

#### MOTOR DIMENSIONS

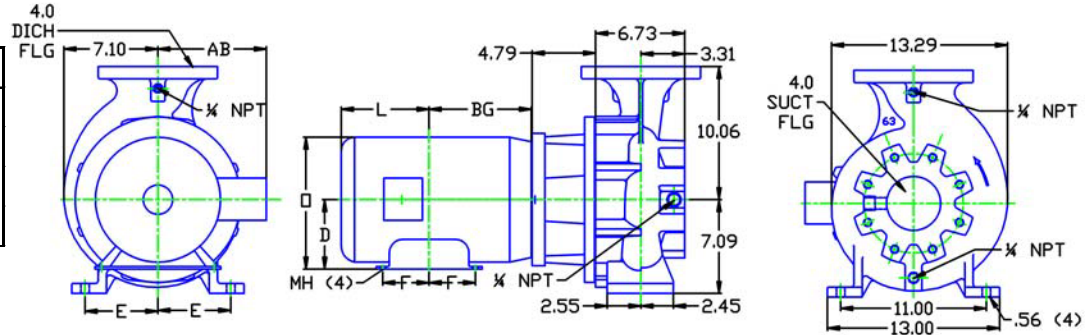
#### NEMA JP FRAME 3 PHASE 1450 RPM

HP	Type	Frame	D	E	F	O	AB	BG	L	MH
5	ODP	JP213	5.25	4.25	2.75	10.14	7.97	7.00	6.45	0.41
7.5	ODP	JP215	5.25	4.25	3.50	10.14	7.97	7.75	5.69	0.41
5	TEFC	JP213	5.25	4.25	2.75	10.41	8.67	6.00	8.41	0.41
7.5	TEFC	JP215	5.25	4.25	3.50	10.37	8.19	6.77	9.16	0.41

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

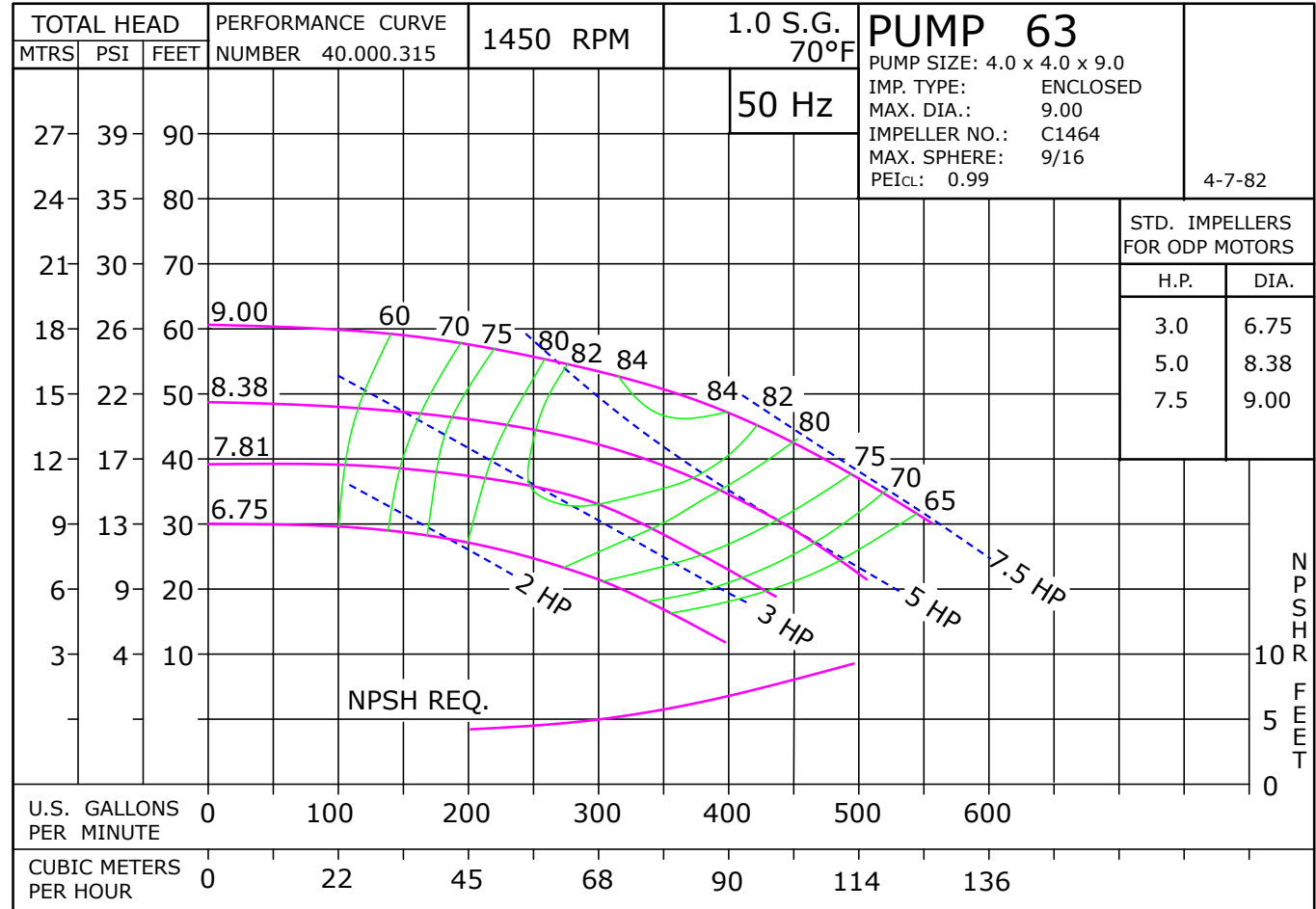
D063JPS215

DRAWING DEPICTS JPS215 10HP ODP MOTOR



ALL DIMENSIONS IN INCHES.

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



06305DP

D063JP215  
0631450

# 63

JP

0631450JP  
81.001.471

A20

# 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.**

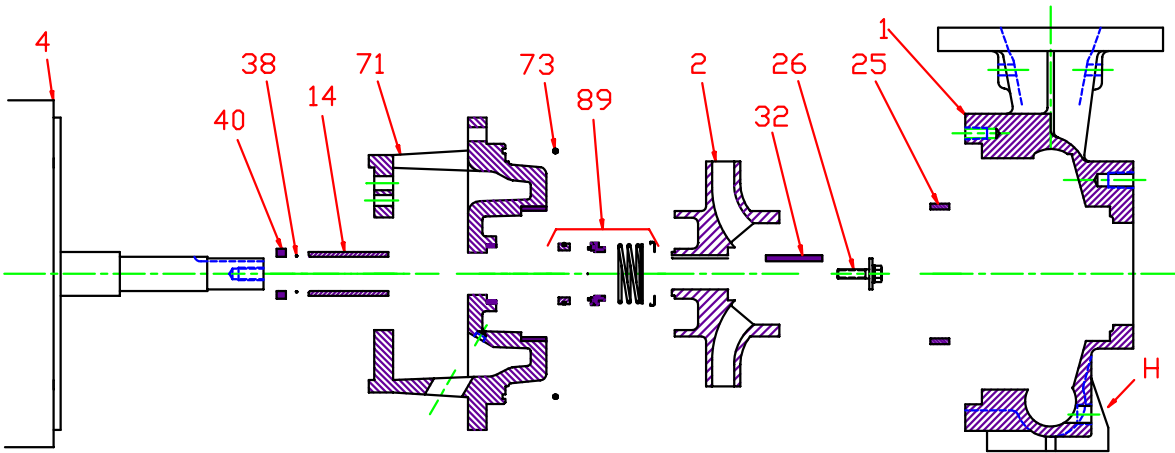
<b>60 Hz Pump on 50 Hz Power</b>		
<b>No Impeller Change</b>		
<b>50 Hz</b>	<b>60 Hz</b>	<b>Factor</b>
GPM =	GPM x	0.829
Head =	Head x	0.687
BHP =	HP x	0.569

<b>To Size 60 Hz Pump Using 50 Hz Data,</b>		
<b>Obtain 60 Hz Data As Follows:</b>		
<b>60 Hz</b>	<b>50 Hz</b>	<b>Factor</b>
GPM =	GPM x	1.2
Head =	Head x	1.45
BHP =	HP =	$\frac{\text{GPM} \times \text{Head} \times \text{SG of}}{3960 \times \text{Eff}}$

<b>Change of Speed (RPM)</b>		
	<b>How Varies:</b>	<b>Examples</b>
GPM	Directly	Double RPM = (2)(RPM) = (2)(GPM) Triple RPM = (3)(RPM) = (3)(GPM)
Head	Square	Double RPM = (2)(RPM) = (2) <sup>2</sup> = (2)(2) = (4)(Head) Triple RPM = (3)(RPM) = (3) <sup>2</sup> = (3)(3) = (9)(Head)
BHP	Cube	Double RPM = (2)(RPM) = (2) <sup>3</sup> = (2)(2)(2) = (8)(BHP) Triple RPM = (3)(RPM) = (3) <sup>3</sup> = (3)(3)(3) = (27)(BHP)

<b>Change of Impeller Diameter (Dia.)</b>		
	<b>How Varies:</b>	<b>Examples</b>
GPM	Directly	Double Dia. = (2)(Dia.) = (2)(GPM) Triple Dia. = (3)(Dia.) = (3)(RPM)
Head	Square	Double Dia. = (2)(Dia.) = (2) <sup>2</sup> = (2)(2) = (4)(Head) Triple Dia. = (3)(Dia.) = (3) <sup>2</sup> = (3)(3) = (9)(Head)
BHP	Cube	Double Dia. = (2)(Dia.) = (2) <sup>3</sup> = (2)(2)(2) = (8)(BHP) Triple Dia. = (3)(Dia.) = (3) <sup>3</sup> = (3)(3)(3) = (27)(BHP)

**Pump 63 • Iron • JP Frame • 1450 RPM**



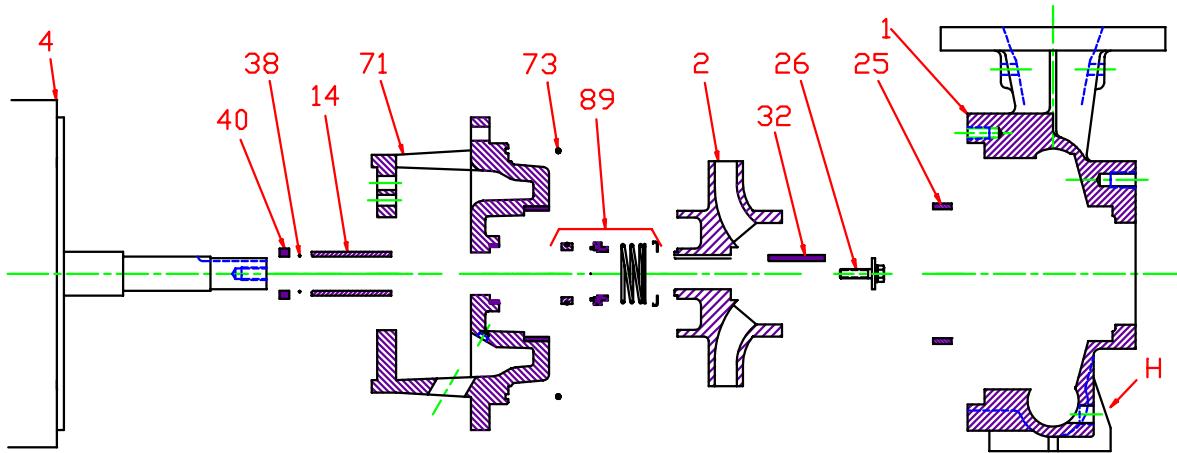
KEY NO.	PART NAME	PUMP NO. 63
1+	CASE, IRON, 4x4 FLG	130.000.256X
2	IMPELLER, ENCLOSED, SPECIFY DIAMETER: IRON BRONZE	137.000.146 137.000.145
4	MOTOR, JP210/250	See 60HZ Chart
14*	SHAFT SLEEVE BRONZE STAINLESS	110.000.397 110.000.308
25	WEAR RING BRONZE STAINLESS	110.000.301 110.000.300
26*	IMPELLER RETAINER, STAINLESS	118.000.640
32*	KEY, STAINLESS	102.000.257
38*	O-RING, SHAFT	116.000.240
40*	FLINGER, STAINLESS	110.000.307
71	ADAPTER, IRON, JP	132.000.269
73*	GASKET, CASE, BUNA	
89*	1 3/4" SEALS: BN-CARB/CM VN-CARB/CM VN-CARB/SIL VN-SIL/SIL EPDM-CARB/SIL EPDM-SIL/SIL	101.000.196 101.000.216 101.000.221 101.000.231 101.000.196B 137.001.555
--	° REPAIR KITS: BN-CARB/CM SEAL VN-CARB/CM SEAL (S) VN-CARB/SIL SEAL VN-SIL/SIL SEAL (S) EPDM-CARB/SIL SEAL EPDM-SIL/SIL SEAL	118.000.388 118.000.388A 118.000.388B 118.000.388C 118.000.388D 118.000.388E

\* DENOTES COMPONENTS INCLUDED IN REPAIR KIT.

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

° THE REPAIR KIT INCLUDES THE BRONZE SHAFT SLEEVE EXCEPT THE (S) INDICATED, WHICH IS STAINLESS.

**Pump 63 • Iron • JP Frame • 1450 RPM**



**CONSTRUCTION OPTIONS**

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

E063JP210

C11

C0631450JP