

ENGINEERING  
TOMORROW

*Danfoss*

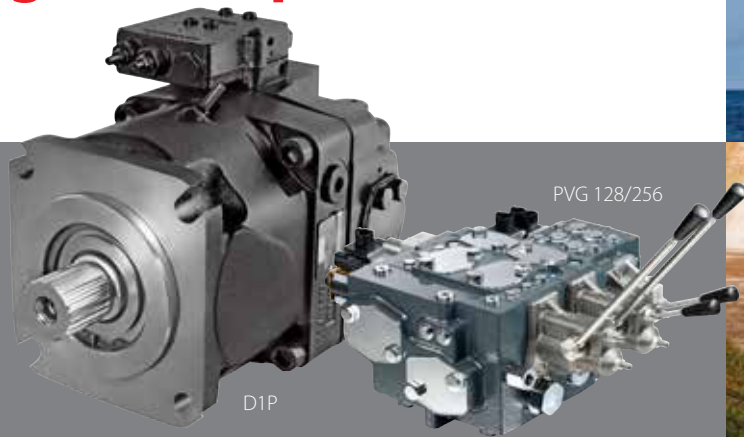
D1P High Power Open Circuit Pumps

Designed for **high performance** and **reliability** in **heavy duty** applications



[www.danfoss.com](http://www.danfoss.com)

# High flow hydraulics with **global expertise**



The D1 pump expands the open circuit pump portfolio to include high-flow up to 600 lpm [160 gpm] hydraulic pump options for customers. Designed to work seamlessly with the PVG 128/256 high flow valves, Danfoss can provide you with all your high flow system needs.

The D1 pump is a high-pressure [350 bar cont. / 400bar int.] pump with equivalent load-life as our H1 pumps. The high-performance variable axial piston pump design ensures the high reliability in heavy duty applications you expect from Danfoss. The advanced open circuit control options (such as power and displacement controls), make the D1 pump ideal for the evolving application functionalities used in today's machines.



## Target markets

### Marine, Oil and Gas

drill rigs, pipe handling equipment, hydraulic power units, artificial lifts

### Mining

road headers

### Construction

wheel loaders, dumpers

### Material Handling

crawler crane

### Forestry

harvesters, mulchers, feller bunchers

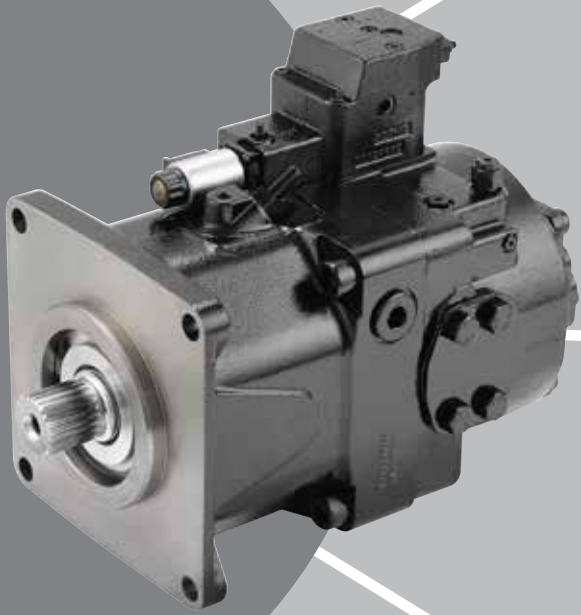
## Technical specifications

| Technical Specifications Features |  | Unit                               | 130             |               | 145             |               | 193           | 260           |  |
|-----------------------------------|--|------------------------------------|-----------------|---------------|-----------------|---------------|---------------|---------------|--|
|                                   |  |                                    | W/O Charge Pump | W/Charge Pump | W/O Charge Pump | W/Charge Pump | W/Charge Pump | W/Charge Pump |  |
| Displacement                      |  | cm <sup>3</sup> [in <sup>3</sup> ] | 130 [7.93]      | 130 [7.93]    | 145 [8.85]      | 145 [8.85]    | 193 [11.78]   | 260 [15.87]   |  |
| Available Rotation                |  | CW [R] <sup>1)</sup>               | •               | •             | •               | •             | •             | •             |  |
|                                   |  | CCW [L] <sup>1)</sup>              | •               | •             | •               | •             | •             | •             |  |
| Input Speed                       | Rated                                      | rpm                                | 2200            | 2500          | 2200            | 2500          | 2500          | 2300          |  |
|                                   | Max.                                       |                                    | 2500            | 2500          | 2500            | 2500          | 2500          | 2300          |  |
| System Pressure                   | Max. Working Pressure <sup>2)</sup>        | bar [psi]                          | 350 [5076]      |               |                 |               |               |               |  |
|                                   | Max. Pressure (Intermittent) <sup>2)</sup> |                                    | 400 [5802]      |               |                 |               |               |               |  |
| Case Pressure                     | Max.                                       | bar [psi]                          | 2 [29]          |               |                 |               |               |               |  |

<sup>1)</sup> Rotation: Counterclockwise (CCW) & Clockwise (CW) directions as viewed from the shaft end of the pump.

<sup>2)</sup> Applied pressures above maximum working pressure requires Danfoss application approval. Maximum (peak) pressure is the highest intermittent (t<1s) outlet pressure allowed.

# D1P Product **benefits**



## **Heavy duty design ensuring robustness and reliability**

2500rpm maximum speed rating provides best in class power density, achieved by integrated charge pump and advanced cylinder-block design

Robust rotating group ensures high reliability in tough applications, with equivalent load-life rating as the H1 and Series 90 pump families



## **Expanded control functionality**

Mechanical Torque Control prevents engines stall or electric motor overload

Electric Displacement control, with manual override function, makes for simple and precise work function speed control

PLUS+1® compliant EDC control with available software block reduces programming time



## **Easy installation and packaging**

Best-in-class installation footprint for easy, compact packaging

Standard port interfaces, and DEUTSCH connectors for electric controls



## **Control options**

- NPNN:** Pressure compensated control
- NPNR:** Pressure compensated control + Remote pressure compensated control
- NPSN:** Pressure compensated control + Load sensing control
- TPSN:** Mechanical power control + Pressure compensated control + Load sensing control
- NNES:** Electric displacement control + Load sensing control
- TPE2/TPE5:** Mechanical power control + Pressure compensated control + Electric displacement control



## About Danfoss Power Solutions

**Danfoss Power Solutions** is a global manufacturer and supplier of high-quality hydraulic and electric components. We specialize in providing state-of-the-art technology and solutions that excel in the harsh operating conditions of the mobile off-highway market as well as the marine sector. Building on our extensive applications expertise, we work closely with you to ensure exceptional performance for a broad range of applications. We help you and other customers around the world speed up system development, reduce costs and bring vehicles and vessels to market faster.

We offer you expert worldwide support for ensuring the best possible solutions for outstanding performance. And with an extensive network of Global Service Partners, we also provide you with comprehensive global service for all of our components.

Danfoss Power Solutions – your strongest partner in mobile hydraulics and mobile electrification.

### Products we offer:

- DCV directional control valves
- Electric converters
- Electric machines
- Electrical motors
- Hydrostatic motors
- Hydrostatic pumps
- Orbital motors
- PLUS+1<sup>®</sup> controllers
- PLUS+1<sup>®</sup> displays
- PLUS+1<sup>®</sup> joysticks and pedals
- PLUS+1<sup>®</sup> operator interfaces
- PLUS+1<sup>®</sup> sensors
- PLUS+1<sup>®</sup> software services, support and training
- PLUS+1<sup>®</sup> software
- Position controls and sensors
- PVG proportional valves
- Steering components and systems
- Telematics

Go to [www.danfoss.com](http://www.danfoss.com) for further product information.

#### Danfoss Power Solutions (US) Company

2800 East 13th Street  
Ames, IA 50010, USA  
Phone: +1 515 239 6000

#### Danfoss Power Solutions GmbH & Co. OHG

Krokamp 35  
D-24539 Neumünster, Germany  
Phone: +49 4321 871 0

#### Danfoss Power Solutions ApS

Nordborgvej 81  
DK-6430 Nordborg, Denmark  
Phone: +45 7488 2222

#### Danfoss Power Solutions Trading (Shanghai) Co. Ltd.

Building #22, No. 1000 Jin Hai Rd.  
Jin Qiao, Pudong New District  
Shanghai, China 201206  
Phone: +86 21 3418 5200