



ES 3/6

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

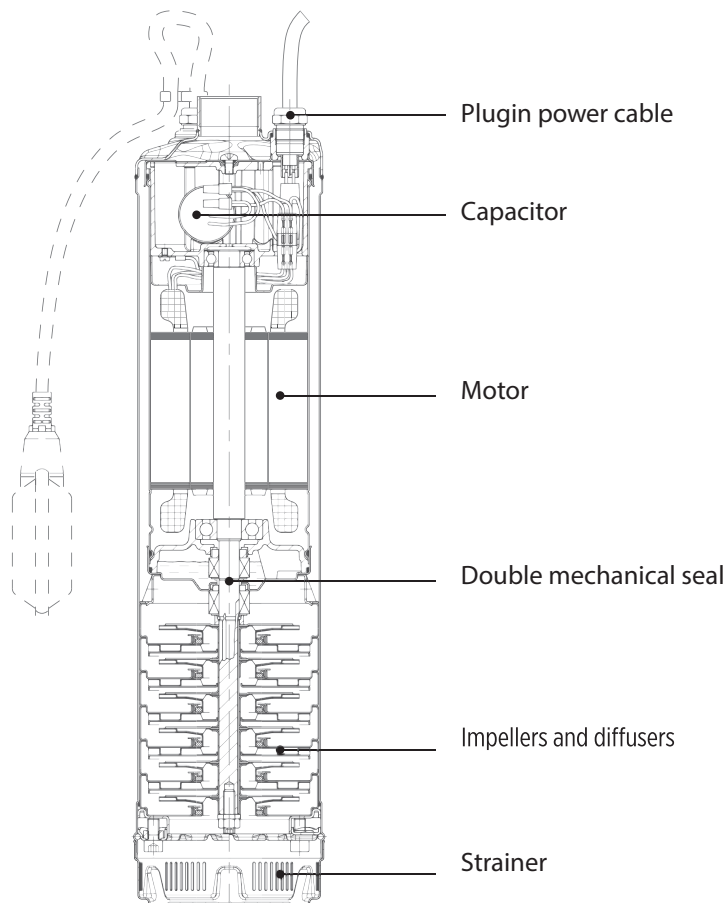
COMPACT CLOSE-COUPLED DESIGN

- ⌋ 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

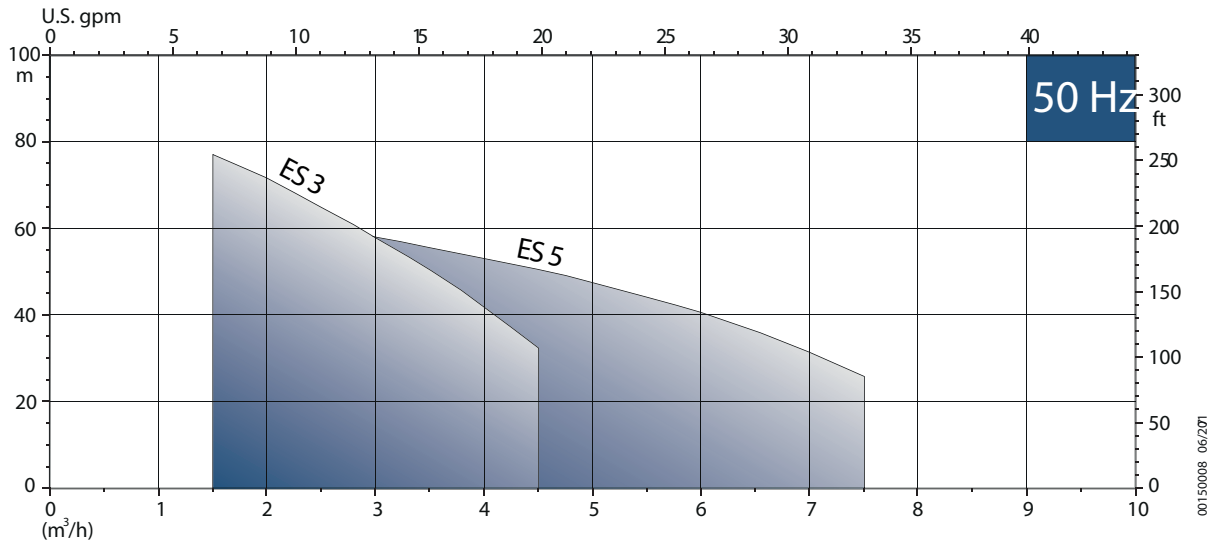
- ⌋ Heavy duty over size motor shaft
- ⌋ Stainless steel water proof capsule to protect the motor
- ⌋ Double mechanical seal separated by an oil chamber* for maximum motor protection

*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

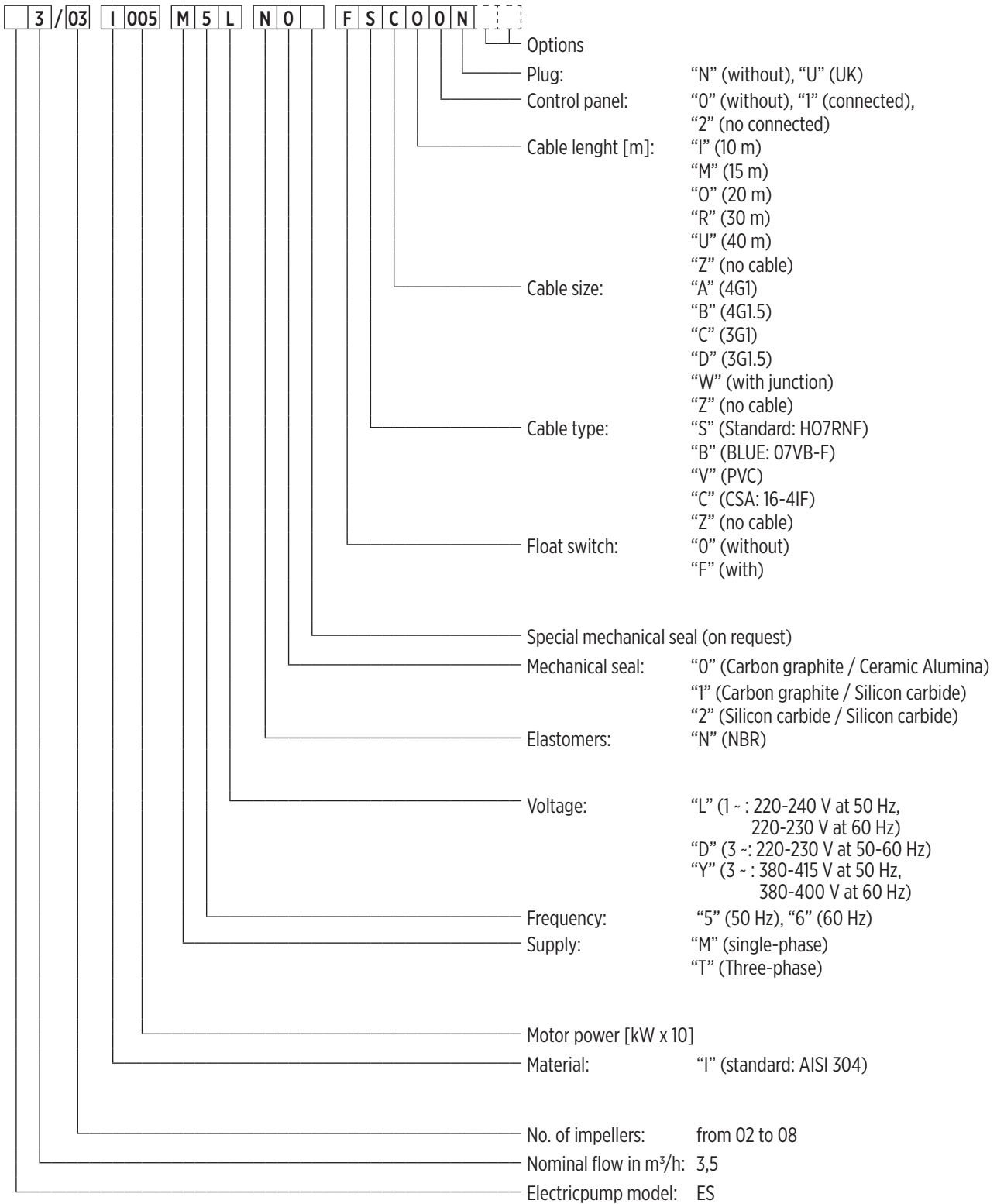


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FAMILY CURVES



PUMP IDENTIFICATION CODE



004005 08/201

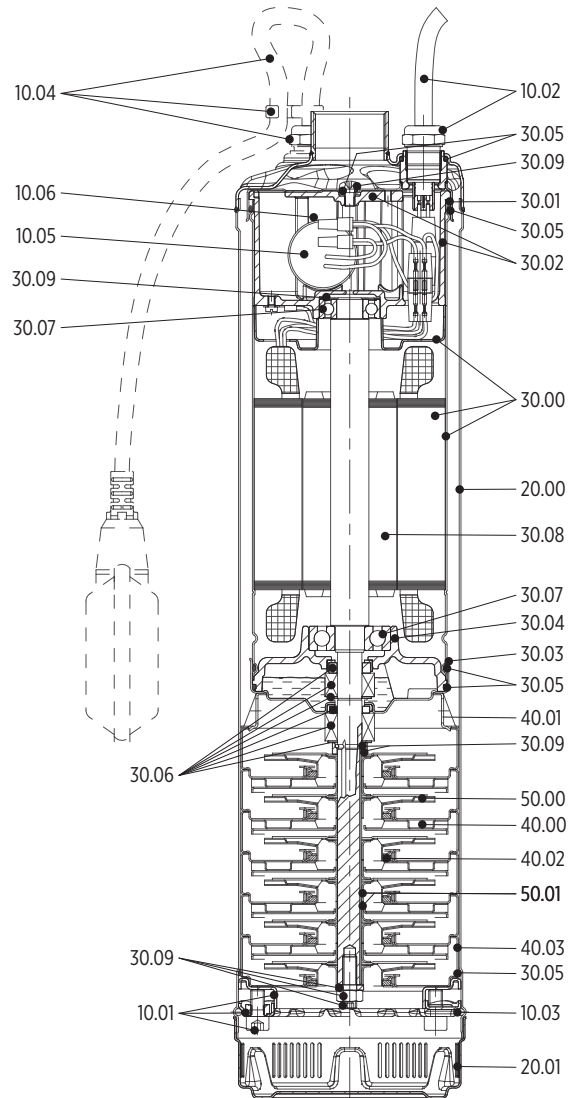
GENERAL FEATURES

| Model | 3 | 5 | 3 | 5 |
|---|--|---|--------------|--|
| Frequency: | 50 Hz | | 60 Hz | |
| Nominal flow [m ³ /h] | 3 | 5 | 3 | 5 |
| Liquid temperature range [°C] | -5 / +40 | | | |
| Max. D hydraulic [%] | 42.3 | 56.1 | 42.3 | 56.1 |
| Range [m ³ /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 ³ , 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 | 1.4301 |
| | | | AISI 316 | 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



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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 ³ /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

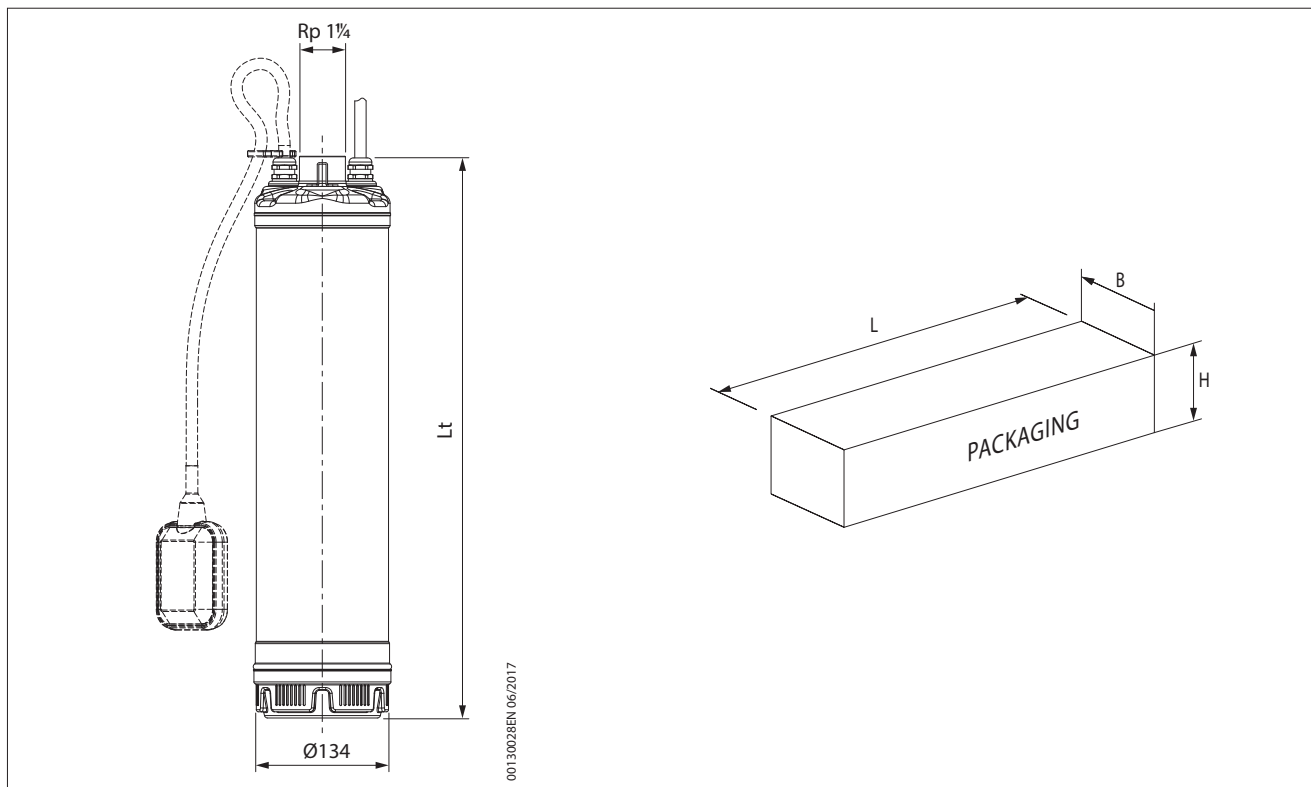
| Electric pump model | | Number of stages | MOTOR POWER | | INPUT POWER | Capacitor | | RATED CURRENT | | |
|---------------------|----------------|------------------|-------------|----------|-------------|-----------|------------|---------------------------|---------------------------------------|------------|
| Single-phase | Three-phase | | [kW] | [HP] | | μ 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 |
| ES 3/5 | ES 3/5T | 5 | 0.75 | 1 | 0.99 | 20 | 450 | 4.7 | 3.7 | 2.1 |
| 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

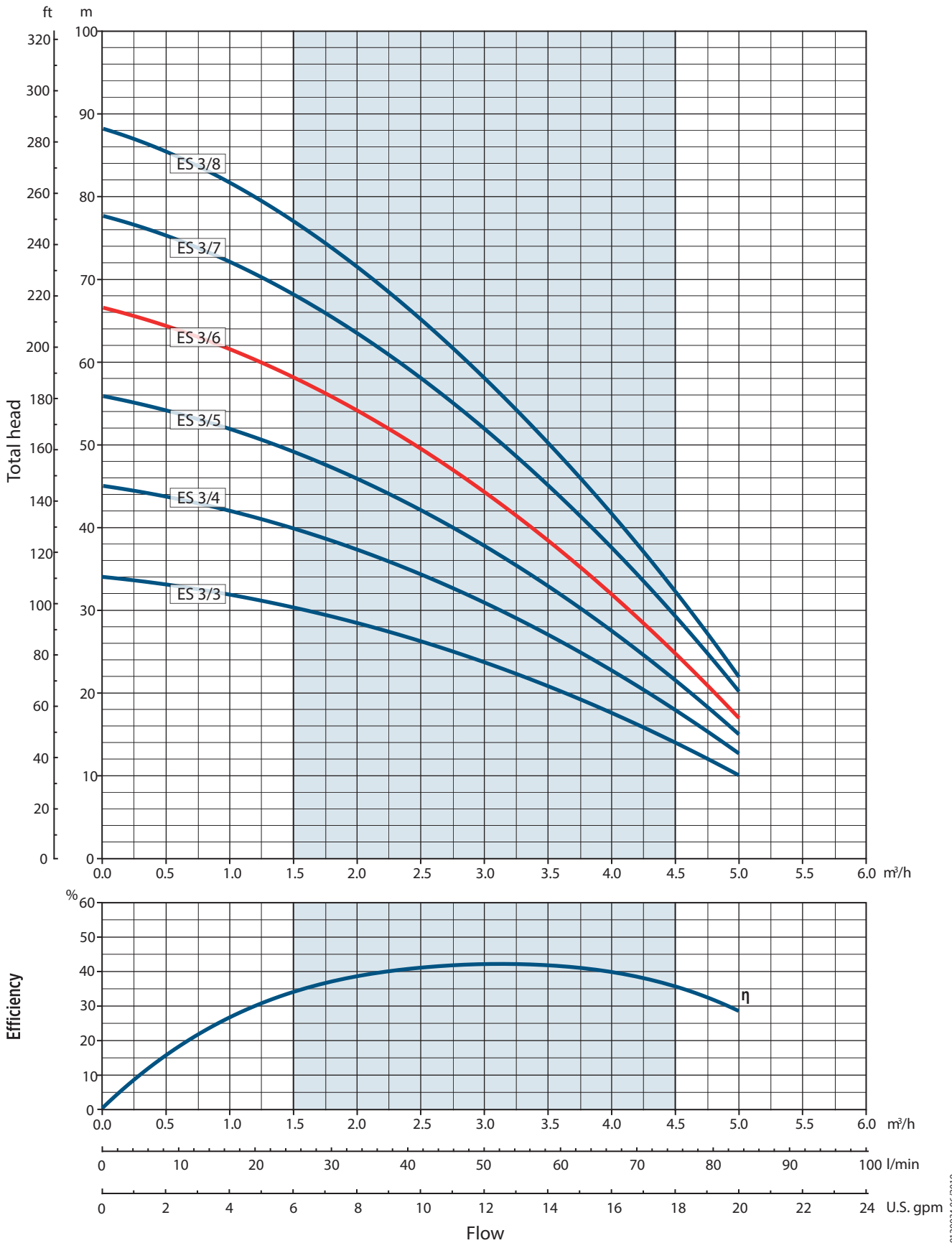
| Electric pump | | | Weight* [Kg] | | Packaging [mm] | | |
|---------------|----------------|------------|--------------|-------------|----------------|------------|------------|
| Single-phase | Three-phase | Lt [mm] | Single-phase | Three-phase | L | B | H |
| ES 3/3 | ES 3/3T | 446 | 12 | 13.3 | 720 | 230 | 175 |
| ES 3/4 | ES 3/4T | 470 | 12.7 | 13.95 | 720 | 230 | 175 |
| ES 3/5 | ES 3/5T | 544 | 14.3 | 14.45 | 720 | 230 | 175 |
| 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



ES 3 PERFORMANCE CURVES AT 50 HZ



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