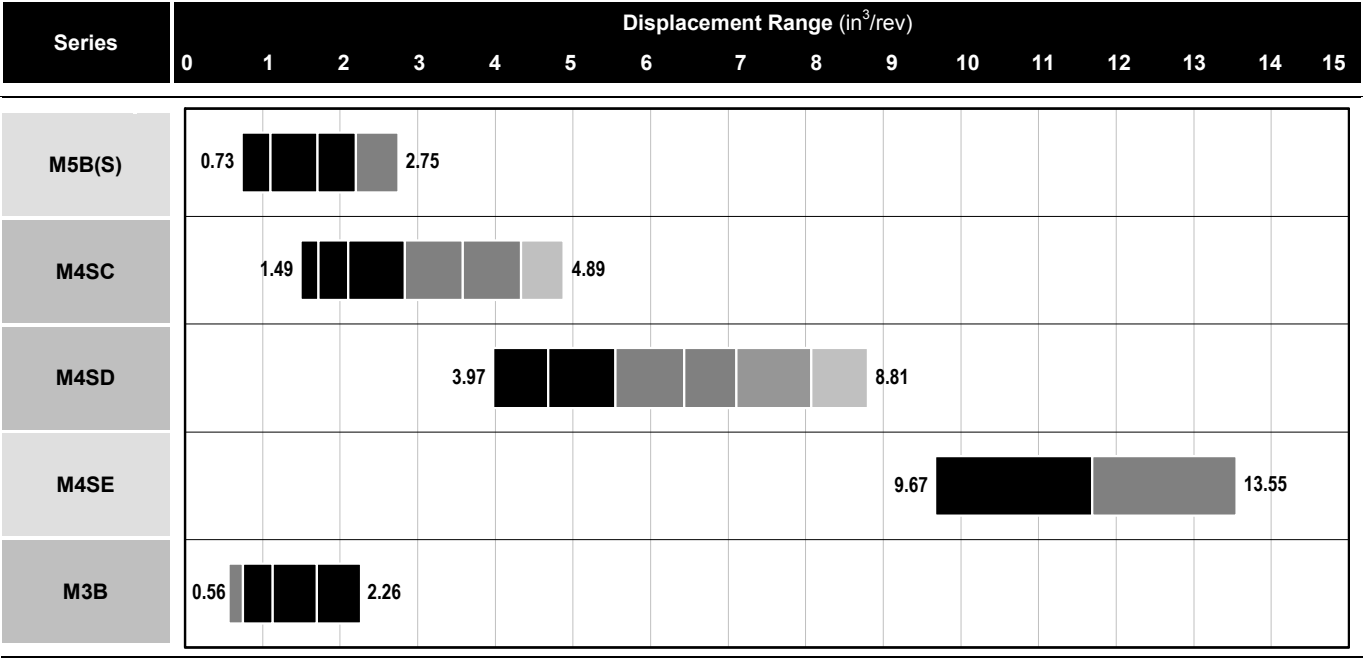


4. Vane Motors

Series	Maximum Operating pressure (PSI)	Maximum Displacement (in ³ /rev)	Mounting	Weight (lbs)	Remarks	Page
M5B(S) M5BF	4600	2.75	• ISO 3019-2 100/A2 • SAE-B • Special (Fan Drive)	41	• 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	• 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	• M4D : standard • M4SD : heavy duty • Rear ports	4 - 6
M4E / M4SE	2500 / 2800	13.55	SAE-C 2/6 bolts	99	• M4E : standard • M4SE : heavy duty • Rear ports	4 - 6
M3B	3000	2.26	SAE-A 2 bolts	18	• Side ports	4 - 8



Performance & Operation Limits

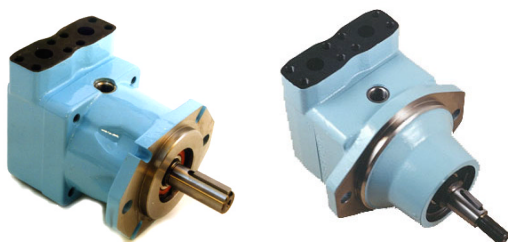
Series	Size	Displ.	Torque	Power @ 100 rpm	Maximum Pressure			Maximum Speed ¹				Size			
					Standard	S series	Case	Rated pressure		Low pressure					
		Cont.	Int.	Standard				S series							
		PSI	PSI	PSI				rpm	rpm	rpm	rpm				
M5B(S)	012	0.73	11.66	0.0185	4600	-	50	3000	6000	6000	-	012			
	018	1.10	17.46	0.0277								018			
	028	1.71	27.23	0.0435				3000	4000	4000		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		3000									043
	055	3.59	56.77	0.0906											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											113
	128	8.08	128.80	0.2035											128
	138	8.81	140.40	0.2220								2500			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		2600						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

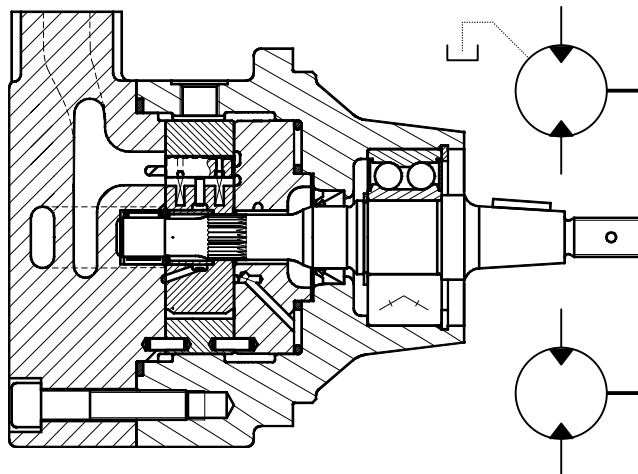
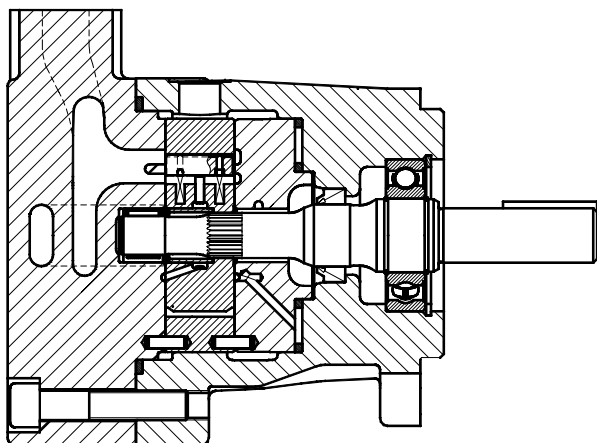
¹ Mineral Oil. Other fluids, consult Denison Hydraulics.

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



M5B, M5B(S), M5BF Series

2.75 in³/rev, 4600 PSI



Key Sheet : Example : **M5BS-028-1N02-A102**

1. **M5BS-028-1N02-A102** Series

Mounting	External Drain
ISO 3019-2 100A2	M5B
SAE	M5BS

2. **M5BS-028-1N02-A102** Displacement

In ³ /rev.	0.73	1.10	1.71	2.2	2.75
Code	012	018	028	036	045

3. **M5BS-028-1N02-A102** Shaft

4. **M5BS-028-1N02-A102** Rotation

Bi-directional	N
----------------	---

5. **M5BS-028-1N02-A102** Porting

6. **M5BS-028-1N02-A102** Design

7. **M5BS-028-1N02-A102** Seal Class

Buna N : Mineral oil	1
----------------------	---

8. **M5BS-028-1N02-A102** Ports

A & B ports : 3/4" SAE - 4 bolts			
A & B	UNC 3/8" -16 UNC	Metric M10	
Drain	9/16" SAE	M18	
Code	02	03	M3
M5B	-	-	●
M5BS	●	●	●

Key Sheet Example : **M5BF-028-1N02-A102**

1. **M5BF-028-1N02-A102** Series

Mounting	External Drain	Internal Drain
2 bolts special (fan drive)	M5BF	M5BF1

2. **M5BF-028-1N02-A102** Displacement

In ³ /rev.	0.73	1.10	1.71	2.2	2.75
Code	012	018	028	036	045

3. **M5BF-028-1N02-A102** Shaft

4. **M5BF-028-1N02-A102** Rotation

	Bi-directional	Integrated braking valve	
		CW	CCW
M5BF	N	R	L

5. **M5BF-028-1N02-A102** Porting

6. **M5BF-028-1N02-A102** Design

7. **M5BF-028-1N02-A102** Seal Class

Buna N : Mineral oil	1
----------------------	---

8. **M5BF-028-1N02-A102** Ports

A & B ports : 3/4" SAE - 4 bolts			
A & B	UNC 3/8" -16 UNC	Metric M10	
Drain	9/16" SAE	M18	None
M5BF	02	03	M3
M5BF1	-	-	-
			MX

Porting (M5BS-028-1N02-A102)

Code	01	02	03	04

			M5B	M5BS					
		A1	0.87	0.87					
		B1	1.87	1.87					
		C1	Ø 0.75	Ø 0.75					
		D	M18	02 : ⁹ / ₁₆ "SAE *3 : M18					
		E	5.66	5.66					
		F	6.59	6.59					
		G	3.48	3.54					
		I	5.51	5.75					
		J1	3.937	4.000					
		J2	3.935	3.998					
		M	6.85	6.85					
		N	3.62	3.62					
		O	2.52	2.52					
		P	Ø 0.53	Ø 0.56					
		T1	M10	02 : ³ / ₈ "16UNC M* : M10					
Shaft		Series		Dimensions (in)					
		M5B	M5BS	L1	L2	Diameter	K1 x K2	H1	
1	Keyed SAE-B		●	2.81	1.50	0.875 - 0.874	0.250 x 0.248	0.98	
2	Keyed ISO R775	●		2.76	1.57	0.9845 - 0.9840	0.3150x0.3129	1.11	
3	Splined SAE-B	●	●	1.63	0.96	Class 1 - J498b 16/32 d.p. - 13 teeth			

								M5BF
				A1				0.87
				B1				1.87
				C1				Ø 0.75
				D				02 : $\frac{9}{16}$ " SAE *3 : M18
				E				3.64
				F				
				G				3.62
				I				2.52
				J1				5.3150
				J2				5.3130
				M				6.30
				N				7.40
				O				2.76
				P				Ø 0.55
				T1				02 : $\frac{3}{8}$ " -16 UNC M* : M10
Shaft		Dimensions (in)						
		L1	L2	Diameter	K1 x K2	H1		
1	Keyed (taper)	2.87	1.61	Taper 125:1000 + M16	0.250 x 0.248	-		
2	Keyed SAE-C	1.89	1.54	1.250 - 1.248	0.311 x 0.312	1.39		
3	Keyed ISO 3019/2 G32N	2.28	1.97	1.2604 - 1.2597	0.392 x 0.394	1.39		