**Direct-Drive Plunger Pump Models**

**SPECIFICATIONS**

**MODEL 3DX29GSI**

- Flow: 2.9 gpm (10.9 lpm)
- Max. Discharge Pressure: 2500 psi (175 bar)
- Max. RPM: 3450 rpm
- Stroke: 0.232" (5.9 mm)

**MODEL 3DX30GSI**

- Flow: 3.0 gpm (11.4 lpm)
- Max. Discharge Pressure: 2500 psi (175 bar)
- Max. RPM: 3450 rpm
- Stroke: 0.244" (6.2 mm)

**COMMON PUMP SPECIFICATIONS**

- Inlet Pressure Range: Flooded to 60 psi (Flooded to 4 bar)
- Bore: 0.630" (16 mm)
- Max. Liquid Temperature: 140°F (60°C)
- Crankcase Capacity: 8.5 oz. (0.25 l)
- Inlet Port: 3/4" GHF (3/4" GHF)
- Discharge Port: M18x1.0 (M18x1.0)
- Chemical Discharge Port: 3/8" NPTM (3/8" NPTM)
- Chemical Injection Barb: 8/32" UNF (8/32" UNF)
- Shaft Diameter: 3/4" (19.0 mm)
- Weight: 10.7 lbs. (4.9 kg)
- Dimensions: 7.99 x 7.75 x 6.29" (203x197x160 mm)

**ELECTRIC HORSEPOWER REQUIREMENTS**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>FLOW</th>
<th>PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>psi 1000</td>
<td>psi 1200</td>
</tr>
<tr>
<td>3DX29GSI</td>
<td>2.9</td>
<td>1.9</td>
</tr>
<tr>
<td>3DX30GSI</td>
<td>3.0</td>
<td>2.1</td>
</tr>
</tbody>
</table>

**DETERMINING**

- Rated gpm = "Desired" gpm
- Rated rpm = "Desired" rpm
- gpm x psi = Electric Brake
- H. P. Required

**CAUTIONS AND WARNINGS**

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. CAT PUMPS does not assume any liability or responsibility for the operation of a customer’s high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/cautions-warnings or can be requested directly from CAT PUMPS.

**WARRANTY**

View the Limited Warranty on-line at www.catpumps.com/warranty.
Center raised pilot guide on the Adapter Plate assures proper alignment of pump and engine. Before mounting pump onto engine inspect engine for recessed seal and bearing guide to permit adapter to completely seat into recess and four bosses to be flush with engine face.
INTEGRAL UNLOADER

SPECIFICATIONS

U.S. Measure

Metric Measure

Flow................................................................. 3.0 gpm
(11.4 lpm)
PSI Range...................................................... 100-2500 psi
Inlet Port ......................................................... 3/4" GHF
(3/4" GHF)
Discharge Port w/Chemical Injector........... 3/8" NPTM
(3/8" NPTM)

UNLOADER TYPE

An integral unloader with built-in by-pass is part of the discharge manifold to provide system pressure regulation and pump protection. This pump also includes a fixed chemical injector for chemical application.

OPERATION:

Pump should be purged of air before commencing with operation. Liquid must flow through the pump without discharge restriction to assure full system pressure is reached.

Install a pressure gauge close to the manifold head of the pump to assist in setting system pressure and to periodically monitor system pressure.

Setting and adjusting the unloader pressure must be done with the system turned on. Start the system with the unloader backed off to the lowest pressure setting (counterclockwise direction). Squeeze the trigger and read the pressure on the gauge at the pump. Do not read pressure at the gun or nozzle. If more pressure is desired, release the trigger, turn adjusting cap one quarter turn in a clockwise direction. Squeeze the trigger and read the pressure. Repeat this process until the desired system pressure is reached. Thread locking nut up to adjusting cap (model 3DX29GSI only).

NOTE: Pressure is not set at the factory.

SERVICE:

The unloader should be serviced on the same schedule as the seals in the pump. Refer to 3DX Service Manual for servicing of seals and valves, torque requirements and diagnosis and maintenance chart.

FIXED CHEMICAL INJECTOR

SPECIFICATIONS

U.S. Measure

Model 7232
GPM................................................................. 3.0 gpm
(11.4 lpm)
Nozzle Orifice................................................... 2.0 mm
(0.039"
(2.1 mm)
Model 7242
GPM................................................................. 2.9 gpm
(10.9 lpm)
Nozzle Orifice................................................... 2.0 mm
(0.039"
(2.0 mm)

COMMON SPECIFICATIONS

Hose Barb....................................................... 3/4" NPTM
(8/32" UNF
(1/4"
(M18x1.0)
Discharge Port................................................. 3/8" NPTM
(3/8" NPTM)
Weight............................................................. 5.3 oz
(0.15 kg)
Dimensions.................................................... 2 x 1 x 1.75"
(52 x 25 x 45 mm)

CHEMICAL INJECTOR PERFORMANCE CHART

<table>
<thead>
<tr>
<th>Orifice Size</th>
<th>Injector Model</th>
<th>Maximum Injecting Pressure</th>
<th>Maximum Chemical Draw</th>
<th>Pressure Drop Across Injector At System Pressure (2500 psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 mm</td>
<td>7232</td>
<td>250 PSI</td>
<td>37.2 oz/min</td>
<td>141 psi</td>
</tr>
<tr>
<td>2.0 mm</td>
<td>7242</td>
<td>280 PSI</td>
<td>38.3 oz/min</td>
<td>148 psi</td>
</tr>
</tbody>
</table>

Optimum performance of chemical injector occurs with a 35 ft. high pressure hose and a minimum 3/8" I.D. The type of hose, extended lengths, reduced I.D. and fittings may create back pressures in excess of the low pressure nozzle rating and prevent the injector from drawing chemical.

Deduct hose friction loss from above low PSI Nozzle. Contact Cat Pumps for assistance with other options.

CAUTION: Deduct the pressure drop shown in the performance chart from your desired system pressure to arrive at the maximum high pressure nozzle rating. This is essential to avoid over-pressurizing the pump.
1 Die cast flange-style aluminum **crankcase** means high strength, lightweight, and excellent tolerance control.

2 Heavy-duty dual crankshaft **bearings** provide extended drive-end life.

3 Chrome-moly **crankshaft** provides unmatched strength and surface hardness for long life.

4 High strength **connecting rods** assure durability and bearing quality.

5 Strong brass **plunger rods** with chrome-moly crosshead pins.

6 Special, concentric, high-density, polished solid ceramic **plungers** provide a true wear surface and extended seal life.

7 High tensile strength, forged brass **manifold head** with built-in integral unloader and eight mounting screws for exceptional strength.

8 100% wet **seal** design adds to service life by allowing pumped liquids to cool and lubricate on both sides.

9 Stacked **valve assemblies** include stainless steel valves, seats and springs to provide corrosion-resistance, ultimate seating and extended life.

10 Unique design and specially formulated **Hi-Pressure Seals** offer unmatched performance and seal life.

11 **Crossheads** are 360° supported for uncompromising alignment.