



API Standard 685; latest edition

Comments and Exceptions for Heavy Duty Design Pumps

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| 01. Compliance | Pump and motor generally in accordance with API 685 standard, latest edition. |
| 02. Design Pressure | 50 bar design pressure for pump and motor, hydraulic test pressure 75 bar. Test pressure of stator casing is 52 bar. |
| 03. Casing | Single stage, centerline supported. For high head applications, radially split multi-stage design is available. Overhung mounted impellers, rotor in between bearings. Pressure containment barrel over split casings, as option. |
| 04. Flanges | ANSI 300, RF as standard. Forces and moments on nozzles for horizontal pumps, in accordance with API 685. |
| 05. Materials | Material classes in accordance with API 685 H-1 and H-2 appendixes, ASTM or equivalent materials. |
| 06. Drains | Pump and motor drains flanged ANSI 300, as standard. |
| 07. Hydraulic | Suction Specific Speed (NSS) can be < 11.000 sometimes improved NPSHR values needs consideration with higher NSS values. |
| 08. Wear Rings | Replaceable wear rings on casings and impellers as standard for single stage pumps only. |
| 09. Operating Range | Due to hydraulic and electrical reasons the pump allowable operating range (min. / max. flow) may differ from API 685 requirements. |
| 10. Gaskets | Gaskets in spiral wounded metal to metal fitting as standard, according to API 685 |
| 11. Terminal Box | Motor terminal box in accordance to IEC standards.
NEMA standards for large terminal box only, as option available. |
| 12. Welding | Welding procedures in accordance with EN / ISO 15614-1 standard.
Welders qualification in accordance with EN 287 standard. |
| 13. Performance / NPSH Test | 5 points test data on 20 °C water in accordance with API 685. Reduced speed test for very low density fluids. Data converted to the process liquid characteristics.
NPSH test as option, when specified. |
| 14. Inspections | Inspections and acceptance criteria in accordance with EN / ISO standard. |

