



ES SERIES 50-60 HZ

5" STAINLESS STEEL CLOSE-COUPLED
SUBMERSIBLE MULTISTAGE PUMPS



INDEX

5" Stainless steel close-coupled submersible multistage pumps	2
Family curves	3
Pump identification code	3
Table of Hydraulic performance	4
Materials/Fluids compatibility	4
TECHNICAL DATA AND PERFORMANCE CURVES AT 50HZ	
ES 3	6
ES 5	8
TECHNICAL DATA AND PERFORMANCE CURVES AT 60HZ	
ES 3	10
ES 5	12
PUMP SECTION AND LIST OF MAIN COMPONENTS	
	16

NOTE: Franklin Electric S.r.l. reserves the right to amend specification without prior notice

For the most up-to-date product information, visit franklinwater.eu.



5" STAINLESS STEEL CLOSE-COUPLED SUBMERSIBLE MULTISTAGE PUMPS

APPLICATION

- Water distribution / pressure boosting
- Rainwater recovery
- Irrigation / Gardening / Sprinklers
- Dewatering
- Wash down unit
- Other various installations

FEATURES

- Easy installation: the single phase version have internal capacitor and thermic motor-protection thus is not necessary to connect the pump to a control panel
- Compact close-coupled design, robust and corrosion resistant
- Double mechanical seal separated by an oil chamber* for maximum motor protection
*In compliance with FDA - Food, Drug Administration - and the annex to G.U. no. 104 of 20/04/73 for oils in contact with food stuffs
- Plug-in type power cable and level control (floater) for easy replacement
- Heavy duty over size motor shaft
- Stainless steel water proof capsule to protect the motor
- Motor cooling is guaranteed by the pumped liquid

PUMP SPECIFICATIONS

- Flow: up to 7.5 m³/h at 50Hz / 9 m³/h at 60Hz
- Head: up to 88 m at 50Hz / 80.5 m at 60Hz
- Discharge outlet 1"¼ Rp or NPT
- Maximum working pressure: 10 Bar
- Maximum immersion depth: 20 m
- Maximum allowable amount of sand: 50 gr/m³
- Maximum solids size: up to 2 mm
- Liquid temperature range: -5° C to + 40° C
- Continuous operation either in vertical or horizontal position
- 20 m of power cable type H07RN F is supplied with the standard version

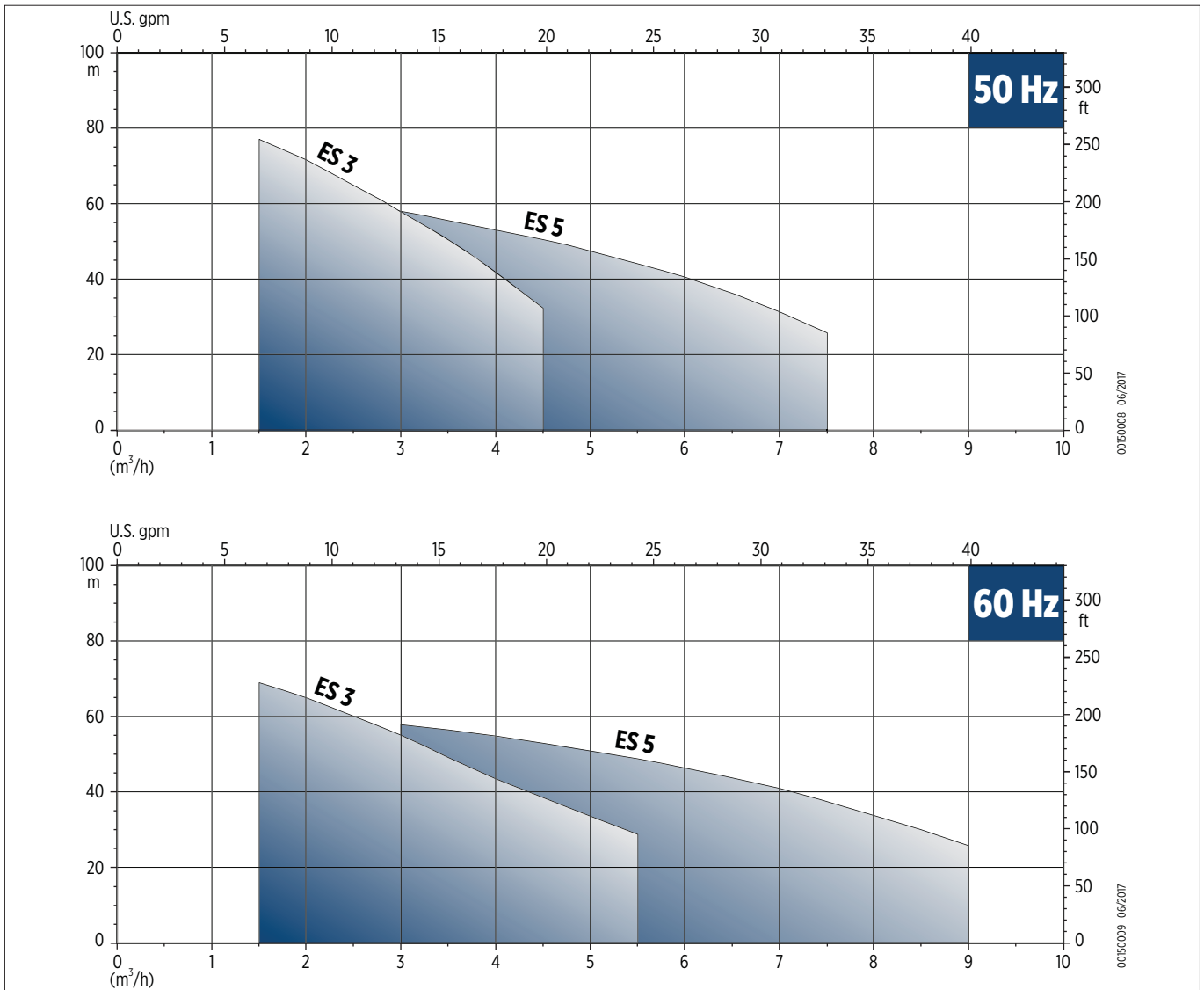
MOTOR SPECIFICATIONS

- Single phase or three phase motor
- Asynchronous, Class F insulation, IP 68 protection
- Standard voltage
 - Single-phase: 50 Hz motors 220-240 V ± 5 %; 60 Hz motors 220-230V ± 5 %. Thermal protection built into the motor up to 1,1 kW.
 - Three-phase: 50 Hz motors 220-240 V ± 5 % and 380-415 V ± 5 %; 60 Hz motors 220-230V ± 5 % or 380-400V ± 5%. Thermal protection to be provided into the starter panel by the Installer.
- Maximum number starts per hour: 60. Waiting time between two consecutive starts 1 minute.

AVAILABLE ON REQUEST

- Single-phase models equipped with level control
- 2" Adapter
- Different voltages and frequencies

FAMILY CURVES



PUMP IDENTIFICATION CODE

ES 3 / 7 T 6

- ES (60 Hz); empty (50 Hz)
- 3 (Three-phase vers.); empty (single-phase vers.)
- 7 Number of stages
- T Nominal flow rate in m³/h
- 6 Pump type

ES 3-5

TABLE OF HYDRAULIC PERFORMANCE AT 50HZ

Pump model	RATED POWER		Q = DELIVERY												
			l/min 0	25.0	33.3	42	50.0	58.3	67	75.0	83.3	92	100.0	116.7	125
	[kW]	[HP]	m ³ /h 0	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	7	7.5
			US GMP 0	6.6	8.8	11.0	13.2	15	17.6	19.8	22.0	24.2	26	30.8	33
H = TOTAL HEAD METERS COLUMN OF WATER [m]															
ES 3/3	0.55	0.75	34	30.5	28.5	26.5	23.5	21	17.5	14					
ES 3/4	0.55	0.75	45	40	37.5	34.5	31	27	23	18					
ES 3/5	0.75	1	56	49	46	42	38	33	27.5	21.5					
ES 3/6	0.75	1	66.5	58	54	49.5	44.5	38.5	32	25					
ES 3/7	0.9	1.2	77.5	68	63.5	58	52	45	37.5	29.5					
ES 3/8	1.1	1.5	88	77	71.5	65	58	50.5	42	32.5					
ES 5/3	0.55	0.75	34.5			31	30	29	28	26.5	25	23.5	22	17.5	15
ES 5/4	0.75	1	45.5			40.5	39	38	36.5	35	33	30.5	28	22	19.5
ES 5/5	0.9	1.2	57			50.5	49	47.5	45.5	43.5	41	38	35	27.5	23
ES 5/6	1.1	1.5	68			59.5	58	55.5	53	50.5	47.5	44	40.5	31.5	26

TABLE OF HYDRAULIC PERFORMANCE AT 60HZ

Pump model	RATED POWER		Q = DELIVERY													
			l/min 0	25.0	33.3	42	50.0	58.3	67	75.0	83.3	92	100.0	116.7	133.3	150
	[kW]	[HP]	m ³ /h 0	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	7	8	9
			US GMP 0	6.6	8.8	11.0	13.2	15	17.6	19.8	22.0	24.2	26	30.8	35.2	39.6
H = TOTAL HEAD METERS COLUMN OF WATER [m]																
ES 3/3	0.75	1	49		43	40.5	37.5	34.5	31	27.5	23	19				
ES 3/4	0.9	1.2	65		55.5	52.5	49	44.5	40	35	29.5	24				
ES 3/5	1.1	1.5	80.5		69	65	60	55	49	43	36.5	29				
ES 5/2	0.75	1	33.5				30	29.5	28.5	28	27	26	25	22	19	15
ES 5/3	0.9	1.2	50				44	43	42	40.5	39	37.5	36	31.5	27	21
ES 5/4	1.1	1.5	65.5				58	56.5	55	53	51	49	46.5	41	34	26

MATERIALS/FLUIDS COMPATIBILITY

Position	Parts Description	Type	Material	
			AISI	DIN / EN
10.00	Screws and flanges for pre-loading	Stainless steel	-	UNI-EN 12165-98
20.00	Outer case with discharge hear	Stainless steel	304	1.4301
20.01	Suction strainer	Stainless steel	304	1.4301
30.00	Motor housing and stator	Stainless steel	304	1.4301
30.01 / 30.03	Motor covers	Stainless steel	304	1.4301
30.05	Kit O-ring	NBR	-	-
30.06	Mechanical seals	Ceramic / Carbon / NBR	-	-
		Ceramic / Carbon / NBR	-	-
30.08	Pump-rotor shaft	Stainless steel	304	1.4301
40.00	Stage housing and diffuser	Stainless steel	304	1.4301
40.02	Floating neck ring assembly	PPS	-	-
50.00	Impeller	Stainless steel	304	1.4301

Technical data and Performance curves

50Hz

ES 3 50Hz

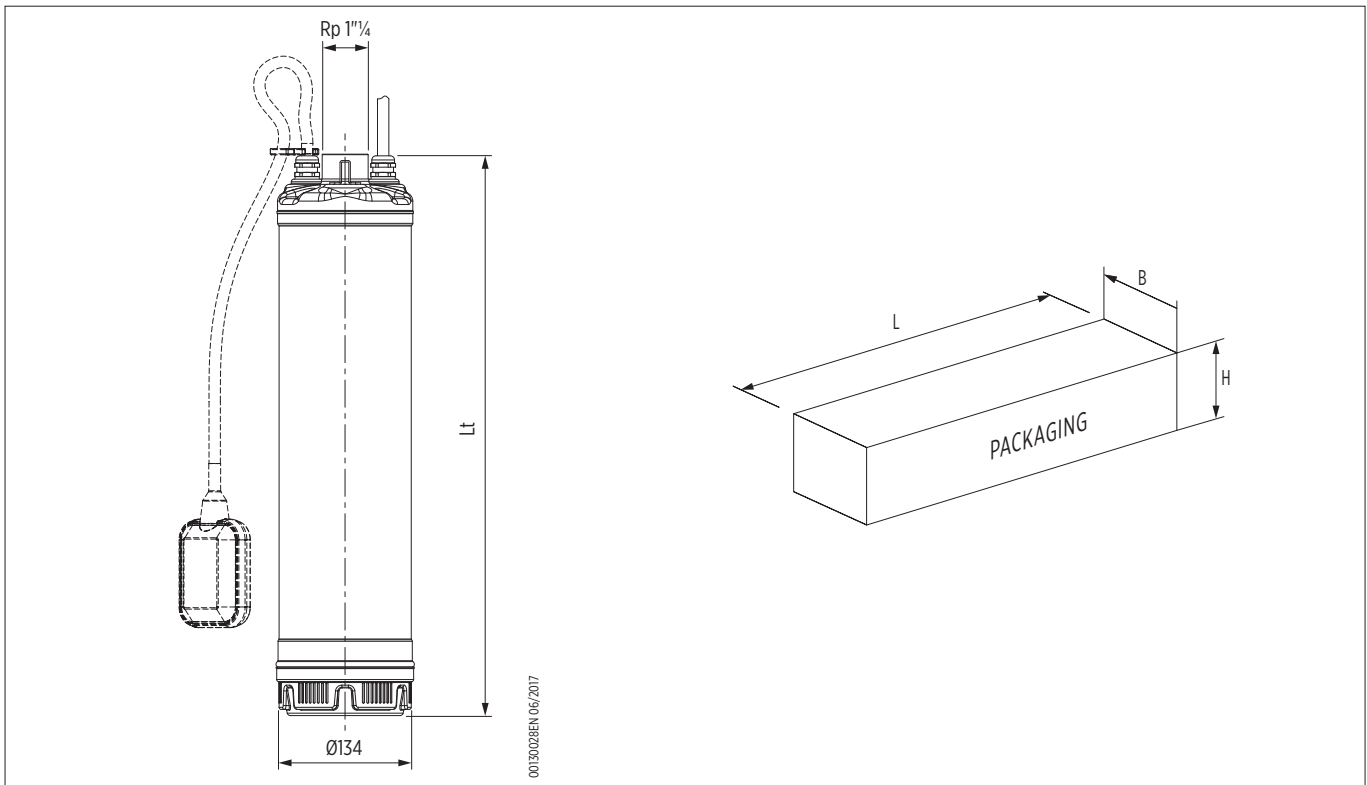
TECHNICAL DATA

Pump model		Number of stages	MOTOR POWER		INPUT POWER	Capacitor		RATED CURRENT	
Single-phase	Three-phase		[kW]	[HP]		μF	V	Single-phase	Three-phase
					[kW]				220-240 V 50 Hz
ES 3/3	ES 3/3T	3	0.55	0.75	0.63	16	450	3.6	1.8
ES 3/4	ES 3/4T	4	0.55	0.75	0.81	16	450	4.0	2.0
ES 3/5	ES 3/5T	5	0.75	1	0.99	20	450	4.7	2.1
ES 3/6	ES 3/6T	6	0.75	1	1.15	20	450	5.2	2.3
ES 3/7	ES 3/7T	7	0.9	1.2	1.34	30	450	6.7	2.5
ES 3/8	ES 3/8T	8	1.1	1.5	1.50	30	450	7.2	2.7

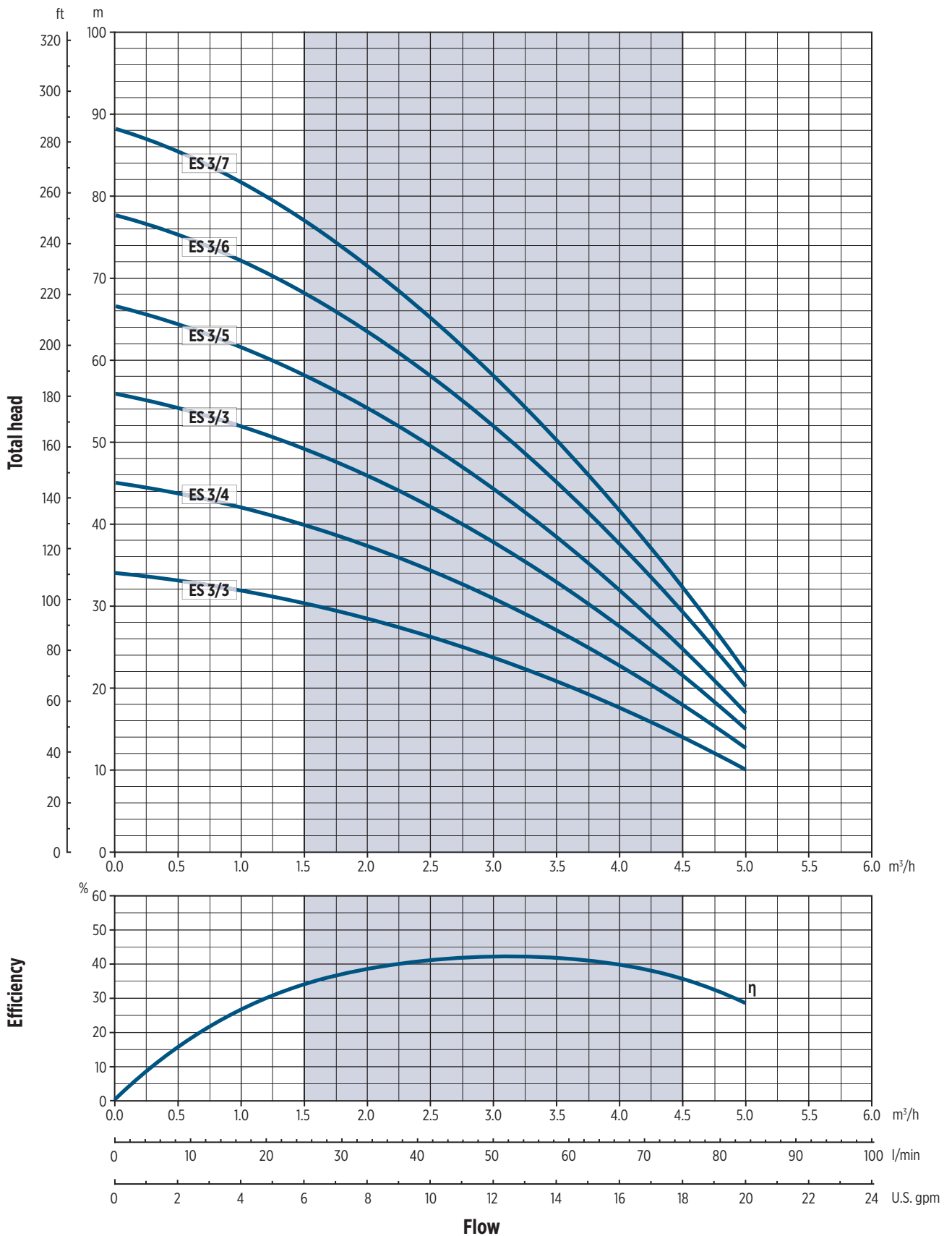
DIMENSIONS AND WEIGHTS

Pump			Packaging				Weight [Kg]	
Single-phase	Three-phase	Lt [mm]	L [mm]	B [mm]	H [mm]	Single-phase	Three-phase	
ES 3/3	ES 3/3T	446	720	230	175			13.2
ES 3/4	ES 3/4T	470	720	230	175	13.8	16.2	
ES 3/5	ES 3/5T	544	720	230	175	15.6	16.8	
ES 3/6	ES 3/6T	568	720	230	175	16.2	17.4	
ES 3/7	ES 3/7T	592	720	230	175	18.8	18	
ES 3/8	ES 3/8T	616	720	230	175	19.4	18.6	

DIMENSIONAL DRAWINGS



PERFORMANCE CURVES 50Hz



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ES 5 50Hz

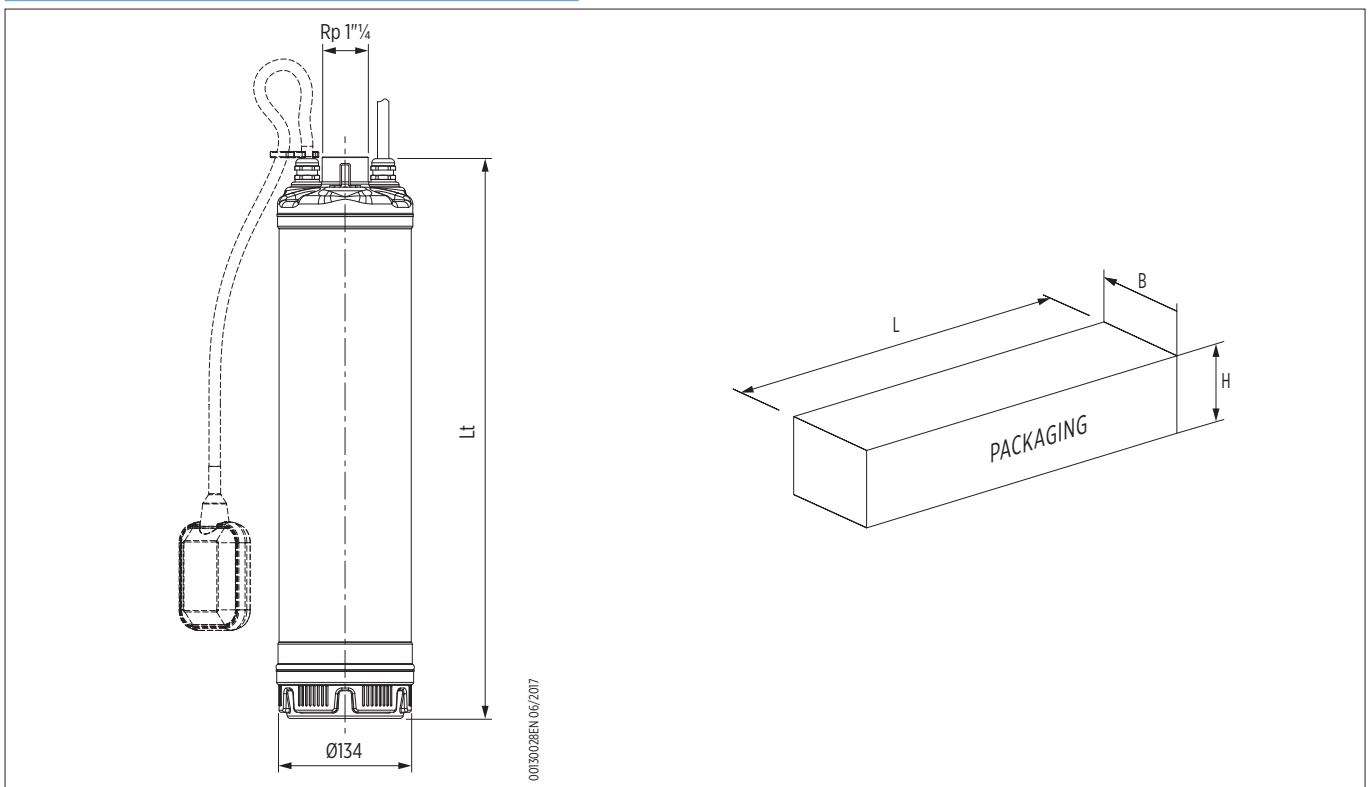
TECHNICAL DATA

Pump model		Number of stages	MOTOR POWER		INPUT POWER	Capacitor		RATED CURRENT	
Single-phase	Three-phase		[kW]	[HP]		μF	V	Single-phase	Three-phase
					220-240 V			380-415 V	
ES 5/3	ES 5/3T	3	0.55	0.75	0.84	16	450	4.1	2.0
ES 5/4	ES 5/4T	4	0.75	1	1.07	20	450	5.0	2.2
ES 5/5	ES 5/5T	5	0.9	1.2	1.34	30	450	6.6	2.5
ES 5/6	ES 5/6T	6	1.1	1.5	1.55	30	450	7.4	2.7

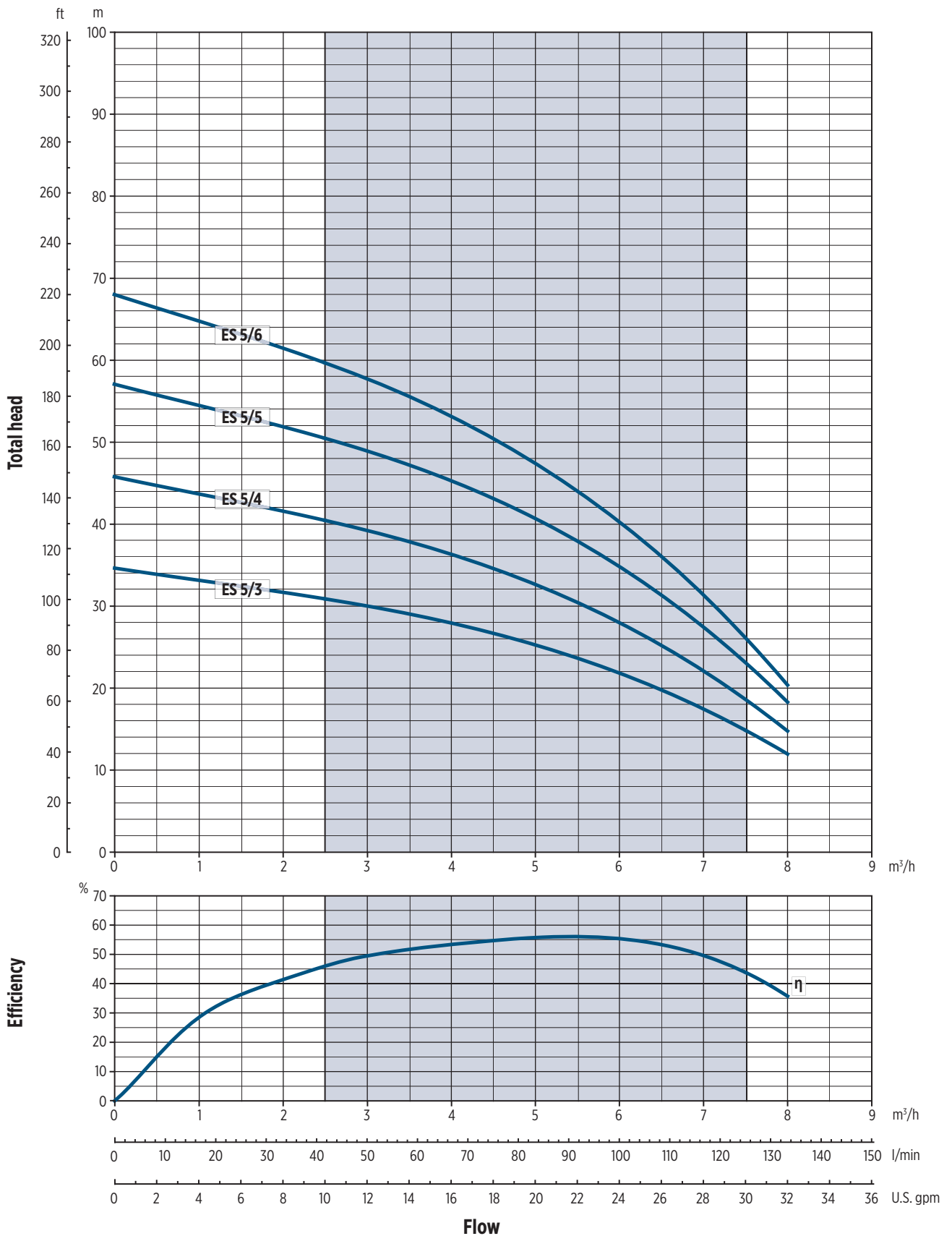
DIMENSIONS AND WEIGHTS

Pump			Packaging				
Single-phase	Three-phase	Lt [mm]	L [mm]	B [mm]	H [mm]	Weight [Kg]	
						Single-phase	Three-phase
ES 5/3	ES 5/3T	446	720	230	175	13.2	16.2
ES 5/4	ES 5/4T	470	720	230	175	14.8	16.2
ES 5/5	ES 5/5T	544	720	230	175	17.6	16.8
ES 5/6	ES 5/6T	568	720	230	175	18.2	17.4

DIMENSIONAL DRAWINGS



PERFORMANCE CURVES 50Hz



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Technical data and Performance curves

60Hz

ES 3 60Hz

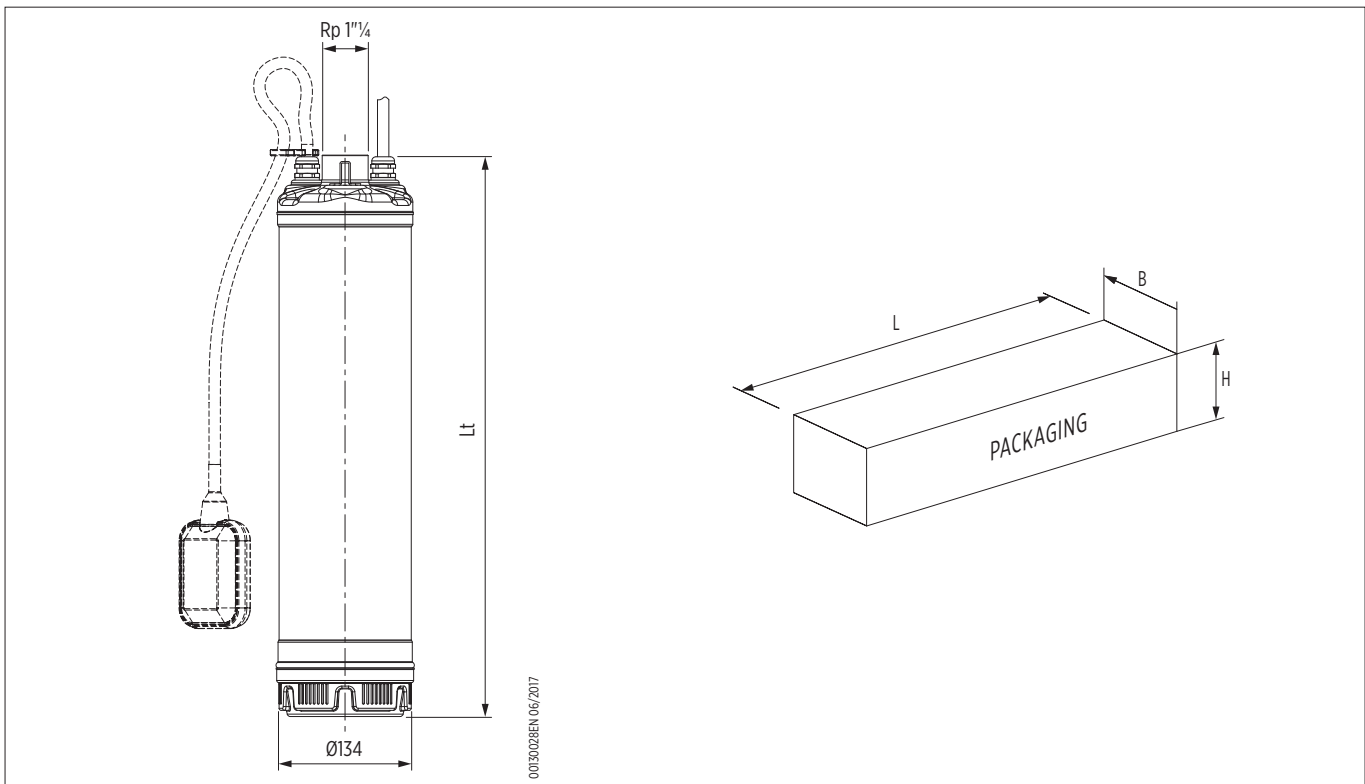
TECHNICAL DATA

Pump model		Number of stages	MOTOR POWER		INPUT POWER [kW]	Capacitor		RATED CURRENT		
Single-phase	Three-phase		[kW]	[HP]		μ F	V	Single-phase 220-230 V 60Hz	Three-phase 60Hz	
									220-230 V	380-400 V
ES 3/36	ES 3/3T6	3	0.75	1	1.05	20	450	5.2	4.2	2.4
ES 3/46	ES 3/4T6	4	0.9	1.2	1.30	20	450	6.2	4.5	2.6
ES 3/56	ES 3/5T6	5	1.1	1.5	1.61	25	450	8.0	5.2	3.0

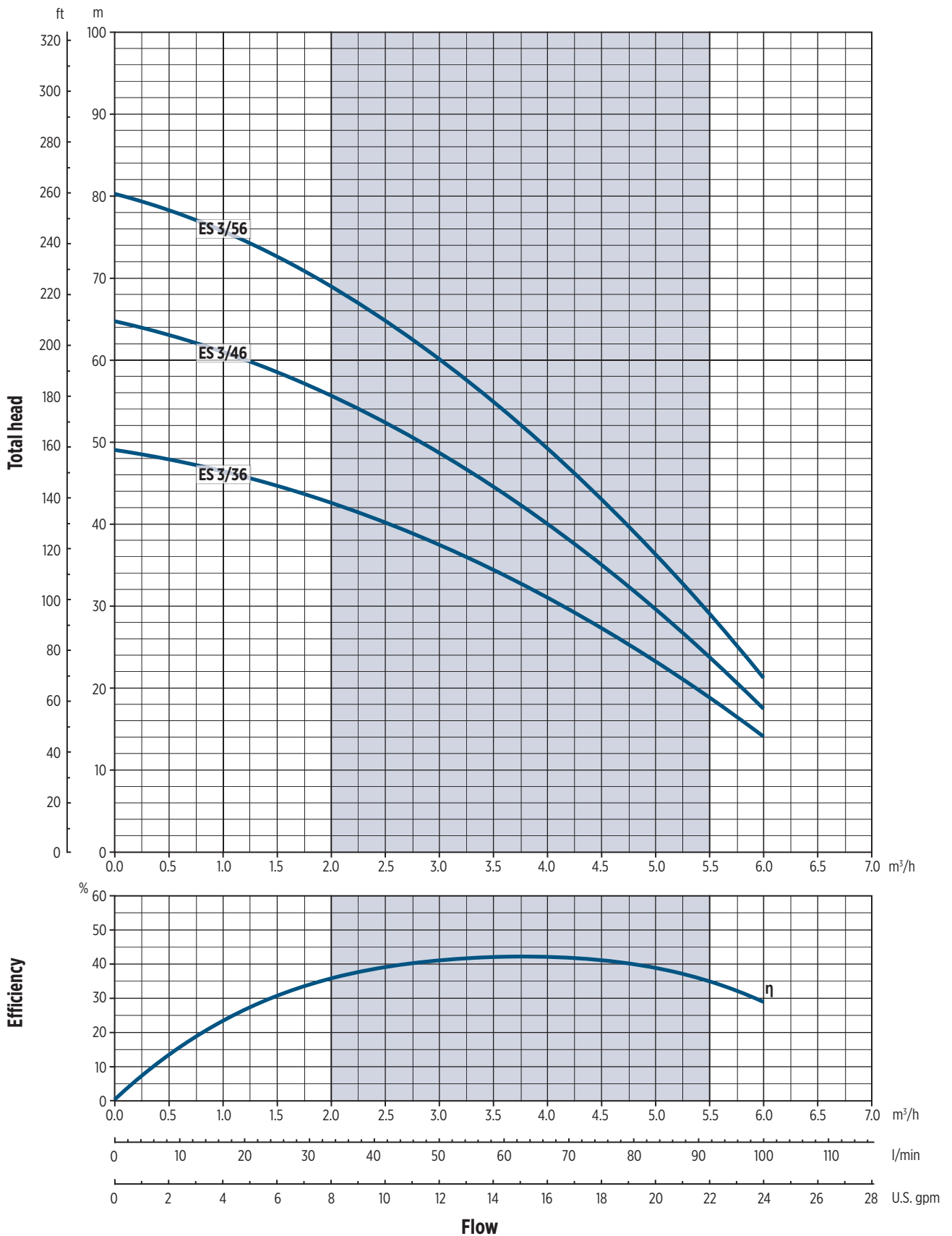
DIMENSIONS AND WEIGHTS

Pump			Packaging				
Single-phase	Three-phase	Lt [mm]	L [mm]	B [mm]	H [mm]	Weight [Kg]	
						Single-phase	Three-phase
ES 3/36	ES 3/3T6	496	720	230	175	15.8	15.6
ES 3/46	ES 3/4T6	520	720	230	175	16.4	16.2
ES 3/56	ES 3/5T6	544	720	230	175	17.6	16.8

DIMENSIONAL DRAWINGS



PERFORMANCE CURVES 60Hz



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ES 5 60Hz

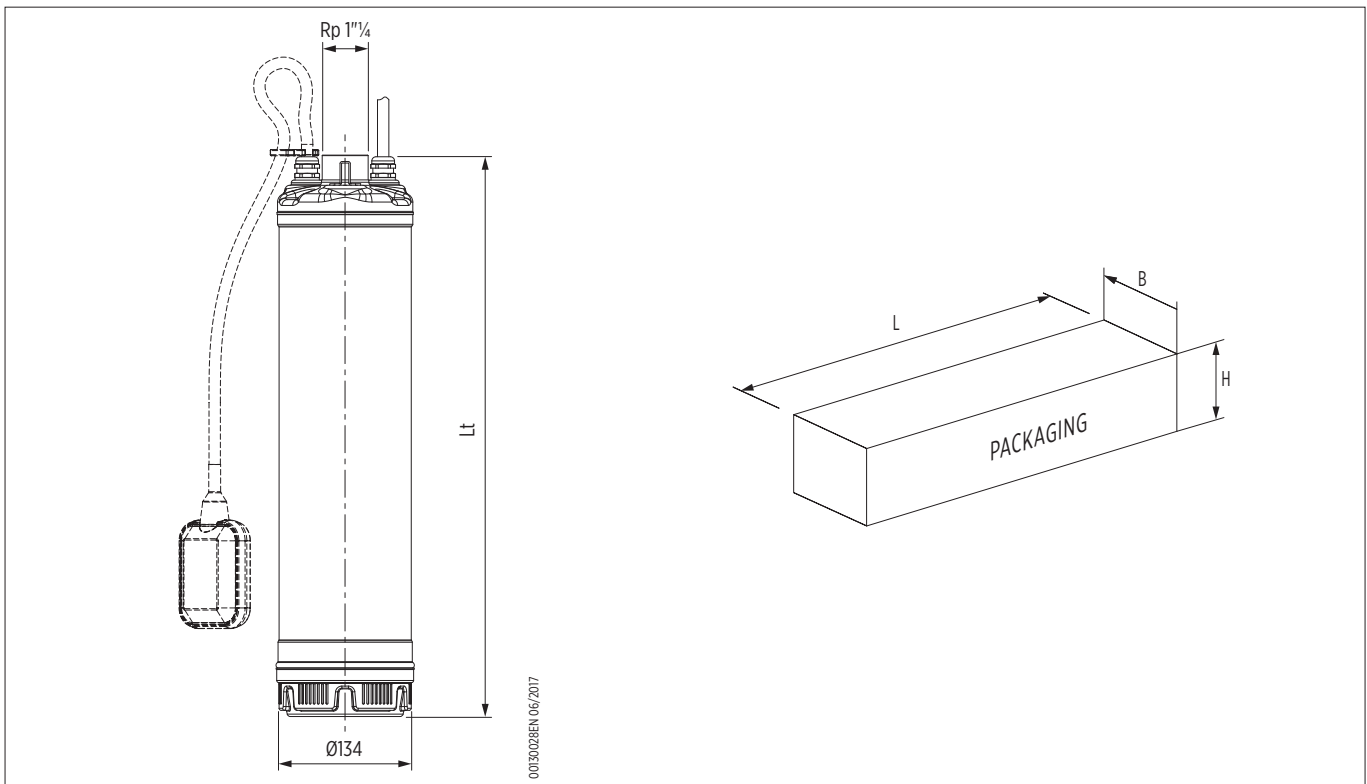
TECHNICAL DATA

Pump model		Number of stages	MOTOR POWER		INPUT POWER	Capacitor		RATED CURRENT		
Single-phase	Three-phase		[kW]	[HP]		[kW]	μ F	V	Single-phase 220-230 V 60Hz	Three-phase 60Hz
										220-230 V
ES 5/26	ES 5/2T6	2	0.75	1	1	20	450	5.0	4.0	2.3
ES 5/36	ES 5/3T6	3	0.9	1.2	1.35	20	450	6.4	4.7	2.7
ES 5/46	ES 5/4T6	4	1.1	1.5	1.78	25	450	8.6	5.5	3.2

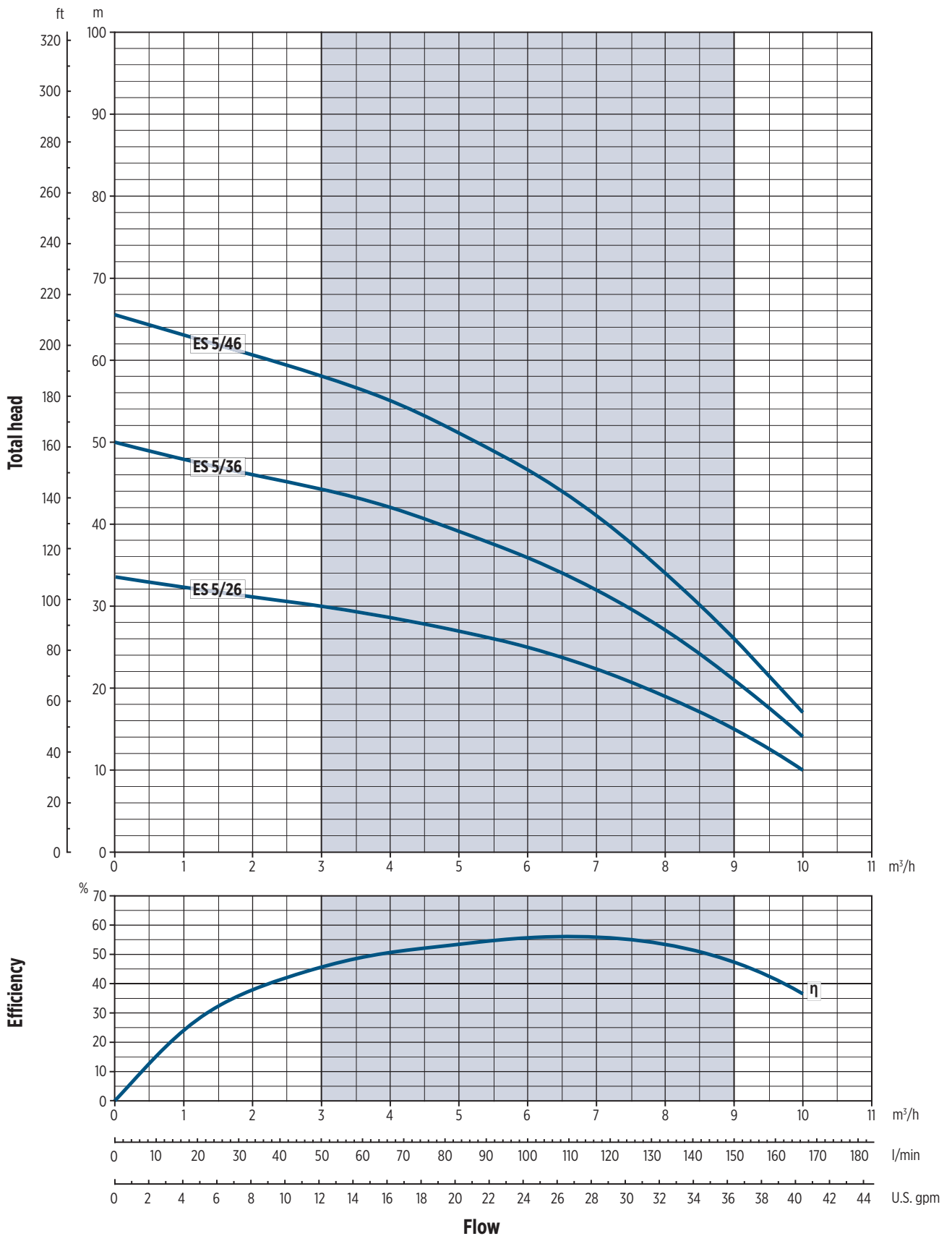
DIMENSIONS AND WEIGHTS

Pump			Packaging				
Single-phase	Three-phase	Lt [mm]	L [mm]	B [mm]	H [mm]	Weight [Kg]	
						Single-phase	Three-phase
ES 5/26	ES 5/2T6	470	720	230	175	14.5	14.5
ES 5/36	ES 5/3T6	494	720	230	175	15	15
ES 5/46	ES 5/4T6	518	720	230	175	17	16

DIMENSIONAL DRAWINGS



PERFORMANCE CURVES 60Hz



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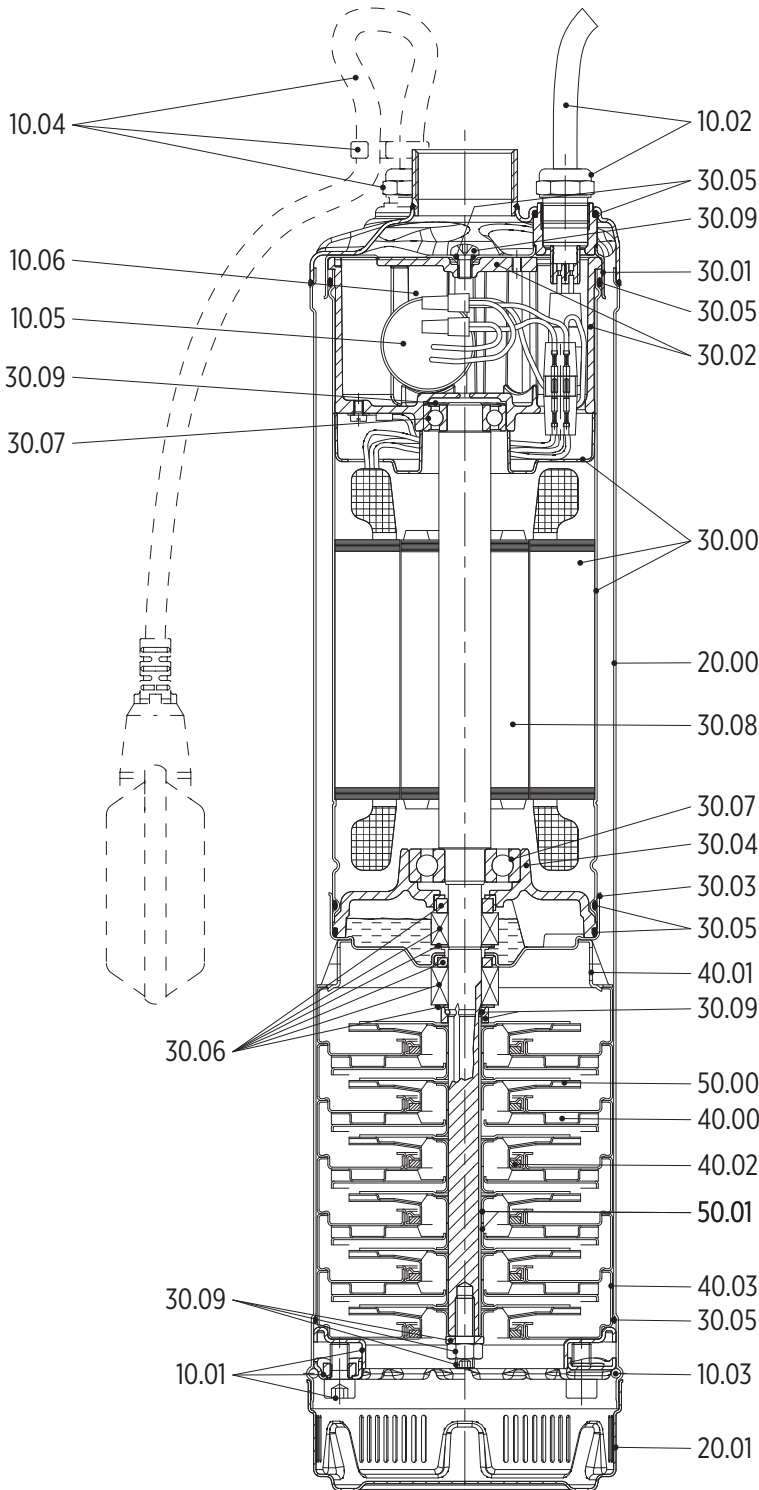


Pump section and List of main components



ES 3-5

PUMP SECTION AND LIST OF MAIN COMPONENTS



Pos.	Description
10.01	Screws and flanges for pre-loading
10.02	Power cable assembly
10.03	Seeger-ring
10.04	Level control assembly
10.05	Capacitor with cables and connectors
10.06	Clamp for capacitor
20.00	Outer case with suction head
20.01	Suction strainer
30.00	Motor housing and stator
30.01	Upper motor cover
30.02	Upper bearing housing with cover
30.03	Lower motor cover
30.04	Lower bearing cover
30.05	O-Ring
30.06	Mechanical seals
30.07	Ball bearings
30.08	Rotor and pump shaft
30.09	Screws, nut and washers
40.00	Stage housing and diffuser
40.01	Spacer
40.02	Floating neck ring assembly
40.03	Initial stage housing
50.00	Impeller
50.01	Impeller spacers

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CATALOG REVISION CHANGES NOTICE

Rev. No.	Changes	Page
02	Modified the description of pump	2, 3
	Modified and updating section "Materials/Fluids compatibility"	4
	Updating Technical and Dimensional data	6, 8, 12, 14



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00103780EN_REV.02_09/2017

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