PFCS High Pressure Pump
PUMPS WITH MULTIPLE FIXED DELIVERIES FOR HIGH PRESSURE (OIL OR 95/5 HWCF) HEAVY DUTY APPLICATIONS

Internationally known as a world class hydraulic company, Oilgear specializes in the design, engineering technology and equipment needed to solve tough hydraulic problems by combining the right pump and components into an engineered system that will meet specific needs. The Oilgear PFCS pump is designed for applications that require the following:

- **HIGH PRESSURE**
  Up to 7250 psi (500 bar) with most hydraulic fluids
  (5000 psi (345 bar) with 95/5).

- **HEAVY DUTY CONSTRUCTION**
  Many of these units have operated 40,000 hours before inspection and reconditioning is necessary.

- **HIGH DIRT TOLERANCE**
  Check valve design provides a high degree of contamination resistance.

- **OPERATION ON LOW VISCOSITY and SPECIAL FLUIDS INCLUDING 95/5**
  These pumps are designed with hydrostatic type bearings and a stationary cylinder.

- **MULTIPLE DELIVERIES – Up to three separate displacements available from a single pump.**
Every Oilgear product is shipped to you with our Performance Assurance — a corporate commitment to stay with your installation until our equipment performs as specified.

Hydraulic equipment and systems have been Oilgear’s primary business since 1921. For decades, we have developed hydraulic techniques to meet the unique needs and unusual fluid power problems of machinery builders and users worldwide, matching fluid power systems to a tremendous range of applications and industries. Our exclusive Performance Assurance program is built upon that strong foundation.

As a customer, you also benefit from access to Oilgear’s impressive technical support network. You’ll find factory trained and field-experienced application engineers on staff at every Oilgear facility. They are backed by headquarters staff who can access the records and knowledge learned from decades of solving the most difficult hydraulic challenges.

When your design or purchase is complete, our service is just beginning. If you ever need us, our Oilgear engineers will be there, ready to help you with the education, field service, parts and repairs to assure that your installation runs smoothly—and keeps right on running.
PFCS
HIGH PRESSURE AXIAL PISTON PUMPS

Features and Benefits

Pistons
- Eighteen hardened steel pistons located in two stationary cylinders are not subject to centrifugal force thus reducing load and wear. The piston load is caused by pumping only, therefore higher operating speeds are possible.

Steel Piston Shoes
- Hydrostatically balanced design reduces piston shoe load and provides lubrication for increased life
- Facilitates a high degree of contamination wear resistance
- Permits higher pressure operation with long life
- Allows operation with low viscosity or other special fluids including 95/5. Consult Oilgear for more information.

Replaceable Piston Sleeves
- Allows economical rebuilding without cylinder replacement

Precision Manufactured White Metal Bearings with Forced Lubrication
- Enables operating with low viscosity or other special fluids
- Provides superior bearing life

Double Sided Counterbalanced Swashblock with Replaceable Swash Wear Plate
- Balanced design eliminates need for thrust bearings
- Provide long life
- Enables easy re-buildability
- Permits high rotational speeds

Three Separate Deliveries (1/3 each)
- Deliveries can be combined together in one circuit
- Deliveries can be completely separated in three circuits
- Deliveries can be any combination of two circuits
- Can provide limited power consumption
- Allows design flexibility

Axial Overload Sensing Devices
- Simple dependable design
- Senses unbalanced (piston load) condition by detecting shaft movement
- Provides shut-down or warning signal before damage occurs

Optional Thru-Shaft
- Permits mounting of additional pumps

Experience
Typical applications for these units include – open and closed die forging presses, piercing presses, coining presses, rubber pad presses, etc.
SINGLE DISCHARGE PFCS440 / PFCS580

<table>
<thead>
<tr>
<th>UNIT</th>
<th>THEORETICAL DISPLACEMENT</th>
<th>RATED CONTINUOUS DRIVE SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in.3/rev m3/rev</td>
<td>1200 rpm 1500 rpm 1800 rpm</td>
</tr>
<tr>
<td></td>
<td>psi bar USgpm lpm hp kw</td>
<td>INPUT* INPUT* INPUT*</td>
</tr>
<tr>
<td>PFCS440</td>
<td>500 135 511 484 169 649</td>
<td>169 640 812 606 203 769</td>
</tr>
<tr>
<td>PFCS580</td>
<td>500 135 511 484 169 649</td>
<td>169 640 812 606 203 769</td>
</tr>
</tbody>
</table>

*Approximate at rated speed and pressure.
Note: External supercharge pressure of 150-to-180 psi (10,3-to-12,4 bar) is required.

MULTIPLE DISCHARGE PFCS440 / PFCS580

<table>
<thead>
<tr>
<th>UNIT</th>
<th>NUMBER OF DISCHARGES</th>
<th>RATED DRIVE SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1200 rpm 1500 rpm 1800 rpm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>USgpm lpm USgpm lpm USgpm lpm</td>
</tr>
<tr>
<td>PFCS440</td>
<td>2</td>
<td>45.0 171 56.3 213 67.7 257</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>45.0 171 56.3 213 67.7 257</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>56.5 214 70.5 267 - -</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>56.5 214 70.5 267 - -</td>
</tr>
<tr>
<td>PFCS580</td>
<td></td>
<td>45.0 171 56.3 213 67.7 257</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>56.5 214 70.5 267 - -</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>56.5 214 70.5 267 - -</td>
</tr>
</tbody>
</table>

DISCHARGE BLOCKS
There is a wide and diverse variety of discharge blocks and integrated manifolds available incorporating valves for the various types of installations. Contact the factory with specific requirements.

DIMENSIONS* (Without Discharge Block)

<table>
<thead>
<tr>
<th>UNIT</th>
<th>L LENGTH</th>
<th>W WIDTH</th>
<th>H HEIGHT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in.</td>
<td>mm</td>
<td>in.</td>
<td>mm</td>
</tr>
<tr>
<td>PFCS440</td>
<td>46.42</td>
<td>24.57</td>
<td>22.72</td>
<td>577</td>
</tr>
<tr>
<td>PFCS580</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* All dimensions are approximate. For detailed information consult your factory representative.
Performance Data

**PFCS440**

**PFCS580**
### HOW TO ORDER – PFCS

| BLOCK NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|--------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| EXPLANATION  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| HIGH PRESSURE PUMP EXAMPLE | P | F | C | S | 440 | A | * | M | 500 | L | F | R | L | N | NN | A | B |

1 = UNIT
   P = Pump

2 = TYPE
   F = Fixed

3 = DESIGN
   C = Dual Swash

4 = FRAME
   S = Up to 630 ml/Rev

5 = DISPLACEMENT
   440 = 440 ml/Rev
   580 = 580 ml/Rev

6 = DESIGN SERIES
   A = Standard for Mineral Oil

7 = MODIFIER
   * = Designated by Factory

8 = DIMENSIONS
   M = Metric

9 = MAX. WORKING PRESSURE
   500 = For 440 Size
   350 = For 580 Size

10 = ROTATION (Facing Drive Shaft)
    L = Counterclockwise (CCW)
    Left Hand
    R = Clockwise (CW) Right Hand

11 = MOUNTING
    F = Foot Mounting (Standard)

12 = INLET POSITION (Facing Drive Shaft)
    Note: Inlet is always on the opposite side of discharge
    L = Left Side with Horizontal Connection
    R = Right Side with Horizontal Connection
    A = Left Side with Vertical Connection
    B = Right Side with Vertical Connection

13 = DISCHARGE POSITION (Facing Drive Shaft)
    Note: Discharge Position is always on the opposite side of inlet
    L = Left Side
    R = Right Side

14 = DISCHARGE BLOCK
    N = No Connection Block Fitted
    (Available as a separate item; consult Oilgear)

15 = SHAFT
    NN = Standard Key

16 = FAULT SWITCH
    A = Micro Switch and Connector

17 = SEALS
    B = Buna N
    E = E.P.D.M.
    V = Viton
    Z = Special
BRAZIL
Oilgear do Brazil Hydraulica Ltd.

CANADA
The Oilgear Company

FRANCE
Oilgear Towler S.A.

GERMANY
Oilgear Towler GmbH

INDIA
Oilgear Towler Polyhydron Pvt. Ltd.
Towler Automation Pvt. Ltd.

ITALY
Oilgear Towler S.r.l.

JAPAN
The Oilgear Japan Company

KOREA
Oilgear Towler Korea Co. Ltd.

MEXICO
Oilgear Mexicana S.A. de C.V.

SPAIN
Oilgear Towler S.A.

TAIWAN
Oilgear Towler Taiwan Co. Ltd.

UNITED KINGDOM
Oilgear Towler Ltd.

UNITED STATES OF AMERICA
The Oilgear Company
Olmsted
Clover Industries

For more information about your application or the products in this brochure, please contact your nearest Oilgear facility.