

3. Axial Piston Motors

Piston Motors Range - Fixed & Variable Displacement, Goldcup Series

Series	Maximum Operating pressure (PSI)	Maximum Displacement (in ³ /rev)	Mounting	Weight (lbs)	Pages
M6	6000	6.00	SAE-C, 2 bolts	Fixed..... 47.7 Variable 70.4	3 - 2
M7	6000	7.25	SAE-D, 4 bolts		
M11	6000	11.00	SAE-E, 4 bolts	Fixed..... 113	
M14	6000	14.00		Variable 136	
M24	5000 ²	24.60	SAE-F, 4 bolts	Fixed..... 290 Variable 295	
M30	5000 ²	30.60		Fixed..... 299 Variable 304	

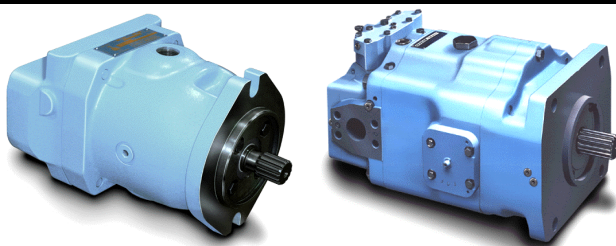
Performance & Operation Limits ¹

Series	Maximum Displacement (in ³ / rev.)	Torque (in-lb / 100PSI)	Maximum Pressure (PSI)			Maximum Speed (rpm)	
			Intermittent	Continuous	Case	100% displacement	50% displacement
M6	6.00	96	6000	5000	75	3000	3600
M7	7.25	115					
M11	11.00	175	6000	5000	75	2400	2800
M14	14.00	221					
M24	24.60	380	5000 ²	5000 ²	75	2100 ³	2100 ³
M30	30.60	486	5000 ²			1800	1800

¹ Mineral Oil. Other fluids, consult Denison Hydraulics.

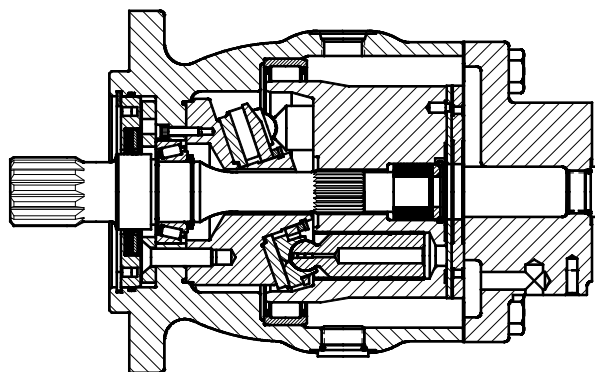
² Max. pressure 4000 psi for M24 and M30 variable motors. Consult Denison for higher pressure applications.

³ On HF-1 fluids, 1800 RPM max. on HF-0 fluids.

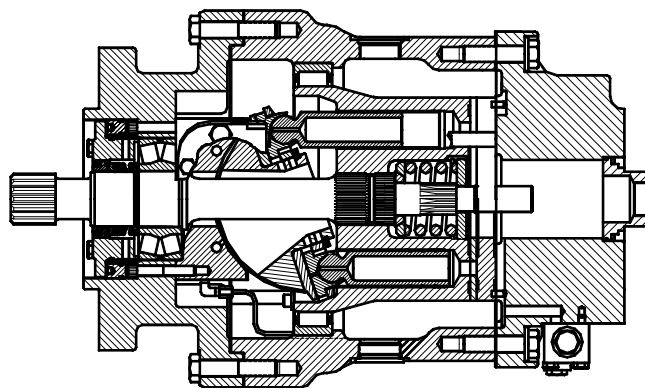


Goldcup Series

Fixed Displacement Variable Displacement



Fixed Displacement



Variable Displacement

Key Sheet..... Example : **M6G-2N1D-00**

1. **M6G-2N1D-00**..... Series

Shuttle Valve	in ³ /rev					
	6.00	7.25	11.00	14.00	24.60	30.60
Without	M6F	M7F	M11F	M14F	M24F	M30F
With	M6G	M7G	M11G	M14G	M24G	M30G

2. **M6G-2N1D-00**..... Shaft

		Keyed	Splined
M6 / M7	2 bolts mounting - SAE-C	2	3
	4 bolts mounting - SAE-D	4	5
M11 / M14	4 bolts mounting - SAE-E	2	3
M24 / M30	4 bolts mounting - SAE-F	2	3

3. **M6G-2N1D-00**..... Rotation

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

4. **M6G-2N1D-00**..... Seal Class

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

5. **M6G-2N1D-00**..... Design

6. **M6G-2N1D-00**..... Shuttle Valve Orifices

	M + F	M + G
No orifice	00	00
Orifice (reduced flow)	-	02

Key Sheet..... Example : **M14H-2N1A-2A0-A00**

1. **M14H-2N1A-2A0-A00**..... Series

Shuttle Valve	in ³ /rev					
	6.00	7.25	11.00	14.00	24.60	30.60
Without	M6H	M7H	M11H	M14H	M24H	M30H
With	M6V	M7V	M11V	M14V	M24V	M30V

2. **M14H-2N1A-2A0-A00**..... Shaft

		Keyed	Splined
M6 / M7	2 bolts mounting - SAE-C	2	3
	4 bolts mounting - SAE-D	4	5
M11 / M14	4 bolts mounting - SAE-E	2	3
M24 / M30	4 bolts mounting - SAE-F	2	3

3. **M14H-2N1A-2A0-A00**..... Rotation

Bi-directional	N
CW / CCW	R / L

4. **M14H-2N1A-2A0-A00**..... Seal Class

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

5. **M14H-2N1A-2A0-A00**..... Design

6. **M14H-2N1A-2A0-A00**..... Primary controls

7. **M14H-2N1A-2A0-A00**..... Control Option

8. **M14H-2N1A-2A0-A00**..... Secondary controls

None	0
Reverse compensator	5

9. **M14H-2N1A-2A0-A00**..... Control side

Control on port A side / port B side	A / B
--------------------------------------	--------------

10. **M14H-2N1A-2A0-A00**..... Control Features

11. **M14H-2N1A-2A0-A00**..... Shuttle Valve Orifice

	M + H	M + V
No orifice	0	0
Orifice (reduced flow)	-	2

Allowable controls & options combinations.....(M14H-2N1A-2A0-A00)

Options	Controls	Primary Controls		
		2♦♦ Cylinder Control	8♦♦ Hydraulic stroker	9♦♦ Electro hydraulic stroker
A - Maximum volume stop		2A0	8A0	9A0
		2A5	8A5	9A5
M - Electric 4D01, 2 positions		2M0	-	-
		2M5		

Control Features(M14H-2N1A-2A0-A00)

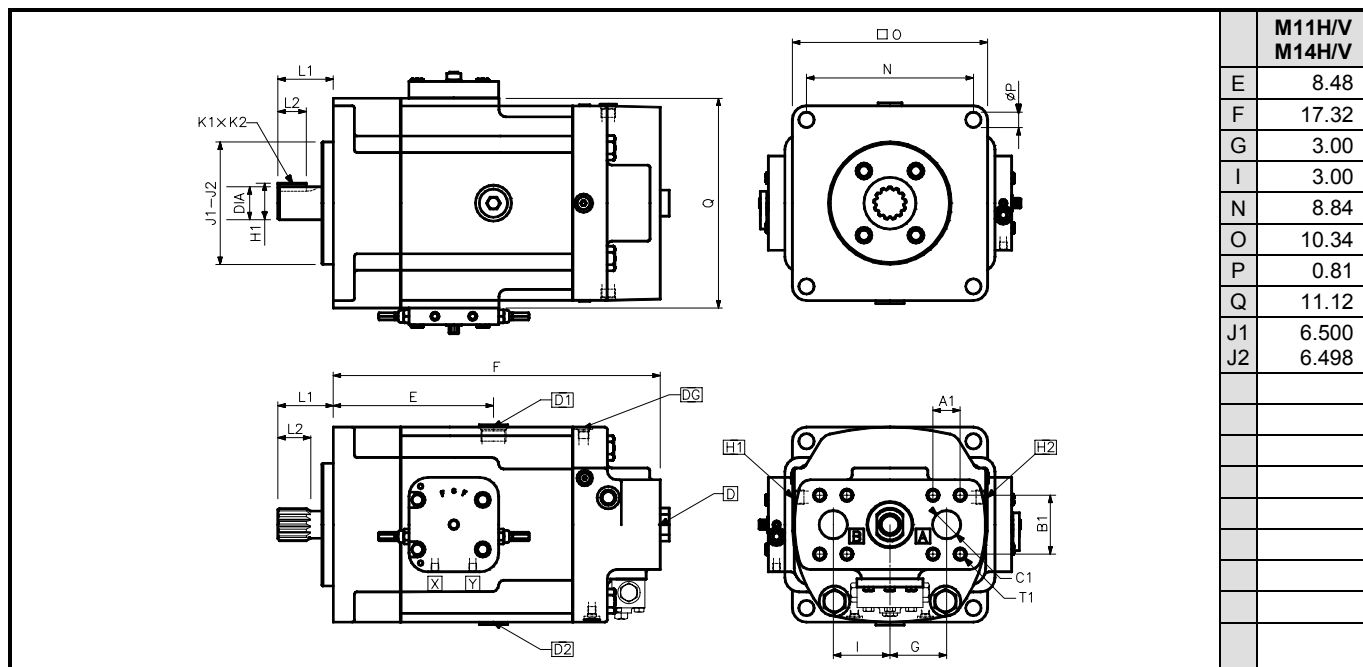
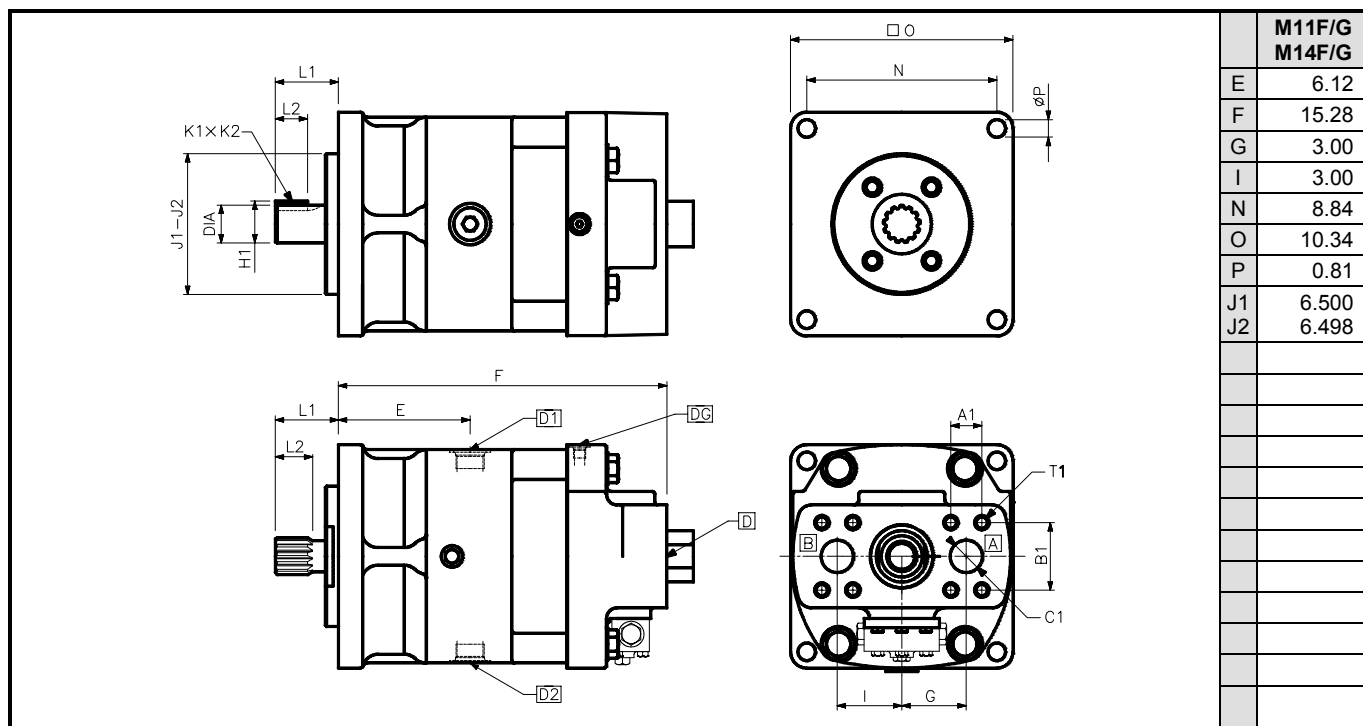
		Primary Controls			
		2♦♦ Cylinder Control		8♦♦ Hydraulic stroker	9♦♦ Electro hydraulic stroker
		2M0, 2M5	2A0, 2A5	8A0, 8A5	9A0, 9A5
Code	0	110 VAC / 60 Hz DIN connector	Standard	75 - 250 PSI	24 VDC
	1	12 VDC DIN connector	-	245 - 450 PSI	12 VDC
	2	240 VAC / 50 Hz DIN connector	-	-	-
	3	110 VAC / 60 Hz Wiring Box	-	-	-
	4	12 VDC Wiring Box	-	-	-

	M6F/G M7F/G	
	SAE-C	SAE-D
A	1.44	1.44
B	3.12	3.12
C	1.50	1.50
E	6.16	6.16
F	11.06	11.46
G	3.00	3.00
I	3.00	3.00
J1	5.000	6.000
J2	4.998	5.998
N	7.12	6.36
O	8.36	9.00
P	0.73	0.83

		M6H/V M7H/V	
		SAE-C	SAE-D
E		7.02	8.36
F		13.16	14.50
G		3.00	3.00
I		3.00	3.00
J1		5.000	6.000
J2		4.998	5.998
N		7.12	6.36
O		8.36	9.00
P		0.72	0.83
Q		9.00	9.00
T		6.36	6.36

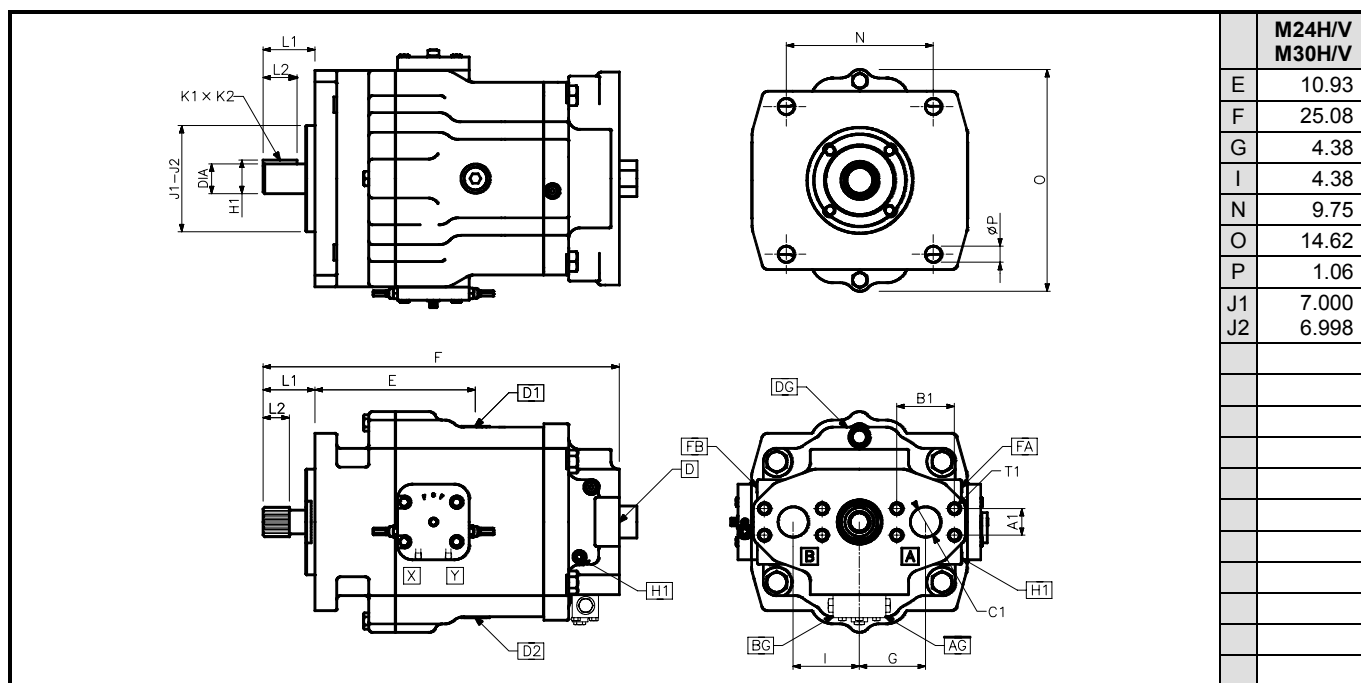
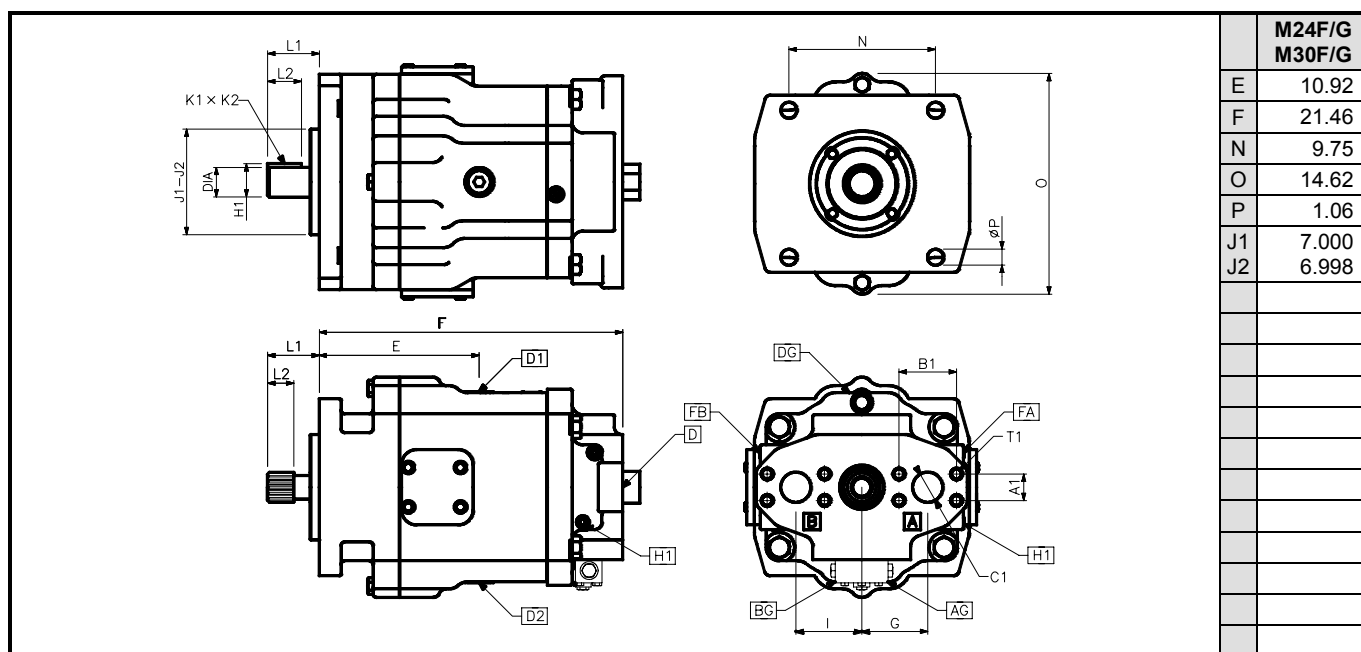
Shafts	Code	Torque N.m	Dimensions (in)					
			L1	L2	DIAMETER	K1 x K2	H1	
Keyed : SAE-C	2		2.23	1.25	1.250 - 1.249	0.312 x 0.310	1.39	
Keyed : SAE-D	4		2.97	1.75	1.750 - 1.748	0.438 x 0.437	1.94	
Splined : SAE-C	3		2.23		Class 1-J498b, 12/24 d.p. - 14 teeth			
Splined : SAE-D	5		2.97		Class 1-J498b, 8/16 d.p. - 13 teeth			

Ports		Series				Dimensions (in)				Remarks
		M♦F	M♦G	M♦H	M♦V	A1	B1	E	F	
A & B	1 1/2"	●	●	●	●	1.44	3.12	1.50	5/8"-11UNC x 1.38	Main lines
D, D1, D2	SAE	●	●	●	●				SAE - 12	Case drain ports
DG	SAE	●	●	●	●				SAE - 6	Case pressure gauge port
FA,FB	NPTF			●	●				NPTF 1/4"	Ctrl pressure gauge ports
H	SAE			●	●				SAE - 8	Ctrl pressure port
X,Y	NPTF			●	●				1/8" NPTF	Ctrl pilot ports



Shafts	Code	Torque N.m	Dimensions (in)				
			L1	L2	DIAMETER	K1 x K2	H1
Keyed : SAE-E	2		2.97	1.50	1.750 - 1.748	0.438 x 0.437	1.94
Splined : SAE-E	3		2.97		Class 1-J498b, 8/16 d.p. - 13 teeth		

Ports		Series				Dimensions (in)				Remarks
		M♦F	M♦G	M♦H	M♦V	A1	B1	E	F	
A & B	1 ½"	●	●	●	●	1.44	3.12	1.50	5/8"-11UNC x 1.38	Main lines
D, D1, D2	SAE	●	●	●	●	SAE - 16				Case drain ports
DG	SAE	●	●	●	●	SAE - 6				Case pressure gauge port
FA,FB	NPTF			●	●	NPTF ¼"				Ctrl pressure gauge ports
H	SAE			●	●	SAE - 8				Ctrl pressure port
X,Y	NPTF			●	●	1/8" NPTF				Ctrl pilot ports



Shafts	Code	Torque N.m	Dimensions (in)				
			L1	L2	DIAMETER	K1 x K2	H1
Keyed : SAE-F	2		3.47	2.25	1.999 - 1.998	0.500 x 0.498	2.22
Splined : SAE-F	3		3.47		Class 1-J498b, 8/16 d.p. - 15 teeth		

Ports		Series				Dimensions (in)				Remarks
		M♦F	M♦G	M♦H	M♦V	A1	B1	E	F	
A & B	2"	●	●	●	●	1.75	3.82	2.00	3/4" -10 UNC x 1.50	Main lines
D, D1, D2	SAE	●	●	●	●				SAE - 16	Case drain ports
D, D1, D2	SAE			●	●				SAE - 20	Case drain ports
DG	SAE	●	●	●	●				SAE - 6	Case pressure gauge port
AG,BG,KG	SAE			●	●				SAE - 6	Gauge ports
FA,FB	SAE			●	●				SAE - 6	Ctrl pressure gauge ports
H1,H2	SAE			●	●				SAE - 4	Ctrl pressure port
X,Y	NPTF			●	●				1/8" NPTF	Ctrl pilot ports

