**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 couplings, output flange for cardan shafts and cardan shafts.

**WORKING SCHEME**

**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:

\[
\text{water (lt/min)} = \frac{\text{power (kW)}}{50} \times 8
\]

\[
\text{oil (lt/min)} = \frac{\text{power (kW)}}{50} \times 10
\]

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.
**Dimensions for flywheel 21".**
For admissible radial loads apply Transfluid.

Dimensions can be changed without notice.

Drain-type fluid couplings - 1012

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