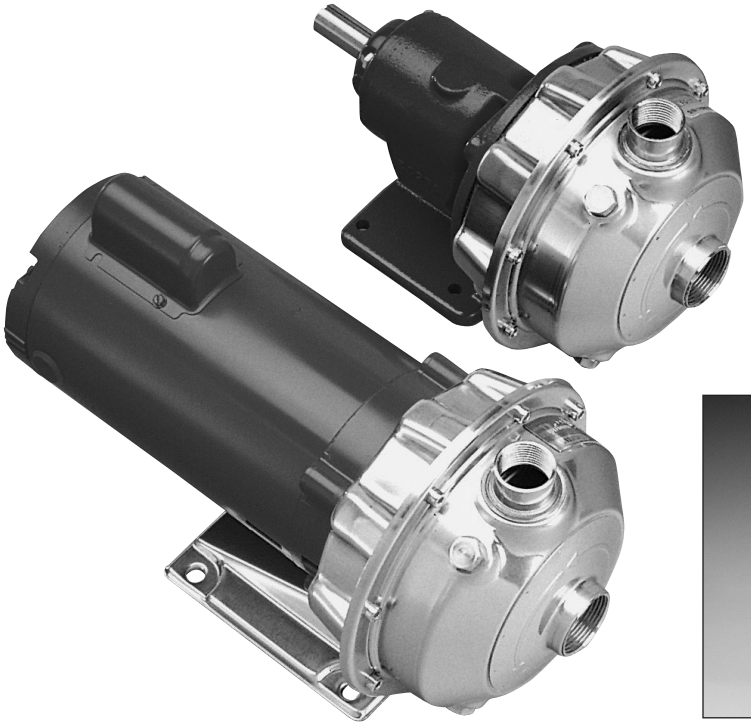
ITT

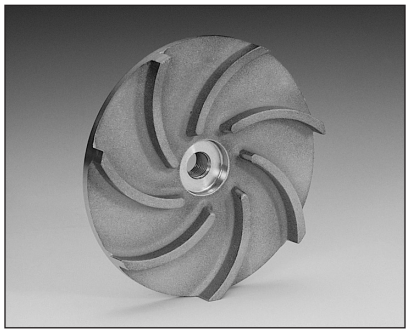
Commercial Water

Goulds Pumps

G&L Series NPO

Open Impeller All Stainless Steel End Suction Pumps





GOULDS PUMPS

www.goulds.com

Engineered for life

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.

Open Impeller Design: Open impeller design passes up to 3/8" solids including food particles, lint, metal filings, and other wash residue.

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.

The various versions of the NPO 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 in the Product Line Numbering System chart.

NPO Product Line Numbering System

Example Product Code

1 SN 2 C 1 A 4 F

Seal Vent/Flush Option

Mechanical Seal and O-ring
4 = Pre-engineered standard
For optional mechanical seal modify catalog order no. with seal code listed below.

John Crane Type 21 Mechanical Seal (5/8" seal)						
Seal Code	Rotary	Stationary	Elastomers	Metal Parts	Part No.	Casing O-Ring
2	Carbon	Sil-Carbide	EPR	316 SS	10K18	EPR
4			Viton		10K55	Viton
5	Sil-Carbide		EPR		10K81	EPR
6			Viton		10K62	Viton

Impeller Option
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	4 5/16	5 5/16	5 7/16
B	4	5 1/16	5 1/4
C	3 3/4	4 5/8	4 15/16
D	3 1/2	4 5/16	4 5/8
E	3 1/4	4 1/16	4 7/16
F	3	3 3/4	4 3/16
G	5 3/8	3 7/16	3 3/4
H	5	–	–

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
7 = 3 PH, XP
8 = 575 V, XP
0 = 1 PH, XP

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

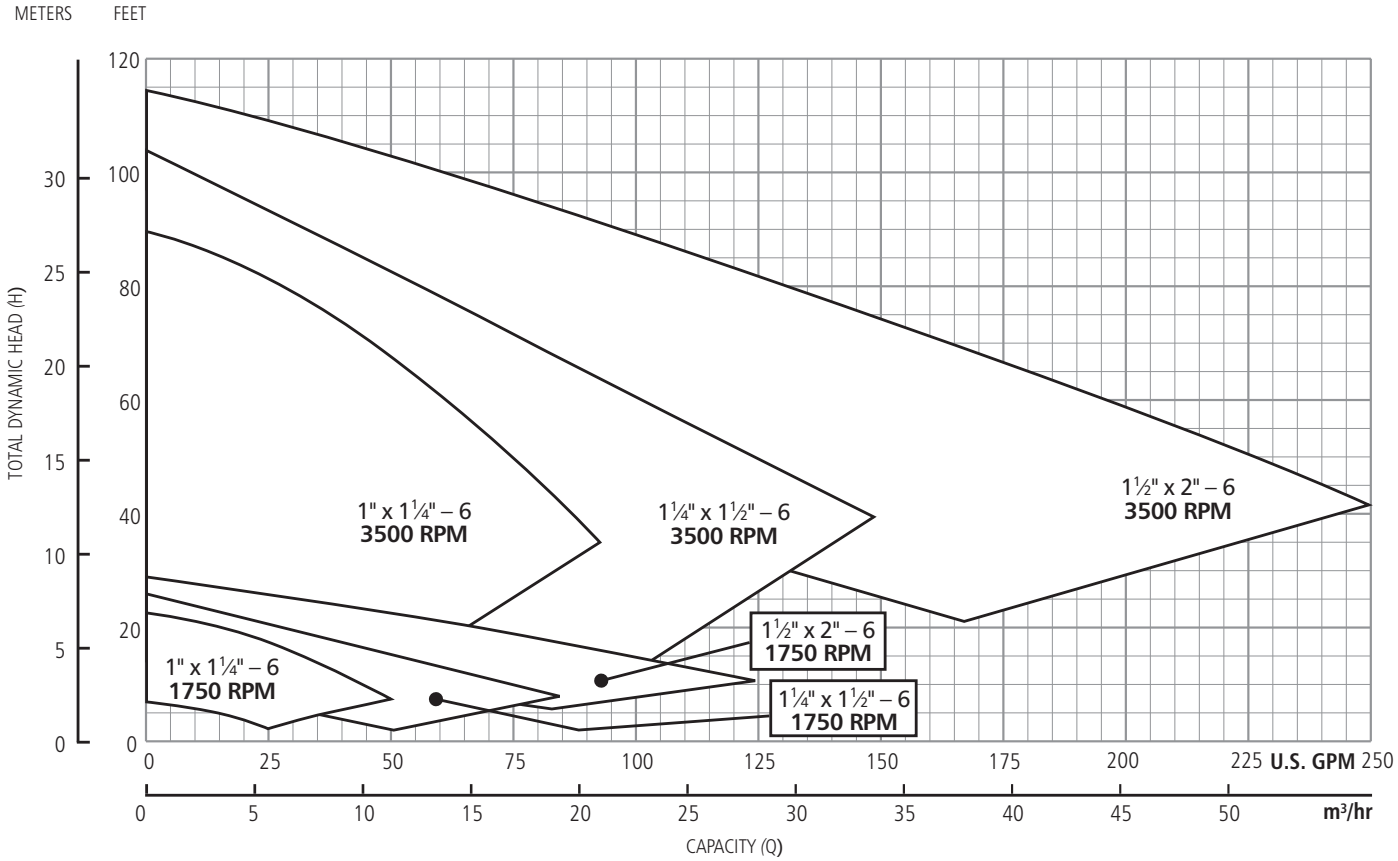
Driver: Hertz/Pole/RPM
1 = 60 Hz, 2 pole, 3500 RPM
2 = 60 Hz, 4 pole, 1750 RPM
4 = 50 Hz, 2 pole, 2900 RPM
5 = 50 Hz, 4 pole, 1450 RPM

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

Material
SN = Stainless steel

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

Performance Coverage (60 Hz)



NOTES:

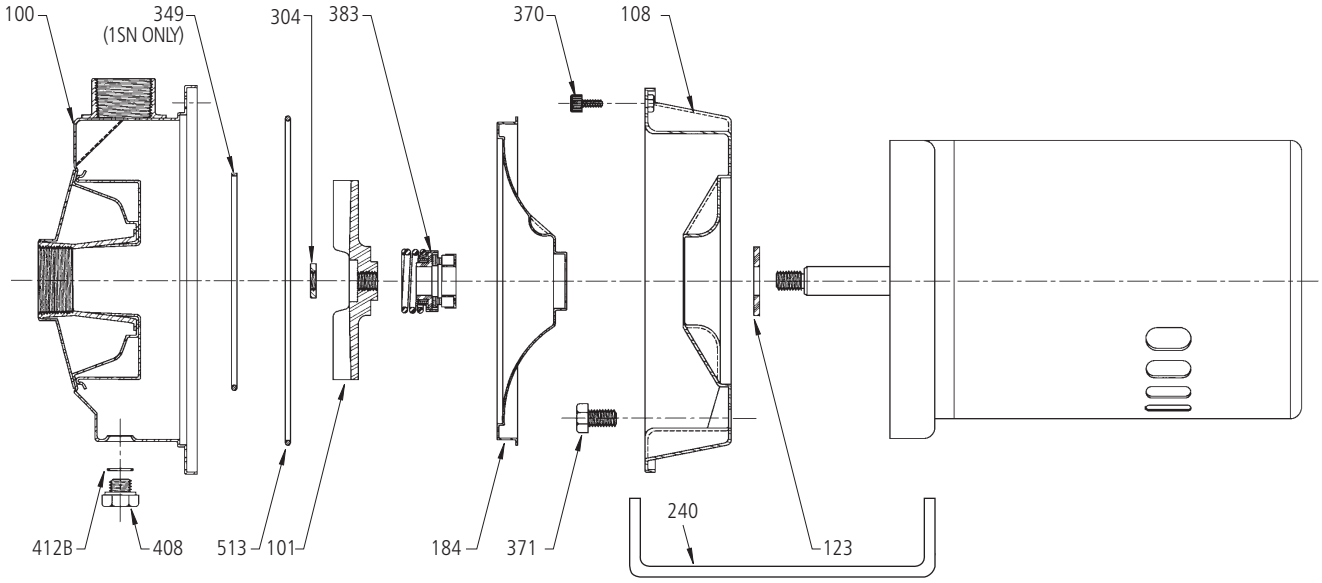
Not recommended for operation beyond printed H-Q curve.

For critical application conditions consult factory.

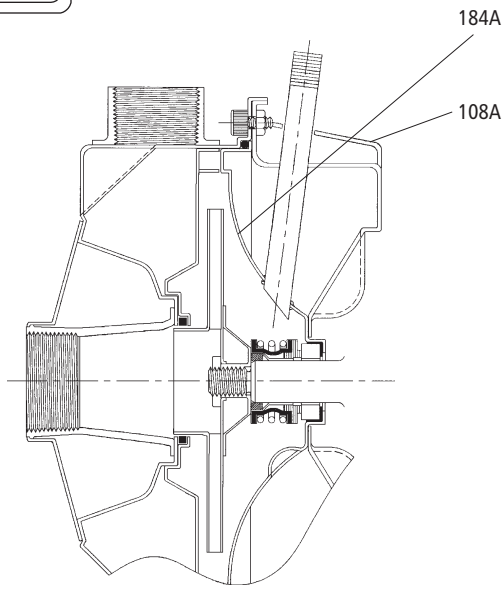
Not all combinations of motor, impeller and seal options are available for every pump model. Please check with G&L Pumps on non-cataloged numbers.

All standard 3500 RPM ODP and TEFC motors supplied by Goulds Pumps, have minimum of 1.15 service factor. Standard catalog units may utilize available service factor. Check available service factor for all motors not supplied by Goulds Pumps.

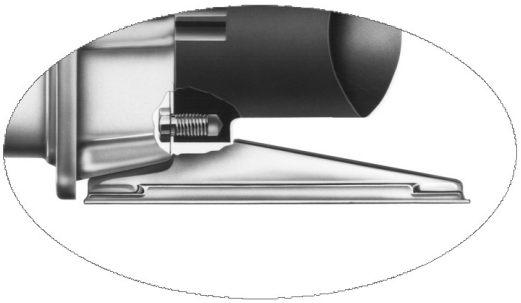
NPO Close Coupled Pump Major Components: Materials of Construction



Item No.,	Description	Materials
100	Casing	AISI 304 SS
101	Impeller	AISI 316L SS
108	Motor adapter	AISI 316L SS
108A	Motor adapter seal vent/flush	
123	Deflector	BUNA-N
184	Seal housing	AISI 316L SS
184A	Seal housing seal vent/flush	
240	Motor support	Steel
304	Impeller locknut	AISI 304 SS
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
513	O-ring, casing	
Motor	NEMA standard, 56J flange	
	Bearing frame, greased for life	Iron



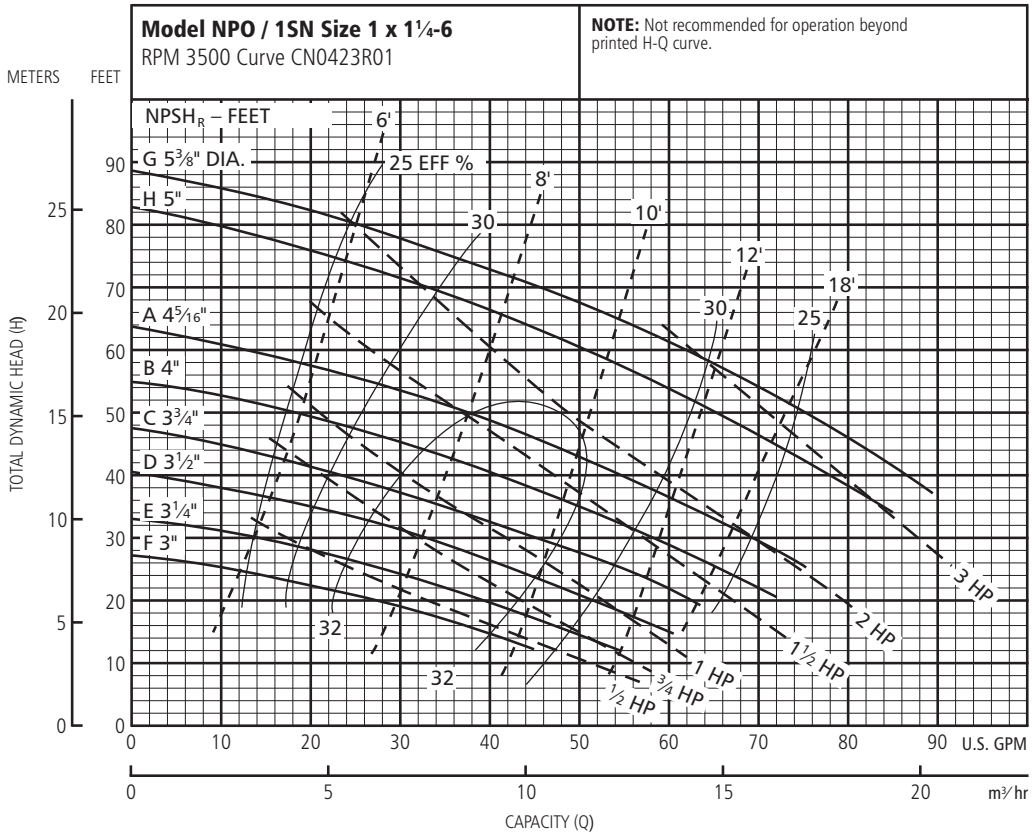
Seal Face Vent/Flush Option. Image shown with NPE impeller.



½, ¾ and 1 HP

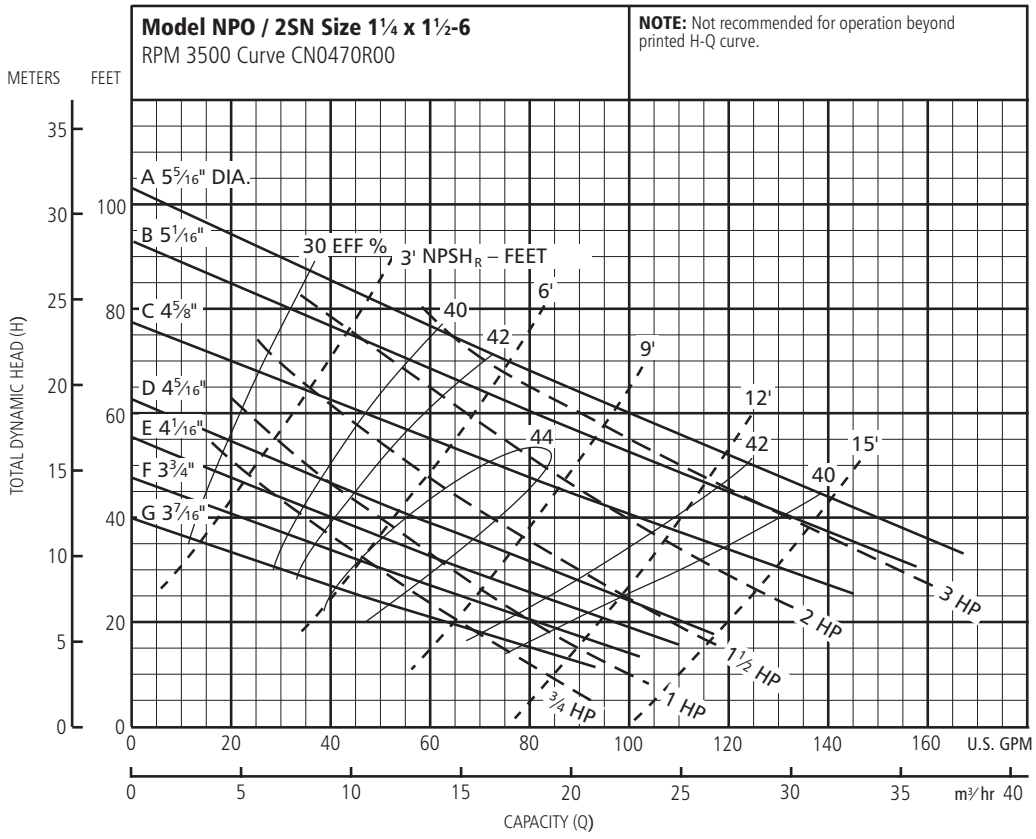
Footed motor for 5 HP, ODP and TEFC, all explosion proof. See page 11.

Performance Curves – 60 Hz, 3500 RPM



Ordering Code	Standard HP Rating	Imp. Dia.
F	½	3"
E	¾	3¼
D	1	3½
C	1½	3¾
B	1½	4
A	2	4⅝
H	3	5
G	3	5⅜

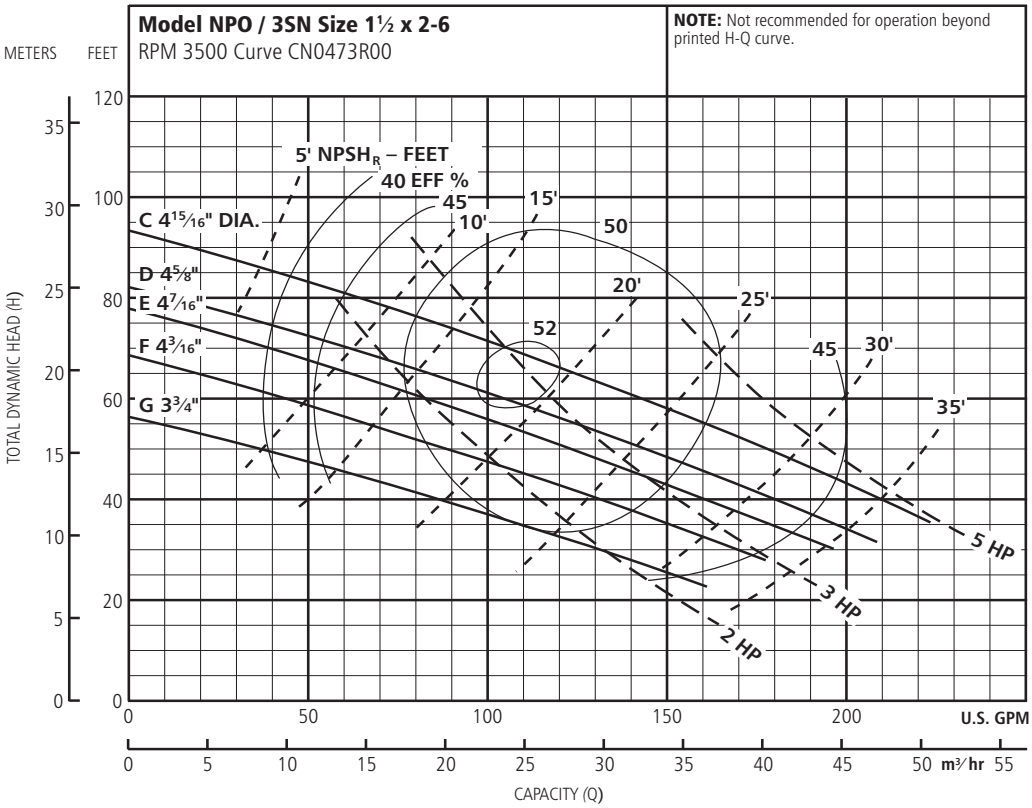
NOTE: Although not recommended, the pump may pass a ⅜" sphere.



Ordering Code	Standard HP Rating	Imp. Dia.
G	¾	3⅞
F	1	3¾
E	1½	4⅛
D	1½	4⅝
C	2	4⅝
B	3	5⅛
A	3	5⅝

NOTE: Although not recommended, the pump may pass a ⅜" sphere.

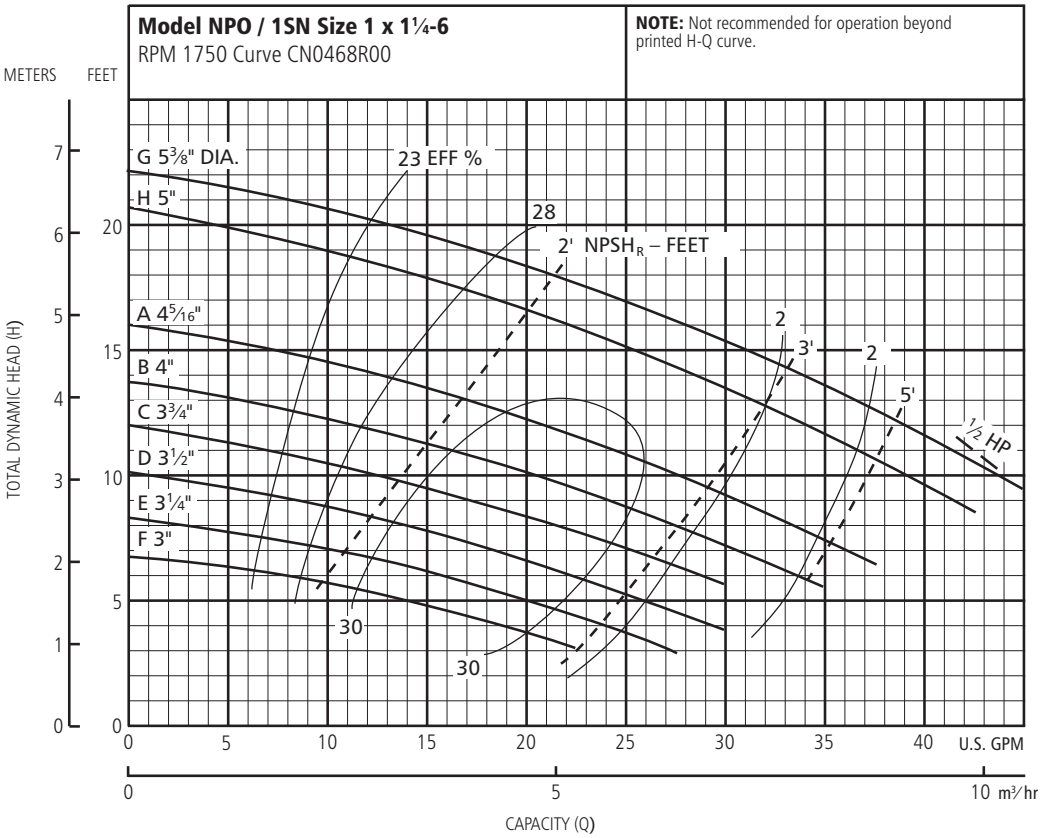
Performance Curves – 60 Hz, 3500 RPM



Ordering Code	Standard HP Rating	Imp. Dia.
G	2	3¾"
F	3	4 3/16
E	3	4 7/16
D	5	4 5/8
C	5	4 15/16

NOTE: Although not recommended, the pump may pass a ⅜" sphere.

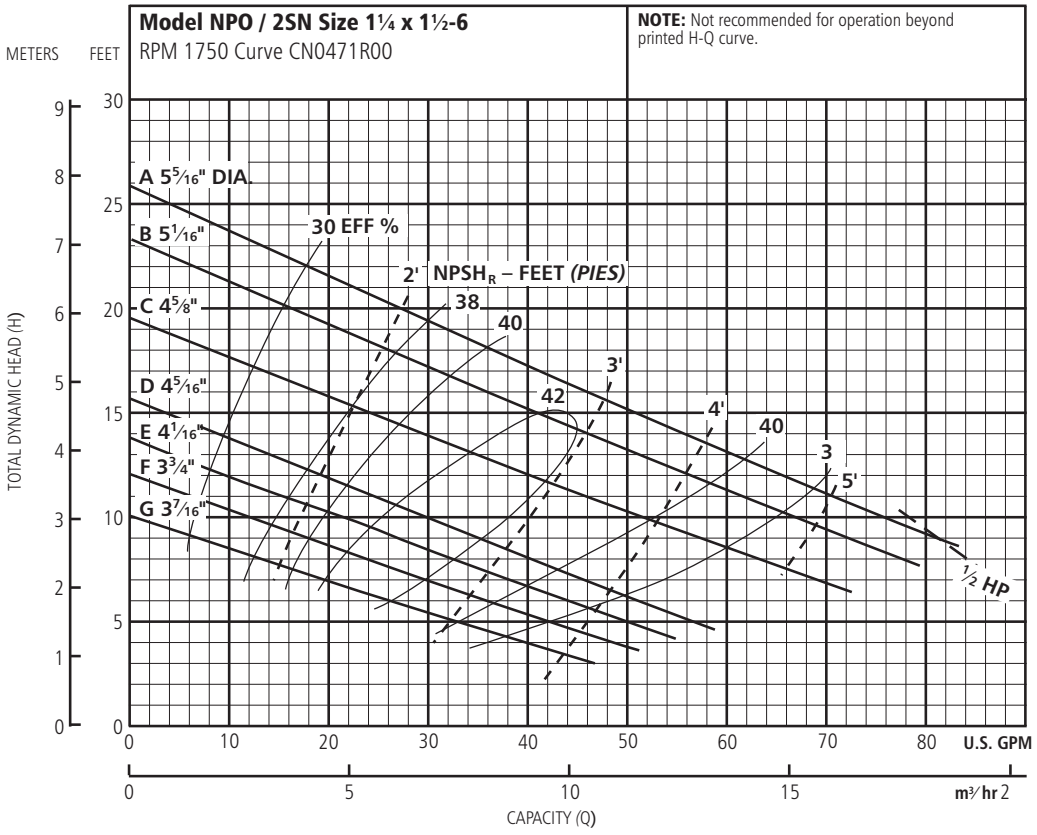
Performance Curves – 60 Hz, 1750 RPM



Ordering Code	Standard HP Rating	Imp. Dia.
F	½	3"
E	½	3¼
D	½	3½
C	½	3¾
B	½	4
A	½	4 5/16
H	½	5
G	½	5 3/8

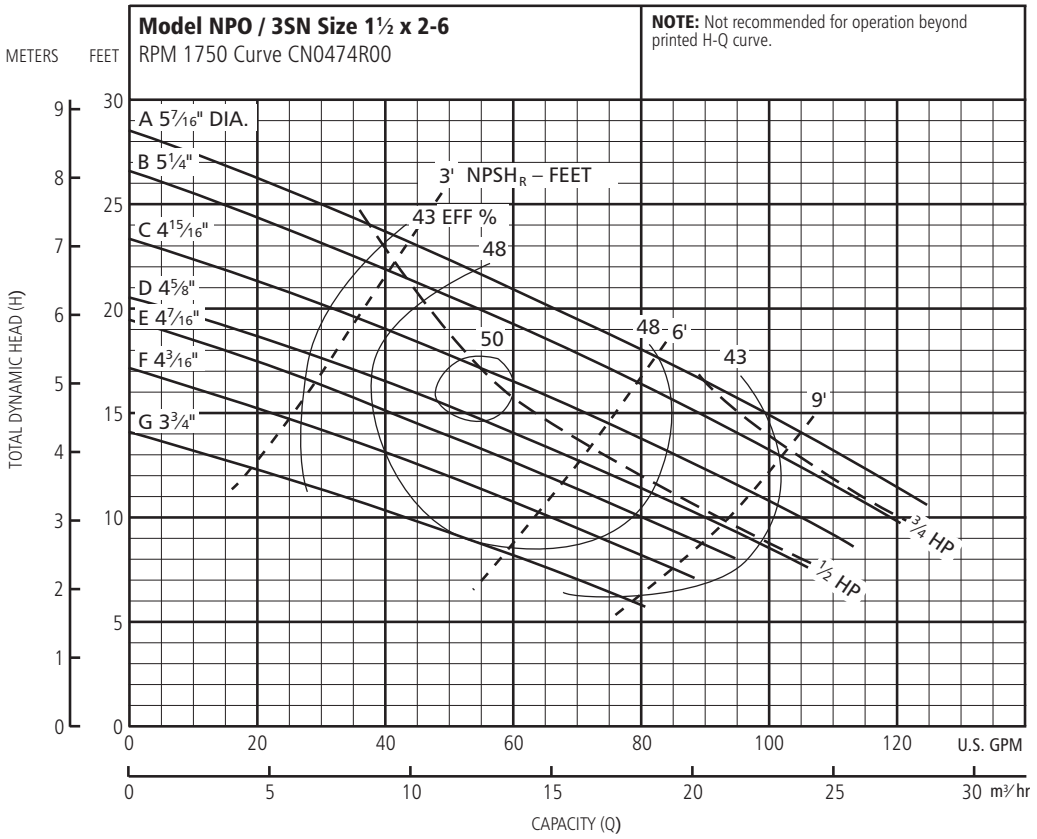
NOTE: Although not recommended, the pump may pass a ⅜" sphere.

Performance Curves – 60 Hz, 1750 RPM



Ordering Code	Standard HP Rating	Imp. Dia.
G	½	3⁷⁄₁₆"
F	½	3¾
E	½	4¹⁄₁₆
D	½	4⁵⁄₁₆
C	½	4⅝
B	½	5¹⁄₁₆
A	½	5⁵⁄₁₆

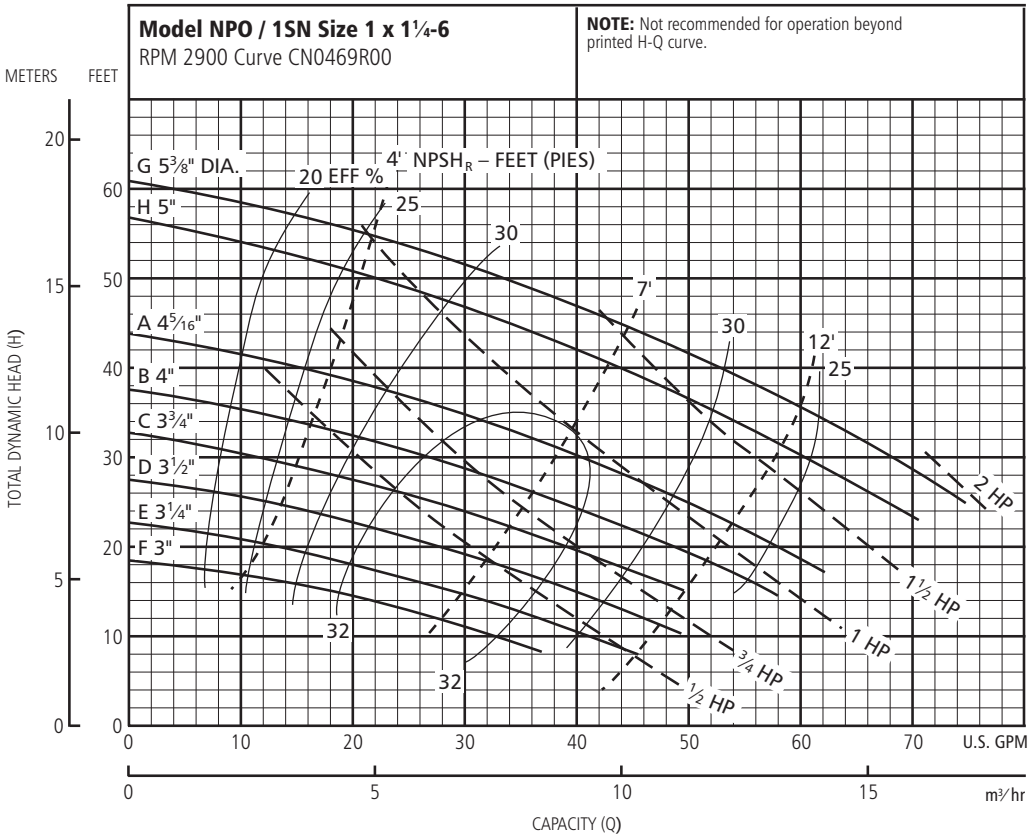
NOTE: Although not recommended, the pump may pass a ⅜" sphere.



Ordering Code	Standard HP Rating	Imp. Dia.
G	½	3¾"
F	½	4³⁄₁₆
E	½	4⁷⁄₁₆
D	½	4⅝
C	½	4¹⁵⁄₁₆
B	¾	5¼
A	¾	5⁷⁄₁₆

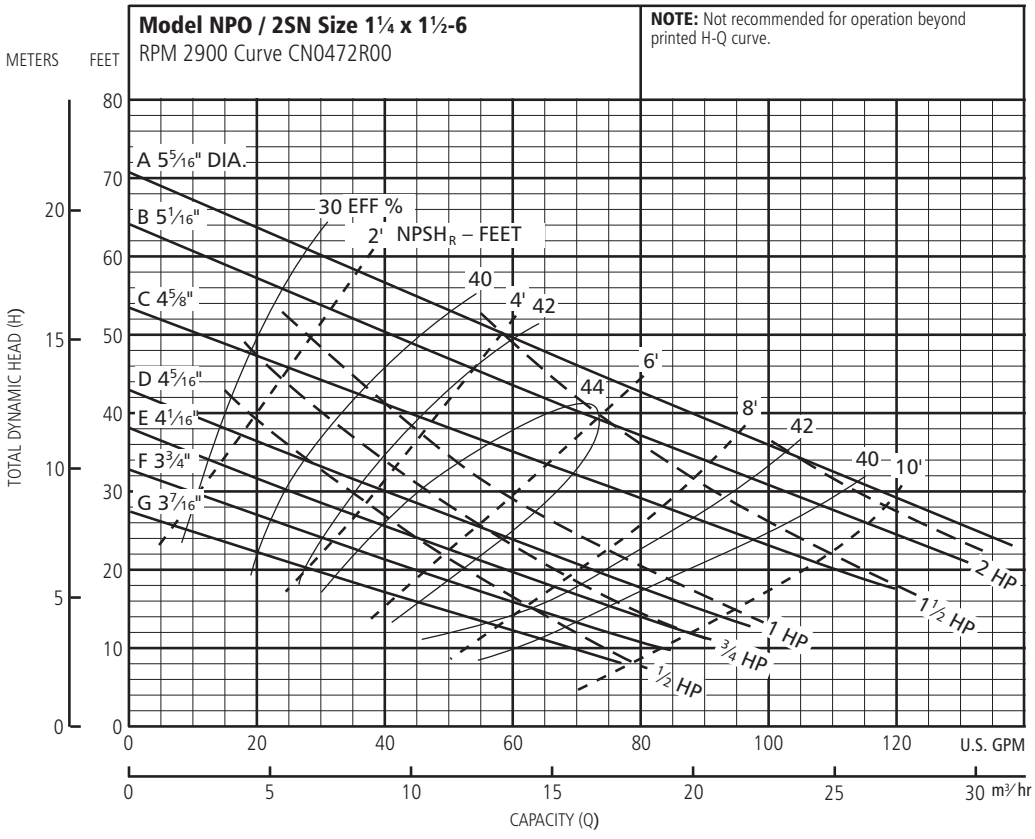
NOTE: Although not recommended, the pump may pass a ⅜" sphere.

Performance Curves – 50 Hz, 2900 RPM



Optional Impeller	
Ordering Code	**Dia.**
A	4⅝"
B	4
C	3¾
D	3½
E	3¼
F	3
G	5⅜
H	5

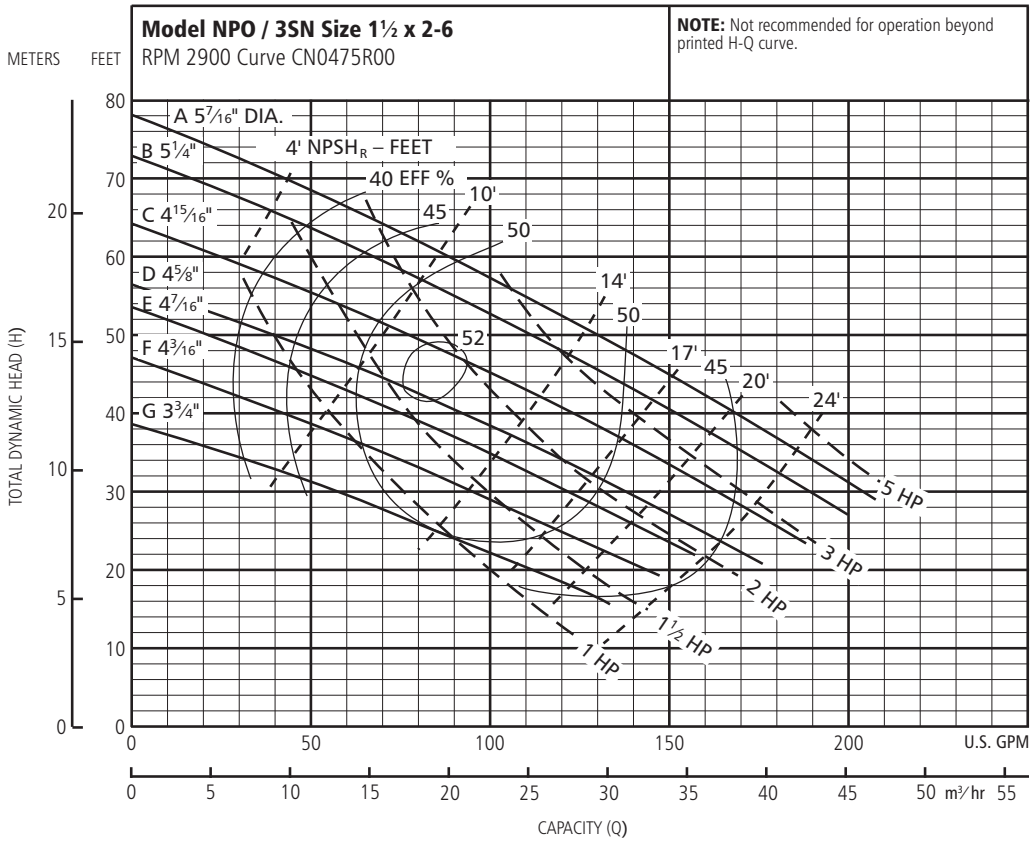
NOTE: Although not recommended, the pump may pass a ⅜" sphere.



Optional Impeller	
Ordering Code	**Dia.**
A	5⅝"
B	5⅛
C	4⅝
D	4⅝
E	4⅛
F	3¾
G	3⅞

NOTE: Although not recommended, the pump may pass a ⅜" sphere.

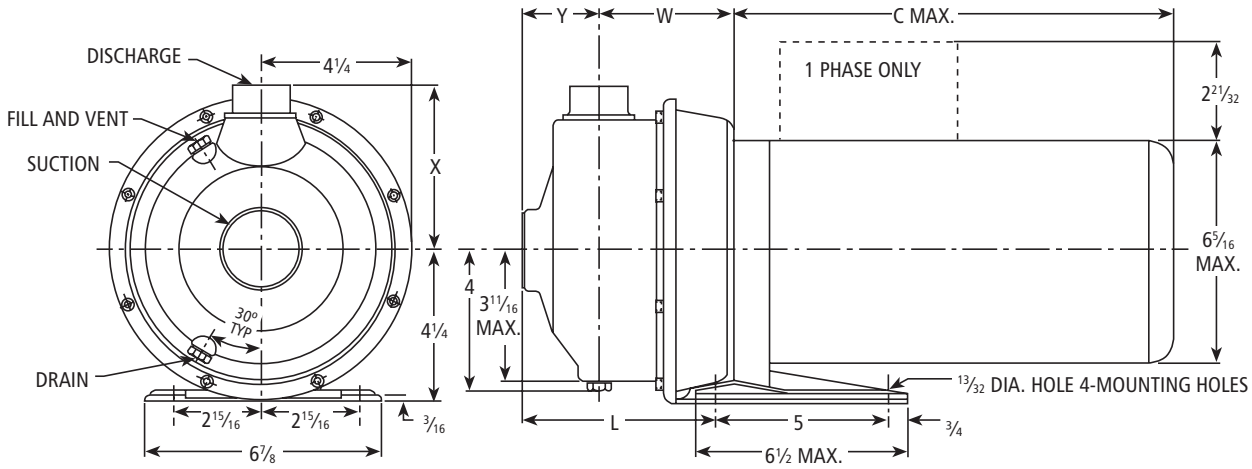
Performance Curves – 50 Hz, 2900 RPM



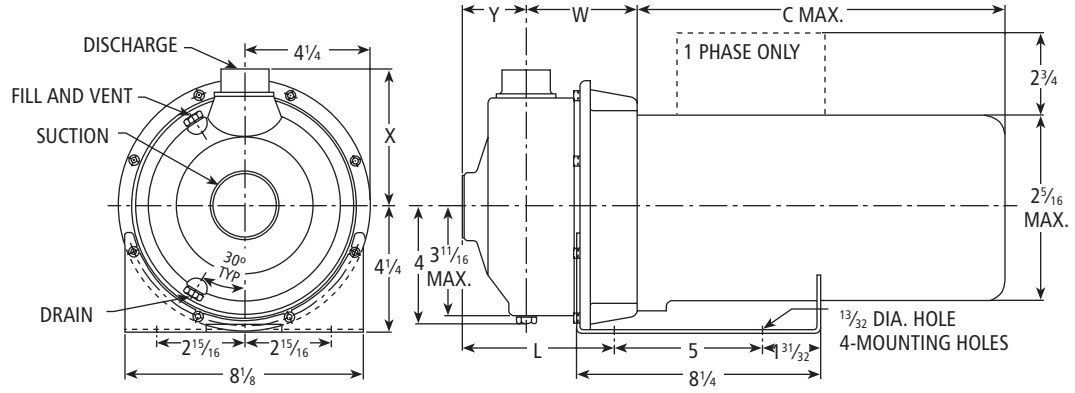
Optional Impeller	
Ordering Code	**Dia.**
A	5 7/16"
B	5 1/4
C	4 15/16
D	4 5/8
E	4 7/16
F	4 3/16
G	3 3/4

NOTE: Although not recommended, the pump may pass a 3/8" sphere.

Clockwise Rotation Viewed from Drive End



ODP and TEFC ½, ¾ and 1 HP



ODP and TEFC 1½, 2 and 3 HP

Dimensions – Determined by Pump

Pump	Suction	Discharge	HP	W	X	Y	L	M
1SN	1¼	1	½ – 3	3 5/16	4 3/8	2	4 9/16	7 5/16
2SN	1½	1¼	¾ – 5	3¾	4½	2 1/8	5 1/8	7 7/8
3SN	2	1½	1 – 7½	3¾	4 5/8	2 1/8	5 1/8	7 7/8

Available Motor Weights and Dimensions

HP	Motor Weights						C Max. Length
	1 Phase			3 Phase			
	ODP	TEFC	EXP	ODP	TEFC	EXP	
½	16	21	47	19	18	27	10 15/16
¾	19	24	41	21	21	30	11¼
1	22	26	49	23	21	30	11½
1½	28	35	56	27	27	37	12½
2	33	39	60	32	33	44	12 5/8
3	40	43	—	41	37	—	12¾
5	42	—	—	42	45	—	14½

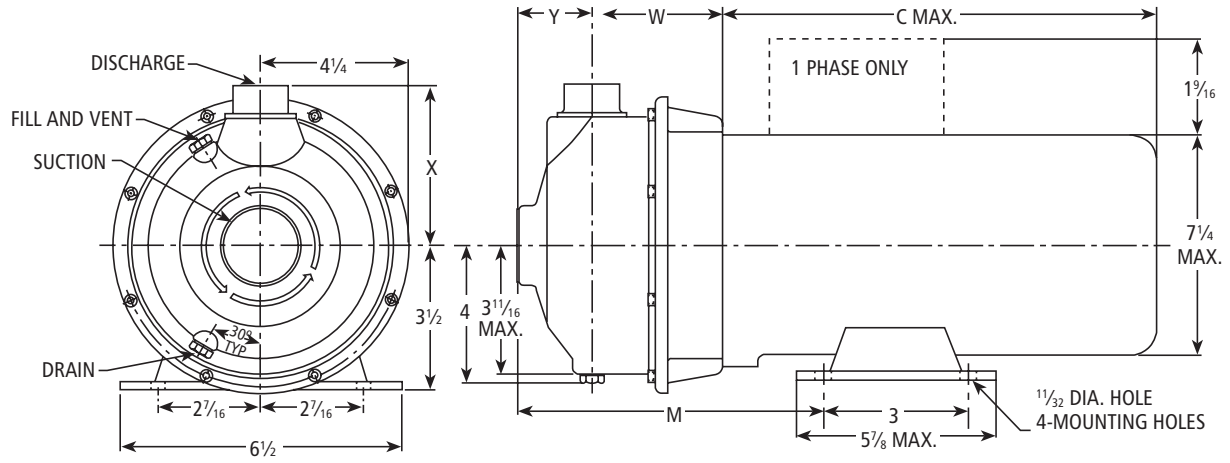
Dimensions in inches, weights in pounds.

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.

NPO Close Coupled with Footed Motor – 5 and 7½ HP units and all Explosion proof

All Explosion Proof Motors and 5 HP ODP and TEFC and 7½ HP ODP



Specifications

Capacities to:
120 GPM (283L/min) at 1750 RPM
200 GPM (550L/min) at 3500 RPM

Heads to:
30 feet (11 m) at 1750 RPM
100 feet (50 m) at 3500 RPM

Working pressures to:
125 PSIG (9 bars)

Maximum temperatures to:
212°F (100°C) with standard seal or 250°F (121°C) with optional high temperature seal.

Direction of rotation:
Clockwise when viewed from motor end.

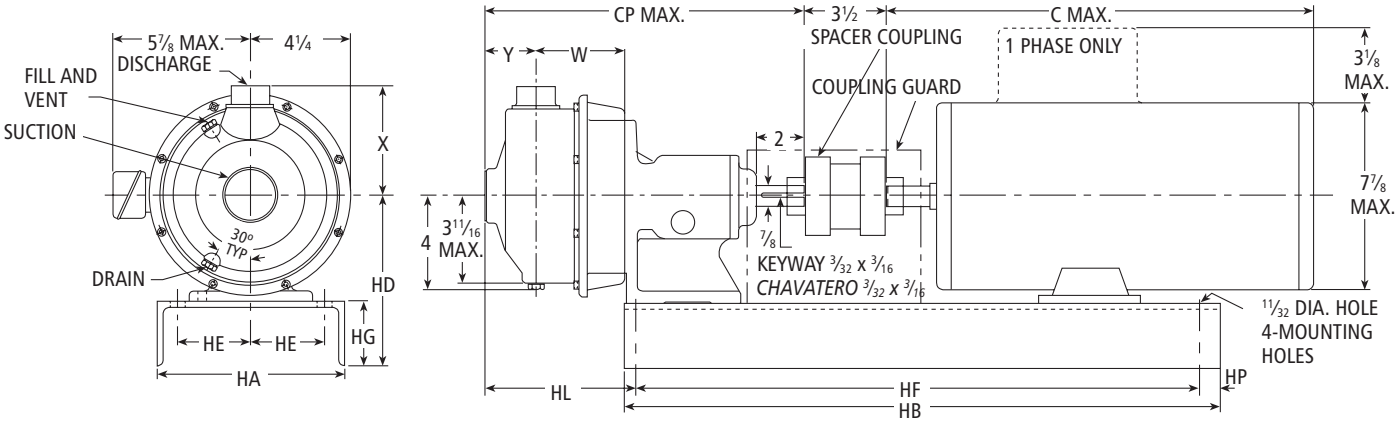
Motor specifications:
NEMA 56J frame, 1750 RPM, ½ and ¾ HP. 3500 RPM ½ through 5 HP. Open drip-proof, totally enclosed fan-cooled explosion proof enclosures. Stainless steel shaft with ball bearings.

Single phase: Voltage 115/230 ODP and TEFC. (3 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.

NPO Frame Mounted – Dimensions, Weights and Specifications



Specifications

Capacities to:
120 GPM (283L/min) at 1750 RPM
200 GPM (550L/min) at 3500 RPM

Heads to:
30 feet (11 m) at 1750 RPM
100 feet (50 m) at 3500 RPM

Working pressures to:
125 PSIG (9 bars)

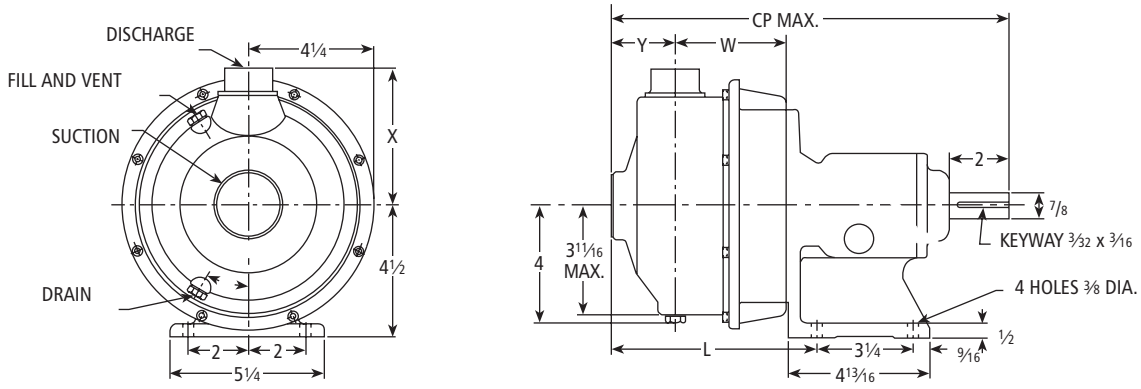
Maximum temperatures to:
212°F (100°C) with standard seal or 250°F (121°C) with optional high temperature seal.

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.

NPO-F



Dimensions and Weights – Determined by Pump

Pump	Suct. NPT	Disch. NPT	CP	L	W	X	Y	Wt.	Dim. "HL" Determined by Pump and Motor		
									Frame		
									56	140	180
1SN	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
2SN	1 1/2	1 1/4	13 1/2	7	3 3/4	4 1/2	2 1/8	23	5 1/8		7
3SN	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.
	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	13	45
143T	—	—	1 1/2	1 1/2	13 3/8	45
145T	2	2	1 1/2 – 3	1 1/2 – 2	14 1/4	52
182T	3	3	5	3	16 5/8	63
184T	5	5	—	5	18 1/8	112

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.

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.

- Dish washers
- Bottle and glass washers
- Commercial laundry systems
- Parts washers
- Machine tool coolant
- Water circulation
- Booster service
- Liquid transfer
- Spray system
- Chillers
- Washing/cleaning systems
- Air scrubbers
- Filtration systems
- OEM applications
- General water services

Notes

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Commercial Water

GOULDS PUMPS

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Engineered for life