

# Technical Data

Pump Name

3LS 80-160/15R

|          |                 |           |
|----------|-----------------|-----------|
| Customer | Date 10.06.2024 | Company   |
| Contact  | Item no.        | Issued by |
| Phone    | Project         | Phone     |
| E-mail   | Project ID      | E-mail    |

## Requested data

|   |                           |                   |                       |       |
|---|---------------------------|-------------------|-----------------------|-------|
| 1 | Pump type                 | CENTRIFUGAL PUMPS | Fluid                 | Water |
| 2 | Number of pumps / Reserve | 1 / 0             | Liquid temperature °C | 20    |
| 3 | Flow m³/h                 |                   | Kin. viscosity cSt    | 1.005 |
| 4 | Head m                    |                   | Vapour pressure kPa   | 2.34  |
| 5 | Geodetic head m           |                   | PH value              |       |
| 6 | Inlet pressure (pin) kPa  | 0                 | Density kg/m³         | 998.3 |
| 7 | Available system NPSH     |                   | Solids Weight %       | 0     |
| 8 | Ambient temperature °C    | 20                |                       |       |

## Pump

|    |                           |                                |                                      |                  |
|----|---------------------------|--------------------------------|--------------------------------------|------------------|
| 9  | Pump Name                 | 3LS 80-160/15R                 | Frequency Hz                         | 50               |
| 10 | Design                    | CENTRIFUGAL PUMPS              | Installation type                    | STANDARD         |
| 11 | Manufacturer              | EBARA                          | Impeller Diameter                    | Max. mm 160      |
| 12 | Speed rpm                 | 2900                           |                                      | Designed mm 160  |
| 13 | No. of Stage              | 1                              |                                      | Min. mm 160      |
| 14 | Connection Suction side   | DIN 2532                       | Flow                                 | Operating m³/h   |
| 15 | Connection Discharge side | DIN 2532                       |                                      | Max- m³/h 216    |
| 16 | Max Working Pressure kPa  | 1000                           |                                      | Min- m³/h 78     |
| 17 | Shut-off head kPa         | 313.38                         | Head                                 | Operating m      |
| 18 | Total weight kg           | See the table of "Dimensions". |                                      | - (Qmax.) m 14.5 |
| 19 | Shaft power kW            |                                |                                      | - (Qmin.) m 30.5 |
| 20 |                           |                                | Max. Shaft Power at max. impeller kW | 12.80            |
| 21 | Required pump NPSH m      |                                | Efficiency %                         |                  |

## Materials

|    |          |           |  |  |
|----|----------|-----------|--|--|
| 22 | Impeller | CF8M      |  |  |
| 23 | Casing   | CF8M      |  |  |
| 24 | Shaft    | AISI 316L |  |  |
| 25 |          |           |  |  |
| 26 |          |           |  |  |
| 27 |          |           |  |  |

## Motor

|    |                      |                                    |                    |       |
|----|----------------------|------------------------------------|--------------------|-------|
| 28 | Manufacturer         | LAFERT                             | Insulation class   | F     |
| 29 | Type                 | TEFC_3LS80-160/15R_400_Three Phase | Phases             | 3~    |
| 30 | Specific design      | IE3 / 50 Hz / Pole pairs 1         | Frame size         | 160 M |
| 31 | Rated power kW       | 15                                 | Weight kg          | 88.91 |
| 32 | Number of poles      | 2                                  | Electric voltage V | 400   |
| 33 | Speed rpm            | 2900                               | Electric current A | 26.7  |
| 34 | Degree of protection |                                    |                    |       |
| 35 |                      |                                    |                    |       |

## Remarks

# Performance Curve

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## Requested data

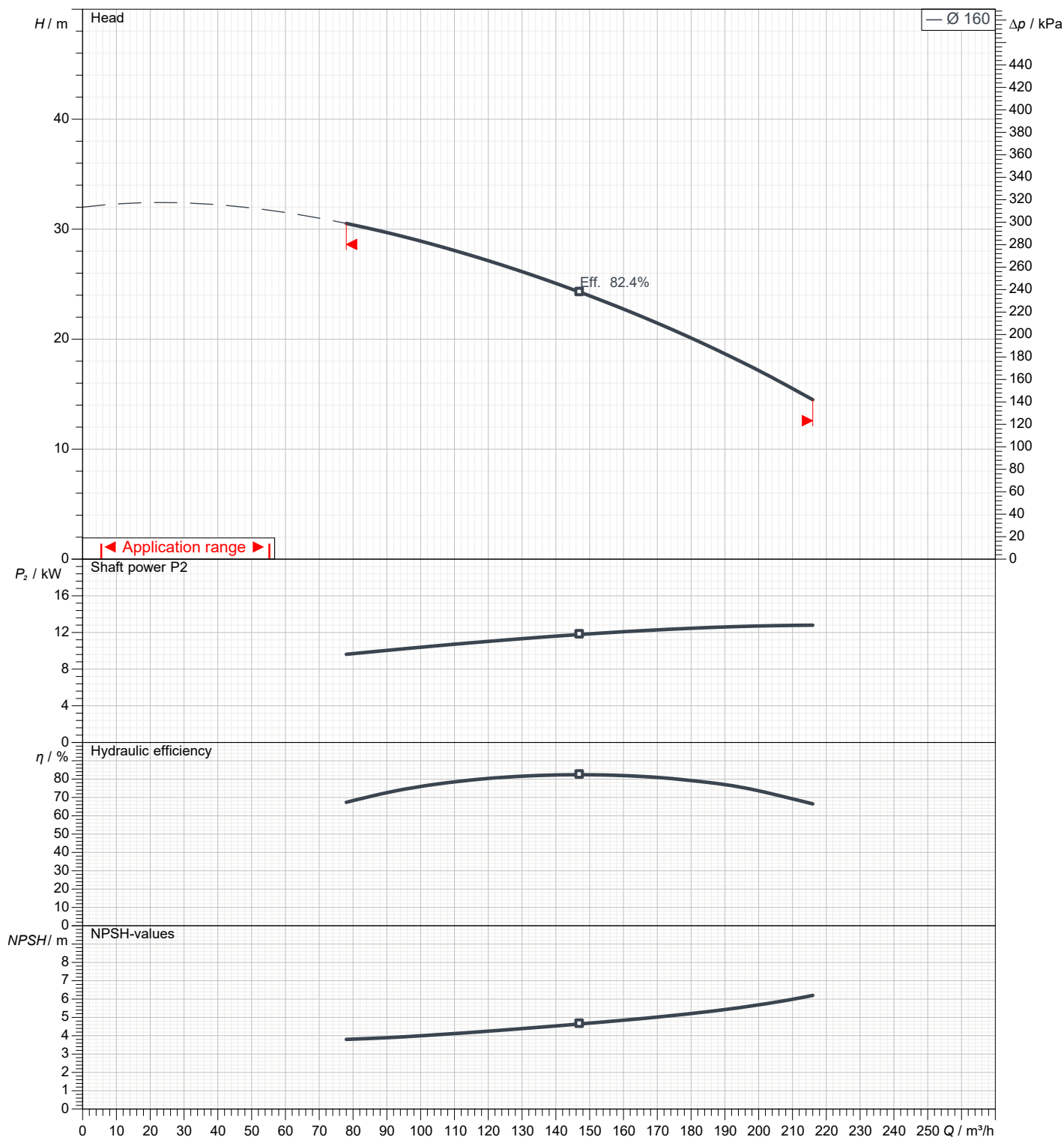
|   |               |      |  |
|---|---------------|------|--|
| 1 | Flow          | m³/h |  |
| 2 | Head          | m    |  |
| 3 | Geodetic head | m    |  |

## Pump

|                            |      |     |                 |     |      |
|----------------------------|------|-----|-----------------|-----|------|
| Operating flow             | m³/h |     | Frequency       | Hz  | 50   |
| Operating head             | m    |     | Number of poles |     | 2    |
| Impeller diameter designed | mm   | 160 | Speed           | rpm | 2900 |

Test standard: ISO 9906:2012 - Grade3B

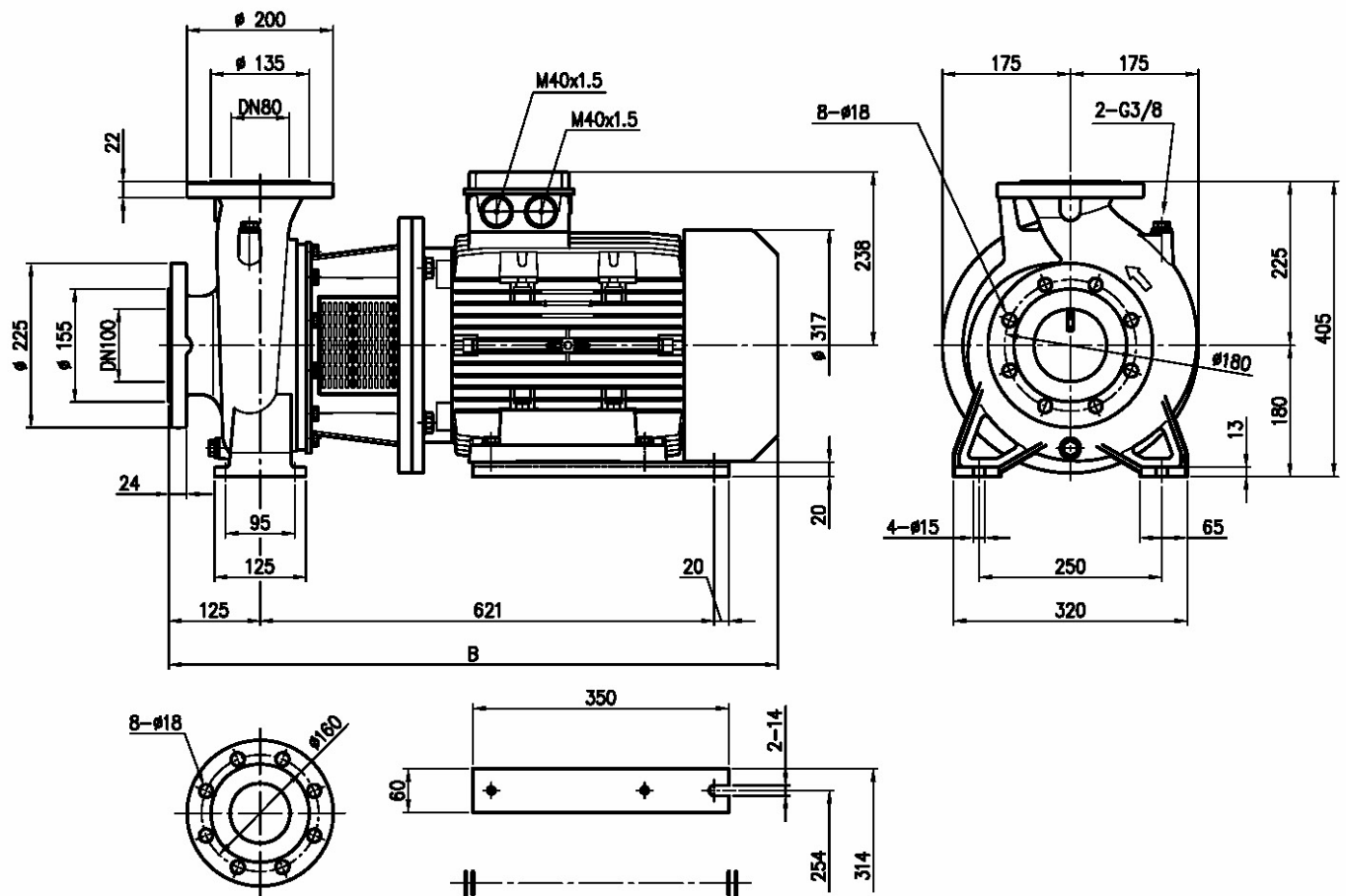
Water; 20°C; 998.3kg/m³; 1cSt



## Dimensions

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| Dimensions in |            | mm     |  |  |  |  |  |  |
|---------------|------------|--------|--|--|--|--|--|--|
| 1             | B          | 831    |  |  |  |  |  |  |
| 2             | G          | 317    |  |  |  |  |  |  |
| 3             | H3         | 238    |  |  |  |  |  |  |
| 4             | Weight P&M | 157 kg |  |  |  |  |  |  |
| 5             |            |        |  |  |  |  |  |  |
| 6             |            |        |  |  |  |  |  |  |
| 7             |            |        |  |  |  |  |  |  |
| 8             |            |        |  |  |  |  |  |  |
| 9             |            |        |  |  |  |  |  |  |
| 10            |            |        |  |  |  |  |  |  |
| 11            |            |        |  |  |  |  |  |  |
| 12            |            |        |  |  |  |  |  |  |
| 13            |            |        |  |  |  |  |  |  |
| 14            |            |        |  |  |  |  |  |  |
| 15            |            |        |  |  |  |  |  |  |

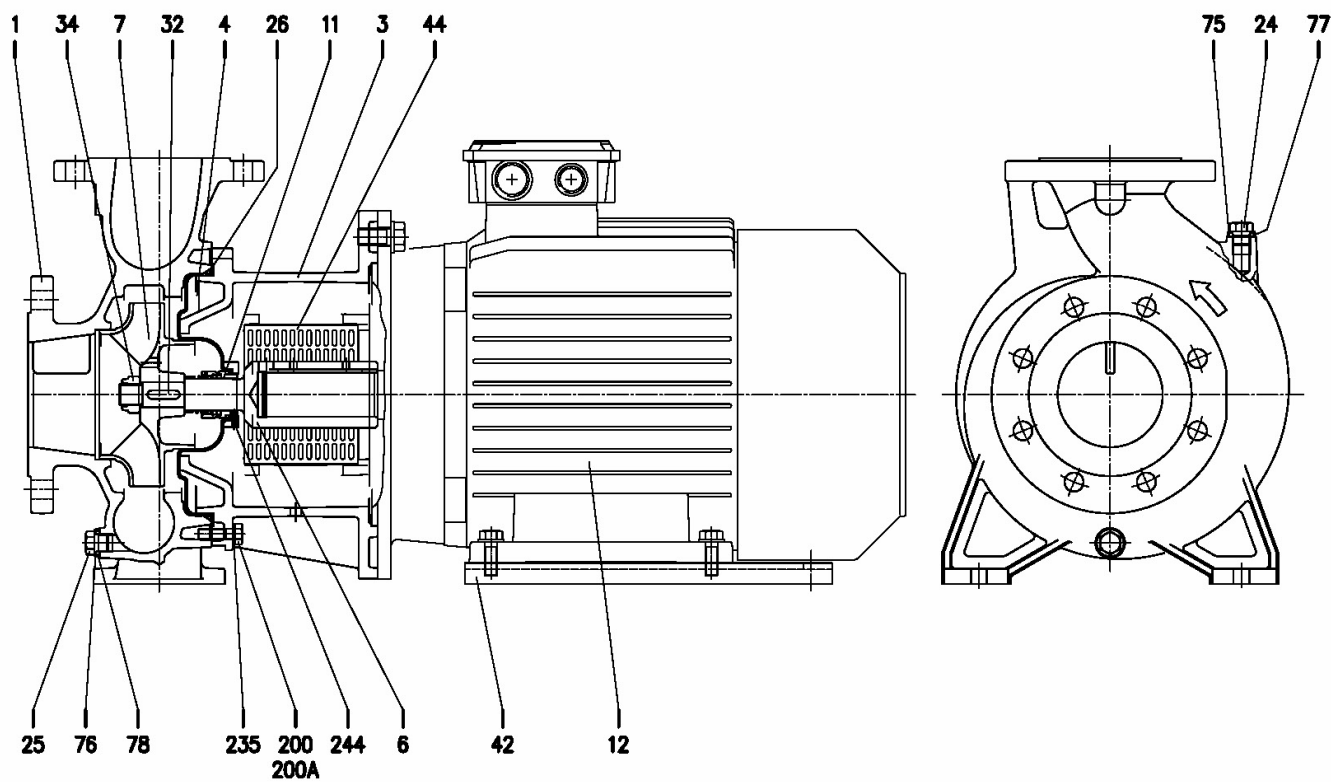
(1/3)

Construction

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(2/3)

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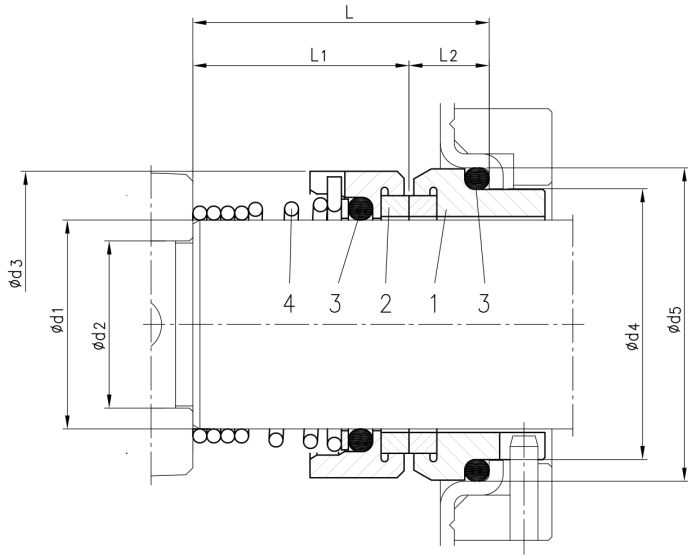
(3/3)

Construction

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| Version | Pump type                             | Dimensions |    |    |    |    |      |    |      | Material                     |                          |             |                           |
|---------|---------------------------------------|------------|----|----|----|----|------|----|------|------------------------------|--------------------------|-------------|---------------------------|
|         |                                       | d1         | d2 | d3 | d4 | d5 | L    | L1 | L2   | 1<br>Stationary<br>seal ring | 2<br>Rotary<br>seal ring | 3<br>Rubber | 4<br>Frame<br>+ spring    |
| L ø30   | 65-160/15<br>65-200/250<br>80-160/200 | 30         | 24 | 44 | 39 | 45 | 42.5 | 31 | 11.5 | SiC                          | SiC                      | FPM         | EN 1.4571<br>(AISI 316Ti) |
| L ø35   | 80-250                                | 35         | 29 | 49 | 44 | 50 | 42.5 | 31 | 11.5 |                              |                          |             |                           |