

# TRANSFLUID



# TRANSFLUID®

**industrial & marine**



**drive with us**

**KFBD – SKF**

FLUID COUPLING FOR INTERNAL  
COMBUSTION ENGINES

# FLUID COUPLINGS FOR INTERNAL COMBUSTION ENGINES

## Applying TRANSFLUID Fluid Couplings in your Drive Line

Transfluid Fluid Couplings are used on all types of industrial equipment driven by internal combustion engines up to 2300 kW. By transmitting power through a fluid, they improve overall performance and protect both driving and driven machine.

Figure 1 shows the typical performance available from a Fluid Coupling when used with an internal combustion engine.

The curved sloping lines represent the torque capacity of Fluid Coupling for various values of slip and input speeds. The relatively flat curve is the engine torque.

The points at which the curves intersect, indicate per cent of slip in the coupling output. Since slip represents loss of speed between input and output member and since Fluid Coupling transmits torque at a 1:1 ratio, output speed and output power can be readily calculated. Performance characteristics are easily determined by superimposing the engine torque curve on the torque capacity curve of the selected Coupling.

From the performance curve it can be noted that at 100% of governed speed, slip is 1.5%. As the load on the Coupling output member increases, it demands more torque, forcing the engine to decelerate so that it can supply this extra torque. A slower input speed to the Coupling will result in a higher slip. If still greater loads are applied, the Coupling output member will eventually stall with the engine being pull down in speed until its torque curve intersects the 100% slip curve of the Coupling.

Note that 100% slip should not occur until the engine has developed peak torque. This is a highly desirable characteristics, since it permits the engine to deliver maximum torque without stalling and also permits rapid acceleration to normal load speeds. In addition to transmitting power smoothly and without shocks the Coupling has other advantages related to engine operation. Especially important is the fact that the engine can always be started under low load conditions.

Figure 2 shows the fluid couplings power capacity against input engine speed. It is a quick selection chart where slip values are not mentioned. For an application specific calculation ask Transfluid or local distributor.

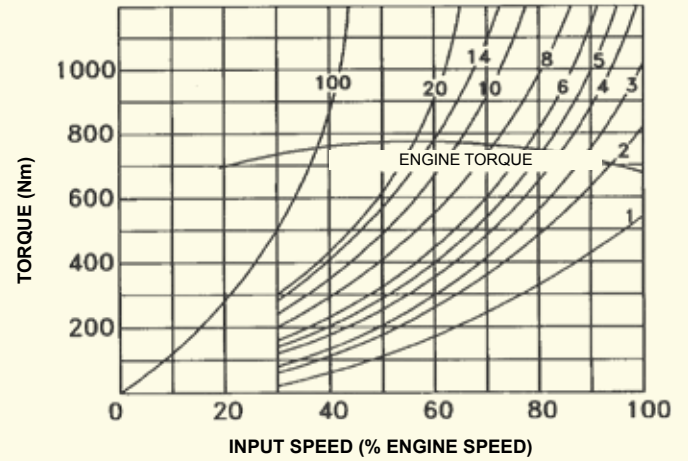
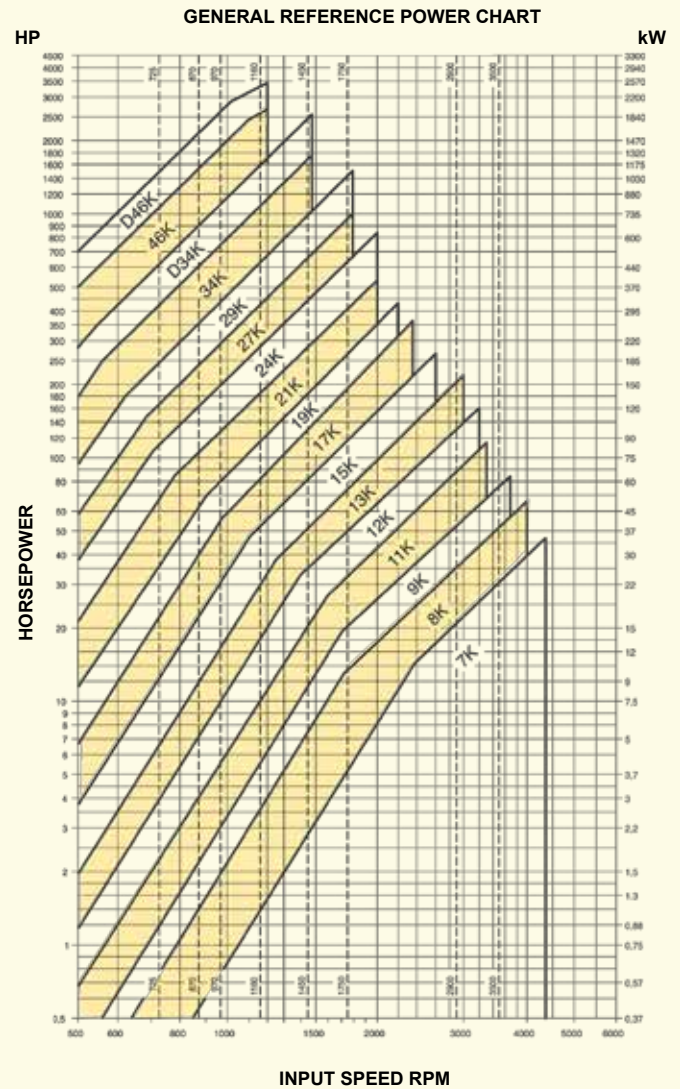


Fig. 1



THE CURVES SHOW LIMIT CAPACITY OF COUPLING  
Fig. 2

When you drive through a Transfluid Coupling you profit by these Basic Benefits

**1**

**Frees engine during heavy starts**

During heavy starts and sudden running load increases, engine stalling is prevented. The Fluid Coupling simply “slips” while the engine smoothly picks up the load.

**2**

**Provides cushioned drive**

Mechanical connection is eliminated; power and torque are transmitted entirely by the mass and velocity of the fluid. The result is a smooth, sustained flow of power without the shocks and strains which, with mechanical drives, reduce equipment life.

**3**

**Prevents transmission of shock loads**

Fluid Couplings protect both driving and driven equipment by smoothing out shock loads and preventing them from impacting the drive line.

**4**

**Assures damping effect**

Torsional vibrations from engine are drastically dampened by Fluid Couplings allowing longer life of entire transmission line.

**5**

**Transmits full input torque**

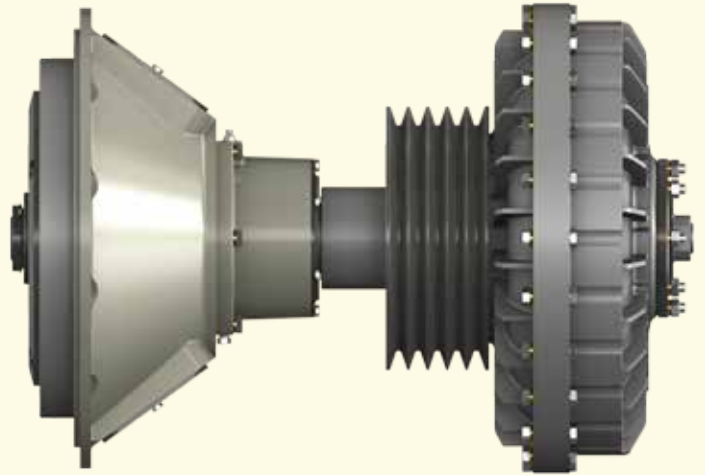
The patented Transfluid Circuit design always delivers output torque equal to input torque. The engine can operate at the maximum torque-rpm, even when the driven equipment is stalled.

**6**

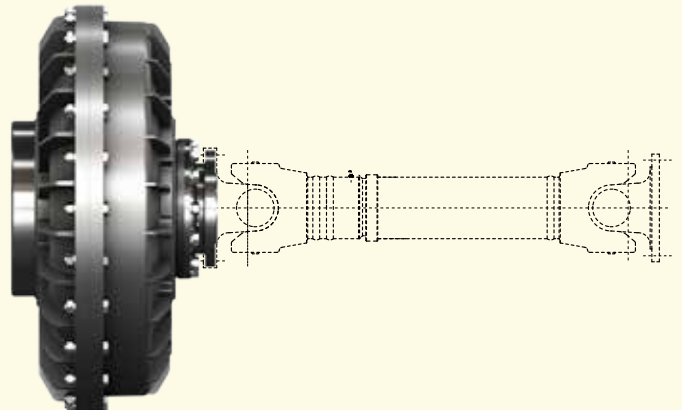
**Improves load distribution on compounded drives**

With Fluid Couplings, engines no longer “fight” each other when a common drive is driven in parallel. Each engine is free to seek its own operating speed, while the Fluid Couplings balance the load requirements at each point of operation.

HFR or PTO CLUTCH with KSD



KRU

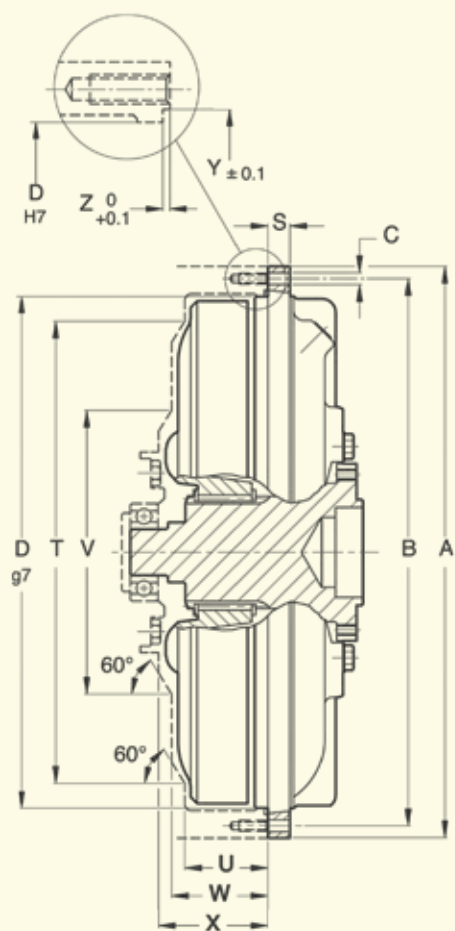


KRBD

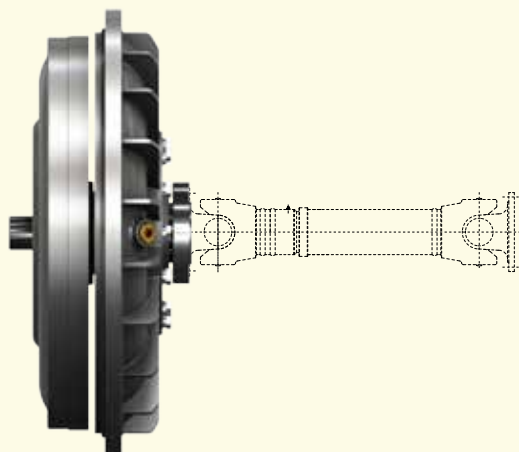


# SKF SERIES OIL TIGHT FLYWHEEL MOUNTED

SKF type installation requires specific design.  
Please contact our technical department for  
certified prints and instructions.



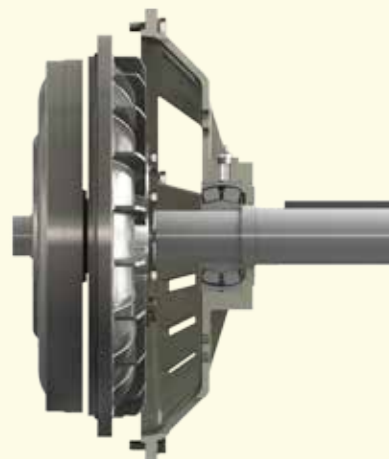
SKFU



SKFC



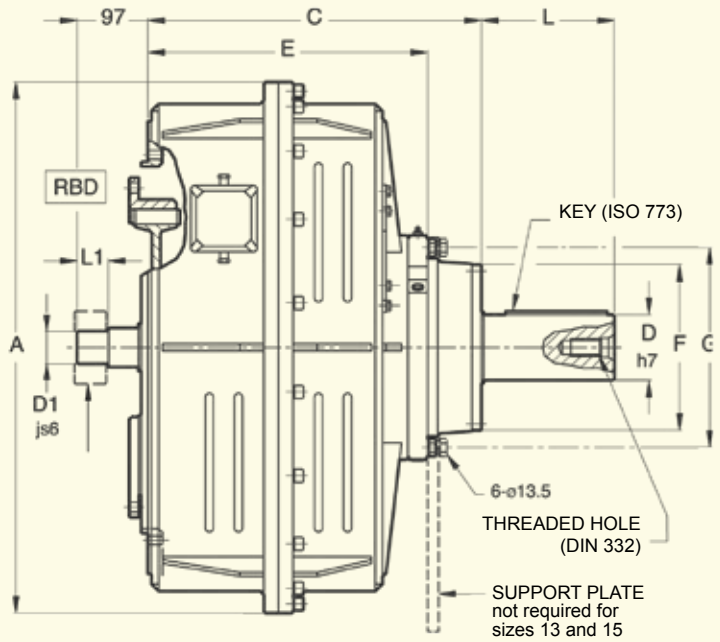
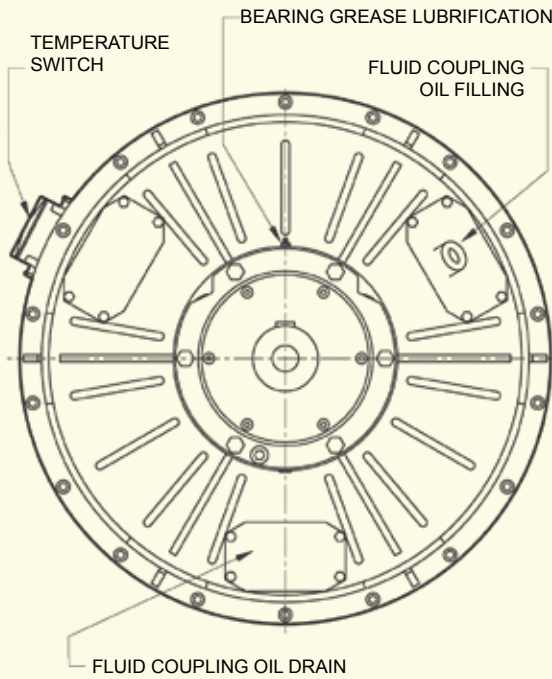
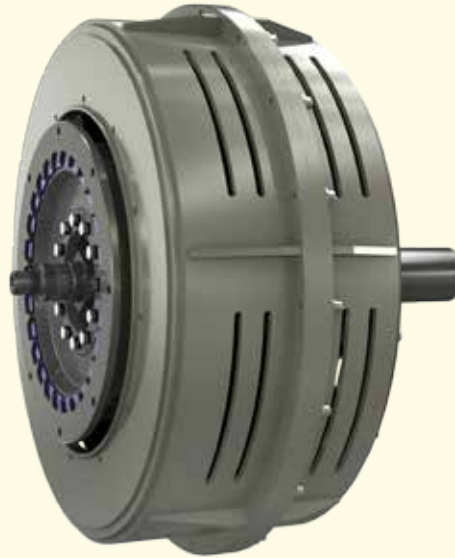
SKFE



Size ⇕ ⇕ Dimensions (mm)

| Size | ⇕ ⇕ Dimensions (mm) |     |     |        |     |    |     |    |     |      |      |     |     |
|------|---------------------|-----|-----|--------|-----|----|-----|----|-----|------|------|-----|-----|
|      | A                   | B   | Nr. | C<br>Ø | D   | S  | T   | U  | V   | W    | X    | Y   | Z   |
| 9    | 295                 | 280 | 12  | 9      | 253 | 13 | 222 | 42 | 142 | 47   | 52.5 | 261 | 2.2 |
| 11   | 325                 | 311 | 12  | 9      | 284 | 13 | 252 | 47 | 164 | 52.5 | 59.5 | 292 | 2.2 |
| 12   | 370                 | 356 | 20  | 9      | 328 | 13 | 290 | 53 | 177 | 59   | 64   | 338 | 3   |
| 13   | 398                 | 384 | 20  | 9      | 356 | 15 | 320 | 56 | 198 | 64   | 69   | 364 | 2.8 |
| 15   | 460                 | 440 | 24  | 11     | 406 | 17 | 365 | 63 | 230 | 73   | 83   | 418 | 4.3 |
| 17   | 520                 | 500 | 24  | 11     | 465 | 18 | 420 | 70 | 240 | 82   | 85   | 477 | 4.3 |

DIMENSIONS CAN BE CHANGED WITHOUT NOTICE



Size

Dimensions (mm)

| Size | A   | C     | D     | D1    | E     | F     | G     | H   |      | L     | L1 | SAE J620 flywheel size | SAE J617 housing size | Weight (kg) (1) | OIL (l) max |
|------|-----|-------|-------|-------|-------|-------|-------|-----|------|-------|----|------------------------|-----------------------|-----------------|-------------|
|      |     |       |       |       |       |       |       | Nr. | Ø    |       |    |                        |                       |                 |             |
| 13   | 451 | 231.3 | 57.15 | 30    | -     | -     | -     | -   | -    | 139.7 | 33 | 11½                    | 3                     | 62              | 5.2         |
| 15   | 545 | 290   | 63.5  | 30    | -     | -     | -     | -   | -    | 165.1 | 33 | 11½                    | 3                     | 85              | 7.65        |
| 17   | 662 | 389   | 85    | 30-35 | 304.5 | 190.5 | 225.5 | 6   | 13.5 | 170   | 38 | 11½-14                 | 3-2-1                 | 176             | 11.7        |
| 19   | 662 | 389   | 85    | 30-35 | 304.5 | 190.5 | 225.5 | 6   | 13.5 | 170   | 38 | 11½-14                 | 3-2-1                 | 185             | 14.2        |
| 21   | 730 | 462   | 90    | 45    | 385   | 245   | 275   | 6   | 15   | 180   | 43 | 14                     | 1                     | 313             | 19          |
| 24   | 820 | 462   | 90    | 45    | 385   | 245   | 275   | 6   | 15   | 180   | 43 | 14                     | 1-0                   | 355             | 28.4        |

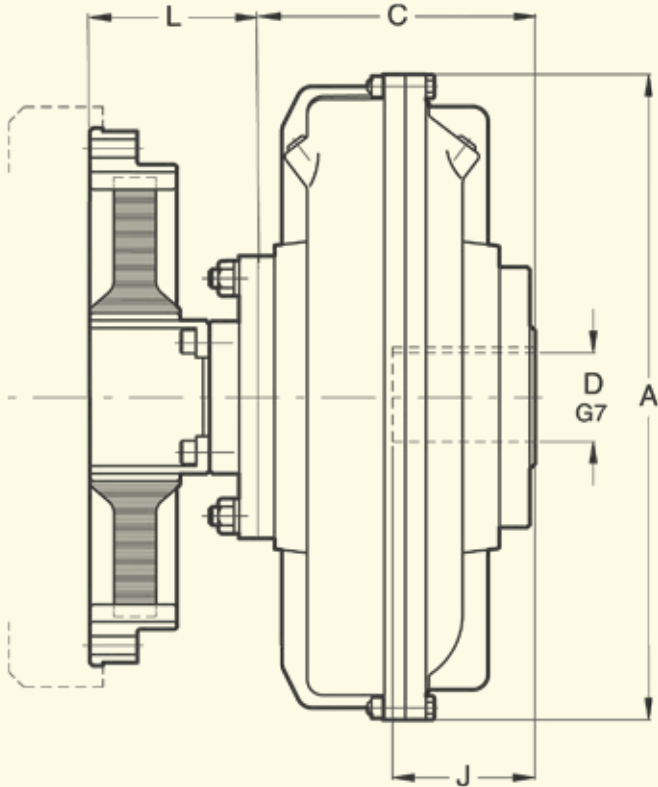
FOR 15 KFBD: KEY ACCORDING TO USAS SQUARE B17.1.67; SHAFT THREADED HOLE 3/4" - 10-UNC.

FOR 17-19-21-24 KFBD: KEY ACCORDING TO DIN 6885; SHAFT THREADED HOLE DIN 332

(1) WEIGHT REFERS TO KFBD LARGER FLYWHEEL SIZE AND WITHOUT OIL

TEMPERATURE SWITCH IS AVAILABLE AS OPTIONAL. IT DETECTS THE SURROUNDING AIR TEMPERATURE RELATED TO THE FLUID COUPLING OIL TEMPERATURE. IT IS ADJUSTABLE ACCORDING TO AMBIENT TEMPERATURE (REFER TO TF5941-O).

DIMENSIONS CAN BE CHANGED WITHOUT NOTICE



Size → Dimensions (mm)

| Size | D max     | J max     | A    | C         | L       | SAE J620 flywheel size | SAE J617 housing size | Weight (kg) (1) | OIL (l) max |
|------|-----------|-----------|------|-----------|---------|------------------------|-----------------------|-----------------|-------------|
| 15   | 65        | 140       | 460  | 205       | 123     | flywheel               | 3 - 2 - 1             | 63              | 7.65        |
| 17   | 80        | 170       | 520  | 223       | 113     | size                   | 2 - 1                 | 81              | 11.7        |
| 19   |           |           | 565  |           |         | 11½ - 14               | 2 - 1                 | 88              | 14.2        |
| 21   | 90 - □100 | 170 - 210 | 620  | 260 - 295 | 109 ± 5 | 14 - 16                | 1 - 0                 | 114             | 19          |
| 24   |           |           | 710  |           | 125 ± 6 | 14 - 16                | 1 - 0                 | 139             | 28.4        |
| 27   | 120       | 210       | 780  | 297       | 128 ± 6 | 14 - 16 - 18           | -                     | 208             | 42          |
| 29   | 135       | 240       | 860  | 326       |         | 14 - 16 - 18           | -                     | 261             | 55          |
| 34   | 150       | 265       | 1000 | 387       | 150 ± 5 | 18 - 21                | -                     | 410             | 82.5        |

STANDARD KEYWAY AS PER DIN 6885/1

□ REDUCED DEPTH KEYWAY AS PER DIN 6885/2



















(1) WEIGHT REFERS TO KRDA LARGER FLYWHEEL SIZE AND WITHOUT OIL

DIMENSIONS CAN BE CHANGED WITHOUT NOTICE

| PRODUCT       | POWER RANGE kW | TYPE    | IN LINE                                      | SIDE LOAD | TYPICAL APPLICATIONS   |
|---------------|----------------|---------|--|-----------|--|
| SKFC-SKFU     | 15 - 260       | F       | •  |           | farm and airport tractor,<br>lift truck, dumper, loader,<br>road roller, concrete mixer,<br>fire truck, snow vehicle,<br>road sweeping machine,<br>centrifugal pump, gear pump<br>vane pump, reciprocating<br>pump, centrifugal and<br>volumetric compressor,<br>fan, blower, chiller,<br>wood chipper, stone crusher,<br>shredder, grinder, mill,<br>dredge pump, marine<br>propeller, bow thruster,<br>water jet, generating set<br>drilling machine |
| SKFE          |                | F       | •  | •         |  |
| KRBD-KRDA     | 15-1300        | E+F     | •  |           |  |
| KRU           |                | F       | •  |           |  |
| KFBD          | 45-600         | E+F     | •  | •         |  |
| HFR           | 50-1300        | C dis   | •  | •         |  |
| HFR+KR or KSD |                | C dis   | •  | •         |  |
| HFO           |                | C dis   |  | •         |  |
| HFP+KSD       | 50-700         | C dis   |  | •         |  |
| RBD           | 30-1000        | E       | •  |           |  |
| PF RBD        | 80-700         | E       | •  | •         |  |
| KPTO          | 65-1000        | E+F dis | •  | •         |  |
| KPTB          | 65-1700        | E+F dis | •  | •         |  |
| KSL           | 200-3500       | E+F dis | •  |           |  |
| MPD-SPD       | 27-1300        | E+G     | •  | •         |  |
| REVERMATIC    | 30-70          | P       | 1 forw -1rev                                 |           |  |
| RANFERMATIC   | 30-95          | P       | 3 forw -1rev<br>2 forw -2rev<br>2 forw -1rev |           |  |

|   |                  |     |                         |
|---|------------------|-----|-------------------------|
| F | Fluid coupling   | G   | Gear drive              |
| C | Clutch           | P   | Powershift transmission |
| E | Elastic coupling | dis | Disconnectable          |



**EUROPE**

-  **AUSTRIA**  
ASC GMBH  
4470 Enns
-  **BELGIUM - LUXEMBURG**  
TRANSFLUID FRANCE s.a.r.l.  
38110 Rochetoirin  
Ph. +33 9 75635310  
Fax +33 4 26007959  
tffrance@transfluid.eu
-  **CZECH REPUBLIC**  
TESPO ENGINEERING s.r.o.  
602 00 Brno
-  **DENMARK (Electric appl.)**  
JENS S. TRANSMISSIONER A/S  
DK 2635 ISHØJ
-  **ENGLAND & IRELAND**  
MARINE AND INDUSTRIAL TRANS. LTD.  
Queenborough Kent me11 5ee
-  **FINLAND (Electric appl.)**  
OY JENS S. AB  
02271 Espoo
-  **FINLAND (Diesel appl.)**  
TRANS-AUTO AB  
151 48 Södertälje
-  **FRANCE**  
TRANSFLUID FRANCE s.a.r.l.  
38110 Rochetoirin  
Ph. +33 9 75635310  
Fax +33 4 26007959  
tffrance@transfluid.eu
-  **GERMANY - HOLLAND**  
TRANSFLUID GERMANY GmbH  
D-48529 Nordhorn  
Ph. +49 5921 7288808  
Fax +49 5921 7288809  
tfgermany@transfluid.eu
-  **NORWAY (Diesel appl.)**  
K GK Norge AS  
0664 Oslo
-  **POLAND**  
SENOMA LTD  
PL40-153 Katowice
-  **PORTUGAL**  
REDVARIO LDA  
2735-469 Cacem
-  **RUSSIA - BELARUS - KAZAKHSTAN**  
TRANSFLUID OOO  
143100 Moscow  
Ph. +7 495 7782042  
Mob. +7 926 8167357  
tfrussia@transfluid.eu
-  **SLOVENIA - BOSNIA - CROATIA  
SERBIA**  
VIA INTERNATIONAL d.o.o.  
1241 Kamnik
-  **SPAIN**  
TECNOTRANS BONFIGLIOLI S.A.  
08040 Barcelona
-  **SWEDEN - ESTONIA - LATVIA  
(Electric appl.)**  
JENS S. TRANSMISSIONER AB  
SE-601-19 Norrköping
-  **SWEDEN (Diesel appl.)**  
TRANS-AUTO  
SE 151-48 Södertälje
-  **TURKEY**  
REMAS  
81700 Tuzla Istanbul

**AMERICA**




-  **ARGENTINA**  
ACOTEC S.A.  
Villa Adelina - Buenos Aires
-  **BRAZIL**  
SGI PTI  
04461-050 Sao Paulo SP
-  **CHILE**  
SCEM LTDA  
Santiago Do Chile
-  **COLUMBIA**  
A.G.P. REPRESENTACIONES LTDA  
77158 Bogotà
-  **PERU'**  
SCEM LTDA SUC. PERU  
Lima 18
-  **U.S.A. - CANADA - MEXICO**  
TRANSFLUID LLC  
Auburn, GA30011  
Ph. +1 770 822 1777  
Fax +1 770 822 1774  
tfusa@transfluid.us

**AFRICA**

-  **ALGERIA - CAMEROUN - GUINEA  
MAROCCO - MAURITANIA  
SENEGAL - TUNISIA**  
TRANSFLUID FRANCE s.a.r.l.  
38110 Rochetoirin (France)  
Ph. +33 9 75635310  
Fax +33 4 26007959  
tffrance@transfluid.eu
-  **EGYPT**  
INTERN.FOR TRADING & AGENCY (ITACO)  
Nasr City (Cairo)
-  **SOUTH AFRICA  
SUB SAHARAN COUNTRIES**  
BMG BEARING MAN GROUP  
Johannesburg
-  **OCEANIA  
NEW ZELAND**  
HENLEY ENGINEERING Ltd  
Auckland

**ASIA**

-  **ASIA South East**  
ATRAN TRANSMISSION PTE LTD  
Singapore 608 579
-  **CHINA**  
TRANSFLUID BEIJING TRADE CO. LTD  
101300 Beijing  
Ph. +86 10 60442301-2  
Fax +86 10 60442305  
tbtinfo@sina.cn
-  **INDIA**  
PROTOS ENGINEERING CO. PRIVATE LTD  
600002 Tamilnadu Chennai
-  **INDONESIA**  
PT. HIMALAYA EVEREST JAYA  
Barat Jakarta 11710
-  **IRAN**  
LEBON CO.  
Tehran 15166
-  **IRAN (Oil & Gas appl.)**  
EVANPALA Inc  
Tehran 1433643115
-  **ISRAEL**  
ELRAM ENGINEERING &  
ADVANCED TECHNOLOGIES 1992 LTD  
Emek Hefer 38800
-  **JAPAN**  
ASAHI SEIKO CO. LTD.  
Osaka 593
-  **KOREA**  
KIWON CORP.  
Pusan - South Korea
-  **TAIWAN**  
FAIR POWER TECHNOLOGIES CO.LTD  
105 Taipei
-  **THAILAND**  
SYSTEM CORP. LTD.  
Bangkok 10140
-  **UAE - SAUDI ARABIA - KUWAIT - OMAN  
BAHRAIN - YEMEN - QATAR**  
NICO INTERNATIONAL U.A.E.  
Dubai

-  **TRANSFLUID SUBSIDIARIES**
-  **REPRESENTATIVE OFFICE**
-  **SERVICE CENTER**

Global web site: [www.transfluid.eu](http://www.transfluid.eu)

E-commerce web site: [www.buy-transfluid.com](http://www.buy-transfluid.com)

LOCAL DISTRIBUTOR