

FEATURES

- High Pump Efficiency Means Lower Energy Consumption
- All Major Pump Components Are Made Of Stainless Steel
- Built And Designed To Resist The Most Complex And Severe Conditions
- All Parts Subject To Wear Can Be Easily Replaced — No Special Tools Are Needed
- Improved Stiffness And Permanent Alignment
- Only The Highest Quality Materials Are Used
- Attention To Detail Provides Better Reliability

SPECIFICATIONS

- Capacity: Up to 650GPM at 60Hz
- Heads: Up to 1620 Feet at 60Hz
- Pump Can Work Continuously Both Vertically And Horizontally



Impellers and turbine bowls with three-dimensional twisted blades enhance efficiency and head per stage.

NS

series 60_{Hz}

6"

NS 80

NS 110

NS 160

NS 240

NS 320

8"

NS 400

NS 500

motralec

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www.motralec.com

submersible pumps for deep wells

NS Series. Stainless Steel 6" & 8" Submersible Pumps for 6" deep wells and larger

APPLICATIONS

These heavy-duty 6" & 8" submersible pumps are specially designed for:

- Municipal water works
- Water distribution and pressure boosting
- Irrigation and sprinkler systems
- Water treatment plants. filtration and reverse osmosis
- Industrial cooling and processing
- Mining industry, drainage and de-watering
- Fire-fighting equipment
- General industry
- Fountains

FEATURES

- Fabricated stainless steel impellers and diffusers for corrosion resistance
- Heavy duty stainless steel structures to assure permanent alignment of all the components in order to increase run time and trouble-free operation
- Teflon floating neck ring, ceramic guide journal and Nitrile rubber fluted bearing ensure durability against wear for long-lasing constant performances and product reliability
- Hexagonal shaft to ensure positive drive of the impeller stack
- Compact, reliable and suited to operate in horizontal position
- Built-in check valve to protect the pump against water hammer risk
- The hydraulic design is such to enhance the overall efficiency thus reducing energy consumption and making the pumping systems more cost effective

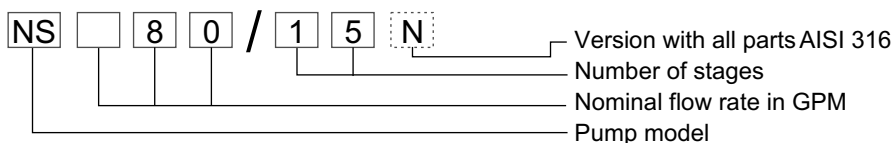
SPECIFICATIONS

- Capacities up to 650 GPM
- 1620 feet
- Maximum allowable amount of sand 50 gr/m³
(of the same hardness and granulometry of silt)
- Water temperature range: from -5° C to 6° C (23°F to 140°F)
- Rotation: counter clockwise when looking into the discharge
- Motor adapter in compliance with NEMA standard
- Pump can work continuously in a vertical or horizontal position

AVAILABLE OPTIONS

- 316 Stainless steel (N) version (DIN/EN 1.4401) for 6" only
- 8" Submersible is all 316 stainless steel
- Double cable guard

PUMP IDENTIFICATION CODE



6" SUBMERSIBLE PUMP



Radial flow stage

Mixed flow stage

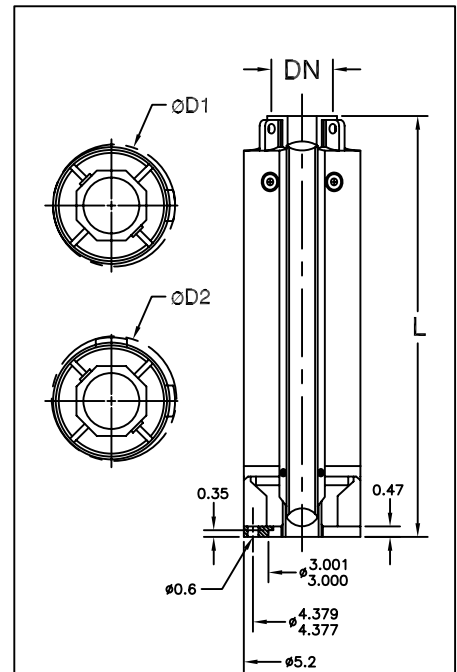
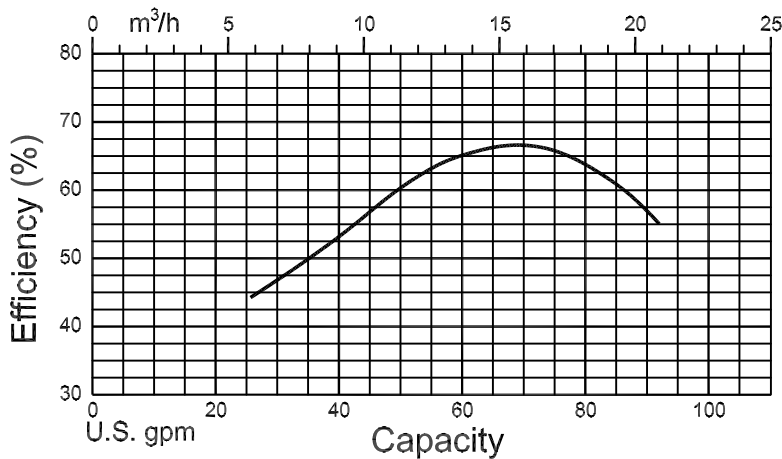
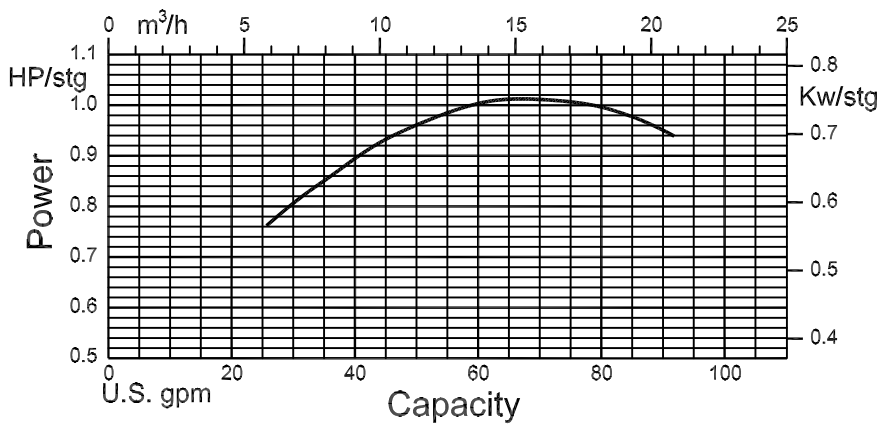
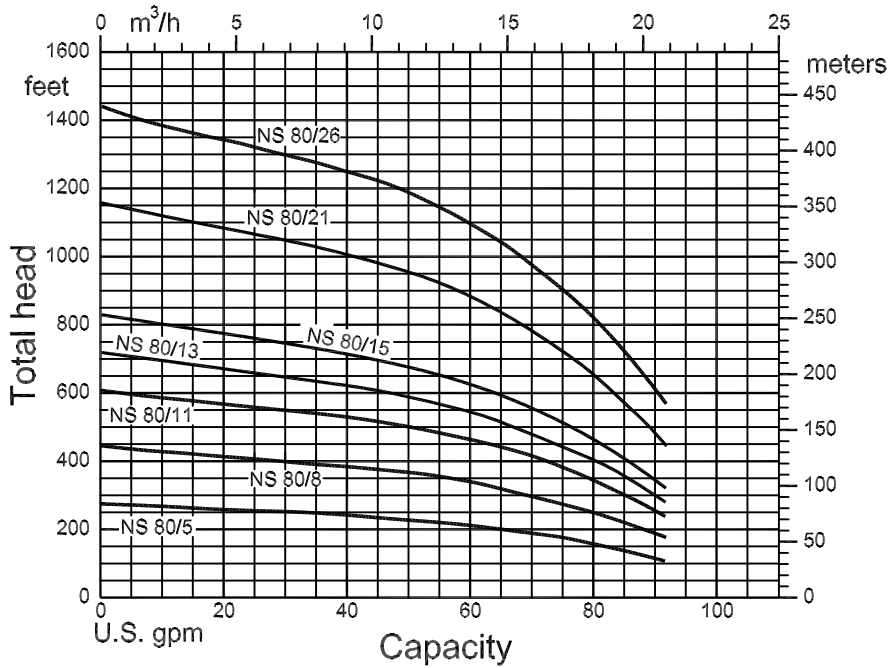


PARTS DESCRIPTION	MATERIAL				
	Type	Standard version		N version	
		AISI	DIN / EN	AISI	DIN / EN
Outer case with motor adapter	Stainless steel	304	1.4301	316	1.4404
Discharge case with built-in check valve	Stainless steel	316	1.4404	316	1.4404
Sealing O-ring	Nitrile rubber (NBR)				
Upper bowl	Stainless steel	316	1.4404	316	1.4404
Upper bearing bush	Nitrile rubber (NBR)				
Upper journal sleeve	Stainless steel w/ceramic coating	329	1.4460	329	1.4460
Pump shaft	Stainless steel	316	1.4401	316	1.4401
Coupling to motor	Stainless steel	316/329	1.4401/1.4460	316/329	1.4401/1.4460
Diffuser	Stainless steel	304	1.4301	316	1.4404
Floating neck ring	Teflon (PTFE)				
Secondary bearing bush	Nitrile rubber (NBR)				
Secondary journal sleeve	Stainless steel	304	1.4301	316	1.4401
Impeller	Stainless steel	304	1.4301	316	1.4404
Cable guard	Stainless steel	316	1.4401	316	1.4401
Suction strainer	Stainless steel	316	1.4401	316	1.4401
Insert locking outer case	Stainless steel	316	1.4401	316	1.4401
Up-thrust washer	Stainless steel	316	1.4401	316	1.4401
Up-thrust disc	Teflon (PTFE)				
Screws and washers	Stainless steel	316	1.4401	316	1.4401

It is our policy to continuously develop and improve our products, therefore, National Pump reserves the right to amend specifications without prior notice.

6" SUBMERSIBLE PUMP

NS 80 3460 RPM



D1 max dimensions:
 pump ø5.6 inches
 pump with motor (e.g. 5.37 inches ext. dia.) ø5.6 inches

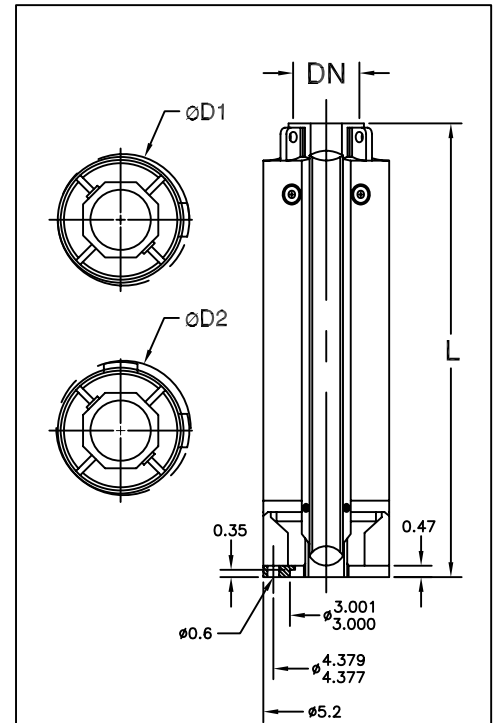
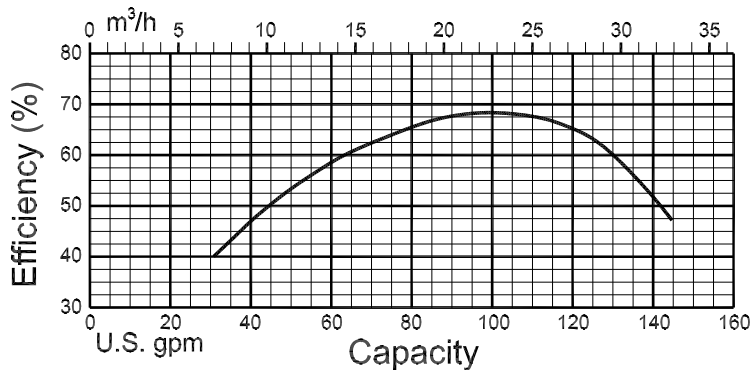
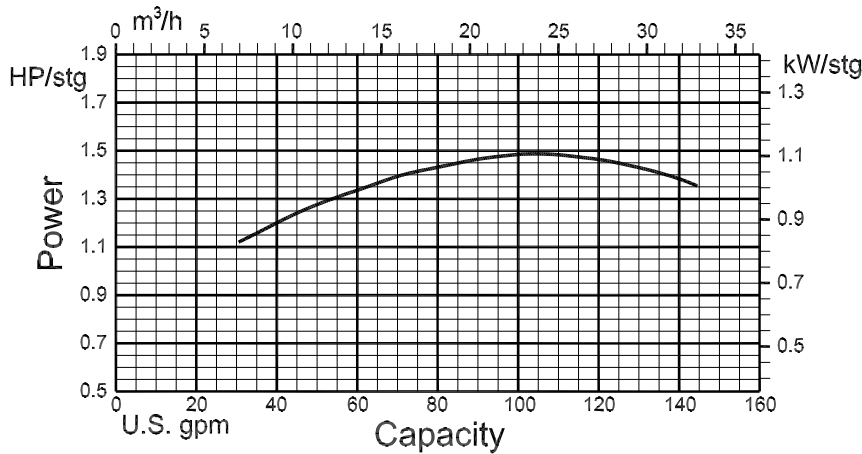
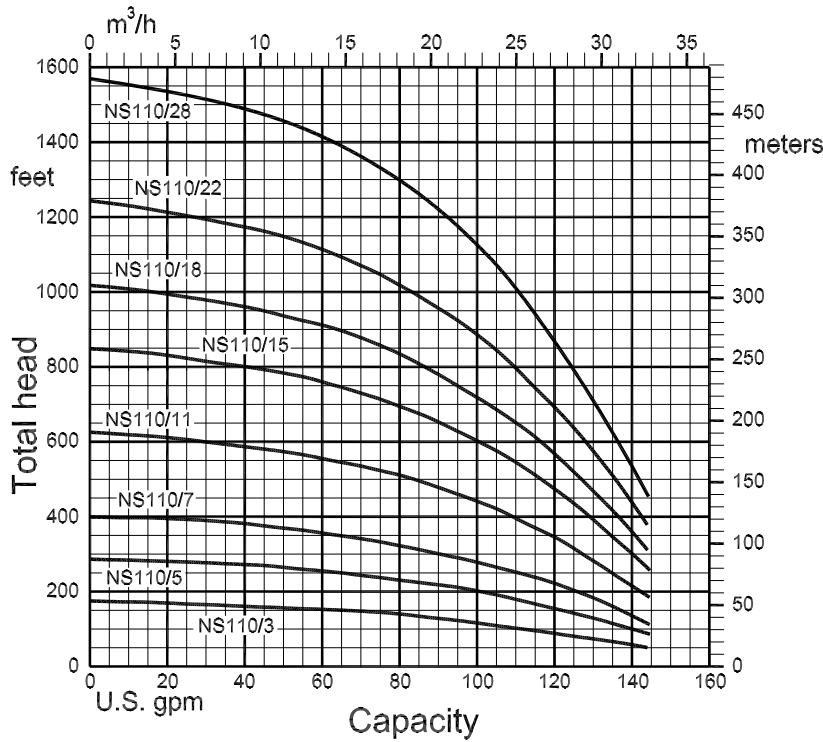
D2 max dimensions:
 pump ø5.7 inches
 pump with motor (e.g. 5.37 inches ext. dia.) ø5.76 inches

Pump Type	HP	kW	Dimensions		Weight (lbs.)
			L (inches)	DN	
NS80/5	5.0	4	14.0	3" NPT	23.1
NS80/8	7.5	5.5	17.6	3" NPT	28.6
NS80/11	10	7.5	21.1	3" NPT	33
NS80/13	12.5	9.1	23.5	3" NPT	36.7
NS80/15	15	11	25.9	3" NPT	39.6
NS80/21	20	15	33.0	3" NPT	49.5
NS80/26	25	18.5	38.8	3" NPT	57.2

The coupling to motor and all the mounting dimensions are in accordance with NEMA standard.

6" SUBMERSIBLE PUMP

NS110 3460 RPM



D1 max dimensions:
 pump ø5.6 inches
 pump with motor
 (e.g. 5.37 inches ext. dia.) ø5.6 inches

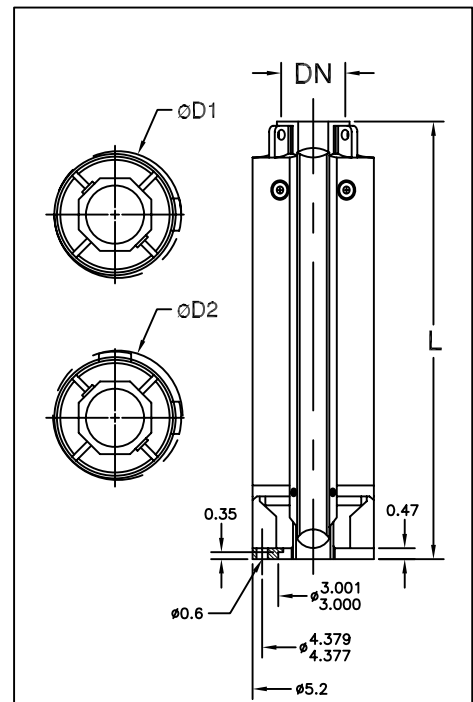
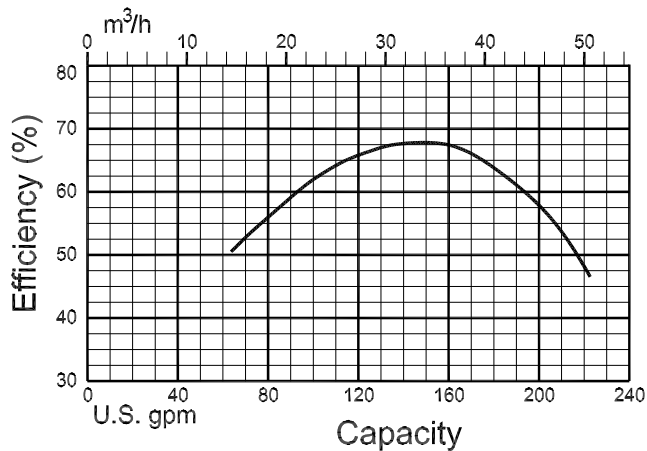
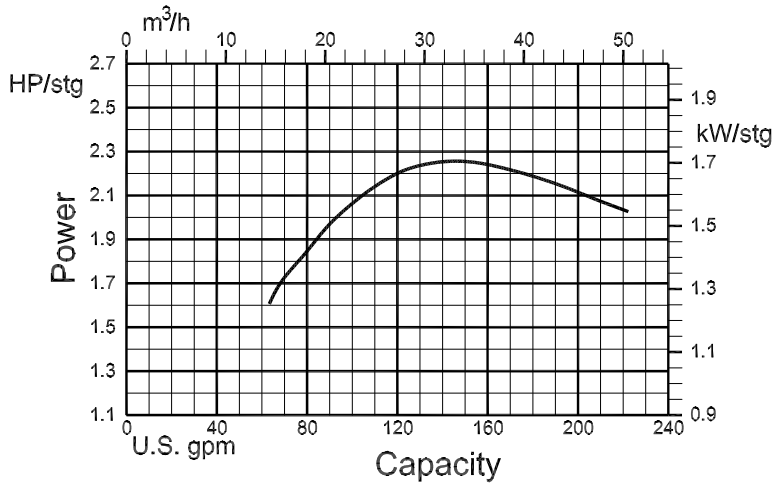
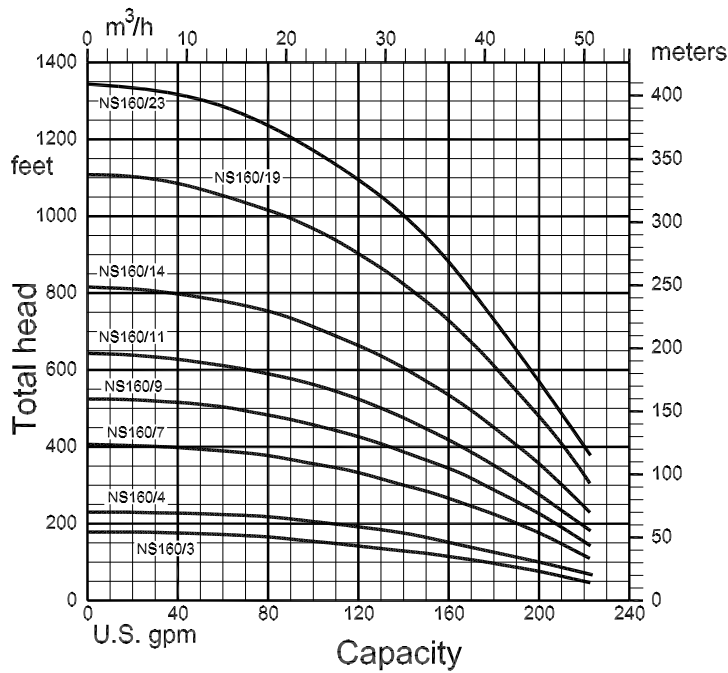
D2 max dimensions:
 pump ø5.7 inches
 pump with motor
 (e.g. 5.37 inches ext. dia.) ø5.76 inches

Pump Type	HP	kW	Dimensions		Weight (lbs.)
			L (inches)	DN	
NS110/3	5	4	12.5	3" NPT	19.8
NS110/5	7.5	5.5	15.5	3" NPT	24.2
NS110/7	10	7.5	18.4	3" NPT	27.5
NS110/11	15	11	24.4	3" NPT	35.2
NS110/15	20	15	30.3	3" NPT	41.8
NS110/18	25	18.5	34.7	3" NPT	47.3
NS110/22	30	22	40.6	3" NPT	55.0
NS110/28	40	30	49.5	3" NPT	67.0

The coupling to motor and all the mounting dimensions are in accordance with NEMA standard.

6" SUBMERSIBLE PUMP

NS160 3460 RPM



D1 max dimensions:
 pump Ø5.6 inches
 pump with motor
 (e.g. 5.37 inches ext. dia.) Ø5.6 inches

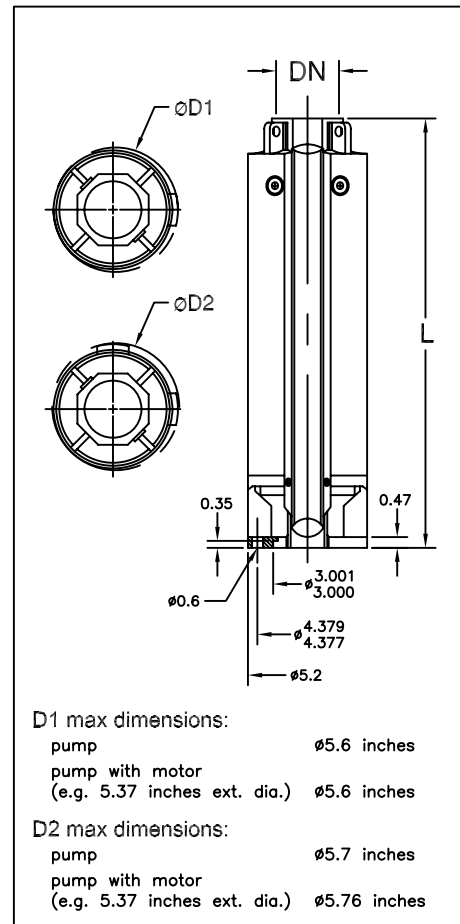
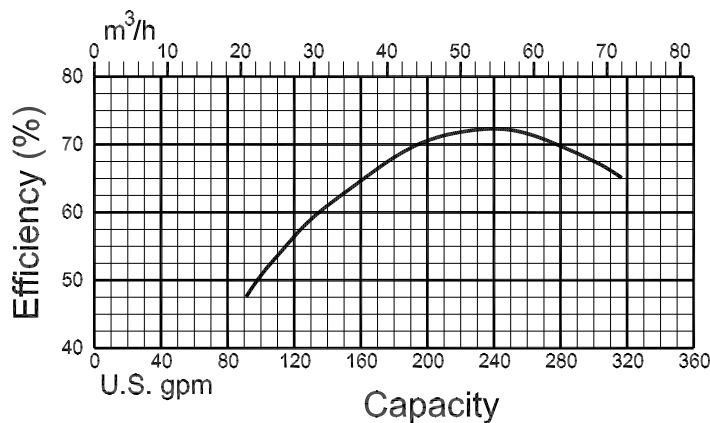
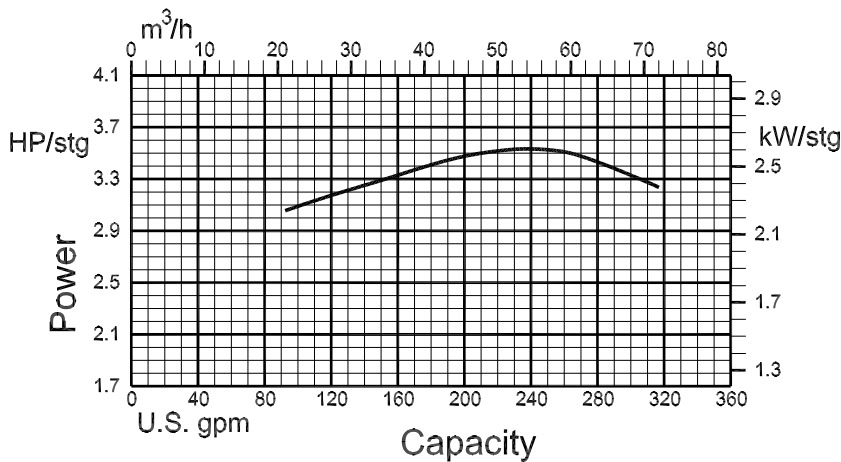
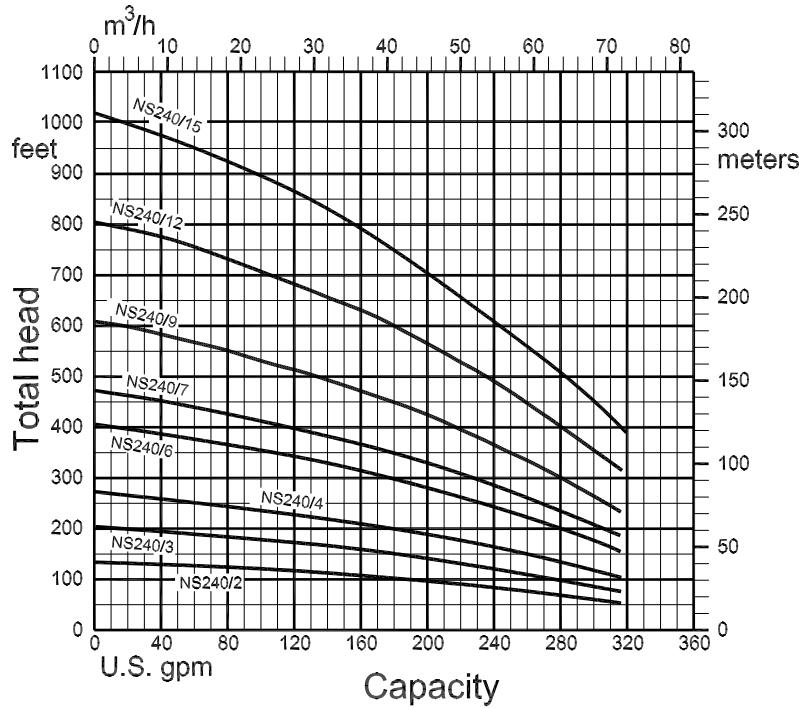
D2 max dimensions:
 pump Ø5.7 inches
 pump with motor
 (e.g. 5.37 inches ext. dia.) Ø5.76 inches

Pump Type	HP	kW	Dimensions		Weight (lbs.)
			L (inches)	DN	
NS160/3	7.5	5.5	14.4	3" NPT	23.1
NS160/4	10	7.5	16.2	3" NPT	25.3
NS160/7	15	11	21.7	3" NPT	31.9
NS160/9	20	15	25.4	3" NPT	36.3
NS160/11	25	18.5	29.0	3" NPT	40.7
NS160/14	30	22	34.5	3" NPT	47.3
NS160/19	40	30	43.7	3" NPT	57.2
NS160/23	50	37	51.0	3" NPT	67.0

The coupling to motor and all the mounting dimensions are in accordance with NEMA standard.

6" SUBMERSIBLE PUMP

NS240 3460 RPM

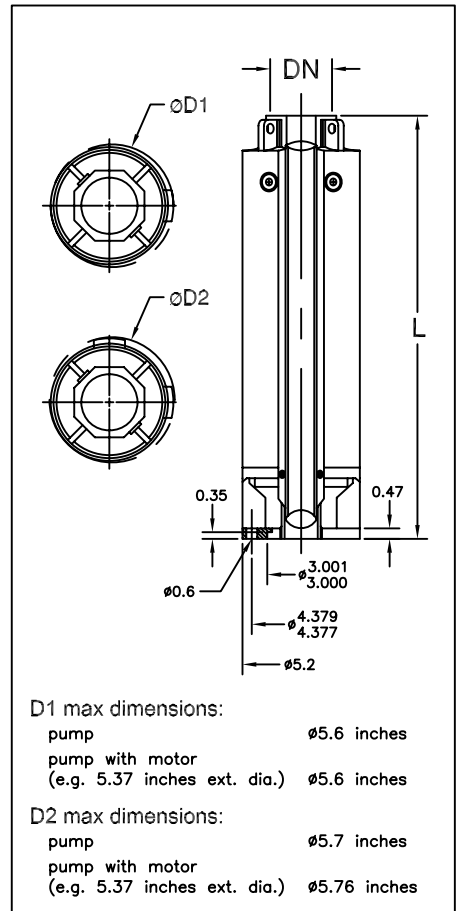
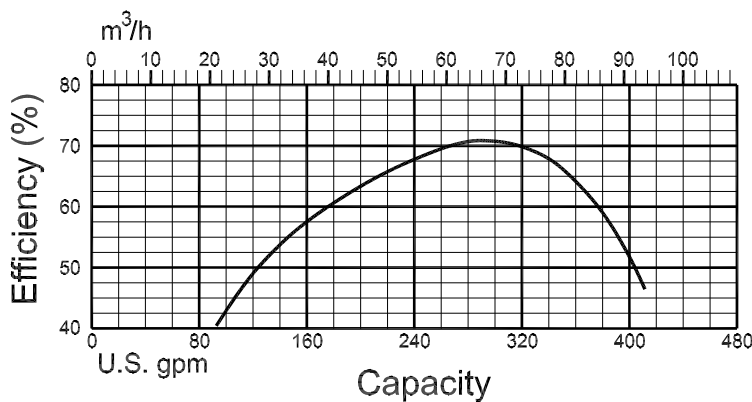
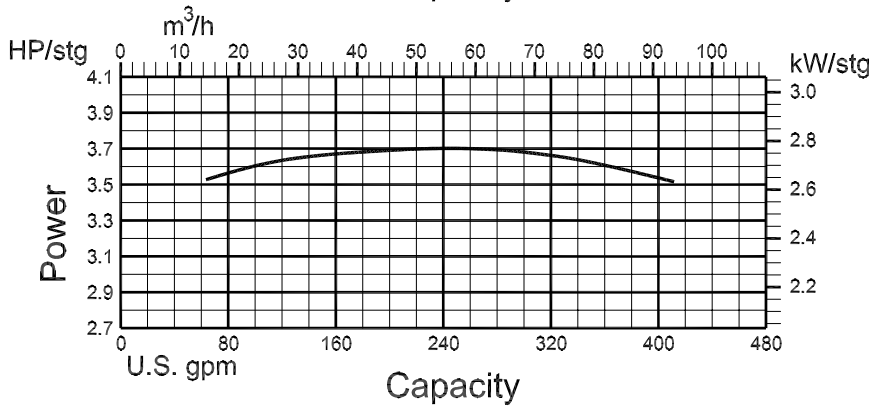
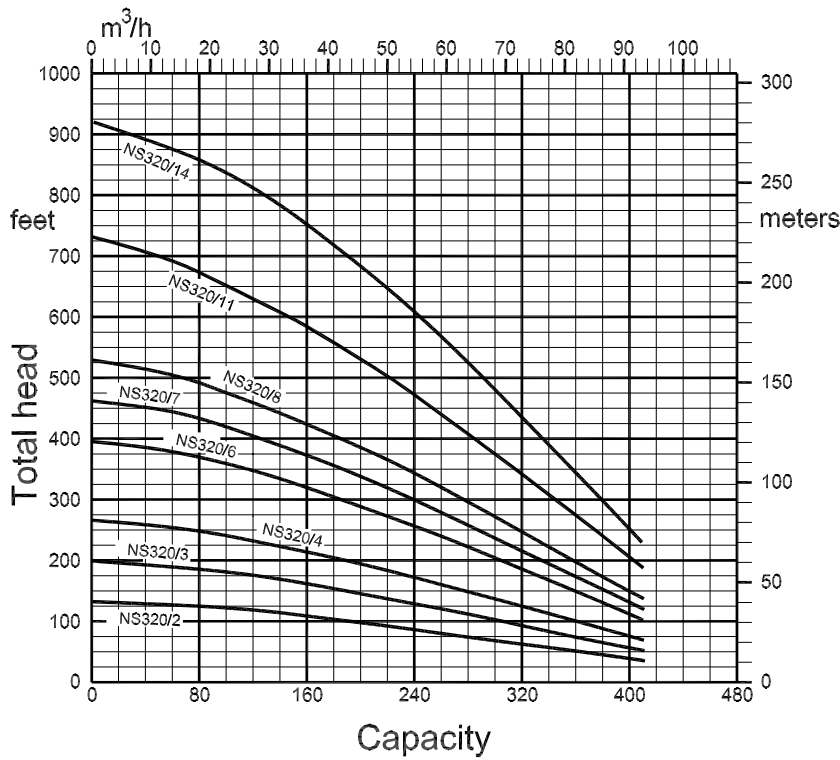


Pump Type	HP	kW	Dimensions		Weight (lbs.)
			L (inches)	DN	
NS240/2	7.5	5.5	14.4	4" NPT	24.2
NS240/3	10	7.5	18.1	4" NPT	29.7
NS240/4	15	11	21.7	4" NPT	35.2
NS240/6	20	15	29.0	4" NPT	45.1
NS240/7	25	18.5	32.7	4" NPT	49.5
NS240/9	30	22	40.0	4" NPT	59.4
NS240/12	40	30	51.0	4" NPT	74.8
NS240/15	50	37	61.9	4" NPT	90.4

The coupling to motor and all the mounting dimensions are in accordance with NEMA standard.

6" SUBMERSIBLE PUMP

NS320 3460 RPM



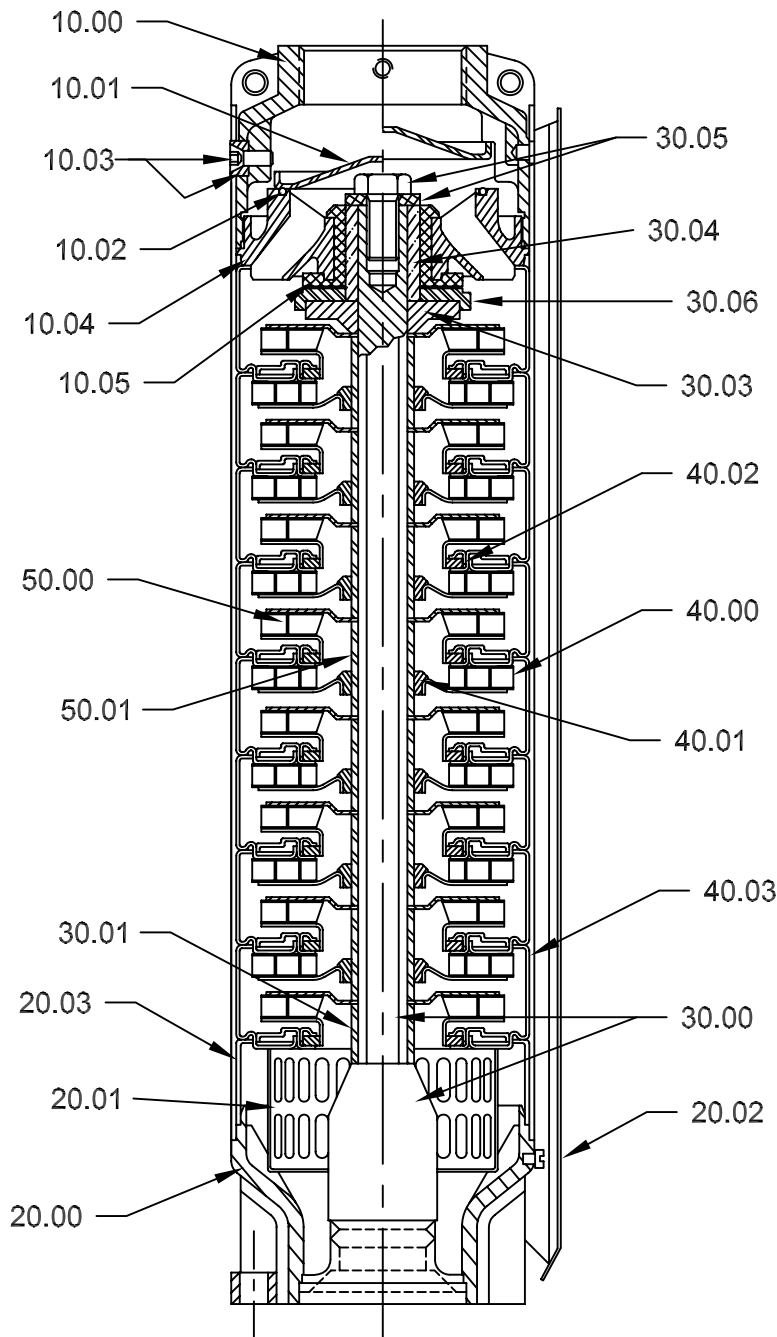
Pump Type	HP	kW	Dimensions		Weight (lbs.)
			L (inches)	DN	
NS320/2	7.5	5.5	14.4	4" NPT	25.3
NS320/3	10	7.5	18.1	4" NPT	29.7
NS320/4	15	11	21.7	4" NPT	35.2
NS320/6	20	15	29.0	4" NPT	45.1
NS320/7	25	18.5	32.7	4" NPT	50.6
NS320/8	30	22	36.4	4" NPT	55.0
NS320/11	40	30	47.5	4" NPT	71.5
NS320/14	50	37	58.3	4" NPT	86.0

The coupling to motor and all the mounting dimensions are in accordance with NEMA standard.

6" SUBMERSIBLE PUMP

Pump section and list of main components

NS 80
NS 110
NS 160
 Radial Flow Pump



Ref. No.	Description
10 00	Discharge case
10 01	Valve
10 02	O-ring
10 03	Screws and inserts locking outer case
10 04	Upper bowl
10 05	Upper bearing bush
20 00	Outer case with motor adapter
20 01	Suction strainer
20 02	Cable guard
20 03	Initial spacer
30 00	Pump shaft with coupling

Ref. No.	Description
30 01	Lower spacer
30 03	Up-thrust washer
30 04	Upper journal sleeve
30 05	Screw and washer
30 06	Up-thrust disc
40 00	Stage with diffuser and floating neck ring
40 01	Secondary bearing bush
40 02	Floating neck ring
40 03	First stage
50 00	Impeller
50 01	Secondary journal sleeve

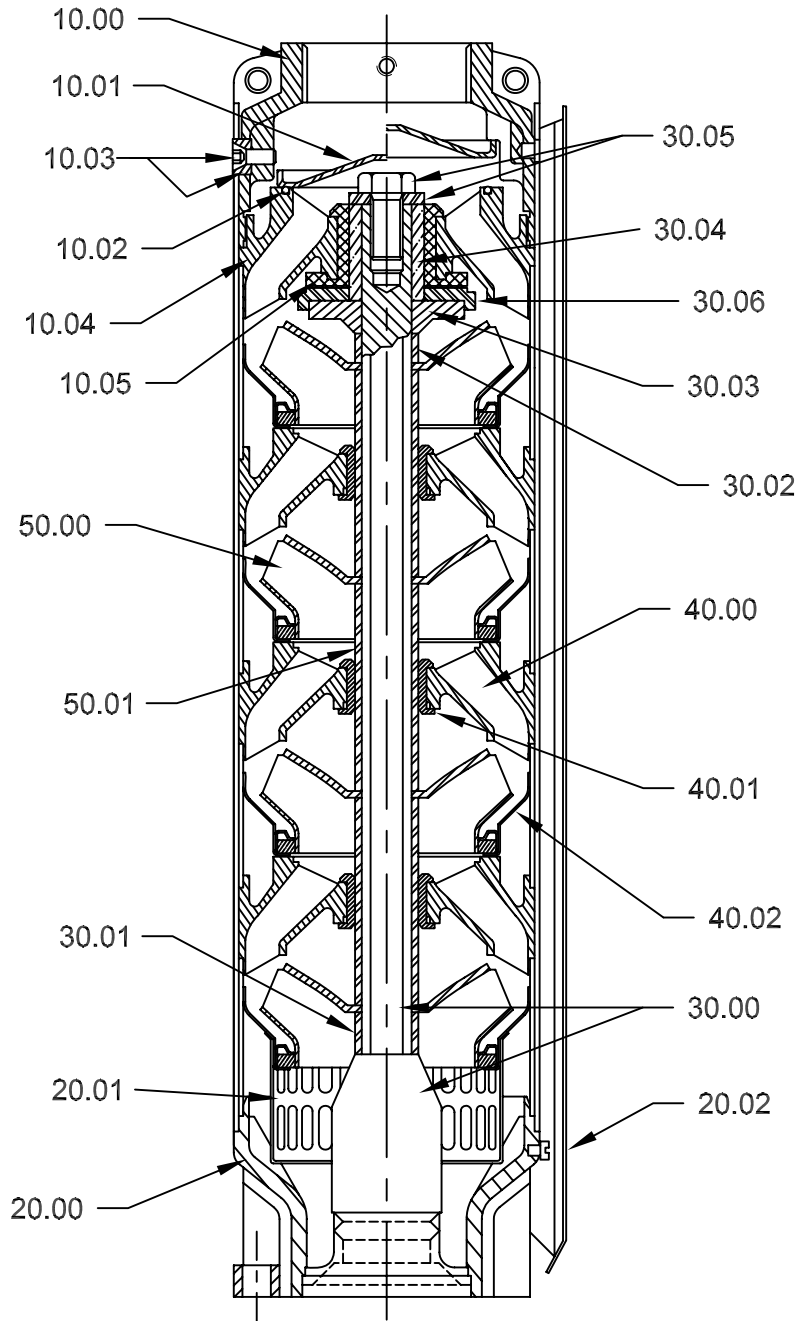
It is our policy to continuously develop and improve our products, therefore, National Pump reserves the right to amend specifications without prior notice.

6" SUBMERSIBLE PUMP

Pump section and list of main components

NS 240 NS 320

Mixed Flow Pump



Ref. No.	Description
10 00	Discharge case
10 01	Valve
10 02	O-ring
10 03	Screws and inserts locking outer case
10 04	Upper bowl
10 05	Upper bearing bush
20 00	Outer case with motor adapter
20 01	Suction strainer
20 02	Cable guard
30 00	Pump shaft with coupling
30 01	Lower spacer

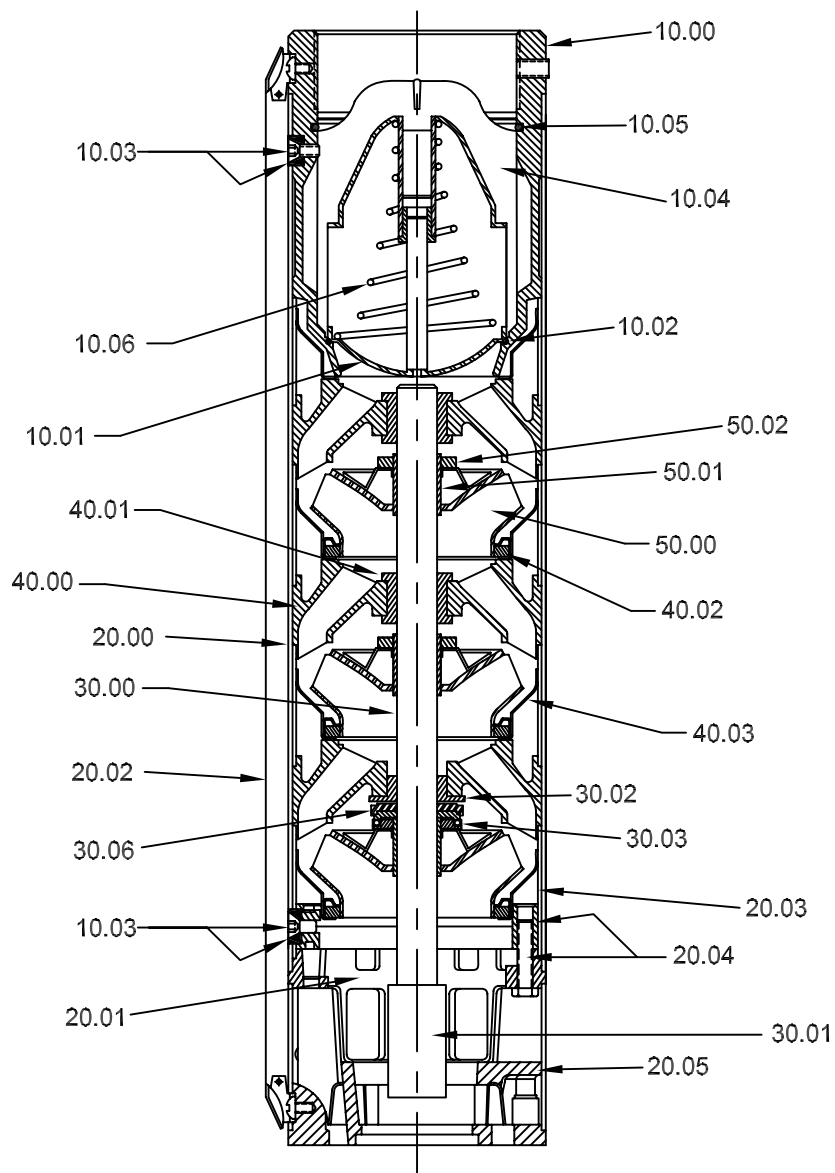
Ref. No.	Description
30 02	Upper spacer
30 03	Up-thrust washer
30 04	Upper journal sleeve
30 05	Screw and washer
30 06	Up-thrust disc
40 00	Diffuser
40 01	Secondary bearing bush
40 02	Stage with diffuser and floating neck ring
50 00	Impeller
50 01	Secondary journal sleeve

It is our policy to continuously develop and improve our products, therefore, National Pump reserves the right to amend specifications without prior notice.

8" SUBMERSIBLE PUMP

NS 400 NS 500

Pump section and list of main components



Ref. No.	Description	Material	AISI
10 00	Discharge case	Stainless Steel	316
10 01	Valve	Stainless Steel	316
10 02	O-ring	Nitrile (NBR)	
10 03	Screws and inserts, outer case	Stainless Steel	316
10 04	Check valve assembly	Stainless Steel	316
10 05	Stop Ring	Stainless Steel	316
10 06	Spring	Stainless Steel	316
20 00	Outer case	Stainless Steel	316
20 01	Suction strainer	Stainless Steel	316
20 02	Cable guard	Stainless Steel	316
20 03	First stage	Stainless Steel	316
20 04	Flange and screws	Stainless Steel	316
20 05	Motor adapter	Stainless Steel	316

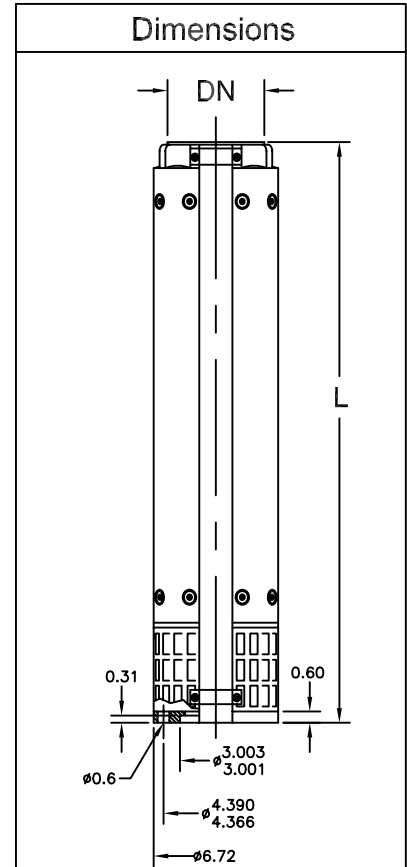
Ref. No.	Description	Material	AISI
30 00	Pump shaft	Stainless Steel	329
30 01	Coupling	Stainless Steel	316/329
30 02	Upper up-thrust washer	Stainless Steel	329
30 03	Lower up-thrust washer	Stainless Steel	329
30 06	Up-thrust disc	Teflon (PTFE)	
40 00	Diffuser	Stainless Steel	316
40 01	Secondary bearing bush	Nitrile (NBR)	
40 02	Floating neck ring	Teflon (PTFE)	
40 03	Flange clamping neck ring	Stainless Steel	316
50 00	Impeller	Stainless Steel	316
50 01	Split cone	Stainless Steel	316
50 03	Split cone nut	Stainless Steel	316

8" SUBMERSIBLE PUMP

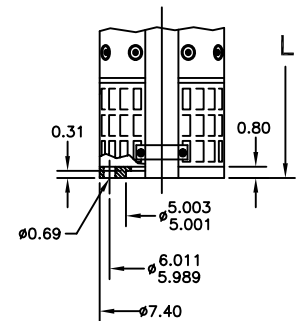
NS400 3470 RPM

Performance table at 3470 RPM

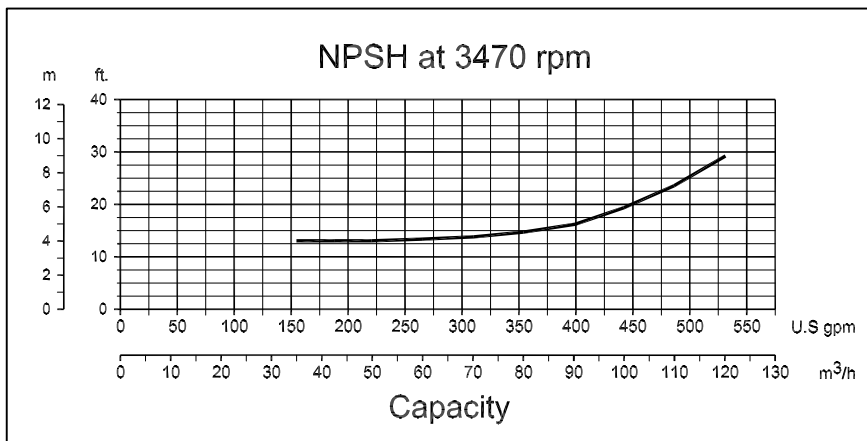
Model #	HP	kW	Motor Size	Dimensions		Weight (lbs.)
				L (inches)	DN	
NS 400/2	15	11	6"	25.35	5" NPT	70
NS 400/3	25	18.5	6"	30.31	5" NPT	81
NS 400/4	30	22	6"	35.28	5" NPT	92
NS 400/5	40	30	6"	40.25	5" NPT	103
NS 400/6	50	37	6"	45.20	5" NPT	114
NS 400/7	50	37	6"	50.15	5" NPT	125
NS 400/8	75	55	8"	55.31	5" NPT	136
NS 400/9	75	55	8"	60.28	5" NPT	147
NS 400/10	75	55	8"	65.24	5" NPT	158
NS 400/12	100	75	8"	75.16	5" NPT	180
NS 400/13	100	75	8"	80.12	5" NPT	191
NS 400/15	125	93	8"	90.04	5" NPT	213
NS 400/16	125	93	8"	95.00	5" NPT	225



6" Motor Adapter



8" Motor Adapter



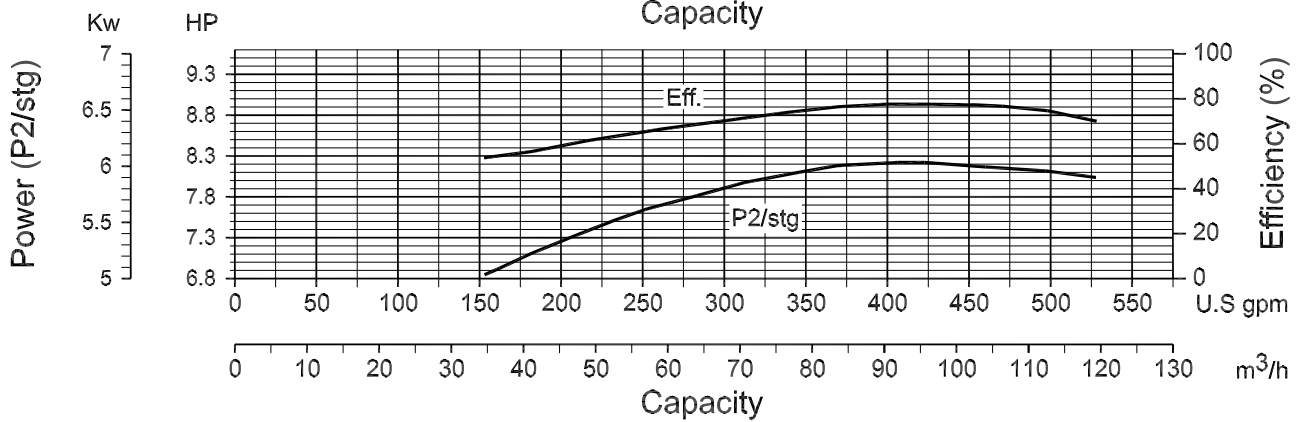
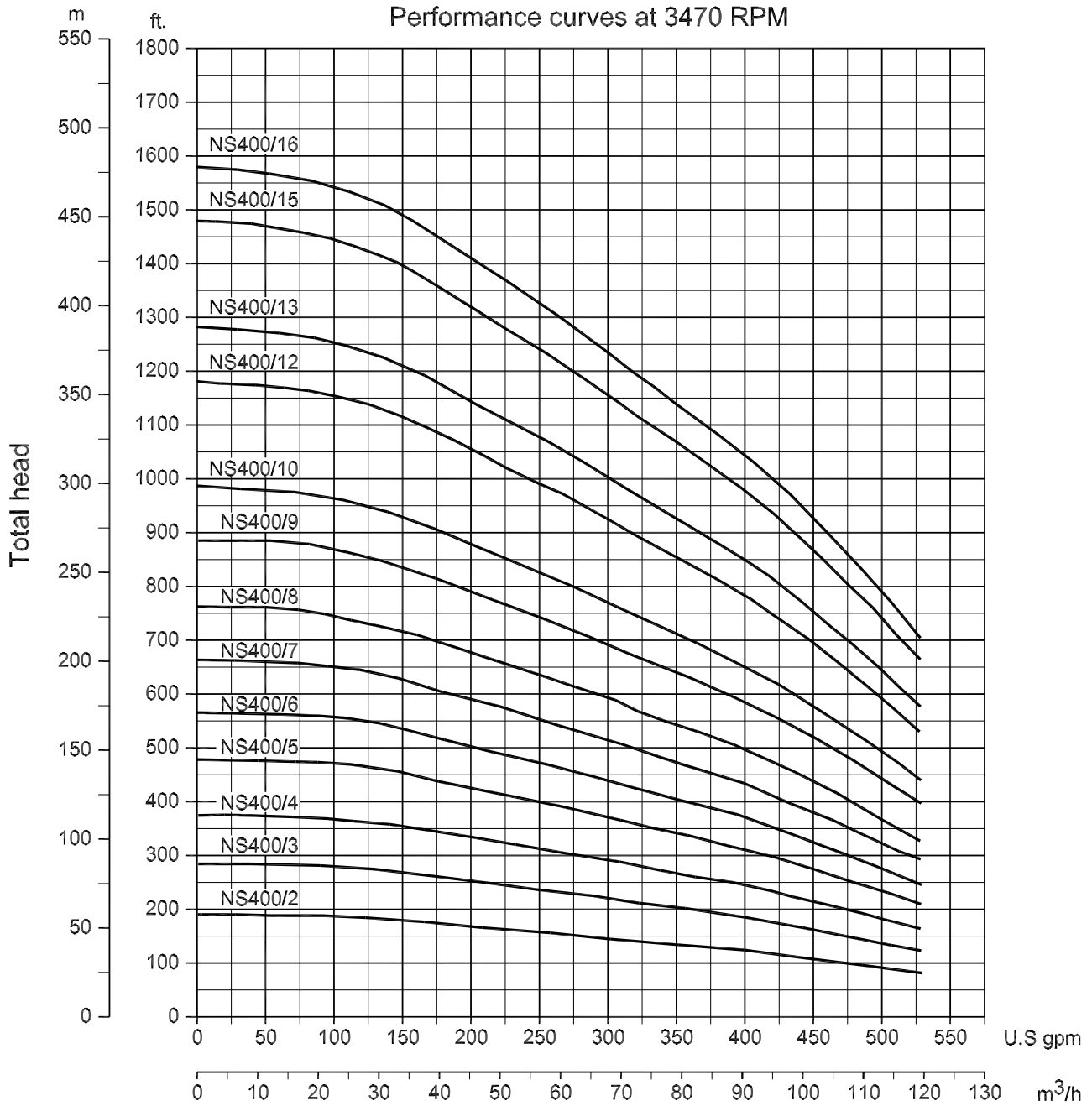
	Diameter with 1 cable cover	Diameter with 2 cable covers	External Motor Diameter
Pump, 8"	7.35"	7.56"	/
Pump, 8" with 6" motor	7.35"	7.56"	5.38"
Pump, 8" with 8" motor	7.68"	7.78"	7.38"

The coupling to motor and all the mounting dimensions are in accordance with NEMA standard.

8" SUBMERSIBLE PUMP

NS400

Performance curves at 3470 RPM

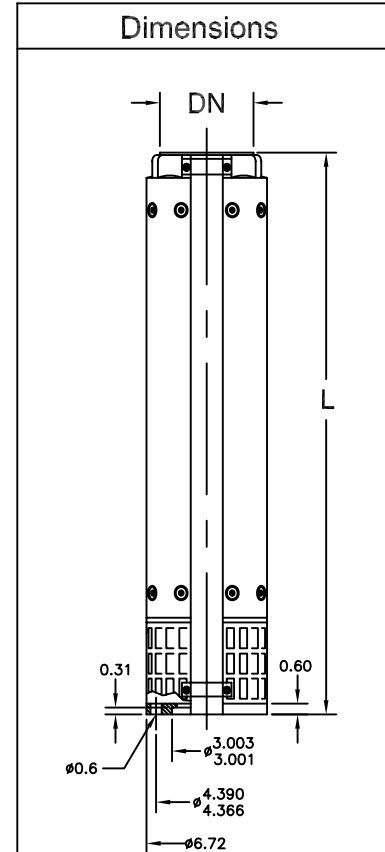


8" SUBMERSIBLE PUMP

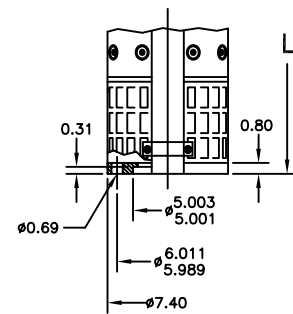
NS500 3470 RPM

Performance table at 3470 RPM

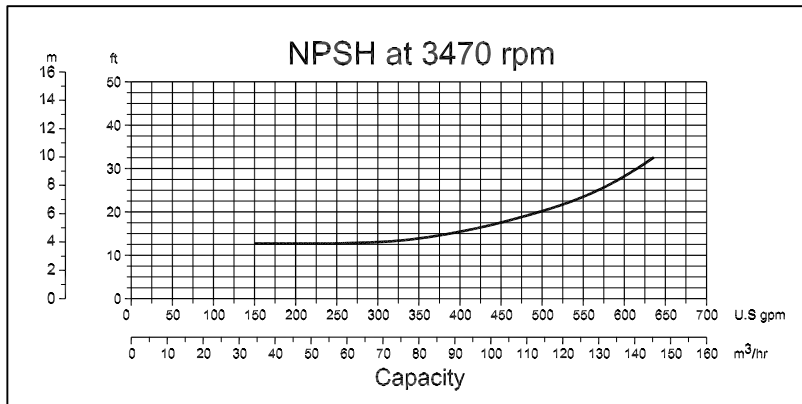
Model #	HP	kW	Motor Size	Dimensions		Weight (lbs.)
				L (inches)	DN	
NS 500/2	20	15	6"	25.35	5" NPT	70
NS 500/3	30	22	6"	30.31	5" NPT	81
NS 500/4	40	30	6"	35.28	5" NPT	92
NS 500/5	50	37	6"	40.25	5" NPT	103
NS 500/6	60	45	6"	45.20	5" NPT	114
NS 500/7	75	55	8"	50.15	5" NPT	125
NS 500/9	100	75	8"	60.05	5" NPT	147
NS 500/10	100	75	8"	65.00	5" NPT	158
NS 500/12	125	93	8"	74.90	5" NPT	180
NS 500/13	125	93	8"	79.85	5" NPT	191
NS 500/15	150	110	8"	89.75	5" NPT	213



6" Motor Adapter



8" Motor Adapter



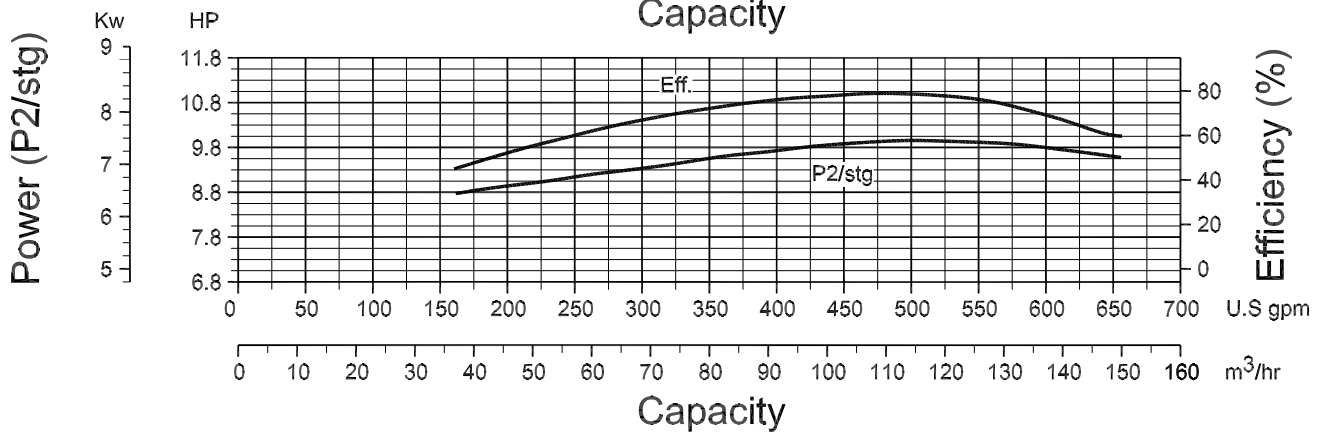
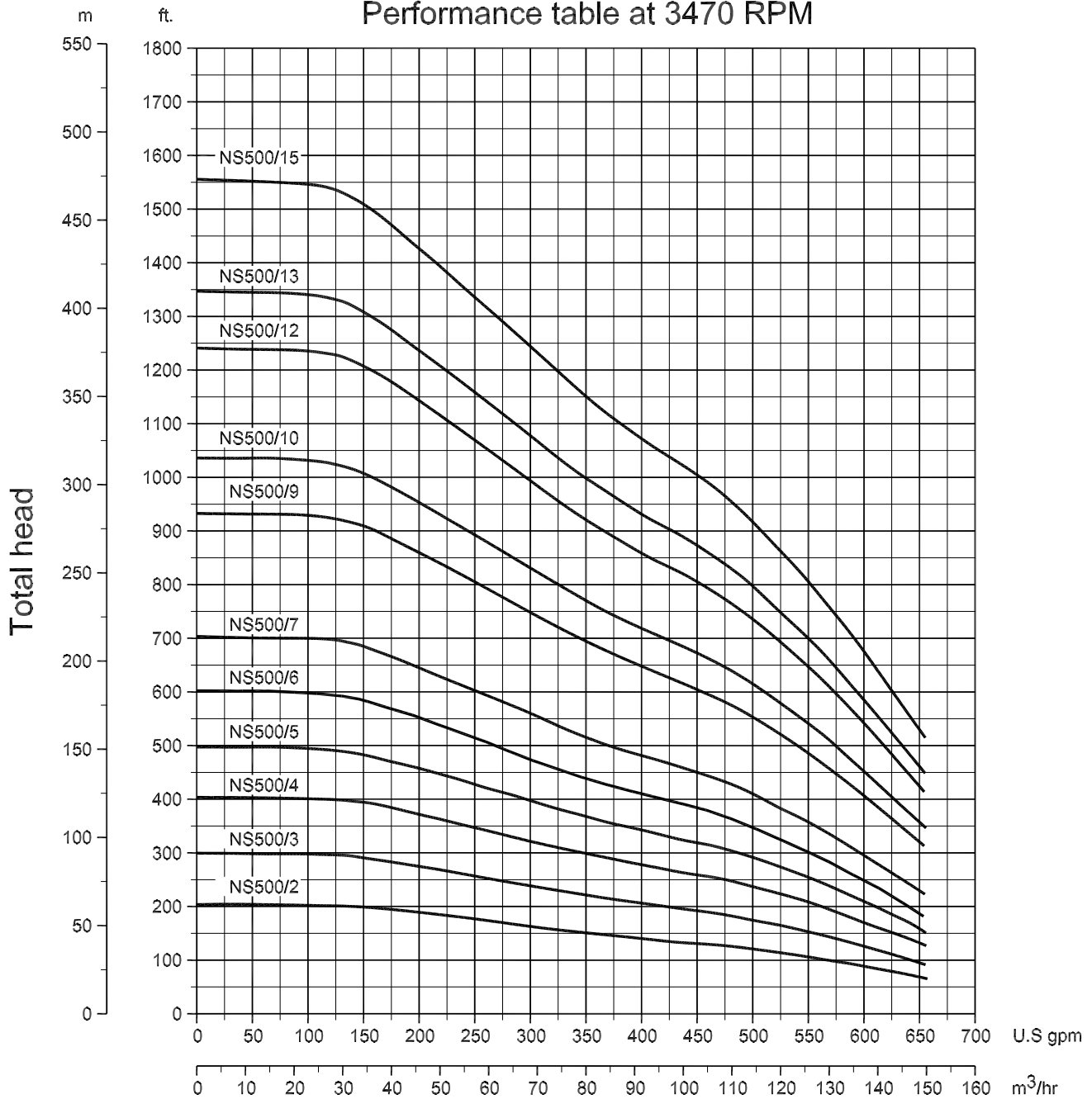
	Diameter with 1 cable cover	Diameter with 2 cable covers	External Motor Diameter
Pump, 8"	7.35"	7.56"	/
Pump, 8" with 6" motor	7.35"	7.56"	5.38"
Pump, 8" with 8" motor	7.68"	7.78"	7.38"

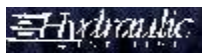
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8" SUBMERSIBLE PUMP

NS500

Performance table at 3470 RPM





motralec

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