SERIES 215.10
SELF-PRIMING SUBMERSIBLE SCREW PUMP FOR LUBRICATING LIQUIDS

PRODUCTS
- LUBE OILS
- HYDRAULIC OILS
- CLEAN FUEL OILS

LABELLING
- LUBE OIL PUMPS
- HYDRAULIC SYSTEMS
- FUEL OIL TRANSFER PUMPS

HOUTTUIN B.V.
Principle
The Houttuin double entry screw pumps series 215 are rotating self-priming positive displacement pumps. The pump is constructed for submergible application and has therefore a very good NPSH-value.

Two inter-meshing screws rotating in a pump casing ensure high pumping efficiency with constant axial flow and unequalled suction power.

Construction
The spindles are supported and axially held in position by ball bearings. The transmission of torque from the driven spindle to the idler spindle is effected by product lubricated timing gears in an attached gearbox. The ball bearings and timing gears maintain a small clearance between the screws, thus preventing metal to metal contact.

Shaft sealing
Product lubricated single unbalanced mechanical seal.

Overload protection
For protection against overload a built-on spring loaded relief valve can be supplied.

Applications
For pumping lubricating oils, hydraulic oils or other lubricating liquids which do not contain abrasive substances nor chemically attack the pump materials.
As lub oil pumps in ship and offshore engineering, as filling pumps in tank farms and in hydraulic systems.

Products
- Lubricating oils
- Hydraulic oils
- Clean fuel oils

Labelling
- Main lub oil pumps
- Auxiliary lub oil pumps
- Hydraulic systems
- Fuel oil transfer systems

Performance data
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity (Q)</td>
<td>up to 490 m³/h</td>
</tr>
<tr>
<td>Viscosity range (V)</td>
<td>20 to 760 cSt</td>
</tr>
<tr>
<td>Temperature of pumped liquid (t)</td>
<td>up to 80 °C</td>
</tr>
<tr>
<td>Inlet pressure (Pd)</td>
<td>not applicable</td>
</tr>
<tr>
<td>Outlet pressure (pd)</td>
<td>up to 10 bar</td>
</tr>
<tr>
<td>Difference pressure (Δp)</td>
<td>up to 10 bar</td>
</tr>
<tr>
<td>Speed (n)</td>
<td>up to 2900 rpm</td>
</tr>
<tr>
<td>Flanges</td>
<td>according to DIN or ANSI</td>
</tr>
</tbody>
</table>

Available materials

For pump and mechanical seal:

<table>
<thead>
<tr>
<th>Screw shafts</th>
<th>Casing and Covers</th>
<th>Mechanical seal according to DIN 24960 / API</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Carbon Steel</td>
<td>- Cast Iron</td>
<td>- Stainless Steel (Type 300)</td>
</tr>
<tr>
<td></td>
<td>- Nodular Cast Iron</td>
<td>- Carbon</td>
</tr>
<tr>
<td></td>
<td>- Cast Iron</td>
<td>- Viton</td>
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</table>
PERFORMANCE GRAPHS

Flow rate/pressure at minimum and maximum viscosity according to pump size. For exact performance data dependent of viscosity and rpm please refer to the individual characteristics per pump size.
Drive by **commercial standard motors**, construction V1, all types of enclosure possible.

**Motor bracket for** direct mounting on the tanktop.

**Single unbalanced mechanical seal** lubricated by the liquid pumped.

For **overload protection** a direct mounted pressure relief valve is optional.

The length of the intermediate pipe is on request.

**Safe lubricating/cooling** of ball bearing, timing gears by internal circulation of liquid pumped.

**Safe transmission of torque** through the hardened and ground timing gears lubricated by the liquid pumped.

**Amply dimensioned and maintenance free ball bearings** lubricated by the liquid pumped, which additionally serve for the axial thrust of the spindles.

**Axial forced balanced** through double entry spindles.

The special profile of the spindle flanks results in **continuously and nearly pulsation-free pumping**, high efficiency, good NPSH-values and constant pressure course.

Rigid spindles of solid material therefore **contact-free running** and compared with multi-part spindles no **crevice corrosion**.

Strainer as an integrated part of the pump.
Serie S 215.10

Dimensions in mm, dimensions are subject to alternations.

Performance diagrams total pump program (*):

Engineered

Pumps

Pump flanges PN16 DIN 2533

Pump size

<table>
<thead>
<tr>
<th>PUMP SIZE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>e</th>
<th>s</th>
<th>a1</th>
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<tbody>
<tr>
<td>150</td>
<td>250</td>
<td>405</td>
<td>355</td>
<td>12x26</td>
<td>55</td>
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<td>700</td>
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<td>12x27</td>
<td>505</td>
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<td>165</td>
<td>250</td>
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<td>355</td>
<td>12x26</td>
<td>55</td>
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<td>700</td>
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<td>55</td>
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<td>700</td>
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<td>780</td>
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<td>210</td>
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<td>520</td>
<td>470</td>
<td>16x26</td>
<td>73.5</td>
<td>990</td>
<td>850</td>
<td>45</td>
<td>920</td>
<td>12x27</td>
<td>725</td>
</tr>
</tbody>
</table>

Pump relief valve size

Sense of rotation: clockwise seen from drive side

Dimensions in mm, dimensions are subject to alternations.

Discharge flange

Bottom view connection flange

Pump dimensions

Relief valve size
**STANDARD PUMPS**

**With Internal Bearings**

for lubricating liquids

viscosity range: 20 - 760 cSt
: 98 - 3500 SSU

**With External Bearings**

for non-lubricating liquids

viscosity range: 0,6 - 1500 cSt
: 32 - 7000 SSU

**With External Bearings**

for lubricating and non-lubricating liquids

viscosity range: 0,6 - 100.000 cSt
: 32 - 466.000 SSU

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**ENGINEERED PUMPS**

**With External Bearings**

for lubricating and non-lubricating liquids

viscosity range: 0,6 - 100.000 cSt
: 32 - 466.000 SSU

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