HERBORNER PUMPEN

DATA SHEET

herborner.X-N-PM

100% COATING = 0% CORROSION!

NSF
Certified to NSF/ANSI Standard 50

www.herborner-pumps.com

Subject to misprints and changes.
Illustrations may differ from actual product (scope of delivery)

US

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TECHNICAL DESCRIPTION

Use
With its 100% coating and integrated pre-filter for dirt separation, the herborner.X-N-PM is particularly suitable for use in swimming complexes, water parks or amusement parks, and wherever a pump and internal filter are needed to circulate media. Since the coating is approved for swimming pools and drinking water, it can be used practically anywhere.
The coating thickness of up to 3.9 x 10-2 inches provides an extremely smooth surface. Hydraulic efficiency is thus improved by up to 10%, saving energy over years.

Coating
A 100% coating of all necessary, medium-contacting parts and susceptible parts prevents corrosion and protects against corrosive substances. Corrosion damage to the pump and system components is then avoided.

Impeller protector
Special impeller protectors made of durable plastic prevent the impeller from rusting (after shutdown) and ensure quiet operation.
The version with a very small gap allows for high efficiency.

Mechanical seal protector
The mechanical seal seat is 100% protected against corrosion. Corrosion wells are prevented in the intermediate casing around the O-ring seat of the mechanical seal. This improvement in corrosion stability leads to a reduction in life cycle costs.

X-Lock system
The X-Lock system allows internal threads to be fully coated in cast parts to prevent corrosion in the threads.

Service and maintenance
Only stainless steel screw connections are used, keeping the components easy to maintain for years.

Filter cover
With its light weight, the new transparent, impact-resistant filter cover allows the filter casing to be cleaned easily. The current filling level can also be viewed when emptying the filter casing in order to avoid water in the pump room and save time.

Seal Guard system (option)
In general, a mechanical seal breaks after just a few seconds of dry running. The innovative and maintenance-free Seal Guard system greatly exceeds this time by offsetting lack of lubrication with a media reservoir. The primary mechanical seal is thus effectively protected against dry running.

Impeller
Dynamically balanced impellers ensure vibration-free running and contribute significantly to the long service life of the pump. By correcting the diameter, all impellers can reach any operating point within the characteristic diagram.

Closed multi vane impellers are used for clean to lightly contaminated pumped media.
Large contaminants are caught by the integrated pre-filter.

TECHNICAL DESCRIPTION

Construction
The robust and sturdy construction, as well as the low profile for optimal use of the splash water tank, are continued in this model. The rear pull-out design allows the interchangeable module to be easily replaced. Variable flange positions in 45° increments also offer optimum design possibilities.

Filter strainer
The filter strainer, with a special perforation diameter of 0.12 inches, designed to tackle hair and fibers, ensures a high degree of separation. It is easily removed without tools for easy handling.

Filter casing
Flow-optimized filter casing with large drain screw plug for fast emptying when cleaning the filter.

Venting
Simple pump venting with a ball valve to discharge any air accumulation and prevent the mechanical seal from dry running.

Economic efficiency
Generously dimensioned shafts and bearings prolong the lifetime of the pump. The motors also come with a relubrication unit, starting from 1.5 HP.
These technological improvements over standard motors considerably reduce the life cycle cost of the pump.

Motor shaft
The high-alloy, stainless steel motor shaft with high bending stiffness ensures minimum deflection. This minimizes leaks in the sealing, increasing the lifetime of the motor shaft.

Shaft seal
The shaft seal is a maintenance-free, bidirectional mechanical seal made of wear-resistant silicon carbide (SiC).
With the Seal Guard system version, a mechanical seal made from wear-resistant silicium carbide (SiC) seals at the pump side and another mechanical seal made of carbon/chrome molybdenum casting seals on the drive side. To lubricate and cool the mechanical seals, the intermediate casing is filled with NSF H1 lubricant. This oil seal even allows for short-term dry running.
All motors are equipped on the pump side with a special sealing against splash water.

By-pass channel
This ensures that the mechanical seal is optimally flushed with pumped medium. The sliding surfaces receive the necessary lubricating and cooling medium, which effectively increase the lifetime of the mechanical seal.

Installation
The pumps are delivered in vertical installations with the “motor facing up”.

Performance range

A seamless performance field with many steep pump characteristic curves guarantees uniform pump power output, even with contamination of the filter system. Even in parallel operation, minor adjustments to the delivery quantity with increased filter and friction losses are guaranteed.

Speed	Q_{max} [US.gpm]	H_{max} [ft]
1,500 rpm	2,813	137
1,500 rpm	1,189	201

Noise

The noise is determined by complex factors such as size, materials, operating and installation conditions. Already during development, hydraulic measures and a solid construction were implemented to influence noise behavior. The maximum sound pressure level is mostly determined by the drive motors from air, magnetic and bearing noise. The limit curves permitted for electrical motors according to DIN EN 60034-9 are exceeded. Lowest noise development levels is during operation near to Q optimal (best efficiency).

Motor

A surface-cooled three-phase motor with squirrel-cage is used, which corresponds to energy-efficiency class NEMA Premium.

Design	C-Face
Speed	1,500 rpm
Connection	450 V

The motors have a PTC thermistor ex-works.
The motor can be ordered with an external variable frequency drive. Using a variable frequency drive is recommended.
Frequency control of the pumps is possible depending on the operating conditions.
from 30 to 60 Hz

General data

- Media temperature range from 23 to 140 °F; higher temperatures by request
- Ambient temperature range: +23° to 104 °F
- Pumped medium H_2S-free, up to 1,000 oz/gal chloride ions
- Density of the pumped medium up to maximum 8.76 lb/gal
- Viscosity of the pumped medium up to maximum 1.88 x 10-5 sq ft/s

Output can be adjusted for different operating conditions according to customer specifications.

Special configurations

- Different voltage and/or mains frequency
- Different insulation class
- Elevated ambient temperature
- Higher protection type
- Enhanced tropical and moisture protection
- Special materials
- Special paint finish for all uncoated components
- Asynchronous motors with efficiency class IE3
- (herborner.X)
- Heat exchanger motor with diffusion of motor waste heat to the swimming pool water (herborner.X-N-C)
- Customer-specific design of the filter cover
- Customer-specific solutions

Model designation

XN040-220A-0204P-W2B-V

1 2 3 4 5 6 7 8 9

Number	Name	Type key identification	Meaning
1	Design	XN	herborner.X-N
2	Nominal diameter pressure flange	025	DF 1
		040	DF 1 ½
		050	DF 2
		065	DF 2 ½
		080	DF 3
		100	DF 4
		125	DF 5
		150	DF 6
		200	DF 8
3	Design dimension	220	Diameter centering [mm]
4	Version	A-Z	Design version
5	Motor power	020	2 hp
		030	3 hp
		050	5 hp
		075	7,5 hp
		100	10 hp
		150	15 hp
		200	20 hp
		250	25 hp
		300	30 hp
		400	40 hp
		500	50 hp
		600	60 hp
		750	75 hp

Number	Name	Type key identification	Meaning
6	Speed	4	1,500 rpm
7	Motor type	P	Permanent - Magnet - Motor
8	Type of material	W2B	See type of material
		W30	See type of material
		W40	See type of material
		W60	See type of material
9	Flange position	V	Front
		VL	Center between front and left
		L	Left
		HL	Center between rear and left
		H	Rear
		HR	Center between rear and right
		R	right
		VR	Center between front and left

Type of material

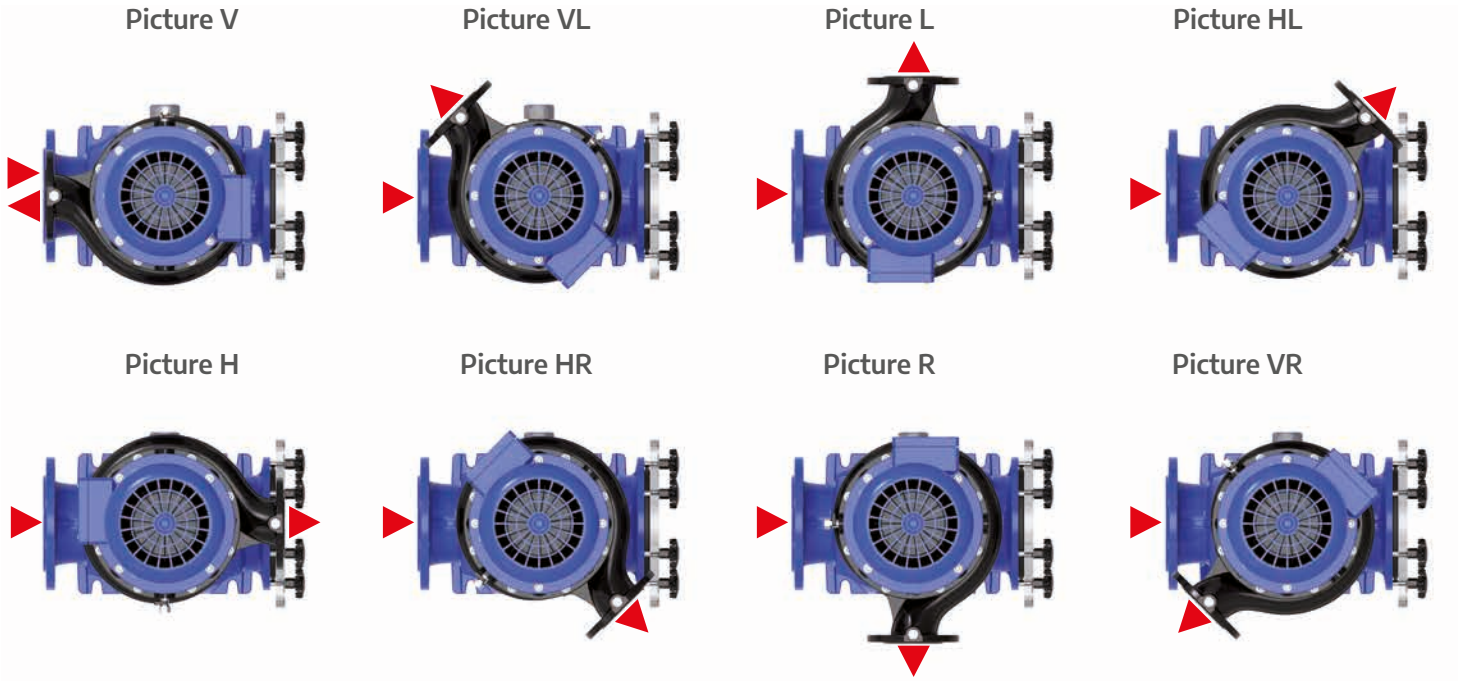
Individual parts	W2B	W30	W40	W60
Filter casing	AISI A48-40B 1)	AISI A48-40B 2)	AISI A48-40B 2)	AISI A48-40B 2)
Filter strainer	AISI 316Ti	AISI 316Ti	AISI 316Ti	AISI 316Ti
Filter cover	PMMA	PMMA	PMMA	PMMA
Impeller protector	POM/FKM	-	-	-
Pump casing	AISI A48-40B 3)	C90700	ASTM A351 CF8M	ASTM A890 Grade 1B
Intermediate casing	AISI A48-40B 3)	C90700	ASTM A351 CF8M	ASTM A890 Grade 1B
Casing cover	AISI A48-40B 3)	C90700	ASTM A351 CF8M	ASTM A890 Grade 1B
Impeller	C95800	C95800	ASTM A351 CF8M	ASTM A890 Grade 1B

1) Interior with epoxy resin hot powder coating
2) Medium-side hardened rubber coating
3) With thick-film coating

TECHNICAL DESCRIPTION

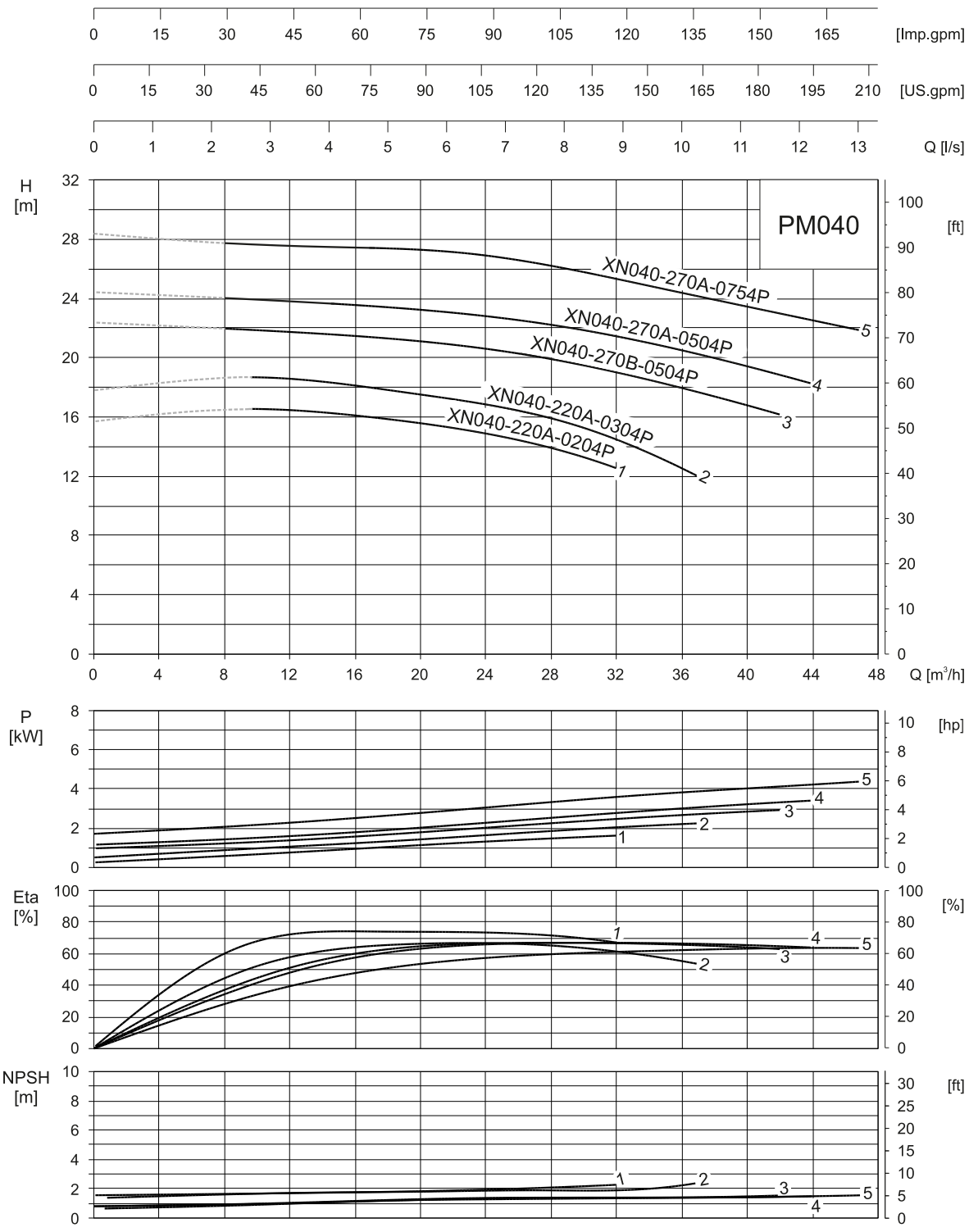
Individual parts	W2B	W30	W40	W60
Mechanical seal	SiC/SiC/FKM	SiC/SiC/FKM	SiC/SiC/FKM	SiC/SiC/FKM
Carbon mechanical seal	Chrome steel/carbon/NBR	Chrome steel/carbon/ NBR	Chrome steel/carbon/NBR	Chrome steel/carbon/NBR
Seal cover	AISI A48-40B	AISI A48-40B	ASTM A351 CF8M	ASTM A890 Grade 1B
Motor shaft	AISI 316Ti	AISI 316Ti	AISI 316Ti or 318LN	AISI 316Ti or 318LN
Mechanical seal protec-tor	C95800	-	-	-

Flange position



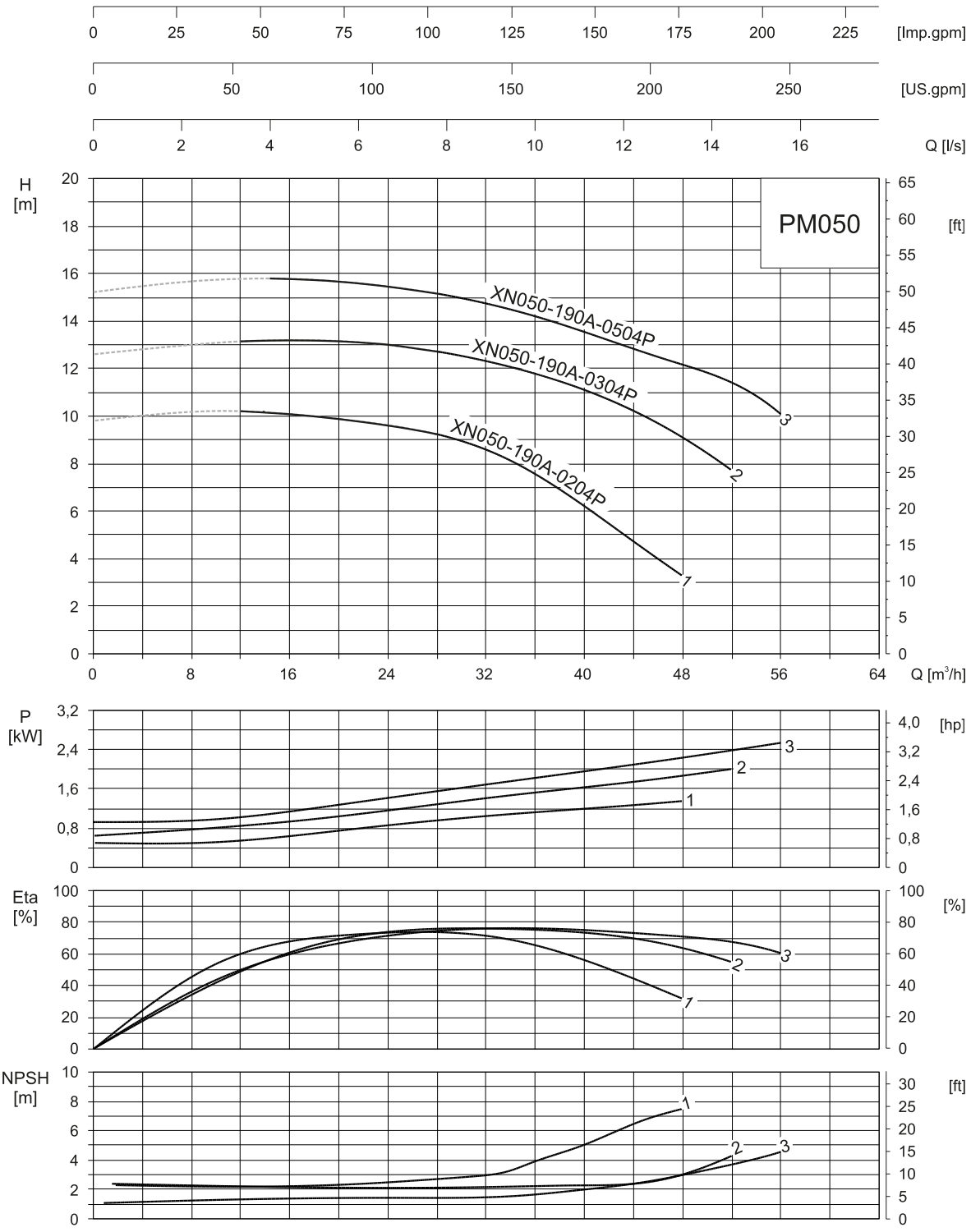
CHARACTERISTIC CURVES 1,500 rpm

DN 40



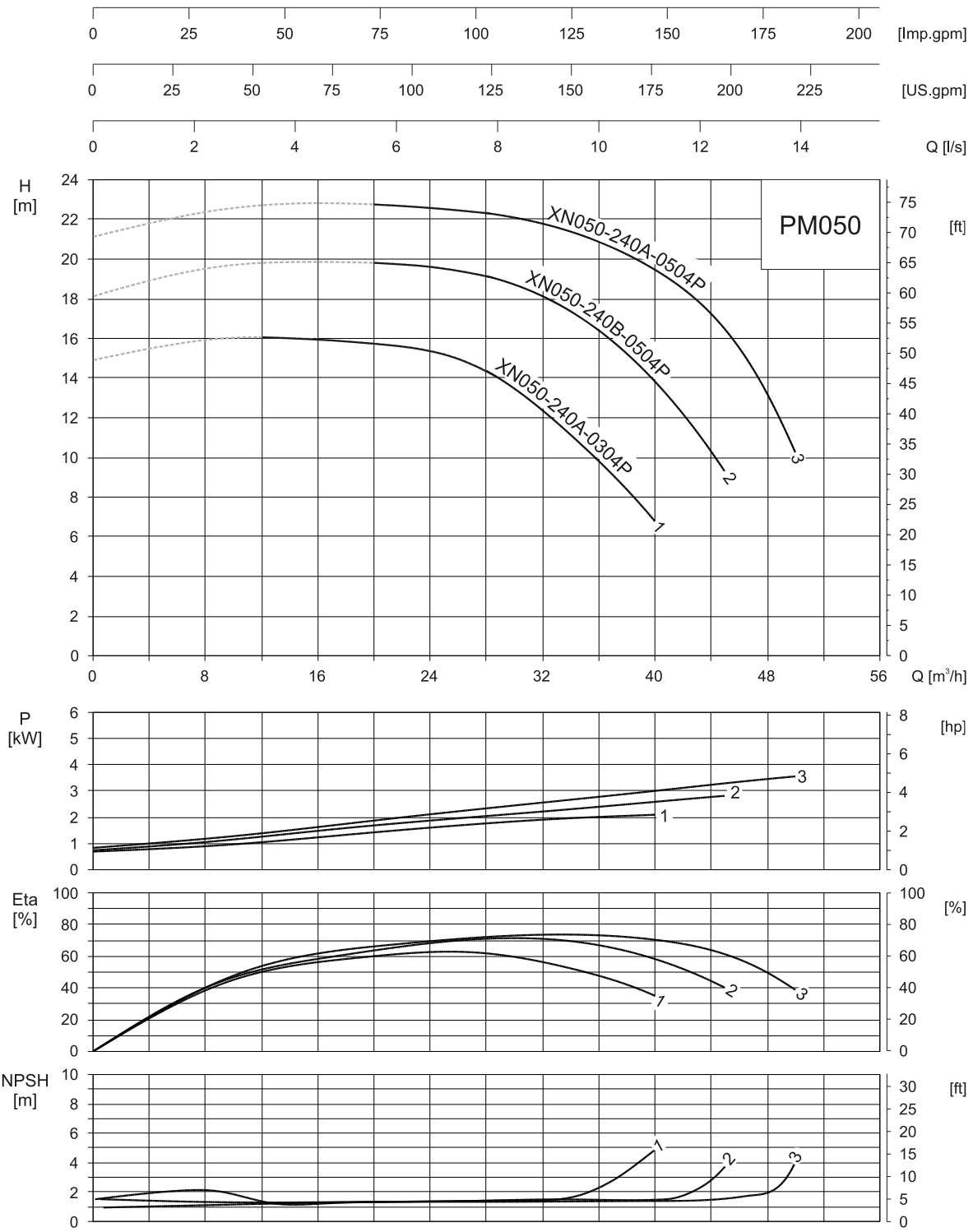
CHARACTERISTIC CURVES 1,500 rpm

DN 50



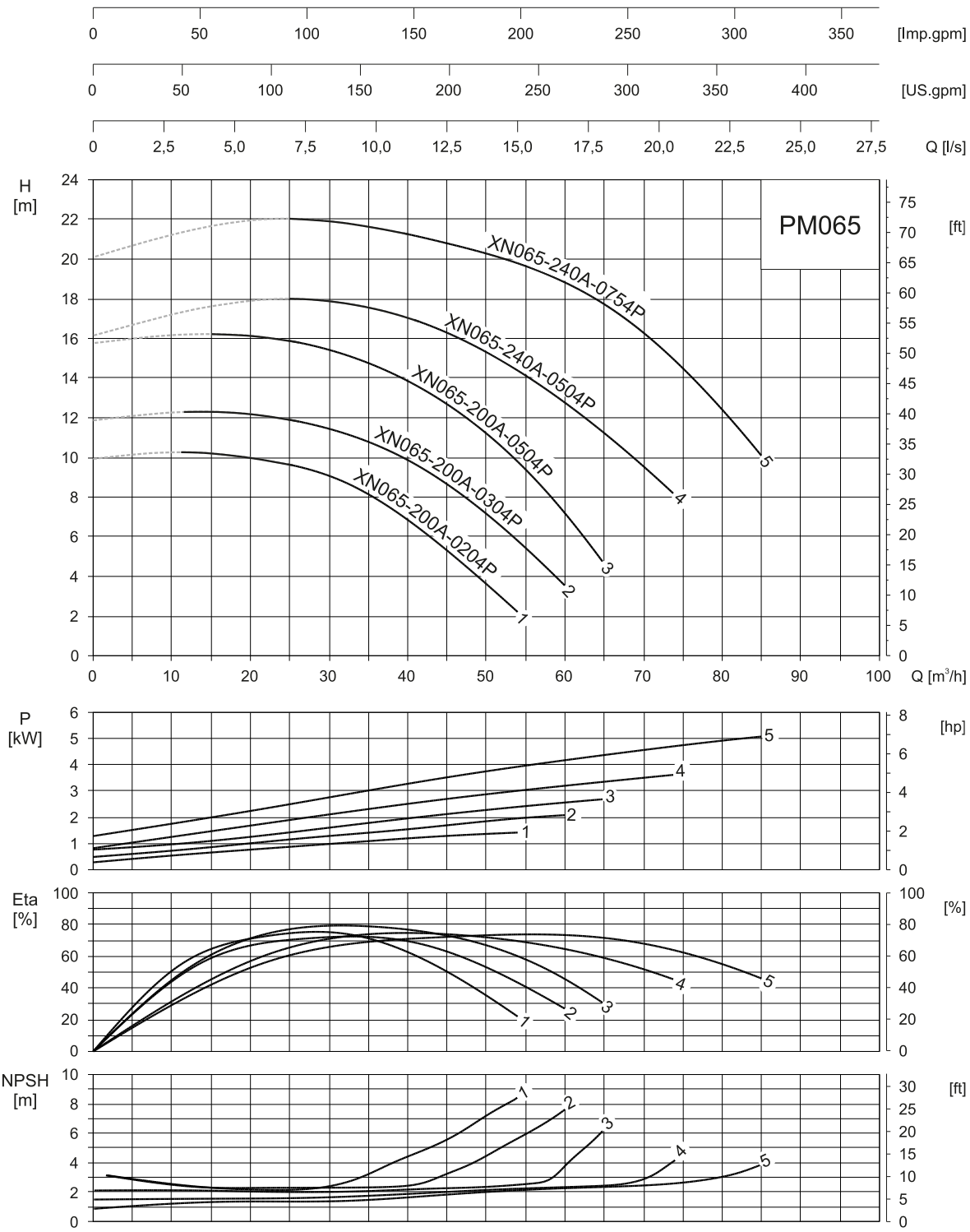
CHARACTERISTIC CURVES 1,500 rpm

DN 50



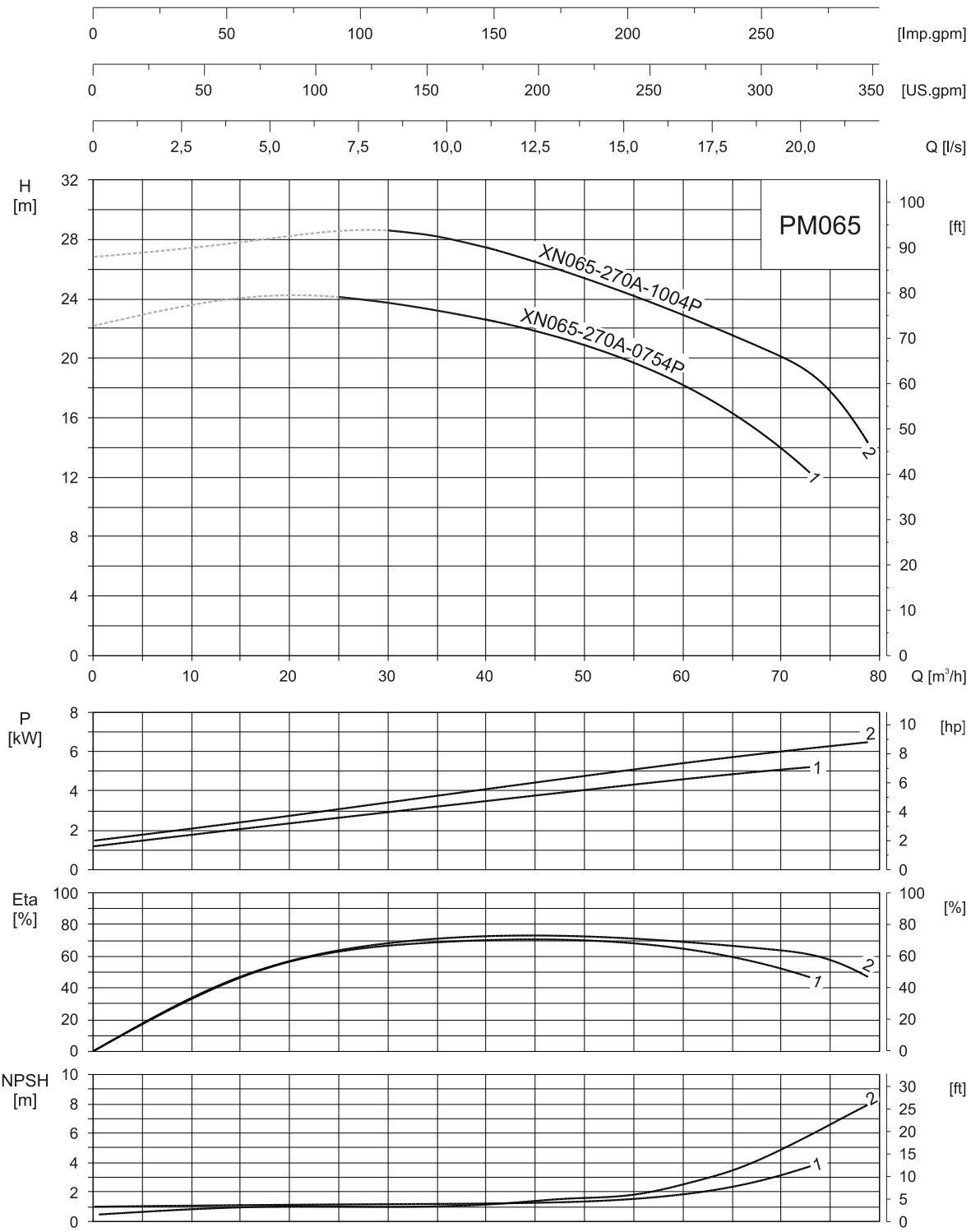
CHARACTERISTIC CURVES 1,500 rpm

DN 65



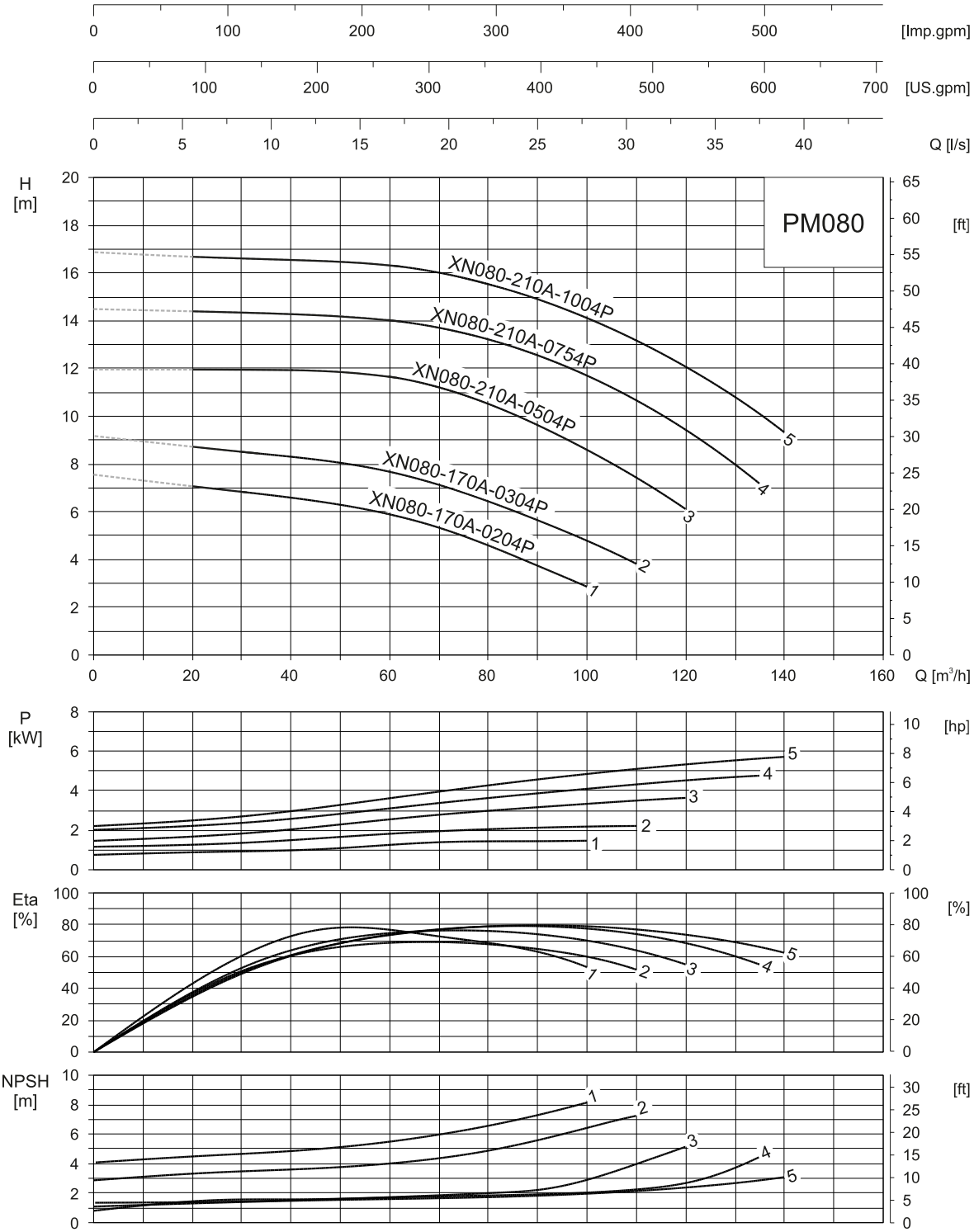
CHARACTERISTIC CURVES 1,500 rpm

DN 65



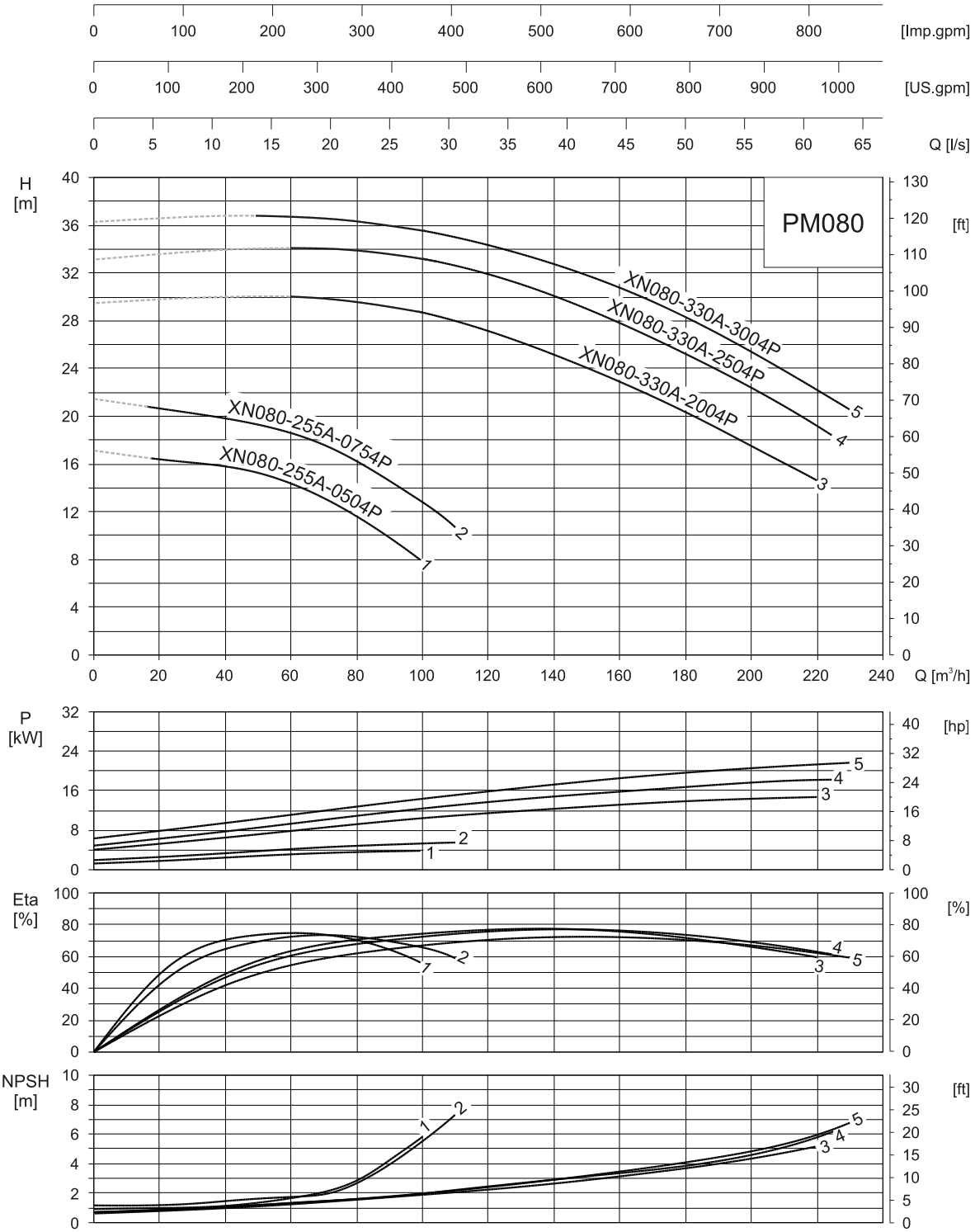
CHARACTERISTIC CURVES 1,500 rpm

DN 80



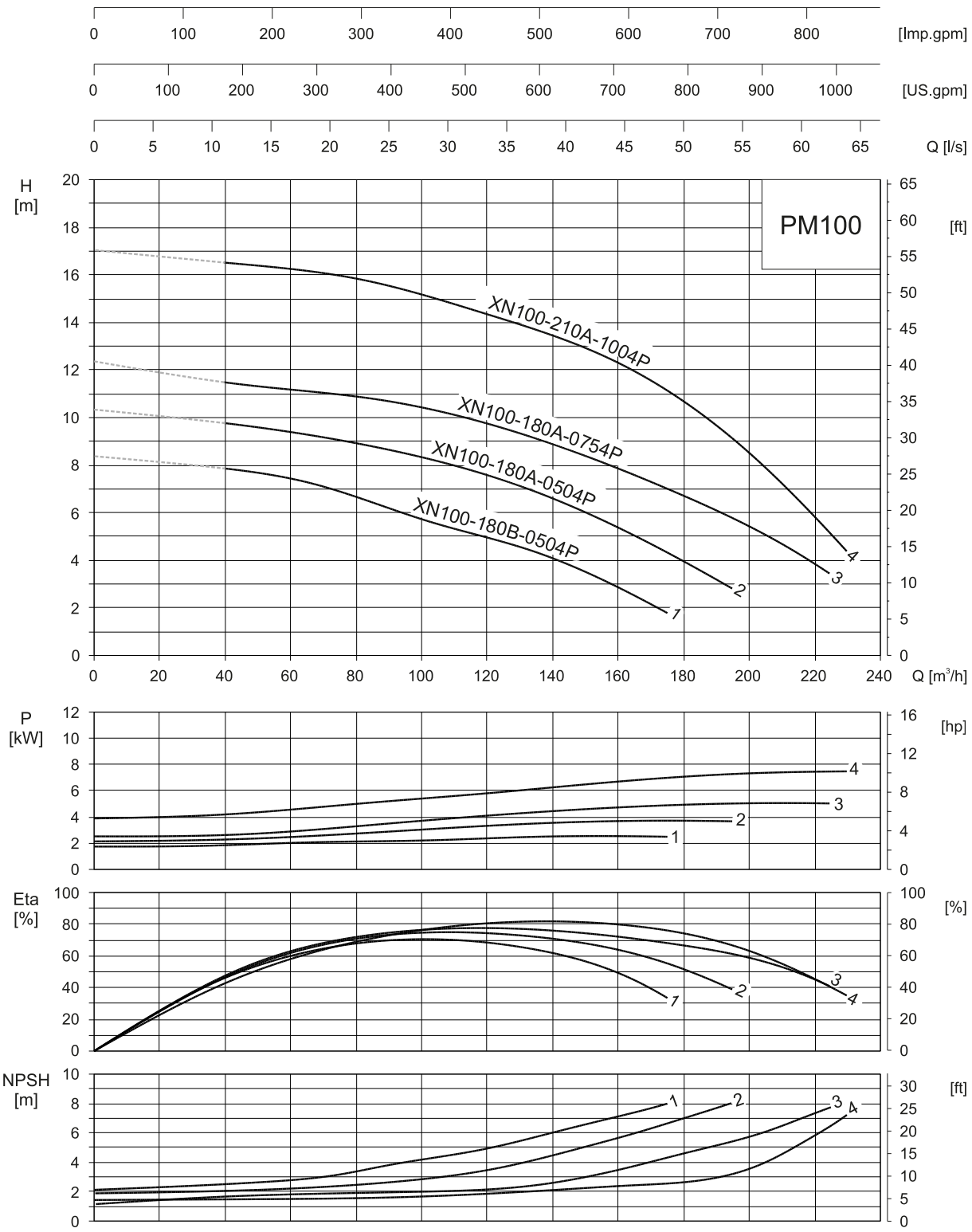
CHARACTERISTIC CURVES 1,500 rpm

DN 80



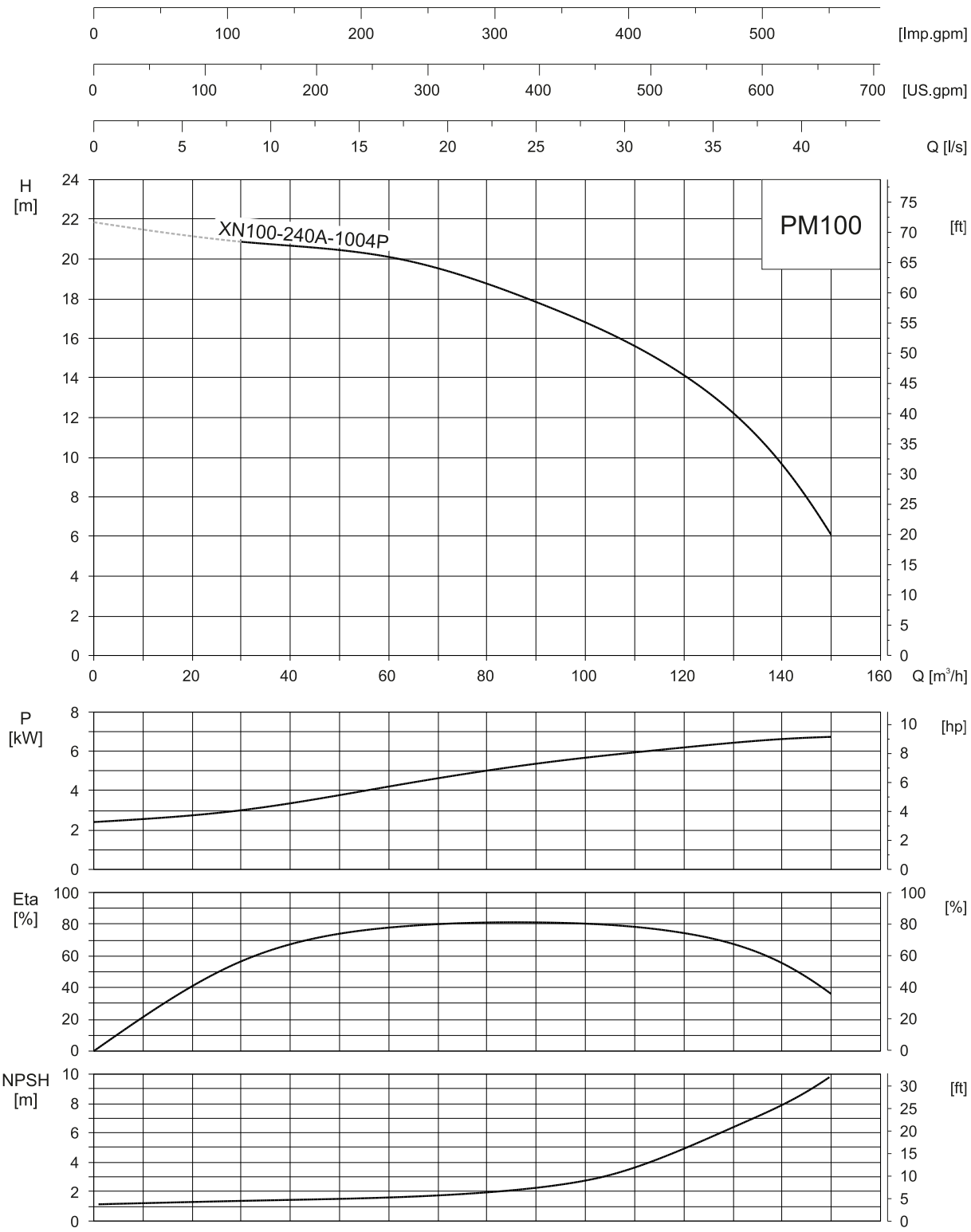
CHARACTERISTIC CURVES 1,500 rpm

DN 100



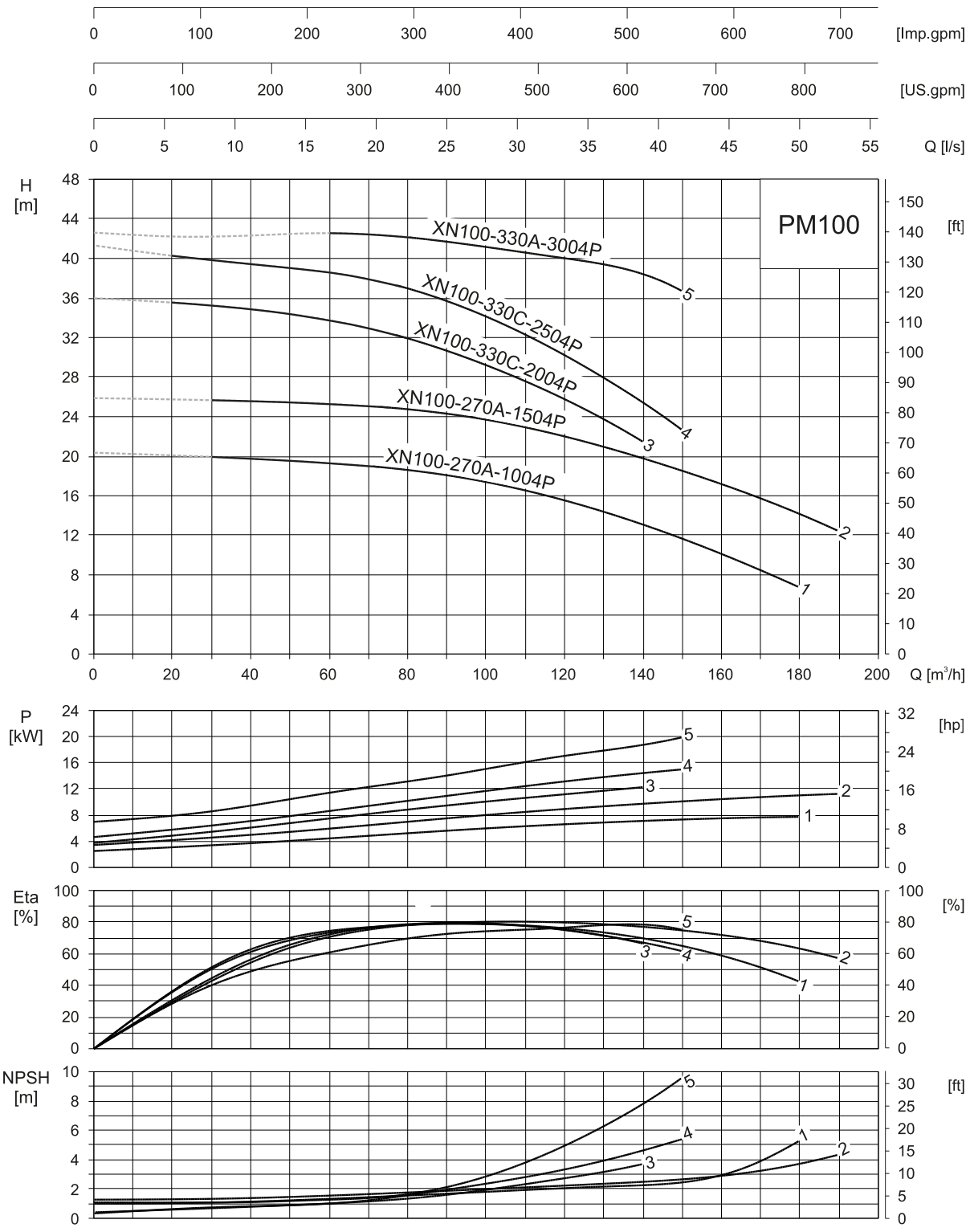
CHARACTERISTIC CURVES 1,500 rpm

DN 100



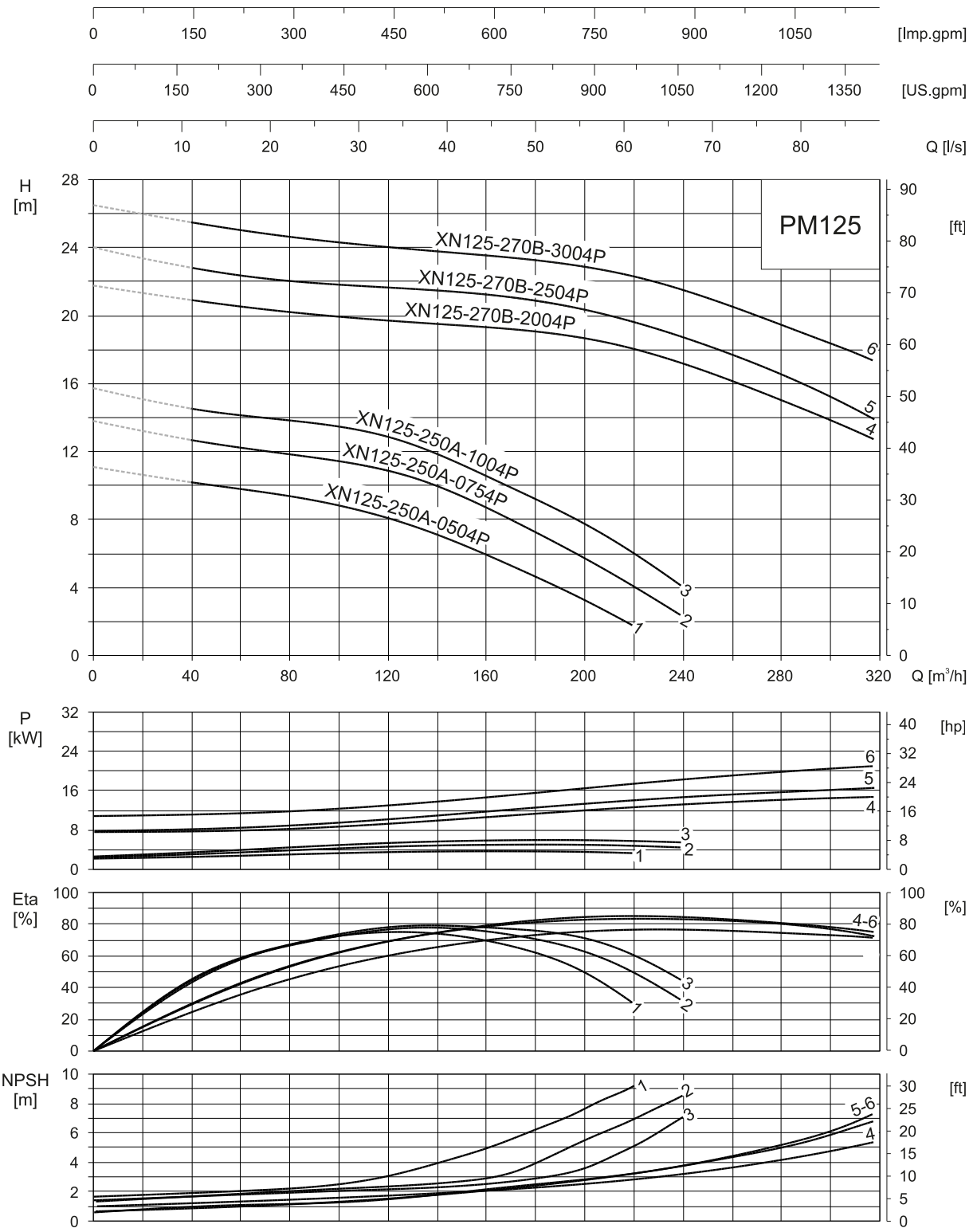
CHARACTERISTIC CURVES 1,500 rpm

DN 100



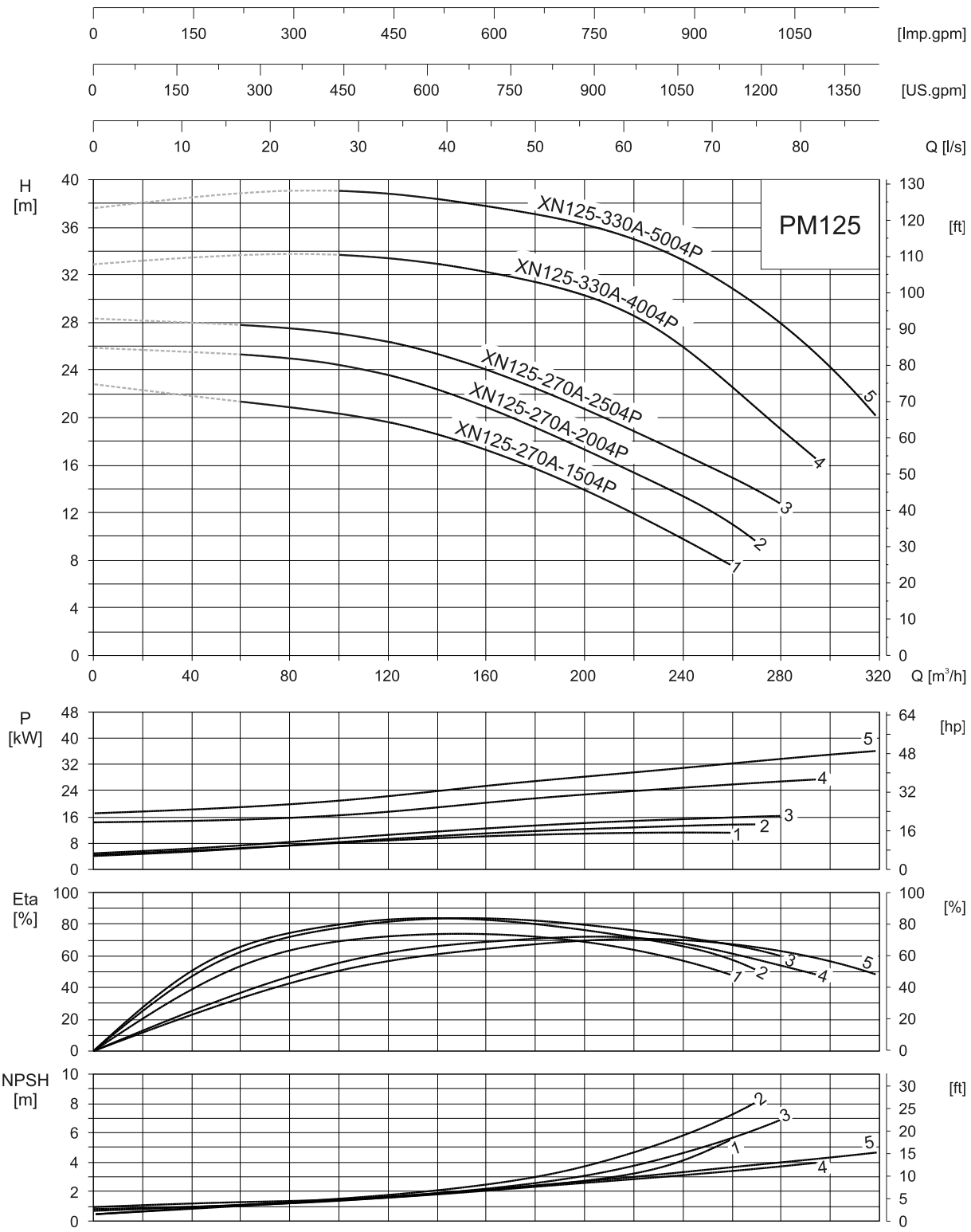
CHARACTERISTIC CURVES 1,500 rpm

DN 125



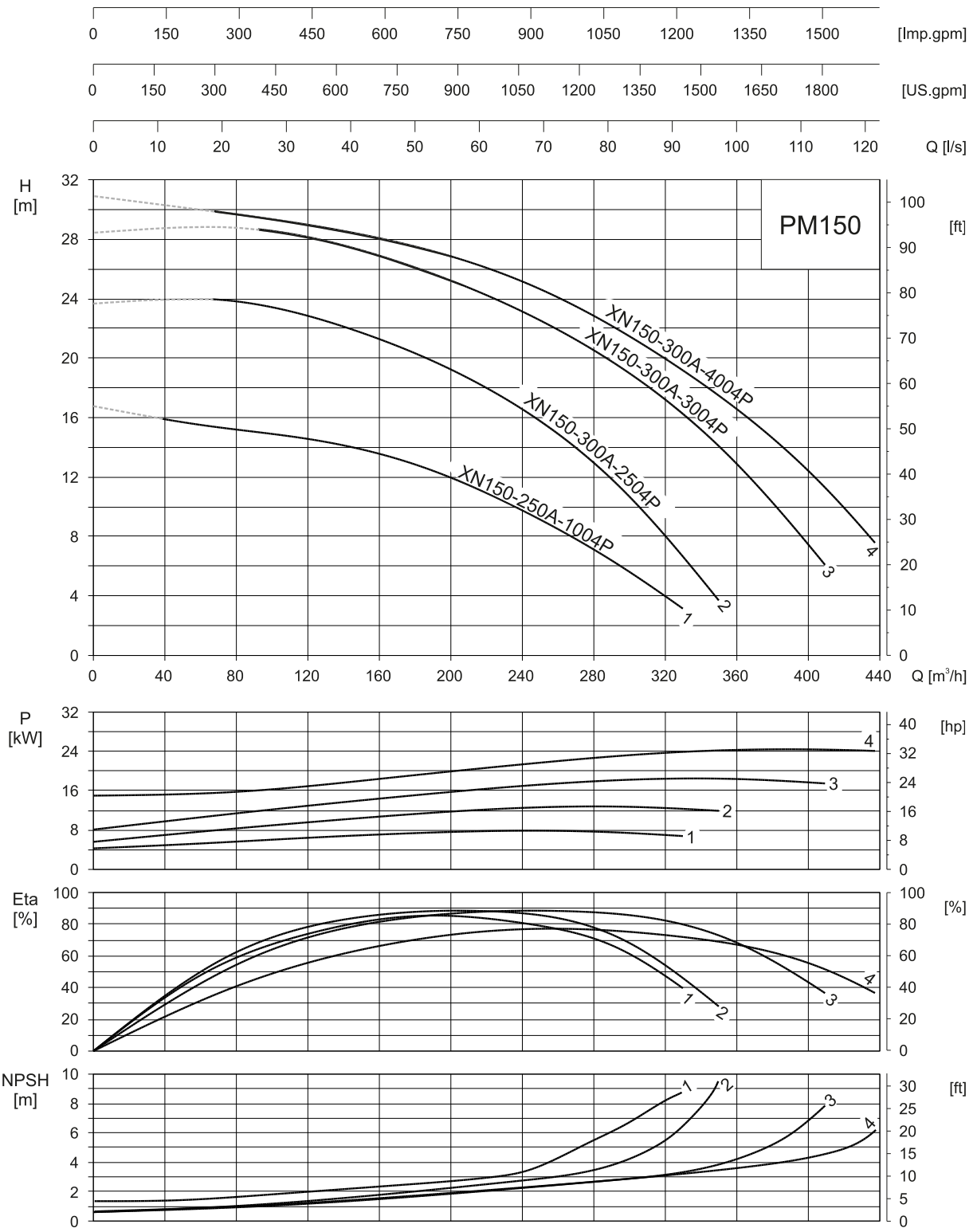
CHARACTERISTIC CURVES 1,500 rpm

DN 125



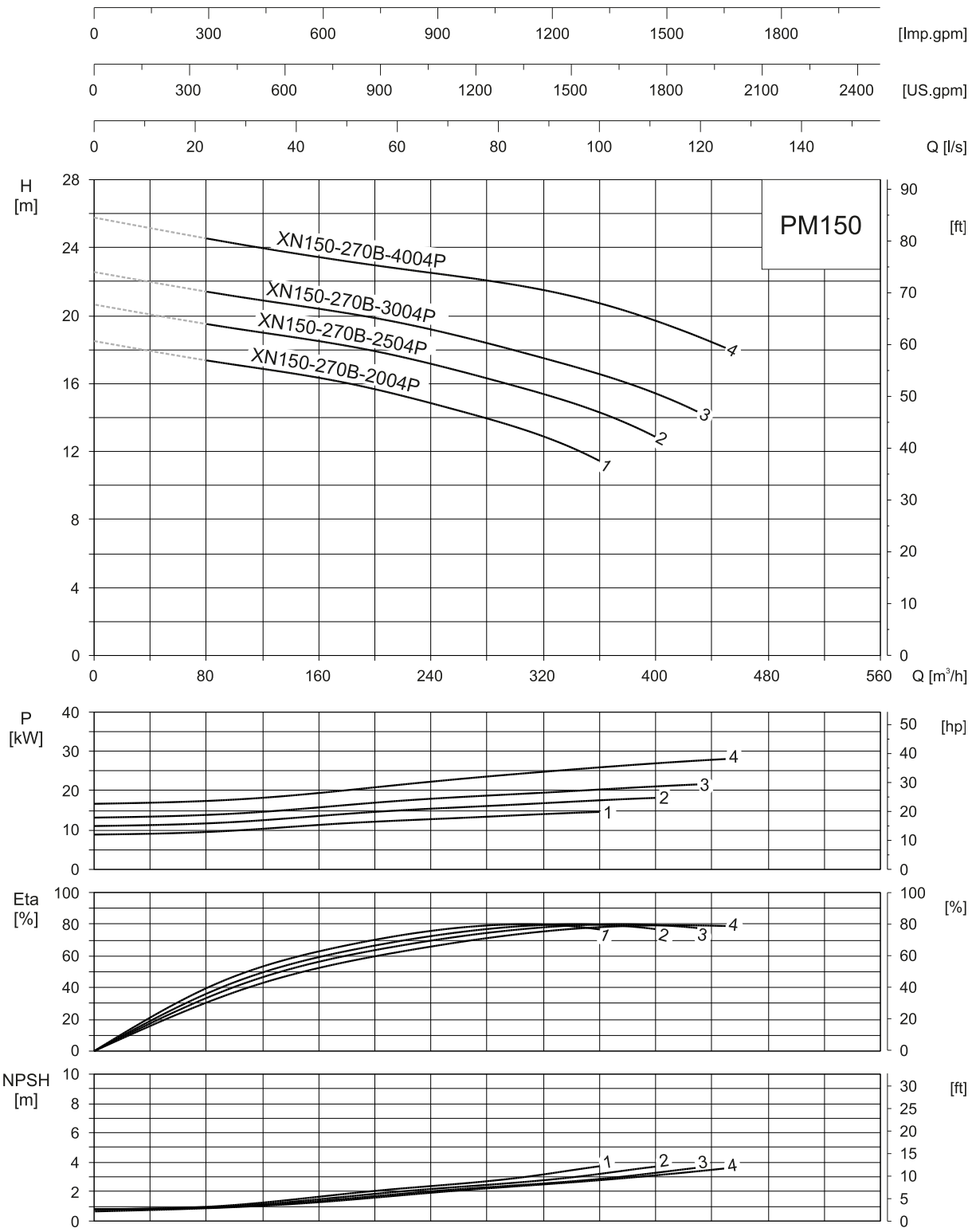
CHARACTERISTIC CURVES 1,500 rpm

DN 150



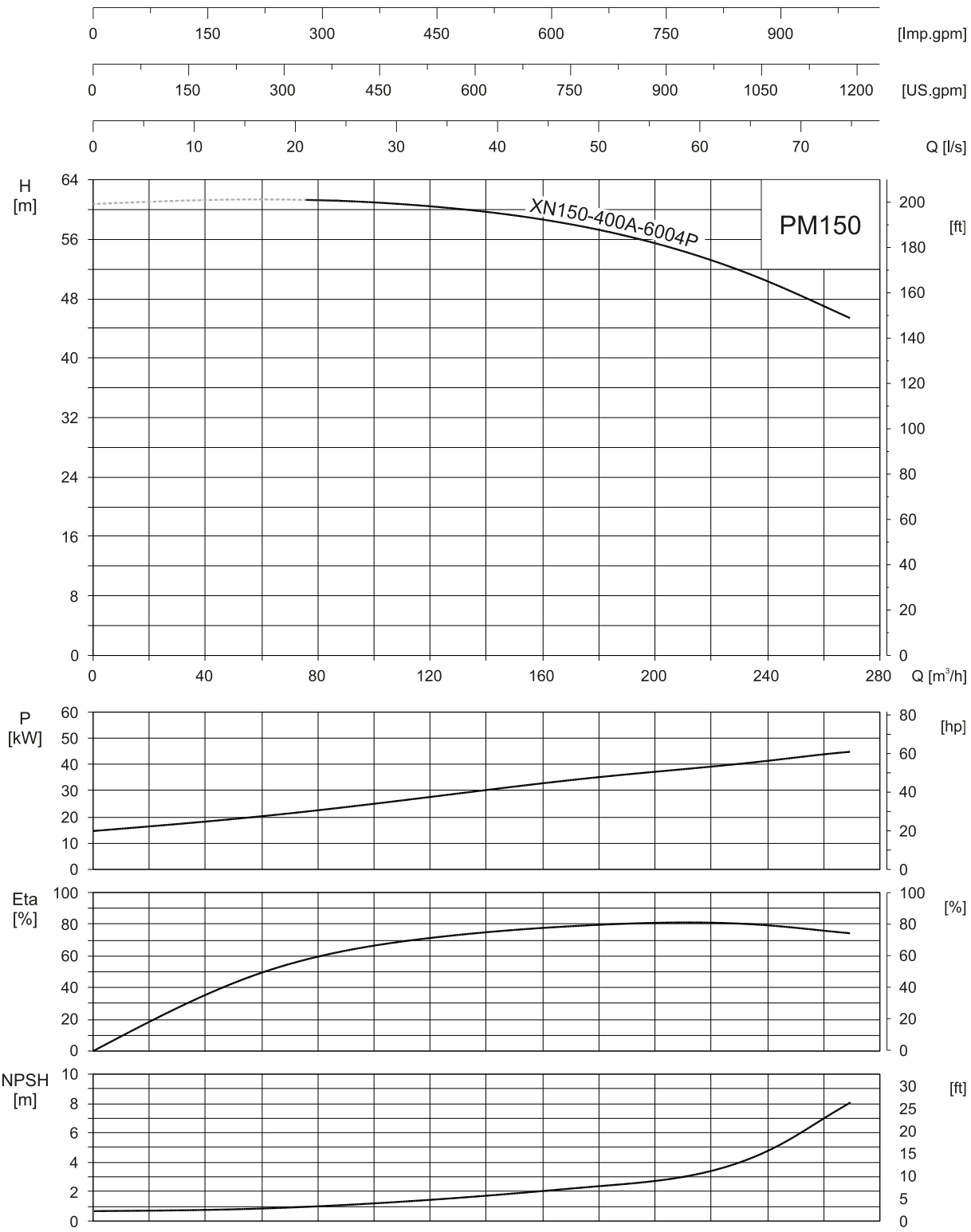
CHARACTERISTIC CURVES 1,500 rpm

DN 150



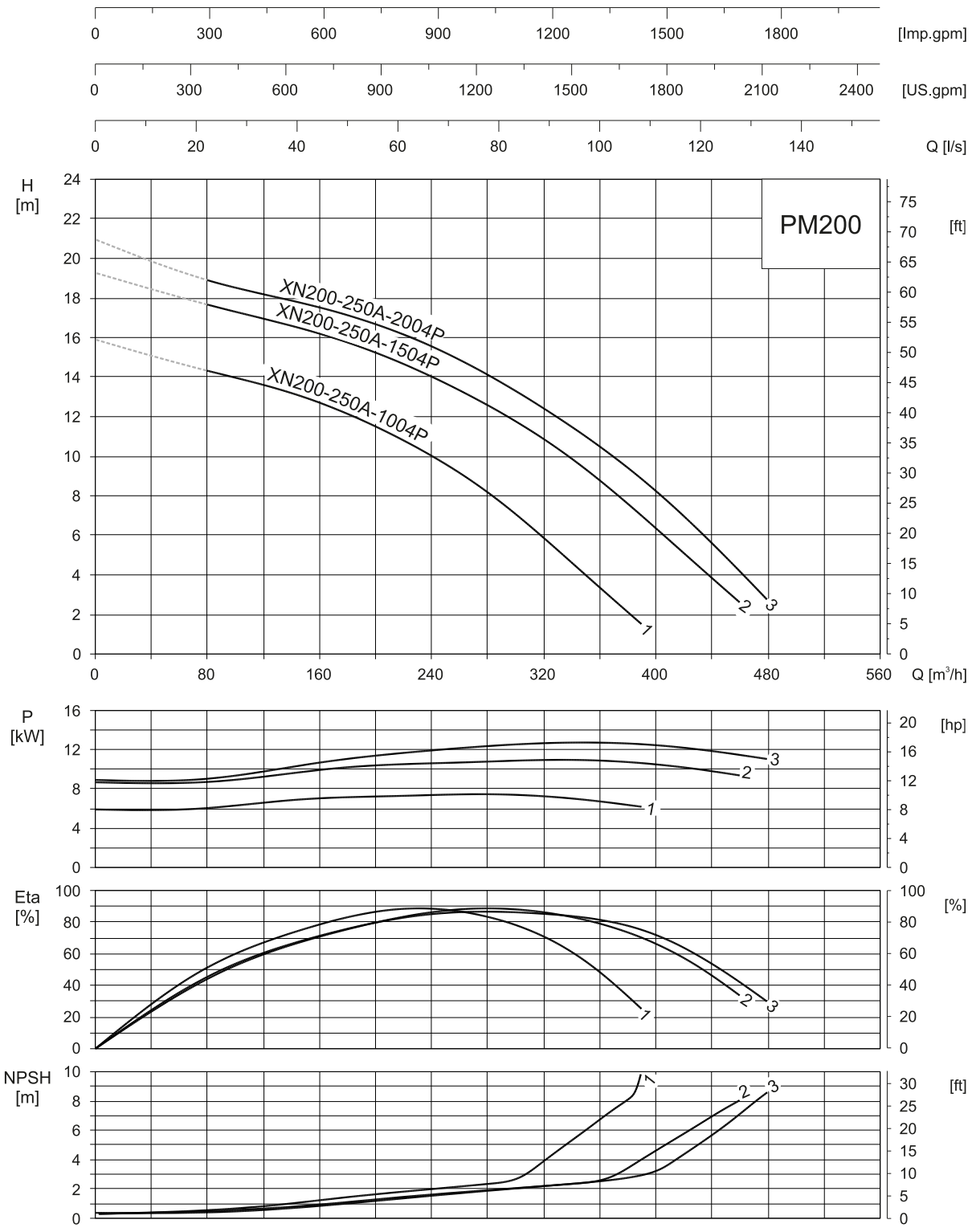
CHARACTERISTIC CURVES 1,500 rpm

DN 150



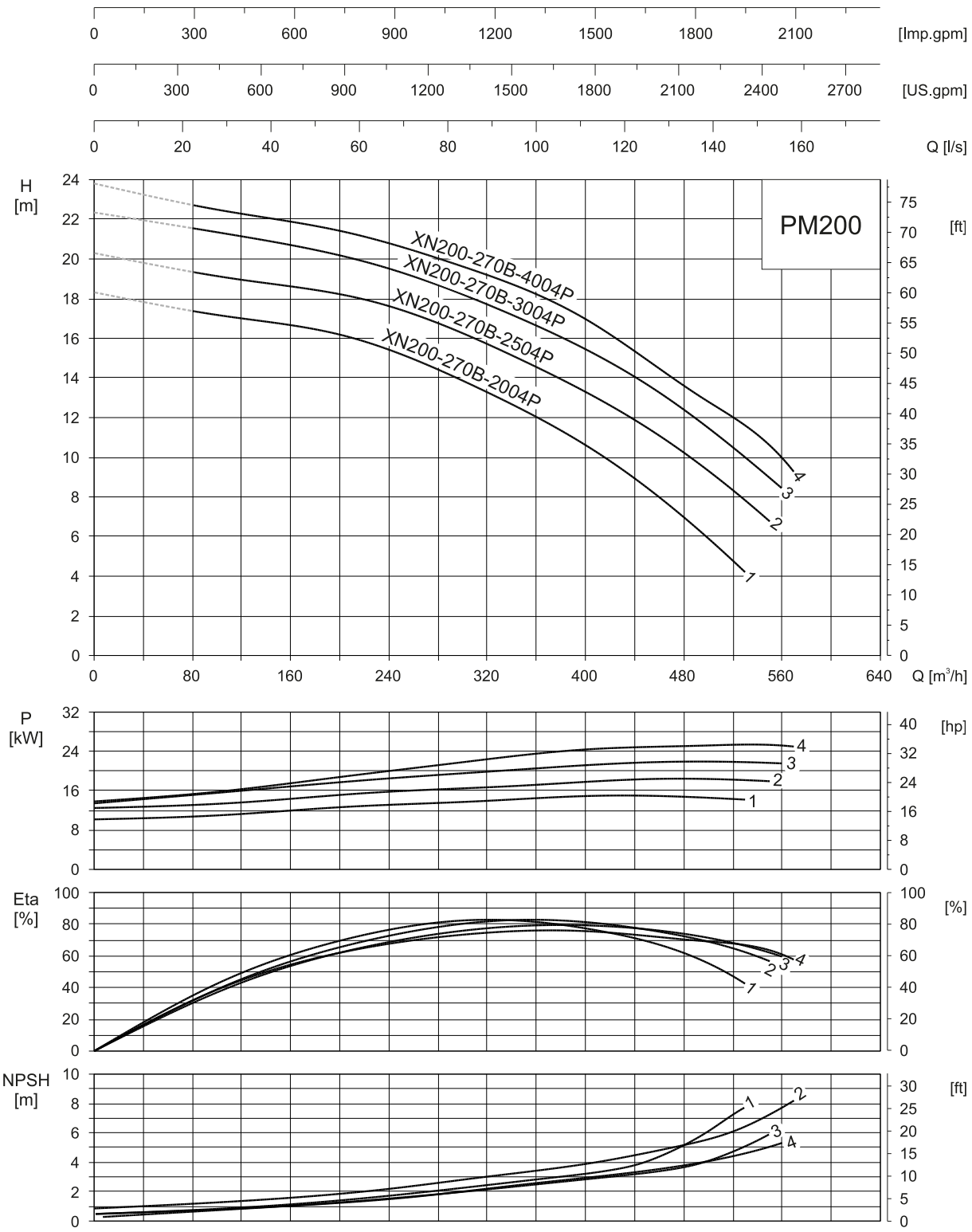
CHARACTERISTIC CURVES 1,500 rpm

DN 200



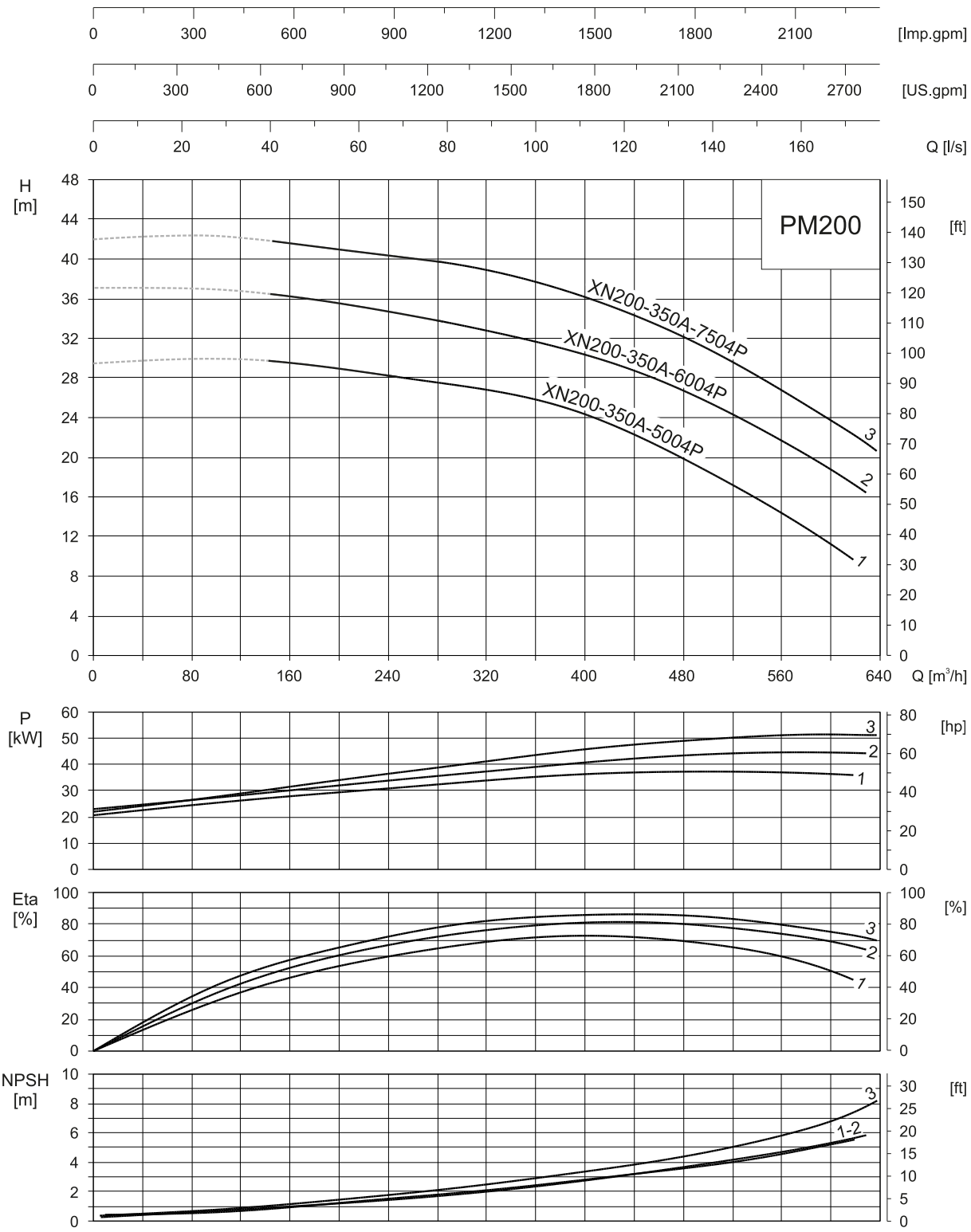
CHARACTERISTIC CURVES 1,500 rpm

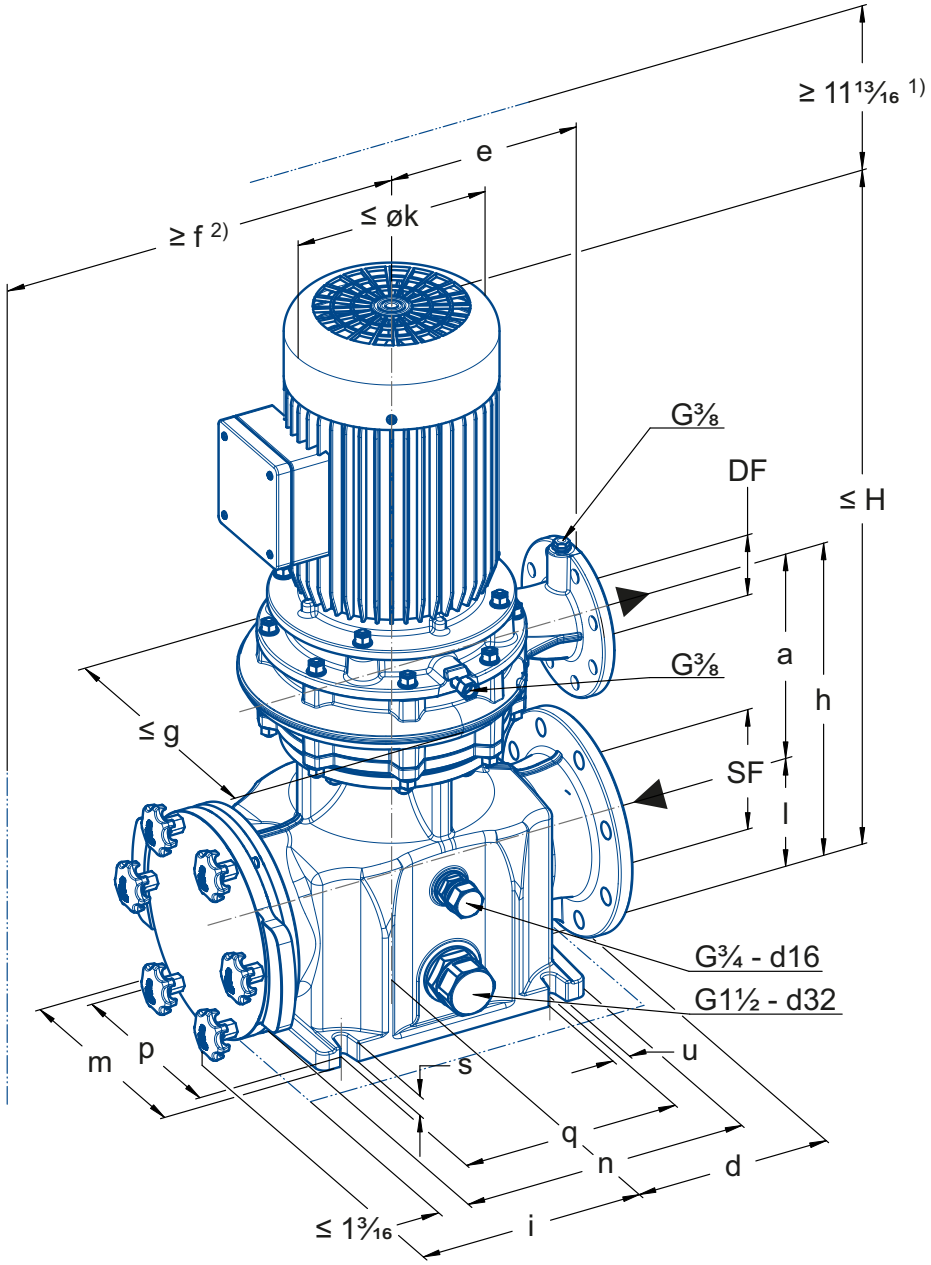
DN 200



CHARACTERISTIC CURVES 1,500 rpm

DN 200





1) To remove the motor, ensure sufficient space is available for the lifting device.

2) Clearance dimensions for filter strainer removal

Flange connection dimensions according to ANSI B 16.5 Class 150

1,500 rpm

	P_2	DF	SF	≤ H	a	d	e	≥ f [2]	≤ g	h	i	≤ Ø k	l	m	n	p	q	s	u	m [3]
	hp	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	lb
XN025-200A-0104P	1	1 (25)	4 (100)	28.48 (724)	11.14 (283)	7.87 (200)	7.09 (180)	26.57 (675)	13.03 (331)	15.87 (403)	10.2 (259)	6.14 (156)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	161
XN040-160A-0104P	1	1.5 (40)	4 (100)	28.31 (719)	10.89 (277)	7.87 (200)	6.3 (160)	26.57 (675)	13.03 (331)	15.61 (397)	10.2 (259)	6.14 (156)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	161
XN040-220A-0204P	2	1.5 (40)	4 (100)	29.34 (746)	9.04 (230)	7.87 (200)	7.87 (200)	26.57 (675)	13.03 (331)	13.76 (350)	10.2 (259)	6.93 (176)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	231
XN040-220A-0304P	3	1.5 (40)	4 (100)	31.31 (796)	9.04 (230)	7.87 (200)	7.87 (200)	26.57 (675)	13.03 (331)	13.76 (350)	10.2 (259)	6.93 (176)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	240
XN040-270A-0504P	5	1.5 (40)	4 (100)	30.66 (779)	9.43 (240)	7.87 (200)	9.19 (234)	26.57 (675)	13.94 (354)	14.15 (360)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	270
XN040-270A-0754P	7,5	1.5 (40)	4 (100)	32.63 (829)	9.43 (240)	7.87 (200)	9.19 (234)	26.57 (675)	13.94 (354)	14.15 (360)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	303
XN040-270B-0504P	5	1.5 (40)	4 (100)	30.66 (779)	9.43 (240)	7.87 (200)	9.19 (234)	26.57 (675)	13.94 (354)	14.15 (360)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	270
XN050-190A-0204P	2	2 (50)	4 (100)	30.96 (787)	10.67 (271)	7.87 (200)	7.87 (200)	26.57 (675)	13.03 (331)	15.39 (391)	10.2 (259)	6.93 (176)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	225
XN050-190A-0304P	3	2 (50)	4 (100)	32.93 (837)	10.67 (271)	7.87 (200)	7.87 (200)	26.57 (675)	13.03 (331)	15.39 (391)	10.2 (259)	6.93 (176)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	233
XN050-190A-0504P	5	2 (50)	4 (100)	31.75 (807)	10.67 (271)	7.87 (200)	7.87 (200)	26.57 (675)	13.31 (338)	15.39 (391)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	250
XN050-240A-0304P	3	2 (50)	4 (100)	31.22 (793)	9.21 (234)	7.87 (200)	8.66 (220)	26.57 (675)	13.23 (336)	13.94 (354)	10.2 (259)	6.93 (176)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	239
XN050-240A-0504P	5	2 (50)	4 (100)	30.41 (773)	9.21 (234)	7.87 (200)	8.66 (220)	26.57 (675)	13.31 (338)	13.94 (354)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	256
XN050-240B-0504P	5	2 (50)	4 (100)	30.41 (773)	9.21 (234)	7.87 (200)	8.66 (220)	26.57 (675)	13.31 (338)	13.94 (354)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	256
XN065-200A-0204P	2	2.5 (65)	4 (100)	32.61 (829)	11.63 (296)	7.87 (200)	8.86 (225)	26.57 (675)	13.03 (331)	16.35 (416)	10.2 (259)	6.93 (176)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	234
XN065-200A-0304P	3	2.5 (65)	4 (100)	34.57 (879)	11.63 (296)	7.87 (200)	8.86 (225)	26.57 (675)	13.03 (331)	16.35 (416)	10.2 (259)	6.93 (176)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	243
XN065-200A-0504P	5	2.5 (65)	4 (100)	32.93 (837)	11.63 (296)	7.87 (200)	8.86 (225)	26.57 (675)	13.31 (338)	16.35 (416)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	258
XN065-220A-0504P	5	2.5 (65)	4 (100)	30.28 (769)	9.21 (234)	7.87 (200)	9.84 (250)	26.57 (675)	13.39 (340)	13.94 (354)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	255
XN065-220A-0754P	7,5	2.5 (65)	4 (100)	32.24 (819)	9.21 (234)	7.87 (200)	9.84 (250)	26.57 (675)	13.39 (340)	13.94 (354)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	288
XN065-220B-0504P	5	2.5 (65)	4 (100)	30.28 (769)	9.21 (234)	7.87 (200)	9.84 (250)	26.57 (675)	13.39 (340)	13.94 (354)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	255
XN065-240A-0504P	5	2.5 (65)	4 (100)	30.65 (779)	9.33 (237)	7.87 (200)	9.84 (250)	26.57 (675)	14.41 (366)	14.06 (357)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	297

1) To remove the motor, ensure sufficient space is available for the lifting device.

2) Clearance dimensions for filter strainer removal

3) Total weight of the pump

Flange connection dimensions according to ANSI B 16.5 Class 150

1,500 rpm

	P_2	DF	SF	≤ H	a	d	e	≥ f [2]	≤ g	h	i	≤ Ø k	l	m	n	p	q	s	u	m [3]
	hp	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	lb
XN065-240A-0754P	7,5	2.5 (65)	4 (100)	32.62 (829)	9.33 (237)	7.87 (200)	9.84 (250)	26.57 (675)	14.41 (366)	14.06 (357)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	330
XN065-270A-0754P	7,5	2.5 (65)	4 (100)	32.63 (829)	9.43 (240)	7.87 (200)	9.45 (240)	26.57 (675)	14.49 (368)	14.15 (360)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	318
XN065-270A-1004P	10	2.5 (65)	4 (100)	36.44 (926)	9.43 (240)	7.87 (200)	9.45 (240)	26.57 (675)	14.49 (368)	14.15 (360)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	336
XN065-270C-0754P	7,5	2.5 (65)	4 (100)	32.9 (836)	9.57 (243)	7.87 (200)	9.84 (250)	26.57 (675)	15.12 (384)	14.29 (363)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	319
XN065-270C-1004P	10	2.5 (65)	4 (100)	36.72 (933)	9.57 (243)	7.87 (200)	9.84 (250)	26.57 (675)	15.12 (384)	14.29 (363)	10.2 (259)	8.66 (220)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	338
XN065-300B-1504P	15	2.5 (65)	4 (100)	38.27 (972)	9.7 (247)	7.87 (200)	10.83 (275)	26.57 (675)	16.54 (420)	14.42 (367)	10.2 (259)	10.24 (260)	4.72 (120)	9.21 (234)	11.69 (297)	8.07 (205)	8.86 (225)	0.83 (21)	0.67 (17)	426
XN080-170A-0204P	2	3 (80)	6 (150)	34.76 (883)	13.23 (336)	10.24 (260)	8.86 (225)	30.91 (785)	15.43 (392)	19.13 (486)	12.17 (309)	6.93 (176)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	302
XN080-170A-0304P	3	3 (80)	6 (150)	36.73 (933)	13.23 (336)	10.24 (260)	8.86 (225)	30.91 (785)	15.43 (392)	19.13 (486)	12.17 (309)	6.93 (176)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	310
XN080-210A-0504P	5	3 (80)	6 (150)	35.43 (900)	12.97 (330)	10.24 (260)	9.84 (250)	30.91 (785)	15.43 (392)	18.88 (480)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	318
XN080-210A-0754P	7,5	3 (80)	6 (150)	37.4 (950)	12.97 (330)	10.24 (260)	9.84 (250)	30.91 (785)	15.43 (392)	18.88 (480)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	351
XN080-210A-1004P	10	3 (80)	6 (150)	41.21 (1047)	12.97 (330)	10.24 (260)	9.84 (250)	30.91 (785)	15.43 (392)	18.88 (480)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	373
XN080-255A-0504P	5	3 (80)	6 (150)	33.7 (856)	11.36 (289)	10.24 (260)	11.02 (280)	30.91 (785)	15.43 (392)	17.26 (439)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	357
XN080-255A-0754P	7,5	3 (80)	6 (150)	35.67 (906)	11.36 (289)	10.24 (260)	11.02 (280)	30.91 (785)	15.43 (392)	17.26 (439)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	385
XN080-330A-2004P	20	3 (80)	6 (150)	41.79 (1062)	11.56 (294)	10.24 (260)	12.4 (315)	30.91 (785)	19.53 (496)	17.46 (444)	12.17 (309)	10.24 (260)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	594
XN080-330A-2504P	25	3 (80)	6 (150)	43.72 (1111)	11.56 (294)	10.24 (260)	12.4 (315)	30.91 (785)	19.84 (504)	17.46 (444)	12.17 (309)	12.4 (315)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	726
XN080-330A-3004P	30	3 (80)	6 (150)	47.89 (1217)	11.56 (294)	10.24 (260)	12.4 (315)	30.91 (785)	19.84 (504)	17.46 (444)	12.17 (309)	12.4 (315)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	666
XN100-180A-0504P	5	4 (100)	6 (150)	36.84 (936)	13.58 (345)	10.24 (260)	11.02 (280)	30.91 (785)	15.43 (392)	19.49 (495)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	370
XN100-180A-0754P	7,5	4 (100)	6 (150)	38.81 (986)	13.58 (345)	10.24 (260)	11.02 (280)	30.91 (785)	15.43 (392)	19.49 (495)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	403
XN100-180B-0504P	5	4 (100)	6 (150)	36.84 (936)	13.58 (345)	10.24 (260)	11.02 (280)	30.91 (785)	15.43 (392)	19.49 (495)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	370
XN100-210A-1004P	10	4 (100)	6 (150)	41.45 (1053)	13.09 (333)	10.24 (260)	11.02 (280)	30.91 (785)	15.51 (394)	19 (483)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	401

1) To remove the motor, ensure sufficient space is available for the lifting device.

2) Clearance dimensions for filter strainer removal

3) Total weight of the pump

Flange connection dimensions according to ANSI B 16.5 Class 150

1,500 rpm

	P_2	DF	SF	≤ H	a	d	e	≥ f [2]	≤ g	h	i	≤ Ø k	l	m	n	p	q	s	u	m [3]
	hp	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	lb
XN100-240A-1004P	10	4 (100)	6 (150)	41.31 (1050)	13.13 (334)	10.24 (260)	11.02 (280)	30.91 (785)	15.91 (404)	19.03 (484)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	410
XN100-270A-1004P	10	4 (100)	6 (150)	38.26 (972)	10.17 (259)	10.24 (260)	10.63 (270)	30.91 (785)	15.51 (394)	16.07 (409)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	395
XN100-270A-1504P	15	4 (100)	6 (150)	39.36 (1000)	10.17 (259)	10.24 (260)	10.63 (270)	30.91 (785)	15.51 (394)	16.07 (409)	12.17 (309)	10.24 (260)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	448
XN100-330A-3004P	30	4 (100)	6 (150)	48.66 (1236)	13.37 (340)	10.24 (260)	12.4 (315)	30.91 (785)	19.84 (504)	19.27 (490)	12.17 (309)	12.4 (315)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	647
XN100-330C-2004P	20	4 (100)	6 (150)	40.92 (1040)	11.16 (284)	10.24 (260)	12.4 (315)	30.91 (785)	17.72 (450)	17.07 (434)	12.17 (309)	10.24 (260)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	579
XN100-330C-2504P	25	4 (100)	6 (150)	42.85 (1089)	11.16 (284)	10.24 (260)	12.4 (315)	30.91 (785)	19.84 (504)	17.07 (434)	12.17 (309)	12.4 (315)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	711
XN125-250A-0504P	5	5 (125)	6 (150)	35.71 (907)	13.31 (338)	10.24 (260)	13.98 (355)	30.91 (785)	20.39 (518)	19.21 (488)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	404
XN125-250A-0754P	7,5	5 (125)	6 (150)	37.68 (957)	13.31 (338)	10.24 (260)	13.98 (355)	30.91 (785)	20.39 (518)	19.21 (488)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	437
XN125-250A-1004P	10	5 (125)	6 (150)	41.5 (1054)	13.31 (338)	10.24 (260)	13.98 (355)	30.91 (785)	20.39 (518)	19.21 (488)	12.17 (309)	8.66 (220)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	454
XN125-270A-1504P	15	5 (125)	6 (150)	40.99 (1042)	11.44 (291)	10.24 (260)	13.98 (355)	30.91 (785)	16.46 (418)	17.34 (441)	12.17 (309)	10.24 (260)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	469
XN125-270A-2004P	20	5 (125)	6 (150)	41.22 (1047)	11.44 (291)	10.24 (260)	13.98 (355)	30.91 (785)	16.46 (418)	17.34 (441)	12.17 (309)	10.24 (260)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	502
XN125-270A-2504P	25	5 (125)	6 (150)	43.15 (1096)	11.44 (291)	10.24 (260)	13.98 (355)	30.91 (785)	19.84 (504)	17.34 (441)	12.17 (309)	12.4 (315)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	638
XN125-270B-2004P	20	5 (125)	6 (150)	41.83 (1063)	11.76 (299)	10.24 (260)	13.98 (355)	30.91 (785)	20.47 (520)	17.66 (449)	12.17 (309)	10.24 (260)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	534
XN125-270B-2504P	25	5 (125)	6 (150)	43.76 (1112)	11.76 (299)	10.24 (260)	13.98 (355)	30.91 (785)	20.47 (520)	17.66 (449)	12.17 (309)	12.4 (315)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	666
XN125-270B-3004P	30	5 (125)	6 (150)	46.2 (1174)	11.76 (299)	10.24 (260)	13.98 (355)	30.91 (785)	20.47 (520)	17.66 (449)	12.17 (309)	12.4 (315)	5.91 (150)	11.81 (300)	14.96 (380)	10.24 (260)	11.42 (290)	1.06 (27)	0.71 (18)	595
XN125-330A-4004P	40	5 (125)	8 (200)	50.51 (1283)	20.51 (521)	12.2 (310)	13.19 (335)	34.65 (880)	21.26 (540)	27.6 (701)	13.94 (354)	13.78 (350)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	909
XN125-330A-5004P	50	5 (125)	8 (200)	49.81 (1266)	20.51 (521)	12.2 (310)	13.19 (335)	34.65 (880)	21.26 (540)	27.6 (701)	13.94 (354)	13.78 (350)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	934
XN150-250A-1004P	10	6 (150)	8 (200)	45.06 (1145)	15.55 (395)	12.2 (310)	14.76 (375)	34.65 (880)	21.81 (554)	22.64 (575)	13.94 (354)	8.66 (220)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	543
XN150-270B-2004P	20	6 (150)	8 (200)	47.48 (1206)	16.18 (411)	12.2 (310)	14.76 (375)	34.65 (880)	24.65 (626)	23.27 (591)	13.94 (354)	10.24 (260)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	643
XN150-270B-2504P	25	6 (150)	8 (200)	49.41 (1255)	16.18 (411)	12.2 (310)	14.76 (375)	34.65 (880)	24.65 (626)	23.27 (591)	13.94 (354)	12.4 (315)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	775

1) To remove the motor, ensure sufficient space is available for the lifting device.

2) Clearance dimensions for filter strainer removal

3) Total weight of the pump

Flange connection dimensions according to ANSI B 16.5 Class 150

1,500 rpm

	P_2	DF	SF	≤ H	a	d	e	≥ f [2]	≤ g	h	i	≤ Ø k	l	m	n	p	q	s	u	m [3]
	hp	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	lb
XN150-270B-3004P	30	6 (150)	8 (200)	51.85 (1317)	16.18 (411)	12.2 (310)	14.76 (375)	34.65 (880)	24.65 (626)	23.27 (591)	13.94 (354)	12.4 (315)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	709
XN150-270B-4004P	40	6 (150)	8 (200)	52.17 (1325)	16.18 (411)	12.2 (310)	14.76 (375)	34.65 (880)	24.65 (626)	23.27 (591)	13.94 (354)	13.78 (350)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	886
XN150-300A-2504P	25	6 (150)	8 (200)	46.73 (1187)	13.91 (354)	12.2 (310)	12.99 (330)	34.65 (880)	21.02 (534)	21 (534)	13.94 (354)	12.4 (315)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	793
XN150-300A-3004P	30	6 (150)	8 (200)	46.57 (1183)	13.91 (354)	12.2 (310)	12.99 (330)	34.65 (880)	21.02 (534)	21 (534)	13.94 (354)	12.4 (315)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	719
XN150-300A-4004P	40	6 (150)	8 (200)	46.88 (1191)	13.91 (354)	12.2 (310)	12.99 (330)	34.65 (880)	21.26 (540)	21 (534)	13.94 (354)	13.78 (350)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	895
XN150-400A-6004P	60	6 (150)	8 (200)	58.57 (1488)	15.19 (386)	12.2 (310)	17.72 (450)	34.65 (880)	24.17 (614)	22.28 (566)	13.94 (354)	15.28 (388)	7.09 (180)	14.17 (360)	17.99 (457)	12.6 (320)	13.78 (350)	1.26 (32)	0.87 (22)	1339
XN200-250A-1004P	10	8 (200)	10 (250)	49.41 (1255)	17.95 (456)	13.78 (350)	13.78 (350)	37.8 (960)	21.18 (538)	26.42 (671)	15.51 (394)	8.66 (220)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	544
XN200-250A-1504P	15	8 (200)	10 (250)	50.51 (1283)	17.95 (456)	13.78 (350)	13.78 (350)	37.8 (960)	21.18 (538)	26.42 (671)	15.51 (394)	10.24 (260)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	605
XN200-250A-2004P	20	8 (200)	10 (250)	50.97 (1295)	17.95 (456)	13.78 (350)	13.78 (350)	37.8 (960)	21.18 (538)	26.42 (671)	15.51 (394)	10.24 (260)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	627
XN200-270B-2004P	20	8 (200)	10 (250)	51.39 (1306)	17.62 (448)	13.78 (350)	14.57 (370)	37.8 (960)	22.44 (570)	26.08 (663)	15.51 (394)	10.24 (260)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	647
XN200-270B-2504P	25	8 (200)	10 (250)	53.32 (1355)	17.62 (448)	13.78 (350)	14.57 (370)	37.8 (960)	22.44 (570)	26.08 (663)	15.51 (394)	12.4 (315)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	780
XN200-270B-3004P	30	8 (200)	10 (250)	56.12 (1426)	17.62 (448)	13.78 (350)	14.57 (370)	37.8 (960)	22.44 (570)	26.08 (663)	15.51 (394)	12.4 (315)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	730
XN200-270B-4004P	40	8 (200)	10 (250)	56.44 (1434)	17.62 (448)	13.78 (350)	14.57 (370)	37.8 (960)	22.44 (570)	26.08 (663)	15.51 (394)	13.78 (350)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	906
XN200-350A-5004P	50	8 (200)	10 (250)	54.7 (1390)	16.25 (413)	13.78 (350)	15.75 (400)	37.8 (960)	26.22 (666)	24.72 (628)	15.51 (394)	13.78 (350)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	1037
XN200-350A-6004P	60	8 (200)	10 (250)	59.66 (1516)	16.25 (413)	13.78 (350)	15.75 (400)	37.8 (960)	26.22 (666)	24.72 (628)	15.51 (394)	15.28 (388)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	1256
XN200-350A-7504P	75	8 (200)	10 (250)	61.7 (1568)	16.25 (413)	13.78 (350)	15.75 (400)	37.8 (960)	26.22 (666)	24.72 (628)	15.51 (394)	15.28 (388)	8.46 (215)	16.89 (429)	21.06 (535)	14.96 (380)	16.14 (410)	1.26 (32)	0.79 (20)	1300

1) To remove the motor, ensure sufficient space is available for the lifting device.

2) Clearance dimensions for filter strainer removal

3) Total weight of the pump

Flange connection dimensions according to ANSI B 16.5 Class 150

IE5 : 1,500 rpm

Motor power (hp)	Voltage (V)	Frequency (Hz)	Maximum current consumption (A) at 450 V
1	450	50	1.39
1.5	450	50	2.04
2	450	50	2.8
3	450	50	4.1
5	450	75	6.6
7.5	450	75	9.7
10	450	75	13.4
15	450	75	20.2
20	450	75	27.2
25	450	75	34.0
30	450	75	40.0
40	450	100	54.0
50	450	100	66.0
60	450	100	80.0
75	450	100	96.0

Noise emission

Motor power (hp)	Noise emission dB (A)
1	50
1.5	55
2	63
3	66
5	71
7.5	71
10	72
15	74

Motor power (hp)	Noise emission dB (A)
20	74
25	76
30	76
40	78
50	78
60	79
75	80
100	81

Sound pressure level of the entire pump. Tolerance ± 3 dB(A)

EXPLODED VIEW

Individual parts

001	Filter casing
002	Filter strainer
003	Filter cover
004	Star handle
005.1	Screwed connection
005.2	Screwed connection
006	Ball valve
025	Impeller protector
026 1)	Seal Guard System
101	Pump casing
113	Intermediate casing
161	Casing cover
230	Impeller
320.1	Anti-friction bearing (non drive side)
320.2	Anti-friction bearing (drive side)
400.1	Gasket
400.2	Gasket
400.3	Gasket
410	Profile sealing
412 1)	O-ring
420	Shaft seal ring
433.1	Mechanical seal
433.2 1)	Mechanical seal
471 1)	Seal cover
554	Washer
730	Pipe connection
800	Motor
819	Motor shaft
831	Fan
832	Fan hood
900 1)	Screw
903	Screwed plug
920.1	Nut
920.2	Nut
920.3	Nut
920.4	Nut
922	Impeller nut
940	Key

1) Special model / accessories

Variable Frequency Drive (VFD)

Variable Frequency Drives are used to electronically control the speed of motors and can produce significant energy savings. They also extend the service life of the plant and reduce repair and maintenance costs.
The primary advantage of a Variable Frequency Drive is that controlling pump speed enables the operating point to be adjusted to best suit the system requirements (e.g., reduced night-time operation in swimming pools), which significantly improves energy use over earlier technical solutions and options.
Variable Frequency Drives are used in wall or control cabinet mounting methods (all performance variables).

Seal Guard System (SGS)

The Seal Guard system uses a media reservoir to prevents the mechanical seal from dry running.
A soon as there is no medium on the primary mechanical seal of the pump, which leads to dry running, the lack of lubrication is offset by the media reservoir. The media reservoir is automatically replenished by a supply container. This container can also be used to detect primary mechanical seal leakage. Except for refilling the media reservoir, the system is entirely maintenance-free.
Using a media reservoir to protect the mechanical seal against dry running saves costs and, in turn, reduces life cycle costs.

Analog pre-filter monitoring

The analog pre-filter monitor indicates the degree of contamination of the filter strainer. This is a simple aid in determining filter strainer contamination.

ACCESSORIES

Digital pre-filter monitoring

The digital pre-filter monitor indicates the degree of contamination of the filter strainer and helps clean the filter strainer when contaminated. The value is shown directly via the optional digital display.

Long Life set

The Long Life set consists of a grease gun with high-performance grease. Keeping the motor bearings lubricated increases their lifetime considerably and therefore improves the life cycle costs of the pump.

Replacement filter strainer

The replacement filter strainer reduces the downtime of the pump when cleaning the filter strainer. This helps keep the time it takes to clean the filter to an absolute minimum.

Digital pressure sensor unit

The digital pressure sensor unit records the pressure on the pump‘s pressure side. The value is shown directly via the optional digital display.

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