

# IMPORTANT INSTRUCTIONS

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## B166 AND T166 BYPASS VALVES



*Solutions beyond products...*

**CORKEN**  
**IDEX**

Warning: (1) Periodic inspection and maintenance of Corken products is essential. (2) Inspection, maintenance and installation of Corken products must be made only by experienced, trained and qualified personnel. (3) Maintenance, use and installation of Corken products must comply with Corken instructions, applicable laws and safety standards (such as NFPA Pamphlet 58 for LP-Gas and ANSI K61. 1-1972 for Anhydrous Ammonia). (4) Transfer of toxic, dangerous, flammable or explosive substances using Corken products is at user's risk and equipment should be operated only by qualified personnel according to applicable laws and safety standards.

## THE CORKEN B166 VALVE

Your new CORKEN B166 Valve (Figure 1) is a patented, dual purpose automatic priming and differential bypass valve especially designed for high pressure volatile liquid service, but it is suitable also as a bypass valve for handling stable liquids. The B166 Valve was developed for use with the CORKEN Coro-Flo turbine regenerative pumps to keep the pump primed at all times and to act as a differential bypass when needed. The B166 is also ideal for centrifugal and other pumps.

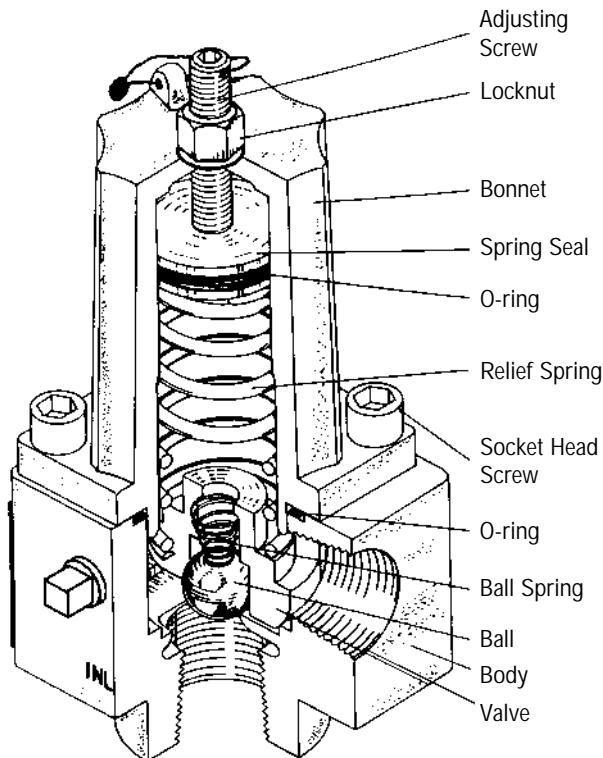


Figure 1. B166 Construction Details

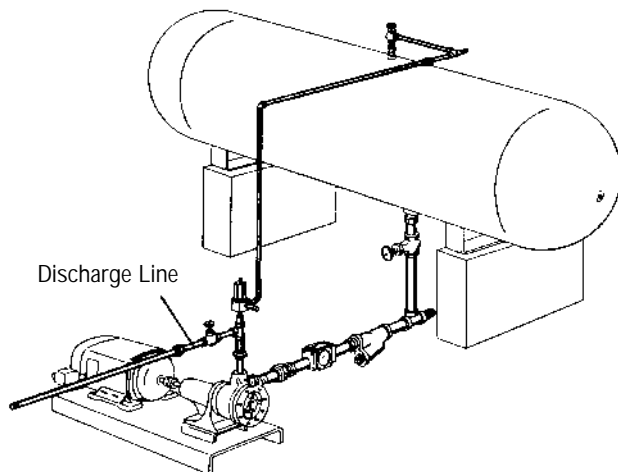


Figure 2. Typical Installation

## INSTALLATION OF B166 VALVE

Proper installation of the CORKEN B166 Valve will ensure optimum performance of the pump as well as the valve. Install your B166 Valve on the discharge side of the pump, either vertically or horizontally. All CORKEN Coro-Flo turbine pumps have a 3/4" NPT opening in the discharge nozzle for piping this valve. For other pumps a tee in the discharge line must be provided. The discharge piping from the valve should go to the vapor section of the supply tank into an excess flow valve, **not a back check valve**. The typical installation is shown in Figure 2. The recommended valve discharge pipe line sizes are given in the table below. For distances of 50 feet or more, the next larger pipe size should be used.

### Recommended Valve Discharge Line Sizes

Flow Rate GPM	B166 Valve Size	
	3/4"	1"
Up to 20	3/4"	3/4"
Up to 40	1"	1"

## ADJUSTMENT OF CORKEN B166 VALVE

The proper setting of the valve must be made at the time of installation. Start the pump and circulate liquid through the valve back to the tank. Turn the valve adjusting screw out (counterclockwise) to decrease the pressure and in (clockwise) to increase the pump discharge pressure.

Adjust the valve to open at the maximum pump pressure required to fill all containers.

Tighten the lock nut and permit the pump to circulate liquid through the valve. On stationary applications, if the motor overload protection device stops the motor, readjust the valve by turning the screw out another turn or two.

Once a satisfactory pressure adjustment has been made, attach the "tamper-proof" seal furnished with your valve to prevent unauthorized valve adjustment. On installations where the pump has an internal safety relief valve, the B166 bypass valve should be set at a pressure slightly lower than the pump internal safety relief valve.

### NOTE:

On LP-gas installations, a maximum differential pressure of 125 psi is allowed by Underwriters' Laboratories, Inc.

## THE CORKEN T166 VALVE

Your new CORKEN T166 Valve (Figure 3) has been especially designed for use with delivery truck pumps to control the pump discharge pressure and to bypass excess liquid back to the truck tank. It is also quite satisfactory for service with any positive displacement pump within its capacity range and has been used in many stationary installations.

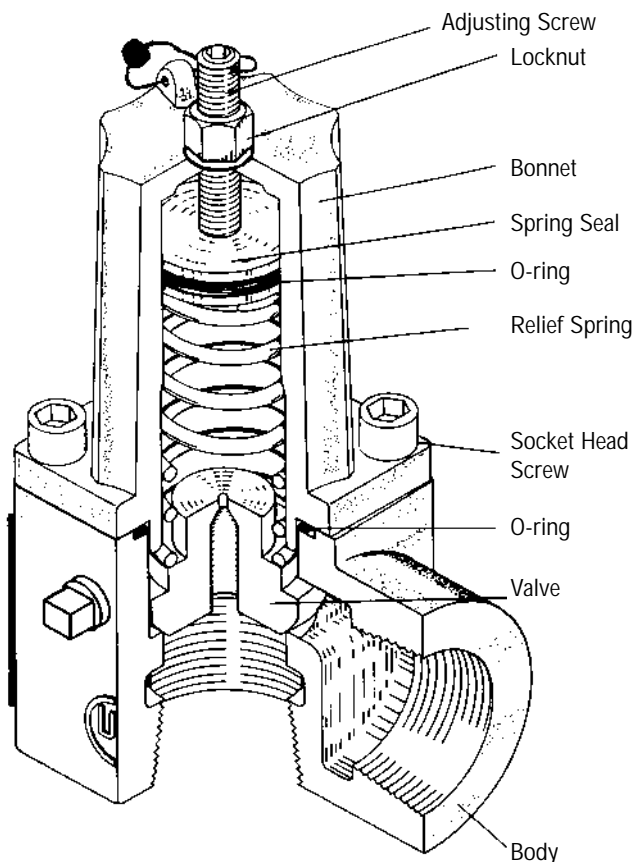


Figure 3. T166 Construction Details

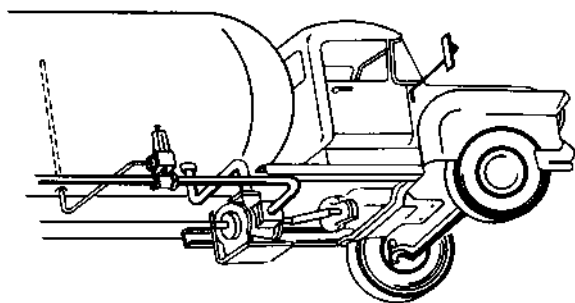


Figure 4. Typical Delivery Truck Installation

## INSTALLATION OF T166 VALVE

Proper installation of the CORKEN T166 Valve will ensure optimum performance of the pump as well as the valve. Install your T166 Valve on the discharge side of the pump, either vertically or horizontally. The discharge piping from the valve should go to the vapor section of the truck tank into a filler type valve or a back check valve. A typical truck installation is shown in Figure 4. When the valve is being used for vapor venting on stationary applications using pumps with internal safety relief valves, the piping should be the same as that used for the CORKEN B166. The recommended valve discharge pipe line sizes are given in the table below. For distances of 50 feet or more, the next larger pipe size should be used.

### Recommended Valve Discharge Line Sizes

Flow Rate GPM	T166 Valve Size	
		1-1/4"
Up to 80	1-1/2"	1-1/2"

## ADJUSTMENT OF CORKEN T166 VALVE

The proper setting of the valve must be made at the time of installation. Start the pump and circulate liquid through the valve back to the tank. Turn the valve adjusting screw out (counterclockwise) to decrease the pressure and in (clockwise) to increase the pump discharge pressure.

Adjust the valve to open at the maximum pump pressure required to fill all containers. This is typically around 100 psi differential.

Tighten the lock nut and permit the pump to circulate liquid through the valve. On stationary applications, if the motor overload protection device stops the motor, readjust the valve by turning the screw out another turn or two.

Once a satisfactory pressure adjustment has been made, attach the "tamper-proof" seal furnished with your valve to prevent unauthorized valve adjustment. On installations where the pump has an internal safety relief valve, the T166 bypass valve should be set at a pressure slightly lower than the pump internal safety relief valve.

### NOTE:

On LP-gas installations, a maximum differential pressure of 125 psi is allowed by Underwriters' Laboratories, Inc.

## CORKEN ONE YEAR LIMITED WARRANTY

CORKEN, INC. warrants that its products will be free from defects in material and workmanship for a period of 12 months following date of purchase from CORKEN. CORKEN products which fail within the warranty period due to defects in material or workmanship will be repaired or replaced, at CORKEN'S option, when returned, freight prepaid to: CORKEN, INC., 3805 N.W. 36th Street, Oklahoma City, Oklahoma 73112. Parts subject to wear or abuse, such as mechanical seals, blades, piston rings, and packing, and other parts showing signs of abuse are not covered by this limited warranty. Also, equipment, parts and accessories not manufactured by CORKEN but furnished with CORKEN products are not covered by this limited warranty and purchaser must look to the original manufacturer's warranty, if any. This limited warranty is void if the CORKEN product has been altered or repaired without the consent of Corken. All implied warranties, including any implied warranty of merchantability or fitness for a particular purpose, are expressly and shall in no event extend beyond the expressed warranty period. CORKEN DISCLAIMS ANY LIABILITY FOR CONSEQUENTIAL DAMAGES DUE TO BREACH OF ANY WRITTEN OR IMPLIED WARRANTY ON CORKEN PRODUCTS. Transfer of toxic, dangerous, flammable or explosive substances using CORKEN products is **at the user's risk**. Such substances should be handled by **experienced, trained personnel in compliance with governmental and industrial safety standards**.

### WARNING

**Install, use and maintain this equipment according to CORKEN, INC. instructions and all applicable federal, state, local laws and codes and NFPA Pamphlet 58 for LP-Gas or ANSI K61.1-1989 for Anhydrous Ammonia. Periodic inspection and maintenance is essential.**

### WRITING THE FACTORY

For your convenience, the valve size and serial code are given on the valve nameplate. This serial code tells the month and year your valve was built. Space is provided below for you to keep a written record of this information.

**Always include the valve size and serial code when ordering parts.**

Valve Model \_\_\_\_\_ Valve Size \_\_\_\_\_ Serial Code \_\_\_\_\_  
Date Purchased \_\_\_\_\_ Date Installed \_\_\_\_\_  
Purchased From \_\_\_\_\_  
Installed By \_\_\_\_\_

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