SCOT

MOTORPUMPTM — 1450 RPM

52B

50 HERTZ, 2.5 X 2 X 5.5 NPT

MOTOR DIMENSIONS

NEMA JM FRAME 3 PHASE 1450 RPM

HP	Туре	Frame	D	Е	F	0	AB	BG	L	МН
.75	ODP	JM143	3.50	2.75	2.00	6.72	5.87	4.75	4.70	.34
1	ODP	JM143	3.50	2.75	2.50	6.72	5.87	5.25	5.36	0.34
.75	TEFC	JM143	3.50	2.75	2.00	7.00	6.25	4.57	5.84	.34
1	TEFC	JM145	3.50	2.75	2.50	7.00	6.25	5.06	6.34	0.34

Dimensions are the next larger 60Hz motor derated for 50HZ operation. See C56 frame for .33 - .50 HP $\,$

ALL DIMENSIONS IN INCHES.

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



TOT.	AL HE		PERFC NUMB		CE CL		145	0 RF	PM		1.0 5	S.G. 70°F	PU	MP	5	2B			
WITKS	P31	FEET	NOIVIB	ER 40	0.000.	249B						/ 	PUMP IMP. 7	SIZE: TYPE:	2.5 x 2	.0 x 6.! NCLOS			
_	_	_									50	HZ —	MAX. IMPEI	DIA.: LER NO		.50 :1155			
														SPHER 0.97		1/32		6/2	0/72
10	-	40															STD. FOR O		LLERS OTORS
12-	17-	40-															H.F	P.	DIA.
-	_	_															1/3	3	5.50
			6.50			.55	65	68			•	.					1/2	2	6.00
9-	13-		6.25 6.00					00	70	``.	`	-					3/4		6.50
6-	9-	20-	5.50				1,				6	8 — 65						·	
	9	20						1.1.1		X	\nearrow		>!	55					N 6 P
3-	4-	10-								, <u>, , , , , , , , , , , , , , , , , , </u>		7,		3/4		7/2/2			S H 4 R
	_	10			NPS	H REG	<u>2</u> .				7	3 -	₩	/*/	s 				F
												3/1/2	l L						2 E E T
	GALLO MINUT))	2	0	4	0	6	0	8	0	1(00	12	20	1			1 0
	C MET HOUR	ERS (Ö	4	1	Ç)	1	4	1	8	2	2	2	7				

050B05DP D052BJM145 0521450 52B 052B1450JM 81.001.781 M19

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* (see below).

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. We will require the country the motor is being exported to, frequency in hertz and specific voltage to ensure that a nameplate with applicable efficiency and country markings (if required) is supplied. In utilizing this practice, service factors may be derated to 1.0. Please contact the factory for approval of the rating for your specific application.

Wound 50 Hz Motors

Specially wound 50 Hz motors are available. These motors are not normally a stock item and require an extended lead time.

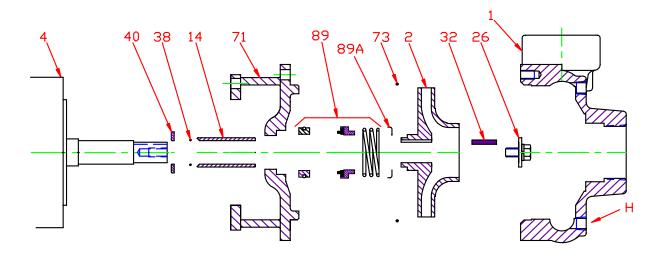
The impeller and horsepower combination sized (taking the reduction in speed into consideration) may not be suitable for operation on 60 Hz power. The increase in speed, performance and load may overload the system and the electric motors. *Pumps sized for 50 Hz operation SHOULD NOT be tested on 60 Hz*.

60 Hz Pump on 50 Hz Power								
No	No Impeller Change							
50 Hz	50 Hz 60 Hz Factor							
GPM =	GPM = GPM x 0.829							
Head = Head x 0.687								
BHP =	HP x	0.569						

To Size 60 Hz Pump Using 50 Hz Data,								
Obtai	Obtain 60 Hz Data As Follows:							
60 Hz	50 Hz	Factor						
GPM =	GPM x	1.2						
Head =	Head x	1.45						
BHP =	HP =	GPM x Head x SG of 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.)					
	Chan How Varies:	Examples			
GPM					
GPM Head	How Varies:	Examples Double Dia. = (2)(Dia.) = (2)(GPM)			

Pump 52B • Bronze • JM Frame • 1450 RPM



1+ CASE, BRONZE, 2.5 x 2 NPT 130.000.218X 2 IMPELLER, 7/8" KEYED, ENCLOSED, SPECIFY DIAMETER: BRONZE 131.000.810 4 MOTOR, JM140/180 See 60Hz Chart 14* SHAFT SLEEVE, BRONZE 110.000.178 SHAFT SLEEVE, STAINLESS 110.000.192 25 WEAR RING, BRONZE 103.000.136 26* IMPELLER RETAINER, STAINLESS 118.000.163A 32* KEY, STAINLESS 102.000.102 38* O-RING, SHAFT, BUNA 116.000.117 O-RING, SHAFT, VITON 116.000.105 40* FLINGER, STAINLESS 104.000.165 ADAPTER, BRONZE - JM140/180 132.000.228X 73* GASKET, CASE, FIBER 116.000.157 1½" SEALS: BN-CARB/CM 101.000.168 VN-CARB/SIL 101.000.175 VN-SIL/SIL 101.000.204 EPDM-CARB/SIL 101.000.204 EPDM-SIL/SIL 101.000.204 BPDM-SIL/SIL 101.000.204 BPDM-SIL/SIL 104.000.174 ** REPAIR KITS: 104.000.344 BN-CARB/CM SEAL 118.000.344	KEY NO.	PART NAME	PUMP NO. 52B
BRONZE	1+	CASE, BRONZE, 2.5 x 2 NPT	130.000.218X
BRONZE	2	IMPELLER, 7/8" KEYED, ENCLOSED, SPECIFY I	DIAMETER:
14* SHAFT SLEEVE, BRONZE 110.000.178 SHAFT SLEEVE, STAINLESS 110.000.192 25 WEAR RING, BRONZE 103.000.136 26* IMPELLER RETAINER, STAINLESS 118.000.163A 32* KEY, STAINLESS 102.000.102 38* O-RING, SHAFT, BUNA 116.000.117 O-RING, SHAFT, VITON 116.000.105 40* FLINGER, STAINLESS 104.000.165 ADAPTER, BRONZE - JM140/180 132.000.228X 73* GASKET, CASE, FIBER 116.000.157 1½" SEALS: 101.000.168 WN-CARB/CM 101.000.191 89* VN-CARB/SIL 101.000.204 EPDM-CARB/SIL 101.000.204 EPDM-SIL/SIL 101.000.204B 89A* SEAL RETAINER, STAINLESS 104.000.174 OREPAIR KITS: BN-CARB/CM SEAL 118.000.344	2	BRONZE	131.000.810
SHAFT SLEEVE, STAINLESS	4	MOTOR, JM140/180	See 60Hz Chart
SHAFT SLEEVE, STAINLESS	1./*	SHAFT SLEEVE, BRONZE	110.000.178
26* IMPELLER RETAINER, STAINLESS 118.000.163A 32* KEY, STAINLESS 102.000.102 38* O-RING, SHAFT, BUNA 116.000.117 0-RING, SHAFT, VITON 116.000.105 40* FLINGER, STAINLESS 104.000.165 ADAPTER, BRONZE - JM140/180 132.000.228X 73* GASKET, CASE, FIBER 116.000.157 1½" SEALS:	14	SHAFT SLEEVE, STAINLESS	110.000.192
32* KEY, STAINLESS 102.000.102 38* O-RING, SHAFT, BUNA 116.000.117 O-RING, SHAFT, VITON 116.000.105 40* FLINGER, STAINLESS 104.000.165 ADAPTER, BRONZE - JM140/180 132.000.228X 73* GASKET, CASE, FIBER 116.000.157 1½" SEALS:	25	WEAR RING, BRONZE	103.000.136
38* O-RING, SHAFT, BUNA	26*	IMPELLER RETAINER, STAINLESS	118.000.163A
O-RING, SHAFT, VITON 40* FLINGER, STAINLESS ADAPTER, BRONZE - JM140/180 73* GASKET, CASE, FIBER 116.000.157 1½" SEALS: BN-CARB/CM VN-CARB/CM VN-CARB/SIL VN-SIL/SIL EPDM-CARB/SIL EPDM-SIL/SIL BPDM-SIL/SIL 89* SEAL RETAINER, STAINLESS BN-CARB/CM SEAL 101.000.204 101.000.175 101.000.204 101.000.175 101.000.204 101.000.175 101.000.204 101.000.204 101.000.204 101.000.204 101.000.175 101.000.204 101.000.204	32*		102.000.102
O-RING, SHAFT, VITON	38*		
ADAPTER, BRONZE - JM140/180 132.000.228X 73* GASKET, CASE, FIBER 116.000.157 1½" SEALS: BN-CARB/CM 101.000.168 VN-CARB/SIL 101.000.175 VN-SIL/SIL 101.000.204 EPDM-CARB/SIL 101.000.175B EPDM-SIL/SIL 101.000.204B 89A* SEAL RETAINER, STAINLESS 104.000.174 © REPAIR KITS: BN-CARB/CM SEAL 118.000.344		, ,	
73* GASKET, CASE, FIBER 116.000.157 1½" SEALS: BN-CARB/CM 101.000.168 VN-CARB/CM 101.000.191 89* VN-CARB/SIL 101.000.175 VN-SIL/SIL 101.000.204 EPDM-CARB/SIL 101.000.175B EPDM-SIL/SIL 101.000.204B 89A* SEAL RETAINER, STAINLESS 104.000.174 © REPAIR KITS: BN-CARB/CM SEAL 118.000.344	40*		
1½" SEALS: BN-CARB/CM		,	
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 101.000.204B 89A* SEAL RETAINER, STAINLESS 104.000.174 © REPAIR KITS: BN-CARB/CM SEAL 118.000.344	73*		116.000.157
VN-CARB/CM			
89* VN-CARB/SIL 101.000.175 VN-SIL/SIL 101.000.204 EPDM-CARB/SIL 101.000.175B EPDM-SIL/SIL 101.000.204B 89A* SEAL RETAINER, STAINLESS 104.000.174 © REPAIR KITS: BN-CARB/CM SEAL 118.000.344		BN-CARB/CM	
VN-SIL/SIL 101.000.204 EPDM-CARB/SIL 101.000.175B EPDM-SIL/SIL 101.000.204B 89A* SEAL RETAINER, STAINLESS 104.000.174 PREPAIR KITS: BN-CARB/CM SEAL 118.000.344		VN-CARB/CM	101.000.191
EPDM-CARB/SIL 101.000.175B EPDM-SIL/SIL 101.000.204B 89A* SEAL RETAINER, STAINLESS 104.000.174 * REPAIR KITS: BN-CARB/CM SEAL 118.000.344	89*		
EPDM-SIL/SIL 101.000.204B 89A* SEAL RETAINER, STAINLESS 104.000.174 ° REPAIR KITS: BN-CARB/CM SEAL 118.000.344			
89A* SEAL RETAINER, STAINLESS 104.000.174			
° REPAIR KITS: BN-CARB/CM SEAL 118.000.344			
BN-CARB/CM SEAL 118.000.344	89A*	SEAL RETAINER, STAINLESS	104.000.174
		_	
VN-CARB/CM SEAL (S) 118.000.344A			
		` '	
VN-CARB/CM SEAL 118.000.344K			
VN-CARB/SIL SEAL 118.000.344B			
VN-SIL/SIL SEAL (S) 118.000.344F		` <i>'</i>	
EPDM-CARB/SIL SEAL 118.000.344C			
EPDM-SIL/SIL SEAL 118.000.344D			118.000.344D

^{*} DENOTES COMPONENTS INCLUDED IN REPAIR KIT.

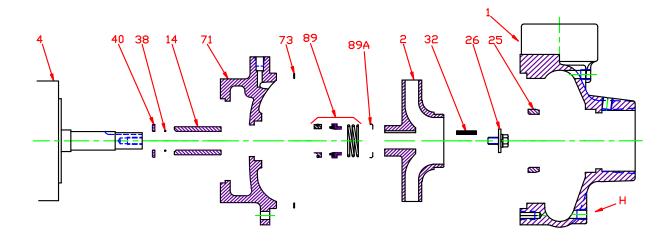
E054JM

D11 P052B1450JM

⁺ INCLUDES BRONZE WEAR RING.

O ALL REPAIR KITS INCLUDE THE BRONZE SHAFT SLEEVE EXCEPT THE (S) INDICATED, WHICH IS STAINLESS WITH VITON SHAFT O-RING.

Pump 52B • Bronze • JM Frame • 1450 RPM



	CONSTRUCTION OPTIONS					
KEY	PART NAME	ALL BRONZE				
1	Case	Bronze				
2	Impeller	Bronze				
14	Shaft Sleeve	Bronze				
25	Wear Ring	Bronze				
26	Impeller Retaining Assy	Stainless				
32	Key	Stainless				
38	Shaft O-Ring	BUNA				
40	Flinger	Stainless				
71	Adapter	Bronze				
73	Gasket, Case	Fiber				
89	Mechanical Seal, Type 21 BN-CM	Standard				
89A	Seal Spring Retainer	Stainless				
Н	Plug, Drain	Brass				

E054JM

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