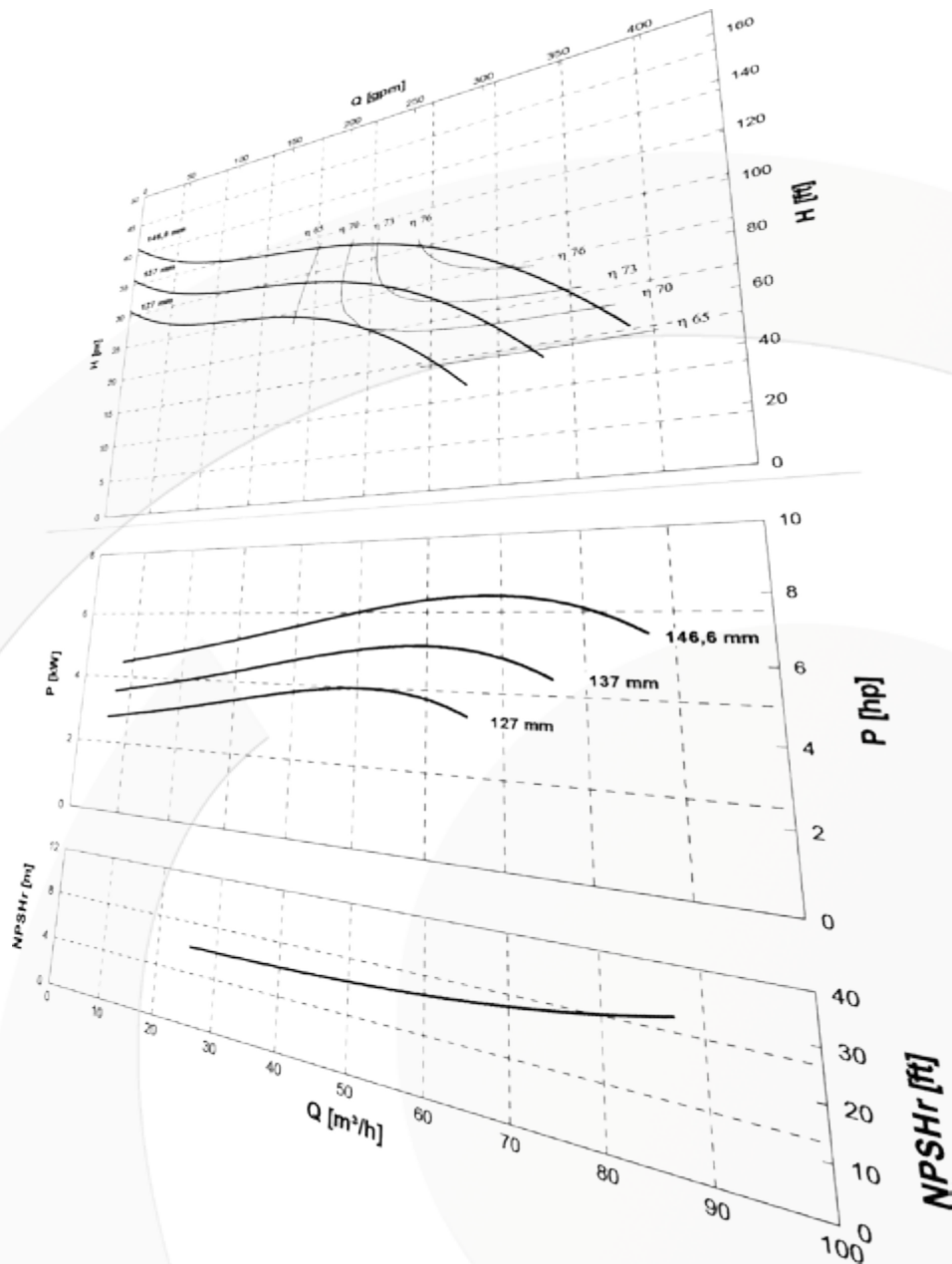




Engineered Pump Catalog
60 Hz Performance Curves



ENGINEERED PUMP CATALOG

60 Hz Performance Curves

Neptuno Pumps®
Engineered Pump Catalog 60 Hz Performance Curves
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Index

Vertical Turbine Pumps (VTP)	7	Multistage Pumps (HR).....	111
Applications.....	10	Applications.....	114
Main Components & Materials	10	Main Components & Materials	114
Range Chart - 60 Hz - 1 Stage.....	11	Available Models.....	115
Available Models.....	11	Range Chart - 60 Hz - 1 Stage	115
Diagram	12	Diagram	116
Main Dimensions	13	Main Dimensions	116
Main Dimensions (cont.)	14		
Multiple discharge configurations and sizes	14	Axial Split Case Pumps (HA)	125
Vertical Submersible Pumps (VS)	87	Applications.....	128
Available Models.....	89	Main Components & Materials	128
Applications.....	90	Available Models.....	129
Main Components & Materials	90	Range Chart - 60Hz	129
Diagram	91	Diagram	130
Main Dimensions	92	Main Dimensions	130
Range Chart - 60 Hz - 1 Stage	92		
		Volute Pumps (HV).....	147
		Applications.....	150
		Main Components & Materials	150
		Available Models.....	151
		Range Chart - 60 Hz.....	151
		Diagram	152
		Main Dimensions	152



AS SIMPLE AS 1-2-3

Find the right Vertical Turbine Pump (VTP) for your application using the Neptuno Pumps® VTPSelector™. Simply select your system design point, fluid characteristics and NPSH ratings and the VTPSelector™ will create a dynamic pump curve. From there you can adjust operating speeds, view/save electronic curves and data sheet reports in a PDF format, generate system curves, simulate multiple pumps/speeds, request quotes and much more.



ABOUT US

NEPTUNO PUMPS® is a world-class manufacturer of centrifugal pumps for industrial and heavy-duty applications, delivering a comprehensive line of innovative products and engineered pumping solutions to satisfy and exceed your most demanding needs with the highest quality and lowest lead-times in the market.

TECHNOLOGY

NEPTUNO PUMPS® counts with a highly skilled team of engineers and well-trained personnel; state-of-the-art computer assisted design softwares and advanced manufacturing technologies complemented with rigorous quality control systems that guarantee high quality products and services with its emphasis on total customer satisfaction.

RESEARCH & DEVELOPMENT

NEPTUNO PUMPS® is continually working with business partners and most prestigious universities and institutions in the areas of mechanical, hydraulic, aerospace engineering and material science. Our active in-house R&D Department is permanently doing research for new designs and developing new technologies always focusing on maximizing efficiency and delivering innovative pumping solutions, to keep your business going strong.

QUALITY, ENVIRONMENT, SAFETY & HEALTH PROGRAM

The principals of Quality Management System (QMS) are the foundation of our business. That is why all our Design and Manufacturing Processes are certified under:

- **ISO 9001: 2008**
- **ISO 9906: 1999**
- **ISO 14001: 2004**
- **OHSAS 18001: 2007**

And conforms or meets most recognized specifications, including:

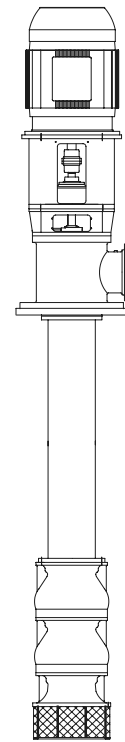
- **ANSI/HI**
- **ANSI/AWWA E101**
- **ISO 13709/API 610 Latest Edition.**

TESTING

ISO 9906 certified state-of-the-art Testing Facility, in accordance with Hydraulic Institute Standards and ISO 13709/API 610.

APPLICATIONS

- Primary Water Supply – Fresh water or Sea water
- Mining Processes: Cooling Water, Thickener Overflow, Reclaim Water, MiSeepage, Well Pumps-Process, Water Supply, MiDe-Watering, Electrolyte, Pressure Boosting and Transfer
- Solvent Extraction/Electro-Winning (SX/EW): Raffinate, Pregnate Leach Solution (PLS), Heap Leach, Dump Leach, Acid Water Pressure Boosting and Transfer
- Dewatering – Sump, Deep Well, Ponds
- Tailings – Post Processed Solutions
- Seepage Water – Sump or Can/Booster
- Oil & Gas Production – Onshore, Offshore and Pipeline
- Marine
- Pulp and Paper
- Municipal Water & Wastewater
- Agriculture - Irrigation



Vertical Turbine Pumps (VTP)

Vertical Turbine Pumps (VTP)

Versatility is one of the main characteristics of NEPTUNO PUMPS® VTP: flanged bowl construction, single or multiple stage design, depending on your total head requirements, for continuous service. Heavy duty design for long term operation in industrial applications.

VERTICAL PUMPS MODELS

- VERTICAL Turbine Pumps (VTP)
- VERTICAL CAN TYPE (VC)

OPERATING PARAMETERS

- Capacities up to 40,000 gpm (7,500 m³/h)
- Head up to 1,200 Feet (400 m)
- Power through 2000 hp (1500 kW)
- Pressures up to 590 psi (4,067 kPa)
- Frequency 50/60 Hz
- Temperatures to 400 °F (200°C)
- Bowls sizes from 8" to 40"

DESIGN FEATURES

- NEPTUNO PUMPS® high-efficiency design
- High-quality investment cast impellers and bowls
- Maximum versatility and reliability
- Low NPSH first stage construction
- No priming required
- Thrust balanced impellers available
- Product lube or enclosed lineshaft
- Minimum space requirement
- Special material selection for standard or abrasive/corrosive service
- Packing or mechanical seal
- Independent axial-thrust bearing assembly
- Multiple discharge configurations and sizes

SERVICES

- Primary Water Supply – Fresh water or Sea water
- Mining Processes: Cooling Water, Thickener Overflow, Reclaim Water, MiSeepage, Well Pumps-Process, Water Supply, MiDe-Watering, Electrolyte, Pressure Boosting and Transfer
- Solvent Extraction/Electro-Winning (SX/EW): Raffinate, Pregnate Leach Solution (PLS), Heap Leach, Acid Water Pressure Boosting and Transfer
- Dewatering – Sump, Deep Well, Ponds
- Tailings – Post Processed Solutions
- Seepage Water – Sump or Can/Booster
- Oil & Gas Production – Onshore, Offshore and Pipeline
- Marine
- Pulp and Paper
- Municipal Water & Wastewater
- Agriculture - Irrigation

Vertical Turbine Pumps (VTP) Applications

Duty	Heavy	Medium	Low
	●	●	●
Capacity	High	Medium	Low
	●	●	
Head	High	Medium	Low
	●	●	●
Fluid	Clean	Process	Slurry
	●	●	
Flexibility	High	Medium	Low
	●		

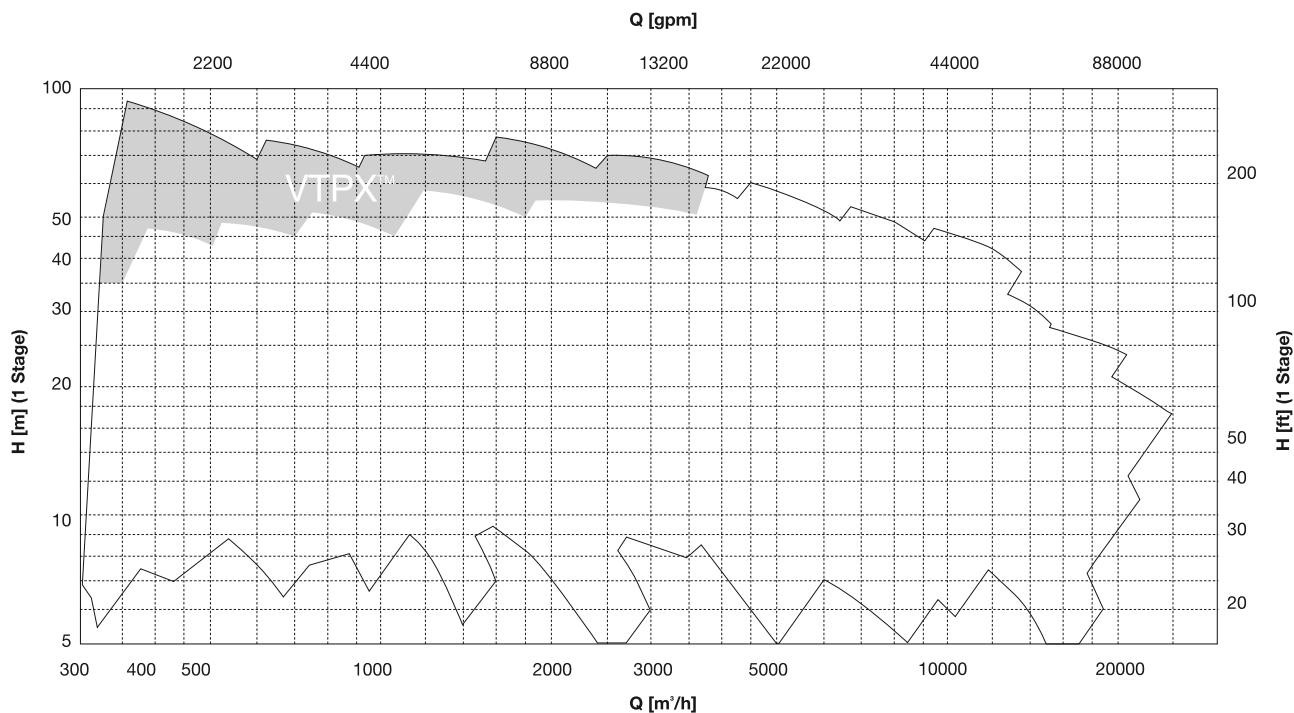
Vertical Turbine Pumps (VTP) Main Components & Materials

Components	Material					
	Cast Iron	Carbon Steel	Brass	Stainless Steel	Duplex	Polymer
Suction Bell	●		●	●	●	
Bowl	●		●	●	●	
Impeller	●		●	●	●	
Wear Rings	●		●	●	●	●
Shaft				●	●	
Discharge Head	●	●		●	●	
Stuffing Box / Mechanical Seal	●					

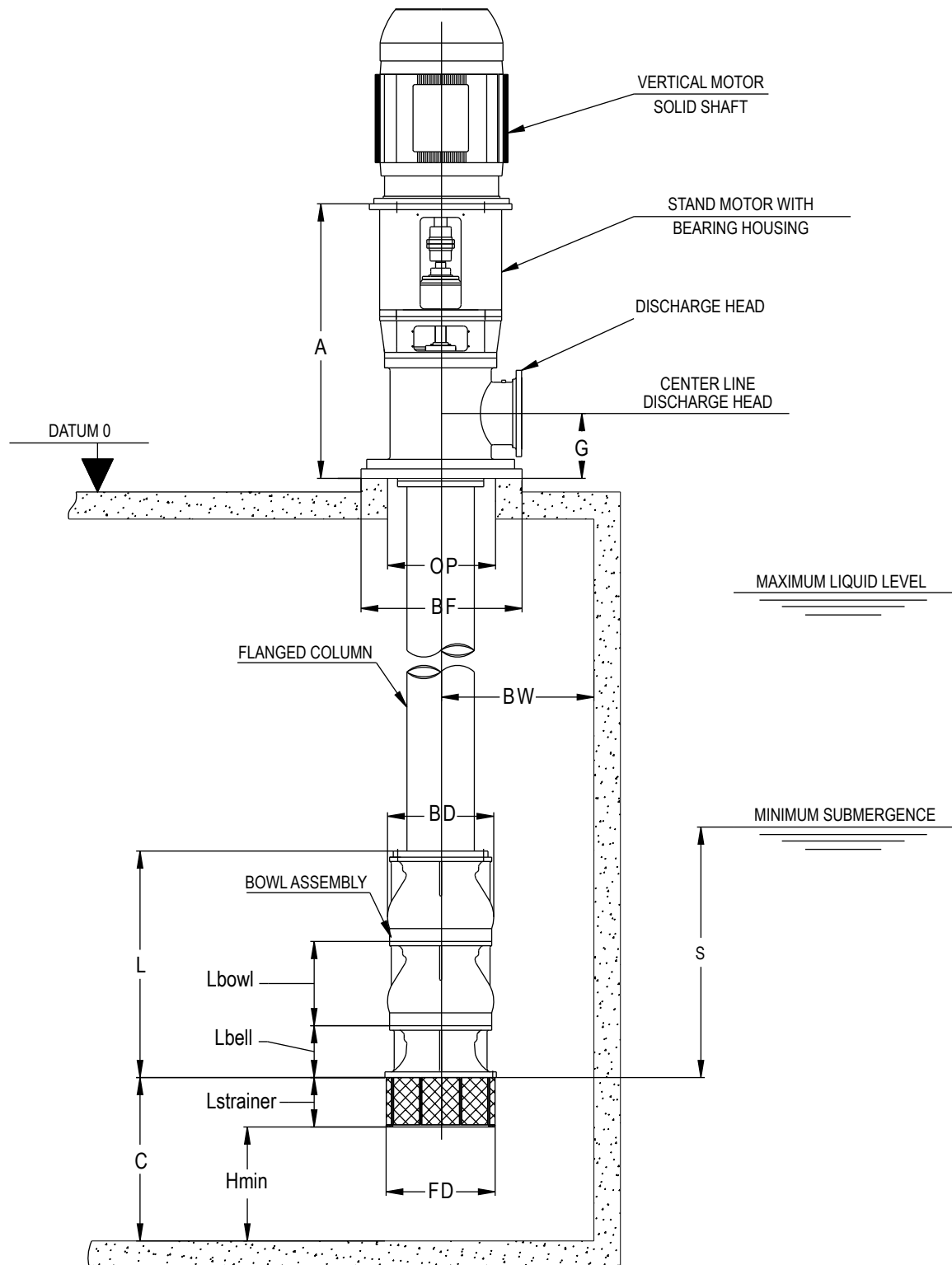
Vertical Turbine Pumps (VTP) Available Models

VTP 30	VTP 50	VTP 60M	VTP 80C
VTP 100	VTP 110	VTP 130	VTP 135X
VTP 170	VTP 170M	VTP 180	VTP 180M
VTP 250	VTP 290	VTP 300	VTP 300MH
VTP 325	VTP 325X	VTP 360	VTP 400M
VTP 450	VTP 500	VTP 500M	VTP 500X
VTP 650	VTP 700	VTP 750	VTP 750M
VTP 800	VTP 850	VTP 850M	VTP 850X
VTP 850XB	VTP 1000	VTP 1000X	VTP 1250
VTP 1300	VTP 1350	VTP 1500	VTP 1500L
VTP 1500LH	VTP 1500KM	VTP 1800M	VTP 1800X
VTP 2200	VTP 2200M	VTP 3000	VTP 3400
VTP 3400M	VTP 6500		

Vertical Turbine Pumps (VTP) Range Chart - 60 Hz - 1 Stage



Vertical Turbine Pumps (VTP) Diagram



Vertical Turbine Pumps (VTP)

Main Dimensions

Pump Model	Column Diameters [in]	Pump's Principal Dimensions							Bowl Assembly Dimensions				Discharge Head Principal Dimensions		
		FD [in]	BD [in]	OP [in]	S min [in]	C [in]	H min [in]	BW min [in]	L [in] (1st Stage)	Lbowl [in] Each add Stage	Lbell [in]	Ls-trainer [in]	G [in]	BF [in]	A [in]
30	4	7.8	7.8	9.4	9.1	6.3	2.3	5.8	6.3	2.4	3.9	3.9	8.5	18.9	39.4
50	4	7.1	9.4	11.3	12.8	6.6	2.1	5.3	10.5	7.4	3.1	4.4	8.5	18.9	51.2
60M	4	7.1	7.1	8.5	10.5	6.7	2.1	5.3	7.1	3.1	3.9	4.5	8.5	18.9	51.2
80C	4	9.6	9.6	11.6	9.9	13.1	2.9	7.2	10.4	7.3	3.1	10.2	8.5	18.9	51.2
100	6	9.5	10	11.5	12.8	8	2.8	7.1	13.3	8.4	4.9	5.2	8.5	18.9	51.2
110	4	9.3	9.8	11.3	13.3	7.5	2.8	6.9	8.9	6.5	2.4	4.7	8.5	18.9	51.2
130	4	7.8	8.3	9.5	15.3	7.1	2.3	5.8	8.9	6.5	2.4	4.7	8.5	18.9	51.2
135X	4	11.6	11.6	13.3	14.3	8.2	3.5	8.7	10.0	6.5	3.5	4.7	8.5	18.9	51.2
170	6	9.5	10	11.5	16.4	8	2.8	7.1	13.3	8.4	4.9	5.2	8.5	18.9	51.2
170M	6	9.5	10	11.5	19.7	8	2.8	7.1	13.3	8.4	4.9	5.2	8.5	18.9	51.2
180	8	9.5	12.2	14	16.9	8	2.8	7.1	14.1	9.2	4.9	5.2	9.8	25.9	51.2
180M	6	14	14.8	17.1	16.4	14.9	4.2	10.5	17.9	10	7.9	10.7	8.5	18.9	51.2
250	8	9.4	12.8	14.8	20.6	8.3	2.8	7.1	10.5	6.7	3.8	5.5	9.8	25.9	70.9
290	8	9.2	11.6	14.8	23.2	10.6	2.8	6.9	14.2	8.9	5.3	7.9	9.8	25.9	51.2
300	10	13.8	14	17.7	19.9	15	4.1	10.3	19	12.5	6.5	10.8	11.6	32.2	51.2
300MH	10	16.8	16.7	19.3	21.1	16.9	5.0	12.6	24.4	14.0	10.4	11.9	13.5	47.6	47.2
325	6	17.7	14.9	20.4	19.9	15.7	5.3	13.3	23	11	12	10.4	8.5	18.9	51.2
325X	8	17.5	19.3	21.9	22.2	17.1	5.3	13.1	14.3	8.5	5.8	11.8	9.8	23.6	51.2
360	8	9.5	12.8	14.8	26.3	8	2.8	7.1	14.1	9.2	4.9	5.2	9.8	25.9	51.2
400	8	13.8	21.3	24.4	16.7	15.9	4.1	10.4	17.7	10.4	7.3	11.8	9.8	25.9	51.2
450	10	17	17.5	20.1	23.2	16.3	5.1	12.7	22.4	13.6	8.9	11.2	11.6	32.2	51.2
500	10	13.8	14.2	17.7	25.8	13.9	4.1	10.3	20.8	13.8	7	9.7	11.6	32.2	51.2
500M	10	21.7	20.5	24.9	33.0	18.3	6.5	16.3	21.7	11.2	10.4	11.8	12.2	32.0	57.1
500X	10	20.5	20.5	23.5	23.9	16.6	6.1	15.4	18.5	11.3	7.2	10.4	11.6	32.2	57.1
650	12	20.4	17.5	20.1	27	20.8	6.1	15.3	28.5	16.5	12	14.6	13.4	38.3	57.1
700	12	24.2	24.2	27.8	28.3	19.7	7.3	18.2	28.5	17.7	10.8	12.5	13.4	38.3	57.1
750	14	19.9	27.7	31.9	28.7	19.7	6	14.9	28.7	17.5	11.2	13.8	15	42	57.1
750M	14	24.2	25.7	29.5	28.9	22.3	7.3	18.2	24.2	15.6	8.7	15	15	42	57.1
800	12	19.7	16.0	18.4	29.5	13.4	5.9	14.8	21.3	14.9	6.4	7.5	12.6	42.0	57.1
800M	14	18.5	18.5	21.3	31.0	13.4	5.6	13.9	23.6	11.8	11.8	7.9	15.0	39.4	57.1
850	14	17.5	18.7	21.6	31.6	15.1	5.3	13.1	29.3	18.6	10.6	9.8	15	42	57.1
850M	14	18.5	18.5	21.3	31.0	13.4	5.6	13.9	23.6	11.8	11.8	7.9	15.0	39.4	57.1
850X	14	18.5	18.5	21.3	31.0	13.4	5.6	13.9	23.6	11.8	11.8	7.9	15.0	39.4	57.1
850XB	16	24.2	24.2	27.8	28.3	19.8	7.3	18.1	28.5	17.7	10.8	12.5	13.4	38.3	57.1
1000	14	18	19.9	22.9	34.3	14.5	5.4	13.5	31.7	18.3	13.4	9.1	15	42	57.1
1000X	14	28.7	28.7	33.1	32.8	26.3	8.6	21.6	28.5	12.8	15.7	17.7	15.0	39.4	57.1

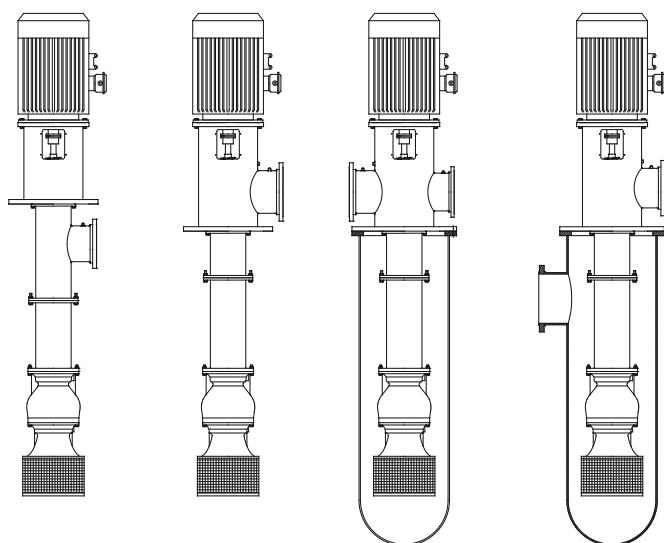
Vertical Turbine Pumps (VTP)

Main Dimensions (cont.)

Pump Model	Column Diameter [in]	Pump's Principal Dimensions							Bowl Assembly Dimensions				Discharge Head Principal Dimensions		
		FD [in]	BD [in]	OP [in]	S min [in]	C [in]	H min [in]	BW min [in]	L [in] (1st Stage)	Lbowl [in] Each add Stage	Lbell [in]	Ls-trainer [in]	G [in]	BF [in]	A [in]
1250	12	19	22.4	25.8	38.1	28	5.7	14.3	31	18	13	22.3	13.4	38.3	57.1
1300	16	17	25	28.8	41.7	14.2	5.1	12.8	28.7	15.6	13.1	9.1	16.5	48	63
1350	14	25.5	25.5	29.3	42.0	19.6	7.6	19.1	29.8	19.0	10.8	12.0	14.0	47.2	51.2
1500	16	20.2	25	28.8	41.2	16.4	6.1	15.1	27.3	17.9	9.4	10.3	16.5	48	70.9
1500KM	14	25.5	22.4	29.3	38.1	19.6	7.6	19.1	28.9	19.0	9.9	12.0	13.9	44.0	67.3
1500L	16	21.1	21.1	24.2	40.5	16.6	6.3	15.8	24.2	14.6	9.5	10.3	16.5	48	68.9
1500LH	16	21.1	21.1	24.2	40.5	16.6	6.3	15.8	24.2	14.6	9.5	10.3	16.5	48	68.9
1800M	16	22.8	22.8	27.6	43.3	14.7	6.9	17.1	28.0	16.1	11.8	7.9	16.5	51.2	68.9
1800X	16	22.4	25.2	29.0	45.0	22.5	6.7	16.9	27.0	16.7	10.3	15.7	16.5	51.2	68.9
2200	20	33.1	32.4	37.2	44.1	24.9	9.9	24.8	38.4	24	14.4	15	20.9	60	72.8
2200M	20	33.1	32.4	37.2	44.1	24.7	9.9	24.8	39	24.4	14.6	14.8	20.9	60	72.8
3000	20	36	37.1	42.7	49.9	23.4	10.8	27	48.9	28.9	20	12.6	25.2	72	78.7
3400	22	36.2	34.6	39.8	52.6	29.4	10.9	27.2	44.8	28.5	16.3	18.5	25.2	72	78.7
3400M	24	36.2	37.6	43.2	52.6	26.4	10.9	27.2	43.8	28.5	15.3	15.6	25.2	72	78.7
6500	26	39	43.3	49.8	65.5	33.6	11.7	29.2	48.2	28.8	19.4	21.9	27.6	78	98.4

Discharge Configurations

Multiple discharge configurations and sizes



Underground

Above ground

Inlet in the head

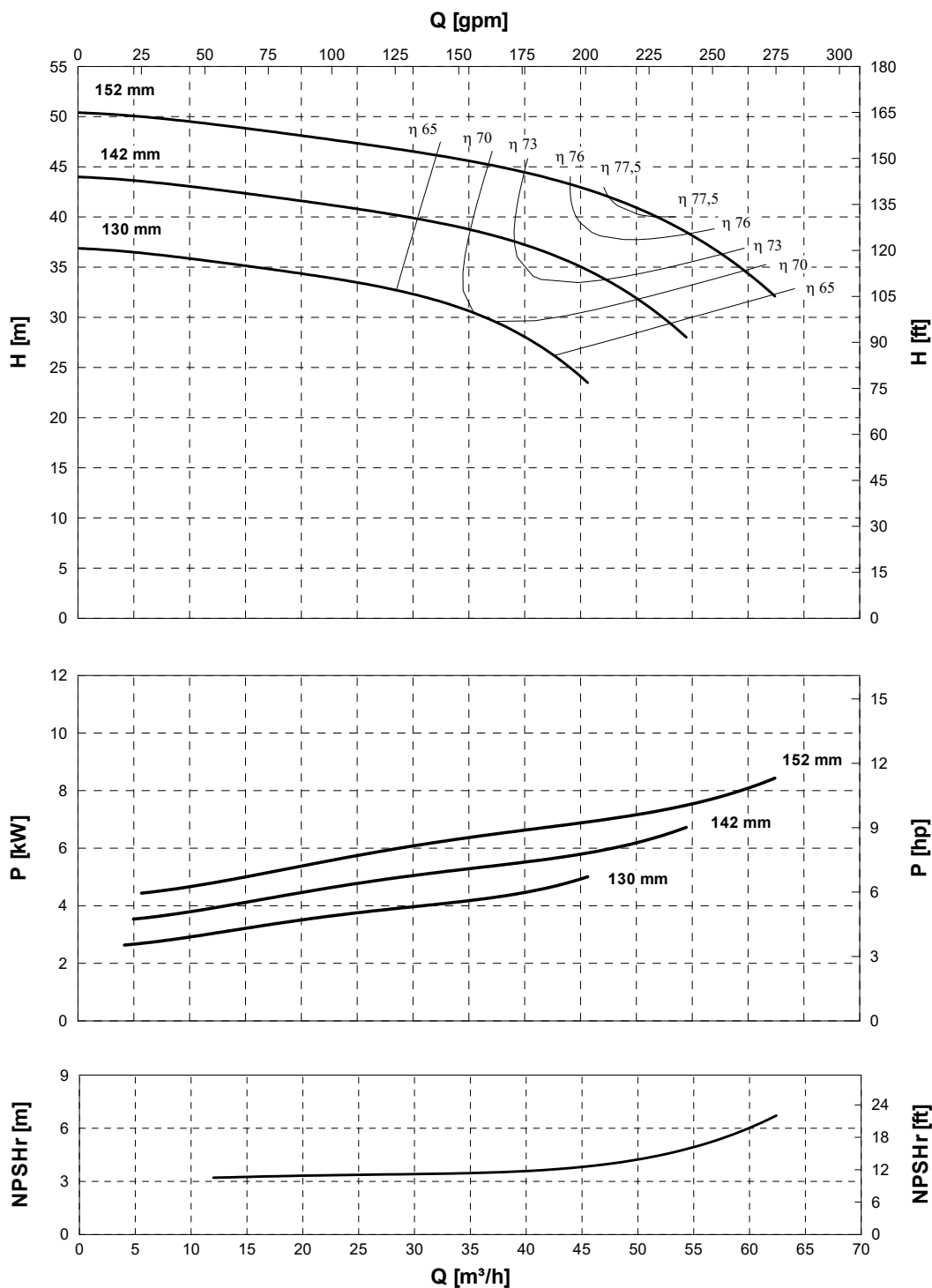
Inlet in the can

Vertical Turbine Pumps (VTP)

3600 rpm

VTP 30

Curve #: 11063-140207-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

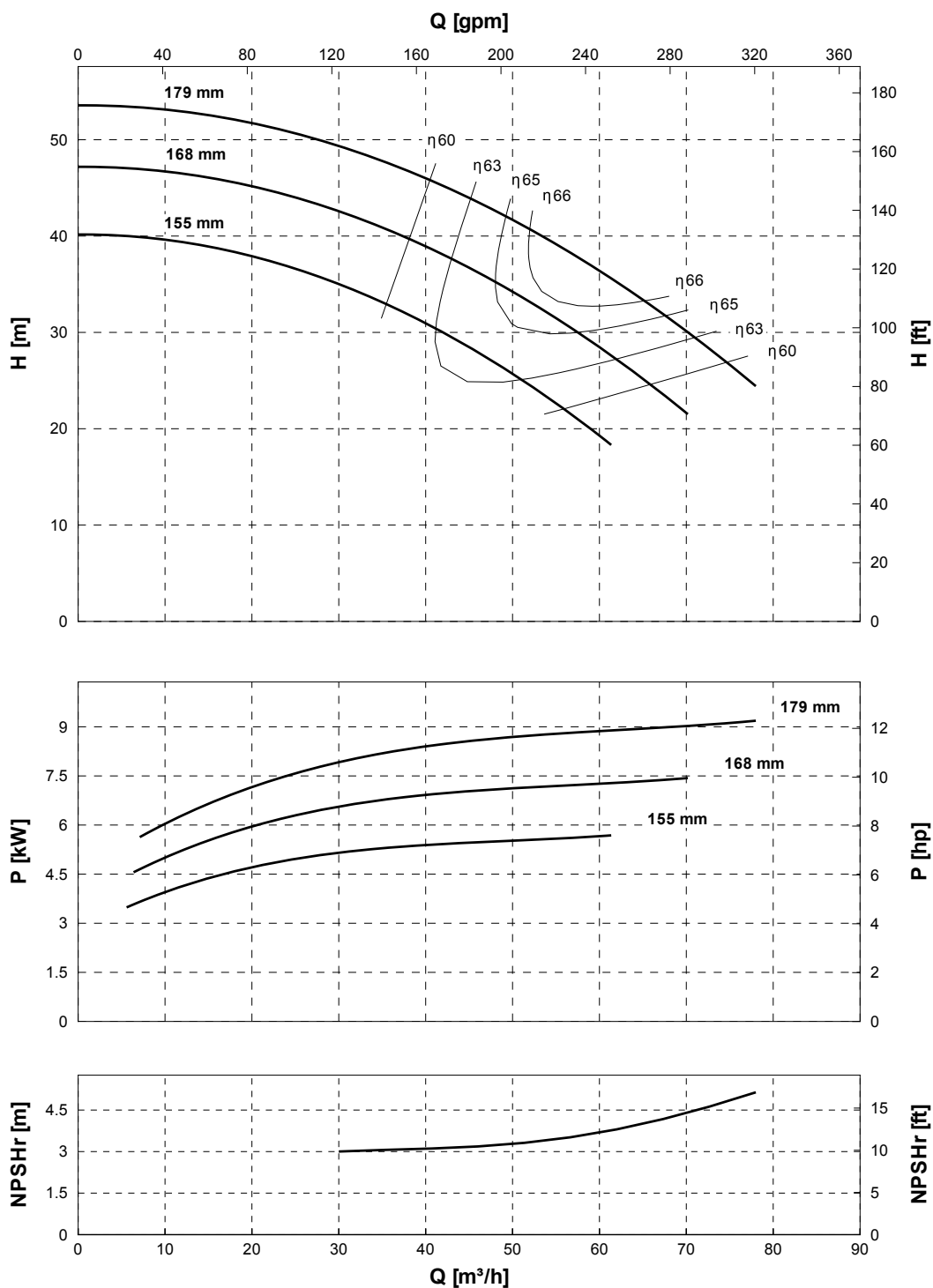


VTP 50

Curve #: 11001-110214-S1

Vertical Turbine Pumps (VTP)

3600 rpm

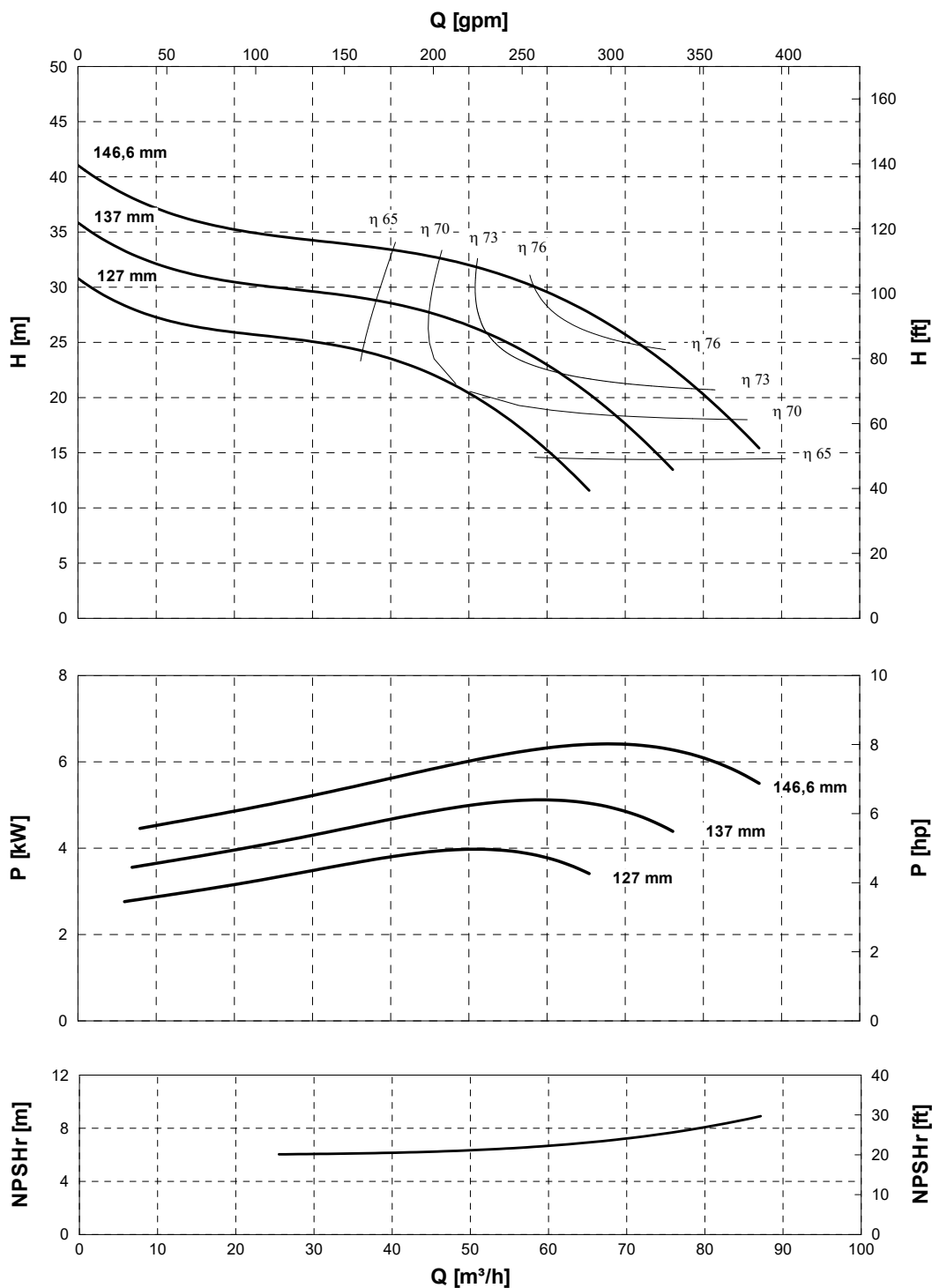


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 3600 rpm

VTP 60M Curve #: 11086-151123-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

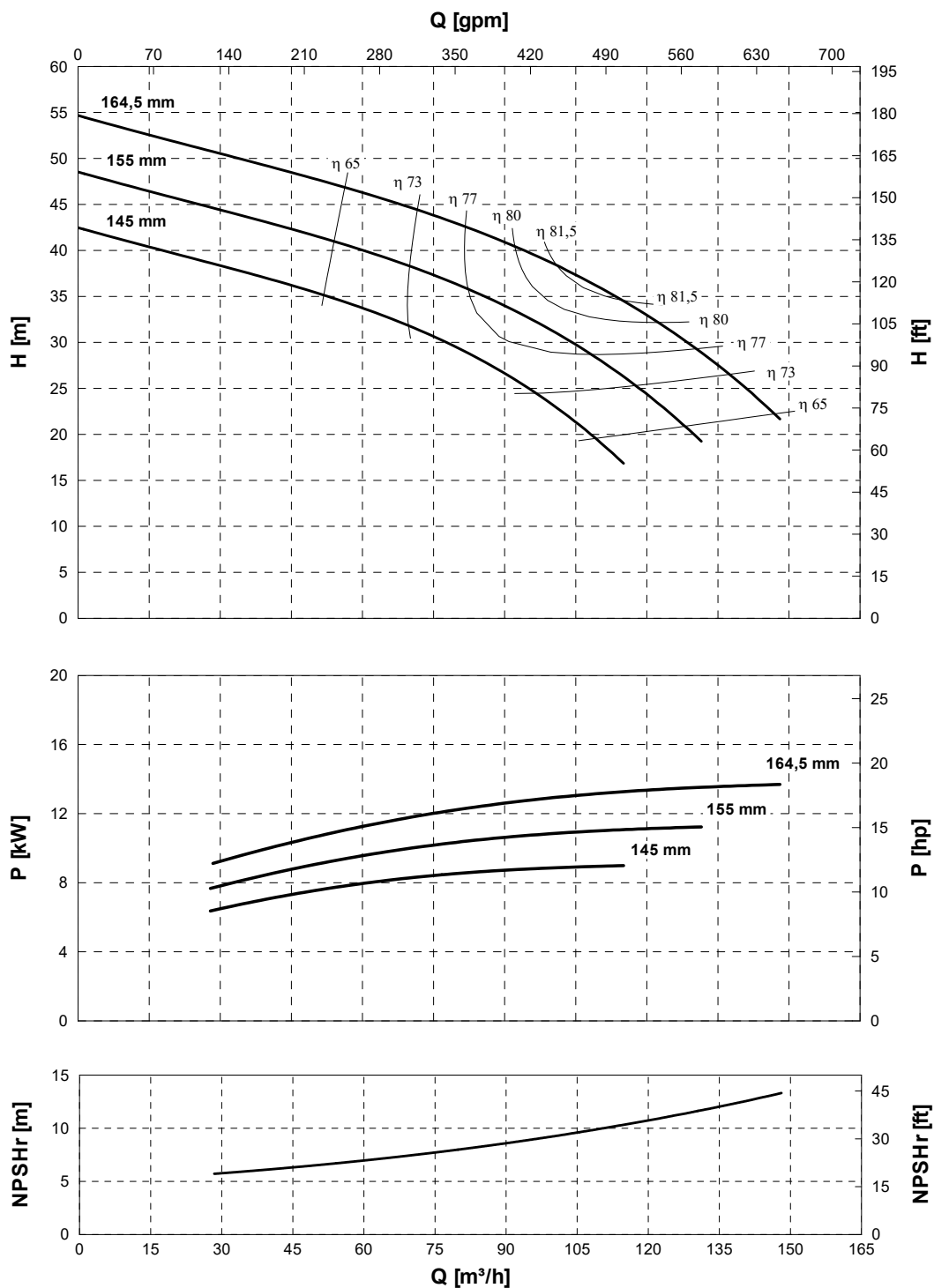


VTP 80C

Curve #: 11055-130718-F1

Vertical Turbine Pumps (VTP)

3600 rpm

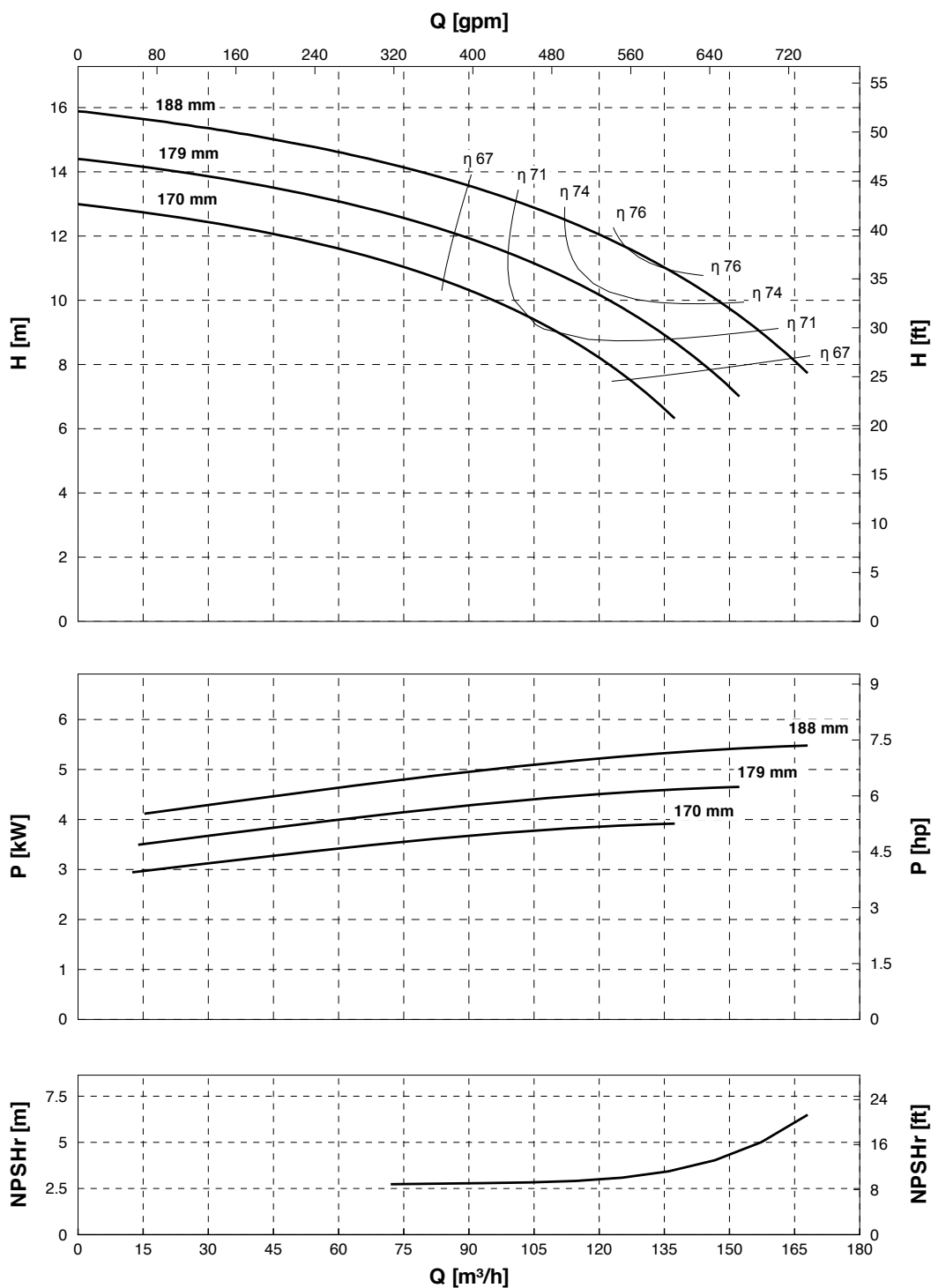


Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 100 Curve #: 11002-070713-F1



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

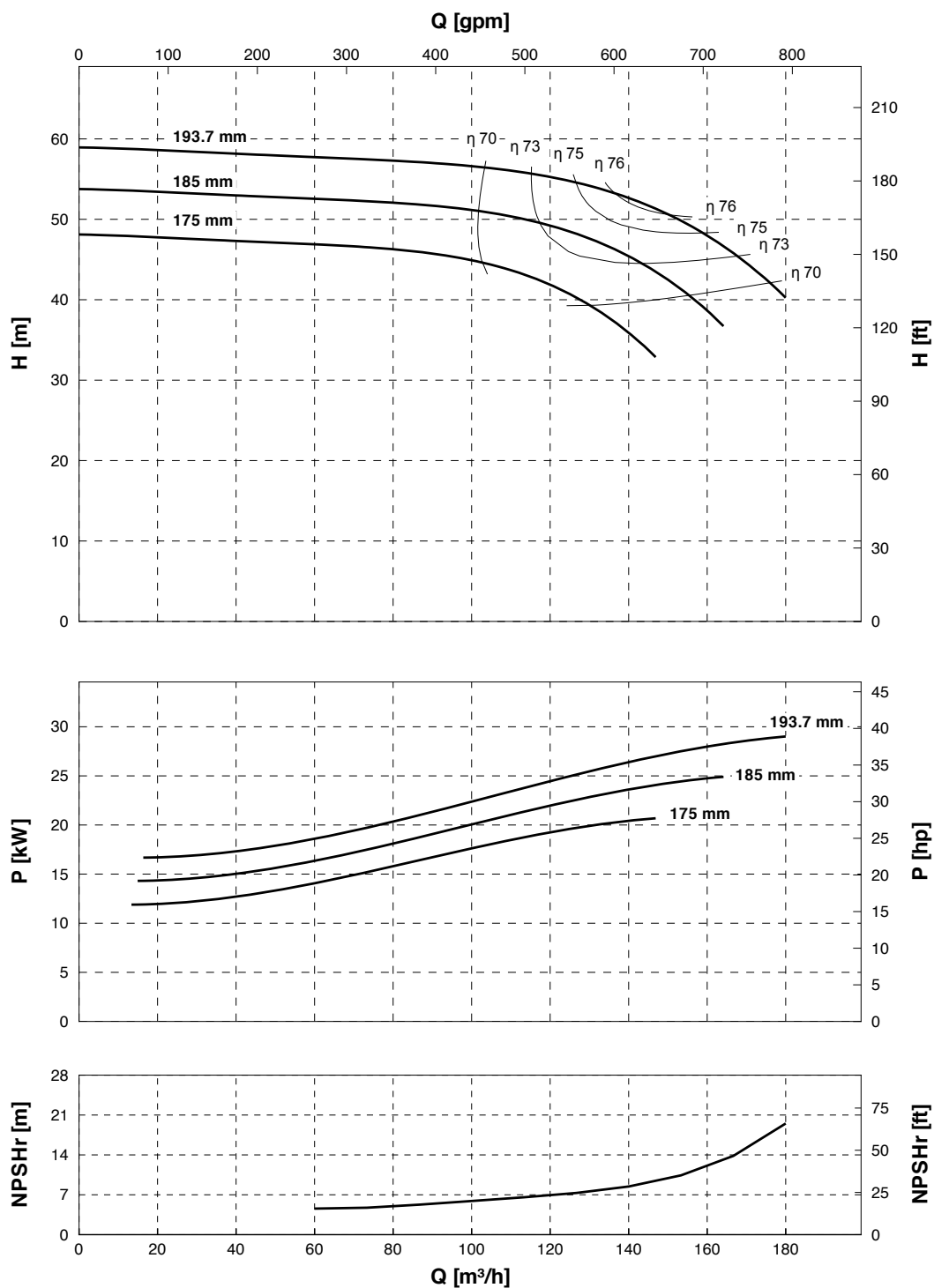


VTP 110

Curve #: 11003-071121-S1

Vertical Turbine Pumps (VTP)

3600 rpm



Notes:

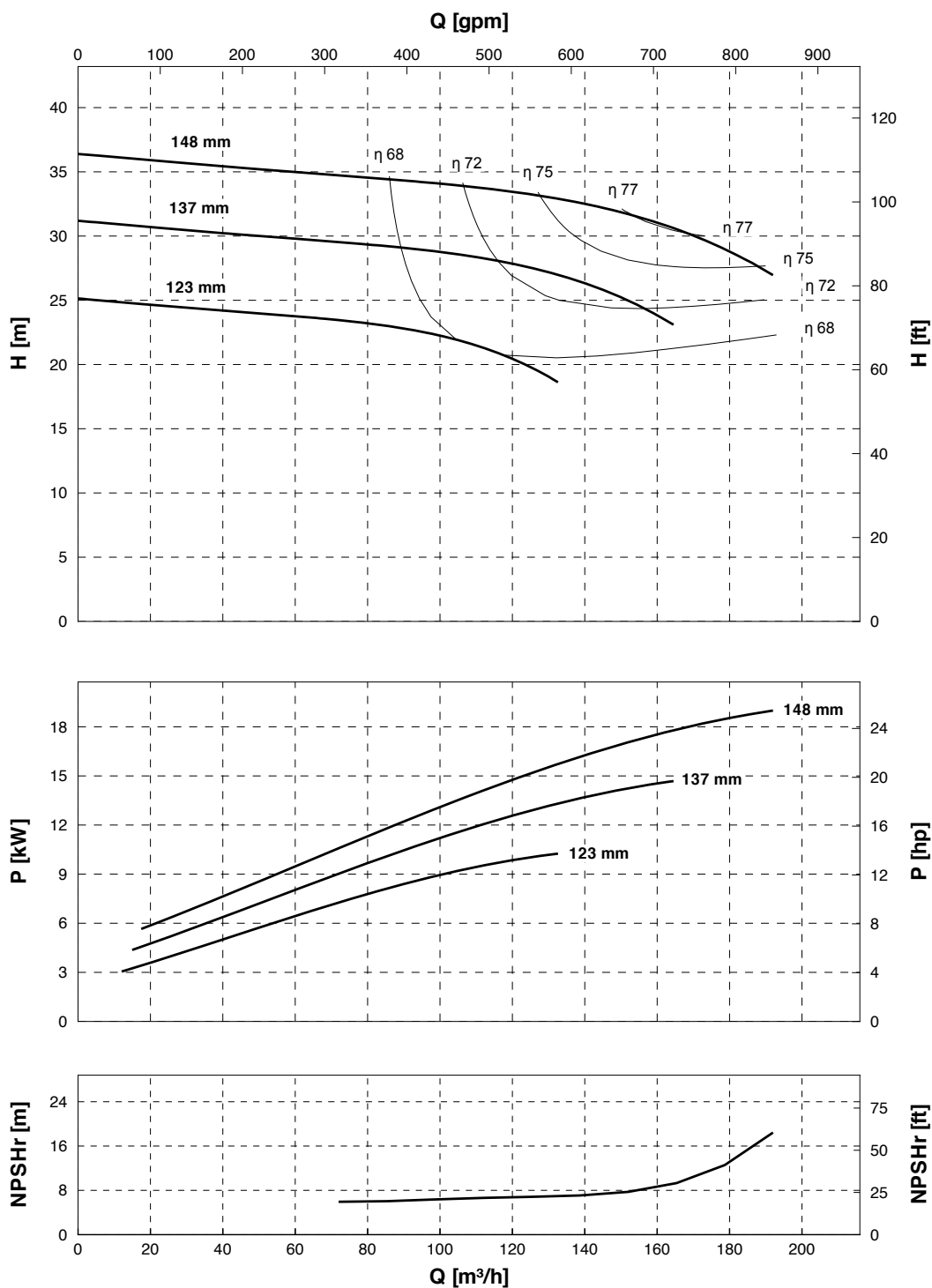
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H_2O $T^*=18^\circ\text{C}$, H_2O Density = 998 kg/m^3)
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP)

3600 rpm

VTP 130

Curve #: 11004-081121-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H_2O $T=18^\circ\text{C}$, H_2O Density = 998 kg/m^3)
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

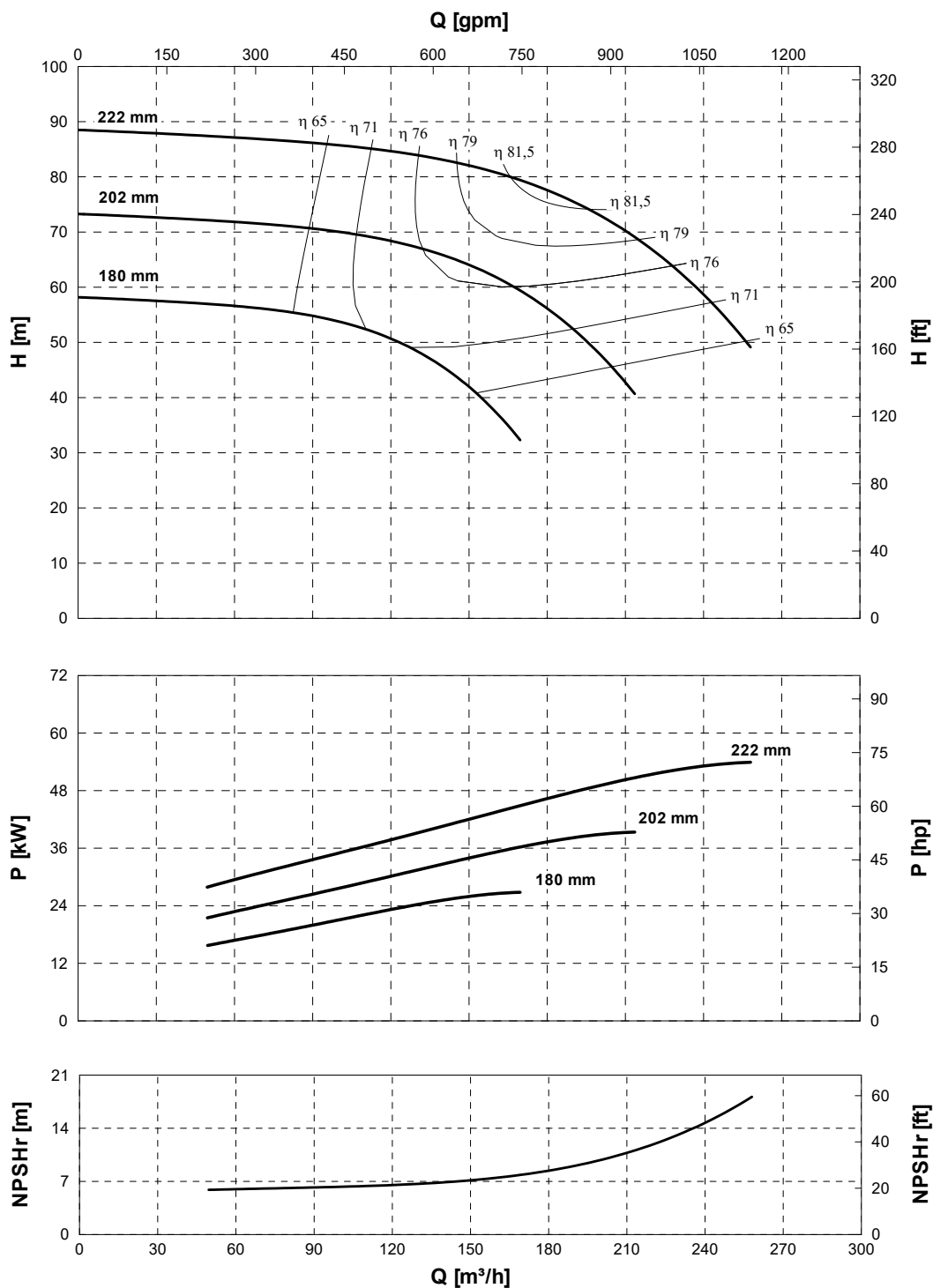


VTP 135X

Curve #: 11076-141114-S1

Vertical Turbine Pumps (VTP)

3600 rpm



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

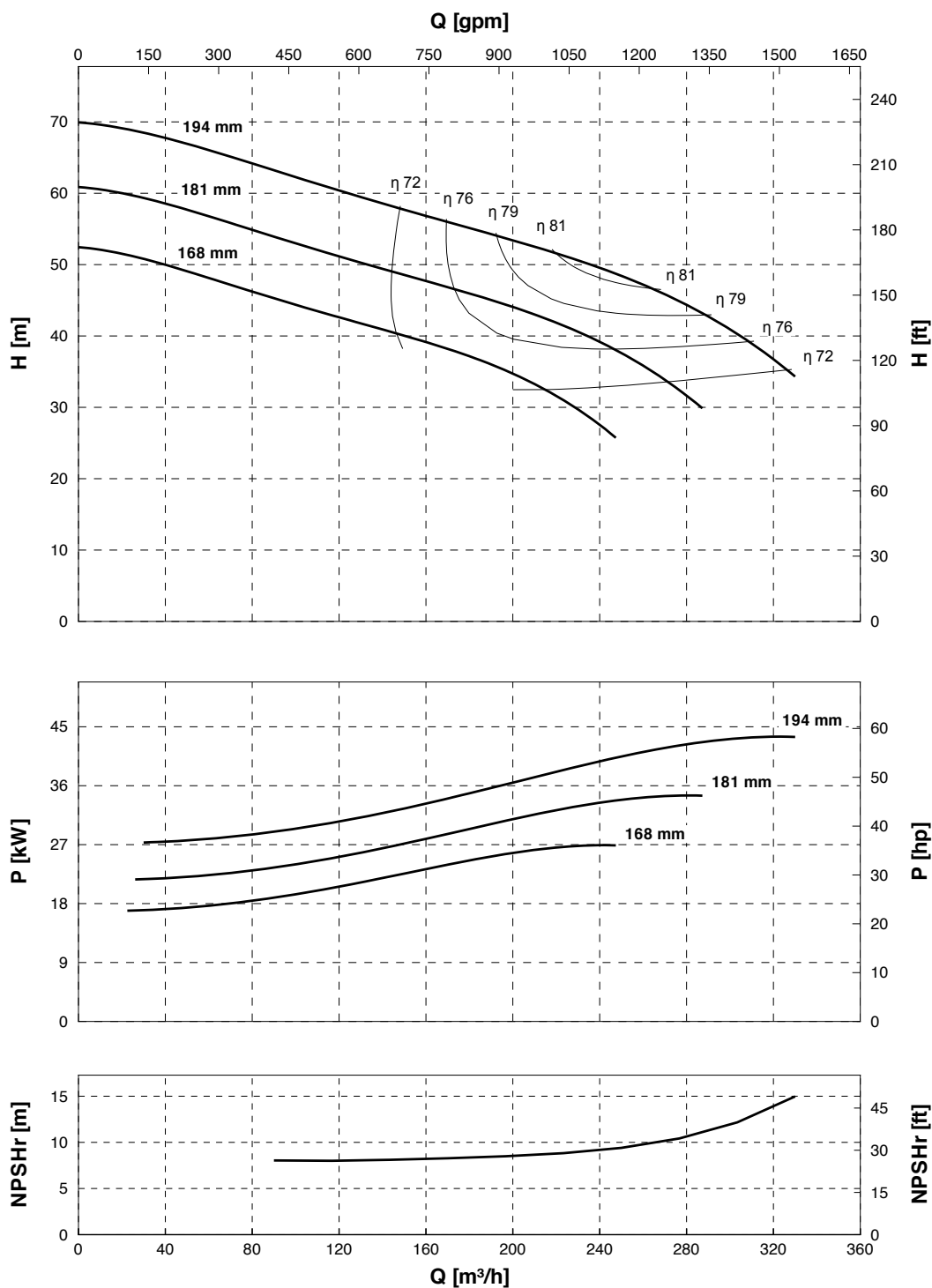


Vertical Turbine Pumps (VTP)

3600 rpm

VTP 170

Curve #: 11005-080704-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

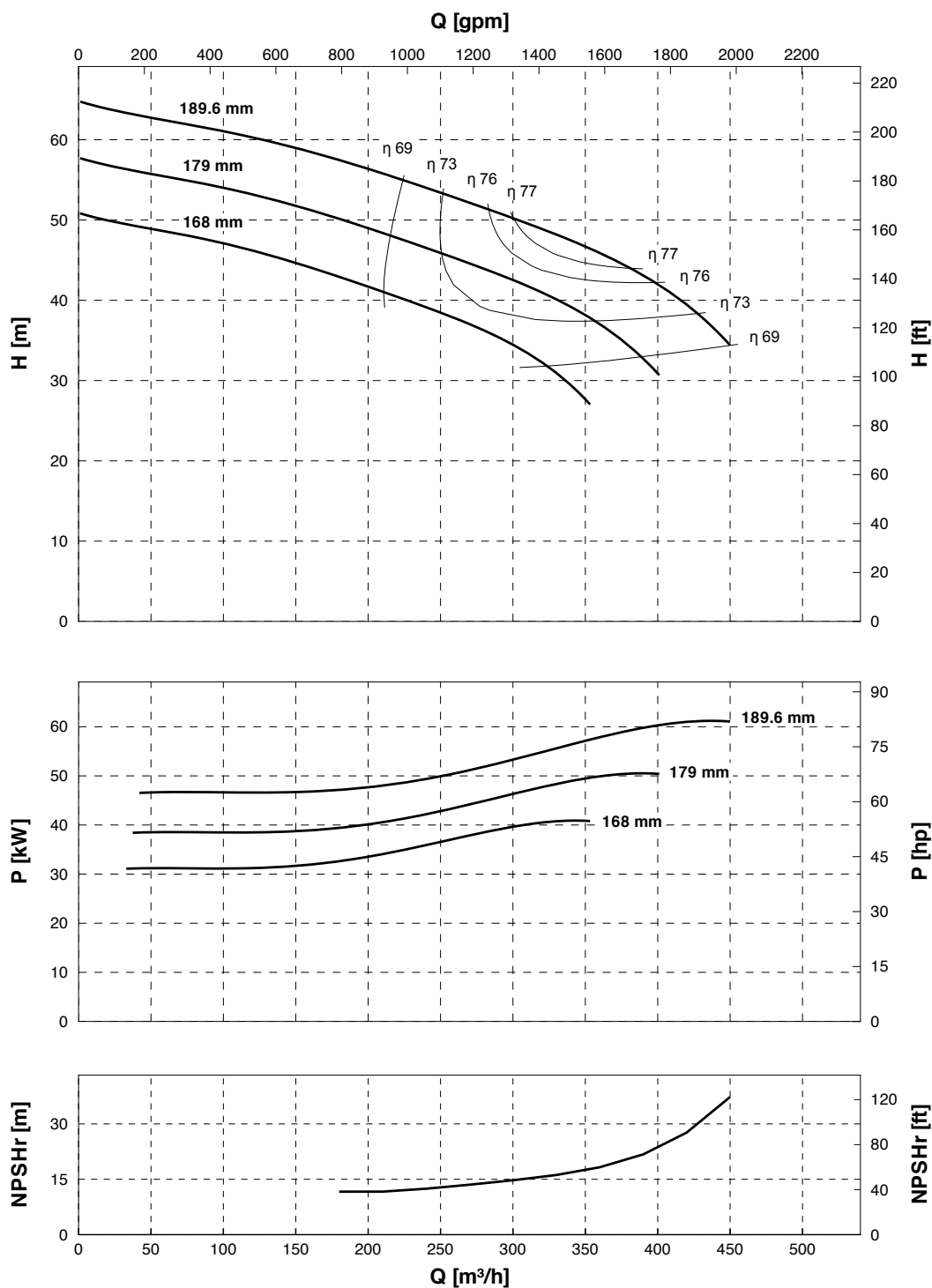


VTP 170M

Curve #: 11006-090721-S1

Vertical Turbine Pumps (VTP)

3600 rpm

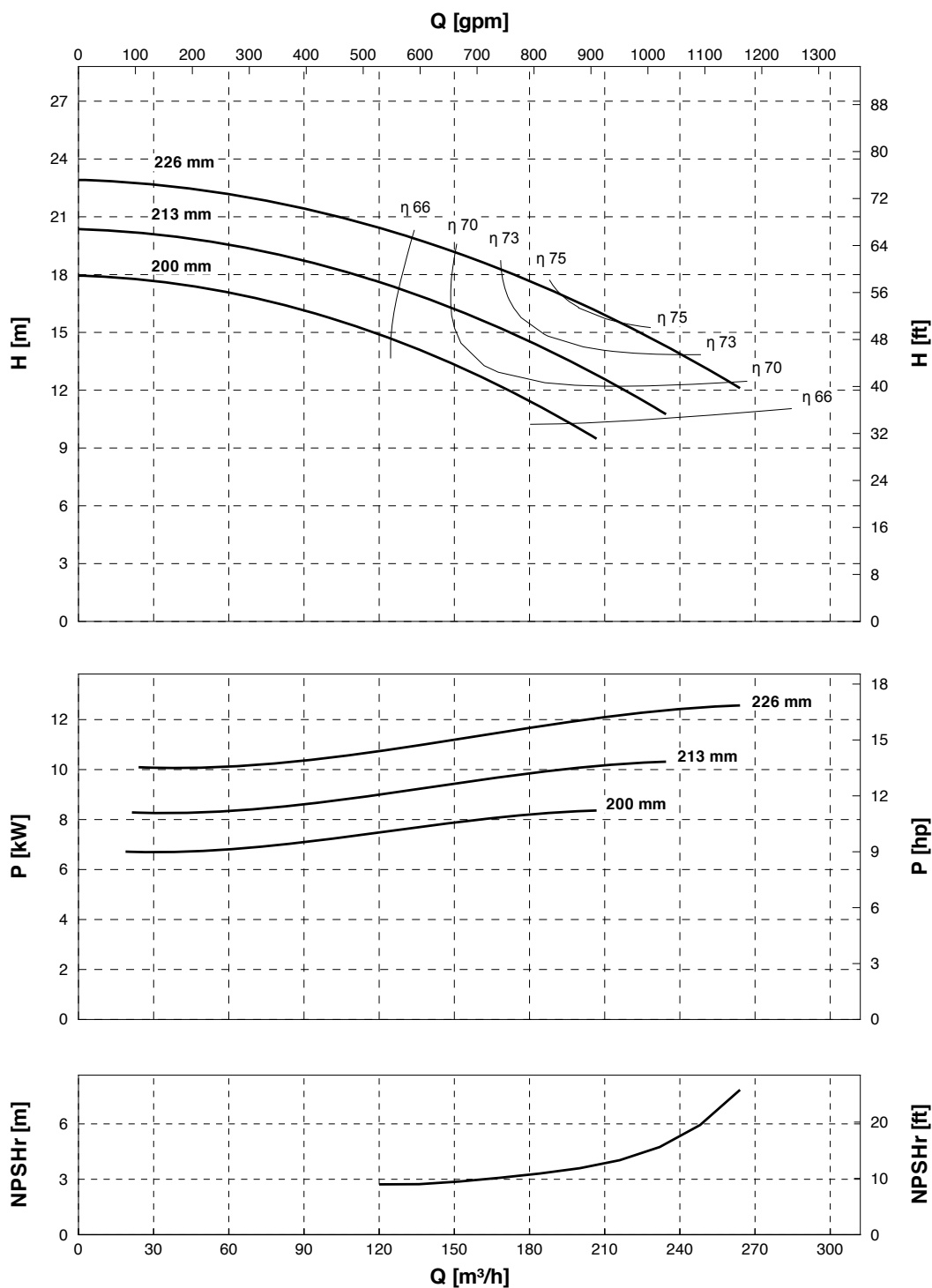


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 180 Curve #: 11007-070717-E1



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

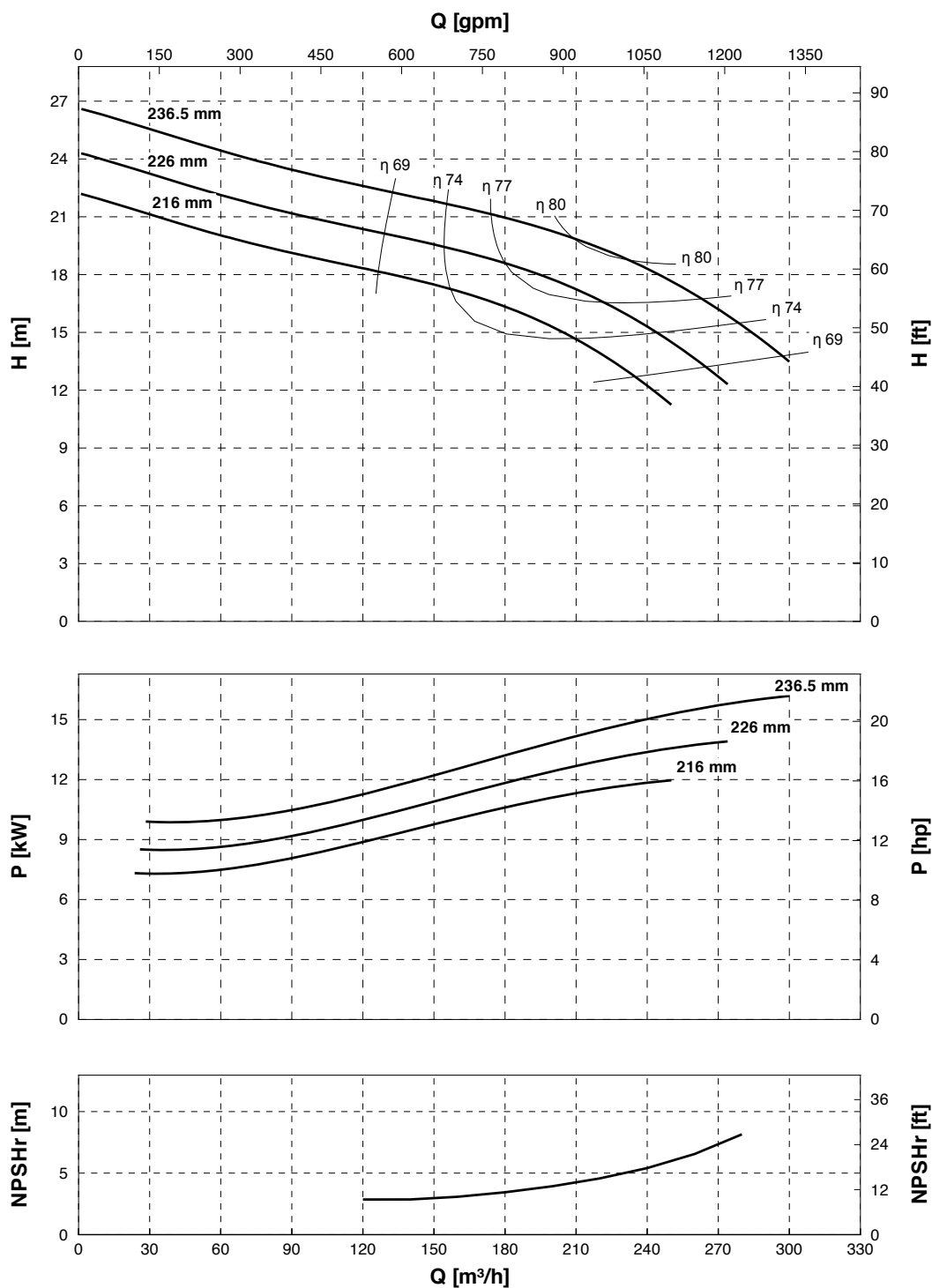


VTP 180M

Curve #: 11008-081103-S1

Vertical Turbine Pumps (VTP)

1800 rpm

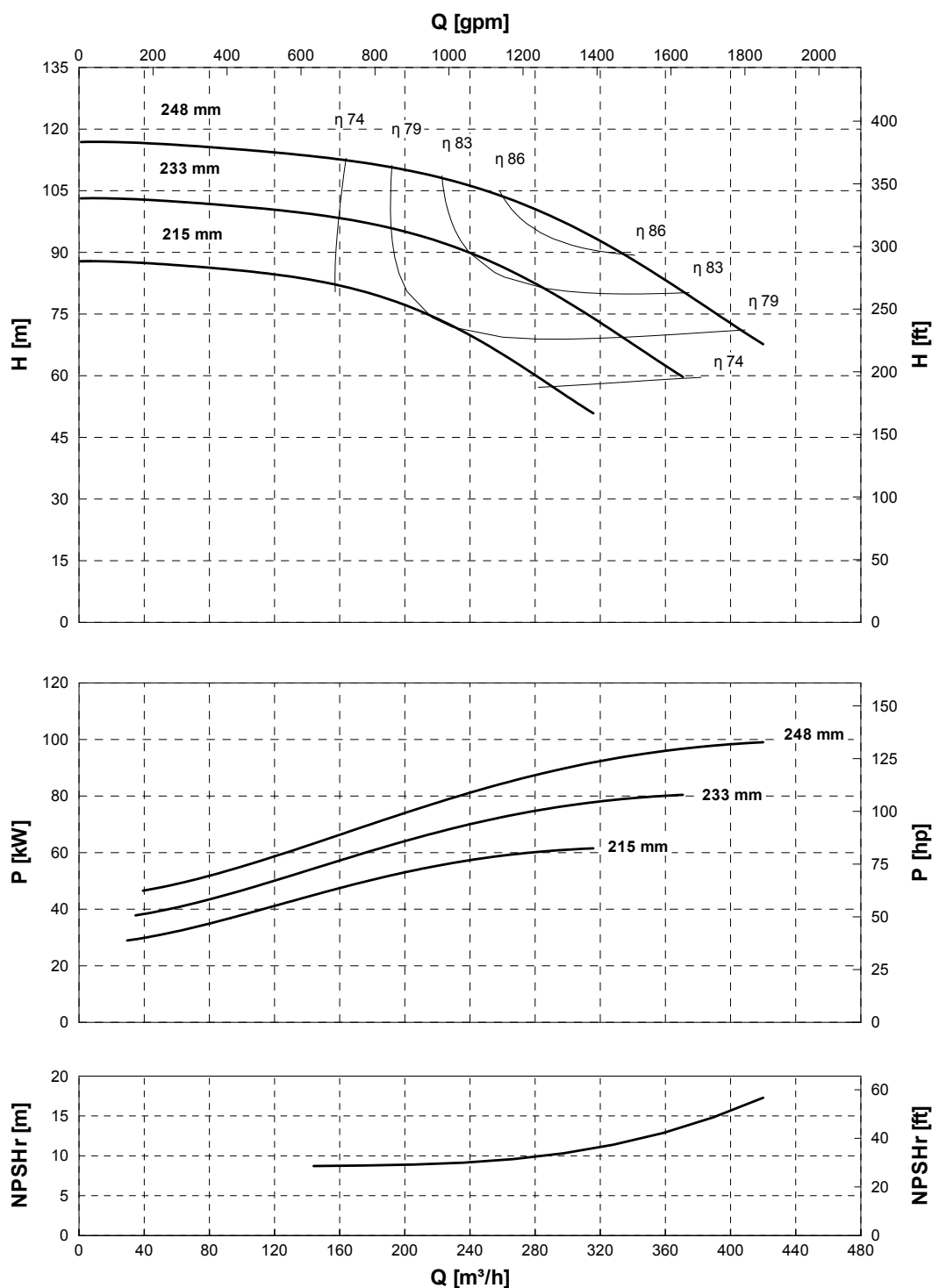


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^{\circ}=18^{\circ}C$, H_2O Density = 998 kg/m^3)
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 3600 rpm

VTP 250 Curve #: 11009-100625-E2



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

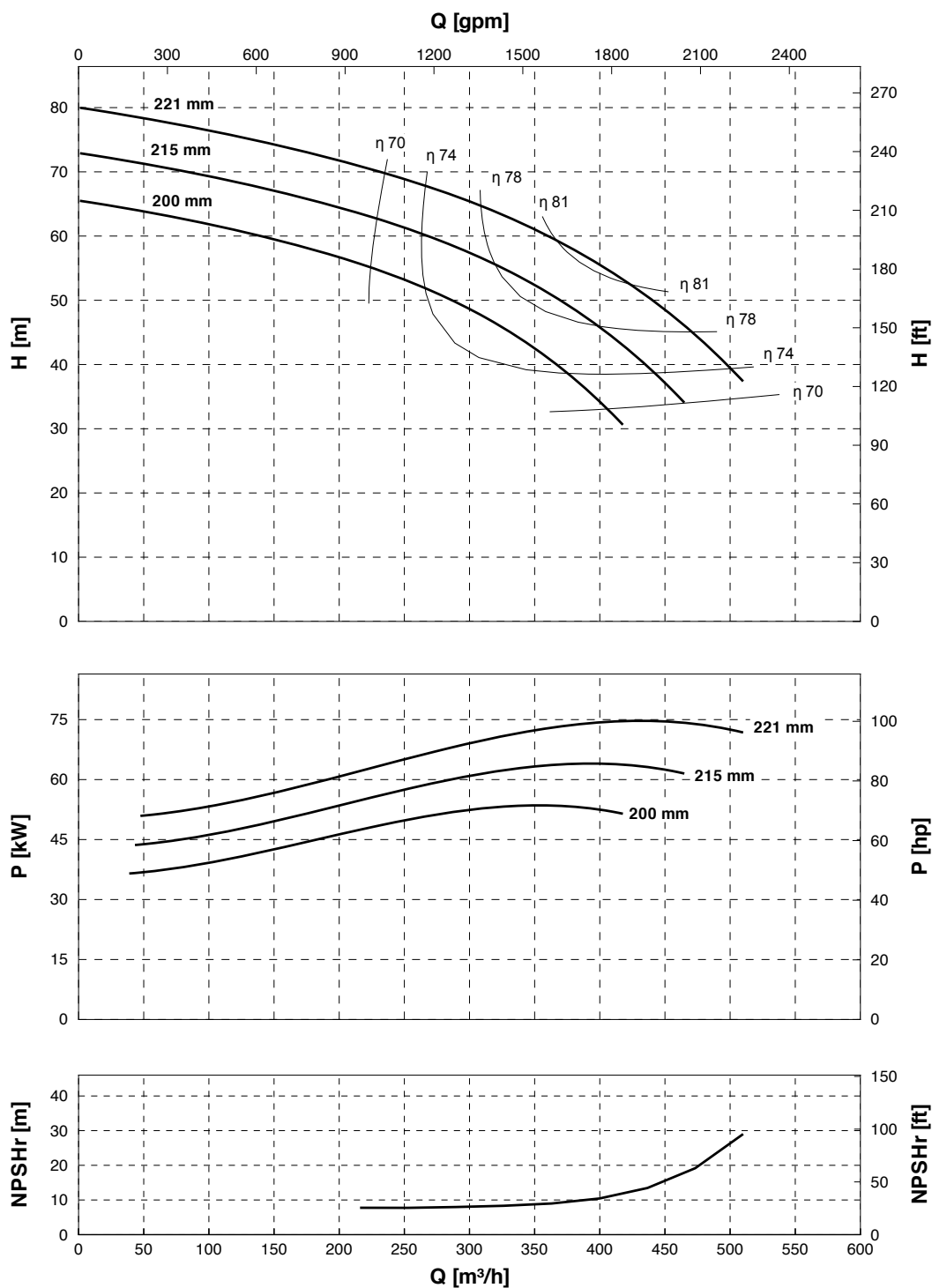


VTP 290

Curve #: 11010-081103-S1

Vertical Turbine Pumps (VTP)

3600 rpm

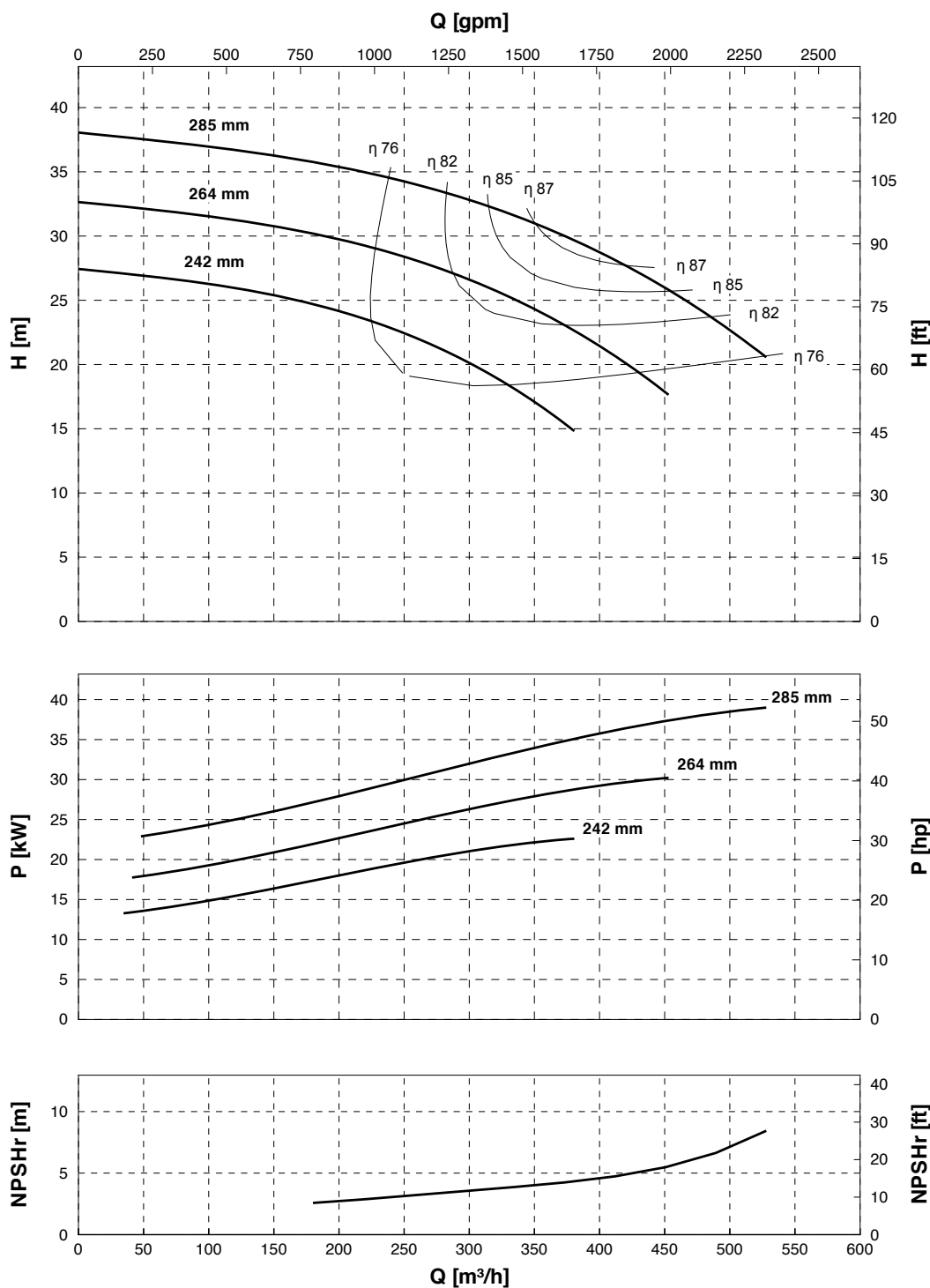


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 300 Curve #: 11011-070713-F1



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

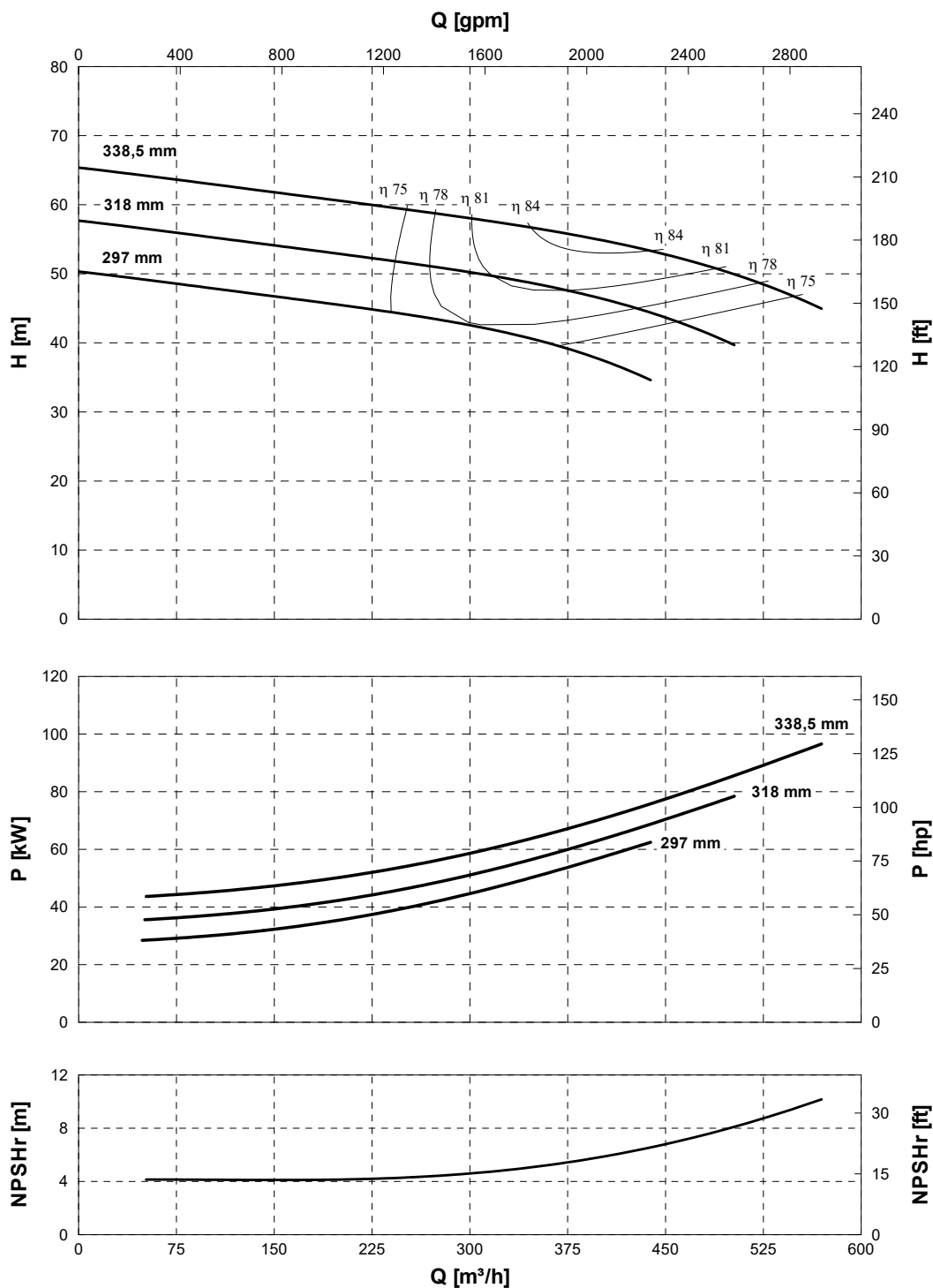


VTP 300MH

Curve #: 11090-160414-E1

Vertical Turbine Pumps (VTP)

1800 rpm

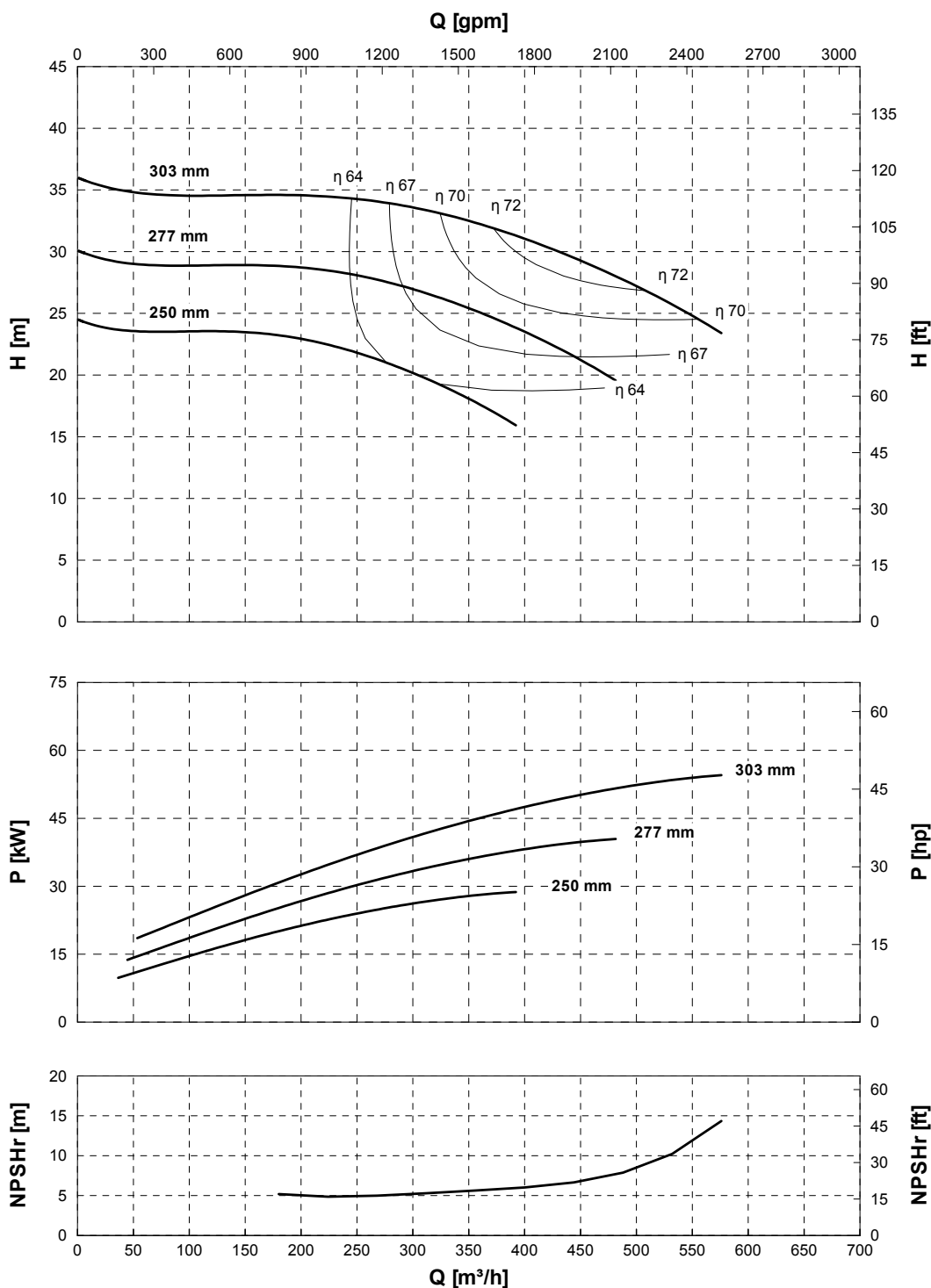


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 325 Curve #: 11012-100701-E1



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

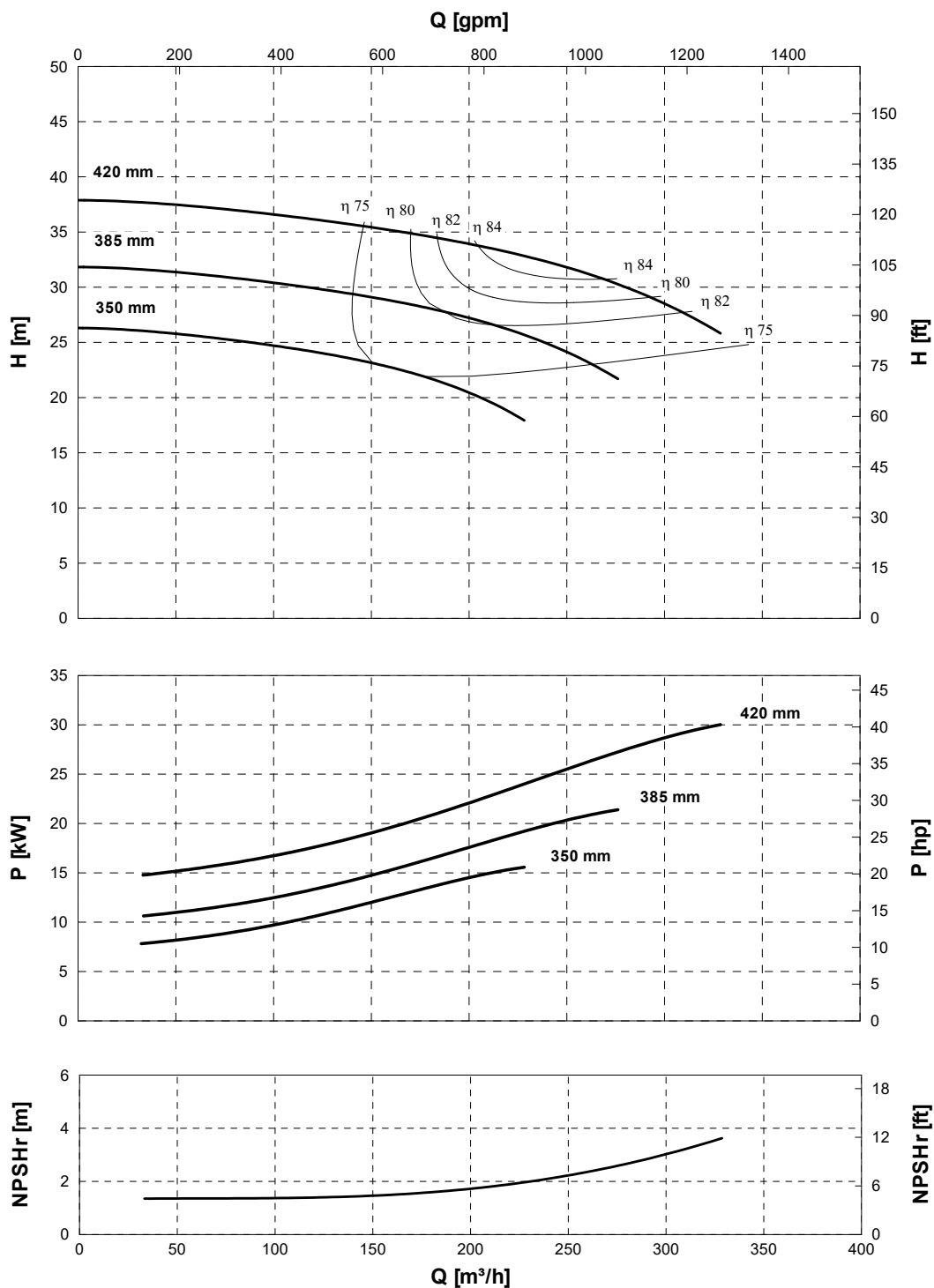


VTP 325X

Curve #: 11070-140513-F1

Vertical Turbine Pumps (VTP)

1200 rpm

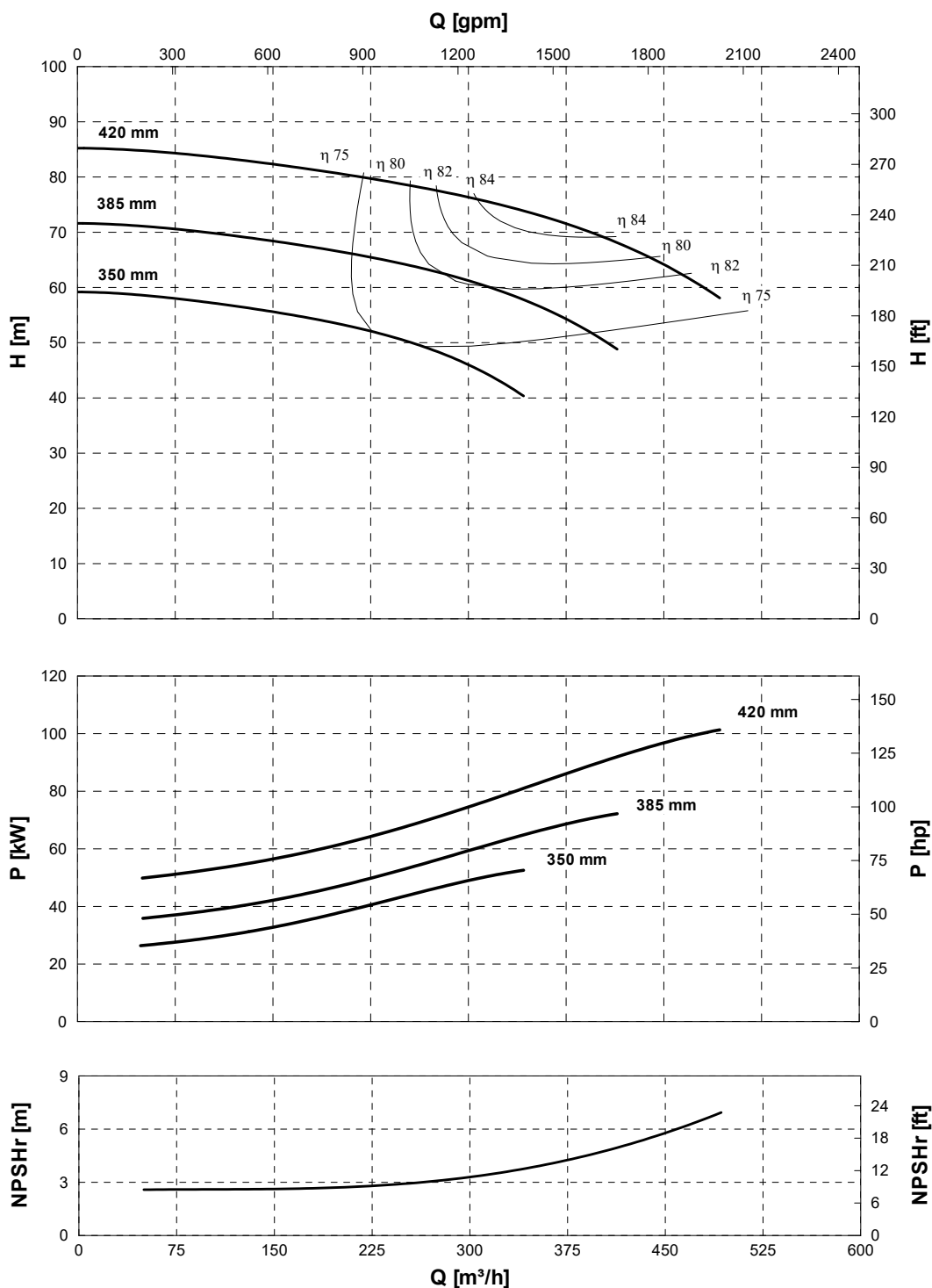


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^*=18$ [°C], H_2O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 325X Curve #: 11070-140513-F1



Notes:

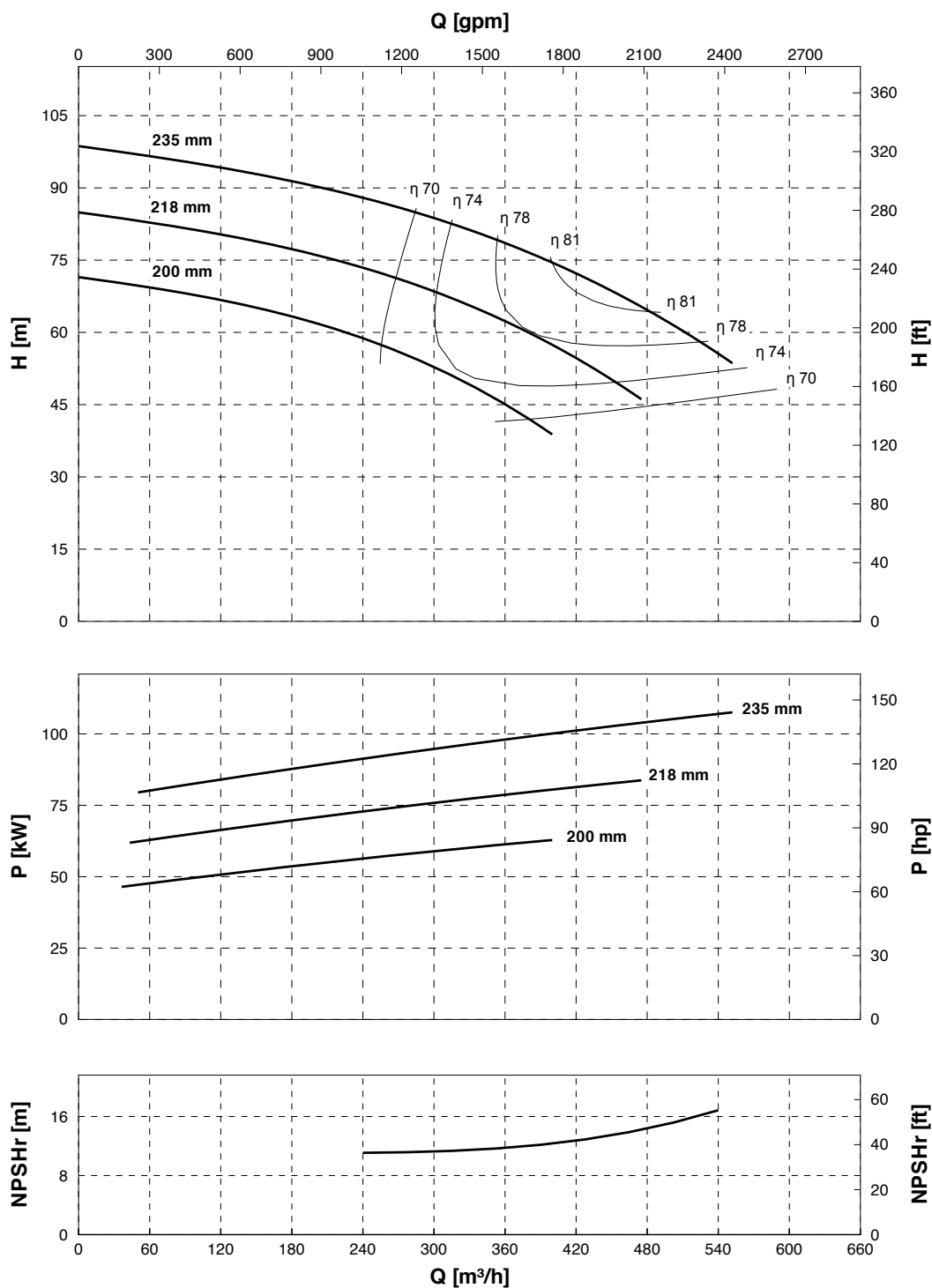
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 360

Curve #: 11013-080614-E1

Vertical Turbine Pumps (VTP)
3600 rpm

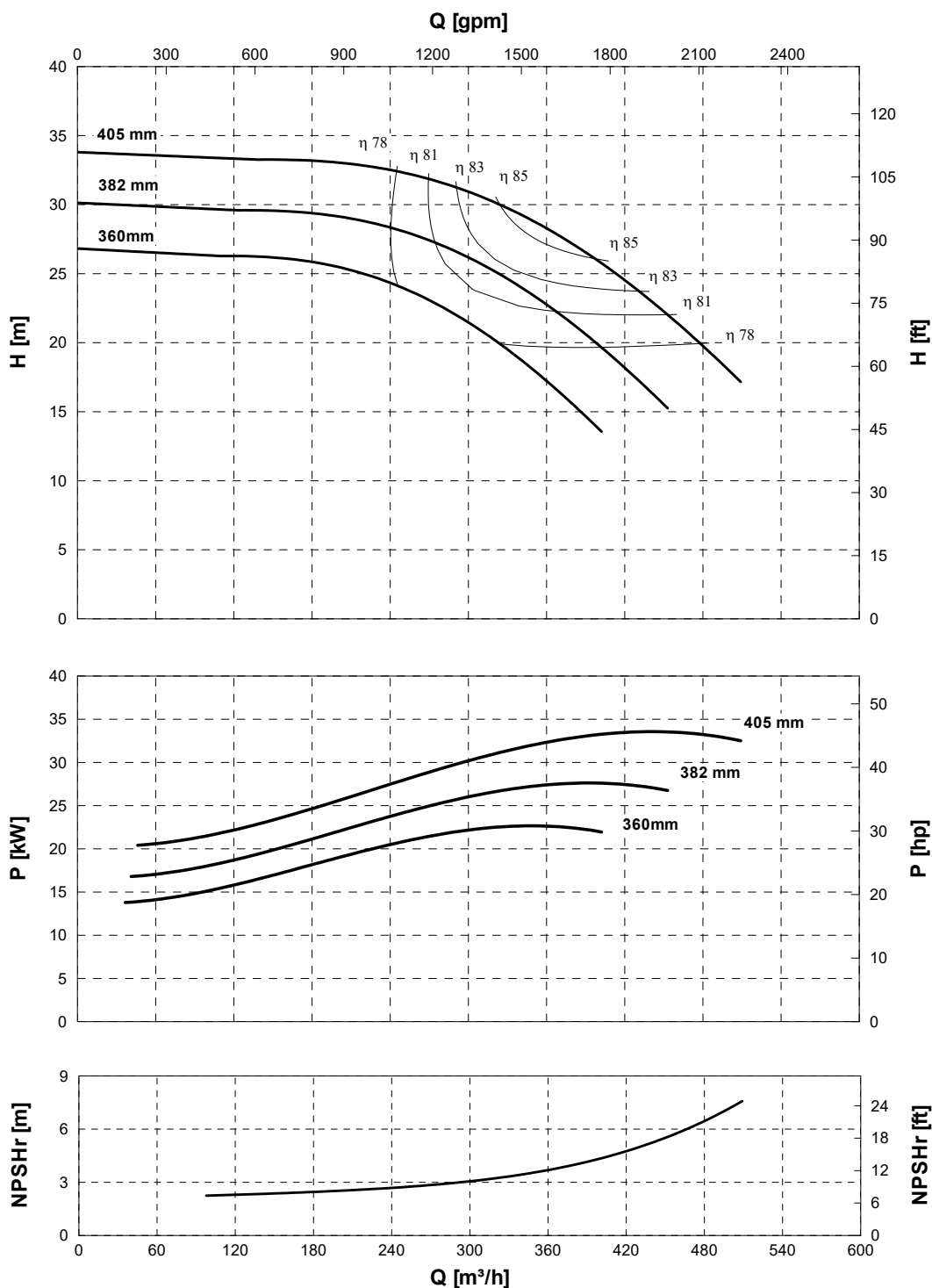


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1200 rpm

VTP 400M Curve #: 11074-140708-S1



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T=18$ °C), H_2O Density = 998 [kg/m³]
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

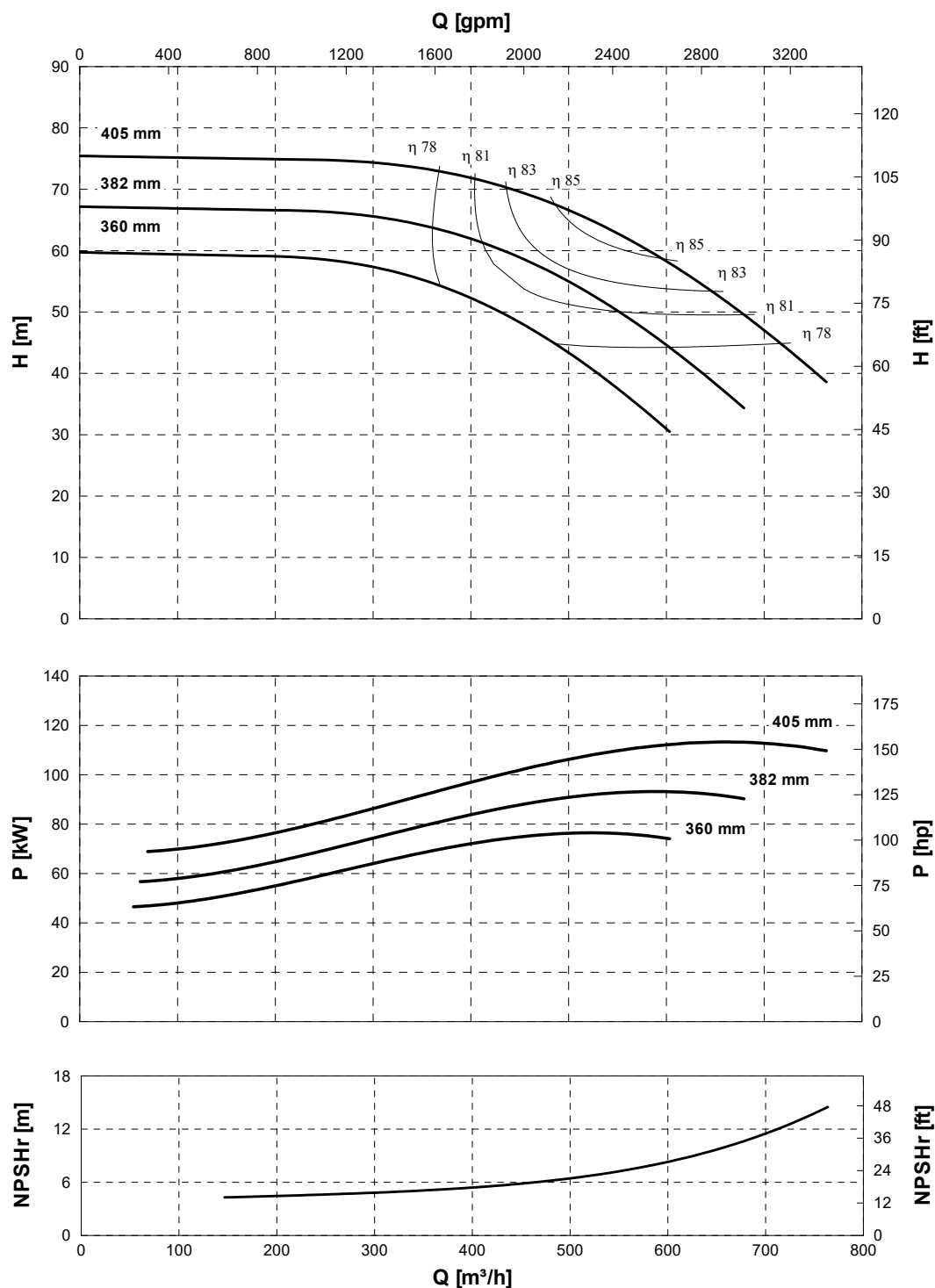


VTP 400M

Curve #: 11074-140708-S1

Vertical Turbine Pumps (VTP)

1800 rpm

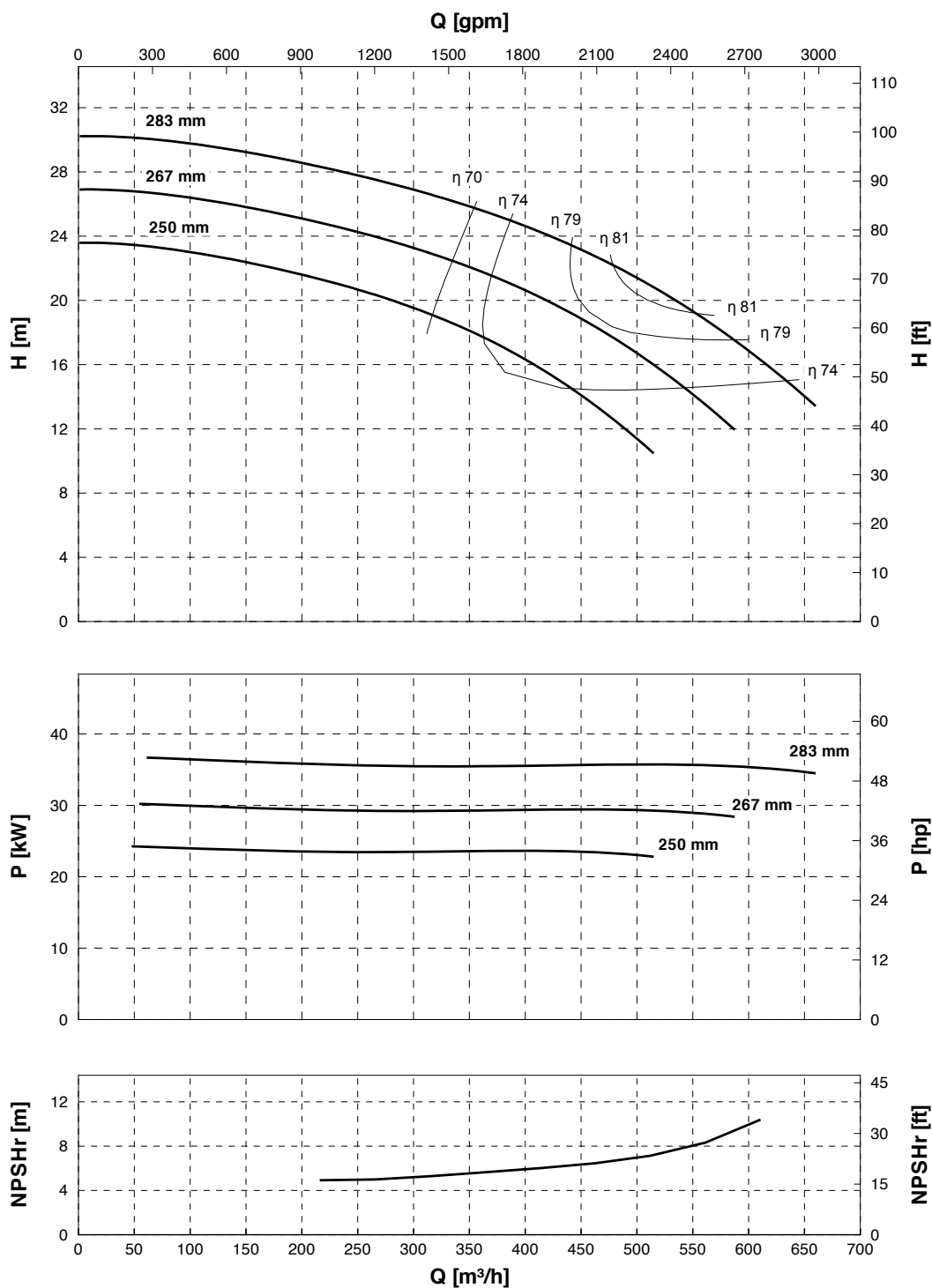


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 450 Curve #: 11014-081103-S1



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

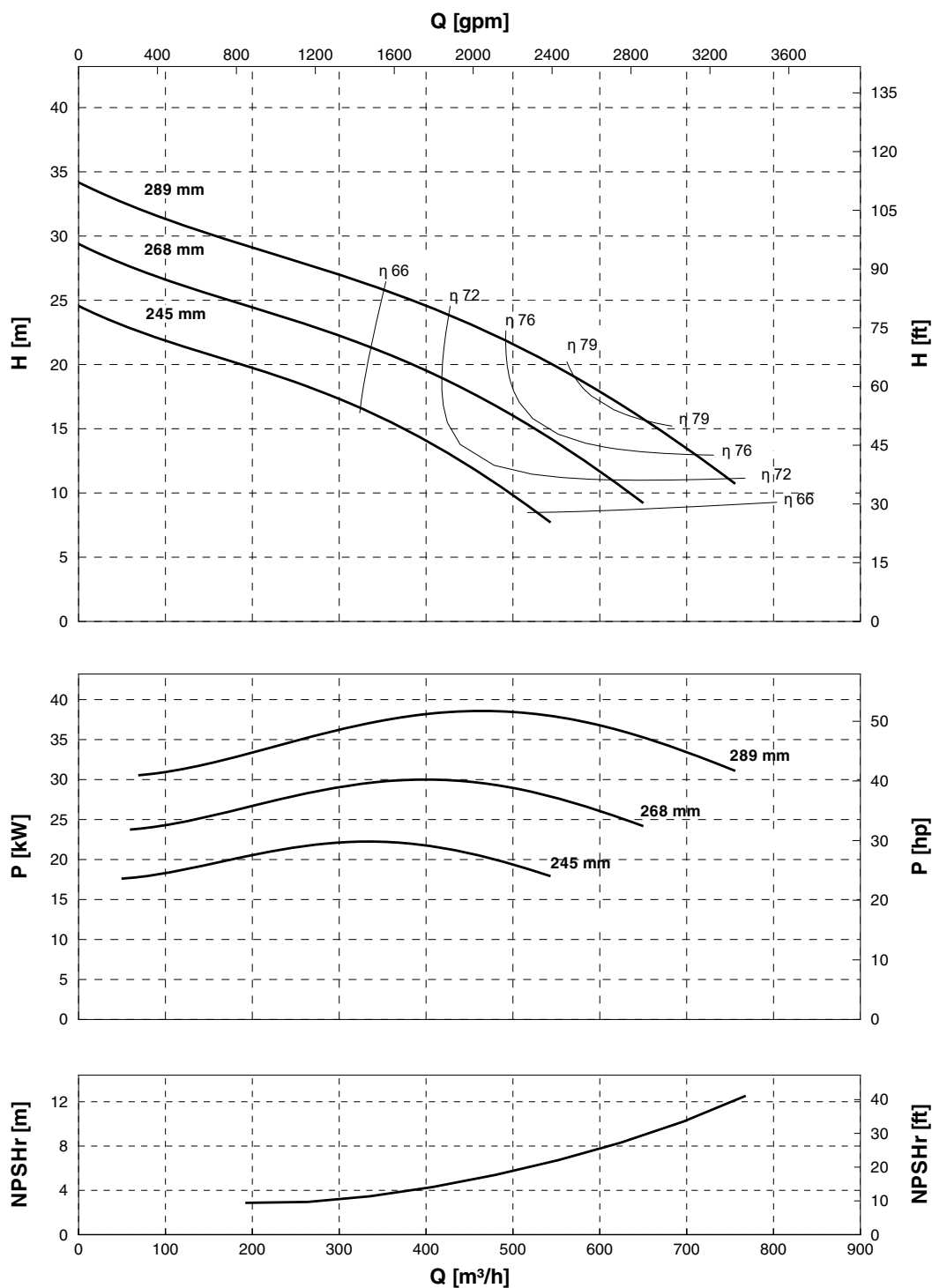


VTP 500

Curve #: 11015-080802-E2

Vertical Turbine Pumps (VTP)

1800 rpm

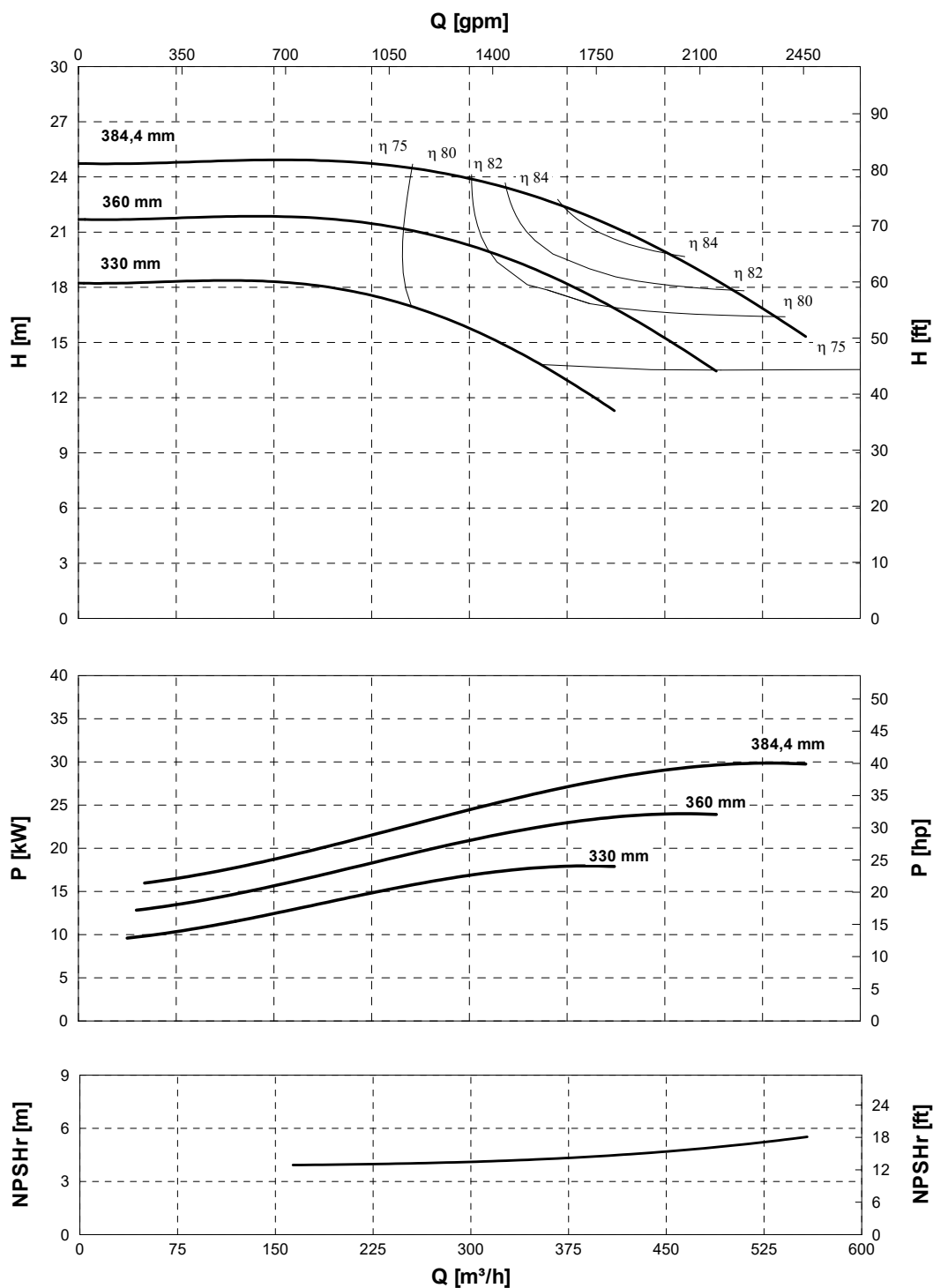


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^{\circ}=18^{\circ}C$, H_2O Density = 998 kg/m^3)
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1200 rpm

VTP 500M Curve #: 11085-151120-S1



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

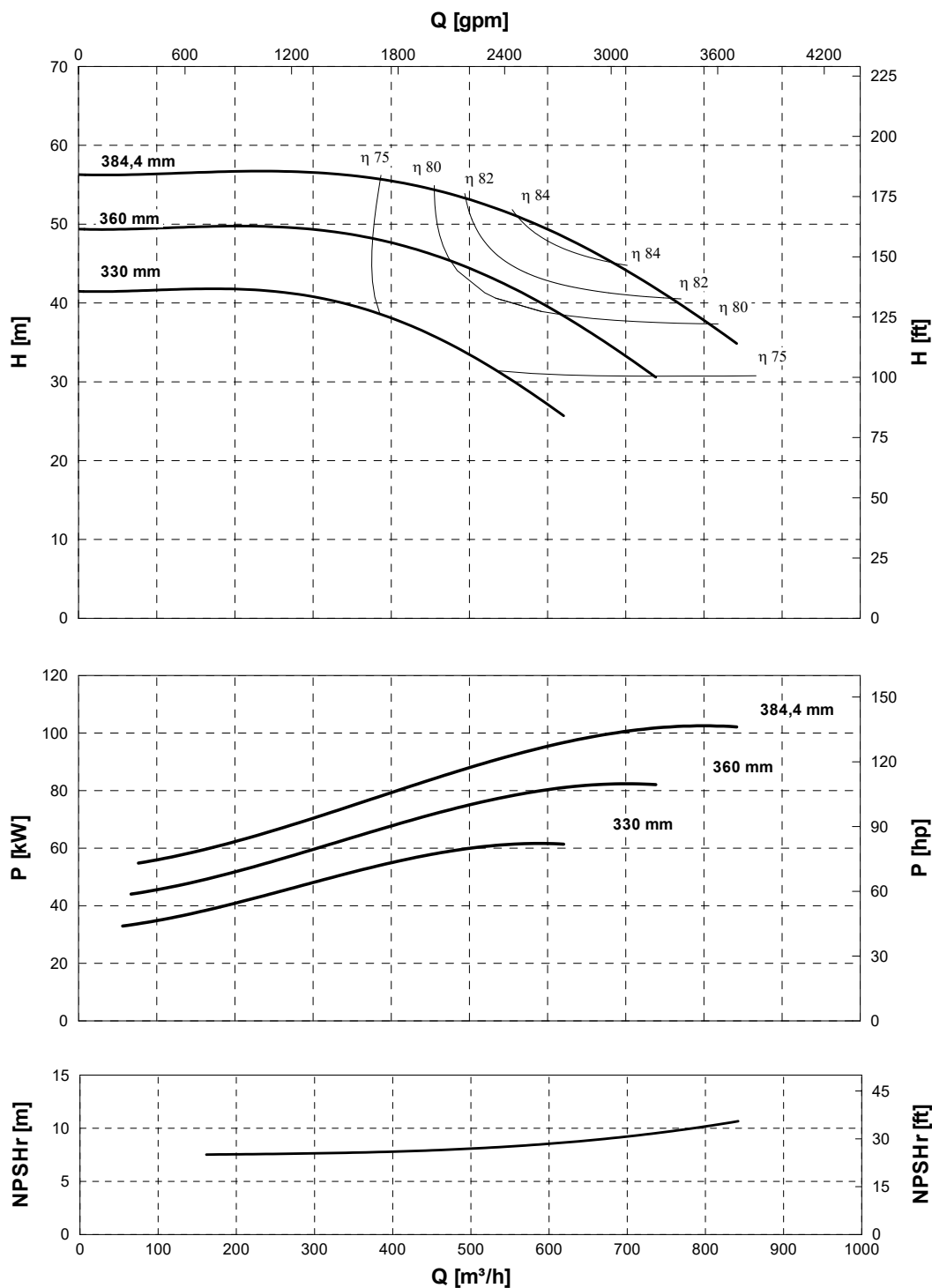


VTP 500M

Curve #: 11085-151120-S1

Vertical Turbine Pumps (VTP)

1800 rpm

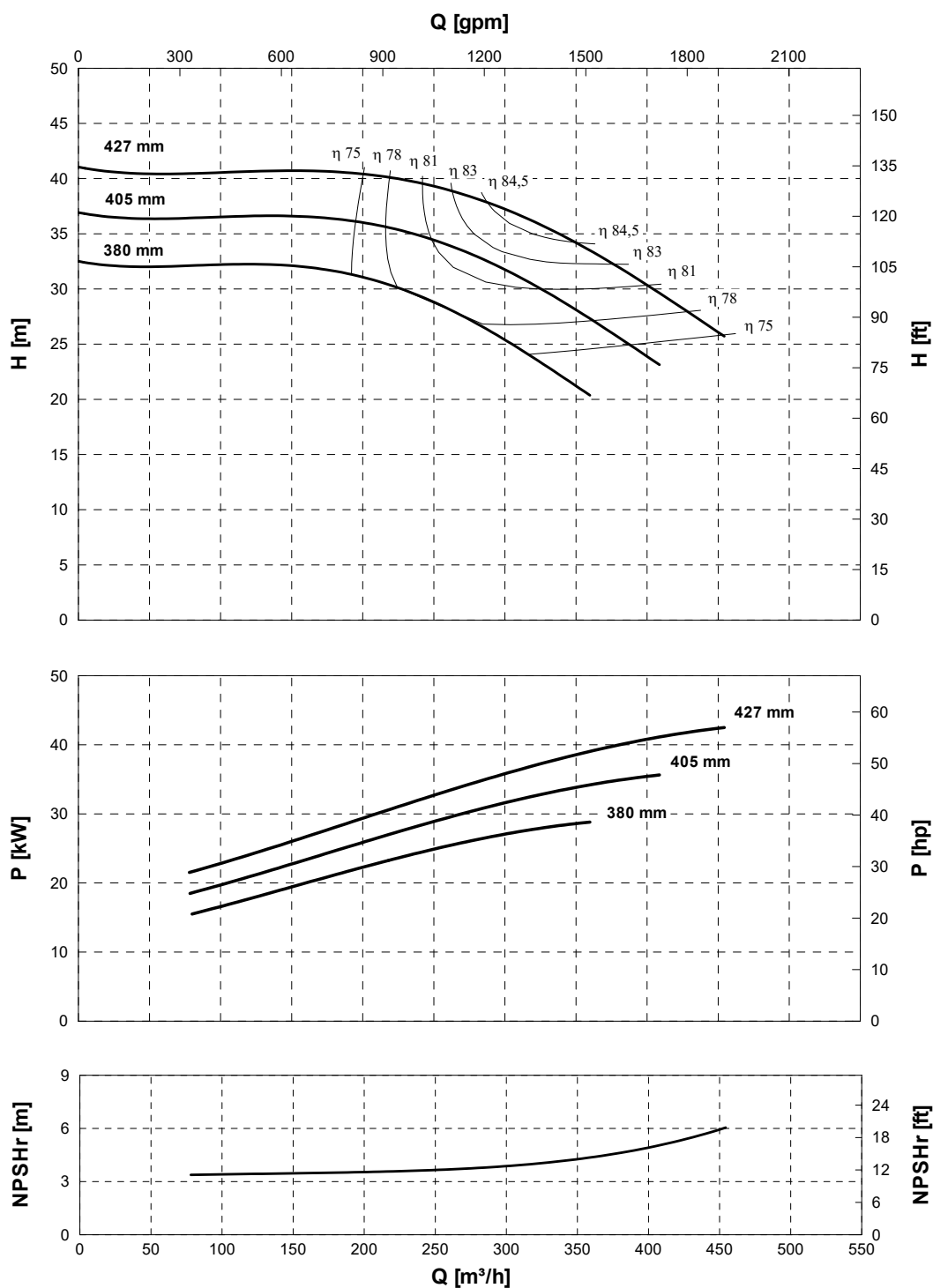


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1200 rpm

VTP 500X Curve #: 11016-121116-E1



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

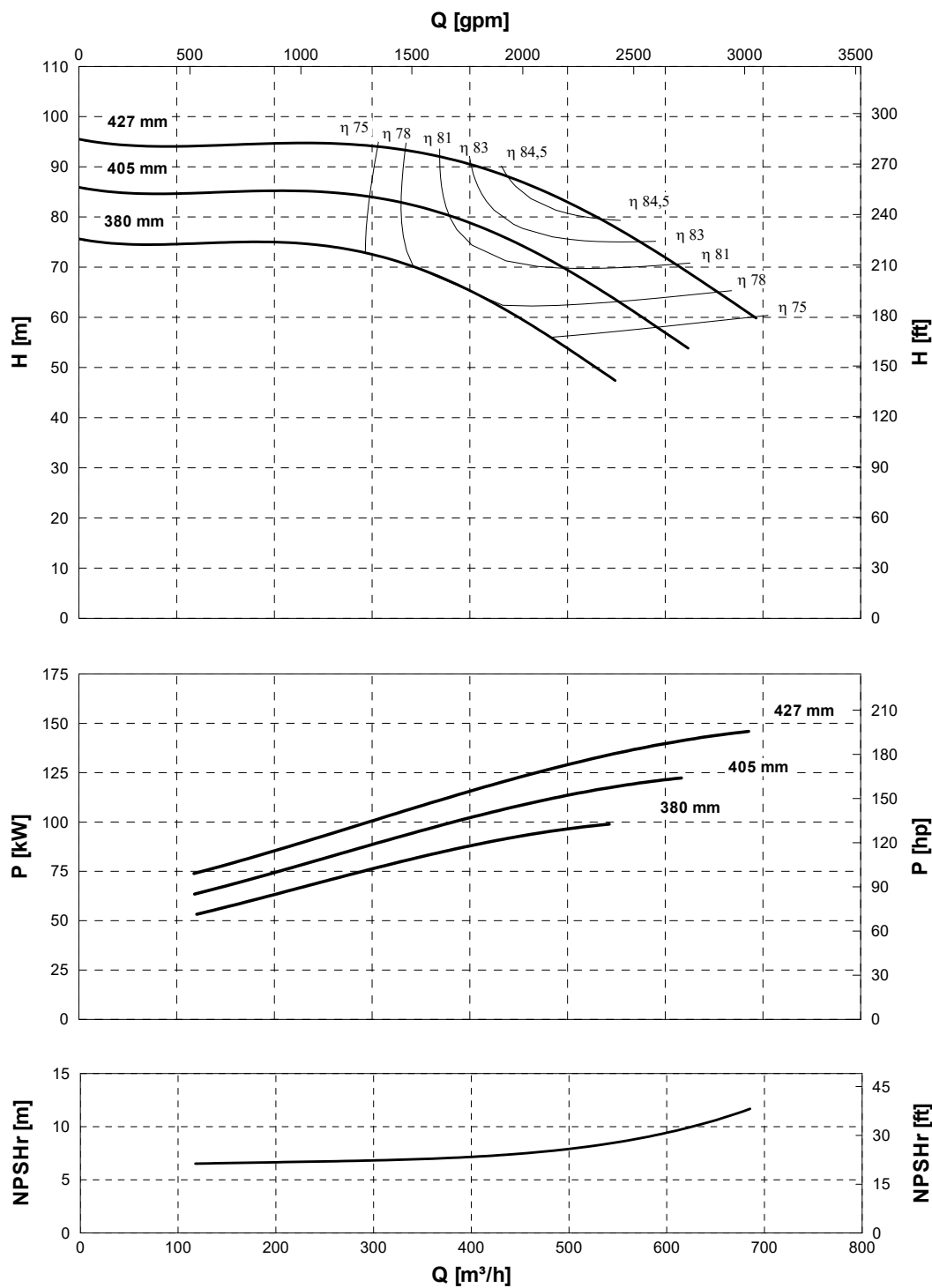


VTP 500X

Curve #: 11016-121116-E1

Vertical Turbine Pumps (VTP)

1800 rpm

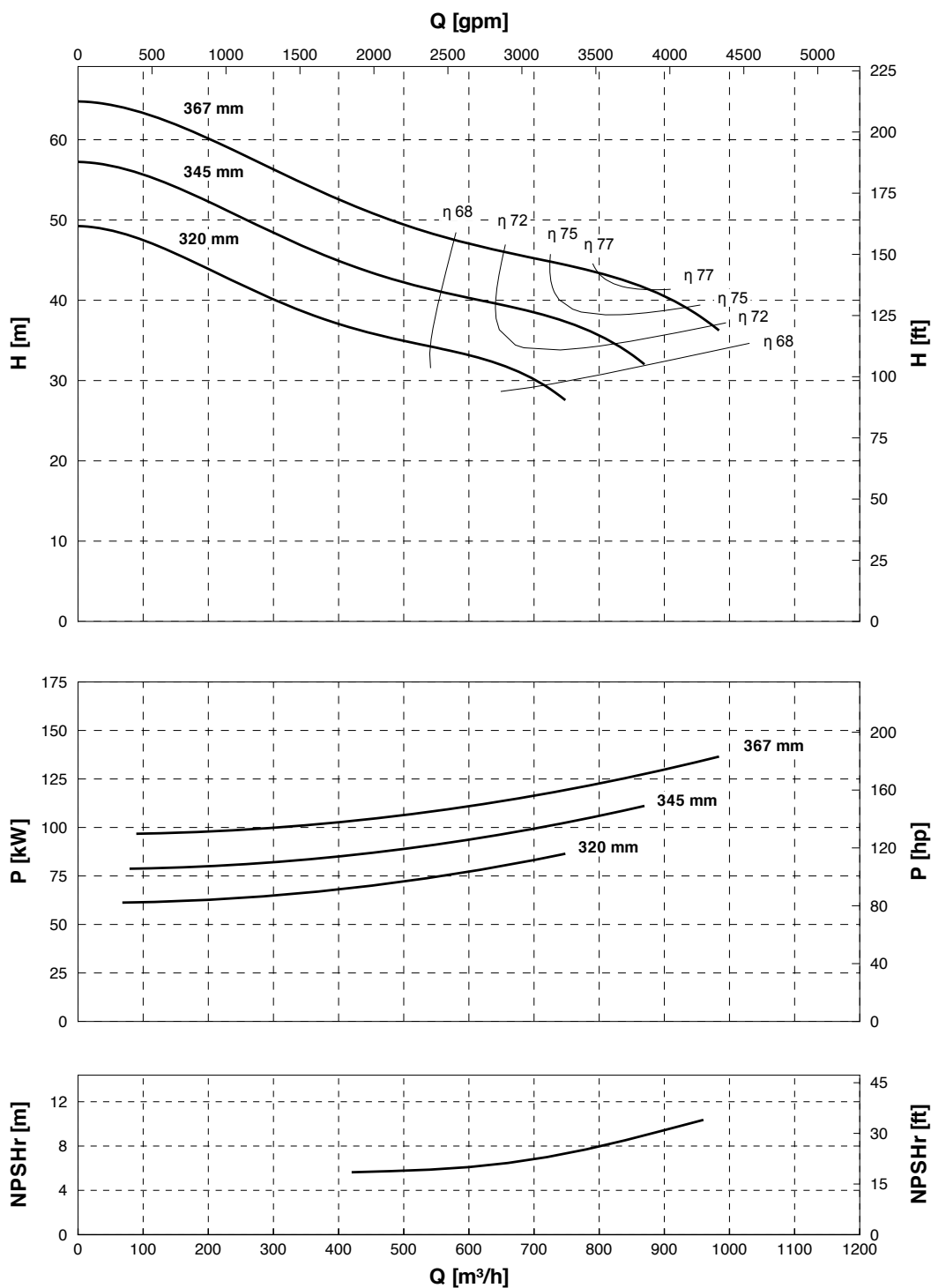


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^{\circ}=18^{\circ}C$, H_2O Density = 998 kg/m^3)
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 650 Curve #: 11017-070713-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

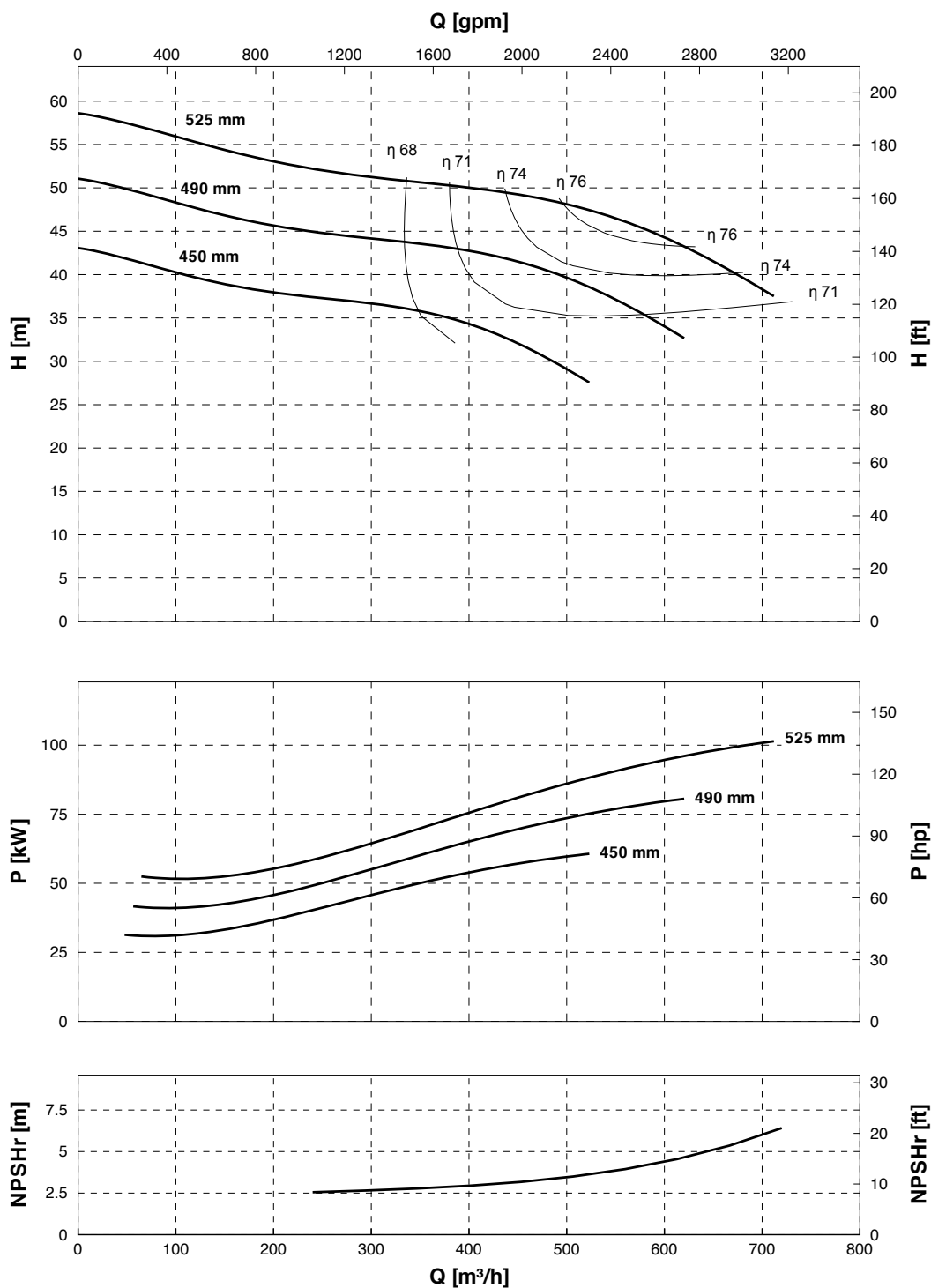


VTP 700

Curve #: 11018-070713-E1

Vertical Turbine Pumps (VTP)

1200 rpm

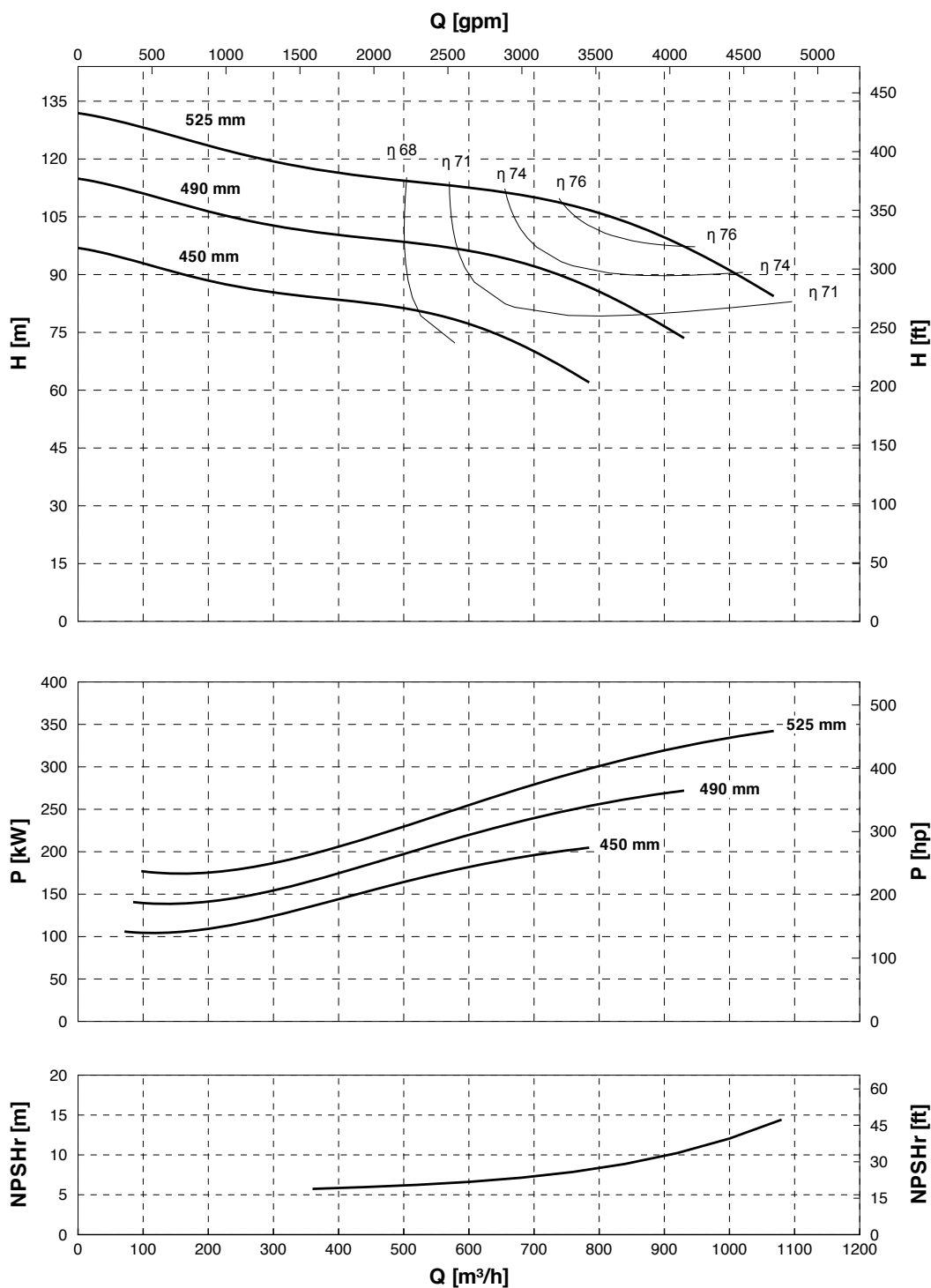


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 700 Curve #: 11018-070713-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

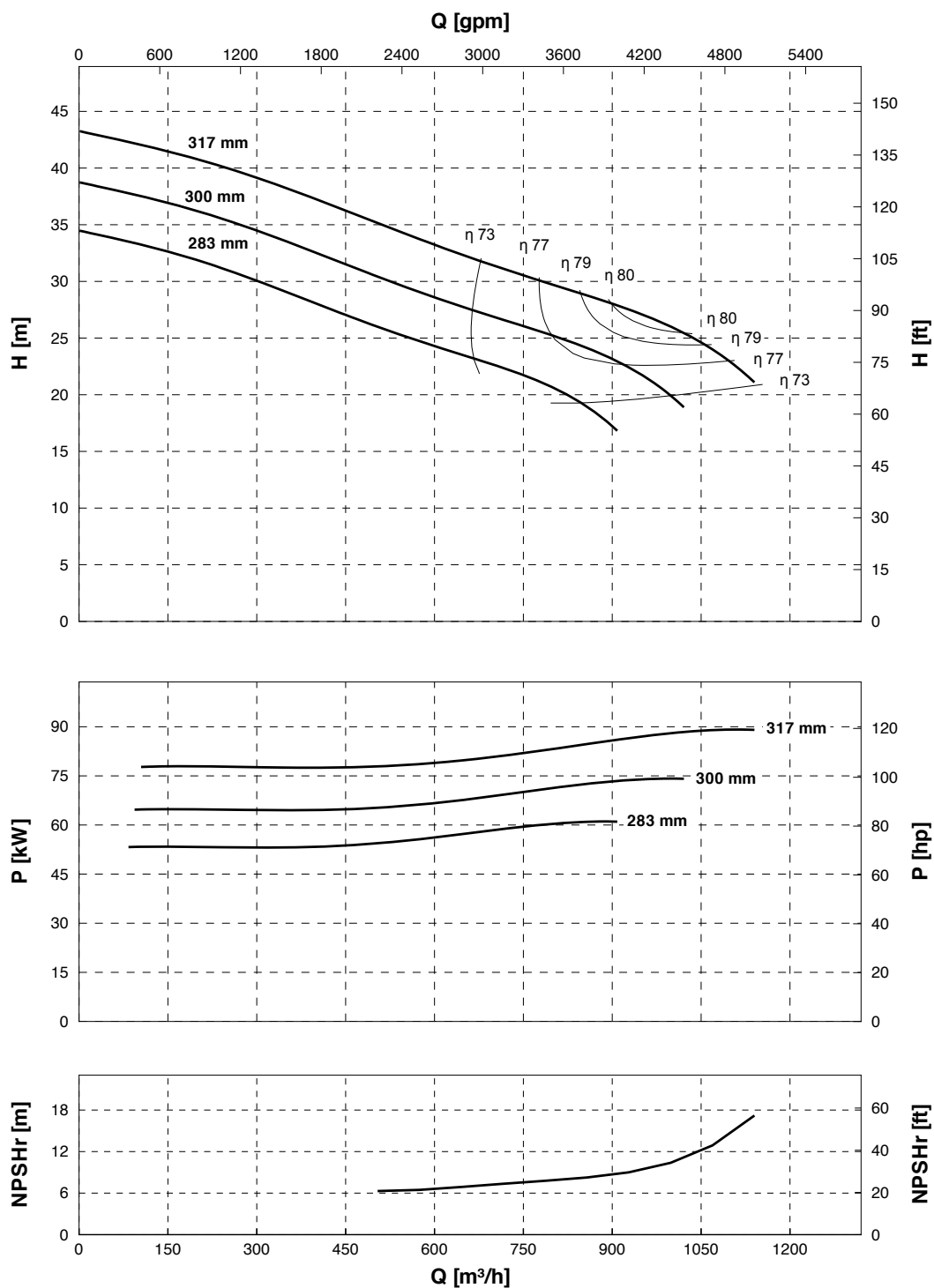


VTP 750

Curve #: 11019-090112-S1

Vertical Turbine Pumps (VTP)

1800 rpm

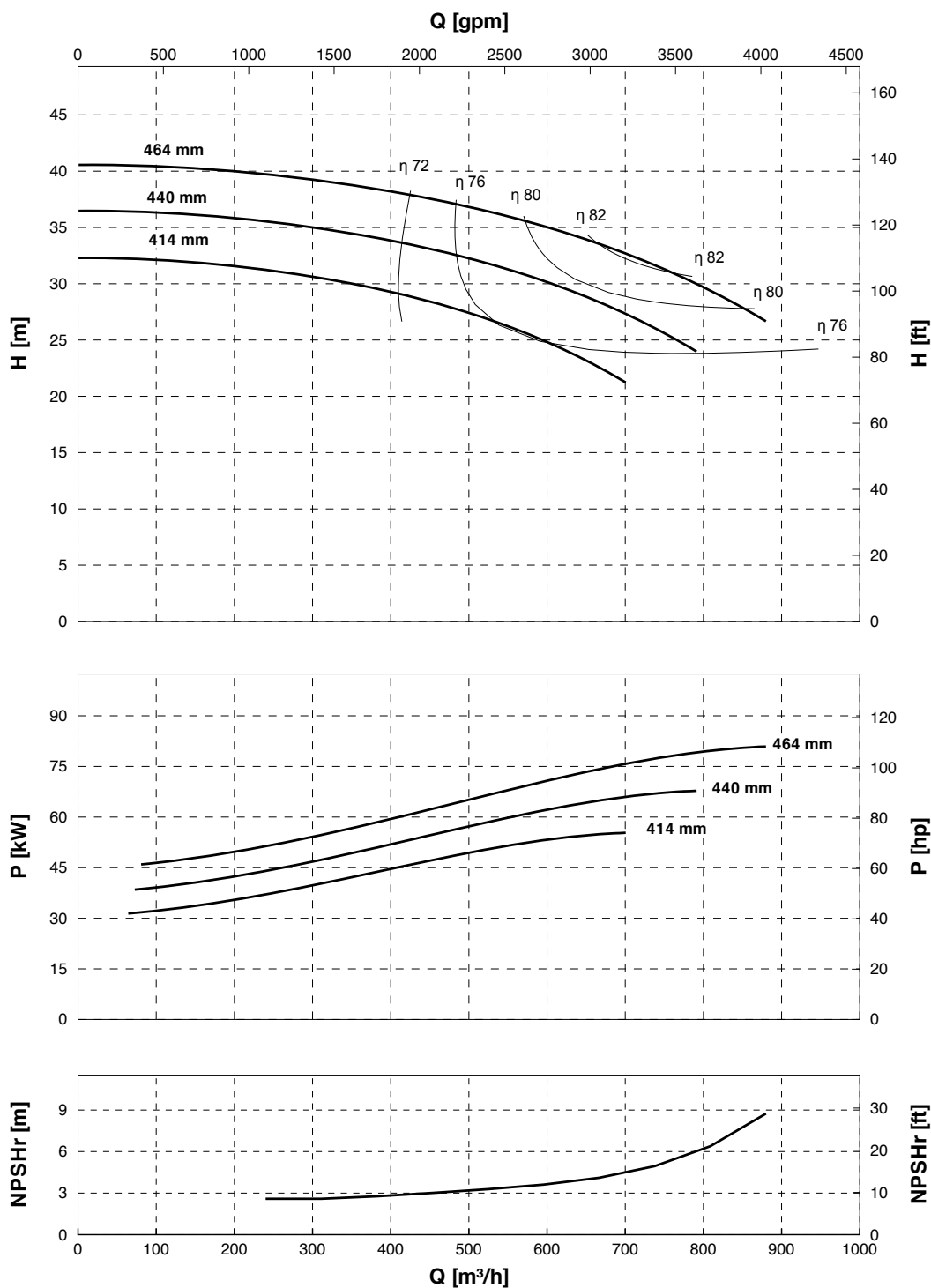


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1200 rpm

VTP 750M Curve #: 11020-081103-S1



Notes:

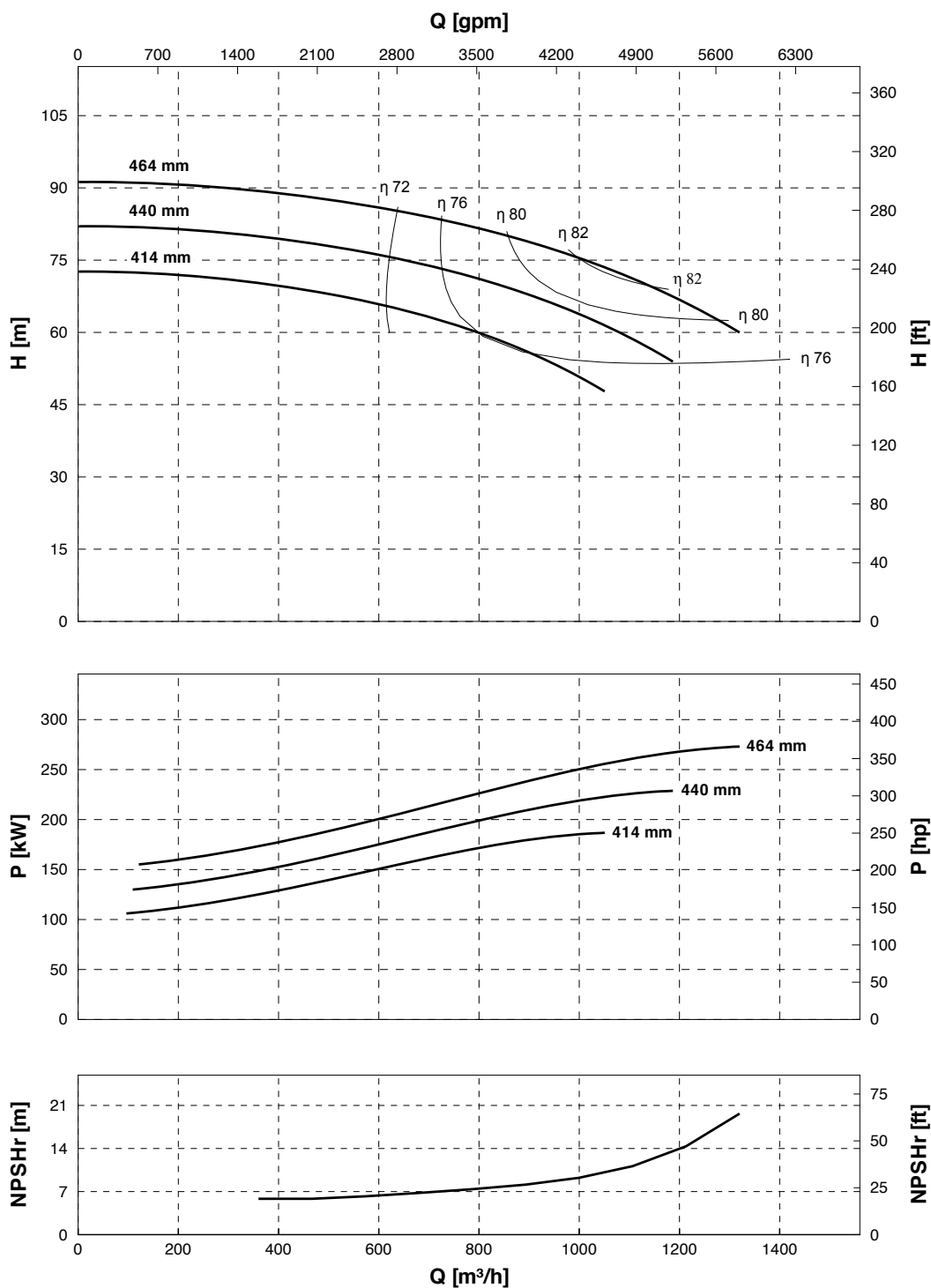
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 750M

Curve #: 11020-081103-S1

Vertical Turbine Pumps (VTP)
1800 rpm

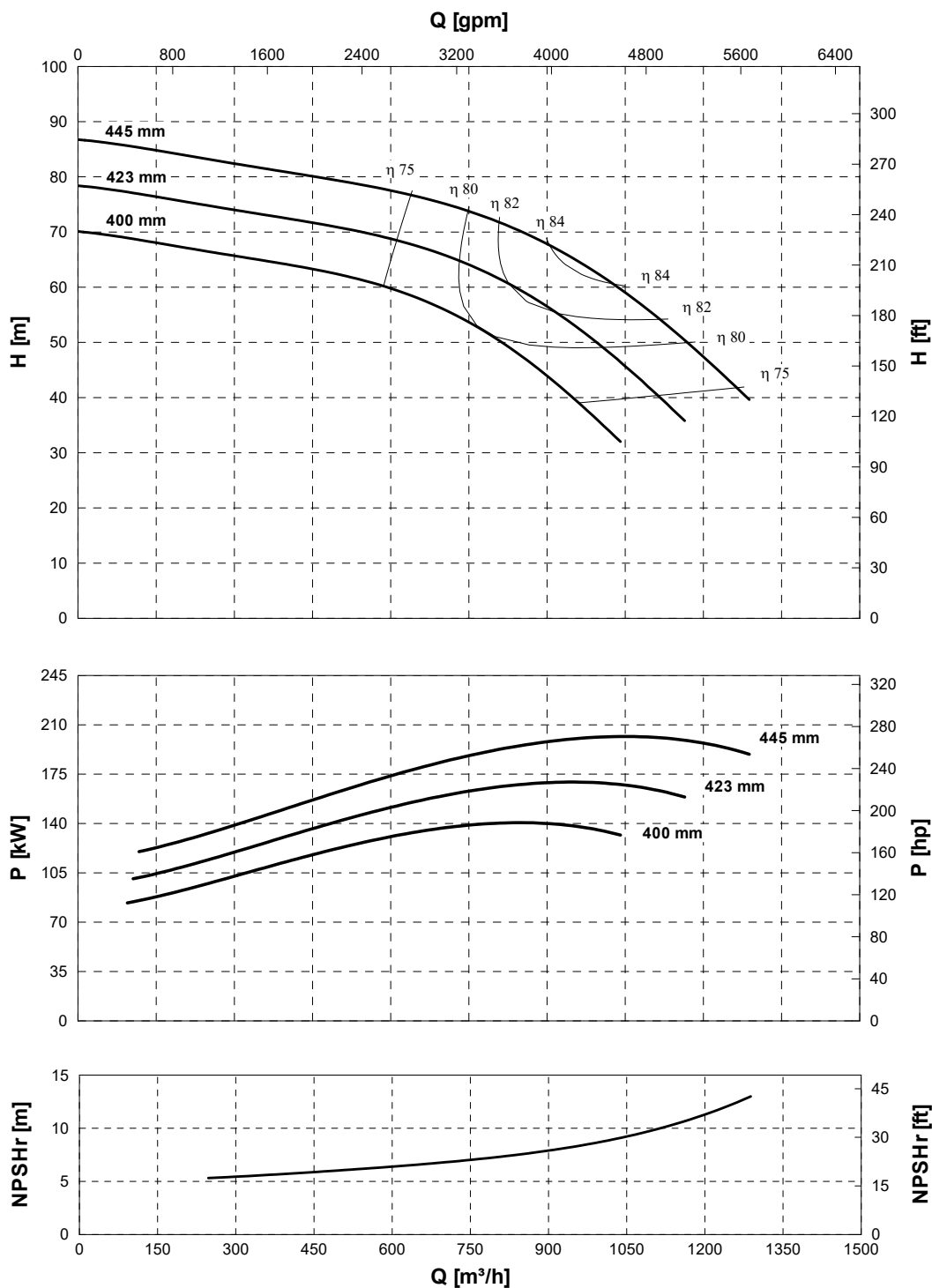


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T*=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 800 Curve #: 11043-120227-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

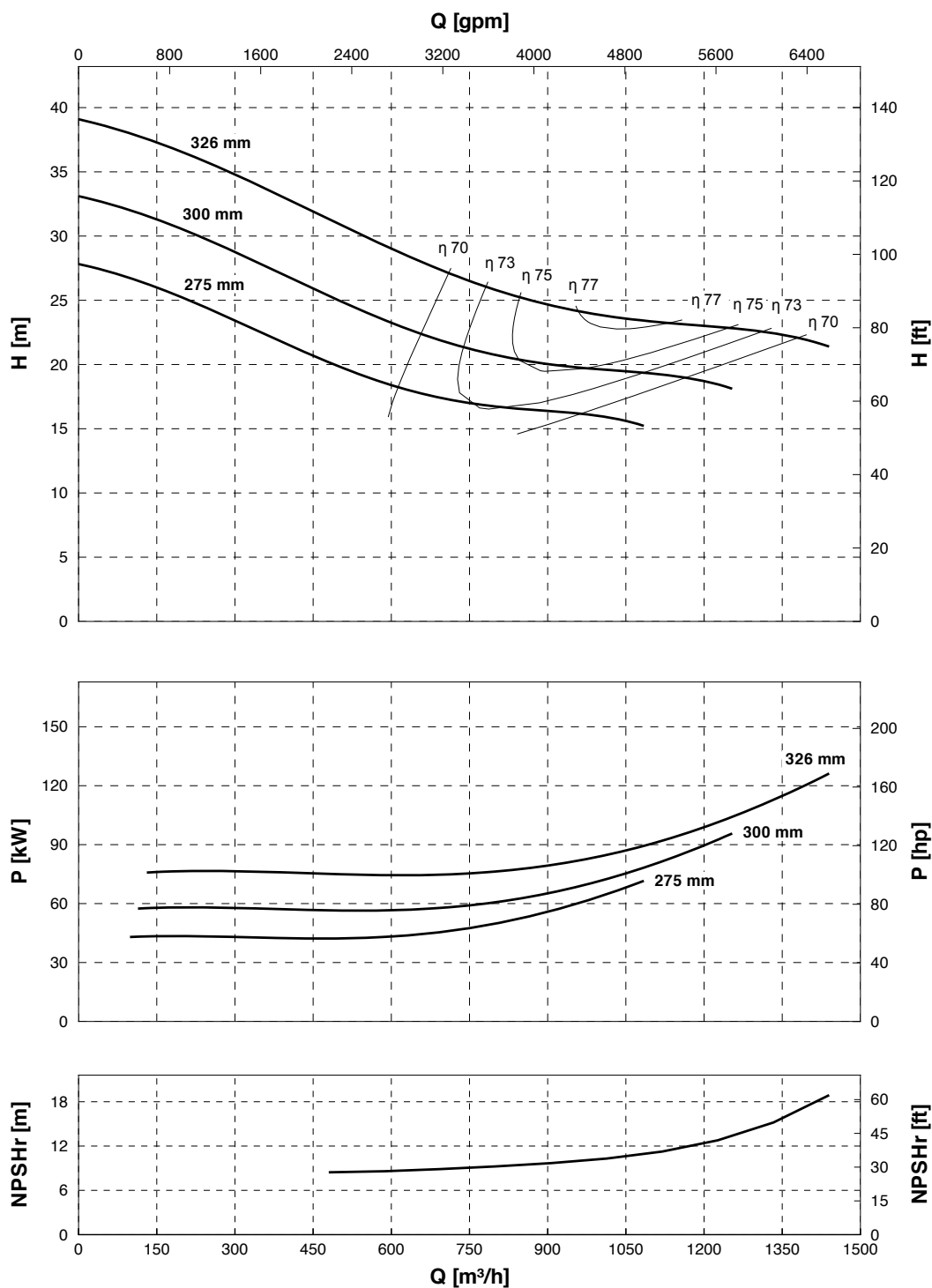


VTP 850

Curve #: 11021-070713-E1

Vertical Turbine Pumps (VTP)

1800 rpm

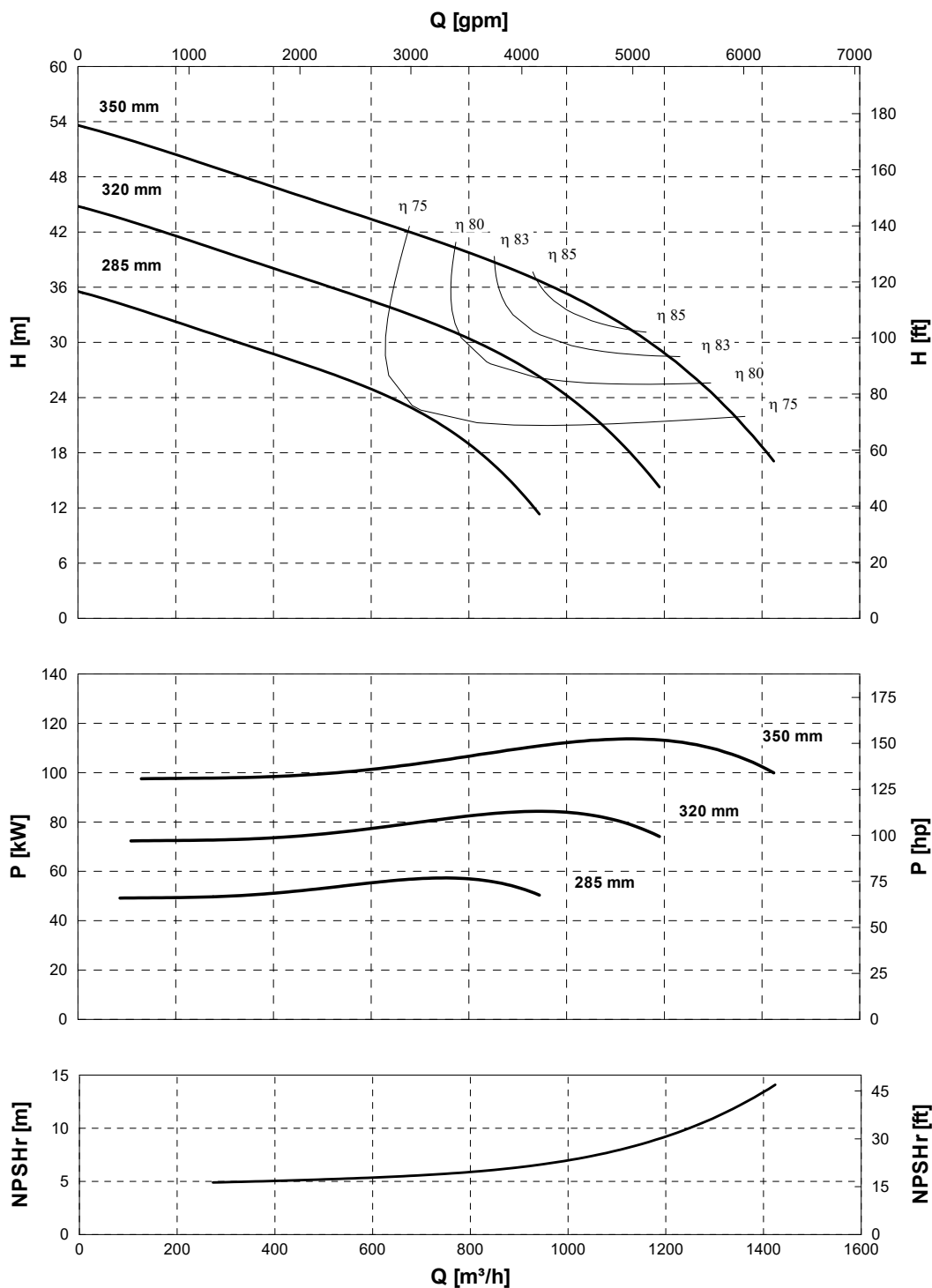


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^*=18$ [°C], H_2O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 850M Curve #: 11071-140616-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

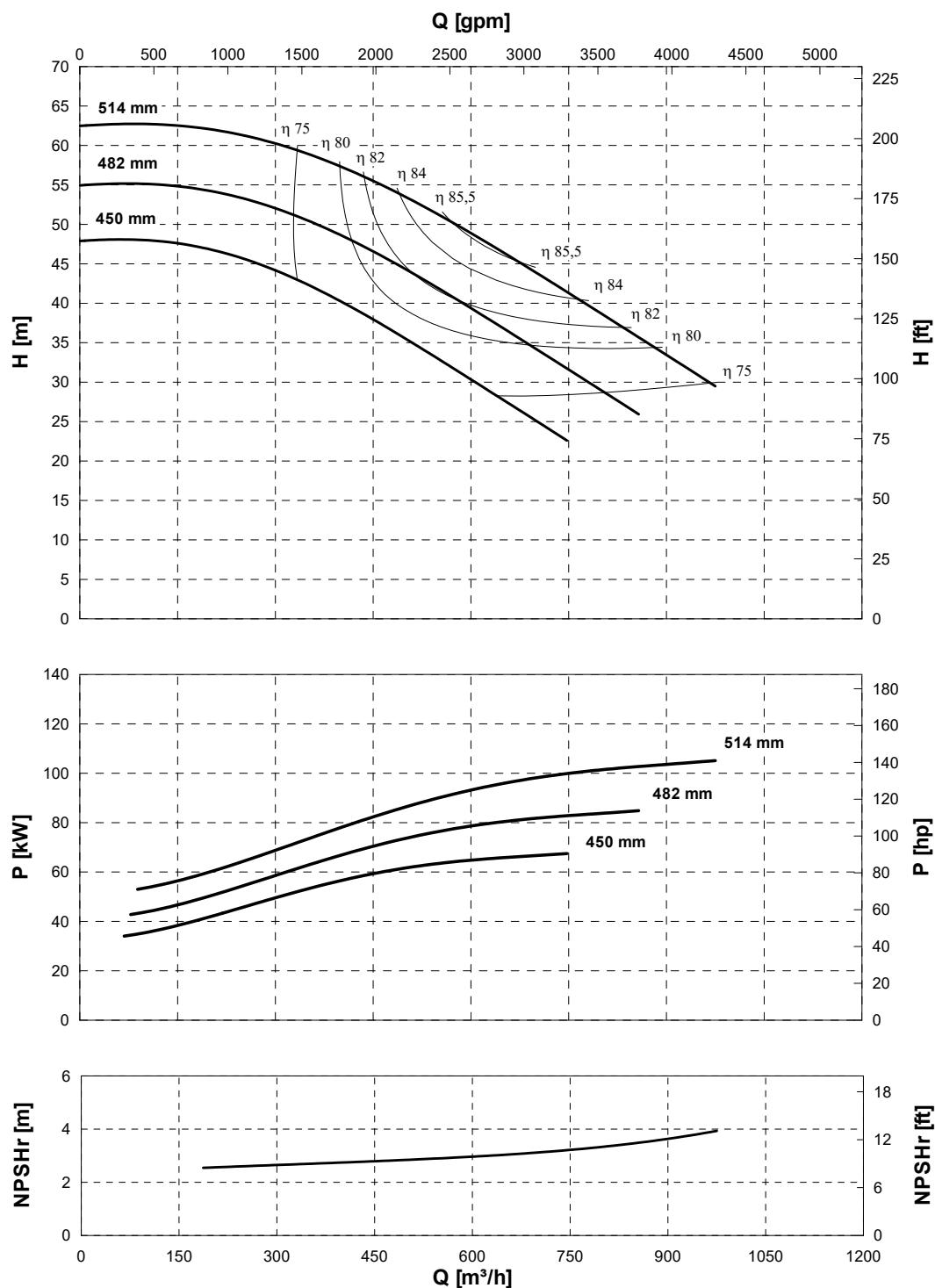


VTP 850X

Curve #: 11022-101104-E1

Vertical Turbine Pumps (VTP)

1200 rpm

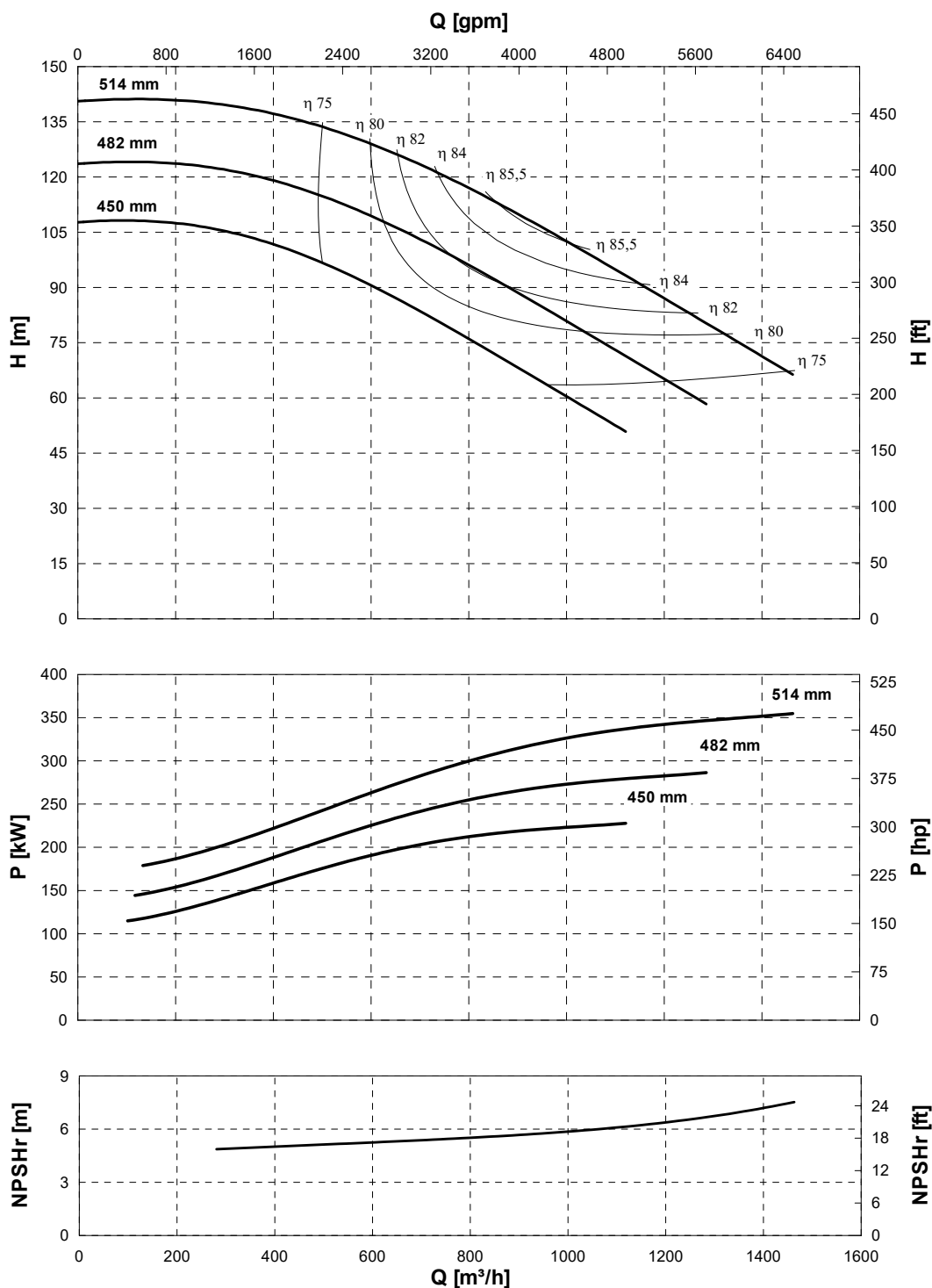


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T*=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 850X Curve #: 11022-101104-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

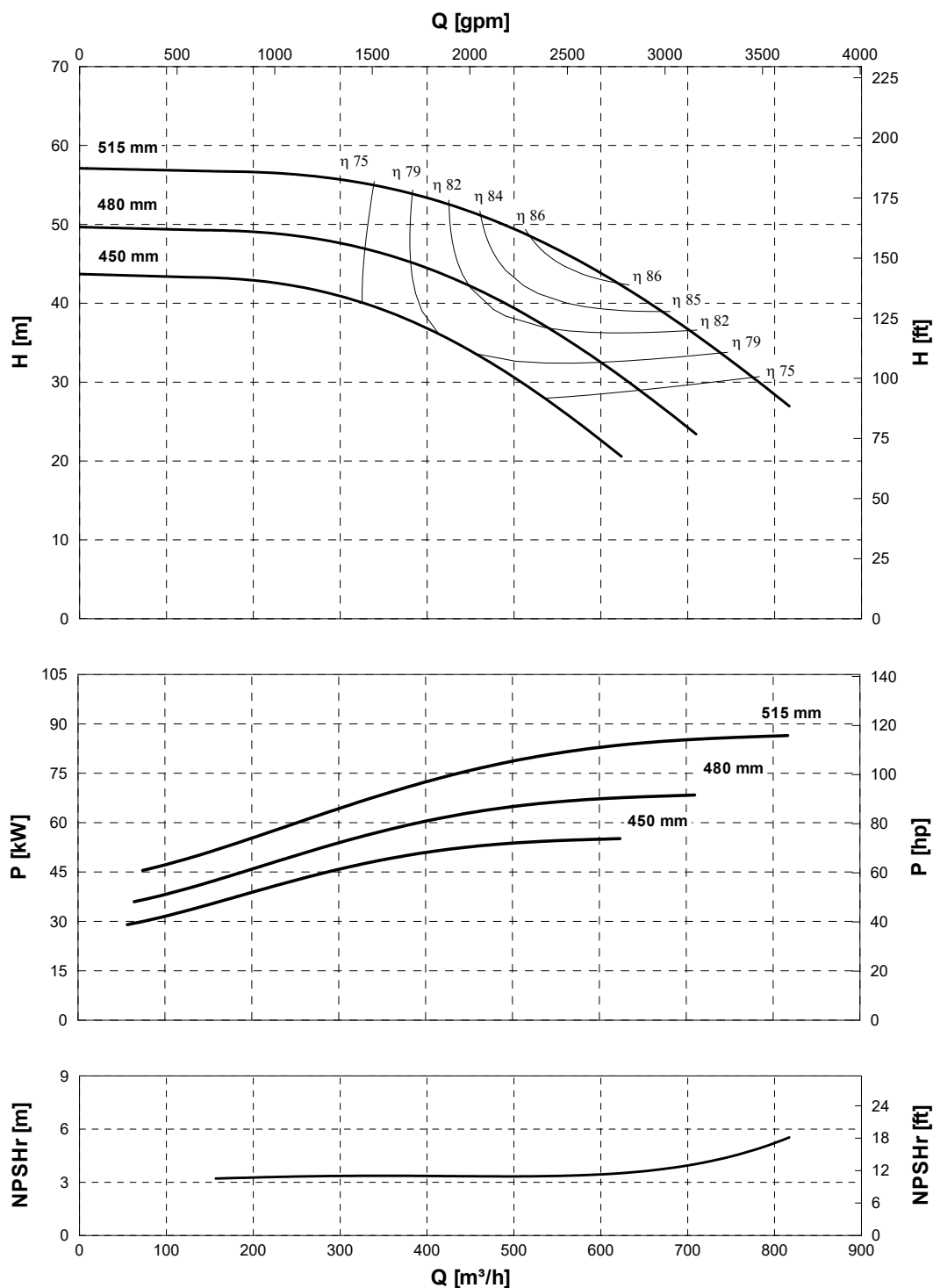


VTP 850XB

Curve #: 11047-130213-E1

Vertical Turbine Pumps (VTP)

1200 rpm

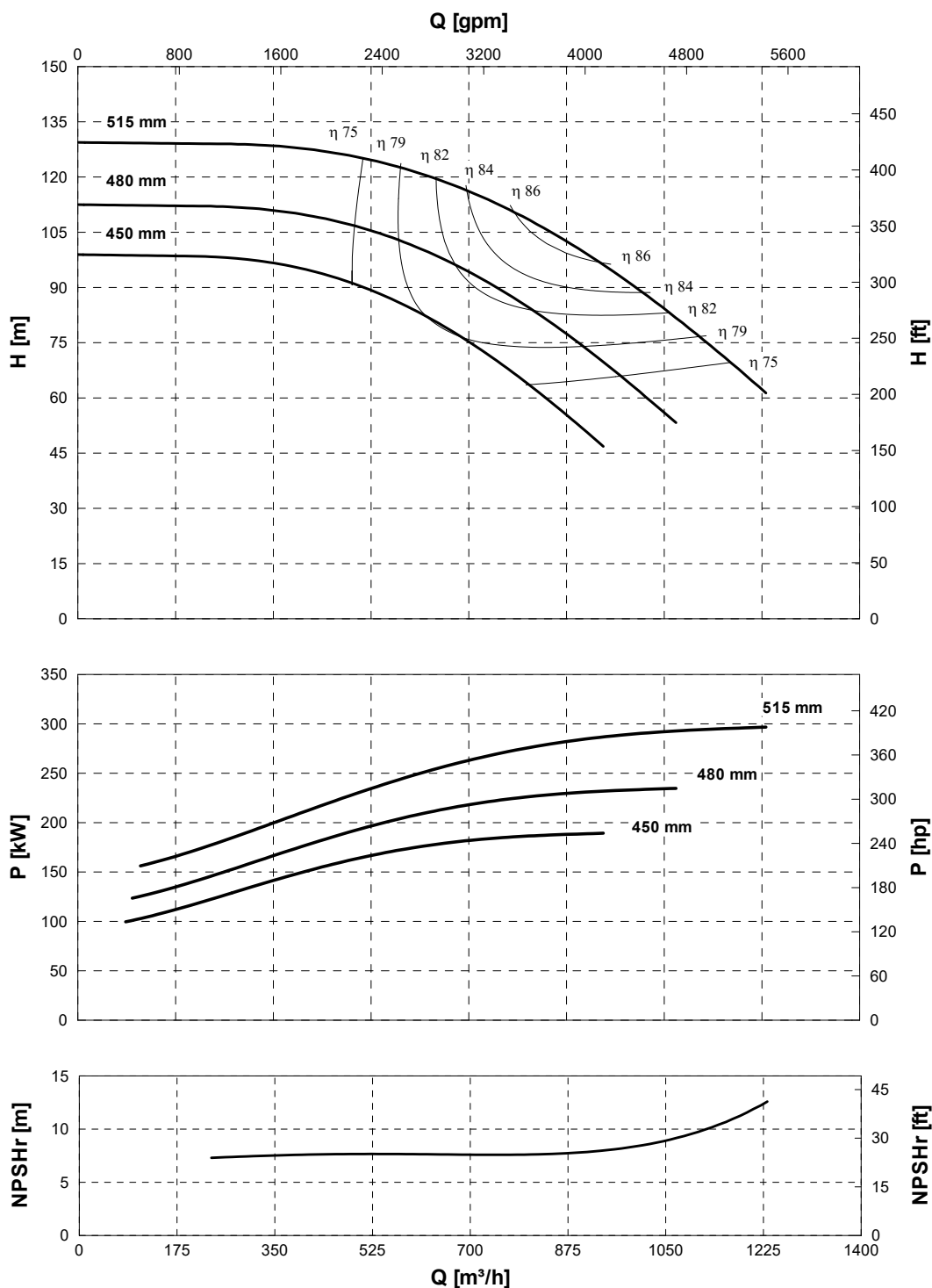


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 850XB Curve #: 11047-130213-E1



Notes:

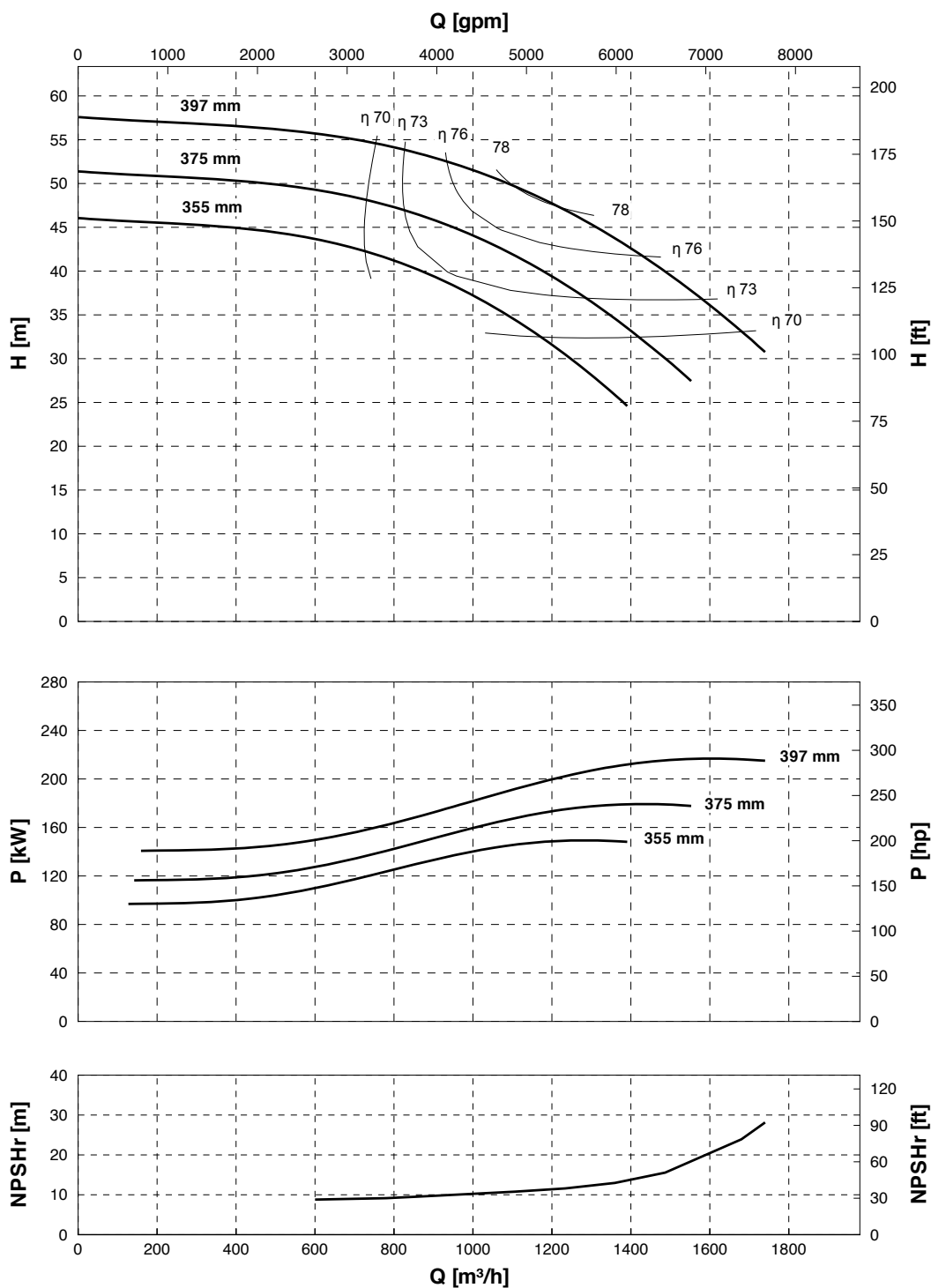
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 1000

Curve #: 11024-080704-S1

Vertical Turbine Pumps (VTP)
1800 rpm

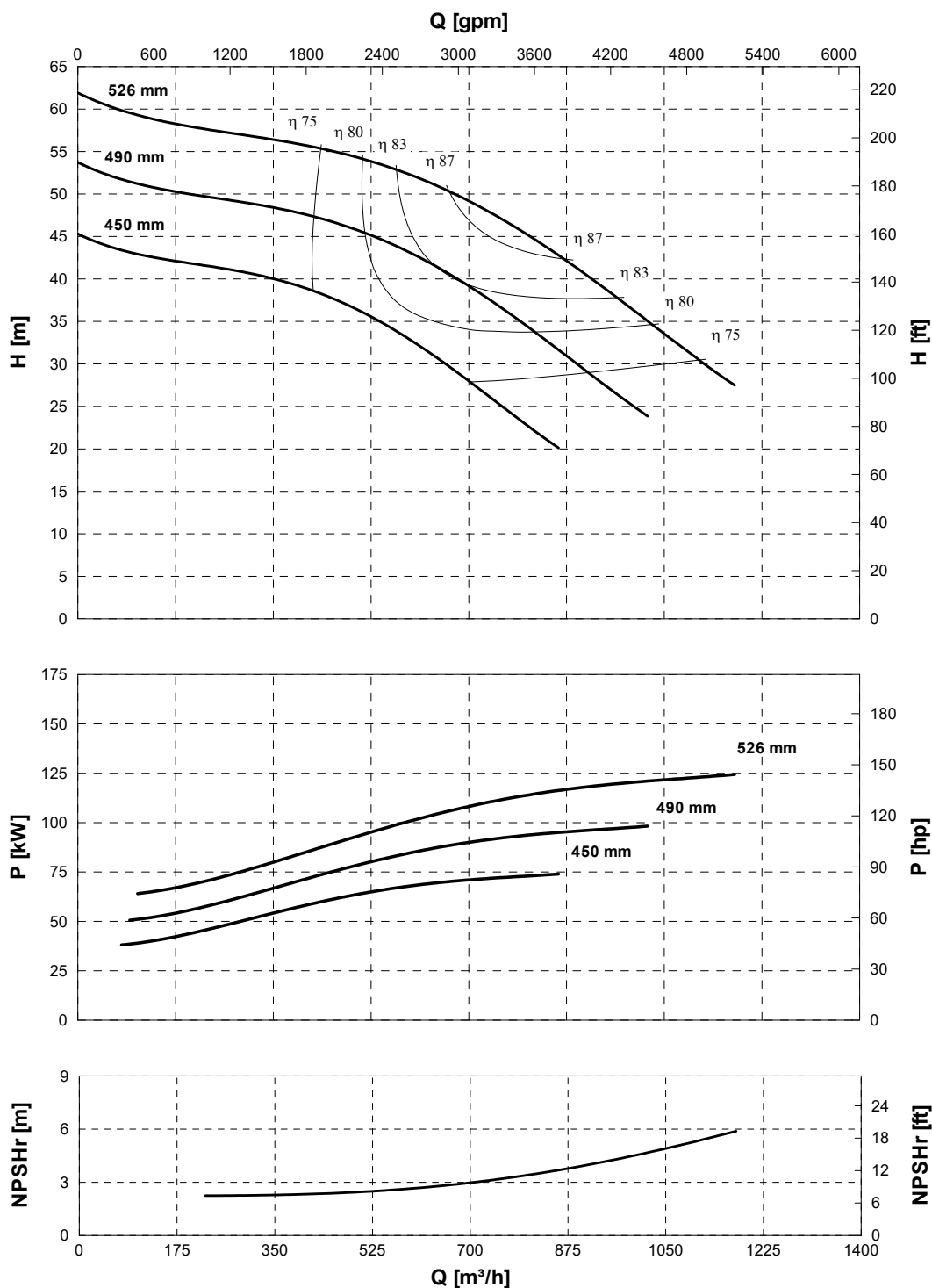


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1200 rpm

VTP 1000X Curve #: 11053-131114-E1



Notes:

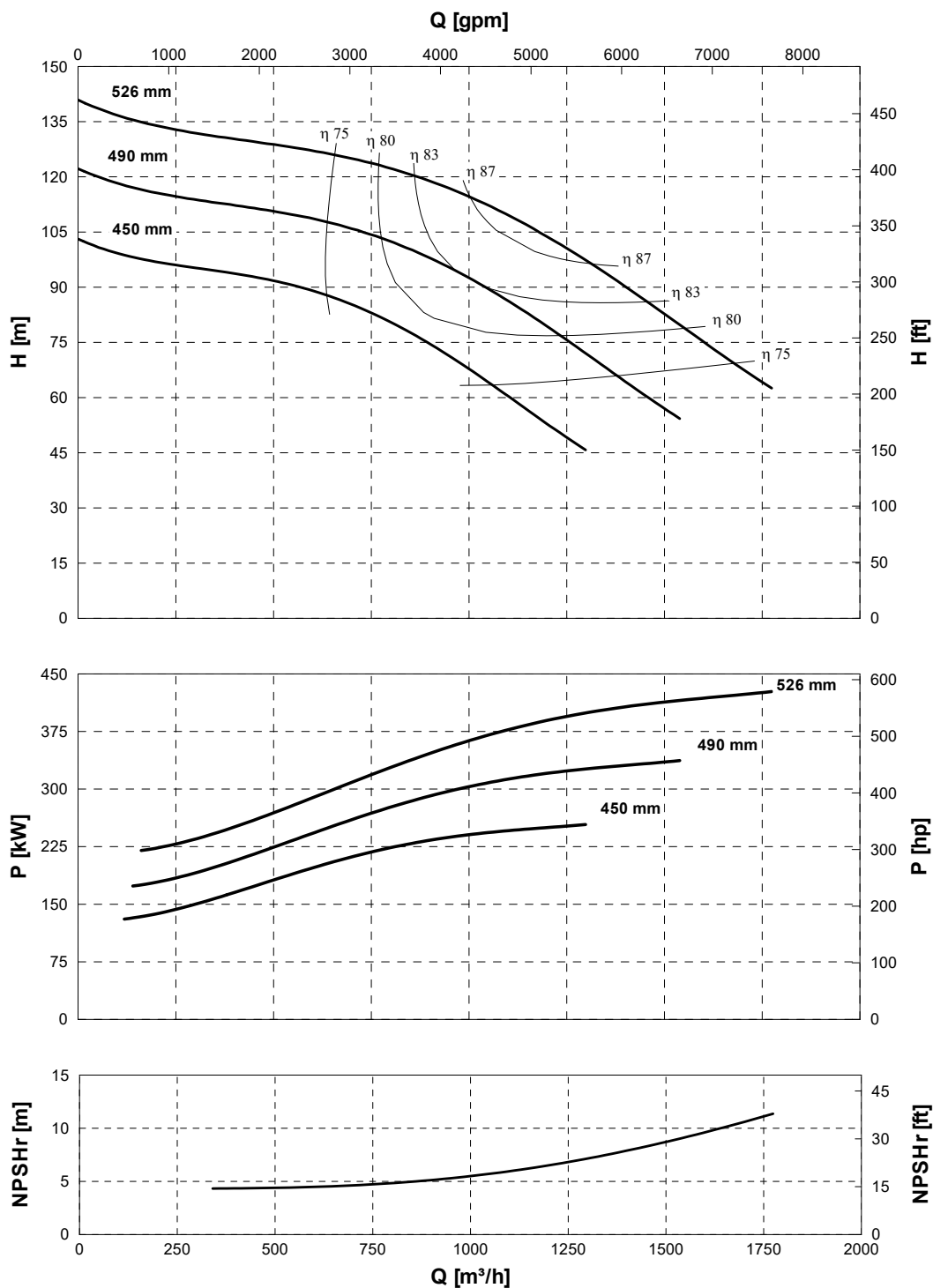
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H_2O $T=18^\circ\text{C}$, H_2O Density = 998 kg/m^3)
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 1000X

Curve #: 11053-131114-E1

Vertical Turbine Pumps (VTP) 1800 rpm



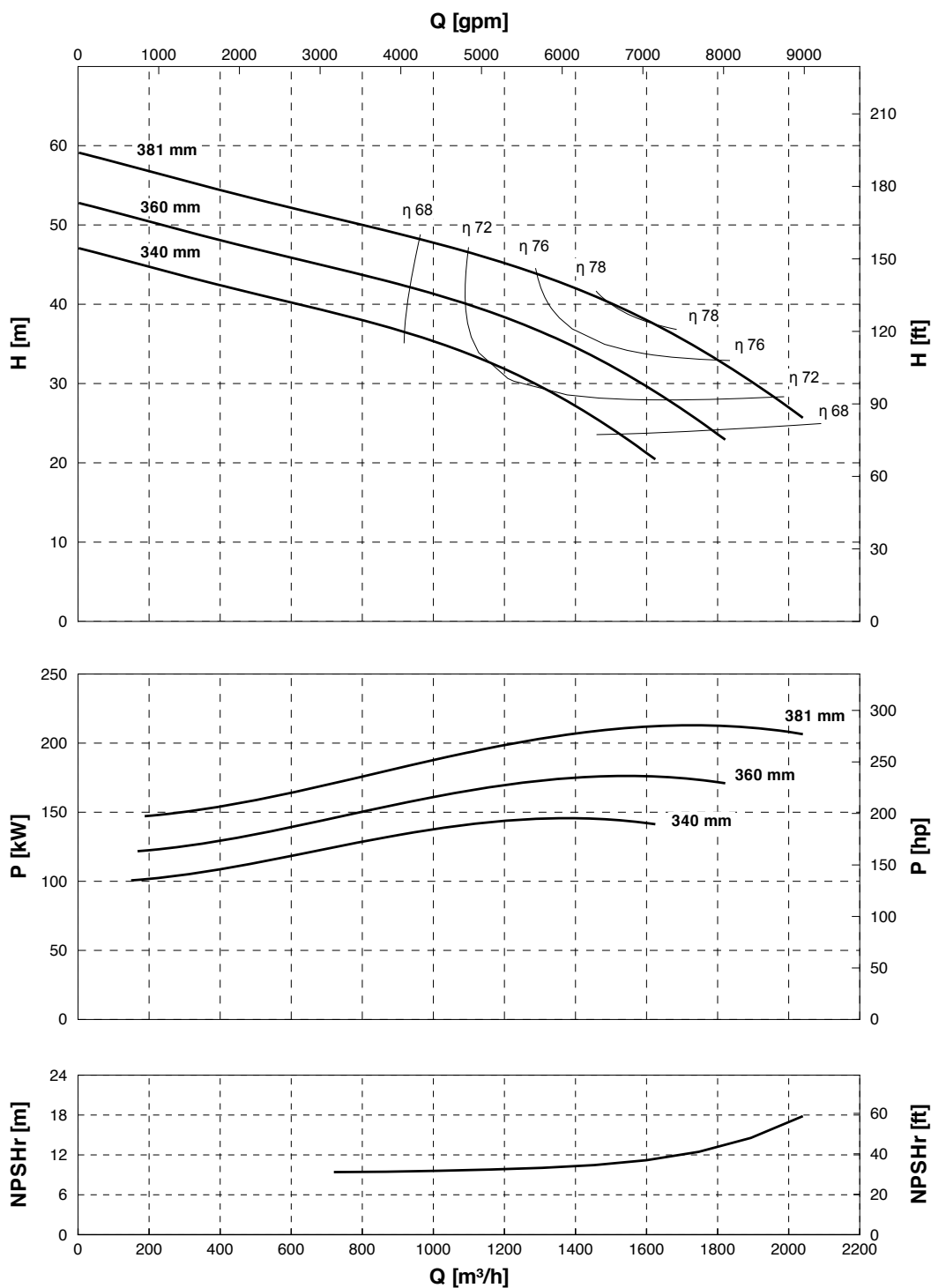
Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 1250

Curve #: 11025-080520-S1



Notes:

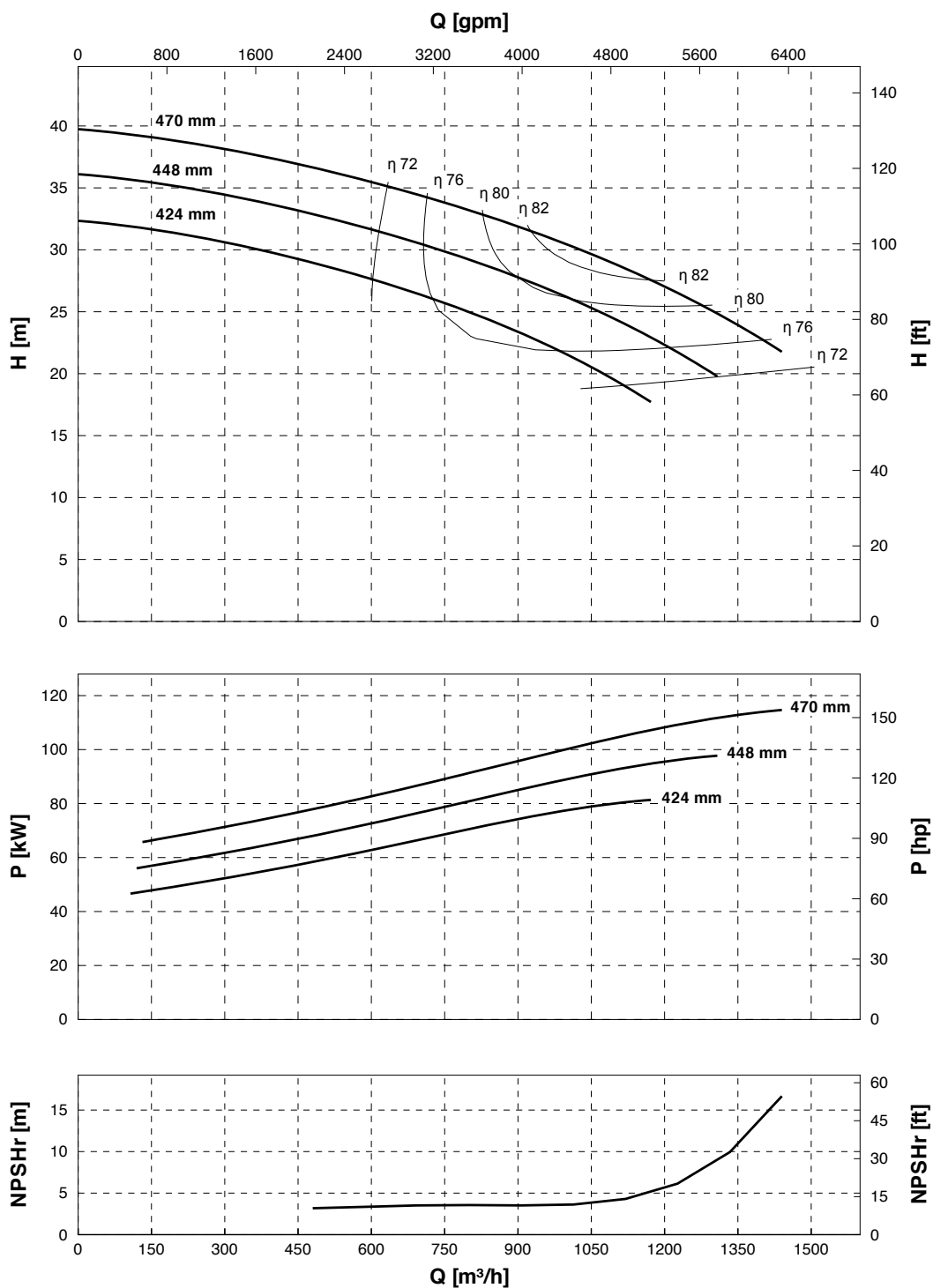
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 1300

Curve #: 11026-081111-S1

Vertical Turbine Pumps (VTP)
1200 rpm

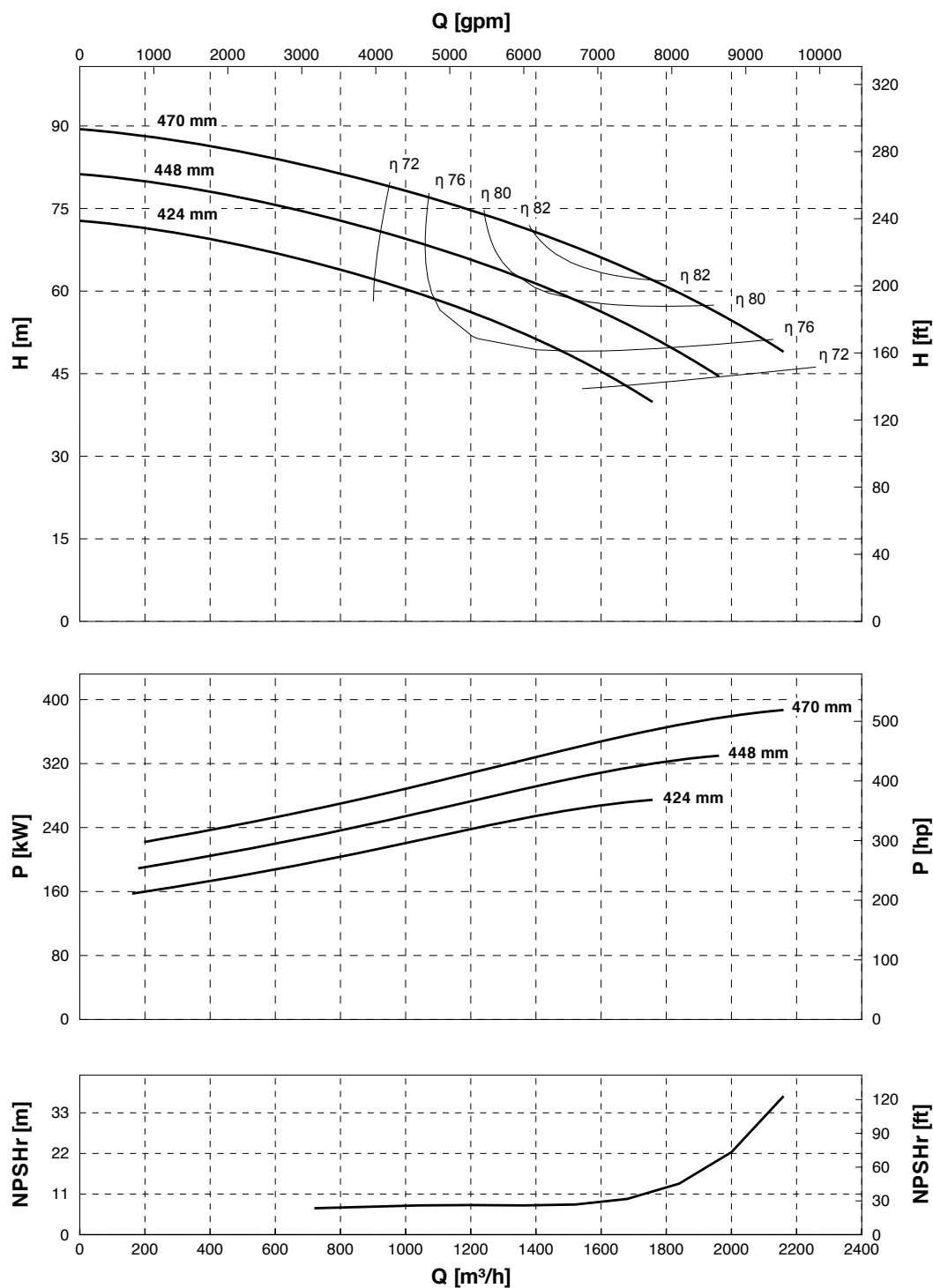


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T*=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 1300 Curve #: 11026-081111-S1



Notes:

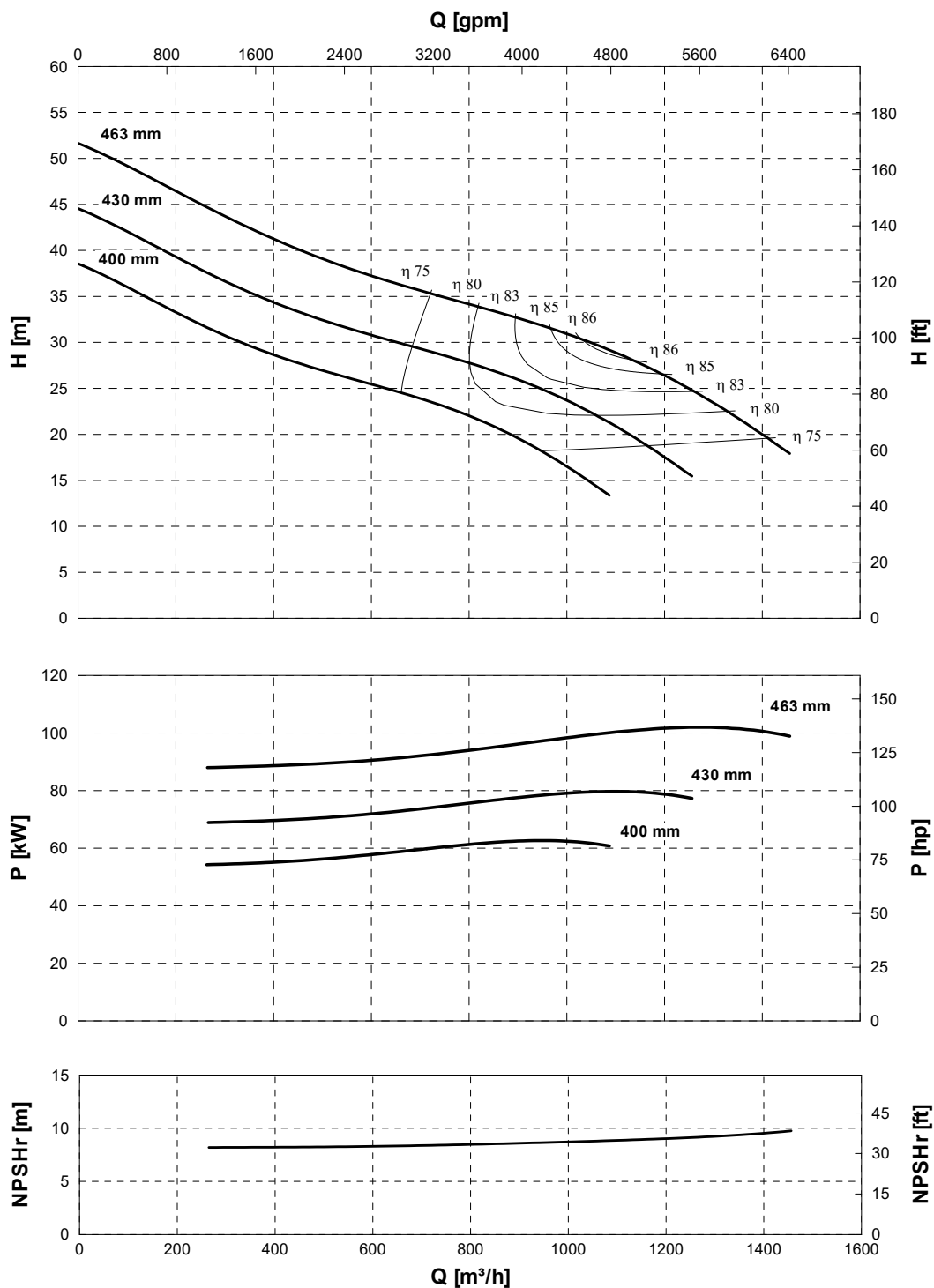
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 1350

Curve #: 11087-160202-F1

Vertical Turbine Pumps (VTP)
1200 rpm

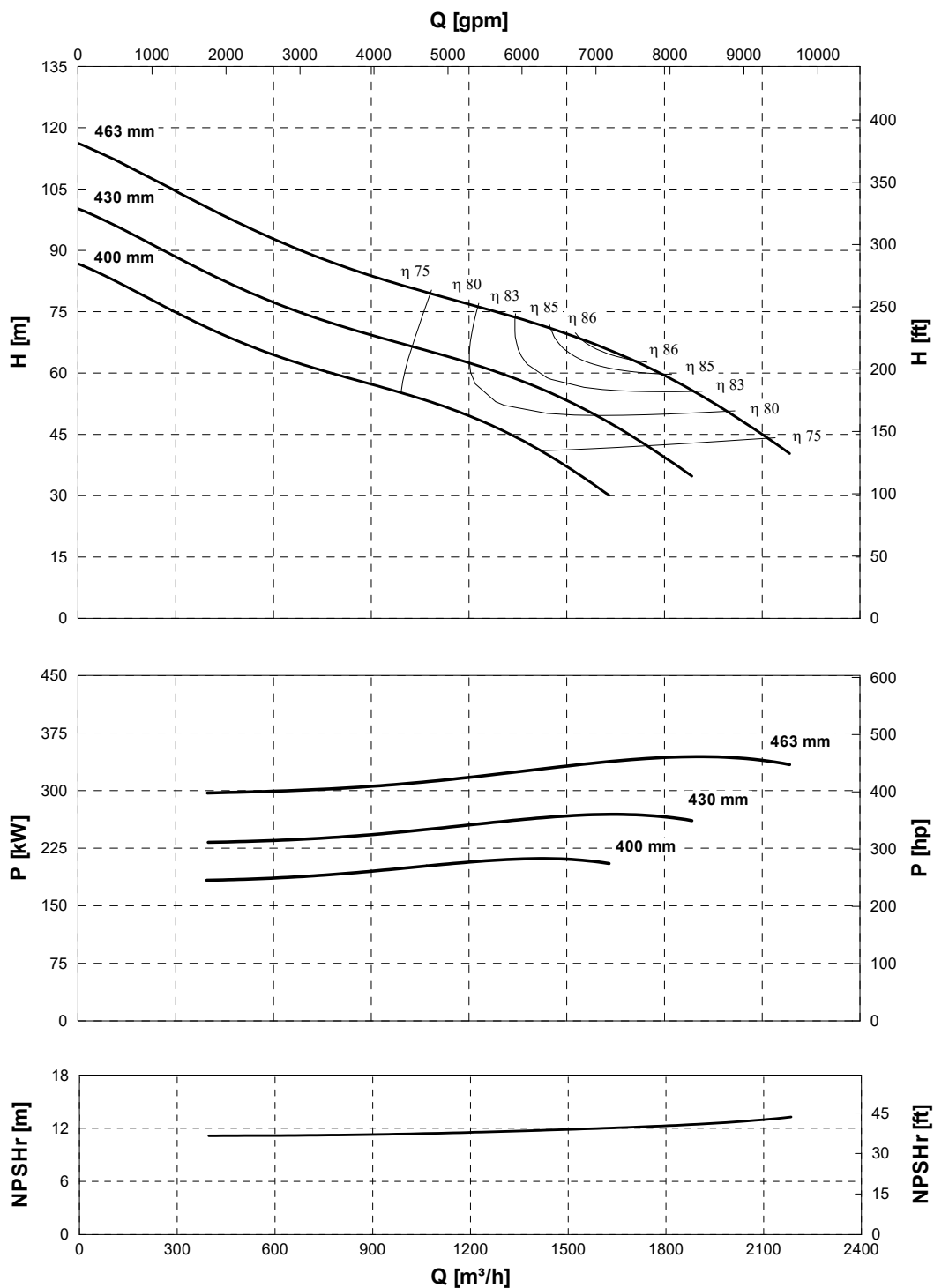


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 1350 Curve #: 11087-160202-F1



Notes:

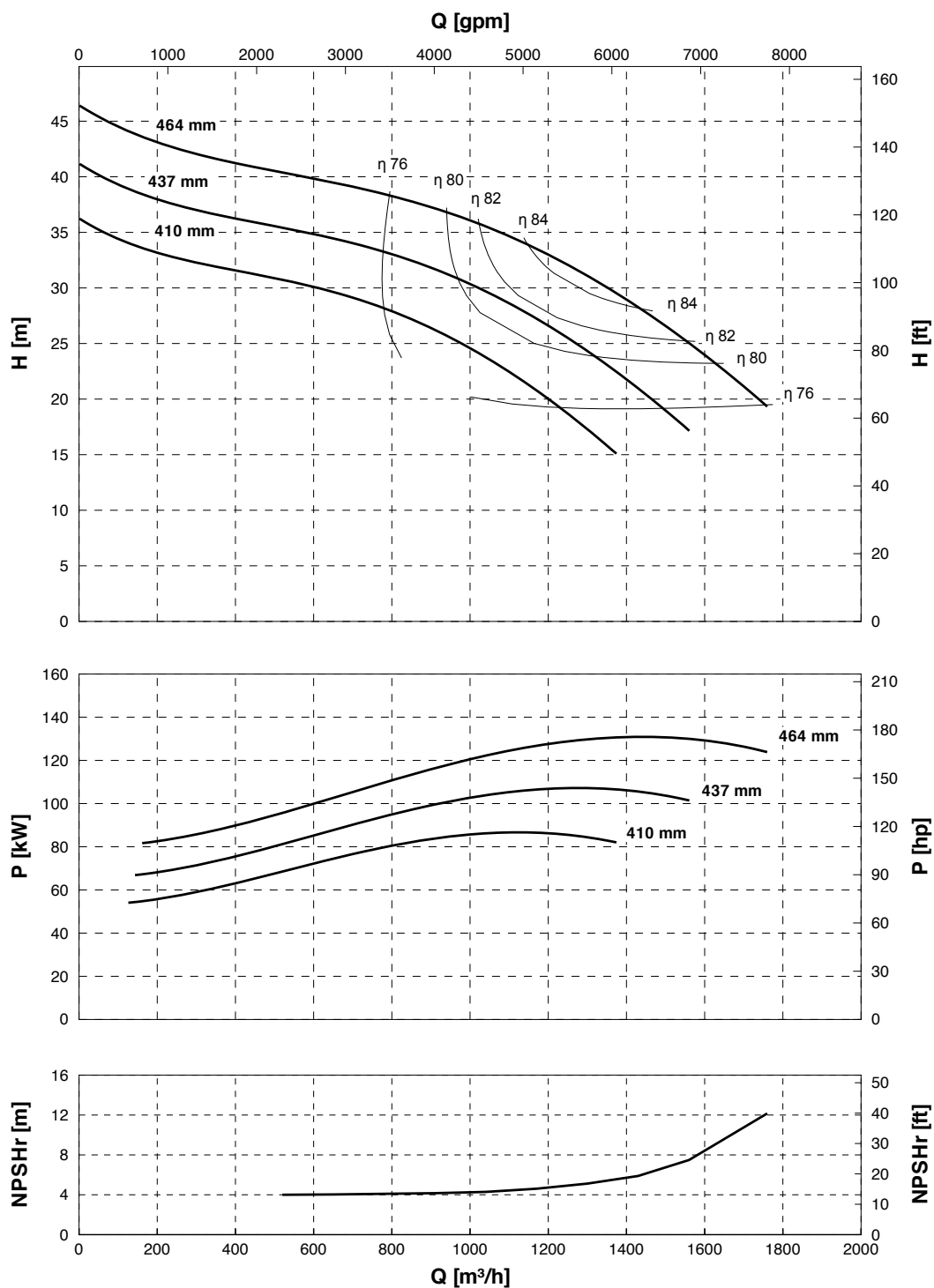
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 1500

Curve #: 11027-081205-E1

Vertical Turbine Pumps (VTP)
1200 rpm

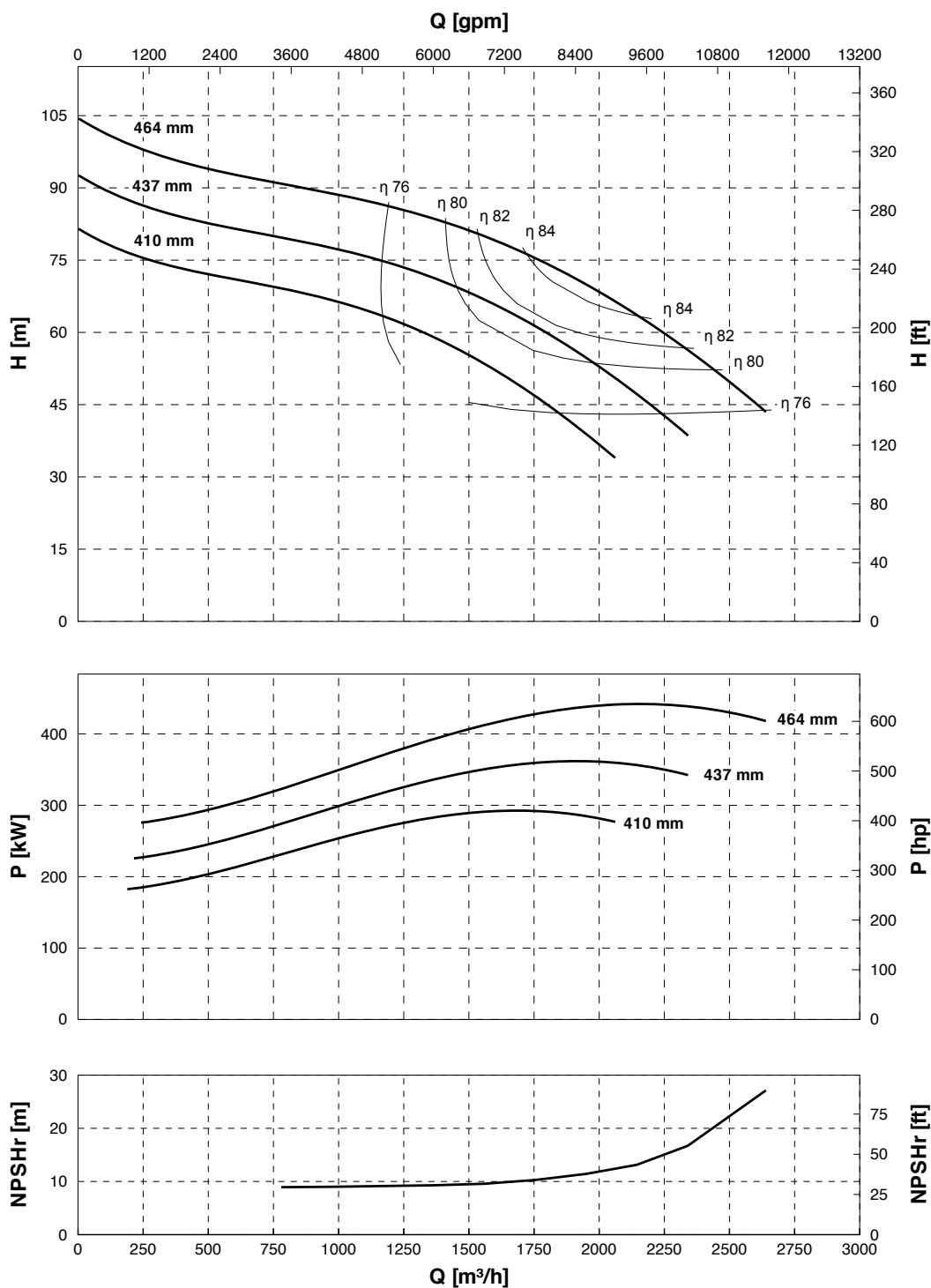


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 1500 Curve #: 11027-081205-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

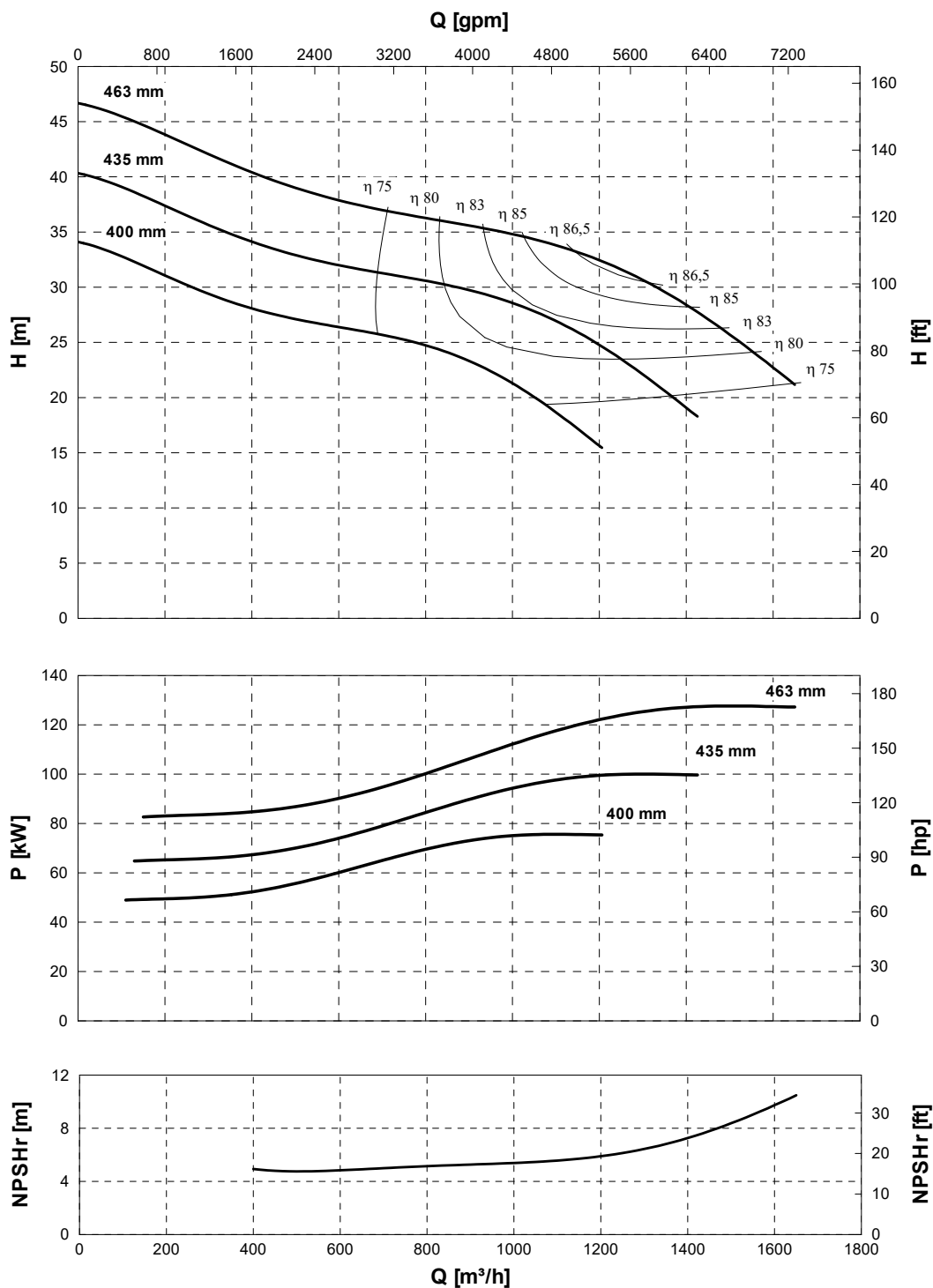


VTP 1500KM

Curve #: 11089-160405-F1

Vertical Turbine Pumps (VTP)

1200 rpm

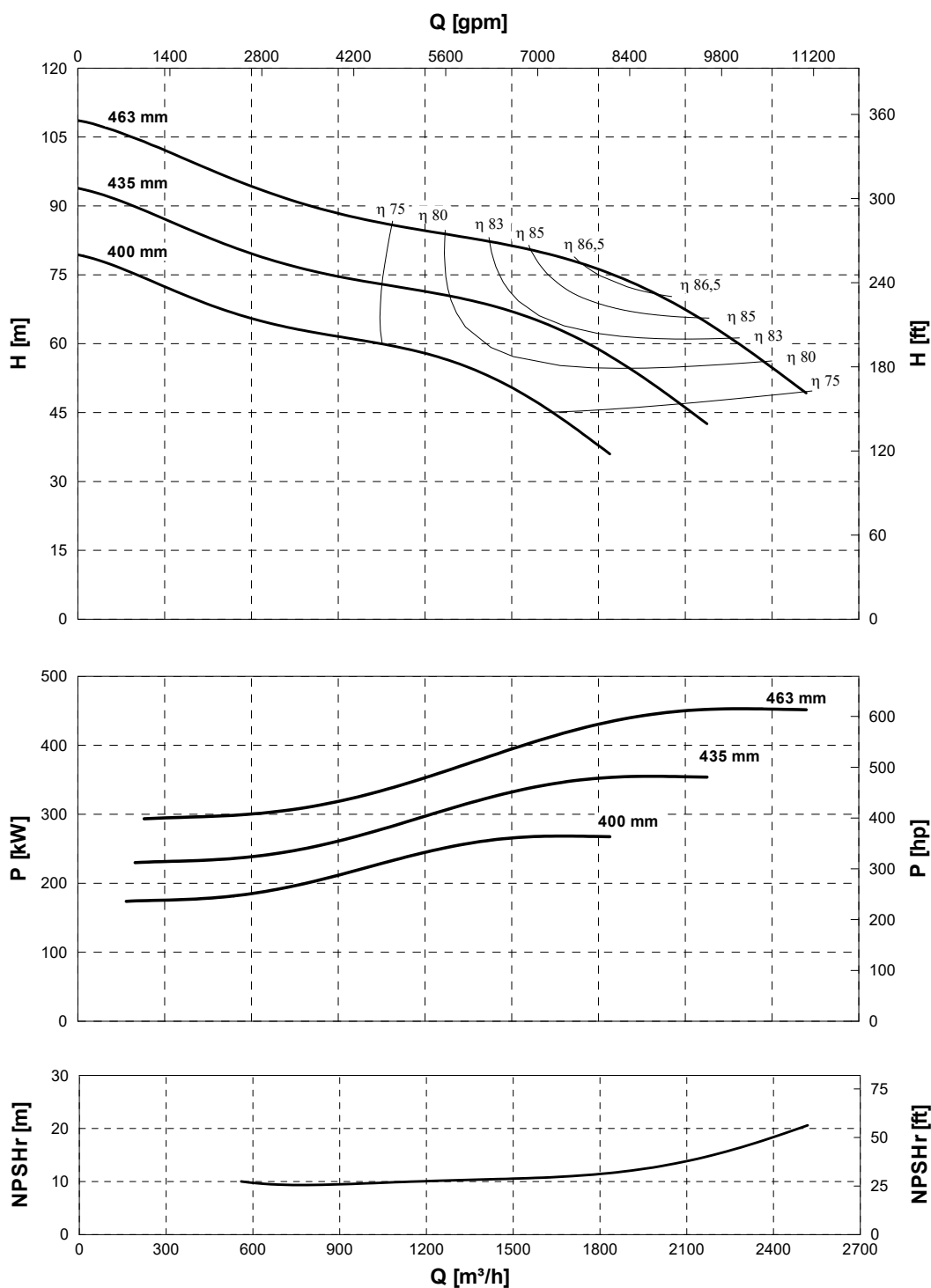


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 1500KM Curve #: 11089-160405-F1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

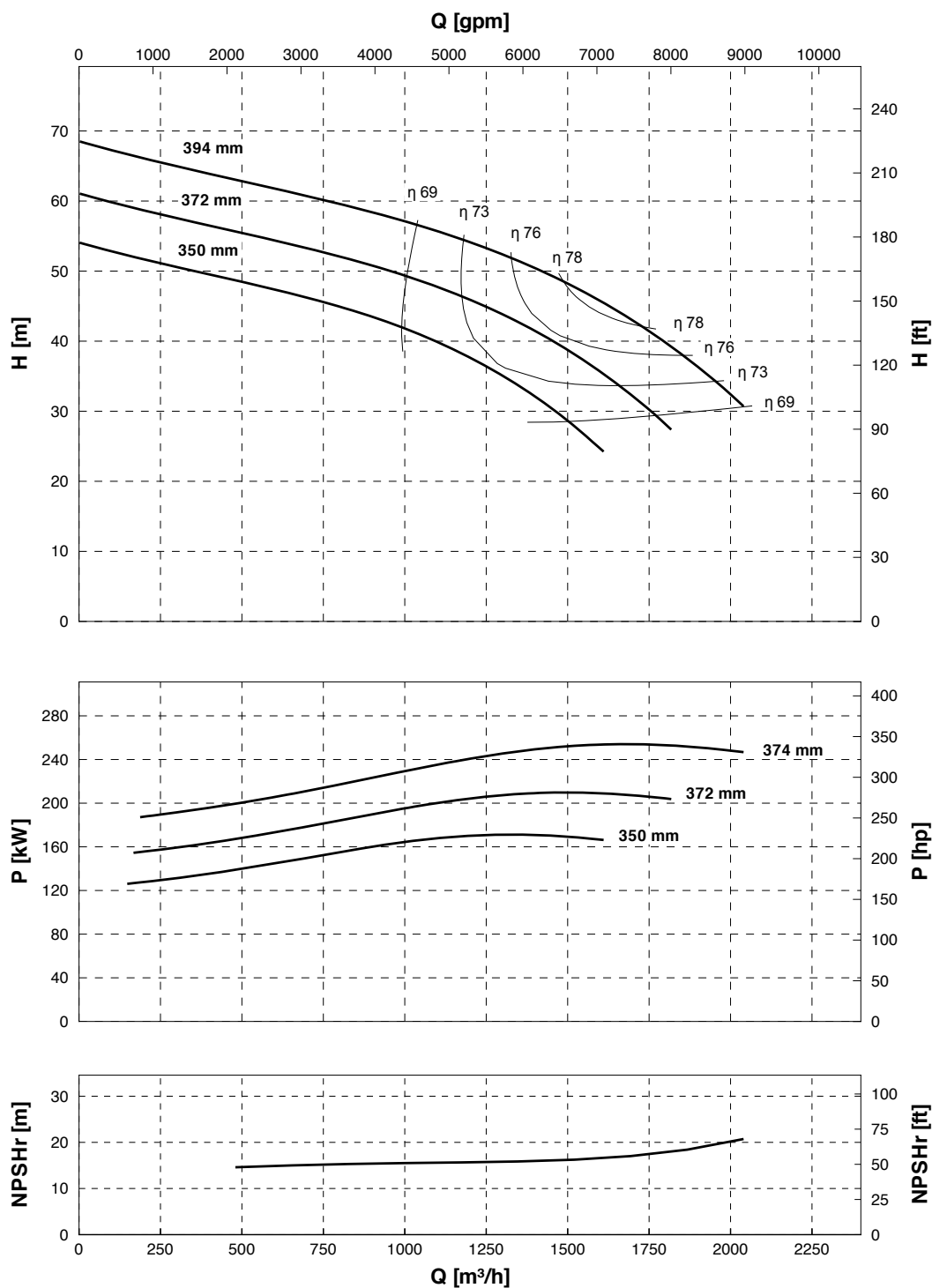


VTP 1500L

Curve #: 11028-080704-S1

Vertical Turbine Pumps (VTP)

1800 rpm

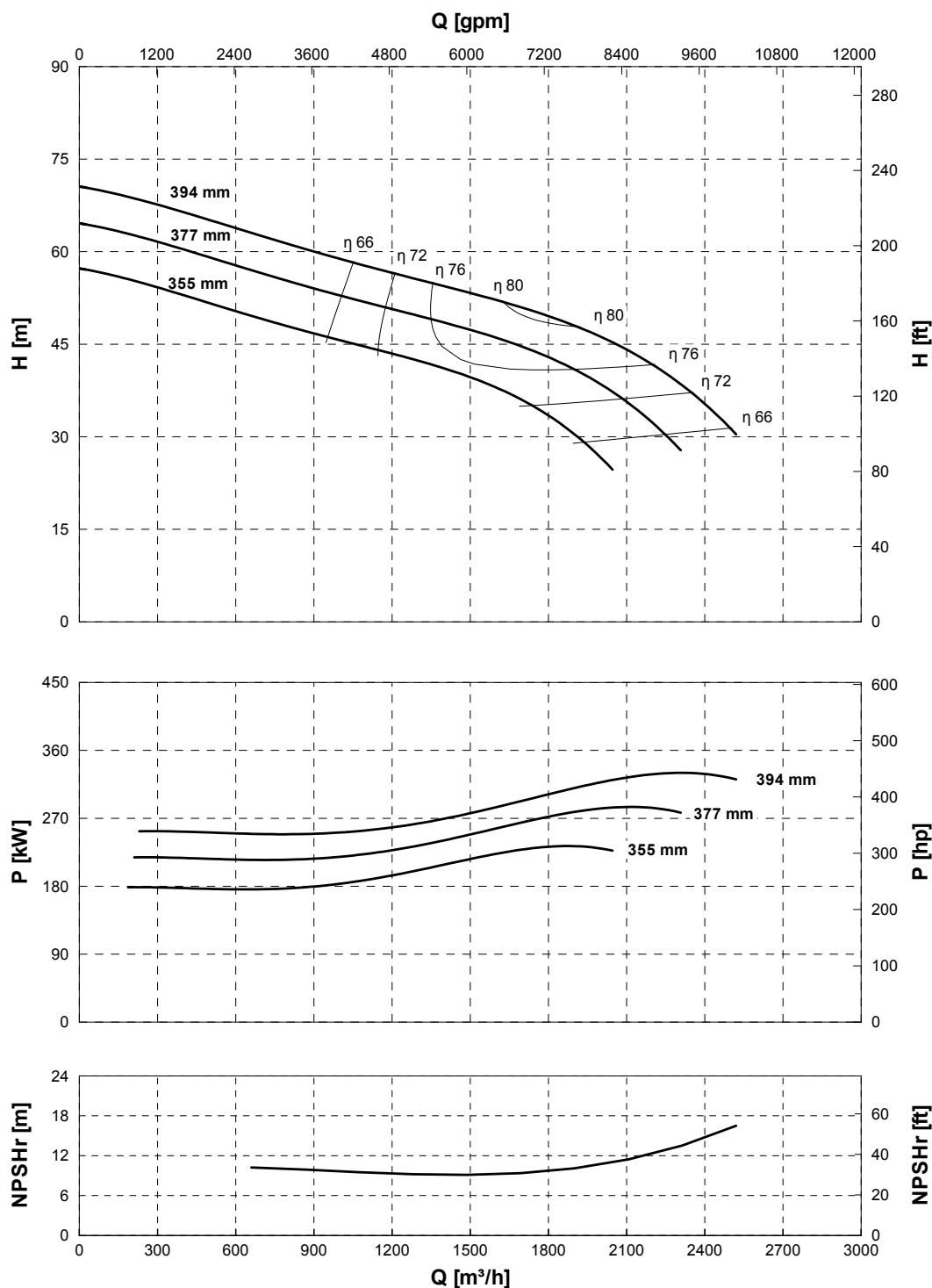


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T*=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1800 rpm

VTP 1500LH Curve #: 11029-080830-S1



Notes:

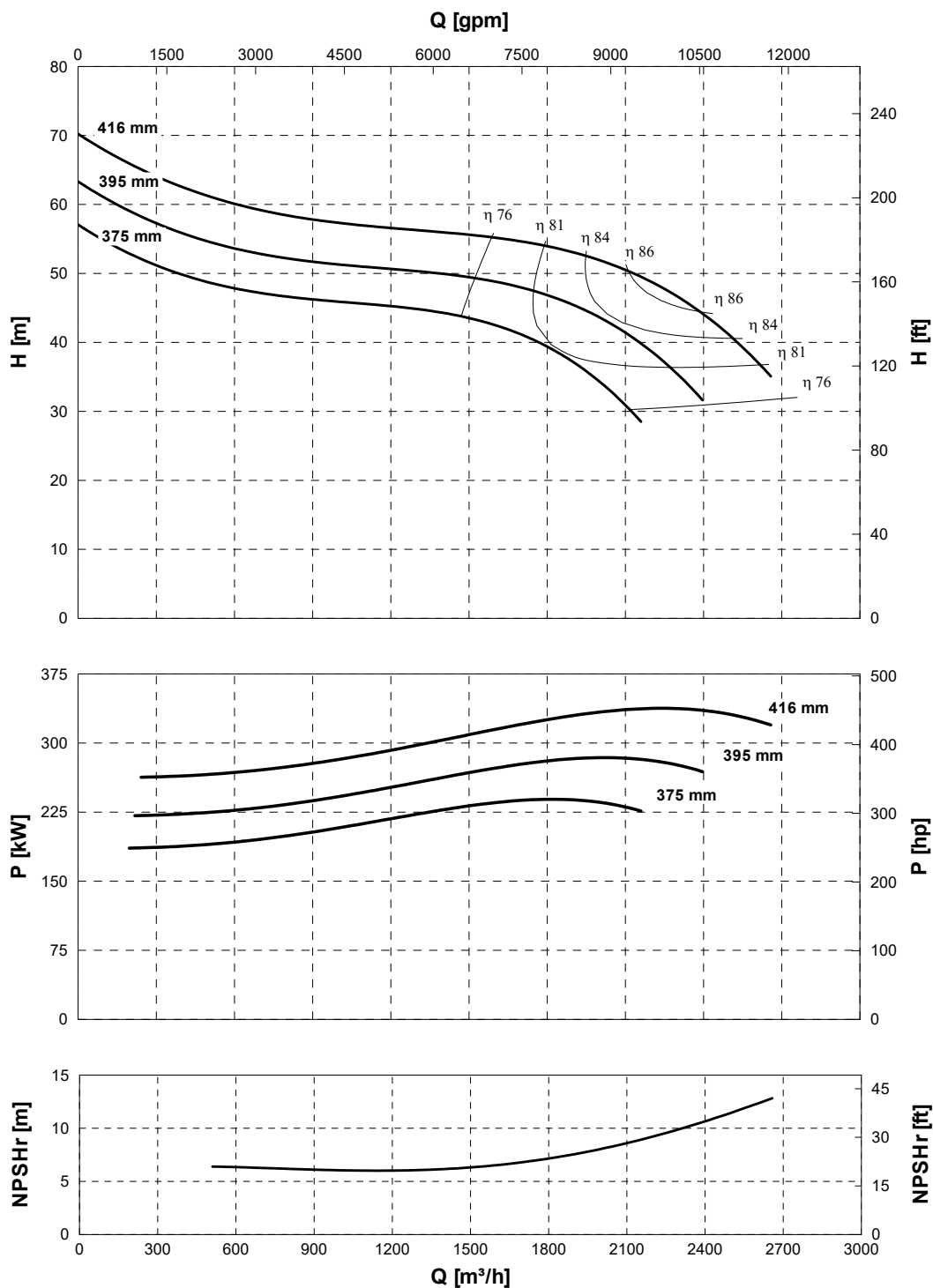
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 1800M

Curve #: 11067-140320-S1

Vertical Turbine Pumps (VTP)
1800 rpm



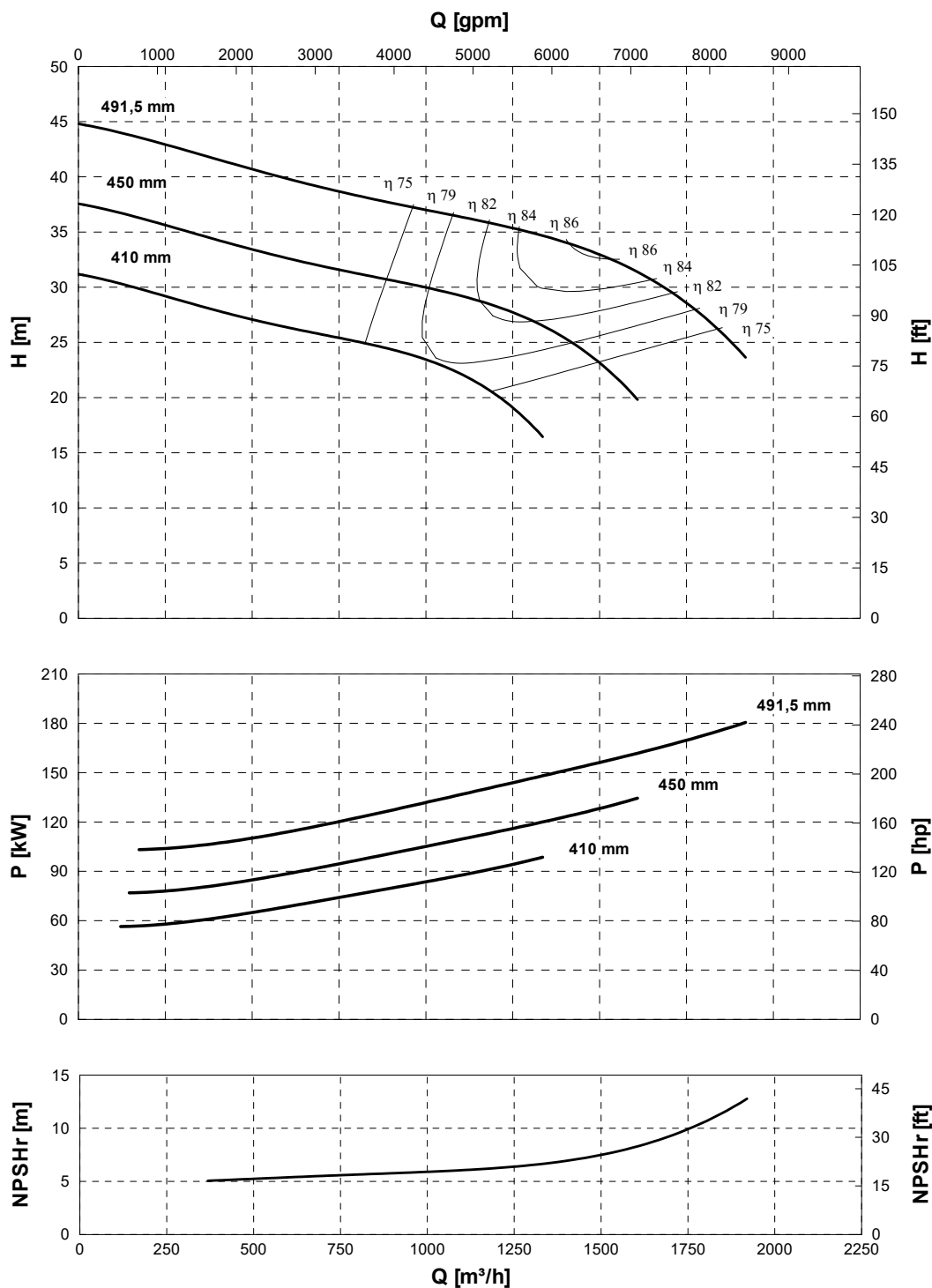
Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1200 rpm

VTP 1800X

Curve #: 11072-140620-S1



Notes:

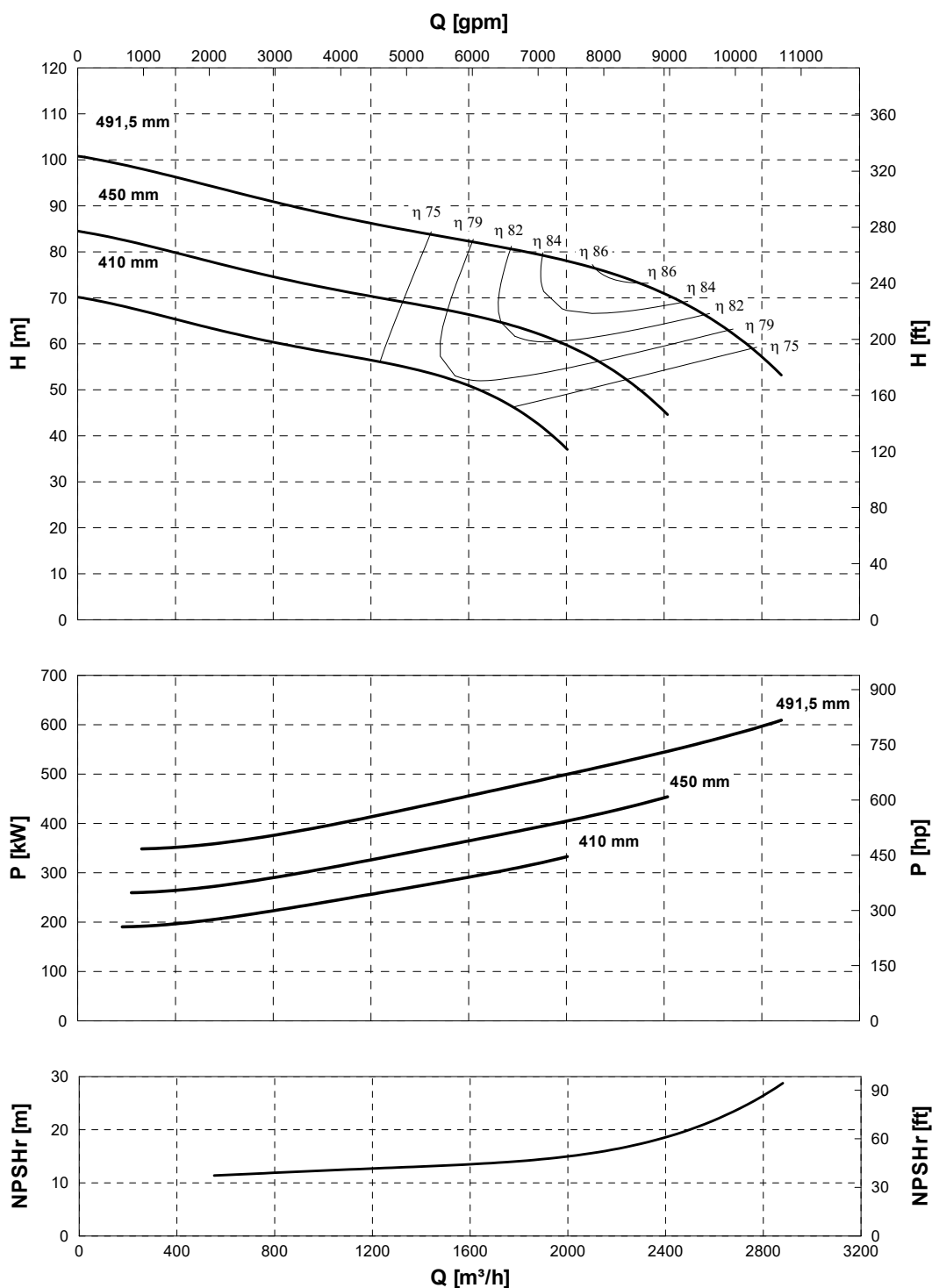
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H_2O $T=18$ $^{\circ}C$), H_2O Density = 998 $[kg/m^3]$
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 1800X

Curve #: 11072-140620-S1

Vertical Turbine Pumps (VTP) 1800 rpm

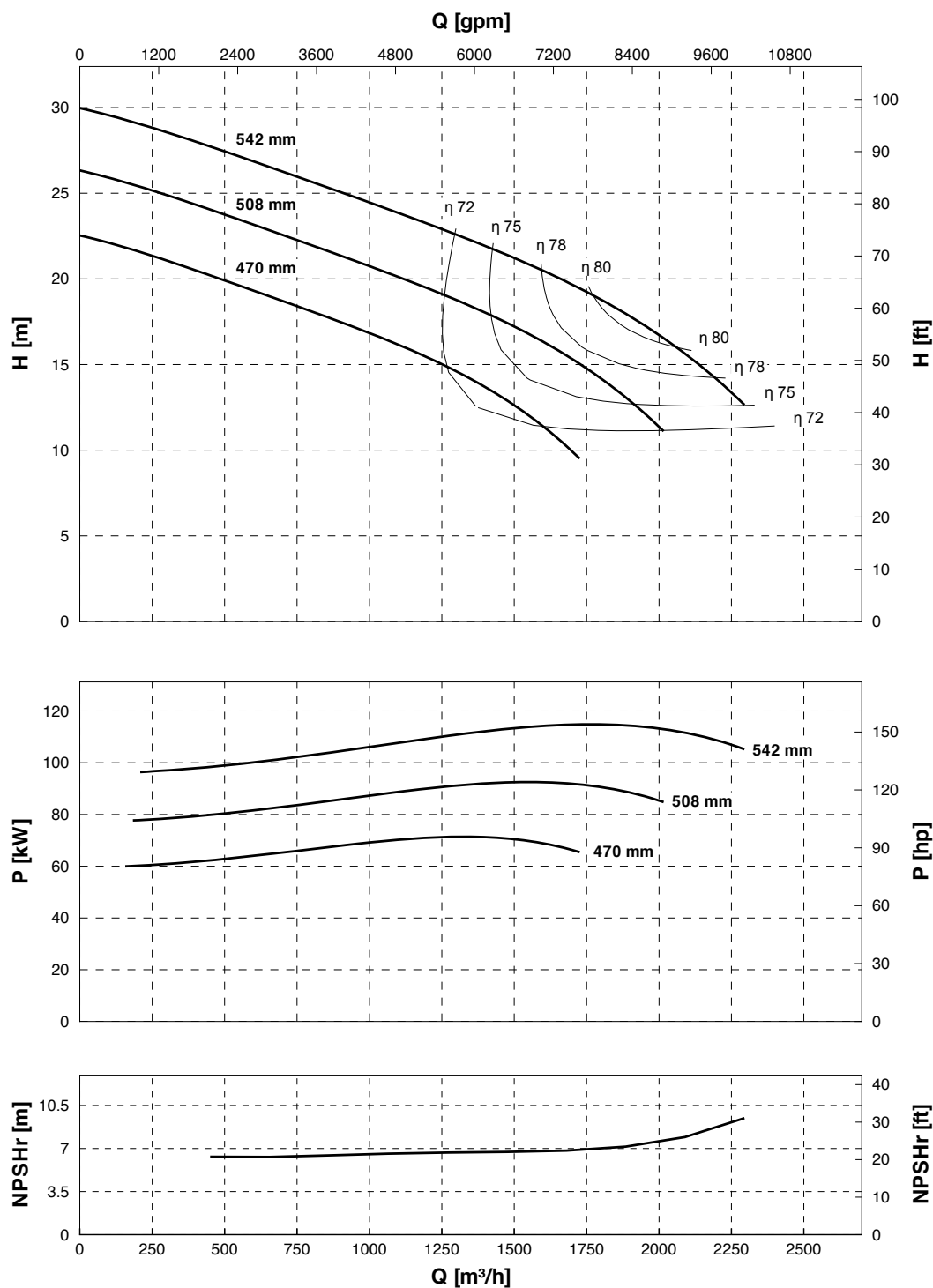


Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 900 rpm

VTP 2200 Curve #: 11030-080728-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

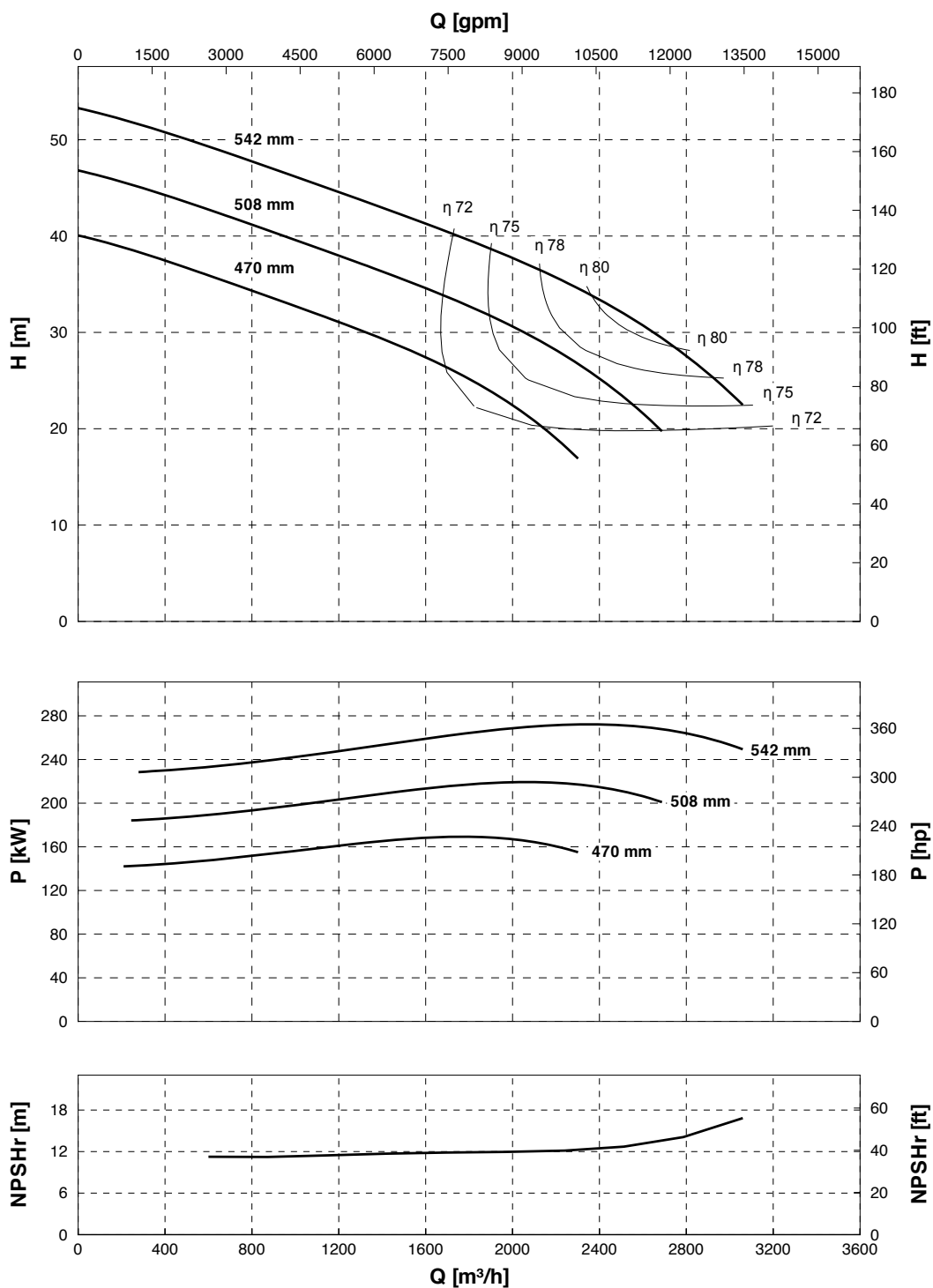


VTP 2200

Curve #: 11030-080728-S1

Vertical Turbine Pumps (VTP)

1200 rpm

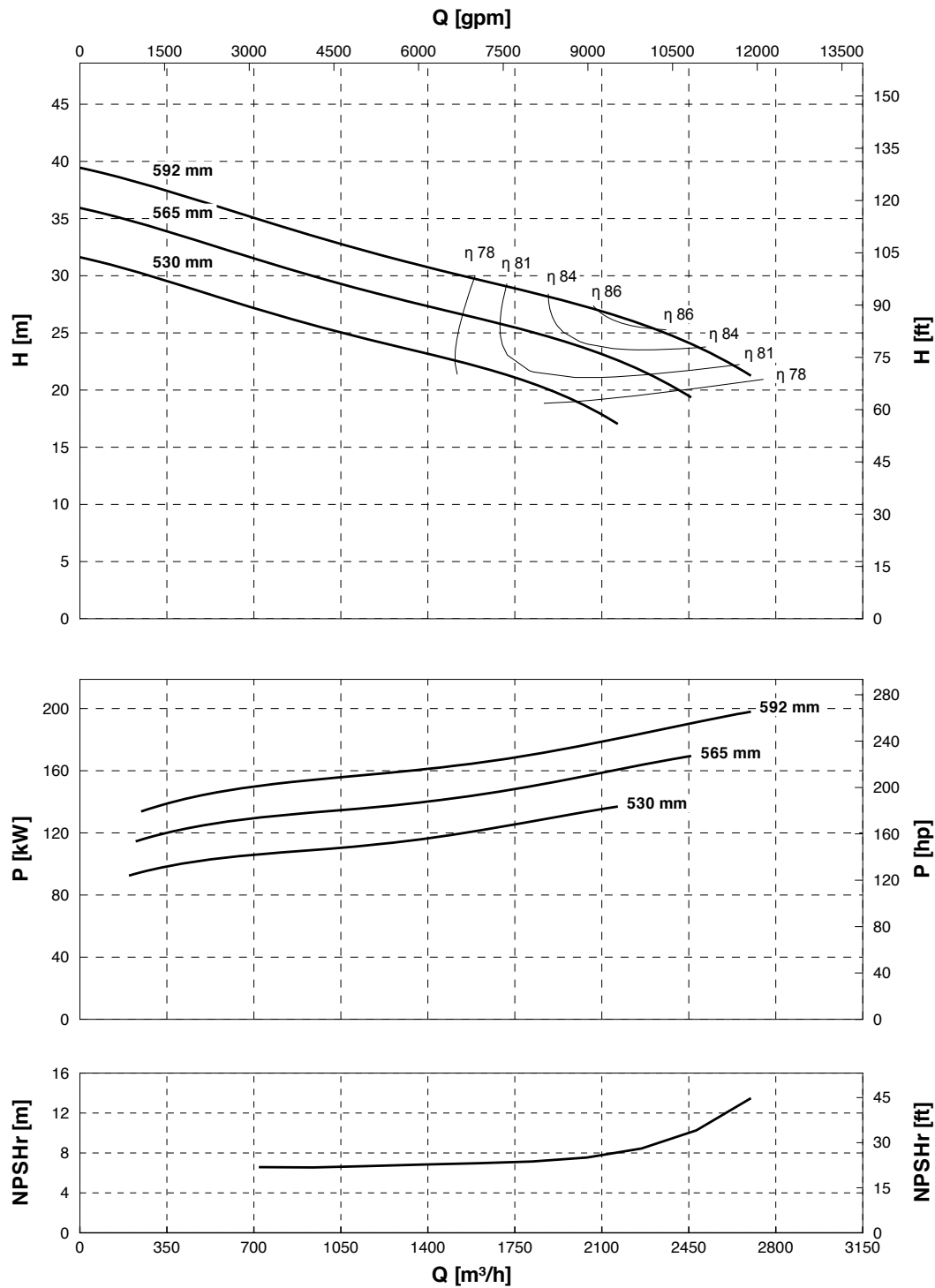


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T*=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 900 rpm

VTP 2200M Curve #: 11032-080723-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

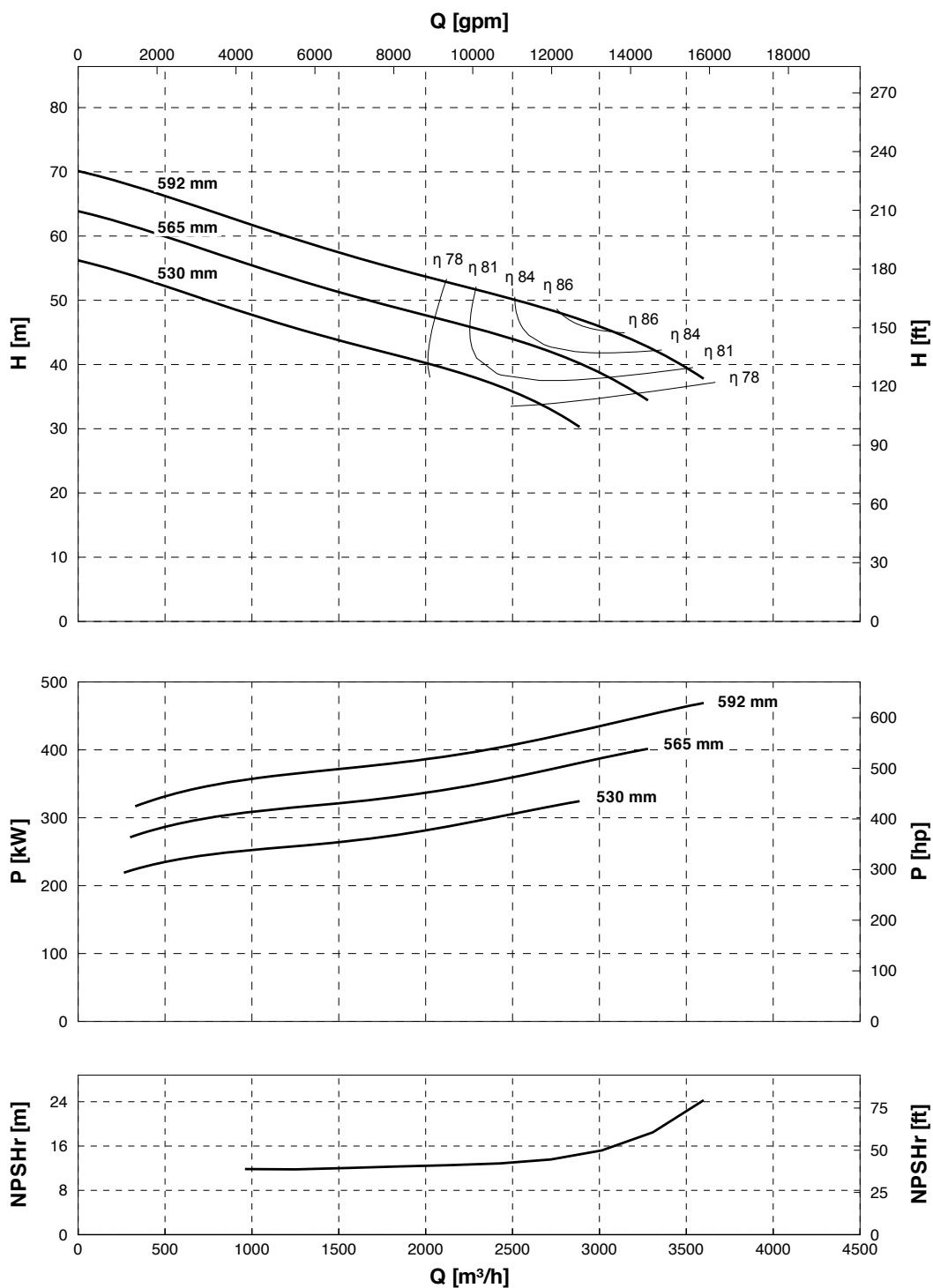


VTP 2200M

Curve #: 11032-080723-S1

Vertical Turbine Pumps (VTP)

1200 rpm

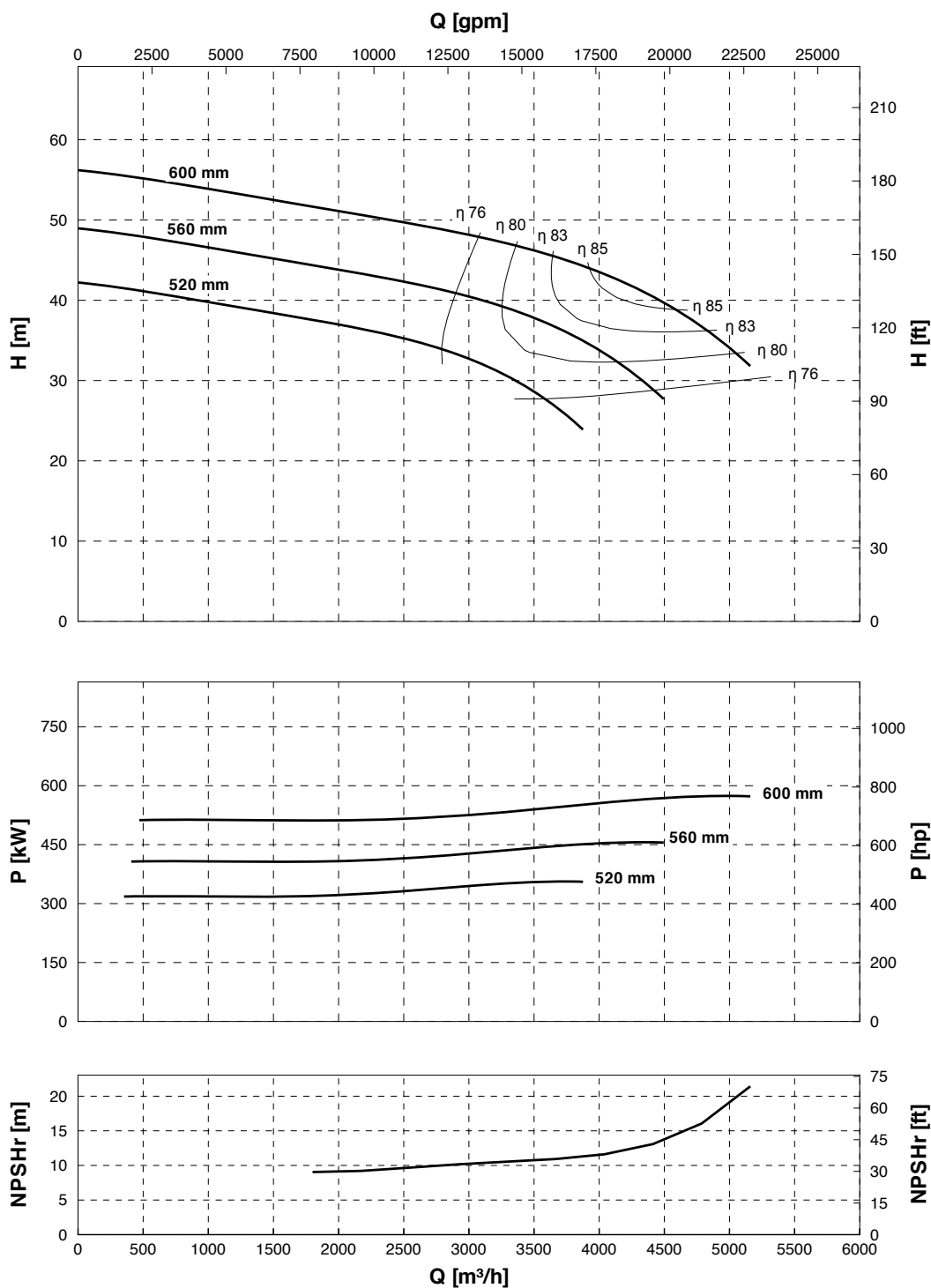


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1200 rpm

VTP 3000 Curve #: 11033-080813-S1



Notes:

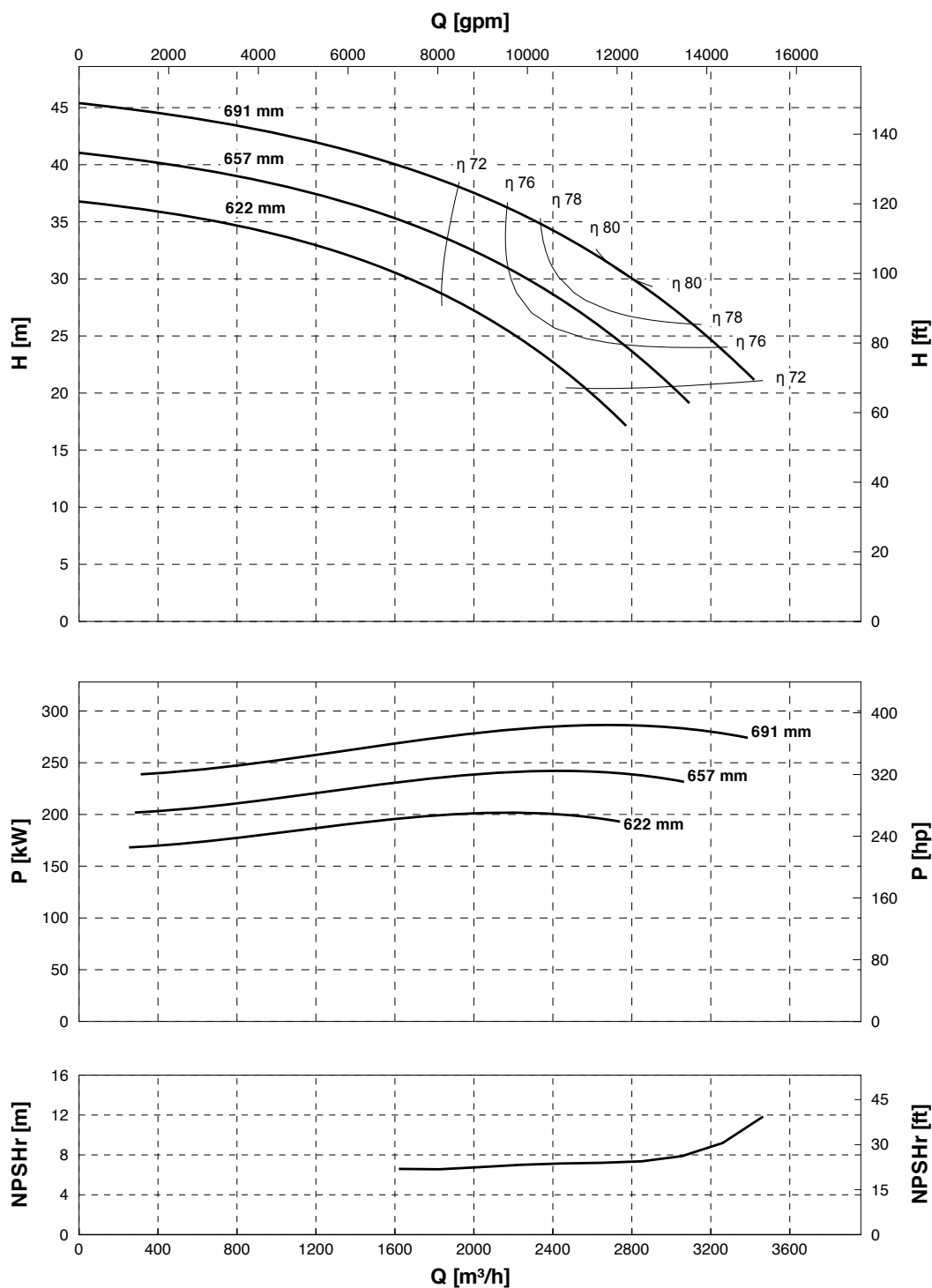
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 3400

Curve #: 11034-080723-S1

Vertical Turbine Pumps (VTP)
900 rpm

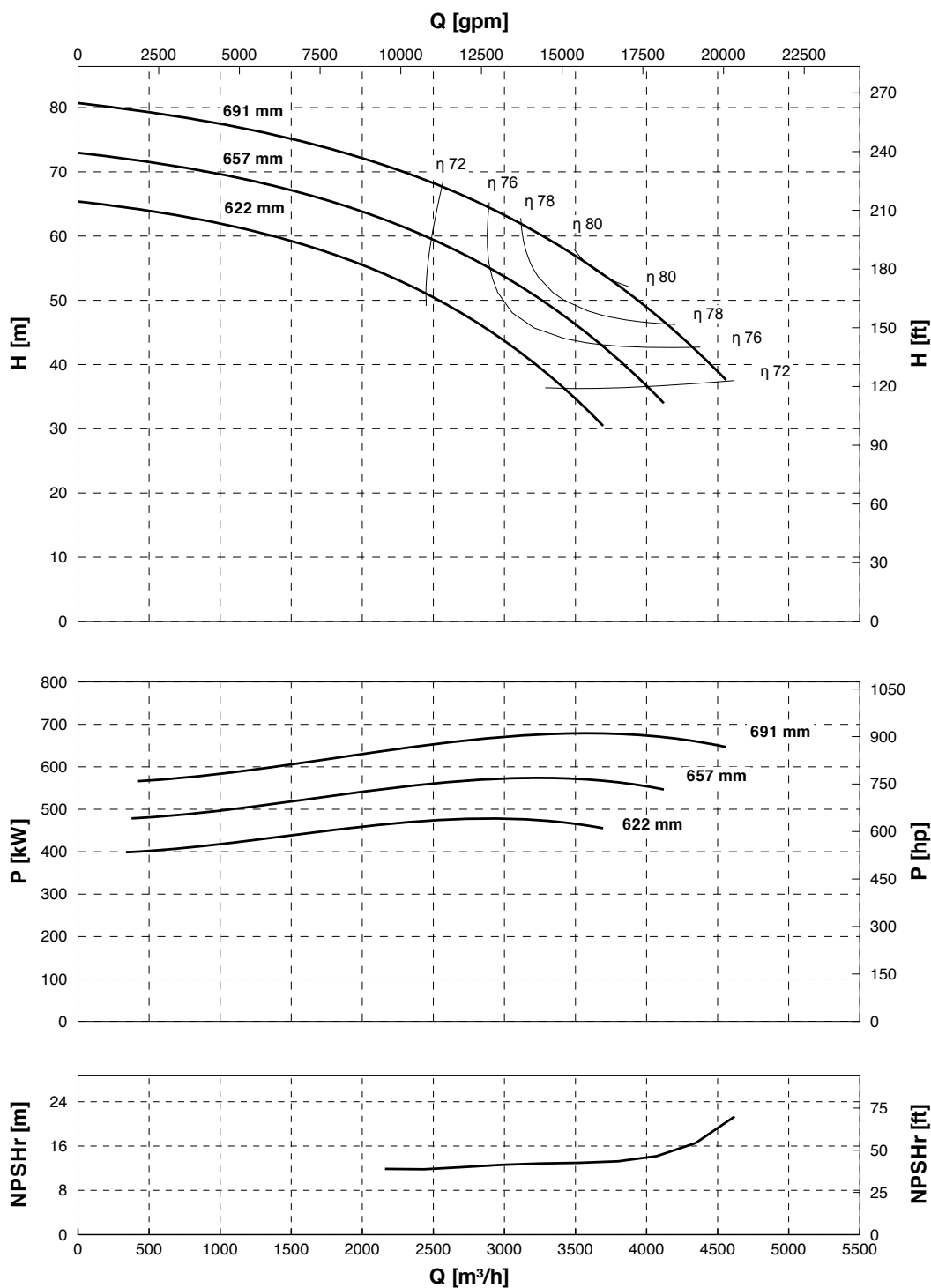


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T*=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 1200 rpm

VTP 3400 Curve #: 11034-080723-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

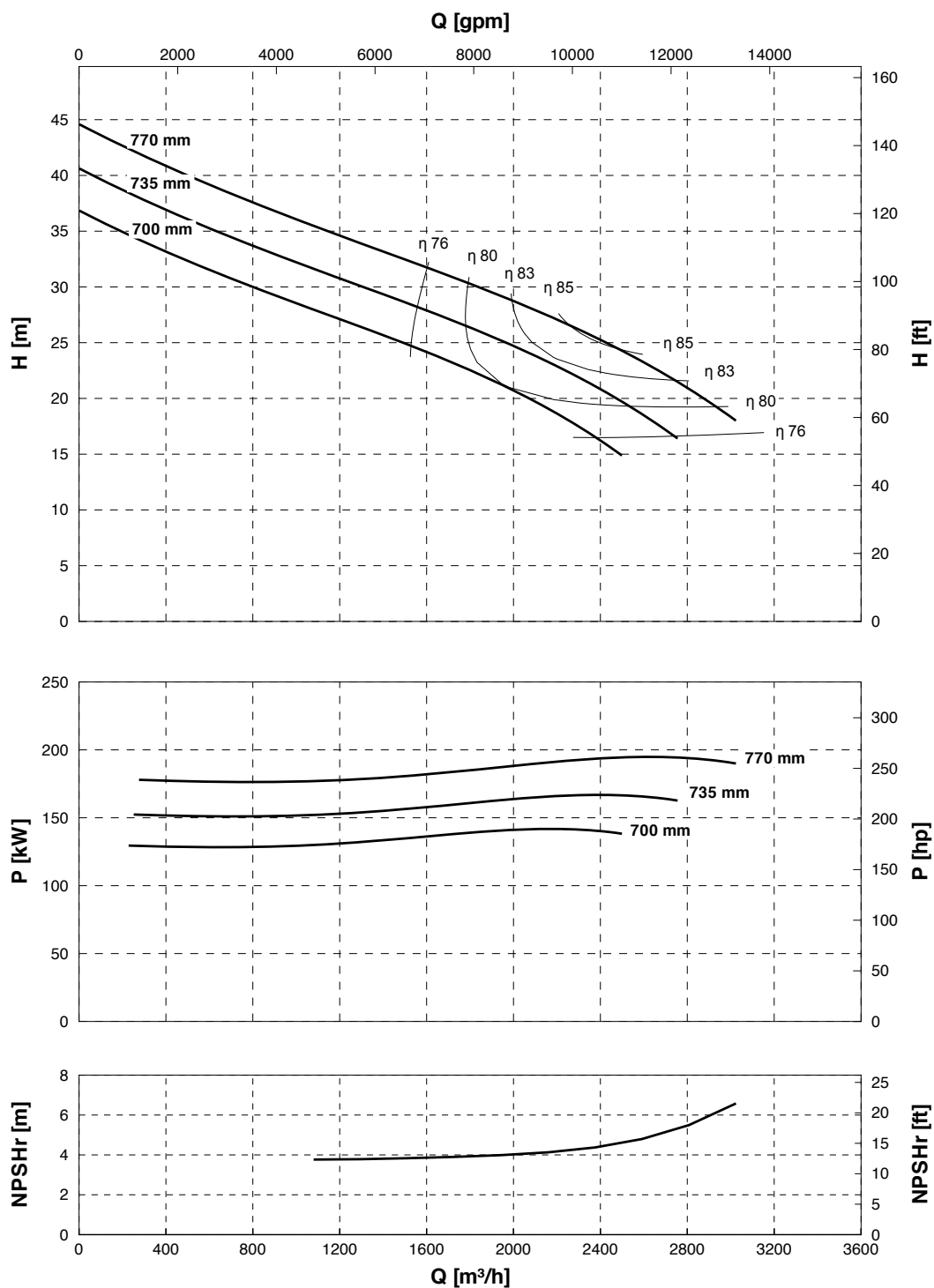


VTP 3400M

Curve #: 11035-080702-S1

Vertical Turbine Pumps (VTP)

720 rpm

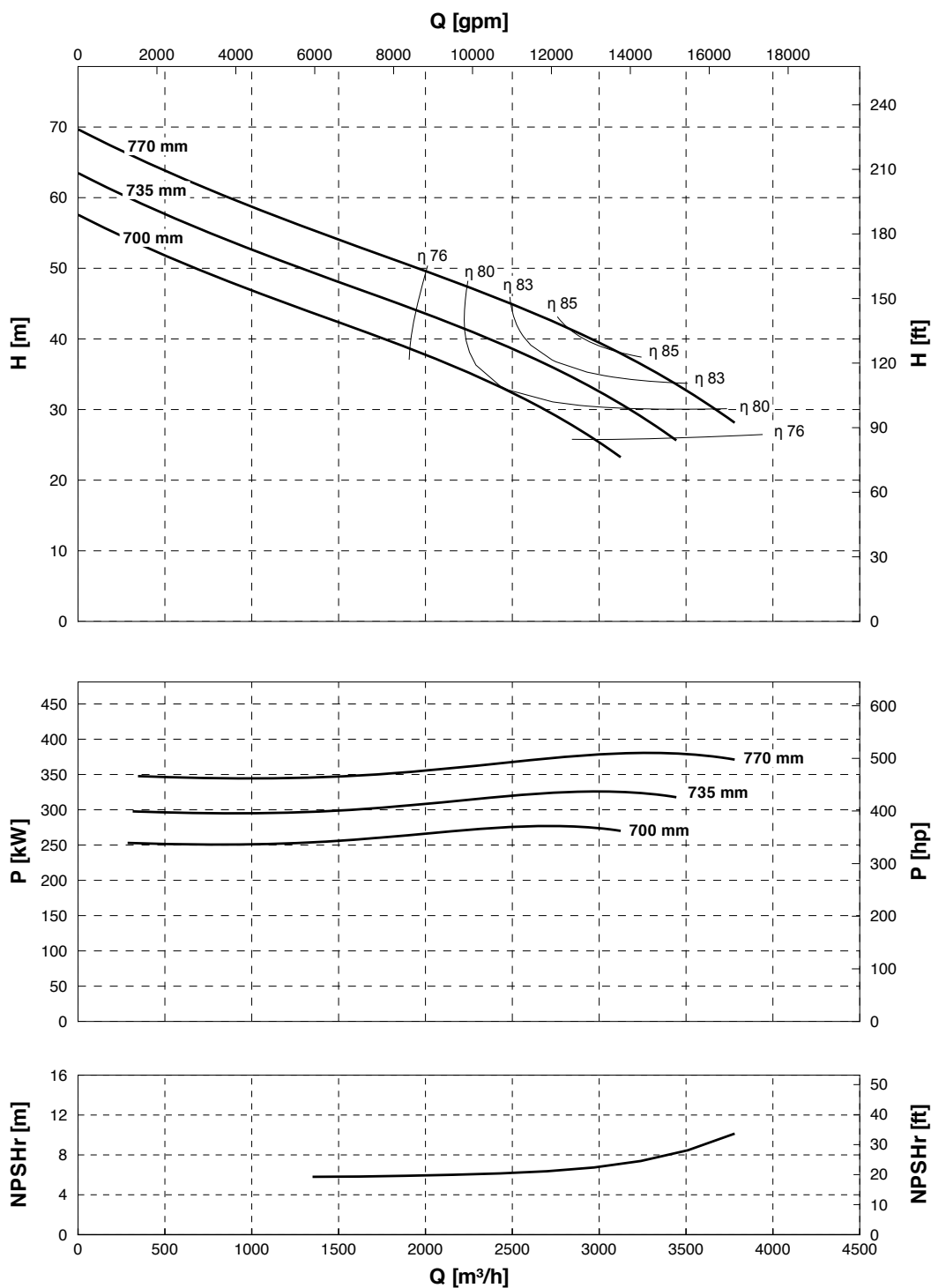


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 900 rpm

VTP 3400M Curve #: 11035-080702-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

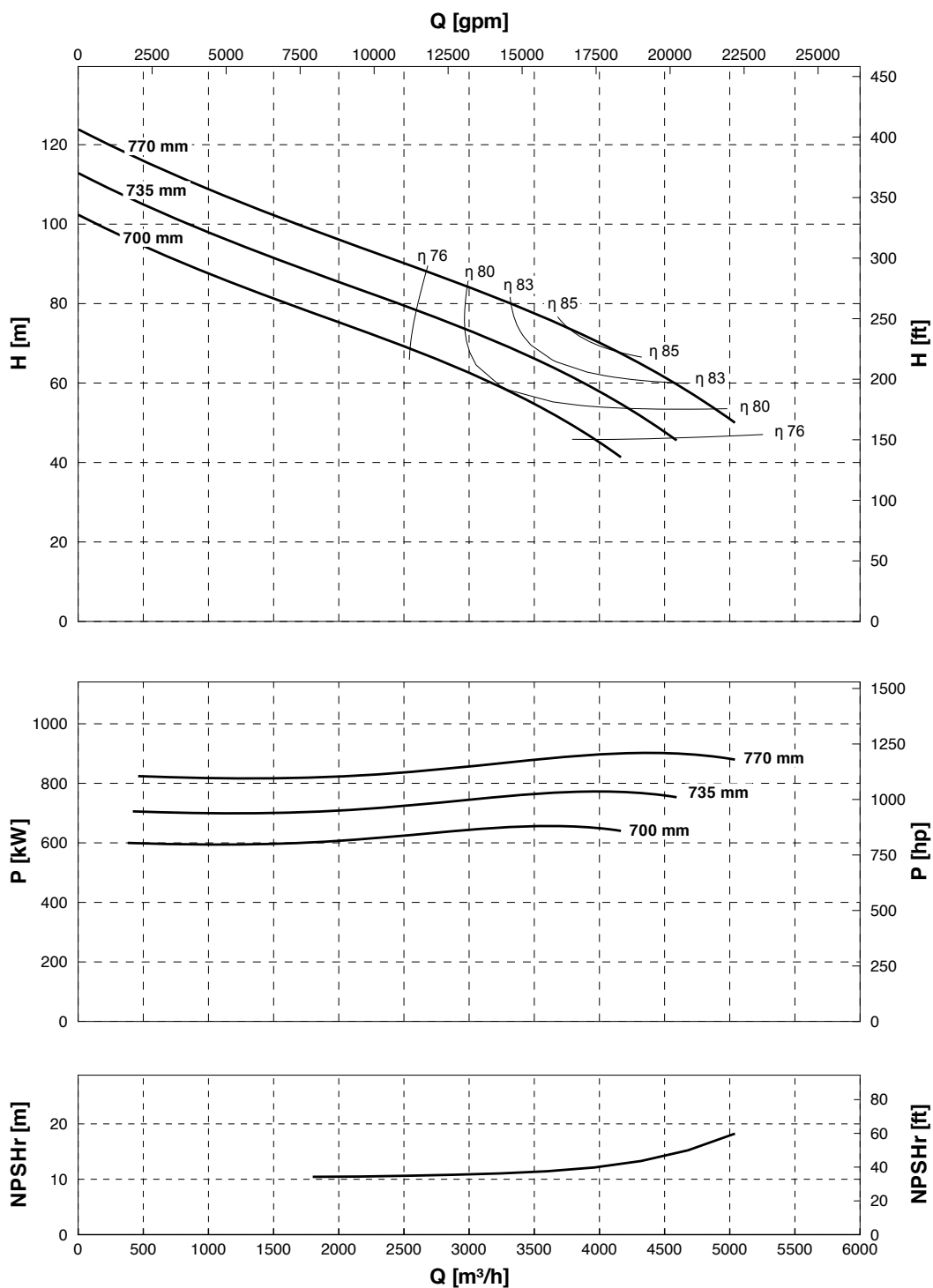


VTP 3400M

Curve # : 11035-080702-S1

Vertical Turbine Pumps (VTP)

1200 rpm

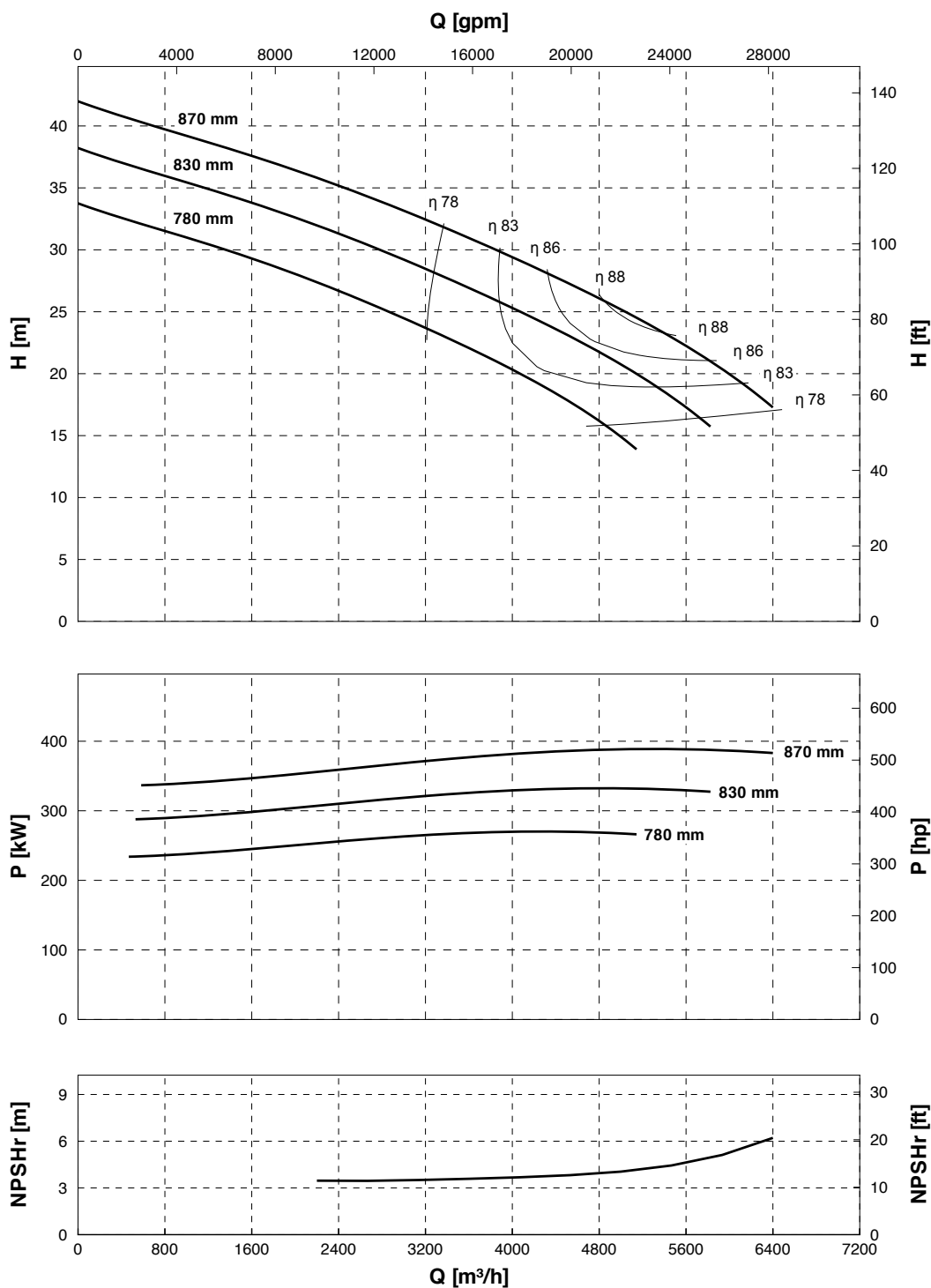


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 600 rpm

VTP 6500 Curve #: 11036-090310-S2



Notes:

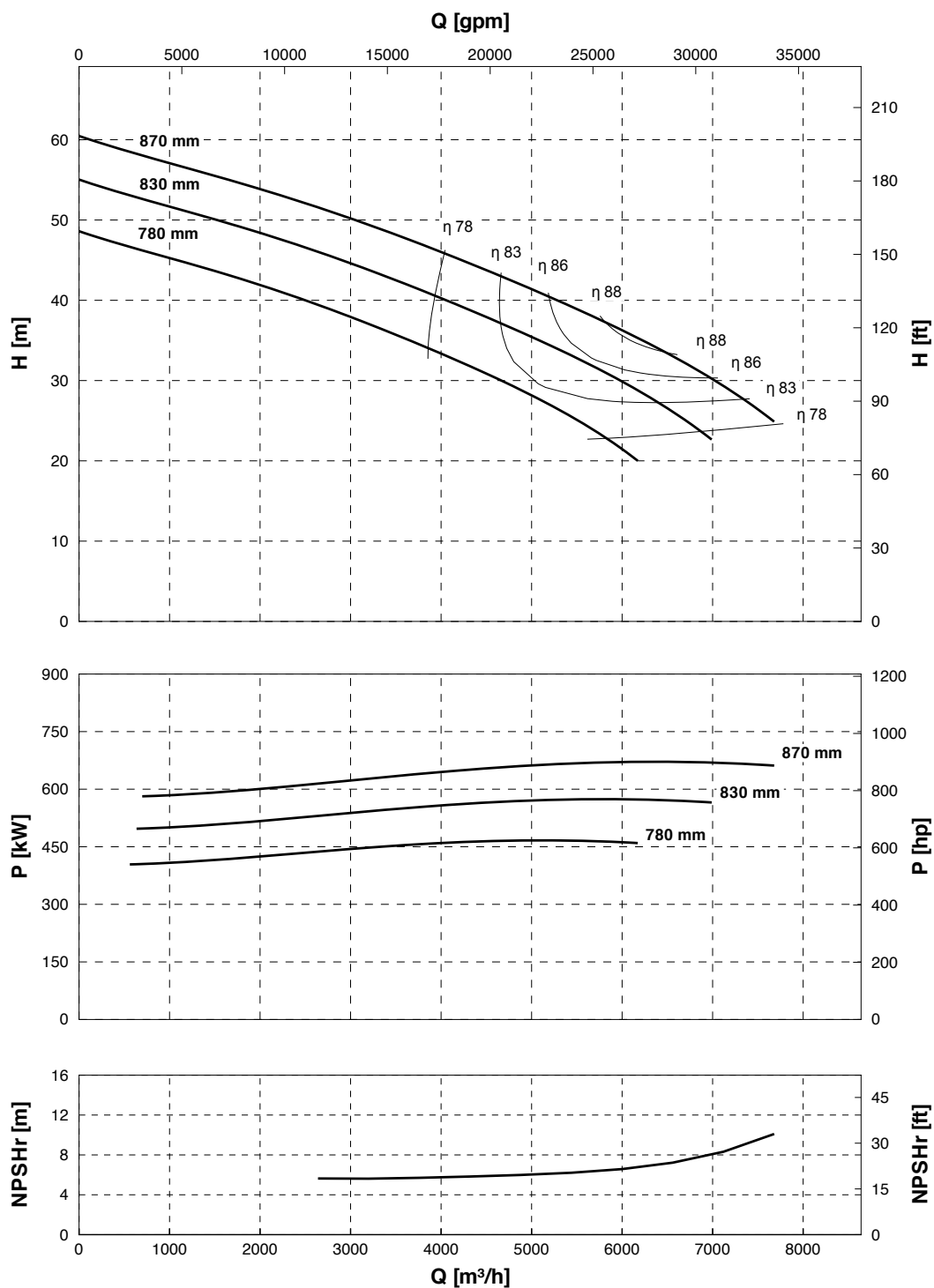
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VTP 6500

Curve #: 11036-090310-S2

Vertical Turbine Pumps (VTP)
720 rpm

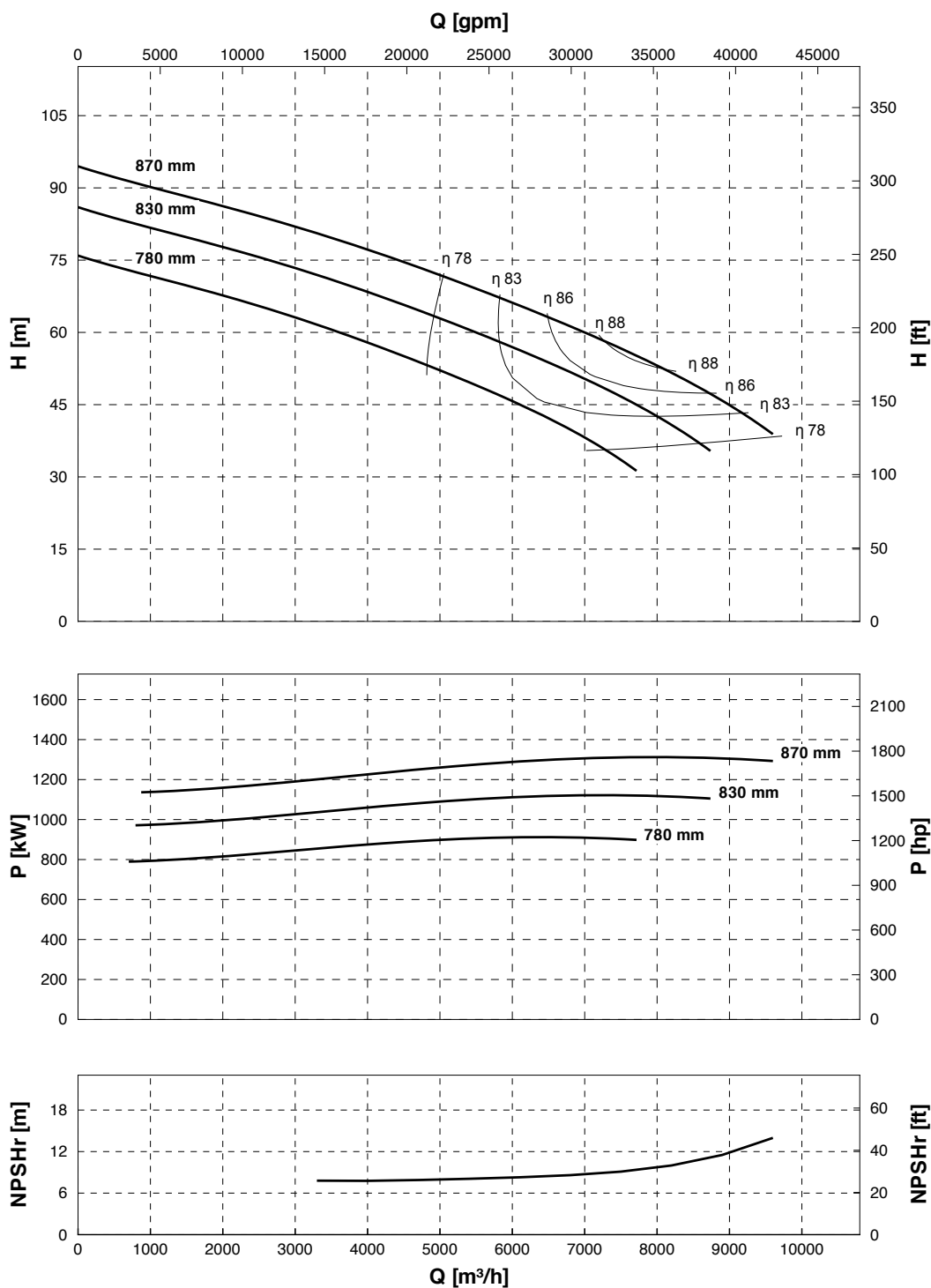


Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

Vertical Turbine Pumps (VTP) 900 rpm

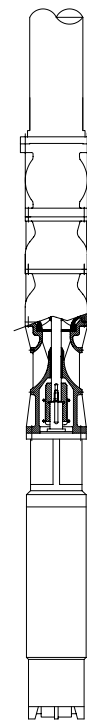
VTP 6500 Curve #: 11036-090310-S2



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.





Vertical Submersible Pumps (VS)

Vertical Submersible Pumps (VS)

Equipment is completely submersed, ideal for deep well applications where lineshaft pumps can not be used. Flanged bowl construction, single or multiple stage design, depending on your total head requirements, for continuous service. Heavy duty design for long term operation in industrial applications.

OPERATING PARAMETERS

- Capacities up to 6,000 gpm (1,150 m³/h)
- Head up to 2,130 Feet (650 m)
- Power through 1000 hp (750 kW)
- Pressures up to 960 psi (6,620 kPa)
- Frequency 50/60 Hz
- Bowl sizes from 8" to 20"

SERVICES

- Primary Water Supply – Fresh water or Sea water
- Dewatering – Sump, Deep Well, Ponds
- Oil & Gas Production – Onshore, Offshore and Pipeline
- Agriculture – Irrigation

DESIGN FEATURES

- NEPTUNO PUMPS® high-efficiency design
- Ideal for deep-well applications
- High-quality investment cast impellers and bowls
- Thrust balanced impellers available
- Maximum versatility and reliability
- Minimum space requirement
- Discharge casing with incorporated non-return valve
- Special material selection for standard or abrasive/corrosive service

Vertical Submersible Pumps (VS)

Available Models

VS 50	VS 100	VS 110	VS 130
VS 170	VS 170M	VS 180	VS 180M
VS 250	VS 290	VS 300	VS 325
VS 360	VS 450	VS 500	VS 650
VS 850			

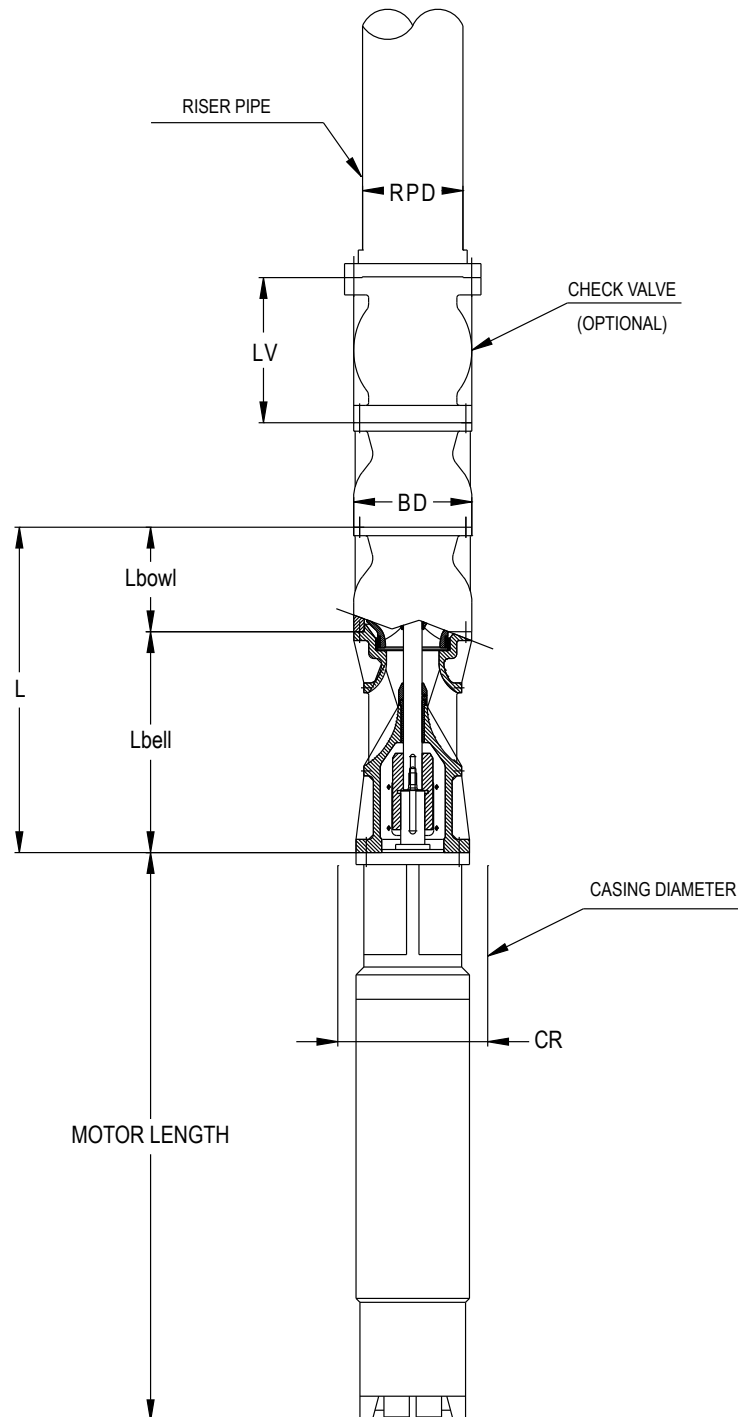
Vertical Submersible Pumps (VS) Applications

Duty	Heavy	Medium	Low
	●	●	●
Capacity	High	Medium	Low
		●	●
Head	High	Medium	Low
	●	●	
Fluid	Clean	Process	Slurry
	●	●	
Flexibility	High	Medium	Low
	●		

Vertical Submersible Pumps (VS) Main Components & Materials

	Material					
Components	Cast Iron	Carbon Steel	Brass	Stainless Steel	Duplex	Polymer
Bowl	●		●	●	●	
Impeller	●		●	●	●	
Wear Rings	●		●	●	●	
Shaft				●	●	
Check Valve	●		●	●	●	

Vertical Submersible Pumps (VS) Diagram



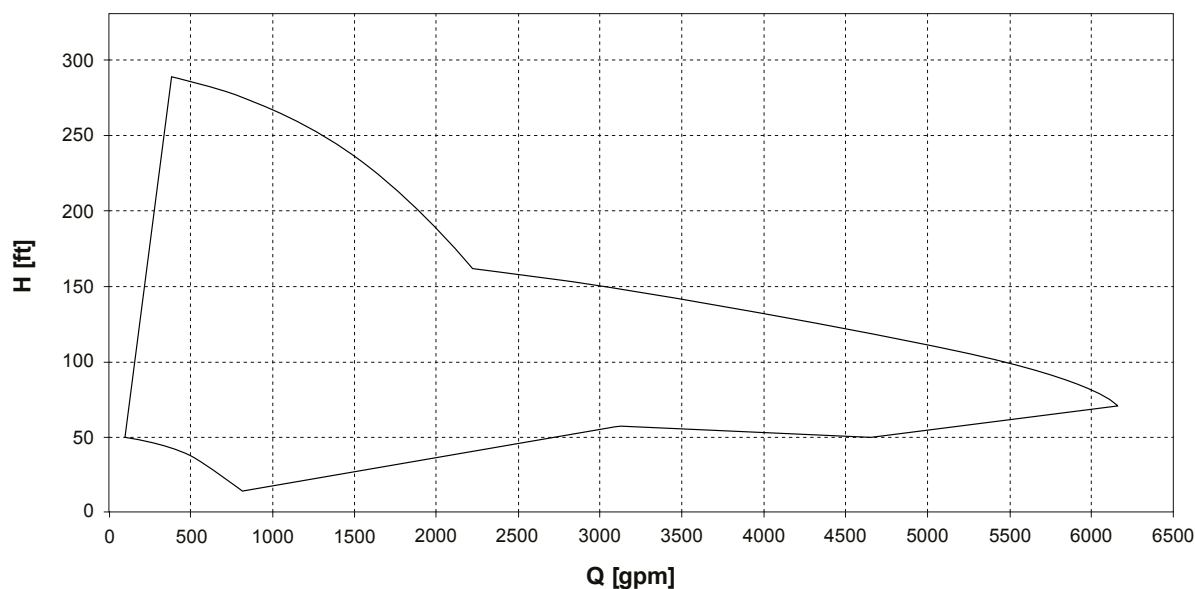
Vertical Submersible Pumps (VS)

Main Dimensions

Pump Model	Pump's Principal Dimensions				Bowl Assembly Dimensions		
	RPD [in]	BD [in]	CRmin [in]	LV [in]	L [in] (1st Stage)	Lbowl [in] Each add Stage	Lbell [in]
50	4	9.4	11	8.6	21.7	7.4	14.3
100	6	10.0	12	11.7	13.3	8.4	4.9
110	4	9.8	12	9.5	17.3	6.5	10.8
130	4	8.3	10	7.6	17.3	6.5	10.8
170	6	10.0	12	11.7	13.3	8.4	4.9
170M	6	10.0	12	11.7	13.3	8.4	4.9
180	8	12.2	14	11.6	28.7	9.2	19.6
180M	6	14.8	17	12.4	27.7	10.0	17.7
250	8	12.8	15	11.5	23.6	6.7	16.9
290	8	11.6	14	11.5	25.8	8.9	16.9
300	10	14.0	16	15.2	38.1	12.5	25.6
325	6	14.9	17	15.2	36.6	11.0	25.6
360	8	12.8	15	11.6	28.7	9.2	19.6
450	10	17.5	19	15.7	40.6	13.6	27.0
500	10	14.2	16	16.1	36.6	13.8	22.8
650	12	20.6	23	19.1	50.0	16.5	33.5
850	14	18.7	21	19.7	48.2	18.6	29.5

Vertical Submersible Pumps (VS)

Range Chart - 60 Hz - 1 Stage

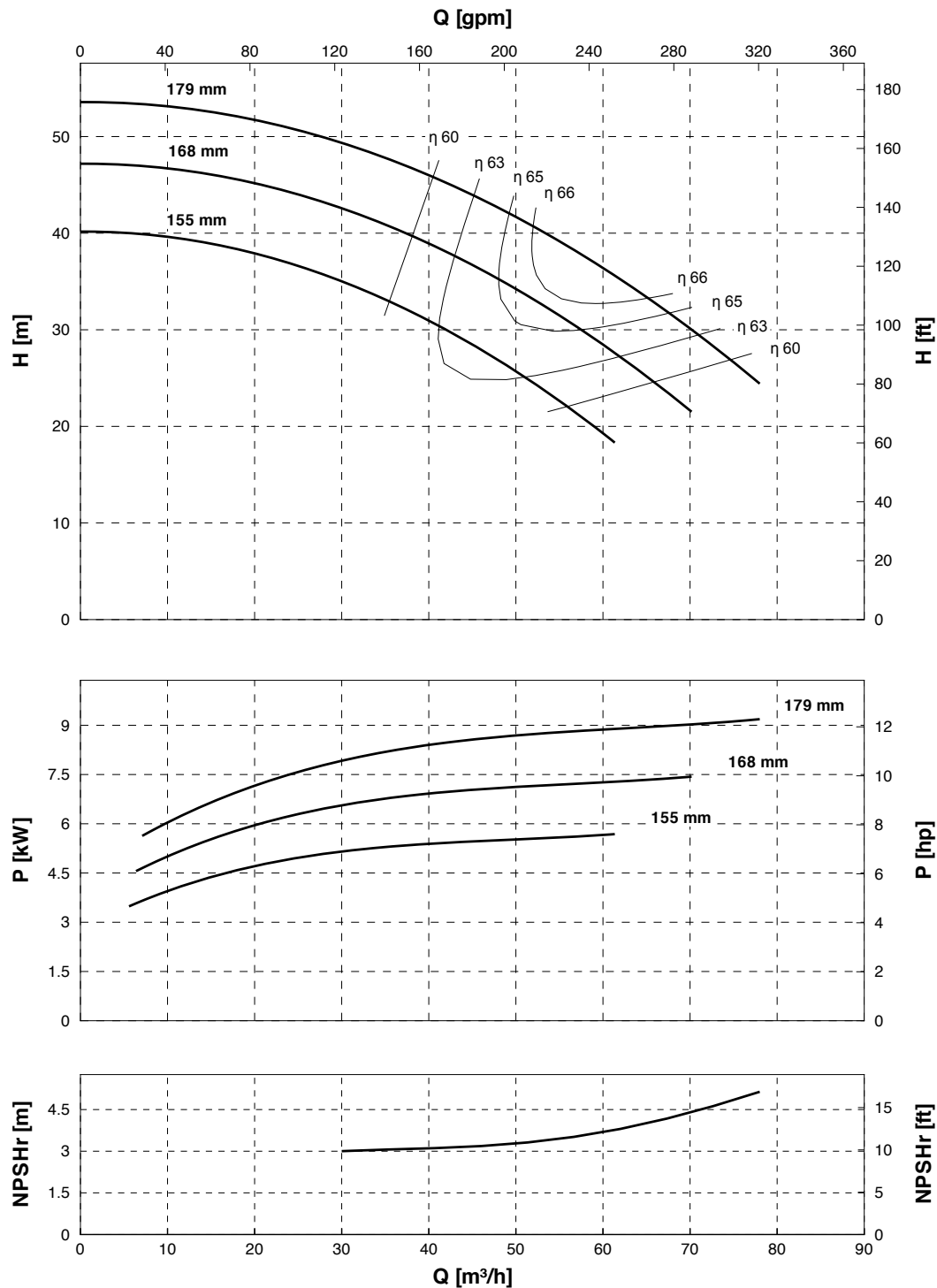


Vertical Submersible Pumps (VS)

3600 rpm

VS 50

Curve #: 11001-110214-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

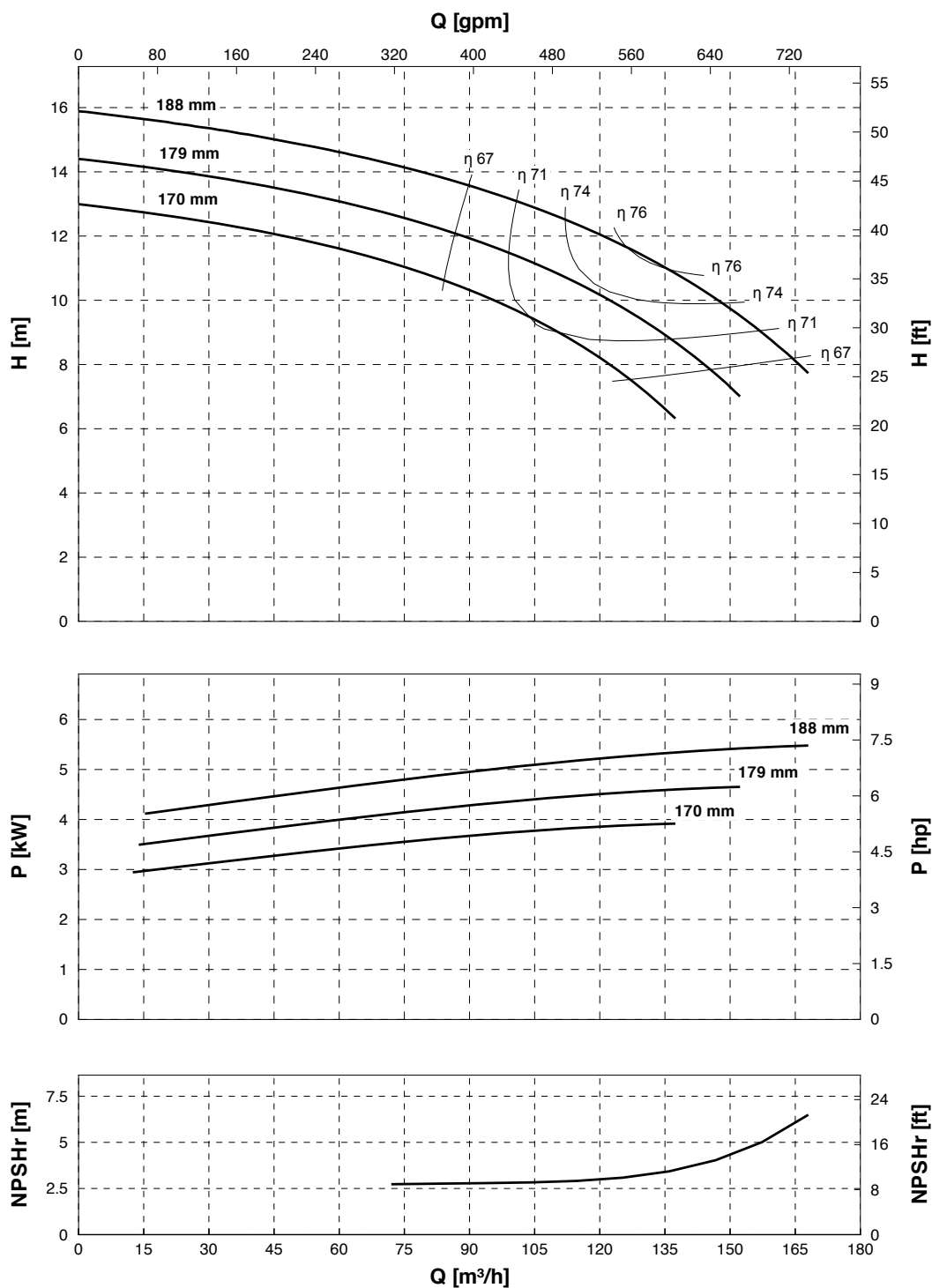


VS 100

Curve #: 11002-070713-F1

Vertical Submersible Pumps (VS)

1800 rpm



Notes:

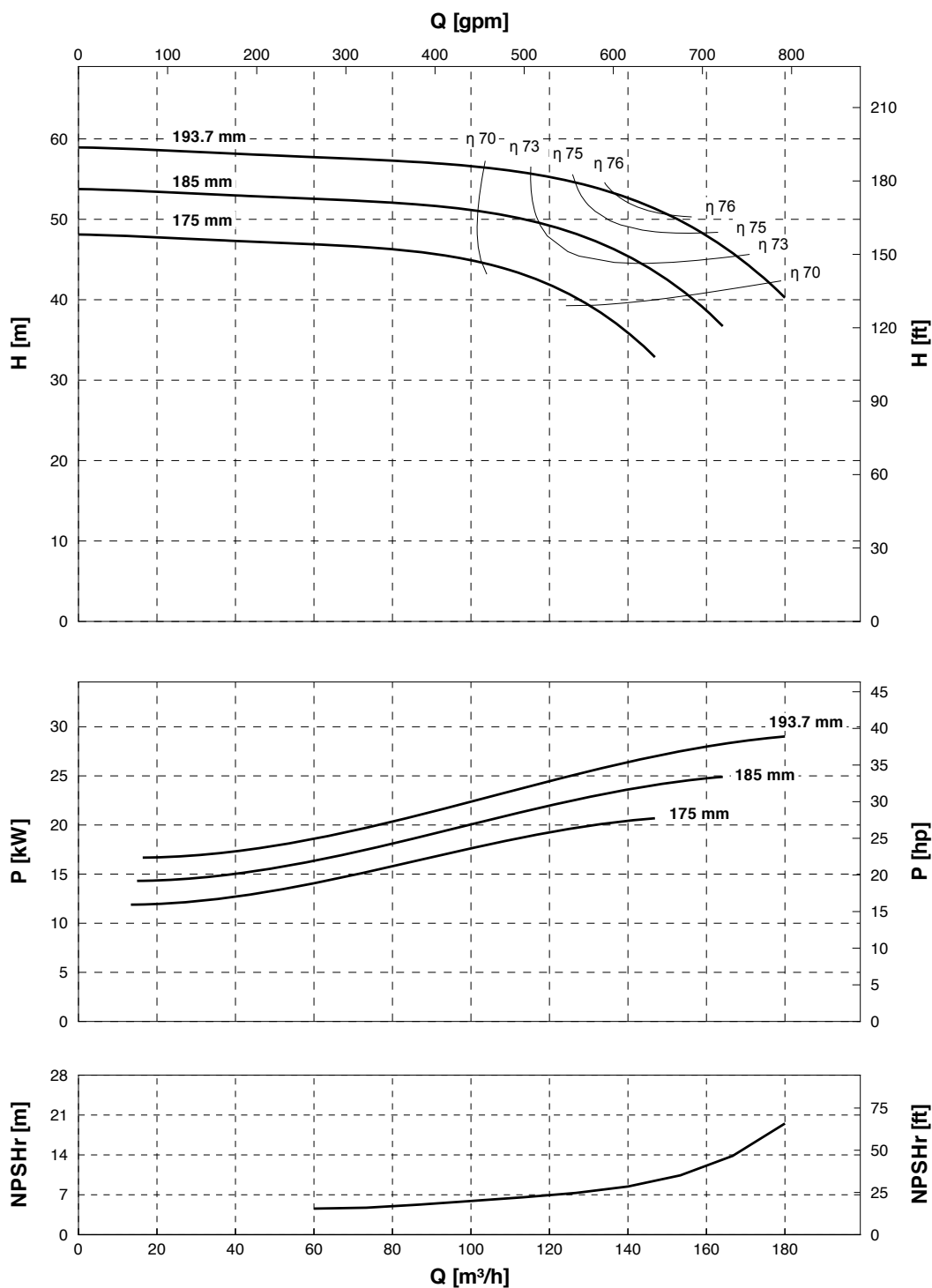
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^{\circ}=18^{\circ}C$, H_2O Density = 998 kg/m^3)
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Submersible Pumps (VS)

3600 rpm

VS 110

Curve #: 11003-071121-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

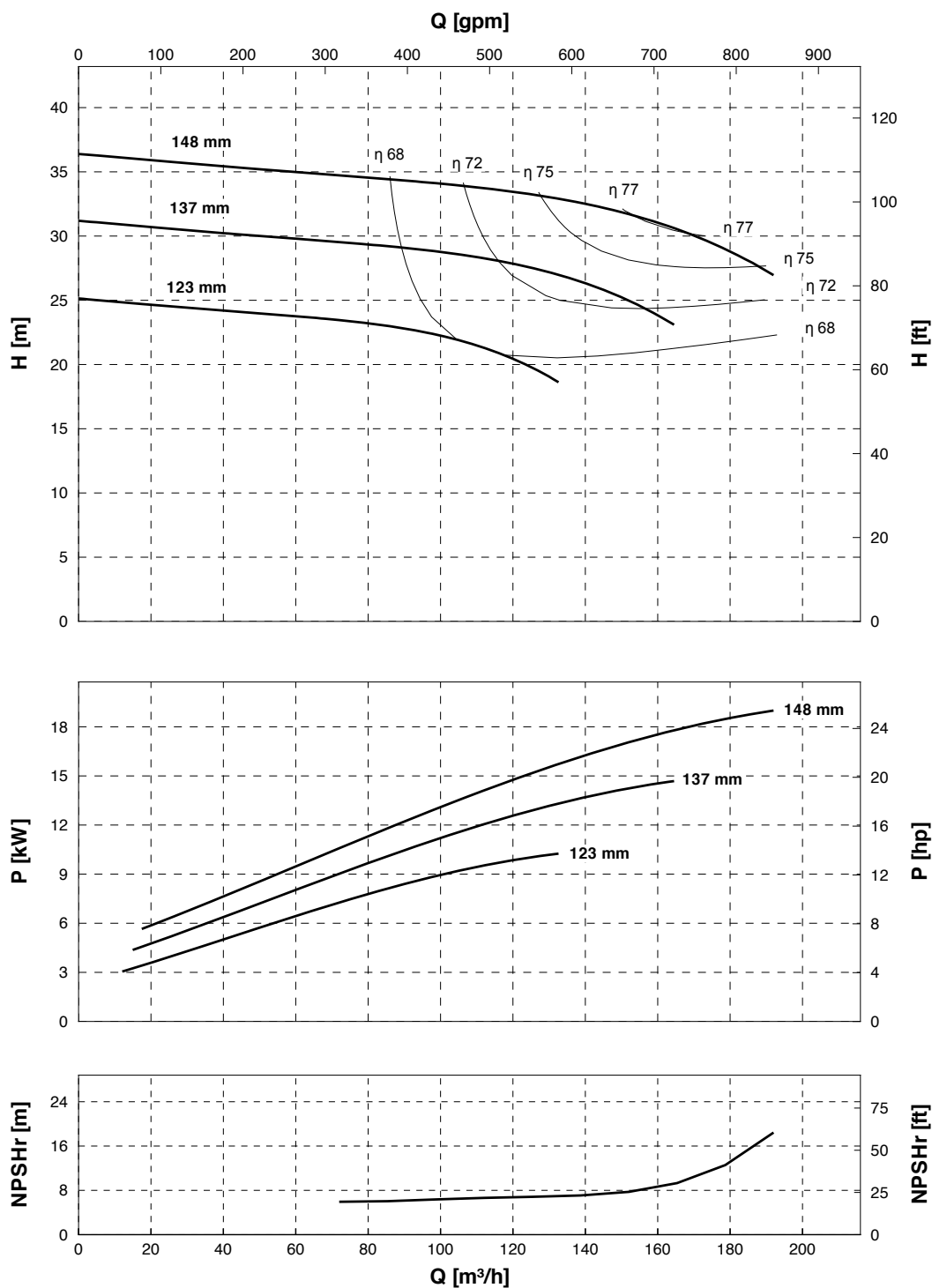


VS 130

Curve #: 11004-081121-S1

Vertical Submersible Pumps (VS)

3600 rpm



Notes:

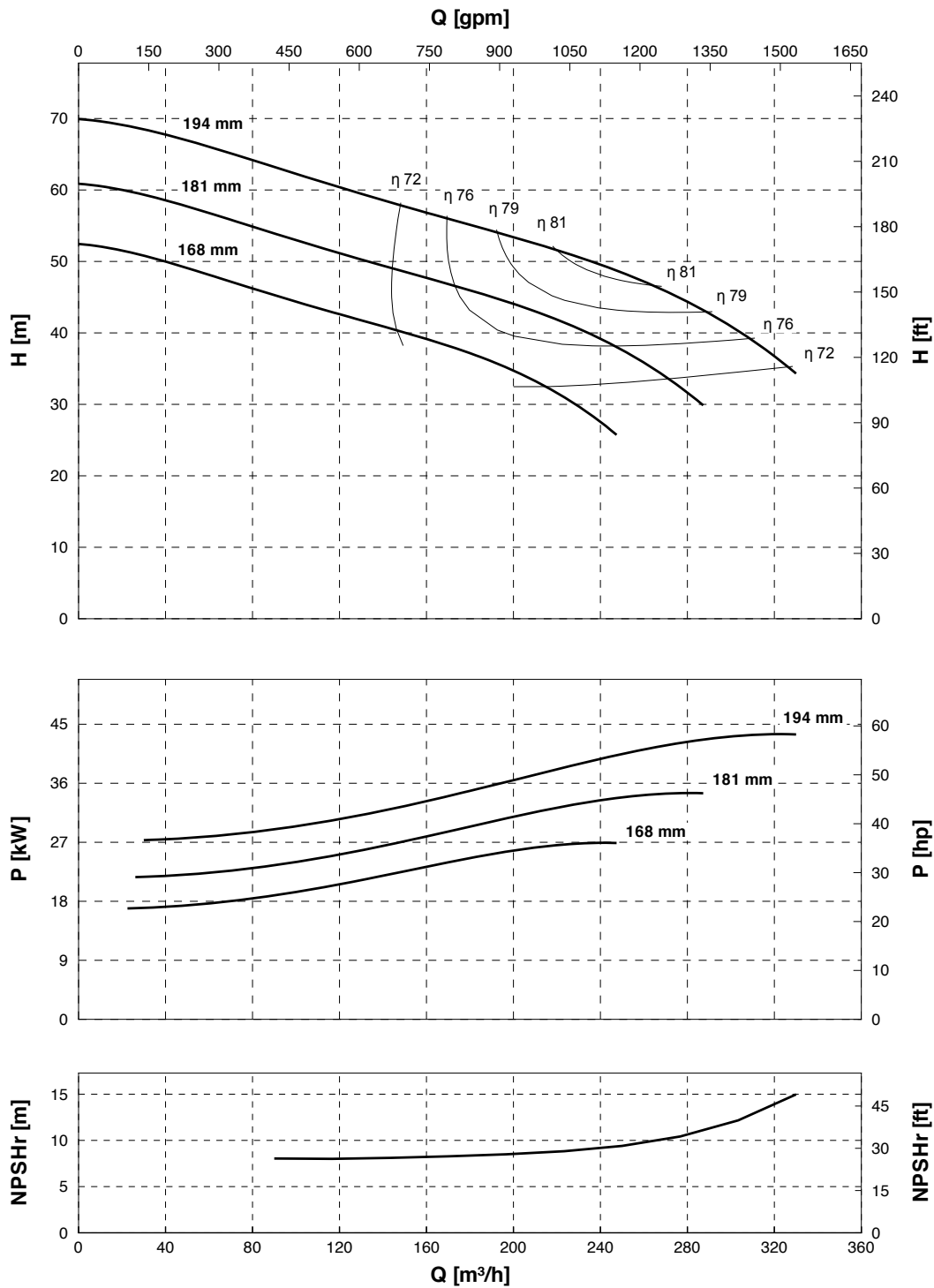
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T*=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Submersible Pumps (VS)

3600 rpm

VS 170

Curve #:11005-080704-E1



Notes:

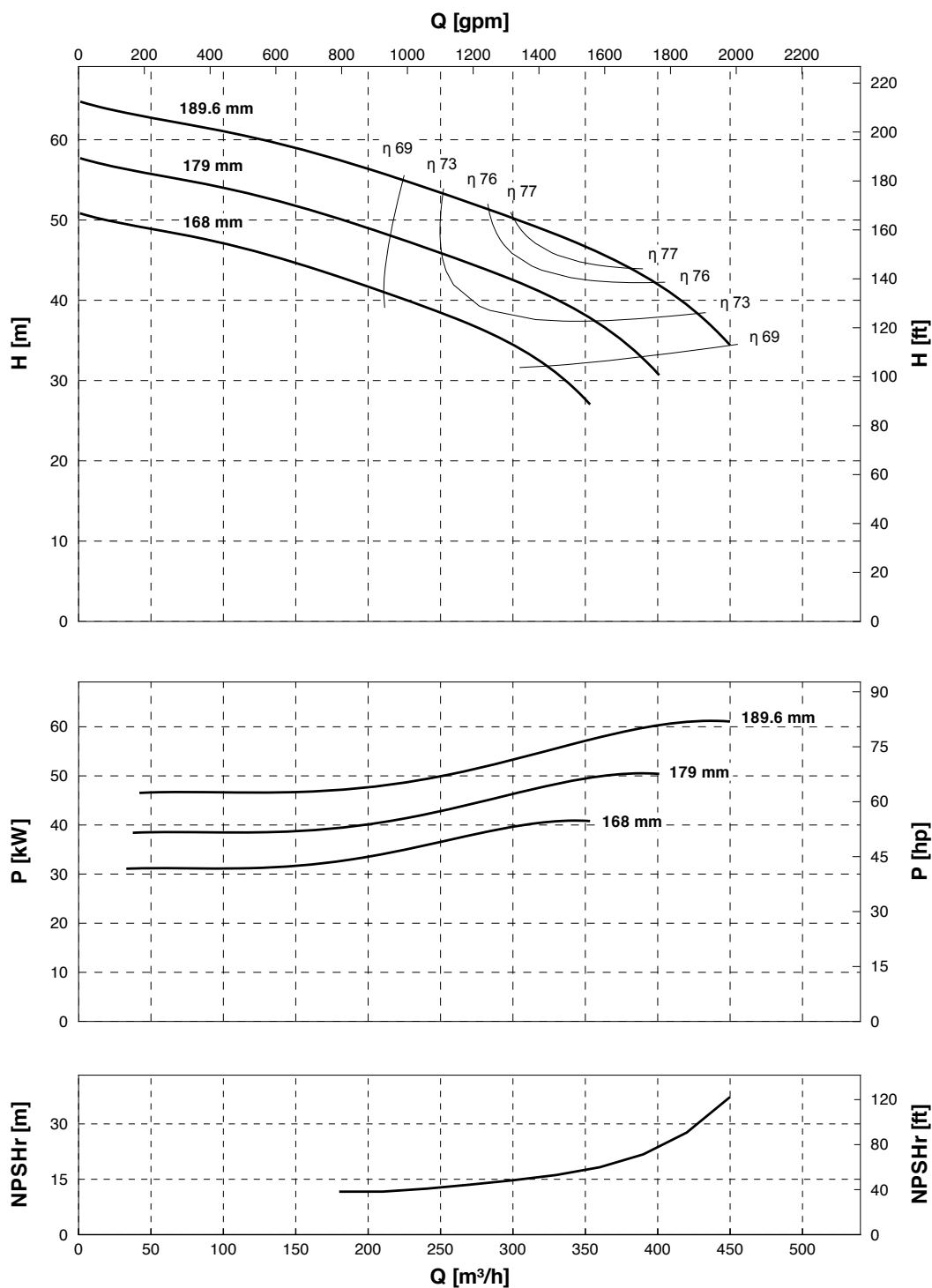
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VS 170M

Curve #: 11006-090721-S1

Vertical Submersible Pumps (VS)
3600 rpm



Notes:

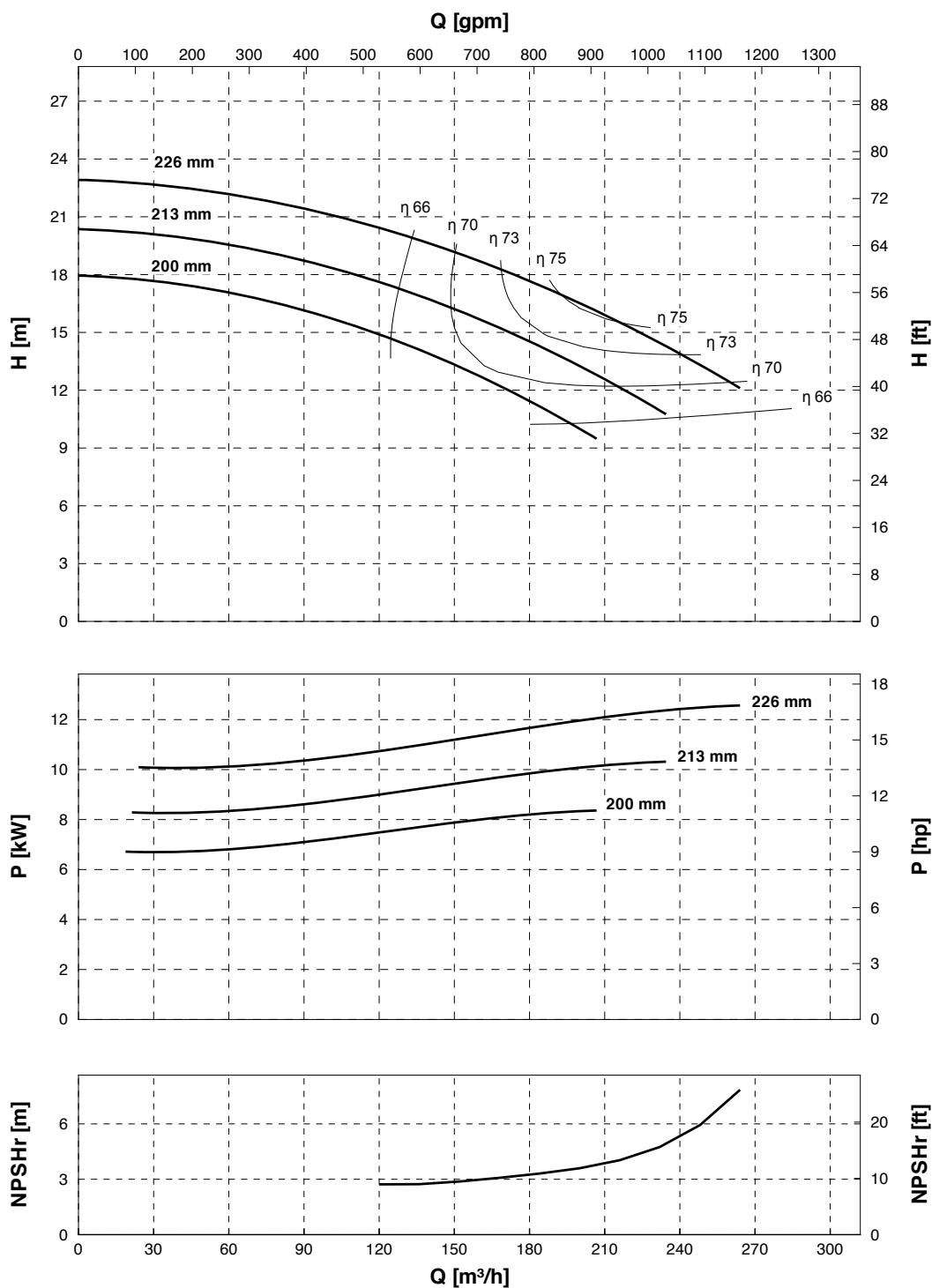
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Submersible Pumps (VS)

1800 rpm

VS 180

Curve #: 11007-070717-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

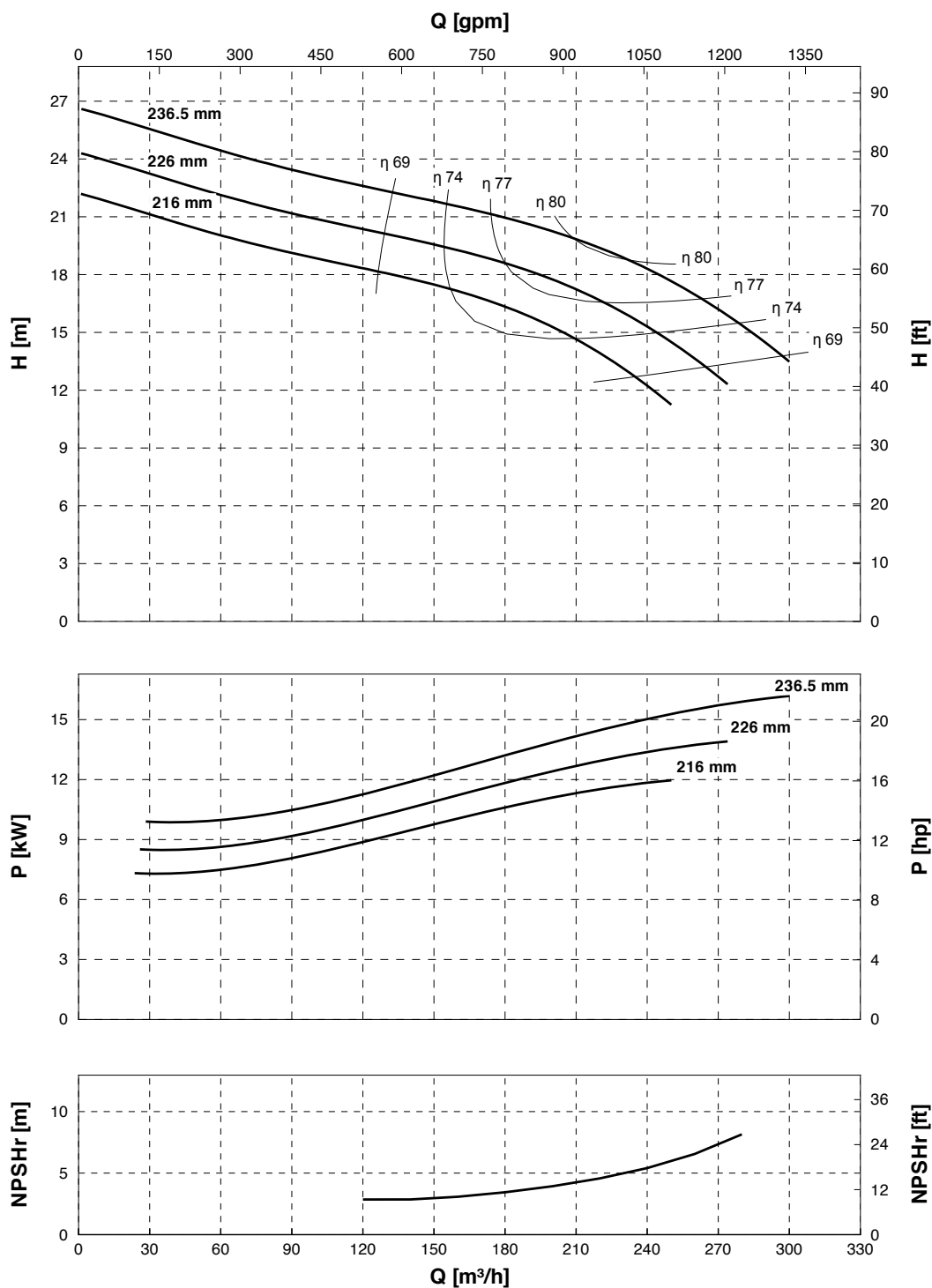


VS 180M

Curve #: 11008-081103-S1

Vertical Submersible Pumps (VS)

1800 rpm



Notes:

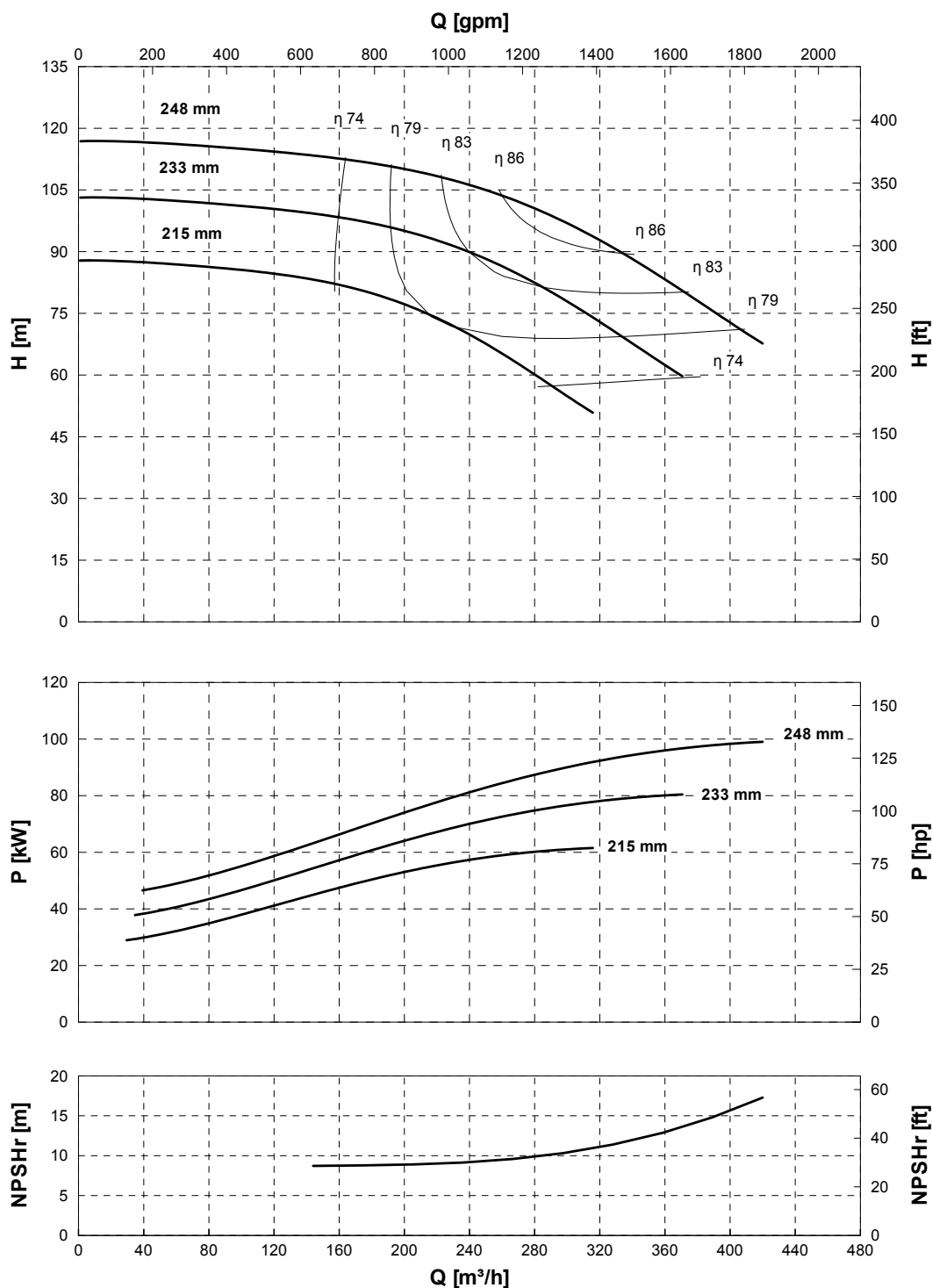
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Submersible Pumps (VS)

3600 rpm

VS 250

Curve #: 11009-100625-E2



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

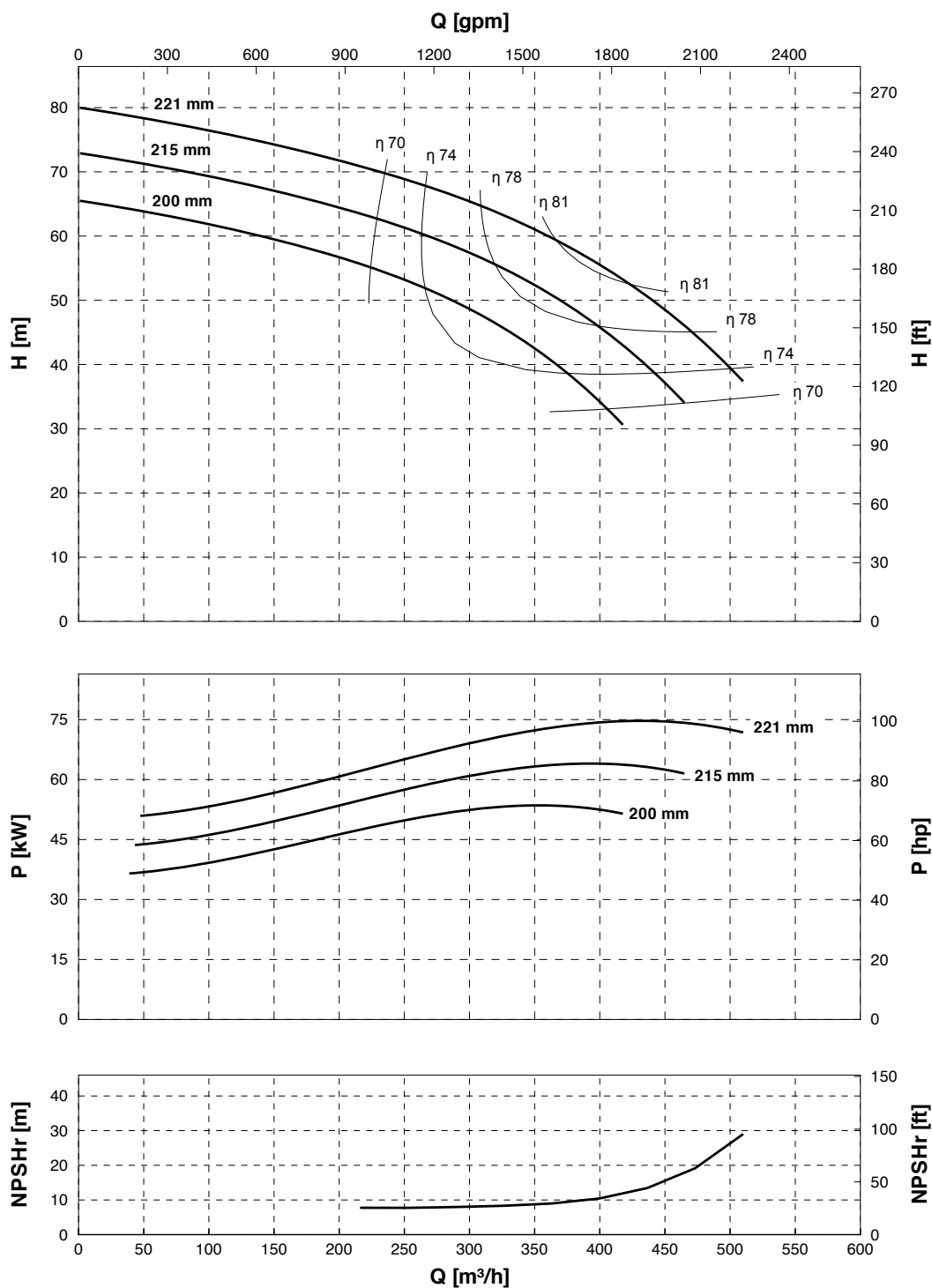


VS 290

Curve #: 11010-081103-S1

Vertical Submersible Pumps (VS)

3600 rpm



Notes:

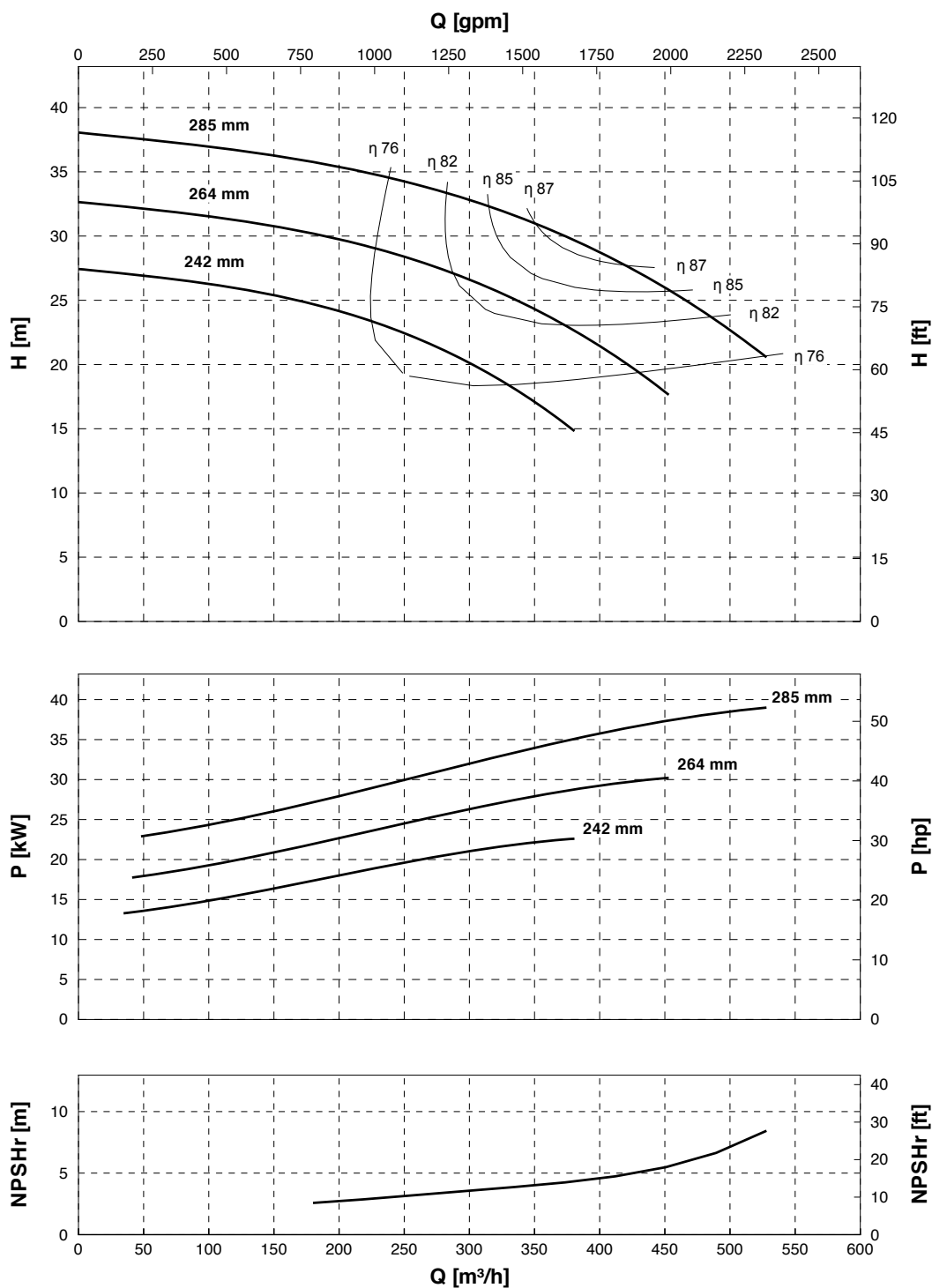
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Submersible Pumps (VS)

1800 rpm

VS 300

Curve #: 11011-070713-F1



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

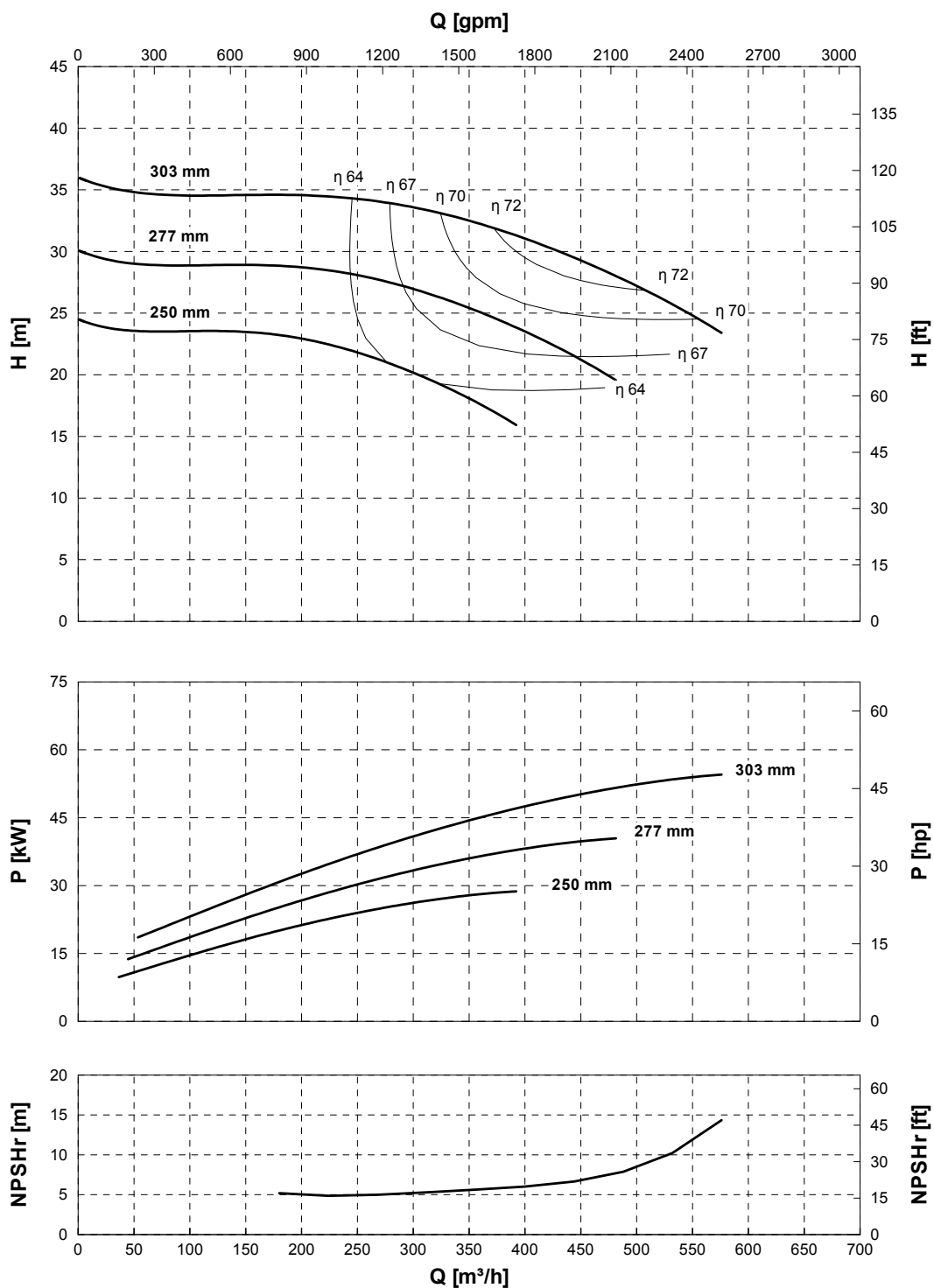


VS 325

Curve #: 11012-100701-E1

Vertical Submersible Pumps (VS)

1800 rpm



Notes:

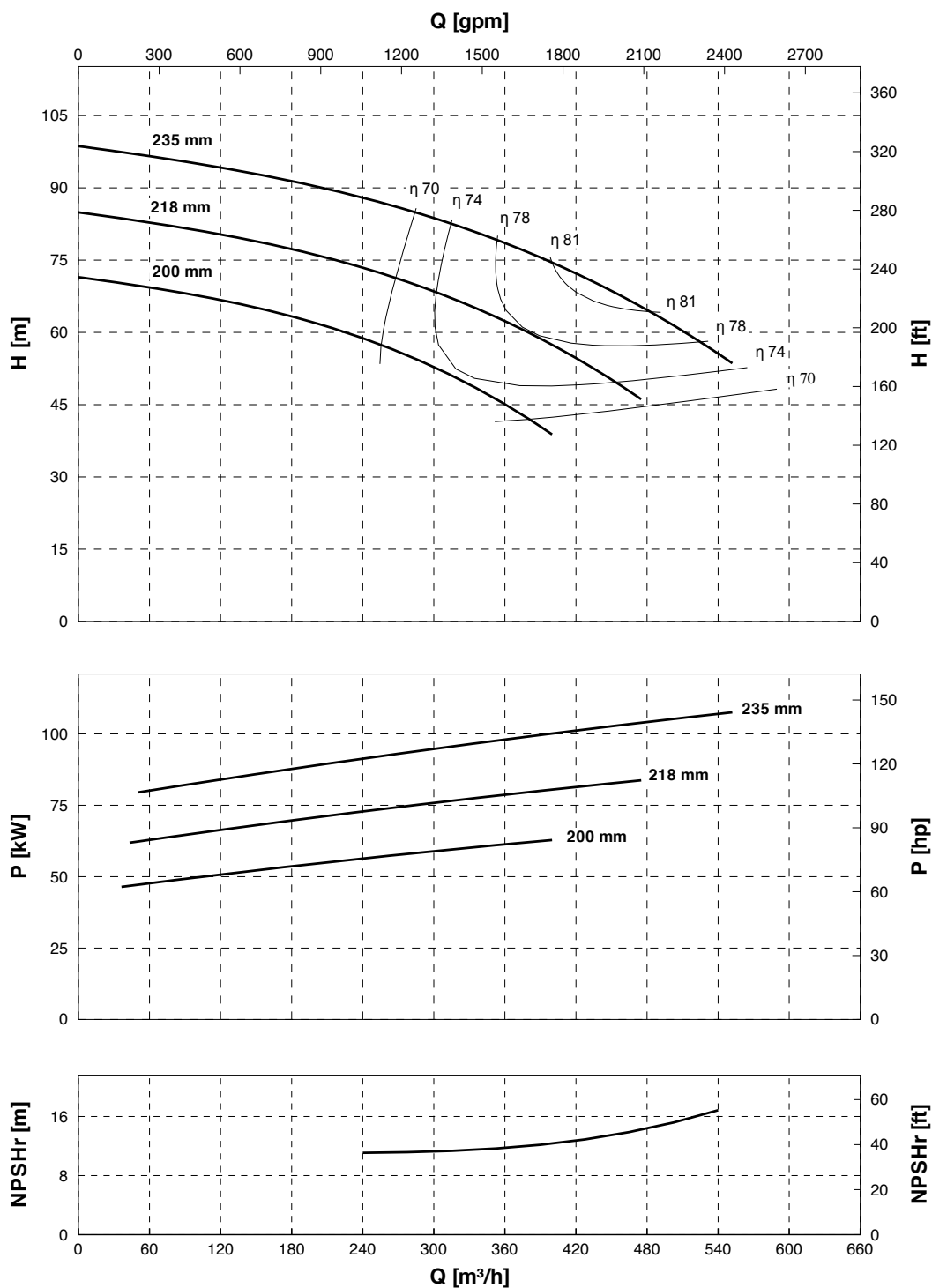
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^{\circ}=18^{\circ}C$, H_2O Density = 998 kg/m^3)
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Submersible Pumps (VS)

3600 rpm

VS 360

Curve #: 11013-080614-E1



Notes:

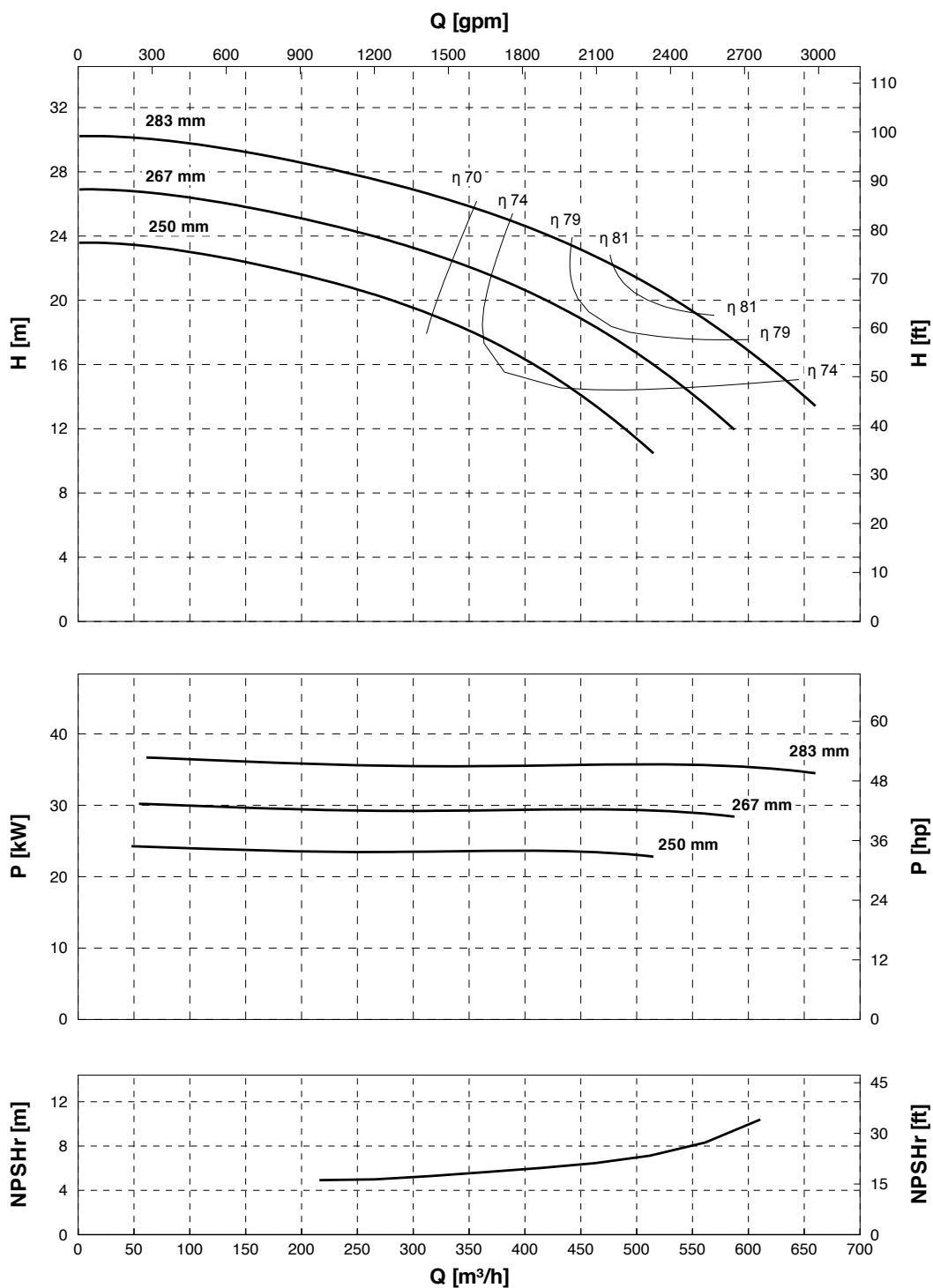
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VS 450

Curve #: 11014-081103-S1

Vertical Submersible Pumps (VS) 1800 rpm



Notes:

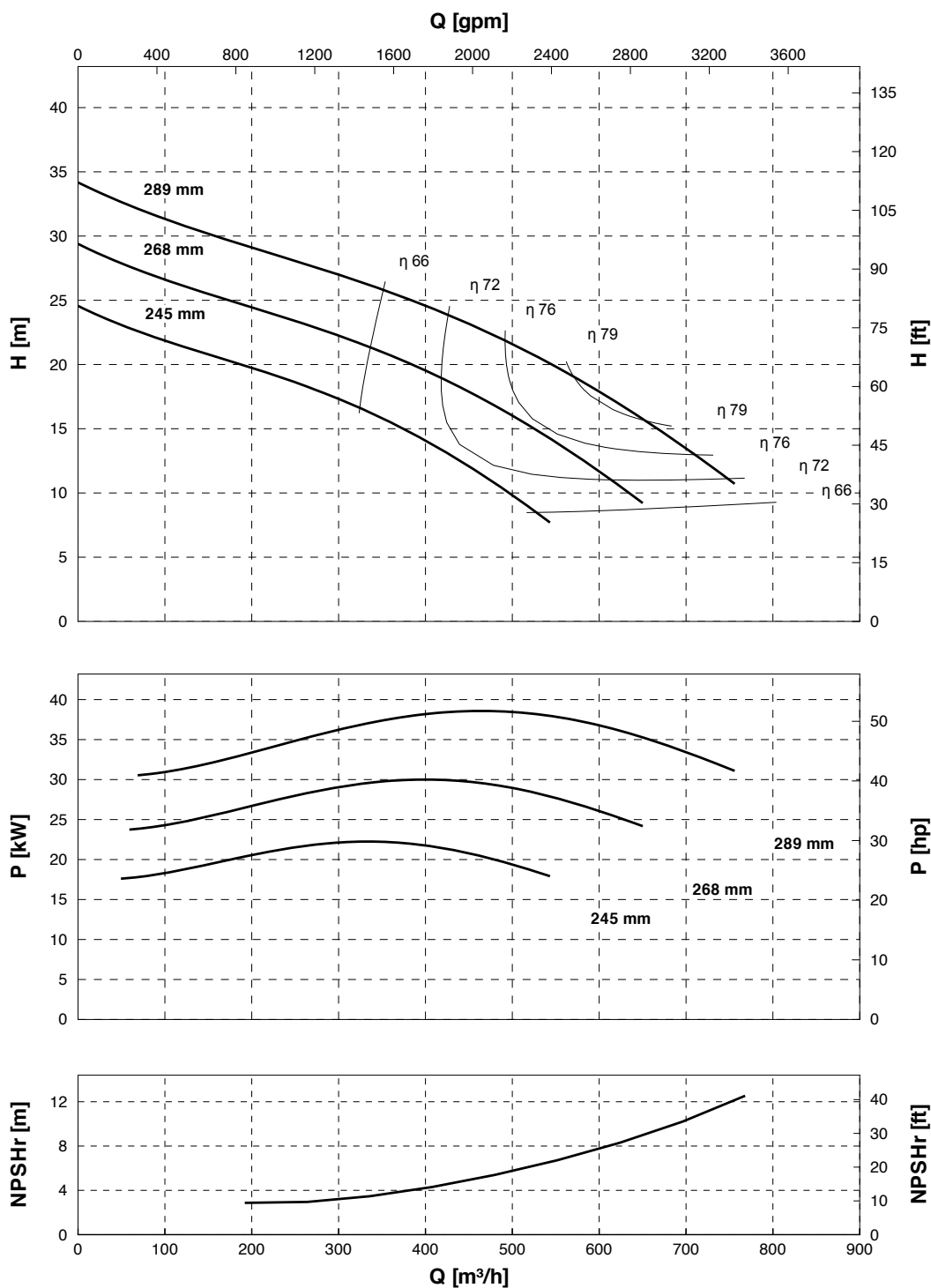
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Submersible Pumps (VS)

1800 rpm

VS 500

Curve #: 11015-080802-E2



Notes:

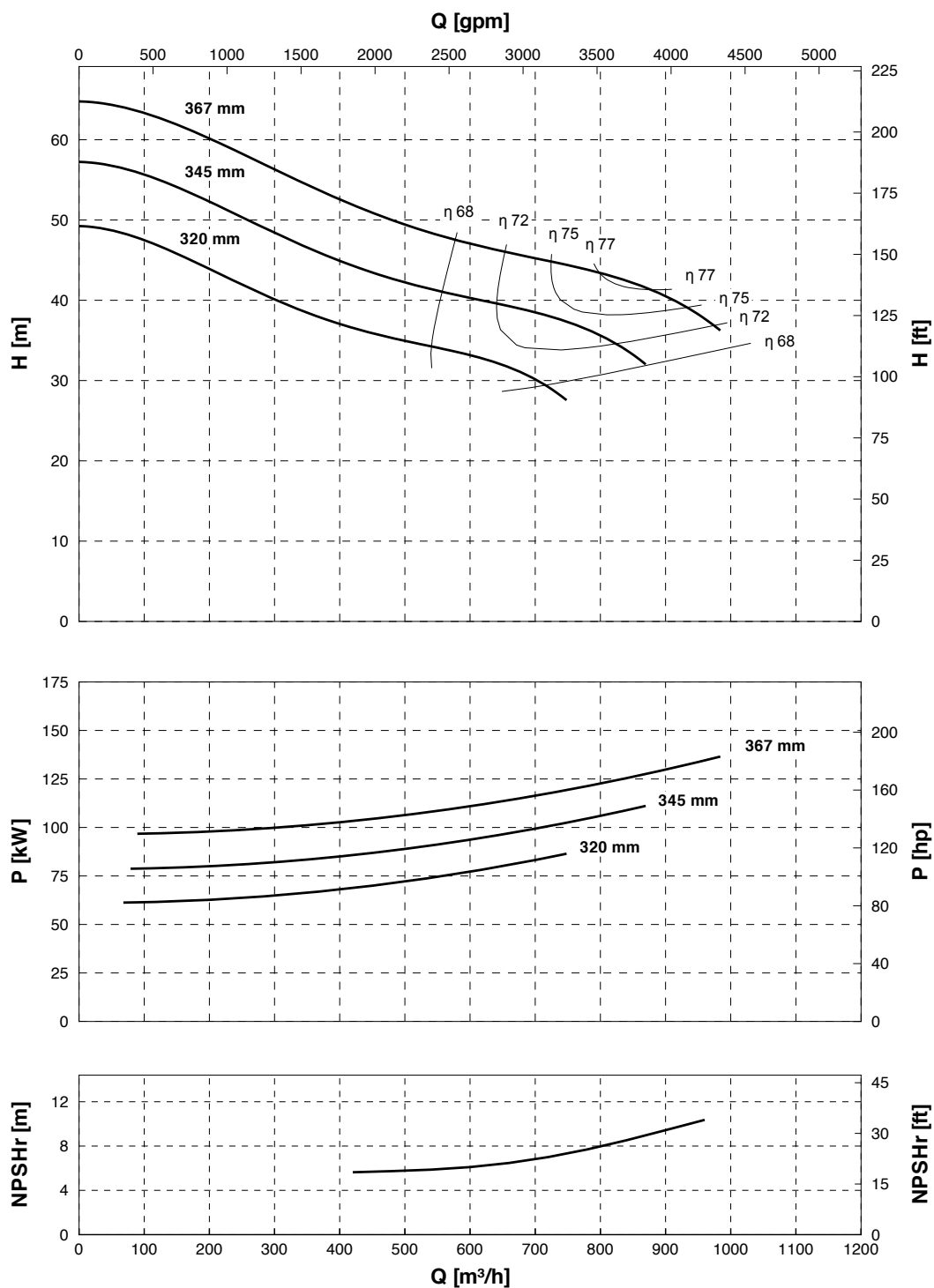
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



VS 650

Curve #: 11017-070713-E1

Vertical Submersible Pumps (VS) 1800 rpm



Notes:

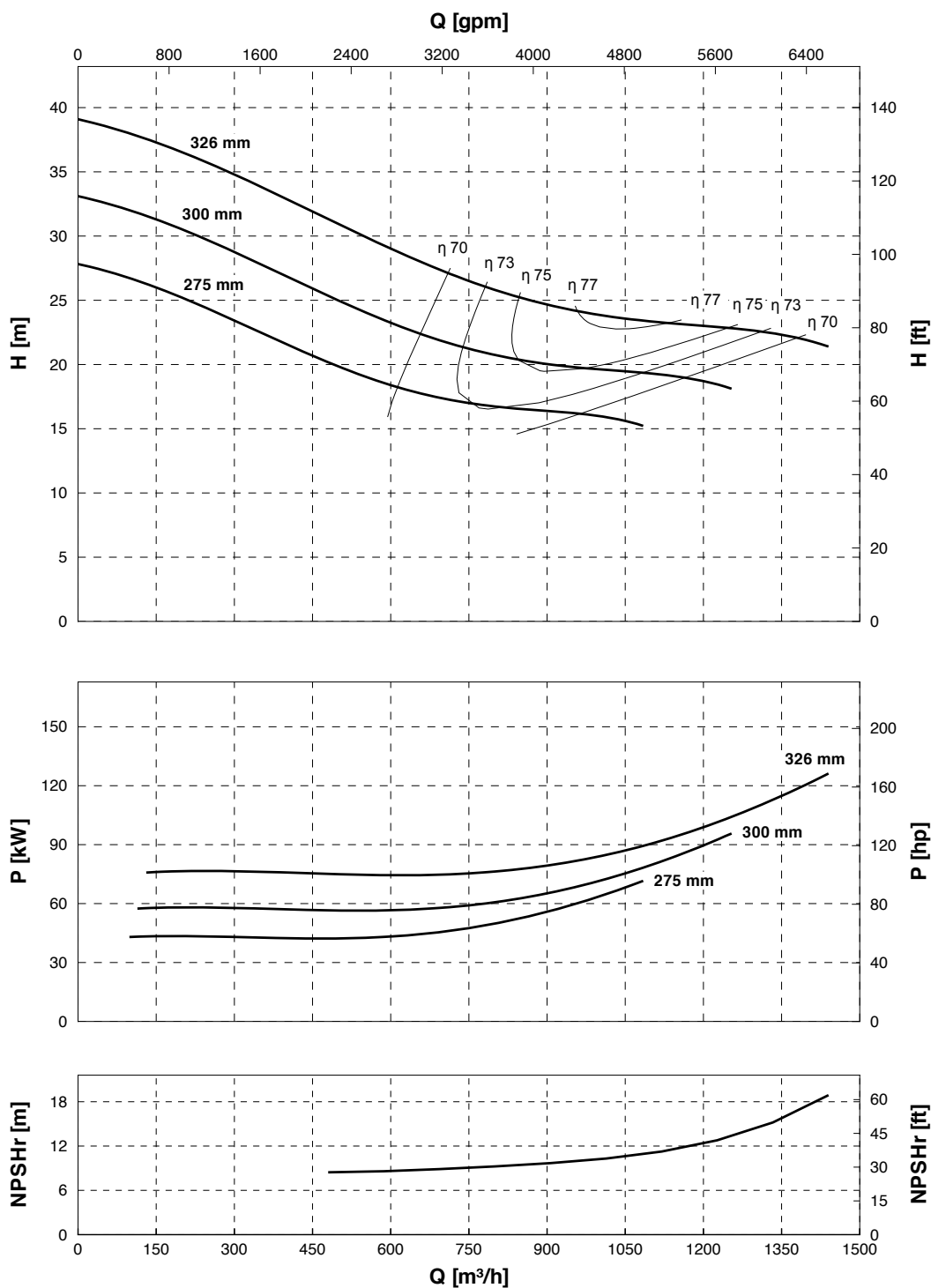
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Vertical Submersible Pumps (VS)

1800 rpm

VS 850

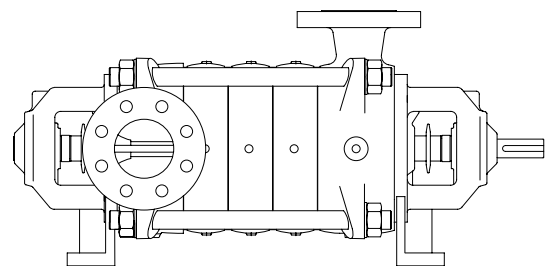
Curve #: 11021-070713-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H_2O $T=18^\circ\text{C}$), H_2O Density = 998 kg/m^3)
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.





Multistage Pumps (HR)

Multistage Pumps (HR)

Versatile modular design concept for ease in components interchangeability. Pumps are suitable for pumping clean or slightly polluted liquids. Equipment characterized by its application in operation with high flows and where high pressures and excellent air tightness are required.

OPERATING PARAMETERS

- Capacities up to 6,500 gpm (1,400 m³/h)
- Head up to 1,320 Feet (400 m)
- Power through 1000 hp (750 kW)
- Pressures up to 590 psi (4,067 kPa)
- Frequency 50/60 Hz
- Temperatures to 300 °F (150°C)
- Discharge sizes from 3" to 12"

DESIGN FEATURES

- NEPTUNO PUMPS® high-efficiency design
- High-quality investment cast impellers and stage diffusers
- Modular design concept for maximum interchangeability
- Maximum versatility and reliability
- Both ends bearings and axial thrust balancing
- Special material selection for standard or abrasive/corrosive service
- Different suction and discharge flange orientation
- Packing or mechanical seal

SERVICES

- Primary Water Supply – Fresh water or Sea water
- Mining Processes - Cooling Water, Thickener Overflow, Reclaim Water, MiSeepage, Well Pumps-Process, Water Supply, MiDe-Watering, Electrolyte, Pressure Boosting and Transfer
- Solvent Extraction/Electro-Winning (SX/EW) - Raffinate, Pregate Leach Solution (PLS), Heap Leach, Dump Leach, Acid Water Pressure Boosting and Transfer
- Tailings – Post Processed Solutions
- Oil & Gas Production – Onshore, Offshore and Pipeline
- Marine
- Pulp and Paper

Multistage Pumps (HR)

Applications

Duty	Heavy	Medium	Low
	●	●	●
Capacity	High	Medium	Low
		●	●
Head	High	Medium	Low
	●	●	
Fluid	Clean	Process	Slurry
	●	●	
Flexibility	High	Medium	Low
	●		

Multistage Pumps (HR)

Main Components & Materials

Components	Material					
	Cast Iron	Carbon Steel	Brass	Stainless Steel	Duplex	Polymer
Volute	●		●	●	●	
Impeller			●	●	●	
Wear Rings	●		●	●	●	
Shaft				●	●	
Stuffing Box / Mechanical Seal	●					

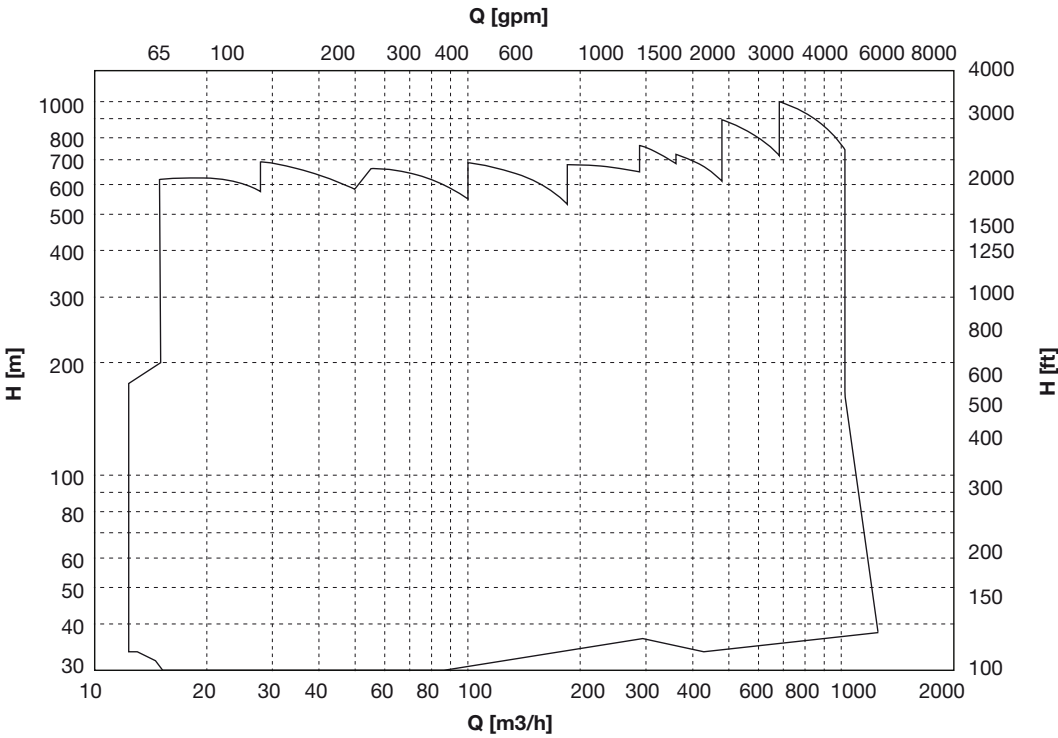
Multistage Pumps (HR)

Available Models

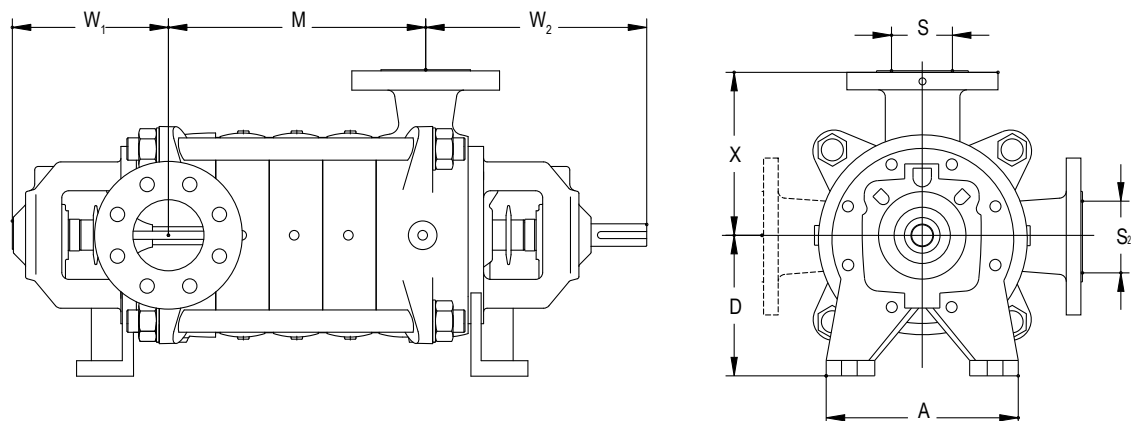
HR 32	HR 50	HR 70
HR 150	HR 360	HR 900

Multistage Pumps (HR)

Range Chart - 60 Hz - 1 Stage



Multistage Pumps (HR) Diagram



Multistage Pumps (HR) Main Dimensions

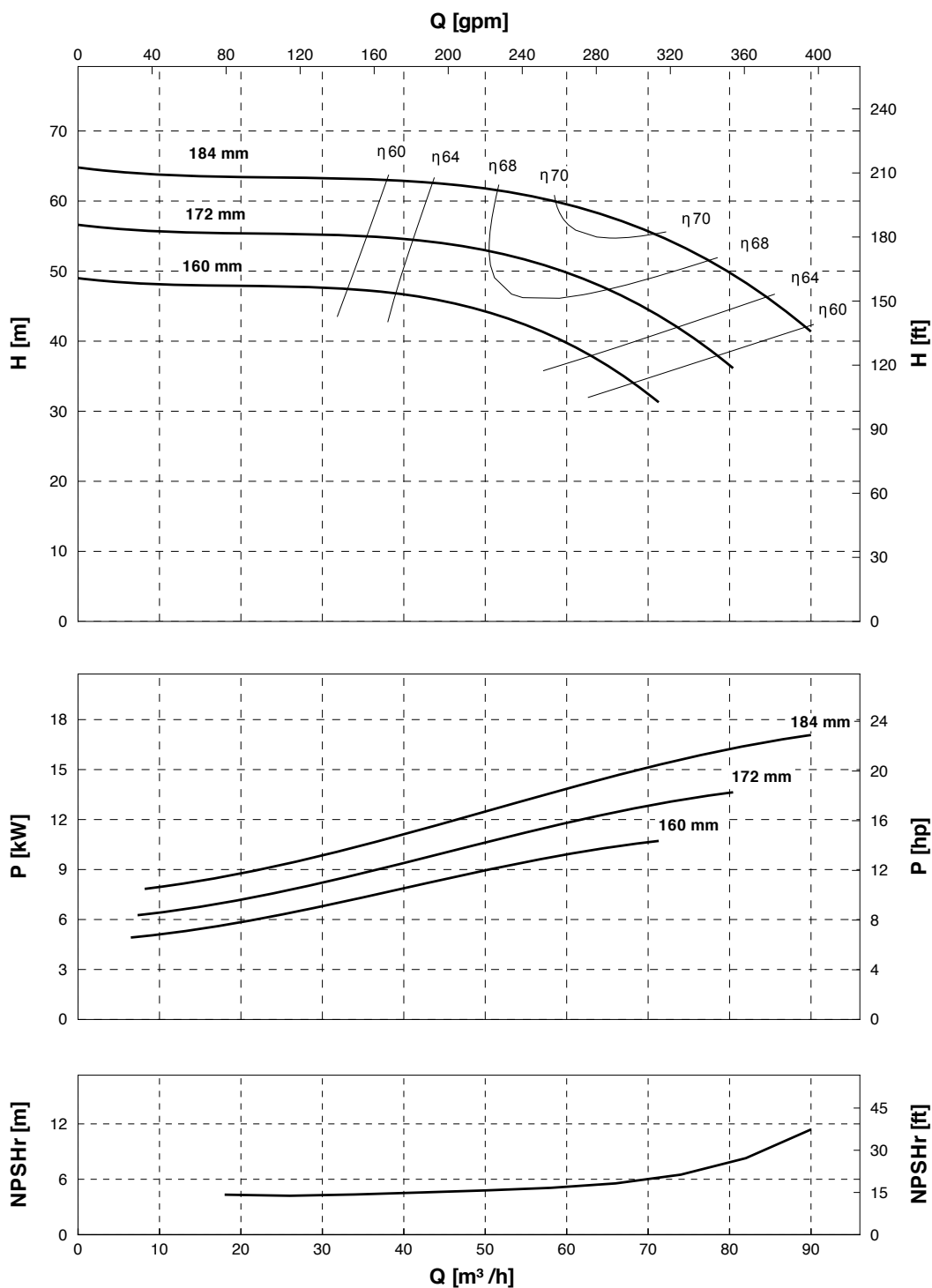
Model	Dimensions (in)								
	S_2 Radial Suction	S_1 Discharge	X	D	A	W_1	W_2	M 3-Stage	Each Add'l Stage M
HR 32	4	3	8.3	5.6	11.2	12.4	8.8	10.2	2.8
HR 50	3	2	7.9	6.3	12.0	11.7	8.9	8.9	2.6
HR 70	4	3	8.6	7.9	10.4	12.4	9.3	10.8	3.0
HR 150	4	3	11.7	12.6	21.2	21.0	18.1	14.5	7.1
HR 360	8	6	15.7	14.0	22.5	22.2	17.3	23.0	6.1
HR 900	12	10	21.7	17.7	30.8	32.3	25.7	33.5	8.5

Multistage Pumps (HR)

3600 rpm

HR 50

Curve #: 22002-080917-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

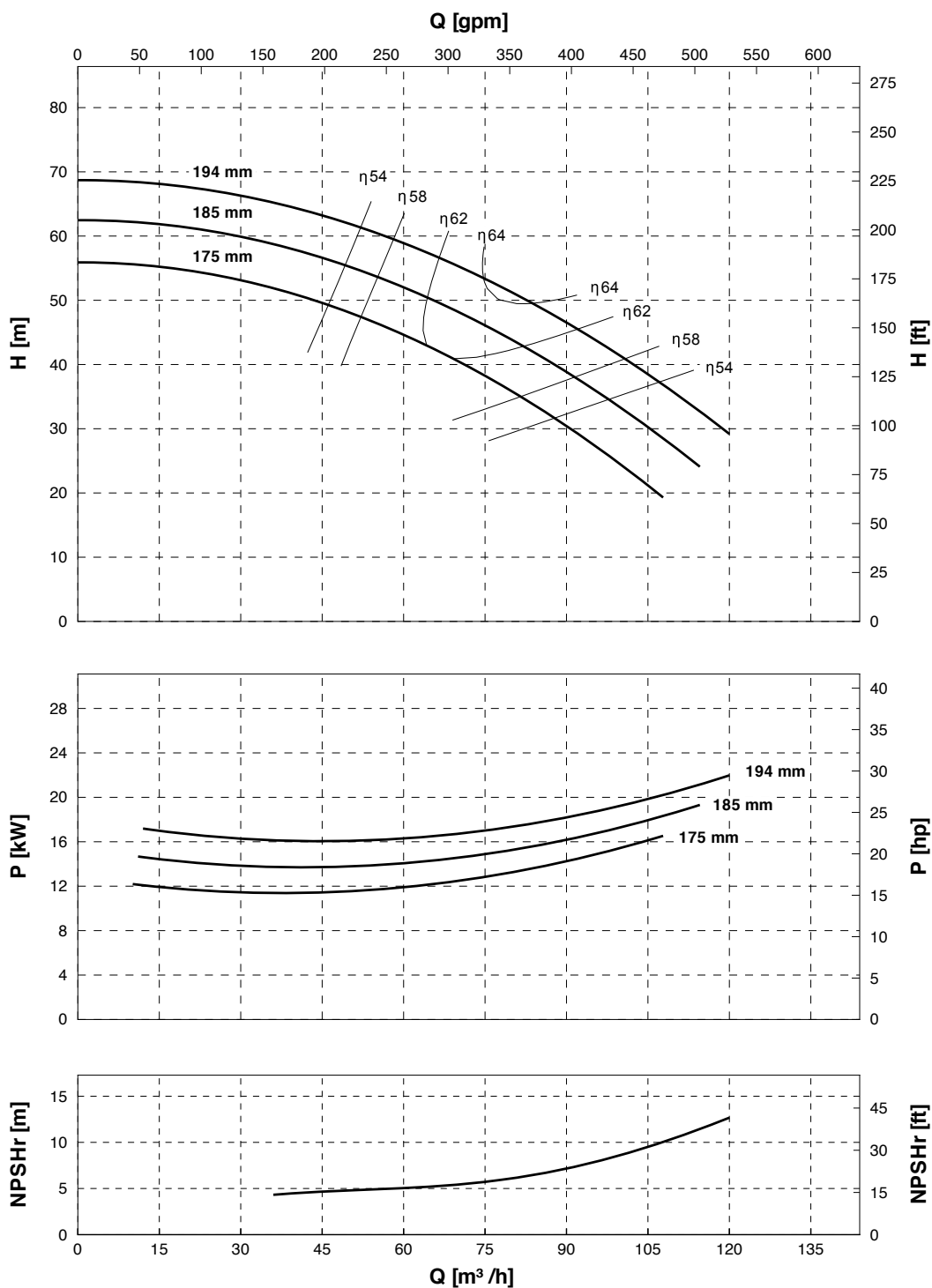


HR 70

Curve #: 22003-070619-S1

Multistage Pumps (HR)

3600 rpm



Notes:

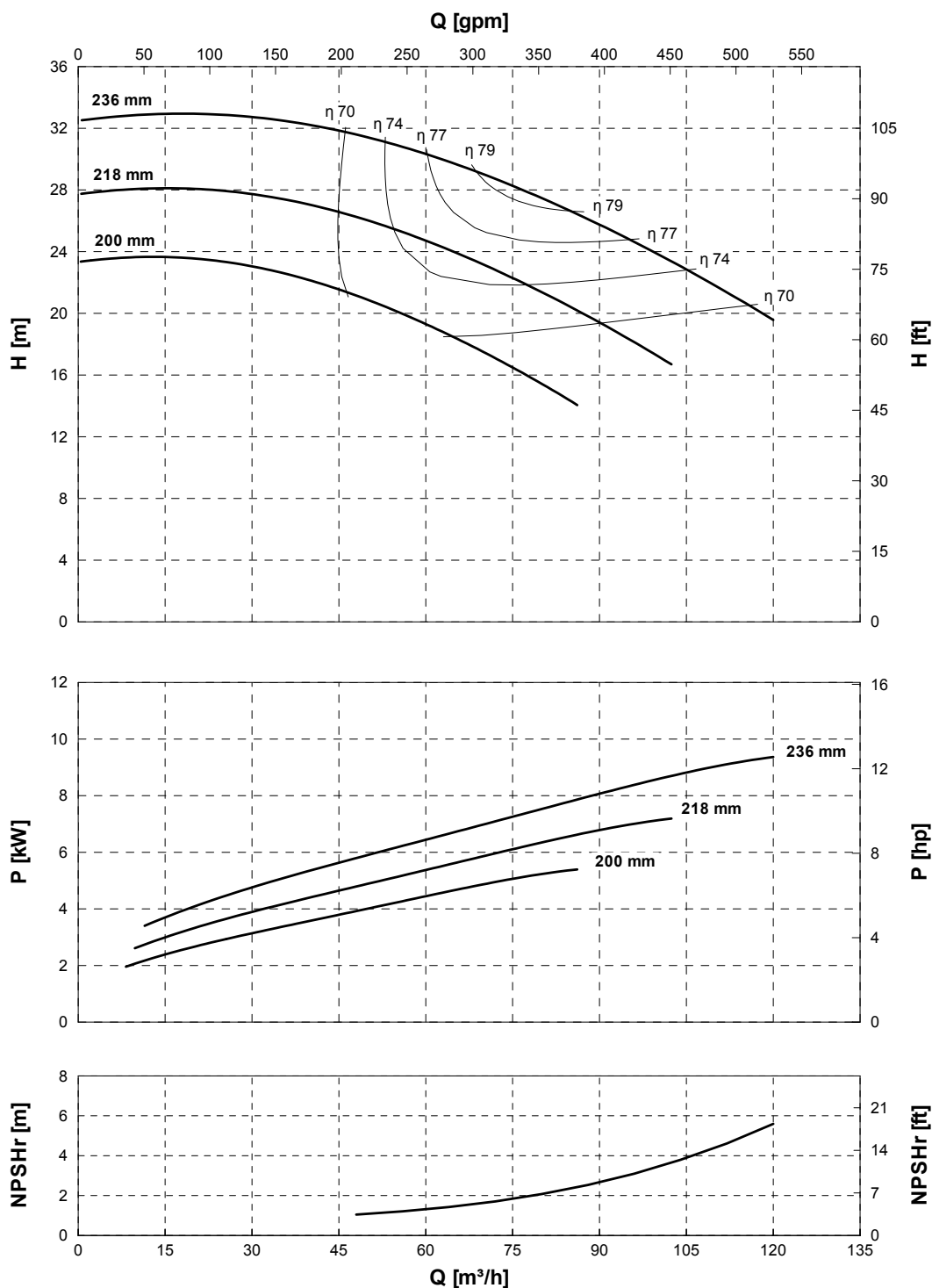
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Multistage Pumps (HR)

1800 rpm

HR 150

Curve #: 22004-100709-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

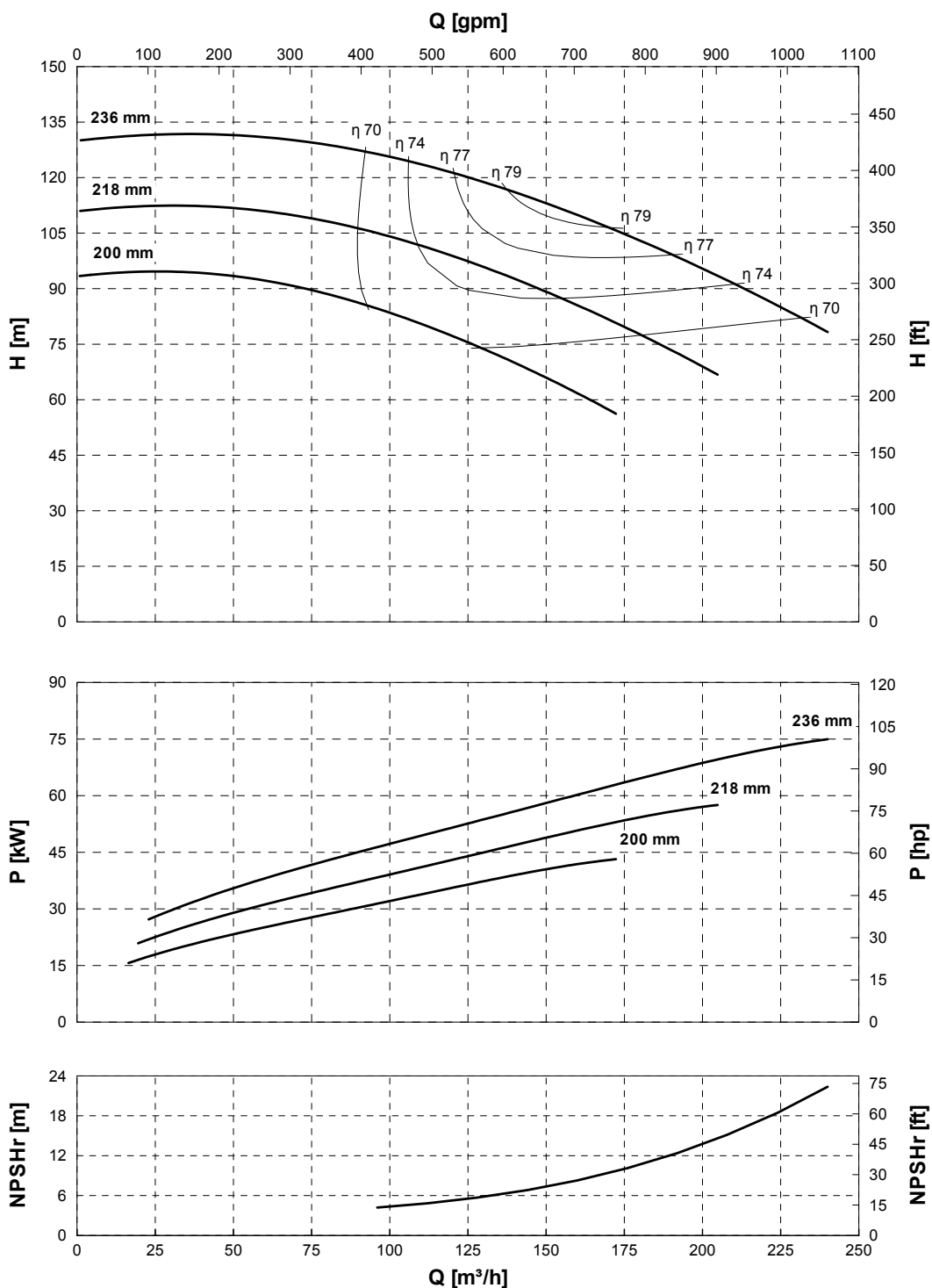


HR 150

Curve #: 22004-100709-E1

Multistage Pumps (HR)

3600 rpm



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

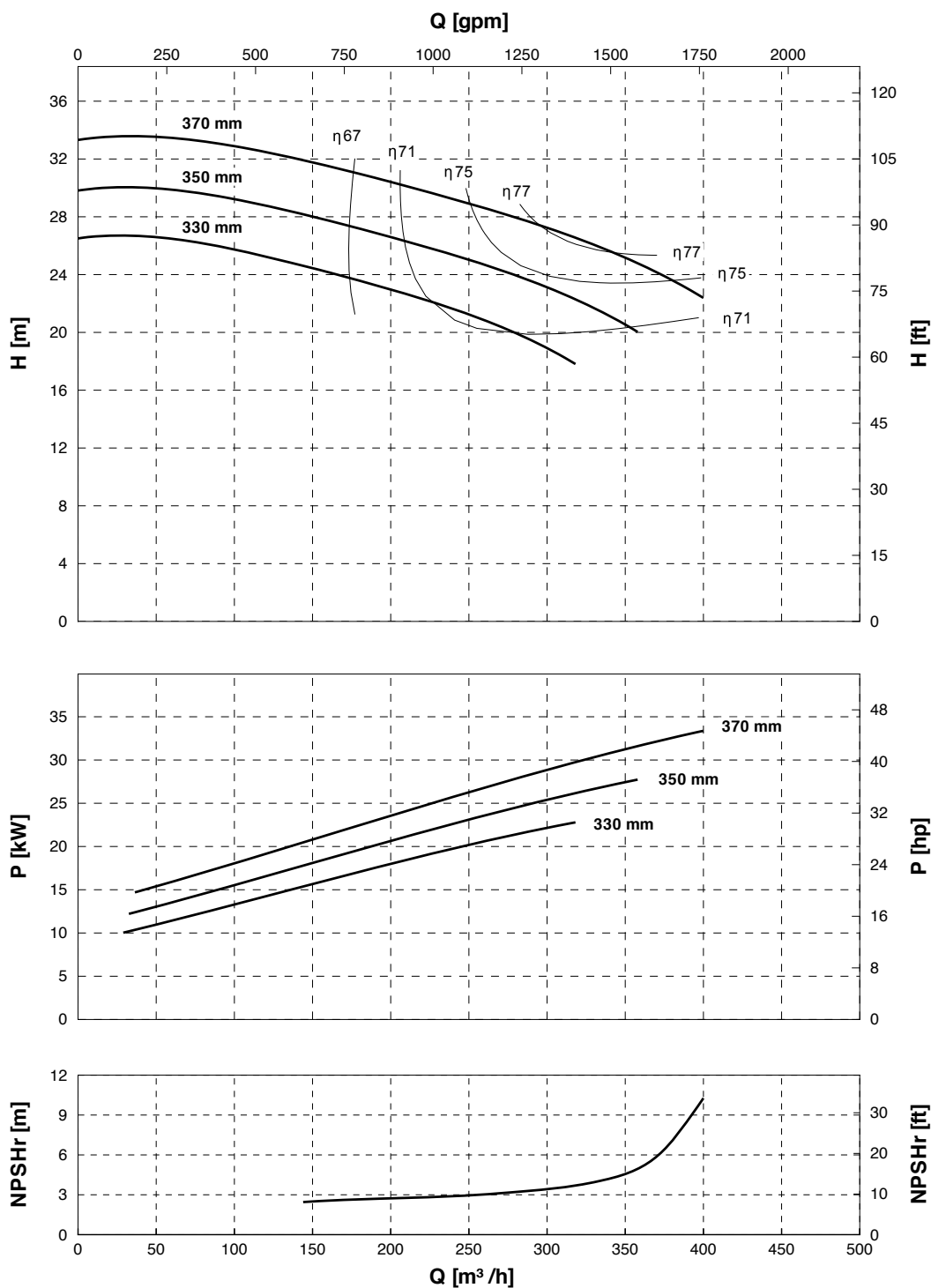


Multistage Pumps (HR)

1200 rpm

HR 360

Curve #: 22005-080614-E1



Notes:

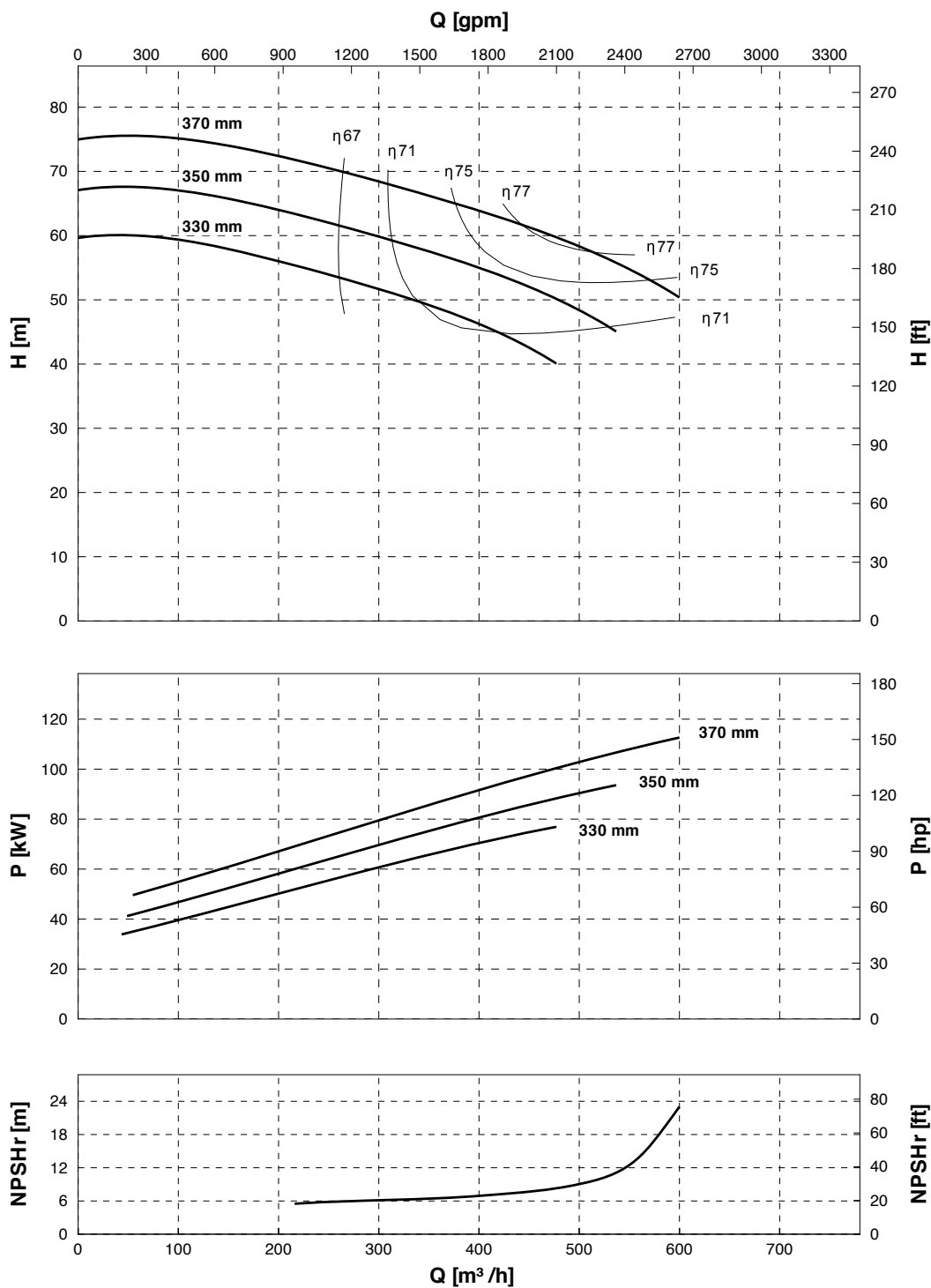
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



HR 360

Curve #: 22005-080614-E1

Multistage Pumps (HR)
1800 rpm



Notes:

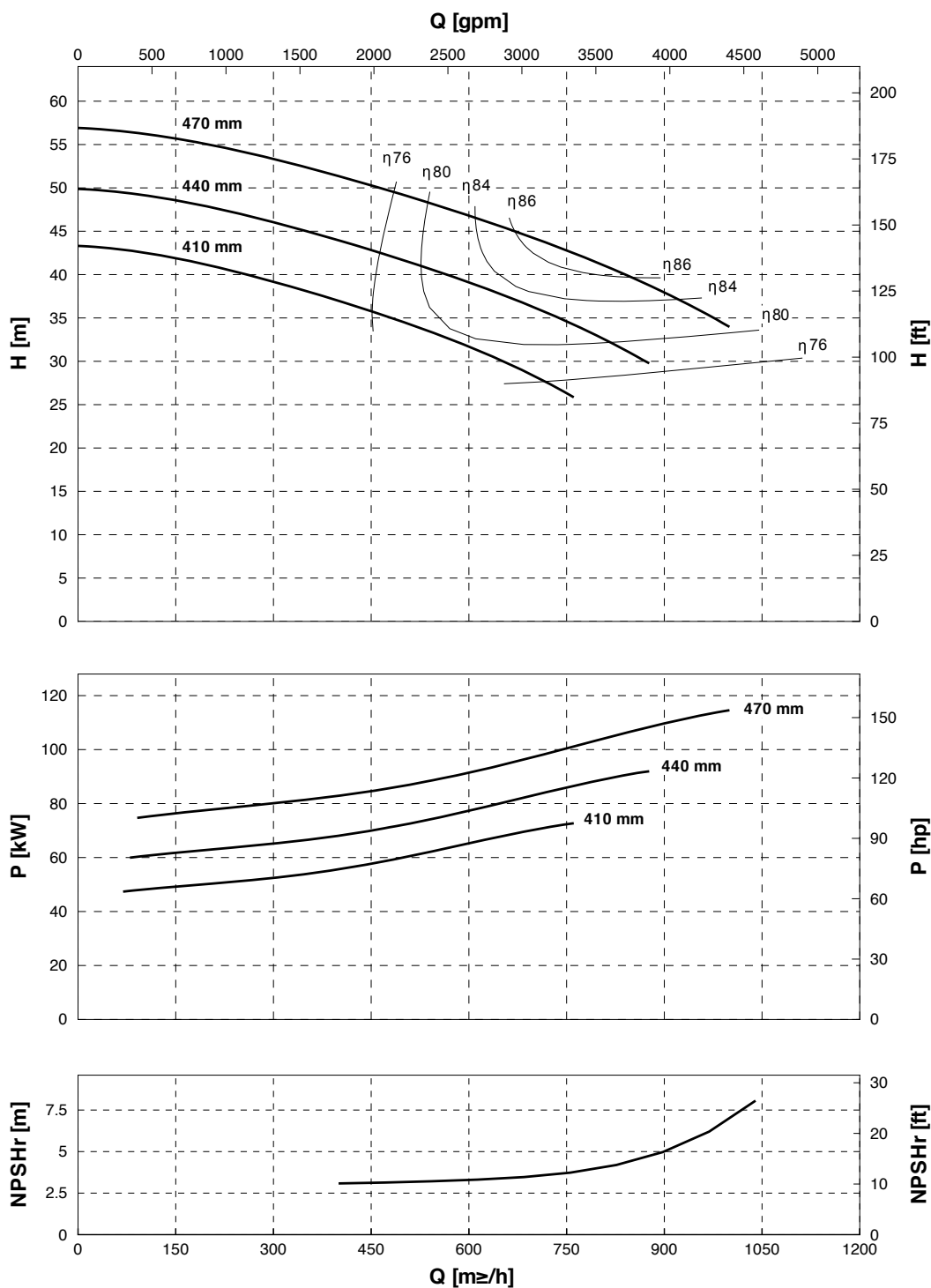
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Multistage Pumps (HR)

1200 rpm

HR 900

Curve #: 22006-120214-S2



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

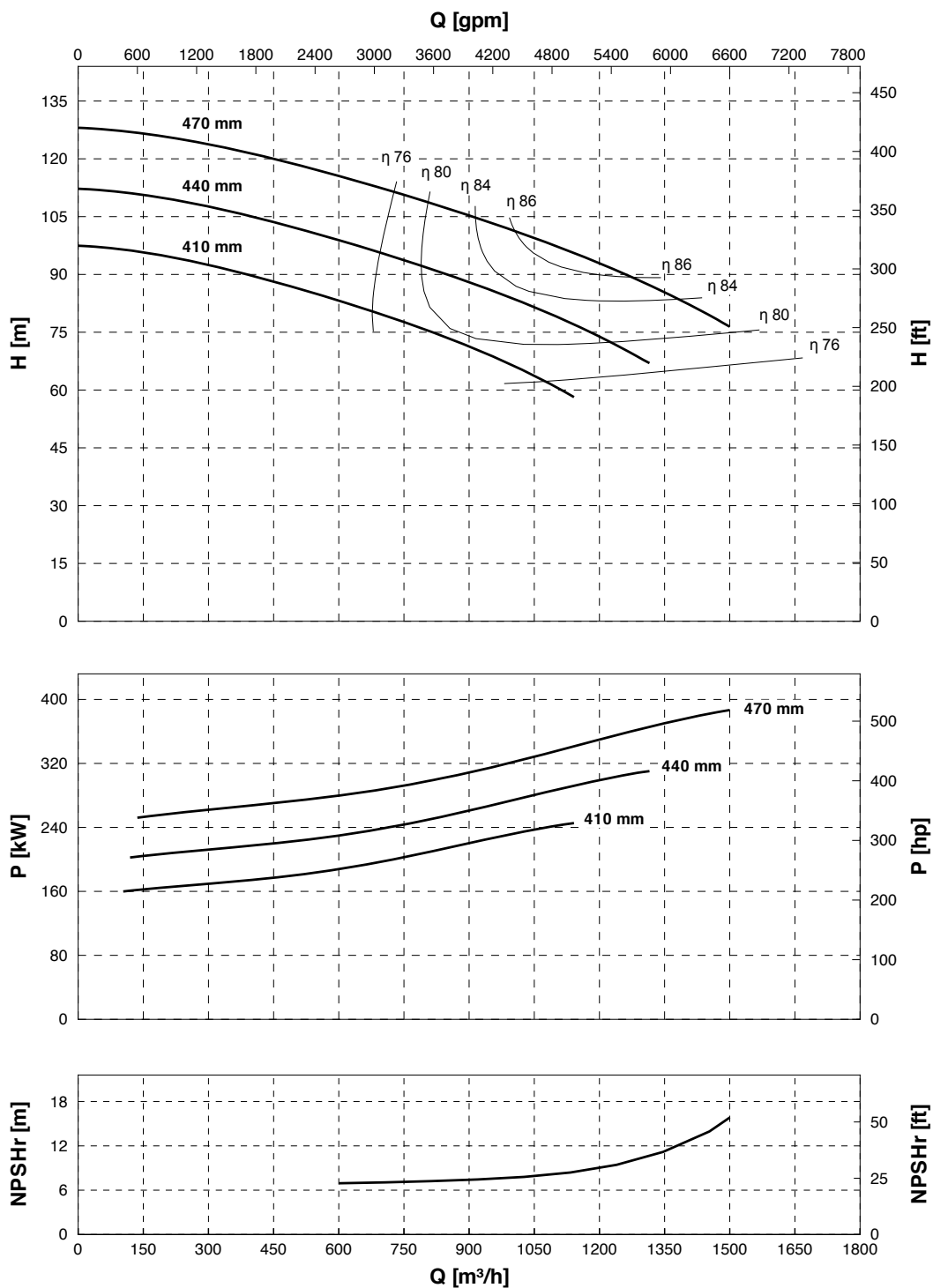


HR 900

Curve #: 22006-120214-S2

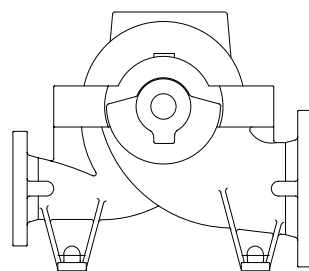
Multistage Pumps (HR)

1800 rpm



Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.



Axial Split Case Pumps (HA)

Axial Split Case Pumps (HA)

The range axial split pump available pumps include both single double-suction and multi-stage designs. Our pumps are designed for high volume, high pressure heavy-duty liquid transport applications.

OPERATING PARAMETERS

- Capacities up to 17,000 gpm (3,200 m³/h)
- Head up to 2,700 Feet (800 m)
- Power through 1000 hp (750 kW)
- Pressures up to 1,180 psi (8,148 kPa)
- Frequency 50/60 Hz
- Temperatures to 300 °F (150°C)
- Discharge sizes from 3" to 14"

DESIGN FEATURES

- NEPTUNO PUMPS® high-efficiency design
- High-quality investment cast impellers and stage diffusers
- Axially split casing for ease of maintenance
- Heavy duty single row bolting
- Opposed impeller arrangement for thrust balancing
- Special material selection for standard or abrasive/corrosive service
- Different suction and discharge flange orientation
- Mechanical sealing

SERVICES

- Primary Water Supply – Fresh water or Sea water
- Mining Processes - Cooling Water, Thickener Overflow, Reclaim Water, MiSeepage, Well Pumps-Process, Water Supply, MiDe-Watering, Electrolyte, Pressure Boosting and Transfer
- Solvent Extraction/Electro-Winning (SX/EW): Raffinate, Pregenate Leach Solution (PLS), Heap Leach, Dump Leach, Acid Water Pressure Boosting and Transfer
- Tailings – Post Processed Solutions
- Oil & Gas Production – Onshore, Offshore and Pipeline
- Marine
- Pulp and Paper

Axial Split Case (HA) Applications

Duty	Heavy	Medium	Low
	●	●	●
Capacity	High	Medium	Low
		●	●
Head	High	Medium	Low
	●	●	
Fluid	Clean	Process	Slurry
	●	●	
Flexibility	High	Medium	Low
	●		

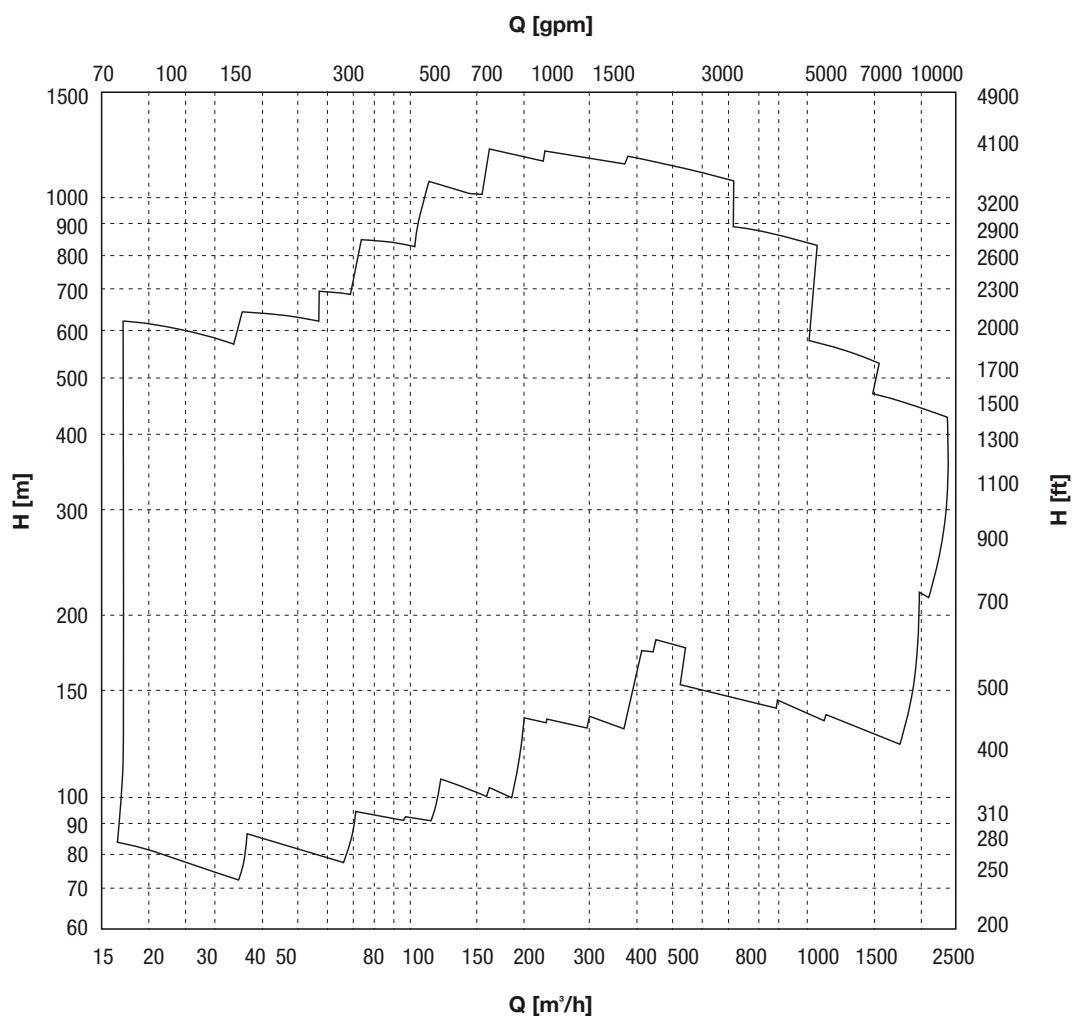
Axial Split Case (HA) Main Components & Materials

	Material					
Components	Cast Iron	Carbon Steel	Brass	Stainless Steel	Duplex	Polymer
Volute	●		●	●	●	
Impeller	●		●	●	●	
Wear Rings	●		●	●	●	
Shaft				●	●	

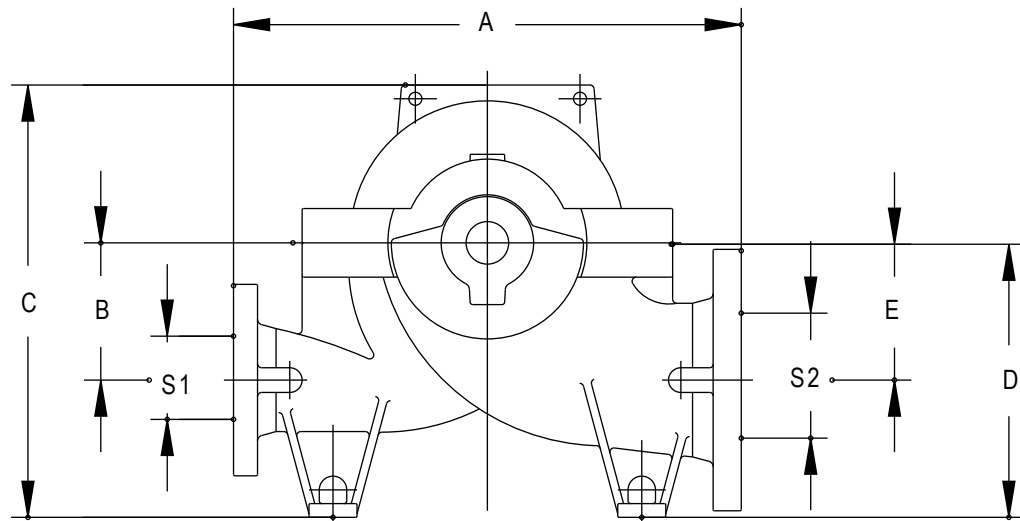
Axial Split Case (HA) Available Models

HA 90	HA 140	HA 200
HA 250	HA 290	HA 475
HA 700	HA 2400	

Axial Split Case (HA) Range Chart - 60Hz



Axial Split Case (HA) Diagram



Axial Split Case (HA) Main Dimensions

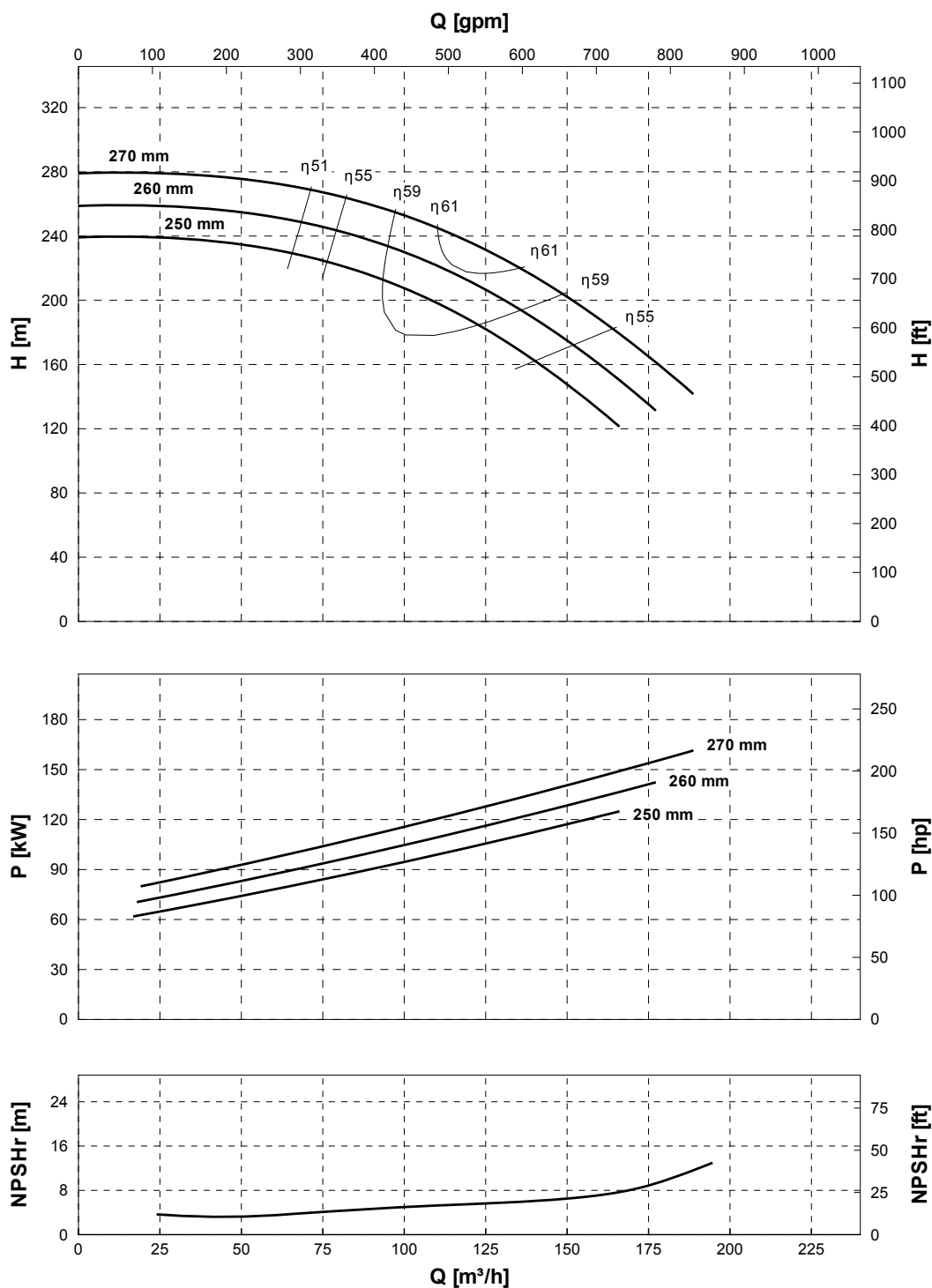
Dimensions (in)								
Model	S ₂ Suction	S ₁ Discharge	A	B	C	D	E	Stages
HA 90	5.0	3.0	20.0	5.5	21.7	11.0	6.4	2
HA 140	5.0	3.0	23.6	5.5	19.0	12.4	5.5	1
HA 200	6.0	4.0	26.0	6.7	21.7	14.0	6.7	1
HA 250	6.0	4.0	26.0	6.7	21.7	14.0	6.7	1
HA 290	6.0	4.0	26.0	6.7	21.7	14.0	6.7	1
HA 475	11.0	6.0	41.9	9.6	39.1	19.7	9.6	5
HA 700	8.0	8.0	40.6	11.1	35.4	18.6	8.3	3
HA 2400	20.0	14.0	45.7	18.3	51.8	32.1	18.3	1

Axial Split Case (HA)

3600 rpm

HA 90

Curve #: 31001-070619-F1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Specifications are subject to change without previous notice.

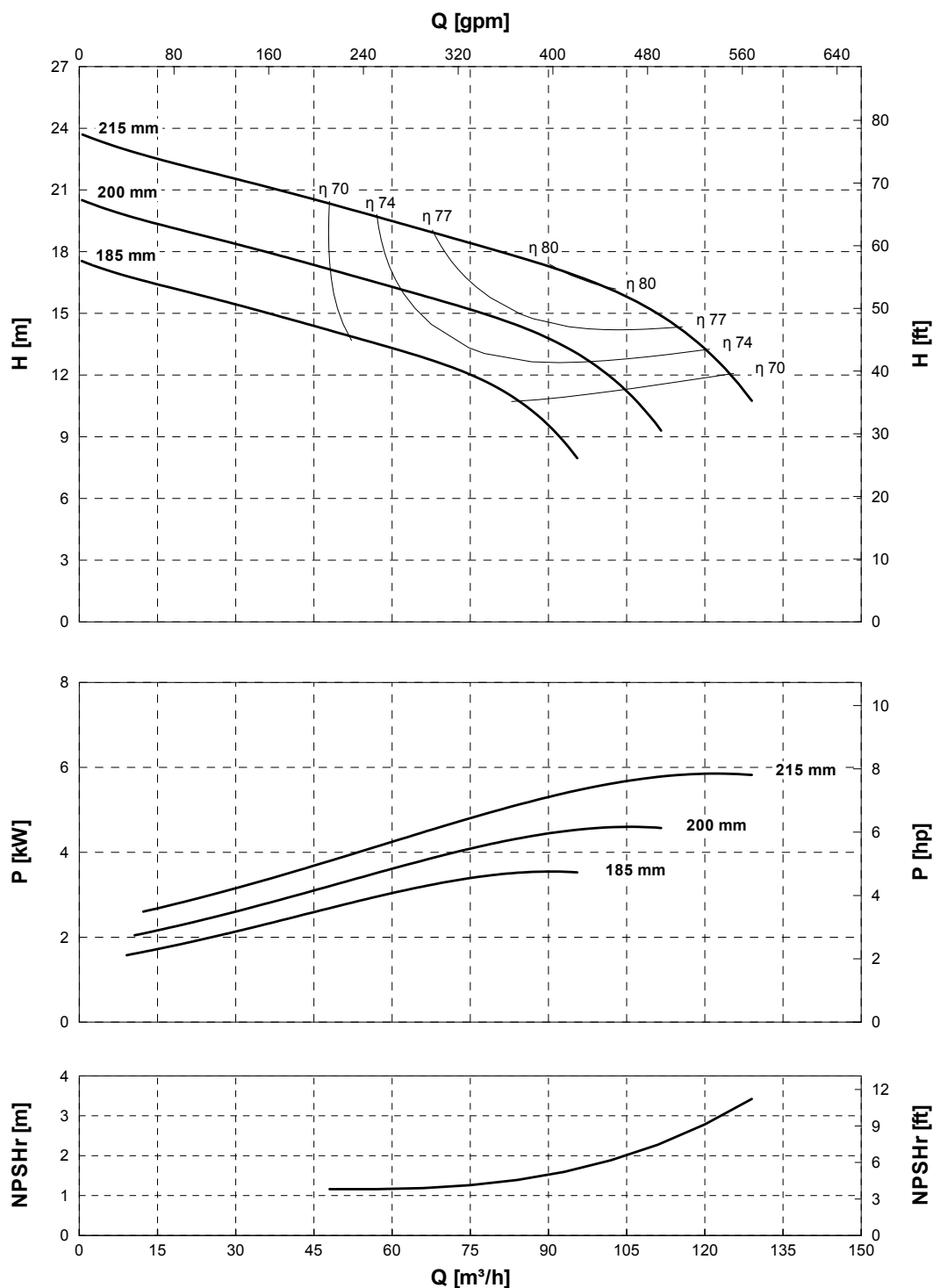


HA 140

Curve #: 31002-090923-S1

Axial Split Case (HA)

1800 rpm



Notes:

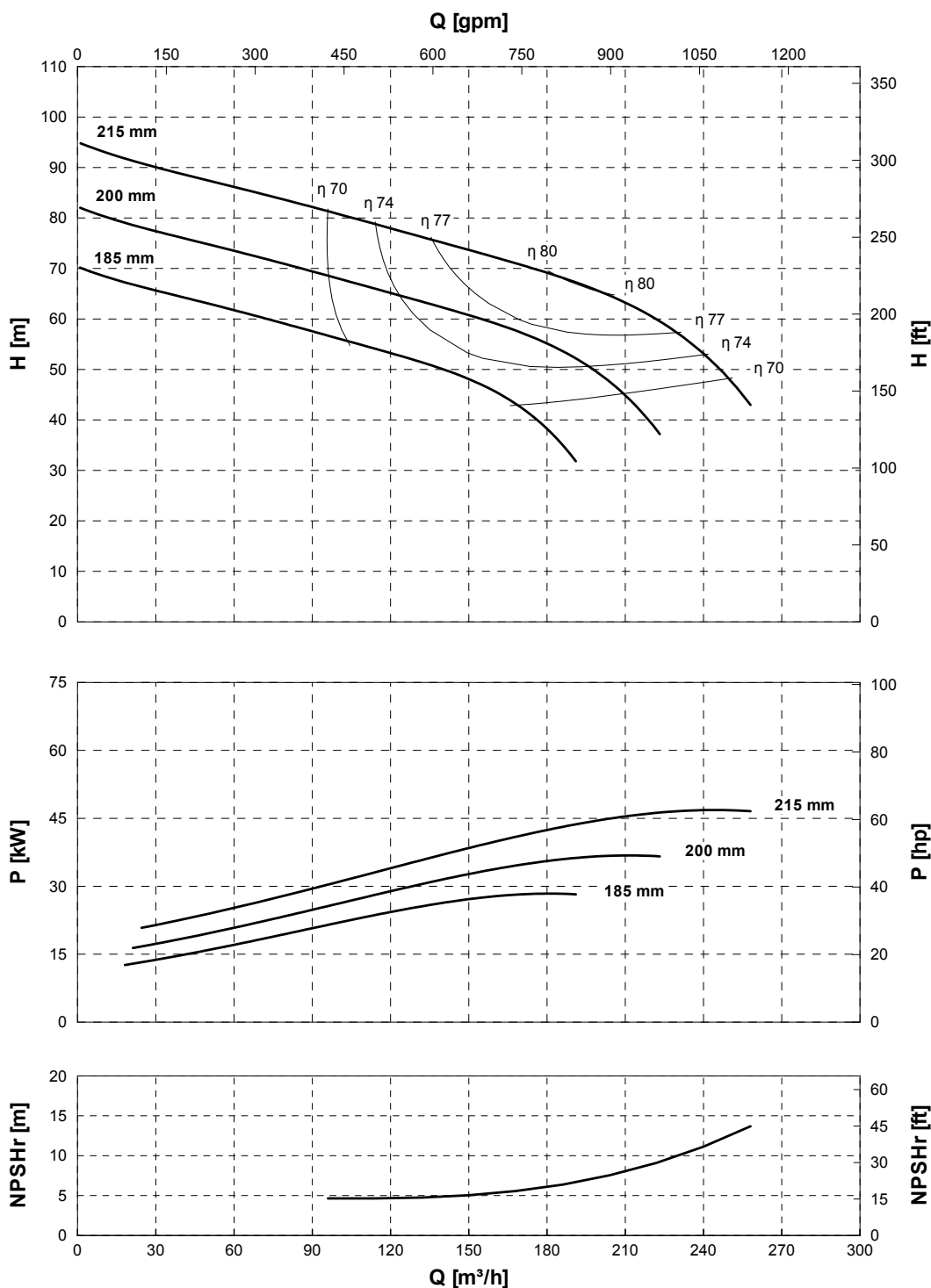
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^{\circ}=18^{\circ}C$, H_2O Density = 998 kg/m^3)
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Specifications are subject to change without previous notice.

Axial Split Case (HA)

3600 rpm

HA 140

Curve #: 31002-090923-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Specifications are subject to change without previous notice.

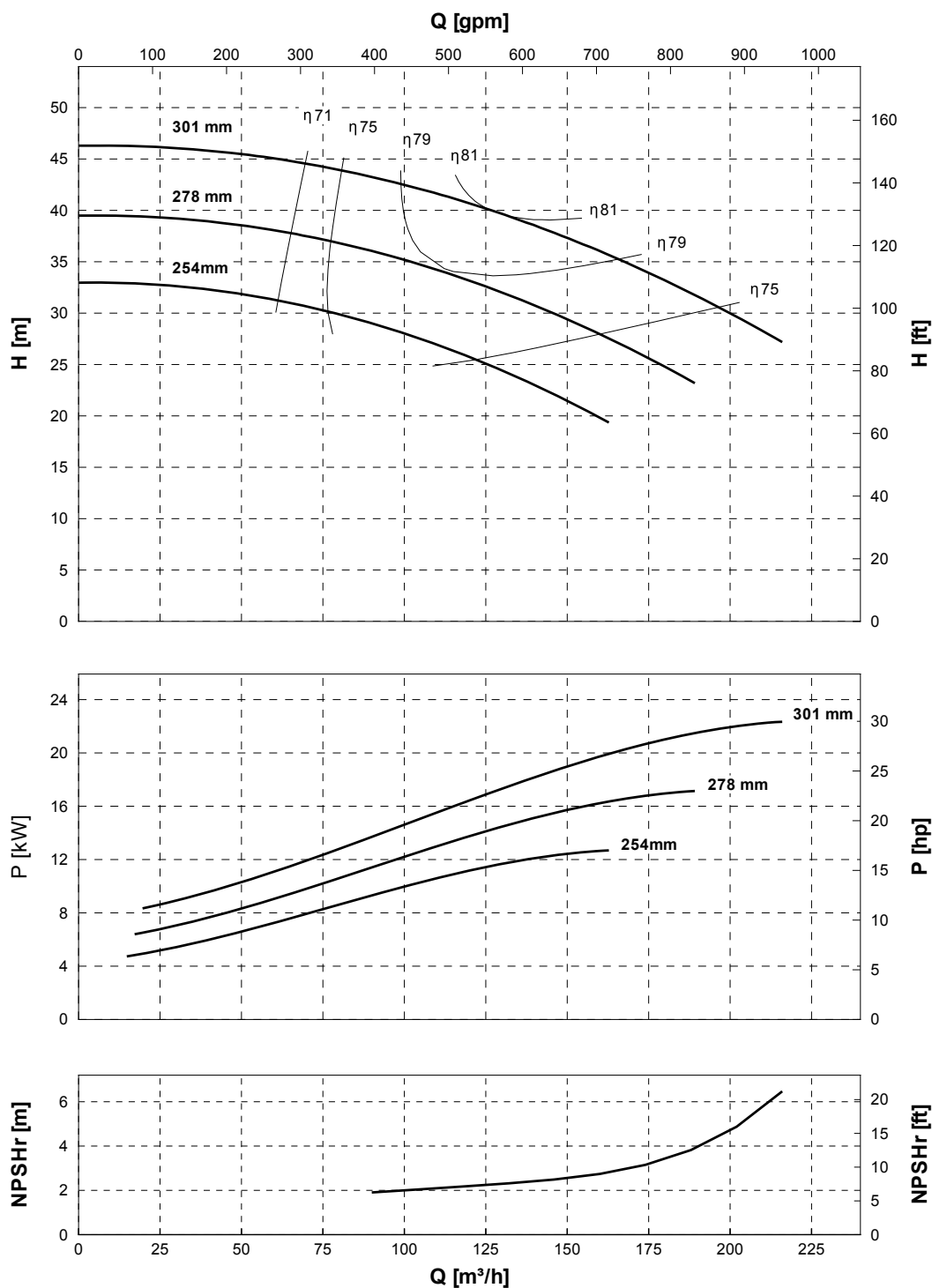


HA 200

Curve #: 31003-080724-E1

Axial Split Case (HA)

1800 rpm



Notes:

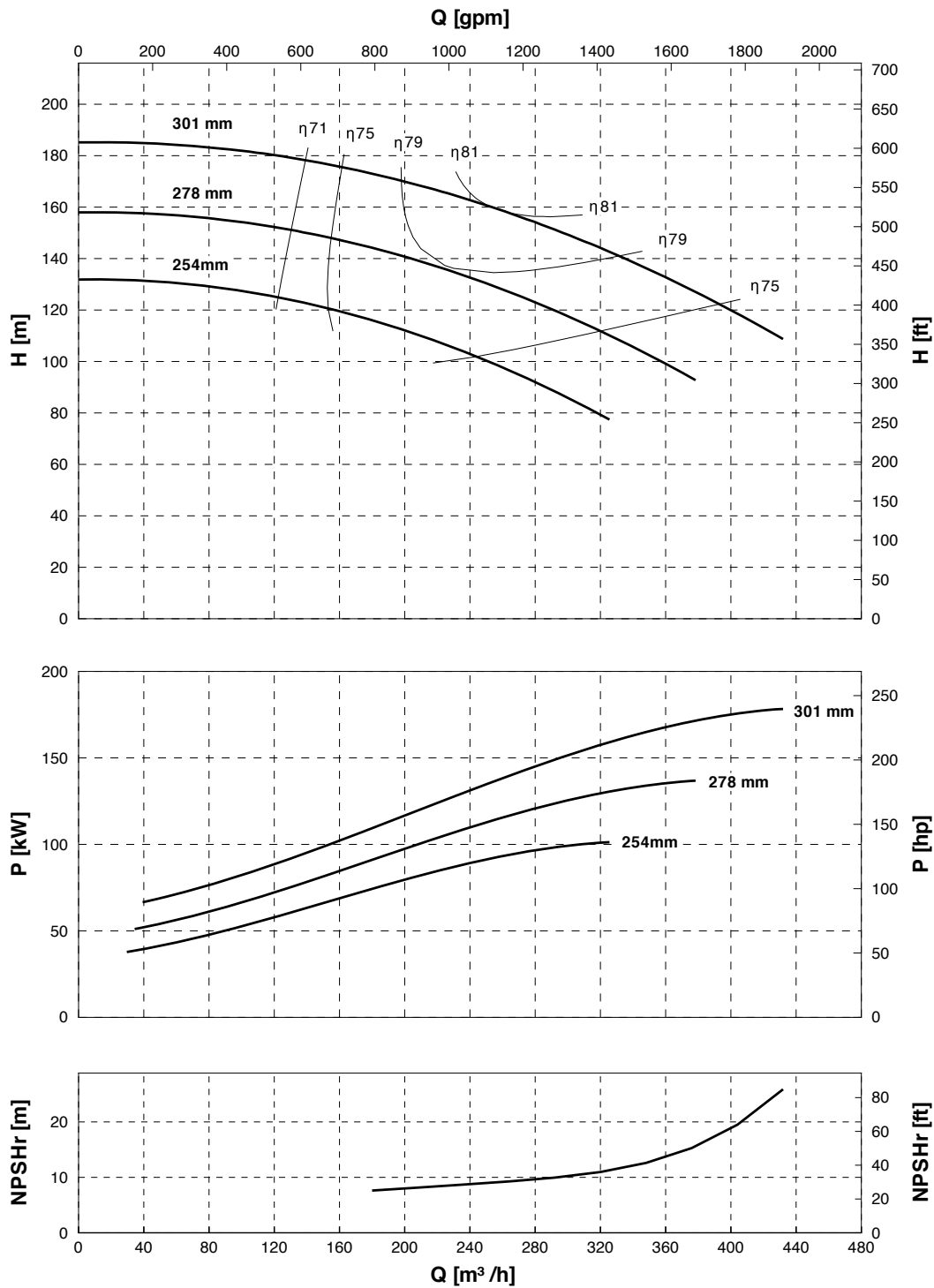
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Specifications are subject to change without previous notice.

Axial Split Case (HA)

3600 rpm

HA 200

Curve #: 31003-080724-E1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H_2O $T=18$ [°C], H_2O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
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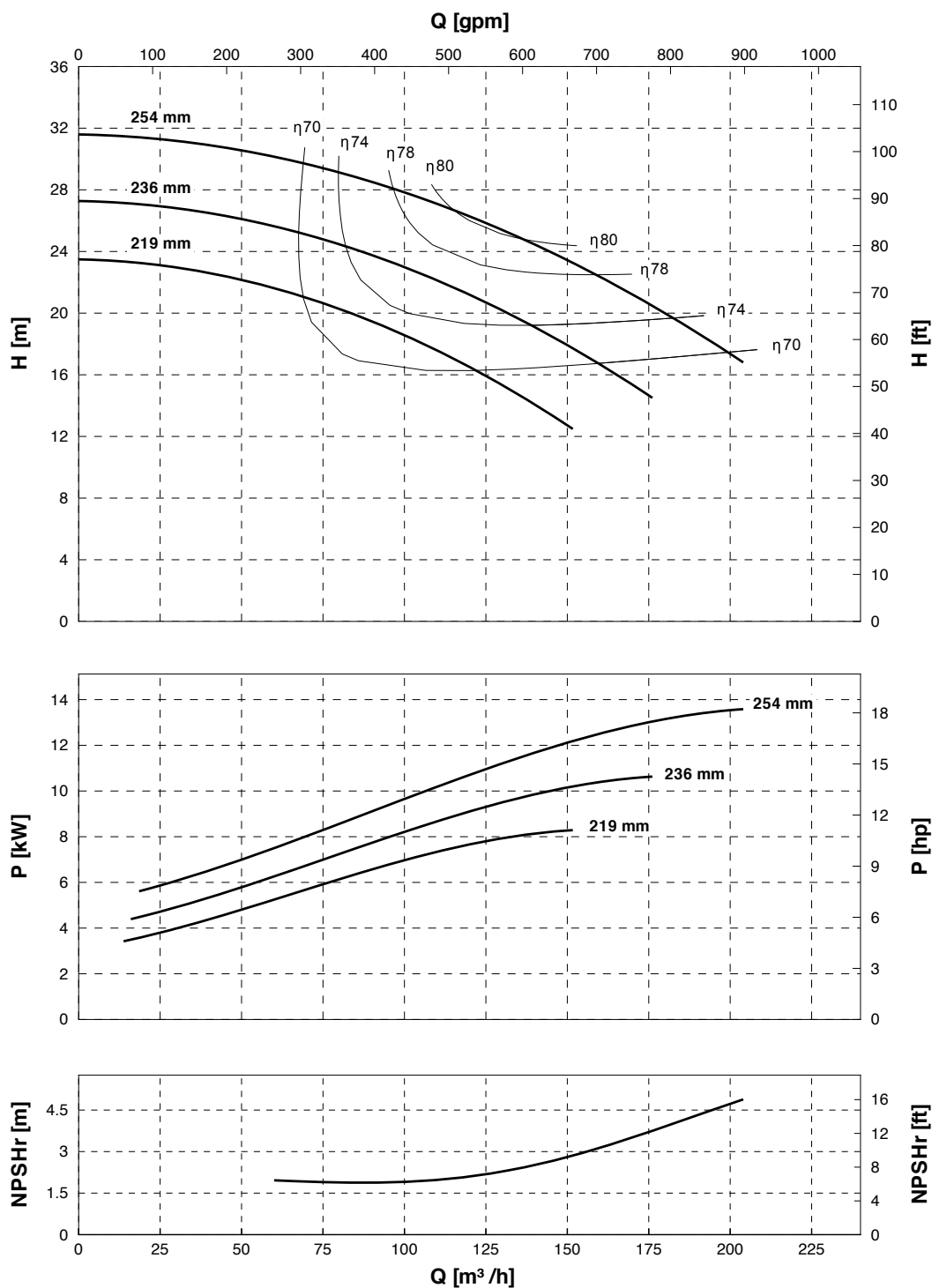


HA 250

Curve #: 31004-080704-F1

Axial Split Case (HA)

1800 rpm



Notes:

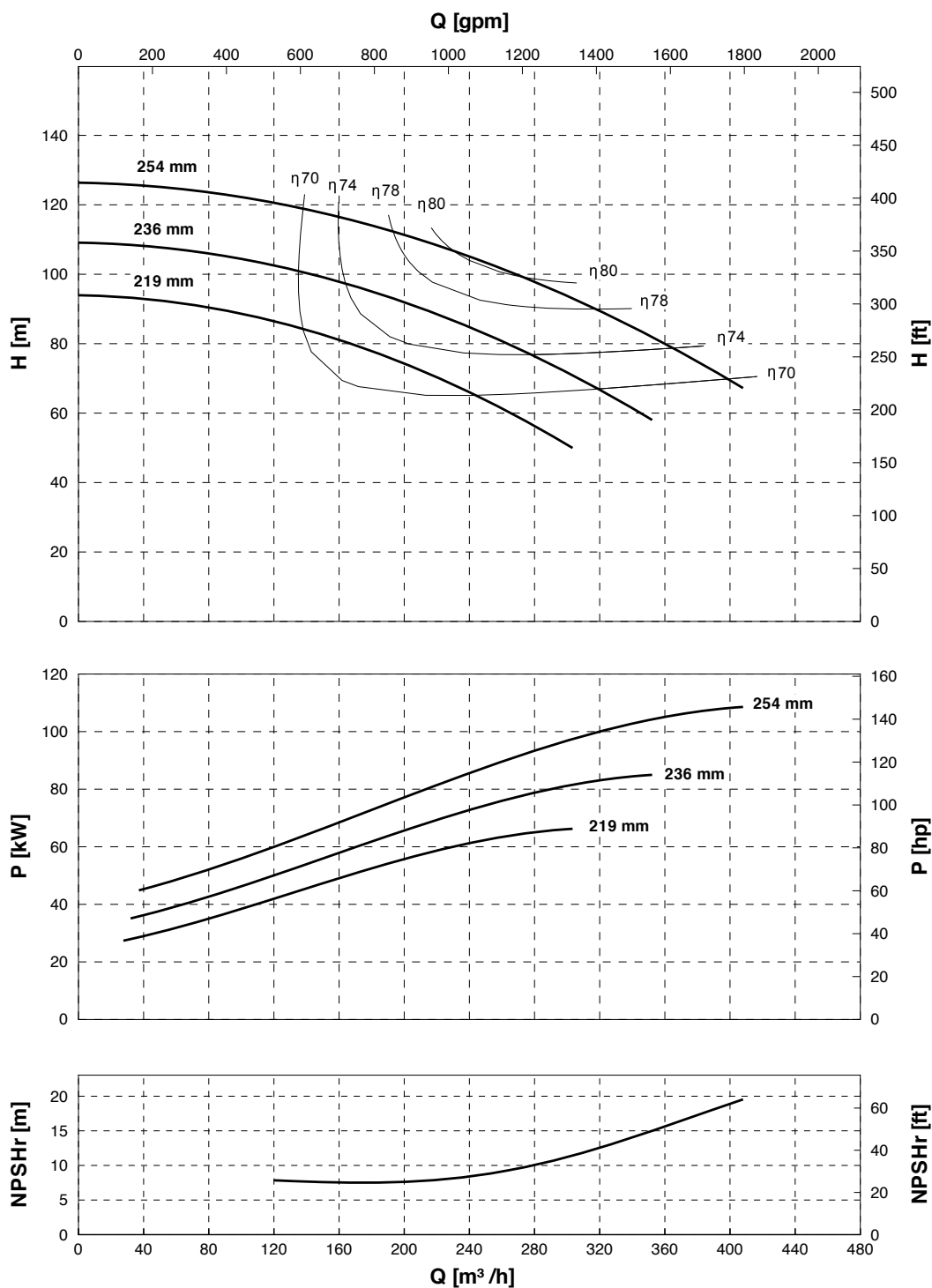
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Specifications are subject to change without previous notice.

Axial Split Case (HA)

3600 rpm

HA 250

Curve #: 31004-080704-F1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Specifications are subject to change without previous notice.

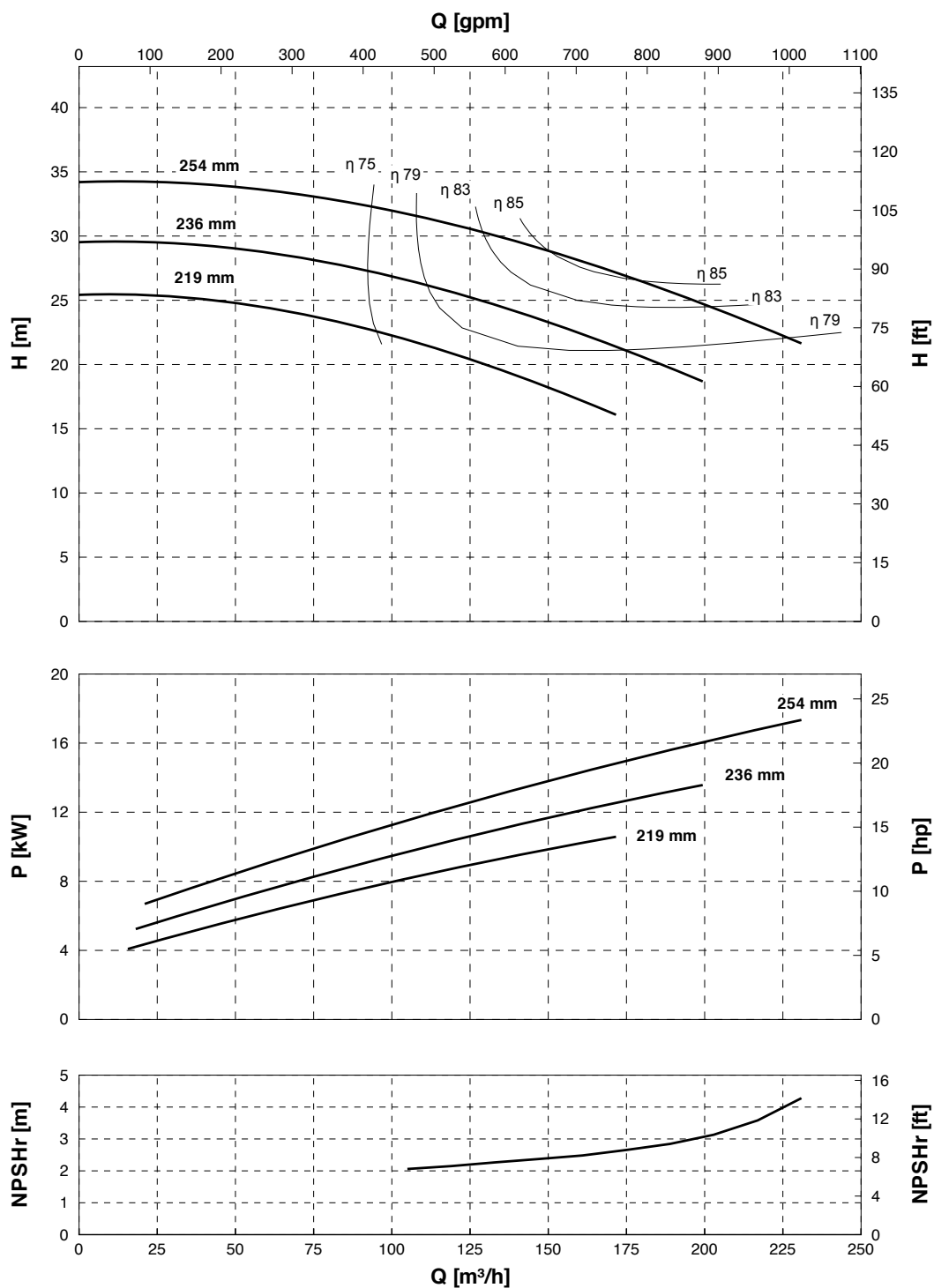


HA 290

Curve #: 31005-080614-F1

Axial Split Case (HA)

1800 rpm



Notes:

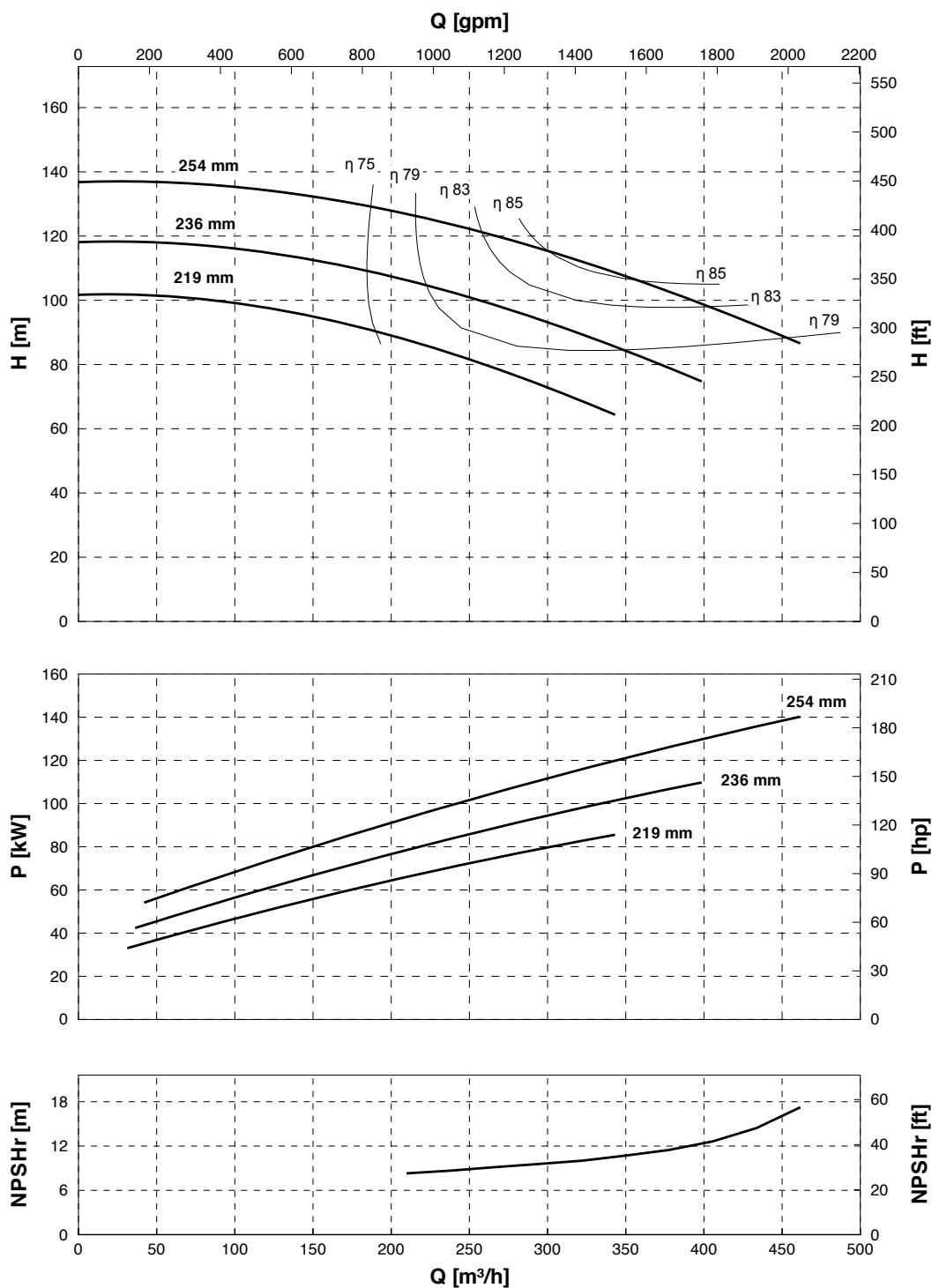
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Specifications are subject to change without previous notice.

Axial Split Case (HA)

3600 rpm

HA 290

Curve #: 31005-080614-F1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Specifications are subject to change without previous notice.

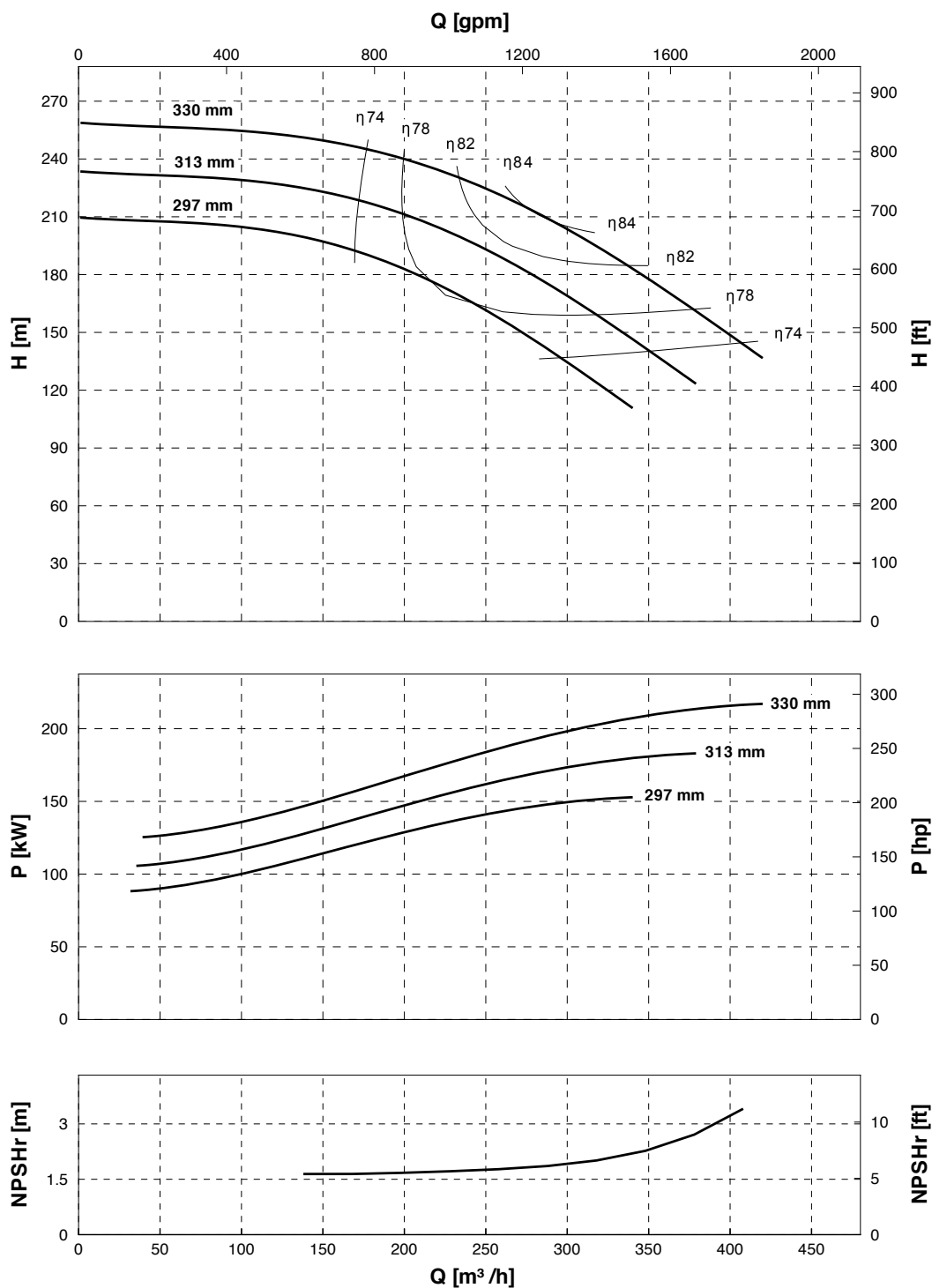


HA 475

Curve #: 32001-100625-S2

Axial Split Case (HA)

1800 rpm



Notes:

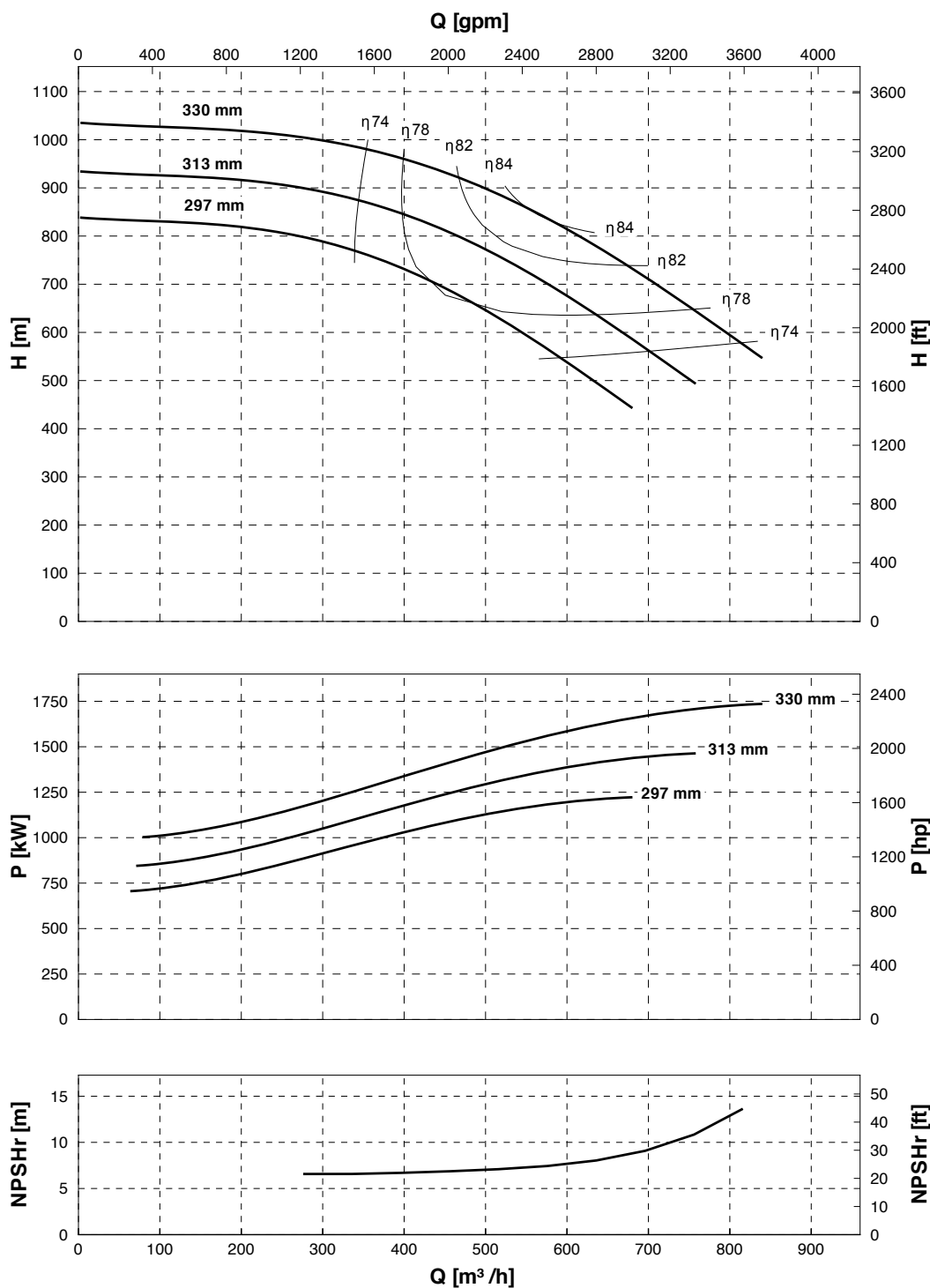
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Specifications are subject to change without previous notice.

Axial Split Case (HA)

3600 rpm

HA 475

Curve #: 32001-100625-S2



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Specifications are subject to change without previous notice.

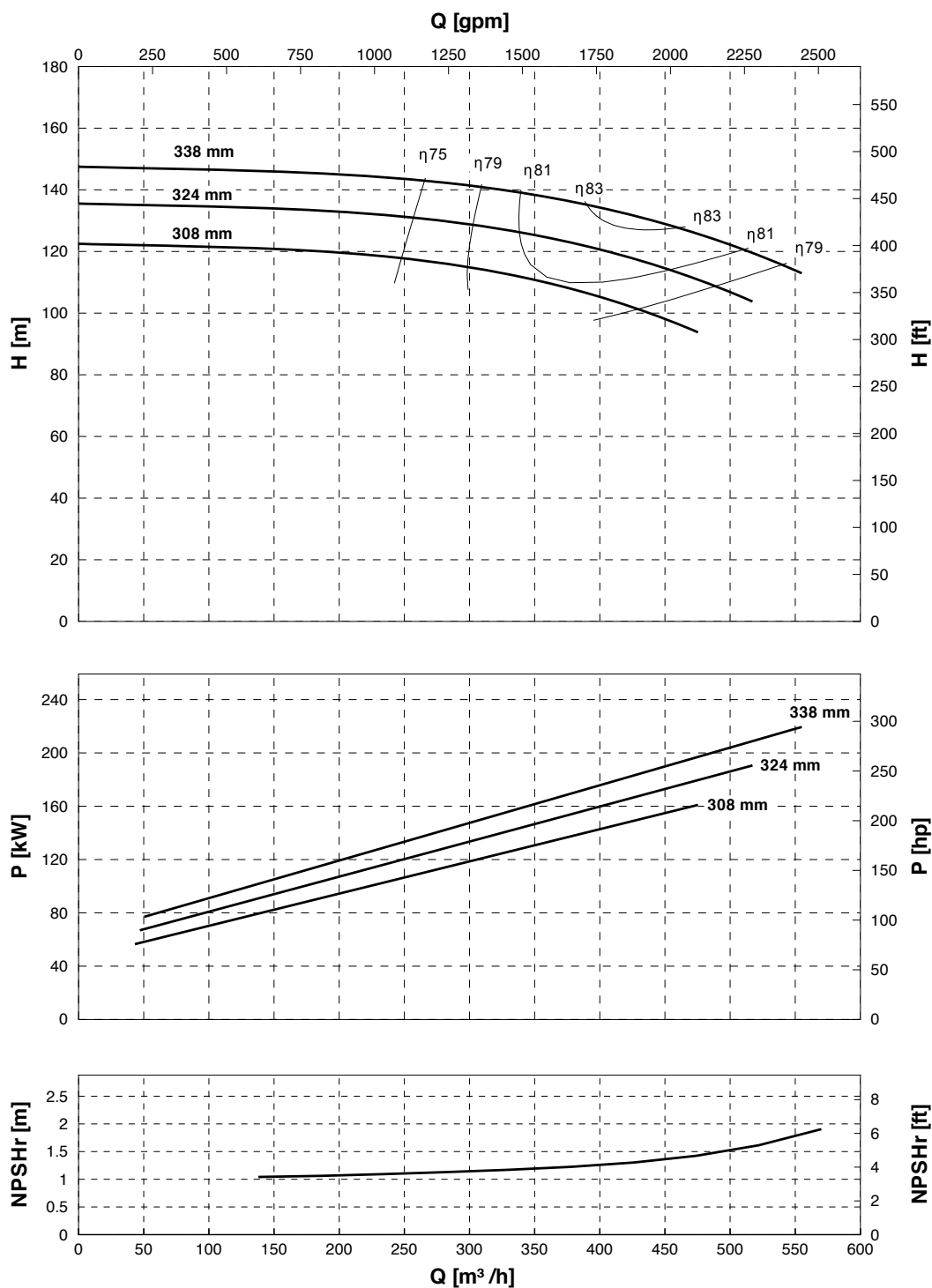


HA 700

Curve #: 32002-070619-F1

Axial Split Case (HA)

1800 rpm



Notes:

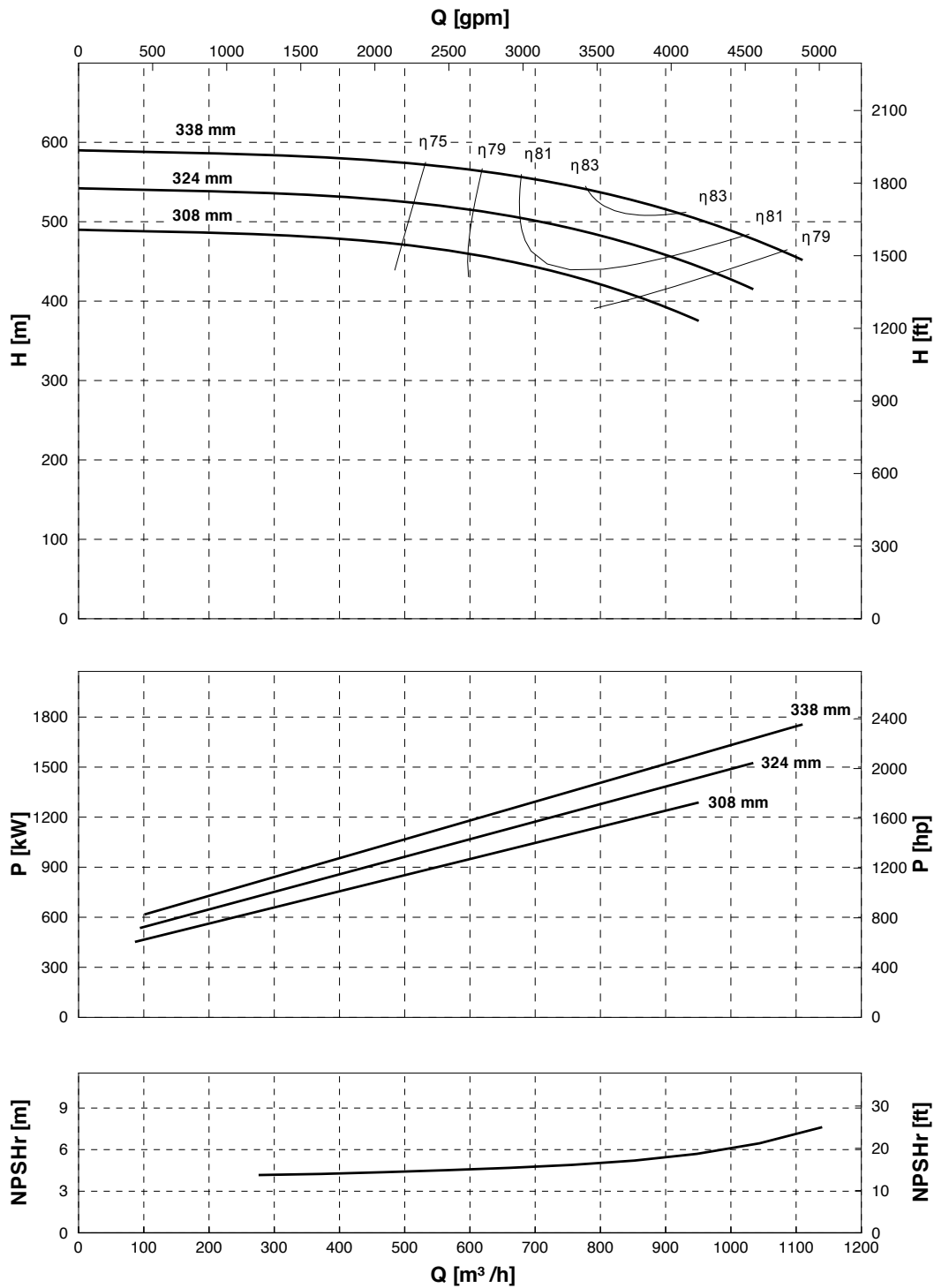
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Specifications are subject to change without previous notice.

Axial Split Case (HA)

3600 rpm

HA 700

Curve #: 32002-070619-F1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Specifications are subject to change without previous notice.

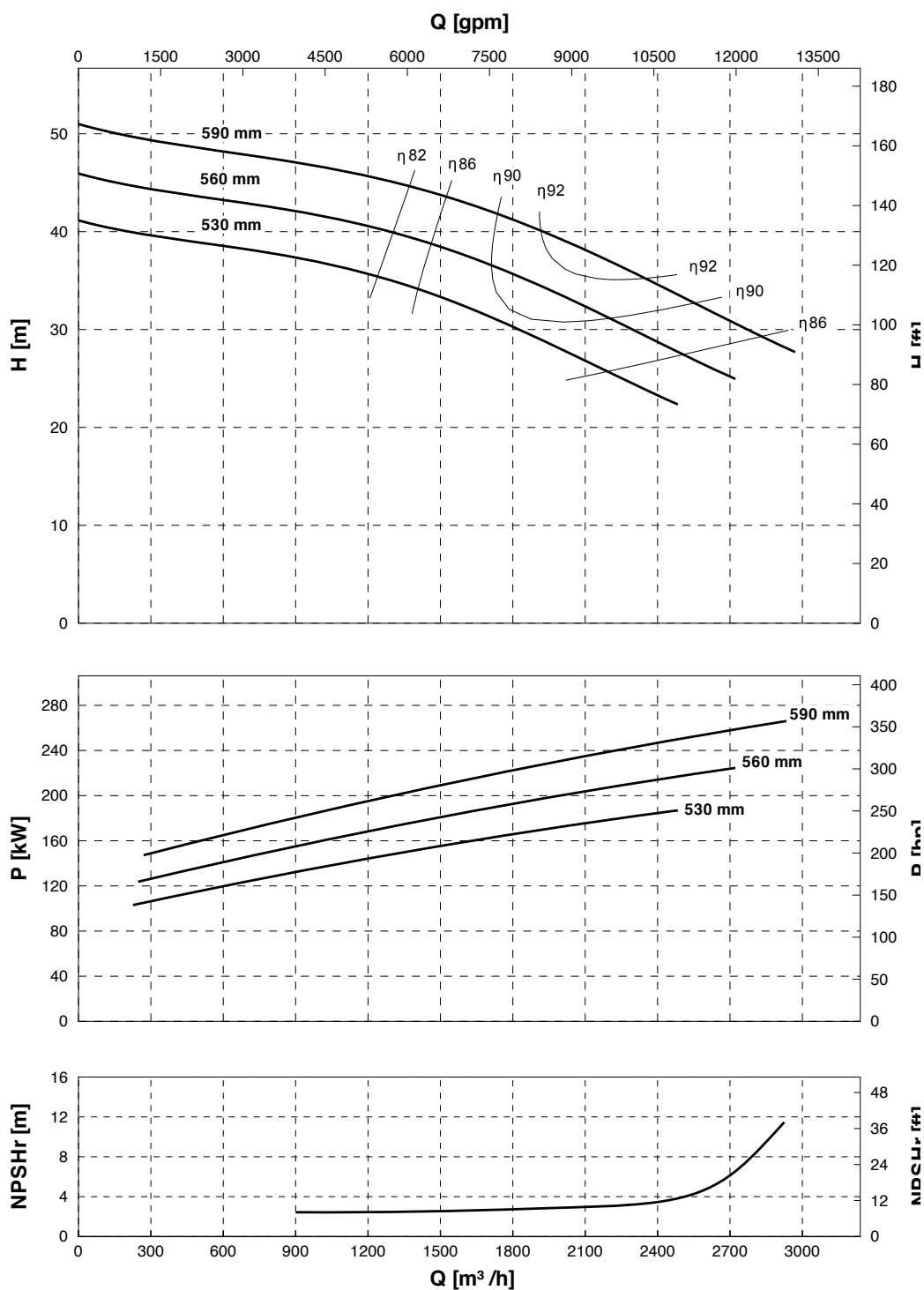


HA 2400

Curve #: 32006-070713-F1

Axial Split Case (HA)

900 rpm



Notes:

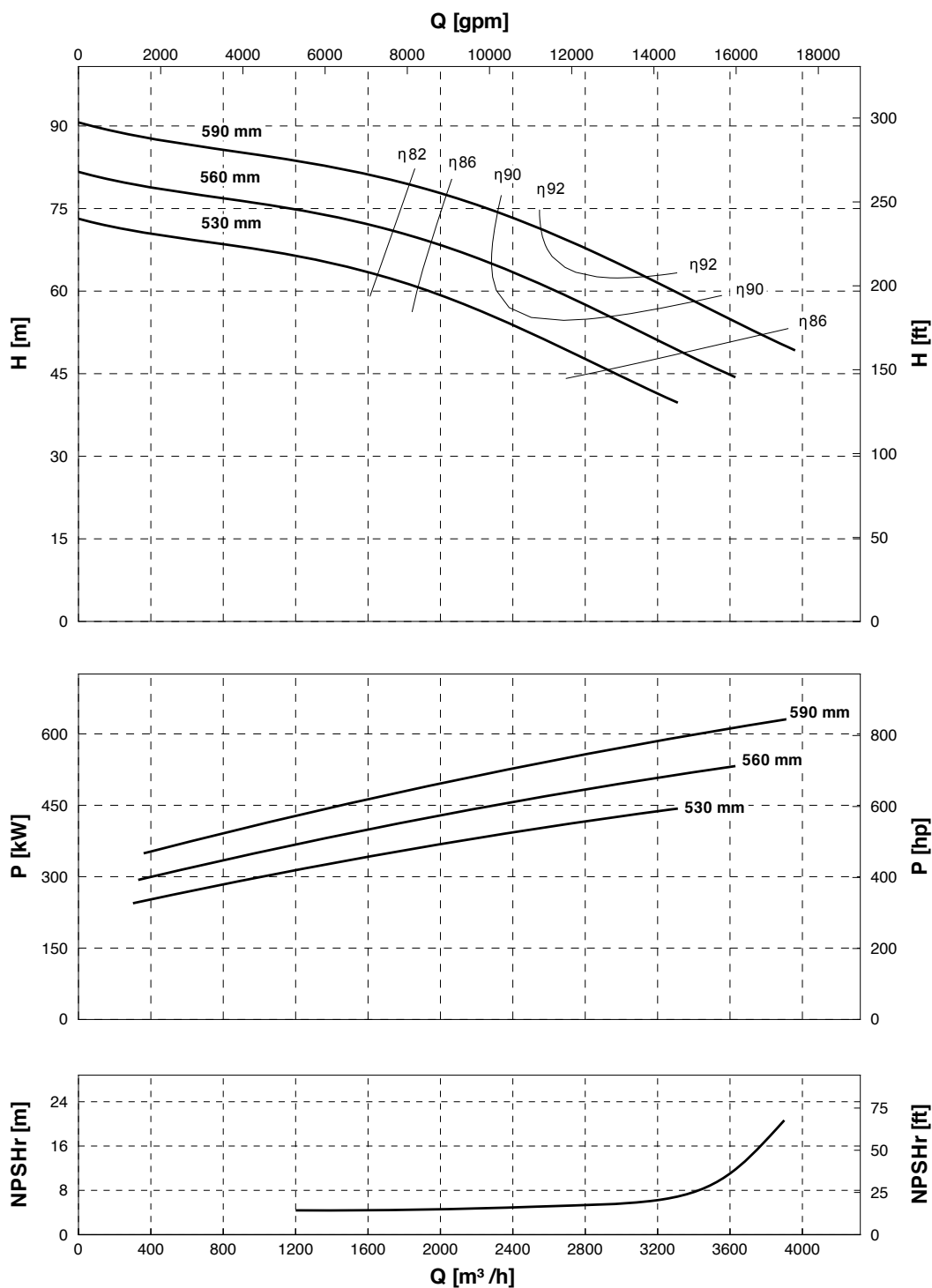
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Specifications are subject to change without previous notice.

Axial Split Case (HA)

1200 rpm

HA 2400

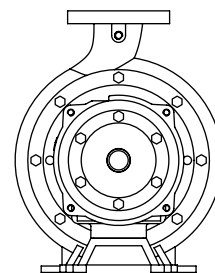
Curve #: 32006-070713-F1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H_2O $T=18^\circ\text{C}$), H_2O Density = 998 kg/m^3)
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Specifications are subject to change without previous notice.





Volute Pumps (HV)

Volute Pumps (HV)

NEPTUNO PUMPS® offers a wide range Volute Pumps to satisfy a variety of head requirements and capacities, with different suction and discharge flange sizes.

OPERATING PARAMETERS

- Capacities up to 19,500 gpm (3,700 m³/h)
- Head up to 820 Feet (250 m)
- Power through 700 hp (520 kW)
- Pressures up to 370 psi (2,550 kPa)
- Frequency 50/60 Hz
- Temperatures to 300 °F (150°C)
- Discharge sizes from 3" to 12"

DESIGN FEATURES

- NEPTUNO PUMPS® high-efficiency design
- High-quality investment cast impellers and stage diffusers
- ANSI Design available
- Special material selection for standard or abrasive/corrosive service
- Maximum versatility and reliability
- Different suction and discharge flange sizes
- Packing or mechanical seal

SERVICES

- Primary Water Supply – Fresh water or Sea water
- Mining Processes: Cooling Water, Thickener Overflow, Reclaim Water, MiSeepage, Well Pumps-Process, Water Supply, MiDe-Watering, Electrolyte, Pressure Boosting and Transfer
- Solvent Extraction/Electro-Winning (SX/EW): Raffinate, Pregnate Leach Solution (PLS), Heap Leach, Dump Leach, Acid Water Pressure Boosting and Transfer
- Tailings – Post Processed Solutions
- Oil & Gas Production – Onshore, Offshore and Pipeline
- Marine
- Pulp and Paper

Volute Pumps (HV)

Applications

Duty	Heavy	Medium	Low
	●	●	●
Capacity	High	Medium	Low
	●	●	●
Head	High	Medium	Low
	●	●	●
Fluid	Clean	Process	Slurry
	●	●	●
Flexibility	High	Medium	Low
			●

Volute Pumps (HV)

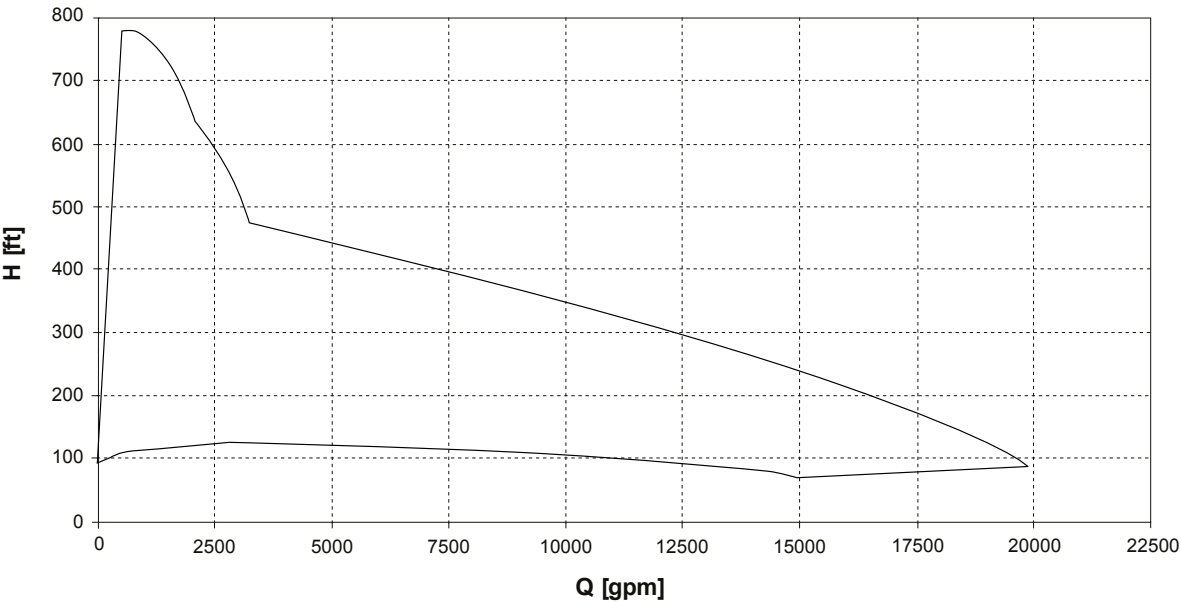
Main Components & Materials

Components	Material					
	Cast Iron	Carbon Steel	Brass	Stainless Steel	Duplex	Polymer
Volute	●			●	●	
Impeller	●			●	●	
Shaft		●		●	●	
Stuffing Box	●			●	●	

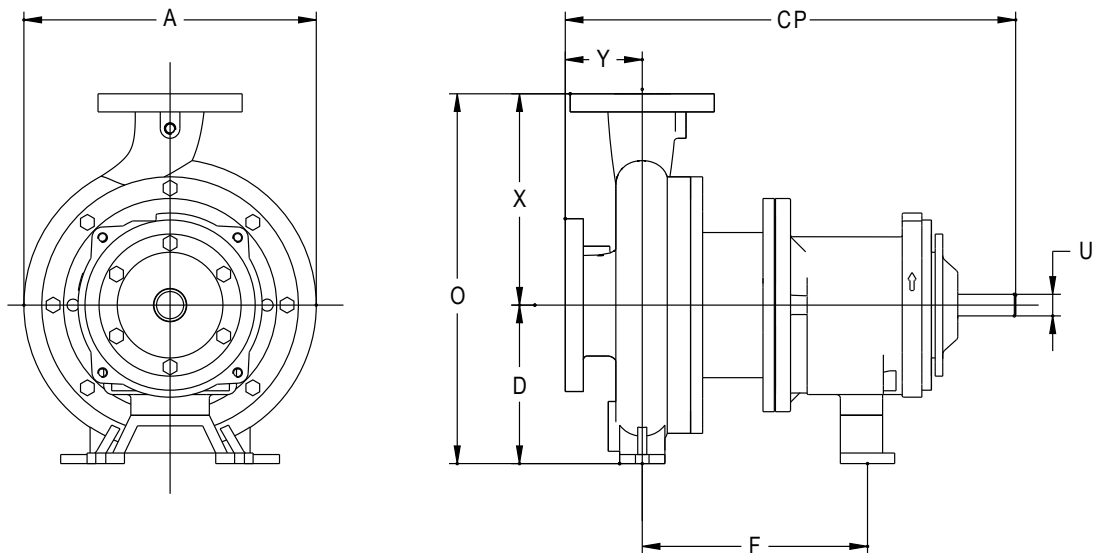
Volute Pumps (HV) Available Models

HV 62	HV 105	HV 120
HV 175	HV 250	HV 450
HV 475	HV 500	HV 3000

Volute Pumps (HV) Range Chart - 60 Hz



Volute Pumps (HV) Diagram



Volute Pumps (HV) Main Dimensions

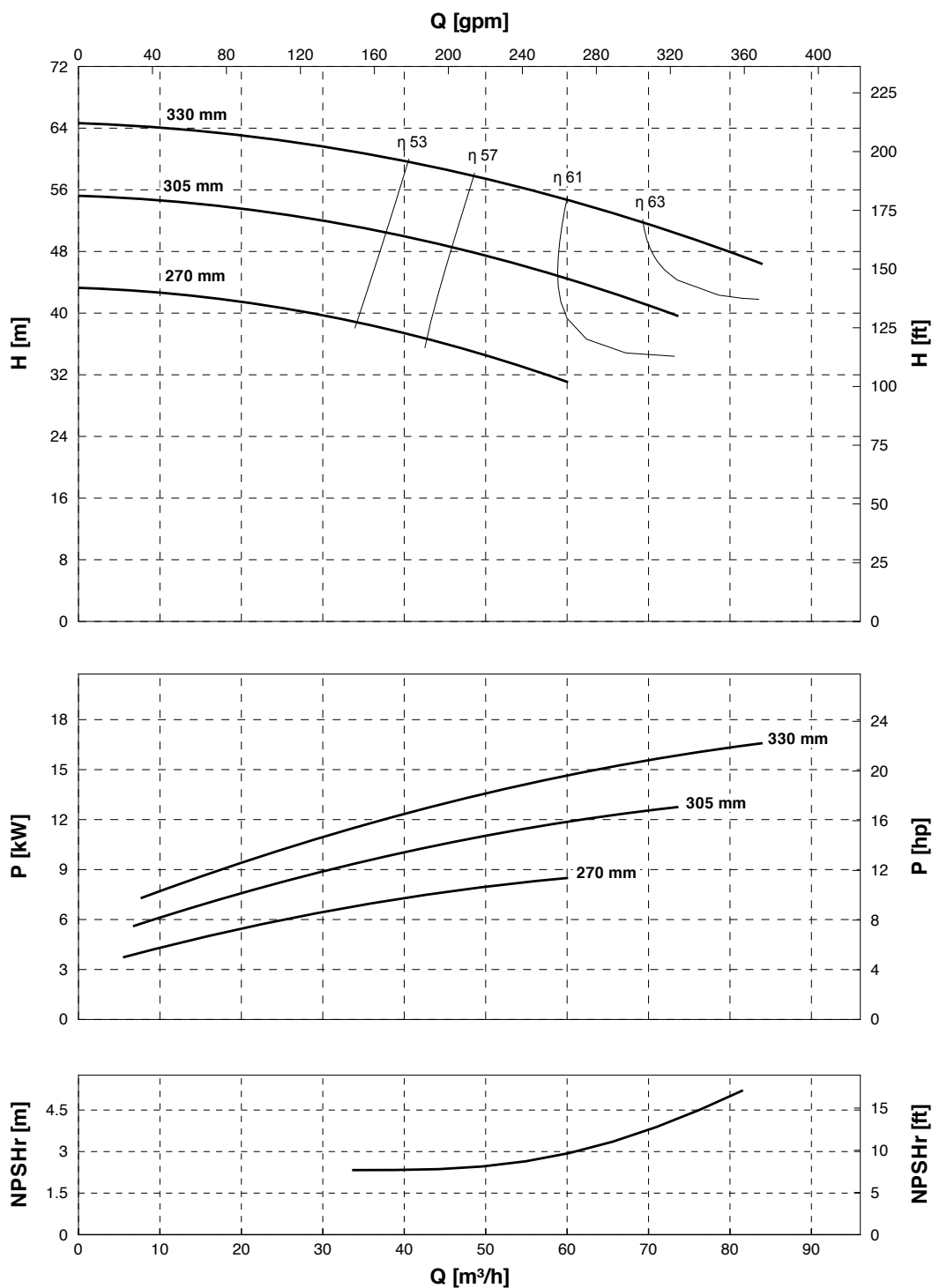
	Dimension in inch									
Model	Suction	Discharge	CP	D	F	O	U	X	Y	A
HV 62	3	2	23.5	10	12.5	21.5	1.1	11.5	4	16.8
HV 105	4	3	23.5	8.3	12.5	19.3	1.1	8.2	4	12.4
HV 120	4	3	23.5	8.3	12.5	19.3	1.1	8.2	4	7.6
HV 175	4	3	23.5	8.3	12.5	19.3	1.1	8.2	4	13.6
HV 250	8	6	33.9	14.5	18.7	30.5	2.4	16	6	20.5
HV 450	8	6	33.9	14.5	18.7	32.5	2.4	18	6	23.3
HV 475	8	6	40.1	15	19.5	36.9	2.4	21.9	8	24.4
HV 500	8	6	39.5	16.9	22.6	30.1	2.2	13.2	9.3	28
HV 3000	18	18	50	28	24.8	62	3.4	34	16.7	50

Volute Pumps (HV)

1800 rpm

HV 62

Curve #: 43001-070620-F1



Notes:

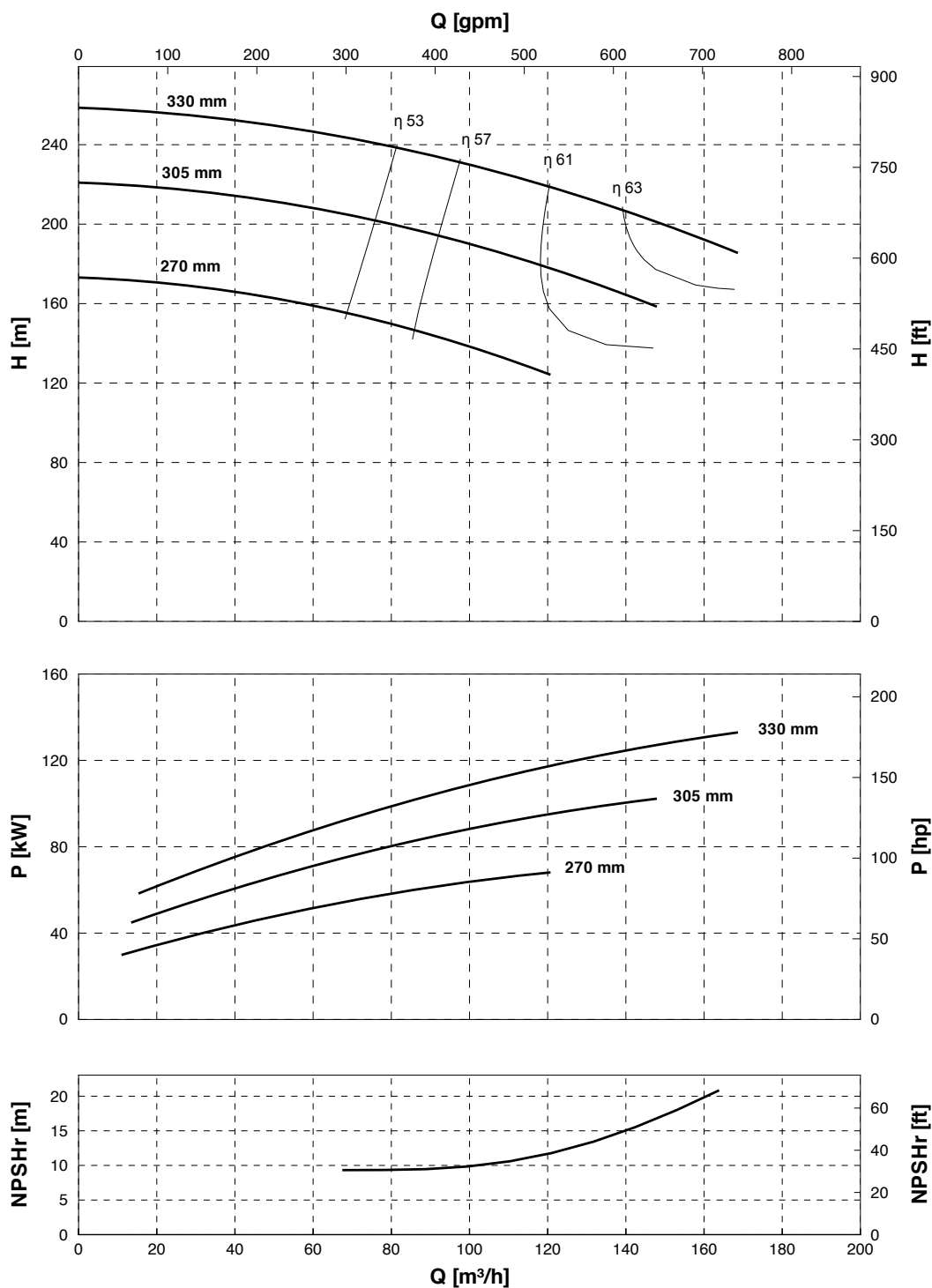
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



HV 62

Curve #: 43001-070620-F1

Volute Pumps (HV)
3600 rpm



Notes:

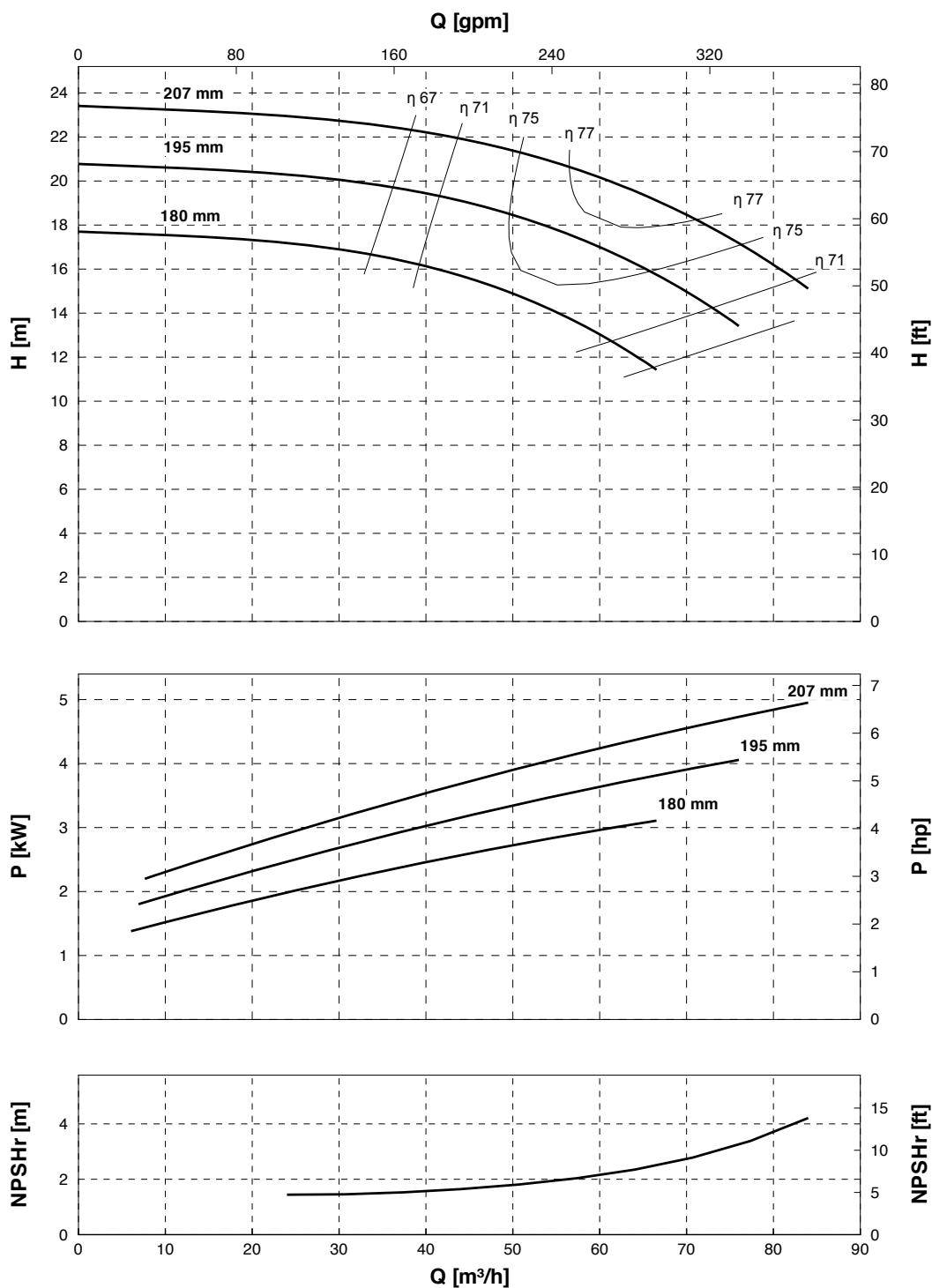
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^*=18$ [°C], H_2O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Volute Pumps (HV)

1800 rpm

HV 105

Curve #: 43002-070619-F1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

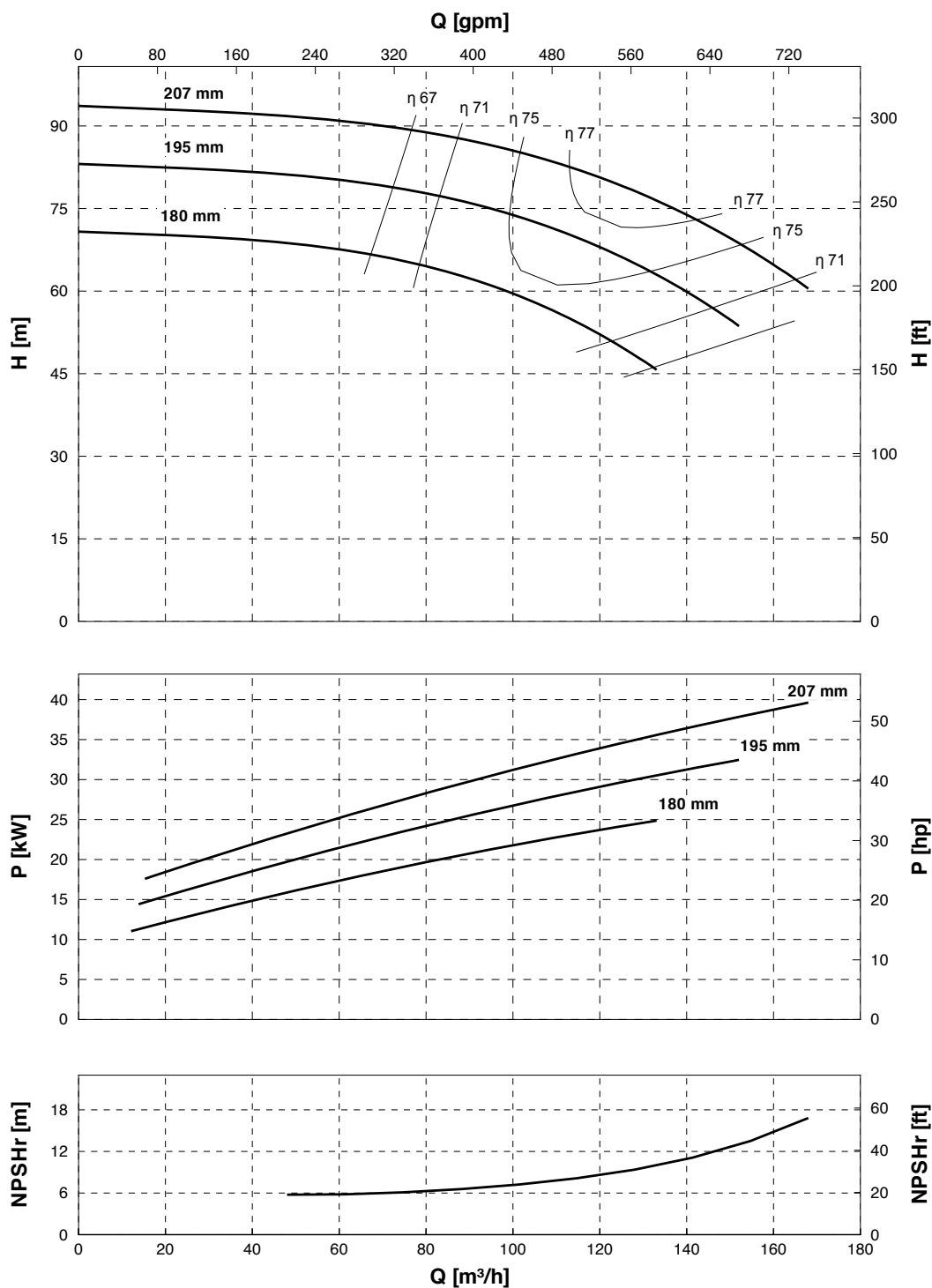


HV 105

Curve #: 43002-070619-F1

Volute Pumps (HV)

3600 rpm



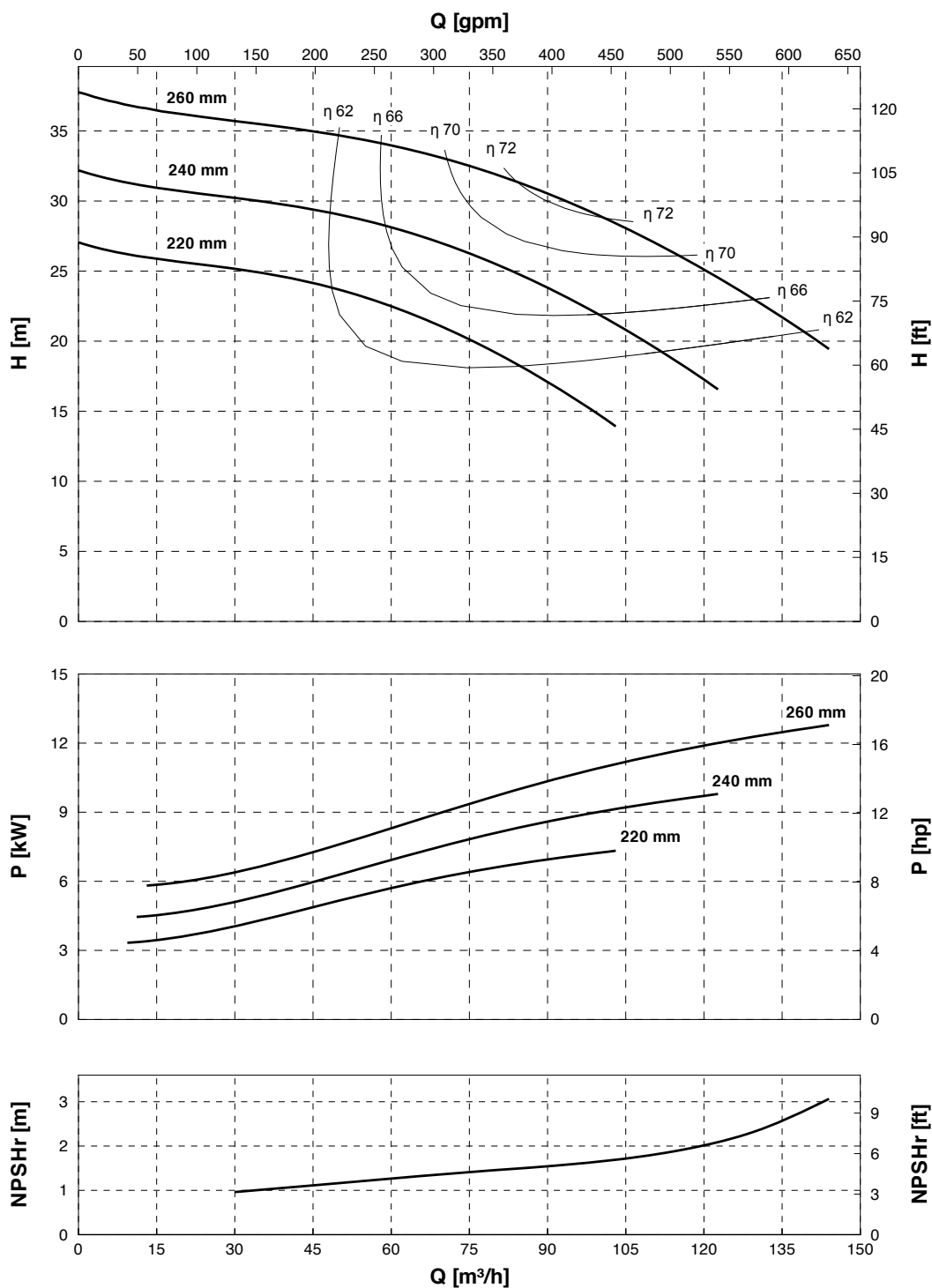
Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

Volute Pumps (HV) 1800 rpm

HV 120

Curve #: 43003-090209-S1



Notes:

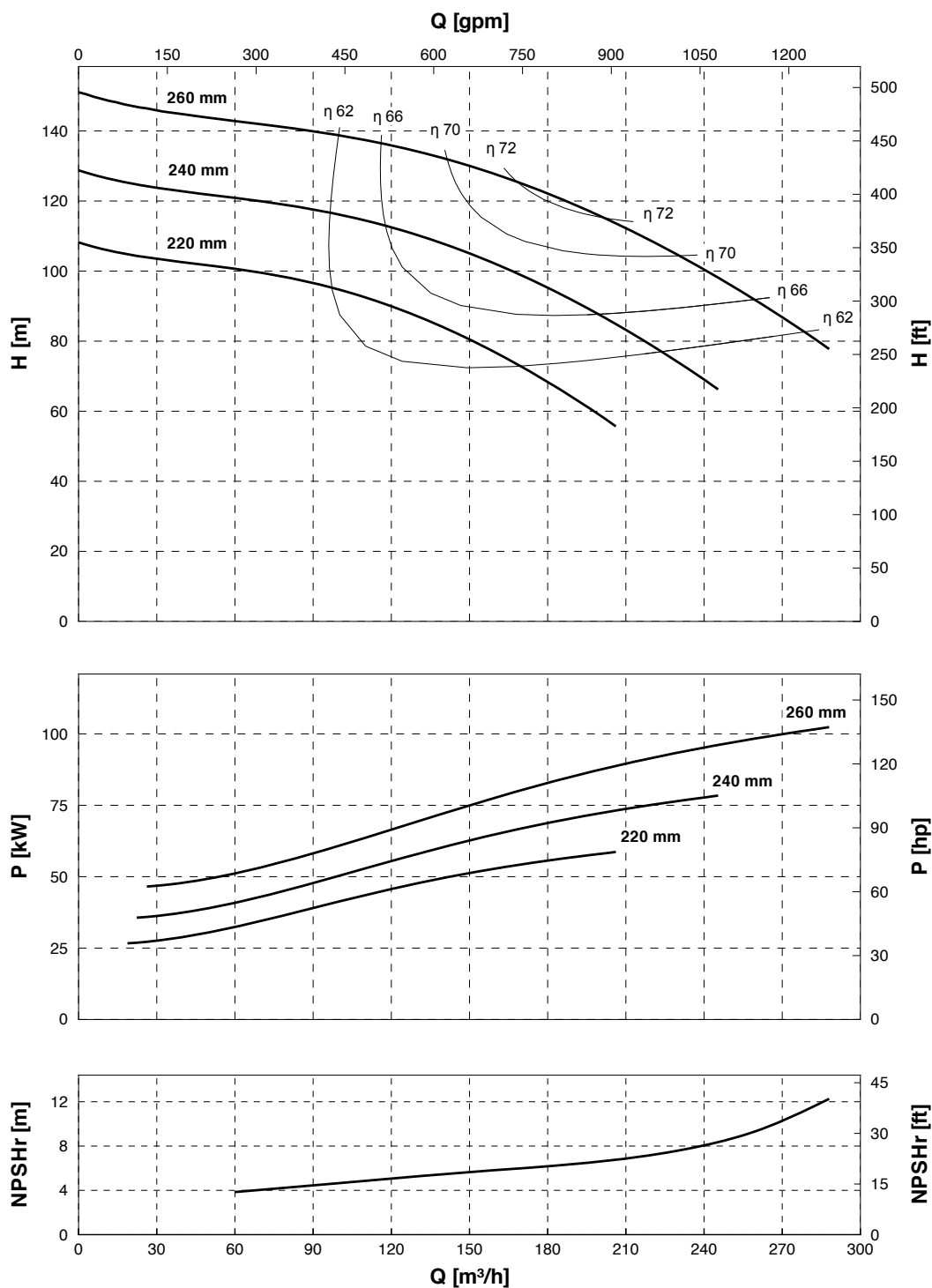
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.



HV 120

Curve #: 43003-090209-S1

Volute Pumps (HV)
3600 rpm



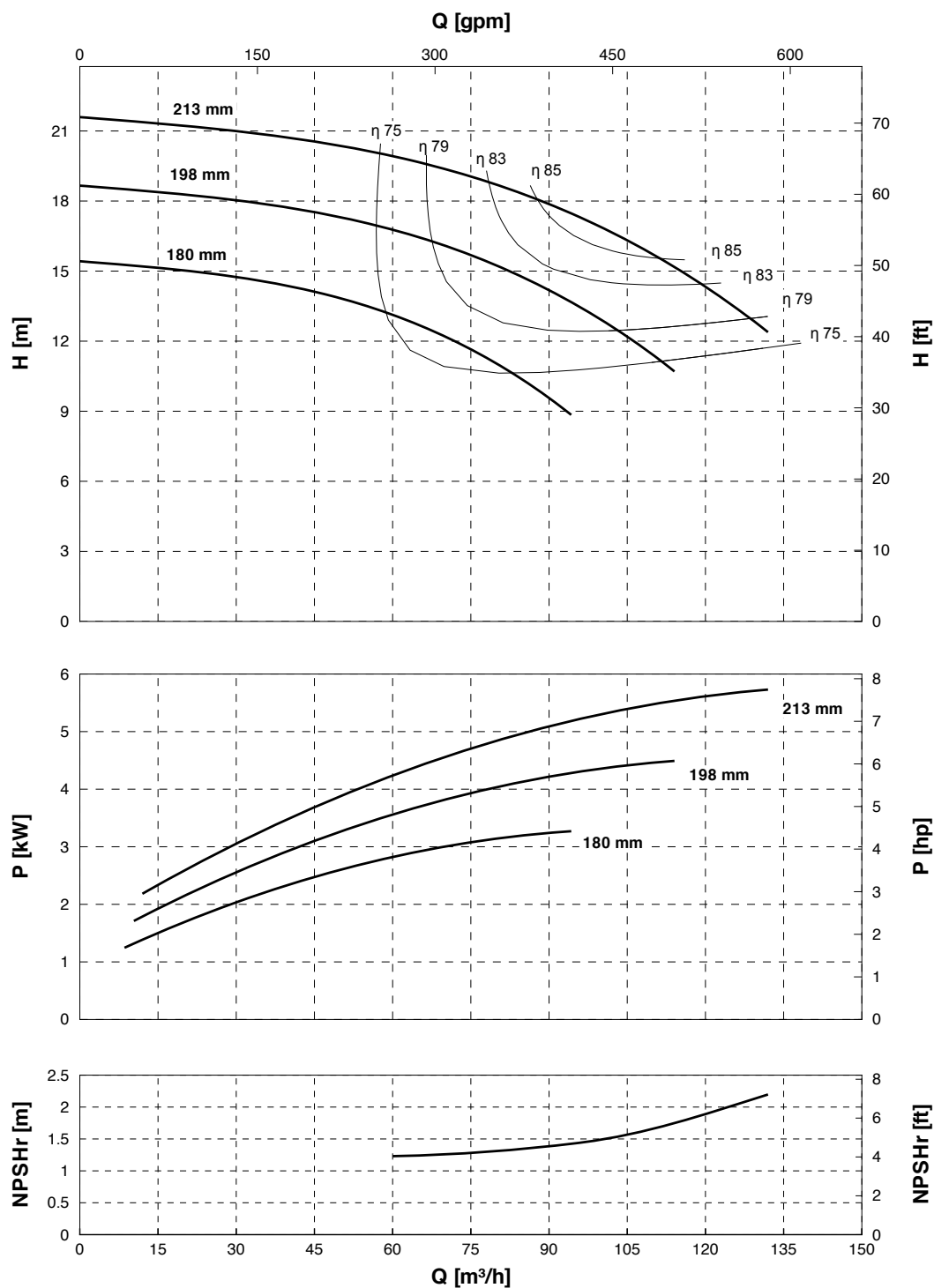
Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H_2O $T^{\circ}=18^{\circ}C$, H_2O Density = 998 kg/m^3)
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Volute Pumps (HV) 1800 rpm

HV 175

Curve #: 43004-070619-F1



Notes:

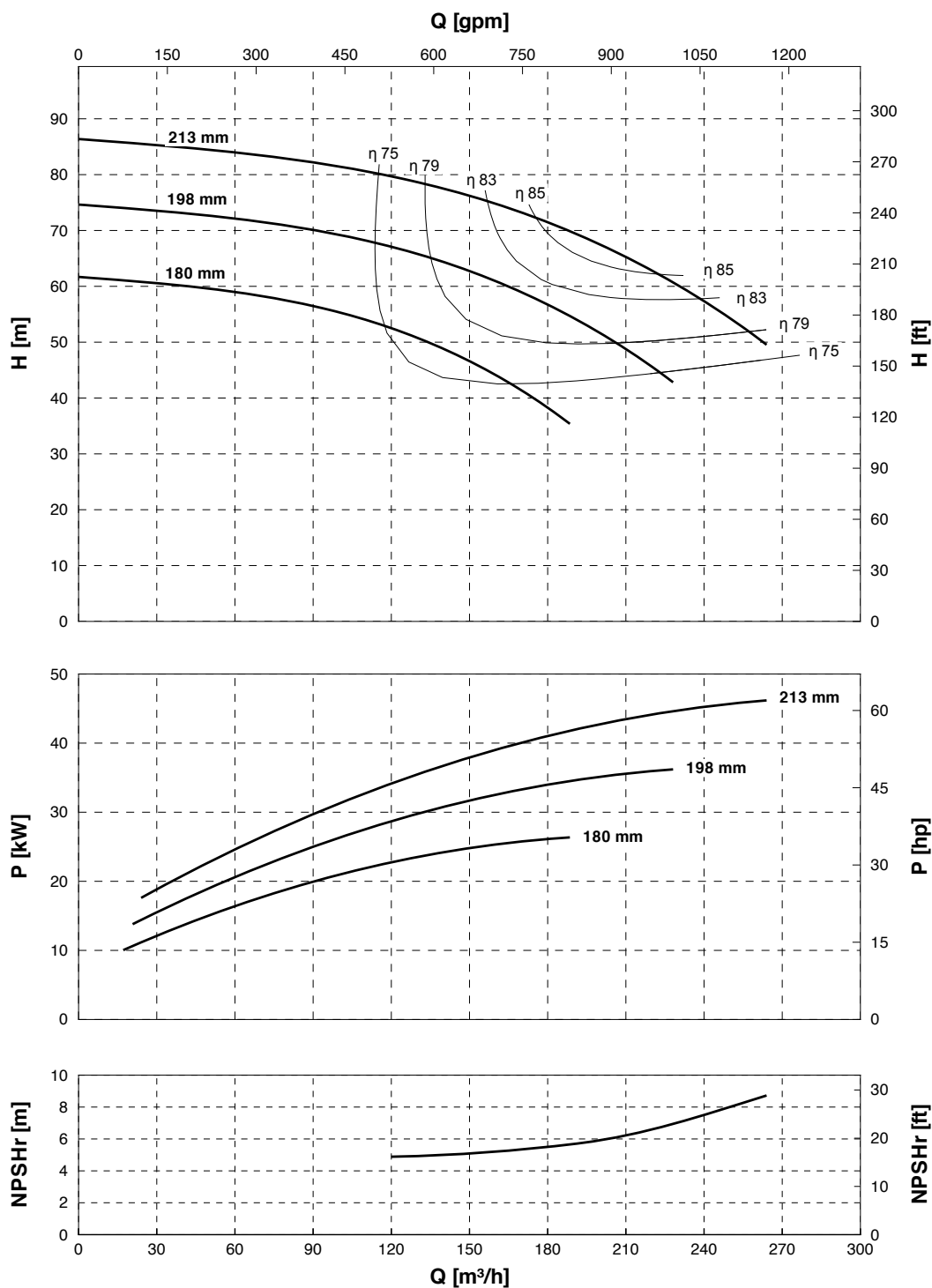
- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



HV 175

Curve #: 43004-070619-F1

Volute Pumps (HV)
3600 rpm



Notes:

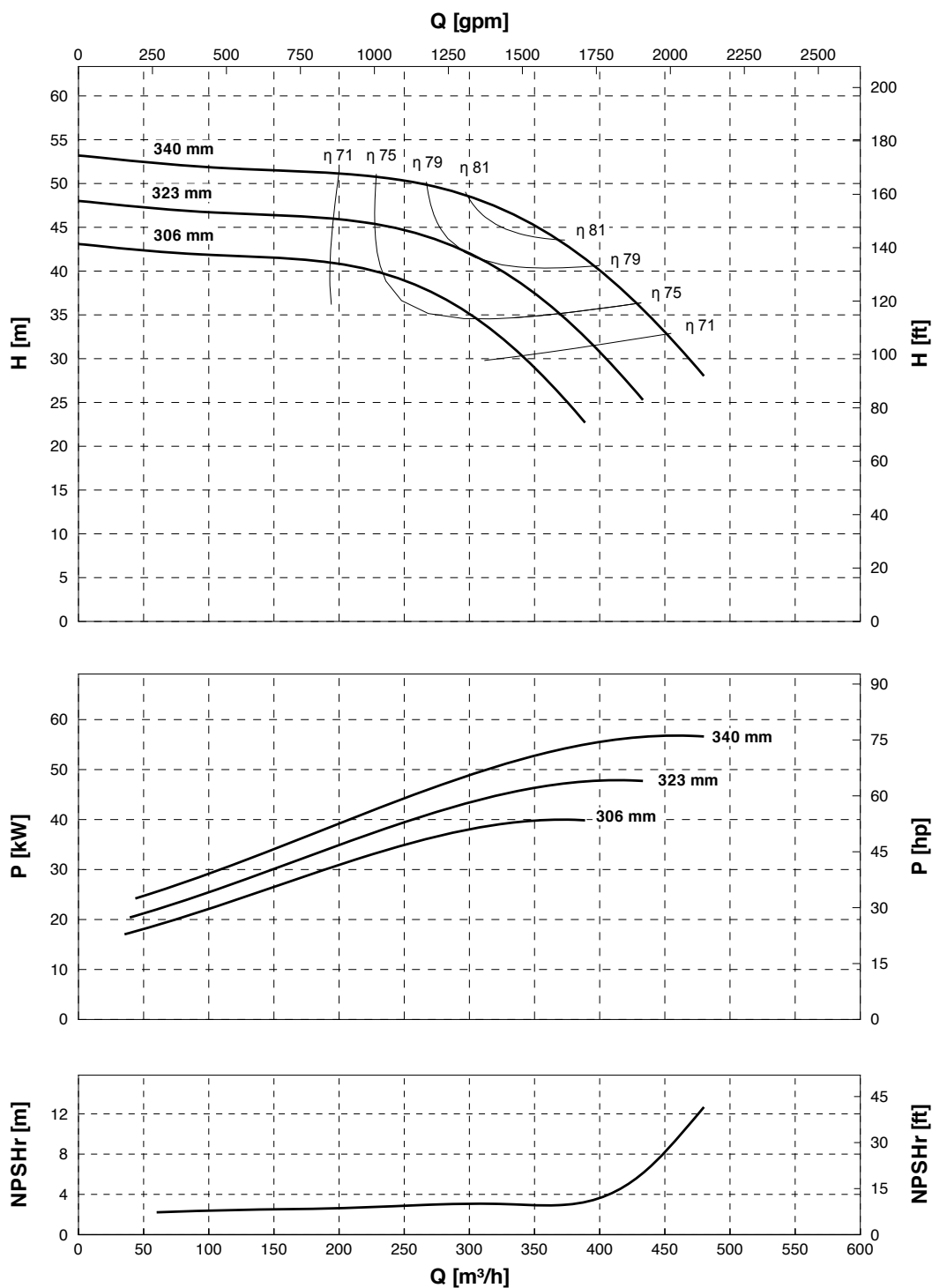
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T*=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Volute Pumps (HV)

1800 rpm

HV 250

Curve #: 43006-090526-S1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

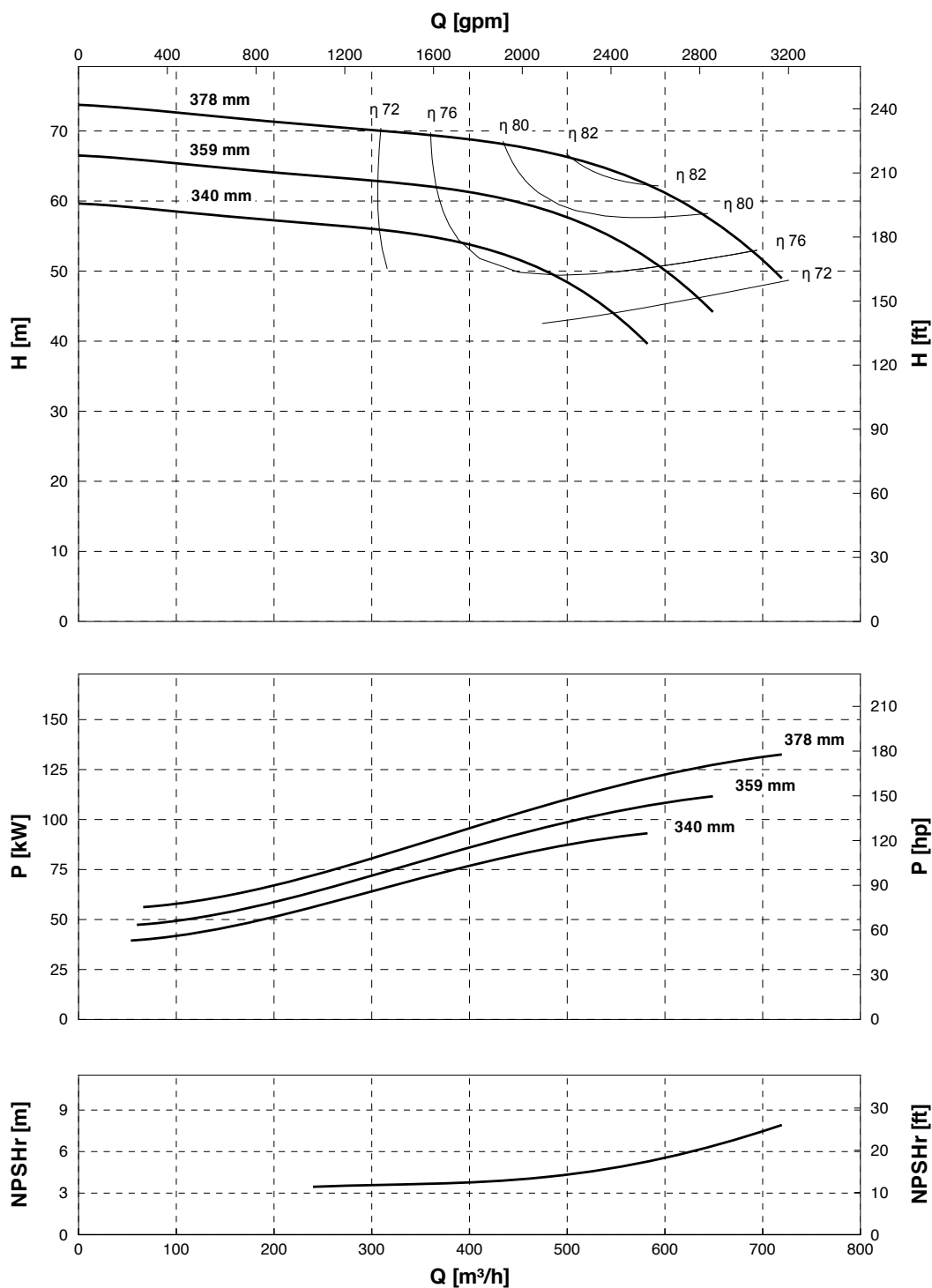


HV 450

Curve #: 43007-090509-S2

Volute Pumps (HV)

1800 rpm



Notes:

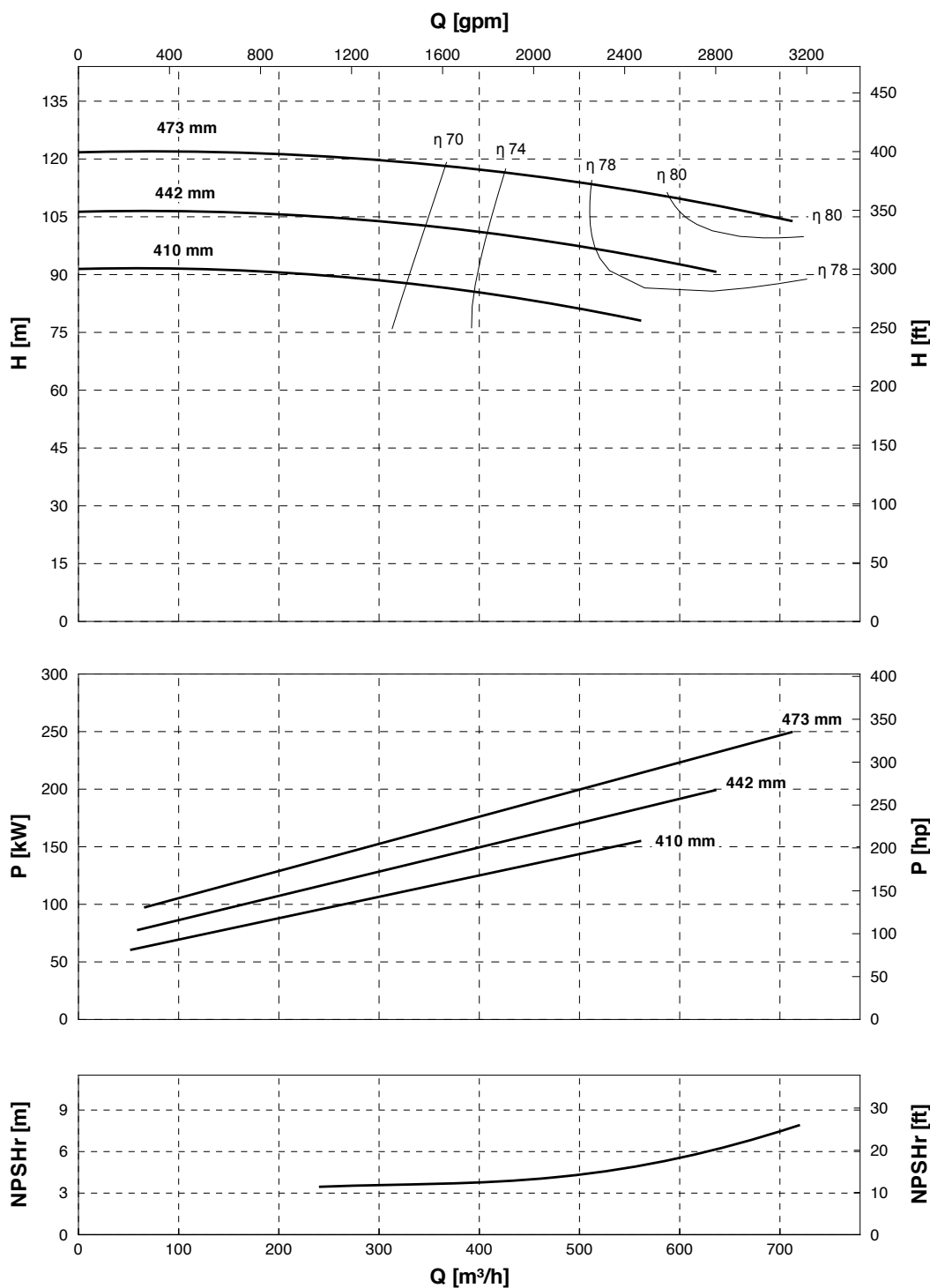
1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Volute Pumps (HV)

1800 rpm

HV 475

Curve #: 41001-070723-F1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.

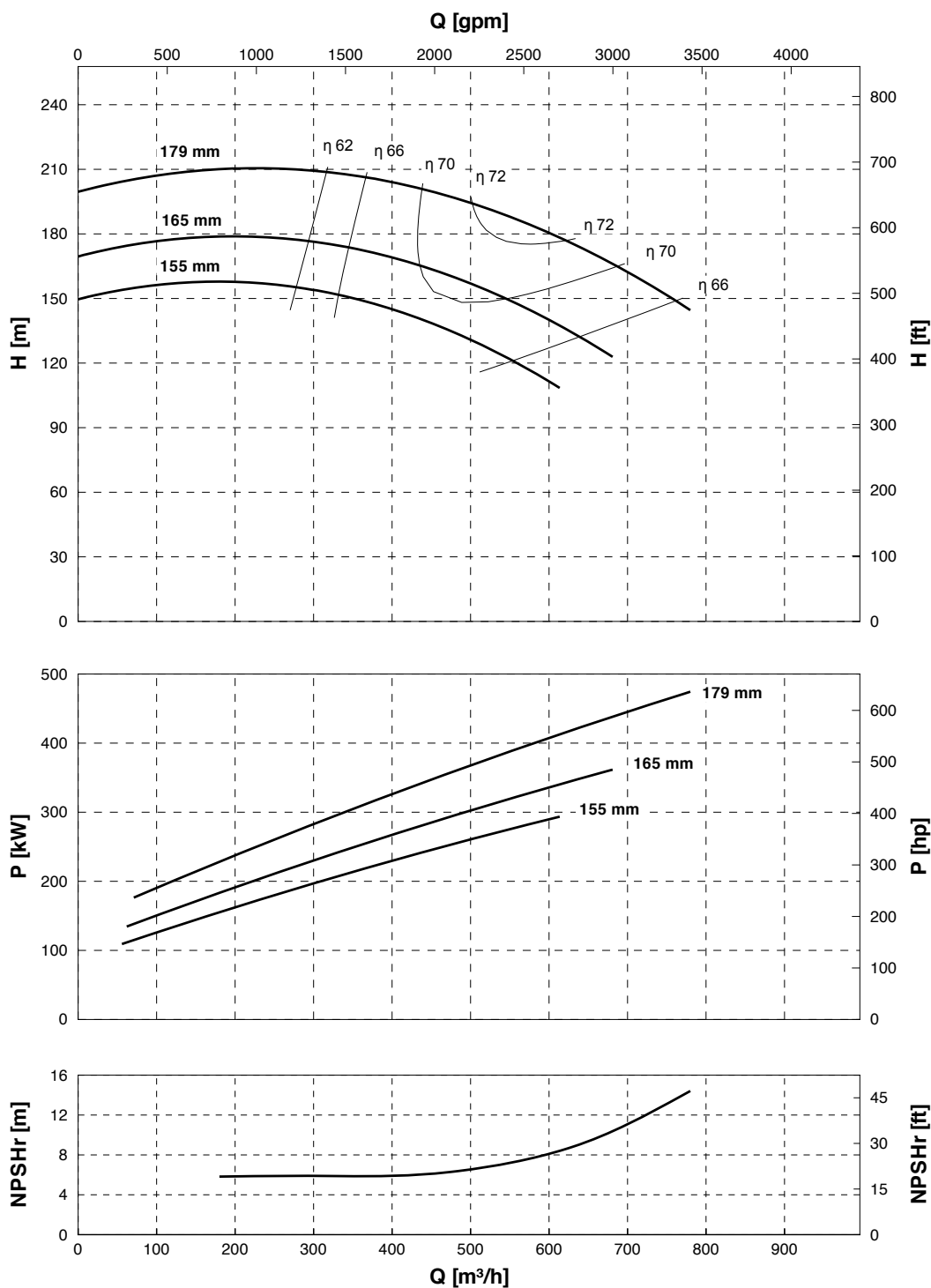


HV 500

Curve #: 42002-070724-F1

Volute Pumps (HV)

3600 rpm

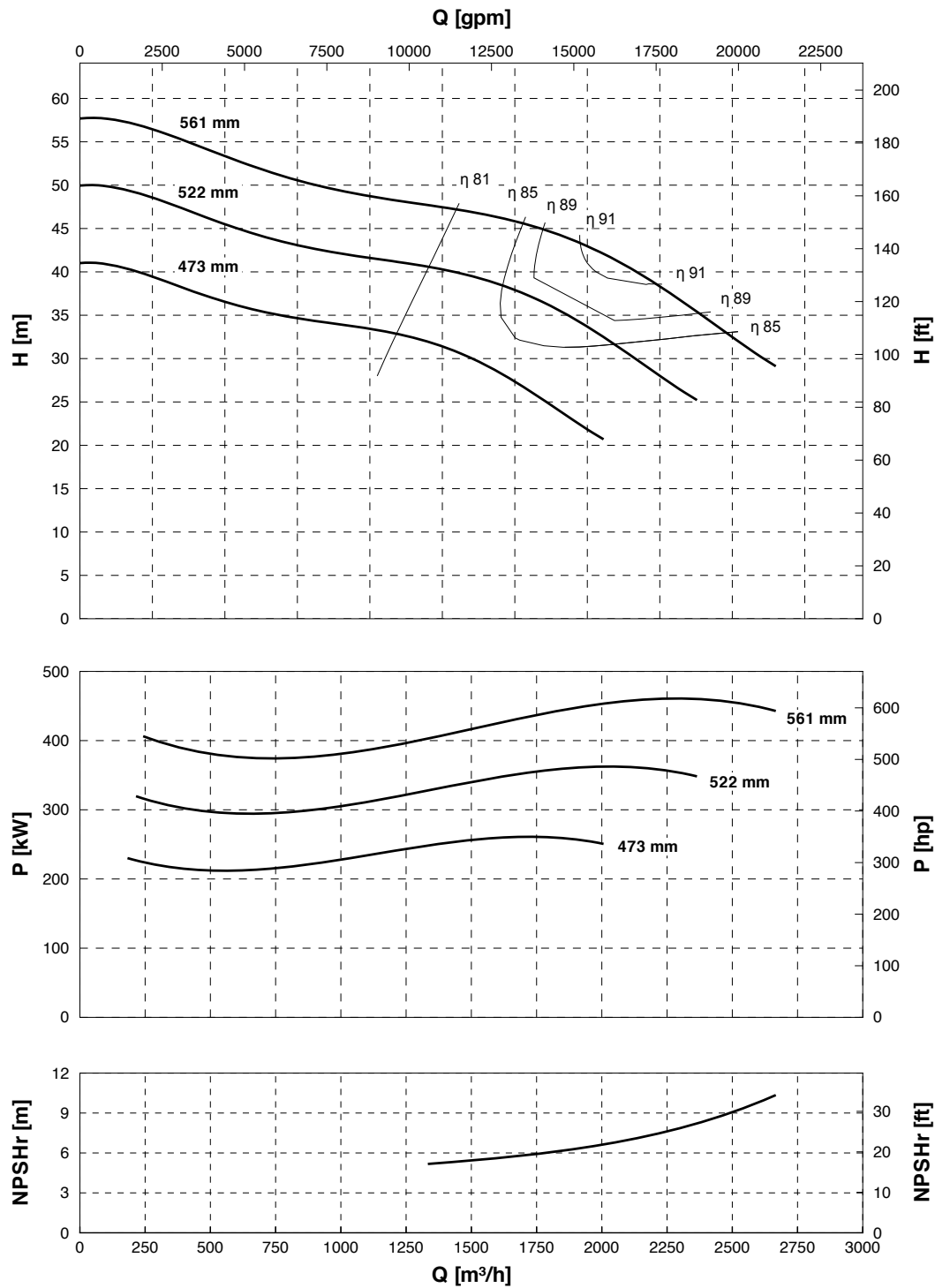


Notes:

1. Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
2. Performance based on single stage pumping clean non-aerated water (H₂O T*=18 [°C], H₂O Density = 998 [kg/m³])
3. Power and efficiency losses are not reflected on the curve
4. Elevated temperature effects on performance are not included
5. Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
6. Consider 2.0% efficiency derate if using balanced impellers
7. Specifications are subject to change without previous notice.

Volute Pumps (HV) 1200 rpm

HV 3000
Curve #: 41002-070717-F1



Notes:

- Operating data certified to ISO 9906 Hydraulic performance acceptance tests - Grades 1 & 2
- Performance based on single stage pumping clean non-aerated water (H₂O T°=18 [°C], H₂O Density = 998 [kg/m³])
- Power and efficiency losses are not reflected on the curve
- Elevated temperature effects on performance are not included
- Consider 3.0% efficiency derate if operated Off-BEP (60% - 80%)
- Consider 2.0% efficiency derate if using balanced impellers
- Specifications are subject to change without previous notice.



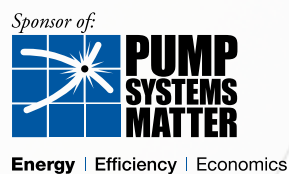


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