

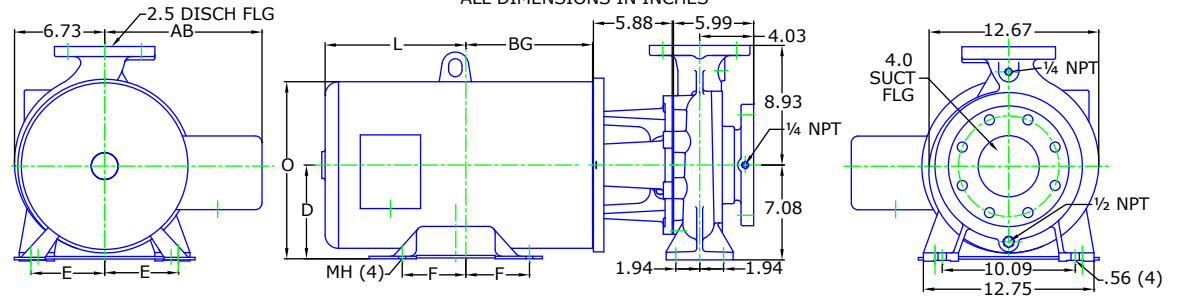
MOTOR DIMENSIONS

NEMA JP FRAME 3 PHASE 2900 RPM

HP	Type	Frame	D	E	F	O	AB	BG	L	MH
10	ODP	JP215	5.25	4.25	3.50	10.14	7.97	7.75	6.88	0.41
15	ODP	JP254	6.25	5.00	4.13	12.01	9.45	8.88	7.84	0.53
20	ODP	JP256	6.25	5.00	5.00	12.01	9.45	9.75	6.97	0.53
25	ODP	JP284	7.00	5.50	4.75	13.86	10.87	9.75	9.26	0.53
10	TEFC	JP254	6.25	5.00	4.13	12.76	10.48	8.13	10.84	0.53
15/20	TEFC	JP256	6.25	5.00	5.00	12.37	10.48	9.01	11.70	0.53
25	TEFC	JP286	7.00	5.50	5.50	14.11	11.07	10.02	13.04	0.53

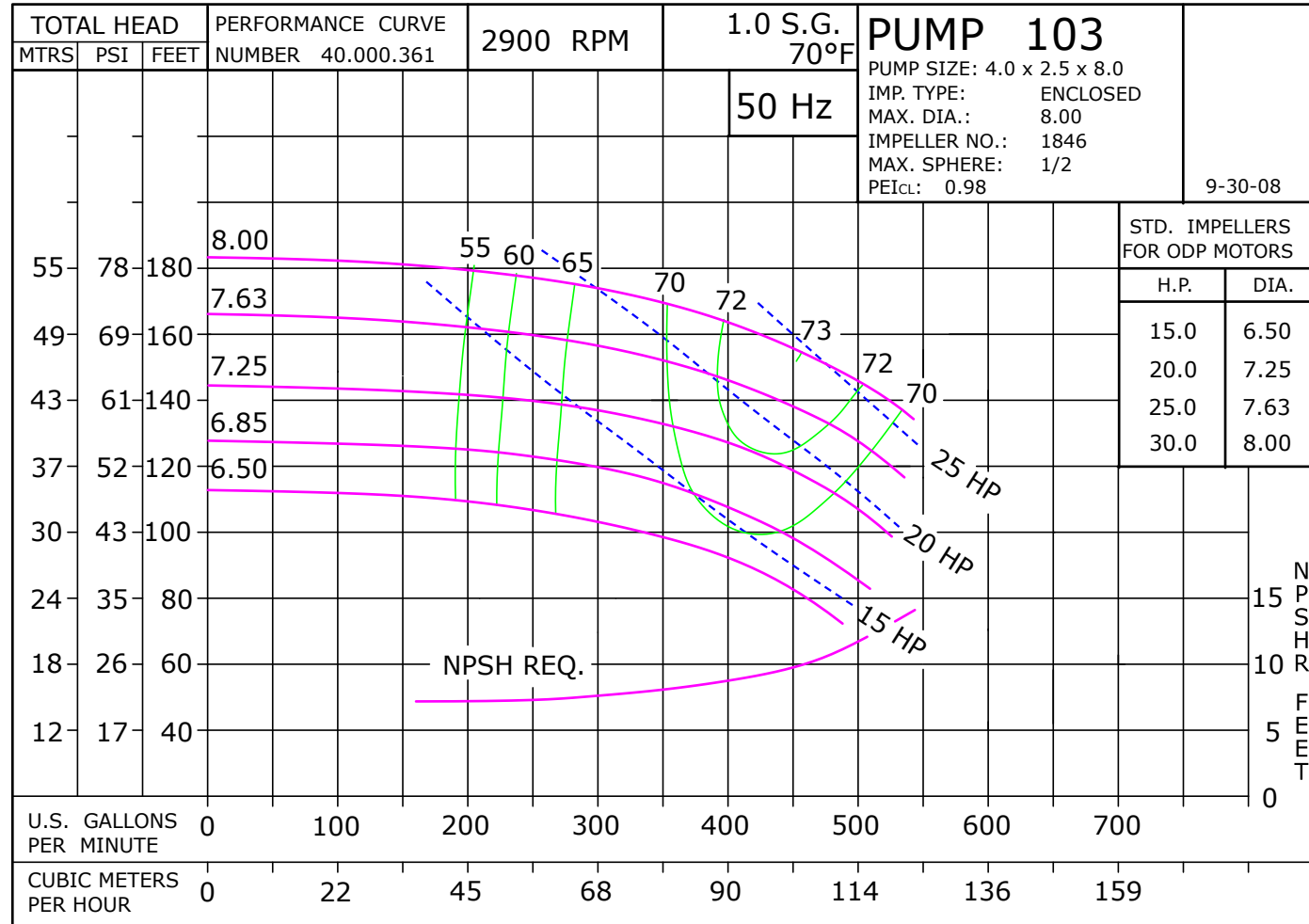
Dimensions are the next larger 60Hz motor derated for 50HZ operation.

DRAWING DEPICTS 284JP 30HP ODP MOTOR
ALL DIMENSIONS IN INCHES



ALL DIMENSIONS IN INCHES.

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



10230DP D102JP256
1032900

103

JP

1032900JP
81.001.436 E21

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.**

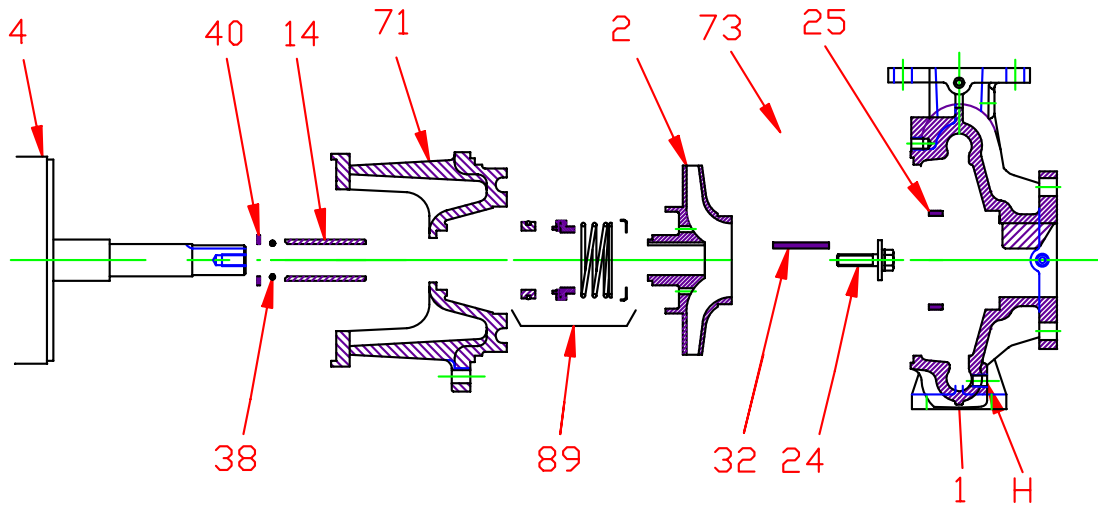
60 Hz Pump on 50 Hz Power		
No Impeller Change		
50 Hz	60 Hz	Factor
GPM =	GPM x	0.829
Head =	Head x	0.687
BHP =	HP x	0.569

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 =	$\frac{\text{GPM} \times \text{Head} \times \text{SG of}}{3960 \times \text{Eff}}$

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 103 • Iron • JP Frame • 2900 RPM



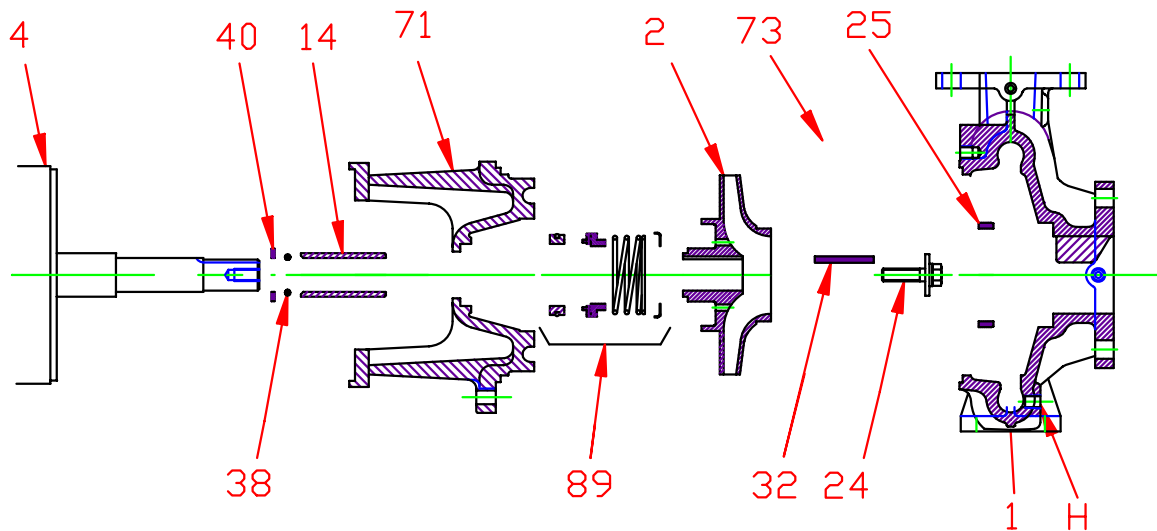
KEY NO.	PART NAME	PUMP NO. 103
1+	CASE, IRON, 4 x 2.5 FLG	130.000.309X
2	IMPELLER, 1¼" KEYED, ENCLOSED, SPECIFY DIAMETER: IRON	137.002.242
4	MOTOR, JP210/250 MOTOR, JP280/320	See 60HZ Chart See 60HZ Chart
14*	SHAFT SLEEVE, BRONZE SHAFT SLEEVE, STAINLESS	110.000.398 110.000.360
25	WEAR RING, BRONZE WEAR RING, STEEL	137.000.434 137.002.335
26*	IMPELLER RETAINER, STAINLESS	118.000.640
32*	KEY, STAINLESS	102.000.257
38*	O-RING, SHAFT, BUNA O-RING, SHAFT, VITON	116.000.218 116.000.218A
40*	FLINGER, STAINLESS	104.000.200
71	ADAPTER, IRON, JP210/250 ADAPTER, IRON, JP280/320	132.000.378X 132.000.387X
73*	GASKET, CASE, FIBER	116.000.276
89*	1¼" SEALS:	
	BN-CARB/CM	101.000.196
	VN-CARB/CM	101.000.216
	VN-CARB/SIL	101.000.221
	VN-SIL/SIL	101.000.231
	EPDM-CARB/SIL EPDM-SIL/SIL	101.000.196B 137.001.555
--	° REPAIR KITS:	
	BN-CARB/CM SEAL	118.000.410
	VN-CARB/CM SEAL (S)	118.000.410G
	VN-CARB/CM SEAL	118.000.410A
	VN-CARB/SIL SEAL	118.000.410B
	VN-SIL/SIL SEAL (S)	118.000.410H
	VN-SIL/SIL SEAL	118.000.410D
	EPDM-CARB/SIL SEAL EPDM-SIL/SIL SEAL	118.000.410C 118.000.410E

* DENOTES COMPONENTS INCLUDED IN REPAIR KIT.

+ INCLUDES BRONZE WEAR RING. FOR STEEL WEAR RING, REPLACE SUFFIX "X" WITH "X1"

° THE REPAIR KITS INCLUDE THE BRONZE SHAFT SLEEVE EXCEPT THE (S) INDICATED, WHICH IS STAINLESS

Pump 103 • Iron • JP Frame • 2900 RPM



CONSTRUCTION OPTIONS

KEY	PART NAME	STANDARD FITTED	ALL IRON
1	Case	Iron	Iron
2	Impeller	Iron	Iron
14	Shaft Sleeve	Bronze	Stainless
25	Wear Ring, Case	Bronze	Steel
26	Impeller Retainer	Stainless	Stainless
32	Key	Stainless	Stainless
38	Shaft O-Ring	BUNA	BUNA
40	Flinger	Stainless	Stainless
71	Adapter	Iron	Iron
73	Gasket, Case	Fiber	Fiber
89	Mechanical Seal, Type 21 BN-CM	Standard	Standard
H	Plug, Drain	Brass	Plated Steel

E103JP

M14

C1032900JP