SCOT

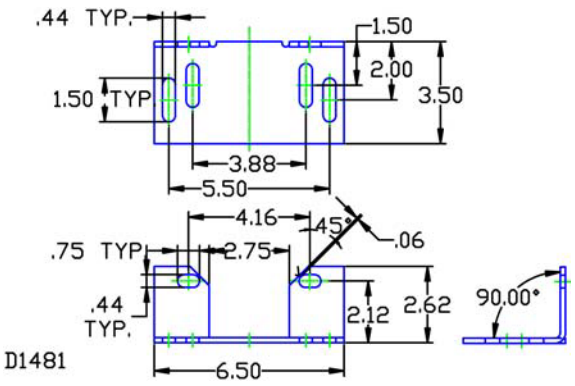
MOTORPUMP™ — 1450 RPM

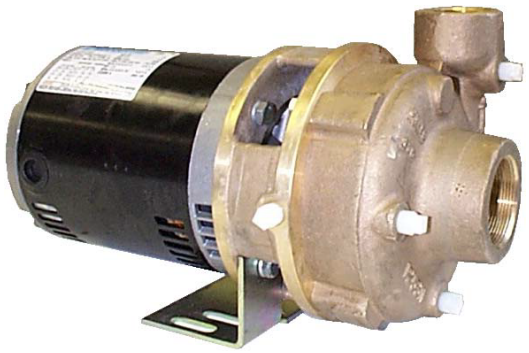
50 HERTZ, 2 X 1.5 X 5.5 NPT

16B
C56

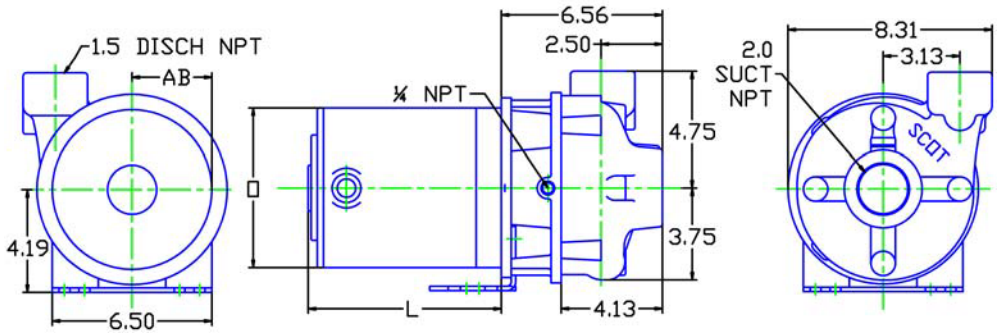
MOTOR DIMENSIONS
NEMA C56 FRAME 1450 RPM

HP	FRAME	ODP			TEFC		
		L	O	AB	L	O	AB
.33	C56	9.92	10.32	10.71	9.48	7.25	5.88



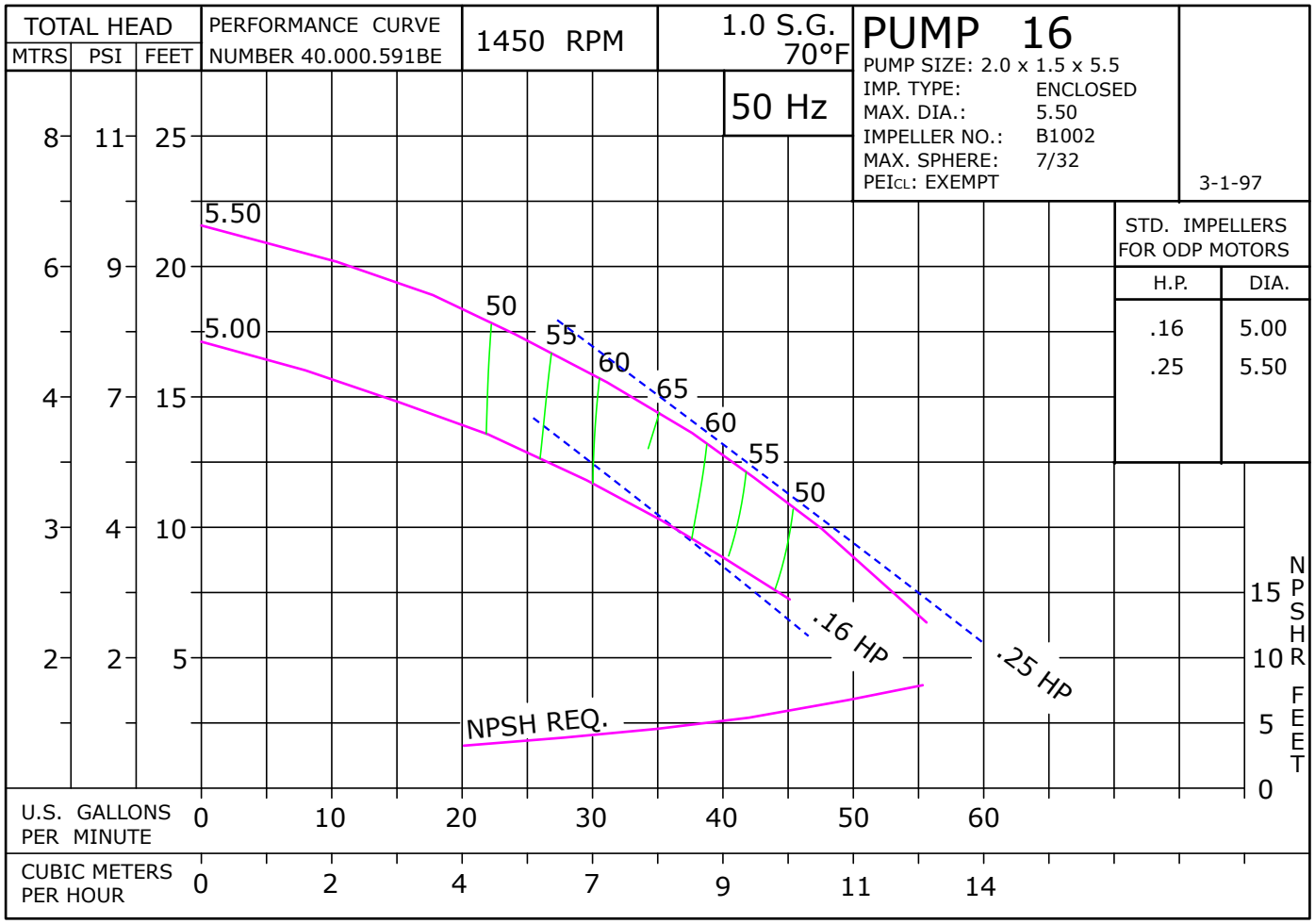


D016BC56_PRINT DRAWING DEPICTS 56C ODP MOTOR



ALL DIMENSIONS IN INCHES.

DRAWING REPRESENTS APPROXIMATE PUMP DIMENSIONS. AUTOCAD DRAWING TO SCALE AVAILABLE FROM FACTORY.



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50 Hertz Pump & Motor Data

A 3-phase 50 Hertz Motorpump™ can be obtained in several ways. The most common options are listed below:

1. Most 60 Hz pumps available from Scot Pump can be operated on a 3-phase 50 Hz 190/380V power. However, when operated on 50 Hz power, the speed is reduced by approximately 20%, and a significant reduction in performance is realized. The charts below indicate these reductions in performance.
2. Pumps will produce the performance indicated in the performance curves when operated on 50 Hz power. The motors for these selections can be obtained through *derated 60 Hz motors* and *wound 50 Hz motors*.

Contact factory for 1 Phase applications.

Derated 60 Hz Motors

The most common practice and readily available method of obtaining a 50 Hz motor is by using the next larger 60 Hz motor and derating it to the desired horsepower on 50 Hz. Many High Efficient motors can be operated on 50 HZ power without a reduction in horsepower. The motor manufacturers 60 HZ nameplate will remain intact. An "Alternate Motor Rating" nameplate indicating the reduced horsepower, RPM, volts, amps, and service factor will be affixed to the pump. In utilizing this practice, service factors may be derated to 1.0. The standard voltage is 190/380V and has a ±10% voltage variation. In addition, 200/400V and 208/416V may be available. Please contact the factory for approval of the rating for your specific application.

Wound 50 Hz Motors

Specially wound 50 Hz 220/380V six-lead Delta Wye motors are available. Most ratings offer a ±15% voltage variation. These motors are not normally a stock item and require an extended lead time.

The impeller and horsepower combination sized (taking the reduction in speed into consideration) may not be suitable for operation on 60 Hz power. The increase in speed, performance and load may overload the system and the electric motors. ***Pumps sized for 50 Hz operation SHOULD NOT be tested on 60 Hz***.

60 Hz Pump on 50 Hz Power

No Impeller Change

50 Hz	*60 Hz*	*Factor*
GPM =	GPM x	0.829
Head =	Head x	0.687
BHP =	HP x	0.569

To Size 60 Hz Pump Using 50 Hz Data,

Obtain 60 Hz Data As Follows:

60 Hz	*50 Hz*	*Factor*
GPM =	GPM x	1.2
Head =	Head x	1.45
BHP =	HP =	$\frac{\text{GPM x Head x SG of}}{\text{3960 x Eff}}$

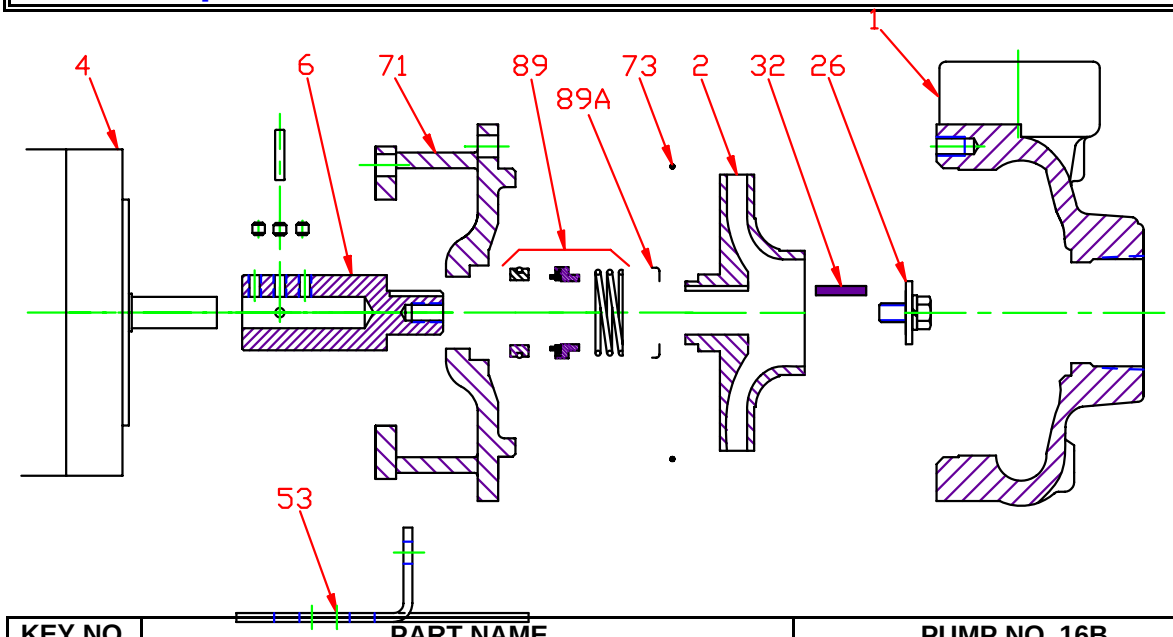
Change of Speed (RPM)

	How Varies:	*Examples*
GPM	Directly	Double RPM = (2)(RPM) = (2)(GPM) Triple RPM = (3)(RPM) = (3)(GPM)
Head	Square	Double RPM = (2)(RPM) = $(2)^2$ = (2)(2) = (4)(Head) Triple RPM = (3)(RPM) = $(3)^2$ = (3)(3) = (9)(Head)
BHP	Cube	Double RPM = (2)(RPM) = $(2)^3$ = (2)(2) (2)= (8)(BHP) Triple RPM = (3)(RPM) = $(3)^3$ = (3)(3)(3) = (27)(BHP)

Change of Impeller Diameter (Dia.)

	How Varies:	*Examples*
GPM	Directly	Double Dia. = (2)(Dia.) = (2)(GPM) Triple Dia. = (3)(Dia.) = (3)(RPM)
Head	Square	Double Dia. = (2)(Dia.) = $(2)^2$ = (2)(2) = (4)(Head) Triple Dia. = (3)(Dia.) = $(3)^2$ = (3)(3) = (9)(Head)
BHP	Cube	Double Dia. = (2)(Dia.) = $(2)^3$ = (2)(2) (2) = (8)(BHP) Triple Dia. = (3)(Dia.) = $(3)^3$ = (3)(3)(3) = (27)(BHP)

Pump 16B • Bronze • C56 Frame • 1450 RPM



KEY NO.	PART NAME	PUMP NO. 16B
1	CASE, BRONZE, 2 x 1.5 NPT	130.000.251
2	IMPELLER, 7/8" KEYED, ENCLOSED, SPECIFY DIAMETER:	
	BRONZE	131.000.808
4	MOTOR, C56	See 60Hz Chart
6*+	STUB SHAFT, BRONZE	135.000.165X
26*	IMPELLER RETAINER, STAINLESS	118.000.111A
32*	KEY, STAINLESS	102.000.102
53	BASE, STEEL	119.000.237A
71	ADAPTER, BRONZE	132.000.219X
73*	GASKET, CASE, BUNA	116.000.146
89*	1½" SEALS:	
	BN-CARB/CM	101.000.168
	VN-CARB/CM	101.000.191
	VN-CARB/SIL	101.000.175
	VN-SIL/SIL	101.000.204
	EPDM-CARB/SIL	101.000.175B
	EPDM-SIL/SIL	101.000.204A
89A*	SEAL RETAINER, STAINLESS	104.000.175
--	º REPAIR KITS:	
	BN-CARB/CM SEAL	118.000.381
	VN-CARB/CM SEAL (S)	118.000.381A
	VN-CARB/SIL SEAL	118.000.381B
	VN-SIL/SIL SEAL (S)	118.000.381D
	EPDM-CARB/SIL SEAL	118.000.381C
	EPDM-SIL/SIL SEAL	118.000.381E

* DENOTES COMPONENTS INCLUDED IN REPAIR KIT.
\+ INCLUDES SET SCREWS AND PINS.
º ALL REPAIR KITS INCLUDE THE BRONZE STUB SHAFT EXCEPT THE (S) INDICATED, WHICH IS STAINLESS.

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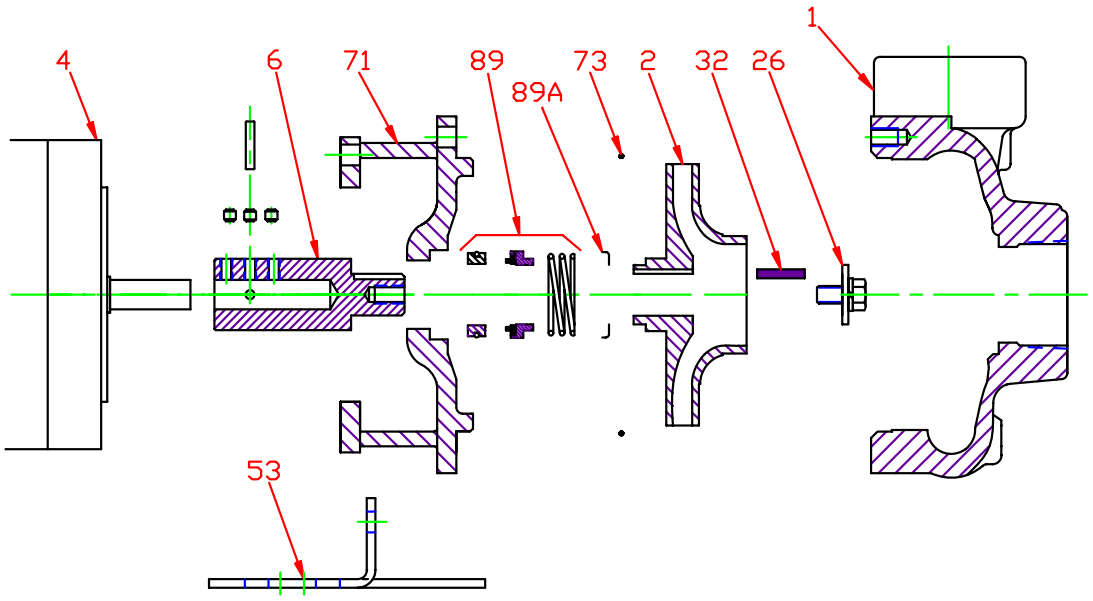

CONSTRUCTION OPTIONS		
KEY	**PART NAME**	**ALL BRONZE**
1	Case	Bronze
2	Impeller	Bronze
6	Shaft Stub	Bronze
26	Imp. Retaining Ass'y	Stainless
32	Key	Stainless
53	Base	Steel
71	Adapter	Bronze
73	Gasket, Case	O-Ring BUNA
89	Mechanical Seal, Type 21 BN-CM	Standard
89A	Seal Spring Retainer	Stainless

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