



# ES 3/5

5" STAINLESS STEEL CLOSE-COUPLED  
SUBMERSIBLE MULTISTAGE ELECTRIC PUMPS



# 5" STAINLESS STEEL CLOSE-COUPLED SUBMERSIBLE MULTISTAGE ELECTRIC PUMPS

## FEATURES AND BENEFITS

### APPLICATIONS



Water Distribution Pressure Boosting



Rainwater Recovering



Irrigation, Gardening, Sprinklers



Wash down unit



Slightly corrosive liquids



Water supply to and from tanks, reservoir and wells

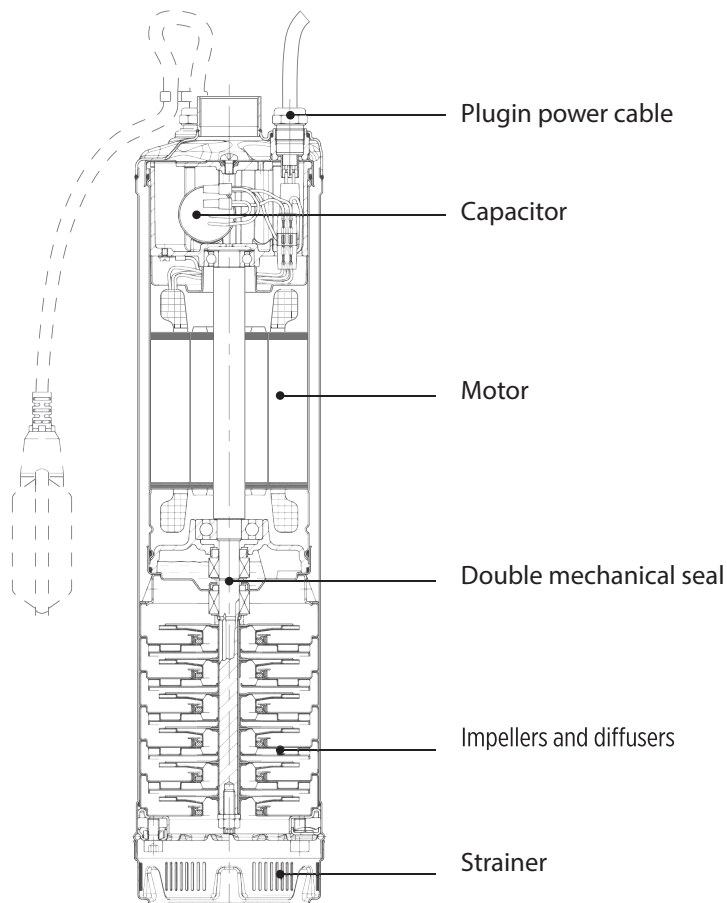
### COMPACT CLOSE-COUPLED DESIGN

- ⌋ Easy installation: the single-phase version have internal capacitor and thermic motor-protection thus is not necessary to connect the electric pump to a control panel
- ⌋ Compact close-coupled design, robust and corrosion resistant
- ⌋ Plug-in type power cable and level control (floater) for easy replacement
- ⌋ Motor cooling is guaranteed by the pumped liquid
- ⌋ Continuous operation either in vertical or horizontal position

### HIGH QUALITY MATERIALS

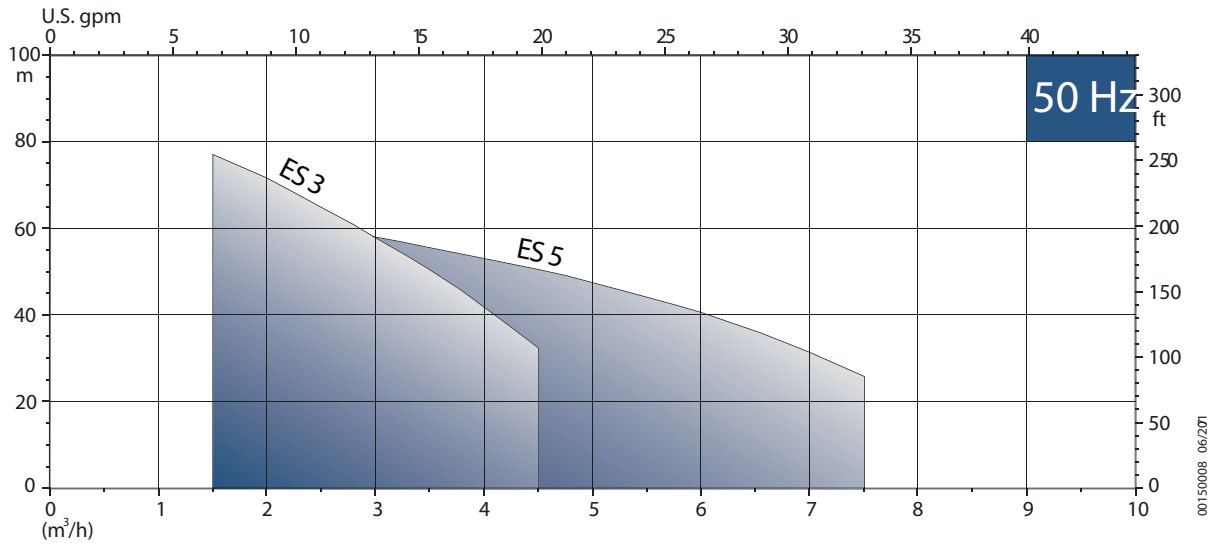
- ⌋ Heavy duty over size motor shaft
- ⌋ Stainless steel water proof capsule to protect the motor
- ⌋ Double mechanical seal separated by an oil chamber\* for maximum motor protection

\*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

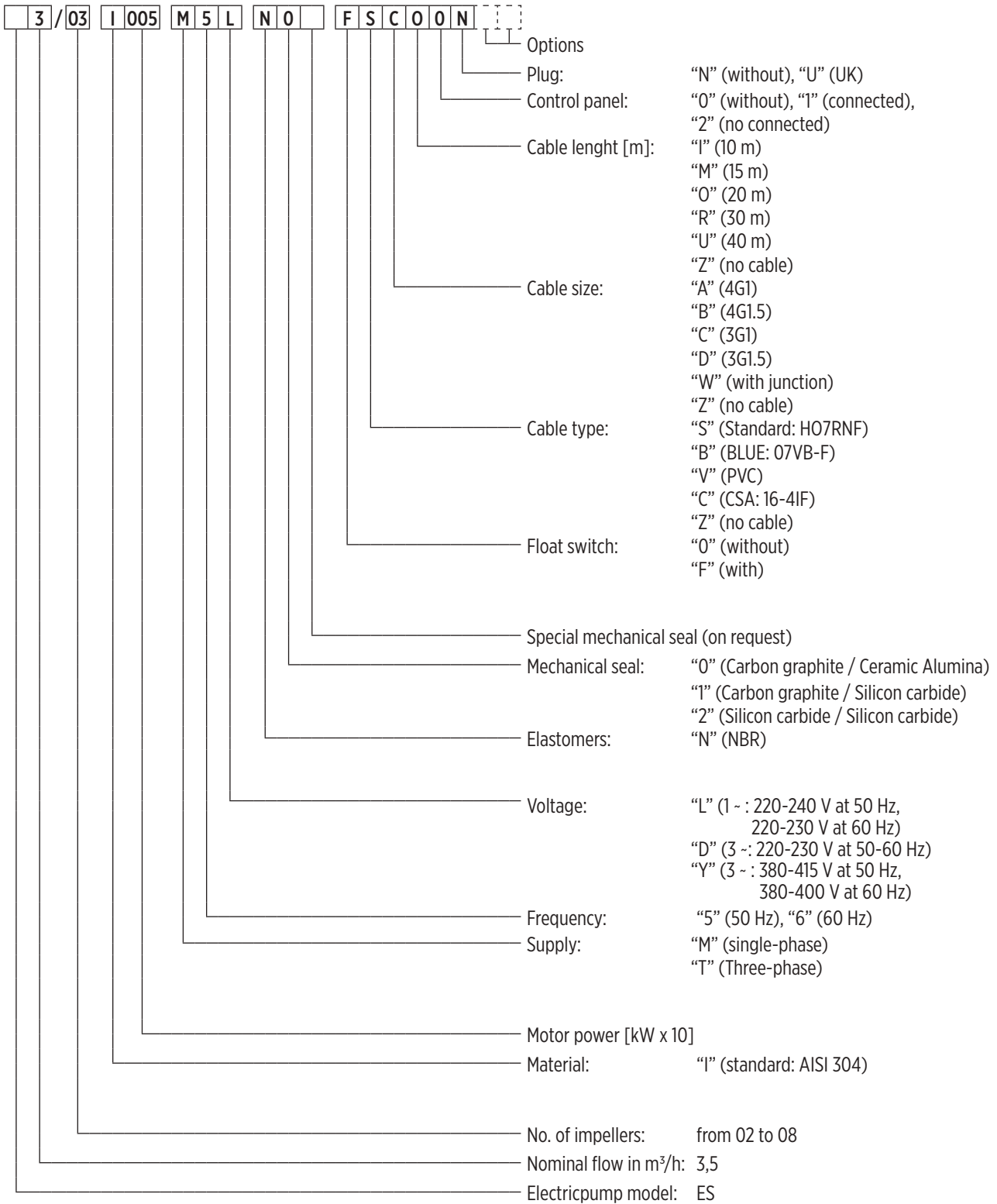


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### FAMILY CURVES



## PUMP IDENTIFICATION CODE



004005 08/201

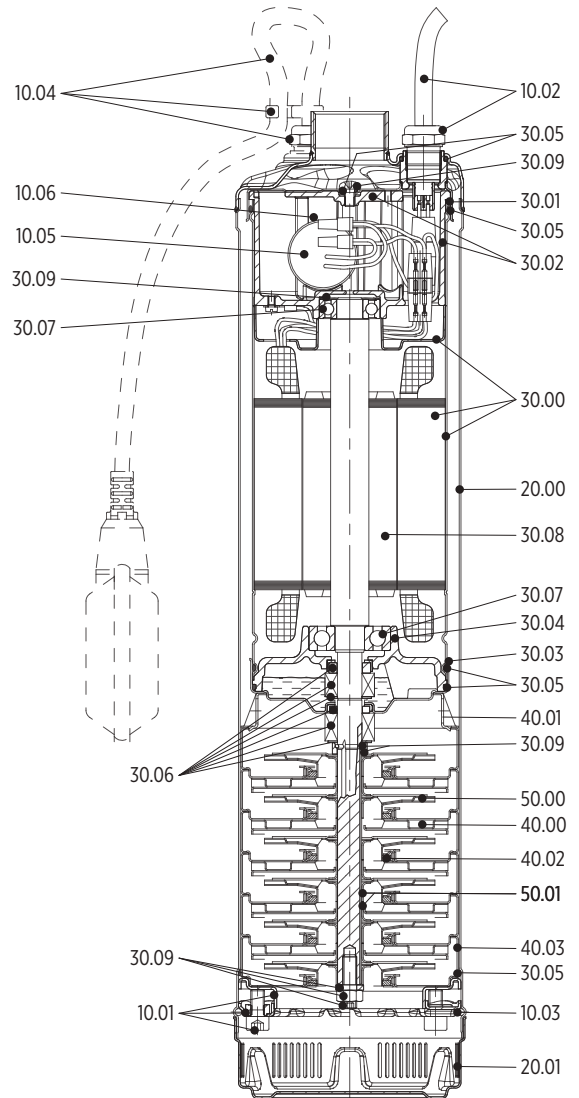
## GENERAL FEATURES

Model	3	5	3	5
Frequency:	50 Hz		60 Hz	
Nominal flow [m <sup>3</sup> /h]	3	5	3	5
Liquid temperature range [°C]	-5 / +40			
Max. D hydraulic [%]	42.3	56.1	42.3	56.1
Range [m <sup>3</sup> /h]	1.5 - 4.5	2.5 - 7.5	2.5 - 5.5	3.0 - 9.0
Max. head [m]	75.5	58.5	69	58
Maximum operating pressure [bar]	10			
Discharge outlet:	1"¼ Rp			
Power cable:	20 m, type H07RN F			
Maximum immersion depth [m]:	17 (with 20m power cable length) 20 (with power cable longer than 20m)			
Maximum allowable amount of sand/Maximum solids size:	50 gr/m <sup>3</sup> , up to 2 mm			
Float switch option:	Single phase version without level regulator			
Motor power [kW]:	0,55 ÷ 1,1kW		0,75 ÷ 1,1kW	
Motor type:	Asynchronous Protection degree: IP68 Insulation class: F			
Motor standard voltage:	Single Phase	220-240 V ± 5 %		220-230V ± 5 %
	Three Phase	380-415 V ± 5 % (220-240 V ± 5 % on request)		380-400V ± 5% (220-230V ± 5 % on request)
Thermal protection	Single phase version: built into the motor up to 1.1 kW Three phase: to be provided into the starter panel by the Installer			
Capacitor:	Built in for single phase version			
Motor frequency of starts:	max. 40 starts/hour (with min. 1 minutes resting time)			

# SPARE PARTS AND MATERIALS

Ref. No.	Spare parts description	Material	Standard	
			ASME	DIN / EN
10.01 *	Screws and flanges for pre-loading	Stainless steel	-	UNI-EN 12165-98
10.02 *	Power cable assembly	Cable: H07RN-F Cable gland: nickel plated brass / NBR		
10.03 *	Seeger-ring	Stainless steel	AISI 304	1.4301
10.04 *	Level control assembly	Cable: H07RN-F Float switch: PP Holding cable plate: PA66 Cable gland: nickel plated brass / NBR		
10.05	Capacitor with cables and connectors	-		
10.06	Clamp for capacitor	-		
20.00 *	Outer case	Stainless steel	AISI 304	1.4301
20.01 *	Suction strainer	Stainless steel	AISI 304	1.4301
30.00 *	Motor housing and stator	Stainless steel	AISI 304	1.4301
30.01 *	Upper motor cover	Stainless steel	AISI 304	1.4301
30.02	Upper bearing housing with cover	Aluminum		
30.03 *	Lower motor cover	Stainless steel	AISI 304	1.4301
30.04	Lower bearing cover	Aluminum		
30.05 *	O-Ring	NBR		
30.06 *	Mechanical seals	Ceramic alumina / Carbon graphite / NBR		
30.07	Ball bearings	6202 2Z-C3 / 6303 2Z-C3		
30.08 *	Rotor and pump shaft	Stainless steel	AISI 304	1.4301
30.09 *	Screws, nut and washers	Stainless steel	AISI 304 AISI 316	1.4301 1.4401
40.00 *	Stage housing and diffuser	Stainless steel	AISI 304	1.4301
40.01 *	Spacer	Stainless steel	AISI 304	1.4301
40.02 *	Floating neck ring	PPS		
40.03 *	Initial stage housing	Stainless steel	AISI 304	1.4301
50.00 *	Impeller	Stainless steel	AISI 304	1.4301
50.01 *	Impeller spacers	Stainless steel	AISI 304	1.4301

\* Spare parts in contact with liquid



0018028 01/2018



# TECHNICAL DATA AND PERFORMANCE CURVES AT 50 HZ

## HYDRAULIC PERFORMANCE

Electric pump model	RATED POWER		Q = DELIVERY															
			l/min	0	16.6	25.0	33.3	42	50.0	58.3	67	75.0	83.3	92	100.0	116.7	125	133.3
			m <sup>3</sup> /h	0	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	7	7.5	8
	US gpm	0	4.4	6.6	8.8	11.0	13.2	15	17.6	19.8	22.0	24.2	26	30.8	33	35.2		
	[kW]	[HP]	H = TOTAL METERS HEAD OF WATER COLUMN [m]															
ES 3/3	0.55	0.75	34		30.5	28.5	26	24	21	17.5	14							
ES 3/4	0.55	0.75	45		40	37.5	34	31	27	23	18							
ES 3/5	0.75	1	56		49	46	42	38	33	27.5	22							
ES 3/6	0.75	1	66.5		58.5	54	49	44	38.5	32	25							
ES 3/7	0.9	1.2	77		67	62	56	50	45	37.5	28							
ES 3/8	1.1	1.5	87		75.5	70	63	56	50.5	42	31							
ES 5/3	0.55	0.75	35				31	30	29	28	27	25.5	23.5	22	17.5	15		
ES 5/4	0.75	1	46				40.5	39	38	36.5	34.5	33	30.5	28	22	18.5		
ES 5/5	0.9	1.2	57				50	48	47.5	45.5	42	40	38	34	27.5	22		
ES 5/6	1.1	1.5	67.5				58.5	56.5	55.5	53	49	46	44	39	31.5	24		

# ES 3 - 50 HZ

## TECHNICAL DATA

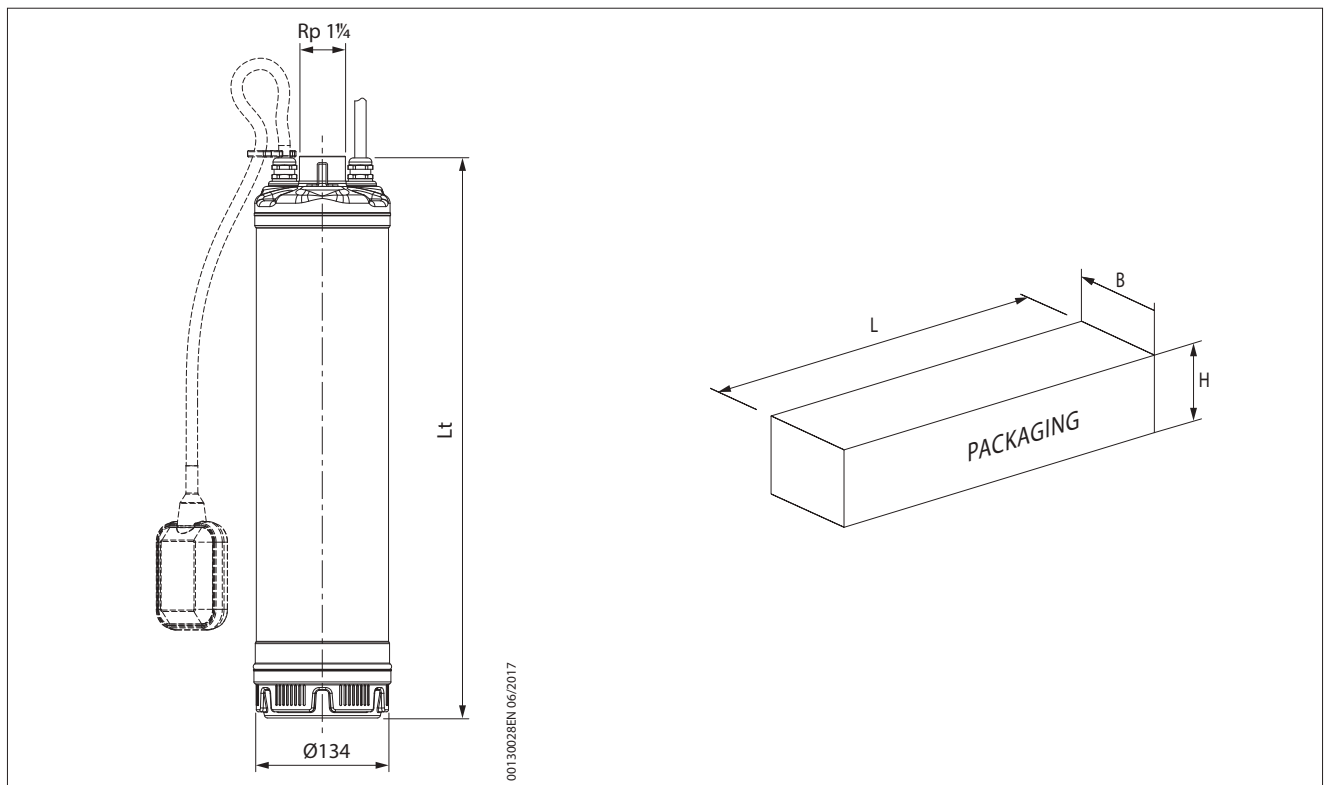
Electric pump model		Number of stages	MOTOR POWER		INPUT POWER	Capacitor		RATED CURRENT		
Single-phase	Three-phase		[kW]	[HP]		$\mu$ F	V	Single-phase 220-240 V	Three-phase 220-240 V    380-415 V	
ES 3/3	ES 3/3T	3	0.55	0.75	0.63	16	450	3.6	3.12	1.8
ES 3/4	ES 3/4T	4	0.55	0.75	0.81	16	450	4.0	3.5	2.0
<b>ES 3/5</b>	<b>ES 3/5T</b>	<b>5</b>	<b>0.75</b>	<b>1</b>	<b>0.99</b>	<b>20</b>	<b>450</b>	<b>4.7</b>	<b>3.7</b>	<b>2.1</b>
ES 3/6	ES 3/6T	6	0.75	1	1.15	20	450	5.2	4.0	2.3
ES 3/7	ES 3/7T	7	0.9	1.2	1.34	30	450	6.7	4.4	2.5
ES 3/8	ES 3/8T	8	1.1	1.5	1.50	30	450	7.2	4.7	2.7

## DIMENSIONS AND WEIGHTS

Electric pump			Weight* [Kg]		Packaging [mm]		
Single-phase	Three-phase	Lt [mm]	Single-phase	Three-phase	L	B	H
ES 3/3	ES 3/3T	446	12	13.3	720	230	175
ES 3/4	ES 3/4T	470	12.7	13.95	720	230	175
<b>ES 3/5</b>	<b>ES 3/5T</b>	<b>544</b>	<b>14.3</b>	<b>14.45</b>	<b>720</b>	<b>230</b>	<b>175</b>
ES 3/6	ES 3/6T	568	14.8	15	720	230	175
ES 3/7	ES 3/7T	592	17	15.45	720	230	175
ES 3/8	ES 3/8T	616	17.1	16	720	230	175

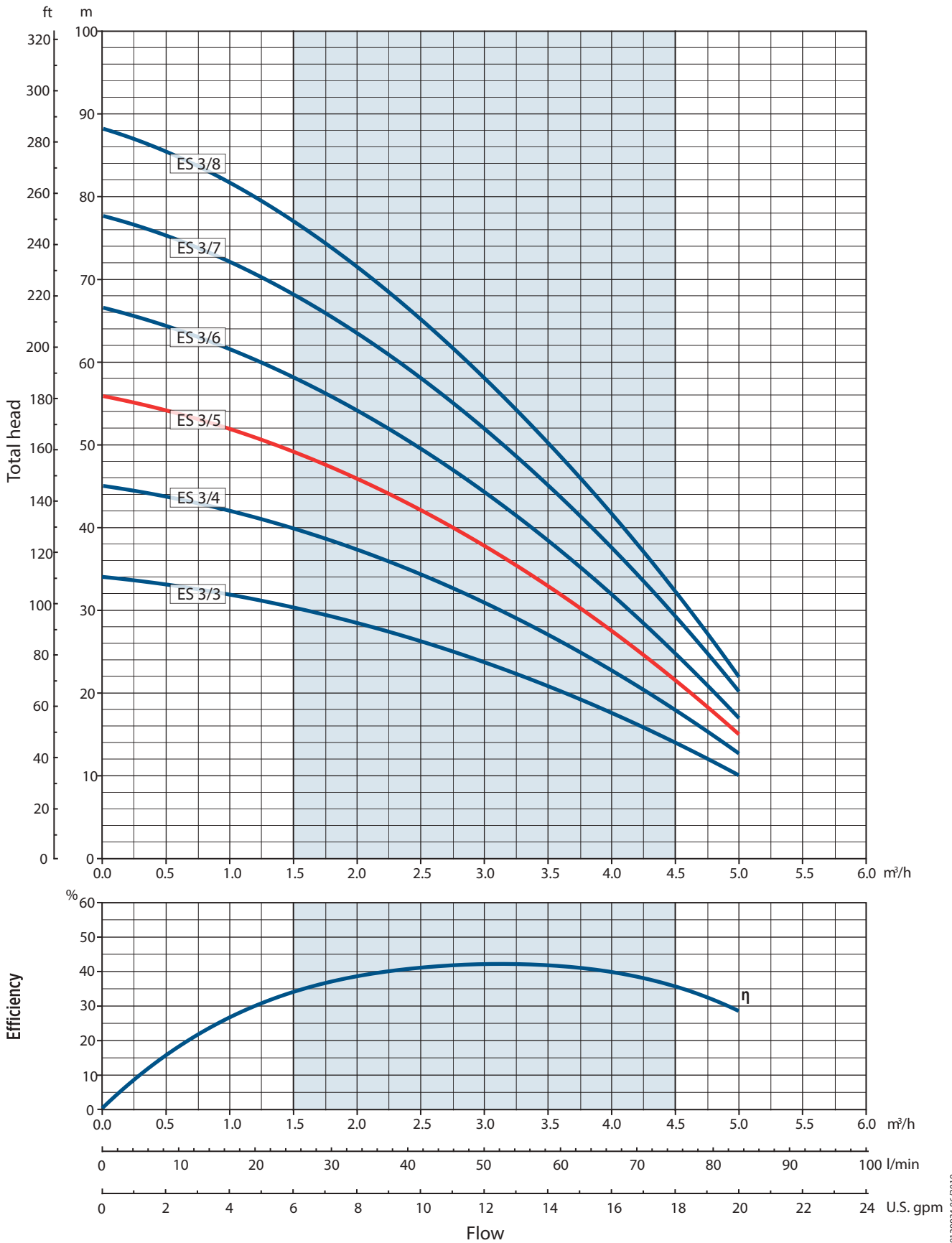
\* Electric pump weight without float switch

## DIMENSIONAL DRAWINGS



00130028EN 06/2017

# ES 3 PERFORMANCE CURVES AT 50 HZ



00120034 06/2019



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00103780 EN REV.06\_09-2021



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