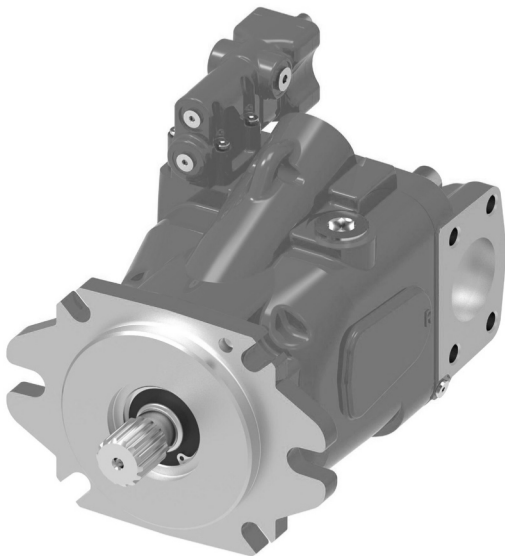


**ENGINEERING  
TOMORROW**

**Danfoss**

**Data Sheet**

Medium pressure open circuit piston pumps  
X20



## Danfoss X20 open circuit piston pumps

Mobile equipment engineers around the world are experiencing increased power density made possible by Danfoss X20 open circuit piston pumps. The reliability, productivity and efficiency of these small, lightweight pumps makes them a heavyweight solution for a wide range of medium-pressure mobile applications operating in harsh environments.

### **Reliability and power in a compact package**

#### **Minimize downtime**

- Simple design, fewer parts
- Longer pump life

#### **Power efficiently**

- Greater fuels savings
- Leak-free system

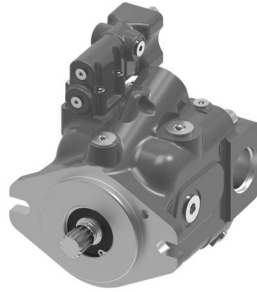
#### **Increase productivity**

- High pressure and flow capability
- High power density

## Key applications

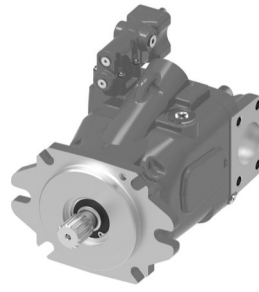
- Construction
- Agriculture
- Commercial vehicle
- Material handling

**220 Series**



**SAE B Mount**

**420 Series**

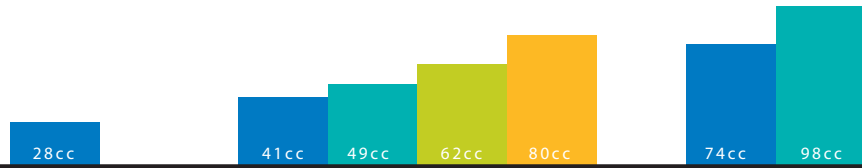


**SAE B/C Mount**

**620 Series**



**SAE C Mount**

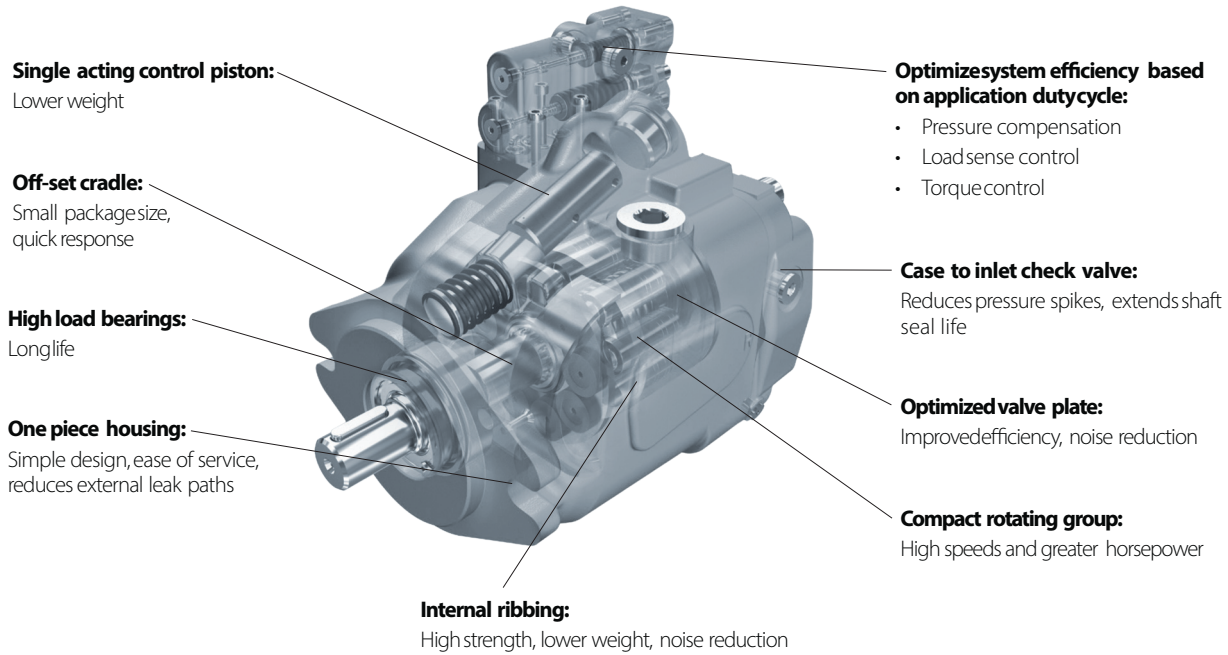


## Available options

	28cc	41cc	49cc	62cc	80cc	74cc	98cc
<b>Front mount and shaft</b>							
2 Bolt B	✓	✓	✓	✓	✓		
2/4 Bolt C		✓	✓	✓	✓		
2 Bolt C		✓	✓	✓	✓		
4 Bolt C						✓	✓
<b>Main ports</b>							
Side Port	✓	✓	✓	✓	✓	✓	✓
Rear Port	✓	✓	✓	✓	✓	✓	✓
<b>Aux mount and shaft</b>							
2 Bolt A	✓	✓	✓	✓	✓	✓	✓
2 Bolt B	✓	✓	✓	✓	✓		
2/4 Bolt B						✓	✓
2/4 Bolt C						✓	✓
<b>Controls</b>							
Load sense and pressure control	✓	✓	✓	✓	✓	✓	✓
Pressure control only	✓	✓	✓	✓	✓	✓	✓
Remote pressure control	✓	✓	✓	✓	✓	✓	✓
Electronic displacement control	✓	✓	✓	✓	✓	✓	✓
Torque control		✓	✓	✓	✓	✓	✓
Inverse proportional pressure control	✓	✓	✓	✓	✓	✓	✓
<b>Diagnostic pressure ports</b>	✓	✓	✓	✓	✓	✓	✓
<b>Swash position sensor</b>	✓	✓	✓	✓	✓	✓	✓
<b>Cold start/ De-stroke valve</b>	✓	✓	✓	✓	✓	✓	✓
<b>External manual displacement limit adjustment</b>	✓	✓	✓	✓	✓	✓	✓
<b>ATEX certification</b>	✓	✓	✓	✓	✓	✓	✓

# Simple, compact design

## Reliable and efficient



		Units	28 cc	41 cc	49 cc	62 cc	80 cc	74 cc	98 cc
Theoretical displacement		cc/ rev	28	41	49.2	62.3	80	74	98
		l <sub>n</sub> 3/ rev	1.71	2.5	3	3.8	4.88	4.54	5.98
Input standby speed	Minimum	rpm	500	600	600	600	600	600	600
	Rated*	rpm	3,000	2,650	2,650	2,600	2,200	2,400	2,200
	Maximum**	rpm	3,600	3,600	3,600	3,600	3,600	2,880	2,640
Maximum pressure		bar	350	350	350	350	250	350	350
		psi	5,076	5,076	5,076	5,076	3,625	5,076	5,076
Continuous pressure		bar	280	280	280	280	210	310	280
		psi	4,061	4,061	4,061	4,061	3,045	4,496	4,061
Theoretical flow at rated speed		lpm	101.1	108.6	130.2	162.0	176.0	178.7	215.7
		gpm	26.7	28.7	34.4	42.8	46.5	47.2	57
Theoretical input torque at max displacement		Nm	125	183	219	278	268	330	436
		ft-lb	92	135	162	205	198	243	322
Theoretical input power		kW	39.2	50.7	60.8	75.6	61.7	82.9	100.6
		HP	52.6	68.0	81.5	101.3	82.7	111.1	135.0
Size – with	Length	mm	187	230	230	230	230	274	288
Load sense pressure controller	Width	mm	134	150	150	150	150	198	198
	Height	mm	210	215	215	215	215	270	270

\*at 1 bar absolute inlet pressure

\*\*pump in standby (minimum displacement)

Need more power density for your construction, mining, agriculture, on-highway or other mobile application? Ask about the X20 experience and how it can help you lower maintenance and fuel costs, improve productivity and minimize downtime. For more information, visit [www.danfoss.com](http://www.danfoss.com).

**Products we offer:**

- Cartridge valves
- DCV directional control valves
- Electric converters
- Electric machines
- Electric motors
- Gear motors
- Gear pumps
- Hydraulic integrated circuits (HICs)
- Hydrostatic motors
- Hydrostatic pumps
- Orbital motors
- PLUS+1® controllers
- PLUS+1® displays
- PLUS+1® joysticks and pedals
- PLUS+1® operator interfaces
- PLUS+1® sensors
- PLUS+1® software
- PLUS+1® software services, support and training
- Position controls and sensors
- PVG proportional valves
- Steering components and systems
- Telematics

**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.

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

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

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.

Local address:

**Hydro-Gear**

[www.hydro-gear.com](http://www.hydro-gear.com)

**Daikin-Sauer-Danfoss**

[www.daikin-sauer-danfoss.com](http://www.daikin-sauer-danfoss.com)

**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 2080 6201