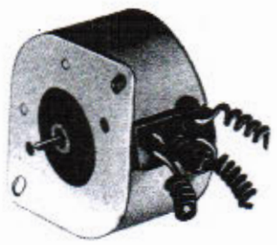
200-0015

Crouzet® Stepper Motors 82 920.0 series



Specifications

	Units	Motor only						Motor with Crouzet drive*		
Number of phases		2 (Bipolar)			4 (Unipolar)			2 (Bipolar)		
Resistance per phase	Ω	10.7	46	198	10.7	46	238	10.7	10.7	10.7
Max. input power	W	7.5								
Max. voltage admissible for continuous duty	V	6.3	12.9	27.2	6.3	12.9	29.9			
Nominal voltage	V	5	12	24	5	12	24	12	24	42
Current per phase under nominal voltage	A	.47	.26	.12	.47	.26	.10	.39	.42	.54
Voltage across motor	V							4.2	4.5	Variable
Inductance per phase	mH	24	80	345	9	48	200	24	24	24
ling torque under max. voltage	in. oz. (mNm)	9.91 (70)			8.07 (57)			8.5 (60)		9.91 (70)

Other Common Specifications

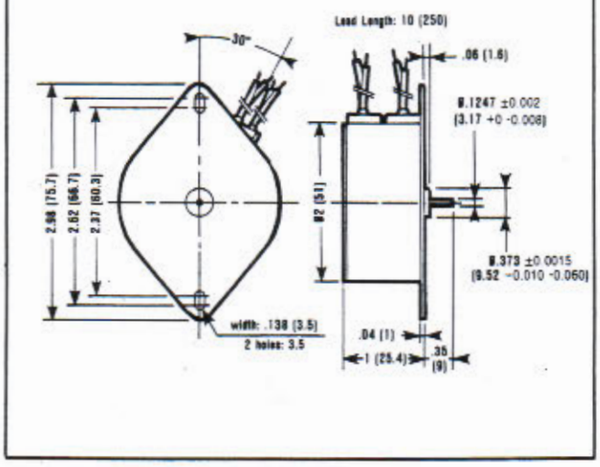
Step angle	Deg.	7.5
Step angle tolerance	%	5
Steps per revolution		48
Rotor inertia	oz. in² (g.cm²)	.10 (18.8)
Detent torque	in. oz. (mN.m)	.85 (6)
Max. coil temperature	°F (°C)	248 (120)
Ambient temperature	°F (°C)	-5 +160 (-20 +70)
Storage temperature	°F (°C)	-40 +212 (-40 +100)
Insulation resistance	MΩ	>10³
Flashover voltage	V.A.C.	>600
ing type		2 sintered bronze sleeve
Weight	ox. (g)	7.4 (210)

* See pages 18/19 for characteristics of the Crouzet drives.
For wiring diagram, see page 9.

When ordering, please specify: motor part number, number of phases and resistance per phase.

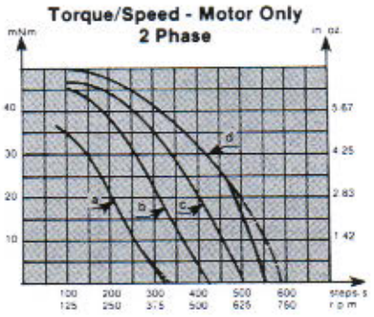
Dimensions inches (mm)

Stepper Motor (82 920.0)

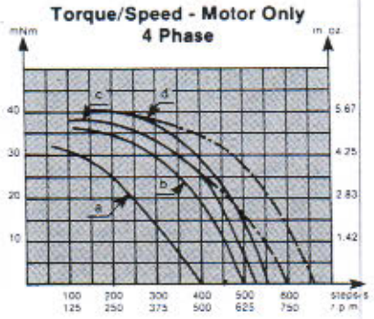


Performance Curves

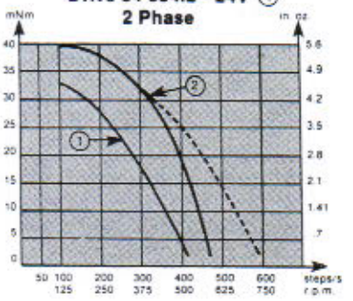
Torque/Speed - Motor Only 2 Phase



Torque/Speed - Motor Only 4 Phase



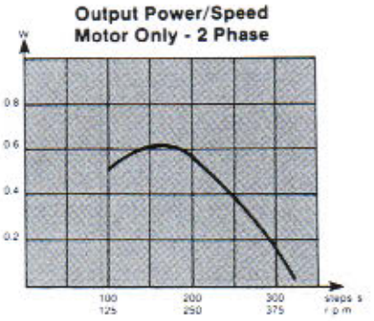
Torque/Speed Using Constant Voltage Drives
Drive 84 851.2 - 12V ①
Drive 84 854.2 - 24V ②
2 Phase



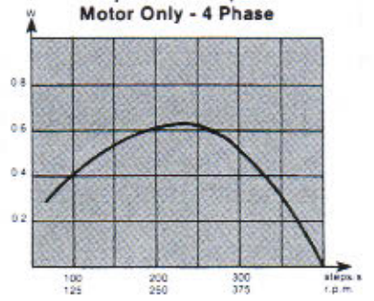
a = Using constant voltage drive with Rs (series resistance) = 0 (L/R)
b = Using constant voltage drive with Rs (series resistance) = R Motor (L/2R)
c = Using constant voltage drive with Rs (series resistance) = 2R Motor (L/3R)
d = using constant voltage drive with Rs (series resistance) = 3R Motor (L/4R)

Measurements were made in full steps, 2 phases at a time.

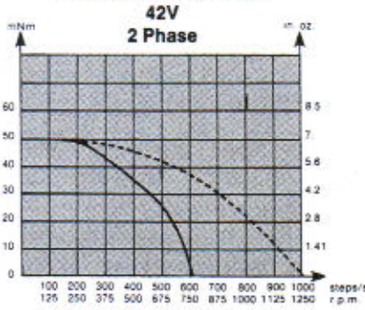
Output Power/Speed Motor Only - 2 Phase



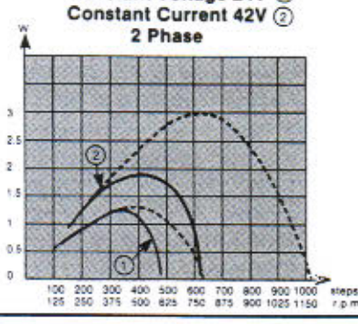
Output Power/Speed Motor Only - 4 Phase



Torque/Speed Using Constant Current Drive 42V 2 Phase



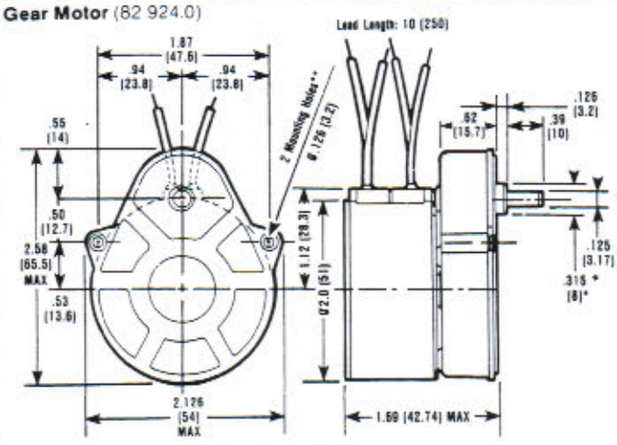
Output Power/Speed Motor w/Crouzet Drives
Constant Voltage 24V ①
Constant Current 42V ②
2 Phase



TEST CONDITIONS:
Ambient Temperature = 77°F (25°C).
If ambient temperature >77°F (25°C), torque loss = .11%/°F (.2%/°C).
Inertial load during test = .012 oz. in² (2.2 g.cm²).

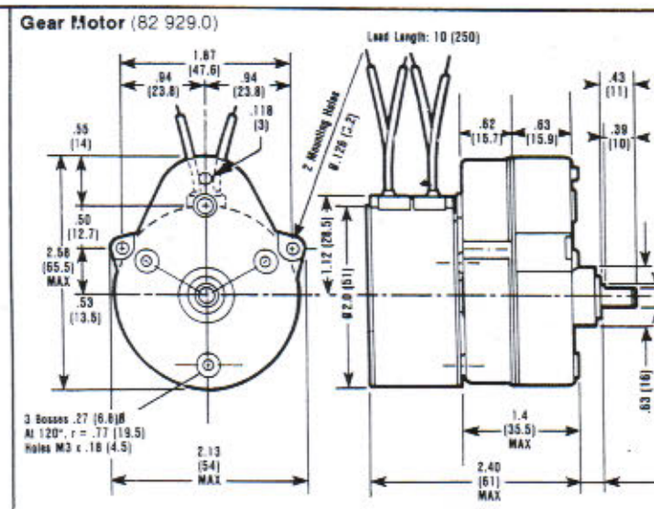
Pull in torque (limit of start/stop zone) ——————
Pull out torque (limit of running zone) — — — — —

Gear Motor (82 924.0)



* .250" (6.35) dia. bearing available upon request.
** .142 (3.7) dia. mounting holes available upon request.
See page 20 for available ratios. See page 11 for standard shafts.

Gear Motor (82 929.0)



*1/4" Dia. shaft available upon request