



## TECHNICAL DATA

**Performance range:** flow up to 110 m<sup>3</sup>/h and max head of 423 m

**Max. quantity of sand/silt:** 50g/m<sup>3</sup>

**Max. ambient temperature:** 30°C (50°C available on request)

**Outlet connection diameter (inside threaded):** 5"

**Nr of starts:** refer to the motor specification

**Motor Cooling flow:** refer to the motor specification

**Installation:** horizontal or vertical, refer to the motor specification

## APPLICATIONS

Multistage mixed-flow borehole electric pumps, completely made in stainless steel (AISI 304L or AISI 316 on request), usable for wells from a minimum diameter equal to pump size or greater and capable of developing a wide range of Flows and Heads.

These pumps can be used in a wide range of lifting, distributing, and pressuring application: domestic and general water supply; sprinkler and drip irrigations systems; fire-fighting installations; lowering of groundwater level; industrial supplies as mining, hot springs, autoclaves and tanks.

These pumps are suitable both for standard water and for aggressive water applications by choosing the proper manufacturing material (AISI 304L or AISI 316) both for hydraulic part and motor.

Special version of motors with PE2+PA windings can be used on request for high-temperature water applications up to maximum 50°C.

Pumps can be installed both vertically and horizontally simply by removing the non-return valve and adding a cooling sleeve to the suction case (the only remark is to check the motor applicability to horizontal operations, refer to the motor specifications section).

## CONSTRUCTION FEATURES OF PUMP

Mixed flow pumps with diffusers, impellers, brackets, suction case and discharge case completely made of stainless steel AISI 304 in order to provide maximum strength, durability, wear and tear resistance.

The impellers are balanced and locked to the shaft with a specially shaped collet and nut coupling, in order to guarantee ease-to-assembly feature and avoid vibration sensitive malfunctions and noise increase during rotation.

Rubber bearings that drive the shaft are water lubricated and have sand channels to make enable the sand particles leave the pump with the pumped liquid (maximum permissible sand content 50 gr/m<sup>3</sup>).

Built-in non returned valve provided in order to minimize local friction losses.

Stainless steel strainer provided in order to prevent particles over a certain size from entering the pump.

Coupling with 6", 8" or 10" motor depending on the power requested by hydraulic part:

- 6GF: 6" canned submersible motor
- TR6: 6" rewindable submersible motor
- TR8: 8" rewindable submersible motor
- TR10: 10" rewindable submersible motor

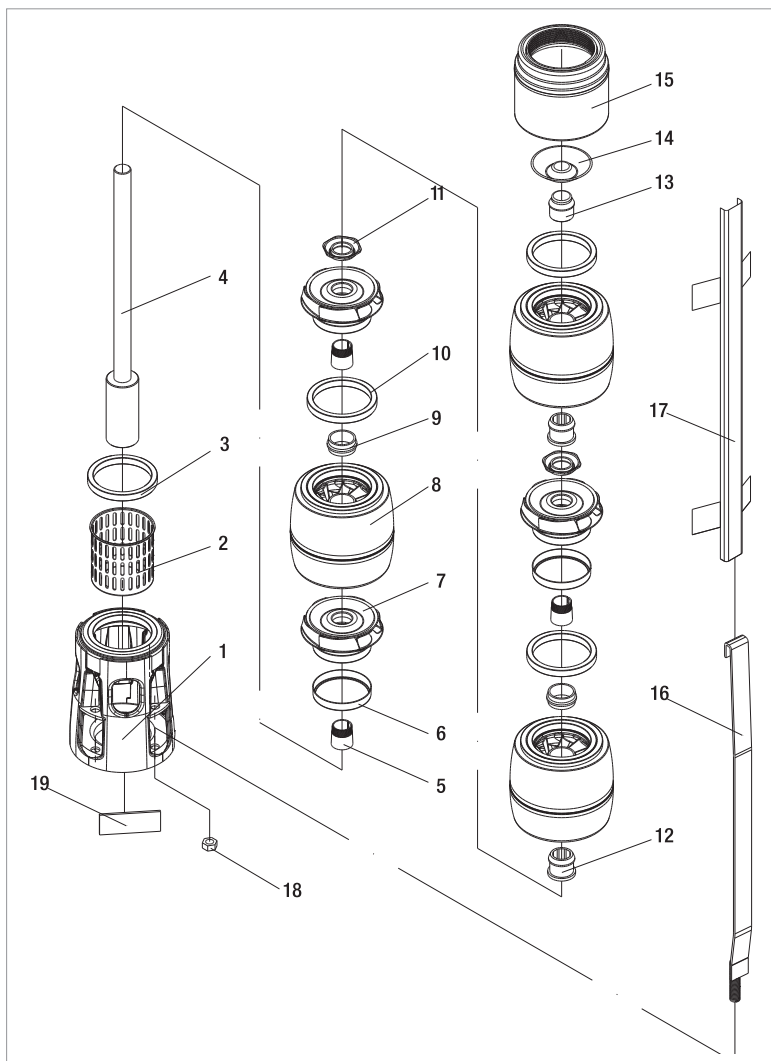
For inverter application refer to the detailed motor specification.

## ON REQUEST:

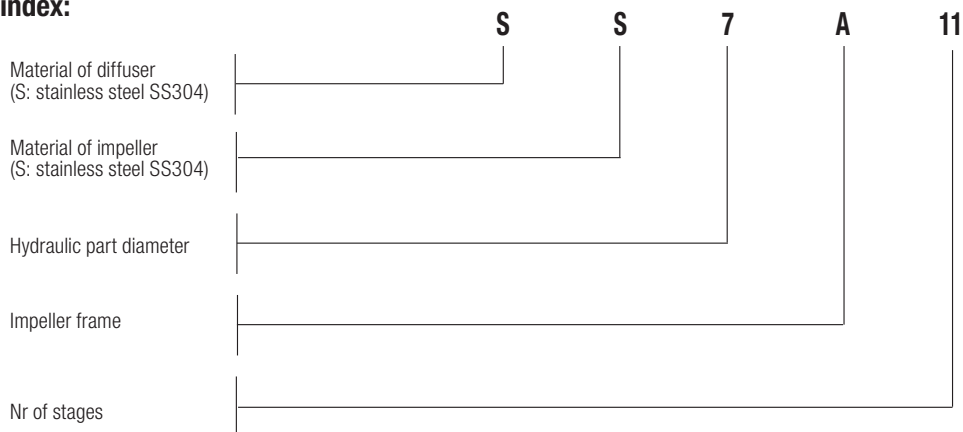
- Pump body stainless steel AISI 316 for aggressive water application
- Impellers stainless steel AISI 316
- Motors in full stainless steel AISI 316 for aggressive water application
- Star/Delta starting version
- Special version of the motor for high temperature application
- Non-standard power coupling

### MATERIALS

| N° | Part Name              | Material                    |
|----|------------------------|-----------------------------|
| 1  | Suction Case           | Stainless Steel (AISI 304L) |
| 2  | Filter                 | Stainless Steel (AISI 304L) |
| 3  | Suction Case Wear Ring | Bronze (ASTM B145-4A)       |
| 4  | Pump Shaft             | Stainless Steel (AISI 420)  |
| 5  | Collet                 | Stainless Steel             |
| 6  | Impeller Wear Ring     | STAINLESS STEEL (AISI 304)  |
| 7  | Impeller               | Stainless Steel (AISI 304L) |
| 8  | Diffuser               | Stainless Steel (AISI 304L) |
| 9  | Rubber Bearing         | Rubber                      |
| 10 | Diffuser Wear Ring     | Rubber                      |
| 11 | Nut for Stop Ring      | Stainless Steel (AISI 304L) |
| 12 | Bearing                | Rubber                      |
| 13 | Shaft Stopper          | Bronze (ASTM B145-4A)       |
| 14 | Valve                  | Stainless Steel (AISI 304)  |
| 15 | Discharge Case         | Stainless Steel (AISI 304)  |
| 16 | TIE ROD                | STAINLESS STEEL (AISI 304L) |
| 17 | CABLE GUARD            | STAINLESS STEEL (AISI 304)  |
| 18 | TIR ROD NUT            | STAINLESS STEEL (AISI 303)  |
| 19 | NAME PLATE             | STAINLESS STEEL (AISI 304)  |



**- Denomination index:**  
(EXAMPLE)



**PERFORMANCE 50 Hz - 2 POLES**

| MODEL   | ELECTRICAL DATA |     | HYDRAULIC DATA     |     |       |     |       |       |      |        |        |      |        | STANDARD MOTOR COUPLING |
|---------|-----------------|-----|--------------------|-----|-------|-----|-------|-------|------|--------|--------|------|--------|-------------------------|
|         | P2 NOMINAL      |     | Q=m <sup>3</sup> h | 0   | 20    | 30  | 40    | 50    | 60   | 70     | 80     | 90   | 100    |                         |
|         | kW              | HP  | Q=l/min            | 0   | 333,3 | 500 | 666,6 | 833,3 | 1000 | 1166,6 | 1333,3 | 1500 | 1666,6 |                         |
| SS7A 01 | 4               | 5,5 | H<br>(mt)          | 19  | 19    | 18  | 17    | 16    | 15   | 14     | 12     | 11   | 8      | 6"                      |
| SS7A 02 | 7,5             | 10  |                    | 38  | 37    | 36  | 34    | 32    | 30   | 28     | 25     | 21   | 17     | 6"                      |
| SS7A 03 | 11              | 15  |                    | 58  | 56    | 54  | 51    | 49    | 45   | 42     | 37     | 32   | 25     | 6"                      |
| SS7A 04 | 15              | 20  |                    | 77  | 74    | 72  | 69    | 65    | 61   | 56     | 50     | 42   | 33     | 6"                      |
| SS7A 05 | 18,5            | 25  |                    | 96  | 93    | 90  | 86    | 81    | 76   | 69     | 62     | 53   | 41     | 6"                      |
| SS7A 06 | 22              | 30  |                    | 115 | 111   | 108 | 103   | 97    | 91   | 83     | 74     | 63   | 50     | 6"                      |
| SS7A 07 | 26              | 35  |                    | 135 | 130   | 126 | 120   | 114   | 106  | 97     | 87     | 74   | 58     | 6"                      |
| SS7A 08 | 30              | 40  |                    | 154 | 149   | 144 | 137   | 130   | 121  | 111    | 99     | 84   | 66     | 6"                      |
| SS7A 09 | 37              | 50  |                    | 173 | 167   | 161 | 154   | 146   | 136  | 125    | 111    | 95   | 75     | 6"                      |
| SS7A 10 | 37              | 50  |                    | 192 | 186   | 179 | 172   | 162   | 152  | 139    | 124    | 105  | 83     | 6"                      |
| SS7A 11 | 45              | 60  |                    | 211 | 204   | 197 | 189   | 179   | 167  | 153    | 136    | 116  | 91     | 8"                      |
| SS7A 12 | 45              | 60  |                    | 231 | 223   | 215 | 206   | 195   | 182  | 167    | 149    | 127  | 99     | 8"                      |
| SS7A 13 | 55              | 75  |                    | 250 | 241   | 233 | 223   | 211   | 197  | 181    | 161    | 137  | 108    | 8"                      |
| SS7A 14 | 55              | 75  |                    | 269 | 260   | 251 | 240   | 227   | 212  | 195    | 173    | 148  | 116    | 8"                      |
| SS7A 15 | 55              | 75  |                    | 288 | 278   | 269 | 257   | 244   | 227  | 208    | 186    | 158  | 124    | 8"                      |
| SS7A 16 | 63              | 85  |                    | 307 | 297   | 287 | 275   | 260   | 243  | 222    | 198    | 169  | 133    | 8"                      |
| SS7A 17 | 75              | 100 |                    | 327 | 316   | 305 | 292   | 276   | 258  | 236    | 210    | 179  | 141    | 8"                      |
| SS7A 18 | 75              | 100 |                    | 346 | 334   | 323 | 309   | 292   | 273  | 250    | 223    | 190  | 149    | 8"                      |
| SS7A 19 | 75              | 100 |                    | 365 | 353   | 341 | 326   | 309   | 288  | 264    | 235    | 200  | 158    | 8"                      |
| SS7A 20 | 75              | 100 |                    | 384 | 371   | 359 | 343   | 325   | 303  | 278    | 248    | 211  | 166    | 8"                      |
| SS7A 21 | 75              | 100 |                    | 404 | 390   | 377 | 360   | 341   | 318  | 292    | 260    | 221  | 174    | 8"                      |
| SS7A 22 | 92              | 125 |                    | 423 | 408   | 395 | 378   | 357   | 334  | 306    | 272    | 232  | 182    | 8"                      |

### ELECTRICAL DATA AND DIMENSIONS

| MODEL   | MOTOR * | ELECTRICAL DATA |     |      |                       | HORIZONTAL INSTALLATION | L2 mm | L mm | L1 mm | D mm | D1 mm | TOTAL WEIGHT Kg |
|---------|---------|-----------------|-----|------|-----------------------|-------------------------|-------|------|-------|------|-------|-----------------|
|         |         | P2 NOMINAL      |     | In A | OPERATING BY INVERTER |                         |       |      |       |      |       |                 |
|         |         | kW              | HP  |      |                       |                         |       |      |       |      |       |                 |
| SS7A 01 | 6GF     | 4               | 5,5 | 10,6 | ●                     | ●                       | 1171  | 600  | 571   | 141  | 172   | 65,4            |
| SS7A 02 | 6GF     | 7,5             | 10  | 18   | ●                     | ●                       | 1359  | 660  | 699   | 141  | 172   | 75,2            |
|         | TR6     | 7,5             | 10  | 18   | ○                     | ●                       | 1536  | 837  | 699   | 144  | 172   | 83              |
| SS7A 03 | 6GF     | 11              | 15  | 25,5 | ●                     | ●                       | 1557  | 730  | 827   | 141  | 172   | 87              |
|         | TR6     | 11              | 15  | 25   | ○                     | ●                       | 1724  | 897  | 827   | 144  | 172   | 94              |
| SS7A 04 | 6GF     | 15              | 20  | 33,4 | ●                     | ●                       | 1740  | 785  | 955   | 141  | 172   | 97              |
|         | TR6     | 15              | 20  | 32   | ○                     | ●                       | 1952  | 997  | 955   | 144  | 172   | 115             |
| SS7A 05 | 6GF     | 18,5            | 25  | 41   | ●                     | ●                       | 1943  | 860  | 1083  | 141  | 172   | 109             |
|         | TR6     | 18,5            | 25  | 39   | ○                     | ●                       | 2140  | 1057 | 1083  | 144  | 172   | 125             |
| SS7A 06 | 6GF     | 22              | 30  | 47   | ●                     | ●                       | 2131  | 920  | 1211  | 141  | 172   | 116,6           |
|         | TR6     | 22              | 30  | 49   | ○                     | ●                       | 2298  | 1087 | 1211  | 144  | 172   | 141             |
| SS7A 07 | 6GF     | 30              | 40  | 61,5 | ●                     | ●                       | 2389  | 1050 | 1339  | 141  | 172   | 136,8           |
|         | TR6     | 26              | 35  | 58   | ○                     | ●                       | 2496  | 1157 | 1339  | 144  | 172   | 155             |
| SS7A 08 | 6GF     | 30              | 40  | 61,5 | ●                     | ●                       | 2517  | 1050 | 1467  | 141  | 172   | 140,8           |
|         | TR6     | 30              | 40  | 65   | ○                     | ●                       | 2679  | 1212 | 1467  | 144  | 172   | 164             |
| SS7A 09 | 6GF     | 37              | 50  | 79,3 | ●                     | ●                       | 2775  | 1180 | 1595  | 141  | 172   | 156,8           |
|         | TR6     | 37              | 50  | 80   | ○                     | ●                       | 2907  | 1312 | 1595  | 144  | 172   | 178             |
| SS7A 10 | 6GF     | 37              | 50  | 79,9 | ●                     | ●                       | 2903  | 1180 | 1723  | 141  | 172   | 160,8           |
|         | TR6     | 37              | 50  | 80   | ○                     | ●                       | 3035  | 1312 | 1723  | 144  | 172   | 182             |
| SS7A 11 | TR8     | 45              | 60  | 92   | ○                     | ●                       | 3121  | 1270 | 1851  | 192  | 172   | 243             |
| SS7A 12 | TR8     | 45              | 60  | 92   | ○                     | ●                       | 3249  | 1270 | 1979  | 192  | 172   | 247             |
| SS7A 13 | TR8     | 55              | 75  | 109  | ○                     | ●                       | 3457  | 1350 | 2107  | 192  | 172   | 266             |
| SS7A 14 | TR8     | 55              | 75  | 109  | ○                     | ●                       | 3585  | 1350 | 2235  | 192  | 172   | 270             |
| SS7A 15 | TR8     | 55              | 75  | 109  | ○                     | ●                       | 3713  | 1350 | 2363  | 192  | 172   | 274             |
| SS7A 16 | TR8     | 63              | 85  | 126  | ○                     | ●                       | 3981  | 1490 | 2491  | 192  | 172   | 304             |
| SS7A 17 | TR8     | 75              | 100 | 145  | ○                     | ●                       | 4209  | 1590 | 2619  | 192  | 172   | 326             |
| SS7A 18 | TR8     | 75              | 100 | 145  | ○                     | ●                       | 4337  | 1590 | 2747  | 192  | 172   | 330             |
| SS7A 19 | TR8     | 75              | 100 | 145  | ○                     | ●                       | 4465  | 1590 | 2875  | 192  | 172   | 334             |
| SS7A 20 | TR8     | 75              | 100 | 145  | ○                     | ●                       | 4593  | 1590 | 3003  | 192  | 172   | 338             |
| SS7A 21 | TR8     | 75              | 100 | 145  | ○                     | ●                       | 4721  | 1590 | 3131  | 192  | 172   | 342             |
| SS7A 22 | TR8     | 92              | 125 | 177  | ○                     | ●                       | 5089  | 1830 | 3259  | 192  | 172   | 392             |

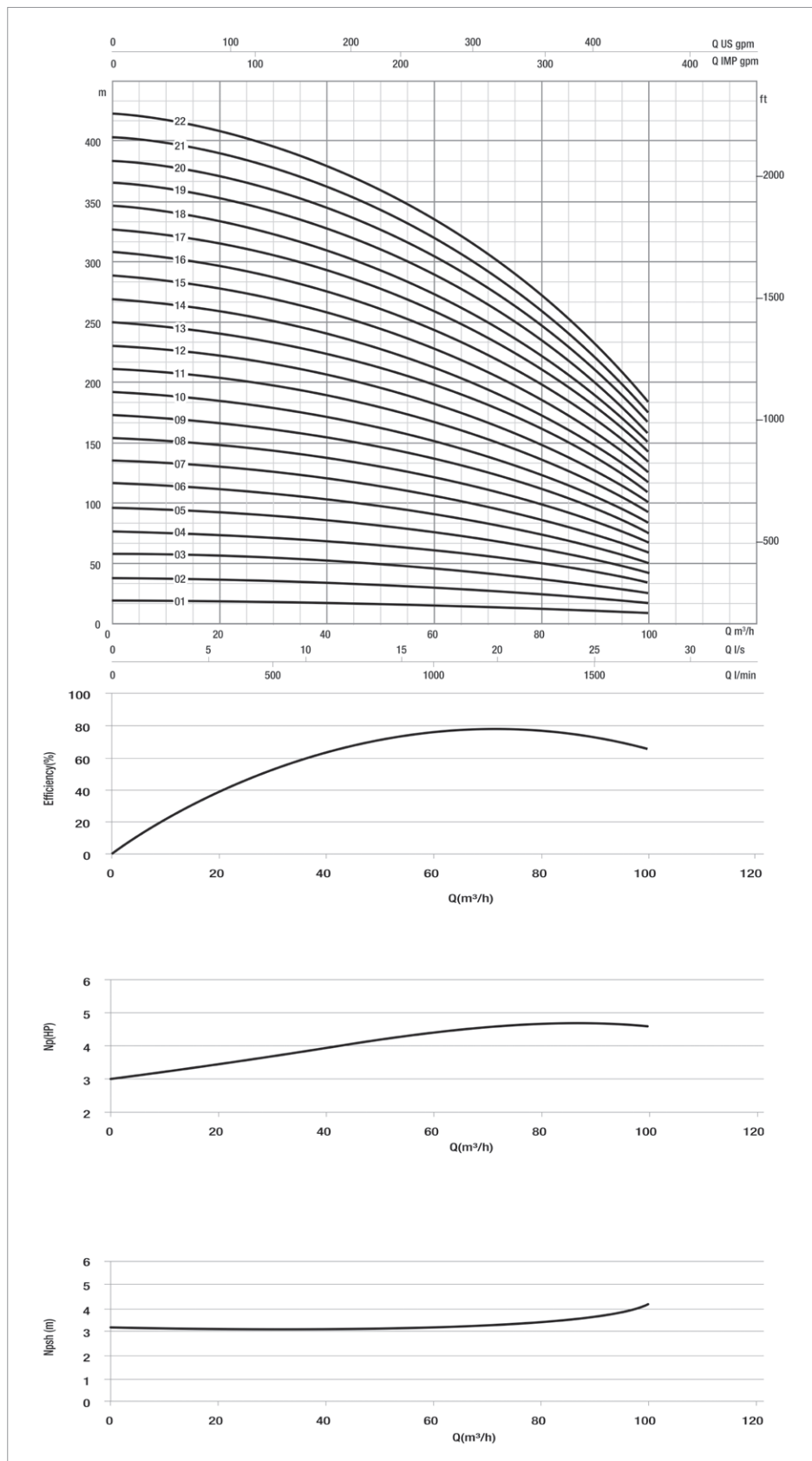
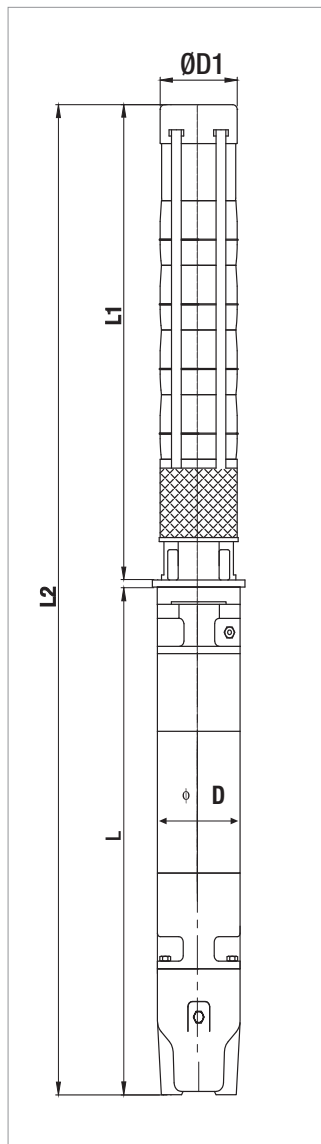
\* Motor 6GF: 6" canned submersible motors.  
 Motor TR: 6"-8" rewindable submersible motors.

|   |                       |
|---|-----------------------|
| ● | Allowed               |
| ○ | Only PE2 + PA version |

# SS7A

## SUBMERSIBLE ELECTRIC PUMPS 7"

The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.



### PERFORMANCE 50 Hz - 2 POLES

| MODEL   | ELECTRICAL DATA |     | HYDRAULIC DATA     |     |       |       |       |      |        |        |      |        |        | STANDARD MOTOR COUPLING |
|---------|-----------------|-----|--------------------|-----|-------|-------|-------|------|--------|--------|------|--------|--------|-------------------------|
|         | P2 NOMINAL      |     | Q=m <sup>3</sup> h | 0   | 20    | 40    | 50    | 60   | 70     | 80     | 90   | 100    | 115    |                         |
|         | kW              | HP  | Q=l/min            | 0   | 333,3 | 666,6 | 833,3 | 1000 | 1166,6 | 1333,3 | 1500 | 1666,6 | 1916,6 |                         |
| SS7B 01 | 5,5             | 7,5 | H<br>(m)           | 21  | 21    | 20    | 20    | 19   | 18     | 17     | 16   | 14     | 11     | 6"                      |
| SS7B 02 | 11              | 15  |                    | 43  | 43    | 41    | 39    | 38   | 36     | 34     | 32   | 28     | 21     | 6"                      |
| SS7B 03 | 15              | 20  |                    | 64  | 64    | 61    | 59    | 56   | 54     | 51     | 47   | 43     | 32     | 6"                      |
| SS7B 04 | 22              | 30  |                    | 85  | 86    | 81    | 78    | 75   | 72     | 68     | 63   | 57     | 43     | 6"                      |
| SS7B 05 | 30              | 40  |                    | 106 | 107   | 101   | 98    | 94   | 90     | 85     | 79   | 71     | 54     | 6"                      |
| SS7B 06 | 37              | 50  |                    | 128 | 128   | 122   | 117   | 113  | 108    | 102    | 95   | 85     | 64     | 6"                      |
| SS7B 07 | 37              | 50  |                    | 149 | 150   | 142   | 137   | 132  | 126    | 119    | 111  | 100    | 75     | 6"                      |
| SS7B 08 | 45              | 60  |                    | 170 | 171   | 162   | 156   | 150  | 144    | 136    | 126  | 114    | 86     | 8"                      |
| SS7B 09 | 45              | 60  |                    | 192 | 193   | 183   | 176   | 169  | 162    | 153    | 142  | 128    | 96     | 8"                      |
| SS7B 10 | 55              | 75  |                    | 213 | 214   | 203   | 196   | 188  | 180    | 170    | 158  | 142    | 107    | 8"                      |
| SS7B 11 | 63              | 85  |                    | 234 | 235   | 223   | 215   | 207  | 197    | 187    | 174  | 157    | 118    | 8"                      |
| SS7B 12 | 75              | 100 |                    | 256 | 257   | 243   | 235   | 225  | 215    | 204    | 190  | 171    | 128    | 8"                      |
| SS7B 13 | 75              | 100 |                    | 277 | 278   | 264   | 254   | 244  | 233    | 221    | 206  | 185    | 139    | 8"                      |
| SS7B 14 | 75              | 100 |                    | 298 | 300   | 284   | 274   | 263  | 251    | 238    | 221  | 199    | 150    | 8"                      |
| SS7B 15 | 92              | 125 |                    | 319 | 321   | 304   | 293   | 282  | 269    | 255    | 237  | 214    | 161    | 8"                      |
| SS7B 16 | 92              | 125 |                    | 341 | 342   | 325   | 313   | 301  | 287    | 272    | 253  | 228    | 171    | 8"                      |
| SS7B 17 | 92              | 125 |                    | 362 | 364   | 345   | 332   | 319  | 305    | 289    | 269  | 242    | 182    | 8"                      |
| SS7B 18 | 110             | 150 |                    | 383 | 385   | 365   | 352   | 338  | 323    | 306    | 285  | 256    | 193    | 8"                      |
| SS7B 19 | 110             | 150 |                    | 405 | 407   | 385   | 372   | 357  | 341    | 323    | 300  | 271    | 203    | 8"                      |
| SS7B 20 | 110             | 150 |                    | 426 | 428   | 406   | 391   | 376  | 359    | 340    | 316  | 285    | 214    | 8"                      |

## ELECTRICAL DATA AND DIMENSIONS

| MODEL   | MOTOR * | ELECTRICAL DATA |     |      |                       | HORIZONTAL INSTALLATION | L2 mm | L mm | L1 mm | D mm | D1 mm | TOTAL WEIGHT Kg |
|---------|---------|-----------------|-----|------|-----------------------|-------------------------|-------|------|-------|------|-------|-----------------|
|         |         | P2 NOMINAL      |     | In A | OPERATING BY INVERTER |                         |       |      |       |      |       |                 |
|         |         | kW              | HP  |      |                       |                         |       |      |       |      |       |                 |
| SS7B 01 | 6GF     | 5,5             | 7,5 | 14   | ●                     | ●                       | 1202  | 631  | 571   | 141  | 172   | 68,6            |
|         | TR6     | 5,5             | 7,5 | 13   | ○                     | ●                       | 1378  | 807  | 571   | 144  | 172   | 76              |
| SS7B 02 | 6GF     | 11              | 15  | 25,5 | ●                     | ●                       | 1429  | 730  | 699   | 141  | 172   | 81,8            |
|         | TR6     | 11              | 15  | 25   | ○                     | ●                       | 1596  | 897  | 699   | 144  | 172   | 90              |
| SS7B 03 | 6GF     | 15              | 20  | 33,4 | ●                     | ●                       | 1612  | 785  | 827   | 141  | 172   | 93              |
|         | TR6     | 15              | 20  | 32   | ○                     | ●                       | 1824  | 997  | 827   | 144  | 172   | 111             |
| SS7B 04 | 6GF     | 22              | 30  | 47   | ●                     | ●                       | 1875  | 920  | 955   | 141  | 172   | 108,6           |
|         | TR6     | 22              | 30  | 49   | ○                     | ●                       | 2042  | 1087 | 955   | 144  | 172   | 133             |
| SS7B 05 | 6GF     | 30              | 40  | 61,5 | ●                     | ●                       | 2133  | 1050 | 1083  | 141  | 172   | 128,8           |
|         | TR6     | 30              | 40  | 65   | ○                     | ●                       | 2295  | 1212 | 1083  | 144  | 172   | 152             |
| SS7B 06 | 6GF     | 37              | 50  | 79,3 | ●                     | ●                       | 2391  | 1180 | 1211  | 141  | 172   | 144,8           |
|         | TR6     | 37              | 50  | 80   | ○                     | ●                       | 2523  | 1312 | 1211  | 144  | 172   | 166             |
| SS7B 07 | 6GF     | 37              | 50  | 79,3 | ●                     | ●                       | 2519  | 1180 | 1339  | 141  | 172   | 148,8           |
|         | TR6     | 37              | 50  | 80   | ○                     | ●                       | 2651  | 1312 | 1339  | 144  | 172   | 170             |
| SS7B 08 | TR8     | 45              | 60  | 92   | ○                     | ●                       | 2737  | 1270 | 1467  | 192  | 172   | 231             |
| SS7B 09 | TR8     | 45              | 60  | 92   | ○                     | ●                       | 2865  | 1270 | 1595  | 192  | 172   | 235             |
| SS7B 10 | TR8     | 55              | 75  | 109  | ○                     | ●                       | 3073  | 1350 | 1723  | 192  | 172   | 254             |
| SS7B 11 | TR8     | 63              | 85  | 126  | ○                     | ●                       | 3341  | 1490 | 1851  | 192  | 172   | 284             |
| SS7B 12 | TR8     | 75              | 100 | 145  | ○                     | ●                       | 3569  | 1590 | 1979  | 192  | 172   | 307             |
| SS7B 13 | TR8     | 75              | 100 | 145  | ○                     | ●                       | 3697  | 1590 | 2107  | 192  | 172   | 311             |
| SS7B 14 | TR8     | 75              | 100 | 145  | ○                     | ●                       | 3825  | 1590 | 2235  | 192  | 172   | 315             |
| SS7B 15 | TR8     | 92              | 125 | 177  | ○                     | ●                       | 4193  | 1830 | 2363  | 192  | 172   | 365             |
| SS7B 16 | TR8     | 92              | 125 | 177  | ○                     | ●                       | 4321  | 1830 | 2491  | 192  | 172   | 369             |
| SS7B 17 | TR8     | 92              | 125 | 177  | ○                     | ●                       | 4449  | 1830 | 2619  | 192  | 172   | 373             |
| SS7B 18 | TR8     | 110             | 150 | 213  | ○                     | ●                       | 4807  | 2060 | 2747  | 192  | 172   | 427             |
| SS7B 19 | TR8     | 110             | 150 | 213  | ○                     | ●                       | 4935  | 2060 | 2875  | 192  | 172   | 431             |
| SS7B 20 | TR8     | 110             | 150 | 213  | ○                     | ●                       | 5063  | 2060 | 3003  | 192  | 172   | 435             |

\* Motor 6GF: 6" canned submersible motors.

Motor TR: 6"-8" rewindable submersible motors.

|   |                       |
|---|-----------------------|
| ● | Allowed               |
| ○ | Only PE2 + PA version |

# SS7B

## SUBMERSIBLE ELECTRIC PUMPS 7"

The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

