

M3/M4 High Performance Vane Motors



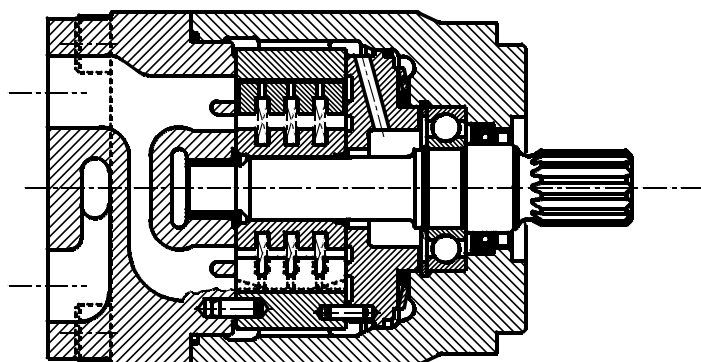
The M3 and M4 Series vane motors are fixed displacement and designed especially for severe duty applications. The balance vane cartridge concept provides high volumetric efficiency, longer life, lower noise, and a high starting torque efficiency. The double motor is ideal for applications to obtain three-speed operation.

Motor Performance Data

Single Pump Model Series	Displacement in ³ /rev (cc/rev)	Max. Outlet Pressure* PSI (BAR)	Rated Drive Speed* RPM	Torque (in-lb/PSI)
M3B	0.56 - 2.26 (9.2 - 37.1)	3000 (210)	4000	0.08 - 0.38
M4C	1.49 - 4.89 (24.4 - 80.1)	2500 (175)	4000	0.24 - 0.78
M4SC	1.49 - 4.89 (24.4 - 80.1)	3400 (235)	4000	0.24 - 0.78
M4D	3.97 - 8.81 (65.1 - 144.4)	2500 (175)	4000	0.63 - 1.40
M4SD	3.97 - 8.81 (65.1 - 144.4)	3400 (235)	4000	0.63 - 1.40
M4E	9.69 - 13.55 (158.8 - 222)	2500 (175)	3600	1.54 - 2.16
M4SE	9.69 - 13.55 (158.8 - 222)	2800 (190)	3600	1.54 - 2.16

Double Pump Model Series	Displacement in ³ /rev (cc/rev)	Max. Outlet Pressure* PSI (BAR)	Rated Drive Speed* RPM	Torque @2000 RPM and 2500 PSI
M4DC	5.46 - 13.70 (89.5 - 224.5)	2500 (175)	4000	0.87 - 2.18
M4SDC	5.46 - 13.70 (89.5 - 224.5)	3400 (235)	4000	0.87 - 2.18

* Intermittent conditions are to be less than 10% of each minute.

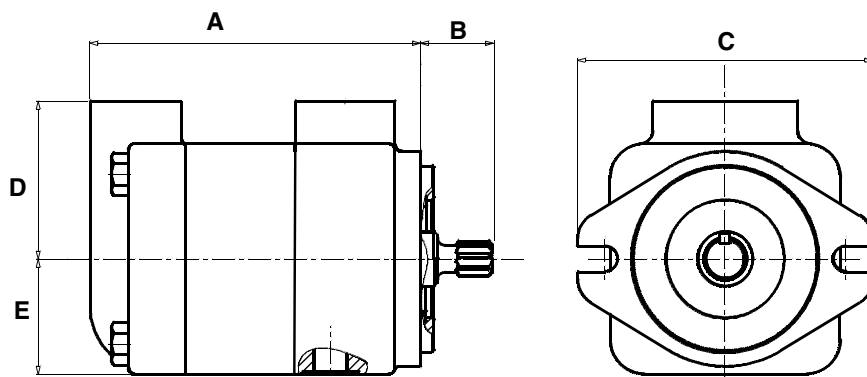


Benefits/Features

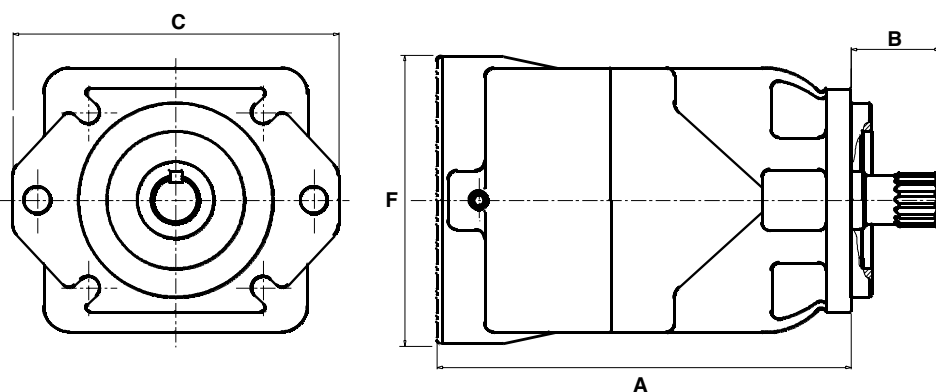
- Low ripple torque
- Low starting torque
- Low noise
- Bi-rotational technology
- Various pilot, threaded port and porting configurations
- External/internal drain option
- Many displacement combinations for double motor

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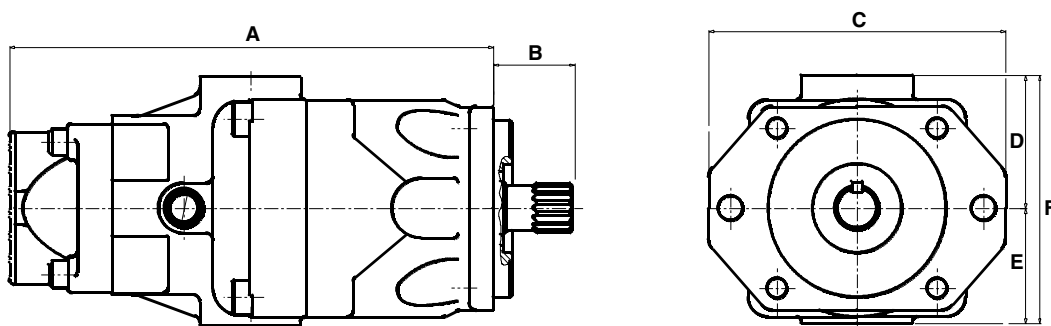
M3



M4 Single



M4 Double

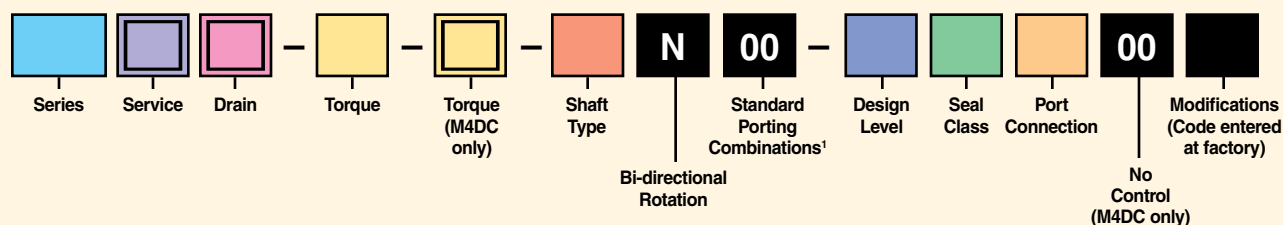


Dimensions, inch (mm)

Series	A	B	C	D	E	F	Weight, lb (kg)
M3B	5.74 (145.8)	2.19 (55.6)	5.12 (130.0)	—	—	4.75 (120.7)	17.6 (8.0)
M4C	7.23 (183.6)	2.81 (71.4)	6.93 (176.0)	—	—	4.75 (120.7)	34.0 (15.5)
M4D	8.01 (203.5)	2.19 (55.6)	8.36 (212.3)	—	—	—	59.5 (27.0)
M4E	10.66 (270.8)	3.31 (84.1)	8.38 (212.9)	—	—	—	99.0 (45.0)
M4DC	13.63 (346.2)	2.19 (55.6)	8.36 (212.3)	3.75 (95.3)	3.25 (82.6)	7.0 (177.8)	88.0 (40.0)

Motors

M3/M4 Model Ordering Code



Series	
M3B	
M4C	
M4D	
M4E	
M4DC	

Code	Service
Omit	Standard
S*	Severe Duty

* Not available on M3B

Code	Drain
Omit	External
1	Internal

Series	Torque Codes (See Table Below)		
	Single Pumps	Double Pumps A1 - B1	Double Pump A2 - B2
M3B	Use M3B Codes		
M4C	Use M4C Codes		
M4D	Use M4D Codes		
M4E	Use M4E Codes		
M4DC		Use M4D Codes	Use M4C Codes

Code	Shaft Type			
	3B	4C/4CS	4D/4DS, 4DC	4E/4ES
1	Keyed (non SAE)	Keyed SAE B	Keyed SAE C	Keyed SAE C
2		Keyed (non SAE)		
3	Splined SAE A	Splined SAE B	Splined SAE C	Splined SAE C
4	Splined SAE B			

Torques

M3B Codes	Torque, in-lb/PSI	M4C Codes	Torque, in-lb/PSI	M4D Codes	Torque, in-lb/PSI	M4E Codes	Torque, in-lb/PSI
009	0.08	024	0.24	062	0.63	153	1.54
012	0.11	027	0.28	074	0.75	185	1.86
018	0.19	031	0.33	088	0.88	214	2.16
027	0.30	043	0.45	102	0.96		
036	0.38	055	0.57	113	1.13		
		067	0.69	128	1.28		
		075	0.78	138	1.40		

Code	Design Level
A	M4C only
B	M3B, M4D, M4E, M4DC

Code	Seal Class
1*	S1 Buna N
4**	S4 EPDM
5 †	S5 Fluorocarbon

* Not available on M4E.

** Available on M3B only.

† Must be ordered for severe duty motors.

Code	Port Connection	
	M3B	M4C/M4D/M4E M4DC
00	SAE Threaded Port SAE Drain	
01	SAE 4 Bolt Flange BSPP Drain	SAE Threaded Port SAE Drain
02	BSPP Threaded Port BSPP Drain	SAE 4 Bolt Flange UNC Threaded SAE Drain
04		SAE 4 Bolt Flange UNC Threaded BSPP Drain
M4*		SAE 4-Bolt Flange Metric Thread BSPP Drain

* Not available on M4DC.

= Omit if not required
 = Not Available

¹ Other combinations available. See catalog on CD.