

Data Sheet

Digital Displacement

DDP096 pump and DPC12 controller



The Danfoss Digital Displacement® Pump DDP096 is the most efficient, variable displacement open circuit pump on the market today.

The Digital Pump Controller DPC12 controls each piston individually, making the pump displacement electronically variable and resulting in fast, accurate flow control.

By using only as many pistons as required to meet the demand, the DDP096 pump has high efficiency and low idle losses across its operating range.

Replacing a standard pump with a single- or multi-outlet 96 cc/rev Digital Displacement® Pump can dramatically increase the productivity of hydraulic machinery, enhancing control, reducing energy consumption and enabling digital transformation.

Customers can profit from lower emissions and the potential to downsize engines or battery packs. Whichever route is taken, the DDP096 pump can deliver benefits today, tomorrow and long into the future.



Features

Most energy-efficient system

- Exceptional full and part load performance
- Low idle losses at any pressure
- Enables significantly lower system losses – reduced throttling, engine downsizing or down speeding
- Works seamlessly in diesel, hybrid or electric machines

Fastest response time

- Power delivered immediately – more responsive to operator demand
- Increased productivity with more usable hydraulic power
- Optimized engine torque management – doing more with less

Digitally controlled

- Software defined control over CAN J1939
- Common hardware – wide range of control modes
- Predictable and precise closed-loop control with integrated sensors
- Performance monitoring, diagnostics, error handling, etc.

Compact and quiet

- Up to 3 independent outlets
- Compact and robust design
- Better sound quality than axial piston pumps

Expanded modularity

- Inventory reduction with common hardware
- PLUS+1® compliant
- Easy integration with telematics
- Standardized connector interface
- Through-drive options

Technical Specifications (pump)

Features		Single-Outlet	Multi-Outlet
Displacement	cm ³ /rev [in ³ /rev]	96 [5.86]	48 [2.93] 24 [1.46] 24 [1.46]
Maximum continuous outlet pressure	bar [psi]	420 [6090]	
Maximum intermittent outlet pressure	bar [psi]	450 [6530]	
Continuous speed range	min ⁻¹ (rpm)	500 to 2200	
Maximum speed	min ⁻¹ (rpm)	2600	
Flow at maximum speed (theoretical)	l/min [US gal/min]	250 [66]	125 [33] 62.4 [16.5] 62.4 [16.5]
Weight (approximate)	kg [lb]	50 [110]	
Rotation		Clockwise or counter-clockwise	
Front mounting flange		SAE C 4-Bolt (SAE D 4-Bolt for tandem)	
Front input shaft		23 Tooth, 16/32 Pitch	
Number of independent outlets		1 outlet	3 outlets
Outlet port(s)		1 inch code 62	¾ inch code 62 ½ inch code 62 ½ inch code 62
Inlet port		2 inch code 61	
Oil type		Mineral hydraulic fluids	
Through drive and auxiliary mounting options*		SAE A 2-Bolt, 9 or 11 Tooth SAE B 2-Bolt, 13 or 15 Tooth SAE C 4-Bolt, 14 or 17 Tooth	

* On request

Tandem units are combinations of single and/or multi-outlet pumps coupled together, each with the same operational limits as individual pumps. Approximate weight is 110 kg [243 lbs].

Technical Specifications (controller)

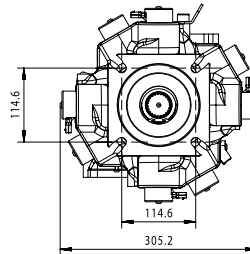
Features	Value	Units
DC supply voltage range	9 to 36	V
Operating temperature range	-40 to +70	°C
Storage temperature range	-55 to +90	°C
Weight (approximate)	3	kg
IP ratings	IP67*	

* IP67 rating is only valid when mating connectors are in place and unused connector pins have sealing plugs installed.

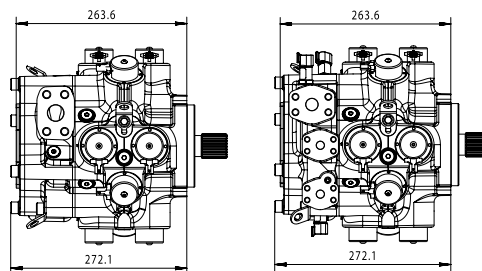
The DPC30 controller can be used with a tandem unit.

Dimensions (pump)

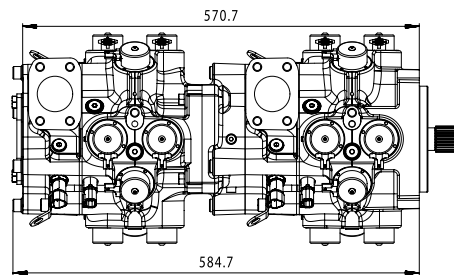
Common dimensions (single and multi-outlet)



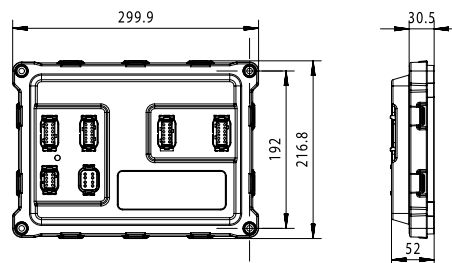
Single-outlet (left), Multi-outlet (right)



Tandem



Dimensions (controller)



Comprehensive technical literature is online at www.danfoss.com