


E-Tech



Franklin Electric

ES 5" SUBMERSIBLE PUMPS



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Stainless Steel Close-Coupled Multistage Submersible Pump

Full Stainless Steel Pump

APPLICATIONS

- Water distribution / pressure boosting
- Rainwater collection
- Irrigation / Gardening / Sprinklers
- Dewatering
- Wash down unit
- Fountains
- 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 rust resistant
- All the components in contact with liquid are made of stainless steel in order to achieve durability, superior efficiency and the highest performances
- 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

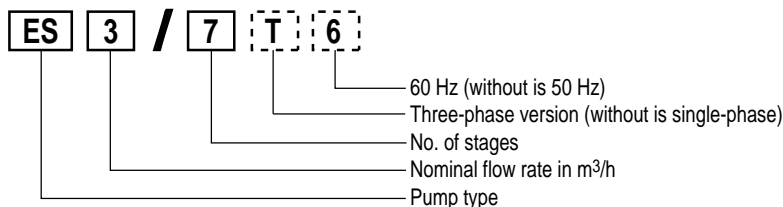
SPECIFICATIONS

- Capacities up to 7,5 m³/h at 50Hz / 48 GPM at 60Hz
- Heads up to 9 Bar at 50Hz / 260 feet at 60Hz
- Discharge outlet 1 1/4" 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
- Motor range: 0,55kW to 1,1kW
- Asynchronous, Class F insulation, IP 68 protection
- 20 m of power cable type H07RN F is supplied with the standard version
- Maximum number of starts per hour: 20 A

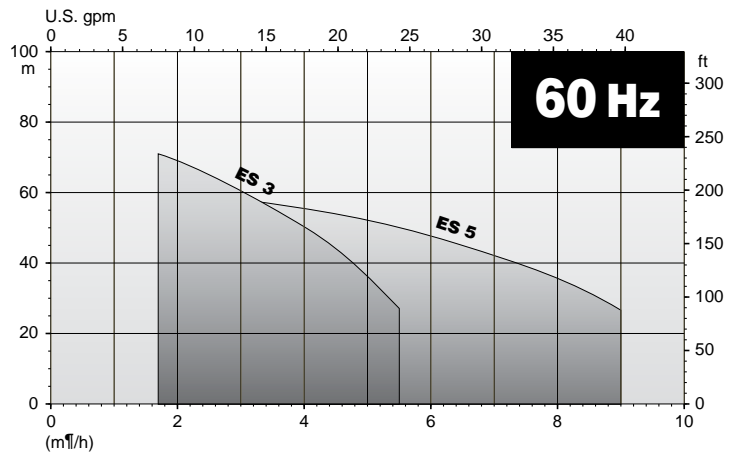
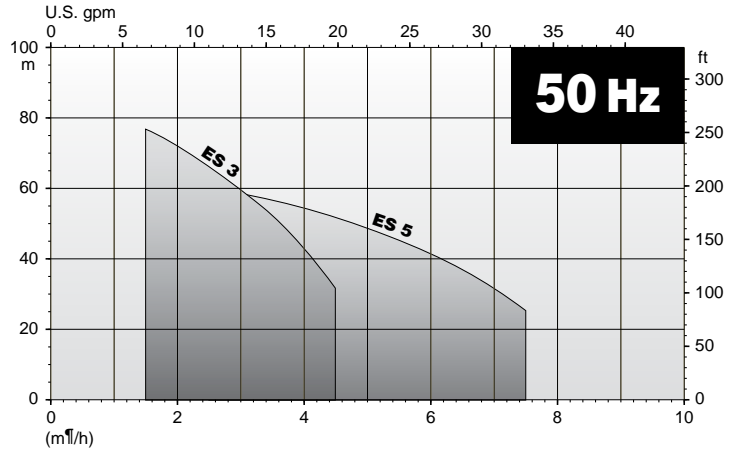
AVAILABLE ON REQUEST

- Single-phase models equipped with level control
- 2" Adapter
- Three phase 220-230V
- Various voltages and frequencies

PUMP IDENTIFICATION CODE



00117019 02/2010



00110054 05/2010

00110054 05/2010

00112006 06/2008

MATERIAL IN CONTACT WITH THE LIQUID				
Pos.	PARTS DESCRIPTIONS	MATERIAL		
		Type	AISI	DIN / EN
10.01	Screws and flanges for pre-loading	Stainless steel	304	1.4301
20.00	Outer case with discharge hear	Stainless steel	441/304	1.4509/1.4301
20.01	Suction strainer	Stainless steel	304	1.4301
30.00	Motor housing and stator	Stainless steel	304	1.4301
30.01/03	Motor covers	Stainless steel	304	1.4301
30.08	Pump-rotor shaft	Stainless steel	304	1.4301
40.00	Stage housing and diffuser	Stainless steel	304	1.4301
50.00	Impeller	Stainless steel	304	1.4301
30.05	O-Ring	NBR		
30.06	Mechanical seals	Ceramic/Carbon/NBR		

ES 3-5

TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	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
			m ³ /h 0	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	7
			US GPM 0	6,6	8,8	11,0	13,2	15	17,6	19,8	22,0	24,2	26	30,8
		H = TOTAL HEAD METERS COLUMN OF WATER												
ES3-3	0,55	0,75	34	30,5	28,5	26,5	23,5	21	17,5	14				
ES3-4	0,55	0,75	45	40	37,5	34,5	31	27	23	18				
ES3-5	0,75	1	56	49	46	42	38	33	27,5	21,5				
ES3-6	0,75	1	66,5	58	54	49,5	44,5	38,5	32	25				
ES3-7	0,9	1,2	77,5	68	63,5	58	52	45	37,5	29,5				
ES3-8	1,1	1,5	88	77	71,5	65	58	50,5	42	32,5				
ES5-3	0,55	0,75	34,5			31	30	29	28	26,5	25	23,5	22	17,5
ES5-4	0,75	1	45,5			40,5	39	38	36,5	35	33	30,5	28	22
ES5-5	0,9	1,2	57			50,5	49	47,5	45,5	43,5	41	38	35	27,5
ES5-6	1,1	1,5	68			59,5	58	55,5	53	50,5	47,5	44	40,5	31,5

ES Series Performance Curves and Tables

ES 3 50Hz

ES 5 50Hz

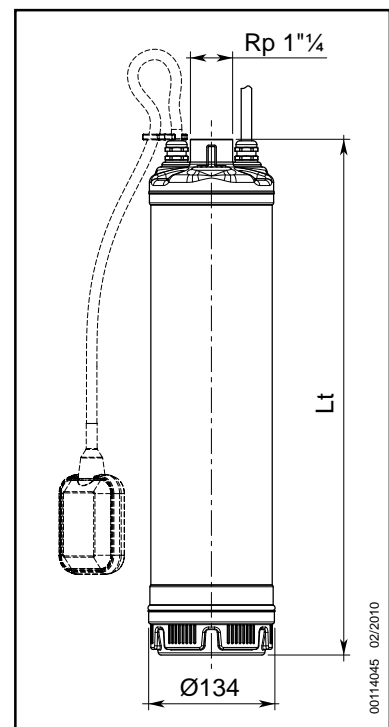
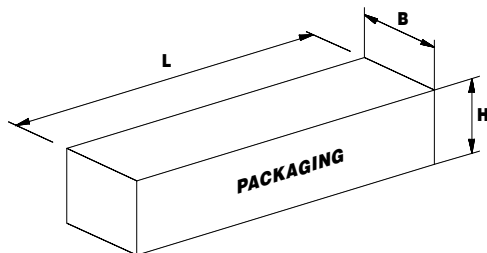
Technical data 50Hz

Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	INTERNAL CAPACITOR		RATED CURRENT	
Single-phase 220-240V 50Hz	Three-phase 380-415V 50Hz		kW	HP		μF	V	Single-phase 220-240V 50Hz	Three-phase 380-415V 50Hz
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

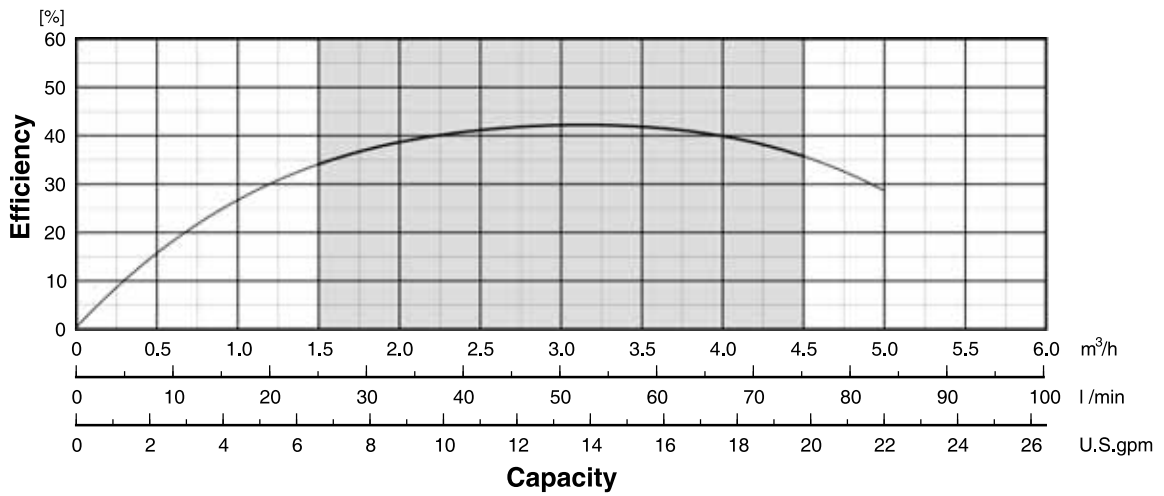
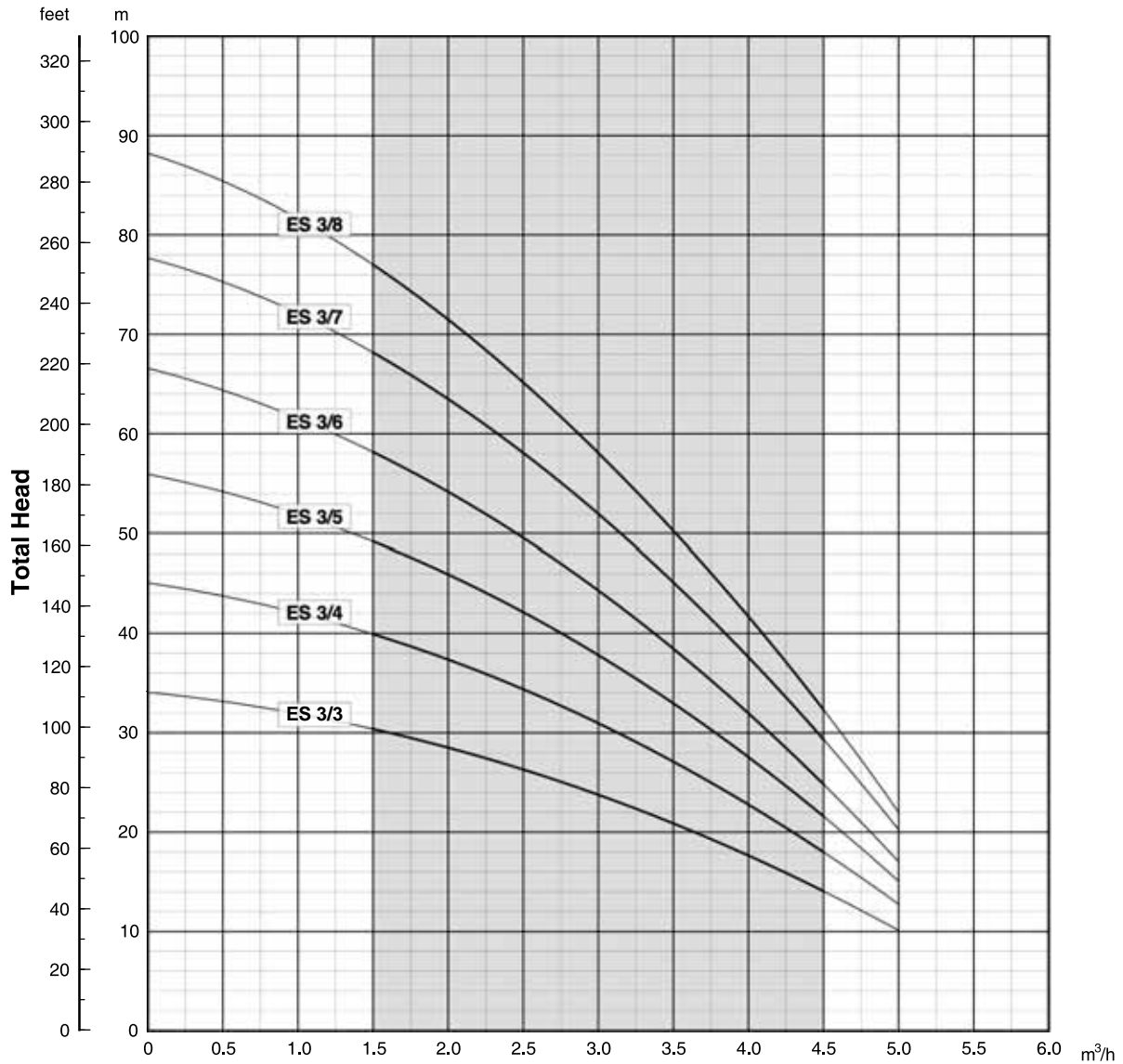
- Single-phase motors: 220-240 V ± 5 % / 50 Hz. Thermal protection built into the motor.
- Three-phase motors: 380-415 V ± 5 % / 50 Hz. Thermal protection to be provided into the starter panel by the installer.

Dimensions and weights

Pump model			PACKAGING				
Single-phase 220-240V 50Hz	Three-phase 380-415V 50Hz	Lt mm	L mm	B mm	H mm	Weight kg	
						Single-phase	Three-phase
ES 3/3	ES 3/3T	446 720	230	175	13,2	15,6	16,2
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



Performance curves 50Hz



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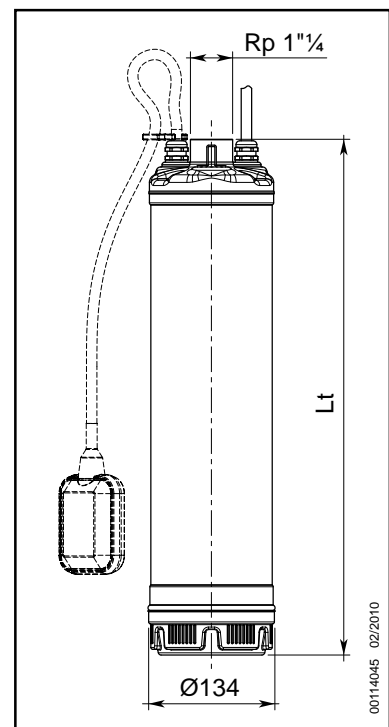
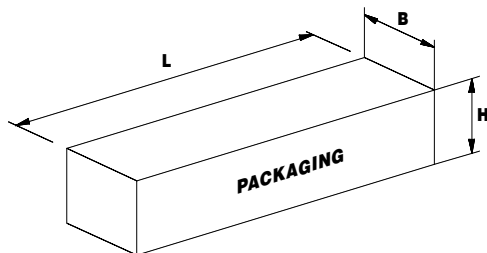
Technical data 50Hz

Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	INTERNAL CAPACITOR		RATED CURRENT	
Single-phase 220-240V 50Hz	Three-phase 380-415V 50Hz		kW	HP		μF	V	Single-phase 220-240V 50Hz	Three-phase 380-415V 50Hz
ES 5/3	ES 5/3T							3	0,55
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

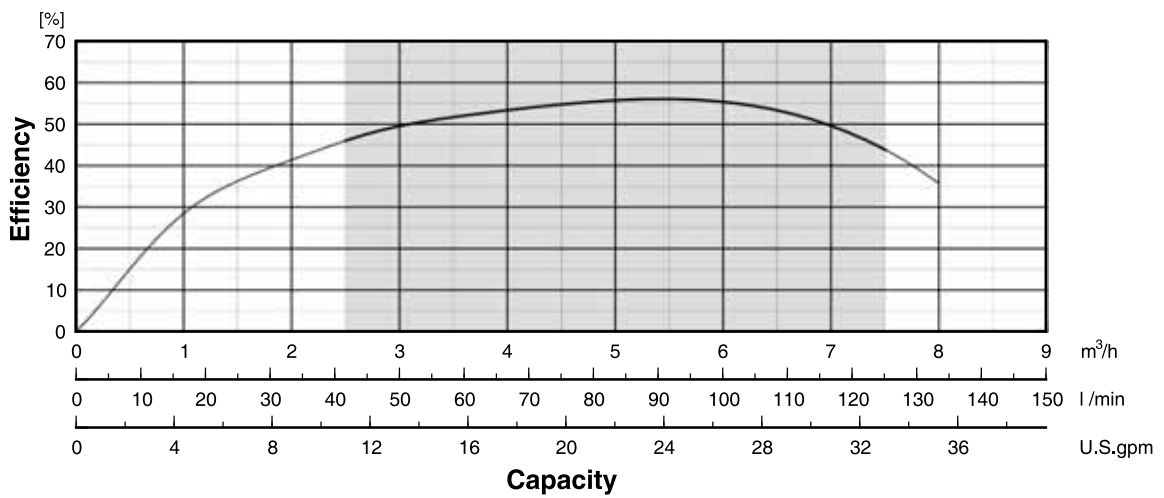
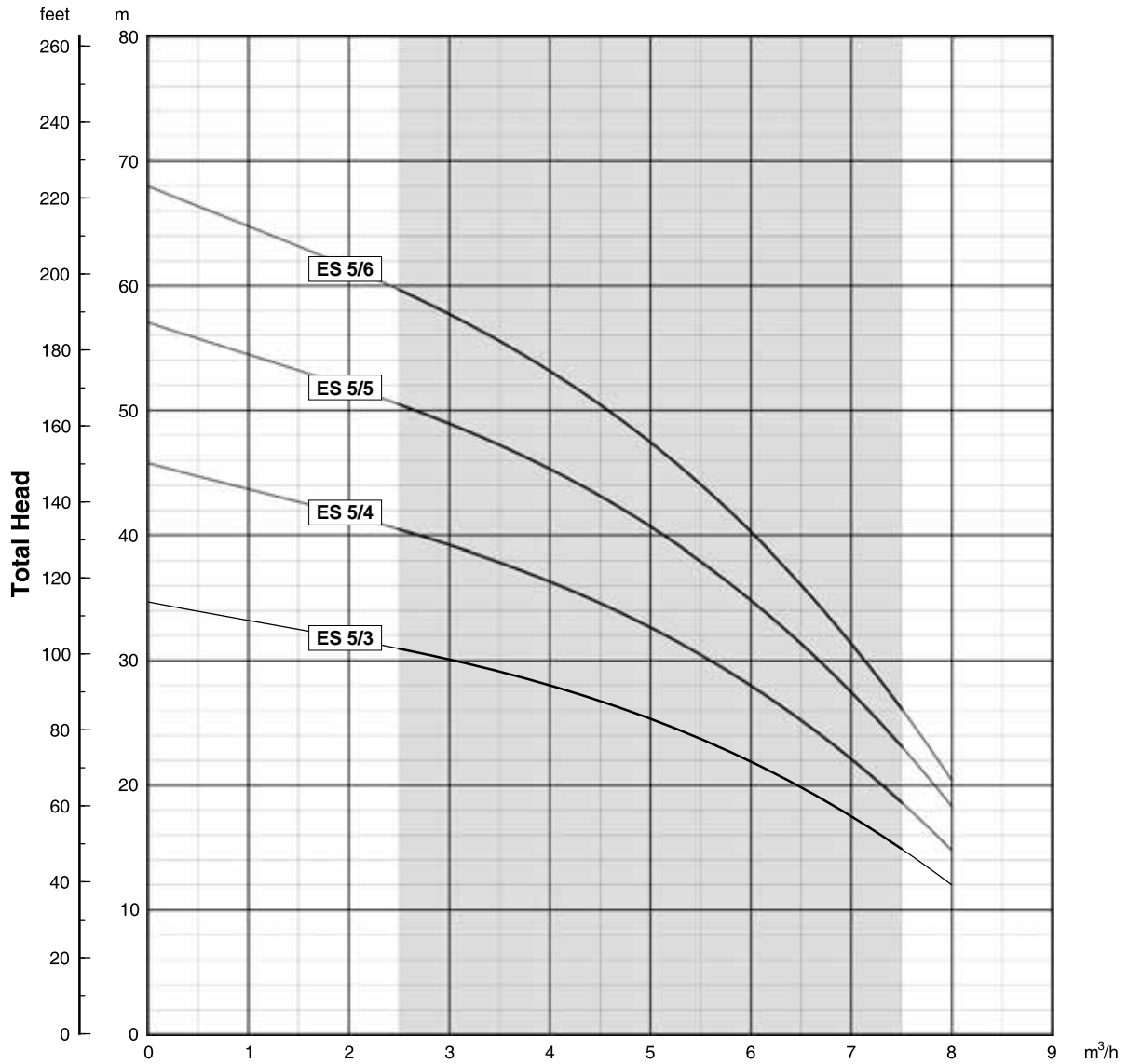
- Single-phase motors: 220-240 V ± 5 % / 50 Hz. Thermal protection built into the motor.
- Three-phase motors: 380-415 V ± 5 % / 50 Hz. Thermal protection to be provided into the starter panel by the installer.

Dimensions and weights

Pump model			PACKAGING				
Single-phase 220-240V 50Hz	Three-phase 380-415V 50Hz	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	15,6	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



Performance curves 50Hz



00110057 11/2013

ES 3-5

TABLE OF HYDRAULIC PERFORMANCES AT 60Hz

PUMP TYPE	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
			m ³ /h 0	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	7
			US GPM 0	6,6	8,8	11,0	13,2	15	17,6	19,8	22,0	24,2	26	30,8
			H = TOTAL HEAD METERS COLUMN OF WATER											
ES3-3	0,75	1	49		43	40,5	37,5	34,5	31	27	23			
ES3-4	0,9	1,2	65		55,5	52,5	49	45	40	35	29,5			
ES3-5	1,1	1,5	80,5		69	65	60	55	49	43	36,5			
ES5-4	0,75	1	45,5				39	37,5	36,5	34,5	33	30,5	28	22
ES5-5	0,9	1,2	57				49	47	45	43	41	38	35	27,5
ES5-6	1,1	1,5	68				57,5	55,5	53	50,5	47,5	44	40,5	31

ES Series Performance Curves and Tables

ES 3 60Hz

ES 5 60Hz

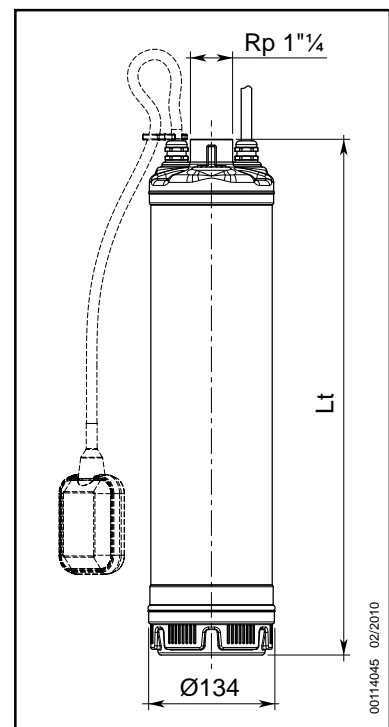
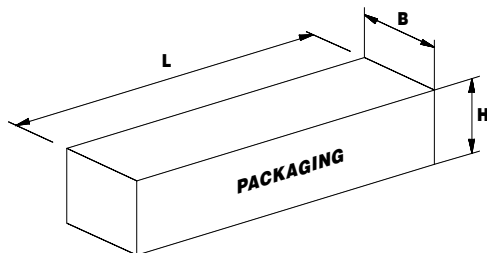
Technical data 60Hz

Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	INTERNAL CAPACITOR		RATED CURRENT		
Single-phase 220-230V 60Hz	Three-phase 220-230V or 380-400V 60Hz		kW	HP		μF	V	Single-phase		
								220-230V	220-230V	380-400V
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

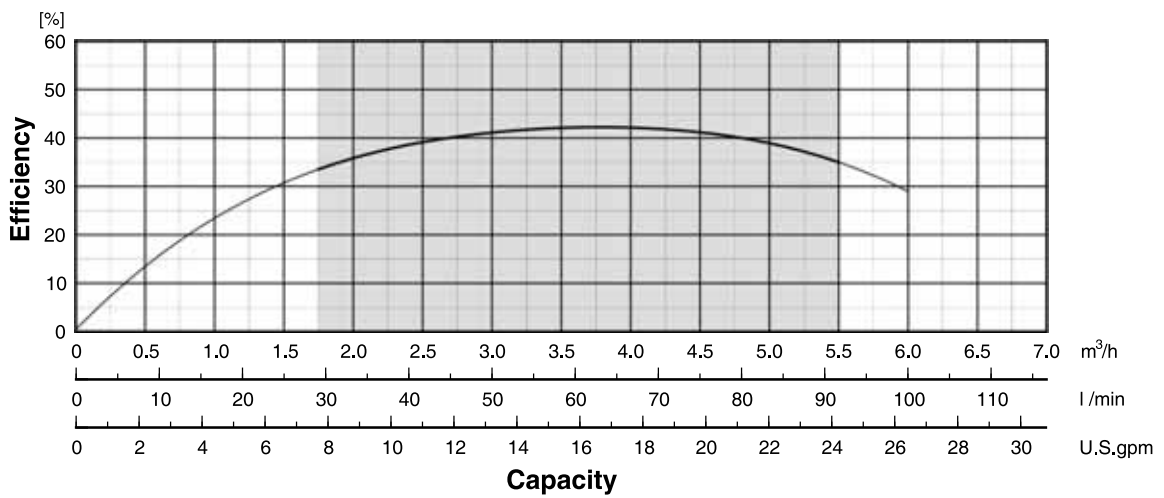
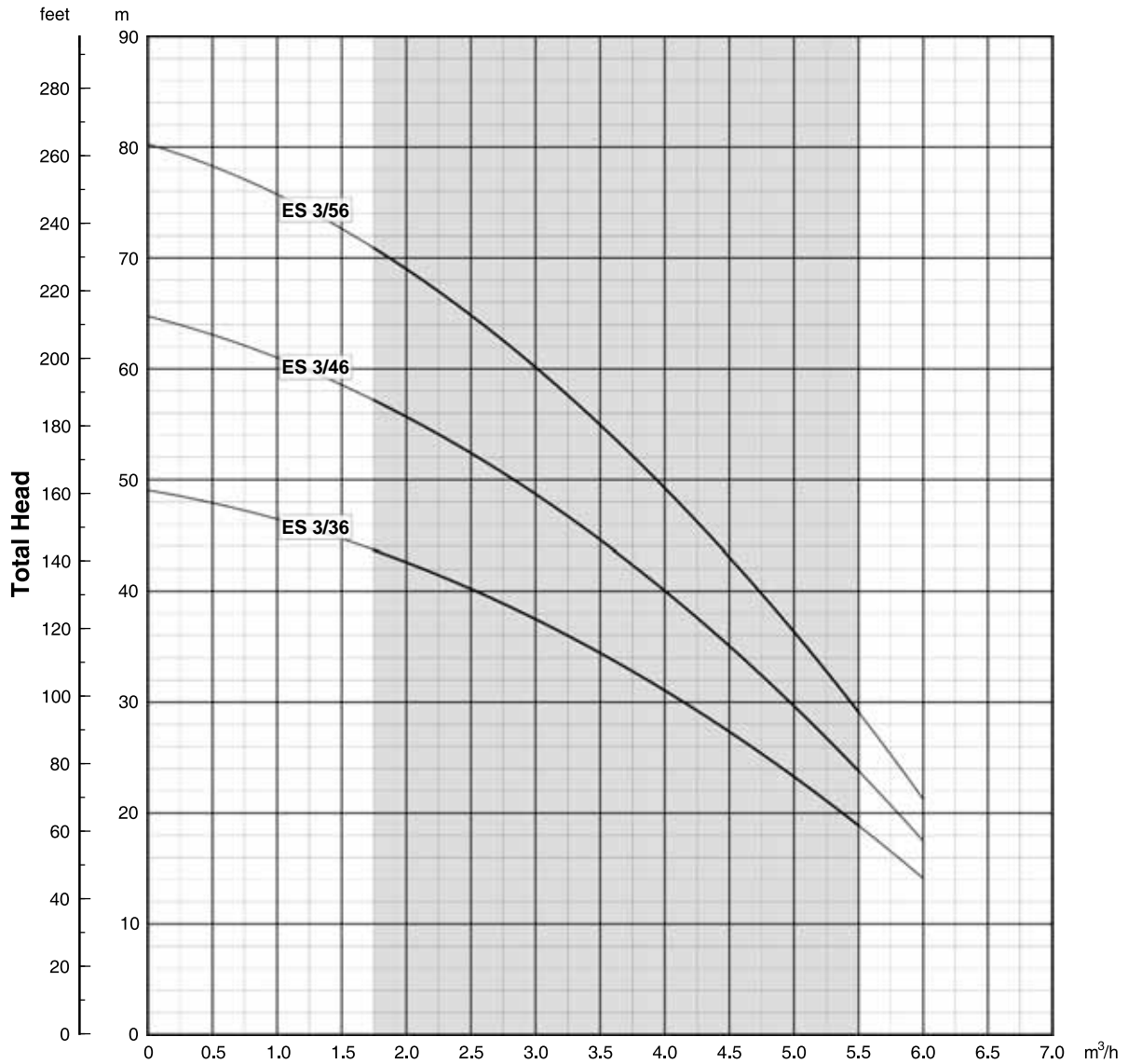
- Single-phase motors: 220-230 V ± 5 % / 60 Hz. Thermal protection built into the motor.
- Three-phase motors: 220-230 V or 380-400 V ± 5 % / 60 Hz. Thermal protection to be provided into the starter panel by the installer.

Dimensions and weights

Pump model			PACKAGING				
Single-phase 220-230V 60Hz	Three-phase 220-230V or 380-400V 60Hz	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



Performance curves 60Hz



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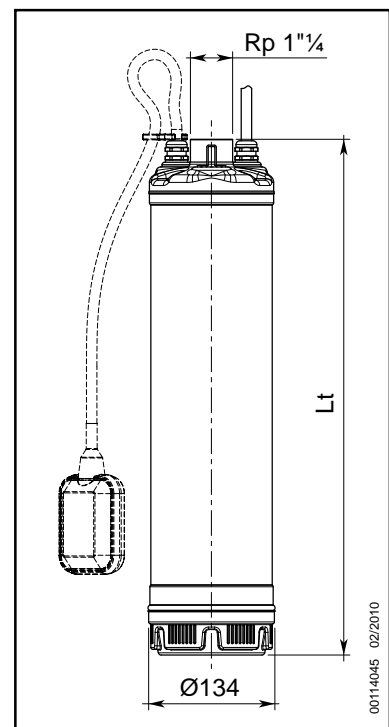
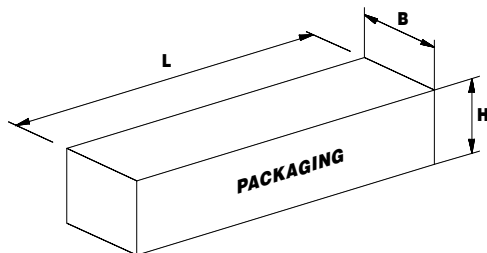
Technical data 60Hz

Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	CAPACITOR		RATED CURRENT		
Single-phase 220-230V 60Hz	Three-phase 220-230V or 380-400V 60Hz		kW	HP		µF	V	Single-phase 220-230V	Three-phase	
									220-230V	380-400V
ES 5/4	ES 5/4T	2	0.75	1	1	20	450	5.0	4.0	2.3
ES 5/5	ES 5/5T	3	0.9	1.2	1.35	20	450	6.4	4.7	2.7
ES 5/6	ES 5/6T	4	1.1	1.5	1.78	25	450	8.6	5.5	3.2

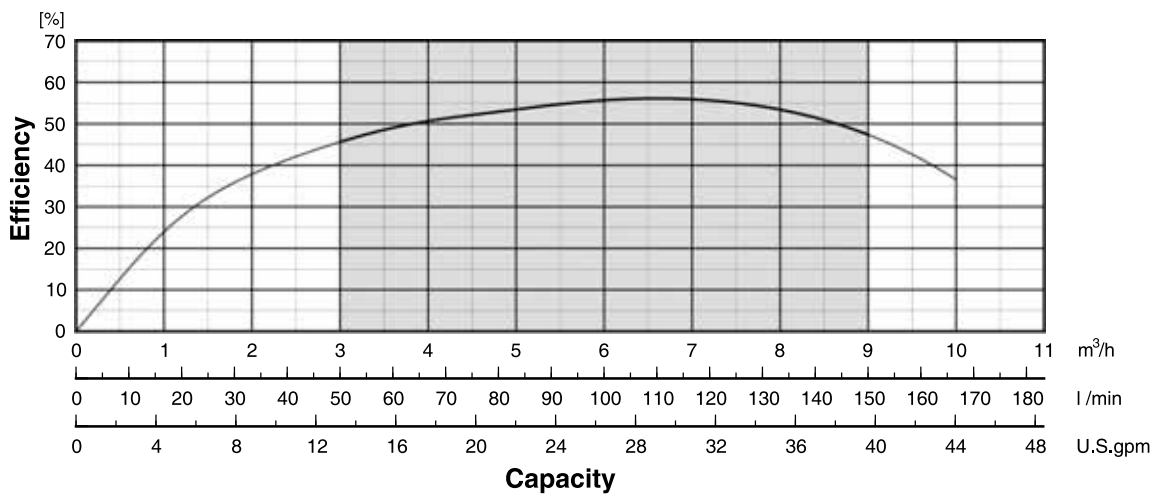
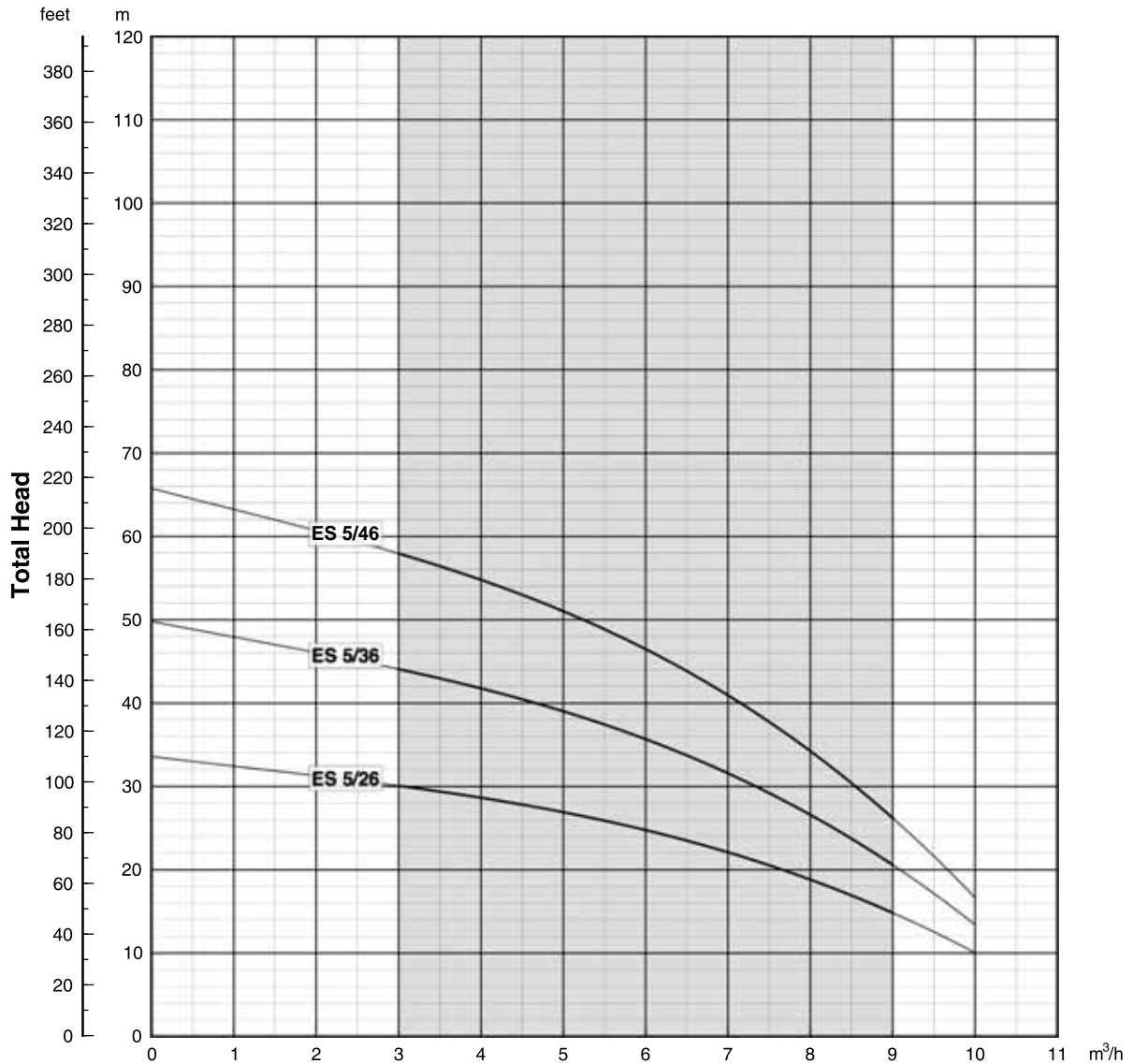
- Single-phase motors: 220-230 V ± 5 % / 60 Hz. Thermal protection built into the motor.
- Three-phase motors: 220-230 V or 380-400 V ± 5 % / 60 Hz. Thermal protection to be provided into the starter panel by the installer.

Dimensions and weights

Pump model			PACKAGING				
Single-phase 220-230V 60Hz	Three-phase 220-230V or 380-400V 60Hz	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



Performance curves 60Hz



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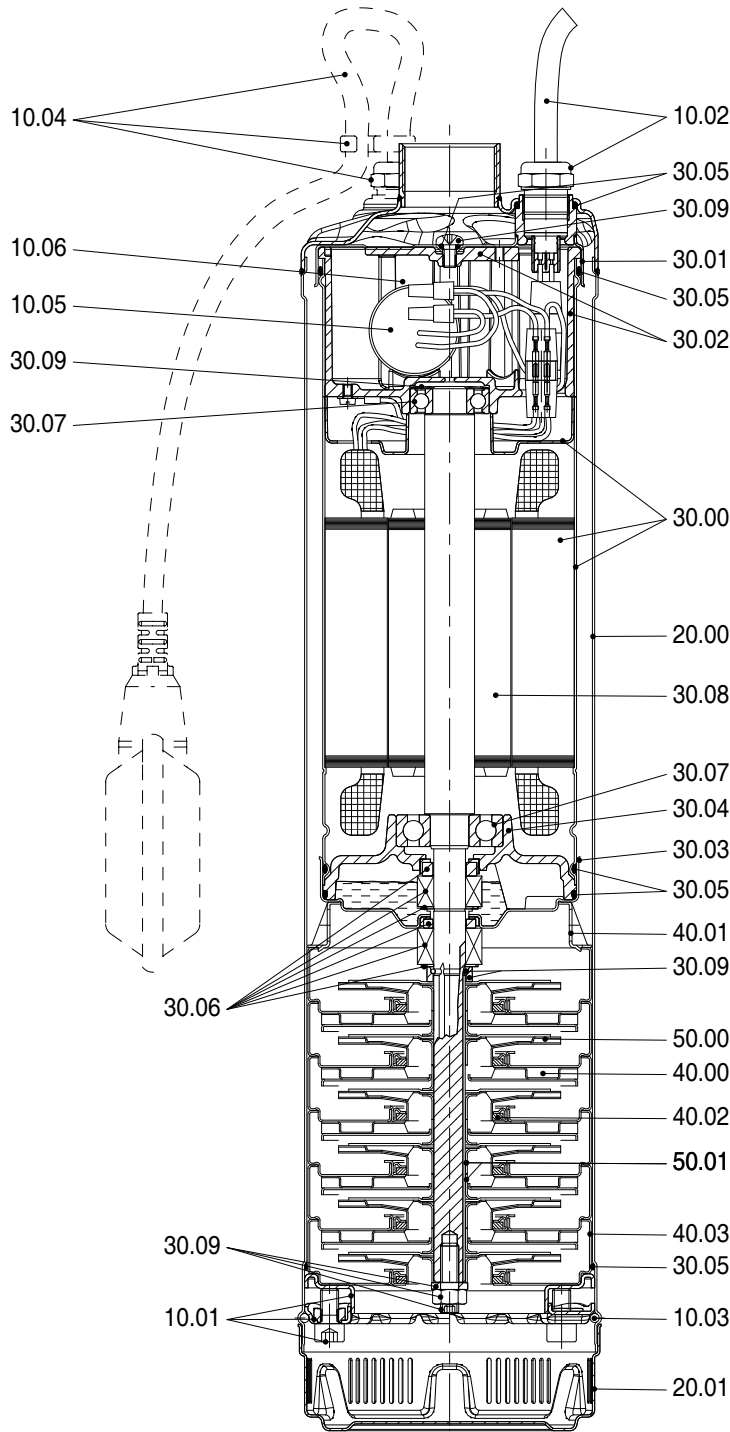
ES Series Pump Section and List of Main Components

ES 3



ES 5

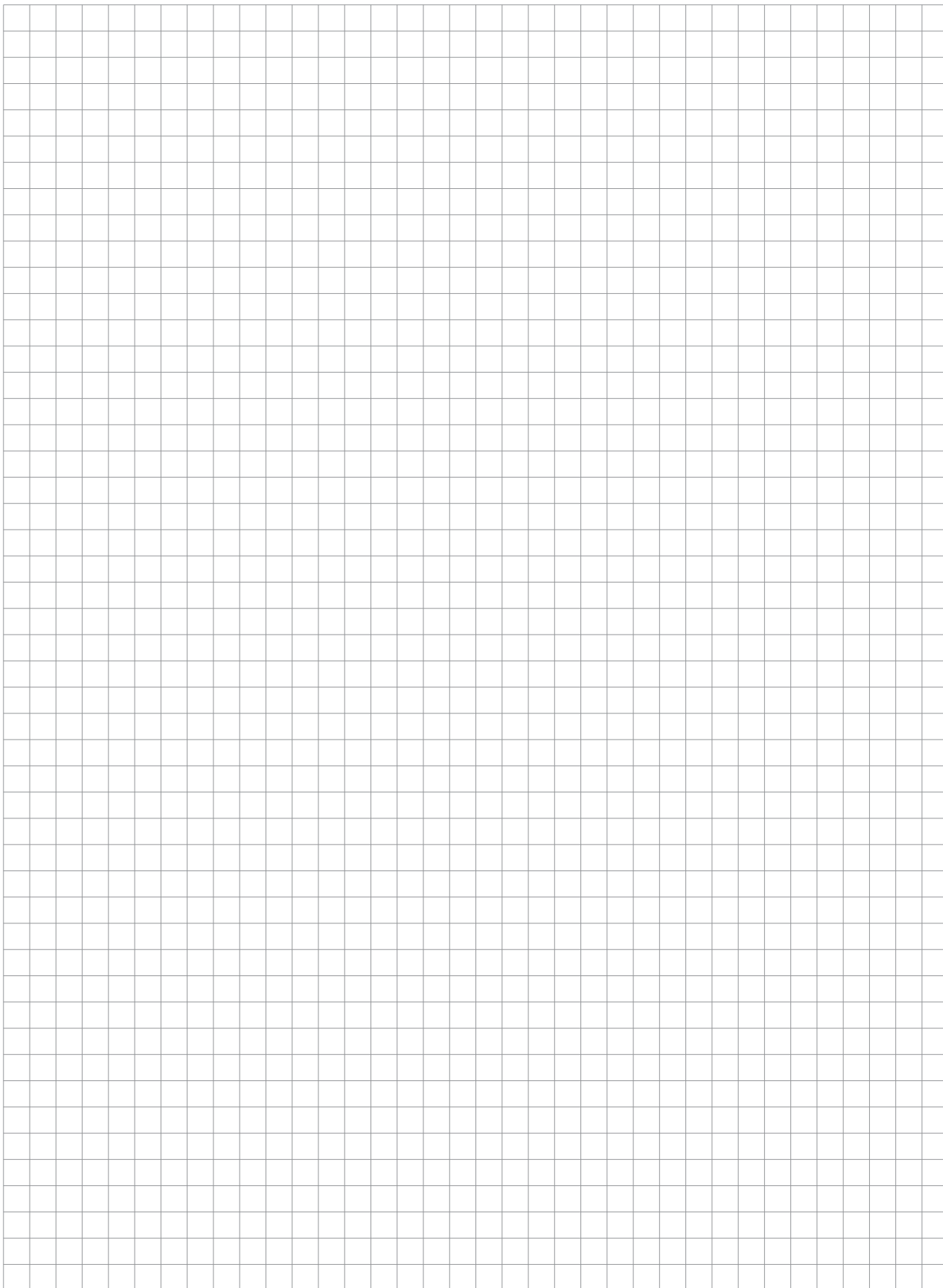
ES 3 ES 5



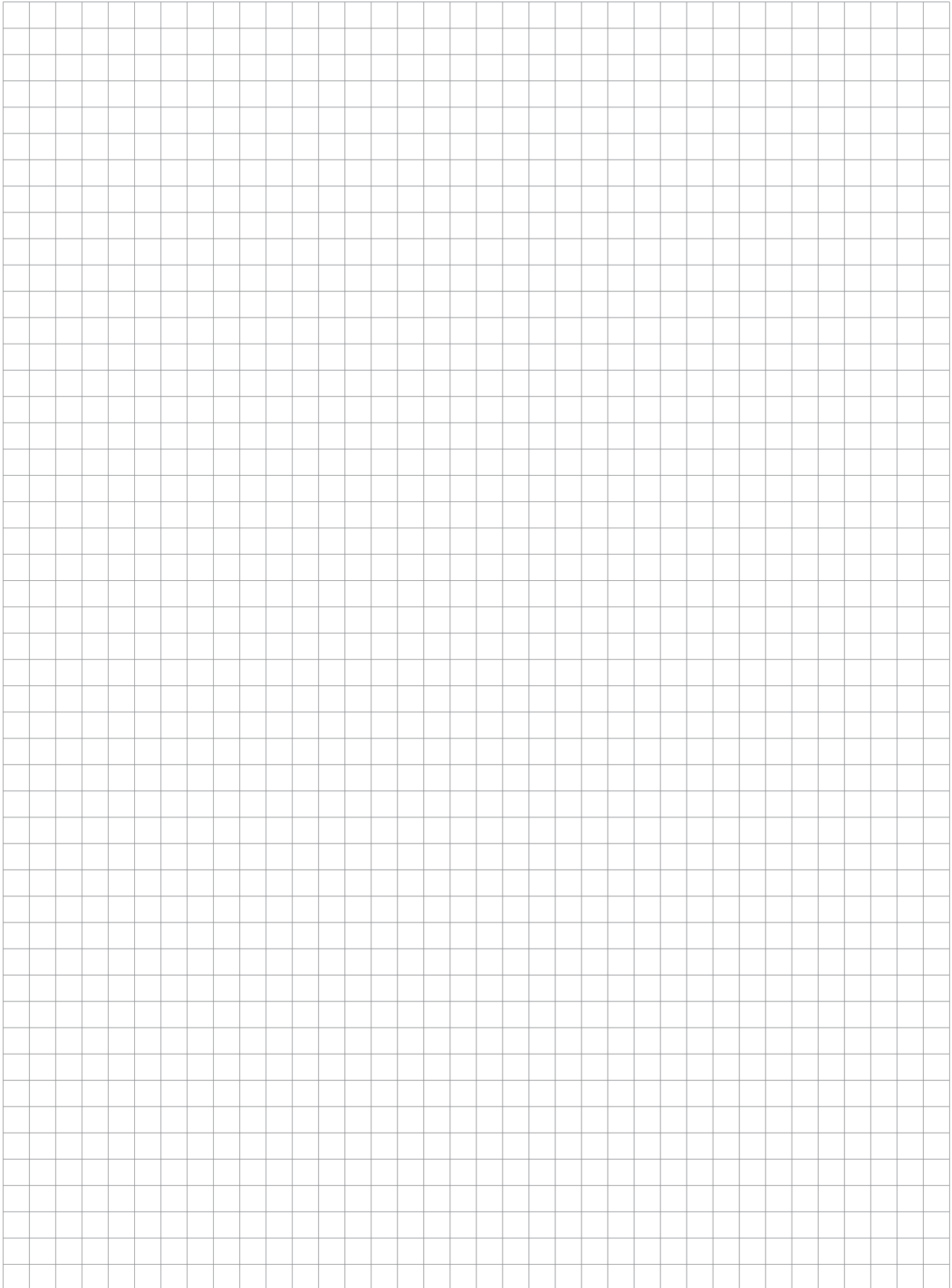
00114046 02/2010

Ref. N.	Description
10 01	Screws and flanges for pre-loading assembly
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 discharge 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

Ref. N.	Description
30 04	Lower bearing cover
30 05	Kit O-Rings (5 pcs)
30 06	Kit mechanical seals (2 pcs)
30 07	Kit ball bearings (2 pcs)
30 08	Rotor and pump shaft
30 09	Kit 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 (2 pcs)



Notes





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