

Submersible Pump in Discharge Tube

AmaCan D

60 Hz

Type Series Booklet



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Type Series Booklet AmaCan D

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Contents

Water Applications: Water Transport / Waste Water Transport, Flood Protection.....	4
Submersible Pump in Discharge Tubes	4
AmaCan D.....	4
Main applications.....	4
Fluids handled	4
Operating data.....	4
Designation	4
Design details	5
Materials.....	5
Coating and preservation	6
Product benefits.....	6
Acceptance tests and warranty	6
Design and selection information.....	6
Overview of product features / selection tables	8
Specifications required for inquiries/orders	10
Selection chart.....	11
Characteristic curves.....	12
Dimensions	63
Installation types.....	67
Scope of supply	67
Accessories.....	68
General assembly drawing with list of components.....	72
Index	73

Water Applications: Water Transport / Waste Water Transport, Flood Protection

Submersible Pump in Discharge Tubes

AmaCan D



Main applications

- Irrigation pumping stations
- Drainage pumping stations
- Stormwater pumping stations

- Raw water pumps and clean water pumps in waterworks and waste water treatment plants
- Cooling water pumps in power stations and in industry
- Industrial water supply
- Water pollution control
- Flood control
- Aquaculture

Fluids handled

- Waste water
- Sludge
- Surface water
- Stormwater
- Gray water
- Seawater
- Brackish water

Operating data

Table 1: Operating properties

Characteristic		Value
Flow rate	Q [US.gpm]	≤ 31700
	Q [l/s]	≤ 2000
Head	H [ft]	≤ 120
	H [m]	≤ 36
Motor rating	P ₂ [hp]	≤ 455
	P ₂ [kW]	≤ 340
Fluid temperature	T [°F]	≤ +104
	T [°C]	≤ +40

Designation

Example: AmaCan DB3 600-420 / 130 4 UTG1 IE3

Table 2: Designation key

Code	Description	
AmaCan	Type series	
D	Impeller type	
	D	Open mixed-flow multi-vane impeller
B	Impeller variant	
	A	
	B	
3	Number of vanes	
	2	
	3	
600	Nominal diameter of the discharge tube [mm]	
420	Nominal impeller diameter [mm]	
130	Motor size	
4	Number of motor poles	
UT	Motor version	
	UT	Not explosion-proof
	XT	Explosion-proof, XP CLASS I, DIV. 1 GROUPS C&D T3
G1	Material variant	
	G1	Gray cast iron, standard material variant
	G2	Gray cast iron, casing wear ring made of stainless steel
	G3	Gray cast iron with Zn anodes, casing wear ring made of stainless steel, shaft made of stainless steel 1.4057

Code	Description
IE3	Motor efficiency classification ¹⁾
	2)
	No efficiency classification
IE3	Premium Efficiency

Design details

Design

- Fully floodable submersible pump in discharge tube (submersible motor pump)
- Not self-priming
- Close-coupled design
- Single-stage
- Vertical installation

Drive

- Three-phase asynchronous squirrel-cage motor
- Motors integrated in explosion-proof pump sets are supplied in Explosionproof Class I Division 1, Groups C&D, T3.

Shaft seal

- Two bi-directional mechanical seals in tandem arrangement, with liquid reservoir
- Leakage chamber

Impeller type

- Open, mixed-flow multi-vane impeller in ECB (Ever Clean Blade) design³⁾

Bearings

- Grease-packed rolling element bearings

Monitoring equipment

Various sensor packages are available for pump/pump set monitoring:

- Basic**
 - Motor temperature monitoring (PTC thermistor)
 - Leakage sensor in the motor space
 - Mechanical seal leakage sensor (float switch)
 - Bearing temperature monitoring, pump end (Pt100)
- Basic+**
 - Motor temperature monitoring (PTC thermistor)
 - Leakage sensor in the motor space
 - Mechanical seal leakage sensor (float switch)
 - Bearing temperature monitoring, drive end (Pt100)
 - Bearing temperature monitoring, pump end (Pt100)
- Premium**
 - Motor temperature monitoring (PTC thermistor)
 - Leakage sensor in the motor space
 - Mechanical seal leakage sensor (float switch)
 - Bearing temperature monitoring, drive end (Pt100)
 - Bearing temperature monitoring, pump end (Pt100)
 - Vibration monitoring
 - Motor temperature measurement (Pt100)

The sensor information can optionally be evaluated via AmaControl using the live diagnosis function:

- Directly on site with the KSB INTspecter app
- In additional external systems via ModBus

Materials

Table 3: Overview of materials depending on material variant (EN and ASTM)

Part No.	Description	Material variant		
		G1	G2	G3 ⁴⁾ (seawater variant)
112	Pump bowl	EN: EN-GJL-250/ASTM: A48 Cl. 35B		
138	Bellmouth	EN: EN-GJL-250/ASTM: A48 Cl. 35B		
230	Impeller	EN: 1.4593/1.4517/ASTM: A995 Gr. 1B		
350 / 330	Bearing housing / bearing bracket	EN: EN-GJL-250/ASTM: A48 Cl. 35B		
360	Bearing cover	EN: EN-GJL-250/ASTM: A48 Cl. 35B		
412	O-ring	EN/ASTM: NBR ⁵⁾ EN: (Viton FPM) ⁶⁾ /ASTM: (Viton FKM)		
433	Mechanical seal (pump end)	SiC/SiC		
	Mechanical seal (drive end)	Carbon/SiC		

¹ The IEC 60034-30 standard is not binding for submersible motor pumps. Efficiencies are calculated / determined by analogy with the measurement method specified in IEC 60034-2. The marking is used for submersible motors that achieve efficiency levels similar to those of standardized motors acc. to the IEC 60034-30 standard.

² Blank

³ ECB = Self-cleaning blade profile (EverCleanBlade)

⁴ Pump set with cathodic protection (anodes to be checked every 6 to 12 months) and top coat of 250 µm

⁵ Nitrile rubber (Perbunan)

⁶ FPM fluorocarbon rubber variant available as an option against a surcharge

Part No.	Description	Material variant		
		G1	G2	G3 ⁴⁾ (seawater variant)
502	Casing wear ring with a groove for flushing	EN: EN-GJL-250/ ASTM: A48 Cl. 35B	EN: 1.4593/1.4517/ASTM: A995 Gr. 1B	
571	Bail	EN: EN-GJS-400-15/S235JR/ASTM: A 536: 60–40–18/A284B		
811	Motor housing	EN: EN-GJL-250/ASTM: A48 Cl. 35B		
812	Motor housing cover	EN: EN-GJL-250/ASTM: A48 Cl. 35B		
818	Shaft (rotor)	EN: 1.4021/20Cr13/ ASTM: A 276 Type 420		EN: 1.4057/ ASTM: A 276 Type 431
82-5	Adapter	EN: EN-GJL-250/ASTM: A48 Cl. 35B		
834	Cable gland	-		
	Cable gland housing	EN: EN-GJL-250/ASTM: A48 Cl. 35B		
Various	Screws/bolts	Stainless steel		
99-16	Anode	-	-	Zn
Other materials on request.				

Description of materials

Duplex stainless steel (1.4517 or technically equivalent material)

This type of cast steel is resistant to cavitation, has excellent strength values and is used for high circumferential speeds. An excellent resistance to pitting corrosion makes ferritic-austenitic stainless steel a popular choice for pumping acidic waste water with a high chloride content as well as seawater and brackish water. Thanks to its good chemical resistance, e.g. against waste water containing phosphorus and sulphuric acid, this material is used in a wide range of applications in the chemical industry and process engineering. Pumps made of duplex stainless steel have a very long service life, even when handling brines, chemical waste water (pH 1 - 12), gray water and landfill leachate.

Coating and preservation

Paint

- **Surface treatment:** SA 2 1/2 (SIS 055900) AN 1865
- **Primer:** primer coat on unfinished casting
- **Top coat:** environmentally friendly KSB standard coating (RAL 5002)

Special coating

- Available on request (extra charge and a longer delivery period apply).

Product benefits

- The pump's own weight ensures self-centering seating in the discharge tube, and an O-ring seals it; quick to install or remove without additional anchoring or anti-rotation device.
- Non-clogging low-maintenance design with large free passages reduces clogging risk and, consequently, maintenance work.
- The slim motor keeps discharge tube flow losses down.
- Optimum hydraulic and energy efficiency by high-efficiency motors and variable hydraulic systems
- High reliability thanks to bearing temperature monitoring, vibration sensor, thermal motor protection, leakage sensors in the motor space and connection space as well as leakage monitoring of the mechanical seal system.
- Low-vibration hydraulic system; inlet ribs and optimized bellmouth for vortex-free inflow.
- Absolutely water-tight resin-sealed cable entries prevent any water from entering the motor – even in the event of a damaged connection cable.
- Highest operating reliability by casing wear ring with groove for flushing
- IIoT⁷⁾-capable: Internal sensor module and AmaControl analyzing device can be used.

Acceptance tests and warranty

Functional test

- Every pump undergoes functional testing to KSB standard ZN 56535.
- Operating data is guaranteed to DIN EN ISO 9906/2/2B or Hydraulic Institute Level B.

Acceptance tests

- Acceptance testing to ISO/DIN or comparable standards is available against a surcharge.

Warranty

- Quality is assured by means of an audited and certified quality assurance system to DIN EN ISO 9001.

Design and selection information

Information for pump selection

The guaranteed point of submersible pumps in discharge tubes is measured at a head of 1.65 ft [0.5 m] above the motor. The documented characteristic curves refer to this data. This must be taken into account when calculating system losses. The indicated heads and performance data apply to pumped fluids with a density $\rho = 7.48 \text{ lbs/ft}^3$ [1 kg/dm³] and a kinematic viscosity ν of up to 20 mm²/s.

- Adjust the power input to the density of the fluid handled:

$$P_2 \text{ (required)} = \rho \text{ [kg/dm}^3\text{]} \text{ (fluid handled)} \times P_2 \text{ (documented)}$$
- Select the operating point with the largest power input within an operating range. Select a motor size providing a power reserve to compensate for the tolerances in the system characteristic / pump characteristic.

⁷ IIoT = Industrial Internet of Things

Table 4: Recommended motor power reserve⁸⁾

P ₂		Reserve	
[hp]	[kW]	Mains operation	With frequency inverter
≤ 40	≤ 30	10 %	15 %
> 40	> 30	5 %	10 %

Intake chamber

Determine the minimum water level t_{1min} (diagram in general arrangement drawing):

The minimum water level t_{1min} is the water level required in the pump's suction chamber to ensure the following:

- The hydraulic system (propeller) is sufficiently submerged (shown in diagram depending on pump size).
- The pump does not draw in air-entraining vortices (shown in diagram depending on flow rate).
- The hydraulic system is free from cavitation (check against the $NPSH_{required}$ value in the technical literature. The following conditions must be met:
 - $NPSH_{available} > NPSH_{required} + \text{safety allowance}$
 - $NPSH_{available} = 10.0 + (t_1 - t_3 - h_f/2)$
 - Safety allowance:
up to $Q_{opt} \Rightarrow 1.65 \text{ ft [0.5 m]}$
larger than $Q_{opt} \Rightarrow 3.3 \text{ ft [1.0 m]}$

Head (H)

The total pump head is composed as follows:

$$H = H_{geo} + \Delta H_v$$

H_{geo} (static head)

- Without discharge elbow – Difference between suction-side water level and overflow edge
- With discharge elbow – Difference between suction-side and discharge-side water level

ΔH_v (losses in the system)

- Starting 1.65 ft [0.5 m] downstream of the pump: e.g. pipe friction, elbow, swing check valve, etc.

Inlet losses, riser and elbow losses

Losses are caused by the inlet, riser and elbow (and/or free discharge).

- Losses in the riser up to the indicated reference level (1.65 ft [0.5 m] above the motor) are taken into account in the documented characteristic curves.
- Inlet losses and elbow losses are system losses. These losses must be taken into account for selection.
- For information on structural requirements, pump installation and pump sump design please refer to the KSB know-how brochure "Planning Information: Amacan Submersible Pumps in Discharge Tubes" 1579.025.

⁸ If larger power reserves are stipulated by local regulations, these larger reserves must be provided.

Overview of product features / selection tables

Table of fluids handled

The table below for your guidance is based on KSB's long-standing experience. The data are standard values and are not to be considered as generally binding recommendations. More detailed advice is available from KSB. Make use of our laboratory's expertise when selecting materials.

Table 5: Selection aid for material variants and fluid temperature per fluid

Fluid handled ⁹⁾	Max. permissible fluid temperature		Material variant	Screen	Comments, further recommendations
	[°F]	[°C]			
Waste water					
▪ Industrial, corrosive, non-abrasive, slightly acidic; pH value ≥ 6	104	40	G2	✓	2-component high solid epoxy finish coat (RAL 5002) 250 µm required
▪ Industrial, corrosive, non-abrasive, with lacquer/paint/varnish suspensions	104	40	G2	-	Lacquer/paint/varnish suspension = free of solvents
▪ Industrial, corrosive, non-abrasive fluids containing feces	104	40	G2	✓	-
▪ Industrial, corrosive, non-abrasive fluids not containing feces	104	40	G2	✓	-
▪ Treated municipal waste water	104	40	G1	✓	-
Suspended solids, water/sand mixture	104	40	G2	-	Up to 200 mg/l
Sludge	104	40	G1	-	Up to 2 % dry solids content
Water, seawater and brackish water	77	25 ¹⁰⁾	G3	-	Use of anodes ¹¹⁾ and 2-component high solid epoxy finish coat (RAL 5002) 250 µm required
Water, cooling water	104	40	G1	-	-
Water, surface water					
▪ River water	104	40	G1	✓	-
▪ No details specified	104	40	G1	✓	-
▪ Lake water, fresh water	104	40	G1	-	-
▪ Lake water, dam water	104	40	G1	-	-
Water, stormwater					
▪ With strainer	104	40	G1	-	-
▪ Without strainer	104	40	G1	✓	-
Water, raw water	104	40	G1	-	-
Water, contaminated water					
▪ Slightly contaminated water	104	40	G1	-	-
▪ Mixed water, with strainer	104	40	G1	-	-
▪ Mixed water, without strainer	104	40	G1	✓	-
▪ Mixed water containing feces	104	40	G1	✓	-
▪ Mixed water not containing feces	104	40	G1	✓	-
Water, clean water	104	40	G1	-	-

Table 6: Symbols key

Symbol	Description
✓	Required
-	Not required

Table 7: Space between screen bars

Size	Required space between screen bars	
	[inch]	[mm]
600-390	1 3/16	30
600-420	1 9/16	40
700-390	1 3/16	30
700-420	1 9/16	40
700-460	1 9/16	40

⁹⁾ Fluids to be pumped which are not listed in this table usually require higher-grade materials. Contact the manufacturer.

¹⁰⁾ For t > 77 °F [25 °C] contact KSB (stainless steel variant).

¹¹⁾ Efficiency reduced by 2 % to 3 %; anode to be checked every 6 to 12 months

Size	Required space between screen bars	
	[inch]	[mm]
800-460	1 9/16	40
800-580	2 3/8	60

Size	Required space between screen bars	
	[inch]	[mm]
900-630	3 1/8	80
900-650	3 1/8	80
1000-650	3 1/8	80

Overview of product features

Table 8: Material variants (G1, G2, G3)

Feature	Motor version		
	UTG/XTG		
Motor size			
4 poles	70 4 ... 130 4	150 4 ... 215 4	275 4 ... 300 4
6 poles	47 6 ... 120 6	155 6 ... 205 6	250 6 ... 340 6
8 poles	40 8 ... 95 8	120 8 ... 160 8	205 8 ... 290 8
10 poles	–	–	–
12 poles	–	–	–
14 poles	–	–	–
Explosion protection			
Version U...	Not explosion-proof		
Version X...	Explosion-proof, XP CLASS I, DIV. 1 GROUPS C&D T3		
Motor			
Starting method	DOL or star-delta		
Voltage	460 V ¹²⁾		
Cooling	Cooled by surrounding fluid		
Immersion depth	98 ft [30 m] max.		
Power cable			
Type	"Overview of power cables",		
Length	33 ft [10 m] ¹³⁾		
Cable entry	Absolutely water-tight		
Sealing elements			
Elastomers	Nitrile butadiene rubber NBR ¹⁴⁾		
Shaft seal	Bellows-type mechanical seal ¹⁵⁾		
Monitoring equipment			
Sensor package	Basic/Basic+/Premium		
Coating	Environmentally friendly KSB standard coating, color RAL 5002 ¹⁶⁾		
Installation	BU, BG, CU, CD, DU, DG (⇒ Page 67)		
Maximum fluid temperature			
Material variant G1	104 °F [40 °C]		
Material variant G2	104 °F [40 °C]		
Material variant G3	77 °F [25 °C]		
Tests/inspections			
Hydraulic system	KSB standard (ZN 56525) ¹⁷⁾		
General	KSB standard (ZN 56525) ¹⁷⁾		

Table 9: Overview of power cables

Feature	Rubber-sheathed cable		
	S1BN8-F	S07RC4N8-F	S05BN8-F
Design	Standard	Optional	Optional
Rated voltage	1000 V	750 V	500 V
EMC screening	–	✓	✓

¹²⁾ Optional: 380 V, 575 V

¹³⁾ Optional: Up to 131 ft [40 m]

¹⁴⁾ Optional: Viton = fluorocarbon rubber FPM

¹⁵⁾ Optional: Mechanical seal with covered spring

¹⁶⁾ Optional: 250 µm

¹⁷⁾ Optionally to ISO 9906/1/2/A

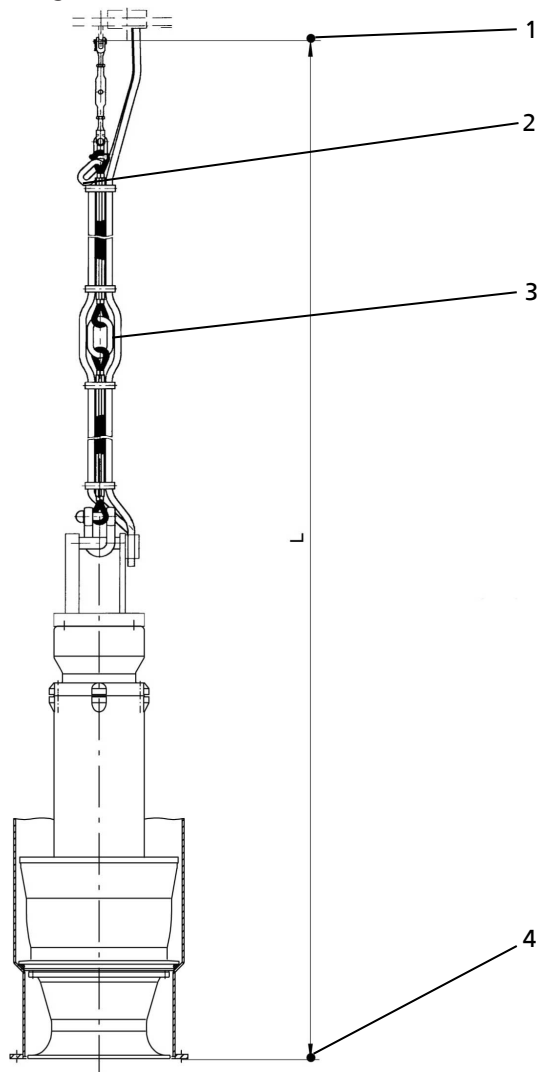
Feature	Rubber-sheathed cable		
	S1BN8-F	S07RC4N8-F	S05BN8-F
Insulation material	EPR ¹⁸⁾	EPR ¹⁸⁾	Elastomer mixture
Maximum continuous temperature of insulation	194 °F [90 °C]	194 °F [90 °C]	194 °F [90 °C]
For permanent immersion in waste water to DIN VDE 0282-16/HD22.16	✓	✓	✓

Specifications required for inquiries/orders

- Designation of the pump
- Flow rate Q, head H_{total}
- Type of fluid handled and fluid temperature
- Voltage, frequency, starting method, cable length
- Quantity and language of operating manuals
- Required accessories
 - For discharge tubes indicate all required elevations and the type of installation.
 - For flow-straightening vanes indicate the type of installation and design (with or without suction umbrella).

- For a support rope indicate dimension "L", the number of additional lifting rings (depending on the lifting height of the lifting equipment) as well as the elevations and type of installation.

Always define dimension "L" when ordering a support rope to allow the correct length to be determined. The lifting height of the crane must be taken into account when ordering a support rope. This determines the number of lifting rings required for installing the pump in or removing it from the discharge tube.



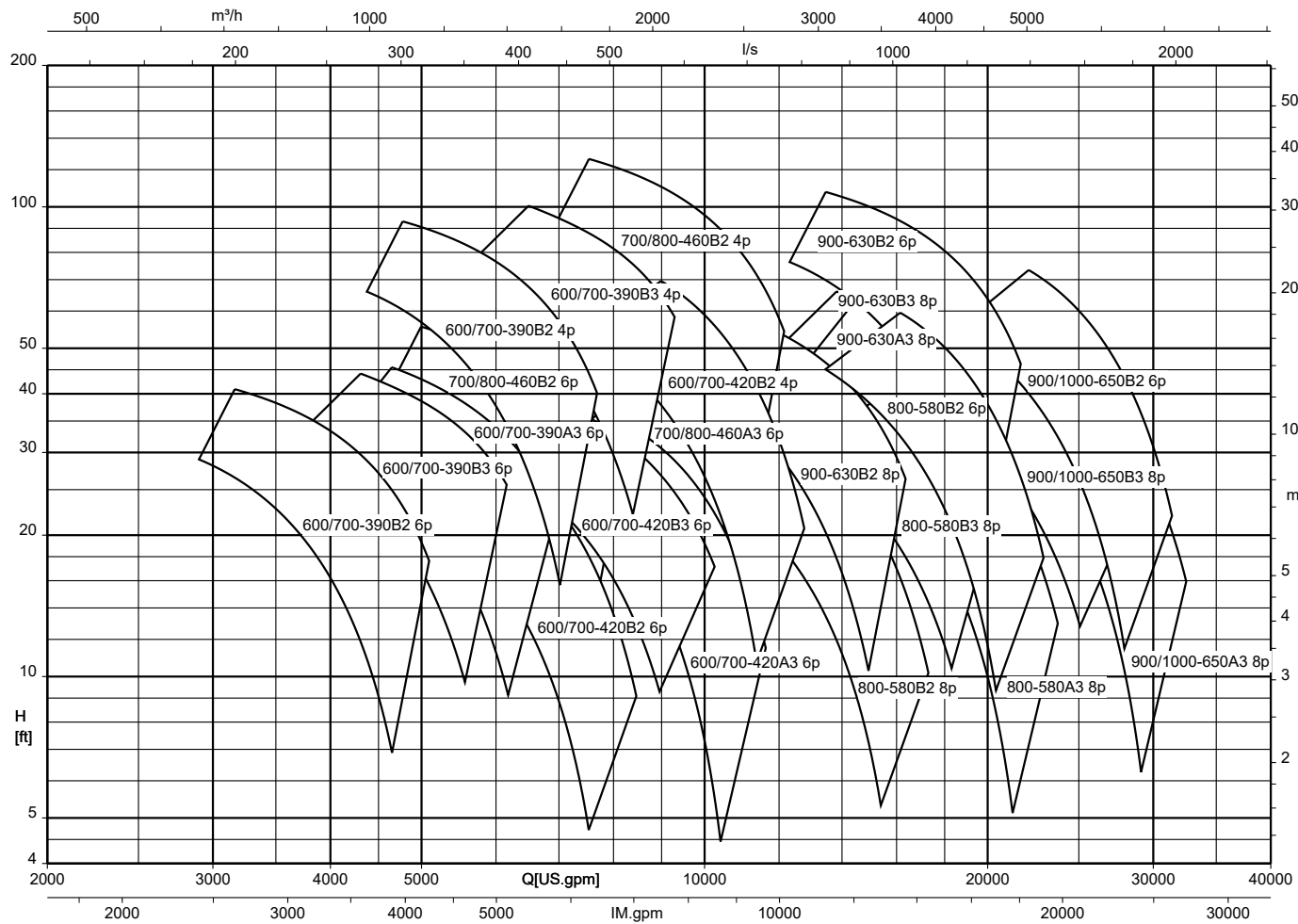
1	Suspension arrangement attached to cover (or cross beam for BU/BG)
2	Lifting ring (standard, included in the scope of supply)
3	Optional (intermediate) lifting ring(s)
4	Lower edge of discharge tube = lower edge of pump

The support rope is an accessory and can be supplied with additional lifting rings and a support spacer as an option. The standard design is supplied without intermediate lifting ring(s).

¹⁸⁾ EPR = ethylene propylene rubber

Selection chart

AmaCan D 60 Hz, n = 1750 / 1160 / 875 rpm (diameter-based selection chart)

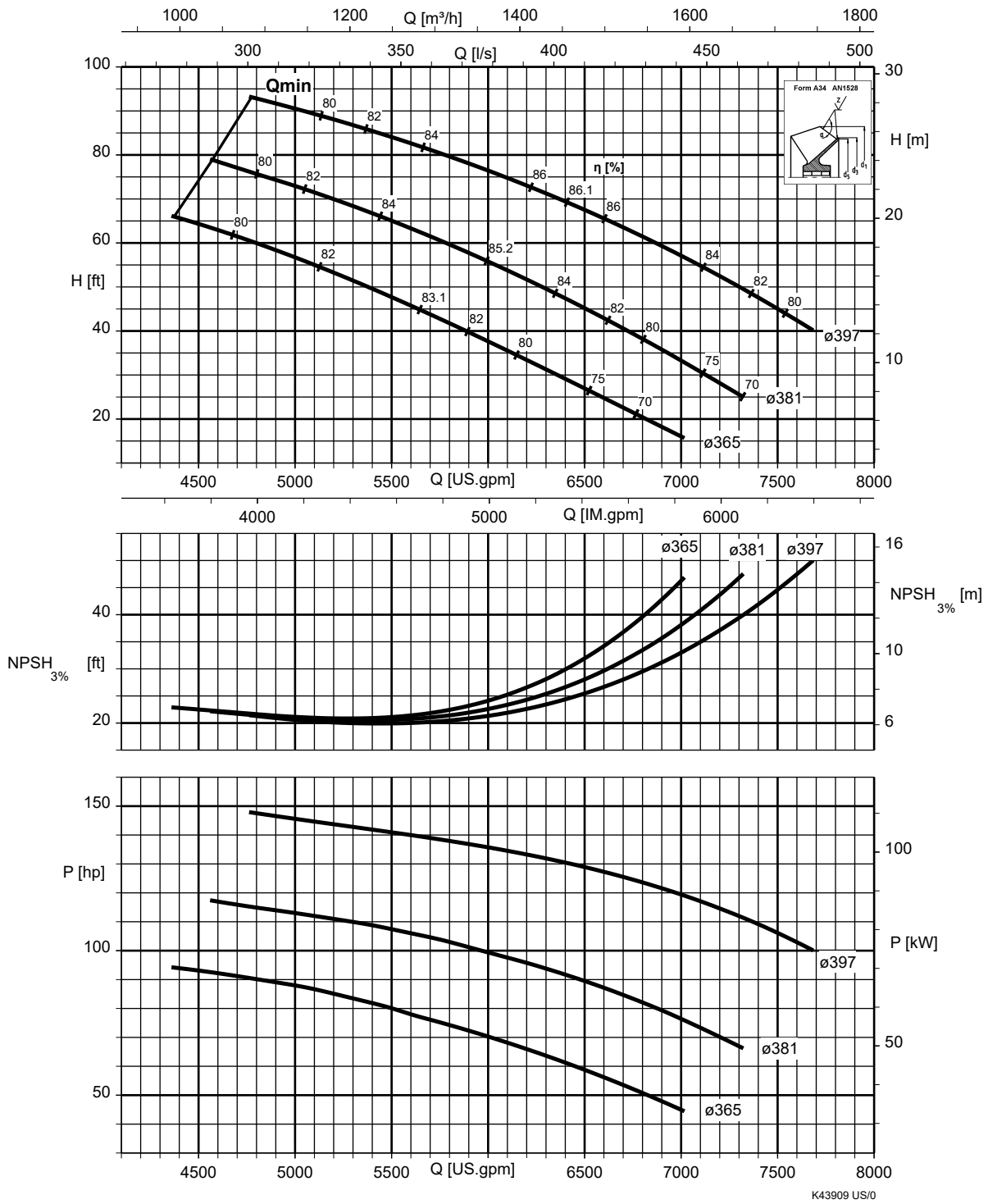


Characteristic curves

$n = 1750 \text{ rpm}$

AmaCan DB2 600/700-390, n = 1750 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 2 9/16 in [65 mm]

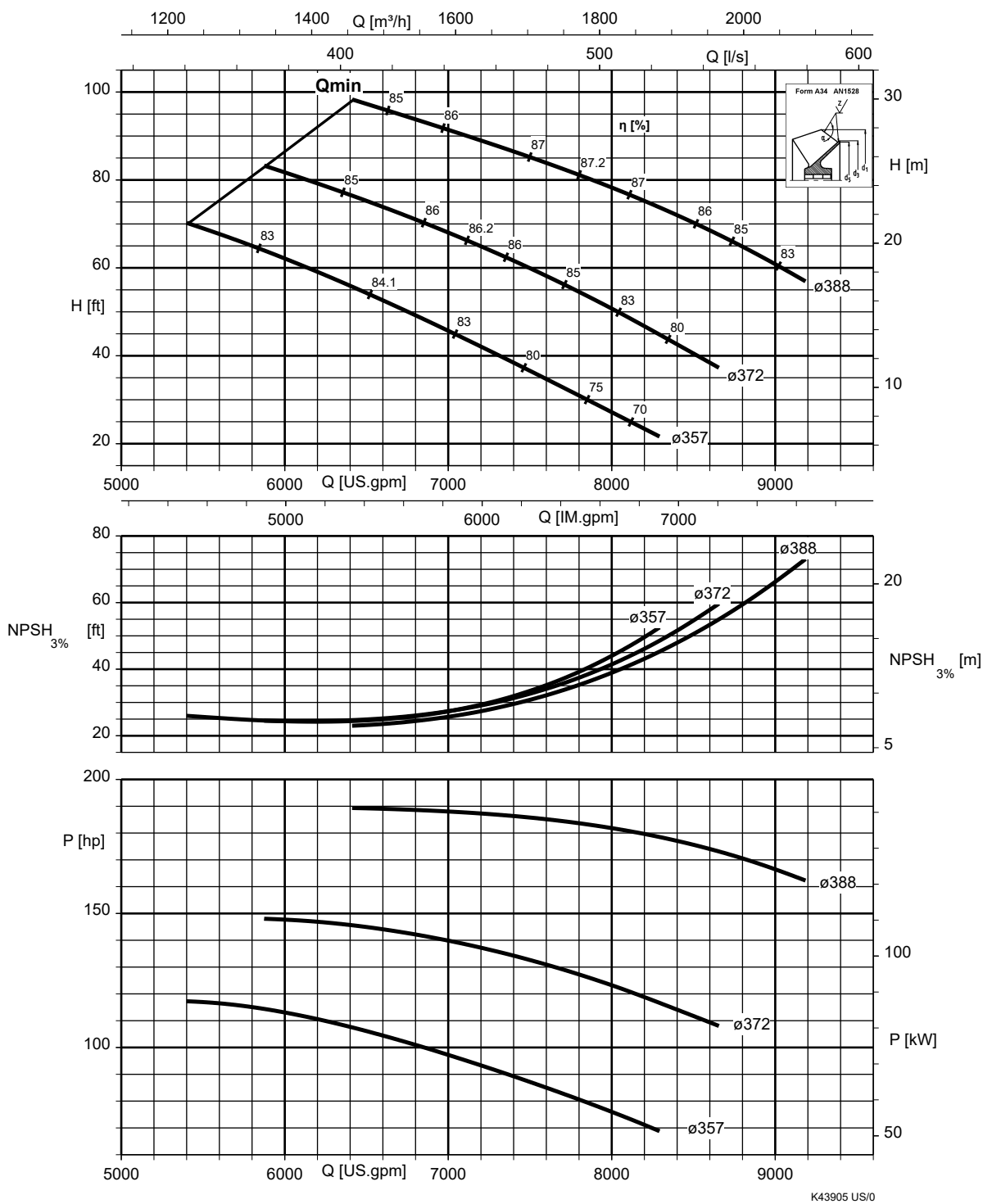
Table 10: Motor data

Size	Motor	P ₂				J
		_19)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
600-390	704 UT/XT	95	70	-	-	0,83
600-390	904 UT/XT	120	90	-	-	0,97
600-390	1054 UT/XT	140	105	-	-	1,05
600-390	1304 UT/XT	175	130	100	75	1,13

¹⁹⁾ - = No efficiency classification

AmaCan DB3 600/700-390, n = 1750 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 2 9/16 in [65 mm]

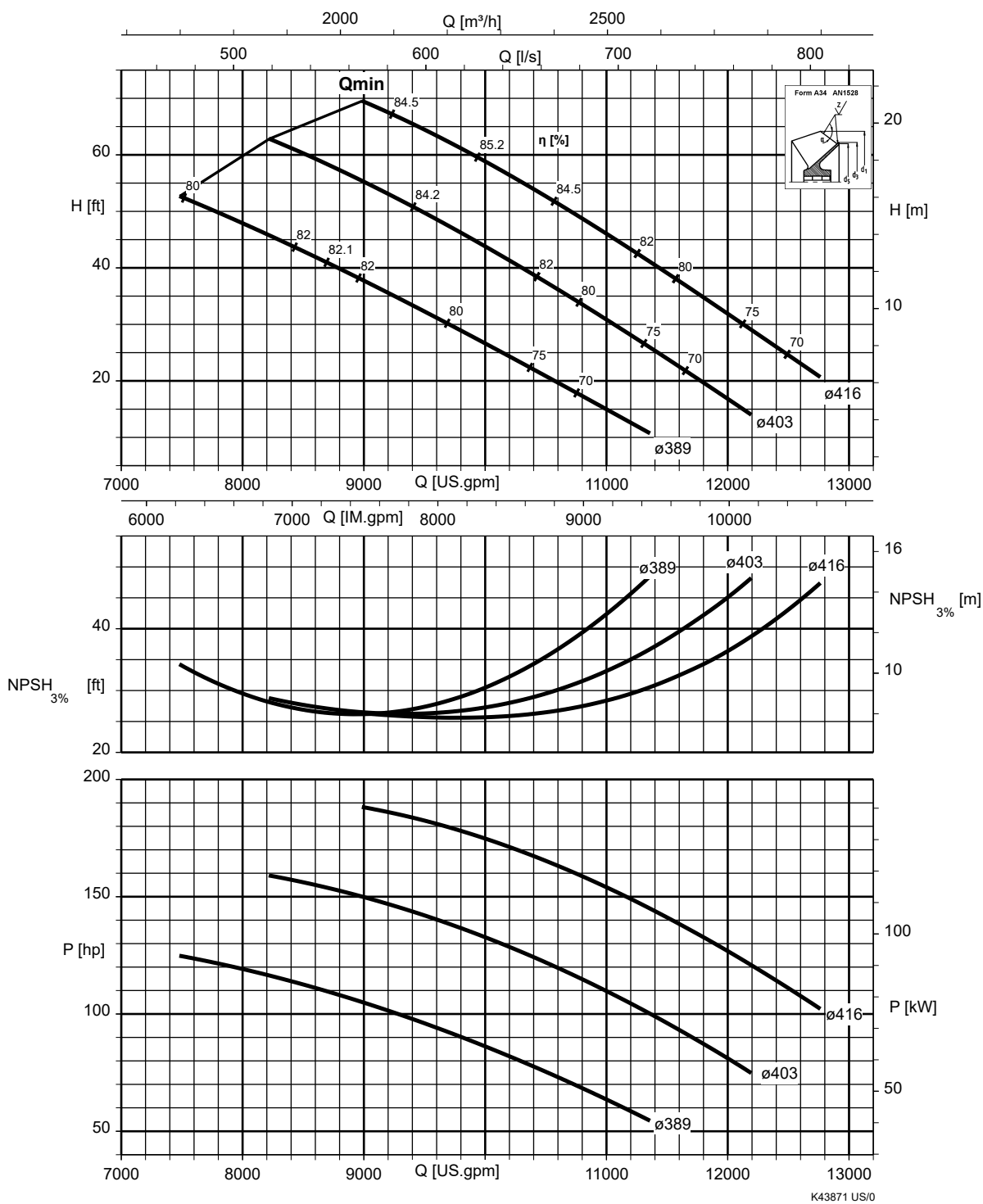
Table 11: Motor data

Size	Motor	P ₂				J
		_20)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
600-390	904 UT/XT	120	90	-	-	1,01
600-390	1054 UT/XT	140	105	-	-	1,09
600-390	1304 UT/XT	175	130	-	-	1,17
700-390	1504 UT/XT	200	150	-	-	1,75
700-390	1704 UT/XT	230	170	-	-	1,75

²⁰ - = No efficiency classification

Amacan DB2 600/700-420, n = 1750 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 3 in [76 mm]

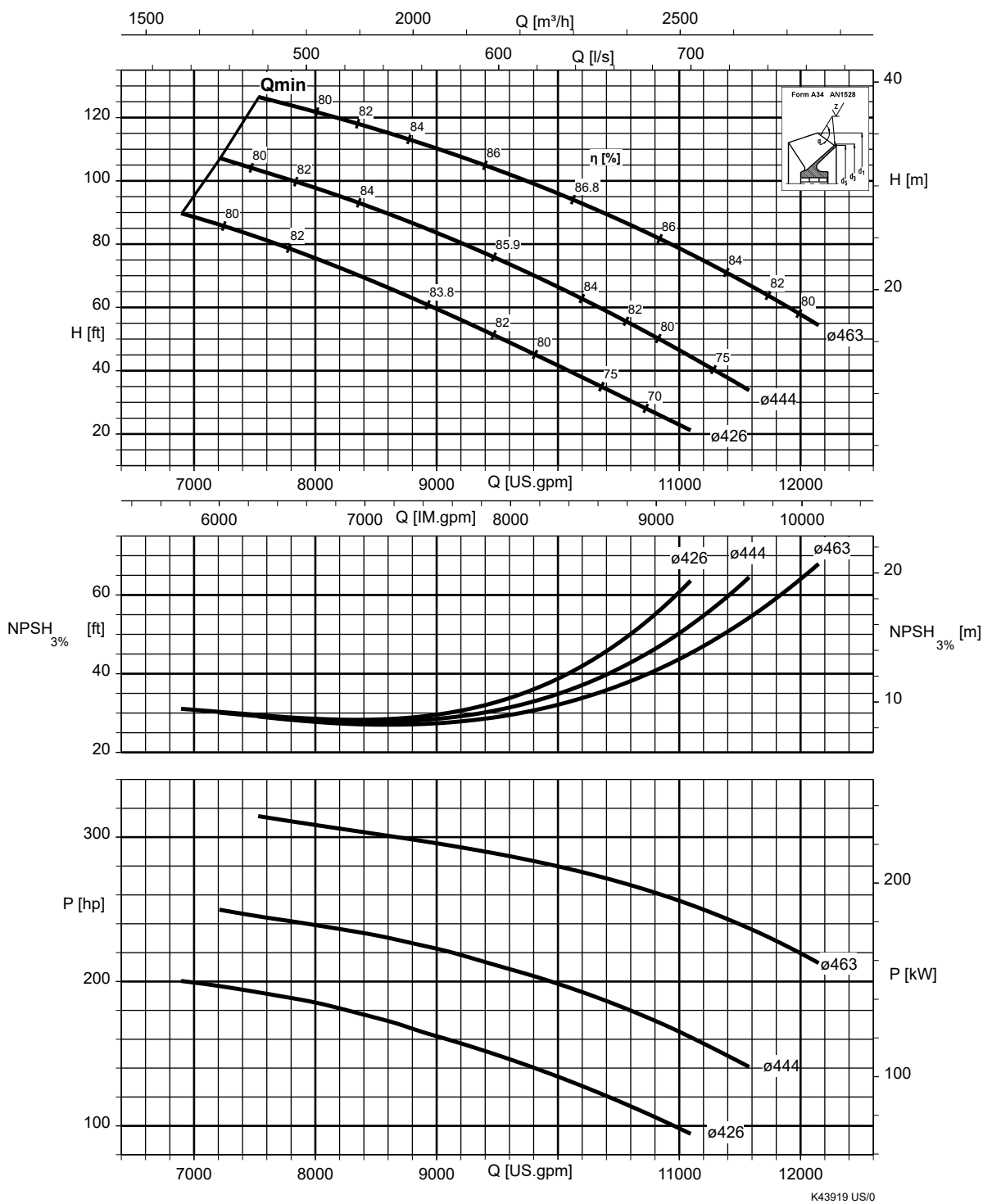
Table 12: Motor data

Size	Motor	P ₂				J
		_21)		IE3		
		[hp]	[kW]	[hp]	[kW]	
600-420	904 UT/XT	120	90	-	-	1,05
600-420	1054 UT/XT	140	105	-	-	1,13
600-420	1304 UT/XT	175	130	-	-	1,21

²¹⁾ - = No efficiency classification

Amacan DB2 700/800-460, n = 1750 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 3 in [76 mm]

Table 13: Motor data

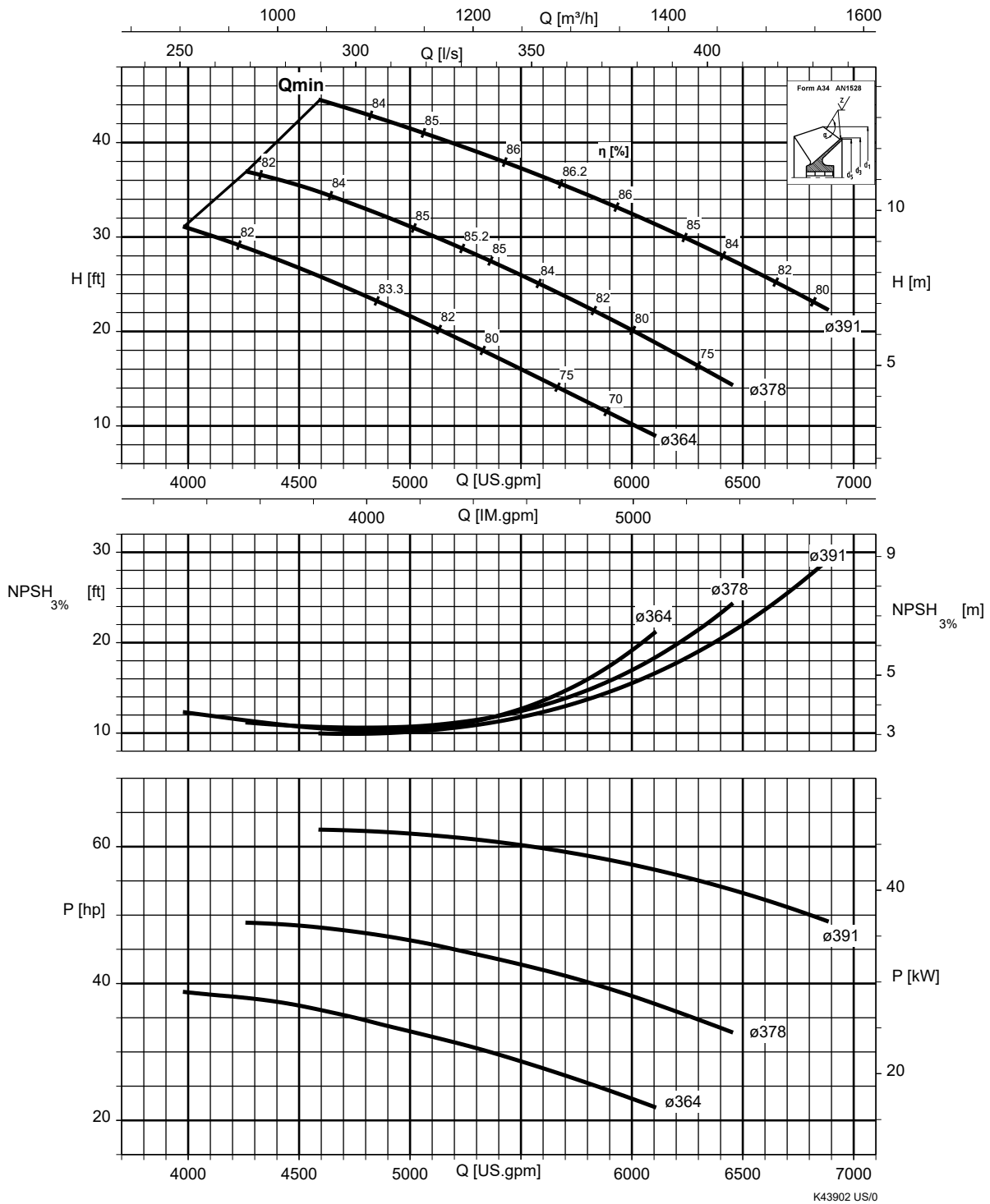
Size	Motor	P ₂				J
		_22)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm²]
700-460	1504 UT/XT	200	150	-	-	2,34
700-460	1704 UT/XT	230	170	-	-	2,34
700-460	1904 UT/XT	255	190	-	-	2,51
700-460	2154 UT/XT	290	215	-	-	2,65
800-460	2754 UT	-	-	200	150	4,68
800-460	3004 UT	-	-	290	215	5,03

²² - = No efficiency classification

$n = 1160 \text{ rpm}$

AmaCan DA3 600/700-390, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 2 9/16 in [65 mm]

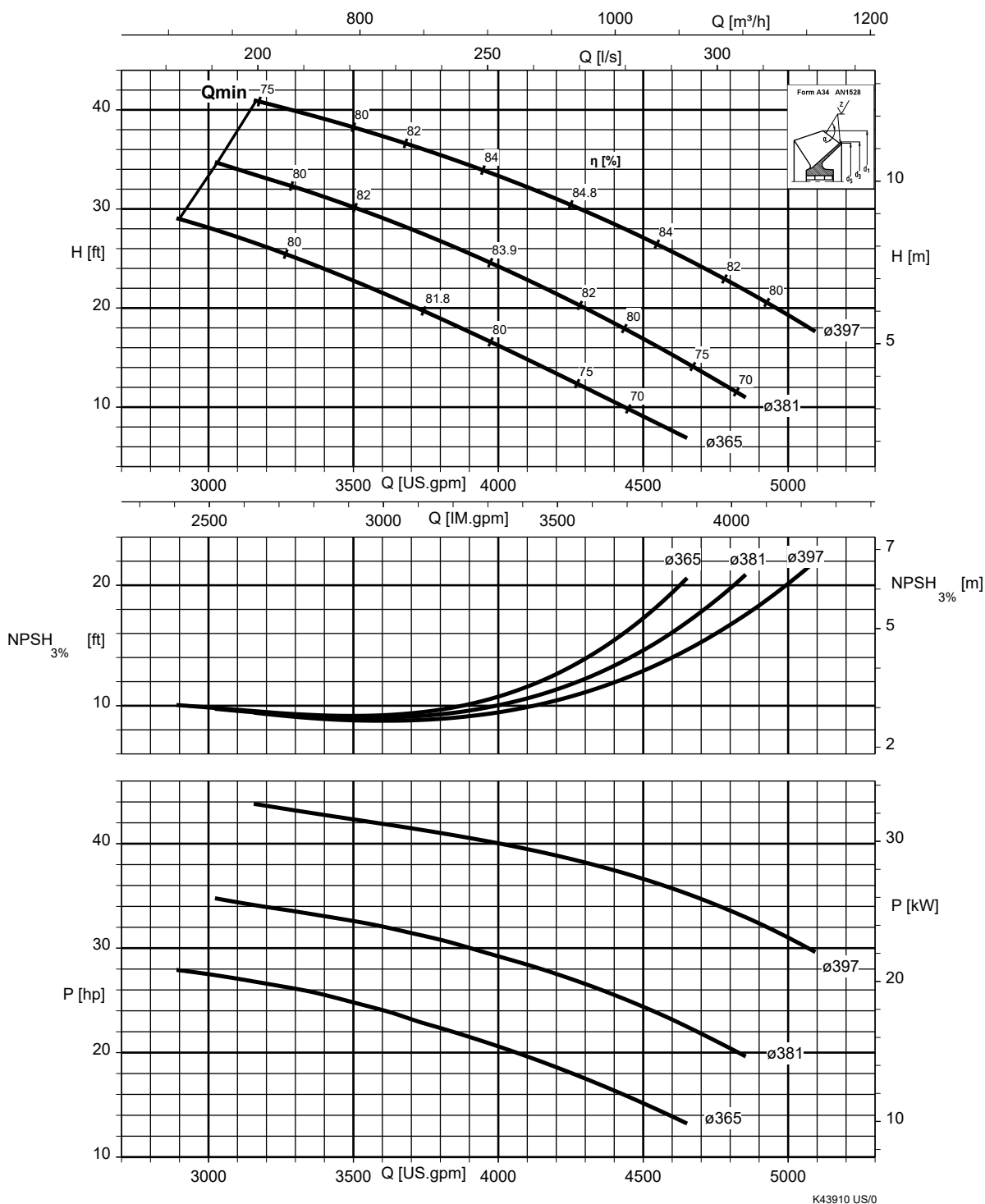
Table 14: Motor data

Size	Motor	P ₂				J
		_23)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
600-390	476 UT/XT	60	47	-	-	1,07
600-390	606 UT/XT	80	60	-	-	1,07
600-390	806 UT/XT	-	-	40	30	1,25
600-390	1006 UT/XT	-	-	50	37	1,38
600-390	1206 UT/XT	-	-	60	45	1,52

²³ - = No efficiency classification

AmaCan DB2 600/700-390, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 2 9/16 in [65 mm]

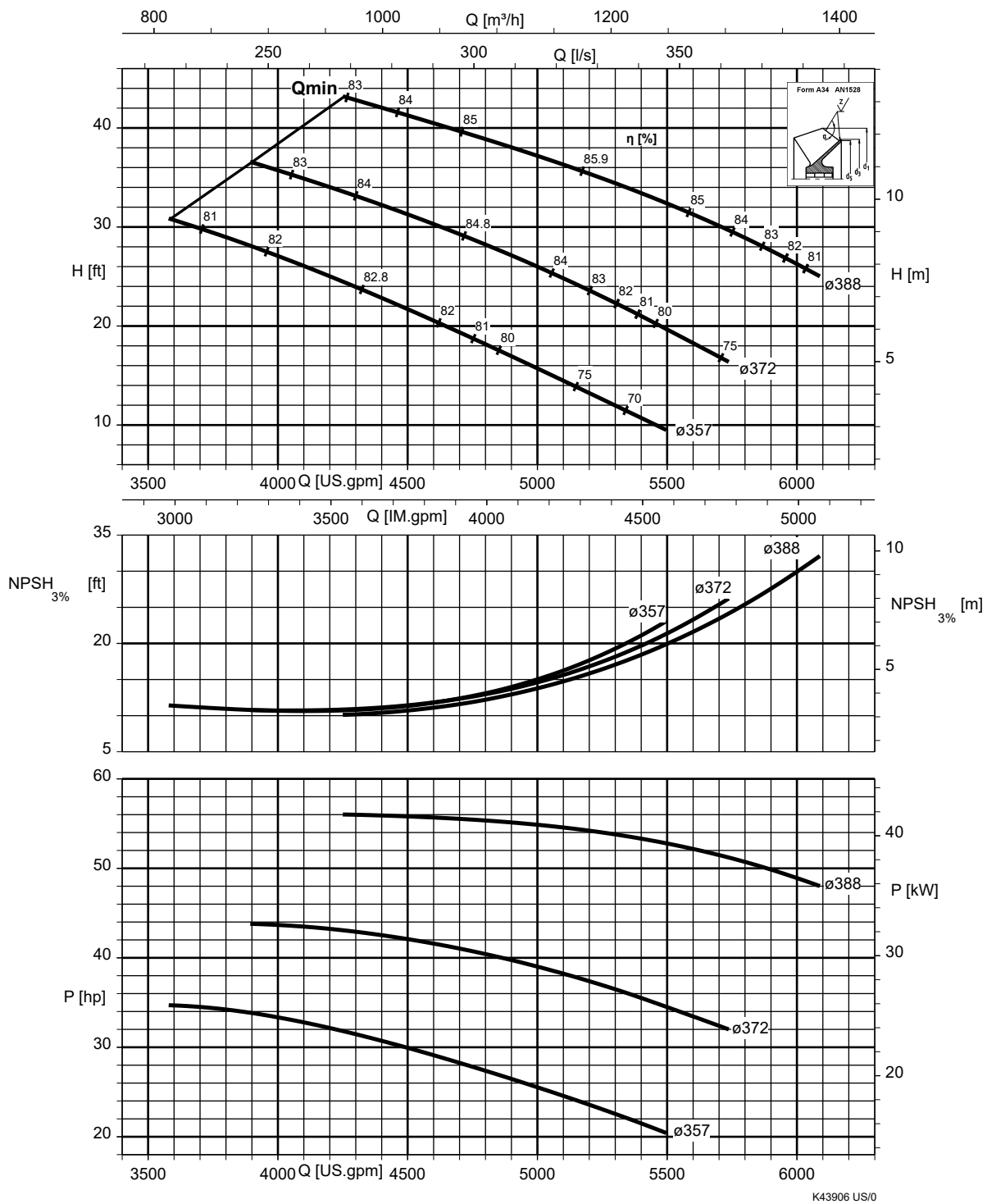
Table 15: Motor data

Size	Motor	P ₂				J
		_24)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
600-390	476 UT/XT	60	47	25	18,5	0,98
600-390	656 UT/XT	-	-	30	22	1,06
600-390	806 UT/XT	-	-	40	30	1,16
600-390	1006 UT/XT	-	-	50	37	1,29

²⁴ - = No efficiency classification

AmaCan DB3 600/700-390, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 2 9/16 in [65 mm]

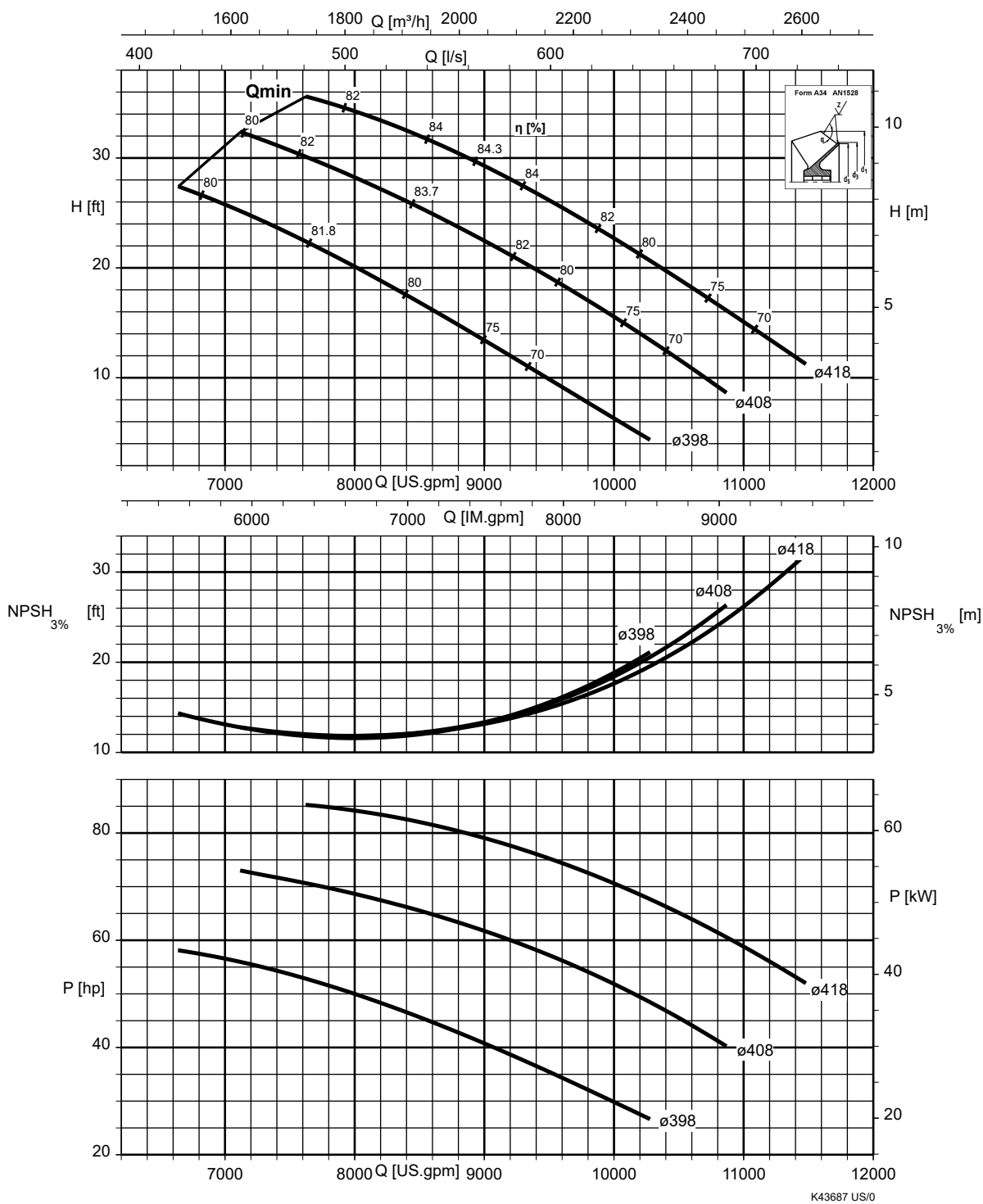
Table 16: Motor data

Size	Motor	P ₂				J
		_25)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm²]
600-390	476 UT/XT	60	47	-	-	1,02
600-390	606 UT/XT	80	60	-	-	1,02
600-390	656 UT/XT	-	-	30	22	1,1
600-390	806 UT/XT	-	-	40	30	1,2
600-390	1006 UT/XT	-	-	50	37	1,33
600-390	1206 UT/XT	-	-	60	45	1,47

²⁵ - = No efficiency classification

AmaCan DA3 600/700-420, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 3 in [76 mm]

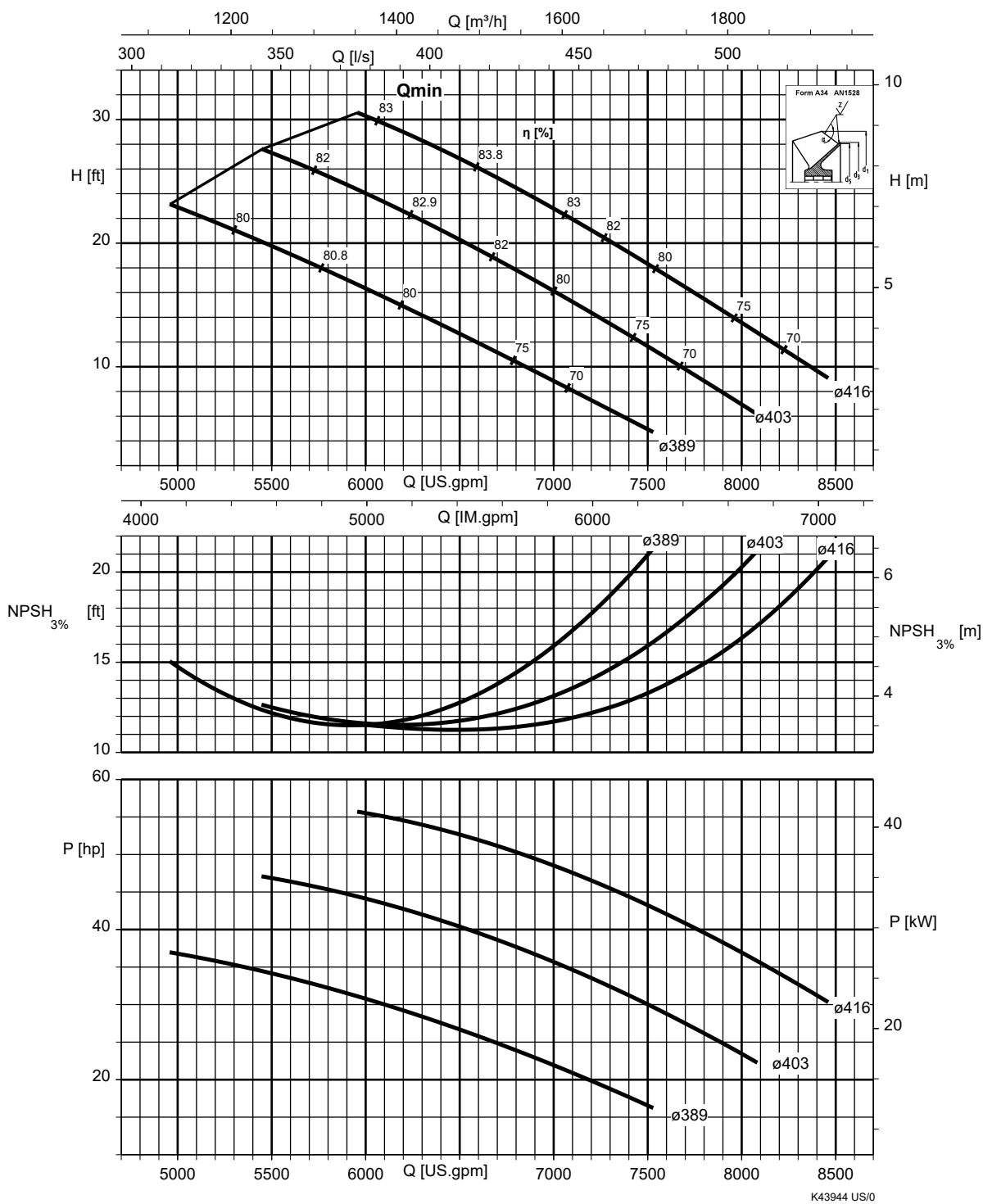
Table 17: Motor data

Size	Motor	P ₂				J
		_26)		IE3		
		[hp]	[kW]	[hp]	[kW]	
600-420	476 UT/XT	60	47	-	-	1,15
600-420	606 UT/XT	80	60	-	-	1,15
600-420	1206 UT/XT	-	-	60	45	1,6

²⁶ - = No efficiency classification

AmaCan DB2 600/700-420, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 3 in [76 mm]

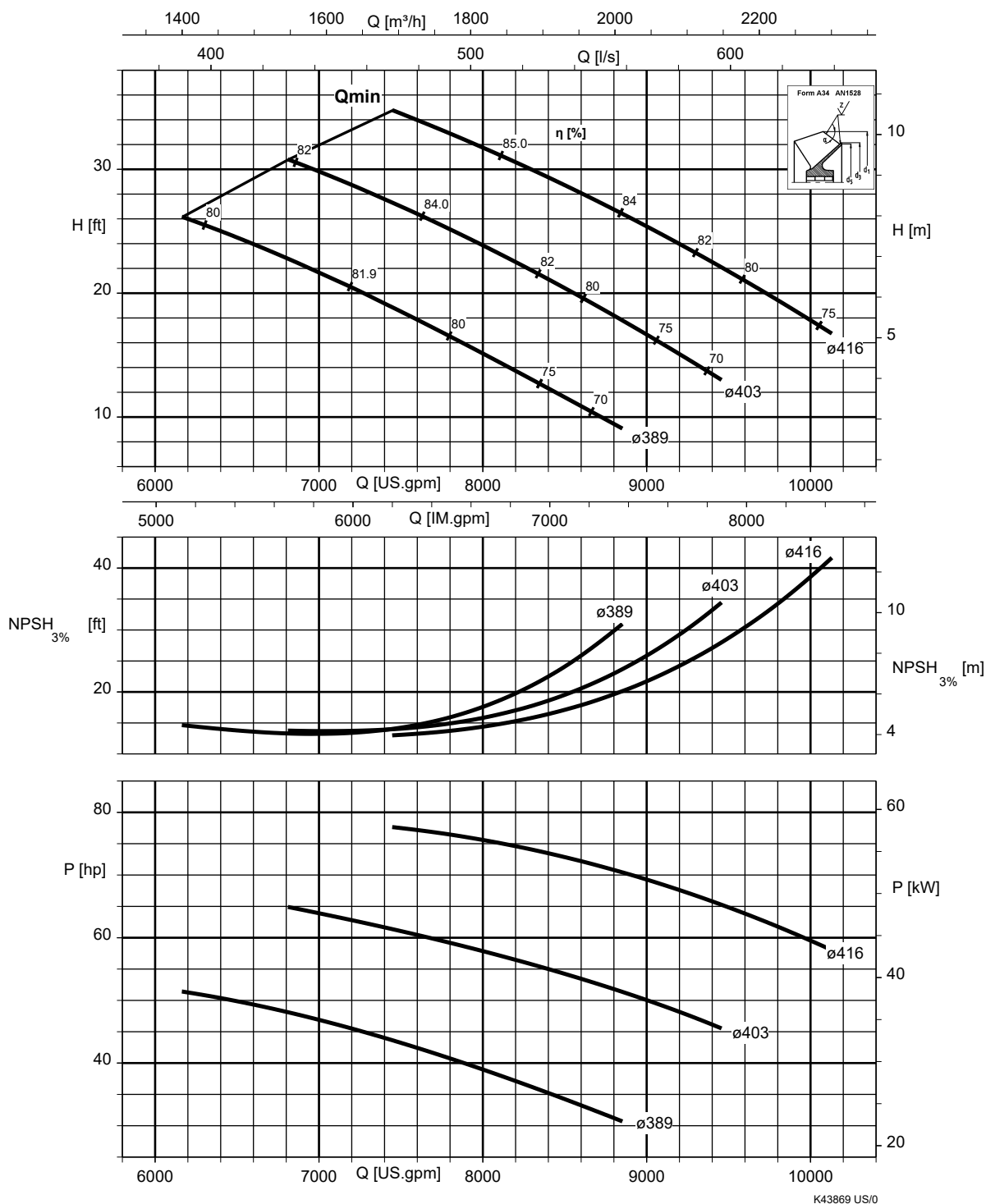
Table 18: Motor data

Size	Motor	P ₂				J
		-27)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
600-420	476 UT/XT	60	47	-	-	1,06
600-420	606 UT/XT	80	60	-	-	1,06
600-420	806 UT/XT	-	-	40	30	1,24
600-420	1006 UT/XT	-	-	50	37	1,37
600-420	1206 UT/XT	-	-	60	45	1,51

²⁷ - = No efficiency classification

AmaCan DB3 600/700-420, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 3 in [76 mm]

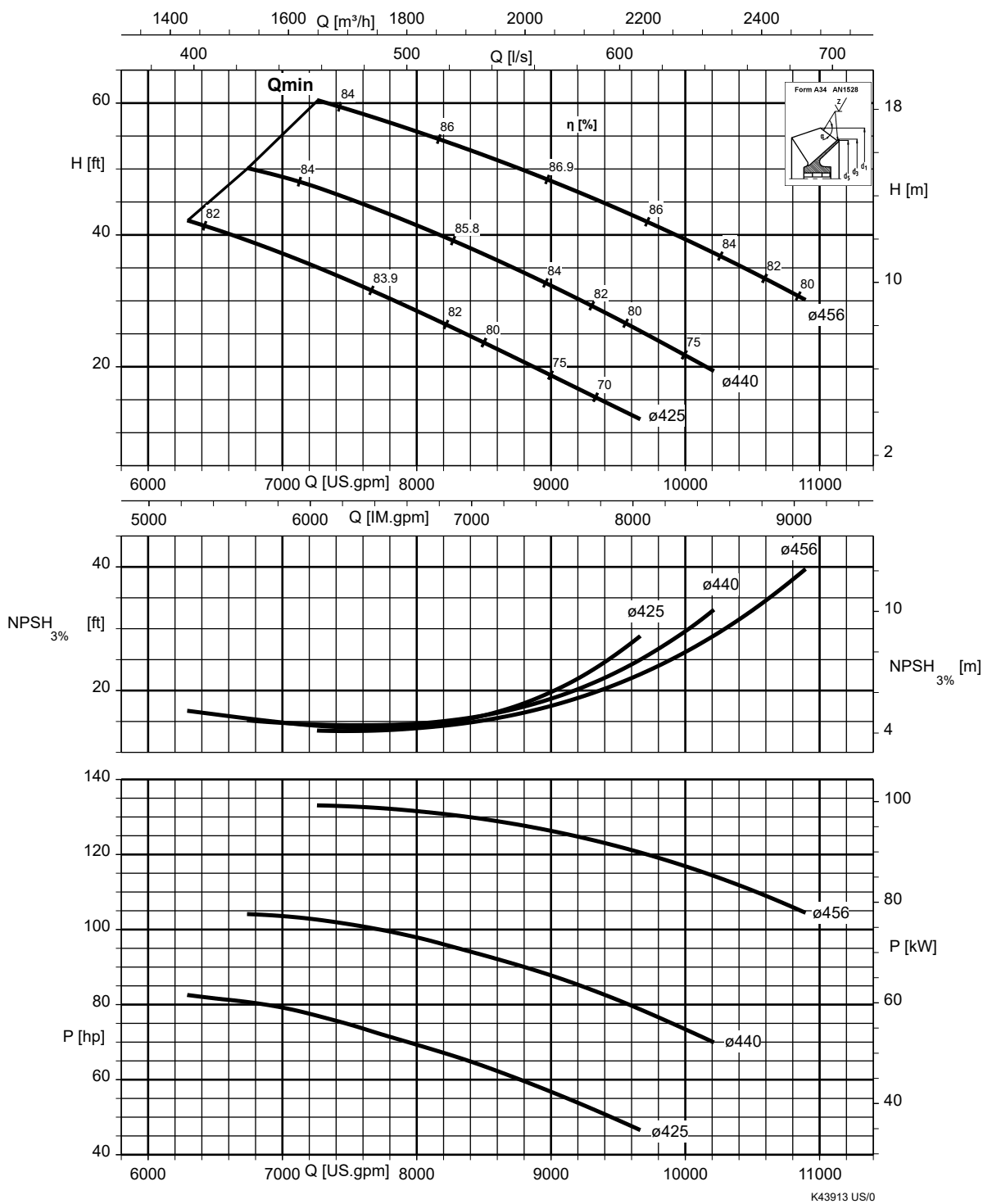
Table 19: Motor data

Size	Motor	P ₂				J
		_28)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
600-420	476 UT/XT	60	47	-	-	1,06
600-420	606 UT/XT	80	60	-	-	1,06
600-420	806 UT/XT	100	80	-	-	1,25
600-420	1006 UT/XT	-	-	50	37	1,37
600-420	1206 UT/XT	-	-	60	45	1,51

²⁸⁾ - = No efficiency classification

AmaCan DA3 700/800-460, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 3 in [76 mm]

Table 20: Motor data

Size	Motor	P ₂				J
		_29)		IE3		
		[hp]	[kW]	[hp]	[kW]	
700-460	806 UT/XT	100	80	-	-	1,92
700-460	1006 UT/XT	135	100	-	-	2,05
700-460	1206 UT/XT	155	120	-	-	2,19

²⁹ - = No efficiency classification

AmaCan DB2 700/800-460, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed

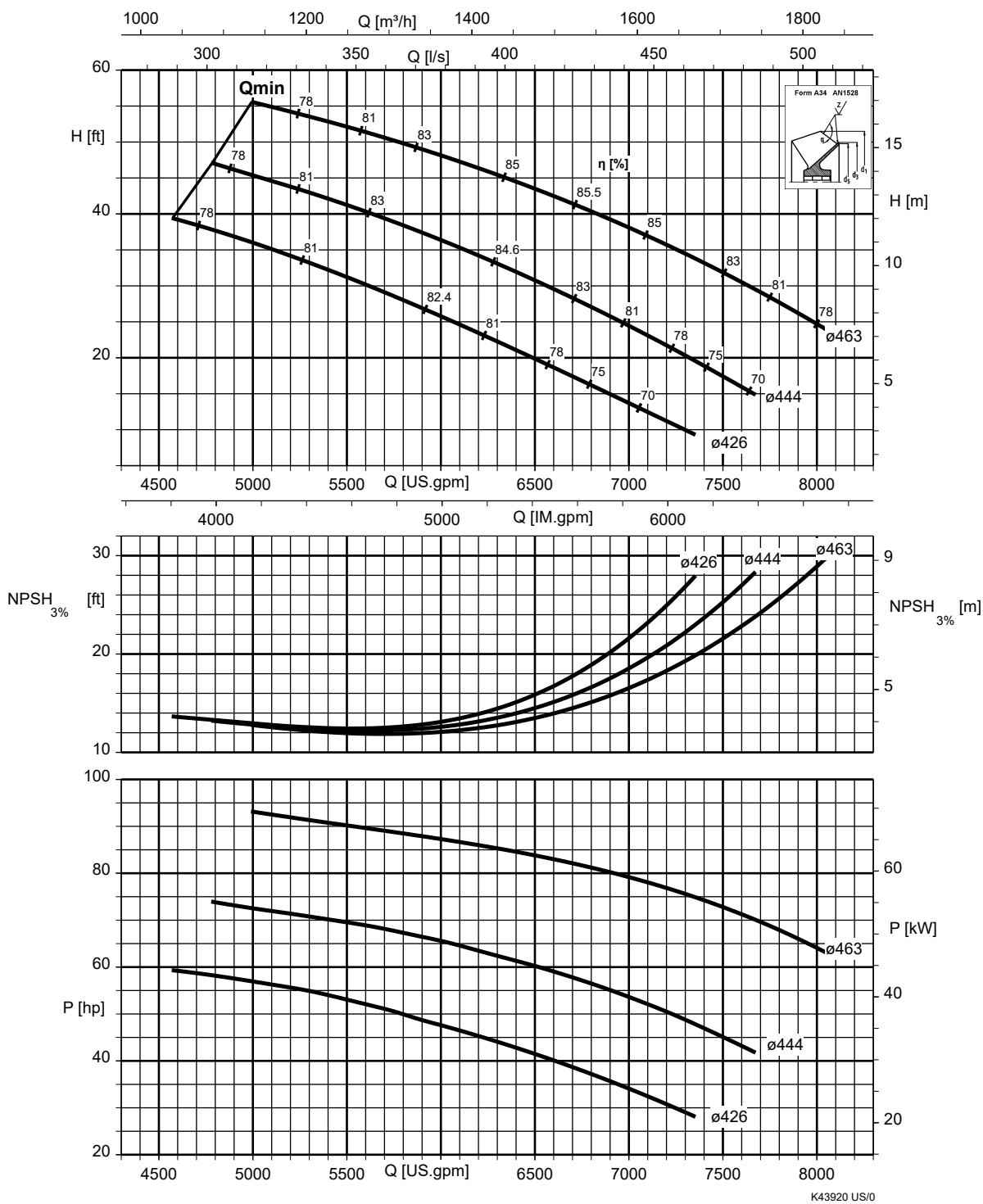
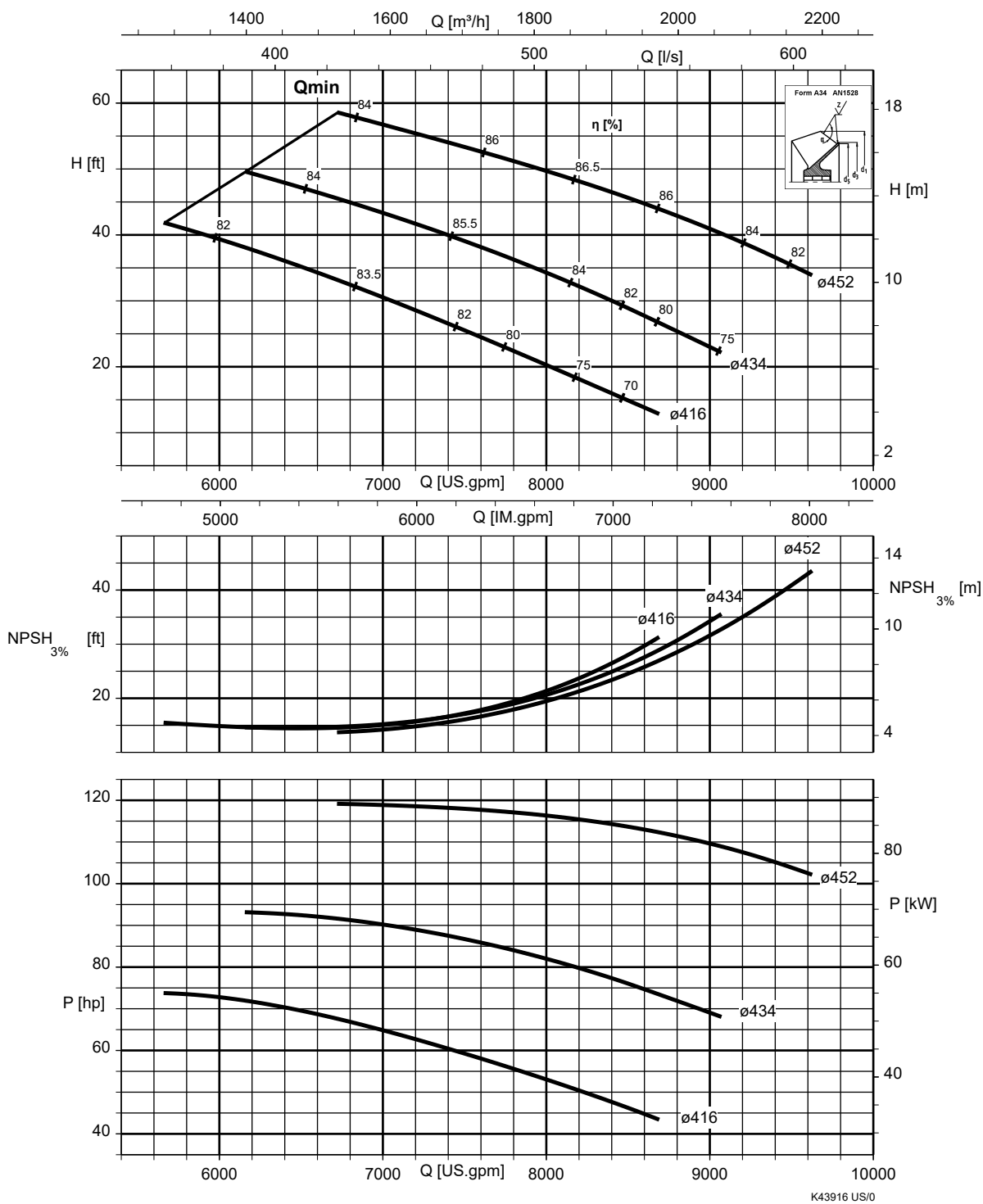


Table 21: Motor data

Size	Motor	P ₂				J
		_30)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
700-460	476 UT/XT	60	47	-	-	1,56
700-460	606 UT/XT	80	60	-	-	1,56
700-460	806 UT/XT	100	80	-	-	1,75
700-460	1206 UT/XT	-	-	60	45	2,02

AmaCan DB3 700/800-460, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 3 in [76 mm]

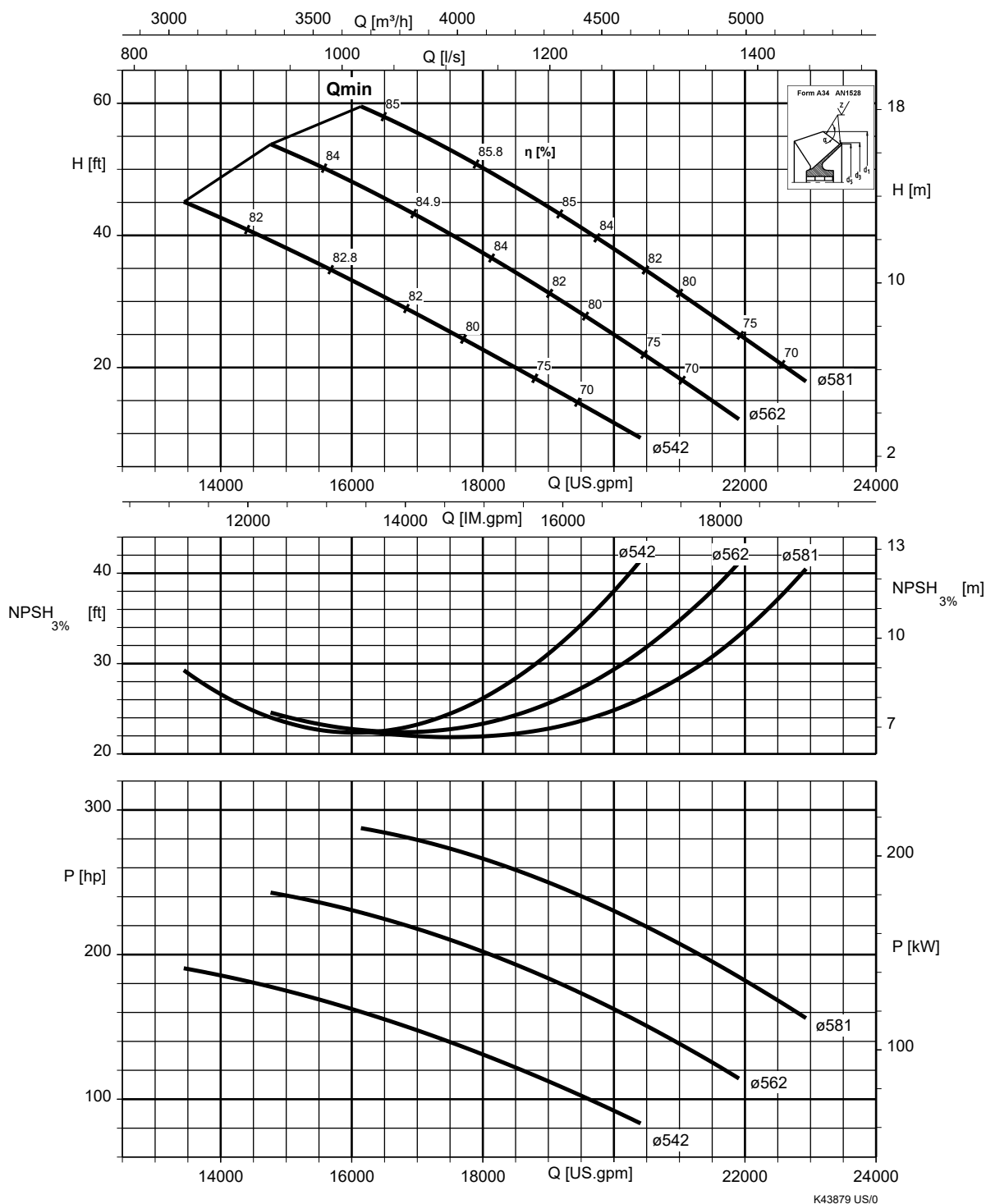
Table 22: Motor data

Size	Motor	P ₂				J
		_31)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
700-460	606 UT/XT	80	60	-	-	1,63
700-460	806 UT/XT	100	80	-	-	1,82
700-460	1006 UT/XT	135	100	-	-	1,95
700-460	1206 UT/XT	155	120	-	-	2,09

³¹⁾ - = No efficiency classification

AmaCan DB2 800-580, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 1/8 in [105 mm]

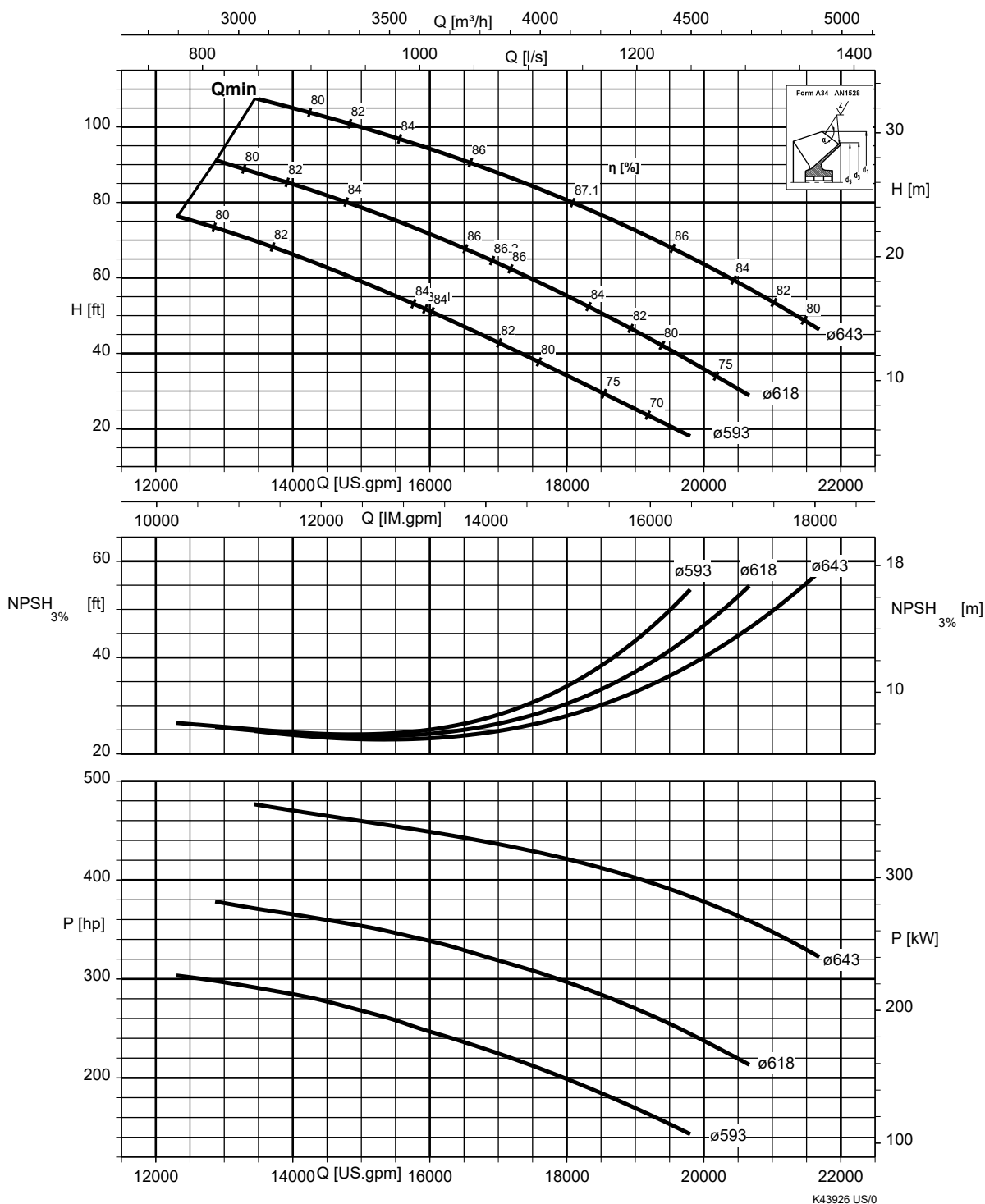
Table 23: Motor data

Size	Motor	P ₂				J
		_32)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm²]
800-580	1556 UT/XT	200	155	-	-	5,17
800-580	1806 UT/XT	240	180	-	-	5,44
800-580	2056 UT/XT	275	205	-	-	5,74
800-580	2506 UT	-	-	180	135	10,31
800-580	2906 UT	-	-	200	150	11,58
800-580	3406 UT	-	-	240	180	12,85

³² - = No efficiency classification

AmaCan DB2 900-630, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 1/8 in [105 mm]

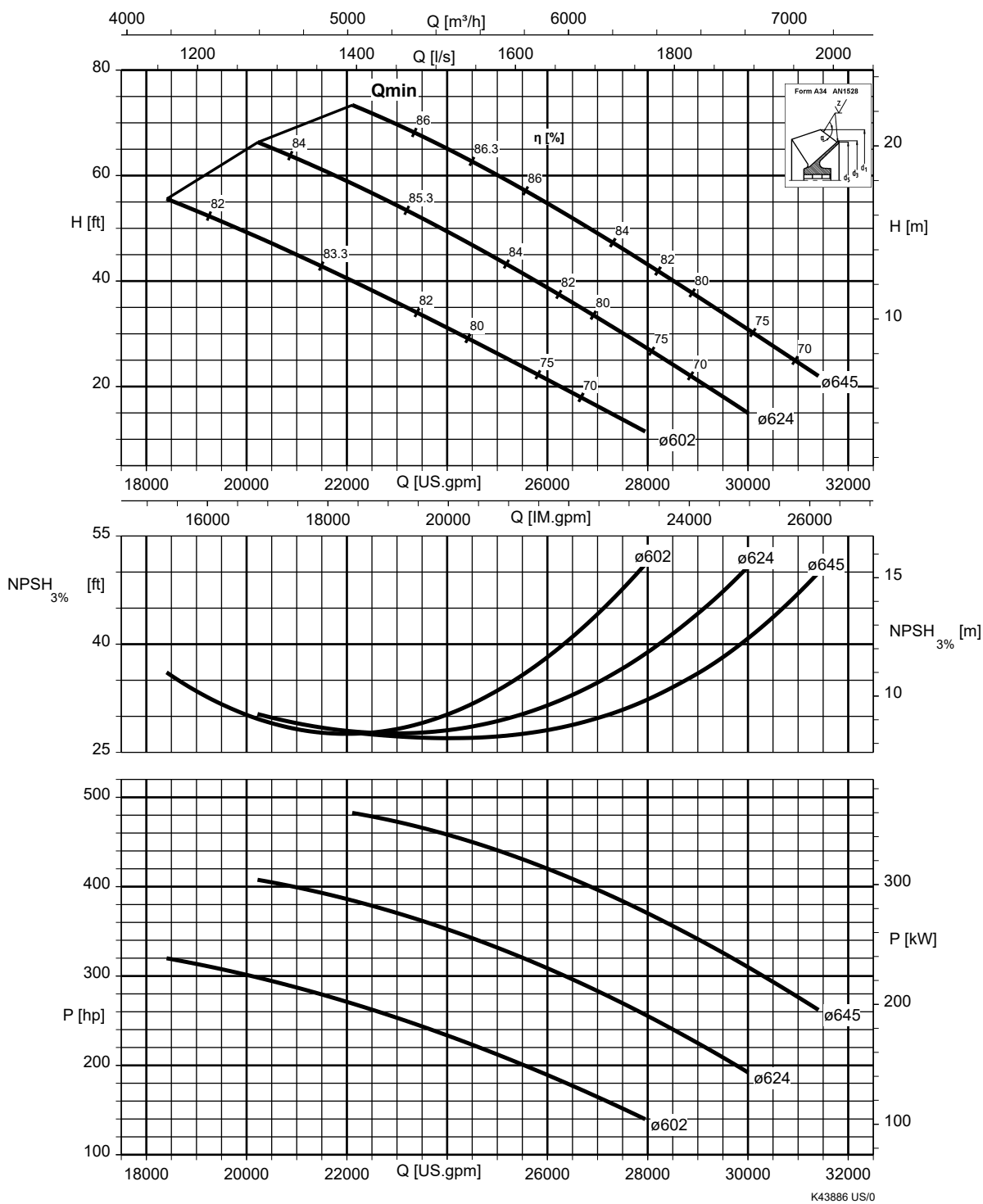
Table 24: Motor data

Size	Motor	P ₂				J
		_33)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
900-630	2056 UT/XT	275	205	-	-	7,91
900-630	2506 UT/XT	335	250	-	-	12,71
900-630	2906 UT/XT	390	290	-	-	13,98
900-630	3406 UT/XT	455	340	-	-	15,25

³³ - = No efficiency classification

AmaCan DB2 900/1000-650, n = 1160 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 9/16 in [116 mm]

Table 25: Motor data

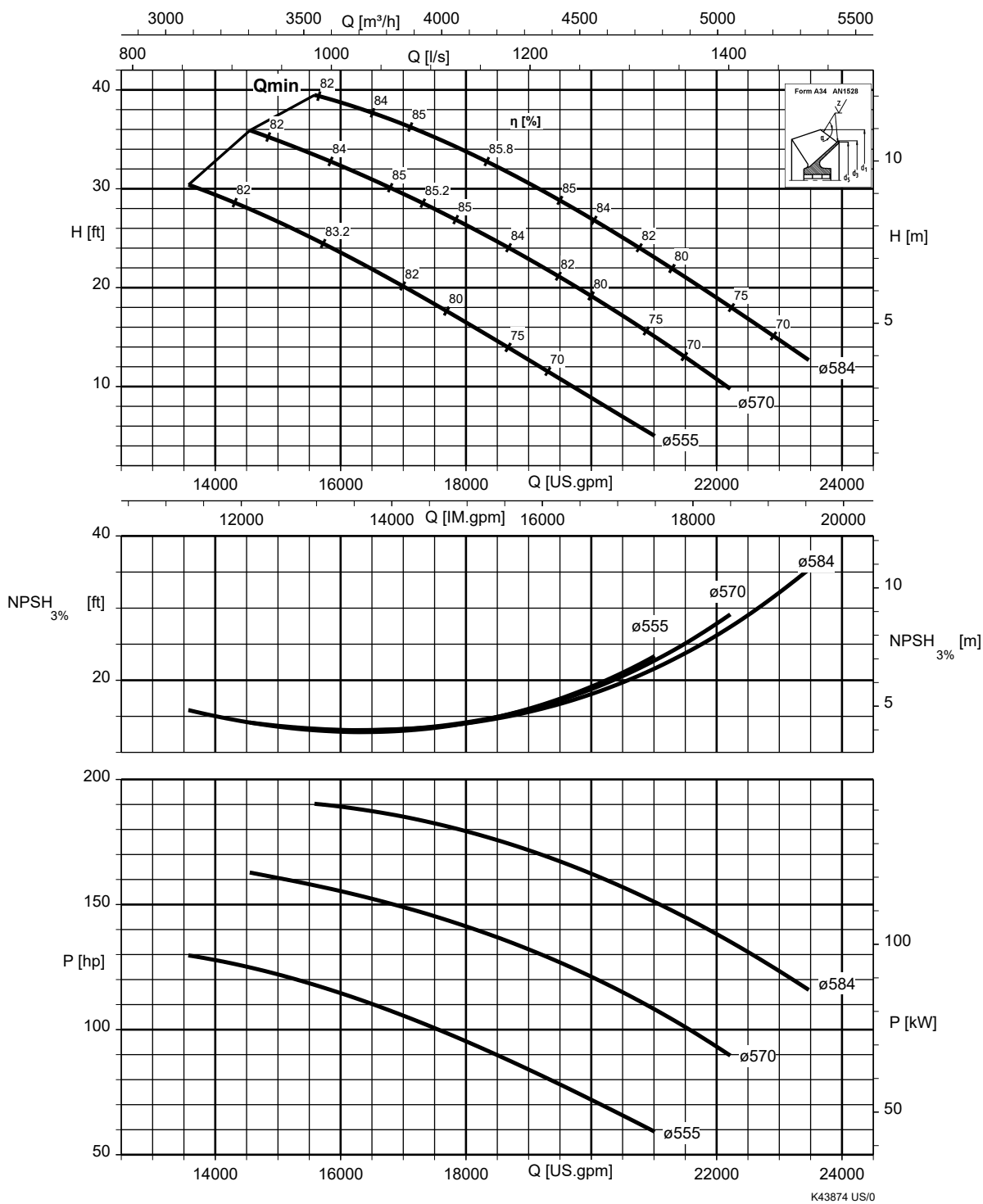
Size	Motor	P ₂				J
		_34)		IE3		
		[hp]	[kW]	[hp]	[kW]	
900-650	2506 UT/XT	335	250	-	-	12,75
900-650	2906 UT/XT	390	290	-	-	14,02
900-650	3406 UT/XT	455	340	-	-	15,29

³⁴ - = No efficiency classification

$n = 875 \text{ rpm}$

Amacan DA3 800-580, n = 875 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 1/8 in [105 mm]

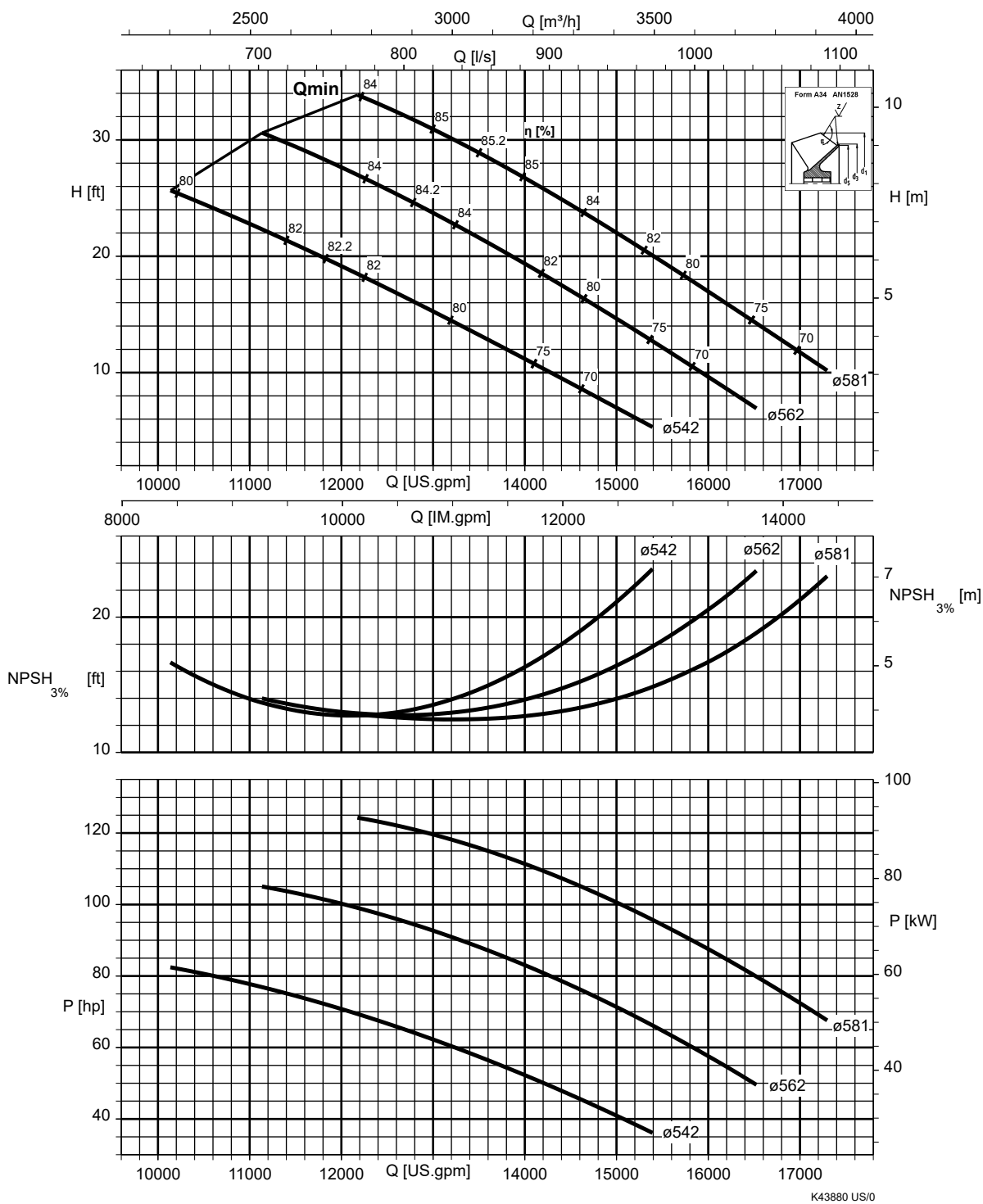
Table 26: Motor data

Size	Motor	P ₂				J
		_35)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm²]
800-580	958 UT/XT	125	95	-	-	4,57
800-580	1208 UT/XT	160	120	-	-	5,61
800-580	1408 UT/XT	185	140	-	-	5,88
800-580	1608 UT/XT	215	160	120	90	6,18
800-580	2058 UT	-	-	160	120	10,75
800-580	2508 UT	-	-	185	140	12,02
800-580	2908 UT	-	-	215	160	13,29

³⁵ - = No efficiency classification

Amacan DB2 800-580, n = 875 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 1/8 in [105 mm]

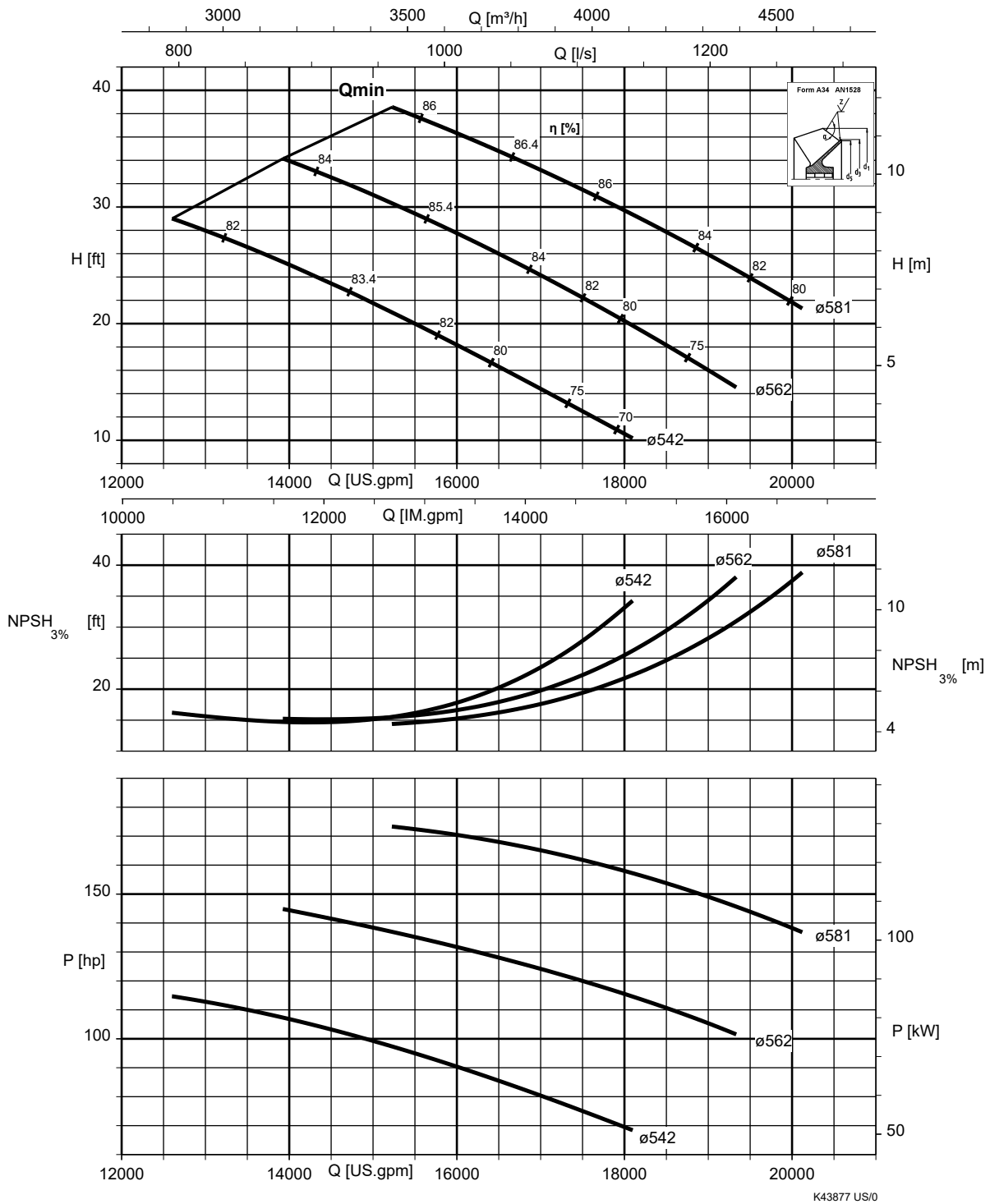
Table 27: Motor data

Size	Motor	P ₂				J
		_36)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm²]
800-580	558 UT/XT	75	55	-	-	3,86
800-580	708 UT/XT	95	70	-	-	3,86
800-580	958 UT/XT	125	95	-	-	4,13
800-580	1208 UT/XT	160	120	80	60	5,17
800-580	1408 UT/XT	-	-	100	75	5,45
800-580	1608 UT/XT	-	-	120	90	5,74
800-580	2058 UT/XT	-	-	160	120	10,31

³⁶ - = No efficiency classification

Amacan DB3 800-580, n = 875 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 1/8 in [105 mm]

Table 28: Motor data

Size	Motor	P ₂				J
		_37)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm²]
800-580	958 UT/XT		95	-	-	4,12
800-580	1208 UT/XT		120	-	-	5,17
800-580	1408 UT/XT		140	-	-	5,44
800-580	1608 UT/XT		160	-	-	5,74
800-580	2058 UT	-	-		120	10,31
800-580	2508 UT	-	-		140	11,68
800-580	2908 UT	-	-		160	12,85

³⁷ - = No efficiency classification

Amacan DA3 900-630, n = 875 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed

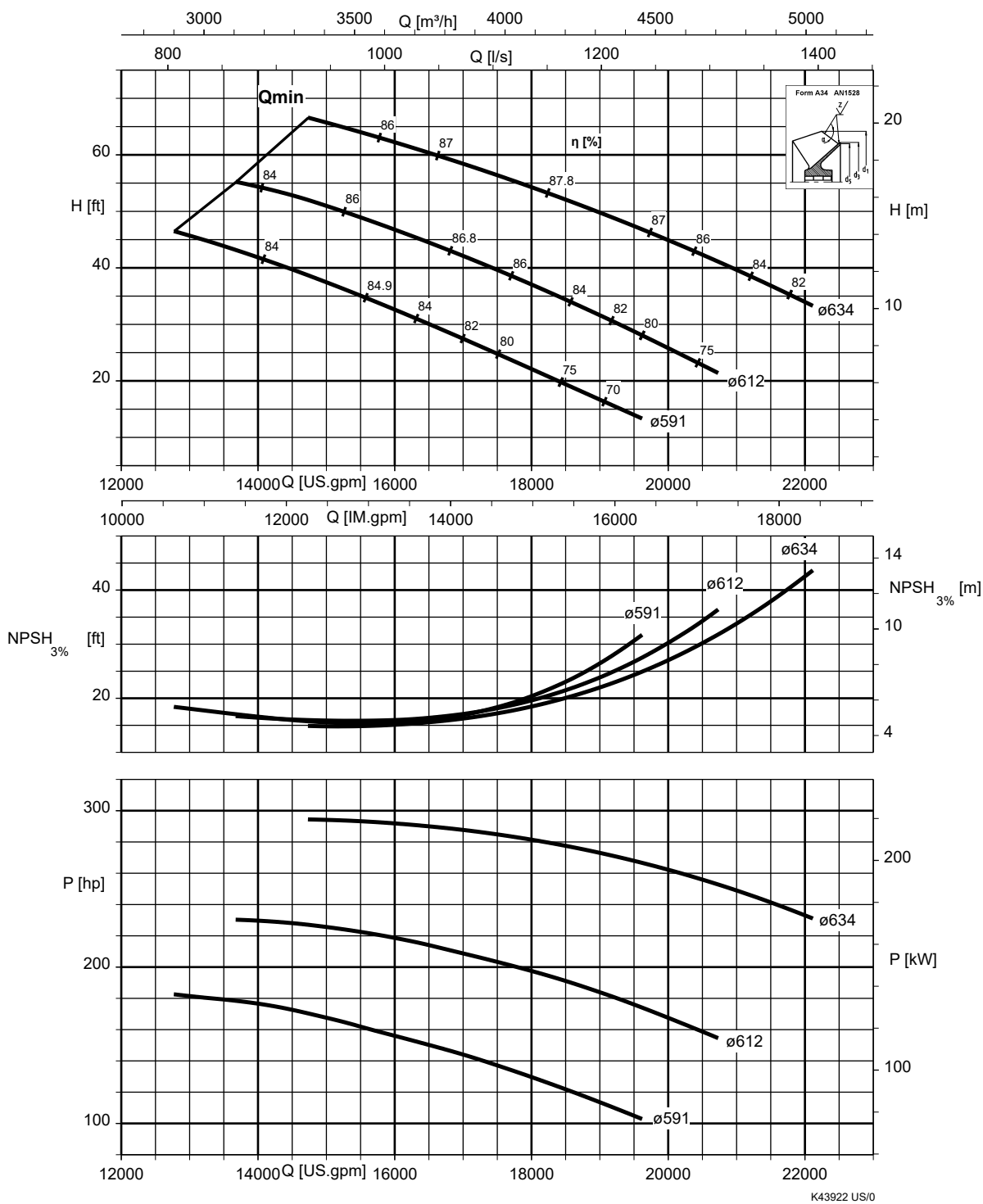


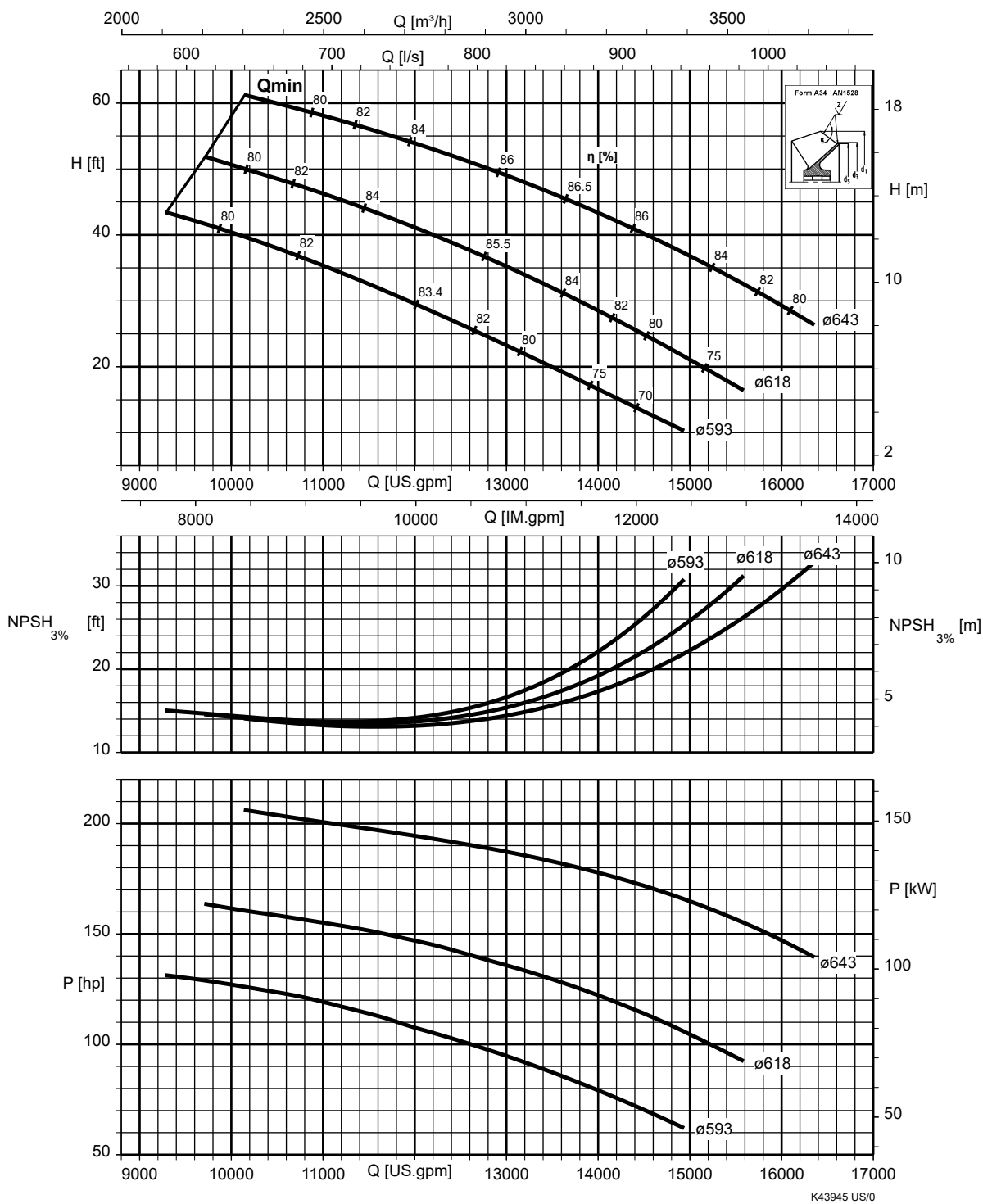
Table 29: Motor data

Size	Motor	P ₂				J
		_38)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
900-630	1408 UT/XT	185	140	-	-	9,77
900-630	1608 UT/XT	215	160	-	-	10,07
900-630	2058 UT/XT	275	205	-	-	14,87
900-630	2508 UT/XT	335	250		140	16,13
900-630	2908 UT/XT	-	-		160	17,4

³⁸⁾ - = No efficiency classification

Amacan DB2 900-630, n = 875 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 1/8 in [105 mm]

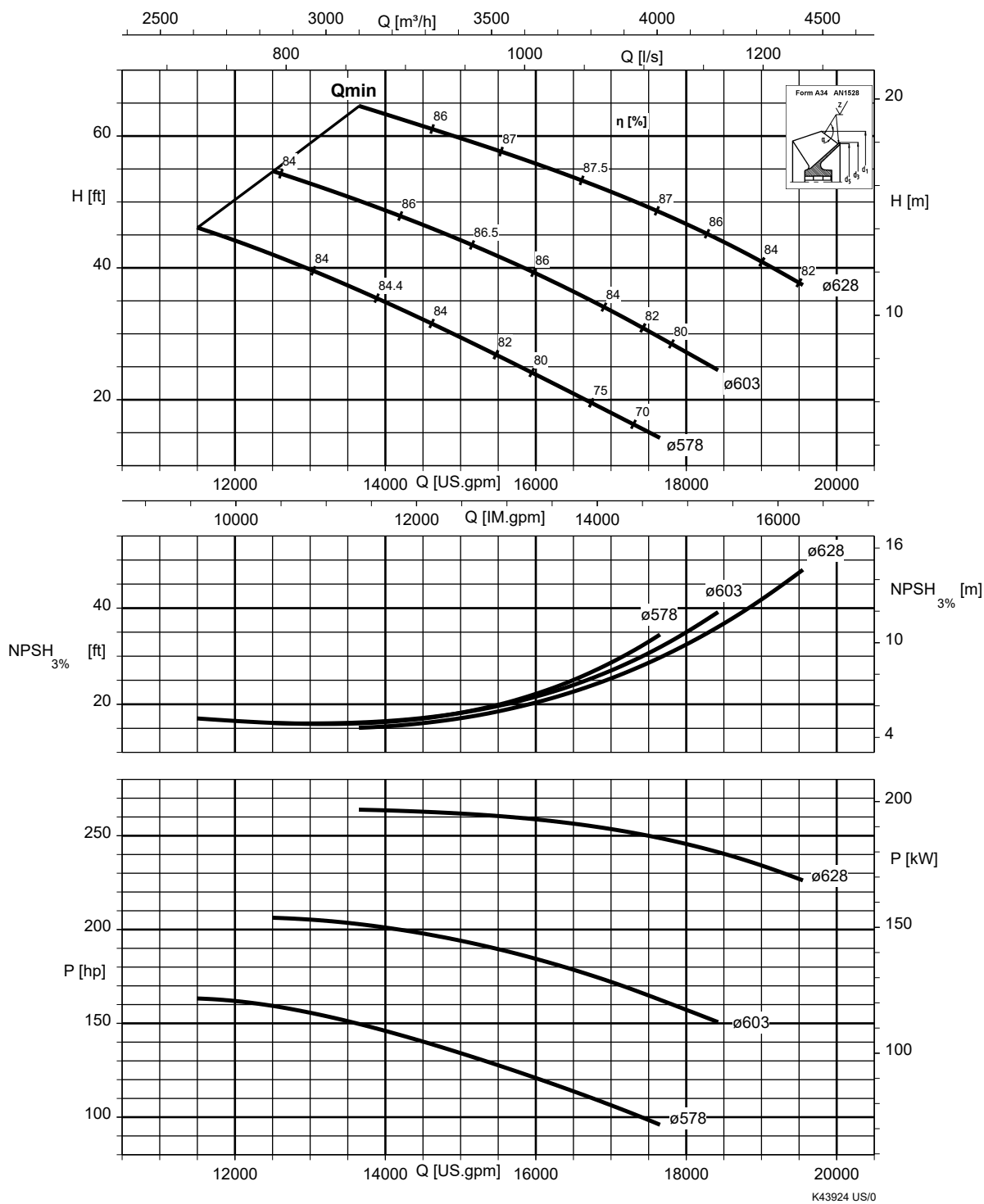
Table 30: Motor data

Size	Motor	P ₂				J
		_39)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
900-630	1208 UT/XT	160	120	-	-	7,34
900-630	1408 UT/XT	185	140	-	-	7,61
900-630	1608 UT/XT	215	160	120	90	7,91
900-630	2058 UT/XT	275	205	160	120	12,71
900-630	2508 UT/XT	-	-	185	140	13,96
900-630	2908 UT/XT	-	-	215	160	15,23

³⁹ - = No efficiency classification

AmaCan DB3 900-630, n = 875 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 1/8 in [105 mm]

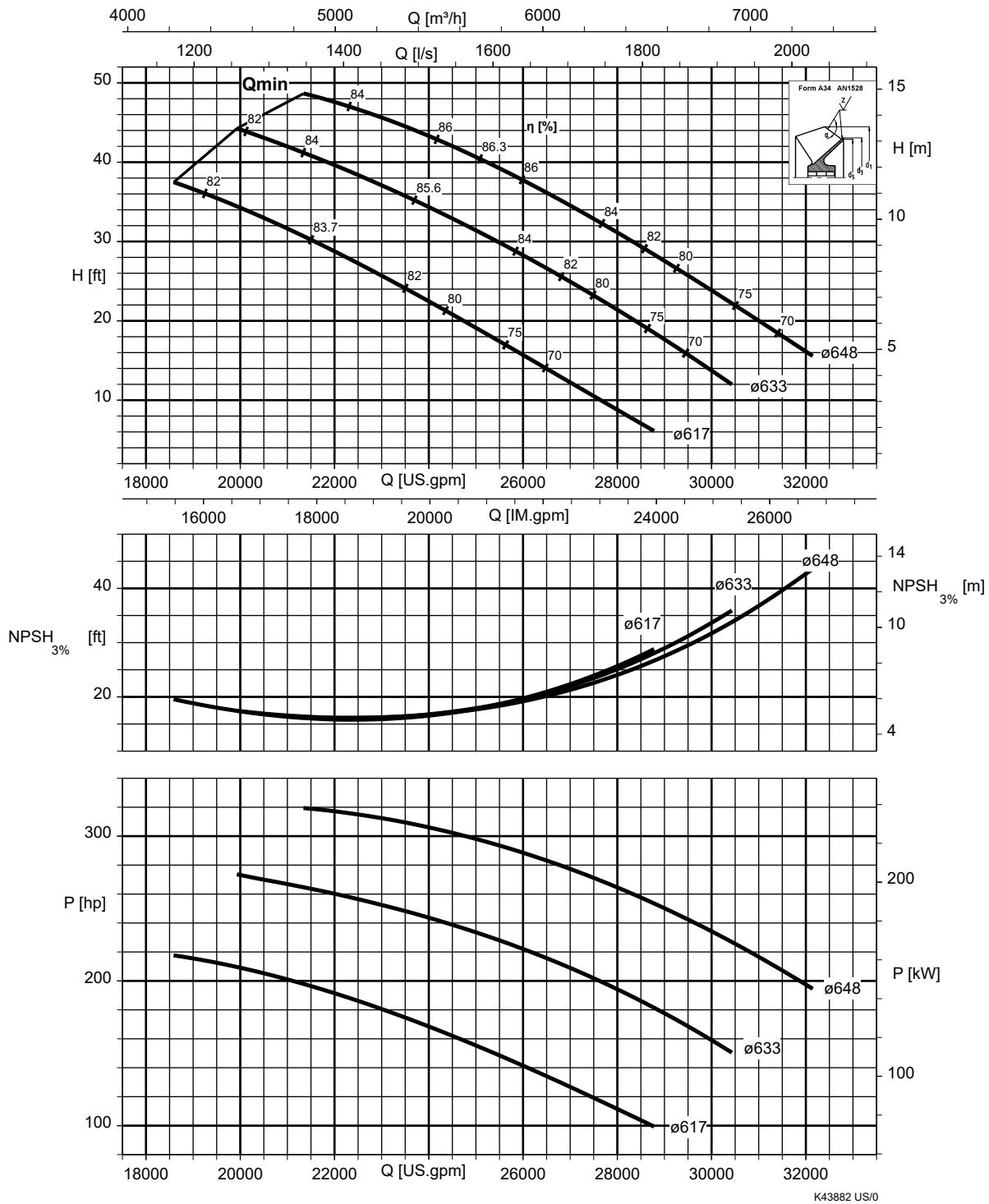
Table 31: Motor data

Size	Motor	P ₂				J
		_40)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
900-630	1408 UT/XT	185	140	-	-	7,8
900-630	1608 UT/XT	215	160	-	-	8,1
900-630	2058 UT/XT	275	205	-	-	12,9
900-630	2508 UT/XT	335	250	185	140	14,7
900-630	2908 UT/XT	-	-	215	160	15,43

⁴⁰⁾ - = No efficiency classification

AmaCan DA3 900/1000-650, n = 875 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 9/16 in [116 mm]

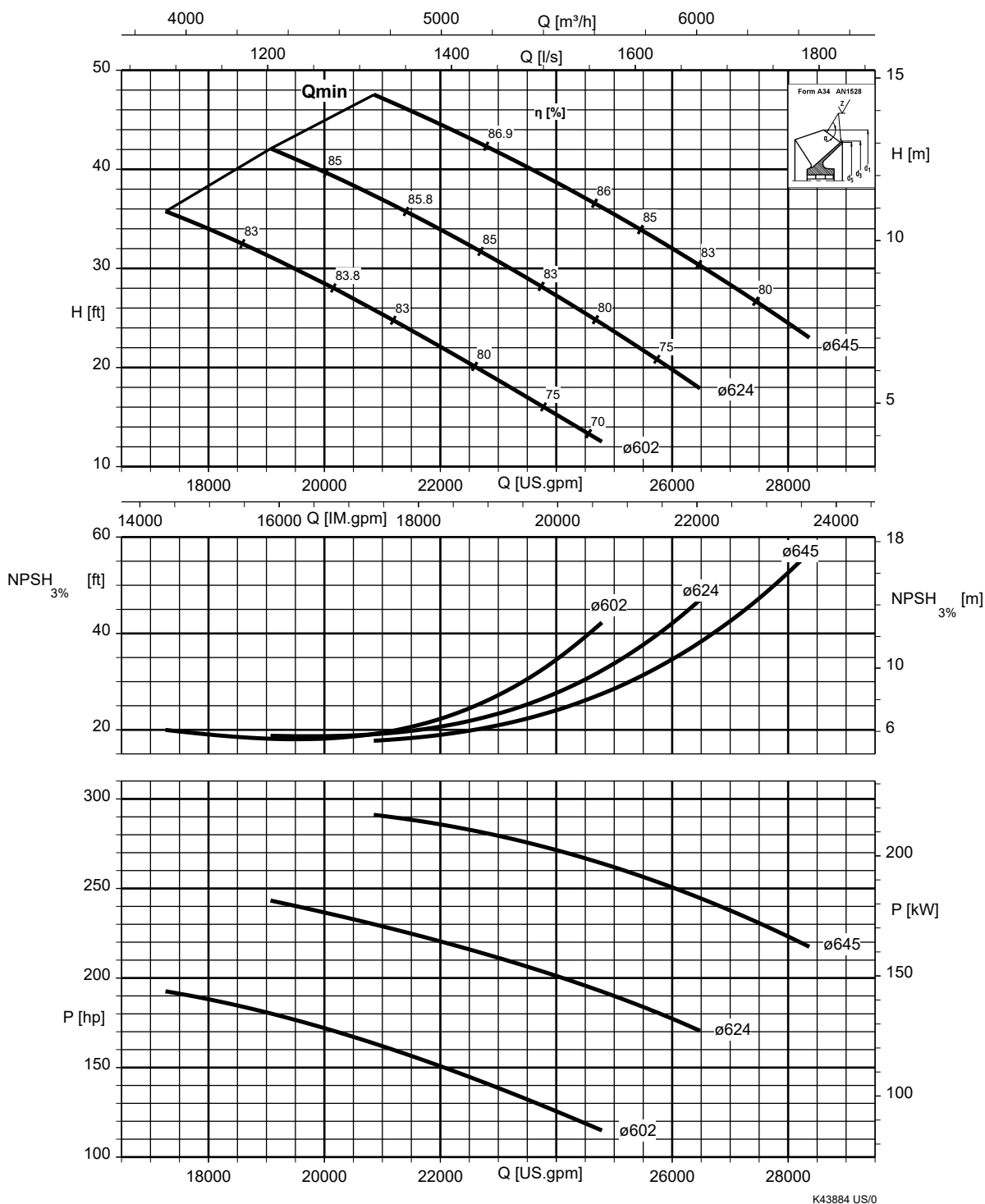
Table 32: Motor data

Size	Motor	P ₂				J
		_41)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm²]
900-650	1608 UT/XT	215	160	-	-	8,71
900-650	2058 UT/XT	275	205	-	-	13,51
900-650	2508 UT/XT	335	250	-	-	14,78
900-650	2908 UT/XT	390	290	215	160	16,04

⁴¹⁾ - = No efficiency classification

AmaCan DB3 900/1000-650, n = 875 rpm

Characteristic curves to ISO 9906 / 2 / 2B. n = rated speed



Free passage = 4 9/16 in [116 mm]

Table 33: Motor data

Size	Motor	P ₂				J
		_42)		IE3		
		[hp]	[kW]	[hp]	[kW]	[kgm ²]
900-650	1408 UT/XT	185	140	-	-	7,65
900-650	1608 UT/XT	215	160	-	-	7,95
900-650	2058 UT/XT	275	205	-	-	12,75
900-650	2508 UT/XT	335	250	185	140	14,02
900-650	2908 UT/XT	-	-	215	160	15,27

⁴² - = No efficiency classification

Dimensions

Dimensions [inch]

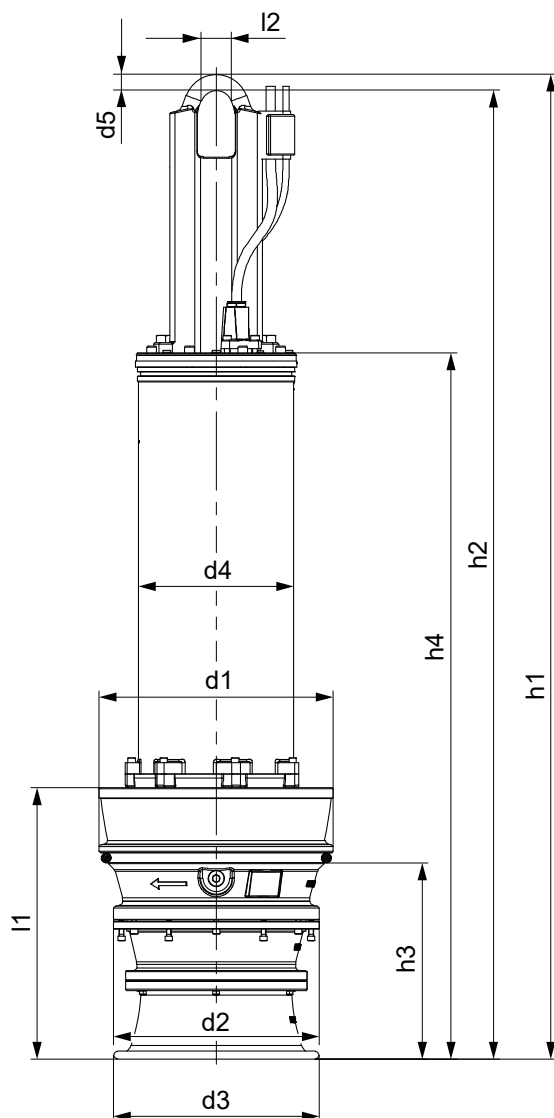


Fig. 1: Pump set dimensions

Table 34: Pump set dimensions [inch]

Size	Motor size	Number of poles	d ₁	d ₂	d ₃	d ₄	d ₅	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	[lbs] ⁴³⁾
600-390	70	4	23	19 2/3	20 6/7	15 1/6	1 4/7	89 5/7	88 1/7	20 1/3	62 1/2	28 3/7	3 1/7	2085
600-390	90	4	23	19 2/3	20 6/7	15 1/6	1 4/7	97 3/5	96	20 1/3	70 2/5	28 3/7	3 1/7	2360
600-390	105	4	23	19 2/3	20 6/7	15 1/6	1 4/7	97 3/5	96	20 1/3	70 2/5	28 3/7	3 1/7	2450
600-390	130	4	23	19 2/3	20 6/7	15 1/6	1 4/7	97 3/5	96	20 1/3	70 2/5	28 3/7	3 1/7	2540
600-390	47	6	23	19 2/3	20 6/7	15 1/6	1 4/7	89 5/7	88 1/7	20 1/3	62 1/2	28 3/7	3 1/7	2085
600-390	60	6	23	19 2/3	20 6/7	15 1/6	1 4/7	89 5/7	88 1/7	20 1/3	62 1/2	28 3/7	3 1/7	2085
600-390	65	6	23	19 2/3	20 6/7	15 1/6	1 4/7	89 5/7	88 1/7	20 1/3	62 1/2	28 3/7	3 1/7	2120
600-390	80	6	23	19 2/3	20 6/7	15 1/6	1 4/7	97 3/5	96	20 1/3	70 2/5	28 3/7	3 1/7	2340
600-390	100	6	23	19 2/3	20 6/7	15 1/6	1 4/7	97 3/5	96	20 1/3	70 2/5	28 3/7	3 1/7	2440
600-390	120	6	23	19 2/3	20 6/7	15 1/6	1 4/7	97 3/5	96	20 1/3	70 2/5	28 3/7	3 1/7	2540
700-390	150	4	23	19 2/3	20 6/7	18 5/7	1 4/7	110 1/4	108 2/3	20 1/3	83	28 3/7	3 1/7	3430

⁴³⁾ Pump set in material variant G3, with 33 ft [10 m] power cable and 16.4 ft [5 m] support rope. The indicated weights are reference values only. Refer to the data sheet for the exact weight.

Size	Motor size	Number of poles	d ₁	d ₂	d ₃	d ₄	d ₅	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	[lbs] ⁽⁴³⁾
700-390	170	4	23	19 2/3	20 6/7	18 5/7	1 4/7	110 1/4	108 2/3	20 1/3	83	28 3/7	3 1/7	3430
600-420	90	4	22 5/6	20	20	15 1/6	1 4/7	96 1/6	94 3/5	19 1/7	69	26 1/2	3 1/7	2305
600-420	105	4	22 5/6	20	20	15 1/6	1 4/7	96 1/6	94 3/5	19 1/7	69	26 1/2	3 1/7	2395
600-420	130	4	22 5/6	20	20	15 1/6	1 4/7	96 1/6	94 3/5	19 1/7	69	26 1/2	3 1/7	2485
600-420	47	6	22 5/6	20	20	15 1/6	1 4/7	88 1/3	86 3/4	19 1/7	61 1/9	26 1/2	3 1/7	2010
600-420	60	6	22 5/6	20	20	15 1/6	1 4/7	88 1/3	86 3/4	19 1/7	61 1/9	26 1/2	3 1/7	2010
600-420	80	6	22 5/6	20	20	15 1/6	1 4/7	96 1/6	94 3/5	19 1/7	69	26 1/2	3 1/7	2285
600-420	100	6	22 5/6	20	20	15 1/6	1 4/7	96 1/6	94 3/5	19 1/7	69	26 1/2	3 1/7	2385
600-420	120	6	22 5/6	20	20	15 1/6	1 4/7	96 1/6	94 3/5	19 1/7	69	26 1/2	3 1/7	2485
700-460	150	4	26 2/3	22 5/6	24	18 5/7	1 4/7	107 1/4	105 2/3	21 7/9	80	31 7/9	3 1/7	3585
700-460	170	4	26 2/3	22 5/6	24	18 5/7	1 4/7	107 1/4	105 2/3	21 7/9	80	31 7/9	3 1/7	3585
700-460	190	4	26 2/3	22 5/6	24	18 5/7	1 4/7	107 1/4	105 2/3	21 7/9	80	31 7/9	3 1/7	3685
700-460	215	4	26 2/3	22 5/6	24	18 5/7	1 4/7	107 1/4	105 2/3	21 7/9	80	31 7/9	3 1/7	3750
700-460	47	6	26 2/3	22 5/6	24	15 1/6	1 4/7	92 1/2	91	21 7/9	65 1/3	31 7/9	3 1/7	2250
700-460	60	6	26 2/3	22 5/6	24	15 1/6	1 4/7	92 1/2	91	21 7/9	65 1/3	31 7/9	3 1/7	2250
700-460	80	6	26 2/3	22 5/6	24	15 1/6	1 4/7	100 2/5	98 5/6	21 7/9	73 1/5	31 7/9	3 1/7	2525
700-460	100	6	26 2/3	22 5/6	24	15 1/6	1 4/7	100 2/5	98 5/6	21 7/9	73 1/5	31 7/9	3 1/7	2625
700-460	120	6	26 2/3	22 5/6	24	15 1/6	1 4/7	100 2/5	98 5/6	21 7/9	73 1/5	31 7/9	3 1/7	2725
800-460	275	4	26 2/3	22 5/6	24	21 6/7	2	123 2/9	121	21 7/9	99 2/3	31 7/9	3 1/2	5095
800-460	300	4	26 2/3	22 5/6	24	21 6/7	2	123 2/9	121	21 7/9	99 2/3	31 7/9	3 1/2	5240
800-580	155	6	30 5/8	27 1/3	27 3/4	18 5/7	1 4/7	109 1/3	107 3/4	25	82 1/8	35 3/7	3 1/7	3960
800-580	180	6	30 5/8	27 1/3	27 3/4	18 5/7	1 4/7	109 1/3	107 3/4	25	82 1/8	35 3/7	3 1/7	4025
800-580	205	6	30 5/8	27 1/3	27 3/4	18 5/7	1 4/7	109 1/3	107 3/4	25	82 1/8	35 3/7	3 1/7	4145
800-580	250	6	30 5/8	27 1/3	27 3/4	21 6/7	2	125 1/3	123	25	101 3/4	35 3/7	3 1/2	5580
800-580	290	6	30 5/8	27 1/3	27 3/4	21 6/7	2	125 1/3	123	25	101 3/4	35 3/7	3 1/2	5890
800-580	340	6	30 5/8	27 1/3	27 3/4	21 6/7	2	125 1/3	123	25	101 3/4	35 3/7	3 1/2	6175
800-580	55	8	30 5/8	27 1/3	27 3/4	15 1/6	1 4/7	102 1/2	101	25	75 2/7	35 3/7	3 1/7	2955
800-580	70	8	30 5/8	27 1/3	27 3/4	15 1/6	1 4/7	102 1/2	101	25	75 2/7	35 3/7	3 1/7	2955
800-580	95	8	30 5/8	27 1/3	27 3/4	15 1/6	1 4/7	102 1/2	101	25	75 2/7	35 3/7	3 1/7	3145
800-580	120	8	30 5/8	27 1/3	27 3/4	18 5/7	1 4/7	109 1/3	107 3/4	25	82 1/8	35 3/7	3 1/7	3895
800-580	140	8	30 5/8	27 1/3	27 3/4	18 5/7	1 4/7	109 1/3	107 3/4	25	82 1/8	35 3/7	3 1/7	4025
800-580	160	8	30 5/8	27 1/3	27 3/4	18 5/7	1 4/7	109 1/3	107 3/4	25	82 1/8	35 3/7	3 1/7	4145
800-580	205	8	30 5/8	27 1/3	27 3/4	21 6/7	2	125 1/3	123	25	101 3/4	35 3/7	3 1/2	5560
800-580	250	8	30 5/8	27 1/3	27 3/4	21 6/7	2	125 1/3	123	25	101 3/4	35 3/7	3 1/2	5865
800-580	290	8	30 5/8	27 1/3	27 3/4	21 6/7	2	125 1/3	123	25	101 3/4	35 3/7	3 1/2	6155
900-630	205	6	34 1/2	31 1/9	31 1/9	18 5/7	1 4/7	115 2/7	113 5/7	23 1/3	88	42 5/7	3 1/7	4840
900-630	250	6	34 1/2	31 1/9	31 1/9	21 6/7	2	125 1/2	123 1/5	23 1/3	102	42 5/7	3 1/2	6255
900-630	290	6	34 1/2	31 1/9	31 1/9	21 6/7	2	125 1/2	123 1/5	23 1/3	102	42 5/7	3 1/2	6560
900-630	340	6	34 1/2	31 1/9	31 1/9	21 6/7	2	125 1/2	123 1/5	23 1/3	102	42 5/7	3 1/2	6850
900-630	120	8	34 1/2	31 1/9	31 1/9	18 5/7	1 4/7	115 2/7	113 5/7	23 1/3	88	42 5/7	3 1/7	4590
900-630	140	8	34 1/2	31 1/9	31 1/9	18 5/7	1 4/7	115 2/7	113 5/7	23 1/3	88	42 5/7	3 1/7	4720
900-630	160	8	34 1/2	31 1/9	31 1/9	18 5/7	1 4/7	115 2/7	113 5/7	23 1/3	88	42 5/7	3 1/7	4840
900-630	205	8	34 1/2	31 1/9	31 1/9	21 6/7	2	125 1/2	123 1/5	23 1/3	102	42 5/7	3 1/2	6230
900-630	250	8	34 1/2	31 1/9	31 1/9	21 6/7	2	125 1/2	123 1/5	23 1/3	102	42 5/7	3 1/2	6540
900-630	290	8	34 1/2	31 1/9	31 1/9	21 6/7	2	125 1/2	123 1/5	23 1/3	102	42 5/7	3 1/2	6835
900-650	250	6	34 1/2	30	30 1/3	21 6/7	2	123 1/4	121	26 7/9	99 2/3	40 1/2	3 1/2	6045
900-650	290	6	34 1/2	30	30 1/3	21 6/7	2	123 1/4	121	26 7/9	99 2/3	40 1/2	3 1/2	6340
900-650	340	6	34 1/2	30	30 1/3	21 6/7	2	123 1/4	121	26 7/9	99 2/3	40 1/2	3 1/2	6640
900-650	140	8	34 1/2	30	30 1/3	18 5/7	1 4/7	113	111 1/2	26 7/9	85 6/7	40 1/2	3 1/7	4500
900-650	160	8	34 1/2	30	30 1/3	18 5/7	1 4/7	113	111 1/2	26 7/9	85 6/7	40 1/2	3 1/7	4630
900-650	205	8	34 1/2	30	30 1/3	21 6/7	2	123 1/4	121	26 7/9	99 2/3	40 1/2	3 1/2	6020
900-650	250	8	34 1/2	30	30 1/3	21 6/7	2	123 1/4	121	26 7/9	99 2/3	40 1/2	3 1/2	6320
900-650	290	8	34 1/2	30	30 1/3	21 6/7	2	123 1/4	121	26 7/9	99 2/3	40 1/2	3 1/2	6615

Dimensions [mm]

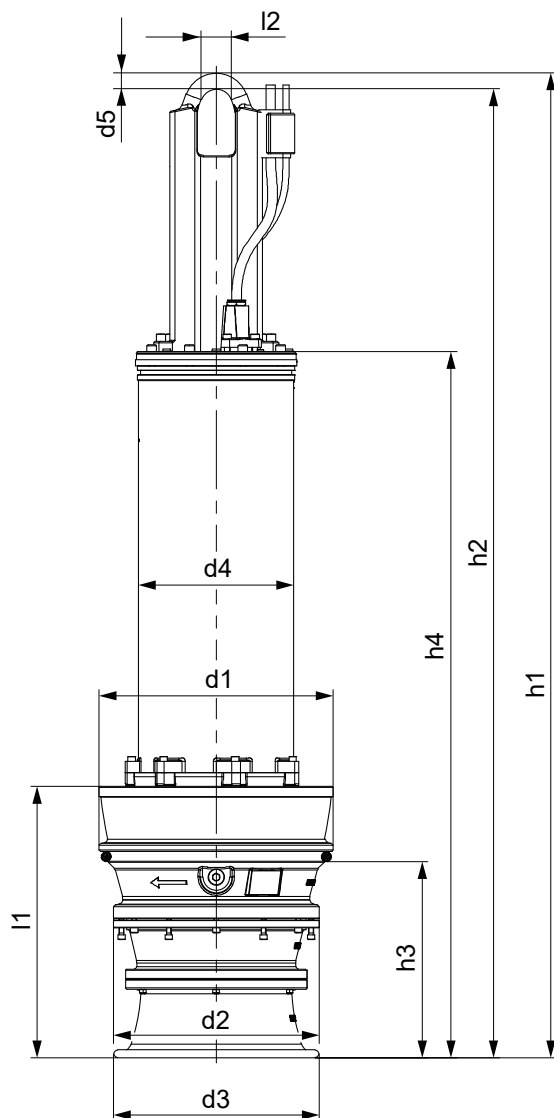


Fig. 2: Pump set dimensions

Table 35: Pump set dimensions [mm]

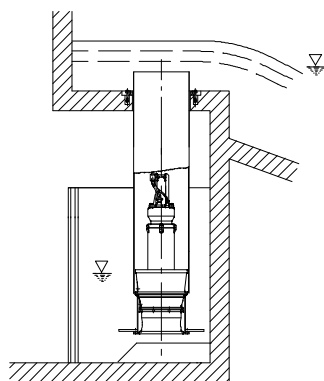
Size	Motor size	Number of poles	d ₁	d ₂	d ₃	d ₄	d ₅	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	[kg] ⁴⁴⁾
600-390	70	4	582	500	530	385	40	2279	2239	517	1588	722	80	945
600-390	90	4	582	500	530	385	40	2479	2439	517	1788	722	80	1070
600-390	105	4	582	500	530	385	40	2479	2439	517	1788	722	80	1110
600-390	130	4	582	500	530	385	40	2479	2439	517	1788	722	80	1150
600-390	47	6	582	500	530	385	40	2279	2239	517	1588	722	80	945
600-390	60	6	582	500	530	385	40	2279	2239	517	1588	722	80	945
600-390	65	6	582	500	530	385	40	2279	2239	517	1588	722	80	960
600-390	80	6	582	500	530	385	40	2479	2439	517	1788	722	80	1060
600-390	100	6	582	500	530	385	40	2479	2439	517	1788	722	80	1105
600-390	120	6	582	500	530	385	40	2479	2439	517	1788	722	80	1150
700-390	150	4	582	500	530	475	40	2800	2760	517	2109	722	80	1555
700-390	170	4	582	500	530	475	40	2800	2760	517	2109	722	80	1555
600-420	90	4	580	510	510	385	40	2443	2403	486	1752	673	80	1045
600-420	105	4	580	510	510	385	40	2443	2403	486	1752	673	80	1085

⁴⁴ Pump set in material variant G3, with 10-meter power cable and 5-meter support rope. The indicated weights are reference values only. Refer to the data sheet for the exact weight.

Size	Motor size	Num- ber of poles	d ₁	d ₂	d ₃	d ₄	d ₅	h ₁	h ₂	h ₃	h ₄	l ₁	l ₂	[kg] ⁽⁴⁴⁾
600-420	130	4	580	510	510	385	40	2443	2403	486	1752	673	80	1125
600-420	47	6	580	510	510	385	40	2243	2203	486	1552	673	80	910
600-420	60	6	580	510	510	385	40	2243	2203	486	1552	673	80	910
600-420	80	6	580	510	510	385	40	2443	2403	486	1752	673	80	1035
600-420	100	6	580	510	510	385	40	2443	2403	486	1752	673	80	1080
600-420	120	6	580	510	510	385	40	2443	2403	486	1752	673	80	1125
700-460	150	4	678	580	610	475	40	2724	2684	553	2033	807	80	1625
700-460	170	4	678	580	610	475	40	2724	2684	553	2033	807	80	1625
700-460	190	4	678	580	610	475	40	2724	2684	553	2033	807	80	1670
700-460	215	4	678	580	610	475	40	2724	2684	553	2033	807	80	1700
700-460	47	6	678	580	610	385	40	2350	2310	553	1659	807	80	1020
700-460	60	6	678	580	610	385	40	2350	2310	553	1659	807	80	1020
700-460	80	6	678	580	610	385	40	2550	2510	553	1859	807	80	1145
700-460	100	6	678	580	610	385	40	2550	2510	553	1859	807	80	1190
700-460	120	6	678	580	610	385	40	2550	2510	553	1859	807	80	1235
800-460	275	4	678	580	610	555	50	3130	3071	553	2531	807	90	2310
800-460	300	4	678	580	610	555	50	3130	3071	553	2531	807	90	2375
800-580	155	6	778	695	705	475	40	2777	2737	636	2086	900	80	1795
800-580	180	6	778	695	705	475	40	2777	2737	636	2086	900	80	1825
800-580	205	6	778	695	705	475	40	2777	2737	636	2086	900	80	1880
800-580	250	6	778	695	705	555	50	3184	3124	636	2584	900	90	2530
800-580	290	6	778	695	705	555	50	3184	3124	636	2584	900	90	2670
800-580	340	6	778	695	705	555	50	3184	3124	636	2584	900	90	2800
800-580	55	8	778	695	705	385	40	2603	2563	636	1912	900	80	1340
800-580	70	8	778	695	705	385	40	2603	2563	636	1912	900	80	1340
800-580	95	8	778	695	705	385	40	2603	2563	636	1912	900	80	1425
800-580	120	8	778	695	705	475	40	2777	2737	636	2086	900	80	1765
800-580	140	8	778	695	705	475	40	2777	2737	636	2086	900	80	1825
800-580	160	8	778	695	705	475	40	2777	2737	636	2086	900	80	1880
800-580	205	8	778	695	705	555	50	3184	3124	636	2584	900	90	2520
800-580	250	8	778	695	705	555	50	3184	3124	636	2584	900	90	2660
800-580	290	8	778	695	705	555	50	3184	3124	636	2584	900	90	2790
900-630	205	6	876	790	790	475	40	2928	2888	593	2237	1085	80	2195
900-630	250	6	876	790	790	555	50	3188	3129	593	2589	1085	90	2835
900-630	290	6	876	790	790	555	50	3188	3129	593	2589	1085	90	2975
900-630	340	6	876	790	790	555	50	3188	3129	593	2589	1085	90	3105
900-630	120	8	876	790	790	475	40	2928	2888	593	2237	1085	80	2080
900-630	140	8	876	790	790	475	40	2928	2888	593	2237	1085	80	2140
900-630	160	8	876	790	790	475	40	2928	2888	593	2237	1085	80	2195
900-630	205	8	876	790	790	555	50	3188	3129	593	2589	1085	90	2825
900-630	250	8	876	790	790	555	50	3188	3129	593	2589	1085	90	2965
900-630	290	8	876	790	790	555	50	3188	3129	593	2589	1085	90	3100
900-650	250	6	876	760	770	555	50	3131	3072	680	2532	1028	90	2740
900-650	290	6	876	760	770	555	50	3131	3072	680	2532	1028	90	2875
900-650	340	6	876	760	770	555	50	3131	3072	680	2532	1028	90	3010
900-650	140	8	876	760	770	475	40	2872	2832	680	2181	1028	80	2040
900-650	160	8	876	760	770	475	40	2872	2832	680	2181	1028	80	2100
900-650	205	8	876	760	770	555	50	3131	3072	680	2532	1028	90	2730
900-650	250	8	876	760	770	555	50	3131	3072	680	2532	1028	90	2865
900-650	290	8	876	760	770	555	50	3131	3072	680	2532	1028	90	3000

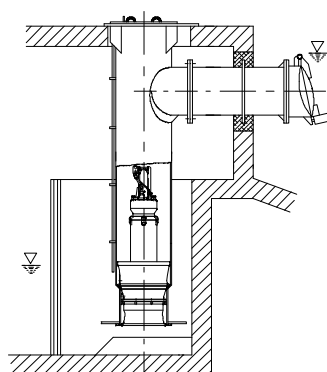
Installation types

Table 36: Overview of installation types



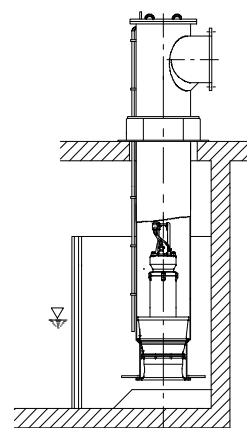
BU⁴⁵⁾/BUS⁴⁶⁾ discharge tube

Overflow design with open intake chamber



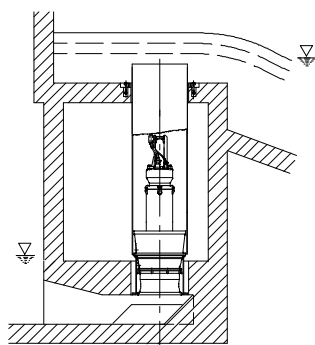
CU⁴⁵⁾/CUS⁴⁶⁾ discharge tube

Design with underfloor discharge line for installation in open intake chamber



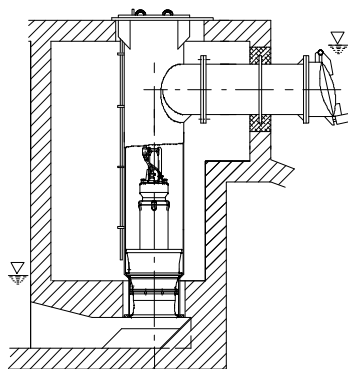
DU⁴⁵⁾/DUS⁴⁶⁾ discharge tube

Design with above floor discharge nozzle for installation in open intake chamber



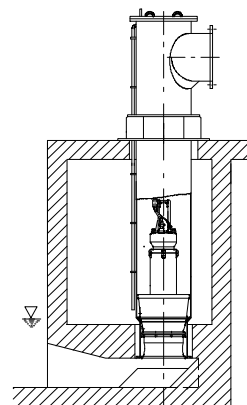
BG⁴⁵⁾ discharge tube

Overflow design for installation in covered intake chamber for low suction-side water levels



CG⁴⁵⁾ discharge tube

Design with underfloor discharge line for installation in covered intake chamber for low suction-side water levels



DG⁴⁵⁾ discharge tube

Design with above floor discharge nozzle for installation in covered intake chamber for low suction-side water levels

Scope of supply

Depending on the model, the following items are included in the scope of supply:

- Pump set complete with power cables
- O-ring
- Back-up name plate

Optional accessories:

- Support rope
- Accessories for installing the cable guide:

- Spacer
- Spacer
- Turnbuckle
- Support
- Shackle
- Cable clamps

- Cable support sleeves
- Flow-straightening vane to prevent floor vortices
- Discharge tube

⁴⁵ Design without suction umbrella

⁴⁶ Design with suction umbrella

Accessories

Flow-straightening vane and intake chamber

Design of the intake chamber wall surfaces (to prevent vortex formation)

The flow-straightening vane is indispensable for the inlet conditions of the pump set. It prevents the development of a submerged vortex (floor vortex) which could cause a drop in performance, for example. In addition, the floor and wall surfaces of the intake chamber should be designed as a rough concrete surface. Rough surfaces minimize the separation of boundary layers that may cause wall and floor vortices.

Flow-straightening vane and intake chamber

- The anti-vortex vanes in the bellmouth must be aligned with the flow-straightening vane.
- The bail of the pump is oriented in the same direction as the anti-vortex vanes in the bellmouth.

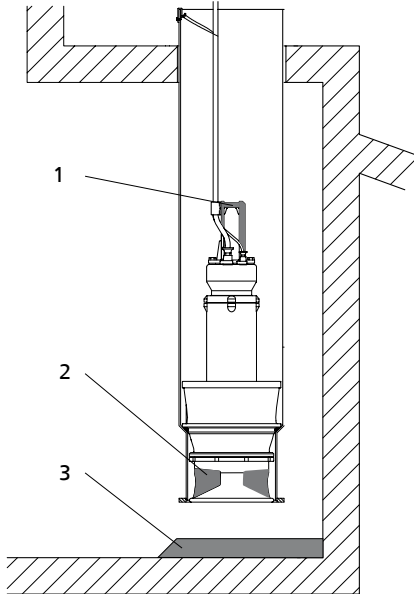
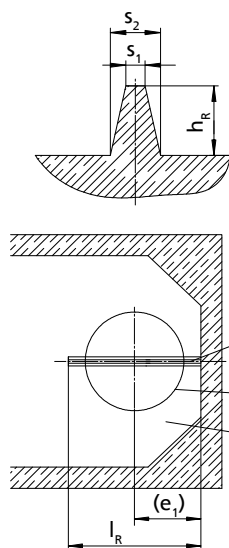


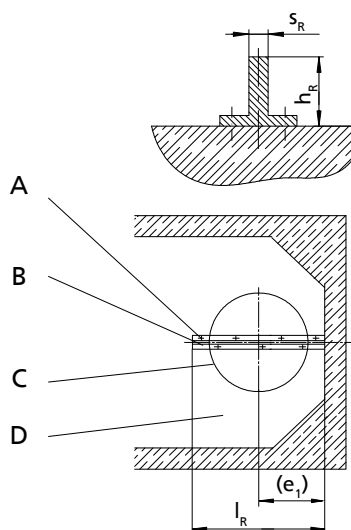
Fig. 3: Installation position of the pump set

1	Bail
2	Anti-vortex vanes
3	Flow-straightening vane

Variant 1
Flow-straightening vane cast from concrete

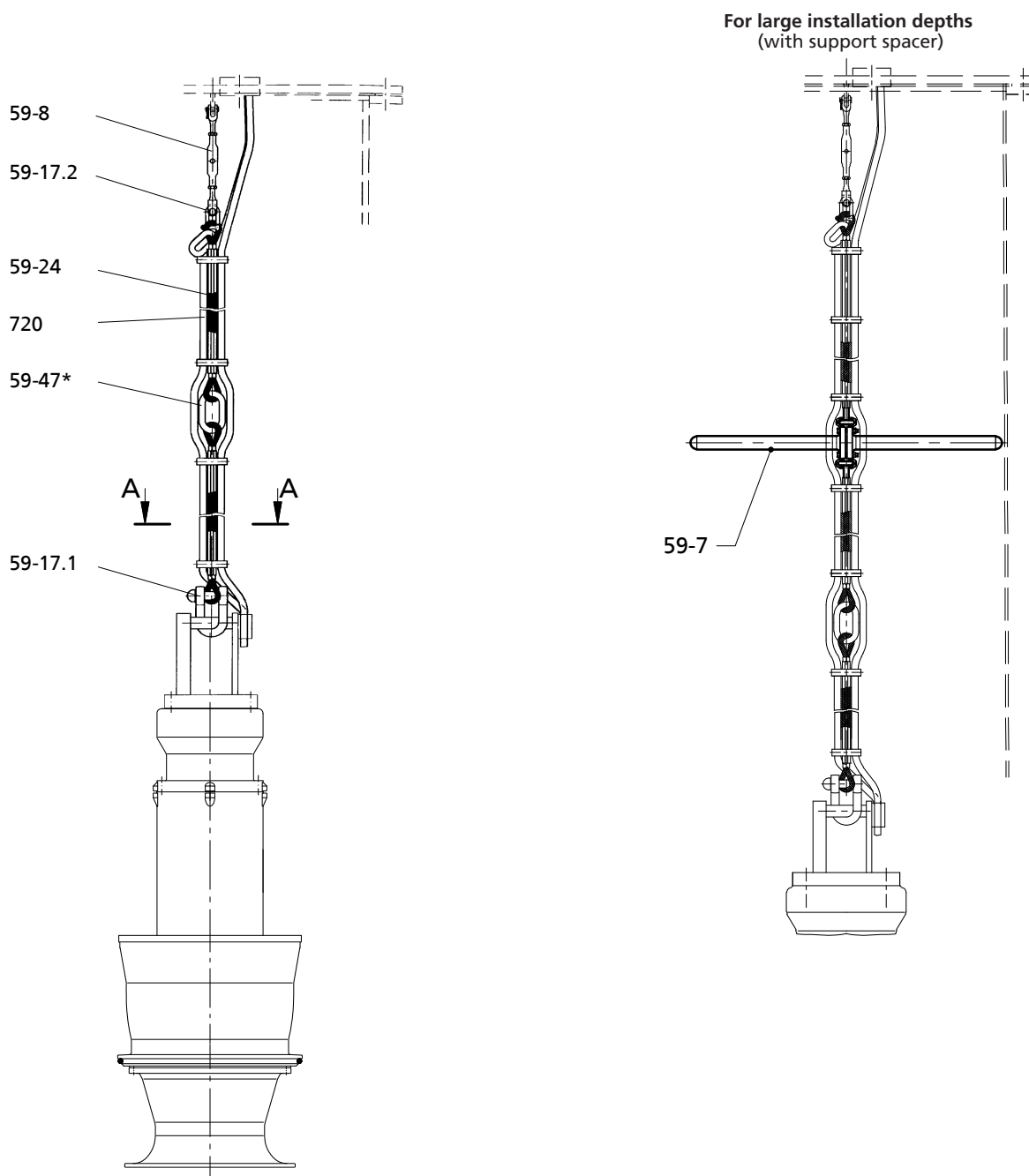


Variant 2
Steel section



A	Bolted to the floor of the intake chamber
B	Flow-straightening vane centered beneath the discharge tube
C	Discharge tube
D	Intake chamber

Support rope and turnbuckle in the discharge tube



*= The number of (intermediate) lifting rings depends on the lifting height of the hoisting tackle and on the building structure. (Intermediate lifting rings are supplied as an option).

Table 37: List of components

Part No.	Description	Material
59-8	Turnbuckle	Stainless steel
59-17.2	Shackle	Stainless steel
59-47	(Intermediate) lifting ring(s)	Stainless steel
59-24	Rope, low rotation design	Stainless steel

Part No.	Description	Material
720	Spacer	EPDM
59-17.1	Shackle	Galvanized steel (stainless steel optional)
59-7	Support	GFRP

Cross-section of cable support

A-A

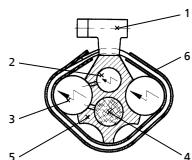


Table 38: List of components

Part No.	Description	Part No.	Description
1	Clamp (approx. every 1 ft [0.3 m] - 1.3 ft [0.4 m])	4	Support rope 59-24
2	Control cable	5	Spacer
3	Power cable	6	Clamp cover

Discharge tube cover with cable gland

Design: with welding sleeve

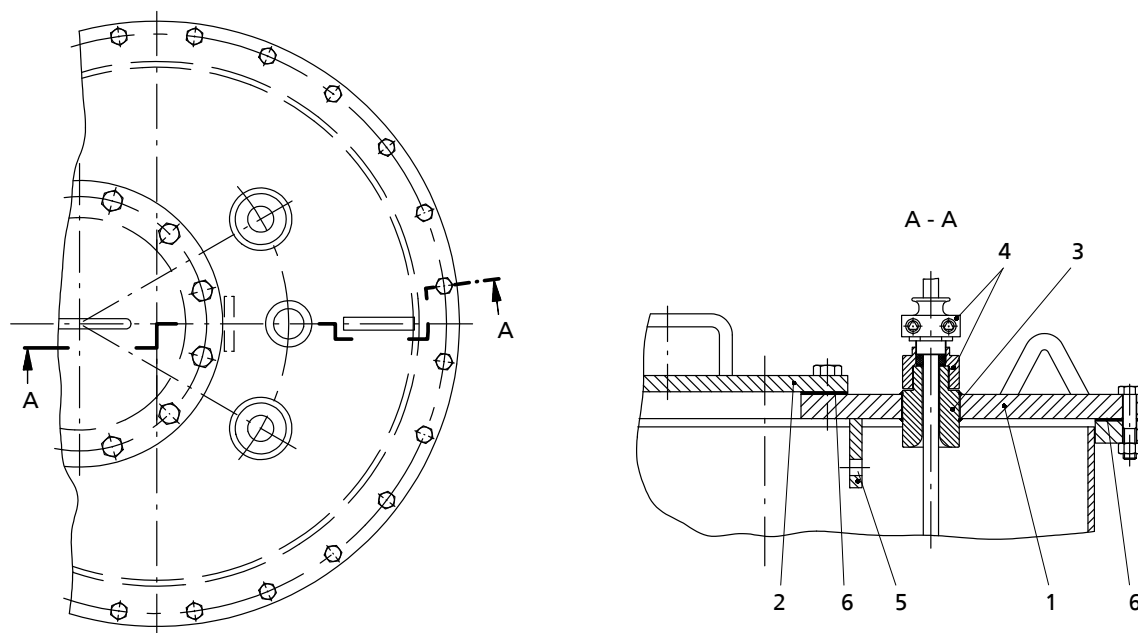


Fig. 4: Design variant with welding sleeve

Table 39: List of components

Part No.	Description	Part No.	Description
1	Discharge tube cover ⁴⁷⁾	4	Threaded bush with cable entry to DIN 22419 with strain relief and protection against kinking and twisting
2	Cover	5	Eyeplate for fastening the cable support (support rope)
3	Welding sleeve	6	Gasket, e.g. fabric-reinforced rubber

⁴⁷ Discharge tube cover also available in split design

General assembly drawing with list of components

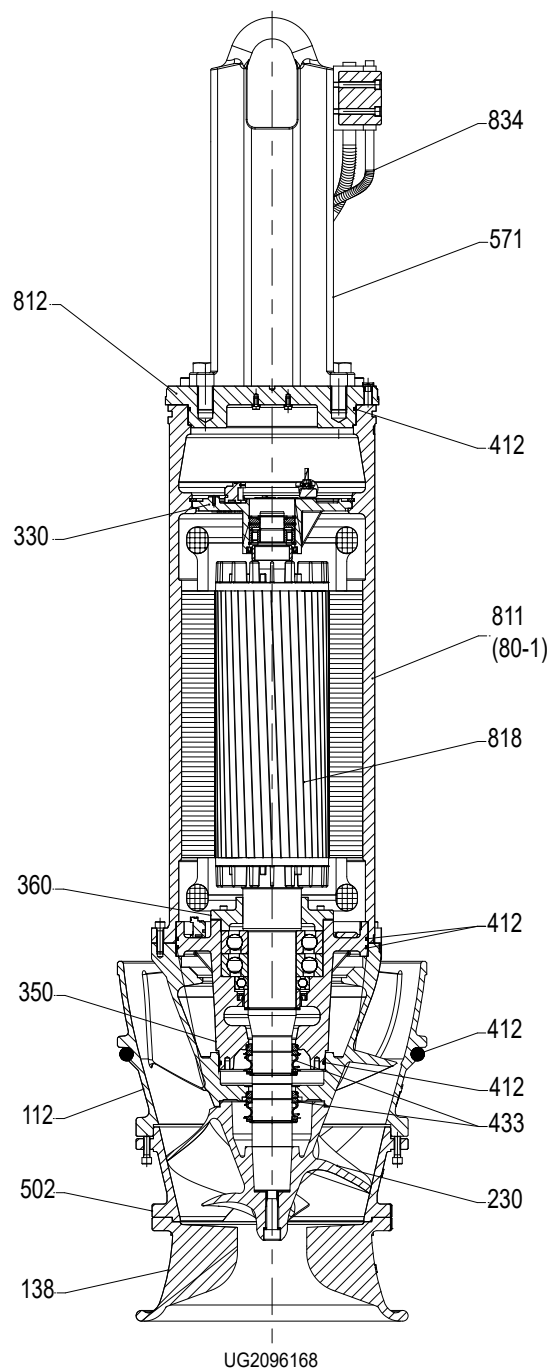


Fig. 5: General assembly drawing

Table 40: List of components

Part No.	Description	Part No.	Description
80-1	Motor unit	433	Mechanical seal
112	Pump bowl	502	Casing wear ring
138	Bellmouth	571	Bail
230	Impeller	811	Motor housing
330	Bearing bracket	812	Motor housing cover
350	Bearing housing	818	Rotor
360	Bearing cover	834	Cable gland
412	O-ring		

Index

B

Bearings 5

D

Design 5

Designation 4

Drive 5

I

Impeller type 5

M

Materials 5

S

Scope of supply 67

Shaft seal 5



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