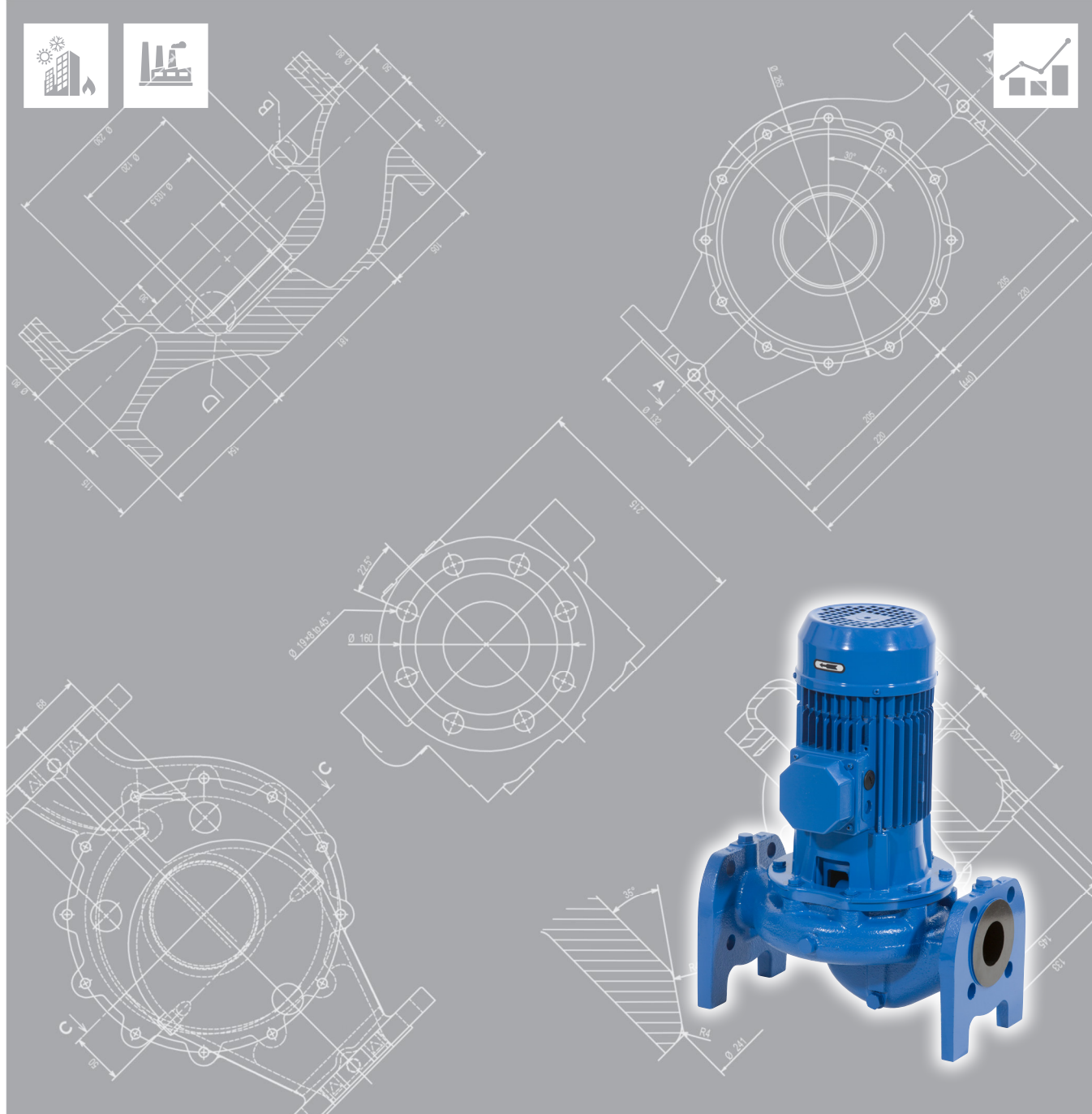


Looking ahead,
going beyond expectations
Ahead Beyond



3E SERIES

Data Book 60Hz



SPECIFICATION

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PRODUCT FEATURES**Energy-saving design**

- ✓ Major improvement over our previous models by impeller designed using our proprietary 3D inverse design technology.
- ✓ Higher efficiency means lower energy consumption and motor output, and more compact size.

Easy installation and simple maintenance

- ✓ Alignment is not required.
- ✓ Back pull-out structure enables disassembly and inspection without removal of suction and discharge piping.
- ✓ Shield bearings eliminate need for adding or exchanging lubricating oil.
- ✓ Shaft seal flushing piping not required for the standard application.
- ✓ Air-bleeding not required.
- ✓ Simplified shaft seal and “O” ring body seal enable easy assembly.

Pump specifications & features

- ✓ Maximum operating pressure: 16 bar(*)
- ✓ Liquid temperature range expansion: -10°C to 120°C
- ✓ Back pull-out design
- ✓ ring casing seal

International standards

- ✓ Pump dimensions adopt EN733
- ✓ Mechanical seal adopts EN12756
- ✓ Protector fitted in accordance with EN294.
- ✓ Electric motor conforms to IEC60072-1 and IEC60034-1

(*) Several models are 1.0MPa

MAIN APPLICATIONS

BUILDING SERVICE

- ✓ Air conditioning-district heating & cooling
- ✓ HVAC system
- ✓ General water supply
- ✓ Hot water circulation
- ✓ Pressure boosting



WATER SUPPLY

- ✓ Water supply duties for municipalities
- ✓ Heat station
- ✓ Irrigation
- ✓ Drainage clean water
- ✓ Fire protection
- ✓ Swimming pool
- ✓ Pressure boosting



OEM

- ✓ Air conditioner
- ✓ Chilling unit
- ✓ Boiler
- ✓ Heat exchanger
- ✓ Coolant unit
- ✓ Water circulation unit



MODEL VARIATION

Version		3E	3ES
pole		2 pole	
Pump Size	32-125	◆	-
	40-100	-	-
	40-160	◆	◆
	40-200	◆	◆
	50-100	◆	-
	50-125	◆	◆
	50-160	◆	◆
	50-200	◆	◆
	65-100	◆	◆
	65-125	◆	◆
	65-160	-	-
	80-100	◆	◆
	80-125	-	-
	80-160	◆	◆
	80-200	◆	◆
	80-250	-	-
	100-160	◆	◆
	100-200	-	-
	100-250	-	-

GENERAL SPECIFICATION PUMP

PUMP						
Version			3E		3ES	
Pole			2 pole			
Liquid Handled	Type of liquid		Clean water[1], Brine(anti-freezing liquid), Water/Glycol mixture up to 40% vol. [2]			
	Temperature [°C]		-10 to 120			
Maximum working pressure [MPa]			1.0 or 1.6 [3]			
Maximum suction pressure [MPa]			1.0 or 1.6 - Shut-off pressure			
Construction	Impeller		Closed centrifugal type Closed centrifugal three dimensional blades for 65 and 80 version			
	Shaft seal type		Mechanical seal (with air ventiration system)			
	Bearing		Sealed ball bearing (Inside of the Motor)			
Pipe Connection	Suction and Discharge	32-125	Flange DN32 according EN 1092-1 Standard			
		40-160/200 50-125/160/200	Flange DN40 according EN 1092-1 Standard			
		50-00/125/160/200 50-125/160/200	Flange DN50 according EN 1092-1 Standard			
		65-100/125/160	Flange DN65 according EN 1092-1 Standard			
		80-100/160/200	Flange DN80 according EN 1092-1 Standard			
		100-160	Flange DN100 according EN 1092-1 Standard			
		Material	Casing		Cast iron EN-GJL-250-EN 1561	
Impeller	32,40,50,65 series,80-100		EN 1.4301 (AISI 304)			
	Other 80 series		EN 1.4401 (AISI 316)			
	100 series		EN 1.4404 (AISI 316L)			
Casing cover	32,40,50,65,80 series		EN 1.4301 (AISI 304)			
	100 series		EN 1.4404 (AISI 316L)			
Mechanical seal			SiC/Carbon/EPDM as a standard(Q1AEGG) SiC/SiC/EPDM as an optional(QGQ1EGG) SiC/SiC/FPM as an optional(QGQ1VGG) SiC/Carbon/FPM as an optional(Q1AVGG) (For version see page 315)			
O-ring			EPDM as a standard FPM as an optional			
Shaft	Designation		Extended shaft		Stub-shaft	
	32,40,50,65,80 series		EN 1.4301 (AISI 304) for wetted part Carbon steel for dry part		EN 1.4301 (AISI 304) for wetted part Carbon steel for dry part	
	100 series		EN 1.4404 (AISI 316L) for wetted part Carbon steel for dry part		EN 1.4404 (AISI 316L) for wetted part Carbon steel for dry part	
Bracket			Aluminium		Cast iron EN-GJL-250-EN 1561	
Accessory			Counter Flange (See page 318) Base plate for 9.2kW or above			
Applicable standard of test			ISO 9906:2012 – Grade 3B			

[1] Viscosity and Dencity shall be equivalent with water

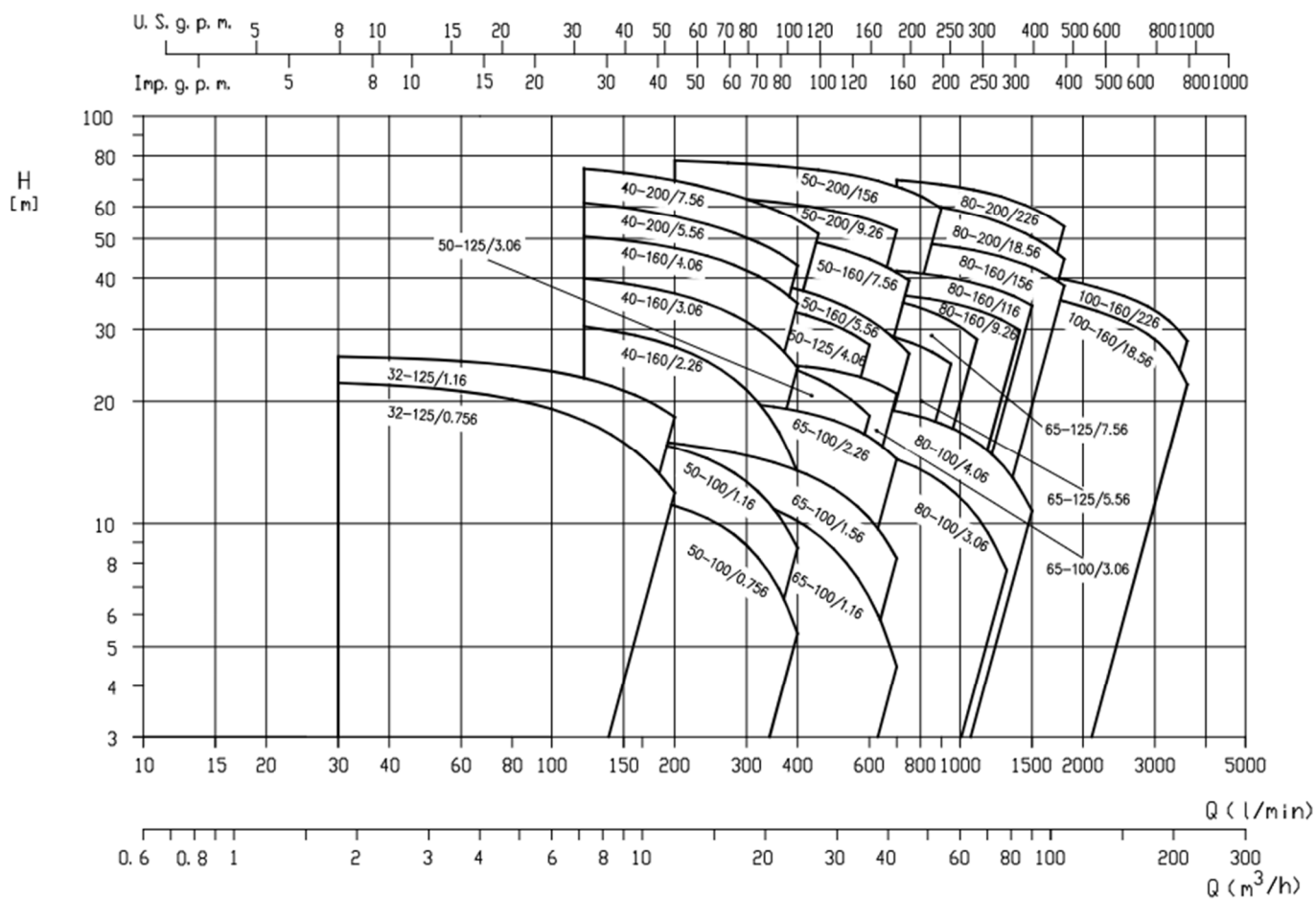
[2] If water-glycol mixtures are used, differents power consumption and pump performances shall be considered.

[3] Depending on the model. See selection chart page 207

GENARAL SPECIFICATION MOTOR

MOTOR		
Type	3E	3ES
	Electric - TEFC	
	Three Phase	
Efficiency level (Reg. 640/2009)	IE3 only 460V	
No. of Poles	2	
Rotation speed [min ⁻¹]	~3500	
Insulation Class	F (temperature rise class B)	
Protection degree (CEI EN 60034-5)	IP55	
Power rating	[kW]	0.75 ÷ 22
	[HP]	1 ÷ 30
Frequency [Hz]	60	
Voltage [V]	220/380-460 ±10% (IE3* up to 4.0 kW)	265/460 ±10% (IE3* up to 4.0 kW)
	380-460/660 ±10% (IE3* 5.5 kW and above)	460 ±10% (IE3* 5.5 kW and above)
Over load protection	Provided by the user	
Casing material	Aluminium	
Motor support material	Cast iron / Aluminium	
Dimensions of cable entry	PG11, PG13.5, PG16, PG21	M32x1.5, M40x1.5, M50x1.5
	M20x1.5, M25x1.5	M10x1.5, M20x1.5, M25x1.5
Flange mount (IEC motor)	---	IM B5

PERFORMANCE RANGE 60Hz



IN-LINE CENTRIFUGAL PUMPS

3E

SPECIFICATION

60Hz

Rev.A

SELECTION CHART 60Hz

3E SERIES 32 SIZE

Pump type	kW	HP	Max working pressure (MPa)	I/min	0	30	50	100	150	200
				m³/h	0	1.8	3	6	9	12
32-125/0.756	0.75	1	1.0		22.6	22.1	21.5	19.1	15.8	11.8
32-125/1.16	1.1	1.5	1.0		25.9	25.7	25.3	23.6	21.2	18.3

3E SERIES 40 SIZE

Pump type	kW	HP	Max working pressure (MPa)	I/min	0	120	150	200	250	300	400	450
				m³/h	0	7.2	9	12	15	18	24	27
40-160/2.26	2.2	3	1.6		32.5	30.4	29.4	27.1	24.4	21.2	13.3	—
40-160/3.06	3	4	1.6		42.7	39.9	38.8	36.6	34.1	31.2	24.1	—
40-160/4.06	4	5.5	1.6		52.6	50.6	49.5	47.3	44.7	41.7	34.6	—
40-200/5.56	5.5	7.5	1.6		64.0	61.3	59.7	56.7	53.6	50.2	42.9	—
40-200/7.56	7.5	10	1.6		76.3	74.3	72.7	69.5	66.1	62.6	55.4	51.4

3E SERIES 50 SIZE

Pump type	kW	HP	Max working pressure (MPa)	I/min	0	120	200	300	400	500	600	700	750	900
				m³/h	0	7.2	12	18	24	30	36	42	45	54
50-100/0.756	0.75	1	1.0		11.9	11.9	11.0	8.8	5.3	—	—	—	—	—
50-100/1.16	1.1	1.5	1.0		16.6	16.6	15.3	12.6	8.7	—	—	—	—	—
50-125/3.06	3	4	1.6		27.2	27.6	27.1	25.7	23.8	21.3	18.4	—	—	—
50-125/4.06	4	5.5	1.6		36.5	36.5	35.9	34.7	32.9	30.4	27.4	—	—	—
50-160/5.56	5.5	7.5	1.6		43.8	—	41.7	39.9	37.5	34.8	31.6	28.0	26.1	—
50-160/7.56	7.5	10	1.6		55.9	—	54.2	52.4	50.1	47.4	44.4	41.2	39.4	—
50-200/9.26	9.2	12.5	1.6		65.8	—	64.0	62.5	60.6	58.3	55.6	52.4	—	—
50-200/156	15	20	1.6		80.7	—	77.8	76.4	74.8	72.8	70.3	67.3	65.5	59.4

3E SERIES 65 SIZE

Pump type	kW	HP	Max working pressure (MPa)	I/min	0	120	250	300	400	600	700	950	1100
				m³/h	0	7.2	12	18	24	36	42	57	66
65-100/1.16	1.1	1.5	1.0		13.6	13.0	12.0	11.4	10.1	6.5	4.4	—	—
65-100/1.56	1.5	2	1.0		17.8	16.5	15.2	14.7	13.4	10.2	8.2	—	—
65-100/2.26	2.2	3	1.6		21.6	20.8	20.0	19.7	18.9	16.3	14.4	—	—
65-100/3.06	3	4	1.6		26.9	25.5	24.9	24.8	24.4	22.5	20.8	—	—
65-125/5.56	5.5	7.5	1.6		30.7	—	31.4	31.3	31.1	29.7	28.6	24.7	—
65-125/7.56	7.5	10	1.6		36.6	—	—	37.4	37.2	36.1	35.1	31.3	28.3

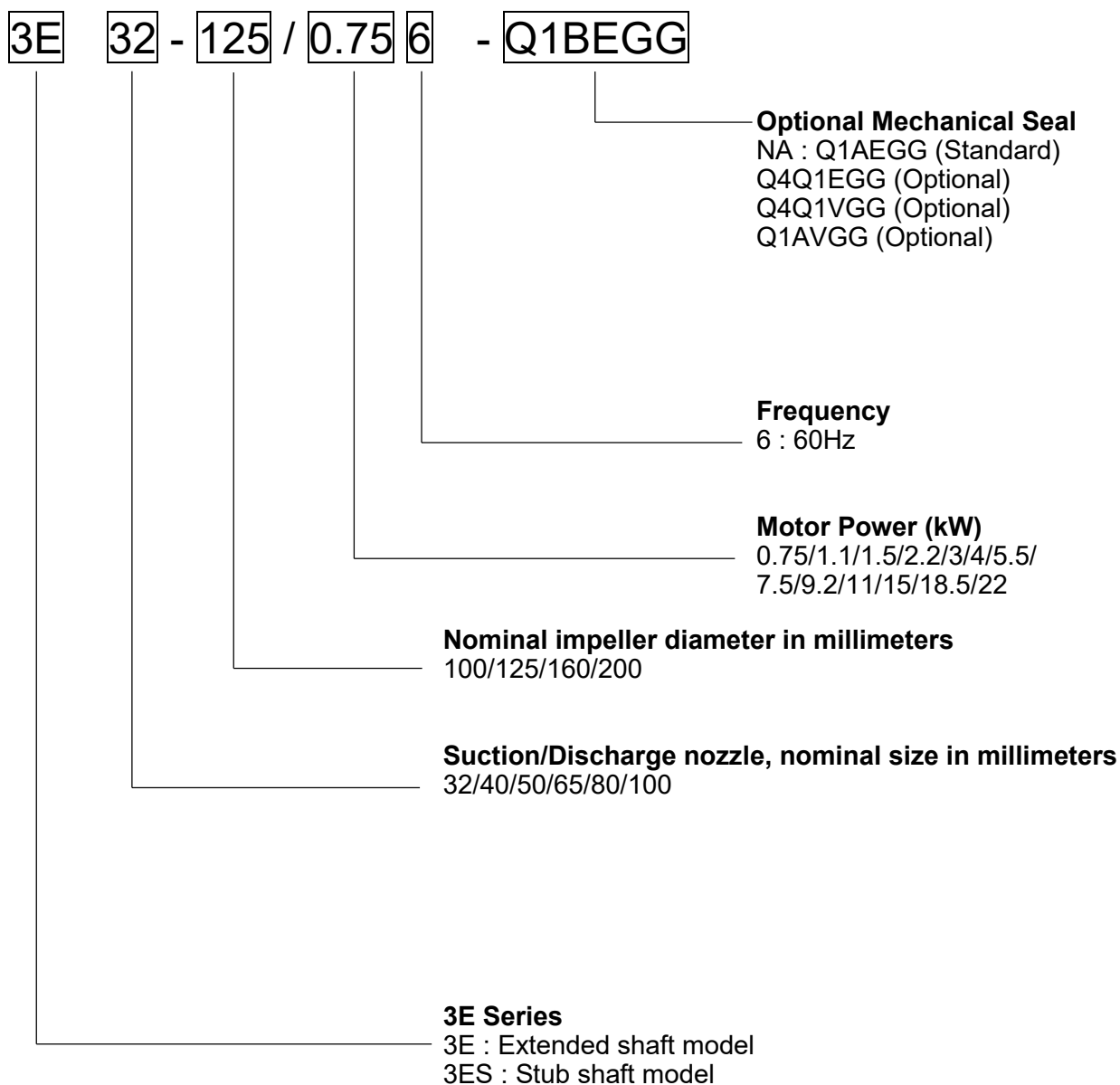
3E SERIES 80 SIZE

Pump type	kW	HP	Max working pressure (MPa)	I/min	0	600	700	900	1100	1300	1400	1500	1700	1800
				m³/h	0	36	42	54	66	78	84	90	102	108
80-100/3.06	3	4	1.0		18.1	15.0	14.3	12.6	10.3	7.6	—	—	—	—
80-100/4.06	4	5.5	1.0		21.3	19.4	18.9	17.6	15.8	13.5	12.2	10.7	—	—
80-160/9.26	9.2	12.5	1.6		38.4	—	36.4	35.1	33.4	31.1	29.8	—	—	—
80-160/116	11	15	1.6		43.4	—	41.6	40.4	38.7	36.7	35.5	34.2	—	—
80-160/156	15	20	1.6		51.0	—	49.3	48.1	46.6	44.7	43.6	42.4	39.8	38.3
80-200/18.56	18.5	25	1.6		64.2	—	62.0	59.7	57.1	54.0	52.3	50.5	46.6	44.5
80-200/226	22	30	1.6		72.2	—	69.8	68.0	65.7	62.9	61.2	59.5	55.6	53.5

3E SERIES 100 SIZE

Pump type	kW	HP	Max working pressure (MPa)	I/min	0	1400	1800	2200	2600	3000	3200	3400	3600
				m³/h	0	84	108	132	156	180	192	204	216
100-160/18.56	18.5	25	1.6		40.3	37.2	35.0	33.0	30.9	28.3	26.6	24.5	22.0
100-160/226	22	30	1.6		44.8	41.6	39.7	37.8	35.7	33.3	31.8	30.1	28.0

TYPE KEY



PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906:2012 - Grade 3B

The curves refer to effective speed of asynchronous motors at 60 Hz, 2 poles.

Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.

The continuous curves indicate the recommended working range. The dotted curve is only a guide. In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

Q = volume flow rate

H = total head

P_2 = pump power input (shaft power)

η = pump efficiency

NPSH = net positive suction head required by the pump

MEI = minimum efficiency index

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

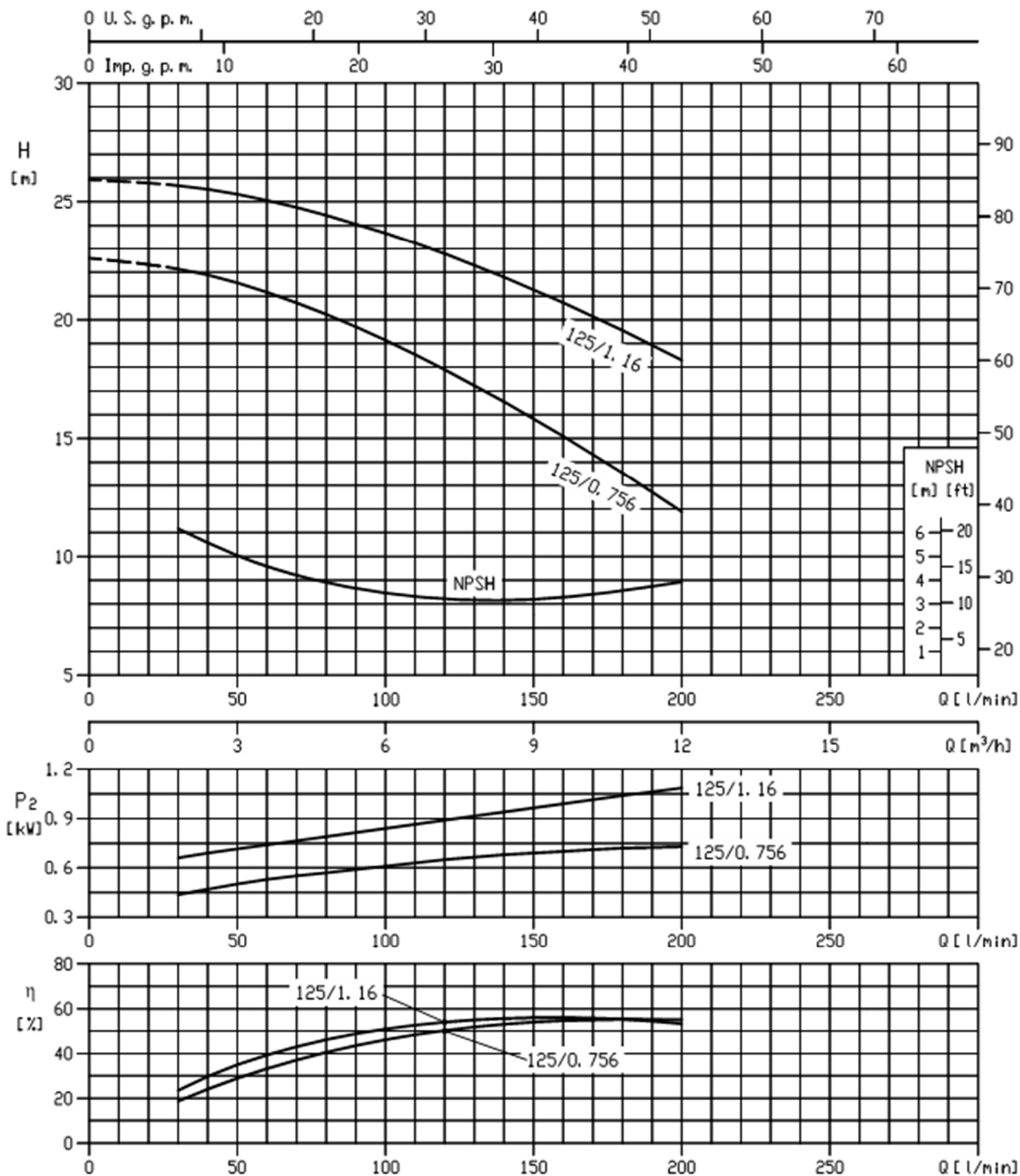
Rev.A

2 POLE

3E(S) 32-125

32-125/0.756 (0.75kW) - impeller diameter = 114 mm

32-125/1.16 (1.1 kW) - impeller diameter = 118 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

210

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

Rev.A

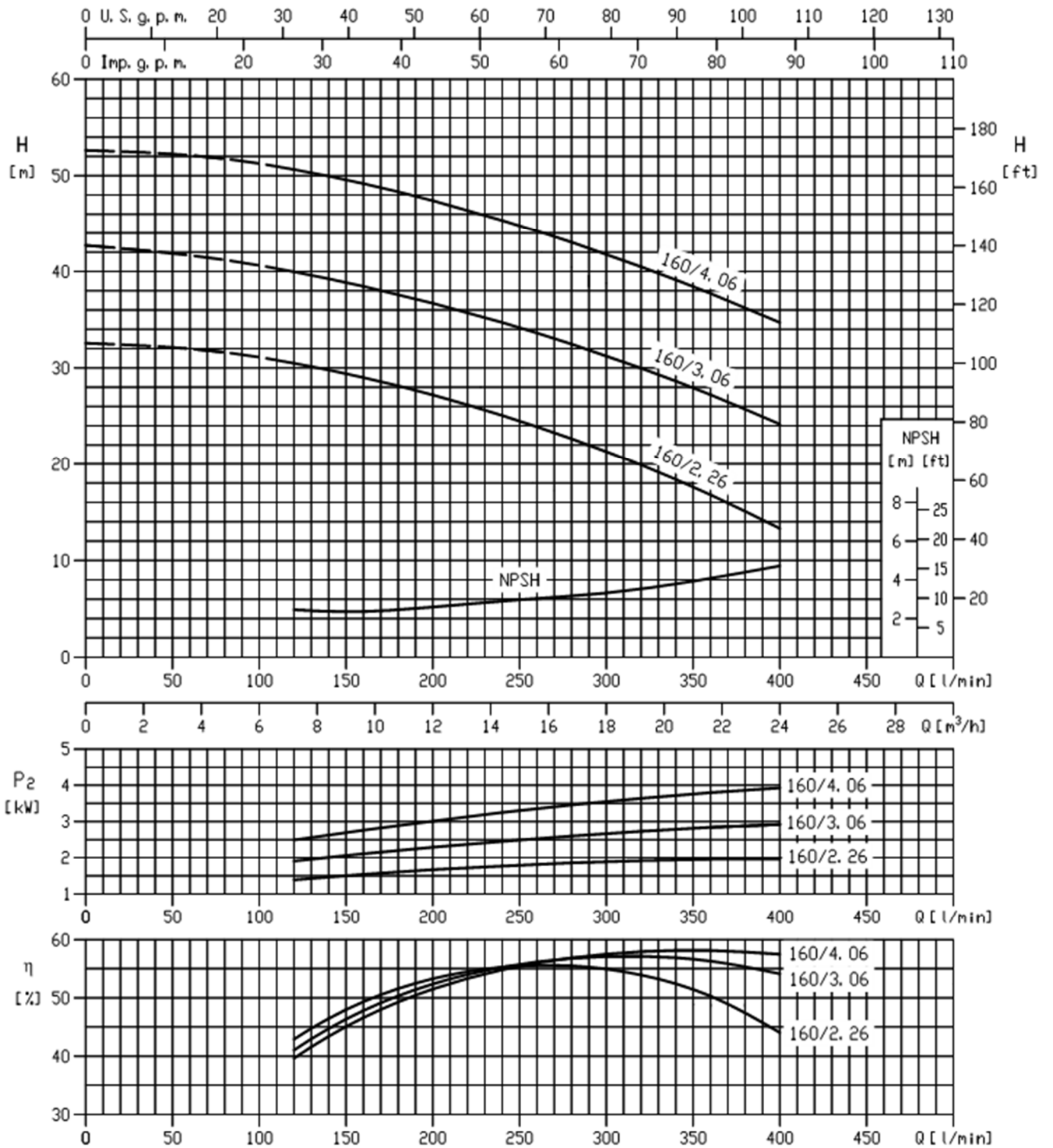
2 POLE

3E 40-160

40-160/2.26 (2.2 kW) - impeller diameter = 133 mm

40-160/3.06 (3.0 kW) - impeller diameter = 151 mm

40-160/4.06 (4.0 kW) - impeller diameter = 166 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

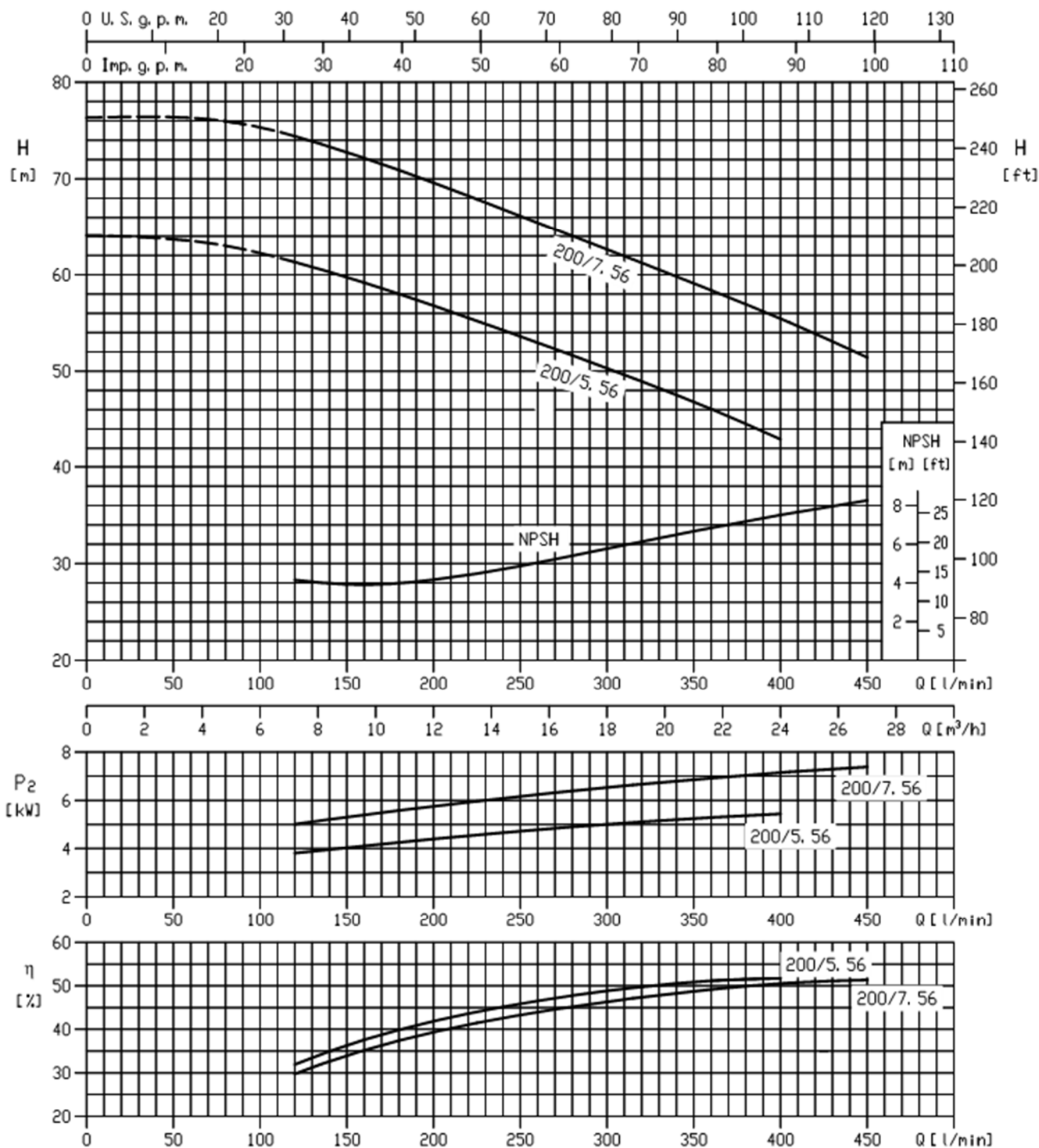
Rev.A

2 POLE

3E 40-200

40-200/5.56 (5.5 kW) - impeller diameter = 186 mm

40-200/7.56 (7.5 kW) - impeller diameter = 200 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

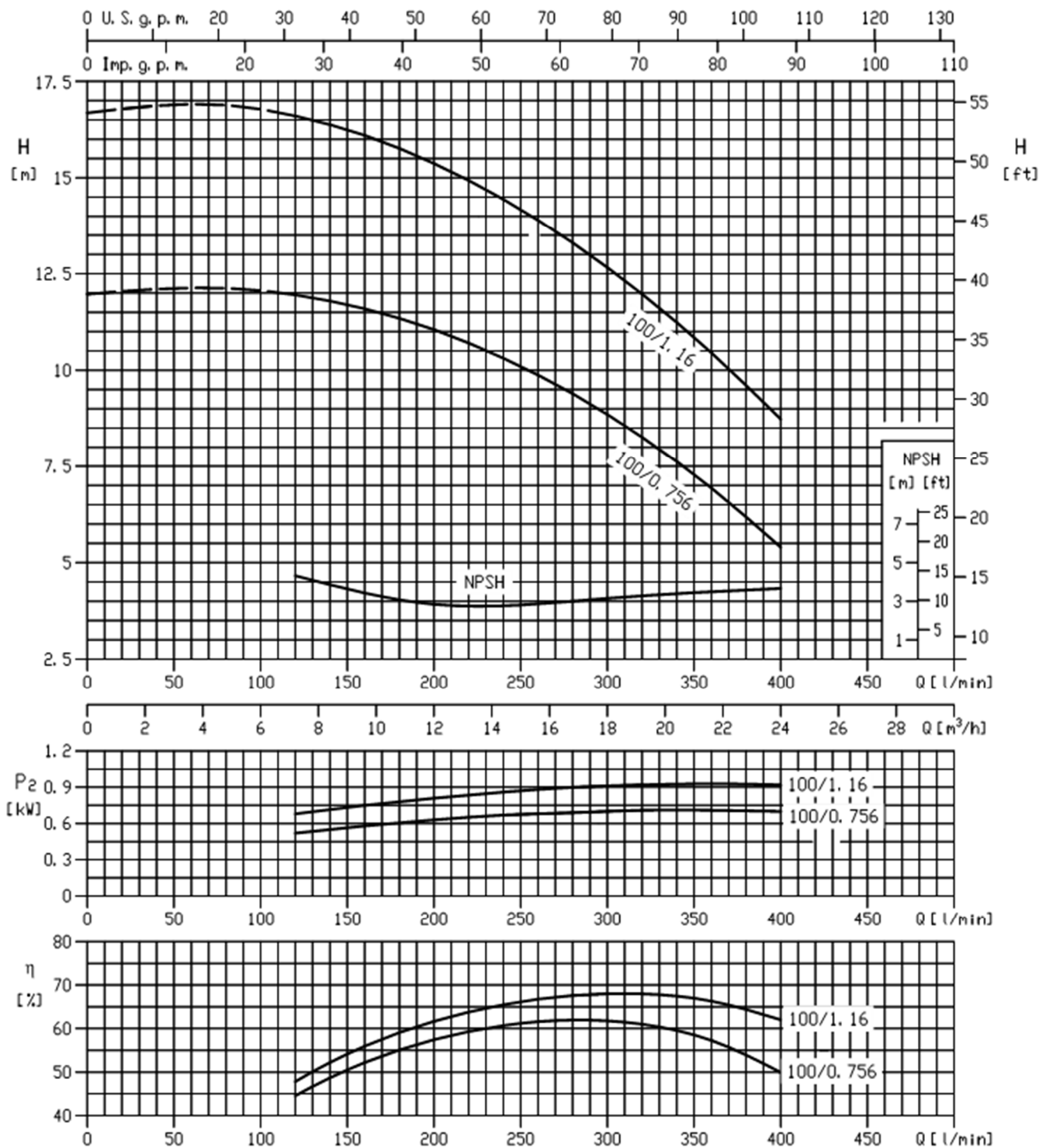
Rev.A

2 POLE

3E 50-100

50-100/0.756 (0.75 kW) - impeller diameter = 86 mm

50-100/1.16 (1.1 kW) - impeller diameter = 101 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

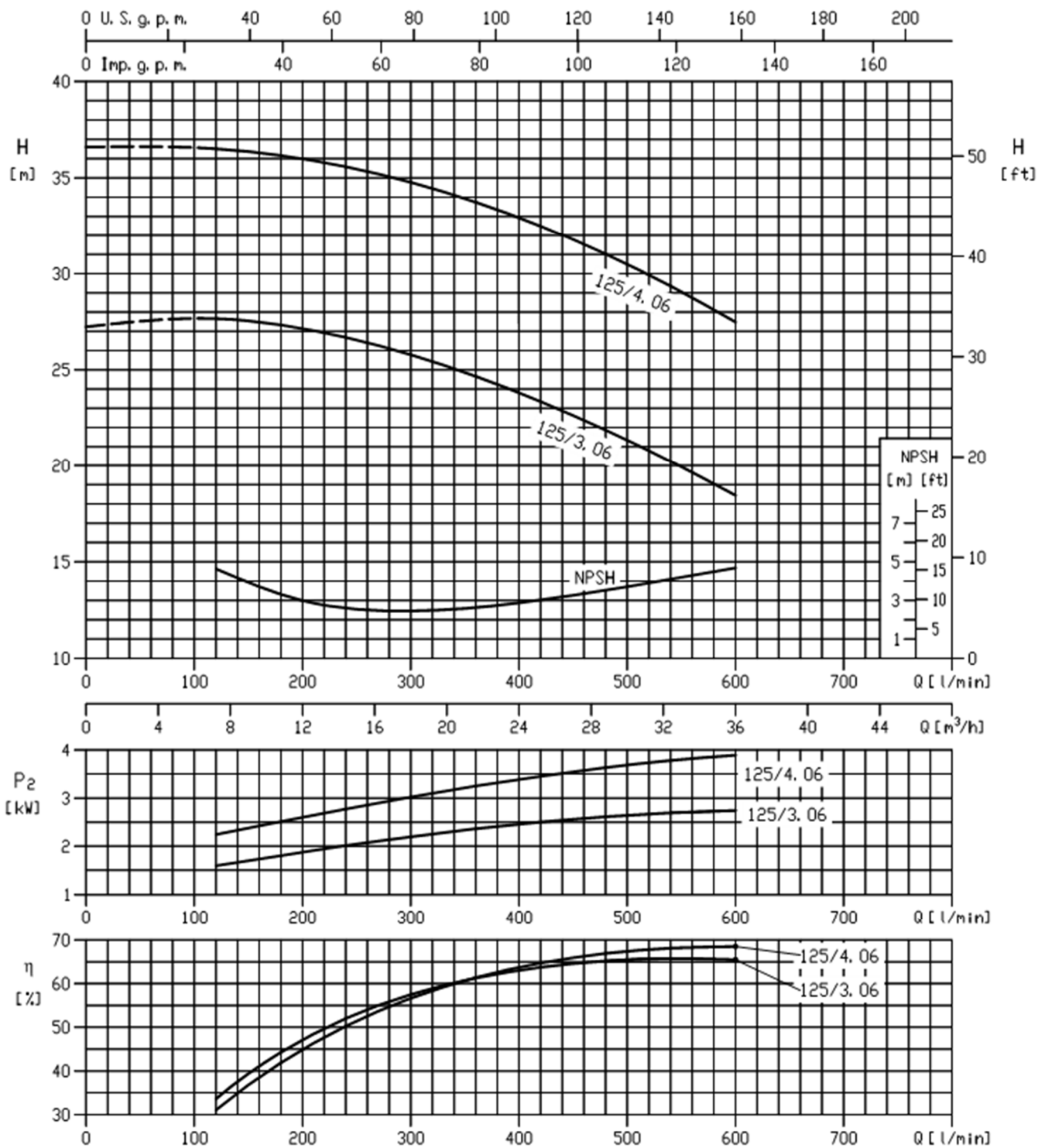
Rev.A

2 POLE

3E 50-125

50-125/3.06 (3.0 kW) - impeller diameter = 125 mm

50-125/4.06 (4.0 kW) - impeller diameter = 140 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

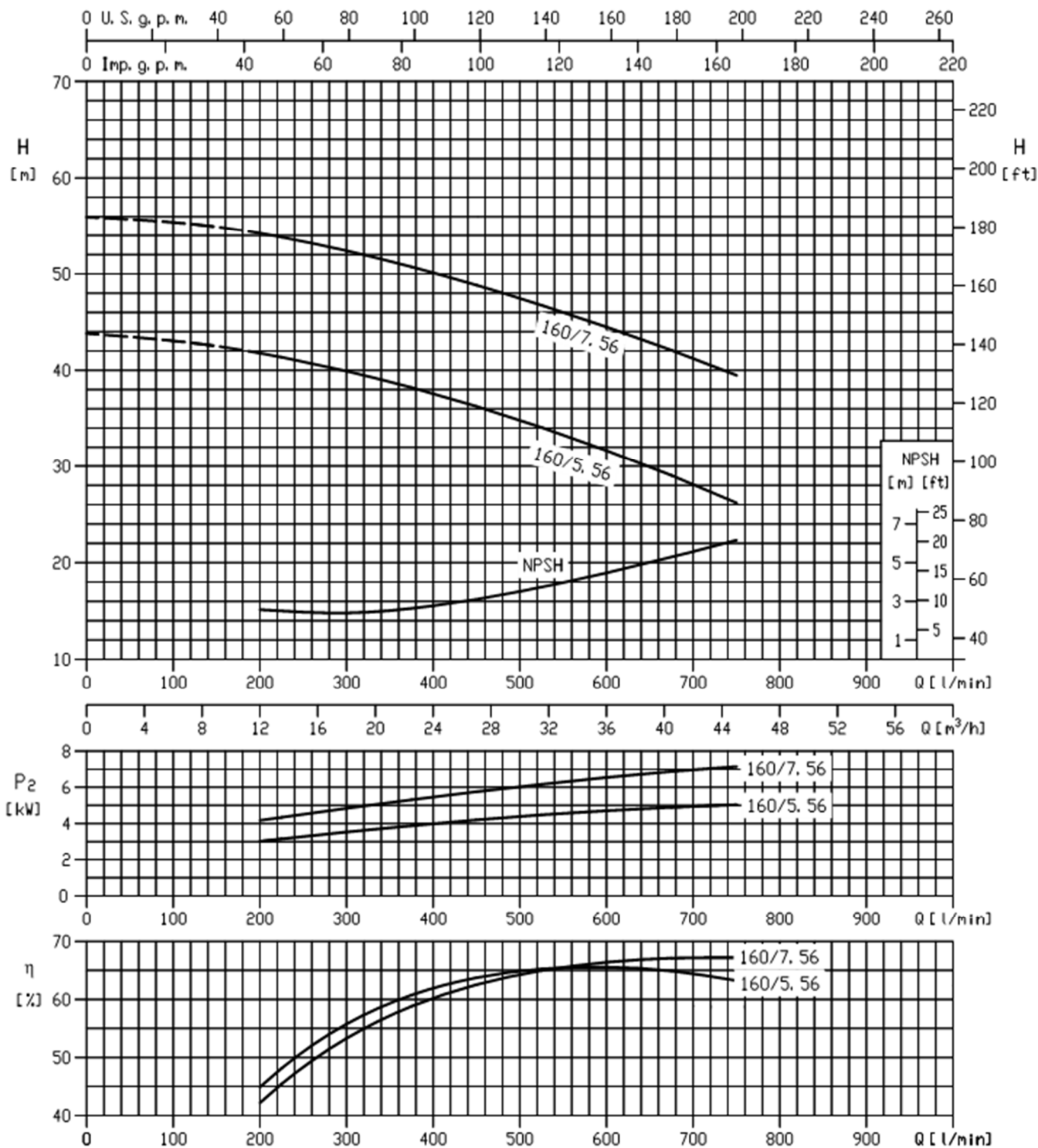
Rev.A

2 POLE

3E 50-160

50-160/5.56 (5.5 kW) - impeller diameter = 151 mm

50-160/7.56 (7.5 kW) - impeller diameter = 166 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

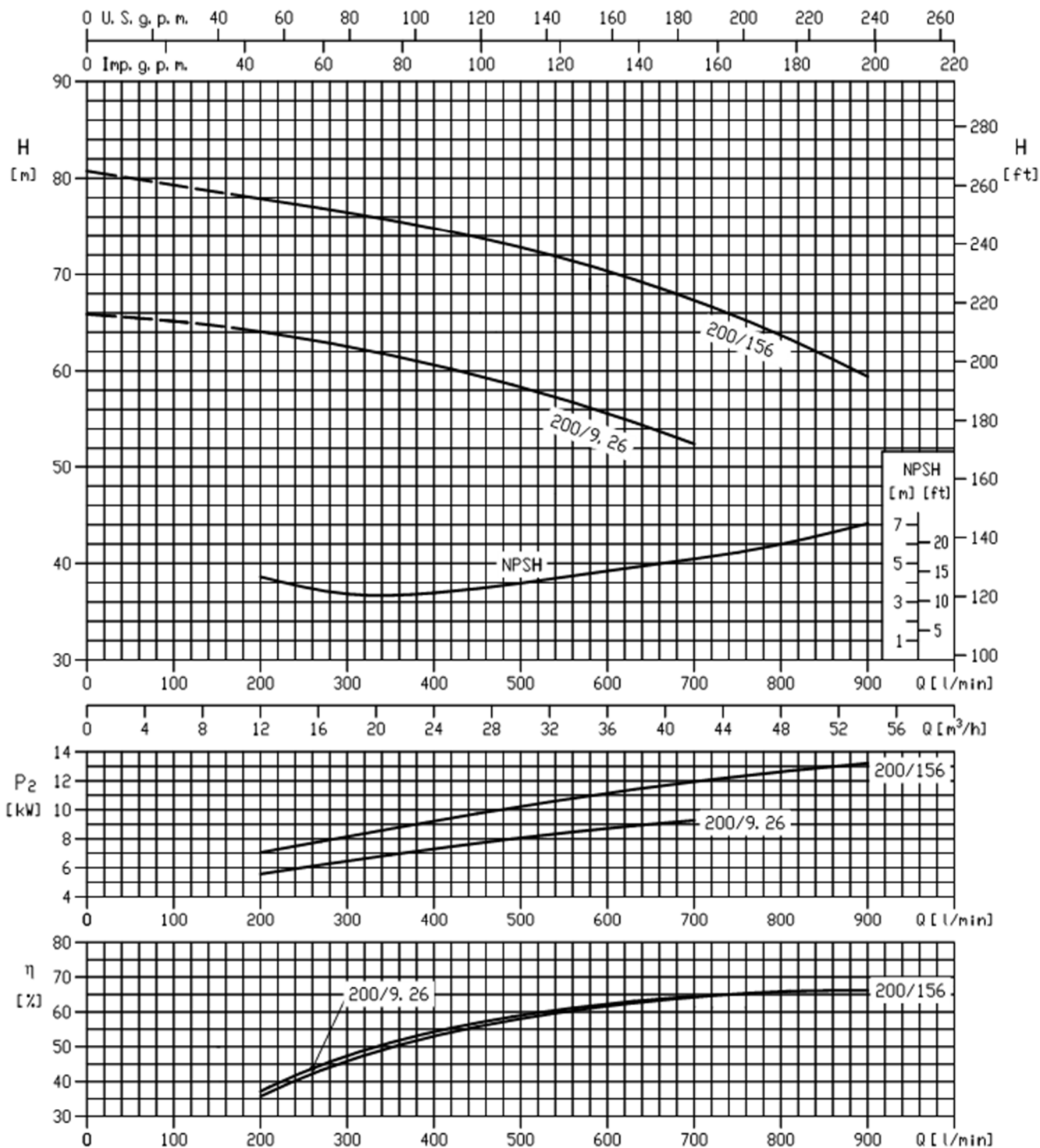
Rev.A

2 POLE

3E 50-200

50-200/9.26 (9.2 kW) - impeller diameter = 183 mm

50-200/156 (15 kW) - impeller diameter = 200 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

Rev.A

2 POLE

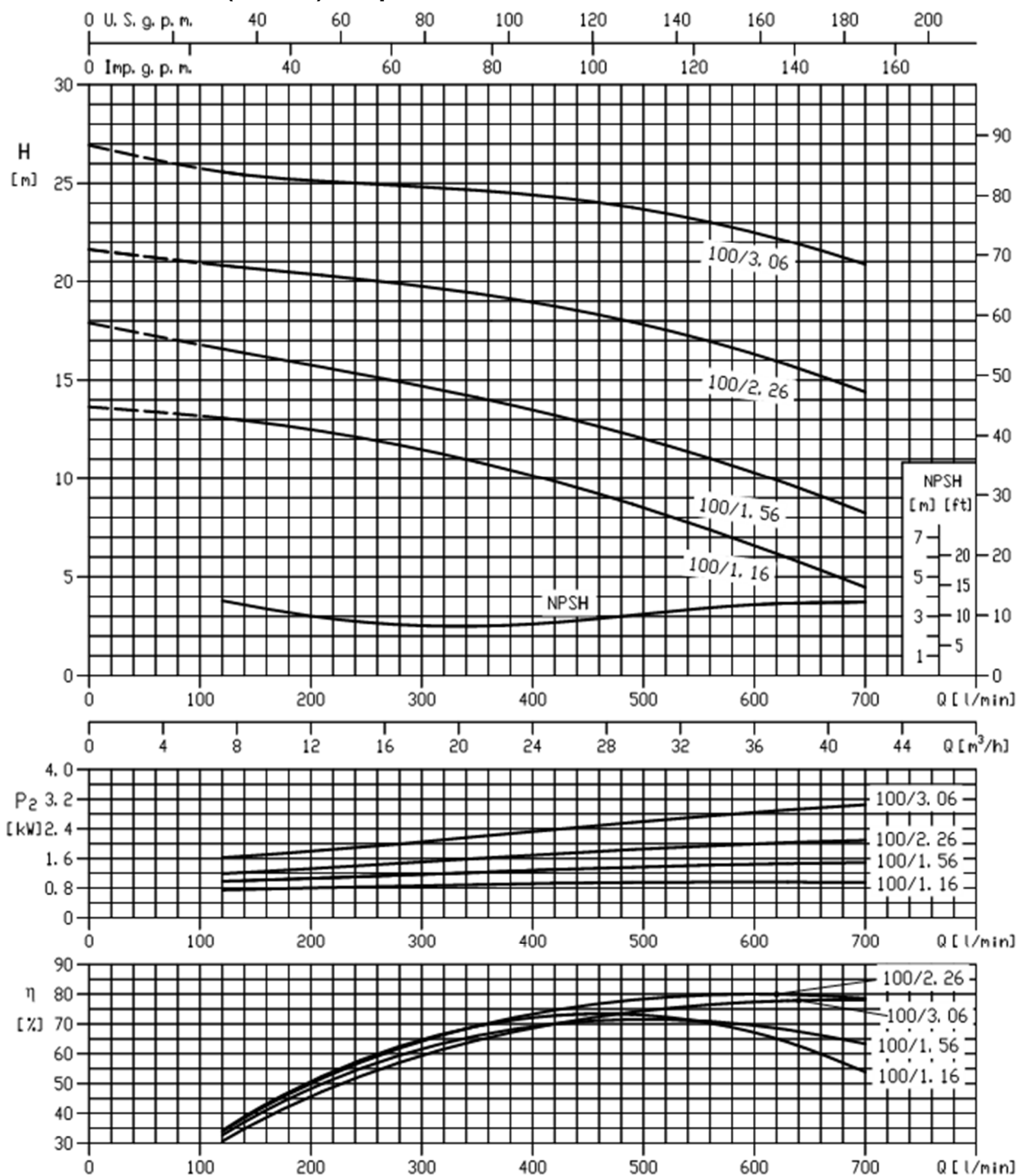
3E 65-100

65-100/1.16 (1.1 kW) - impeller diameter = 88 mm

65-100/1.56 (1.5 kW) - impeller diameter = 95 mm

65-100/2.26 (2.2 kW) - impeller diameter = 104 mm

65-100/3.06 (3.0 kW) - impeller diameter = 114 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

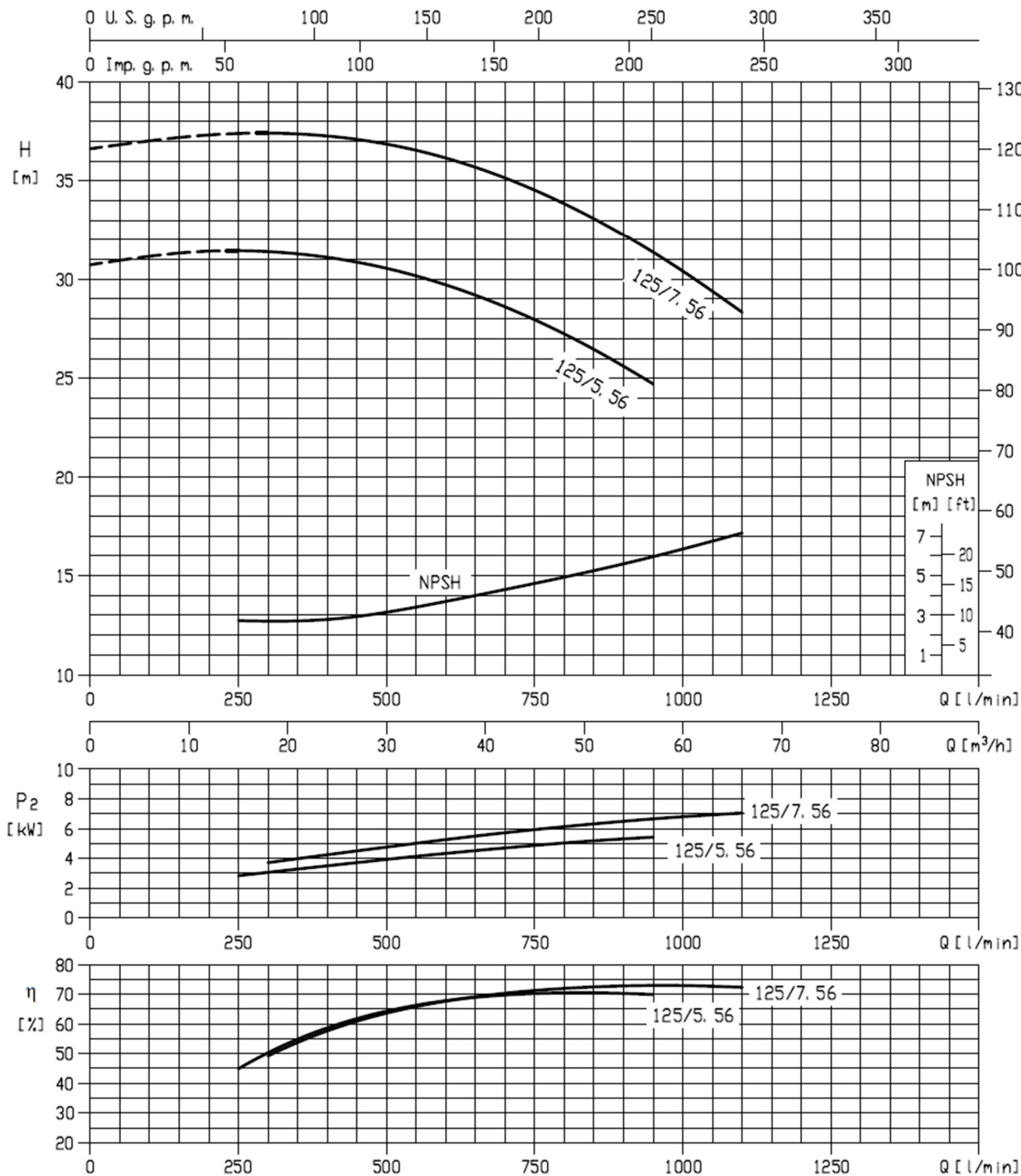
Rev.A

2 POLE

3E 65-125

65-125/5.56 (5.5 kW) - impeller diameter = 131 mm

65-125/7.56 (7.5 kW) - impeller diameter = 140 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

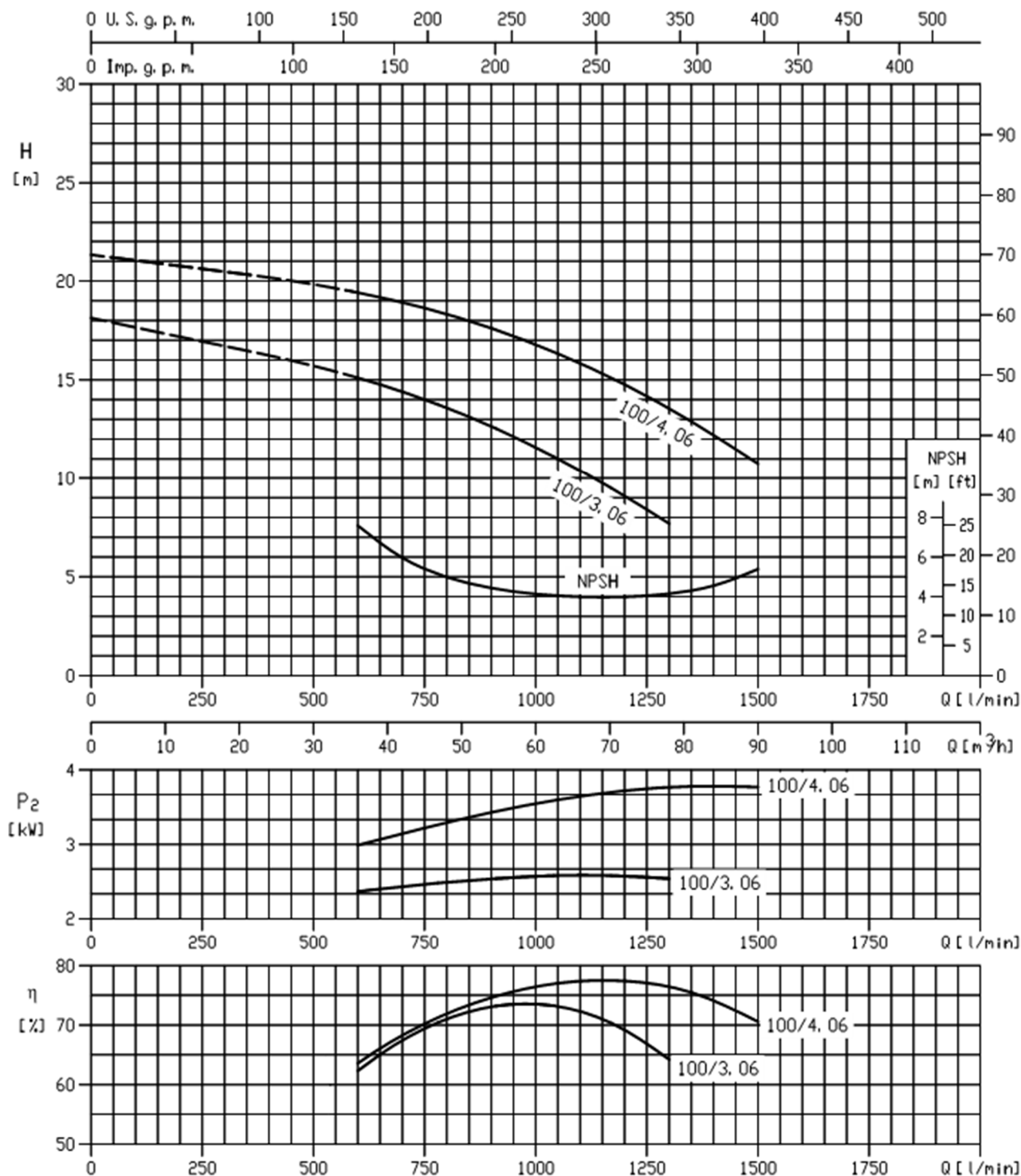
Rev.A

2 POLE

3E 80-100

80-100/3.06 (3.0 kW) - impeller diameter = 103 mm

80-100/4.06 (4.0 kW) - impeller diameter = 110 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

Rev.A

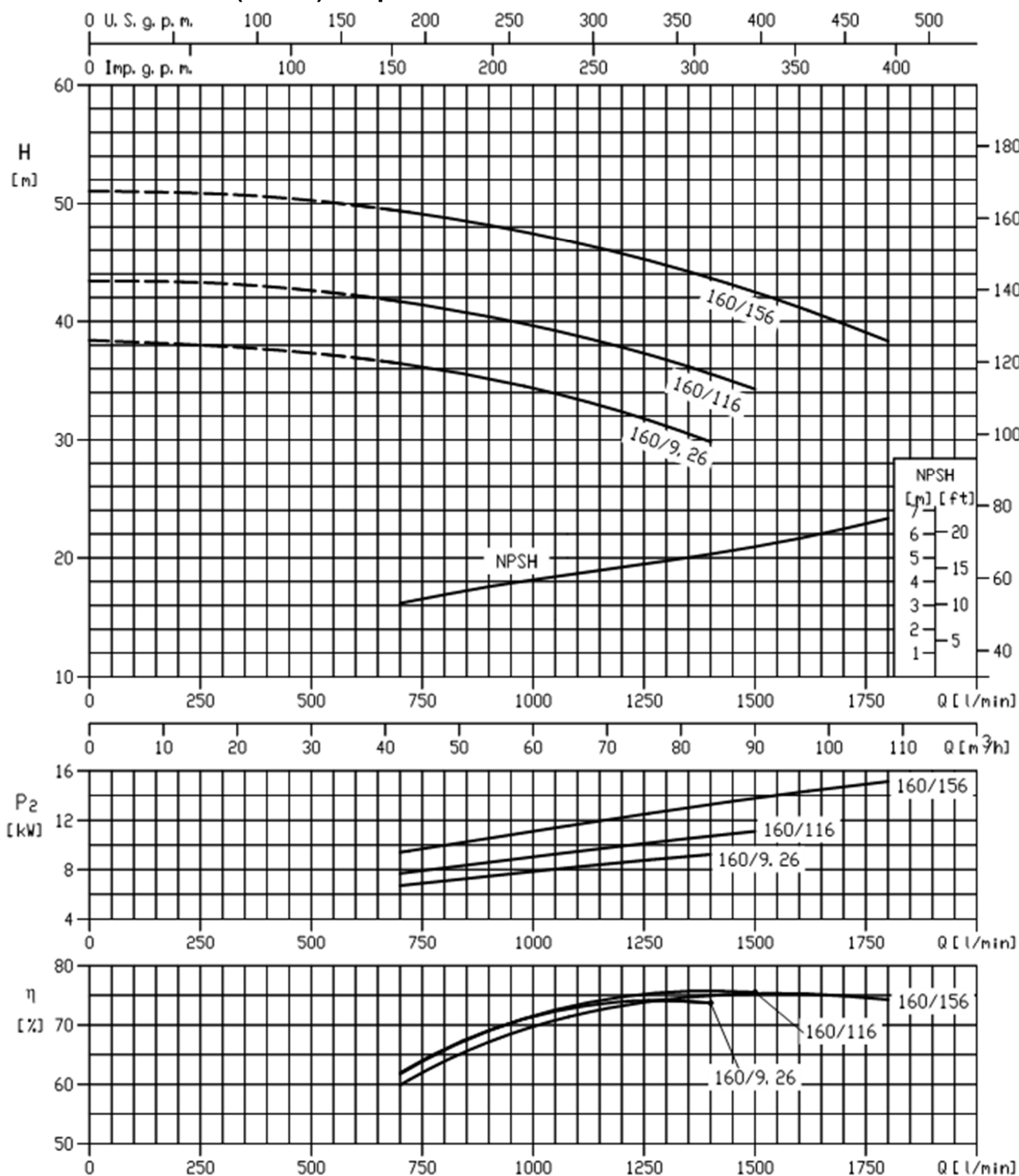
2 POLE

3E 80-160

80-160/9.26 (9.2 kW) - impeller diameter = 139 mm

80-160/116 (11 kW) - impeller diameter = 146 mm

80-160/156 (15 kW) - impeller diameter = 157 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

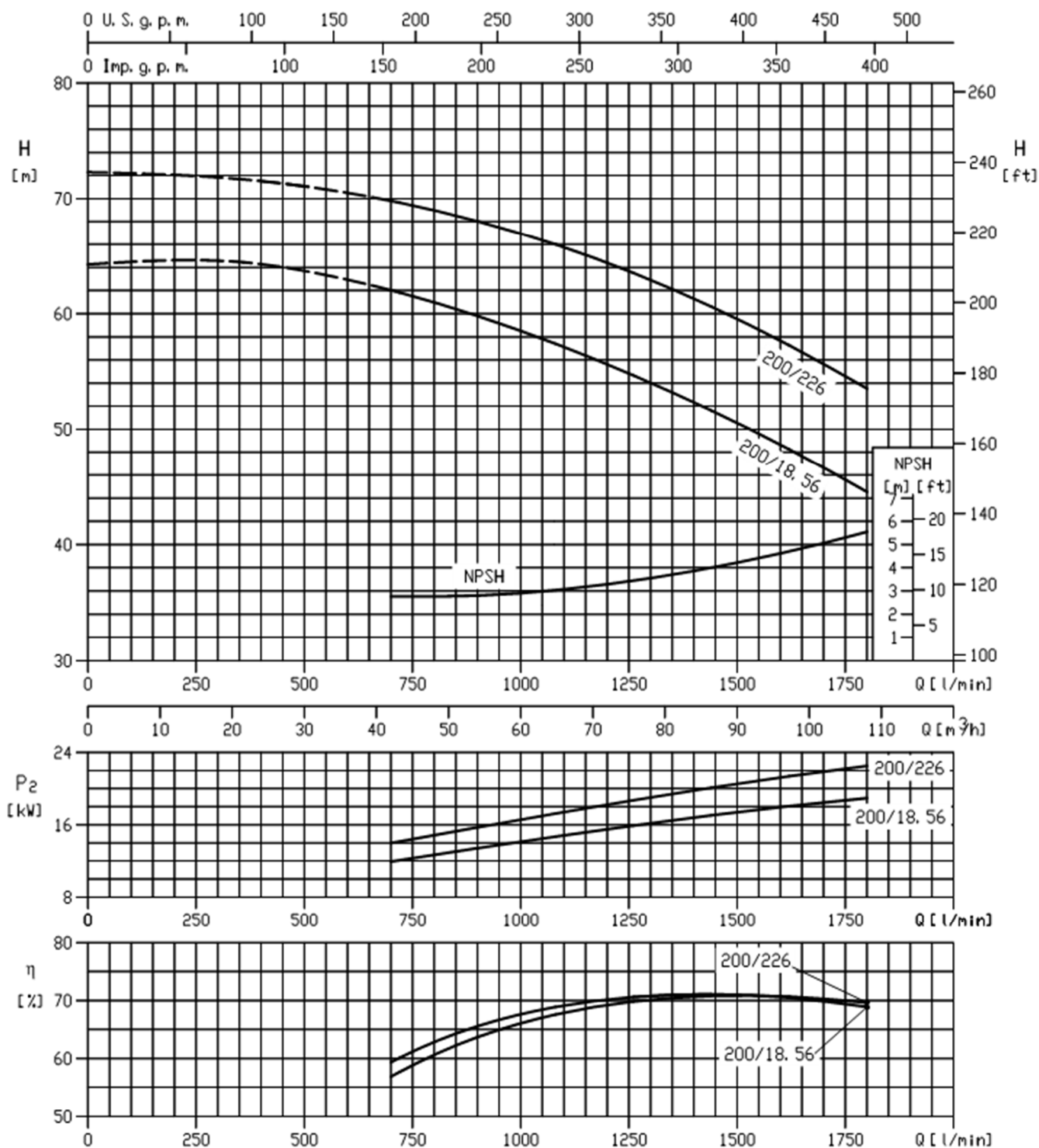
Rev.A

2 POLE

3E 80-200

80-200/18.56 (18.5 kW) - impeller diameter = 175 mm

80-200/226 (22 kW) - impeller diameter = 184 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

IN-LINE CENTRIFUGAL PUMPS

3E

PERFORMANCE CURVE

60Hz

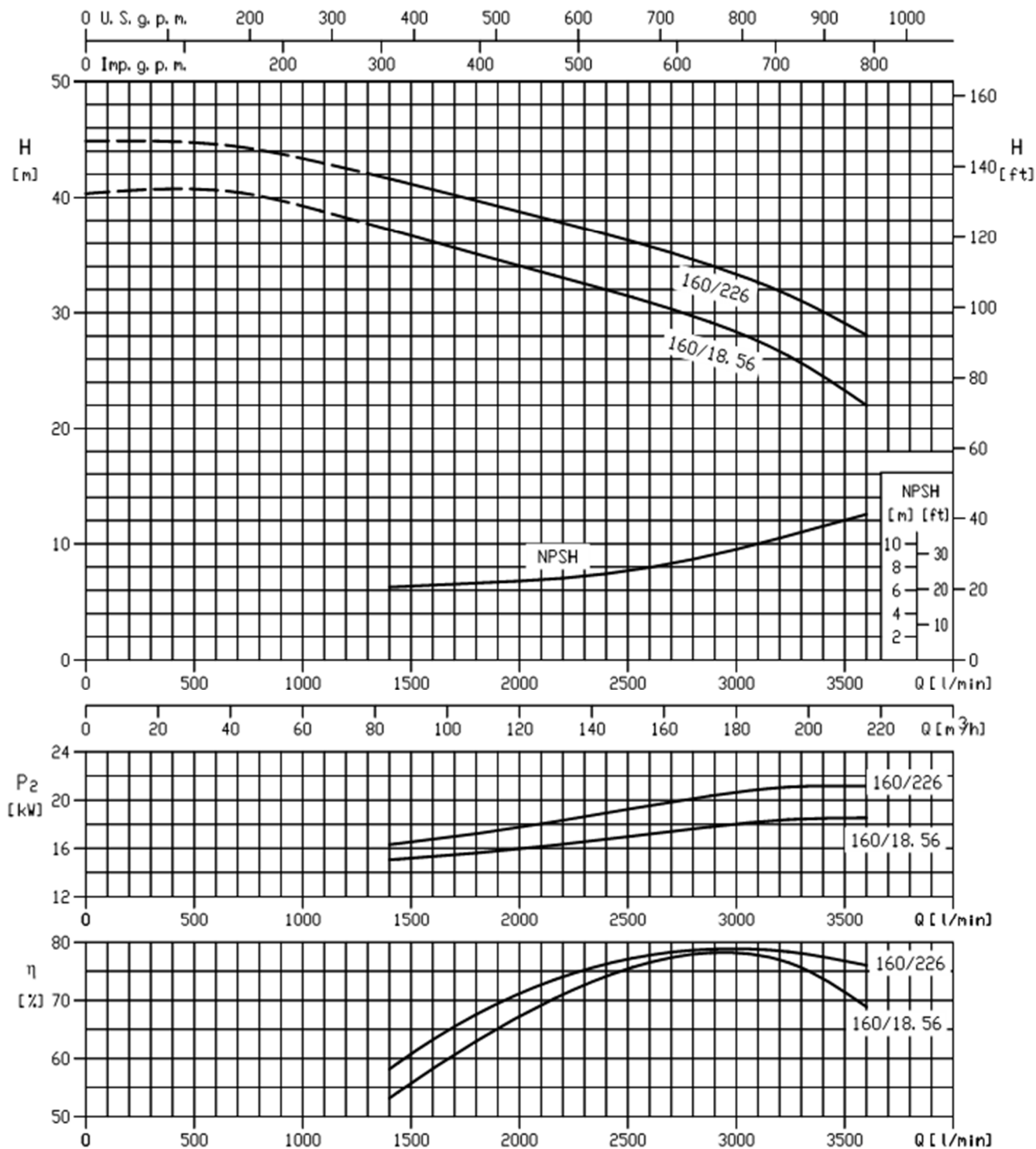
Rev.A

2 POLE

3E 100-160

100-160/18.56 (18.5 kW) - impeller diameter = 151 mm

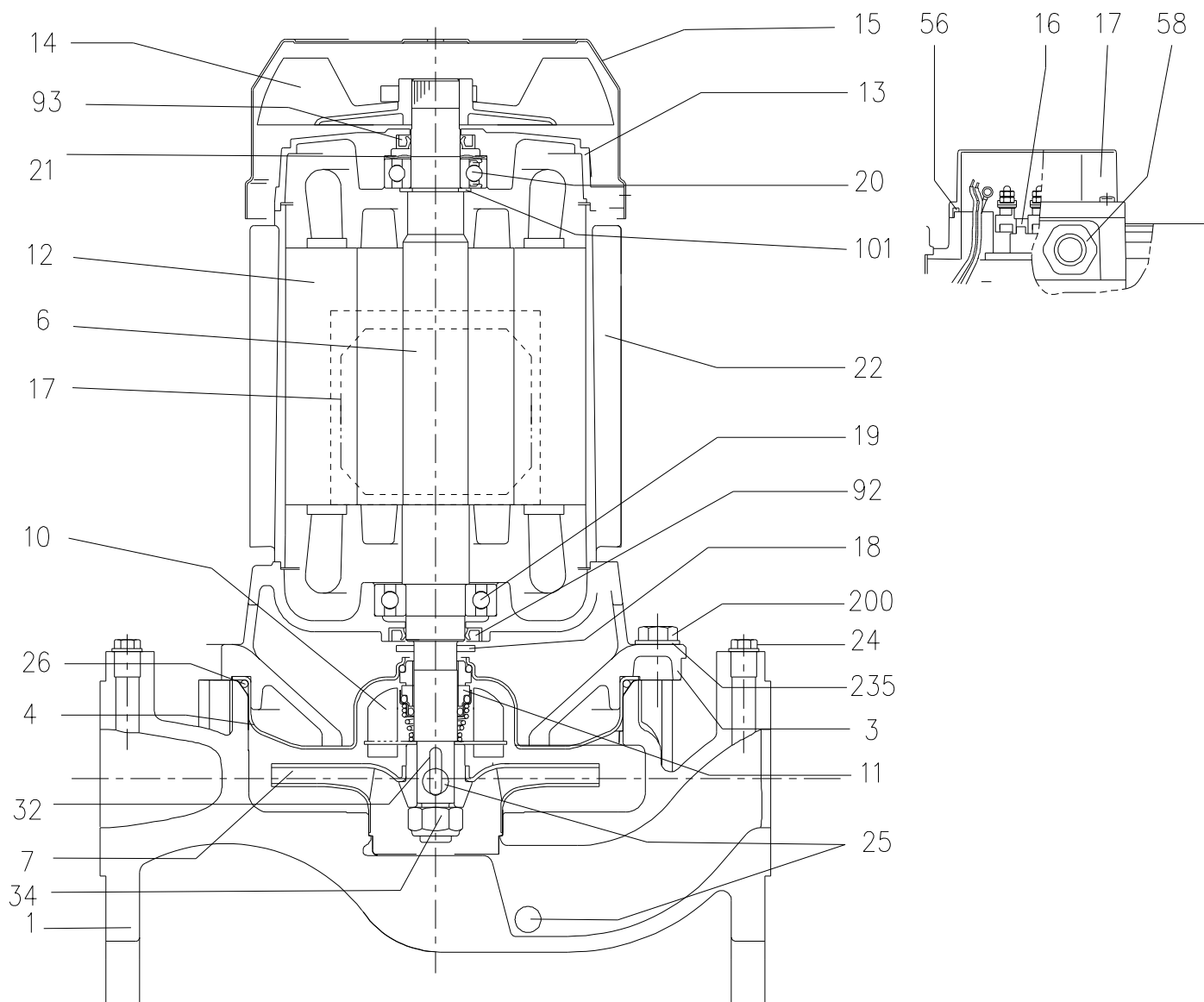
100-160/226 (22 kW) - impeller diameter = 157 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard : ISO 9906 Annex A

226

SECTIONAL VIEW DRAWING 3E 32-125,40-160,50-100/125/160,65-100/125,80-100



SECTIONAL VIEW TABLE 3E 32-125,40-160,50-100/125/160,65-100/125,80-100

No	PART NAME	MATERIAL	DIMENSIONS	STANDARD	Q.TY
1	Casing	Cast iron EN-GJL-250-EN 1561			1
3	Motor bracket	Aluminum AL-EN-1706-AC-46000-D			1
4	Casing cover	EN 1.4301(AISI 304)			1
6	Shaft with rotor - Wet extension	EN 1.4301(AISI 304)			1
7	Impeller	EN 1.4301(AISI 304)			1
10	Baffle	EN 1.4301(AISI 304)			1
11	Mechanical seal [1]				1
12	Motor frame with stator	-			1
13	Motor cover	Aluminum			1
14	Fan	PA			1
15	Fan cover	Fe P04 Galvanized			1
16	Terminal	-			1
17	Terminal box cover	Aluminum (three phase version)			1
18	Splash ring	32-125,50-100 Other models	25x14.5x2.5	EBARA DRAWING	1
			40x21.5x2		
19	Bearing [3]	•			1
20	Bearing [3]	•			1
21	Adjusting ring	Steel C70			1
22	Tie rod	Fe 42 Galvanized	M5	EBARA DRAWING	4
			M6		
24	Plug	Brass	G 1/4		2
25	Drain plug	Brass	G 1/4		4
26	O-ring	EPDM [2]	158.11x5.34	OR 6625	1
			183.52x5.34	OR 6720	
32	Key	EN 1.4401(AISI 316)	4x4x14	UNI 6604	1
			6x6x22		
34	Impeller nut	EN 1.4301(AISI 304)	M10x1.25	DIN 985	1
			M16x1.5		
56	Box gasket	NBR			1
58	Cable gland	-			1
92	Lip seal		15x30x5	DIN 3760 without spring	1
			25x40x7		
			30x47x7		
93	Lip seal		15x30x5	DIN 3760 without spring	1
			17x32x6		
			25x40x7		
			30x47x7		
200	Screw	Gv. Steel 8.8 strength class ISO 898-1	M6x25	UNI 5739	8
			M8x30		10
			M10x35		10
235	Washer	Galvanized Steel	6.4x12.5	UNI 6592	8
			8.4x17		10
			10.5x21		10

[1] See MECHANICAL SEAL page

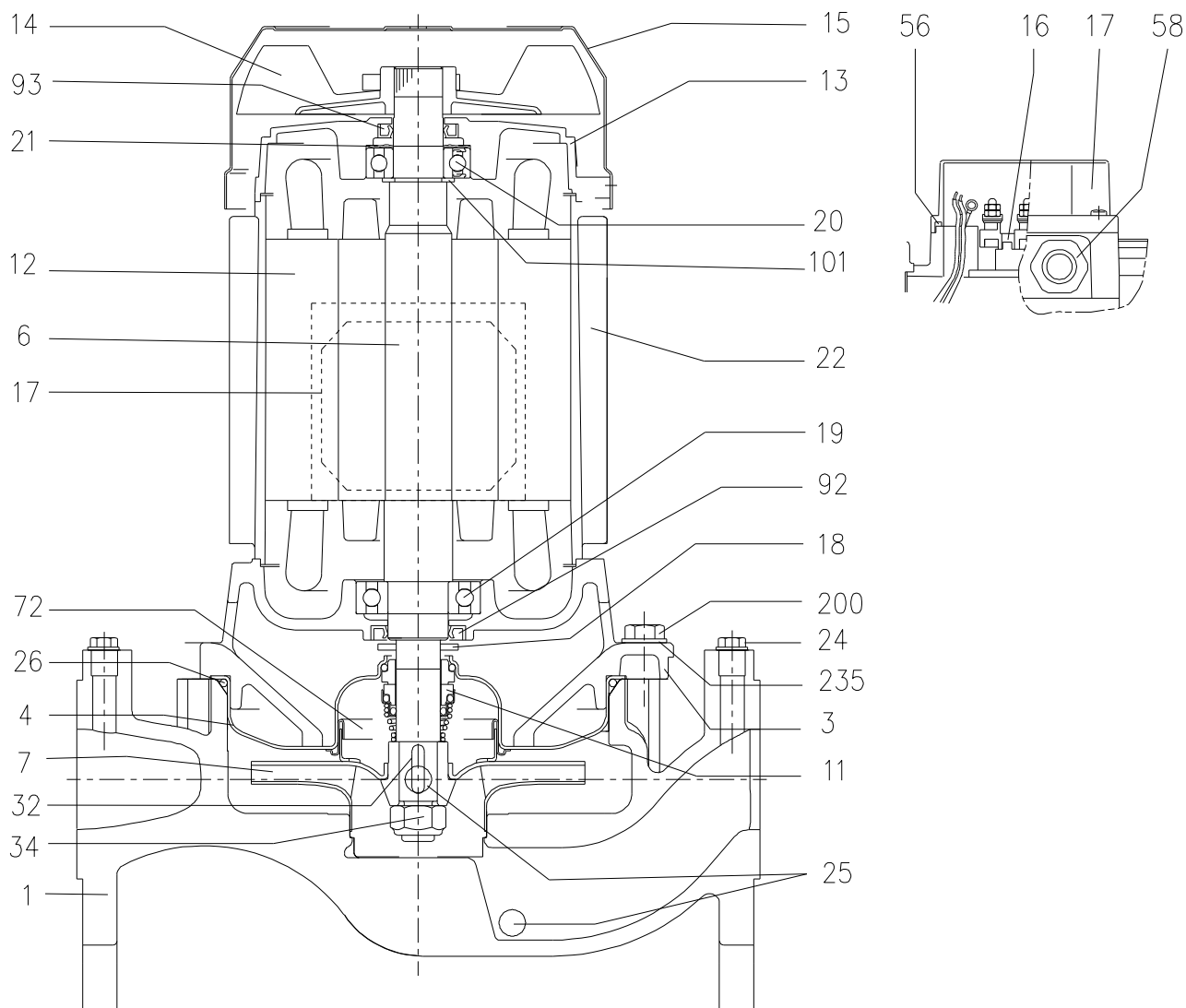
[2] FPM for Q1AVGG,Q4Q1VGG
EPDM for Q1AEGG,Q4Q1EGG

[3] See BEARING Pages

[4] Except for 65-100/1.1kW :25x40x7

[5] Except for 65-100/1.1kW :17x32x6

SECTIONAL VIEW DRAWING 3E 40-200



SECTIONAL VIEW TABLE 3E 40-200

No	PART NAME	MATERIAL	DIMENSIONS	STANDARD	Q.TY
1	Casing	Cast iron EN-GJL-250-EN 1561			1
3	Motor Bracket [4]	Aluminum AL-EN-1706-AC-46000-D			1
4	Casing cover	EN 1.4301(AISI 304)			1
6	Shaft with rotor - Wet extension	EN 1.4301(AISI 304)			1
7	Impeller	EN 1.4301(AISI 304)			1
11	Mechanical seal [1]	-			1
12	Motor frame with stator	-			1
13	Motor cover	Aluminum			1
14	Fan	PA			1
15	Fan cover	Fe P04 Galvanized			1
16	Terminal	-			1
17	Terminal box cover	Aluminum (three phase version)			1
18	Splash ring		40x21.5x2	EBARA DRAWING	1
19	Bearing [3]	•			1
20	Bearing [3]	•			1
21	Adjusting ring	Steel C70			1
22	Tie rod	Fe 42 Galvanized	M6	EBARA DRAWING	4
24	Plug	Brass	G 1/4		-
25	Drain plug	Brass	G 1/4		4
26	O-ring	EPDM [2]	227.96x5.34	OR 6895	1
32	Key	EN 1.4401(AISI 316)	A 6x6x25	UNI 6604	1
34	Impeller nut	EN 1.4301(AISI 304)	M16x1.5	DIN 985	1
56	Box gasket	NBR			1
58	Cable gland	-			1
72	Casing ring	EN 1.4301 (AISI 304)			1
92	Lip seal		30x47x7	DIN 3760 without spring	1
93	Lip seal		30x47x7	DIN 3760 without spring	1
200	Screw	Gv. Steel 8.8 strength class ISO 898-1	M10x35		12
235	Washer	Galvanized Steel	10.5x21	UNI 6592	12

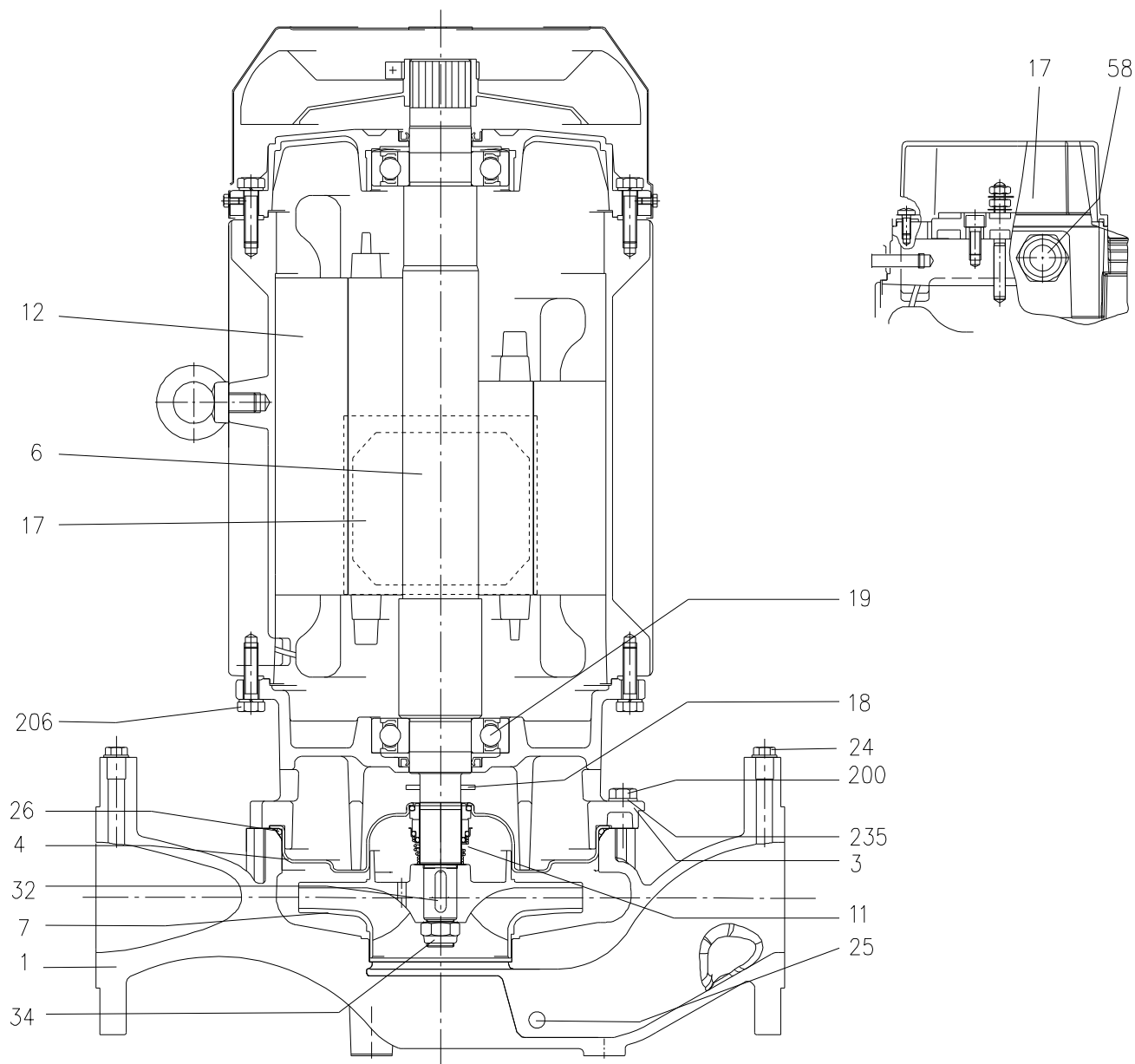
[1] See MECHANICAL SEAL page

[2] FPM for Q1AVGG,Q4Q1VGG
EPDM for Q1AEGG,Q4Q1EGG

[3] See BEARINGS pages

[4] Cast iron EN-GJL-200-EN 1561 for models with 15kW motor
Aluminum AL-EN-1706-AC-46000-D for all the others;

SECTIONAL VIEW DRAWING 3E 50-200,80-160/200,100-160



IN-LINE CENTRIFUGAL PUMPS

3E

CONSTRUCTION

60Hz

Rev.A

SECTIONAL VIEW TABLE 3E 3E 50-200,80-160/200,100-160

No	PART NAME	MATERIAL	DIMENSIONS	STANDARD	Q.TY
1	Casing	Cast iron EN-GJL-250-EN 1561			1
3	Motor bracket [4]	Aluminum AL-EN-1706-AC-46000-D			1
4	Casing cover [5]	EN 1.4301(AISI 304)			1
6	Shaft with rotor - Wet extension	EN 1.4301(AISI 304) [6]			1
7	Impeller [7]	EN 1.4301(AISI 304)			1
11	Mechanical seal [1]				1
12	Motor frame with stator	-			1
13	Motor cover	Aluminum			1
14	Fan	PA			1
15	Fan cover	Fe P04 Galvanized			1
16	Terminal	-			1
17	Terminal box cover	Aluminum (three phase version)			1
18	Splash ring	Up to 11kW 15 kW and above	40x21.5x2 50x29.5x3	EBARA DRAWING	1
19	Bearing [3]	•			1
20	Bearing [3]	•			1
21	Adjusting ring	Steel C70			1
22	Tie rod For 9.2 to 11kW	Fe 42 Galvanized	M8	EBARA DRAWING	4
24	Plug	Brass	G 1/4		2
25	Drain plug	50-200 Other models	Brass G 1/4		4 2
26	O-ring	EPDM [2]	227.96x5.34	OR 6895	1
32	Key	50-200,80-160/9.2,80-160/11 80-160/15,80-160/18.5,80-200,100-160	EN 1.4401(AISI 316) A 6x6x25 A 8x7x30	UNI 6604	1
34	Impeller nut	50-200/9.2,80-160/9.2,80-160/11 50-200/15 80-160/15,80-200,100-160	EN 1.4301(AISI 304) M16x1.5 M18x1.5 M20x1.5	UNI 7474	1
56	Box gasket	NBR			1
58	Cable gland	-			[8]
72	Casing ring [11]	EN 1.4301 (AISI 304)			1
92	Lip seal	From 9.2 to 11 From 15kW to 22kW	40x55x7 45x60x7	DIN 3760 without spring	1
93	Lip seal	From 9.2 to 11 From 15kW to 22kW	40x55x7 45x60x7	DIN 3760 without spring	1
101	Snap ring [9]	Carbon tool steels TC 80	Ø40	UNI 7435	1
200	Screw	Gv. Steel 8.8 strength class ISO 898-1	M10x35		12
206	Screw for Bracket [10]	Gv. Steel 8.8 strength class ISO 898-1	M10x40	UNI 5739	4
235	Washer	Galvanized Steel	10.5x21x2	UNI 6592	12

[1] See MECHANICAL SEAL page

[2] FPM for Q1AVGG,Q4Q1VGG
EPDM for Q1AEGG,Q4Q1EGG

[3] See BEARINGS pages

[4] Cast iron EN-GJL-200-EN 1561 for models with 15,18,5, 22kW motor
Aluminum AL-EN-1706-AC-46000-D for all the others;

[5] EN1.4404(AISI316L) for 100-160

[6] EN1.4404(AISI316L) for 100-160

[7] EN 1.4301 (AISI 304) for 50-200,
EN 1.4401(AISI 316) for 80 series, EN 1.4404(AISI 316L) for 100-160

[8] 1 for pumps with motor up to 11 kW

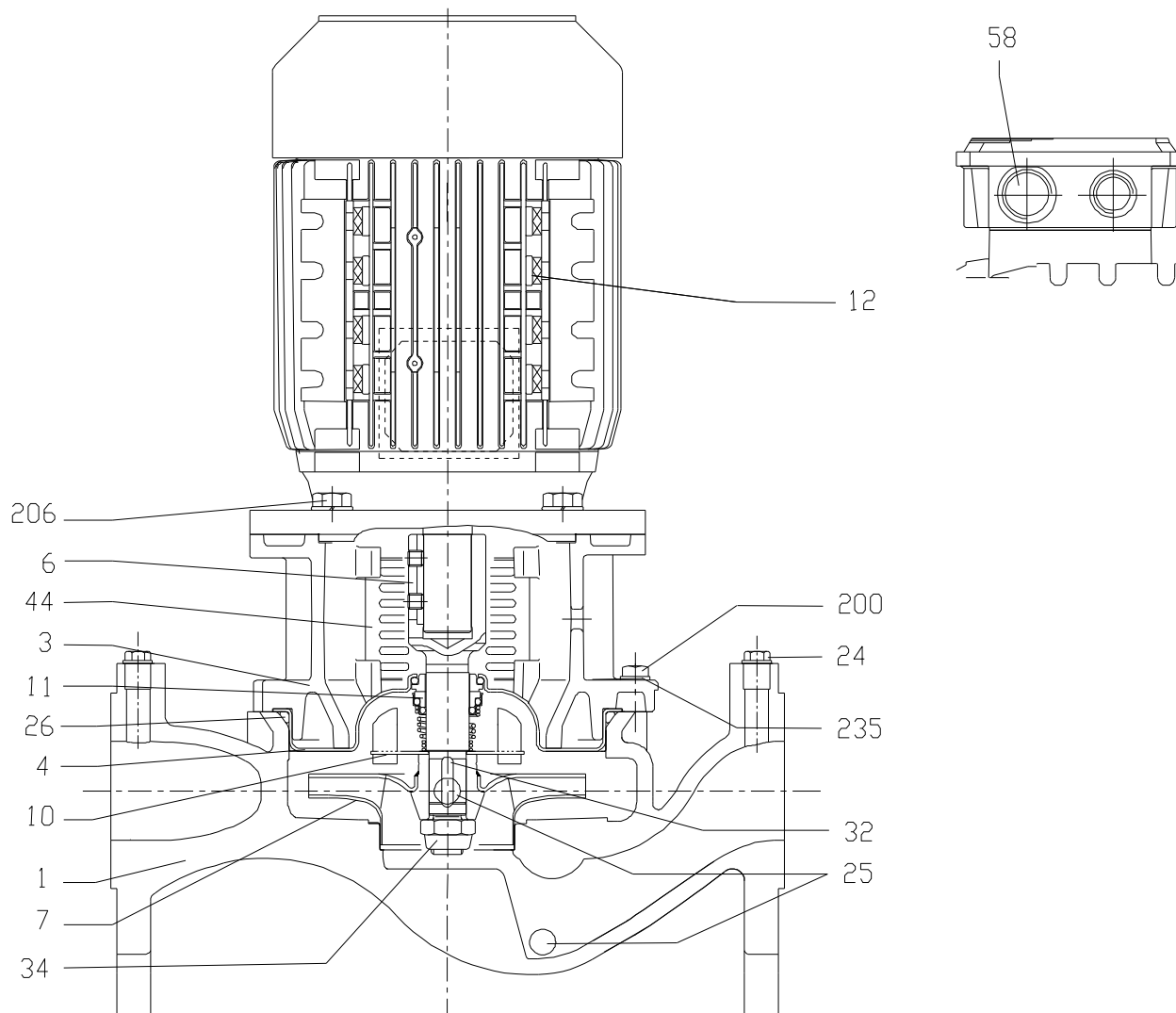
2 for pumps with 15 kW motor and above

[9] Only for pumps with 9.2 and 11 kW motor

[10] Only for pumps with 15 kW motor and above

[11] Only for 50-200

SECTIONAL VIEW DRAWING 3ES 40-160,50-125/160,65-100/125,80-100



SECTIONAL VIEW TABLE 3ES 40-160,50-125/160,65-100/125,80-100

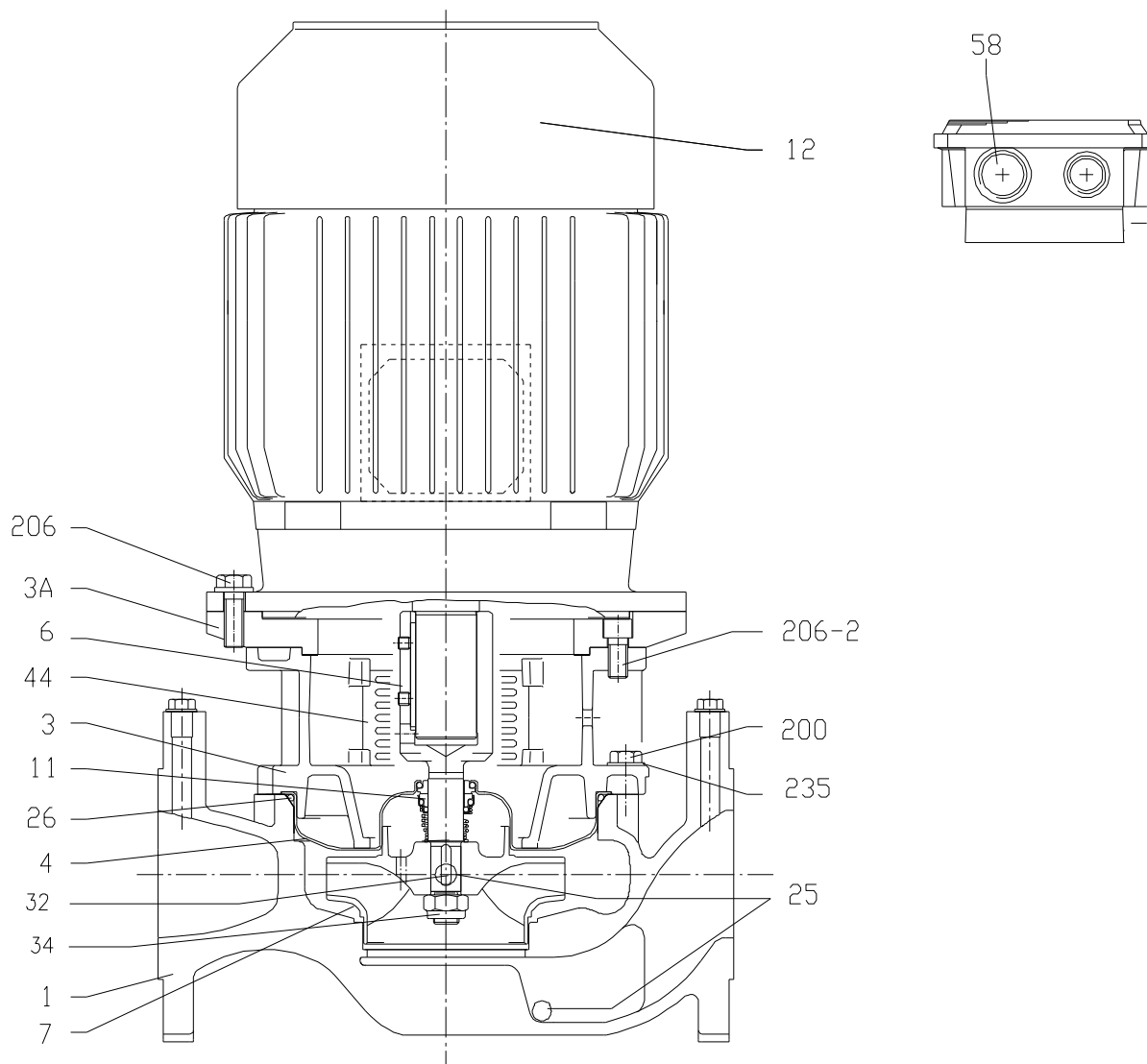
No	PART NAME	MATERIAL	DIMENSIONS	STANDARD	QTY
1	Casing	Cast iron EN-GJL-250-EN 1561			1
3	Motor bracket	Aluminum AL-EN-1706-AC-46000-D			1
4	Casing cover	EN 1.4301(AISI 304)			1
6	Coupling - Wet extensions [3]	EN 1.4301(AISI 304)			1
7	Impeller	EN 1.4301(AISI 304)			1
10	Baffle	EN 1.4301(AISI 304)			1
11	Mechanical seal [1]	-			1
12	Motor				1
24	Priming plug	Brass	G 1/4		2
25	Draining plug	Brass	G 1/4		4
26	O-ring	EPDM [2]	158.11x5.34	OR 6625	1
			183.52x5.34	OR 6720	
			227.96x5.34	OR 6895	
32	Key	EN 1.4401(AISI 316)	6x6x22	UNI 6604	1
34	Impeller nut	EN 1.4301(AISI 304)	M16x1.5	UNI 7474	1
44	Protection	EN 1.4301(AISI 304)		EBARA DRAWING	2
200	Screw	Gv. Steel 8.8 strength class ISO 898-1	M8x30	UNI 5739	8
			M10x35		10
206	Screw for bracket	Gv. Steel 8.8 strength class ISO 898-1	M10x25	UNI 5739	4
			M12x30		
235	Washer	Galvanized Steel	8.4x17	UNI 6592	8
			10.5x21		10

[1] See MECHANICAL SEAL page

[2] FPM for Q1AVGG,Q4Q1VGG
EPDM for Q1AEGG,Q4Q1EGG

[3] See 3ES COUPLING page

SECTIONAL VIEW DRAWING 3ES 40-200



SECTIONAL VIEW TABLE 3ES 40-200

No	PART NAME	MATERIAL	DIMENSIONS	STANDARD	QTY
1	Casing	Cast iron EN-GJL-250-EN 1561			1
3	Motor bracket	Aluminum AL-EN-1706-AC-46000-D			1
3A	Adapter ring [4]	Cast iron EN-GJL-200-EN 1561			1
4	Casing cover	EN 1.4301(AISI 304)			1
6	Coupling - Wet extensions [3]	EN 1.4301(AISI 304)			1
7	Impeller	EN 1.4301(AISI 304)			1
11	Mechanical seal [1]	-			1
12	Motor				1
24	Priming plug	Brass	G 1/4		-
25	Draining plug	Brass	G 1/4		4
26	O-ring	EPDM [2]	227.96x5.34	OR 6895	1
32	Key	EN 1.4401(AISI 316)	6x6x25	UNI 6604	1
34	Impeller nut	EN 1.4301(AISI 304)	M16x1.5	UNI 7474	1
44	Protection	EN 1.4301(AISI 304)		EBARA DRAWING	2
72	Casing ring	EN 1.4301(AISI 304)			1
200	Screw	Gv. Steel 8.8 strength class ISO 898-1	M10x35		12
206	Screw for bracket	Gv. Steel 8.8 strength class ISO 898-1	M12x30	UNI 5739	4
206-2	Screw for adapter ring [4]	Gv. Steel 8.8 strength class ISO 898-1	M12x20	UNI 5931	4
235	Washer	Galvanized Steel	10.5x21	UNI 6592	12

[1] See MECHANICAL SEAL page

[2] FPM for Q1AVGG,Q4Q1VGG
EPDM for Q1AEGG,Q4Q1EGG

[3] See 3ES COUPLING page

[4] Only 80-125

SECTIONAL VIEW TABLE 3ES 50-200,80-160/200,100-160

No	PART NAME		MATERIAL	DIMENSIONS	STANDARD	Q.TY
1	Casing		Cast iron EN-GJL250-EN 1561			1
3	Motor bracket		Aluminum AL-EN-1706-AC-46000-D			1
4	Casing cover		EN 1.4301(AISI 304)			1
6	Coupling - Wet extensions		EN 1.4301(AISI 304) [5]			1
7	Impeller		-			1
11	Mechanical seal		-			1
12	Motor					1
24	Priming plug		Brass	G 1/4		2
25	Drain plug	50-200	Brass	G 1/4		4
		Other models				2
26	O-ring		EPDM [2]	227.96x5.34	OR 6895	1
32	Key	50-200,80-160/9.2,80-160/11	EN 1.4401(AISI 316)	6x6x25	UNI 6604	1
		80-160/15,80-200,100-160		8x7x30		
34	Impeller nut	Up to 11kW	EN 1.4301(AISI 304)	M16x1.5	UNI 7474	1
		50-200/15		M18x1.5		
		15 kW and above		M20x1.5		
44	Protection		EN 1.4301(AISI 304)		EBARA	2
72	Casing ring		EN 1.4301(AISI 304)			1
200	Screw		Gv. Steel 8.8 strength class ISO 898-1	M10x35	UNI 5739	12
206	Screw for bracket	80-160/9.2	Gv. Steel 8.8 strength class ISO 898-1	M12x30	UNI 5739	4
		From 11kW to 22kW		M16x35		
		From 30kW to 55kW		M16x45		
235	Washer		Galvanized Steel	10.5x21	UNI 6592	12

[1] See MECHANICAL SEAL page

[2] FPM for Q1AVGG,Q4Q1VGG

EPDM for Q1AEGG,Q4Q1EGG

[3] EN 1.4404 (AISI 316L) for 100 series

[4] See 3ES COUPLING page

[5] EN 1.4404 (AISI 316L) for 100 series

[6] EN 1.4301(AISI 304) for 50 series;
EN 1.4401(AISI 316) for 80 series, EN 1.4404(AISI 316L) for 100 series

[7] Only 50-200

BEARINGS 3E 60Hz

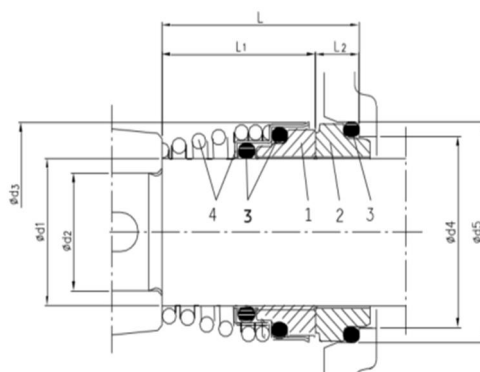
Pump type	Ball Bearing	
	Pump side	Fan side
3E 32-125/0.756	6203	6202
3E 32-125/1.16		
3E 40-160/2.26	6205-ZZ C3	6203-ZZ C3
3E 40-160/3.06		6205-ZZ C3
3E 40-160/4.06	6206-ZZ C3	
3E 40-200/5.56	6306-ZZ C3	6206-ZZ C3
3E 40-200/7.56		
3E 50-100/0.756	6203	6202
3E 50-100/1.16		
3E 50-125/3.06	6205-ZZ C3	6205-ZZ C3
3E 50-125/4.06	6206-ZZ C3	
3E 50-160/5.56	6306-ZZ C3	6206-ZZ C3
3E 50-160/7.56		
3E 50-200/9.26	6308-ZZ C3	6208-ZZ C3
3E 50-200/156	6309-ZZ C3	6309-ZZ C3
3E 65-100/1.16	6203	6202
3E 65-100/1.56		
3E 65-100/2.26	6205-ZZ C3	6203-ZZ C3
3E 65-100/3.06		6205-ZZ C3
3E 65-125/5.56	6306-ZZ C3	6206-ZZ C3
3E 65-125/7.56		
3E 80-100/3.06	6205-ZZ C3	6205-ZZ C3
3E 80-100/4.06	6206-ZZ C3	
3E 80-160/9.26	6308-ZZ C3	6208-ZZ C3
3E 80-160/116		
3E 80-160/156	6309-ZZ C3	6309-ZZ C3
3E 80-200/18.56		
3E 80-200/226		
3E 100-160/18.56		
3E 100-160/226		

BEARINGS 3ES 60Hz

Pump type	Ball bearing	
	Pump side	Fan side
3ES 40-160/2.26	6205-2Z C3	6205-2Z C3
3ES 40-160/3.06	6206-2Z C3	6206-2Z C3
3ES 40-160/4.06	6306-2Z C3	6306-2Z C3
3ES 40-200/5.56	6208-2Z C3	6208-2Z C3
3ES 40-200/7.56		
3ES 50-125/3.06	6206-2Z C3	6206-2Z C3
3ES 50-125/4.06	6306-2Z C3	6306-2Z C3
3ES 50-160/5.56	6208-2Z C3	6208-2Z C3
3ES 50-160/7.56		
3ES 50-200/156	6309-2Z C3	6309-2Z C3
3ES 65-100/2.26	6205-2Z C3	6205-2Z C3
3ES 65-100/3.06	6206-2Z C3	6206-2Z C3
3ES 65-125/5.56	6208-2Z C3	6208-2Z C3
3ES 65-125/7.56		
3ES 80-100/3.06	6206-2Z C3	6206-2Z C3
3ES 80-100/4.06	6306-2Z C3	6306-2Z C3
3ES 80-160/9.26	6208-2Z C3	6208-2Z C3
3ES 80-160/116	6309-2Z C3	6309-2Z C3
3ES 80-160/156		
3ES 80-200/18.56		
3ES 80-200/226	6311-2Z C3	6311-2Z C3
3ES 100-160/18.56	6309-2Z C3	6309-2Z C3
3ES 100-160/226	6311-2Z C3	6311-2Z C3

MECHANICAL SEAL (Standard and Special version)

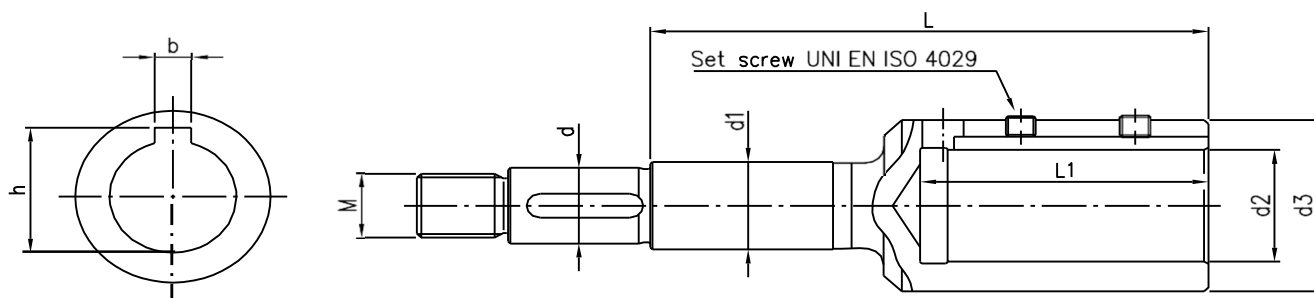
3E-3ES 60Hz



Version	Pump type	Dimensions [mm]								Material			
		d1	d2	d3	d4	d5	L	L1	L2	1 Rotary seal ring	2 Stationary seal ring	3 Rubber	4 Frame + Spring
Standard (Q1AEGG)	32-125 50-100 65-100/1.1	15	12	26	21	26.9	29	22	7	Silicon Carbide	Metallised Carbon	EPDM	EN 1.4401 (AISI 316)
	40-160/200 50-125/160/200 65-100/1.5-2.2-3 65-125 80-100 80-160/9.2-11	22	19	36	31	37	37.5	27.5	10				
	80-160/15 80-200 100-160	30	24	46	39	45	42.5	32.5	10				
Option 1 (Q4Q1EGG)	32-125 50-100 65-100/1.1	15	12	26	21	26.9	29	22	7	Silicon Carbide graphite	Silicon Carbide	EPDM	EN 1.4401 (AISI 316)
	40-160/200 50-125/160/200 65-100/1.5-2.2-3 65-125 80-100 80-160/9.2-11	22	19	36	31	37	37.5	27.5	10				
	80-160/15 80-200 100-160	30	24	46	39	45	42.5	32.5	10				
Option 2 (Q4Q1VGG)	32-125 50-100 65-100/1.1	15	12	26	21	26.9	29	22	7	Silicon Carbide graphite	Silicon Carbide	Viton	EN 1.4401 (AISI 316)
	40-160/200 50-125/160/200 65-100/1.5-2.2-3 65-125 80-100 80-160/9.2-11	22	19	36	31	37	37.5	27.5	10				
	80-160/15 80-200 100-160	30	24	46	39	45	42.5	32.5	10				
Option 3 (Q1AVGG)	32-125 50-100 65-100/1.1	15	12	26	21	26.9	29	22	7	Silicon Carbide	Carbon (Metal)	Viton	EN 1.4401 (AISI 316)
	40-160/200 50-125/160/200 65-100/1.5-2.2-3 65-125 80-100 80-160/9.2-11	22	19	36	31	37	37.5	27.5	10				
	80-160/15 80-200 100-160	30	24	46	39	45	42.5	32.5	10				

* The drawing is only indicative

COUPLING 3ES 60Hz

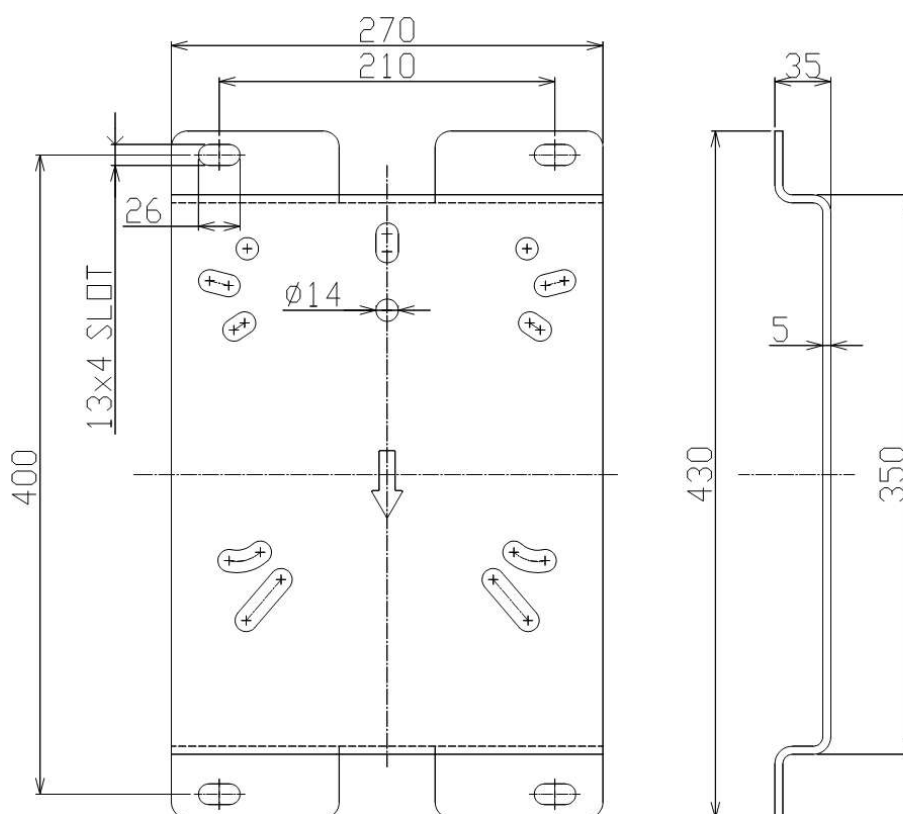


Pump type	Power		Motor Size	Dimensions [mm]									
	[kW]	[HP]		d	d1	d2	d3	M	L	L1	b	h	Set screw
40-160/2.26	2.2	3	90	19	22	24	39	M16x1.5	110	53	8	27.3	M8x8
40-160/3.06	3	4	100	19	22	28	43	M16x1.5	122	63	8	31.3	M8x8
40-160/4.06	4	5.5	112	19	22	28	43	M16x1.5	122	63	8	31.3	M8x8
40-200/5.56	5.5	7.5	132	19	22	38	58	M16x1.5	145	84	10	41.3	M8x8
40-200/7.56	7.5	10	132	19	22	38	58	M16x1.5	145	84	10	41.3	M8x8
50-125/3.06	3	4	100	19	22	28	43	M16x1.5	122	63	8	31.3	M8x8
50-125/4.06	4	5.5	112	19	22	28	43	M16x1.5	122	63	8	31.3	M8x8
50-160/5.56	5.5	7.5	132	19	22	38	58	M16x1.5	145	84	10	41.3	M8x8
50-160/7.56	7.5	10	132	19	22	38	58	M16x1.5	145	84	10	41.3	M8x8
50-200/156	15	20	160	19	22	42	63	M16x1.5	178	114	12	45.3	M8x8
65-100/2.26	2	3	90	19	22	24	39	M16x1.5	110	53	8	27.3	M8x8
65-100/3.06	3	4	100	19	22	28	43	M16x1.5	122	63	8	31.3	M8x8
65-125/5.56	5.5	7.5	132	19	22	38	58	M16x1.5	145	84	10	41.3	M8x8
65-125/7.56	7.5	10	132	19	22	38	58	M16x1.5	145	84	10	41.3	M8x8
80-100/3.06	3	4	100	19	22	28	43	M16x1.5	122	63	8	31.3	M8x8
80-100/4.06	4	5.5	112	19	22	28	43	M16x1.5	122	63	8	31.3	M8x8
80-160/9.26	9.2	12.5	132	19	22	38	58	M16x1.5	145	84	10	41.3	M8x8
80-160/116	11	15	160	19	22	42	63	M16x1.5	178	114	12	45.3	M8x8
80-160/156	15	20	160	24	30	42	63	M20x1.5	184	114	12	45.3	M8x8
80-200/18.56	18.5	25	160	24	30	42	63	M20x1.5	184	114	12	45.3	M8x8
80-200/226	22	30	180	24	30	48	72	M20x1.5	184	114	14	51.8	M10x10
100-160/18.56	18.5	25	160	24	30	42	63	M20x1.5	184	114	12	45.3	M8x8
100-160/226	22	30	180	24	30	48	72	M20x1.5	184	114	14	51.8	M10x10

BASE PLATE

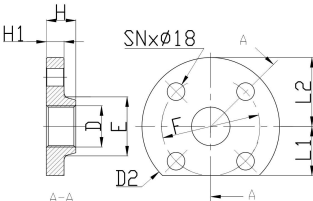
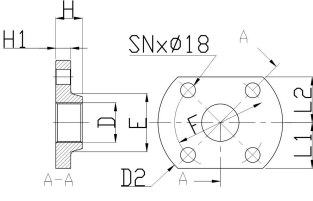
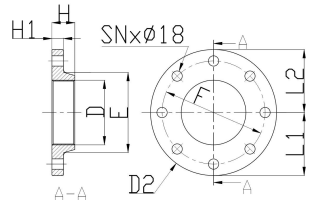
*Pump Models	Hexagon head screws	Type	Quantity
50-200 65-200	3XM12	Type1	1
80-160, 80-200 100-160	4XM12		

*Note: Baseplates are supplied as standard for 9.2kW motors and above

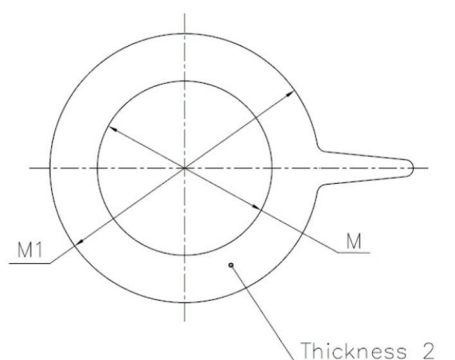


Type 1

COUNTER FLANGE

Counter flange type	Pump type	Rated Pressure (PN)	Dimension (mm)										Bolt	
			Counterflange										Dimension	Material
			DN	D	D2	E	F	H	H1	L1	L2	SN		
	32-125 40-200 50-125 50-160 65-125 80-100	16	32	Rp 1"1/4	140	60	100	30	18	50	70	4	M16X55	A2-70 ISO 3506-1
		16	40	Rp 1"1/2	150	70	110	32	18	55	75	4		
		16	50	Rp 2"	165	84	125	28	18	62.5	82.5	4		
		16	65	Rp 2"1/2	185	104	145	32	18	72.5	92.5	4		
		16	80	Rp 3"	200	118	160	34	20	95	100	8	M16X60	
	40-160 50-100 50-200 65-100	16	40	Rp 1"1/2	150	70	110	32	18	55	55	4	M16X55	
		16	50	Rp 2"	165	84	125	28	18	62.5	62.5	4		
		16	65	Rp 2"1/2	185	104	145	32	18	72.5	72.5	4		
	80-160 80-200 100-160	16	80	Rp 3"	200	118	160	34	20	100	100	8	M16X60	
		16	100	Rp 4"	220	140	180	40	20	110	110	8		

GASKET



Dimensions [mm]		
DN	M	M1
32	38	82
40	50	93
50	60	107
65	80	125
80	90	140
100	115	160

Material : EPDM

IN-LINE CENTRIFUGAL PUMPS

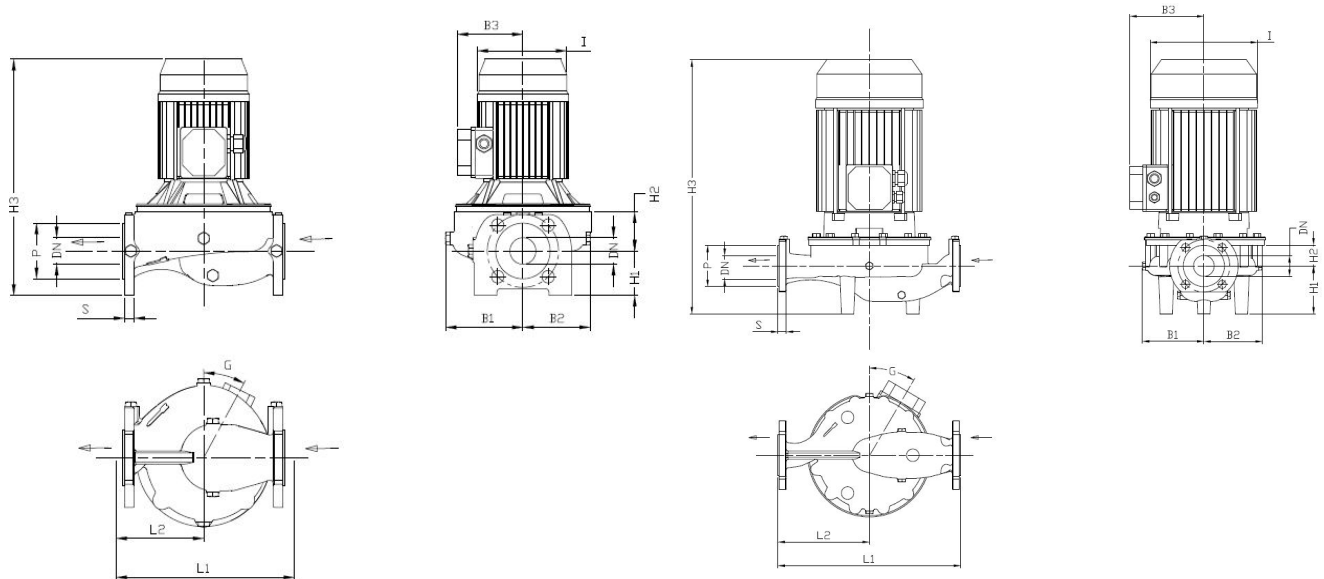
DIMENSION & WEIGHT

3E

60Hz

Rev.A

3E 60Hz



Model	Dimensions [mm]																Weight [kgf]
	Ø DN	Ø P	Ø K	S	L1	L2	H1	H2	H3	B1	B2	B3	G	I	n	A	
32-125/0.756	32	76	100	18	280	140	79	38	348	115	103	102	0	141	4	140	18.4
32-125/1.16	32	76	100	18	280	140	79	38	360	115	103	101	0	140	4	140	21.4
40-160/2.26	40	84	110	18	320	160	68	50	419	127	127	124	0	176	4	150	32.1
40-160/3.06	40	84	110	18	320	160	68	50	459	127	127	124	18	176	4	150	33.8
40-160/4.06	40	84	110	18	320	160	68	50	482	127	127	141	18	193	4	150	42.1
40-200/5.56	40	84	110	18	340	170	100	50	539	146	146	150	15	220	4	150	54.2
40-200/7.56	40	84	110	18	340	170	100	50	559	146	146	150	15	220	4	150	53.7
50-100/0.756	50	99	125	20	280	140	75	47	352	125	108	102	0	141	4	165	21.1
50-100/1.16	50	99	125	20	280	140	75	47	364	125	108	101	0	140	4	165	24.1
50-125/3.06	50	99	125	20	340	170	115	40	506	124	105	124	0	176	4	165	30.5
50-125/4.06	50	99	125	20	340	170	115	40	529	124	105	141	0	193	4	165	44.1
50-160/5.56	50	99	125	20	340	170	115	50	554	134	126	150	18	220	4	165	51.1
50-160/7.56	50	99	125	20	340	170	115	50	574	134	126	150	18	220	4	165	59.0
50-200/9.26	50	99	125	20	440	170	115	50	610	148	141	178	0	259	4	165	71.6
50-200/156	50	99	125	20	440	220	115	50	738	148	141	223	0	209	4	165	112.6
65-100/1.16	65	118	145	20	340	170	82	40	365	115	100	101	0	140	4	185	25.6
65-100/1.56	65	118	145	20	340	170	82	40	433	115	100	119	0	159	4	185	28.7
65-100/2.26	65	118	145	20	340	170	82	40	434	115	100	124	0	176	4	185	31.9
65-100/3.06	65	118	145	20	340	170	82	40	473	115	100	124	0	176	4	185	30.8
65-125/5.56	65	118	145	20	360	180	105	50	544	136	126	150	18	220	4	185	54.5
65-125/7.56	65	118	145	20	360	180	105	50	564	136	126	150	18	220	4	185	55.0
80-100/3.06	80	132	160	22	360	175	97	48	496	134	108	124	0	176	8	200	36.6
80-100/4.06	80	132	160	22	360	175	97	48	519	134	108	141	0	193	8	200	50.2
80-160/9.26	80	132	160	22	440	220	115	50	610	146	141	178	0	259	8	200	73.1
80-160/116	80	132	160	22	440	220	115	50	610	146	141	178	0	259	8	200	82.2
80-160/156	80	132	160	22	440	220	115	50	747	146	141	223	0	309	8	200	120.2
80-200/18.56	80	132	160	22	500	250	115	50	747	160	141	223	0	309	8	200	138.3
80-200/226	80	132	160	22	500	250	115	50	747	160	141	223	0	309	8	200	146.3
100-160/18.56	100	156	180	24	550	275	140	64	786	173	141	223	0	309	8	230	144.2
100-160/226	100	156	180	24	550	275	140	64	786	173	141	223	0	309	8	230	157.0

IN-LINE CENTRIFUGAL PUMPS

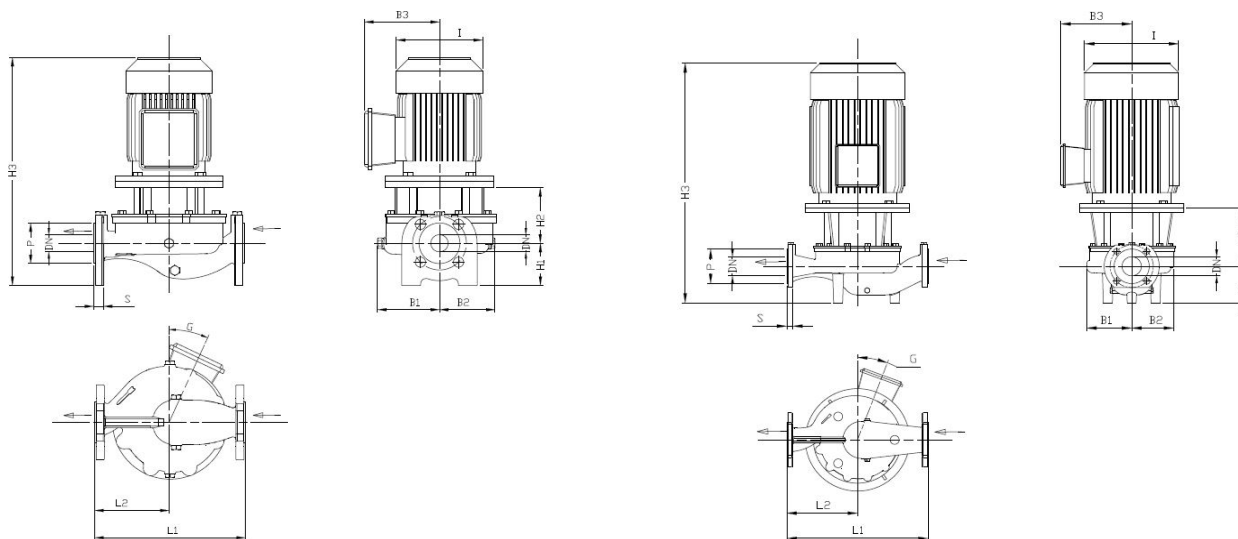
3E

DIMENSION & WEIGHT

60Hz

Rev.A

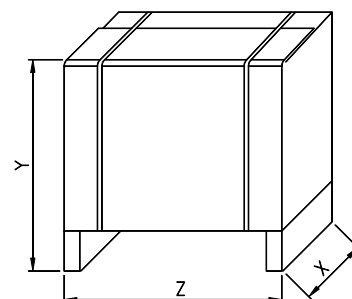
3ES 60Hz



Model	Dimensions [mm]																Weight [kgf]
	Ø DN	Ø P	Ø K	S	L1	L2	H1	H2	H3	B1	B2	B3	G	I	n	A	
40-160/2.26	40	84	110	18	320	160	68	130	465	127	127	148	18	180	4	150	40.4
40-160/3.06	40	84	110	18	320	160	68	142	516	127	127	155	18	196	4	150	46.0
40-160/4.06	40	84	110	18	320	160	68	130	538	127	127	171	18	225	4	150	51.3
40-200/5.56	40	84	110	18	340	170	100	165	627	146	146	198	15	248	4	150	77.5
40-200/7.56	40	84	110	18	340	170	100	165	627	146	146	198	15	248	4	150	92.7
50-125/3.06	50	99	125	20	340	170	115	142	563	124	105	155	0	196	4	165	42.0
50-125/4.06	50	99	125	20	340	170	115	142	585	124	105	171	0	225	4	165	55.8
50-160/5.56	50	99	125	20	340	170	115	165	642	134	126	198	18	248	4	165	80.0
50-160/7.56	50	99	125	20	340	170	115	165	642	134	126	198	18	248	4	165	89.8
50-200/156	50	99	125	20	440	220	115	198	811	148	141	238	0	317	4	165	157.5
65-100/2.26	65	118	145	20	340	170	82	130	479	115	100	148	0	180	4	185	40.2
65-100/3.06	65	118	145	20	340	170	82	142	530	115	100	155	0	196	4	185	42.3
65-125/5.56	65	118	145	20	360	180	105	165	632	136	126	198	18	248	4	185	73.4
65-125/7.56	65	118	145	20	360	180	105	165	632	136	126	198	18	248	4	185	100.6
80-100/3.06	80	132	160	22	360	175	97	150	553	134	108	155	0	196	8	200	48.1
80-100/4.06	80	132	160	22	360	175	97	150	575	134	108	171	0	225	8	200	61.9
80-160/9.26	80	132	160	22	440	220	115	165	682	146	141	198	0	248	8	200	105.2
80-160/116	80	132	160	22	440	220	115	198	811	146	141	238	0	317	8	200	101.6
80-160/156	80	132	160	22	440	220	115	208	821	146	141	238	0	317	8	200	135.7
80-200/18.56	80	132	160	22	500	250	115	208	865	160	141	238	0	317	8	200	155.3
80-200/226	80	132	160	22	500	250	115	208	900	160	141	268	0	360	8	200	193.3
100-160/18.56	100	156	180	24	550	275	140	222	904	173	141	238	0	317	8	230	150.1
100-160/226	100	156	180	24	550	275	140	222	939	173	141	268	0	360	8	230	205.9

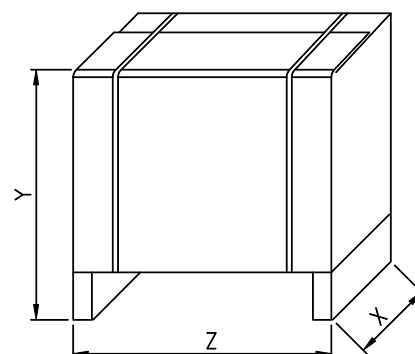
PACKING 3E 60Hz

Pump Type	Packing [mm]			Total net weight [kg]
	Z	X	Y	
3E 32-125/0.756	420	360	500	18.4
3E 32-125/1.16	420	360	500	21.4
3E 40-160/2.26	420	360	500	32.1
3E 40-160/3.06	420	360	500	33.8
3E 40-160/4.06	420	360	500	42.1
3E 40-200/5.56	420	360	590	54.2
3E 40-200/7.56	420	360	590	53.7
3E 50-100/0.756	420	360	500	21.1
3E 50-100/1.16	420	360	500	24.1
3E 50-125/3.06	420	360	590	30.5
3E 50-125/4.06	420	360	590	44.1
3E 50-160/5.56	420	360	590	51.1
3E 50-160/7.56	610	500	670	59.0
3E 50-200/9.26	610	500	670	71.6
3E 50-200/156	610	500	930	112.6
3E 65-100/1.16	420	360	500	25.6
3E 65-100/1.56	420	360	500	28.7
3E 65-100/2.26	420	360	500	31.9
3E 65-100/3.06	420	360	500	30.8
3E 65-125/5.56	420	360	590	54.5
3E 65-125/7.56	420	360	590	55.0
3E 80-100/3.06	420	360	590	36.6
3E 80-100/4.06	420	360	590	50.2
3E 80-160/9.26	610	500	670	73.1
3E 80-160/116	610	500	670	82.2
3E 80-160/156	610	500	930	120.2
3E 80-200/18.56	610	500	930	138.3
3E 80-200/226	610	500	930	146.3
3E 100-160/18.56	610	500	930	144.2
3E 100-160/226	610	500	930	157.0



PACKING 3ES 60Hz

Pump Type	Packing [mm]			Total net weight (kg)
	Z	X	Y	
3ES 40-160/2.26	420	360	500	40.4
3ES 40-160/3.06	420	360	590	46.0
3ES 40-160/4.06	420	360	590	51.3
3ES 40-200/5.56	610	500	670	77.5
3ES 40-200/7.56	610	500	670	92.7
3ES 50-125/3.06	420	360	590	42.0
3ES 50-125/4.06	610	500	670	55.8
3ES 50-160/5.56	610	500	670	80.0
3ES 50-160/7.56	610	500	670	89.8
3ES 50-200/156	610	500	930	157.5
3ES 65-100/2.26	420	360	500	40.2
3ES 65-100/3.06	420	360	590	42.3
3ES 65-125/5.56	610	500	670	73.4
3ES 65-125/7.56	610	500	670	100.6
3ES 80-100/3.06	420	360	590	48.1
3ES 80-100/4.06	610	500	670	61.9
3ES 80-160/9.26	610	500	930	105.2
3ES 80-160/116	610	500	930	101.6
3ES 80-160/156	610	500	930	135.7
3ES 80-200/18.56	610	500	930	155.3
3ES 80-200/226	730	580	1300	193.3
3ES 100-160/18.56	730	580	1300	150.1
3ES 100-160/226	730	580	1300	205.9



IN-LINE CENTRIFUGAL PUMPS

3E

TECHNICAL DATA

60Hz

Rev.A

MOTOR DATA 3E

Pump type	Motor Power		Efficiency	Input [kW]	Efficiency (% load)			Efficiency (% load)			Full load current [A] Three Phase				Locked rotor current [A] Three Phase			
	[kW]	[HP]			(380 V) η %			(460 V) η %			220 V	380 V	460 V	660 V	220 V	380 V	460 V	660 V
					50%	75%	100%	50%	75%	100%								
3E 32-125/0.756	0.75	1	IE3*	0.9	82.3	83.5	83.2	80.5	83.1	84.6	2.8	1.6	1.5	-	17.9	10.3	12.5	-
3E 32-125/1.16	1.1	1.5	IE3*	1.3	84.8	84.5	82.7	82.0	84.4	84.5	4.0	2.3	2.2	-	24.6	14.2	17.2	-
3E 40-160/2.26	2.2	3	IE3*	2.5	86.5	86.8	86.2	86.9	87.8	87.4	7.5	4.3	4.1	-	55.7	32.2	38.9	-
3E 40-160/3.06	3	4	IE3*	3.4	86.8	87.0	87.5	87.0	87.9	88.5	10.2	5.9	5.6	-	75.7	43.7	52.8	-
3E 40-160/4.06	4	5.5	IE3*	4.5	89.66	89.59	88.58	86.1	88.4	88.5	13.5	7.8	7.6	-	107.1	61.8	74.9	-
3E 40-200/5.56	5.5	7.5	IE3*	6.0	90.36	90.86	90.42	88.7	90.5	91.0	-	10.1	8.9	5.8	-	94.5	114.3	54.6
3E 40-200/7.56	7.5	10	IE3*	8.3	90.0	90.61	90.3	88.1	90.3	90.8	-	13.6	11.9	7.8	-	118.0	143.0	68.1
3E 50-100/0.756	0.75	1	IE3*	0.9	82.3	83.5	83.2	80.5	83.1	84.6	2.8	1.6	1.5	-	17.9	10.3	12.5	-
3E 50-100/1.16	1.1	1.5	IE3*	1.3	84.8	84.5	82.7	82.0	84.4	84.5	4.0	2.3	2.2	-	24.6	14.2	17.2	-
3E 50-125/3.06	3	4	IE3*	3.4	86.8	87.0	87.5	87.0	87.9	88.5	10.2	5.9	5.6	-	75.7	43.7	52.8	-
3E 50-125/4.06	4	5.5	IE3*	4.5	89.66	89.59	88.58	86.1	88.4	88.5	13.5	7.8	7.6	-	107.1	61.8	74.9	-
3E 50-160/5.56	5.5	7.5	IE3*	6.0	90.36	90.86	90.42	88.7	90.5	91.0	-	10.1	8.9	5.8	-	94.5	114.3	54.6
3E 50-160/7.56	7.5	10	IE3*	8.3	90.0	90.61	90.3	88.1	90.3	90.8	-	13.6	11.9	7.8	-	118.0	143.0	68.1
3E 50-200/9.26	9.2	12.5	IE3*	10.9	90.3	91.24	91.2	88.3	90.5	91.3	-	18.3	15.1	10.6	-	115.0	140.0	66.4
3E 50-200/156	15	20	IE3*	16.2	92.46	92.65	92.1	91.0	92.5	92.7	-	27.1	23.9	15.7	-	184.0	223.0	106.2
3E 65-100/1.16	1.1	1.5	IE3*	1.3	84.8	84.5	82.7	82.0	84.4	84.5	4.0	2.3	2.2	-	24.6	14.2	17.2	-
3E 65-100/1.56	1.5	2	IE3*	2.48	86.5	86.8	86.2	86.9	87.8	87.4	7.5	4.3	4.1	-	55.7	32.2	38.93	-
3E 65-100/2.26	2.2	3	IE3*	2.5	86.5	86.8	86.2	86.9	87.8	87.4	7.5	4.3	4.1	-	55.7	32.2	38.9	-
3E 65-100/3.06	3	4	IE3*	3.4	86.8	87.0	87.5	87.0	87.9	88.5	10.2	5.9	5.6	-	75.7	43.7	52.8	-
3E 65-125/5.56	5.5	7.5	IE3*	6.0	90.36	90.86	90.42	88.7	90.5	91.0	-	10.1	8.9	5.8	-	94.5	114.3	54.6
3E 65-125/7.56	7.5	10	IE3*	8.3	90.0	90.61	90.3	88.1	90.3	90.8	-	13.6	11.9	7.8	-	118.0	143.0	68.1
3E 80-100/3.06	3	4	IE3*	3.4	86.8	87.0	87.5	87.0	87.9	88.5	10.2	5.9	5.6	-	75.7	43.7	52.8	-
3E 80-100/4.06	4	5.5	IE3*	4.5	89.66	89.59	88.58	86.1	88.4	88.5	13.5	7.8	7.6	-	107.1	61.8	74.9	-
3E 80-160/9.26	9.2	13	IE3*	10.06	90.3	91.24	91.2	88.3	90.5	91.3	-	16.9	14.9	9.7	-	115.0	140.0	66.4
3E 80-160/116	11	15	IE3*	12.1	91.9	91.8	91.2	90.9	91.8	91.3	-	20.3	18.5	11.7	-	153.0	185.0	88.3
3E 80-160/156	15	20	IE3*	16.2	92.46	92.65	92.1	91.0	92.5	92.7	-	27.1	23.9	15.7	-	184.0	223.0	106.2
3E 80-200/18.56	18.5	25	IE3*	19.9	92.19	92.9	92.7	90.8	92.5	92.9	-	33.5	30.3	19.3	-	273.0	331.0	157.6
3E 80-200/226	22	30	IE3*	23.7	92.4	92.7	92.7	92.6	93.1	93.1	-	39.5	34.5	22.8	-	321.0	389.0	185.3
3E 100-160/18.56	18.5	25	IE3*	19.91	92.2	92.9	92.7	90.8	92.5	92.9	-	33.5	30.3	19.3	-	273.0	331.0	157.6
3E 100-160/226	22	30	IE3*	23.65	92.4	92.7	92.7	92.6	93.1	93.1	-	39.5	34.5	22.8	-	321.0	389.0	185.3

* only for 460 V

MOTOR DATA 3ES 60Hz

Pump type	Motor			Efficiency	Input [kW]	Efficiency (% load) and power-factor				Full load Current [A]		Locked rotor current [A]	
	Motor Size	Power				η %			cos-φ	265V	460V	265V	460V
		[kW]	[HP]			50%	75%	100%					
3ES 40-160/2.26	90L	2.2	3	IE3*	2.55	86.0	86.4	86.5	0.82	6.8	3.9	64.1	37.0
3ES 40-160/3.06	100L	3	4	IE3*	3.44	86.4	87.8	87.5	0.90	8.3	4.8	95.3	55.0
3ES 40-160/4.06	112M	4	5.5	IE3*	4.62	84.2	86.2	87.5	0.92	10.9	6.3	69.3	40.0
3ES 40-200/5.56	132S	5.5	7.5	IE3*	6.24	87.2	88.7	89.1	0.91	-	8.6	-	89.0
3ES 40-200/7.56	132S	7.5	10	IE3*	8.45	89.8	90.1	89.7	0.93	-	11.4	-	112.0
3ES 50-125/3.06	100L	3	4	IE3*	3.44	86.4	87.8	87.5	0.90	8.3	4.8	95.3	55.0
3ES 50-125/4.06	112M	4	5.5	IE3*	4.62	84.2	86.2	87.5	0.92	10.9	6.3	69.3	40.0
3ES 50-160/5.56	132S	5.5	7.5	IE3*	6.24	87.2	88.7	89.1	0.91	-	8.6	-	89.0
3ES 50-160/7.56	132S	7.5	10	IE3*	8.45	89.8	90.1	89.7	0.93	-	11.4	-	112.0
3ES 50-200/156	160M	15	20	IE3*	16.34	90.9	92.3	91.8	0.88	-	23.3	-	226.0
3ES 65-100/2.26	90L	2.2	3	IE3*	2.55	86.0	86.4	86.5	0.82	6.8	3.9	64.1	37.0
3ES 65-100/3.06	100L	3	4	IE3*	3.44	86.4	87.8	87.5	0.90	8.3	4.8	95.3	55.0
3ES 65-125/5.56	132S	5.5	7.5	IE3*	6.24	87.2	88.7	89.1	0.91	-	8.6	-	89.0
3ES 65-125/7.56	132S	7.5	10	IE3*	8.45	89.8	90.1	89.7	0.93	-	11.4	-	112.0
3ES 80-100/3.06	100L	3	4	IE3*	3.44	86.4	87.8	87.5	0.90	8.3	4.8	95.3	55.0
3ES 80-100/4.06	112M	4	5.5	IE3*	4.62	84.2	86.2	87.5	0.92	10.9	6.3	69.3	40.0
3ES 80-160/9.26	132M	9.2	12.5	IE3*	10.18	85.0	88.6	90.0	0.90	-	14.2	-	172.0
3ES 80-160/116	160M	11	15	IE3*	12.13	87.2	89.5	90.9	0.88	-	17.3	-	159.0
3ES 80-160/156	160M	15	20	IE3*	16.34	90.9	92.3	91.8	0.88	-	23.3	-	226.0
3ES 80-200/18.56	160L	18.5	25	IE3*	20.19	90.3	92.0	91.7	0.88	-	28.8	-	340.0
3ES 80-200/226	180M	22	30	IE3*	23.40	91.8	93.0	93.4	0.89	-	33.0	-	350.0
3ES 100-160/18.56	160L	18.5	25	IE3*	20.19	90.3	92.0	91.7	0.88	-	28.8	-	340.0
3ES 100-160/226	180M	22	30	IE3*	23.40	91.8	93.0	93.4	0.89	-	33.0	-	350.0

*only for 460V

NOISE DATA 3E-3ES 60Hz

Pump type	Power		LpA - dB(A) *
	[kW]	[HP]	
3E 32-125/0.756	0.75	1	68
3E 32-125/1.16	1.1	1.5	
3E 40-160/2.26	2.2	3	68
3E 40-160/3.06	3	4	75
3E 40-160/4.06	4	5.5	
3E 40-200/5.56	5.5	7.5	78
3E 40-200/7.56	7.5	10	
3E 50-100/0.756	0.75	1	68
3E 50-100/1.16	1.1	1.5	75
3E 50-125/3.06	3	4	
3E 50-125/4.06	4	5.5	78
3E 50-160/5.56	5.5	7.5	
3E 50-160/7.56	7.5	10	82
3E 50-200/9.26	9.2	12.5	
3E 50-200/156	15	20	68
3E 65-100/1.16	1.1	1.5	
3E 65-100/1.56	1.5	2	75
3E 65-100/2.26	2.2	3	
3E 65-100/3.06	3	4	78
3E 65-125/5.56	5.5	7.5	
3E 65-125/7.56	7.5	10	75
3E 80-100/3.06	3	4	
3E 80-100/4.06	4	5.5	82
3E 80-160/9.26	9.2	12.5	
3E 80-160/116	11	15	86
3E 80-160/156	15	20	
3E 80-200/18.56	18.5	25	88
3E 80-200/226	22	30	
3E 100-160/18.56	18.5	25	88
3E 100-160/226	22	30	

Pump type	Power		LpA - dB(A) *
	[kW]	[HP]	
3ES 40-160/2.26	2.2	3	70
3ES 40-160/3.06	3	4	74
3ES 40-160/4.06	4	5.5	78
3ES 40-200/5.56	5.5	7.5	82
3ES 40-200/7.56	7.5	10	
3ES 50-125/3.06	3	4	74
3ES 50-125/4.06	4	5.5	78
3ES 50-160/5.56	5.5	7.5	82
3ES 50-160/7.56	7.5	10	
3ES 50-200/156	15	20	84
3ES 65-100/2.26	2.2	3	70
3ES 65-100/3.06	3	4	74
3ES 65-125/5.56	5.5	7.5	82
3ES 65-125/7.56	7.5	10	
3ES 80-100/3.06	3	4	74
3ES 80-100/4.06	4	5.5	78
3ES 80-160/9.26	9.2	12.5	82
3ES 80-160/116	11	15	84
3ES 80-160/156	15	20	
3ES 80-200/18.56	18.5	25	85
3ES 80-200/226	22	30	
3ES 100-160/18.56	18.5	25	84
3ES 100-160/226	22	30	85

* Mean value of several measures at 1m distance around the pump.

Tolerance ± 2.5 dB.

Sound pressure level of motor pumps with AEG



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