

# Product Information Bulletin

## Triplex Mud Pump

### Supplement for all Pump Manuals

REFERENCE	REFERENCE DESCRIPTION Triplex Mud Pump	
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# WARNING



# PRESSURE RELIEF VALVES

## **! Notice !**

Our Technical Publications relative to reciprocating pumps, state that pressure relief valves must be installed in the discharge systems from these units. This supplement is issued to emphasize the importance of relieving the discharge system of all pressure which exceeds the rated working pressure applied by the manufacturer to the specific pistons and liners ( or plungers and packing) in any particular unit.

## 1 WARNING



For the protection of persons and properly the discharge system from each Reciprocating Pump must be equipped with a device which relieves the system of all pressures which exceed the pressure rating applied by the manufacturer to each particular piston or plunger diameter. Allowances will be made for pressure surges which are inherent with the reciprocating action of piston and plunger pumps. The percentage of pressure allowance appears later in this publication and the “Standards of the Hydraulic Institute” (13<sup>th</sup> Edition)

The relieving device must provide for instantaneous pressure relief, it may be a valve designed for automatic or manual resetting; however, if preferred, rupture discs or burst may be installed.

**Failure** to comply with the procedures outlined in the Warning may result in damage to the pump and related equipment and more importantly may cause serious bodily injury or death!

### 1.1 The Pressure Relief Valve

1. The valve must be a full opening type.
2. It must have a working pressure rating, equal to or greater than, the maximum working pressure of the pump.
3. The through capacity of the valve, when fully opened, must be sufficient to relieve the full capacity of the pump without excessive overpressure.

### 1.2 Rupture Disc or Burst Disc

1. These discs must have a diameter which is not less than the pipe size of the pressure relief flange.
2. These discs must have a rupture or burst pressure rating consistent with the specifications tabulated later in this publication.

### 1.3 Location of the Relief Valve

1. The relief valve must be placed in the discharge line as close as possible to the pump fluid end or it may be mounted on the pump discharge manifold.
2. The relief valve must be on the pump side of any discharge strainer.
3. The relief valve must be between the pump fluid end and any valve in the discharge system.
4. There must be no restricting device(s) between the relief valve and the pump fluid end.

### 1.4 The Relief Valve Discharge Line

1. The relief valve discharge line should not terminate in the pump suction line.
2. The line should terminate in the supply tank, if possible.
3. The line must be securely anchored.
4. The line must be the same pipe size as, or may be larger than, the discharge connection on the relief valve.
5. If the line is of great length, this must be taken into consideration in sizing the relief valve.
6. There must be no restrictions or valves in the relief valve discharge line.

**Note:** Follow the foregoing instructions if rupture discs or burst discs are installed.

<b>SUGGESTED SET PRESSURES FOR PUMP RELIEF VALVES</b>	
<b>Pump Type</b>	<b>Operating Pump Pressure</b>
Double Acting – Duplex	Piston Pressure Rating – Plus 25%
Double Acting – Triplex	Piston Pressure Rating – Plus 10%
Double Acting – Quintuplex	Piston Pressure Rating – Plus 10%
Single Acting – Triplex	Piston Pressure Rating – Plus 10%
Single Acting – Simplex	Plunger Pressure Rating – Plus 25%
Single Acting – Duplex	Plunger Pressure Rating – Plus 10%
Single Acting – Triplex	Plunger Pressure Rating – Plus 10%
Single Acting – Quintuplex	Plunger Pressure Rating – Plus 10%
Single Acting – Septuplex	Plunger Pressure Rating – Plus 10%

**Note:** The above set pressures are to be observed when installing rupture discs or burst discs.