



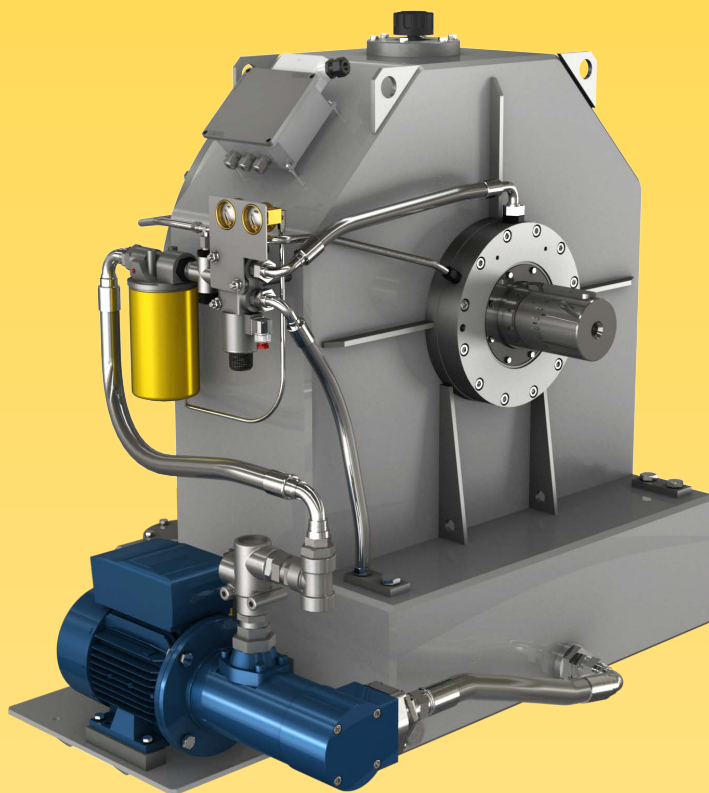
# TRANSFLUID<sup>®</sup>

**industrial & marine**

# TRANSFLUID



**drive with us**



**KPT**

VARIABLE FILL FLUID COUPLINGS

# FLUID COUPLINGS KPT SERIES

## DESCRIPTION

The KPT is a variable fill fluid coupling designed to be a start up drive or a variable speed drive.

The KPT has an externally driven oil feeding pump and a remote electrically operated ON-OFF valve. When the valve is turned ON, the fluid coupling circuit is fed, when it is turned OFF, rapid oil drain occurs through orifices located on the periphery of the coupling.

The forced bearing lubrication is continuously assured.

The KPT control is achieved by on/off solenoid valve modulation or oil flow control valve (4-20mA signal) to obtain more accurate start up control and/or speed variation.

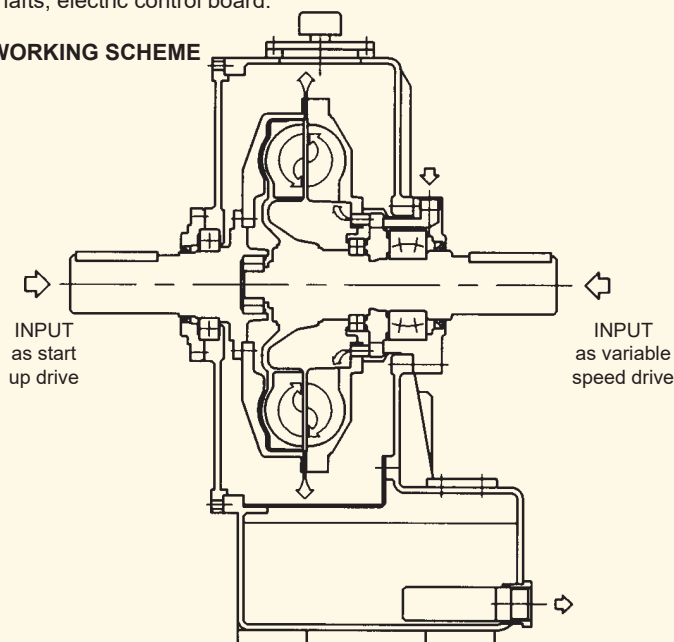
The KPT range is suitable for powers up to 1700 kW (2279 hp) as start up drive and 600 kW (804 hp) as variable speed drive.

The input and output straight shafts can be connected to electric motor diesel/engine and driven machine by elastic and flexible couplings.

Standard accessories: oil motor pump, oil filter with pressure and temperature gauges, ON-OFF electric valve, oil temperature and pressure switches, oil level indicators, connecting wiring box with plug.

Optionals: oil flow control valve water or air heat exchanger, quick release valves, output pulley, flexible and elastic couplings, cardan shafts, electric control board.

## WORKING SCHEME



## FEATURES

The variable fill fluid coupling can disconnect the prime mover from the load, granting the following advantages:

- motor start up with no load
- smooth start up possible under nominal motor current
- shock and overload protection
- torsional vibration dampening
- high radial load capacity (KPTE)
- no belt slip
- remote control
- load positioning
- cheap and easy maintenance due to external mounting of main accessories like oil filter, feeding pump, control valve
- longer life due to no friction linings to wear out
- accurate variable speed performances
- special hazardous area design available upon request

## APPLICATIONS

### start up drive:

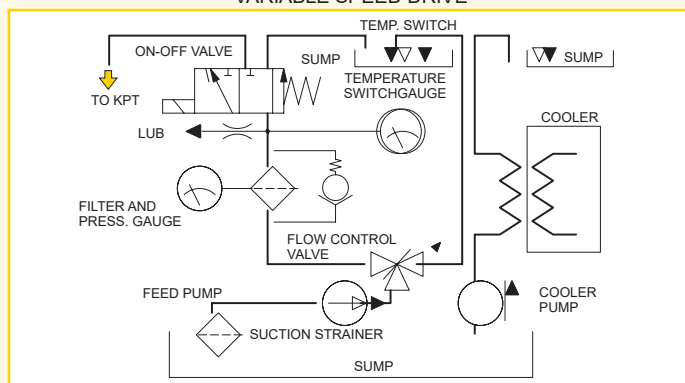
- mills, crushers, wood chippers, grinders
- belt conveyors
- reciprocating and centrifugal pumps, compressors
- marine propulsion
- generators
- centrifuges, fans and blowers
- mixers

### variable speed drives:

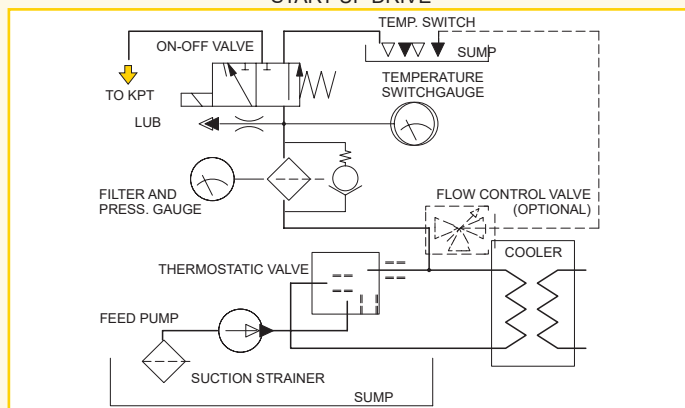
- centrifugal pumps and compressors
- fans and blowers
- mills, belt conveyors (inspection speed)

## HYDRAULIC CIRCUIT

### VARIABLE SPEED DRIVE

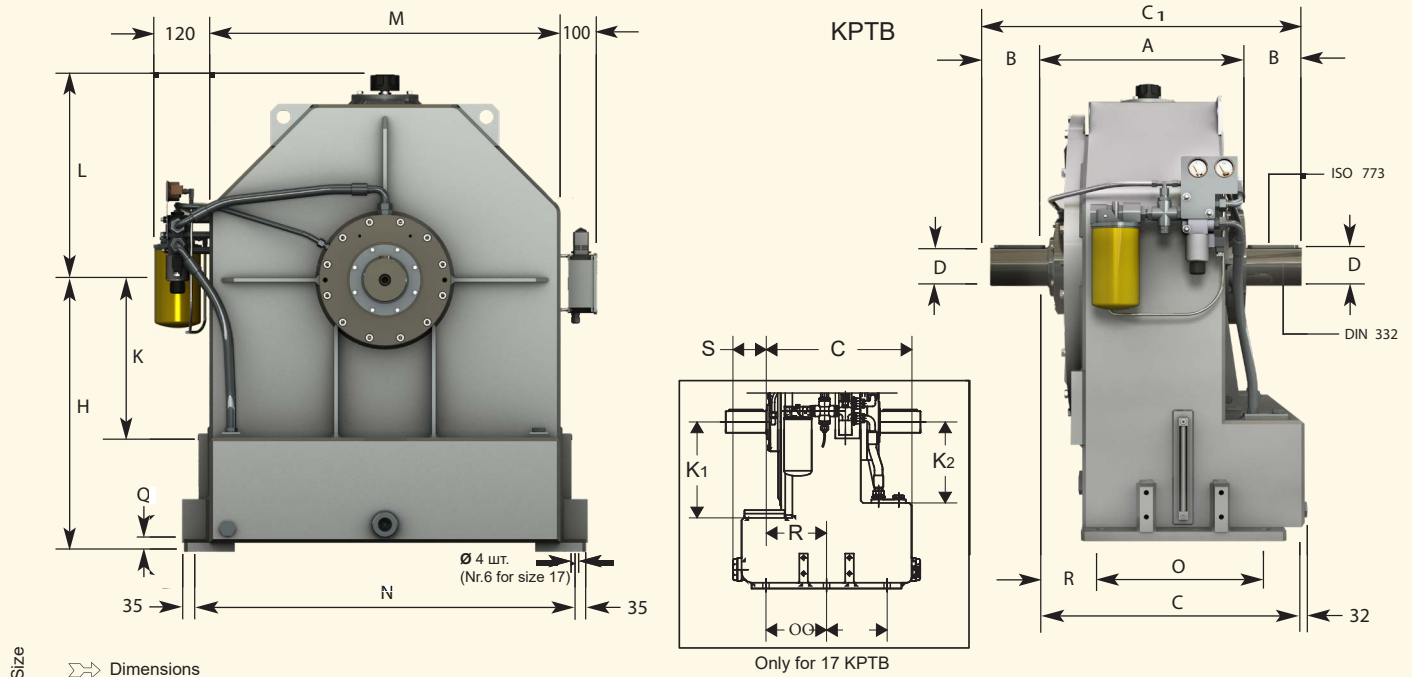


### START UP DRIVE



SELECTION TABLE kW(hp)

| rpm  | Size     |          |          |          |            |            |
|------|----------|----------|----------|----------|------------|------------|
|      | 17HS     | 19       | 21       | 24       | 27         | 29         |
| 1000 | -        | 70(93)   | 100(134) | 150(201) | 220(295)   | 350(469)   |
| 1200 | -        | 90(120)  | 150(201) | 220(295) | 300(402)   | 520(697)   |
| 1500 | -        | 160(214) | 230(308) | 315(422) | 570(764)   | 1000(1341) |
| 1800 | -        | 275(368) | 400(536) | 545(730) | 1000(1341) | 1700(2279) |
| 3000 | 560(750) |          |          |          |            |            |
| 3600 | 600(804) |          |          |          |            |            |



Size  
↕

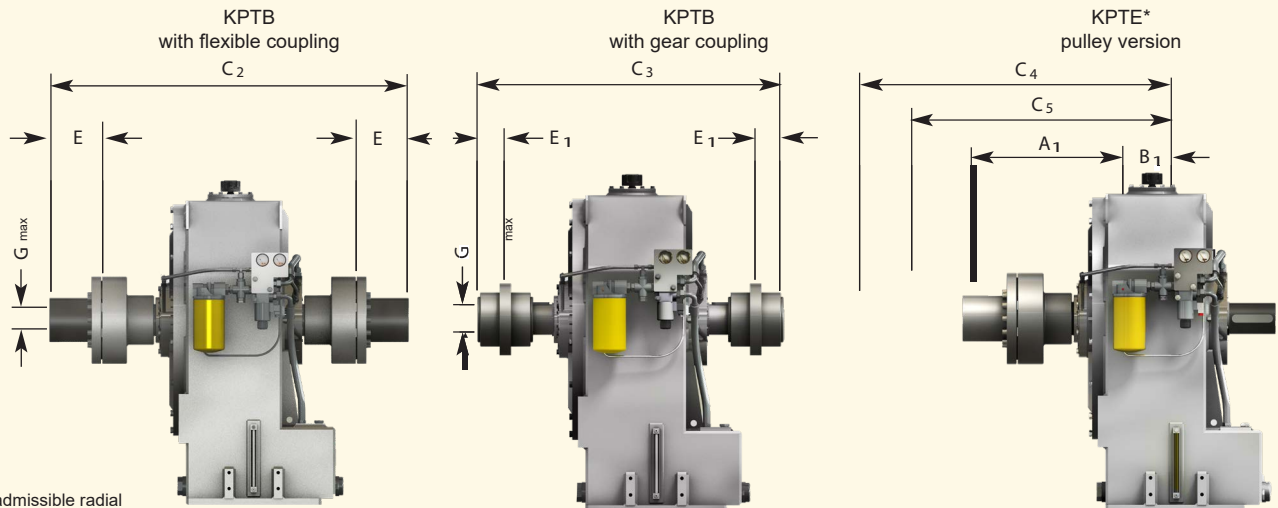
Dimensions

|              | A   | A <sub>1</sub> | B   | B <sub>1</sub> | C   | C <sub>1</sub> | C <sub>2</sub> | C <sub>3</sub> | C <sub>4</sub> | C <sub>5</sub> | D   | D <sub>1</sub> | E   | E <sub>1</sub> | G   |
|--------------|-----|----------------|-----|----------------|-----|----------------|----------------|----------------|----------------|----------------|-----|----------------|-----|----------------|-----|
| <b>17HS</b>  | 396 | 406            | 120 | 150            | 506 | 636            | 864            | 798            | 750            | 640            | 75  | 80             | 110 | 76             | 95  |
| <b>19</b>    | 396 | 406            | 120 | 150            | 506 | 636            | 864            | 798            | 750            | 640            | 75  | 80             | 110 | 76             | 95  |
| <b>21/24</b> | 451 | 463/539        | 140 | 180            | 586 | 731            | 1079           | 921            | 905            | 735            | 85  | 100            | 122 | 90             | 110 |
| <b>27</b>    | 560 | 664            | 180 | 220            | 689 | 920            | 1270           | 1142           | 1095           | 925            | 100 | 115            | 145 | 105            | 120 |
| <b>29</b>    | 610 | -              | 180 | -              | 739 | 970            | 1400           | 1192           | 1185           | 975            | 120 | -              | 165 | 105            | 135 |

Size  
↕

Dimensions

|              | G <sub>1</sub> | H   | K   | K <sub>1</sub> | K <sub>2</sub> | L   | M   | N    | O   | P  | Q  | R   | S   | Flexible coupling | Gear coupling | Weight (Kg) w/o oil | Oil (l) |
|--------------|----------------|-----|-----|----------------|----------------|-----|-----|------|-----|----|----|-----|-----|-------------------|---------------|---------------------|---------|
| <b>17</b>    | 85             | 580 | -   | 334            | 282            | 420 | 670 | 730  | 211 | 22 | 20 | 210 | 116 | B3M 55            | 2½"           | 305                 | 85      |
| <b>19</b>    | 85             | 520 | 282 | -              | -              | 420 | 670 | 730  | 280 | 22 | 20 | 141 | -   | B3M 55            | 2½"           | 500                 | 40      |
| <b>21/24</b> | 100            | 625 | 350 | -              | -              | 487 | 820 | 880  | 325 | 26 | 25 | 146 | -   | B3M 60            | 3"            | 485/503             | 80      |
| <b>27</b>    | 120            | 700 | 385 | -              | -              | 522 | 890 | 960  | 390 | 29 | 25 | 184 | -   | B3M 70            | 3½"           | 800                 | 115     |
| <b>29</b>    | 120            | 750 | 435 | -              | -              | 562 | 970 | 1040 | 440 | 29 | 25 | 184 | -   | B3M 80            | 3½"           | 1100                | 142     |



\* For admissible radial loads refer to TF 6093-A

Dimensions can be changed without notice

Tables for the preliminary selection of the coolers:

- KPTB with single oil pump (with flow control valve if used as variable speed drive)
- Refer to variable speed drive or start up drive column
- Max power = max power absorbed at max speed
- Output water temperature 35°C/ 95°F

| Variable speed application        |                             |                                                 |                                                 |
|-----------------------------------|-----------------------------|-------------------------------------------------|-------------------------------------------------|
| Fluid Coupling<br>max. power (hp) | Water - Oil<br>Cooler Model | Required<br>Water Flow<br>(l/min) at 25°C/ 77°F | Air - Oil<br>Cooler Model<br>(air = 30°C/ 86°F) |
| 134                               | 05048 •                     | 31                                              | TF7132AU                                        |
| 201                               | 05048 •                     | 47                                              | TF7132AV                                        |
| 268                               | 06060 •<br>SP3-11 ••        | 62                                              | TF7132AV                                        |
| 402                               | 06060 •<br>SP3-11 ••        | 94                                              | TF7132AL                                        |
| 536                               | 06096 •<br>SP3-19 ••        | 125                                             | TF7132AW                                        |
| 670                               | 08084 •<br>SP3-31 ••        | 157                                             | TF7132AW                                        |
| 804                               | 08084 •<br>SP3-31 ••        | 188                                             | TF7132AM                                        |

- Tube bundle heat exchanger
- Plate heat exchanger

| Start-up application              |                             |                                                 |                                                 |
|-----------------------------------|-----------------------------|-------------------------------------------------|-------------------------------------------------|
| Fluid Coupling<br>max. power (hp) | Water - Oil<br>Cooler Model | Required<br>Water Flow<br>(l/min) at 25°C/ 77°F | Air - Oil<br>Cooler Model<br>(air = 30°C/ 86°F) |
| 134                               | 03014 •                     | 8                                               | TF7132AT                                        |
| 201                               | 03024 •                     | 11                                              | TF7132AU                                        |
| 268                               | 03024 •                     | 15                                              | TF7132AU                                        |
| 402                               | 05024 •                     | 23                                              | TF7132AU                                        |
| 536                               | 05048 •                     | 31                                              | TF7132AV                                        |
| 670                               | 05048 •                     | 39                                              | TF7132AV                                        |
| 804                               | 05048 •                     | 47                                              | TF7132AL                                        |
| 938                               | 06060 •<br>SP3-11 ••        | 55                                              | TF7132AL                                        |
| 1072                              | 06060 •<br>SP3-11 ••        | 62                                              | TF7132AL                                        |
| 1206                              | 06060 •<br>SP3-11 ••        | 70                                              | TF7132AL                                        |
| 1341                              | 06060 •<br>SP3-11 ••        | 78                                              | TF7132AW                                        |
| 1609                              | 06060 •<br>SP3-11 ••        | 94                                              | TF7132AW                                        |
| 1877                              | 06096 •<br>SP3-19 ••        | 110                                             | TF7132AW                                        |
| 2145                              | 06096 •<br>SP3-19 ••        | 125                                             | TF7132AM                                        |

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