



# Series e-3530

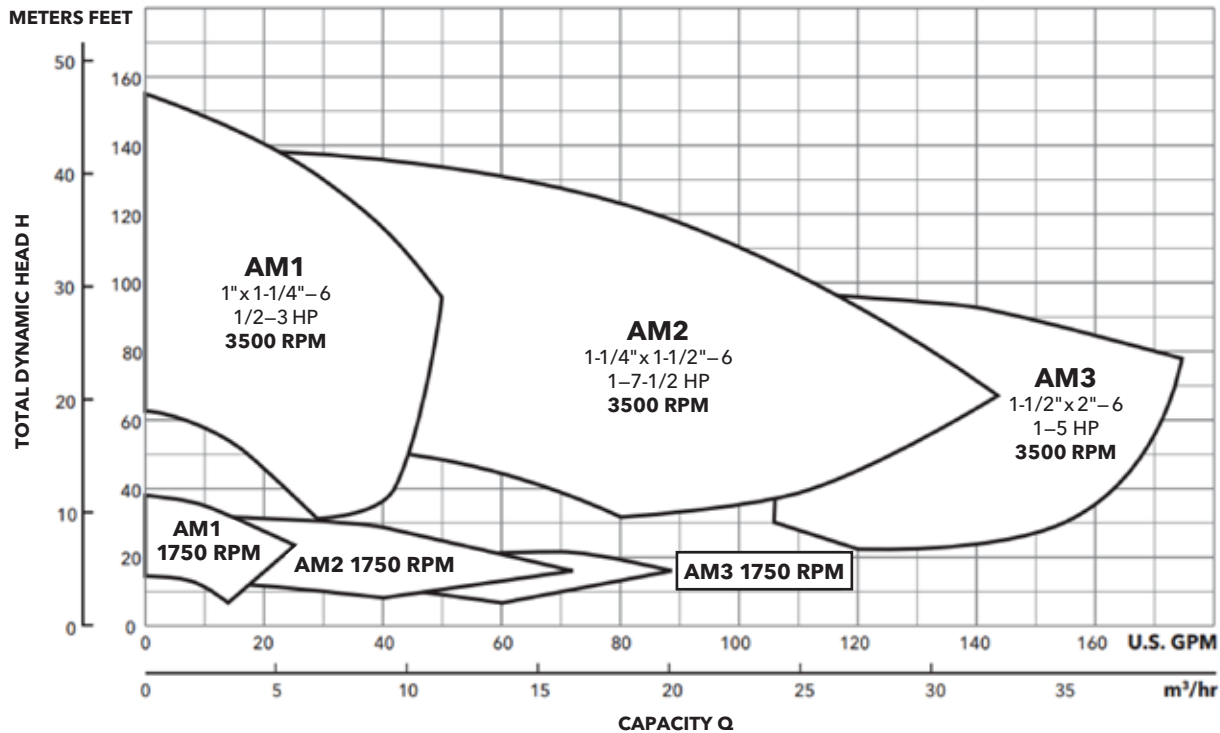
THE STANDARD IN CLOSE COUPLED GENERAL SERVICE PUMPS

CAPACITIES TO 170 GPM • HEADS TO 150 FEET

APPLICATIONS:

COOLING TOWER | PRESSURE BOOSTING | CIRCULATION | CONDENSATE | OEM PACKAGES | DOMESTIC WATER

# Series e-3530 Selection Chart



## FEATURES

### 1. 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.

### 2. High Efficiency Impeller:

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

### 3. Casing and Adapter Features:

Stainless steel construction with NPT threaded, centerline connections, easily accessible vent, prime and drain connections with stainless steel plugs.

### 4. Mechanical Seal:

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

### 5. Multiple Discharge Positions:

Standard pump supplied with top vertical discharge. Casing can be field rotated every 45° for flexible installations.

## SPECIFICATIONS

### Capabilities to:

75 GPM (283 LPM) at 1750 RPM

170 GPM (6433 LPM) at 3500 RPM

Not recommended for operation beyond printed curve.

### Heads to:

39 feet (11m) at 1750 RPM

150 feet (50m) at 3500 RPM

**Working pressures to:** 125 PSIG (9 bars)

**Maximum temperatures to:** 225°F (107°C) with standard seal or 250°F (121°C) with optional high temperature seal.

**Direction of rotation:** Clockwise when viewed from motor end.

**Motor:** NEMA 56J frame. 1750 RPM, 1/2 & 3/4 HP. 3500 RPM, 1/2 through 7-1/2 HP. Open drip-proof and totally enclosed fan-cooled enclosures. Stainless steel shaft with ball bearings.

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

Three-phase: Voltage 208-230/460 ODP and TEFC.

All standard 3500 RPM ODP and TEFC motors supplied by B&G have minimum of 1.15 service factor. Standard catalog units may utilize available service factor.

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

# Series e-3530 Numbering System

AM 1 2 C 1 A 4 F R

## EXAMPLE PRODUCT CODE

### CASING ROTATION, OPTIONAL

R = 3 o'clock B = 6 o'clock L = 9 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 NUMBER
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

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

### IMPELLER OPTION...NO ADDER REQUIRED

For optional impeller diameters modify catalog order number with impeller code listed. Select optional impeller diameter from pump performance curve.

IMPELLER CODE	PUMP SIZE		
	1 X 1-1/4 - 6	1-1/4 X 1-1/2 - 6	1-1/2 X 2 - 6
	DIAMETER	DIAMETER	DIAMETER
A	6-1/8	6-1/8	5-1/8
B	5-3/4	5-15/16	5
C	5-3/16	5-3/4	4-3/4
D	4-3/4	5-11/32	4-1/2
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		4-1/4	
J		4	

### DRIVER

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

### HP RATING

C = 1/2 HP	E = 1 HP	G = 2 HP	J = 5 HP
D = 3/4 HP	F = 1-1/2 HP	H = 3 HP	K = 7-1/2 HP

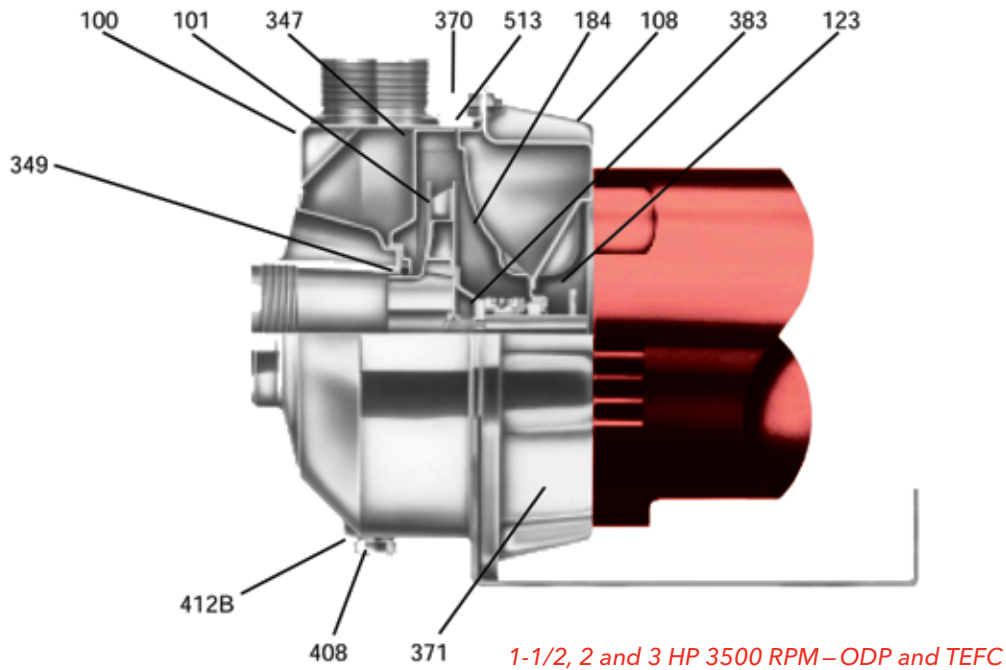
### DRIVER HERTZ/POLE/RPM

1 = 60 Hz, 2 pole, 3500 RPM  
2 = 60 Hz, 4 pole, 1750 RPM

### PUMP SIZE

AM1 = 1 x 1-1/4 - 6    AM2 = 1-1/4 x 1-1/2 - 6    AM3 = 1-1/4 x 2 - 6

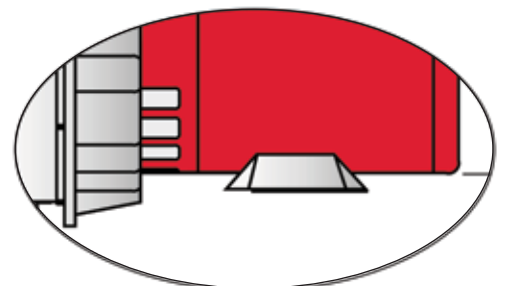
# Materials of Construction



ITEM NO.	DESCRIPTION	MATERIALS
100	Casing	AISI 316L SS
101	Impeller	
108	Motor adapter	
123	Deflector	BUNA-N
184	Seal housing	AISI 316L SS
347	Guidevane	
349	Seal ring, guidevane	Viton
370	Socket head screws, casing	AISI 410 SS
371	Bolts, motor	Plated steel
383	Mechanical seal	Viton/Carbon-Silicon Carbide
408	Drain and vent plug, casing	AISI 316L SS
412B	O-ring, drain and vent plug	
513	O-ring, casing	Vitan
Motor	NEMA standard, 56J flange	316 SS Shaft

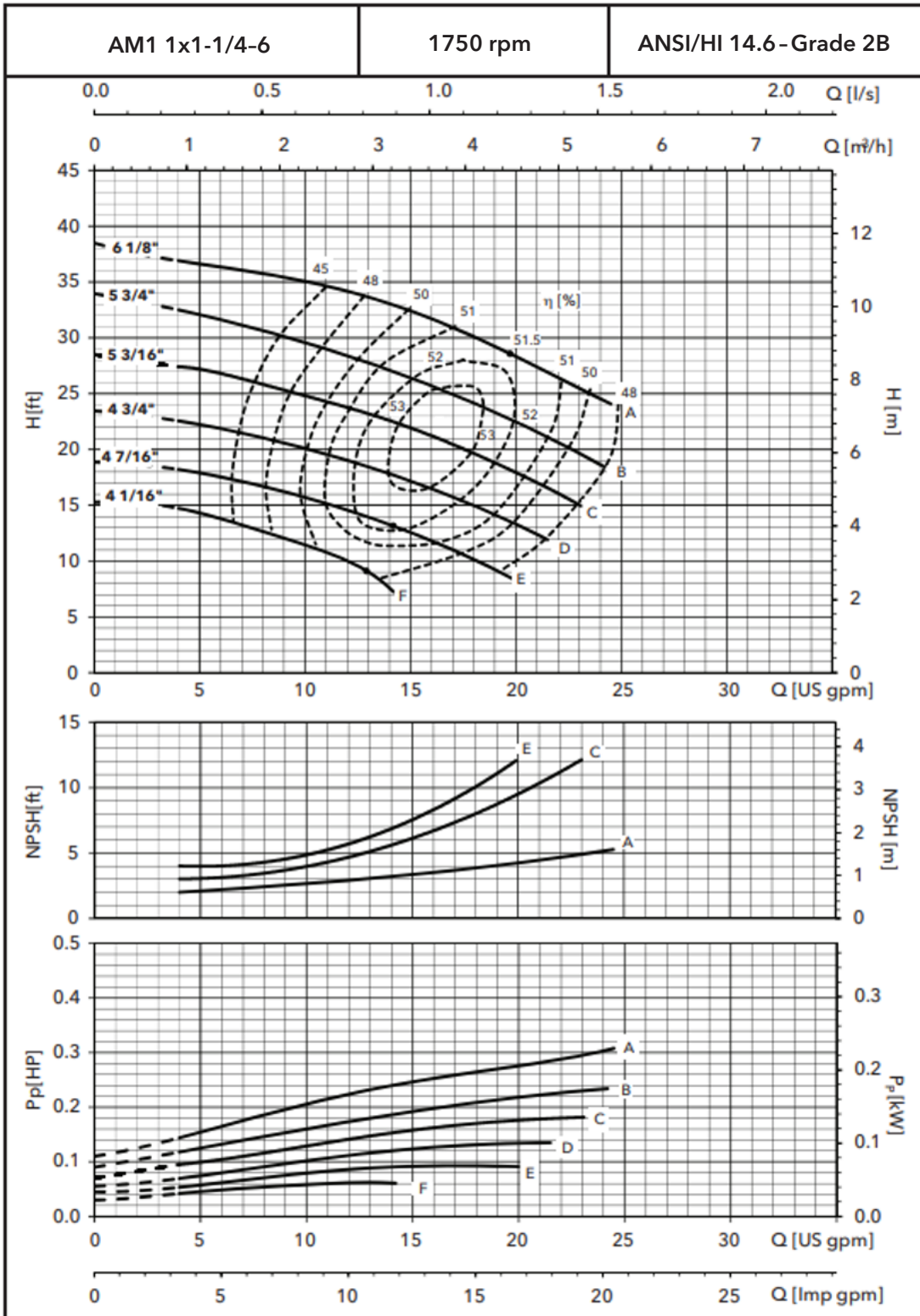


1/2, 3/4 and 1 HP 3500 RPM-ODP and TEFC

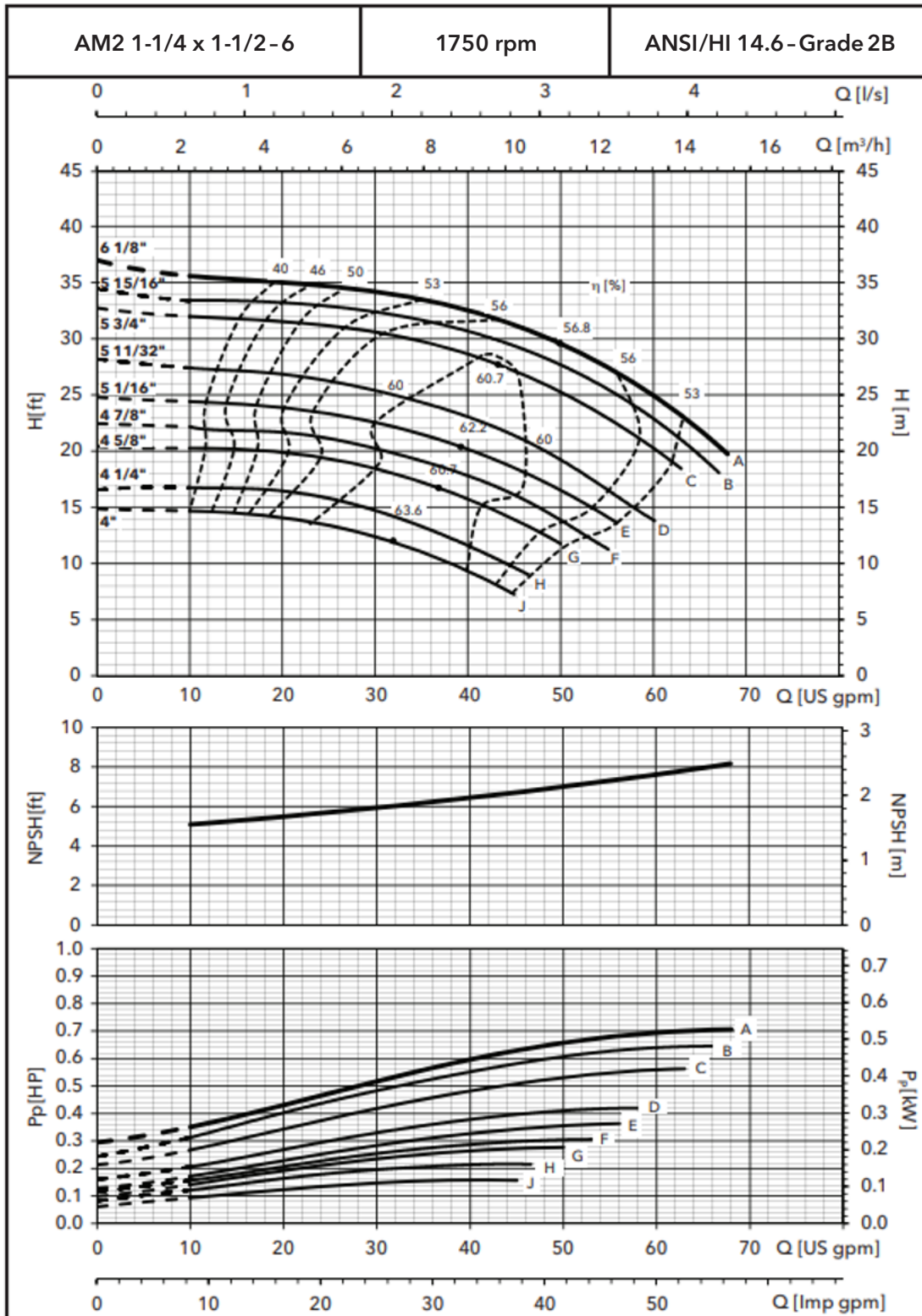


Footed motor for 1750 RPM and 5 & 7-1/2 HP 3500 RPM-ODP and TEFC

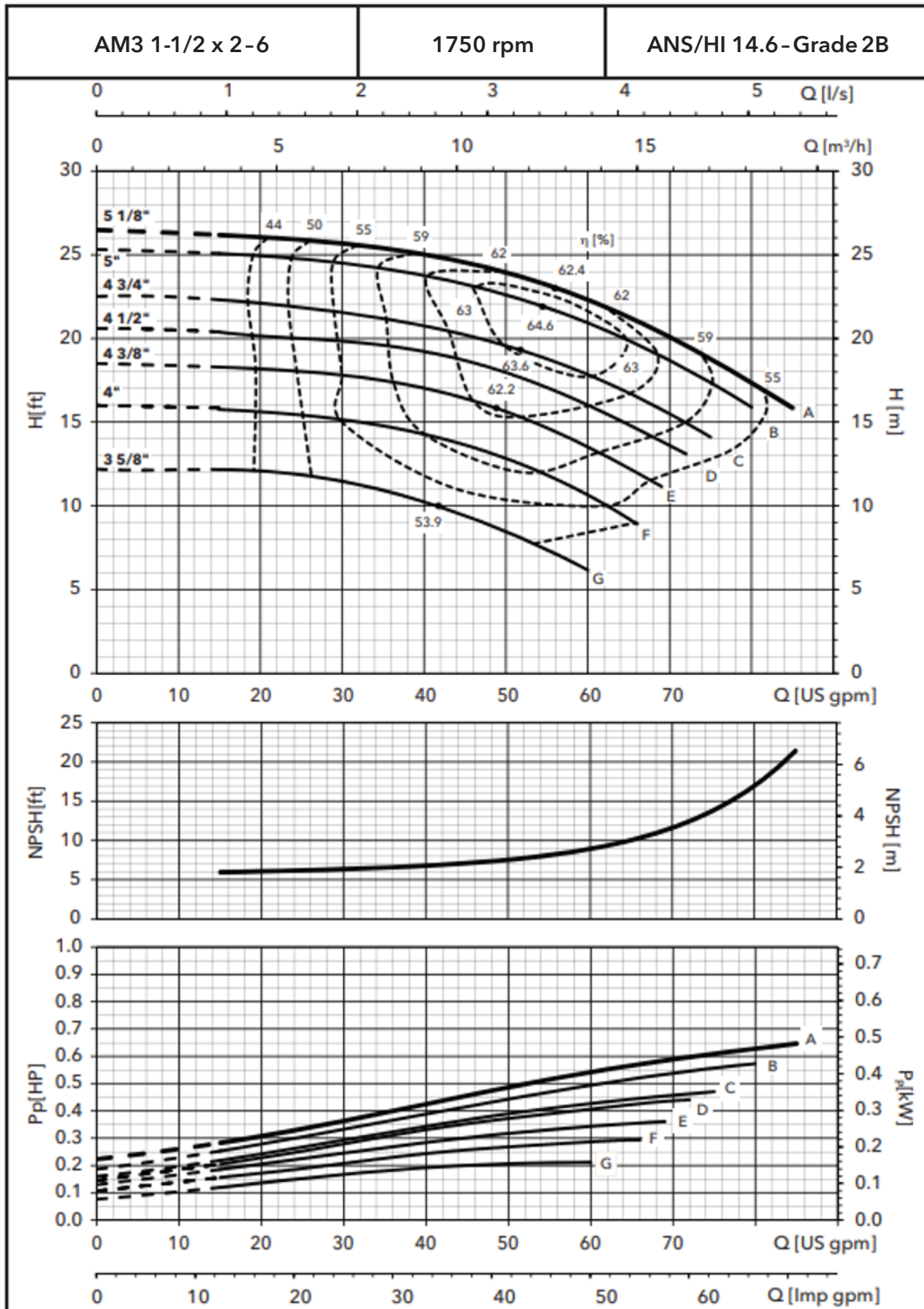
# Series e-3530 Pump Performance Curves



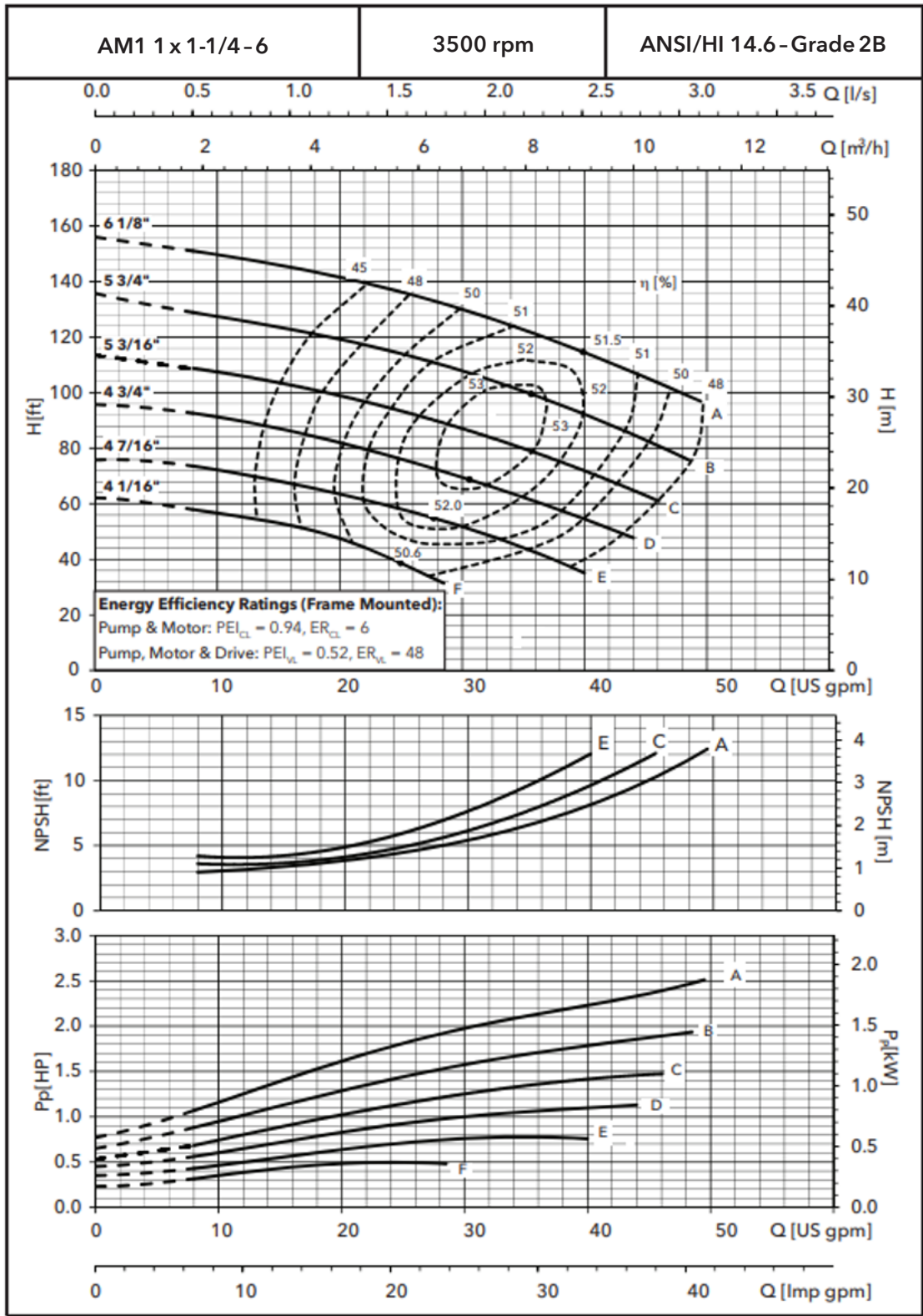
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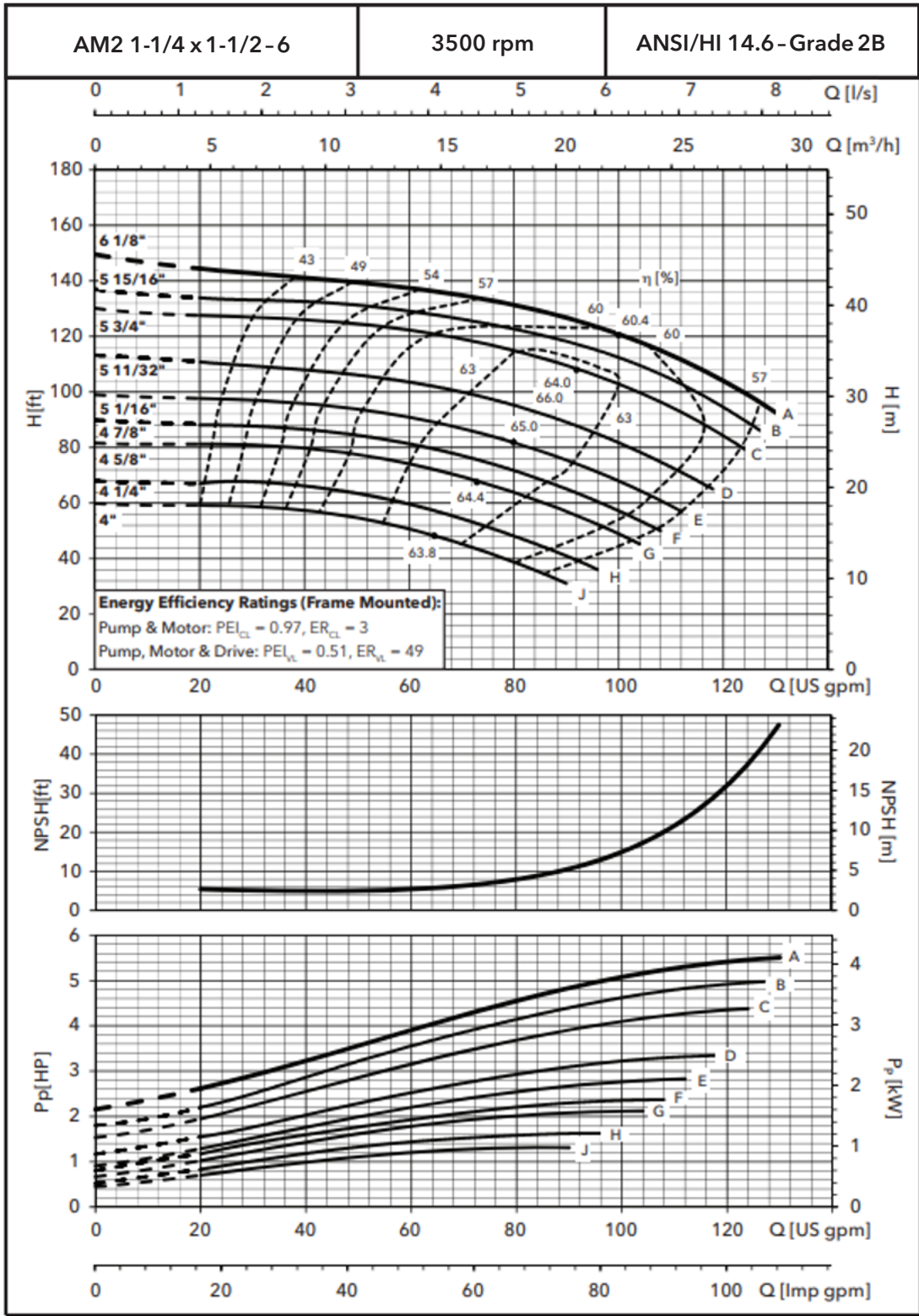
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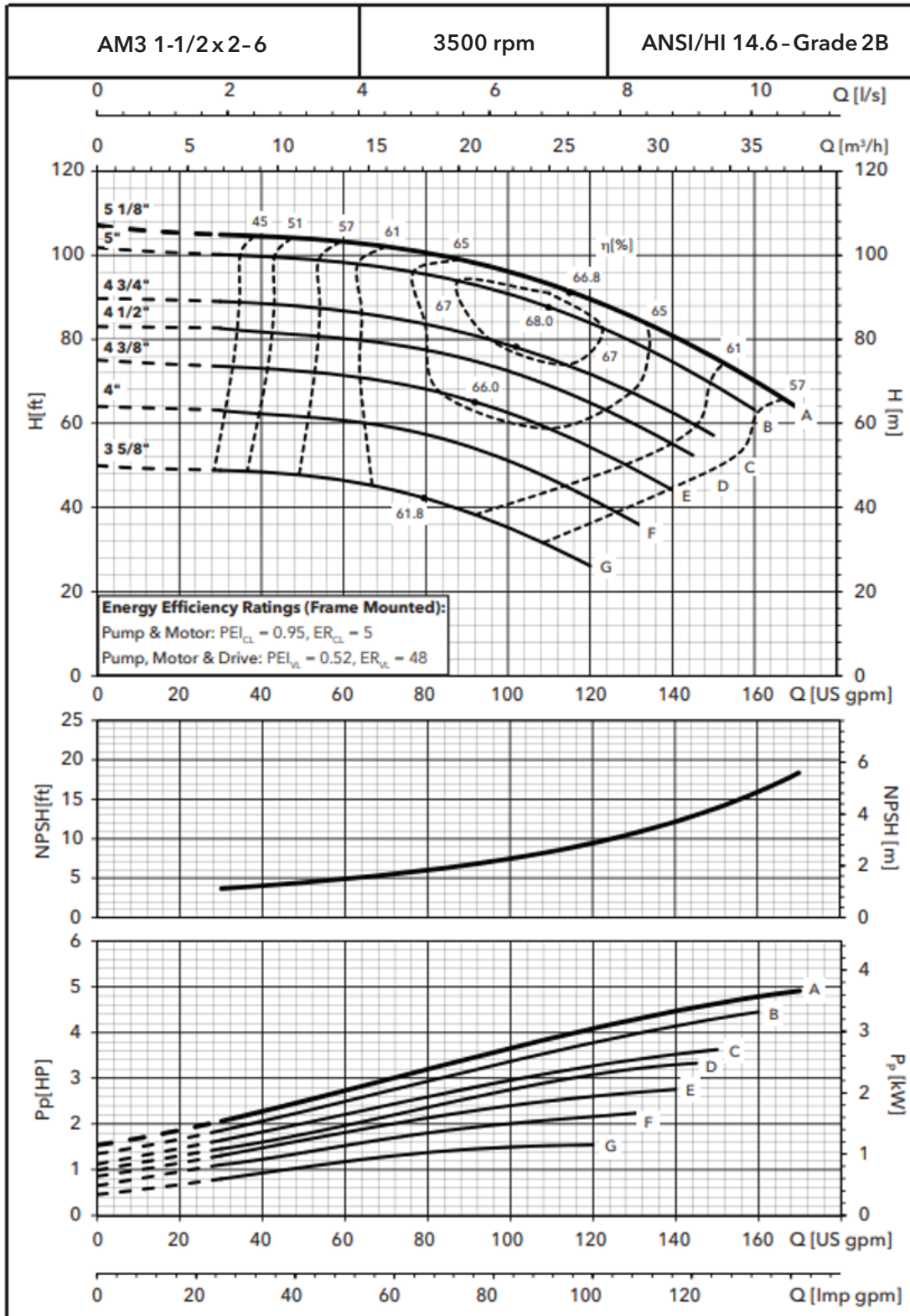
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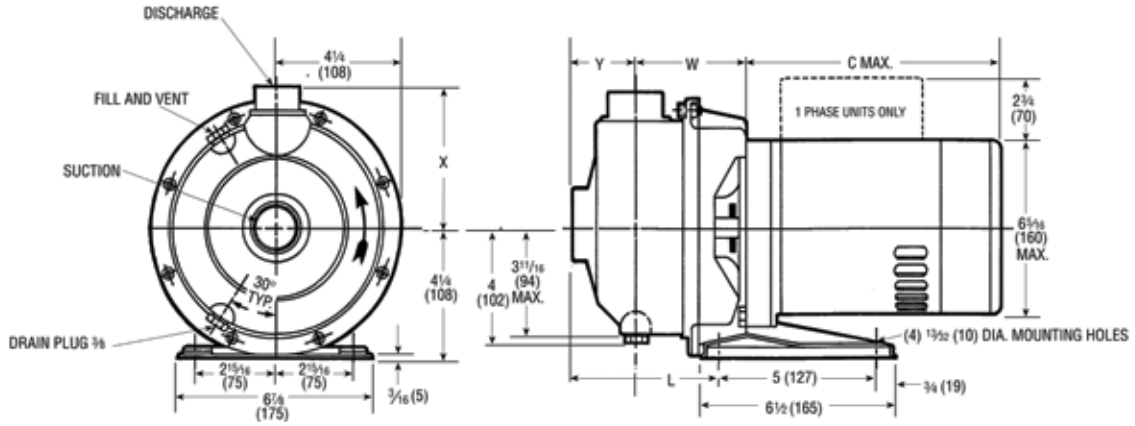
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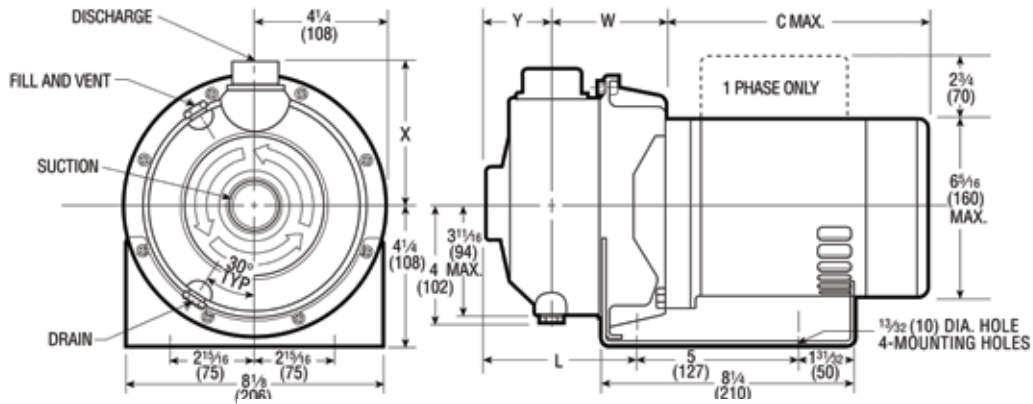
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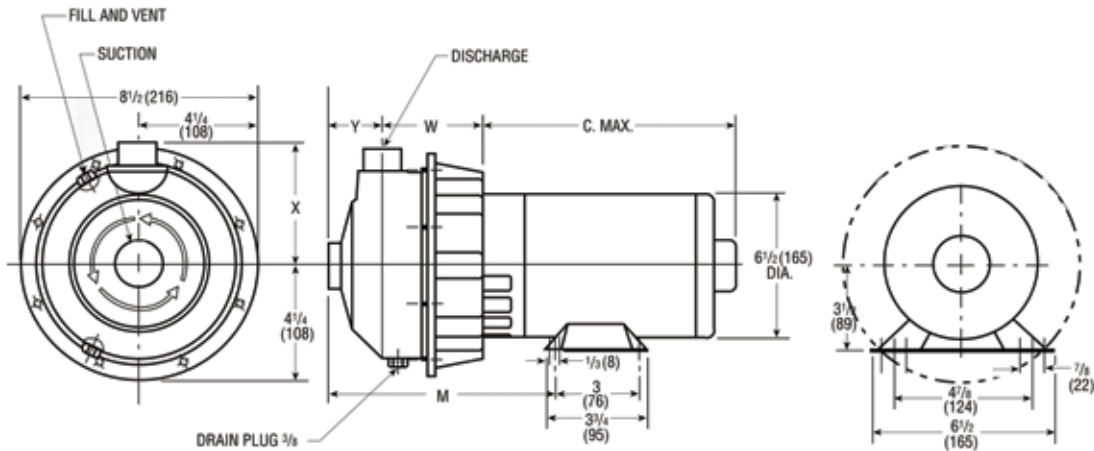
# Series e-3530 Dimension - inches (mm)



**ODP AND TEFC 1/2, 3/4 AND 1 HP – 3500 RPM**



**ODP AND TEFC 1-1/2, 2 AND 3 HP – 3500 RPM**



**ALL 1750 RPM MOTORS AND 5 HP, ODP AND TEFC – 3500 RPM**

DISCHARGE	SUCTION	W	X	Y	L	M	C-MAX
1" NPT	1-1/4" NPT	3-5/16 (84)	4-3/8 (111)	2 (51)	4-9/16 (116)		15-3/8 (391)
1-1/4" NPT	1-1/2" NPT	3-3/4 (95)	4-1/2 (114)	2-1/8 (54)	5-1/8 (130)	8-3/4 (222)	16-5/16 (414)
1-1/2" NPT	2" NPT	3-3/4 (95)	4-5/8 (117)	2-1/8 (54)	5-1/8 (130)	8-1/2 (216)	16-5/16 (414)

**NOTES:** 1. Motor dimensions may vary with motor manufacturers. 2. Not to be used for construction purposes unless certified.

# Typical Specification Series e-3530 Pumps

Furnish and install pumps with capabilities as shown on plans. Pumps shall be close-coupled, single-stage, end suction design capable of being serviced without disturbing piping connections.

Pump volute and impeller shall be AISI 316L stainless steel. All casings shall have a drain and vent plug.

The liquid capacity shall be sealed off at the pump shaft by a internally-flushed mechanical seal with 316 stainless steel hardware. Viton elastomers, Carbon and Silicon Carbide faces, suitable for continuous operation at 225°F (107°C).

Pumps shall be rated for 125 PSIG (9 bar) working pressure.

The motor shall meet NEMA specifications and shall be the size, voltage and enclosure called for on the plans. It shall have rugged ball bearings, completely adequate for the maximum load for which the motor is designed. The shaft material will be 316 stainless steel.

Each pump will be hydrostatically tested per Hydraulic Institute standards. All non-stainless steel components shall be thoroughly cleaned and painted with at least one coat of high grade machinery enamel prior to shipment.

Pumps shall be Series e-3530 Pumps as manufactured by Bell & Gossett.

A detailed weighted average pump efficiency – Part Load Efficiency Value (PLEV) – Pump Rating Report shall be submitted for each pump. Pump PLEV shall be based on the standard load profile developed in AHRI 550/590-1998 also known as IPLV or Integrated Part Load Value. The pump PLEV Rating shall be expressed with load weighting pump  $PLEV = 1 / (0.01/A + 0.42/B + 0.45/C + 0.12/D)$  & shall be based points on A: 100%, B: 75%, C: 50% and D: 25%. Each Pump Efficiency rating shown with flow matched to load percentage and Specified Control Head. Actual job specific load profile weighting may be substituted for standard IPLV weighting.

Pump and motor must meet minimum Department of Energy requirements and have a PEICL value less than 1.

The pump(s) shall be manufactured, assembled and tested in an ISO 9001 approved facility.

Series e-3530 pumps are manufactured by Bell & Gossett, a Xylem, Inc. brand.



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