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# Denison GOLD CUP<sup>®</sup> Hydrostatic Piston Pumps and Motors



ENGINEERING YOUR SUCCESS.

# GOLD CUP<sup>®</sup> Benefits

## INCREASE PRODUCTIVITY AND SAVE POWER

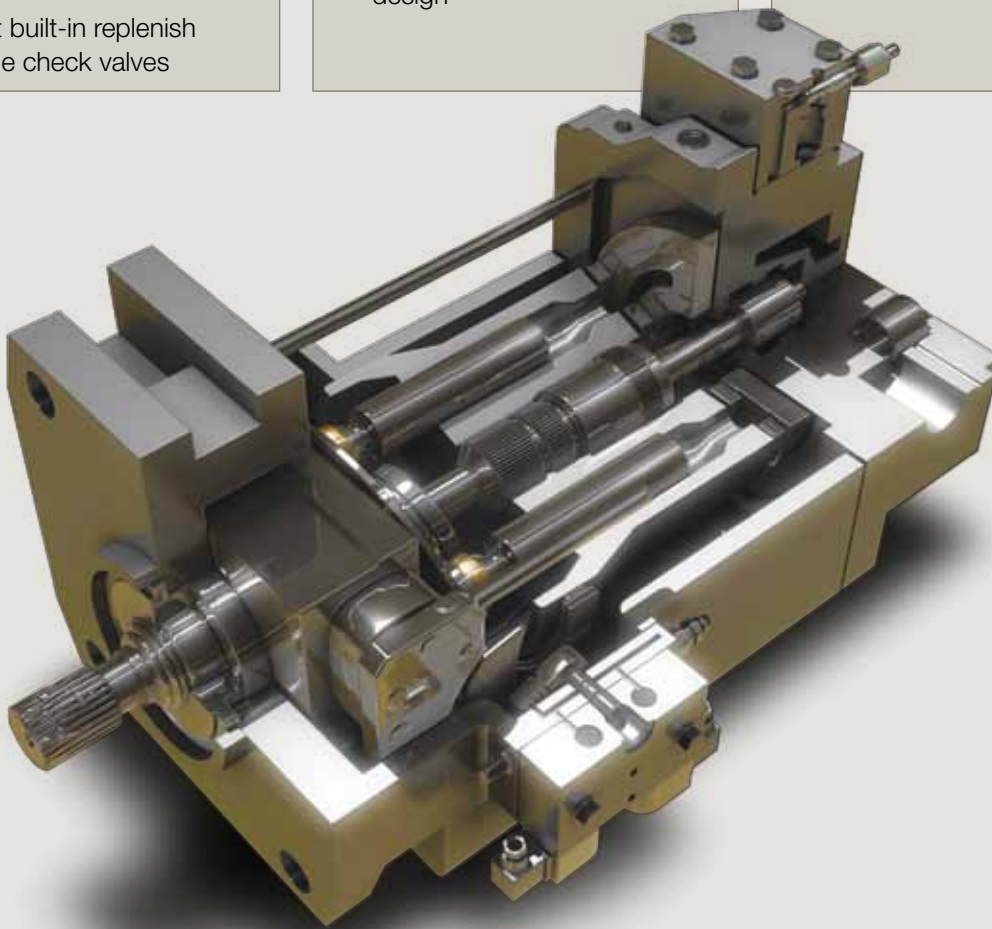
- High speed operation
- Auto-regulated control pressure based on system demand
- Efficient built-in replenish ring style check valves

## LONG LIFE AND RELIABILITY

- Lifetime hydro mechanical controls
- Robust barrel bearing design

## RAPID COMMISSIONING

- Visual displacement indicator
- Simple diagnostic capabilities



## FAST AND ACCURATE CONTROLS

- Efficient and robust control logic
- Performance eliminates need for cross port reliefs
- Stable system flow with low resistance cam design

## EASE OF SERVICE

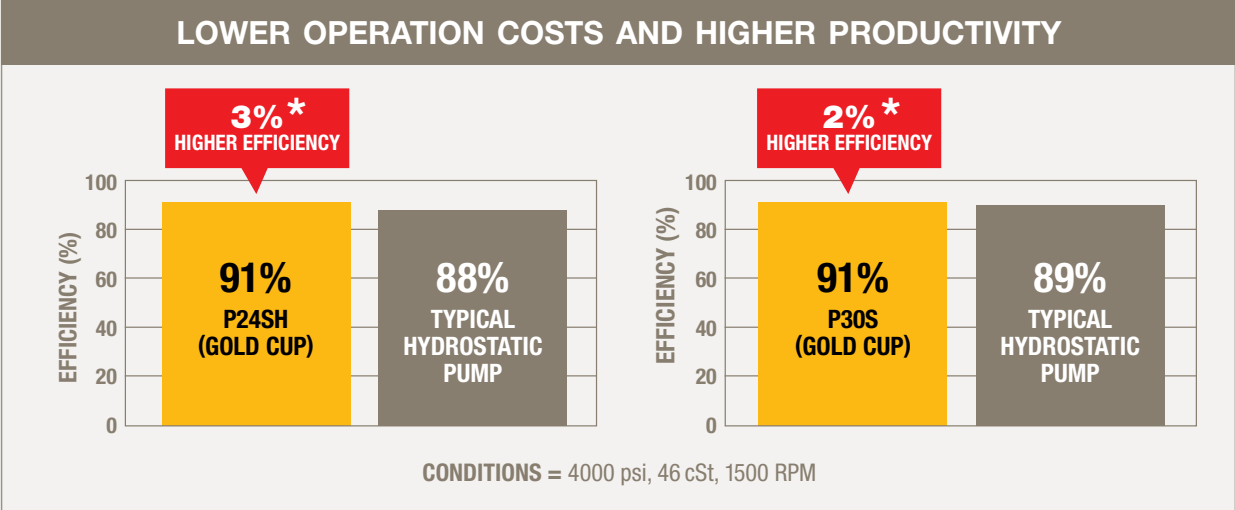
- Quick change valve block
- Modular controls (interchangeable between frame sizes)
- Replaceable shaft sleeve

## DESIGN FLEXIBILITY

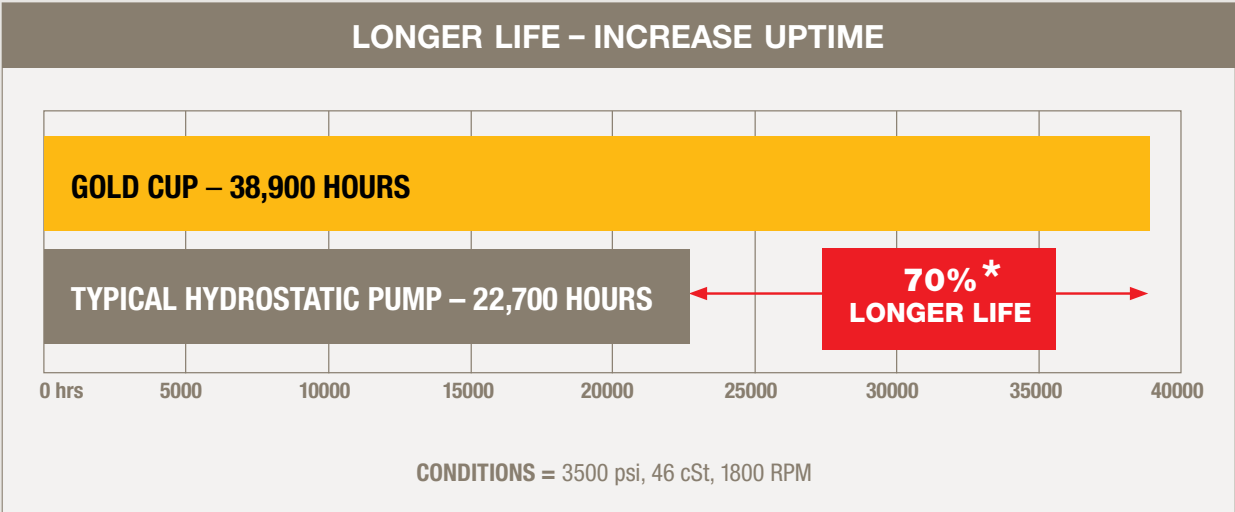
- Controls mount on either side
- Simplified plumbing with built-on hot oil shuttle
- Compact package with integrated auxiliary pumps
- Capable of individual remote pressure compensators

# GOLD CUP® Performs

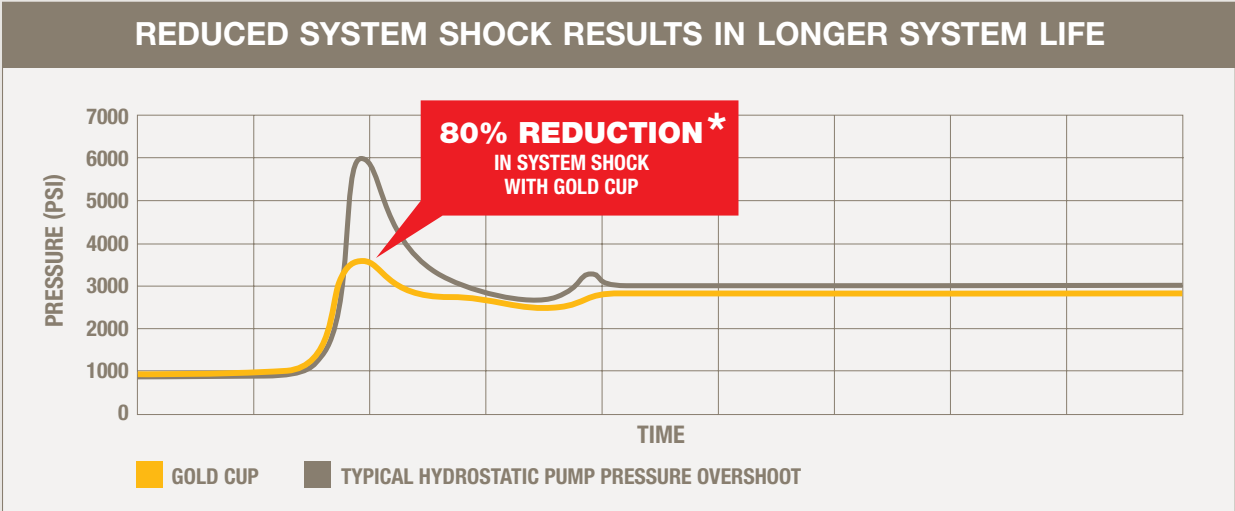
## LOWER OPERATION COSTS AND HIGHER PRODUCTIVITY



## LONGER LIFE – INCREASE UPTIME



## REDUCED SYSTEM SHOCK RESULTS IN LONGER SYSTEM LIFE



\* Consult HPD Technical Support to quantify dollar savings.

# GOLD CUP<sup>®</sup> Hydrostatic Piston Pumps and Motors



## GOLD CUP Series Design TECHNOLOGY

Parker GOLD CUP series of hydrostatic piston pumps and motors delivers exceptional, long-lasting performance in severe duty applications. Featuring a robust barrel bearing design, GOLD CUP pumps and motors provide circuit reliability at speeds up to 3600 rpm at 5000 psi continuous pressure or 6000 psi intermittent pressure.

A closed circuit design makes GOLD CUP series pumps and motors ideal for bi-directional function and eliminates energy losses associated with circuit valving. The GOLD CUP's high power-to-weight ratio, compact package, and flexibility in control options and mounting locations deliver significant value-added benefits. These include lower operating costs, ease of installation

with fewer components, and longevity for reduced down-time.

GOLD CUP hydrostatic pumps and motors perform in such severe duty applications such as:

- **Mining, exploration equipment, well drilling**
- **Drilling, drill rigs, oil exploration**
- **Construction and construction equipment**
- **Material handling**
- **Logging equipment**
- **Land and sea military equipment**
- **Shredding/reducing equipment**
- **Gas turbine starting**
- **Cranes and winches**
- **Water jet cutting systems**
- **Energy recovery applications**

Long-lasting  
Performance  
for Severe Duty  
Applications





# The POWER of GOLD CUP®



*Unique barrel bearing extends pump life.*

## Extended Life and Long-term Efficiency

Increased bearing life is a key GOLD CUP advantage. Unlike most pump designs that use conventional roller bearings to support a large diameter shaft, GOLD CUP pumps utilize a bearing centered around the barrel. This design eliminates the need for conventional large pump shafts and support bearings and allows for a smaller diameter main shaft that permits the

location of the rotating pistons to be closer to the center.

With a smaller diameter piston bore circle, fluid velocity is reduced and the pump can run at speeds up to 3600 rpm. Thus, while GOLD CUP pumps' higher operating speeds generate more flow, their smaller size saves space, energy and costs.



## Superior Performance and Durability

The GOLD CUP pumps feature a low-inertia rocker cam and are controlled hydraulically with equalized pressure acting within the vane chambers located on each side of the cam. The mass of the cam is hydrostatically balanced, a design feature that permits not only fast cam stroking but also ensures pump longevity. The ability to compensate quickly serves to protect the pump and the entire hydraulic system when pressure peaks, helping to extend the life of system components.



*The hydrostatically balanced cam and cradle design promote efficient stroking and pump longevity.*



*Reduce downtime and make service easier with GOLD CUP's quick change valve block.*

## Conserve Energy and Save Power

Greater efficiency is obtained with variable servo pressure. The GOLD CUP modulated servo design automatically changes the force available to stroke the cam as servo pressure follows the increases and decreases in system pressure. This feature conserves energy, resulting in cooler operating systems and more available power.

## Reduce Down Time

The uniquely designed GOLD CUP pump valve block contains multiple poppet valves to provide relief and control pressure functions along with a built-in compensator. Standardized to ensure complete interchangeability among all GOLD CUP pump sizes, a simple exchange to replace a malfunctioning valve block alleviates down time and ensures greater productivity.



## Easy Maintenance and Upgrades

GOLD CUP pumps offer a wide choice of quick change control options to fit application requirements including:

- **Adjustable displacement stops**
- **Manual screw adjustment**
- **Automatic brake and neutral bypass control**
- **Torque limit override**
- **Hydraulic stroker**
- **Electro-hydraulic stroker**
- **Electro-hydraulic servo**
- **Cylinder control**
- **Electro-hydraulic cylinder control**
- **Manual rotary servo**

The pump function remains the same regardless of the control option because there is no metal-to-metal mechanical linkage between the controls and pump.

Our servo control system allows for low hysteresis. A thin film of oil provides a hydro dynamic balance between the control and cam that eliminates component wear typically found in unbalanced designs.

Additionally, this design allows for manual override when needed to control machine operation for troubleshooting or installing a new system. The ability to control the pump manually during a breakdown situation, such as loss of input control electronics, builds reliability and safety into the machine design.

### **GOLD CUP Series Motors**

Parker GOLD CUP series motors are available in either fixed or variable displacement configurations to provide the optimum hydrostatic drive solution for your needs.



*Control interchange between frame size is easily upgradable.*

Parker's GOLD CUP series of hydrostatic piston pumps provides opportunities to simplify circuitry for lower procurement and install costs, reduce system shock for lower warranty costs, and operate with higher efficiencies for lower energy costs. These benefits are obtained by utilizing the GOLD CUP hot oil shuttle package, integrated relief valving, along with our innovative system solution for handling pressure spikes. **The result is lower total cost for applications that benefit from GOLD CUP's superior design and performance.**



## North America

### Industrial

#### USA

##### Chicago Region

Naperville, IL  
Tel: (630) 964 0796

##### Great Lakes Region

Fairlawn, OH  
Tel: (330) 670 2680

##### Northeast Region

Lebanon, NJ  
Tel: (908) 236 4121

##### Pacific Region

Buena Park, CA  
Tel: (714) 228 2509

##### Southern Region

Alpharetta, GA  
Tel: (770) 619 9767

#### Canada

Milton, Ontario  
Tel: (905) 693 3000

#### México

Toluca, Edo. de México  
Tel: (52) 72 2275 4200

### Mobile

#### USA

##### Global Mobile

Lincolnshire, IL  
Tel: (847) 821 1500

##### Central Region

Lincolnshire, IL  
Tel: (847) 821 1500

##### Eastern Region

North Canton, OH  
Tel: (330) 284 3355

##### Midwest Region

Hiawatha, IA  
Tel: (319) 393 1221

##### Southern Region

Aledo, TX  
Tel: (817) 441 1794

##### Western Region

Buena Park, CA  
Tel: (714) 228 2509

#### Canada

Milton, Ontario  
Tel: (905) 693 3000

#### México

Apodaca, N.L.  
Tel: (52) 81 8156 6000

### Truck

#### USA

##### Eastern Region

Cleveland, OH  
Tel: (440) 519 1125

##### Western Region

San Ramon, CA  
Tel: (925) 735 9573

#### Canada

Milton, Ontario  
Tel: (905) 693 3000

#### México

Apodaca, N.L.  
Tel: (52) 81 8156 6000

## Europe

#### Austria

Wiener Neustadt  
Tel: (43) 2622 23501 0

#### Belgium

Nivelles  
Tel: (32) 67 280 900

#### Czech Republic and Slovakia

Klecany  
Tel: (420) 284 083 111

#### Denmark

Ballerup  
Tel: (45) 4356 0400

#### Finland

Vantaa  
Tel: (358) 20 753 2500

#### France

Contamine-sur-Arve  
Tel: (33) 4 50 25 80 25

#### Germany

Kaarst  
Tel: (49) 2131 4016 0

#### Greece

Athens  
Tel: (30) 210 933 6450

#### Hungary

Budapest  
Tel: (36) 1 220 4155

#### Ireland

County Dublin, Baldonnell  
Tel: (353) 1 466 6370

#### Italy

Corsico, Milano  
Tel: (39) 02 45 19 21

#### The Netherlands

Oldenzaal  
Tel: (31) 541 585000

#### Norway

Ski  
Tel: (47) 64 91 10 00

#### Poland

Warsaw  
Tel: (48) 22 57 32400

#### Portugal

Leca da Palmeira  
Tel: (351) 22 999 7360

#### Romania

Bucharest  
Tel: (40) 21 252 1382

#### Russia

Moscow  
Tel: (7) 495 580 9145

#### Slovenia

Novo Mesto  
Tel: (386) 7 337 6650

#### Spain

Madrid  
Tel: (34) 91 675 7300

#### Sweden

Spanga  
Tel: (46) 8 597 95000

#### Ukraine

Kiev  
Tel: (380) 44 494 2731

#### United Kingdom

Warwick  
Tel: (44) 1926 317878

## Asia Pacific

#### Australia

Castle Hill  
Tel: (61) 2 9634 7777

#### China

Beijing  
Tel: (86) 10 6561 0520

#### Shanghai

Tel: (86) 21 5031 2525

#### Hong Kong

Tel: (852) 2428 8008

#### India

Mahape, Navi Mumbai  
Tel: (91) 22 5613 7081

#### Korea

Seoul  
Tel: (82) 2 559 0400

#### Malaysia

Subang Jaya  
Tel: (60) 3 5638 1476

#### New Zealand

Mt. Wellington  
Tel: (64) 9 574 1744

#### Japan

Tokyo  
Tel: (81) 3 6408 3900

#### Singapore

Jurong Town  
Tel: (65) 6 887 6300

#### Taiwan

Taipei  
Tel: (886) 2 2298 8987

#### Thailand

Bangkok  
Tel: (662) 717 8140

## Middle East

#### United Arab Emirates

Abu Dhabi  
Tel: (971) 2 678 8587

#### Latin America

Pan American Division  
Miami, FL  
Tel: (305) 470 8800

#### Argentina

Buenos Aires  
Tel: (54) 33 2744 4129

#### Brazil

Cachoeirinha RS  
Tel: (55) 51 3470 9144

#### Venezuela

Caracas  
Tel: (58) 212 238 5422

## Africa

#### South Africa

Kempton Park  
Tel: (27) 11 961 0700



Parker Hannifin Corporation

**Hydraulic Pump Division**

14249 Industrial Pkwy.

Marysville, OH 43040

phone 937 644 3915

fax 937 642 3738

www.parker.com