# WPS-80

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2D

3D

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# 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.

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# 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.

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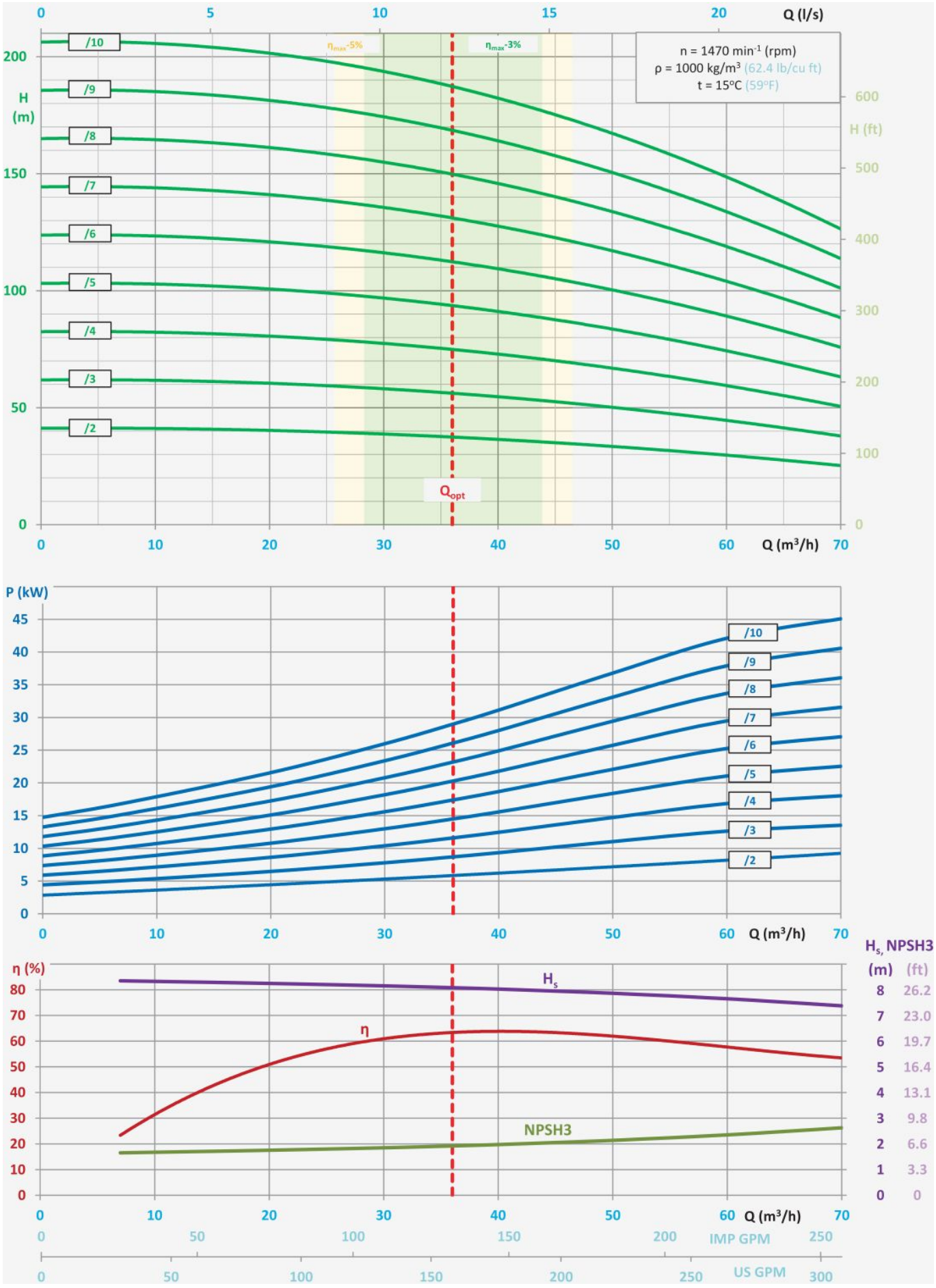
## PUMP PERFORMANCE CURVE




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

- P = f(Q) – power input acc. to rate flow,
- η = f(Q) – efficiency acc. to rate of flow,
- $H_S$ = f(Q) – allowable suction head acc. to rate of flow,
- NPSH3 = f(Q) – net positive suction head and rate of flow.

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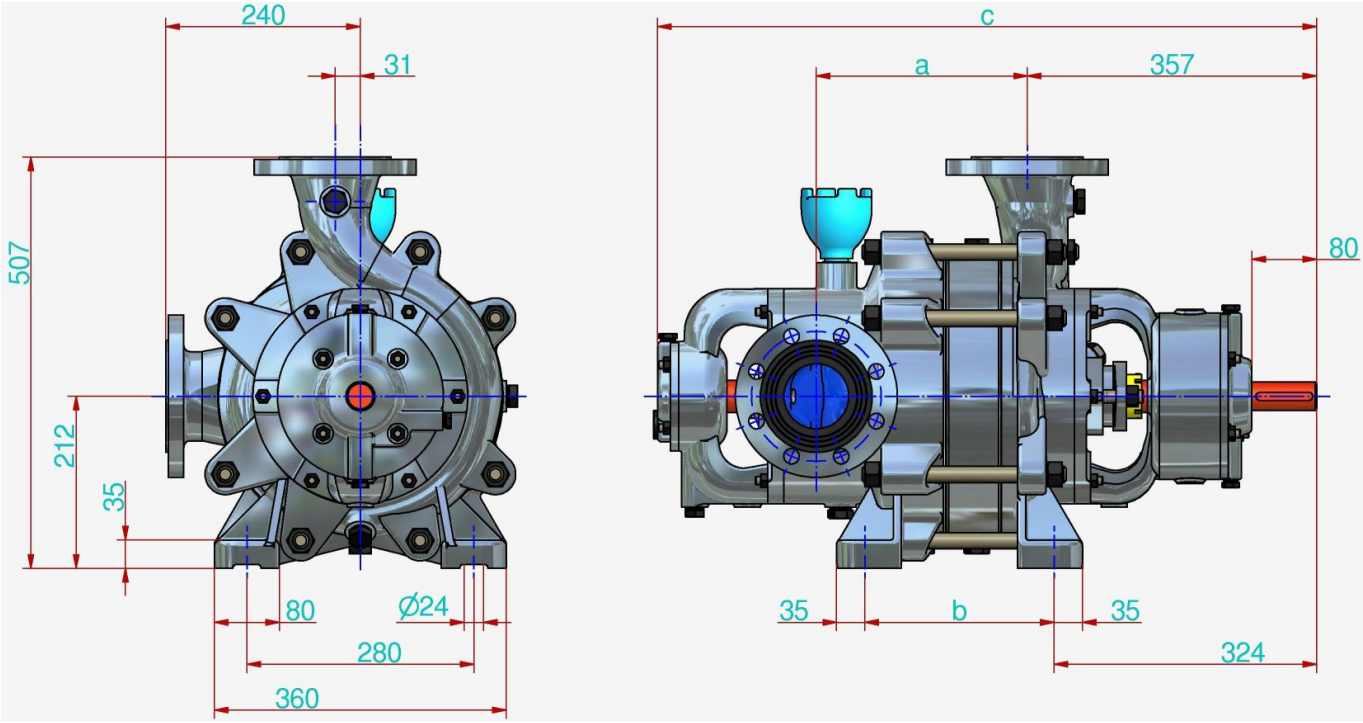
## MAIN DIMENSIONS OF PUMP




| | Number of stages | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| **a** | 162 | 230 | 297 | 366 | 431 | 502 | 570 | 638 | 706 | mm |
| **b** | 165 | 233 | 301 | 369 | 437 | 505 | 573 | 641 | 709 | mm |
| **c** | 769 | 837 | 905 | 973 | 1041 | 1109 | 1177 | 1245 | 1313 | mm |

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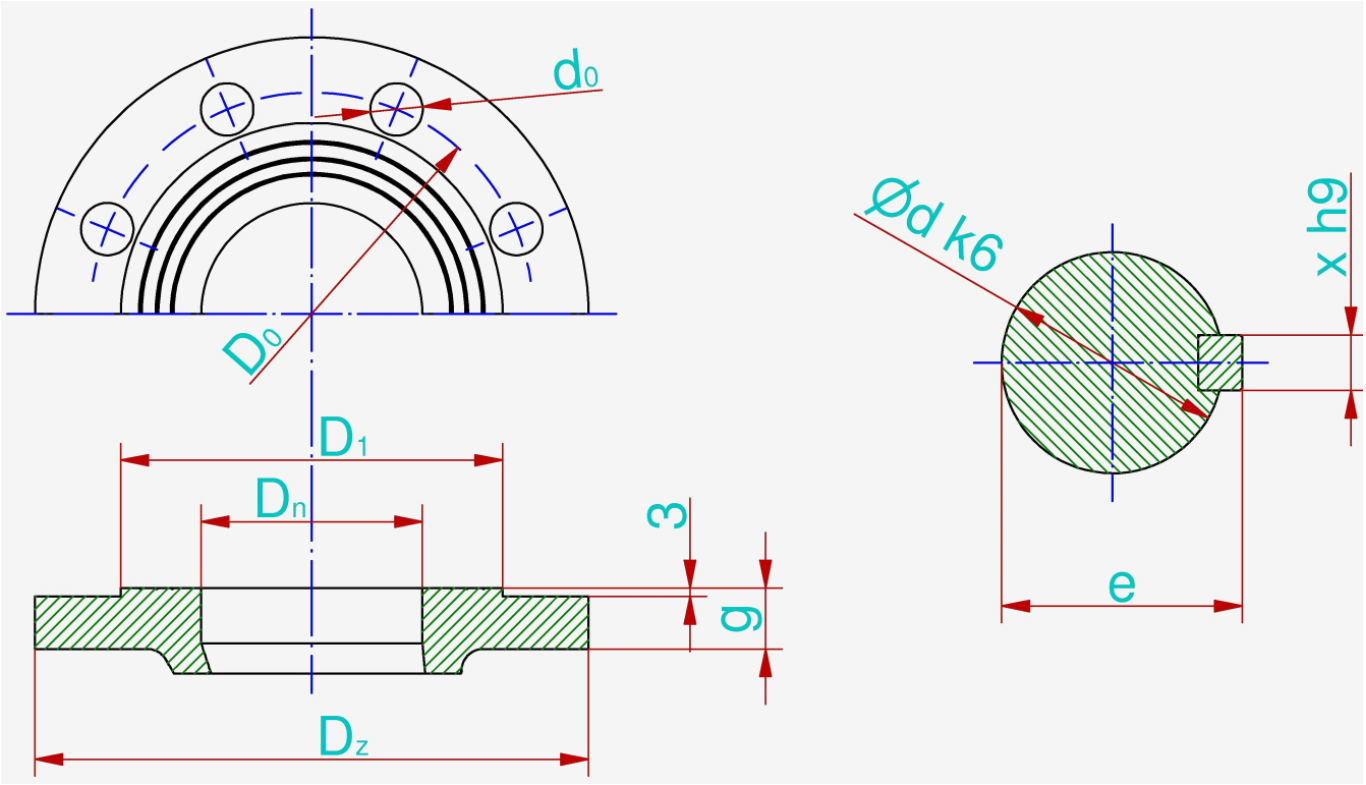
## CONNECTION SIZES OF PUMP




| | Dn | Number of stages | Pn | Df | d0 | g | D0 | D1 | i | d | e | x |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Suction connector** | 80 | - | 10 | 200 | 19 | 22 | 160 | 133 | 8 | - | - | - |
| **Discharge connector** | 80 | 2÷8 | 16 | 200 | 23 | 22 | 160 | 138 | 8 | - | - | - |
| | | 8÷10 | 25 | 200 | 18 | 20 | 160 | 138 | 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.

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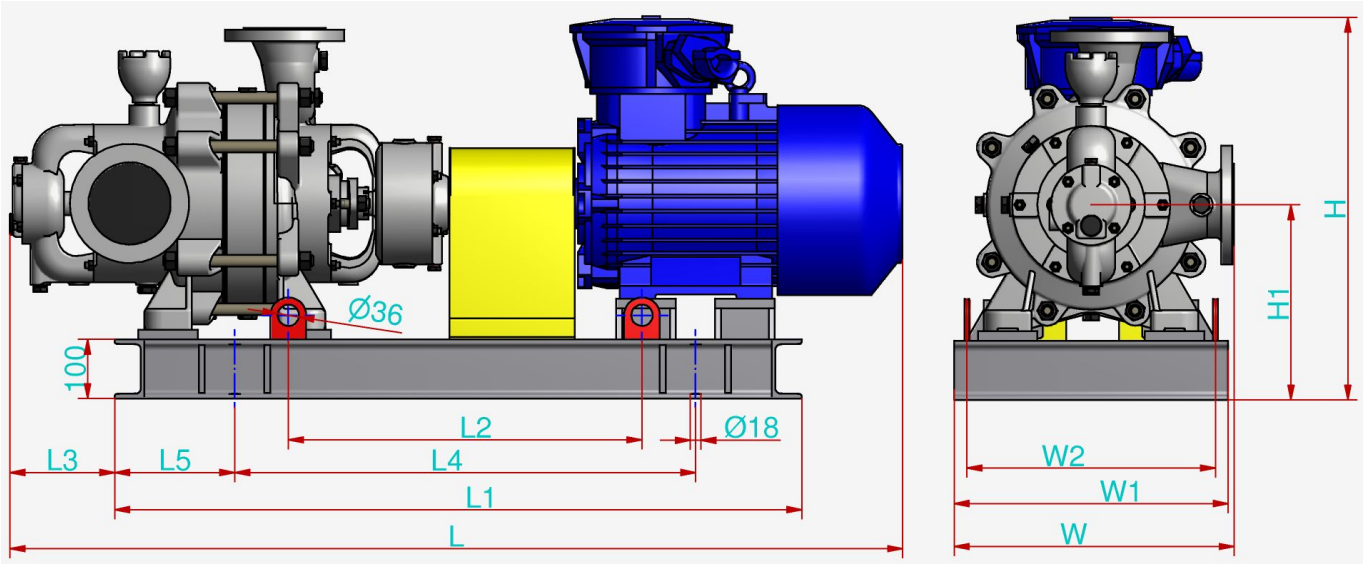
## MAIN DIMENSIONS OF PUMP UNIT




| | Number of stages | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| **L** | 1450 | 1515 | 1625 | 1750 | 1815 | 1974 | 2040 | 2160 | 2230 | mm |
| **$L_1$** | 1085 | 1155 | 1265 | 1370 | 1440 | 1560 | 1630 | 1735 | 1805 | mm |
| **$L_2$** | 565 | 600 | 655 | 710 | 745 | 805 | 840 | 915 | 945 | mm |
| **$L_3$** | | | | | 195 | | | | | mm |
| **$L_4$** | 740 | 775 | 830 | 885 | 920 | 980 | 1015 | 1090 | 1125 | mm |
| **$L_5$** | 170 | 200 | 235 | 270 | 305 | 340 | 370 | 405 | 440 | mm |
| **W** | 470 | 470 | 470 | 470 | 470 | 490 | 490 | 527,5 | 527,5 | mm |
| **$W_1$** | 460 | 460 | 460 | 460 | 460 | 500 | 500 | 545 | 545 | mm |
| **$W_2$** | 415 | 415 | 415 | 415 | 415 | 455 | 455 | 500 | 500 | mm |
| **H** | 643 | 643 | 643 | 663 | 663 | 728 | 728 | 761 | 761 | mm |
| **$H_1$** | 328 | 328 | 328 | 328 | 328 | 328 | 328 | 341 | 341 | mm |
| **Weight** | 405 | 445 | 500 | 570 | 630 | 760 | 800 | 885 | 925 | kg |
| **Coupling type (Rex Viva)** | V125 | V125 | V125 | V130 | V130 | V150 | V150 | V150 | V150 | - |
| **Motor type (Celma)** | dSg 160M4-EP | dSg 160M4-EP | dSg 160L4-EP | dSg 180M4-EP | dSg 180L4-EP | dSg 200L4-EP | dSg 200L4-EP | dSg 225S4-EP | dDSg 225S4-EP | - |
| **Motor power** | 11 | 11 | 15 | 18,5 | 22 | 30 | 30 | 37 | 37 | kW |
| **Motor weight** | 155 | 155 | 170 | 205 | 225 | 315 | 315 | 365 | 365 | kg |

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