

# Multistage Horizontal Centrifugal Pump

## Comeo

### Type Series Booklet



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Type Series Booklet Comeo

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## Centrifugal Pumps

### Multistage Horizontal Centrifugal Pumps

## Comeo



#### Installation

- Horizontal installation

#### Drive

- AC motor / three-phase asynchronous motor
- To IEC 60034-7
- Efficiency class IE3 to IEC 60034-30 (for three-phase motors  $\geq 0.75$  kW)
- Frequency 50 Hz/60 Hz
- 2 poles
- Thermal class F
- Enclosure IP55
- Duty type: continuous duty S1
- Temperature protection switch with automatic reset for single-phase AC motor

#### Shaft seal

- Mechanical seal
- To EN 12756
- Uncooled
- Maintenance-free

#### Main applications

- Cold water pressure booster system
- Cold water systems
- General irrigation systems
- Light industrial applications

#### Fluids handled

- Clean water (without solids)
- Slightly aggressive fluid

#### Operating data

Table 1: Operating properties

Characteristic		Value
Flow rate	Q [m <sup>3</sup> /h]	$\leq 10,8$
Head	H [m]	$\leq 79,5$
Fluid temperature	T [°C]	$\geq -10$
		$\leq +60$
Ambient temperature	T [°C]	$\geq -20$
		$\leq +40$ <sup>1)</sup>
Pressure class	PN [bar]	$\leq 10$

#### Design details

##### Design

- Multistage
- Close-coupled design
- Extended motor shaft
- Maximum pressure class PN 10

<sup>1</sup> Optional:  $\leq +55$  °C

## Designation

**Table 2:** Designation example

Position																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
C	o	m	e	o			C			I	0	0	4	/	0	6	-	A	4	B	3	2	F	S	0	9	0	E	5	M	W
See name plate and data sheet																See data sheet															

**Table 3:** Designation key

Position	Code	Description	
1-7	Pump type		
	Comeo	Comeo	
8-9	Design		
	C	Cast steel	1.4308 (casing)
		Stainless steel	1.4301 (hydraulic system)
	G	Grey cast iron	EN-GJL-250 (casing)
Stainless steel		1.4301 (hydraulic system)	
10	Connection type		
	I	Internal thread	
11-13	Size		
	002	2	
	...	...	
	006	6	
15-16	Number of stages		
	01	1	
	...	...	
	06	6	
17	Trimmed impellers		
	-	No trimmed impeller	
18	Product generation		
	A	Comeo from 2015	
19	Connection standard		
	4	Internal thread / EN ISO 228-1	
20	Material variant		
	A	Grey cast iron	EN-GJL-250 (casing)
		Stainless steel	1.4301 (hydraulic system)
	B	Cast steel	1.4308 (casing)
Stainless steel		1.4301 (hydraulic system)	
21-22	Seal code		
	31	BVPFF	
	32	BVEFF	
23	Mechanical seal design		
	F	Fixed design	
24	Drive		
	S	Standard IEC	
25-27	Motor size		
	071	IEC 071	
	080	IEC 080	
	090	IEC 090	
28	Pressure class		
	E	PN10	
29	Number of motor poles		
	5	50 Hz, 2-pole	
	6	60 Hz, 2-pole	
30	Motor specification		
	C	230/400 V - IE2	
	M	230 V, single-phase AC motor	
	O	0.37/0.55 [kW], without IE classification	
	U	230/400 V - IE3	
31	PumpMeter		

Position	Code	Description
31	W	Without PumpMeter
32	Design	
	.. <sup>2)</sup>	Standard
	X	Non-standard (BT3D, BT3)

### Materials

**Table 4:** Overview of materials depending on material variant

Part No.	Description	In contact with water	Comeo C	Comeo G
10-6	Pump shroud	X	1.4301	
101	Pump casing	X	1.4308	EN-GJL-250
108.01/.04/.05	Stage casing	X	1.4301	
160	Cover	X	1.4301	
-	Shaft	X	1.4541	
230	Impeller	X	1.4301	
341	Drive lantern	-	EN-GJL-250	
412	O-ring	X	EPDM	
433	Mechanical seal	X	BVEFF	BVPFF
525.01/.03/.05	Spacer sleeve	X	1.4305	
903.05	Vent plug	X	1.4301 / EPDM	PEHD / TPE
905	Tie bolt	-	1.4057	
920.02/.03	Nut	X	1.4301	
930.02	Safety device	X	1.4401	
932	Circlip	X	1.4571	
950	Spring	X	1.4401	

**Table 5:** Comparison of materials

EN	General description	EN material code	EN standard	ASTM
EN-GJL-250	Cast iron	GJL-250	EN 1561	A48 - 40 B
1.4057	Chrome nickel steel	X17CrNi 16-2--QT800	EN 10088-3	A276 - 431
1.4301	Chrome nickel steel	X5CrNi 18-10	EN 10088	A276 - 304
1.4305	Chrome nickel steel	X8CrNiS 18-9	EN 10088	A276 - 303
1.4308	Chrome nickel steel	GX5CrNi19-10	EN 10213-4	A351 - Grade CF8
1.4401	Chrome nickel molybdenum steel	X5CrNiMo 17-12-2	EN 10088	A276 - 316
1.4541	Chrome nickel steel	X6CrNiMoTi 18-10	EN 10088	A276 - 321
1.4571	Chrome nickel molybdenum steel	X6CrNiMoTi 17-12-2	EN 10088	A276 - 316Ti

### Product benefits

- Top quality pump thanks to advanced high-precision production technology and durable high-grade materials
- An energy-saving, state-of-the-art pump solution characterised by high efficiency levels, optimum flow passage, the use of high-efficiency motors, and precision engineering of all hydraulic components
- High energy efficiency as well as low investment and maintenance costs make for low life cycle costs.
- Very compact, space-saving design



### Product information

#### Product information as per Regulation No. 1907/2006 (REACH)

For information as per European chemicals regulation (EC) No. 1907/2006 (REACH) see <https://www.ksb.com/en-global/company/corporate-responsibility/reach>.

### Certifications

**Table 6:** Overview

Label	Effective in:	Comment
	France	Approved in accordance with the French drinking water regulation
	United Kingdom	Approved in accordance with the UK drinking water regulation

### Selection information

#### Minimum flow rate and maximum flow rate

A minimum flow rate must be ensured to protect the pump against overheating and to prevent gas pockets, cavitation, etc.

<sup>2)</sup> Blank

**Table 7:** Minimum flow rate and maximum flow rate Q [m<sup>3</sup>/h] at a fluid temperature ≤ 20 °C

Size	Q			
	50 Hz		60 Hz	
	min.	max.	min.	max.
	[m <sup>3</sup> /h]	[m <sup>3</sup> /h]	[m <sup>3</sup> /h]	[m <sup>3</sup> /h]
2	0,2	3,3	0,2	4,0
4	0,4	6,5	0,5	7,8
6	0,6	9,0	0,8	10,8

Overview of product features / selection tables

**Shaft seal**

**Table 8:** Mechanical seal material – Comeo C

Code to EN 12756	Description	Material	Code	Comment
B	Primary ring	Carbon graphite	Ca	Resin-impregnated
V	Mating ring	Aluminium oxide	Ce	Ceramics
E	Elastomer	EPDM	EPDM	Ethylene propylene rubber <sup>3)</sup>
F	Spring	Chrome nickel steel	CrNi steel	-
F	Other metal parts	Chrome nickel steel	CrNi steel	-

**Table 9:** Mechanical seal material – Comeo G

Code to EN 12756	Description	Material	Code	Comment
B	Primary ring	Carbon graphite	Ca	Resin-impregnated
V	Mating ring	Aluminium oxide	Ce	Ceramics
P	Elastomer	NBR	NBR	Nitrile butadiene rubber
F	Spring	Chrome nickel steel	CrNi steel	-
F	Other metal parts	Chrome nickel steel	CrNi steel	-

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<sup>3</sup> To ACS / WRAS



**Technical data**
**Comeo C, 1~ 230 V, 50 Hz**
**Table 10: 50 Hz**

Size	n	P <sub>N</sub>	I <sub>A</sub> /I <sub>N</sub>	cos φ	U <sub>N</sub>	η	L <sub>p</sub>	Cable gland	Maximum frequency of starts	I <sub>N</sub>	Mat. No.	[kg]
					Tolerance					1~230 V		
	[rpm]	[kW]	[%]	[%]	[dB]	[h <sup>-1</sup> ]	[A]					
2/2	2750	0,37	3,70	0,92	+/-10	67,00	58,00	1 × M18 × 1,5	20	2,60	48229175	13,1
2/4	2750	0,37	3,70	0,92	+/-10	67,00	58,00	1 × M18 × 1,5	20	2,60	48229176	13,8
2/6	2760	0,55	3,90	0,92	+/-10	70,00	56,00	1 × M18 × 1,5	20	3,69	48229177	15,9
4/2	2750	0,37	3,70	0,92	+/-10	67,00	58,00	1 × M18 × 1,5	20	2,60	48229178	13,1
4/4	2760	0,55	3,90	0,92	+/-10	70,00	56,00	1 × M18 × 1,5	20	3,69	48229179	15,3
4/6	2790	1,10	4,30	0,95	+/-10	75,00	58,00	1 × M20 × 1,5	20	6,68	48229180	20
6/2	2750	0,37	3,70	0,92	+/-10	67,00	58,00	1 × M18 × 1,5	20	2,60	48239930	13,4
6/4	2790	1,10	4,30	0,95	+/-10	75,00	58,00	1 × M20 × 1,5	20	6,68	48239931	19,7
6/6	2800	1,50	4,80	0,95	+/-10	76,00	58,00	1 × M20 × 1,5	20	8,99	48239932	23,1

**Comeo C, 1~230 V, 60 Hz**
**Table 11: 60 Hz**

Size	n	P <sub>N</sub>	I <sub>A</sub> /I <sub>N</sub>	cos φ	U <sub>N</sub>	η	L <sub>p</sub>	Cable gland	Maximum frequency of starts	I <sub>N</sub>	Mat. No.	[kg]
					Tolerance					1~230 V		
	[rpm]	[kW]	[%]	[%]	[dB]	[h <sup>-1</sup> ]	[A]					
2/2	3450	0,37	4,50	0,95	+/-10	74,00	64,00	1 × M18 × 1,5	20	2,30	48239933	13,1
2/4	3420	0,55	3,80	0,96	+/-10	74,00	65,00	1 × M18 × 1,5	20	3,35	48239934	15,2
2/6	3420	0,75	4,30	0,97	+/-10	75,00	68,00	1 × M20 × 1,5	20	4,50	48239935	17,4
4/2	3420	0,55	3,80	0,96	+/-10	74,00	65,00	1 × M18 × 1,5	20	3,35	48239936	14,5
4/4	3400	1,10	4,80	0,96	+/-10	79,00	72,00	1 × M20 × 1,5	20	6,30	48239937	19,3
4/6	3420	1,50	4,70	0,95	+/-10	76,00	75,00	1 × M20 × 1,5	20	9,10	48239938	22,7
6/2	3420	0,75	4,30	0,97	+/-10	75,00	68,00	1 × M20 × 1,5	20	4,50	48239939	16,3
6/4	3420	1,50	4,70	0,95	+/-10	76,00	75,00	1 × M20 × 1,5	20	9,10	48239940	22,4
6/6	3420	2,20	4,50	0,95	+/-10	77,00	78,00	1 × M20 × 1,5	20	13,10	48239941	25,1

**Comeo C, 230/400 V, 50 Hz**
**Table 12: 50 Hz**

Size	n	P <sub>N</sub>	I <sub>A</sub> /I <sub>N</sub>	cos φ	U <sub>N</sub>	η	L <sub>p</sub>	Cable gland	Maximum frequency of starts	I <sub>N</sub>	Mat. No.	[kg]
					Tolerance					230/400 V		
	[rpm]	[kW]	[%]	[%]	[dB]	[h <sup>-1</sup> ]	[A]					
2/2	2750	0,37	5,50	0,78	+/-10	74,20	64,00	1 × M20 × 1,5	20	1,64/0,94	48019667	14,9
2/4	2750	0,37	5,50	0,78	+/-10	74,20	64,00	1 × M20 × 1,5	20	1,64/0,94	48019668	15,4
2/6	2790	0,55	5,20	0,75	+/-10	77,60	58,00	1 × M20 × 1,5	20	2,31/1,33	48019669	17,1
4/2	2750	0,37	5,50	0,78	+/-10	74,20	64,00	1 × M20 × 1,5	20	1,64/0,94	48020138	15
4/4	2790	0,55	5,20	0,75	+/-10	77,60	58,00	1 × M20 × 1,5	20	2,31/1,33	48019675	16,3
4/6	2855	1,10	7,00	0,80	+/-10	82,70	60,00	2 × M20 × 1,5	25	4,22/2,43	48256815	20
6/2	2750	0,37	5,50	0,78	+/-10	74,20	64,00	1 × M20 × 1,5	20	1,64/0,94	48019678	14,9
6/4	2855	1,10	7,00	0,80	+/-10	82,70	60,00	2 × M20 × 1,5	25	4,22/2,43	48256816	19,7
6/6	2900	1,50	7,70	0,88	+/-10	84,20	63,00	2 × M25 × 1,5	25	5,08/2,92	48256817	23,1

**Comeo C, 230/400 V, 60 Hz**
**Table 13: 60 Hz**

Size	n	P <sub>N</sub>	I <sub>A</sub> /I <sub>N</sub>	cos φ	U <sub>N</sub>	η	L <sub>p</sub>	Cable gland	Maximum frequency of starts	I <sub>N</sub>	Mat. No.	[kg]
	[rpm]	[kW]	Tolerance	[%]	230/400 V							
	[h <sup>-1</sup> ]	[A]										
2/2	3300	0,37	6,00	0,78	+20/-5	75,70	64,00	1 × M20 × 1,5	20	1,54/0,89	48019670	14,9
2/4	3345	0,55	4,40	0,75	+20/-5	77,60	58,00	1 × M20 × 1,5	20	2,29/1,32	48019671	16,2
2/6	3440	0,75	6,50	0,80	+20/-5	80,90	60,00	2 × M20 × 1,5	25	2,87/1,65	48256818	17,4
4/2	3345	0,55	4,40	0,75	+20/-5	77,60	58,00	1 × M20 × 1,5	20	2,29/1,32	48019676	15,7
4/4	3440	1,10	6,70	0,81	+20/-5	82,90	60,00	2 × M20 × 1,5	25	4,72/2,72	48256819	19,3
4/6	3500	1,50	6,70	0,89	+20/-5	84,4	66,00	2 × M25 × 1,5	25	5,01/2,88	48256820	22,7
6/2	3440	0,75	6,50	0,80	+20/-5	80,90	60,00	2 × M20 × 1,5	25	2,87/1,65	48256821	16,3
6/4	3500	1,50	6,70	0,89	+20/-5	84,4	66,00	2 × M25 × 1,5	25	5,01/2,88	48256822	22,4
6/6	3500	2,20	6,70	0,90	+20/-5	86,10	66,00	1 × M25 × 1,5	25	7,12/4,09	48256823	25,1

**Comeo G, 1~ 230 V, 50 Hz**
**Table 14: 50 Hz**

Size	n	P <sub>N</sub>	I <sub>A</sub> /I <sub>N</sub>	cos φ	U <sub>N</sub>	η	L <sub>p</sub>	Cable gland	Maximum frequency of starts	I <sub>N</sub>	Mat. No.	[kg]
	[rpm]	[kW]	Tolerance	[%]	1~230 V							
	[h <sup>-1</sup> ]	[A]										
2/2	2750	0,37	3,70	0,92	+/-10	67,00	58,00	1 × M18 × 1,5	20	2,60	48229157	13,1
2/4	2750	0,37	3,70	0,92	+/-10	67,00	58,00	1 × M18 × 1,5	20	2,60	48229158	13,8
2/6	2760	0,55	3,90	0,92	+/-10	70,00	56,00	1 × M18 × 1,5	20	3,69	48229159	15,9
4/2	2750	0,37	3,70	0,92	+/-10	67,00	58,00	1 × M18 × 1,5	20	2,60	48229160	13,1
4/4	2760	0,55	3,90	0,92	+/-10	70,00	56,00	1 × M18 × 1,5	20	3,69	48229161	15,3
4/6	2790	1,10	4,30	0,95	+/-10	75,00	58,00	1 × M20 × 1,5	20	6,68	48229162	20
6/2	2750	0,37	3,70	0,92	+/-10	67,00	58,00	1 × M18 × 1,5	20	2,60	48229163	13,4
6/4	2790	1,10	4,30	0,95	+/-10	75,00	58,00	1 × M20 × 1,5	20	6,68	48229164	19,7
6/6	2800	1,50	4,80	0,95	+/-10	76,00	58,00	1 × M20 × 1,5	20	8,99	48229165	23,1

**Comeo G, 1~230 V, 60 Hz**
**Table 15: 60 Hz**

Size	n	P <sub>N</sub>	I <sub>A</sub> /I <sub>N</sub>	cos φ	U <sub>N</sub>	η	L <sub>p</sub>	Cable gland	Maximum frequency of starts	I <sub>N</sub>	Mat. No.	[kg]
	[rpm]	[kW]	Tolerance	[%]	1~230 V							
	[h <sup>-1</sup> ]	[A]										
2/2	3450	0,37	4,50	0,95	+/-10	74,00	64,00	1 × M18 × 1,5	20	2,30	48229166	13,1
2/4	3420	0,55	3,80	0,96	+/-10	74,00	65,00	1 × M18 × 1,5	20	3,35	48229167	15,2
2/6	3420	0,75	4,30	0,97	+/-10	75,00	68,00	1 × M20 × 1,5	20	4,50	48229168	17,4
4/2	3420	0,55	3,80	0,96	+/-10	74,00	65,00	1 × M18 × 1,5	20	3,35	48229169	14,5
4/4	3400	1,10	4,80	0,96	+/-10	79,00	72,00	1 × M20 × 1,5	20	6,30	48229170	19,3
4/6	3420	1,50	4,70	0,95	+/-10	76,00	75,00	1 × M20 × 1,5	20	9,10	48229171	22,7
6/2	3420	0,75	4,30	0,97	+/-10	75,00	68,00	1 × M20 × 1,5	20	4,50	48229172	16,3
6/4	3420	1,50	4,70	0,95	+/-10	76,00	75,00	1 × M20 × 1,5	20	9,10	48229173	22,4
6/6	3420	2,20	4,50	0,95	+/-10	77,00	78,00	1 × M20 × 1,5	20	13,10	48229174	25,1

**Comeo G, 230/400 V, 50 Hz**
**Table 16: 50 Hz**

Size	n [rpm]	P <sub>N</sub> [kW]	I <sub>A</sub> /I <sub>N</sub>	cos φ	U <sub>N</sub>	η	L <sub>p</sub> [dB]	Cable gland	Maximum frequency of starts [h <sup>-1</sup> ]	I <sub>N</sub>	Mat. No.	[kg]
					Tolerance					230/400 V		
	[%]	[%]	[A]									
2/2	2750	0,37	5,50	0,78	+/-10	74,20	64,00	1 × M20 × 1,5	20	1,64/0,94	48019662	15,5
2/4	2750	0,37	5,50	0,78	+/-10	74,20	64,00	1 × M20 × 1,5	20	1,64/0,94	48019663	16
2/6	2790	0,55	5,20	0,75	+/-10	77,60	58,00	1 × M20 × 1,5	20	2,31/1,33	48019664	17,6
4/2	2750	0,37	5,50	0,78	+/-10	74,20	64,00	1 × M20 × 1,5	20	1,64/0,94	48019672	15,5
4/4	2790	0,55	5,20	0,75	+/-10	77,60	58,00	1 × M20 × 1,5	20	2,31/1,33	48019673	16,8
4/6	2855	1,10	7,00	0,80	+/-10	82,70	60,00	2 × M20 × 1,5	25	4,22/2,43	48256806	20
6/2	2750	0,37	5,50	0,78	+/-10	74,20	64,00	1 × M20 × 1,5	20	1,64/0,94	48019677	15,5
6/4	2855	1,10	7,00	0,80	+/-10	82,70	60,00	2 × M20 × 1,5	25	4,22/2,43	48256807	19,7
6/6	2900	1,50	7,70	0,88	+/-10	84,20	63,00	2 × M25 × 1,5	25	5,08/2,92	48256808	23,1

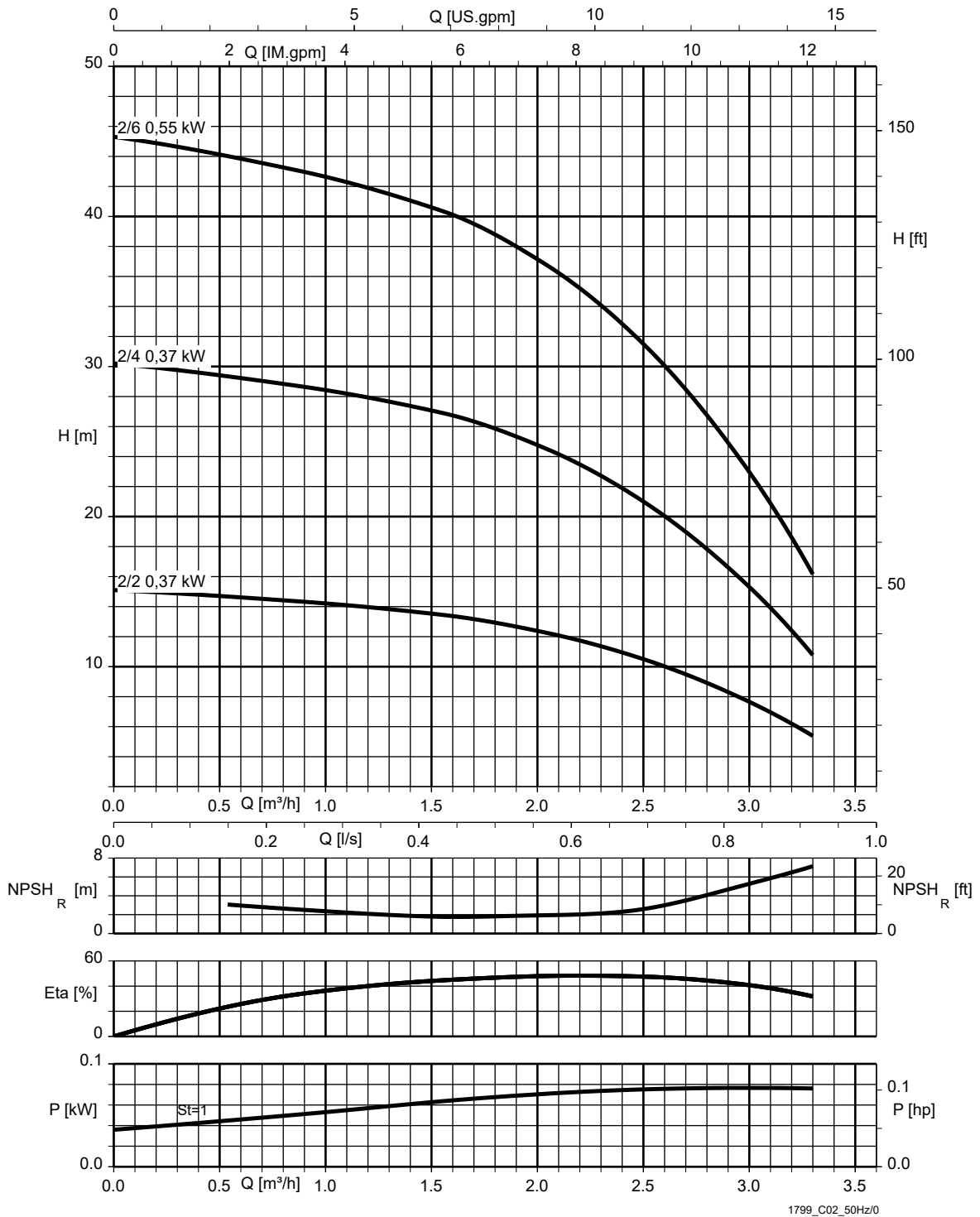
**Comeo G, 230/400 V, 60 Hz**
**Table 17: 60 Hz**

Size	n [rpm]	P <sub>N</sub> [kW]	I <sub>A</sub> /I <sub>N</sub>	cos φ	U <sub>N</sub>	η	L <sub>p</sub> [dB]	Cable gland	Maximum frequency of starts [h <sup>-1</sup> ]	I <sub>N</sub>	Mat. No.	[kg]
					Tolerance					230/400 V		
	[%]	[%]	[A]									
2/2	3300	0,37	6,00	0,78	+20/-5	75,70	67,00	1 × M20 × 1,5	20	1,54/0,89	48019665	15,5
2/4	3345	0,55	4,40	0,75	+20/-5	77,60	58,00	1 × M20 × 1,5	20	2,29/1,32	48019666	16,7
2/6	3440	0,75	6,50	0,80	+20/-5	80,90	60,00	2 × M20 × 1,5	25	2,87/1,65	48256809	17,4
4/2	3345	0,55	4,40	0,75	+20/-5	77,60	58,00	1 × M20 × 1,5	20	2,29/1,32	48019674	16,3
4/4	3440	1,10	6,70	0,81	+20/-5	82,90	60,00	2 × M20 × 1,5	25	4,72/2,72	48256810	19,3
4/6	3500	1,50	6,70	0,89	+20/-5	84,4	66,00	2 × M25 × 1,5	25	5,01/2,88	48256811	22,7
6/2	3440	0,75	6,50	0,80	+20/-5	80,90	60,00	2 × M20 × 1,5	25	2,87/1,65	48256812	16,3
6/4	3500	1,50	6,70	0,89	+20/-5	84,4	66,00	2 × M25 × 1,5	25	5,01/2,88	48256813	22,4
6/6	3500	2,20	6,70	0,90	+20/-5	86,10	66,00	1 × M25 × 1,5	25	7,12/4,09	48256814	25,1

Characteristic curves

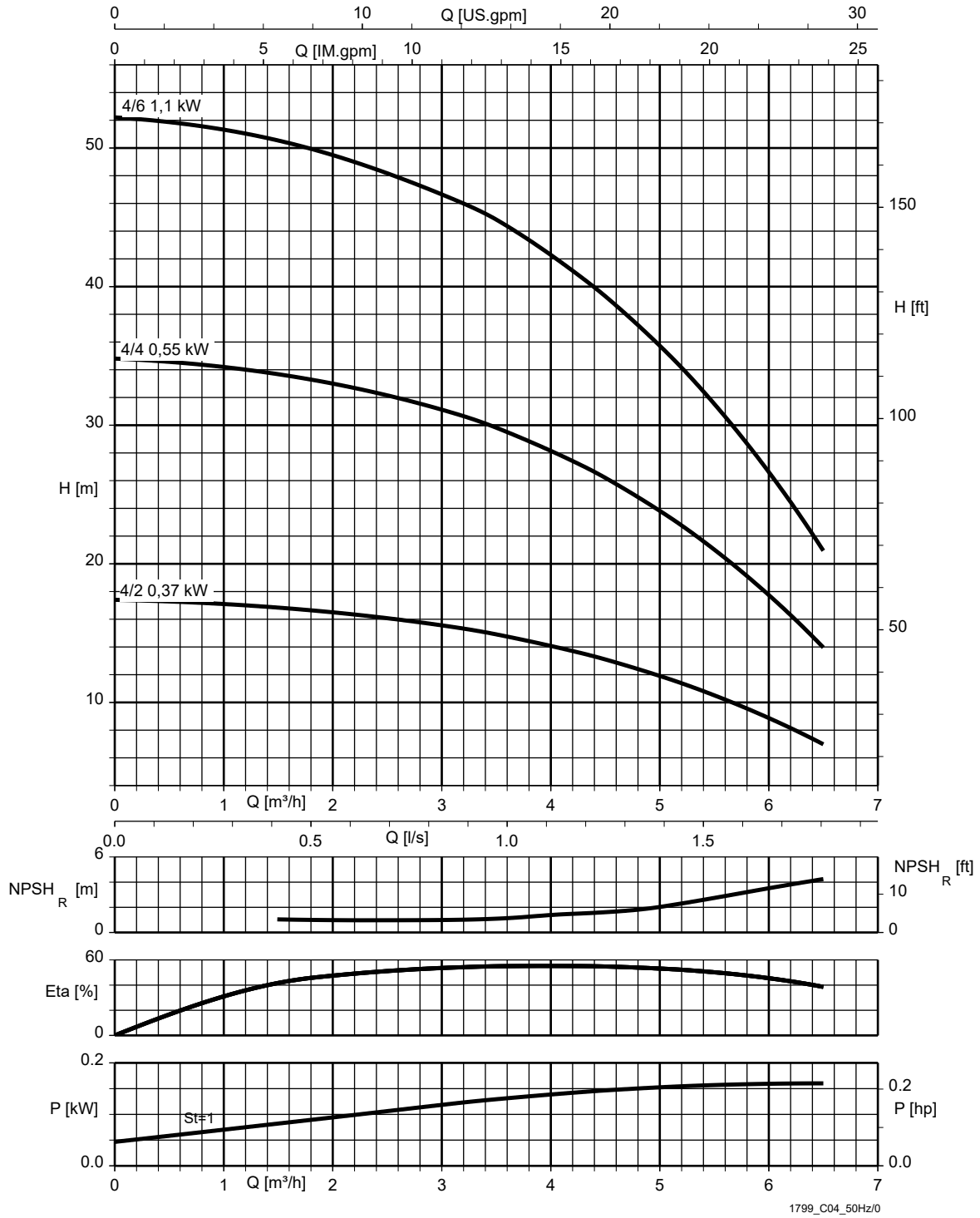
$n \approx 2900$  rpm

Comeo; 2;  $n \approx 2900$  rpm



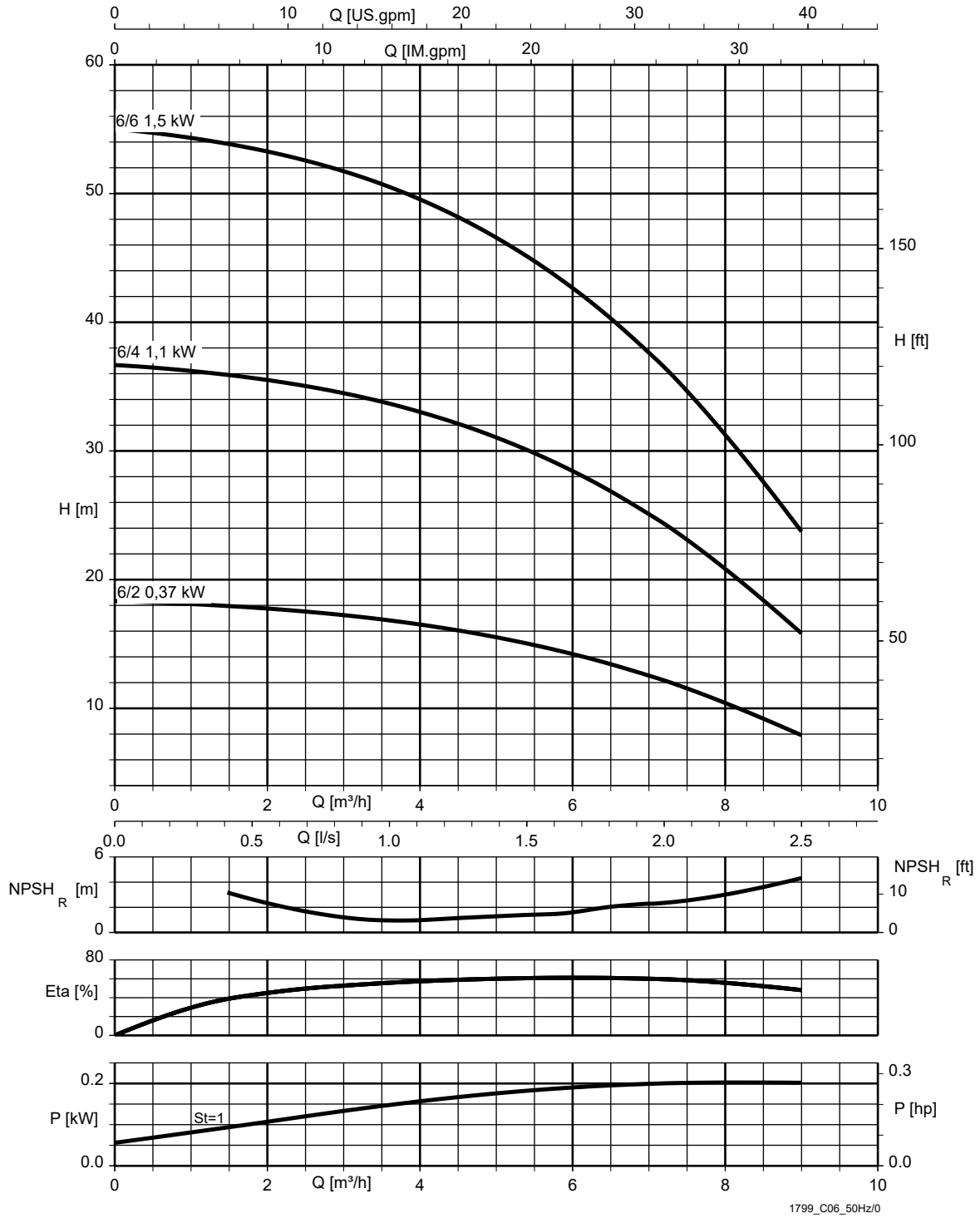
St = 1 | P per stage

Comeo; 4; n ≈ 2900 rpm



St = 1 | P per stage

Comeo; 6; n ≈ 2900 rpm

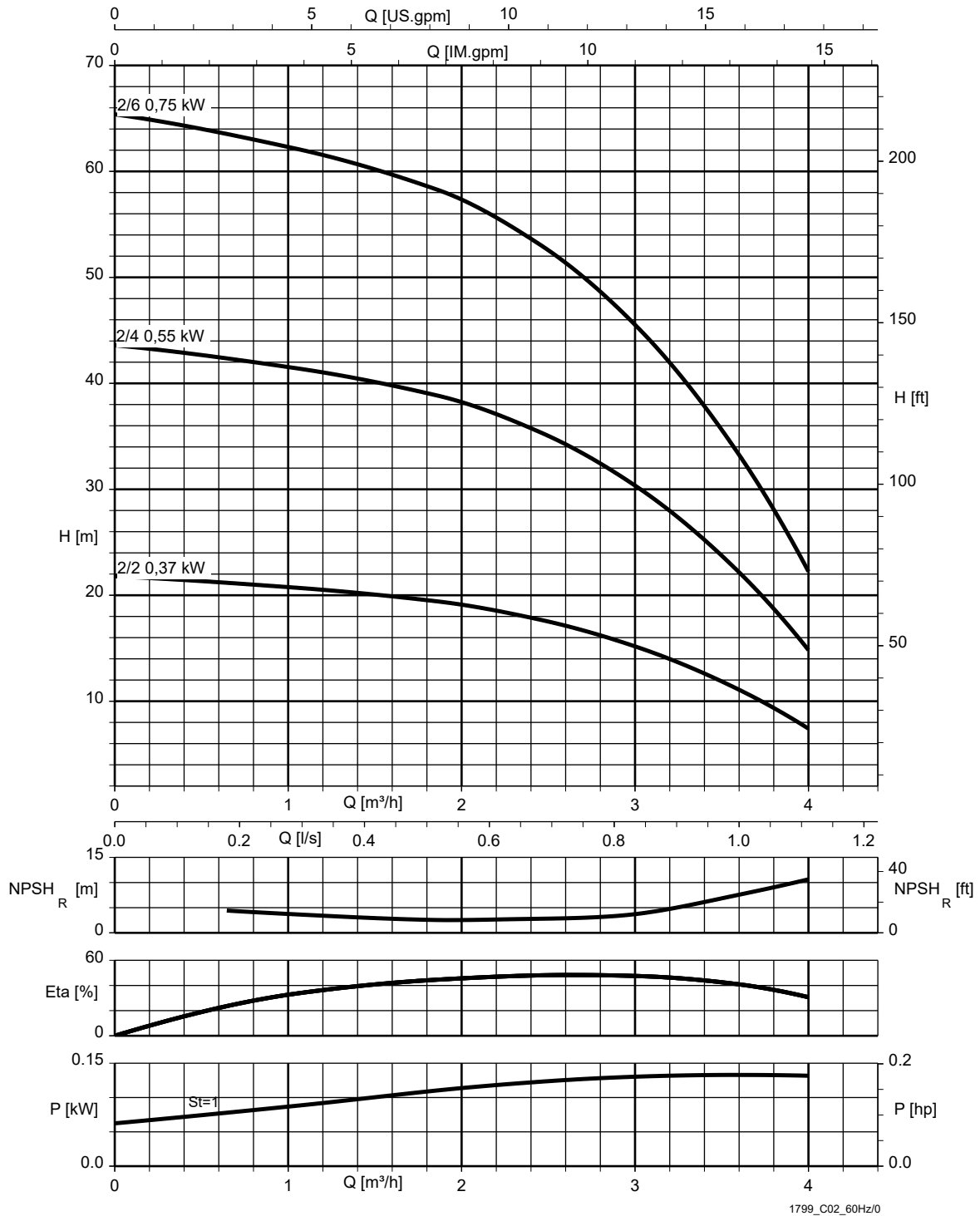


St = 1 | P per stage

1799.5/07-EN

$n \approx 3500$  rpm

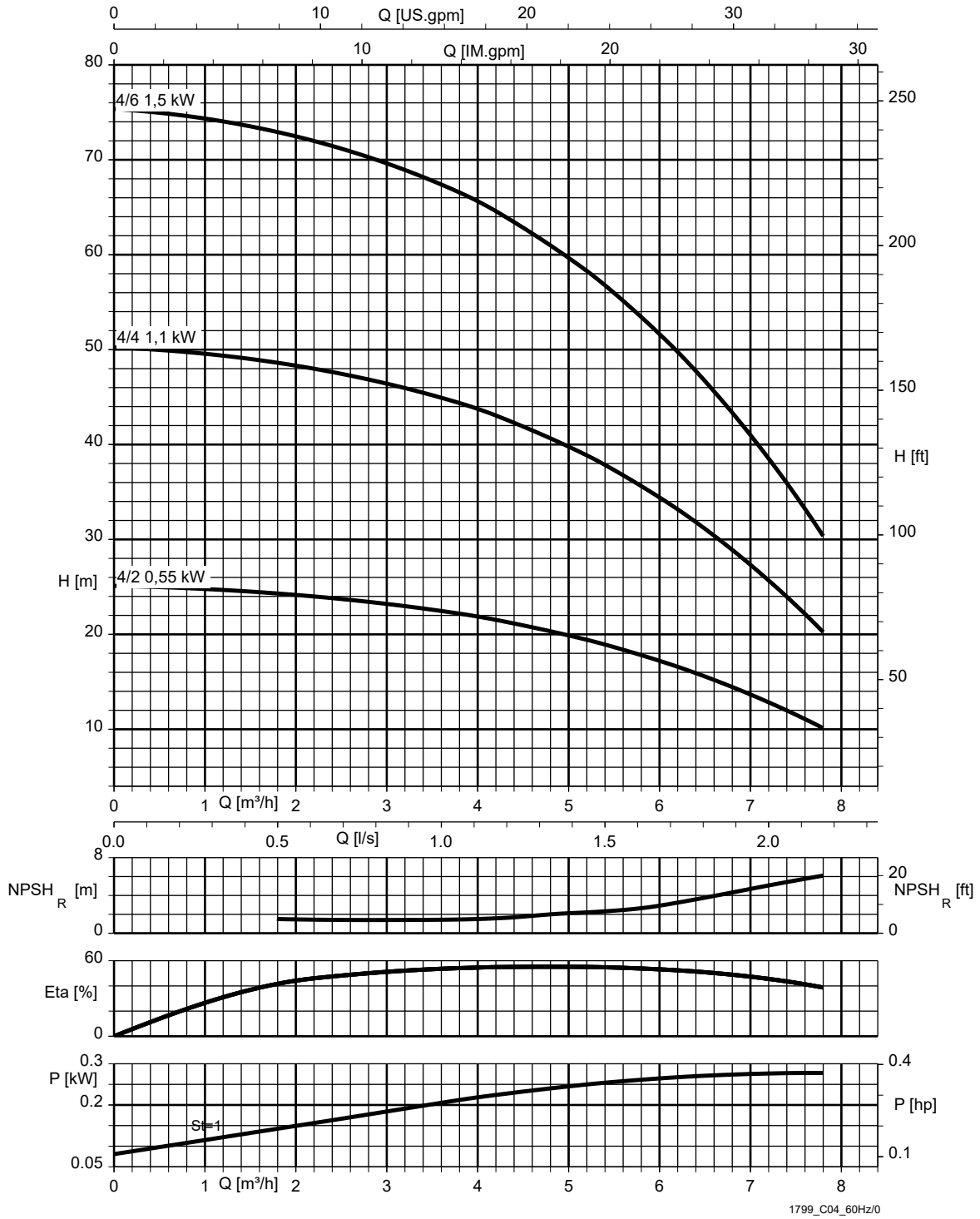
Comeo; 2;  $n \approx 3500$  rpm



St = 1 | P per stage

1799.5/07-EN

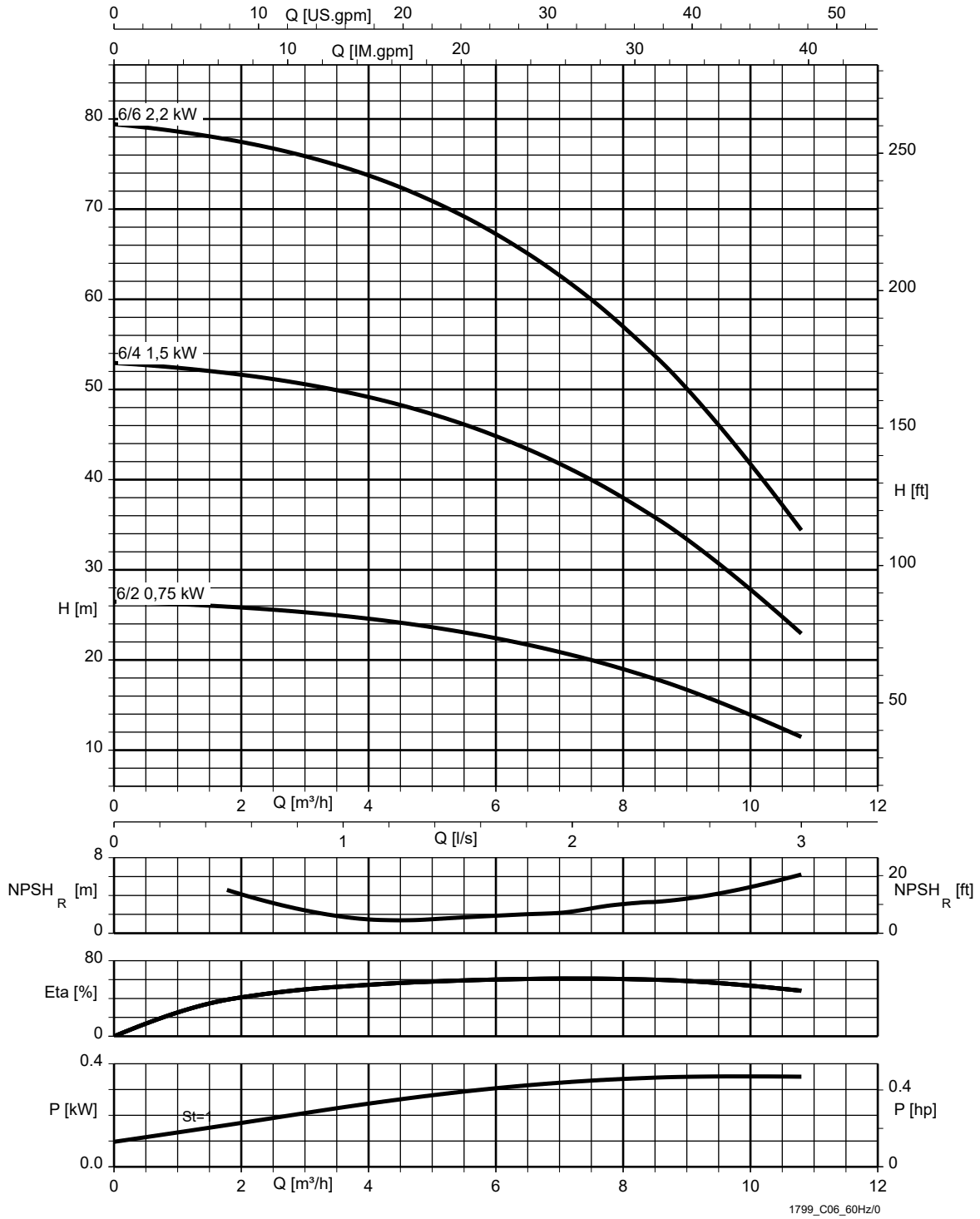
Comeo; 4; n ≈ 3500 rpm



St = 1 | P per stage



Comeo; 6; n ≈ 3500 rpm



St = 1 | P per stage

## Dimensions and connections

### Dimensions

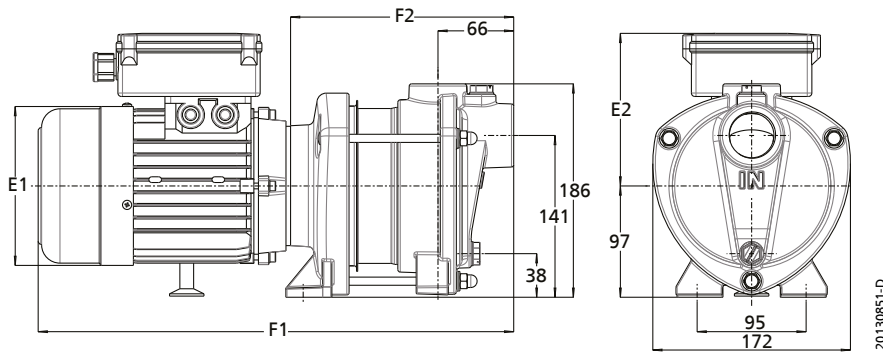


Fig. 1: Dimensions [mm]

Table 18: Dimensions, 1~230 V, 50 Hz

Size	P <sub>N</sub> [kW]	E1 [mm]	E2 [mm]	F1 [mm]	F2 [mm]
2/2	0,37	138,50	110,00	372,50	151,50
2/4	0,37	138,50	110,00	405,00	184,00
2/6	0,55	138,50	110,00	448,00	227,00
4/2	0,37	138,50	110,00	372,50	151,50
4/4	0,55	138,50	110,00	405,00	184,00
4/6	1,10	159,00	155,00	473,00	227,00
6/2	0,37	138,50	110,00	372,50	151,50
6/4	1,10	159,00	155,00	440,50	194,50
6/6	1,50	176,50	160,00	529,50	244,50

Table 19: Dimensions, 1~230 V, 60 Hz

Size	P <sub>N</sub> [kW]	E1 [mm]	E2 [mm]	F1 [mm]	F2 [mm]
2/2	0,37	138,50	110,00	372,50	151,50
2/4	0,55	138,50	110,00	405,00	184,00
2/6	0,75	159,00	155,00	473,00	227,00
4/2	0,55	138,50	110,00	372,50	151,50
4/4	1,10	159,00	155,00	430,00	184,00
4/6	1,50	176,50	160,00	512,00	227,00
6/2	0,75	159,00	155,00	397,50	151,50
6/4	1,50	176,50	160,00	479,50	194,50
6/6	2,20	176,50	160,00	529,50	244,50

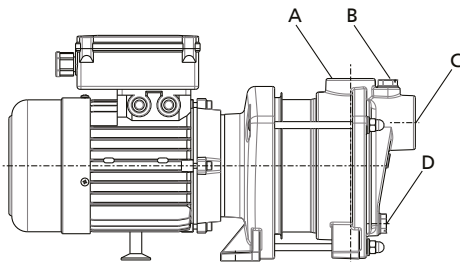
Table 20: Dimensions, 230/400 V, 50 Hz

Size	P <sub>N</sub> [kW]	E1 [mm]	E2 [mm]	F1 [mm]	F2 [mm]
2/2	0,37	138,00	109,00	372,50	151,50
2/4	0,37	138,00	109,00	405,00	184,00
2/6	0,55	138,00	109,00	448,00	227,00
4/2	0,37	138,00	109,00	372,50	151,50
4/4	0,55	138,00	109,00	405,00	184,00
4/6	1,10	157,00	133,00	487,00	227,00
6/2	0,37	138,00	109,00	372,50	151,50
6/4	1,10	157,00	133,00	454,50	194,50
6/6	1,50	180,00	145,00	497,50	244,50

**Table 21: Dimensions, 230/400 V, 60 Hz**

Size	P <sub>N</sub> [kW]	E1 [mm]	E2 [mm]	F1 [mm]	F2 [mm]
2/2	0,37	138,00	109,00	372,50	151,50
2/4	0,55	138,00	109,00	405,00	184,00
2/6	0,75	157,00	133,00	484,00	227,00
4/2	0,55	138,00	109,00	372,50	151,50
4/4	1,10	157,00	133,00	444,00	184,00
4/6	1,50	180,00	145,00	480,00	227,00
6/2	0,75	157,00	133,00	408,50	151,50
6/4	1,50	180,00	145,00	447,50	194,50
6/6	2,20	180,00	145,00	529,50	244,50

**Connections**



**Fig. 2: Connections**

A	Discharge nozzle (G 1), internal thread	C	Suction nozzle (G 1 1/4), internal thread
B	Screw filler plug (G 1/4)	D	Screw drain plug (G 1/4)

General assembly drawing with list of components

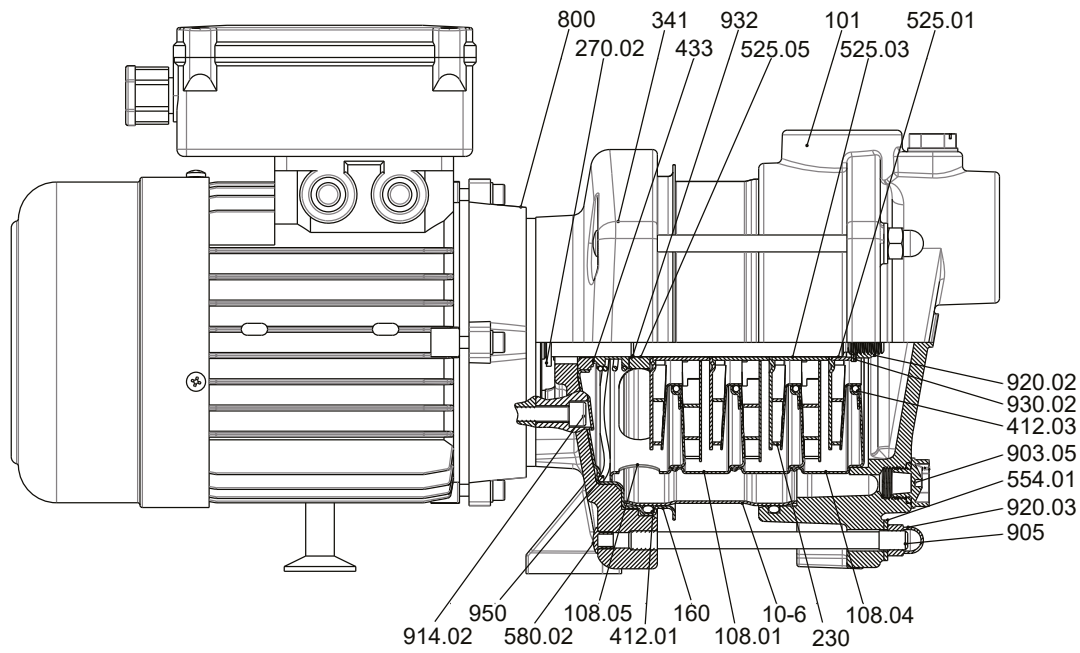


Fig. 3: General assembly drawing

Table 22: List of components

Part No.	Description	Part No.	Description
10-6	Pump shroud	554.01	Washer
101	Pump casing	580.02	Cap
108.01/.04/.05	Stage casing	800	Motor
160	Cover	903.05	Screw plug
230	Impeller	905	Tie bolt
270.02	Deflector	914.02	Hexagon socket head cap screw
341	Drive lantern	920.02/.03	Nut
412.01/.03	O-ring	930.02	Safety device
433	Mechanical seal	932	Circlip
525.01/.03/.05	Spacer sleeve	950	Spring





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