

Data Sheet

D1P High Power Open Circuit Pumps

160cc

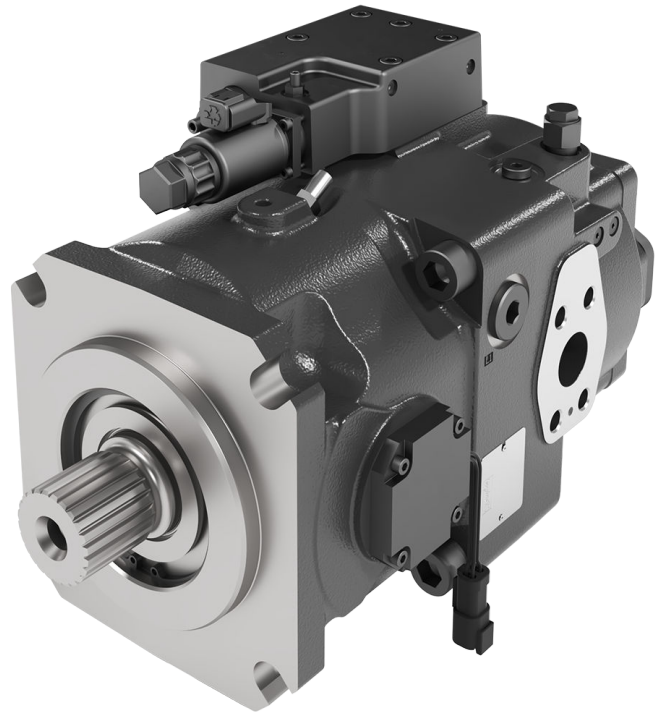


The 160cc D1P pump is a high-pressure, high-performance variable axial piston pump, developed specifically for open circuit systems in the most extreme application environments. The pump's robust design makes it an ideal solution for concrete machinery, mining machinery, cranes, drilling machinery, offshore, marine, and oil and gas equipment.

The 160cc D1P expands the Danfoss open circuit pump portfolio to include higher flows in the same compact package previously only possible in pump displacements up to 145cc. The pump is designed to work seamlessly with the PVG 128/256 high flow valves to provide a full hydraulic system for machines.

The D1P portfolio is available in 6 displacement options (65cc-260cc) and a wide range of proven control options (pressure, load sense, power limiting and displacement controls). The D1P is built to withstand output pressures up to 350bar [5000psi] continuously, 400bar [5802psi] intermittently. The integral impeller style charge pump allows the D1P pump to run at speeds up to 2500rpm.

The D1P pump was developed and designed with global expertise. Danfoss offers technical support through its wide network of local distributors in more than 100 countries.



Features

Designed for quality and reliability

- Proven and optimized 9 piston rotating group
- Angled bore cylinderblock design improves self-priming capability
- The spherical valve plate and cylinderblock surface provide stable rotation, thus achieving high efficiency

Installation and packaging benefits

- Mainstream installation
- Standardized connector interface
- Best in class power density

Expanded functionality

- Integral impeller style charge pump option allows the pump to run at higher speed
- PLUS+1[®] compliant control
- Full power through drive capability
- The electric displacement control features manual override function for diagnosis

Hydraulic control options

- NPNN: PC
- NPSN: PC + LS
- NPNR: PC + RPC
- TPSN: MTC + PC + LS

Electro-hydraulic control options

- NPE0: PC + EDC (without pilot pressure)
- NPE2: PC + EDC (with pilot pressure)
- NNES: EDC + LS
- TPE5: MTC + PC + EDC
- ENSN: EPC + LS

Technical Specifications

Features		Unit	160	
			W/O Impeller	W/ Impeller
Displacement		cm ³ [in ³]	160 [9.76]	160 [9.76]
Available Rotation ¹		CCW [L]	●	●
		CW [R]	●	●
Weight (approx.)		kg [lbs]	69 [152]	75 [165]
Input Speed	Min.	rpm	500	500
	Rated at max. displacement (Vg max)		2200	2500
	Max. at Vg<Vg max		2500	2500
Theoretical Flow		l/min [US gal/min]	352 [93]	400 [106]
System Pressure	Max. Working Pressure ²	bar [psi]	350 [5076]	
	Max. Pressure		400 [5802]	
Inlet Pressure (Abs)	Min.	bar [psi]	0.8 [11.6]	0.8 [11.6]
	Max.		30 [435]	2 [29]
Case Pressure (Abs)	Max.	bar [psi]	2 [29]	

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

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

Dimensions and schematics

For additional controls, please see D1P Technical Information, BC157786485289.

D1P 130/145/160 dimensions with control

Dimensions	Schematic
<p><i>D1P 130/145/160 TPSN (without impeller)</i></p>	
<p><i>D1P 130/145/160 TPSN (with impeller)</i></p>	

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