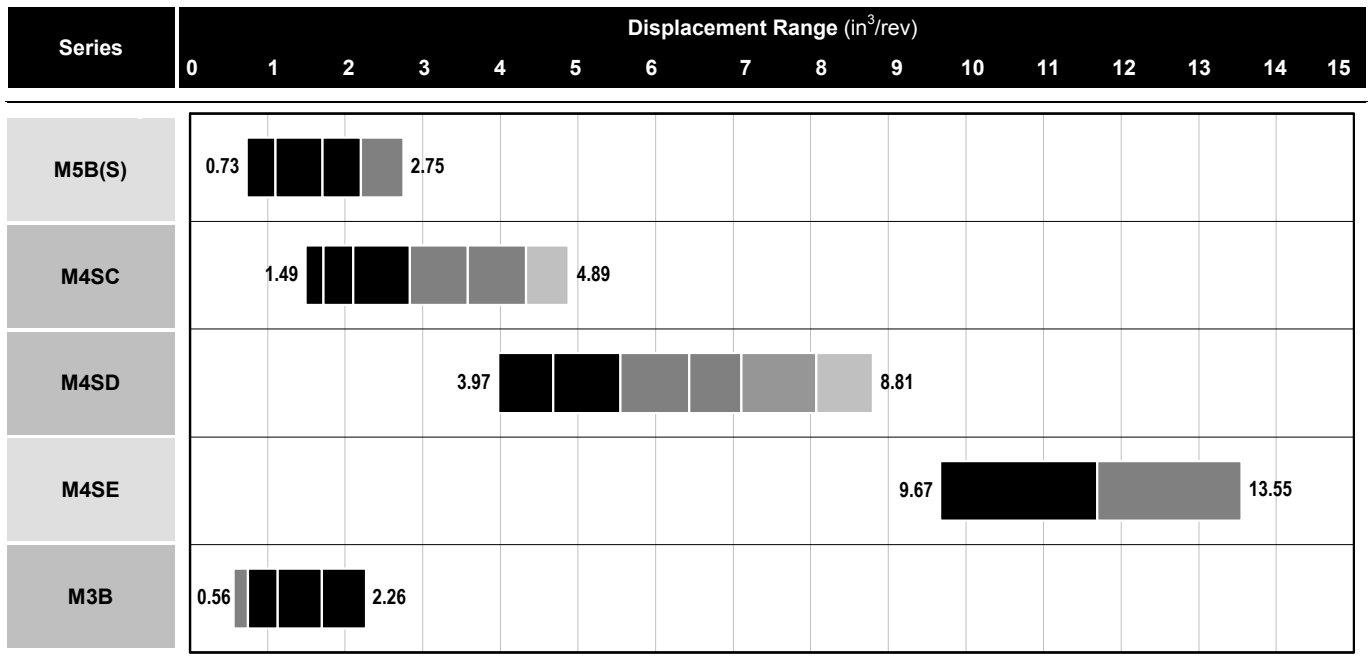


4. Vane Motors

Series	Maximum Operating pressure (PSI)	Maximum Displacement (in ³ /rev)	Mounting	Weight (lbs)	Remarks	Page
M5B(S) M5BF	4600	2.75	<ul style="list-style-type: none"> • ISO 3019-2 100/A2 • SAE-B • Special (Fan Drive) 	41	<ul style="list-style-type: none"> • M5B : ISO 3019-2 100/A2 mounting. • M5BS : SAE B mounting • M5BF : Fan Drive version 	4 - 4
M4C / M4SC	2500 / 3300	4.89	SAE-B 2 bolts	34	<ul style="list-style-type: none"> • M4C : standard • M4SC : heavy duty • Rear ports • Side ports same side • Side ports opposite side (option) 	4 - 6
M4D / M4SD	2500 / 3300	8.81	SAE-C 2/6 bolts	60	<ul style="list-style-type: none"> • M4D : standard • M4SD : heavy duty • Rear ports 	4 - 6
M4E / M4SE	2500 / 2800	13.55	SAE-C 2/6 bolts	99	<ul style="list-style-type: none"> • M4E : standard • M4SE : heavy duty • Rear ports 	4 - 6
M3B	3000	2.26	SAE-A 2 bolts	18	<ul style="list-style-type: none"> • Side ports 	4 - 8

Vane Motors - Product Range Overview



Performance & Operation Limits

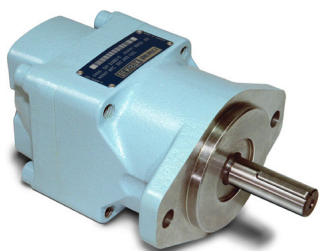
Series	Size	Displ. In ³ /rev	Torque In-lbs / 100 PSI	Power @ 100 rpm HP / 100 PSI	Maximum Pressure			Maximum Speed ¹				Size	
					Standard	S series	Case	Rated pressure		Low pressure			
								Cont.	Int.	Standard	S series		
					PSI	PSI	PSI	rpm	rpm	rpm	rpm		
M5B(S)	012	0.73	11.66	0.0185	4600	-	50	3000	6000	6000	-	012	
	018	1.10	17.46	0.0277				018					
	028	1.71	27.23	0.0435				028					
	036	2.20	34.92	0.0555				036					
	045	2.75	43.71	0.0694				4000	2500	3000		3000	045
M4C M4SC	024	1.49	23.81	0.0370	2500	3300	50	2500	3600	4000 (@ 500psi)	4000 (@ 1200psi)	024	
	027	1.72	27.47	0.0435								027	
	031	2.11	33.57	0.0536								031	
	043	2.84	45.17	0.0721								043	
	055	3.59	56.77	0.0906								3000	055
	067	4.34	68.98	0.1110								067	
	075	4.89	77.52	0.1202								2500	075
M4D M4SD	062	3.97	63.48	0.1017	2500	3300	50	2500	3000	4000 (@ 500psi)	4000 (@ 1200psi)	062	
	074	4.69	74.47	0.1202								074	
	088	5.56	88.51	0.1387								088	
	102	6.44	102.55	0.1665								3000	102
	113	7.12	113.54	0.1850								2800	113
	128	8.08	128.80	0.2035								2500	128
	138	8.81	140.40	0.2220								138	
M4E M4SE	153	9.67	153.83	0.2405	2500	2700	50	2500	3000	4000 (@ 500psi)	4000 (@ 1200psi)	153	
	185	11.69	186.18	0.2959								185	
	214	13.55	215.48	0.3422								2500	214
M3B	009	0.56	7.94	0.0139	2500	-	20	3000	3600	4000 (@ 500psi)	-	009	
	012	0.75	11.35	0.0185	3000							012	
	018	1.13	18.56	0.0296								018	
	027	1.70	29.61	0.0462								027	
	036	2.26	38.09	0.0601								036	

Minimum Replenishment Pressure (PSI absolute) ²

Series	Speed (RPM), fluid : 32 cSt.				
	500	1000	2000	3000	3600
M5B	20.3	24.7	39.2	60.9	87.0
M4C	10.2	20.3	45.0	79.8	134.9
M4D	10.2	20.3	45.0	79.8	134.9
M4E	20.3	40.6	75.4	159.5	-
M3B	8.7	14.5	27.6	50.8	84.1

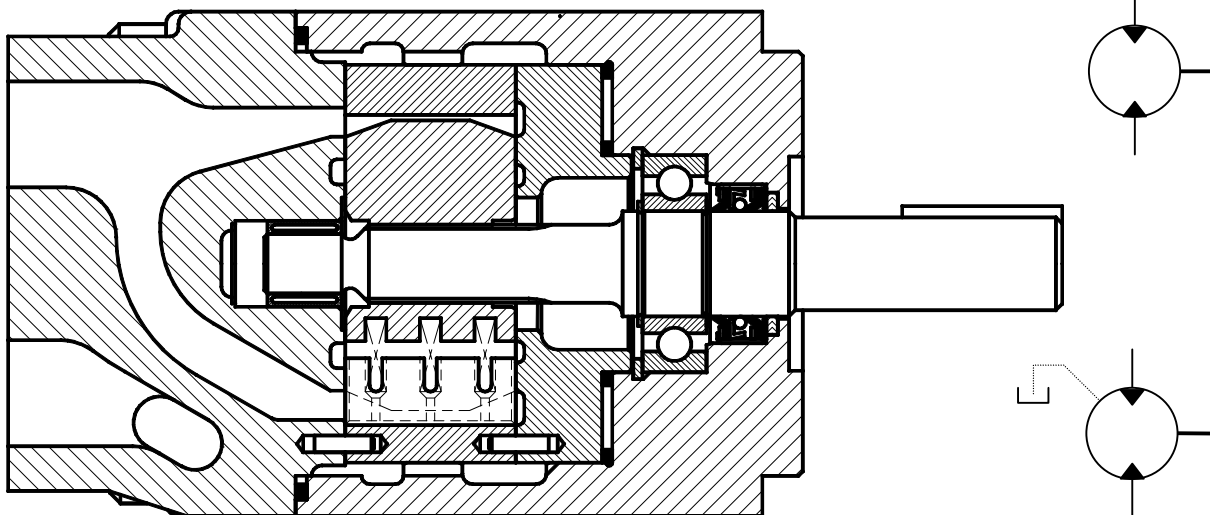
¹ Mineral Oil. Other fluids, consult Denison Hydraulics.

² Mineral Oil. Fire resistant fluid : value x 1.5.



M4 Series

- M4C - 4.81 in³/rev, 3400 PSI
- M4D - 8.81 in³/rev, 3000 PSI
- M4E - 13.55 in³/rev, 2700 PSI



Key Sheet

Example : **M4C-067-1N00-A102**

1. **M4C-067-1N00-A102** Series

	Standard			S series (heavy duty)		
External drain	M4C	M4D	M4E	M4SC	M4SD	M4SE
Internal drain	M4C1	M4D1	M4E1	M4SC1	M4SD1	M4SE1

2. **M4C-067-1N00-A102** Displacement

M4C / M4SC	M4D / M4SD	M4E / M4SE
024 1.49	062 3.97	153 9.67
027 1.72	074 4.69	185 11.69
031 2.11	088 5.56	214 13.55
043 2.84	102 6.44	
055 3.59	113 7.12	
067 4.34	128 8.08	
075 4.89	138 8.81	

3. **M4C-067-1N00-A102** Shaft

4. **M4C-067-1N00-A102** Bi-directional

Bi-directional (note : CW = A inlet, CCW = B inlet)	N
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5. **M4C-067-1N00-A102** Porting

6. **M4C-067-1N00-A102** Design

7. **M4C-067-1N00-A102** Seal Class

	M4	M4S
Buna N : Mineral oil	1	-
Viton : Mineral oil & fire resistant fluids	5	5

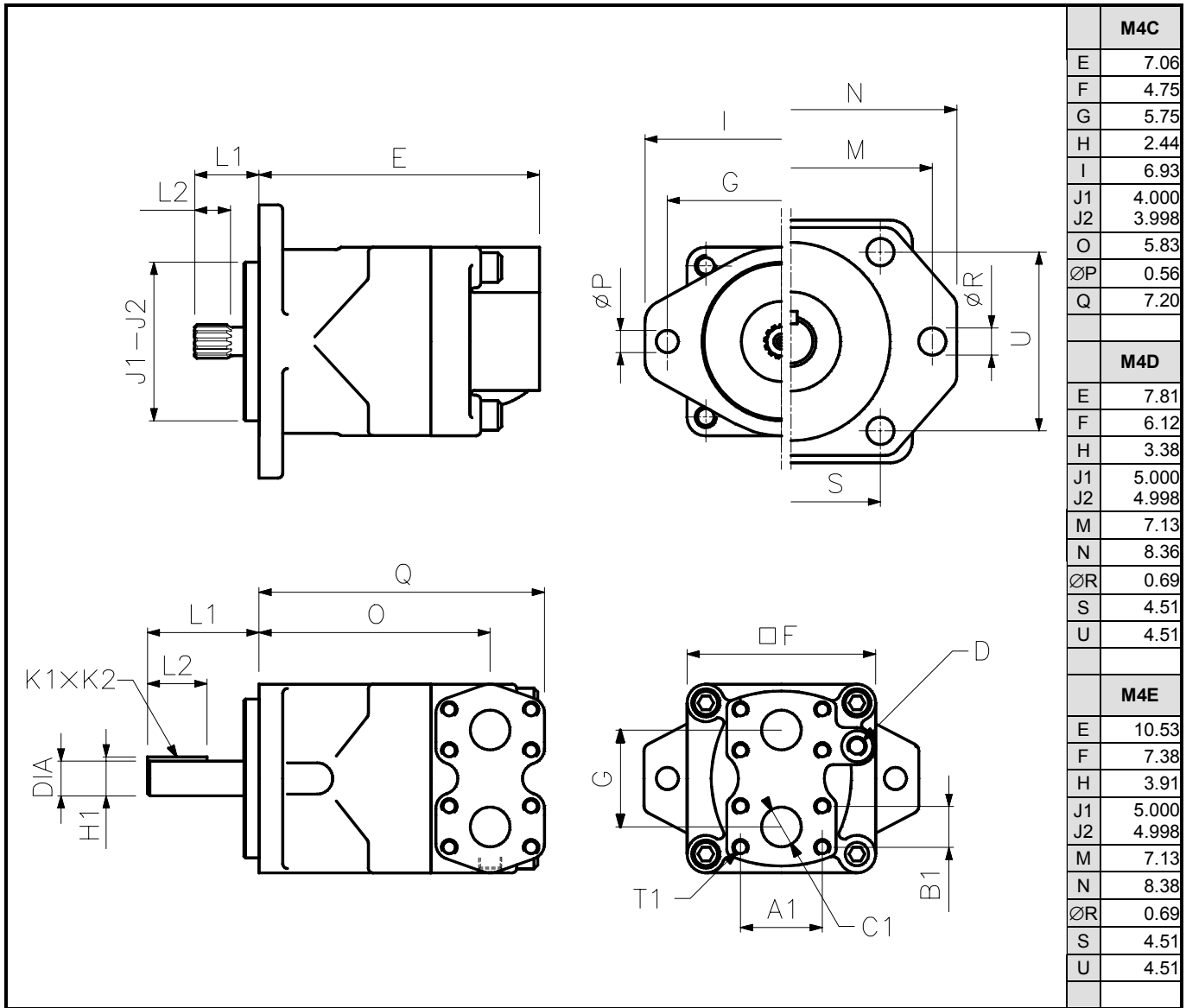
8. **M4C-067-1N00-A102** Port connections

	SAE threaded	SAE 4 bolts	
		UNC	Metric
SAE drain	01	02	-
BSPB drain	-	04	M4
M4C / M4SC	●	●	●
M4D / M4SD	●	●	●
M4E / M4SE	●	●	-

Porting

(M4C-067-1N00-A102)

Series	Code	Rear				Side					
		Drain	B	A	Drain	B	A	Drain	B	A	
M4C / M4SC	00	●	○	○	○	○	○	○	○	○	○
M4D / M4SD	01	○	○	○	○	○	○	○	○	○	○
M4E / M4SE	02	○	○	○	○	○	○	○	○	○	○
	03	○	○	○	○	○	○	○	○	○	○
	04	○	○	○	○	○	○	○	○	○	○



Shaft		Series			Dimensions (in)				
		M4C	M4D	M4E	L1	L2	Diameter	K1 x K2	H1
1	Keyed SAE-B	●			2.81	1.50	0.875 - 0.874	0.250 x 0.248	1.18
	Keyed SAE-C		●		2.19	1.50	1.250 - 1.248	0.313 x 0.311	1.39
	Keyed SAE-C			●	3.31	1.94	1.250 - 1.248	0.313 x 0.311	1.39
2	Keyed non SAE	●			2.31	1.25	0.875 - 0.874	0.188 x 0.186	0.96
	Splined SAE-B	●			1.63	0.96	Class 1 - J498b 16/32 d.p. - 13 teeth		
3	Splined SAE-C		●		2.19	1.50	Class 1 - J498b 12/24 d.p. - 14 teeth		
	Splined SAE-C			●	2.19	0.99	Class 1 - J498b 12/24 d.p. - 14 teeth		

Ports	Dimensions (in)						
	A & B						Drain port D
	SAE 4 bolts flanges ports (option : 02, 04, M4)				SAE threaded ports (option 00)		
	A1	B1	C1	Thread T1			
M4C / M4SC	2.06	1.03	1.00	SAE : 3/8" 16 UNC x 0.75 Metric : M10 x 0.79		1 5/16" UNF x 0.75	SAE : 7/16" 20 UNF BSPP : 1/4"
M4D / M4SD	2.31	1.19	1.25	SAE : 7/16" 14 UNC x 22.0 Metric : M12 x 0.87		1 5/8" 16 UNF x 0.75	SAE : 3/4" 16 UNF BSPP : 3/8"
M4E / M4SE	3.06	1.69	1.97	1/2" 13 UNC x 1.06		2 1/2" 12 UNF x 0.75	SAE : 3/4" 16 UNF BSPP : 1/2"