

DSP-2C



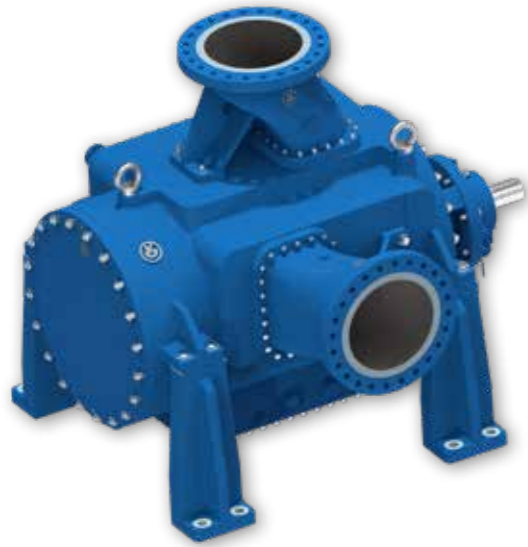
# SINGLE VOLUTE TWIN SCREW PUMP SERIES DSP-2C

WITH SHAFT SEALING  
ACC. TO API 676



[www.klaus-union.com](http://www.klaus-union.com)

# TWIN SCREW PUMP SERIES DSP-2C ACC. API 676



Klaus Union supplies magnetic coupled twin screw pumps for more than 25 years.

For demanding applications with mechanical seals Klaus Union offers a series of twin screw pumps, the DSP-2C complementing our well known DSP-4C and magnet driven SLM DSP-2C twin screw pump ranges.

The mechanical sealed twin screw pumps DSP-2C are engineered following API 676 regulations and offer the usual Klaus Union Twin screw pump features such as rugged design, maintenance friendly „PLUG & PUMP“ Cartridge Design as well as high quality casted casings of carbon steel, stainless steel or even higher grade materials.

The pumps are designed to accept standard cartridge seals (fully interchangeable with centrifugal pump seals) to reduce spare parts and stock costs for customers, as well as to ensure fast availability of spare mechanical seals all over the world. If requested by the customer the pumps can also accept fully API 682 compliant mechanical seals.

Alternatively the standardized gland area makes it easy to install gland packing or lip seal arrangements.

The optional available pressure limiting valve (PLV) using Klaus Union valve product line proven design and internals can protect the pump hydraulic against overpressure and is executed with return to suction as a standard. If requested the pump casings are executed with connection to directly mount standard API 526 grade safety valves on them.



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  
TÜV 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:**  $Q = \text{up to } 1.800 \text{ m}^3/\text{h}$
- ▶ **Diff. Pressure:**  $\Delta P = \text{up to } 40 \text{ bar}$

Higher flow rates upon request

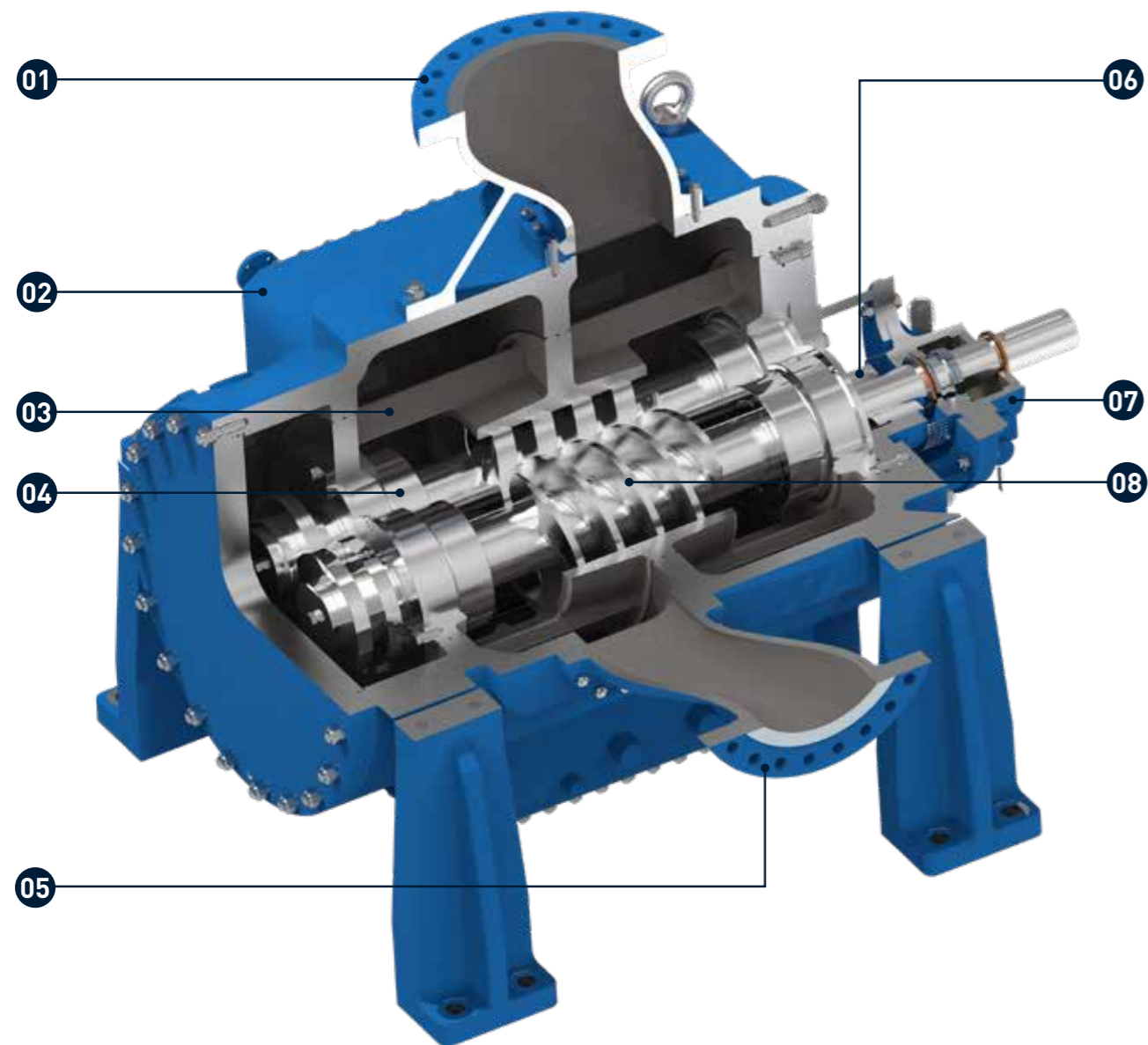
## Pressure Ratings/Temperature Range

- ▶ **Standard Construction:** PN 25 at +120 °C
- ▶ **Temperature Range:** -120 °C up to +400 °C
- ▶ **Pressure Rating:** up to PN 400



# DESIGN DETAILS

## DSP-2C



The description  
can be found on the  
following page  
→

### Design According to API 676

- 01 ▶ **Adaptable Discharge Casing**  
to fit project requirements for nominal diameter, rating and execution. Engineered for smooth flow.
- 02 ▶ **Middle Casing**  
with high Liquid Retention for Stripping Pumps. Radial Split casing with foot or centerline mounting to provide maximum flexibility for customer interfaces. Designed to PN 25 at 120 °C.
- 03 ▶ **Casted Casing Insert (Liner)**  
in Heavy Duty Design.
- 04 ▶ **Radial Slide Bearings**  
optimized to meet customer application needs for maximum overall pump lifetime. Designed acc. to decades of experience in supplying heavy duty pumps with slide bearings.
- 05 ▶ **Adaptable Suction Casing**  
to fit Project Requirements for Nominal Diameter, Rating and Execution. Engineered for Low Inlet Losses.
- 06 ▶ **Cartridge Mechanical Seal**  
with seal chamber compliant with ANSI B73.1 / API 610 / API 682, subjected only to inlet pressure as a standard.
- 07 ▶ **Bearing Carrier**  
with high performance bearings following API 676 Edition recommendations. Bearings available grease lubricated (both lifetime greased or regreaseable) as well as oil lubricated as per customer preferences.
- 08 ▶ **Pump Screws**  
from single piece bar stock, low pulsating design with optimized screw profile for minimized power consumption.

# KLAUS UNION TECHNOLOGY AND INNOVATION

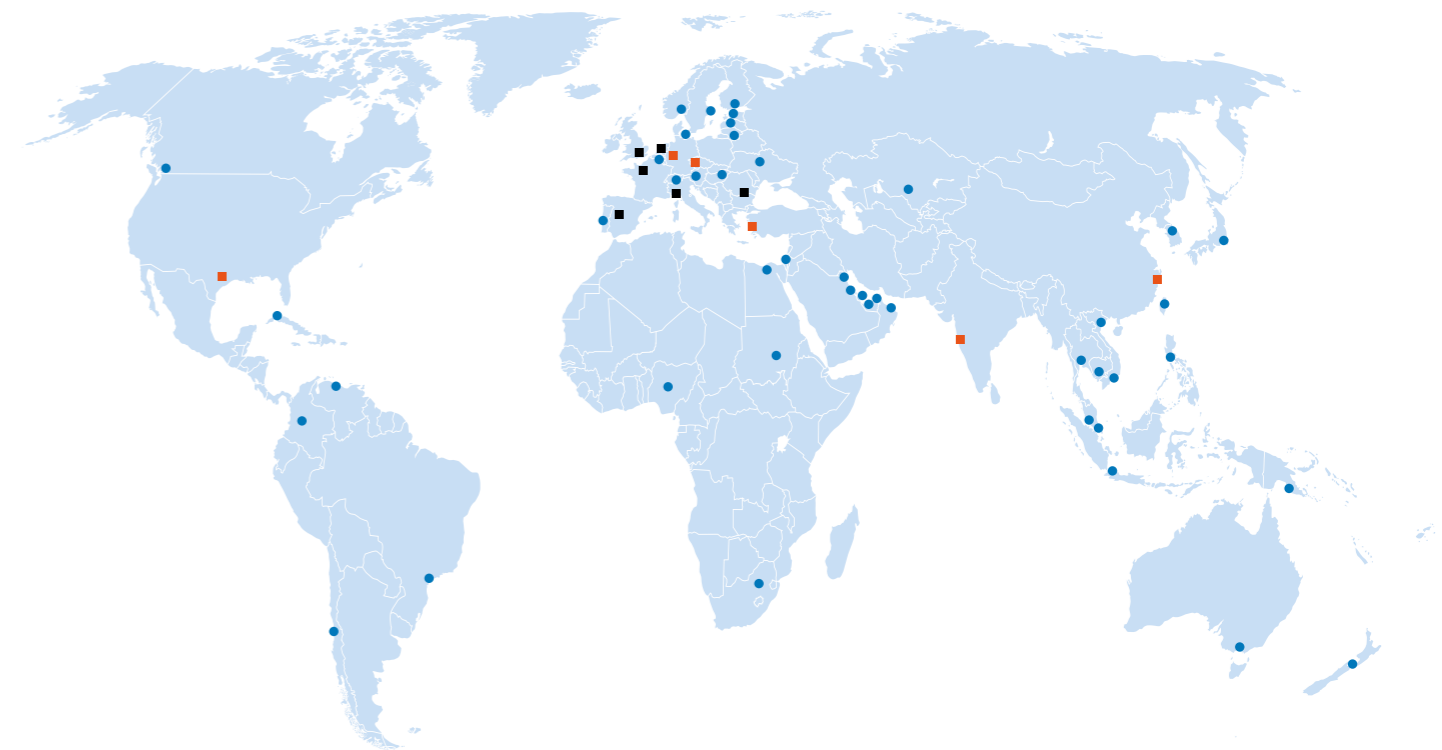


Performance Data	
Flow Rate	max. 1.800 m³/h
Differential Pressure	max. 40 bar
Viscosity	max. 100.000 mm²/s (cSt)
Temperature	max. 350°C (662°F)

Higher flow rates upon request

Construction Material	
Pump Casing	Cast Carbon Steel 1.0619 (similar to A216WCB) Cast Stainless Steel 1.4408 (similar to A351 CF8M) Duplex Stainless Steel 1.4470 (A 890 4A / UNS J92205) Super Duplex Stainless Steel 1.4469 (A 890 / UNS J93372)
Liner	Cast Carbon Steel 1.0619 (similar to A216WCB) Cast Stainless Steel 1.4408 (similar to A351 CF8M) Duplex Stainless Steel 1.4470 (A 890 4A / UNS J92205) Super Duplex Stainless Steel 1.4469 (A 890 / UNS J93372) Wear Resistant Coating
Screws	Carbon Steel 1.8550, nitrated Stainless Steel 1.4542 (similar to UNS S17400), hardened Duplex Stainless Steel 1.4462 (A182-F51 / UNS S31603), hardened Martensitic Stainless Steel 1.4122, nitrated Wear Resistant Coating
Shaft Seals	Standard Cartridge Seals depending on the actual operating conditions following ANSI B73.1 / API 610 / API 682

Upon request, Klaus Union Screw Pumps, Series DSP-2C, can be supplied also in Hastelloy, Inconel, other high nickel alloys or Titanium.



- Germany/ Bochum
  - China/ Ningbo
  - Czech Republic/ Krnov
  - India/ Pune
  - Turkey/ Izmir
  - USA/ Houston
  - England
  - France
  - Italy
  - The Netherlands
  - Romania
  - Spain
  - Australia
  - Austria
  - Belgium
  - Brazil
  - Cambodia
  - Canada
  - Chile
  - Colombia
  - Cuba
  - Denmark
  - Egypt
  - Estonia
  - Finland
  - Hungary
  - Indonesia
  - Iraq
  - Israel
  - Japan
  - Kazakhstan
  - Kuwait
  - Latvia
  - Lithuania
  - Malaysia
  - New Zealand
  - Nigeria
  - Norway
  - Oman
  - Papua New Guinea
  - Portugal
  - Philippines
  - Qatar
  - Saudi Arabia
  - South Africa
  - Singapore
  - Slovakia
  - South Korea
  - Sudan
  - Sweden
  - Switzerland
  - Taiwan
  - Thailand
  - UAE / Abu Dhabi
  - UAE / Dubai
  - Ukraine
  - Venezuela
  - Vietnam
- Klaus Union Center of Competence    
 ■ Klaus Union Subsidiary    
 ● Klaus Union Sales Office

## Product Range Pumps:

### Magnet Drive Pumps

- ▶ Centrifugal Pumps according to DIN EN ISO 2858 & DIN EN ISO 15783
- ▶ Centrifugal Pumps according to ASME B73.3
- ▶ Centrifugal Pumps according to API 685
- ▶ Multi-Stage Centrifugal Pumps (Barrel/Ring-Section Design)
- ▶ Side Channel Pumps following DIN EN ISO 15783
- ▶ Twin Screw Pumps, Single Volute, according to API 676 and DIN EN ISO 14847
- ▶ Pumps in Close-Coupled Design
- ▶ Pumps for High Pressure Applications
- ▶ Pumps for High Temperature Applications
- ▶ Self-Priming Pumps
- ▶ Vertically Suspended (Sump) Pumps, Single- / Multi-Stage and Twin Screw Design
- ▶ Vertical Inline Pumps

### Mechanically Sealed Pumps

- ▶ Centrifugal Pumps according to DIN EN ISO 2858 & DIN EN ISO 5199
- ▶ Centrifugal Pumps following API 610 & ISO 13709
- ▶ Multi-Stage Centrifugal Pumps (Barrel/Ring-Section Design)
- ▶ Propeller Pumps, Horizontal / Vertical / Bottom-Flange
- ▶ Side Channel Pumps
- ▶ Twin Screw Pumps, Single / Double Volute, according to API 676 and DIN EN ISO 14847
- ▶ Pumps for High Pressure Applications
- ▶ Pumps for High Temperature Applications
- ▶ Self-Priming Pumps
- ▶ Vertically Suspended (Sump) Pumps, Single- / Multi-Stage and Twin Screw Design
- ▶ Vertical Inline Pumps

## Product Range Valves:

- ▶ Globe Valves, T-Pattern
- ▶ Globe Valves, Y-Pattern
- ▶ Control Valves
- ▶ Gate Valves, Isomorphous Construction Series
- ▶ Gate Valves, Wedge or Wedge Plates
- ▶ Check Valves
- ▶ Butterfly Valves, Metal Seated
- ▶ Control Butterfly Valves, Metal Seated

## 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

### Klaus Union GmbH & Co. KG

Blumenfeldstraße 18 | 44795 Bochum | Germany

Phone: +49 (0) 234 4595-0 | Fax: +49 (0) 234 4595-7000 | E-Mail: [info@klaus-union.com](mailto:info@klaus-union.com)

[www.klaus-union.com](http://www.klaus-union.com)