Motors (Mobile)



V12 Small Frame Variable Displacement Bent-Axis Motors



Series V12 is a bent-axis, variable displacement motor. It is intended for both open and closed circuits, mainly in mobile applications, but the V12 can also be utilized in a wide variety of other applications.

Motor Performance Data

Model Series	Displacement	Outlet Pressure	Drive Speed	Flow @ Rated RPM
V12-60	3.66 (60)	6000 (420)	5600	57 (215.8)
V12-80	4.88 (80)	6000 (420)	5000	66 (249.8)

Markets

Applications

Forestry	Feller Bunchers, Skidder, Forwarder, Cranes
Marine	Deck Cranes, Constant Tension Winches
Construction	Wheel Loader, Cranes, Excavator
Mining	Drill Rigs, Top Drives, Loaders, Subsurface Loaders, Tunneling Equipment
Power Gen	Turbine Start
Material handling	Conveyor Drives, Truck Mounted Cranes, Mixers
Recycling	Shredders
Military	Fan Drives





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Performance Characteristics



Benefits/Features

- Tolerates very high speeds due to low weight pistons with laminated piston rings and a compact design of the rotating parts
- High output power; the overall efficiency remains high throughout the entire displacement range
- The 9-piston design provides high start-up torque and smooth motor operation
- Wide displacement ratio (5:1)
- Broad range of controls and accessory valves for most applications
- Small envelope size and a high power-to-weight ratio
- ISO, cartridge and SAE versions
- Low noise levels due to a very compact and sturdy design with smooth fluid passages
- Positive piston locking, strong synchronizing shaft, heavy-duty bearings and small number of parts add up to a compact and robust motor with long service life and proven reliability.





V12-80 Series Overall Efficiency





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Dimensions, inch (mm)

Series	Α	C max	D max	E max	F	G	H max	J max
V12-60	10.51 (267)	2.19 (55.6)	7.40 (188)	3.43 (87)	3.03 (77)	2.99 (76)	5.87 (149)	6.26 (159)
V12-80	11.02 (280)	2.19 (55.6)	7.60 (193)	3.54 (90)	3.15 (80)	3.07 (78)	5.87 (149)	6.50 (165)



Motors V12 Model Ordering Code



(NO TABLE PROVIDED)

Code	Frame Size			
60	3.66 in ³ /rev (60 cm ³ /rev)			
80	4.88 in ³ /rev (80 cm ³ /rev)			
Code			Function	
М	Motor; normal end cap pos	sitic	on (EO, EP, HO & ⊢	IP only)
Т	Motor; normal end cap position (AC & AH only)			
Code	Main Ports*			
s	SAE Flange; UN Threads, Side Ports			
U	SAE Flange; UN Threads, Rear Ports			
Code	Shaft Seal		60	80
н	NBR (Nitrile)		x	х
v	FPM (High Temperature Fluorocarbon)	(x) (x)		
Code	Shaft End***		60	80
S	Spline (SAE J498b)		(x)	(x)

Code	Speed Sensor
0	No Sensor
S	Speed Sensor (not installed)
Р	Prepared for Speed Snesor

x = standard; (x) = option

* Main ports also available with metric threads. See CD.

** Cartridge and ISO options available. See CD. *** DIN shaft ends also available. See CD.

- ¹ Factory issued for special versions
- ² Control pressure setting; max and min displacement screws sealed ³ Integrated flushing valve with standard nozzle. See CD for options.

Code	Control	60	80
AC 01	Pressure Compensator, internal pilot pressure, internal servo supply	x	x
AC E 01 I	Pressure Compensator, external pilot pressure, internal servo supply	(x)	(x)
AH I 01 I	Pressure Compensator, hydraulic override internal pilot pressure, internal servo supply	x	x
AH E 01 I	Pressure compensator, hydraulic override, external pilot pressure, internal servo supply	(x)	(x)
EOL 01 I	Electrohydraulic, two-position, 12 VDC, internal servo supply	x	x
EOL 01 E	Electrohydraulic, two-position, 12 VDC, external servo supply	(x)	(x)
EOH 01 I	Electrohydraulic, two-position, 24 VDC, internal servo supply	x	x
EPL 01 I	Electrohydraulic, proportional, 12 VDC, internal servo supply	x	x
EPL 01 E	Electrohydraulic, proportional, 12 VDC, external servo supply	(x)	(x)
EPH 01 I	Electrohydraulic, proportional, 24 VDC, internal servo supply	x	x
EPH 01 E	Electrohydraulic, proportional, 24 VDC, external servo supply	(x)	(x)
HOS 01 I	Hydraulic, two-position, standard version, internal servo supply	x	x
HOS 01 E	Hydraulic, two-position, standard version, external servo supply	(x)	(x)
HPS 01 I	Hydraulic, proportional, standard version, internal servo supply	x	x
HPS 01 E	Hydraulic, proportional, standard version, external servo supply	(x)	(x)

AC, AH: Threshold Pressure: 2175.57, 2900.76, or 3625.94 PSI (150, 200 or 250 bar) Modulating Pressure: 217.56, 362.59, 725.19 PSI (015, 025 or 050 bar)

Settings

EO, EP:

Threshold Current: 400 mA (12 VDC), 200 mA (24 VDC) Modulating Current: 000 (EO), 600 mA (EP 12 VDC), 300 mA (EP 24 VDC)

HO, HP:

Threshold Pressure: 145.14 PSI (010 bar) Modulating Pressure: **000** (HO), **217.56** or **362.59** PSI (HP) (**000** (HO), **015** or **025** bar (HP))