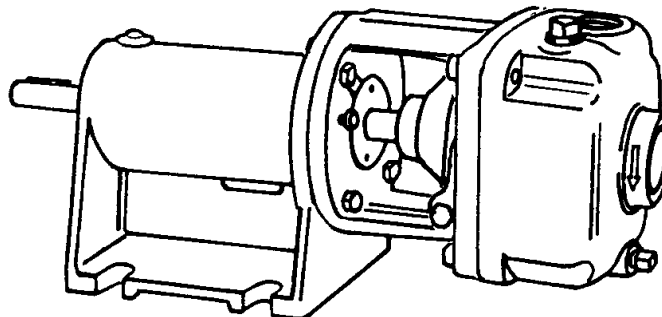




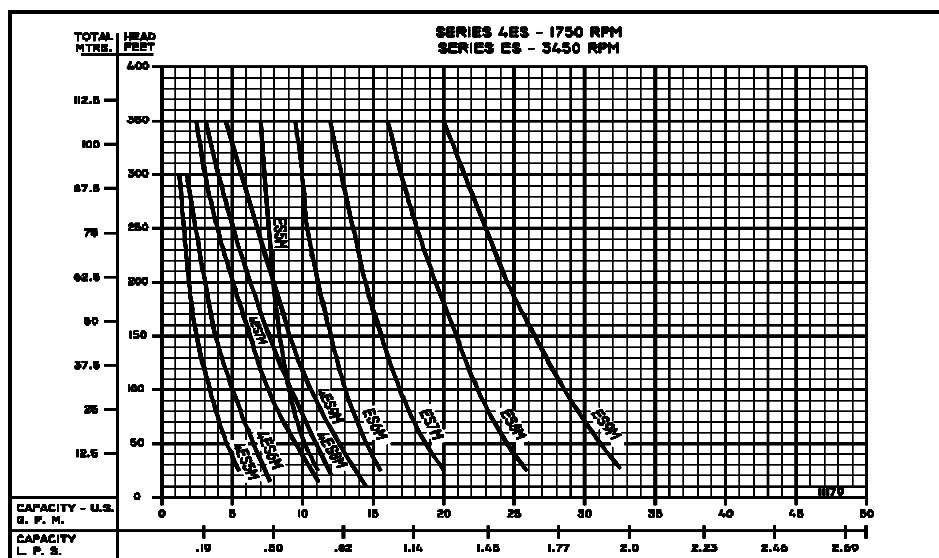
SERIES ES

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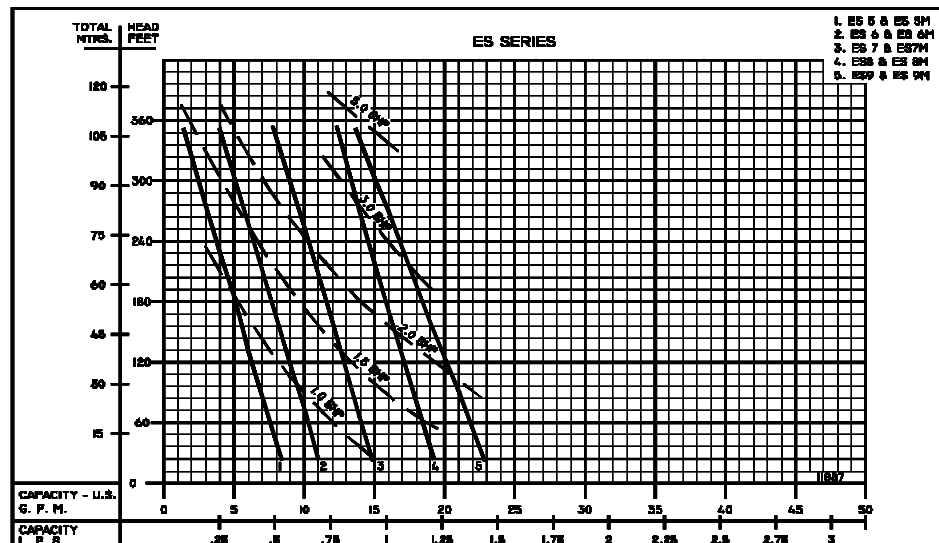
BASE MOUNTED TURBINE PUMPS



4ES - 1725 RPM - 60Hz.
ES - 3450 RPM - 60Hz.
 (See Individual curves for symbol number)



ES - 2900 RPM - 50Hz.
 (See Individual curves for symbol number)



Individual performance curves should be checked for final selection.



PUMPS & SYSTEMS

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60HZ PERFORMANCE



BASE MOUNTED TURBINE PUMPS

60HZ - PERFORMANCE AND SELECTION CHART																	
Capacity In G.P.M. (L.P.S.) at Total Head in Feet (M) or Pressure Shown																	
Catalog Number	PSI (kpa)	8.6 (59)	17.2 (118)	26 (179)	43.3 (298)	54.1 (373)	64.9 (447)	75.8 (522)	86.6 (597)	97.4 (671)	108.3 (746)	119.1 (821)	130 (896)	140.1 (965)	151.6 (1045)		
	FEET (M)	20 (6)	40 (12)	60 (18)	100 (30)	125 (38)	150 (45)	175 (53)	200 (60)	225 (68)	250 (76)	275 (83)	300 (91)	325 (99)	350 (106)		
ES5M	G.P.M. (L.P.S.)	5.6 (.35)	4.9 (.30)	4.2 (.26)	3.2 (.20)	2.8 (.17)	2.4 (.15)	2.1 (.13)	1.8 (.11)	1.6 (.10)	1.4 (.08)	1.2 (.07)	1.0 (.06)				
	BHP	.10	.12	.15	.22	.28	.35	.41	.48	.52	.59	.65	.69				
	Motor Size	1/4				1/3		1/2			3/4						
ES6M	G.P.M. (L.P.S.)	7.7 (.48)	6.9 (.43)	6.2 (.39)	5.0 (.31)	4.4 (.27)	3.9 (.24)	3.6 (.22)	3.2 (.20)	2.9 (.18)	2.6 (.16)	2.4 (.15)	2.1 (.13)				
	BHP	.15	.20	.25	.35	.42	.48	.52	.58	.62	.65	.70	.78				
	Motor Size	1/4				1/2			3/4				1				
ES7M	G.P.M. (L.P.S.)	10.5 (.66)	9.4 (.59)	8.6 (.54)	7.2 (.45)	6.5 (.41)	5.9 (.37)	5.4 (.34)	4.8 (.30)	4.4 (.27)	4.0 (.25)	3.5 (.22)	3.1 (.19)	2.7 (.17)	2.3 (.14)		
	BHP	.20	.28	.32	.48	.55	.64	.75	.85	.92	1.10	1.20	1.35	1.50	1.70		
	Motor Size	1/4		1/3		1/2		3/4			1		1-1/4		1-1/2		2
ES8M	G.P.M. (L.P.S.)	12.1 (.76)	11.2 (.70)	10.3 (.64)	8.9 (.56)	8.2 (.51)	7.5 (.47)	6.8 (.42)	6.2 (.39)	5.6 (.35)	5.0 (.31)	4.5 (.28)	4.0 (.25)	3.6 (.22)	3.1 (.19)		
	BHP	.35	.42	.50	.65	.75	.85	.95	1.10	1.20	1.35	1.5	1.6	1.75	1.95		
	Motor Size	1/2				3/4			1		1-1/2			2			
ES9M	G.P.M. (L.P.S.)	14.5 (.91)	13.1 (.82)	12.1 (.76)	10.4 (.65)	9.6 (.60)	8.8 (.55)	8.2 (.51)	7.5 (.47)	6.9 (.43)	6.3 (.39)	5.7 (.35)	5.2 (.32)	4.8 (.30)	4.2 (.26)		
	BHP	.40	.52	.61	.80	.90	1.05	1.15	1.30	1.42	1.60	1.75	1.90	2.10	2.35		
	Motor Size	1/2		3/4		1		1-1/2			2			3			

Capacity In G.P.M. (L.P.S.) at Total Head in Feet (M) or Pressure Shown															
Catalog Number	PSI (kpa)	13 (89)	17.2 (118)	26 (179)	43.3 (298)	54.1 (373)	64.9 (447)	75.8 (522)	86.6 (597)	97.4 (671)	108.3 (746)	119.1 (821)	130 (896)	140.1 (965)	151.6 (1045)
	FEET (M)	30 (9)	40 (12)	60 (18)	100 (30)	125 (38)	150 (45)	175 (53)	200 (60)	225 (68)	250 (76)	275 (83)	300 (91)	325 (99)	350 (106)
ES5M	G.P.M. (L.P.S.)	10.8 (.68)	10.4 (.65)	10.0 (.63)	9.2 (.58)	8.8 (.55)	8.6 (.54)	8.3 (.52)	8.0 (.50)	7.8 (.49)	7.6 (.47)	7.4 (.46)	7.2 (.45)	7.1 (.44)	7.0 (.44)
	BHP	.60	.65	.70	.80	.91	.98	1.10	1.20	1.30	1.4	1.52	1.75	1.85	2.00
ES6M	Motor Size	3/4			1			1-1/2				2			
	G.P.M. (L.P.S.)	15.6 (.98)	15.2 (.95)	14.6 (.92)	13.5 (.85)	12.9 (.81)	12.4 (.78)	11.9 (.75)	11.6 (.73)	11.2 (.70)	10.8 (.68)	10.4 (.65)	10.1 (.63)	9.8 (.61)	9.5 (.59)
	BHP	.85	.90	1.00	1.20	1.35	1.45	1.60	1.70	1.85	1.95	2.10	2.20	2.30	2.50
ES7M	Motor Size	1			1-1/2			2				3			
	G.P.M. (L.P.S.)	20.0 (1.26)	19.6 (1.23)	18.7 (1.17)	17.3 (1.09)	16.6 (1.04)	15.9 (1.00)	15.3 (.96)	14.8 (.93)	14.3 (.90)	13.8 (.87)	13.3 (.83)	12.8 (.80)	12.5 (.78)	12.1 (.76)
	BHP	1.30	1.38	1.55	1.80	1.95	2.12	2.28	2.45	2.60	2.80	2.95	3.15	3.25	3.5
ES8M	Motor Size	1-1/2			2			3				5			
	G.P.M. (L.P.S.)	26.2 (1.65)	25.6 (1.61)	24.5 (1.54)	22.9 (1.44)	22.0 (1.38)	21.2 (1.33)	20.5 (1.29)	19.8 (1.24)	19.2 (1.21)	18.5 (1.16)	18.0 (1.13)	17.4 (1.09)	16.9 (1.06)	16.4 (1.03)
	BHP	1.60	1.70	1.80	2.20	2.40	2.60	2.80	3.00	3.30	3.60	3.80	4.10	4.40	4.90
ES9M	Motor Size	2			3			5				7-1/2			
	G.P.M. (L.P.S.)	32.0 (2.01)	31.5 (1.98)	30.5 (1.92)	28.6 (1.61)	27.5 (1.73)	26.5 (1.67)	25.6 (1.61)	24.7 (1.55)	23.9 (1.50)	23.0 (1.45)	22.2 (1.40)	21.5 (1.35)	20.7 (1.30)	20.0 (1.26)
	BHP	2.00	2.10	2.30	2.70	3.00	3.20	3.50	3.70	3.90	4.20	4.40	4.60	4.90	5.10

NOTE: When pumping hot water over 180°F (82.2°C), check the NPSH available in the pumping system against the required pump NPSH shown on pump performance curves. Available NPSH must be greater than required NPSH.



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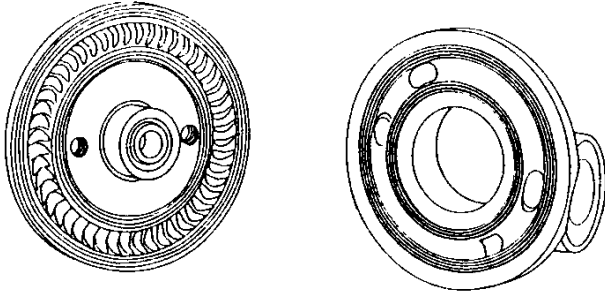
PUMPS & SYSTEMS

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FEATURES



BURKS exclusive, unique regenerative type turbine pumps are designed to handle clear water and many other non-abrasive, lower viscosity liquids on high pressure, low capacity applications with the greatest possible efficiency.

BURKS is the only turbine pump with Life-Lok ® External Impeller Adjustment feature that allows readjustment of impeller without disturbing piping, disassembling pump or replacing parts. Gives up to 40% longer service life than turbine pumps of other designs.

Coupling guard furnished on all complete Base-Mounted units manufactured by Burks Pumps. Not furnished with purchase of pump only, but required.

QUALITY FEATURES:

- Self-Priming
- Compact, space-saving size
- Dependable carbon/ceramic mechanical shaft seal for temperatures to 225°F (107°C).
- Bronze impeller with Monel blades - the only moving part
- Bronze raceway with cast-in vortex pockets - will not vapor lock
- #303 Stainless Steel pump shaft
- Easy to service
- Every pump factory tested
- Available Bronze fitted, all Bronze, Stainless Steel

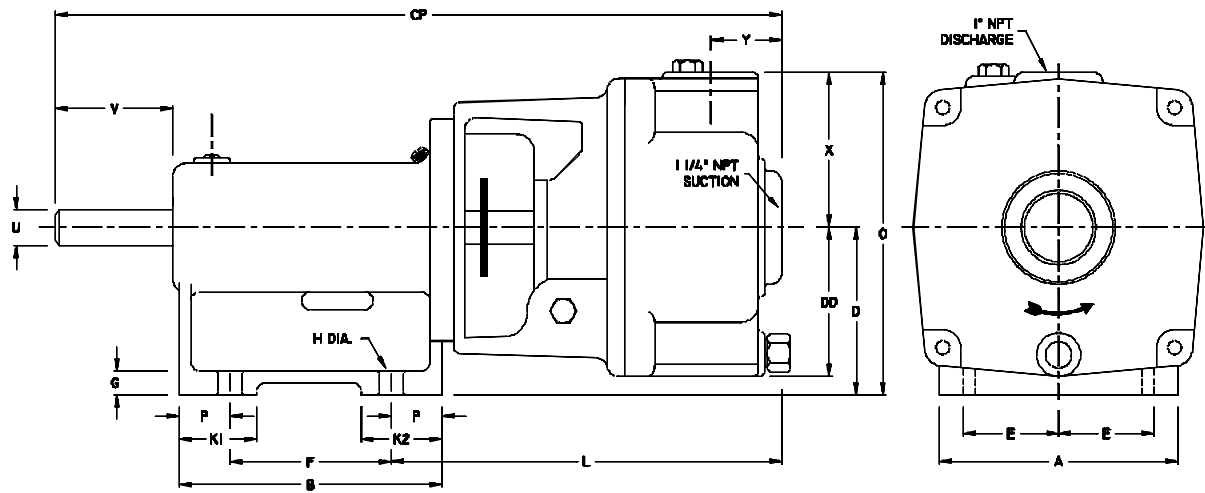
MAXIMUM OPERATING CONDITIONS	
TEMPERATURE (For Standard Buna-N Seal)	225°F (107°C)
INLET PRESSURE	100 PSI (689kpa)
CASING WORKING PRESSURE	250 PSI (1723kpa)

FOR TEMPERATURES TO 500°F (260°C)

Series ES Pumps are available in a Jacketed Seal Cavity design for pumping hot oil, hot water and heat transfer fluids in common use in high temperature heating or cooling applications. This feature greatly extends seal life in high temperature applications. To order, add suffix "J" to pump catalog number for temperatures below 400°F (204°C) and add suffix "JK" to pump catalog number for temperatures over 400°F (204°C). Example: ES6MJ. See Section on High Temperature Pumps for more information.

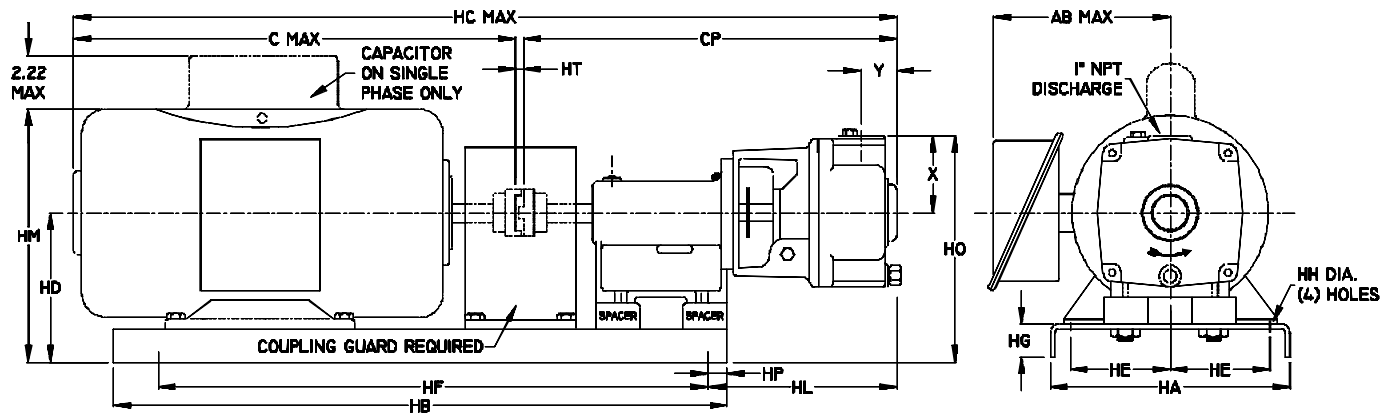
MATERIALS OF CONSTRUCTION			
PART	BRONZE FITTED	ALL BRONZE	STAINLESS STEEL
Bearing Housing	Cast Iron	Cast Iron	Cast Iron
Adapter	Cast Iron	Bronze	#316 Stainless
Case	Cast Iron	Bronze	#316 Stainless
Raceway	Bronze	Bronze	#303 Stainless
Impeller	Bronze (Monel Blades)	Bronze (Monel Blades)	#303 Stainless
Shaft	#303 Stainless	#303 Stainless	#303 Stainless
Shaft Seal	Carbon-Ceramic S. Steel-Buna-N	Carbon-Ceramic S. Steel-Buna-N	Carbon-Ceramic S. Steel-Buna-N

DIMENSIONS



DIMENSIONS IN INCHES (mm)

A	B	CP	D	DD	E	F	G	H	K ₁	K ₂	L	O	P	U	V	X	Y
5 (127)	5 1/2 (139)	15 1/8 (384)	3 1/2 (88)	3 1/8 (79)	2 (50)	3 3/8 (85)	1/2 (13)	1/2 (13)	1 5/8 (41)	1 11/16 (42)	8 3/8 (212)	6 3/4 (171)	1 1/16 (26)	3/4 (19)	2 1/4 (57)	3 1/4 (82)	1 11/16 (42)



DIMENSIONS IN INCHES (mm)

Motor Frame	AB	C	CP	HA	HB	HC	HD	HE	HF	HG	HH	HL	HM	HO	HP	HT	X	Y
56	---	12 1/2 (317)	15 1/8 (384)	8 (203)	22 (558)	28 3/16 (715)	6 (152)	3 (76)	20 (508)	2 1/2 (63)	1 1/16 (17)	8 5/16 (211)	9 3/16 (233)	9 1/4 (234)	1 (25)	9/16 (14)	3 1/4 (82)	1 11/16 (42)
143T	6 3/16 (157)	10 11/16 (271)	15 1/8 (384)	8 (203)	22 (558)	26 3/8 (669)	6 (152)	3 (76)	20 (508)	2 1/2 (63)	1 1/16 (17)	8 5/16 (211)	9 1/2 (241)	9 1/4 (234)	1 (25)	9/16 (14)	3 1/4 (82)	1 11/16 (42)
145T	6 3/16 (157)	11 11/16 (296)	15 1/8 (384)	8 (203)	22 (558)	27 9/8 (695)	6 (152)	3 (76)	20 (508)	2 1/2 (63)	1 1/16 (17)	8 5/16 (211)	9 1/2 (241)	9 1/4 (234)	1 (25)	9/16 (14)	3 1/4 (82)	1 11/16 (42)
182T	8 1/4 (209)	12 3/4 (323)	15 1/8 (384)	10 (254)	25 (635)	28 11/16 (728)	7 (177)	4 (101)	23 (584)	2 1/2 (63)	1 1/16 (17)	8 5/16 (211)	11 1/2 (292)	10 1/4 (260)	1 (25)	13/16 (20)	3 1/4 (82)	1 11/16 (42)
184T	8 1/4 (209)	13 3/4 (349)	15 1/8 (384)	10 (254)	25 (635)	29 11/16 (754)	7 (177)	4 (101)	23 (584)	2 1/2 (63)	1 1/16 (17)	8 5/16 (211)	11 1/2 (292)	10 1/4 (260)	1 (25)	13/16 (20)	3 1/4 (82)	1 11/16 (42)
213T	8 1/4 (209)	15 3/4 (400)	15 1/8 (384)	11 (279)	28 3/4 (730)	31 11/16 (804)	7 3/4 (196)	4 1/2 (114)	26 3/4 (679)	2 1/2 (63)	1 1/16 (17)	8 5/16 (211)	13 1/16 (331)	11 (279)	1 (25)	13/16 (20)	3 1/4 (82)	1 11/16 (42)
215T	8 3/4 (222)	17 1/4 (438)	15 1/8 (384)	11 (279)	28 3/4 (730)	33 3/16 (842)	7 3/4 (196)	4 1/2 (114)	26 3/4 (679)	2 1/2 (63)	1 1/16 (17)	8 5/16 (211)	13 1/16 (331)	11 (279)	1 (25)	13/16 (20)	3 1/4 (82)	1 11/16 (42)

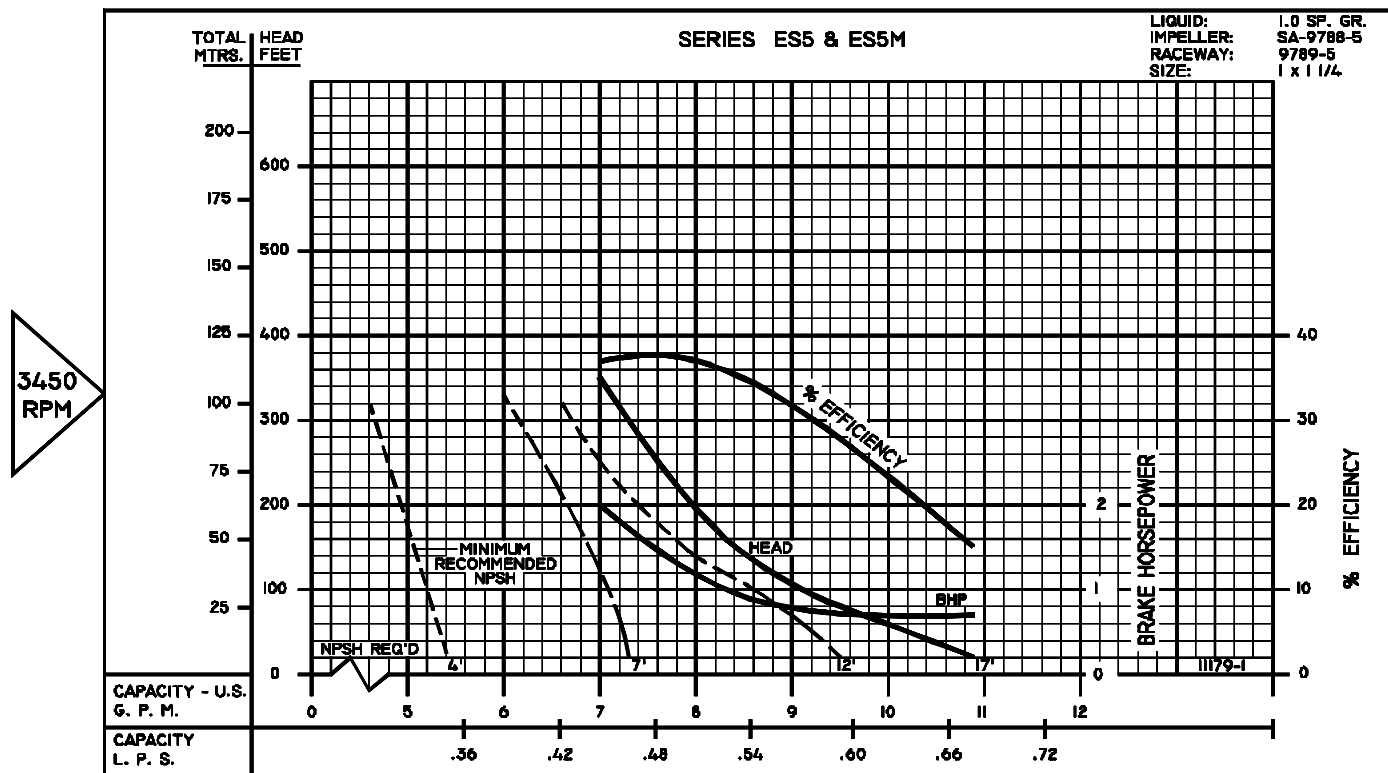
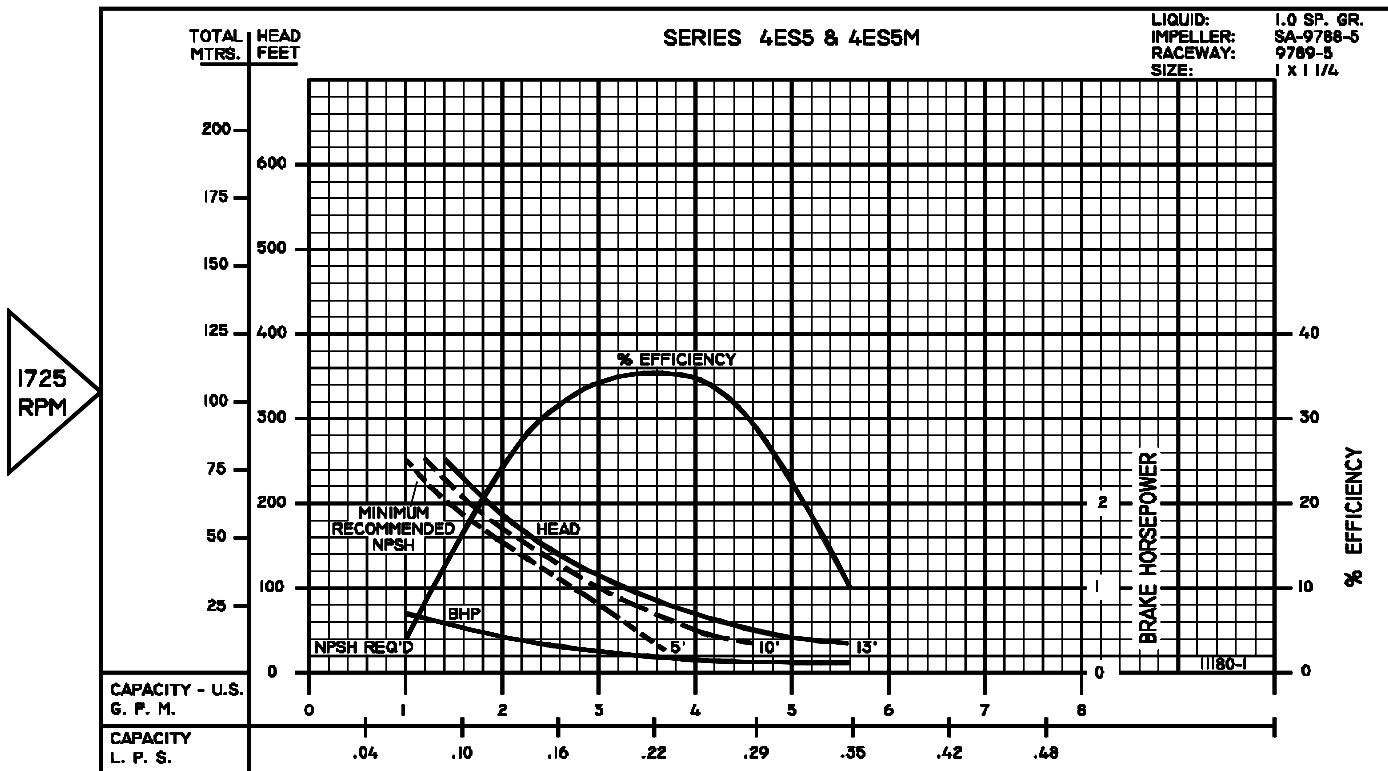
A strainer, approximately 20 mesh, should be installed on the suction side of the pump to prevent chips, scale or hard foreign particales from entering the pump and damaging the raceway and impeller.

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60HZ PERFORMANCE



ES SERIES TURBINE PUMPS

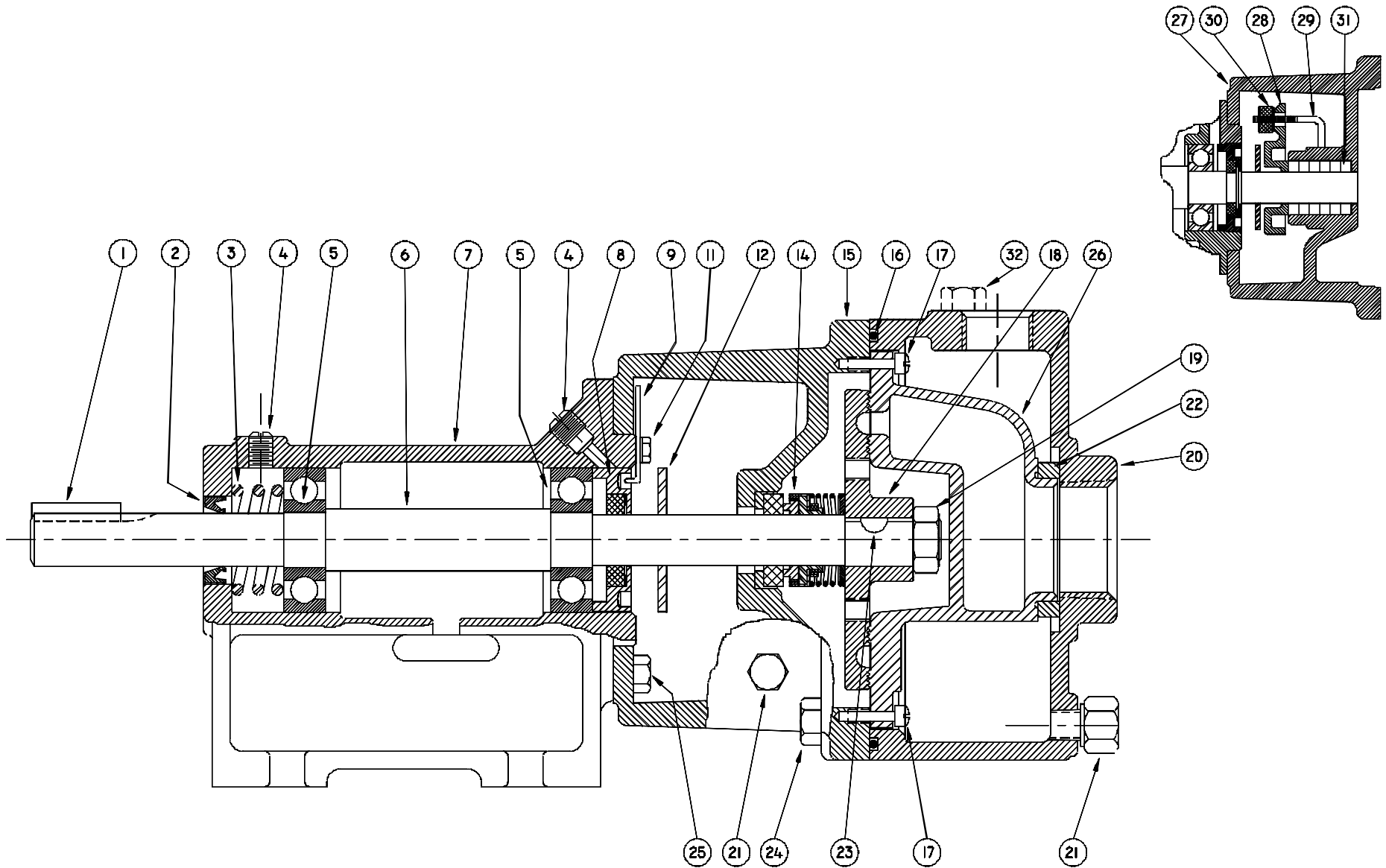


PUMPS & SYSTEMS

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TBMP-84



SERIES: ES BASE MOUNTED TURBINE PUMPS

File: ES.dwg

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SYMBOL NUMBER	PART NUMBER	QTY	DESCRIPTION
1	01420	1	Key
2	20939	1	Oil Seal
3	20922	1	Spring
4	01691	2	Plug, 1/8"
5	21463	2	Bearing
6	20921	1	Shaft
7	20920	1	Bearing Housing
8	09781	1	Impeller Adjusting Screw
9	07576	1	Lock, adjusting Screw
11	07577	1	Screw - #10-24 x 3/8"
12	08324	1	Slinger Washer
14	08991	1	Mechanical Seal - Buna N
	9813-C	1	Mechanical Seal - Viton
	21934	1	Mechanical Seal - EPT
15	09787	1	Frame (for mechanical seal)
16	09791	1	O-Ring Gasket - Buna N
	09817	1	O-Ring Gasket - Viton
	22135	1	O-Ring Gasket - EPT
	22104	1	O-Ring Gasket - Teflon
17	02535	2	Screw, Raceway to Frame
18	SA09788-5	1	Impeller - ES5M
	SA09788-6	1	Impeller - ES6M
	SA09788-7	1	Impeller - ES7M
	SA09788-HT-8	1	Impeller - ES8M
	SA09788-HT-9	1	Impeller - ES9M
19	01404	1	Impeller Locknut
20	09790-B	1	Case
21	04236	2	Pipe Plug - 1/4"
22	04231	1	Suction Sleeve - Buna N (Std.)
	09695	1	Suction Sleeve - Viton
	20285	1	Suction Sleeve - EPT
23	01457	1	Key, Woodruff (as shown) (repair kits only)
	21748-A	1	Key, Square
24	01931	4	Cap Screw, 7/16-14 x 1-1/4" Lg
25	03121	4	Cap Screw, 1/4-20 x 3/4" Lg

SYMBOL NUMBER	PART NUMBER	QTY	DESCRIPTION
26	09789-5	1	Raceway - ES5M
	09789-6	1	Raceway - ES6M
	09789-7	1	Raceway - ES7M
	09789-8	1	Raceway - ES8M
	09789-9	1	Raceway - ES9M
27	09792	1	Frame (for stuffing box)
28	05812-B	1	Gland, Stuffing Box
29	07003	2	Gland Bolt
30	04211	2	Gland Nut
31	05468	5	Packing
32	02953	1	Pipe Plug - 1/2"
	21348		Power Frame Assy
DIFFERING PARTS FOR ALL BRONZE CONSTRUCTION			
15	09787-A	1	Frame (for mechanical seal)
27	09792-A	1	Frame (for packing gland)
20	09790-C	1	Case
25	03121-A	4	Cap Screw
24	08771	4	Cap Screw - S.S.

REPAIR KITS FOR ES SERIES PUMPS	
CATALOG NO.	FOR USE WITH
20522-5	ES5M
20522-6	ES6M
20522-7	ES7M
20522-8	ES8M
20522-9	ES9M

Kit Includes: Impeller, Raceway, Mechanical Seal, Gasket, Suction Sleeve, Raceway Screws, Impeller Locknut, Shaft Key and Instructions.

TBMP-85

SERIES: ES BASE MOUNTED TURBINE PUMPS

* Standard impellers are suitable for fluid temperatures to 250°F. For higher temperatures, add the designation "HT" to impeller part number.

This includes all "MJ" Jacketed Seal Pumps.

Example: SA-9788HT-5

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