

**INSTALLATION & SERVICE**

# **Hydra-Cell<sup>®</sup>** **INDUSTRIAL VALVES**

**MODEL: C46**

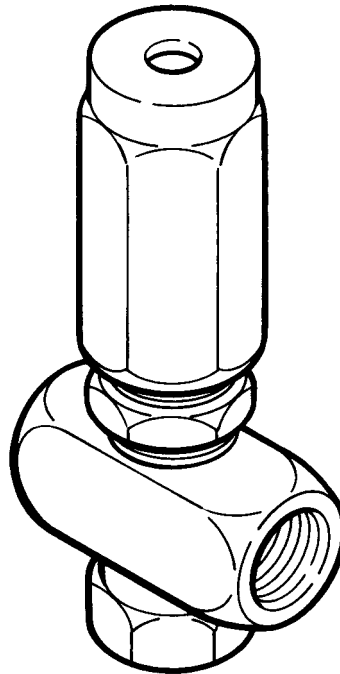
**PRESSURE REGULATING VALVES**



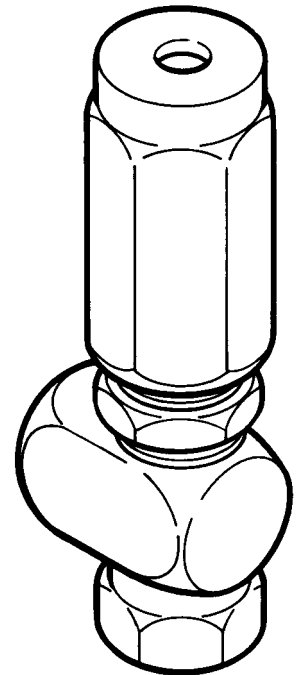
**WANNER ENGINEERING, INC.**

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**In-Line**



**Off-Line**

# Wanner Pressure Regulating Valve

Hydra-Cell C46 Bypass Pressure Regulating Valves bypass system fluid to prevent excess pressure in the system. Whenever the system discharge is completely closed, by a closed spary gun, closed valve or plugged nozzles, Hydra-Cell valves bypass the total system fluid flow. They also can be used to balance system pressure in multiple gun operations.

The design is simple: a plunger and valve seat. When excess pressure overcomes the adjustable spring pressure on the plunger, the plunger lifts off the valve seat, allowing sufficient fluid to bypass and thereby balance system pressure.

## Installation

### Location

Install the regulating valve between the pump outlet (as close to the pump as possible) and any shut-off device in the discharge plumbing. It may be located **in** the discharge line, or **off**-line as illustrated in Figures 1 and 2 below.

### Mounting Position

The preferred mounting position is vertical with the adjusting cap at the top.

## Specifications

### Pressure Range

Low spring (0.081")	50-500 psi
Medium spring (0.099")	100-900 psi
Standard spring (0.125")	200-1500 psi

### Temperature Range

To 180°F

### Volume Range

Off-Line Mount:	To 10 pgm
In-Line Mount:	To 7 pgm

### Ports

Inlet, Outlet, Bypass: 3/8" NPT

### Materials of Construction

(Other materials available on special order):

Body:	Brass
	316 Stainless steel
Piston:	316 Stainless steel
Valve Seat:	316 Stainless steel
O-rings:	Buna-N, EPDM or Viton
Piston Seal:	Buna-N, EPDM or Viton
Spring:	Chrome Vanadium-plated

### Weight

12 ounces

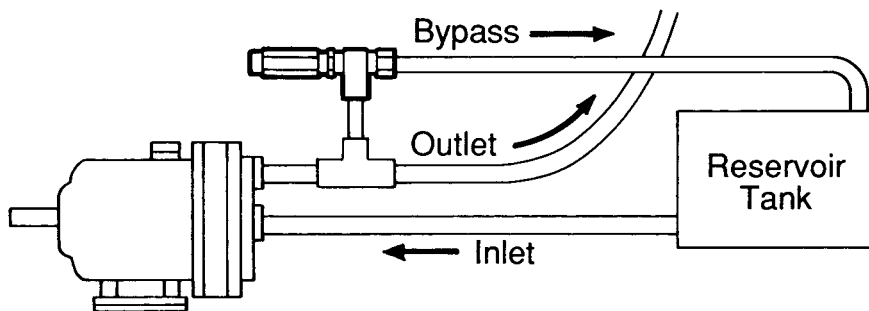


Fig. 1: Off-Line

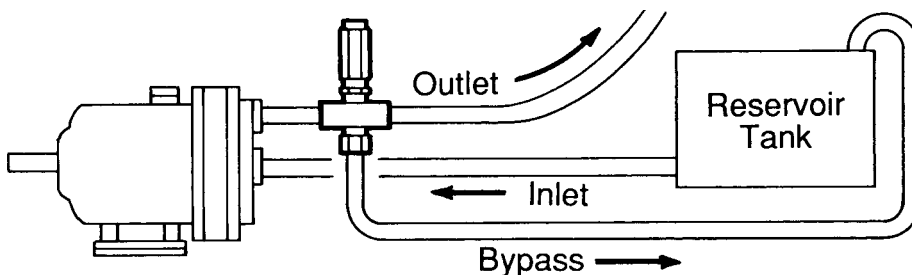


Fig. 2: In-Line

# Installation

## Pressure Adjustment

To increase pressure, turn the adjusting cap clockwise; to reduce pressure, turn counterclockwise.

## Installation

The regulator is not preset for pressure. Start the pump with the spring relaxed (seven threads showing). With the discharge gun open, check the gauge pressure as you turn the adjusting cap clockwise to increase the pressure to the desired operating range (1500 psi max).

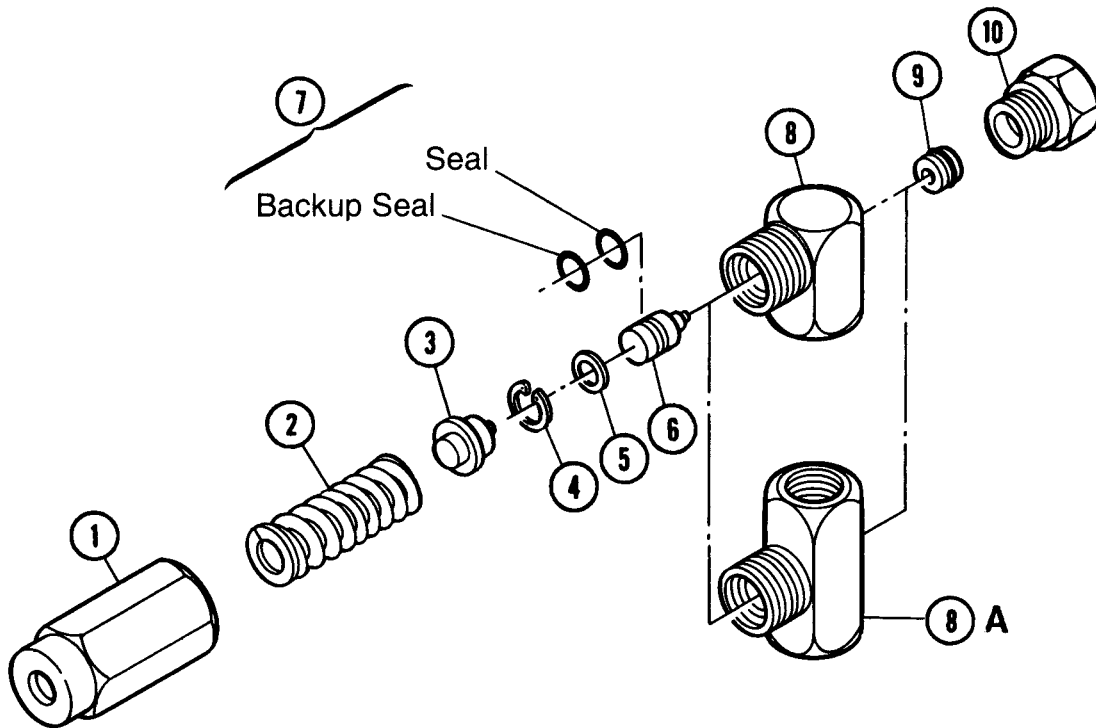
**Caution: Do not exceed maximum pressure rating of the pump.**

There may be some bypass if the nozzle is undersized. Do not adjust above the working pressure as this will unnecessarily increase the pressure when the gun is shut off.

If the system has more than one outlet gun, set the valve pressure with one outlet gun open. Then check again with all guns open to verify that the pressure is still within the proper range.

## Parts List

- |   |   |
|---|---|
| <p><b>1</b> Adjusting Cap:<br/>Brass<br/>Brass-Plated</p> <p><b>2</b> Spring:<br/>200 - 1500 psi<br/>100 - 900 psi<br/>50 - 500 psi</p> <p><b>3</b> Thrust Plate:<br/>316 SST</p> <p><b>4</b> Snap Ring</p> <p><b>5</b> Washer</p> <p><b>6</b> Piston:<br/>316 SST</p> <p><b>7</b> Seal Kit:<br/>Buna/Teflon<br/>EPDM/Teflon<br/>Viton/Teflon</p> | <p><b>8</b> Body Assembly (Off-Line):<br/>Brass<br/>316 SST</p> <p><b>8A</b> Body Assembly (In-Line):<br/>Brass</p> <p><b>9</b> Seat;<br/>Seat O-ring:<br/>Buna<br/>Viton<br/>EPDM</p> <p><b>10</b> Bypass Fitting:<br/>Buna<br/>EPDM<br/>Viton</p> |
|---|---|



### **Limited Warranty**

Wanner Engineering, Inc. extends to the original purchaser of equipment manufactured by it and bearing its name, a limited one-year warranty from the date of purchase against defects in material or workmanship, provided that the equipment is installed and operated in accordance with the recommendations and instructions of Wanner Engineering, Inc. Wanner Engineering, Inc. will repair or replace, at its option, defective parts without charge if such parts are returned with transportation charges prepaid to Wanner Engineering, Inc., 1204 Chestnut Avenue, Minneapolis, Minnesota 55403.

This warranty does not cover:

1. The electric motors (if any), which are covered by the separate warranties of the manufacturers of these components.
2. Normal wear and/or damage caused by or related to abrasion, corrosion, abuse, negligence, accident, faulty installation or tampering in a manner which impairs normal operation.
3. Transportation costs.

This limited warranty is exclusive, and is in lieu of any other warranties (express or implied) including warranty of merchantability or warranty of fitness for a particular purpose and of any noncontractual liabilities including product liabilities based on negligence or strict liability. Every form of liability for direct, special, incidental or consequential damages or loss is expressly excluded and denied.



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