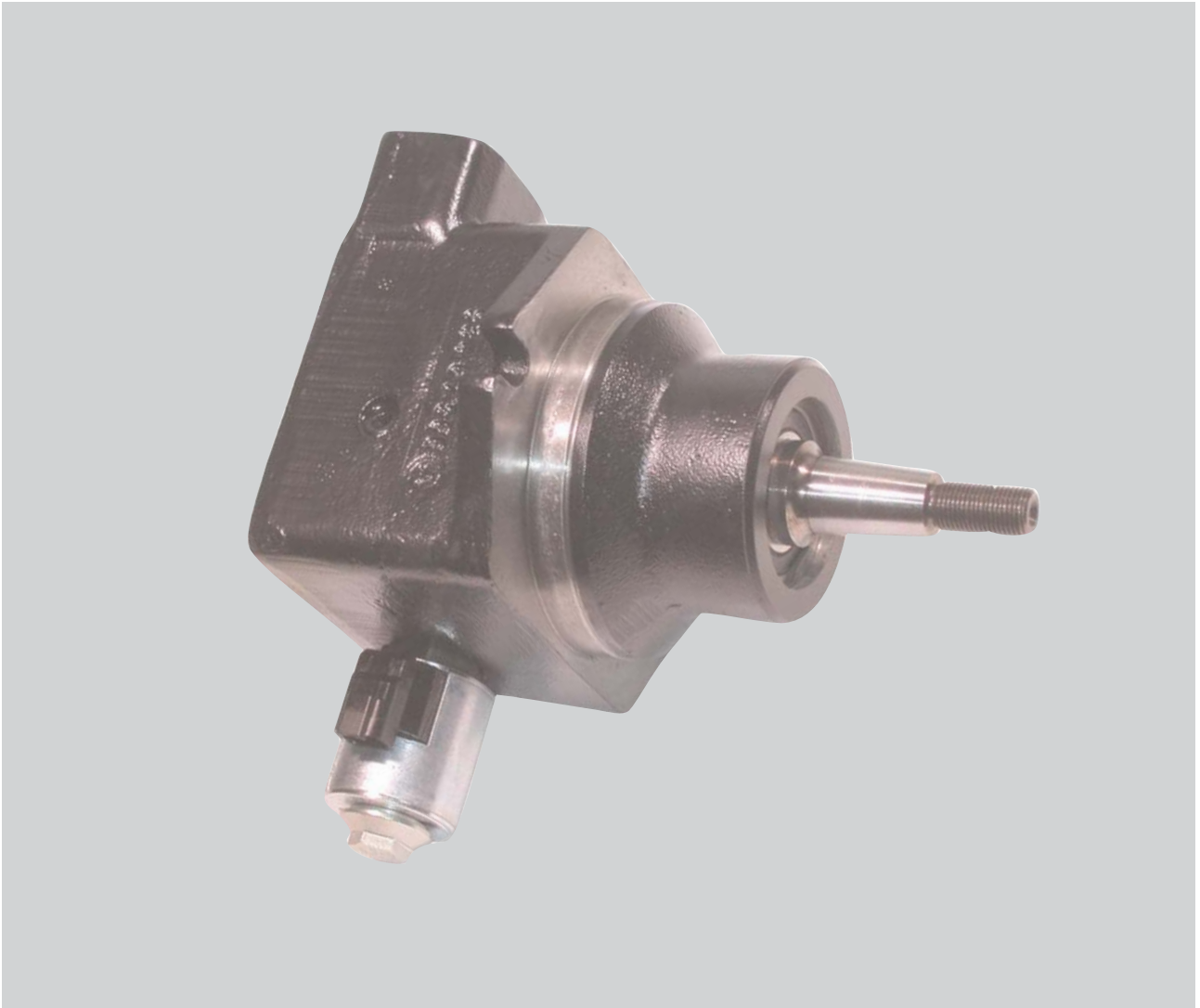




# Vane motor high performance hydraulic series M5AF - M5AF1



Publ. 2 - AM1703 - B

01 / 2005 / FB

Replaces : 2 - AM1703 - A

L14 - 21703 - 2

**DENISON** Hydraulics

**Model No.**

M5AF1 - 018 - 1 N 02 - A 1 - M 3 - ..

Series External drain \*  
Series Internal drain \*

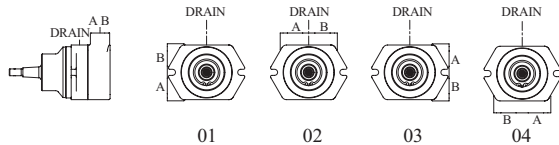
**Displacement**  
Volumetric displacement (in<sup>3</sup>/rev.)  
006 = .38  
010 = .61  
012 = .76  
016 = .98  
018 = 1.10  
025 = 1.52

**Type of shaft**  
1 = taper (non SAE)  
2 = keyed (non SAE)

**Direction of rotation (view on shaft end) - M5AF - M5AF1**  
R = Clockwise  
L = Counter-clockwise

**Direction of rotation (view on shaft end) - M5AF**  
N = Bi-rotational

**Porting combination (view on shaft end)**



**Modifications**

**Drain variables - M5AF**  
2 = 9/16" SAE drain  
3 = M12 x 1,5 metric drain  
**Drain variables - M5AF1**  
X = no drain connection

**End cap variables - All motors except with proportional pressure relief valve \***

M = 4 bolts SAE flange J518 - Metric thread  
0 = 4 bolts SAE flange J518 - UNC thread  
Y = Metric threaded ports (ISO 6149) - M22 x 1,5  
W = SAE str. threaded ports - 1"1/16-12 UNF-2B

**End cap variables - With proportional pressure relief valve (external drain & uni-rotational only) \***

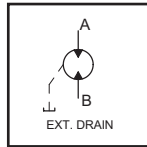
with relief valve and uni-rotational version  
A = 4 bolts SAE flange J518 - Metric thread 210 bar  
B = 4 bolts SAE flange J518 - Metric thread 140 bar  
C = 4 bolts SAE flange J518 - Metric thread 70 bar  
**End cap variables** : all uni-rotational motors have an internal check valve included. \*\*

**Seal class**  
1 = S1 - BUNA N  
5 = S5 - VITON

**Design letter**

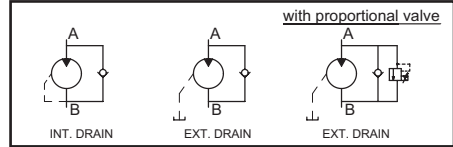
**ROTATION = BI-ROTATIONAL (N)**

**View from shaft end :**  
CW rotation A = inlet  
B = outlet  
CCW rotation A = outlet  
B = inlet

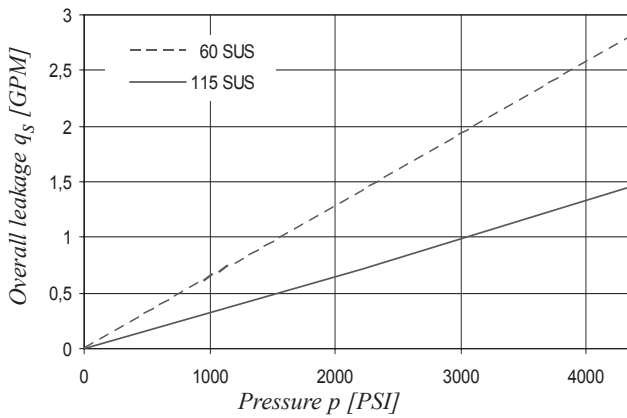


**R OR L ROTATION (New rotation concept - patent pending)\*\*\***

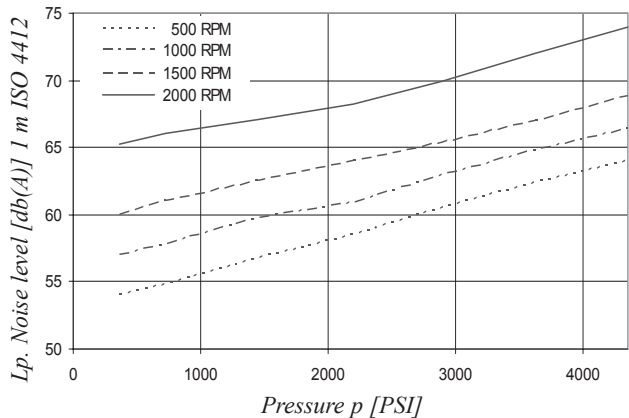
**View from shaft end :**  
CW & CCW rotations  
A = inlet  
B = outlet



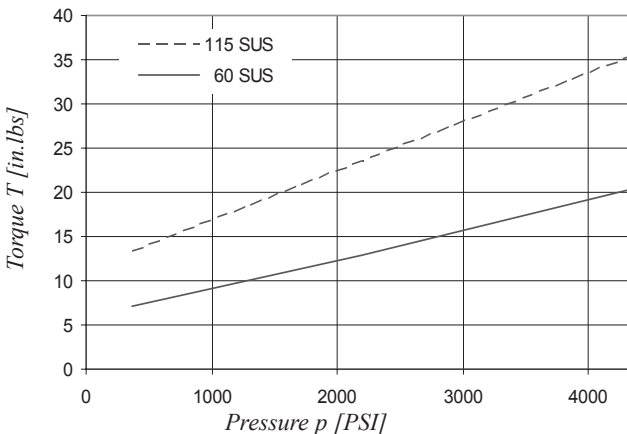
**OVERALL LEAKAGE (internal + external)**



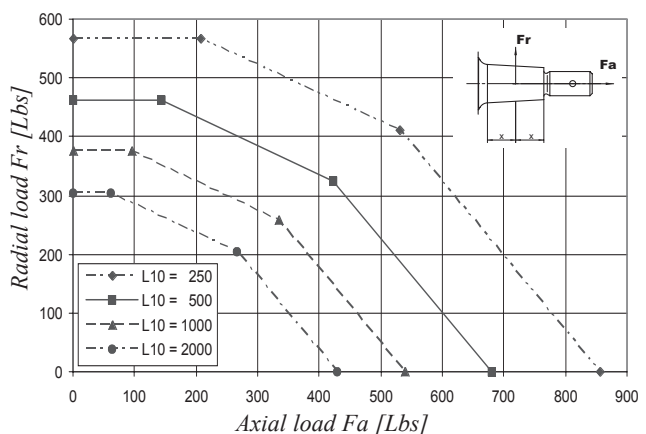
**NOISE LEVEL - M5AF - 025**



**TORQUE LOSS**



**PERMISSIBLE AXIAL AND RADIAL LOADS**

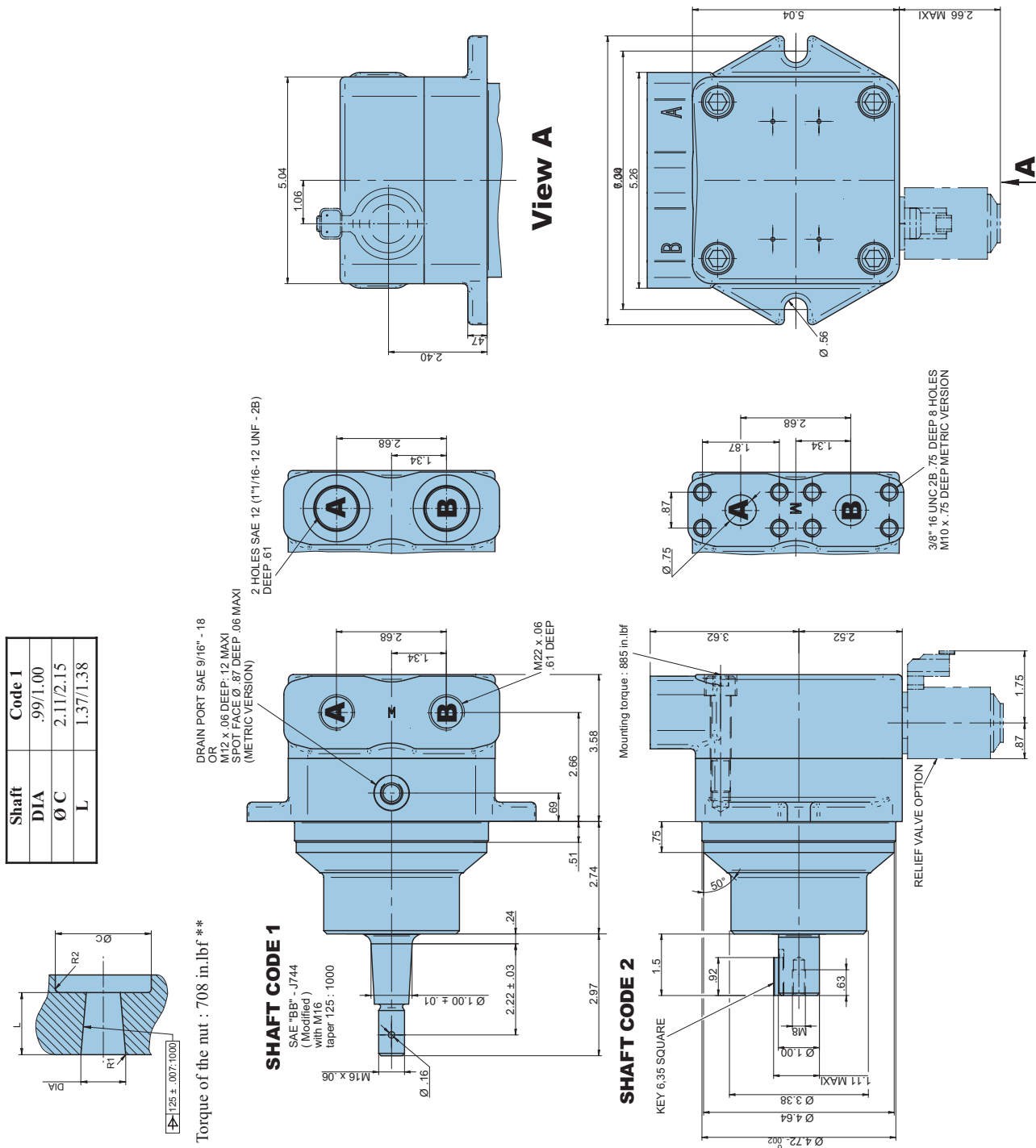


\* If working in series or for other end cap variables, please contact DENISON Hydraulics.

\*\* For the anti-cavitation check valve to work properly, please see chart page 3.

\*\*\* L or R rotation is a new internal concept : A is always "in" and B always "out".

L10 = Theoretical lifetime [10<sup>6</sup> rev.]



**PERFORMANCES : PRESSURE & SPEED**

Displacement	006	010	012	016	018	025
Pressure max (PSI)			4350			4060
Speed max (RPM)			4000			2500

**MINIMUM REPLENISHMENT PRESSURE (BAR ABSOLUTE AT THE B PORT) for M5AF with an internal check valve \***

Flow (GPM)	1.32	2.64	5.28	7.93	10.57	13.21	15.85
Mini pressure (PSI)	18.87	26.12	36.28	43.54	60.96	89.98	130.62

\* 15.85 GPM is the maximum flow allowed through the internal check valve.  
 \*\* This torque is for a steel coupling and a nut of at least grade 8.8 quality. It is compulsory to install a castle nut and cotter pin for right-hand rotation - bi-rotational.