

NOV

 **KLAUS  
UNION**  
QUALITY IS OUR SUCCESS



## CHEMICAL STANDARD PUMP SERIES NOV

WITH SHAFT SEALING  
ACC. TO DIN EN ISO 22858 / 5199



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# CHEMICAL STANDARD PUMP WITH SHAFT SEALING



Here comes more evidence of our product capability: The chemical standard pump type NOV with shaft seal supplements our wellproven modular pump series SLM NV with magnet drive. It has been developed for applications in the chemical and petrochemical industries. This pump type is handling clean, coalesced and aggressive liquids. Its major dimensions and its performance range conform to DIN EN 22858 and DIN ISO 5199.

This dimensional interchangeability means that you can easily use them for replacement of standard pump sizes of other manufacturer. Supplementary pump sizes outside the standard are available if required to satisfy higher pumping requirements.

A wide range of materials and available pressure ratings of the pump hydraulic allow for almost universal use of the pump within the chemical and petrochemical industries. Our construction provides for any shaft seals such as mechanical seals to EN 12756 (DIN 24960) and stuffing box packings.

The following optional designs are available:

- ▶ Casing with centerline support
- ▶ Construction type with heating: jacketed casing "H1" and / or stuffing box heating chamber "H2"
- ▶ Open impellers
- ▶ Inducer
- ▶ Multi-Stage Design Series GOV
- ▶ Submerged Design Series TP NO

Experience  
Responsibility  
Passion



## Quality Assurance

A major component of the Klaus Union ethos is to ensure highest product quality. Existing quality assurance procedures with Klaus Union suppliers are constantly monitored from order placement to goods receipt and final assembly. This quality assurance system, developed on latest technologies, complies with the requirements of international regulations.

Klaus Union is a DIN EN ISO 9001 certified company



In accordance with TUV NORD CERT procedures,

KLAUS UNION GmbH & Co. KG  
Blumenfeldstraße 18, 44795 Bochum  
&  
KLAUS UNION Service GmbH & Co. KG  
Blumenfeldstraße 18, 44795 Bochum

are certified according to DIN EN ISO 9001

## Performance Range

- ▶ **Flow Rate:** Q = up to 3.500 m<sup>3</sup>/h
- ▶ **Delivery Head:** H = up to 220 m L. C.

Higher flow rates and delivery heads upon request

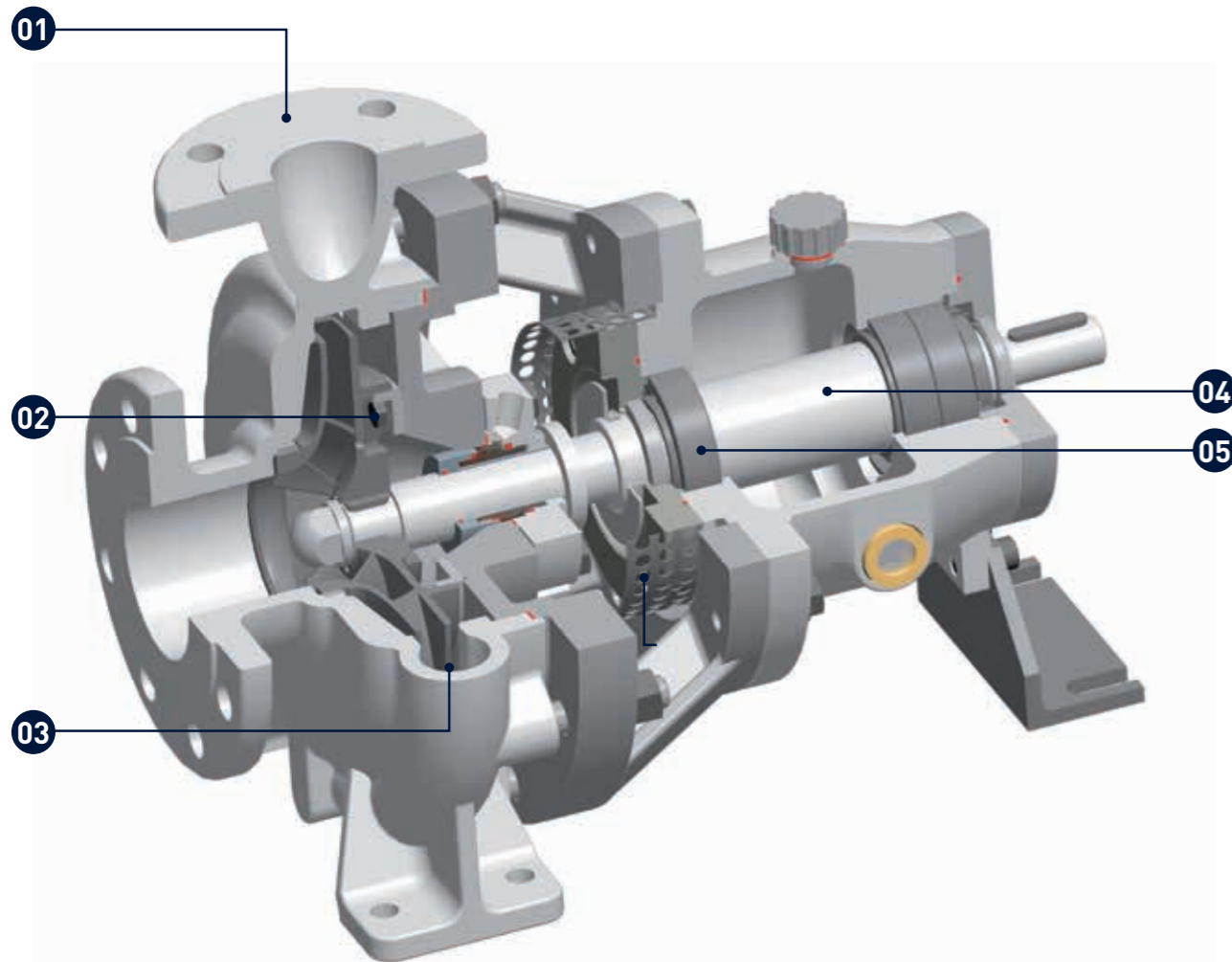
## Pressure Ratings/Temperature Range

- ▶ **Standard Construction:** PN 16 at 120 °C
- ▶ **Temperature Range:** -120 °C up to 450 °C
- ▶ **Pressure Rating:** up to PN 100



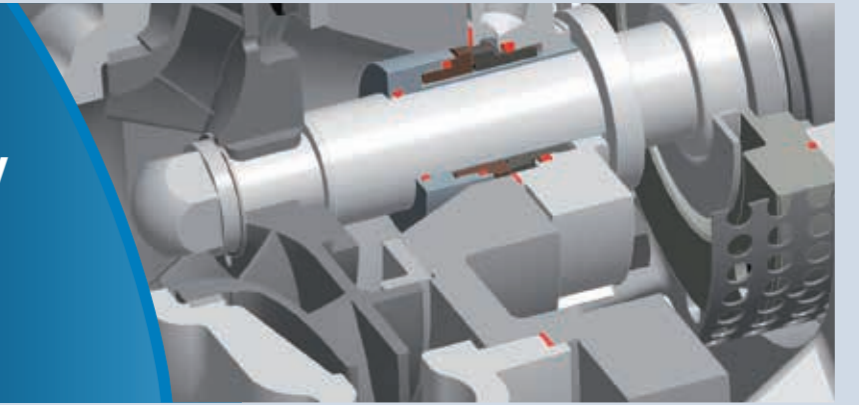
# DESIGN DETAILS

## SERIES NOV



Please see  
the description  
on the following page  
→

### Design According to DIN EN ISO 22858 / DIN EN ISO 5199

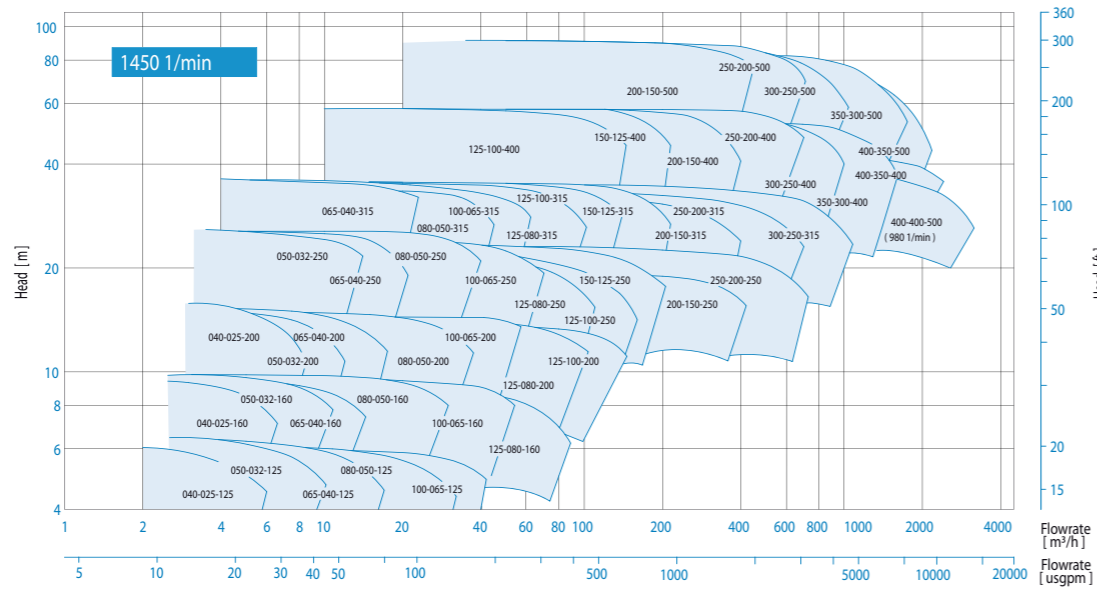


- 01 ▶ Casing**  
Horizontal pump with axially-split casing foot-mounted;  
Designed to PN 16 at 120 °C.
- 02 ▶ Impeller**  
Single-stage closed radial impeller;  
Hydraulic balancing of axial loads via throttle ring and balancing holes;  
Impeller fixed on the shaft by means of key and impeller screwing with lock washer preventing counterclockwise rotation.
- 03 ▶ Pump Shaft**  
Designed to DIN EN ISO 5199: optimum dimensions  
Rigid design to transmit pump power at minimum shaft deflection over the entire operating range.
- 04 ▶ Anti-Friction Bearing**  
Oil-lubricated anti-friction bearings with large bearing spacing for low-vibration operation;  
The bearings consist of a cylindrical roller bearing to accept radial loads and paired angular ball bearings to accept axial loads.
- 05 ▶ Bearing Support**  
Housing the pumps' anti-friction bearings and ensuring safe transmission of any loads to the baseplate;  
Connections for filling and venting of the oil sump and monitoring of the oil level by an oil gauge or a constant level oiler.

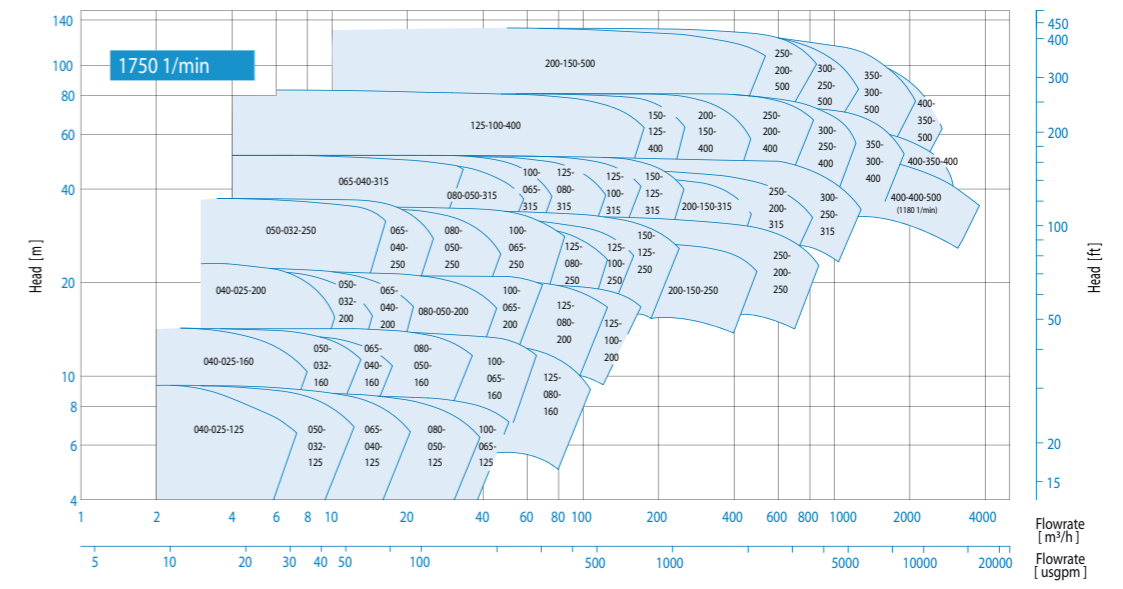
# PERFORMANCE CURVES SERIES NOV



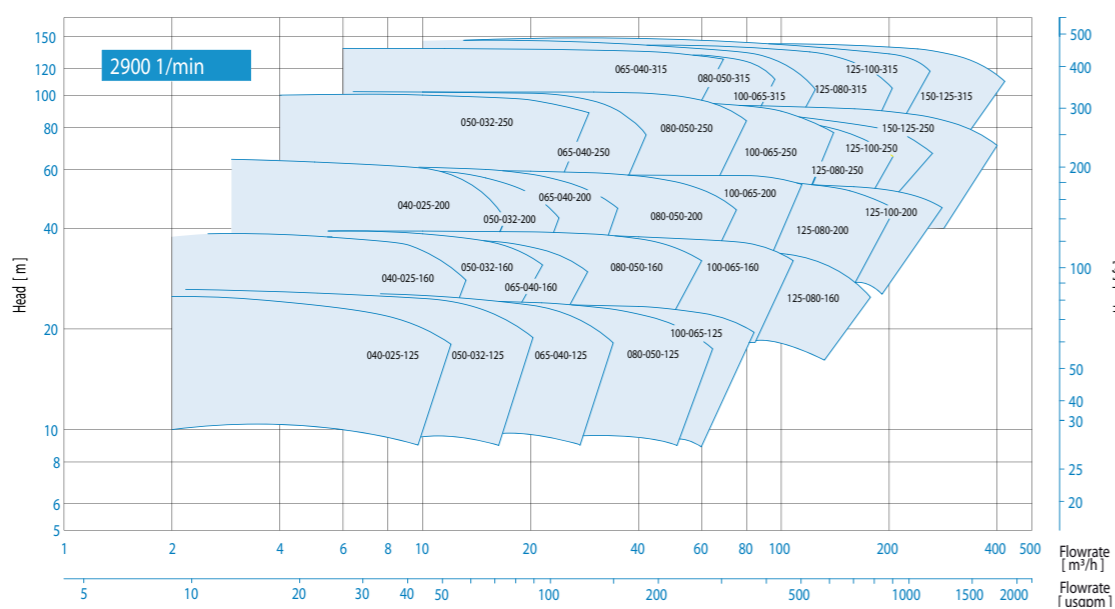
Performance Curve 50 Hz



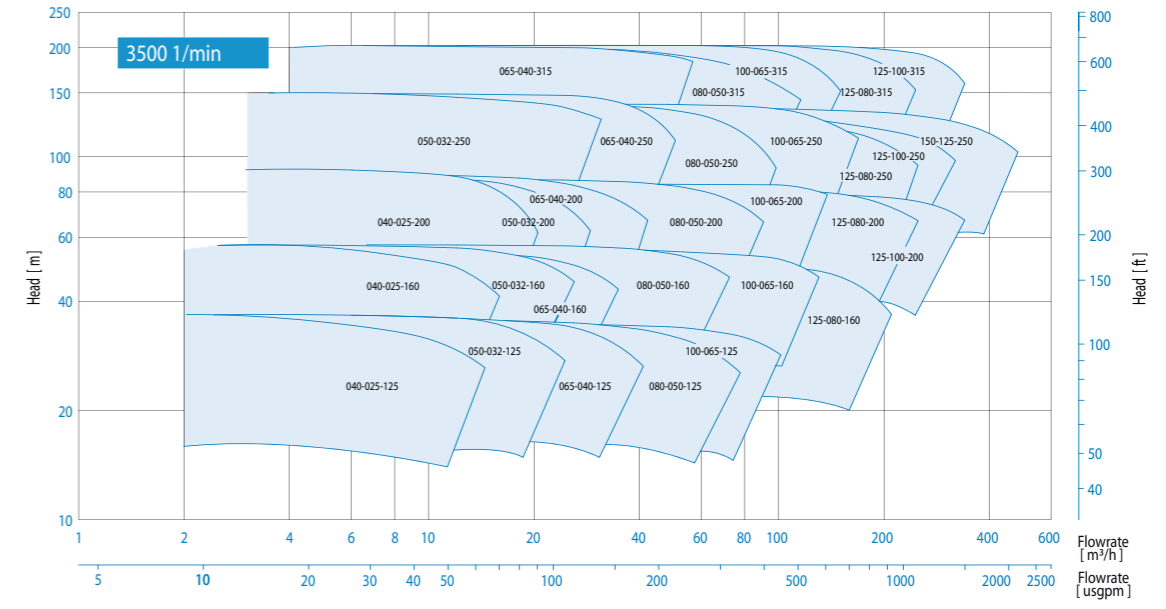
Performance Curve 60 Hz



Performance Curve 50 Hz



Performance Curve 60 Hz



## Product Range Pumps:

### Pumps with Magnet Drive

- ▶ Centrifugal Pumps acc. to DIN EN ISO 2858 & DIN EN ISO 15783, SLM NV
- ▶ Centrifugal Pumps acc. to ASME B73.3M, SLM AV
- ▶ Centrifugal Pumps for Petrochemical Applications acc. to API 685, SLM APL / SLM APC
- ▶ Centrifugal Pumps for High Pressure Applications, SLM SV/SLM GV
- ▶ Centrifugal Pumps for High Temperature Applications, SLM NHO
- ▶ Self-Priming Centrifugal Pumps, SLM SV
- ▶ Multi-Stage Centrifugal Pumps, Tension-Rod or Barrel-Type Design, SLM GV
- ▶ Submerged Centrifugal Pumps, SLM NVT
- ▶ Twin Screw Pumps acc. API 676, SLM DSP-2C

### Pumps with Shaft Sealing

- ▶ Centrifugal Pumps acc. to DIN EN ISO 2858 & DIN EN ISO 5199, NOV
- ▶ Multi-Stage Centrifugal Pumps, Tension-Rod or Barrel-Type Design, GOV / GOVT
- ▶ Horizontal and Vertical Propeller Pumps, P
- ▶ Bottom-Flange Propeller Pumps, UP
- ▶ Submerged Centrifugal Pumps, TP NO
- ▶ Submerged, Multi-Stage Centrifugal Pumps, TP GO
- ▶ Twin Screw Pumps acc. API 676, DSP-2C / DSP-4C

## Product Range Valves:

- ▶ Globe Valves, T
- ▶ Globe Valves, Y
- ▶ Gate Valves, Isomorphous Construction Series
- ▶ Gate Valves, Wedge or Wedge Plates
- ▶ Relief Valves
- ▶ Check Valves
- ▶ Sight Glasses
- ▶ Strainers
- ▶ Filters
- ▶ Bottom Valves
- ▶ Safety Valves

## Klaus Union Service Performance:

- ▶ Workshop / On-Site Repairs
- ▶ Genuine Spare Part Delivery Worldwide
- ▶ Spare Parts Storage
- ▶ Customized Spare Parts Management
- ▶ On-Site Maintenance
- ▶ Installation
- ▶ Retrofitting
- ▶ On-Site Testing / Monitoring
- ▶ Customer Advisory Service
- ▶ Start Up & Commissioning
- ▶ Individual 24 / 7-Service
- ▶ Trouble-Shooting
- ▶ In-House & On-Site Training
- ▶ On-Site Assembly and Disassembly
- ▶ Long-Term Maintenance Contracts
- ▶ Maintenance Planning and Consulting
- ▶ Diagnostics

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