GOULDS WATER TECHNOLOGY
xylem

PumpCatalog.com

Technical Brochure
BNPE R10
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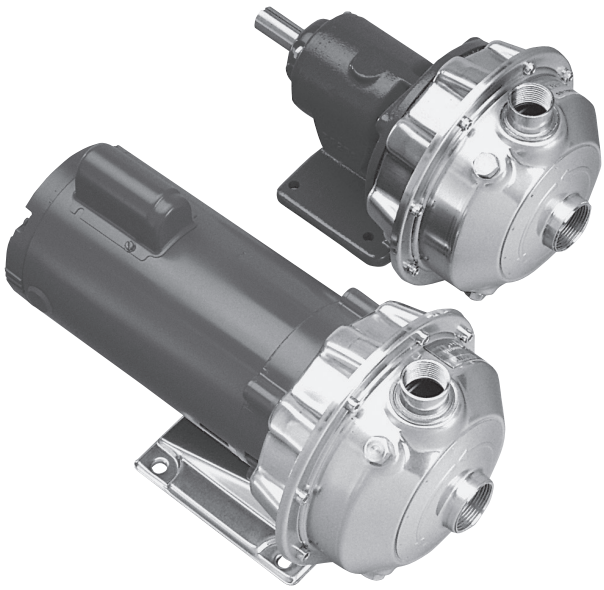


NPE

316L SS

NPE Series End Suction Centrifugal Pumps

xylem
Let's Solve Water

A full range of product features

Superior materials of construction: Complete AISI 316L stainless steel liquid handling components and mounting bracket for corrosion resistance, quality appearance, and improved strength and ductility.

High efficiency impeller: Enclosed impeller with unique floating seal ring design maintains maximum efficiencies over the life of the pump without adjustment.

Casing and adapter features: Stainless steel construction with NPT threaded, centerline connections, easily accessible vent, prime and drain connections with stainless steel plugs. Optional seal face vent/flush available.

Mechanical seal: Standard John Crane Type 21 with carbon versus silicon-carbide faces, Viton elastomers, and 316 stainless metal parts. Optional high temperature and chemical duty seals available.

Motors: NEMA standard open drip-proof, totally enclosed fan cooled or explosion proof enclosures. Rugged ball bearing design for continuous duty under all operating conditions.

DRINKING WATER NSF/ANSI 61 & 372

NSF 61 certification: Pumps assembled at the factory are certified to the NSF/ANSI 61 Drinking Water System Components Standard.

* Premium efficiency where required by Department of Energy regulations.

NPE product line numbering system

The various versions of the NPE are identified by a product code number on the pump label. This number is also the catalog number for the pump. The meaning of each digit in the product code number is shown below.

Example product code

1ST2 C 1 A 4 F R

Casing rotation, optional
R = 3 o'clock L = 9 o'clock
B = 6 o'clock
NOTE: Rotation when viewed from suction end of pump. Standard discharge position is 12 o'clock.

Seal vent/flush option,

Mechanical seal and o-ring
4 = Pre-engineered standard for optional mechanical seal modify catalog order number. With seal code listed below.

John Crane Type 21 mechanical seal (5/8" seal)					
Seal Code	**Rotary**	**Stationary**	**Elastomers**	**Metal parts**	**Part no.**
2	Carbon	Silicon Carbide	EPR	316 SS	10K18
4			Viton		10K55
5	Silicon Carbide		EPR		10K81
6			Viton		10K62
8*			EPR		10K167
9	Carbon	Ceramic	Teflon		10K52

* This is a JC Type 2100 unitized seal ideal for glycol applications.

Impeller option . . . No adder required
For optional impeller diameters modify catalog order no. With impeller code listed. Select optional impeller diameter from pump performance curve.

Impeller code	Pump size		
	1 x 1¼ – 6	**1¼ x 1½ – 6**	**1½ x 2 – 6**
	Diameter	**Diameter**	**Diameter**
A	6 1/8	6 1/8	5 1/8
B	5¾	5 15/16	5
C	5 3/16	5¾	4¾
D	4¾	5 11/32	4½
E	4 7/16	5 1/16	4 3/8
F	4 1/16	4 7/8	4
G		4 5/8	3 5/8
H		4¼	
J		4	

Driver
1 = 1 PH, ODP
2 = 3 PH, ODP
3 = 575 V, ODP
4 = 1 PH, TEFC
5 = 3 PH, TEFC
6 = 575 V, TEFC
H = 1 PH, XP PE
7 = 3 PH, XP
8 = 575 V, XP
9 = 3 PH, TE PE
0 = 1 PH, XP
A = 3 PH, ODP PE
B =
C = 3 PH, 575 TE PE
D = 3 PH, XP PE
E = 3 PH, WD PE
F = 1 PH, ODP PE
G = 1 PH, TEFC PE
3 PH, 575 ODP PE

HP rating
C = ½ HP E = 1 HP G = 2 HP J = 5 HP
D = ¾ HP F = 1½ HP H = 3 HP K = 7.5 HP

Driver: Hertz/pole/RPM
1 = 60 Hz, 2 pole, 3500 RPM
2 = 60 Hz, 4 pole, 1750 RPM
3 = 60 Hz, 6 pole, 1150 RPM
4 = 50 Hz, 2 pole, 2900 RPM
5 = 50 Hz, 4 pole, 1450 RPM

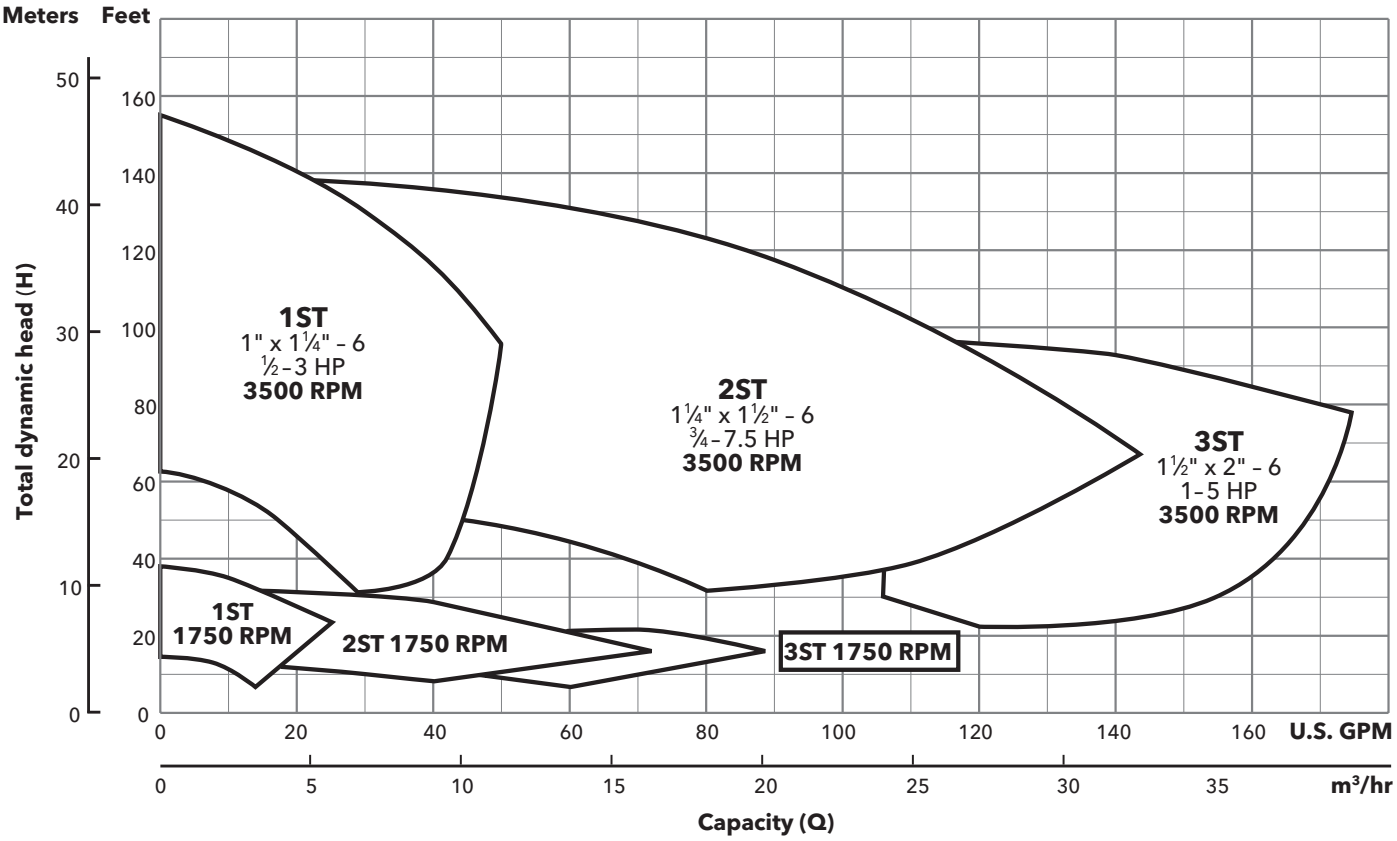
For frame mounted version, substitute the letters "FRM" in these positions

Material
ST= Stainless steel

Pump size
1 = 1 x 1¼ – 6 2 = 1¼ x 1½ – 6 3 = 1½ x 2 – 6

NPE-F frame mounted configurations were discontinued in August 2025.

Performance coverage (60 Hz)



Notes:
Not recommended for operation beyond printed H-Q curve.

For critical application conditions consult factory.

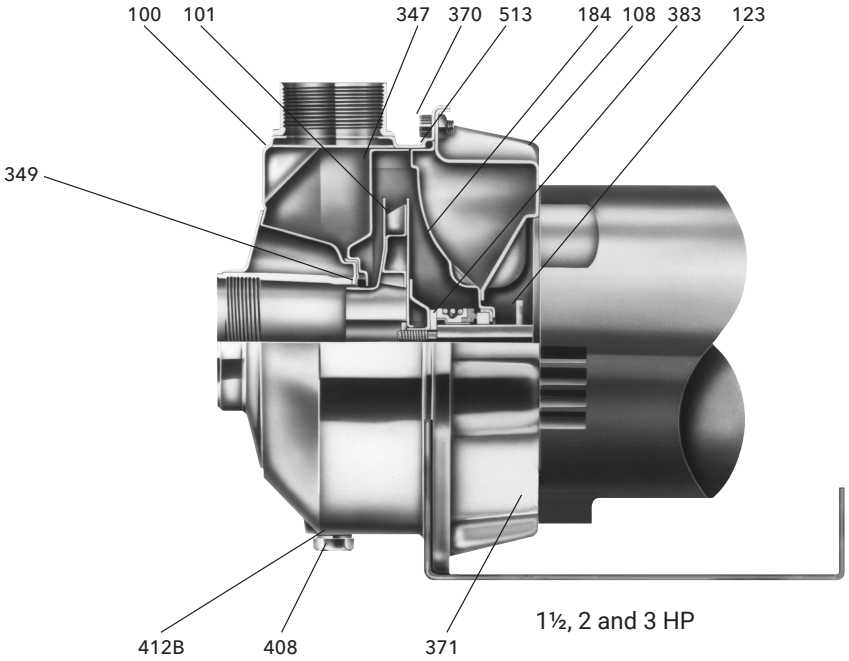
Not all combinations of motor, impeller and seal options are available for every pump model. Please check with G&L on non-cataloged numbers.

All standard 3500 RPM ODP* and TEFC* motors supplied by Goulds Water Technology, have minimum of 1.15 service factor. Standard catalog units may utilize available service factor. Any motors supplied other than Goulds Water Technology check available service factor.

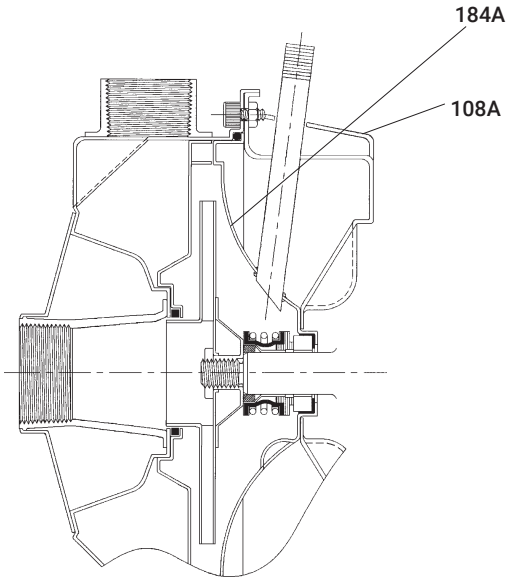
* Premium efficiency where required by Department of Energy regulations.

NPE close coupled pump major components: materials of construction

NPE-F frame mounted configurations were discontinued in August 2025.

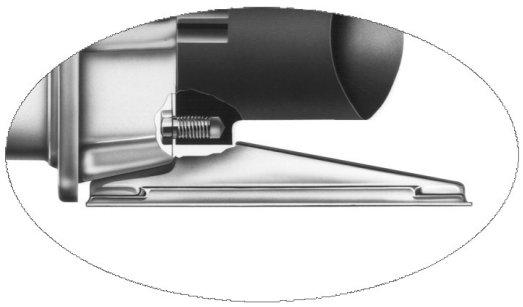


1½, 2 and 3 HP



Seal face vent/flush option

Item No.	Description	Materials
100	Casing	AISI 316L SS
101	Impeller	
108	Motor adapter	
108A	Motor adapter seal vent/flush	
123	Deflector	BUNA-N
184	Seal housing	AISI 316L SS
184 A	Seal housing seal vent/flush	
347	Guidevane	
349	Seal ring, guidevane	Viton
370	Socket head screws, casing;	AISI 410 SS
371	Bolts, motor;	Plated steel
383	Mechanical seal	**see chart
408	Drain and vent plug, casing	AISI 316L SS
412B	O-ring, drain and vent plug	Viton (Standard) EPR (Optional)
513	O-ring, casing	
Motor	NEMA standard, 56J flange;	

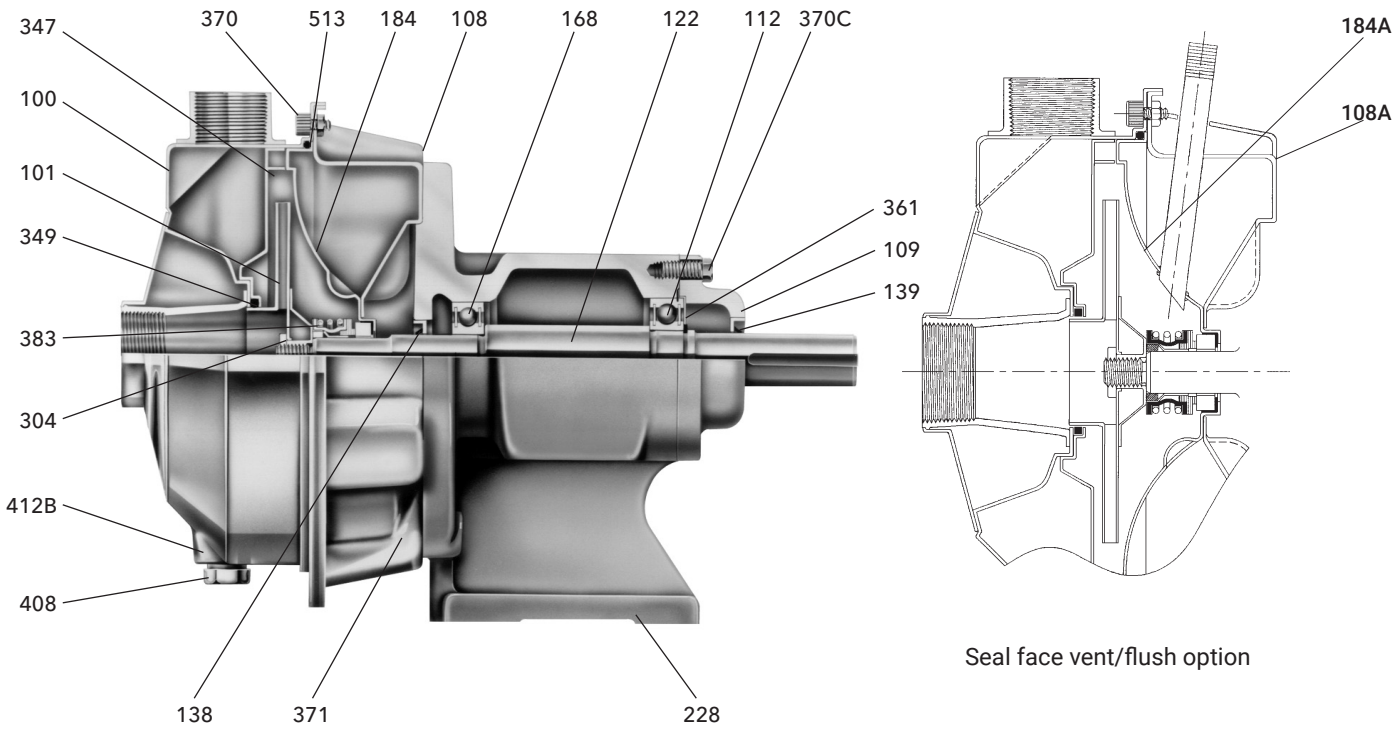


½, ¾ and 1 HP

Footed motor for 5 & 7.5 HP ODP* and TEFC*, all explosion proof motors, see page 17.

* Premium efficiency where required by Department of Energy regulations.

NPE frame mounted pump major components: materials of construction

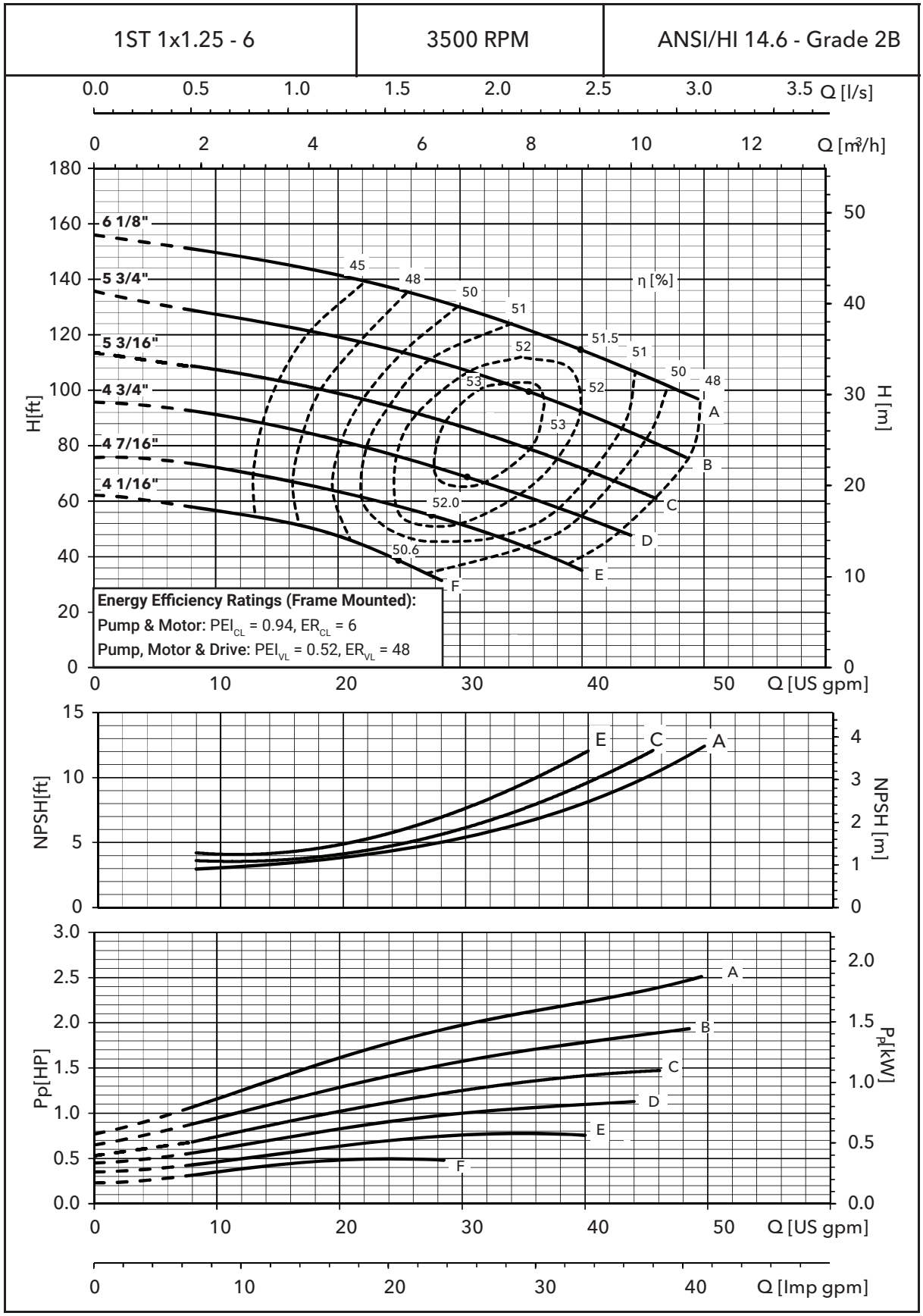


Seal face vent/flush option

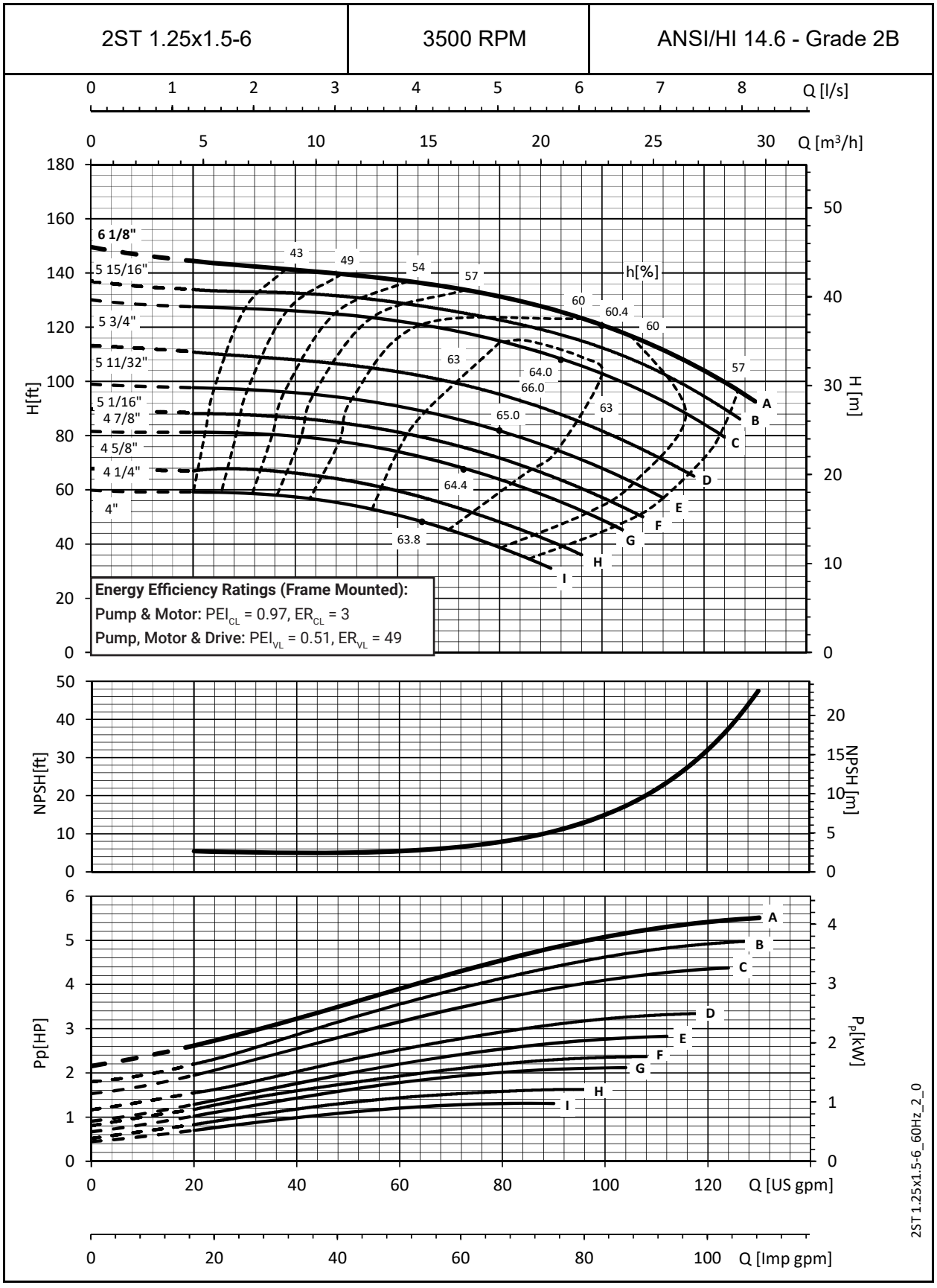
Item No.,	Description,	Materials
100	Casing	AISI 316L SS
101	Impeller	
108	Adapter	
108A	Motor adapter seal vent/flush	
109	Bearing cover	Cast iron
112	Ball bearing (outboard)	Steel
122	Shaft	AISI 316 SS
138	Lip-seal (inboard)	BUNA/steel
139	Lip-seal (outboard)	BUNA/steel
168	Ball bearing (inboard)	Steel
184	Seal housing	AISI 316L SS
184 A	Seal housing seal vent/flush	
228	Bearing frame	Cast iron

Item No.	Description	Materials
304	Impeller locknut	AISI 316 SS
347	Guidevane	
349	Seal ring, guidevane	Viton
361	Retaining ring	Steel
370	Socket head screws, casing	AISI 410 SS
370C	Hex head screw, bearing cover	Plated steel
371	Hex head screw, bearing frame	Plated steel
383	Mechanical seal	**see chart
400	Shaft key	Steel
408	Drain and vent plug, casing	AISI 316 SS
412B	O-ring, drain and vent plug;	Viton (Standard) EPR (Optional)
513	O-ring, casing	

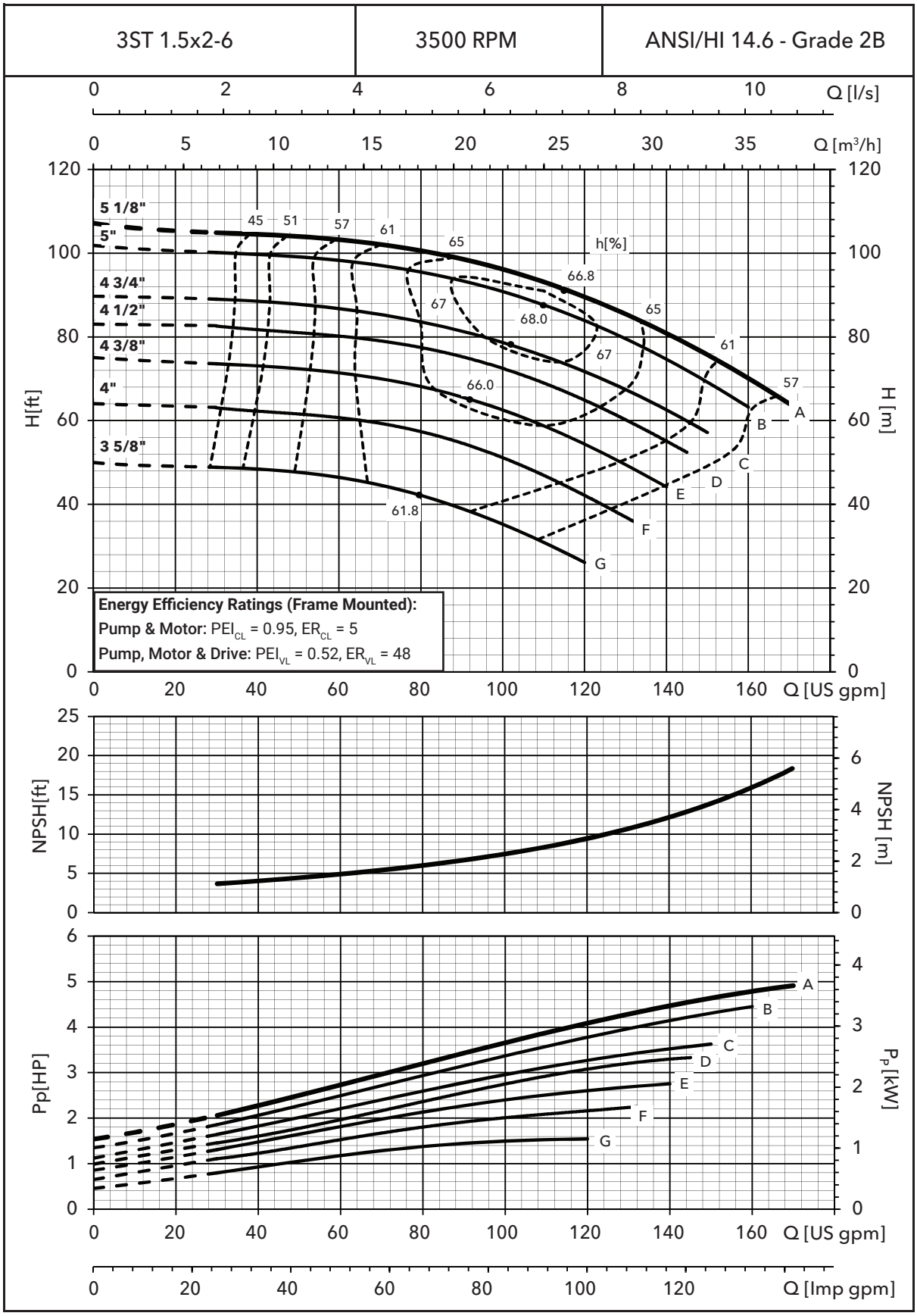
Performance curves – 60 HZ, 3500 RPM



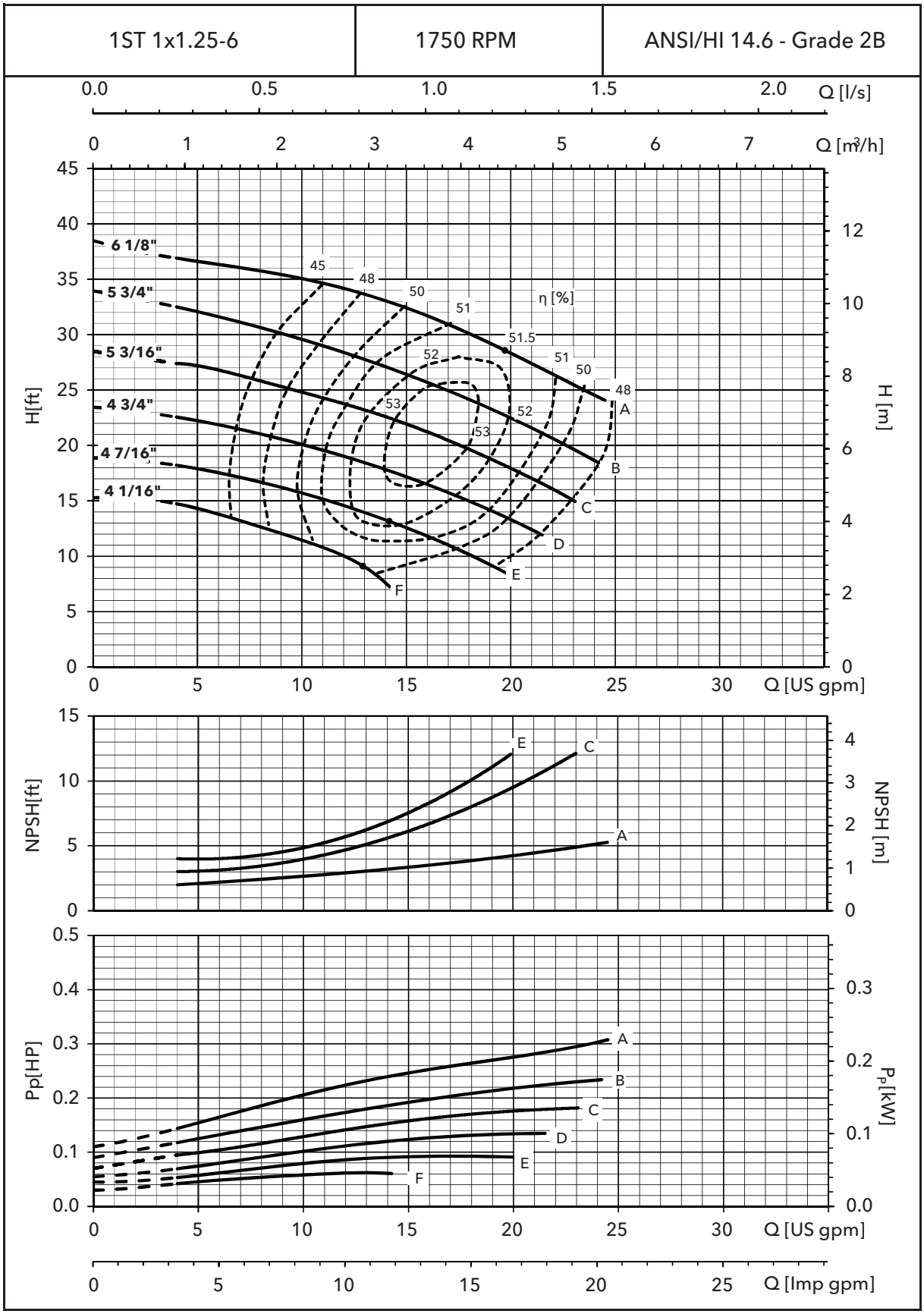
Performance curves – 60 HZ, 3500 RPM



Performance curves – 60 HZ, 3500 RPM

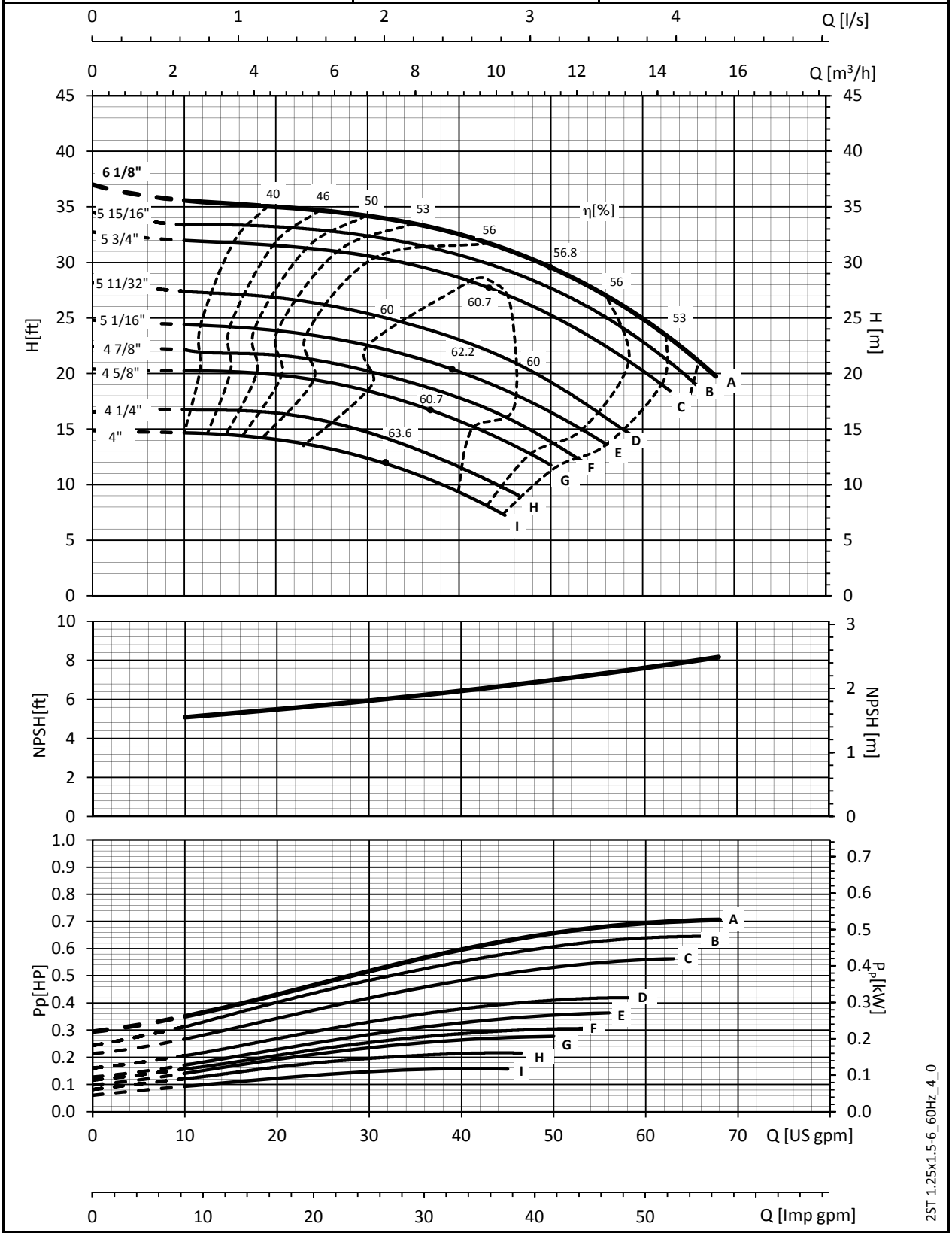


Performance curves – 60 HZ, 1750 RPM



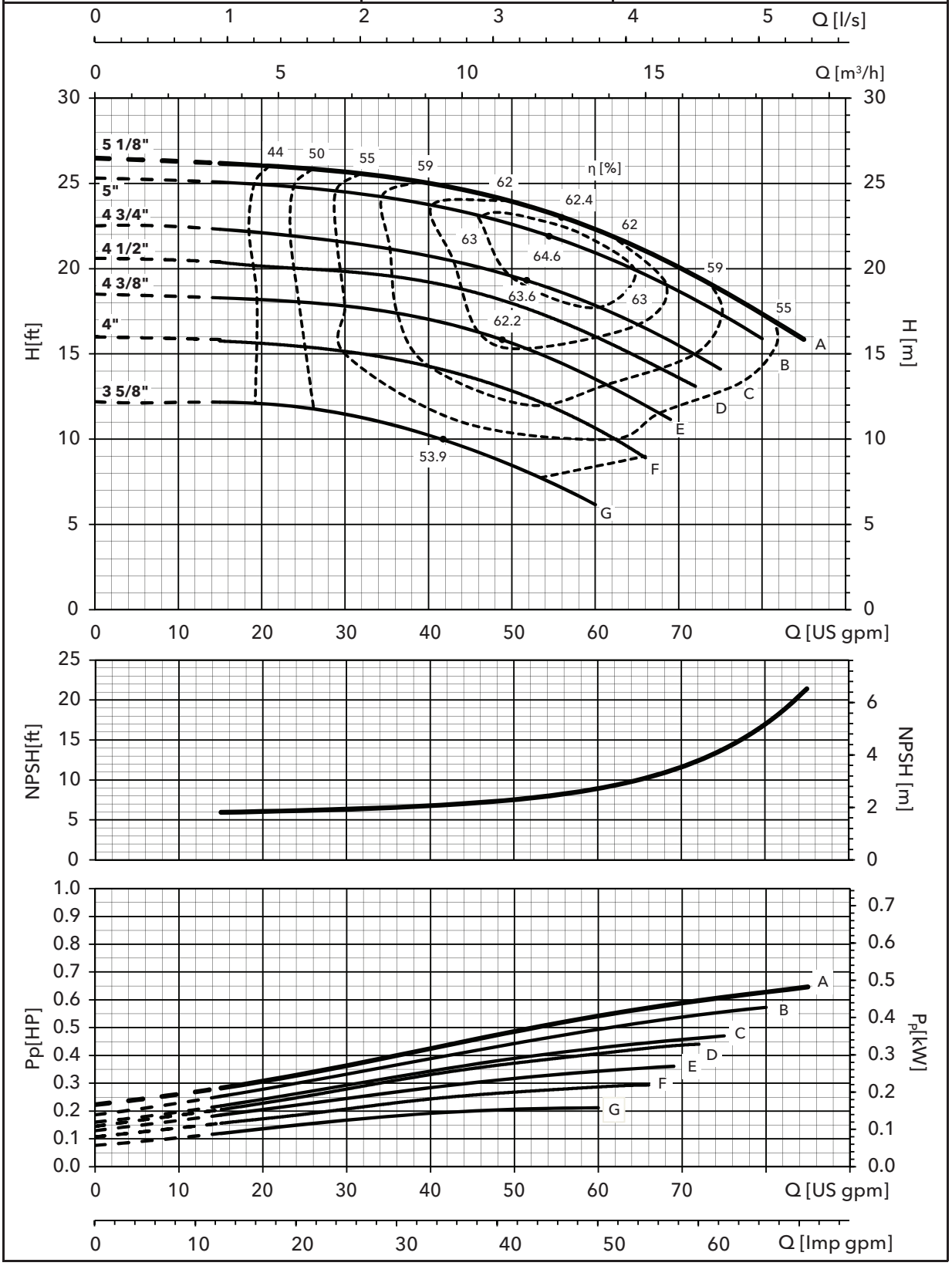
Performance curves – 60 HZ, 1750 RPM

2ST 1.25x1.5-6	1750 RPM	ANSI/HI 14.6 - Grade 2B



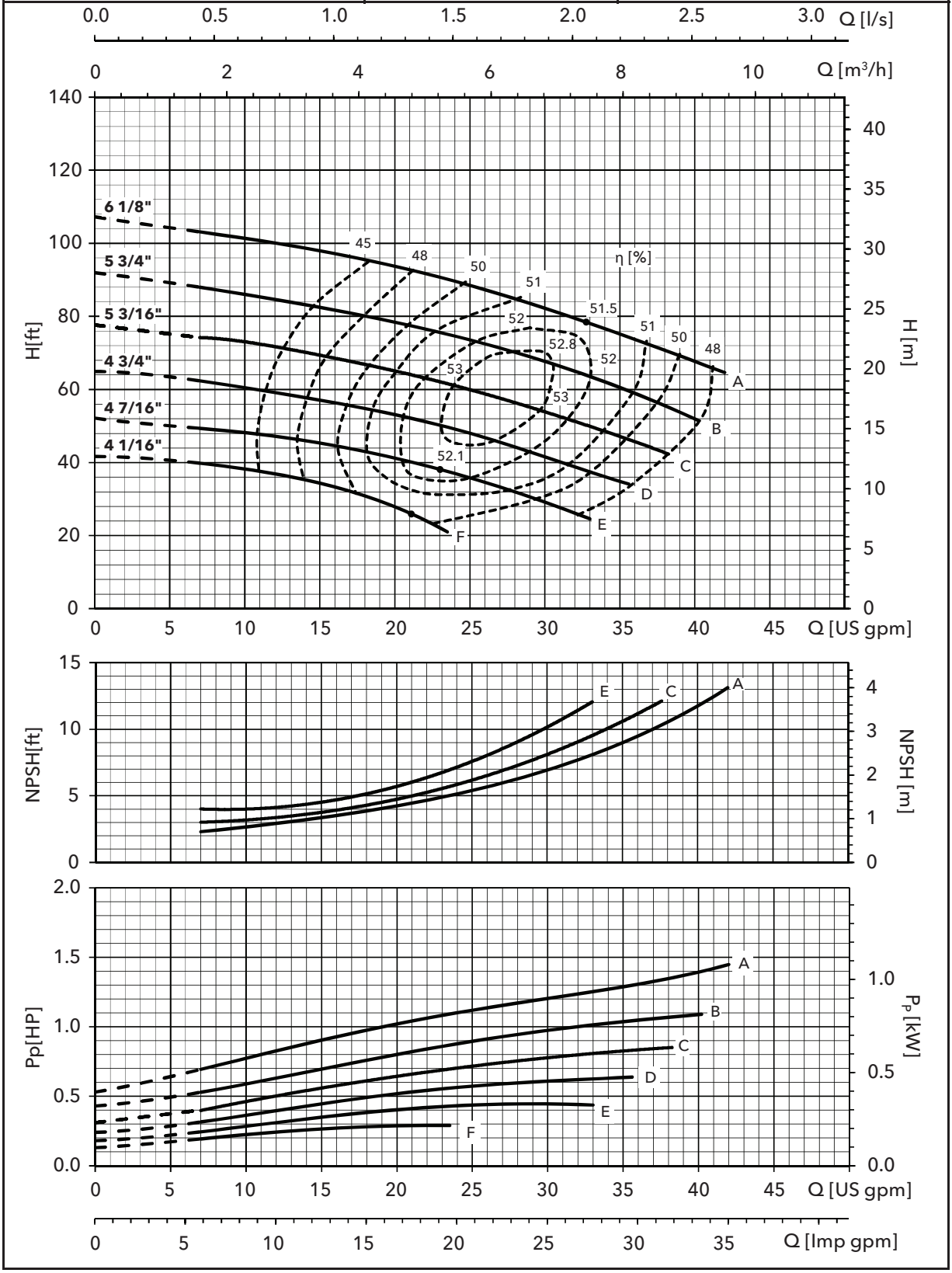
Performance curves – 60 HZ, 1750 RPM

3ST 1.5x2-6	1750 RPM	ANSI/HI 14.6 - Grade 2B



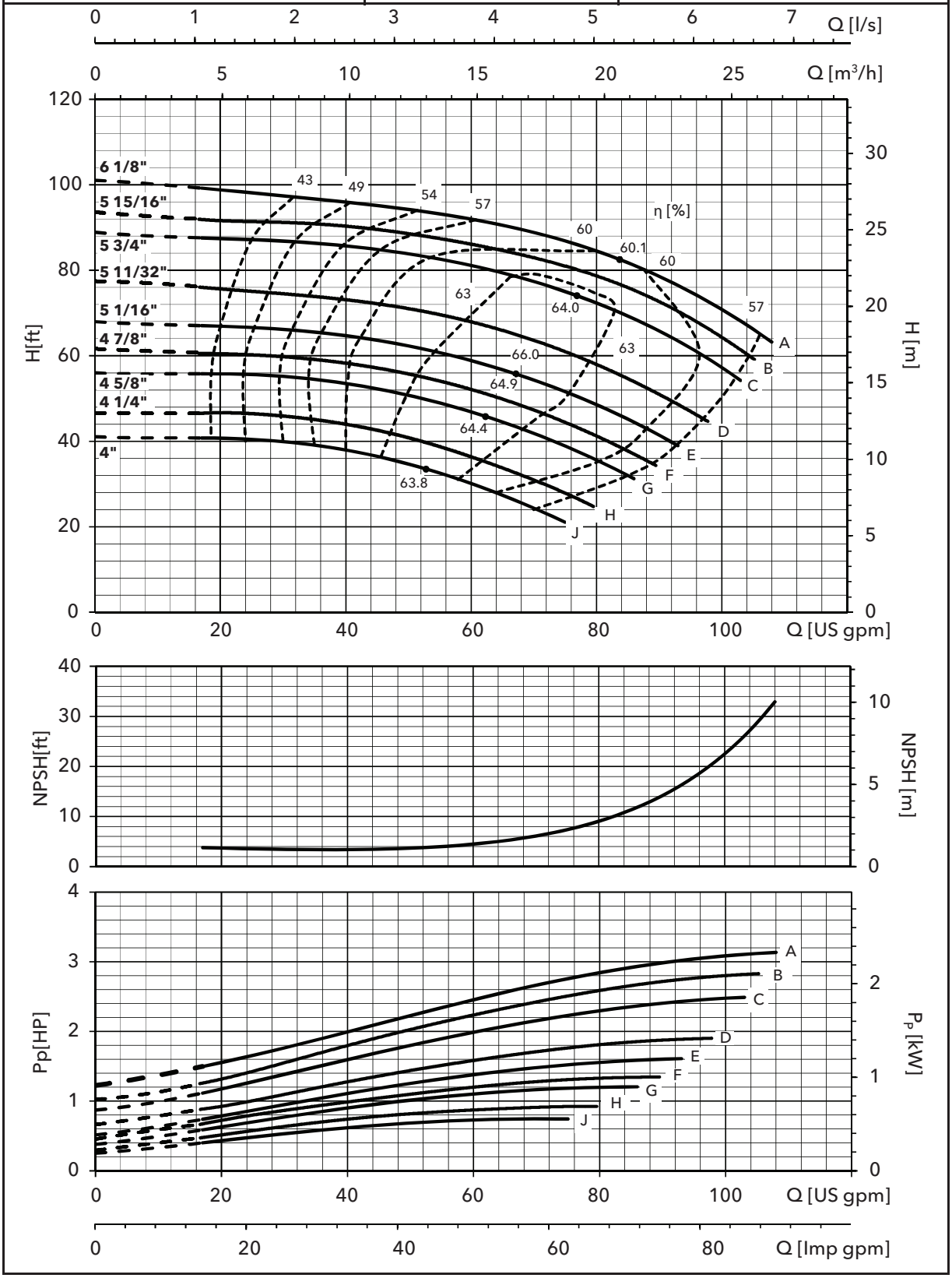
Performance curves – 50 HZ, 2900 RPM

1ST 1x1.25 - 6	2900 RPM	ANSI/HI 14.6 - Grade 2B



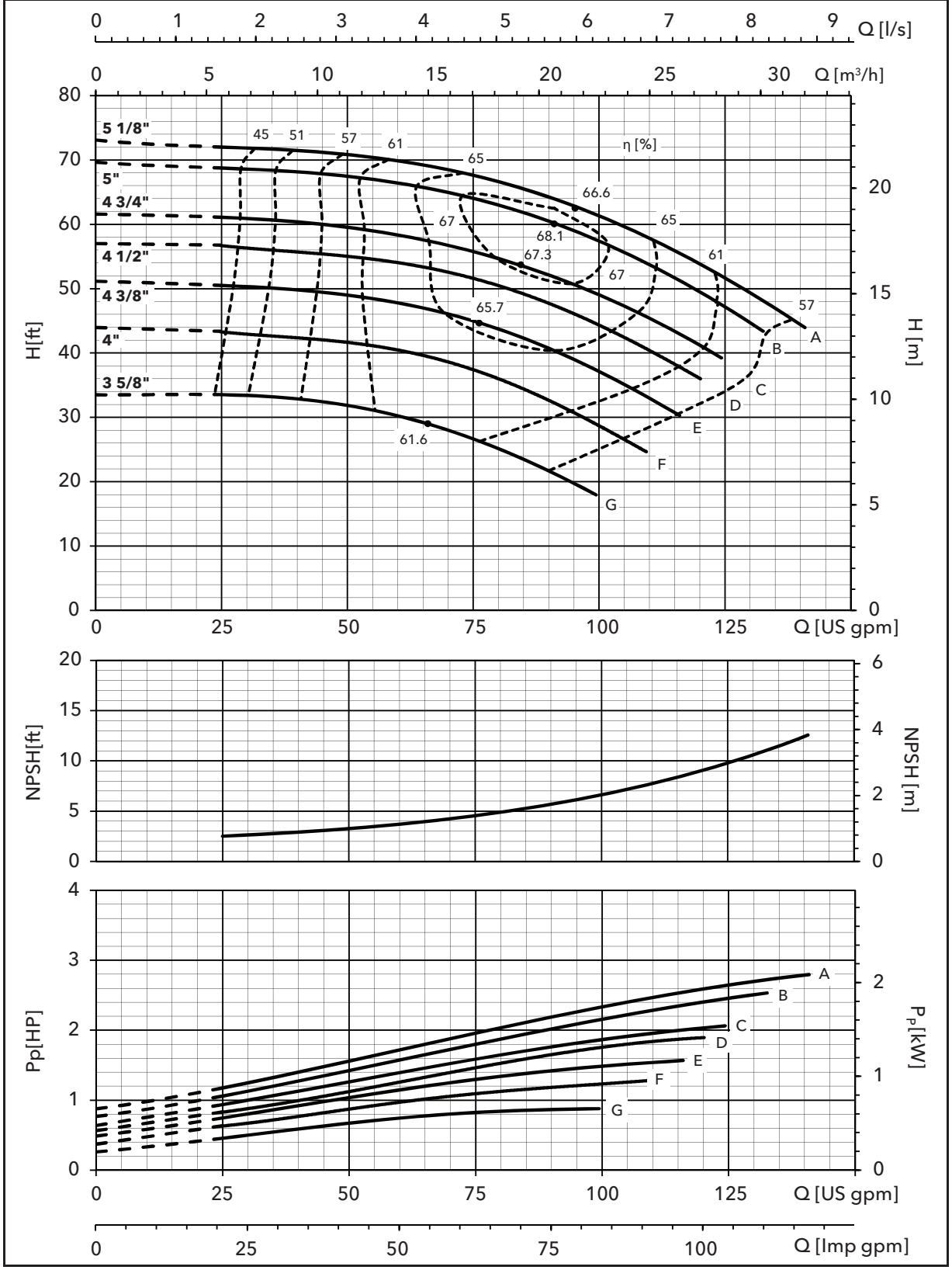
Performance curves – 50 HZ, 2900 RPM

2ST 1.25x1.5-6	2900 RPM	ANSI/HI 14.6 - Grade 2B



Performance curves – 50 HZ, 2900 RPM

3ST 1.5x2-6	2900 RPM	ANSI/HI 14.6 - Grade 2B



Motor sizing tables

1ST motor sizing (2-pole, 3500 RPM)

Impeller code	Impeller dia. (In)	Motor selection 1.15sf (HP)	Motor selection 1.0sf (HP)
A	6.13	2	2
B	5.75	1.5	2
C	5.19	1.5	1.5
D	4.75	1	1.5
E	4.44	0.75	1
F	4.06	0.50	0.50

1ST motor sizing (4-pole, 1750 RPM)

Impeller code	Impeller dia. (In)	Motor selection 1.15sf (HP)	Motor selection 1.0sf (HP)
A	6.13	0.50	0.50
B	5.75	0.50	0.50
C	5.19	0.50	0.50
D	4.75	0.50	0.50
E	4.44	0.50	0.50
F	4.06	0.50	0.50

2ST motor sizing (2-pole, 3500 RPM)

Impeller code	Impeller dia. (In)	Motor selection 1.15sf (HP)	Motor selection 1.0sf (HP)
A	6.13	5	7.5
B	5.94	5	5
C	5.75	5	5
D	5.34	3	5
E	5.06	3	3
F	4.88	2	3
G	4.63	2	3
H	4.25	1.5	2
J	4.00	1	1.5

2ST motor sizing (4-pole, 1750 RPM)

Impeller code	Impeller dia. (In)	Motor selection 1.15sf (HP)	Motor selection 1.0sf (HP)
A	6.13	0.75	0.75
B	5.94	0.75	0.75
C	5.75	0.50	0.75
D	5.34	0.50	0.50
E	5.06	0.50	0.50
F	4.88	0.50	0.50
G	4.63	0.50	0.50
H	4.25	0.50	0.50
J	4.00	0.50	0.50

3ST motor sizing (2-pole, 3500 RPM)

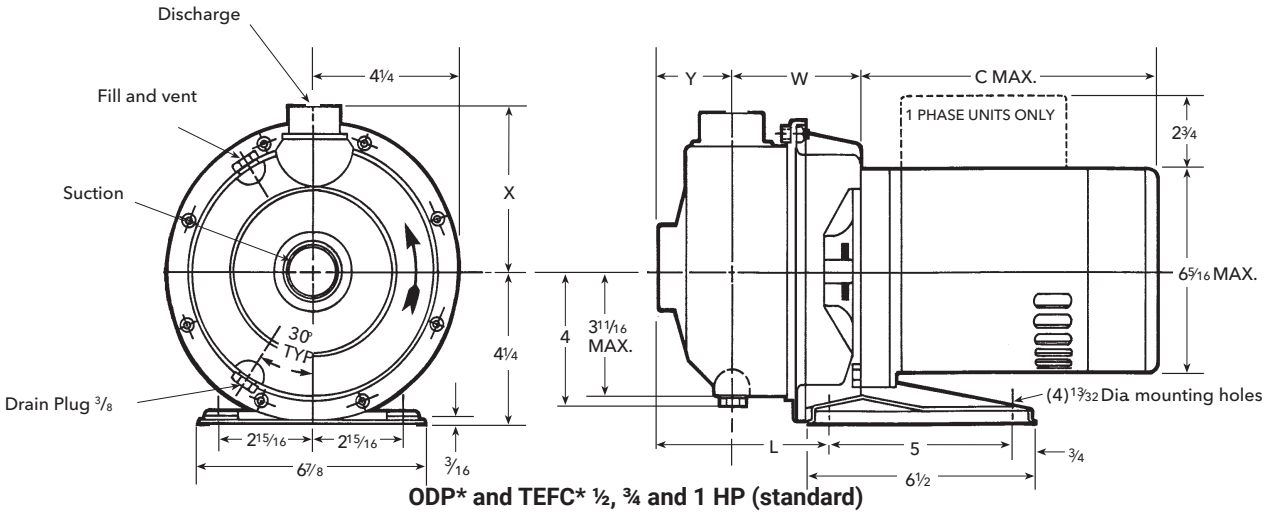
Impeller code	Impeller dia. (In)	Motor selection 1.15sf (HP)	Motor selection 1.0sf (HP)
A	5.13	5	5
B	5.00	5	5
C	4.75	5	5
D	4.50	3	5
E	4.38	3	3
F	4.00	2	2
G	3.63	1.5	1.5

3ST motor sizing (4-pole, 1750 RPM)

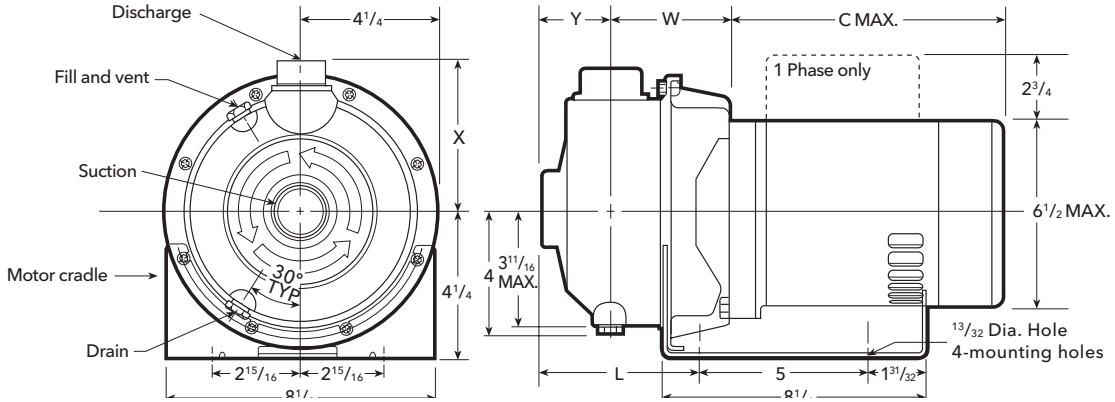
Impeller code	Impeller dia. (In)	Motor selection 1.15sf (HP)	Motor selection 1.0sf (HP)
A	5.13	0.75	0.75
B	5.00	0.75	0.75
C	4.75	0.5	0.5
D	4.50	0.5	0.5
E	4.38	0.5	0.5
F	4.00	0.5	0.5
G	3.63	0.5	0.5

NPE close coupled – dimensions, weights and specifications

Clockwise rotation viewed from drive end



ODP* and TEFC* ½, ¾ and 1 HP (standard)



ODP* and TEFC* 1½, 2, 3 and 5 HP (standard)

Specifications

Capacities to: 85 GPM (322L/min) at 1750 RPM 170 GPM (643L/min) at 3500 RPM

Heads to: 39 feet (12 m) at 1750 RPM 150 feet (46 m) at 3500 RPM

Working pressures to: 125 PSIG (9 bars)

Maximum temperatures to: 250° F (121° C)

Direction of rotation: Clockwise when viewed from motor end.

Motor specifications: NEMA 56J frame, 1750 RPM, ½ HP. 3500 RPM ½ through 5 HP. Open drip-proof, totally enclosed fan-cooled or explosion proof enclosures*. Stainless steel shaft with ball bearings.

Single-phase: Voltage 115/230 ODP* and TEFC*. (3 and 5 HP model – 230 V only) Built-in overload with auto-reset provided.

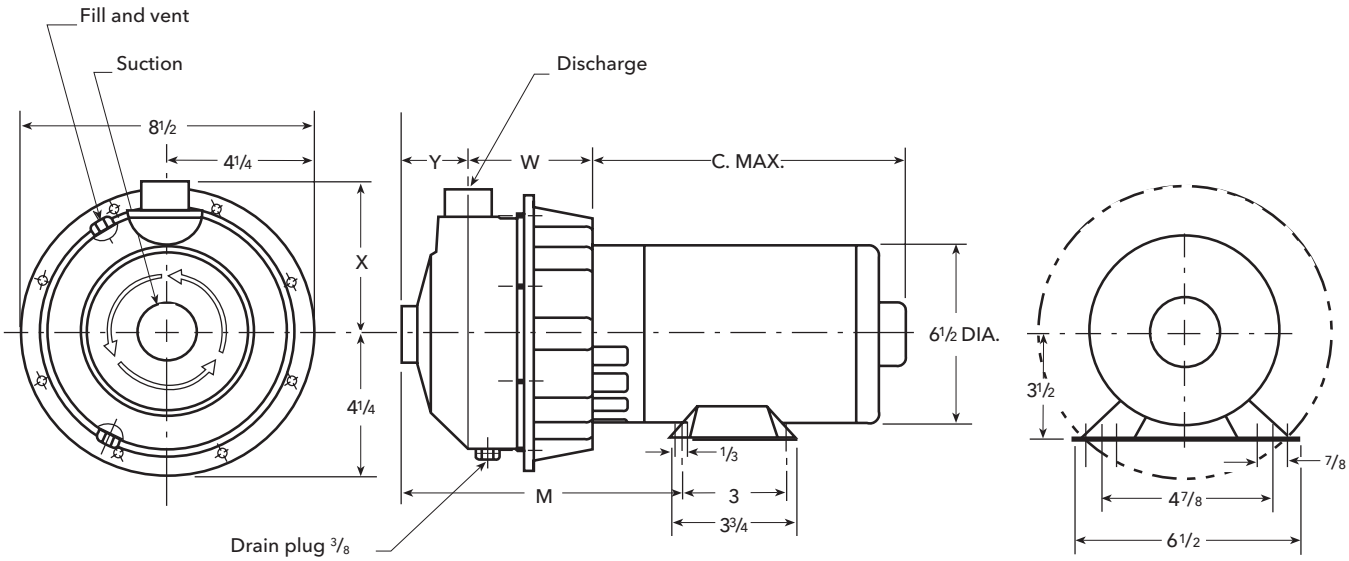
Three-phase: Voltage 208-230/460 ODP*, TEFC* and EX PROOF*.

NOTE: For three-phase motors, overload protection must be provided in starter unit. Starter and heaters must be ordered separately.

* Premium efficiency where required by Department of Energy regulations.

NPE close coupled with footed motor, explosion-proof* and 5 and 7.5 HP motors

All explosion proof motors and 5 HP ODP* and TEFC*



Dimensions – Determined by pump,

Pump	Suction	Discharge	HP	W	X	Y	L	M
1ST	1¼	1	½ – 3	$3\frac{5}{16}$	$4\frac{3}{8}$	2	$4\frac{9}{16}$	$7\frac{5}{16}$
2ST	1½	1¼	¾ – 5	3¾	4½	$2\frac{1}{8}$	$5\frac{1}{8}$	8½
3ST	2	1½	1 – 5	3¾	$4\frac{5}{8}$	$2\frac{1}{8}$	$5\frac{1}{8}$	8½

available motor weights and dimensions

HP	Motor weights						C Max. length	P Max.
	1 Phase			3 Phase				
	ODP*	TEFC*	EXP*	ODP*	TEFC*	EXP*		
½	23	29	45	24	23	27	$11\frac{3}{16}$	$7\frac{2}{16}$
¾	30	35	41	24	26	30	$11\frac{5}{16}$	7
1	26	36	49	25	34	30	$11\frac{5}{16}$	$7\frac{3}{16}$
1½	28	51	56	29	34	37	$13\frac{7}{16}$	$7\frac{3}{16}$
2	34	46	60	35	34	44	$13\frac{7}{16}$	7
3	42	51	—	39	45	44	$13\frac{13}{16}$	$7\frac{3}{16}$
5	48	—	—	45	48	—	$12\frac{5}{16}$	6½

Dimensions in inches, weights in pounds.

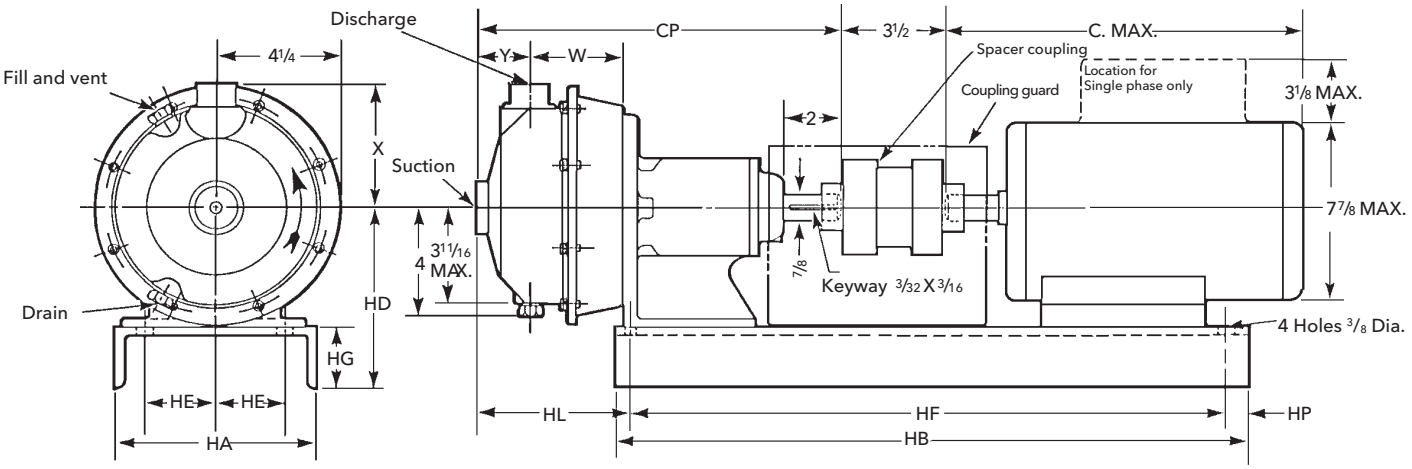
* Premium efficiency where required by Department of Energy regulations.

Notes:

1. Pump will be shipped with top vertical discharge position as standard. For other orientations, remove casing bolts, rotate discharge to desired position, replace and tighten 6mm bolts to 5 – 6 lbs.-ft.
2. Motor dimensions may vary with motor manufacturers.
3. Dimensions in inches, weights in pounds.
4. For explosion proof* motor dimensions consult factory for information.
5. Not to be used for construction purposes unless certified.

NPE frame mounted – dimensions, weights and specifications

NPE-F frame mounted configurations were discontinued in August 2025.



Specifications

Capacities to: 85 GPM (322L/min) at 1750 RPM 170 GPM (643L/min) at 3500 RPM

Heads to: 39 feet (12 m) at 1750 RPM 150 feet (47 m) at 3500 RPM

Working pressures to: 125 PSIG (9 bars)

Maximum temperatures to: 250°F (121°C)

Direction of rotation: Clockwise when viewed from motor end.

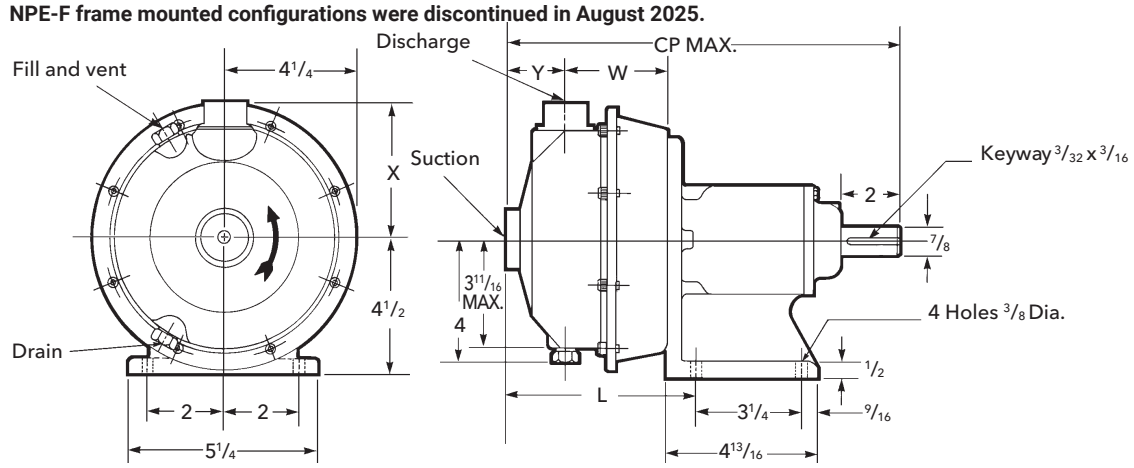
Motor specifications: T-frame single and three-phase. Open drip-proof*, TEFC* or explosion proof* enclosures are available for 60 Hz, 3500 and 1750 RPM operation.

For three-phase motors, overload protection must be provided in starter unit. Starter and heaters must be ordered separately.

* Premium efficiency where required by Department of Energy regulations.

NPE-F

NPE-F frame mounted configurations were discontinued in August 2025.



NPE frame mounted – dimensions, weights and specifications

NPE-F frame mounted configurations were discontinued in August 2025.

Dimensions and weights

Dimensions and weights – determined by pump

Pump, *Bomba*	Suct. NPT	Disch. NPT	CP	L	W	X	Y	Wt.	Dim. "HL" determined by pump and motor		
									Frame		
									56	140	180
1ST	1 1/4	1	12 15/16	6 7/16	3 5/16	4 3/8	2	22 1/2	4 9/16		6 7/16
2ST	1 1/2	1 1/4	13 1/2	7	3 3/4	4 1/2	2 1/8	23	5 1/8		7
3ST	2	1 1/2				4 5/8					

Available motor and bedplate dimensions and weights

Motor frame	HA	HB	HD	HE	HF	HG	HP	Wt. Max.	Shims
56 143T 145T	8	26	6 7/8	3 1/8	22 3/8	2 3/8	1	30	1"
182T 184T	10	26	7 1/4	3 3/4	24	2 3/4	7/8	43	–

Frame size	Horsepower 3500 RPM				C Max.	Wt. Max.	P Max.
	Single-phase		Three-phase				
	ODP	TEFC	ODP	TEFC			
56	1/2 – 1 1/2	1/2 – 1 1/2	1/2 – 1	1/2 – 1	10 13/16	37	7 3/16
143T	–	–	1 1/2	1 1/2	9 13/16	41	7 3/16
145T	2	2	1 1/2 – 3	1 1/2 – 2	11 11/16	52	7 3/16
182T	3	3	5	3	12 3/16	76	7 7/8
184T	5	5	–	5	15 1/8	117	10¼

Notes:

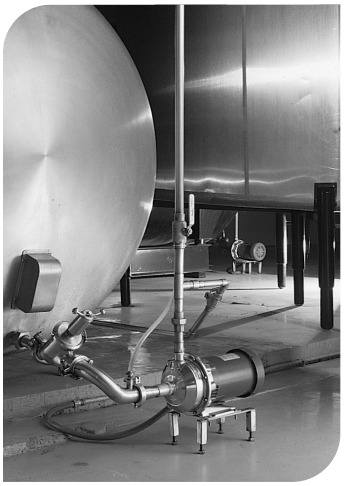
1. Pump will be shipped with top vertical discharge position as standard. For other orientations, remove casing bolts, rotate discharge to desired position, replace and tighten 6mm bolts to 5 – 6 lbs.-ft.
2. Motor dimensions may vary with motor manufacturers.
3. Dimensions in inches, weights in pounds.
4. For explosion proof* motor dimensions consult factory for information.
5. Not to be used for construction purposes unless certified.

* Premium efficiency where required by Department of Energy regulations.

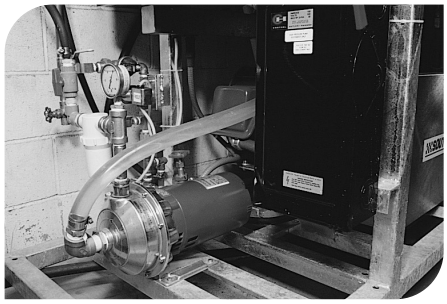
Typical applications

Specifically designed for a broad range of general applications traditionally requiring various materials such as all iron, bronze fitted or all bronze construction.

- Water circulation
- Booster service
- Liquid transfer
- Spray system
- Chillers
- Washing/cleaning systems
- Injection molding cooling
- Reverse osmosis
- Air scrubbers
- Heat exchangers
- Filtration systems
- Jockey pumps
- OEM applications
- General water services



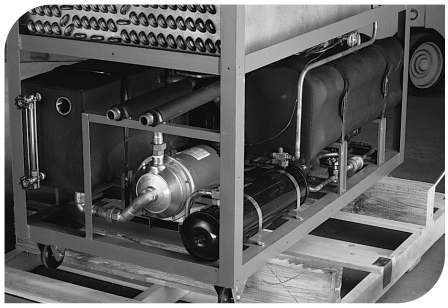
Brewery



Car wash

Pure water/OEM

Pressure booster system



Chiller

NPE-F frame mounted configurations were discontinued in August 2025.

Learn more about NPE centrifugal pumps

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