SCOT

MOTORPUMP™ — 2900 RPM

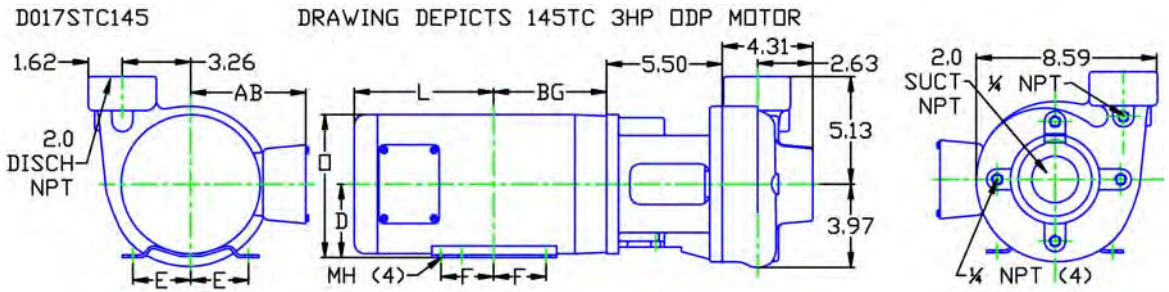
50 HERTZ, 2 X 2 X 5.5 NPT

17S
TC

MOTOR DIMENSIONS

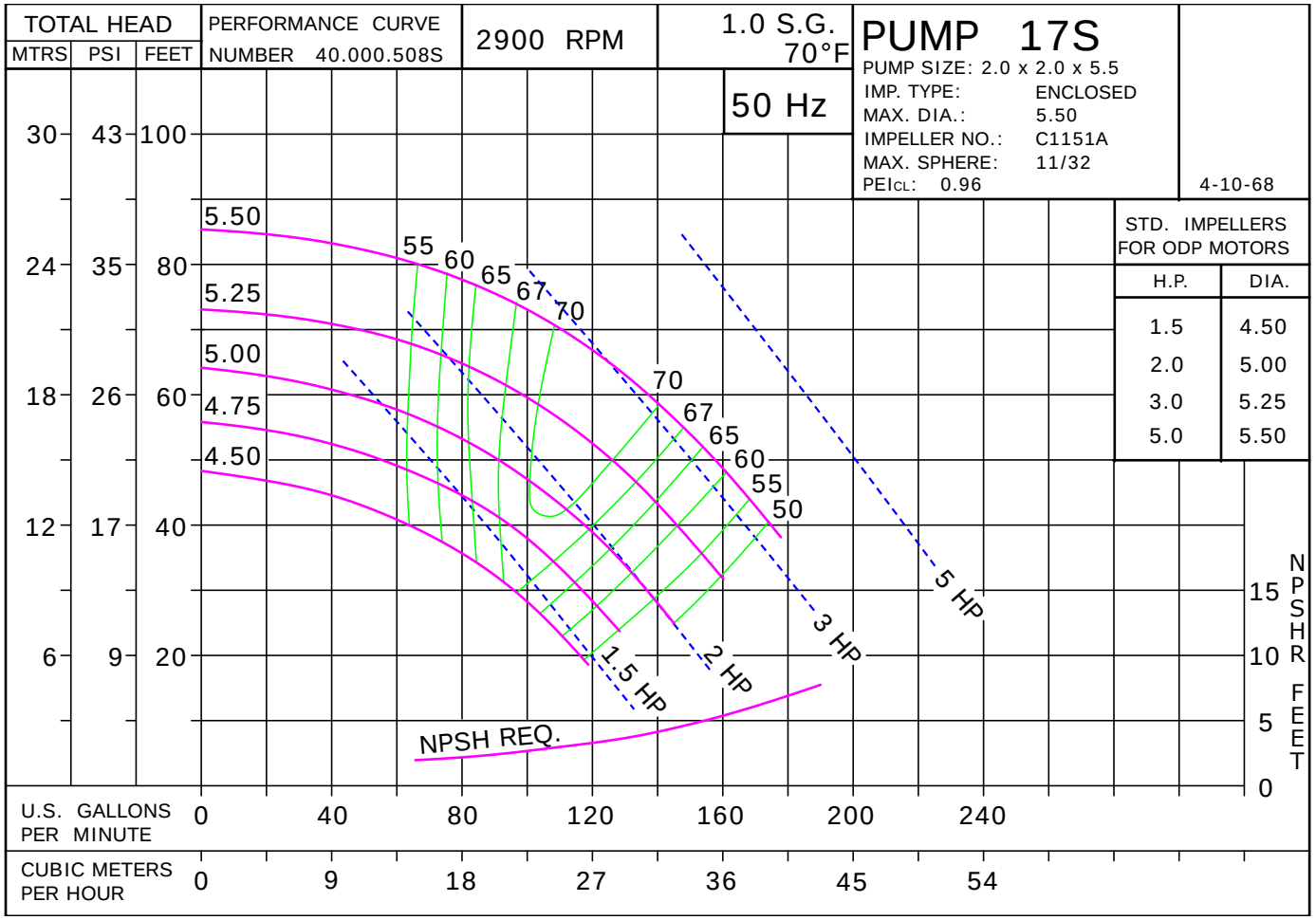
NEMA TC FRAME 3 PHASE 2900 RPM

HP	TYPE	Frame	D	E	F	O	AB	BG	L	MH
1.5	TEFC	TC143	3.50	2.75	2.00	7.12	6.18	4.25	5.81	.34
2	TEFC	TC145	3.50	2.75	2.50	7.12	6.18	4.75	6.31	.34
3	TEFC	TC182	4.50	3.75	2.25	9.34	7.56	5.00	6.99	.41
5	TEFC	TC184	4.50	3.75	2.75	9.34	7.56	5.50	7.49	.41



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. 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, most service factors are 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***.

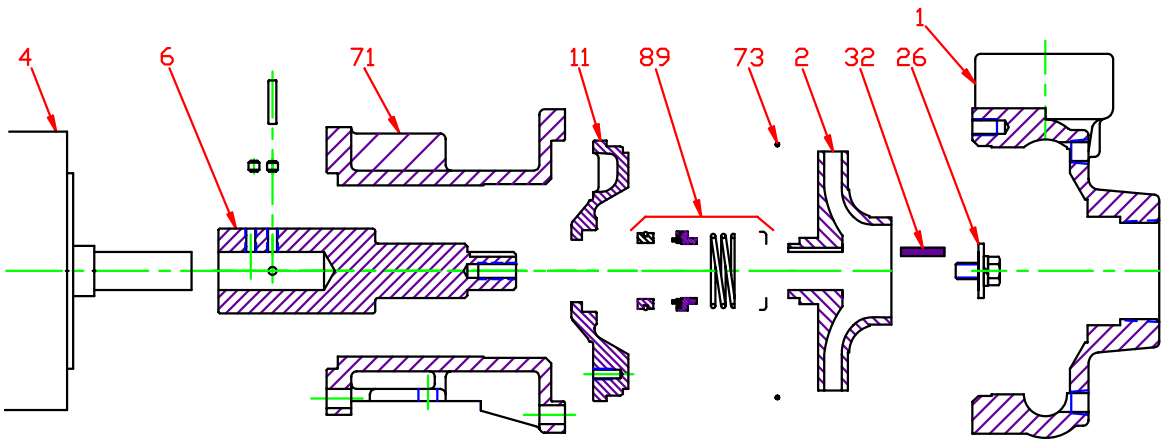
60 Hz Pump on 50 Hz Power No Impeller Change		
50 Hz	***60 Hz***	***Factor***
GPM =	GPM x	0.829
Head =	Head x	0.687
BHP =	HP x	0.569

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 17S • 316SS • TC Frame • 2900 RPM



KEY NO.	PART NAME	TC140	TC180
1	CASE, 316SS, 2 x 2 NPT	130.000.265X	
2	IMPELLER, 7/8" KEYED, ENCLOSED, SPECIFY DIAMETER:		
	316 STAINLESS STEEL	137.000.242	
4	MOTOR, TC	See 60HZ Chart	See 60HZ Chart
6*+	STUB SHAFT ASS'Y, 316SS	135.000.221X	135.000.221AX
11	BACKPLATE, 316SS	132.000.224	
26*	IMPELLER RETAINER, 316SS	118.000.111C	
32*	KEY, 316SS	102.000.218	
71	ADAPTER, IRON	132.000.120	132.000.122
73*	GASKET, CASE, VITON	116.000.150	
89*	SEAL, 1¼", VN-SIL/SIL	101.000.203A	
--	REPAIR KIT, VN-SIL/SIL	118.000.539A	118.000.540A

* DENOTES COMPONENTS INCLUDED IN REPAIR KIT.
\+ ASS'Y INCLUDES STUB SHAFT, PIN, SET SCREWS AND KEY.

E017STC

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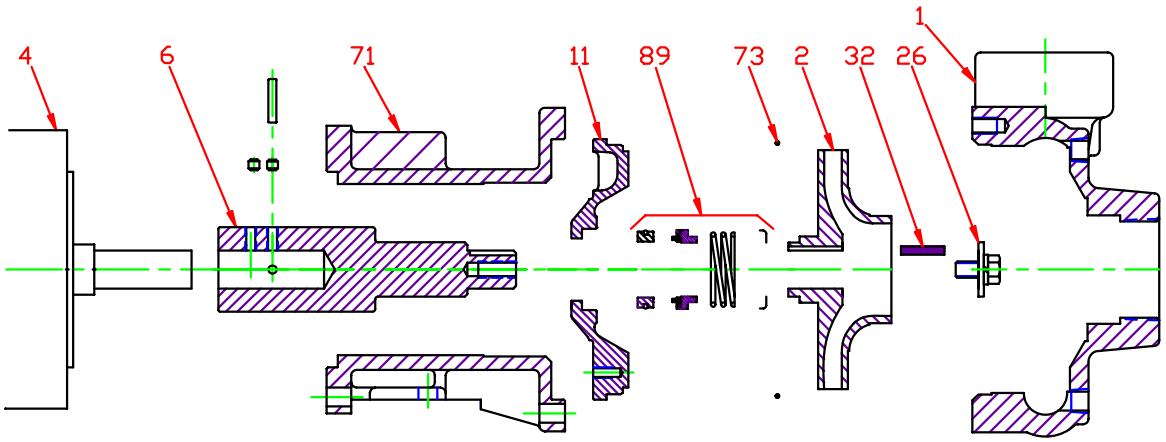

CONSTRUCTION OPTIONS		
KEY NO.	**PART NAME**	**STANDARD FITTED**
1	CASE	316SS
2	IMPELLER	316SS
6	STUB SHAFT ASS'Y	316SS
11	BACKPLATE	316SS
26	IMPELLER RETAINER	316SS
32	KEY	316SS
71	ADAPTER	IRON
73	GASKET, CASE	VITON
89	SEAL ASSEMBLY	VN-SIL/SIL

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