

|              |             |           |
|--------------|-------------|-----------|
| Customer     | Date        | 1/10/2019 |
| Contact      | Project     |           |
| Phone number | Project no. |           |
| Email        |             |           |

## 15SV11F110T

### Operating data

|                           |                     |                           |                          |
|---------------------------|---------------------|---------------------------|--------------------------|
| Pump type                 | Single head pump    | Fluid                     | Water                    |
| No. of pumps / Reserve    | 1 / 0               | Operating temperature t A | °C 4                     |
| Nominal flow              | m <sup>3</sup> /h 0 | pH-value at t A           | 7                        |
| Nominal head              | m 0                 | Density at t A            | kg/m <sup>3</sup> 1000   |
| Static head               | m 0                 | Kin. viscosity at t A     | mm <sup>2</sup> /s 1.569 |
| Inlet pressure            | kPa 0               | Vapor pressure at t A     | kPa 100                  |
| Environmental temperature | °C 20               | Solids                    | 0                        |
| Available system NPSH     | m 0                 | Altitude                  | m 0                      |

### Pump data

|                       |                 |                  |                           |
|-----------------------|-----------------|------------------|---------------------------|
| Make                  | Lowara          | Nominal          | m <sup>3</sup> /h ( )     |
| Speed                 | rpm 2900        | Flow             | Max- m <sup>3</sup> /h 24 |
| Number of stages      | 11              |                  | Min- m <sup>3</sup> /h    |
| Max. casing pressure  | kPa             |                  | Nominal m                 |
| Max. working pressure | kPa 1592.2      | Head             | at Qmax m 84.7            |
| Head H(Q=0)           | m 160           |                  | at Qmin m 162.3           |
| Weight                | kg 109          | Shaft power      | kW ( )                    |
|                       | Max. mm 105     | Max. shaft power | kW 8.7                    |
| Impeller R            | designed mm 105 | Efficiency       | %                         |
|                       | Min. mm 105     | NPSH 3%          | m                         |

### Pump Materials

|                          |                            |
|--------------------------|----------------------------|
| Pump body                | Stainless steel / AISI 304 |
| IMPELLER                 | Stainless steel / AISI 304 |
| DIFFUSER                 | Stainless steel / AISI 304 |
| Outer sleeve             | Stainless steel / AISI 304 |
| SHAFT                    | Stainless steel / AISI 304 |
| ADAPTER                  | Cast iron                  |
| Base                     | Aluminium                  |
| COUPLING                 | Aluminium                  |
| SEAL HOUSING             | Stainless steel / AISI 304 |
| Coupling protection      | Stainless steel / AISI 304 |
| Shaft sleeve and bushing | Tungsten carbide           |
| Fill / drain plugs       | Stainless steel / AISI 304 |
| Tie rods                 | Galvanized steel           |
| WEAR RING                | Technopolymer PPS          |

### Shaft Seal

|                               |                          |
|-------------------------------|--------------------------|
| e-SV Mechanical seal          | Roten                    |
| e-SV - Uniten (-30 / +120 °C) |                          |
| 1 - Rotating part             | Silicon Carbide          |
| 2 - Stationary part           | Resin impregnated carbon |
| 3 - Elastomers                | EPDM                     |
| 4 - Springs                   | AISI 316                 |
| 5 - Other components          | AISI 316                 |

### Motor data

|                  |                                      |                      |       |            |          |                  |          |
|------------------|--------------------------------------|----------------------|-------|------------|----------|------------------|----------|
| Manufacturer     | Lowara                               | Electric voltage     | 380 V | Speed      | 2930 rpm | Insulation class | 155 (F)  |
| Specific design  | IE3 Three phase surface motor (e-SV) |                      |       | Frame size | 160R     | Colour           | RAL 5010 |
| Type             | PLM160RB5/3110 E3 (380-415/660-690V) |                      |       |            |          |                  |          |
| Rated power      | 11 kW                                | Degree of protection | IP55  |            |          |                  |          |
| Electric current | 20.6 A                               |                      |       |            |          |                  |          |

### Remarks:

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## 15SV11F110T

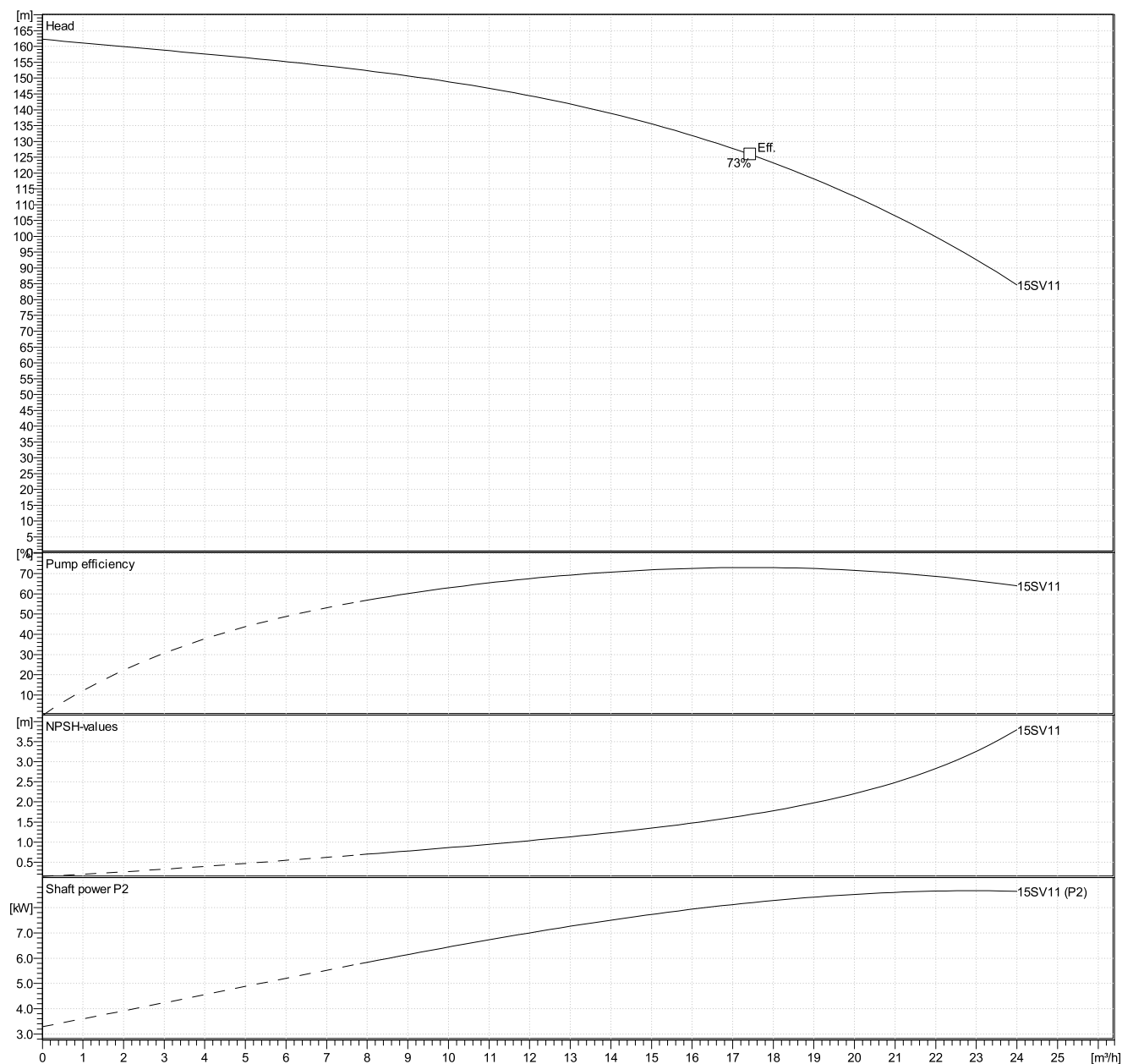
### Hydraulic data

| Operating Data Specification |                     | Hydraulic data (duty point) |  | Impeller design |          |
|------------------------------|---------------------|-----------------------------|--|-----------------|----------|
| Flow                         | 0 m <sup>3</sup> /h | Flow                        |  | Impeller R      | 105 mm   |
| Head                         | 0 m                 | Head                        |  | Frequency       | 50 Hz    |
| Static head                  | 0 m                 | MEI >=0,7                   |  | Speed           | 2900 rpm |

#### Power datas referred to:

Water [100%] ; 4°C; 1000kg/m<sup>3</sup>; 1.57mm<sup>2</sup>/s

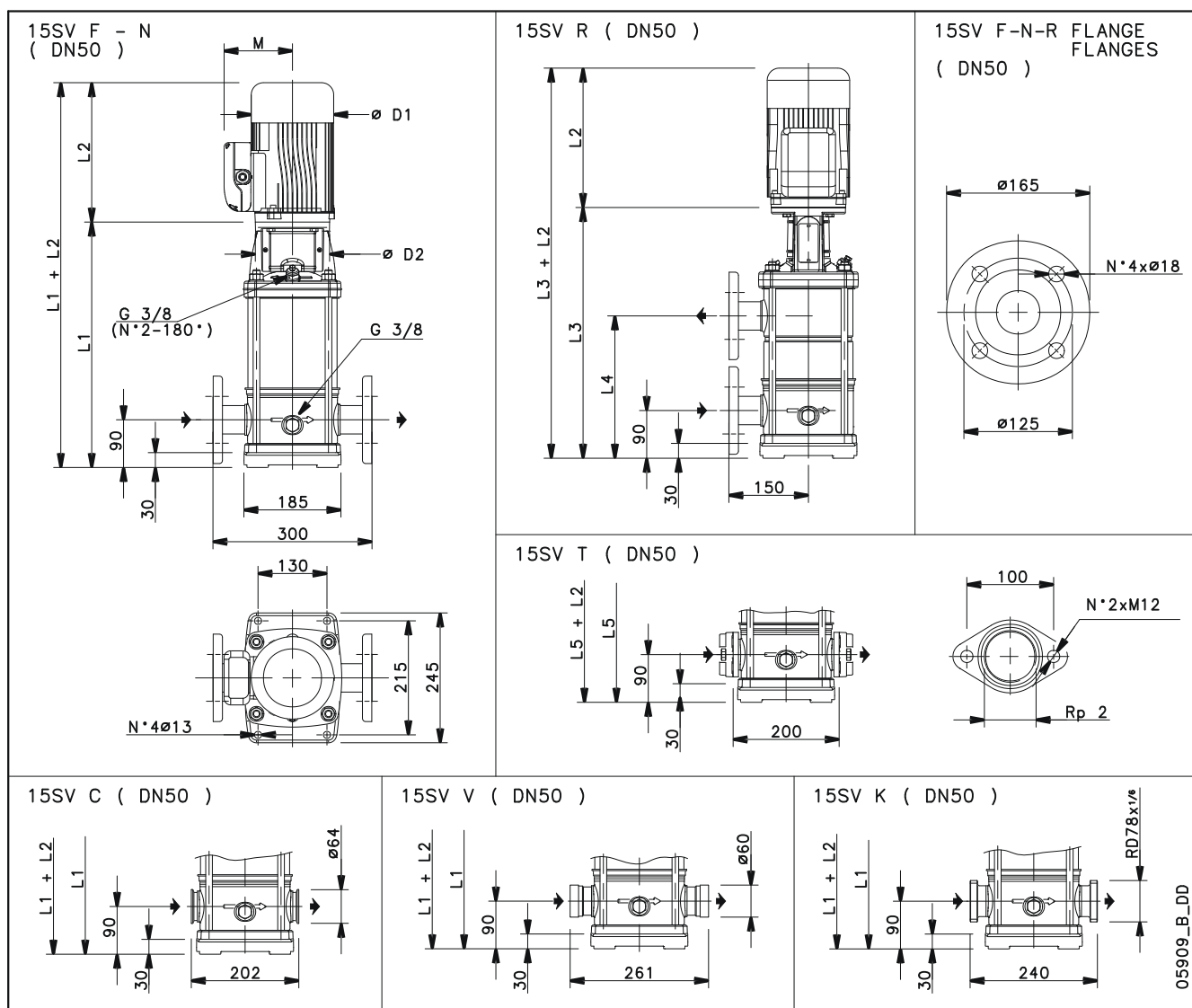
Performance according to ISO 9906:2012 – Grade 3B



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## 15SV11F110T

### Drawing



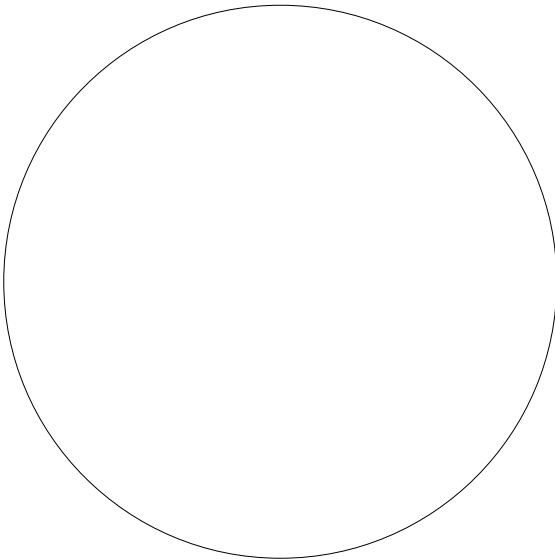
### Dimensions mm

|    |     |  |  |  |  |        |    |
|----|-----|--|--|--|--|--------|----|
| D1 | 256 |  |  |  |  | Weight |    |
| D2 | 350 |  |  |  |  | 109    | kg |
| L1 | 948 |  |  |  |  |        |    |
| L2 | 428 |  |  |  |  |        |    |
| L3 | 948 |  |  |  |  |        |    |
| L4 | 637 |  |  |  |  |        |    |
| M  | 191 |  |  |  |  |        |    |

## 15SV11F110T

|                       |          |                                          |     |
|-----------------------|----------|------------------------------------------|-----|
| Total lifetime        | 15       | Inflation rate (rate of price increases) | 2 % |
| Annual operating time | 5600     | Interest rate (for investment)           | 3 % |
| Energy cost per kWh   | 0.00 GBP |                                          |     |
| Power input P1        |          |                                          |     |

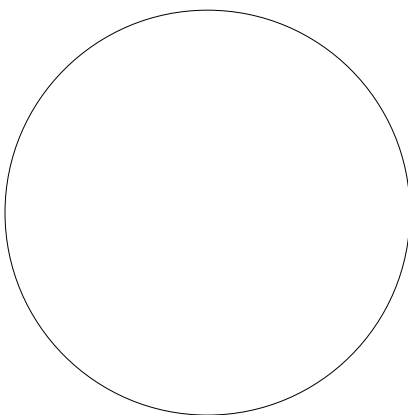
### Total costs



GBP

|    |          |                              |
|----|----------|------------------------------|
| 0% | 0.00 GBP | Energy                       |
| 0% | 0.00 GBP | Investment costs             |
| 0% | 0.00 GBP | Installation & commissioning |
| 0% | 0.00 GBP | Operating cost               |
| 0% | 0.00 GBP | Maintenance & repair         |
| 0% | 0.00 GBP | Downtime                     |
| 0% | 0.00 GBP | Environmental                |
| 0% | 0.00 GBP | Decommissioning              |

### First year costs



GBP

|    |          |                                         |
|----|----------|-----------------------------------------|
| 0% | 0.00 GBP | Energy (1st year)                       |
| 0% | 0.00 GBP | Investment costs (1st year)             |
| 0% | 0.00 GBP | Installation & commissioning (1st year) |
| 0% | 0.00 GBP | Operating cost (1st year)               |
| 0% | 0.00 GBP | Maintenance & repair (1st year)         |
| 0% | 0.00 GBP | Downtime (1st year)                     |
| 0% | 0.00 GBP | Environmental (1st year)                |
| 0% | 0.00 GBP | Decommissioning (1st year)              |