve Plug      | 1   |
| 28A  | 13259      | Spacer Pipe, 22982 Only   | 1   |
| 28B  | 07653      | O-Ring                    | 1   |
| 29   | 13260      | Valve Plate, 22982 Only   | 1   |
| 30   | 07750      | Valve Spring, 22982 Only  | 1   |
| 31   | 07423-0100 | Stop Plug (not shown)     | 4   |
| 32   | 06934      | Copper Washer (not shown) | 4   |

<sup>\*</sup> Also sold as an assembly - p/n 06880

<sup>\*\*</sup> If handwheel is removed, only two of the hexagon nuts are needed.

#### 22982/22982R DIMENSIONS - INCHES (mm)



#### **SERVICE AND ADJUSTMENT**

Servicing and adjusting work is only to be carried out by a skilled tradesman.

#### TO RENEW THE PISTON ROD SEALS AND SLEEVES

Relieve the spring pack by means of the hand wheel (6). Screw out the four inner hexagon screws (3). Remove the spring guide (2) along with the spring plates (12) and hand wheel. **CAUTION:** The hexagon nuts (7) are not to be shifted from the set position. These are the locking nuts to retain the maximum adjusting pressure. Note the sequence of the spring plates (12) for reassembling.

Push out complete piston assembly (13-22A) over the bypass. Hold piston (14) with size 10 spanner and screw off hexagon nut (16). Take seals and cylinder along with the seal supports off the piston, taking note of the sequence for reassembling.

Check inner cylinder surface and piston surface. Check seals and replace as necessary. Dirt or damage will cause seals to wear out quickly.

Grease all parts lightly with silicone before reinstalling. Tighten hexagon nut (16) to 36 ft.-lbs.

Center bypass valve seat within casing and tighten to 184 ft-lbs. with valve plug (24).



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#### TO CHECK AND REPLACE VALVES

Screw out plugs (24 & 28) and check whether the ball (29) underneath or the piston (14) is worn out. Remove the valve seats (23 and 23A) and check the surfaces for damage. Replace as necessary.

#### TO ADJUST PRESSURE

The spring packing is pre-tensioned by means of the hand wheel (6) while the pump is running and the gun is open (in the case of more than one gun, all guns have to be open) until required operating pressure is reached. This must allow for a residue of at least 0.13 GPM to flow over the bypass. The spring packing is never to be tensioned high enough to completely seal up the bypass. The hexagon nut (7) is then to be locked to the spring guide (2).

If the nozzle hole is too small, on no account is the valve to be adjusted to an operating pressure higher than that of the pump. It is advisable in this case to install nozzles more suitable for this purpose.

#### **OPERATION**

The whole discharge must be guided through the valve. Should the actual operating the actual operating pressure exceed the adjusted operating pressure, the valve then acts as a pressure regulator. The valve switches to pressure free bypass operation when the spray gun shuts off and the spray pressure between gun and valve remains idle.

The valve can be operated with a number of spray guns; furthermore, more than one pump can be connected to the pressure pipe.

Valves are pre-adjusted to the desired operating pressure; therefore, the actual operating pressure has always to be stated when ordering.

| Defect  | Cause                            | Remedy  |
|---|----------------------------------|---|
| Valve switches repeatedly when                          | Leaky gun<br>Leaky pressure pipe | Repair gun<br>Seal pressure pipe  |
| gun is closed   | Leaky seal pack (22)             | Renew seal pack   |
|   | Worn out valve plate (29)        | Check and replace as valve plate (23), and seat (23).                   |
|   | Leaky O-Ring (18).               | Renew O-Ring (18).  |
| Pressure guage shows high-pressure above operating (6). | Valve set too high pressure.     | Turn back hand wheel  |
| peaks when<br>shutting off gun.                         | Dirty valve.                     | Clean valve (removing deposits etc.). Grease parts before reinstalling. |