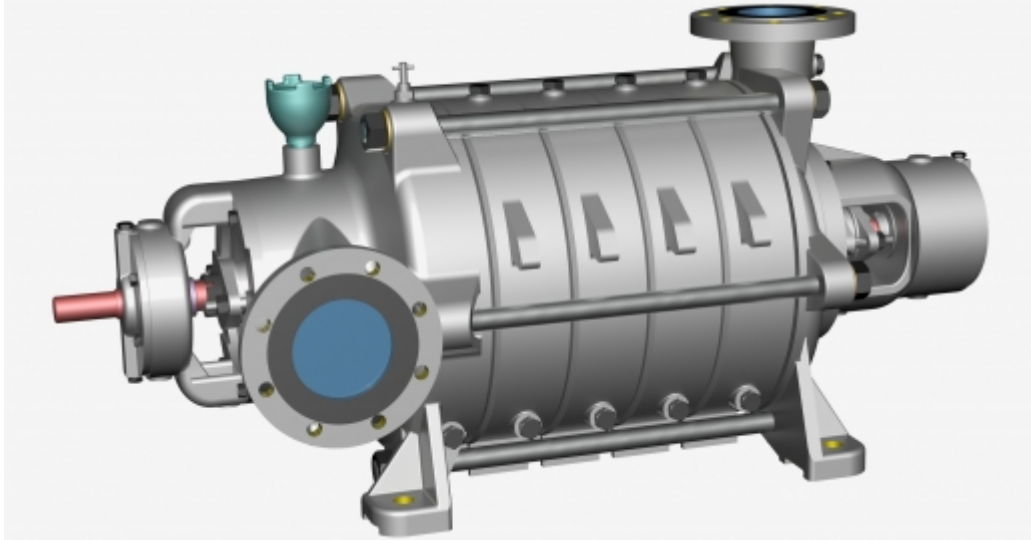


# WPS-100A



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**PUBLICATION - 2017-11-07**

## TYPICAL APPLICATIONS

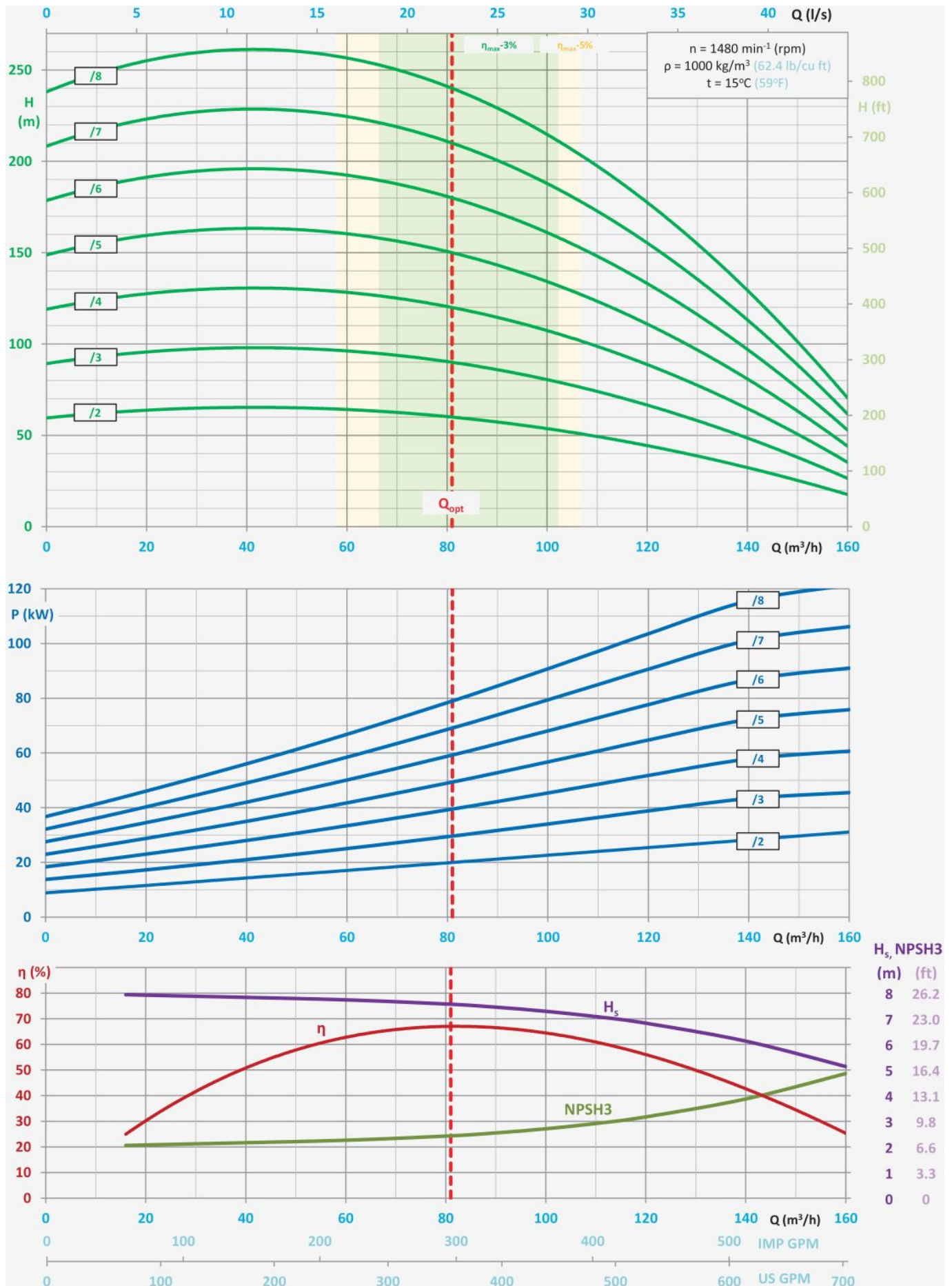
- pumping of pure or mechanically contaminated water with solids with the grain size of up to 2 mm,

- mining – longwall and auxiliary dewatering – WPS pumps intended to replace existing medium pressure drainage pumps,
  - water supply systems,
  - pressure boosting,
  - technological processes,
  - industrial systems,
  - filtration systems.
- 

## **KEY ADVANTAGES**

- long life ensured by the use of state-of-the-art corrosion-and erosion resistant materials,
  - special material execution DUPLEX especially resistant to difficult conditions,
  - no water cooling of bearings required due to the appropriate design of the relief of the pump axial forces,
  - silent and smooth operation,
  - connection dimensions in compliance with medium pressure drainage pumps,
  - inflow and suction operation,
  - compact and modern design,
  - maintenance-free operation with the use of mechanical sealing,
  - approved for operation in explosion-hazard zones – ATEX Ex I M2.
- 

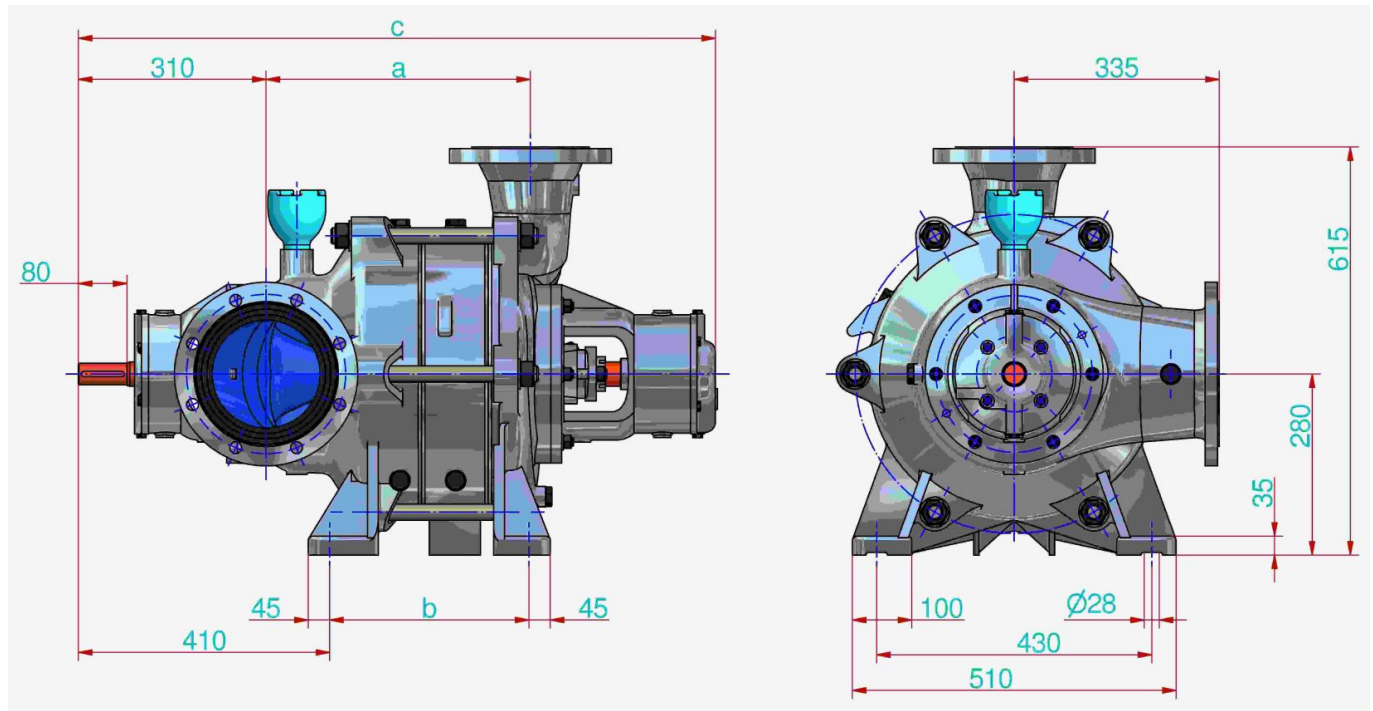
## **PUMP PERFORMANCE CURVE**



- $H = f(Q)$  - lift head acc. to rate flow,

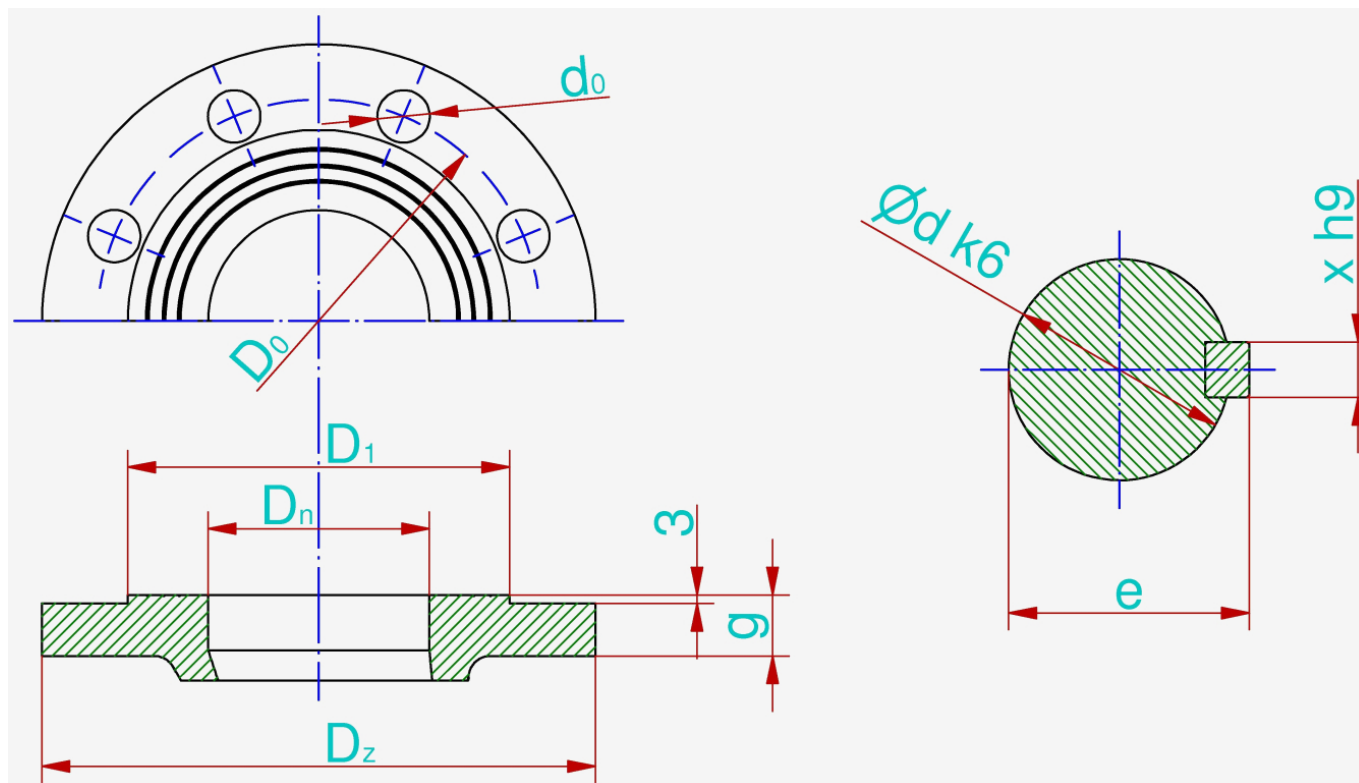
- $P = f(Q)$  - power input acc. to rate flow,
- $\eta = f(Q)$  - efficiency acc. to rate of flow,
- $H_s = f(Q)$  - allowable suction head acc. to rate of flow,
- $NPSH_3 = f(Q)$  - net positive suction head and rate of flow.

## MAIN DIMENSIONS OF PUMP



|          | Number of stages |       |       |       |       |       |       |    |
|----------|------------------|-------|-------|-------|-------|-------|-------|----|
|          | 2                | 3     | 4     | 5     | 6     | 7     | 8     |    |
| <b>a</b> | 291,5            | 398,5 | 505,5 | 612,5 | 719,5 | 826,5 | 933,5 | mm |
| <b>b</b> | 190              | 297   | 404   | 511   | 618   | 725   | 832   | mm |
| <b>c</b> | 944              | 1051  | 1158  | 1265  | 1372  | 1479  | 1586  | mm |

## CONNECTION SIZES OF PUMP

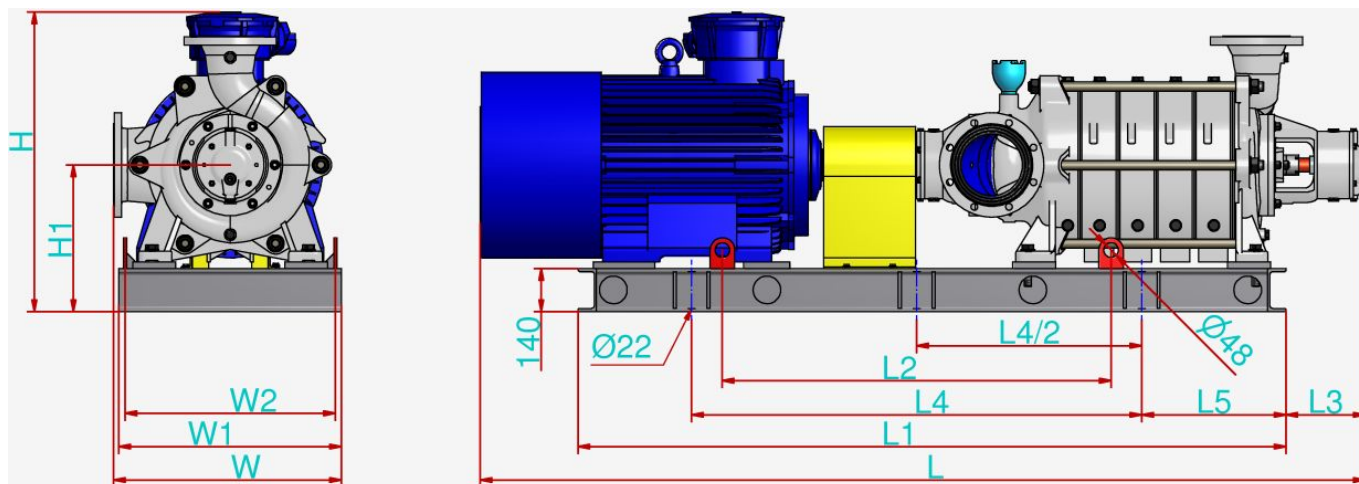


|                     | $D_n$ | Number of stages | $P_n$ | $D_f$ | $d_0$ | $g$ | $D_0$ | $D_1$ | $i$ | $d$ | $e$ | $x$ |
|---------------------|-------|------------------|-------|-------|-------|-----|-------|-------|-----|-----|-----|-----|
| Suction connector   | 125   | -                | 10    | 250   | 19    | 24  | 210   | 188   | 8   | -   | -   | -   |
| Discharge connector | 100   | 2÷6              | 25    | 235   | 23    | 26  | 190   | 162   | 8   | -   | -   | -   |
|                     |       | 5÷8              | 40    | 235   | 22    | 24  | 190   | 162   | 8   | -   | -   | -   |
| Shaft / coupling    | -     | -                | -     | -     | -     | -   | -     | -     | -   | 35  | 38  | 10  |
|                     | mm    | -                | bar   | mm    | mm    | mm  | mm    | mm    | -   | mm  | mm  | mm  |

The flanges are normally made in accordance with the standard PN-EN 1092-1 or PN-EN 1092-2.

## MAIN DIMENSIONS OF PUMP UNIT





|                                 | Number of stages |              |              |              |              |              |              |    |
|---------------------------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|----|
|                                 | 2                | 3            | 4            | 5            | 6            | 7            | 8            |    |
| <b>L</b>                        | 1810             | 1965         | 2075         | 2240         | 2500         | 2605         | 2710         | mm |
| <b>L<sub>1</sub></b>            | 1355             | 1500         | 1620         | 1785         | 1970         | 2080         | 2185         | mm |
| <b>L<sub>2</sub></b>            | 715              | 805          | 870          | 955          | 1060         | 1115         | 1170         | mm |
| <b>L<sub>3</sub></b>            | 244              |              |              |              |              |              |              | mm |
| <b>L<sub>4</sub></b>            | 910              | 1005         | 1065         | 1150         | 1260         | 1310         | 1365         | mm |
| <b>L<sub>5</sub></b>            | 195              | 250          | 305          | 355          | 410          | 465          | 515          | mm |
| <b>W</b>                        | 645              | 645          | 670          | 670          | 670          | 670          | 670          | mm |
| <b>W<sub>1</sub></b>            | 620              | 620          | 620          | 620          | 670          | 670          | 670          | mm |
| <b>W<sub>2</sub></b>            | 570              | 570          | 570          | 570          | 620          | 620          | 620          | mm |
| <b>H</b>                        | 820              | 840          | 840          | 860          | 910          | 910          | 910          | mm |
| <b>H<sub>1</sub></b>            | 420              | 420          | 420          | 420          | 420          | 420          | 420          | mm |
| <b>Weight</b>                   | 745              | 875          | 995          | 1155         | 1425         | 1505         | 1585         | kg |
| <b>Coupling type (Rex Viva)</b> | V150             | V150         | V170         | V190         | V215         | V215         | V215         | -  |
| <b>Motor type (Celma)</b>       | dSg 200L4-EP     | dSg 225S4-EP | dSg 225M4-EP | dSg 250M4-EP | dSg 280M4-EP | dSg 280M4-EP | dSg 280M4-EP | -  |
| <b>Motor power</b>              | 30               | 37           | 45           | 55           | 75           | 90           | 90           | kW |
| <b>Motor weight</b>             | 315              | 365          | 405          | 485          | 660          | 700          | 700          | kg |

**It is possible to produce pumps with parameters different than those presented in the tables and on the graphs per agreement with the manufacturer.**