KPTO
DRAIN-TYPE FLUID COUPLING
for internal combustion engines
FLUID COUPLINGS KPTO SERIES
for internal combustion engines

DESCRIPTION
The KPTO is a variable fill fluid coupling enclosed into a casing connected to the Diesel engine by means of a SAE housing. The KPTO has been designed to meet the market requirements for a unit combining the technical features of a conventional Power Take Off with the performances of a fluid coupling.

The KPTO has an integral feeding pump driven by the Diesel engine. A remote electrically operated ON-OFF solenoid valve allows the fluid coupling circuit to be fed when it is turned ON, while a rapid oil drain through calibrated orifices located on the periphery of the fluid coupling occurs when it is turned OFF.

A forced bearing lubrication is always assured continuously.

The KPTO range is suitable for powers up to 1000 kW.

The engine flywheel is connected to the KPTO input by a highly torsionally flexible coupling. The output shaft can be connected to the driven machine by an elastic coupling, a cardan shaft or a pulley.

Standard accessories: oil feeding pump, oil filter with pressure and temperature gauges, ON-OFF electric valve, oil temperature and pressure switches, oil level indicators.

Optionals: water/oil heat exchanger or radiator, quick release valves, output pulley, elastic or superelastic alignment couplings.

WORKING SCHEME

<table>
<thead>
<tr>
<th>Dimensions (mm)</th>
<th>ENGINE POWER (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>1000</td>
<td>-</td>
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<tr>
<td>1200</td>
<td>-</td>
</tr>
<tr>
<td>1500</td>
<td>65</td>
</tr>
<tr>
<td>1800</td>
<td>85</td>
</tr>
<tr>
<td>2200</td>
<td>155</td>
</tr>
<tr>
<td>2600</td>
<td>200</td>
</tr>
</tbody>
</table>

FEATURES
The KPTO drain type fluid coupling allows to disconnect the engine from the load granting the following advantages:
- unloaded engine warm up
- smooth start up, not belt slip
- shock and overload protection
- torsional vibration dampening
- high radial load capacity
- remote control by electric valve
- load positioning
- inexpensive and easy maintenance due to external mounting of the main accessories like oil filter, feeding pump, control valve
- longer life thanks to no friction linings to wear out.

APPLICATIONS
- mills, crushers, wood chippers, grinders, shredders
- belt conveyors
- reciprocating and centrifugal pumps, compressors
- marine propulsion, boat thrusters
- generators
- fans and blowers.

HYDRAULIC CIRCUIT

To calculate oil and water flow into heat exchanger, use following formulas:

water (l/min) = \( \frac{\text{power (kW)}}{50} \) x 8

oil (l/min) = \( \frac{\text{power (kW)}}{50} \) x 10

Above formulas are based upon following data:

Exchanger oil inlet = 110°C   Exchanger oil outlet = 100°C
Exchanger water inlet = 85°C   Exchanger water outlet = 90°C

Engine cooling water can be used.
### Drain-type fluid couplings - 1710

#### Dimensions (mm)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>G</th>
<th>H</th>
<th>L</th>
<th>M</th>
<th>N</th>
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<td>860</td>
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<tr>
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<td>710-726*</td>
<td>220</td>
<td>605-621*</td>
<td>120</td>
<td>123-139*</td>
<td>550-566*</td>
<td>675</td>
<td>445</td>
<td>890</td>
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* Dimensions for flywheel 21".

#### Dimensions (mm)

<table>
<thead>
<tr>
<th></th>
<th>O</th>
<th>P</th>
<th>Q</th>
<th>S</th>
<th>T</th>
<th>U</th>
<th>SAE J617 housing</th>
<th>SAE J620 flywheel</th>
<th>Weight (kg) w/o oil</th>
<th>Oil (l)</th>
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<tbody>
<tr>
<td>15</td>
<td>65</td>
<td>17</td>
<td>135</td>
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<td>66.5</td>
<td>115</td>
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<td>68</td>
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<td>115</td>
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<td>18-21*</td>
<td>800</td>
<td>87</td>
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* Dimensions for flywheel 21".

For admissible radial loads apply Transfluid.

Dimensions can be changed without notice.

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