TRANSFLUID

# TRANSFLUID

drive with us

## K - CK - CCK
FLUID COUPLINGS

# INDEX

## 1. DESCRIPTION

The TRANSFLUID coupling (K series) is a constant fill type comprising three main elements:
1 Driving impeller (pump) mounted on the input shaft.
2 Driven impeller (turbine) mounted on the output shaft.
3 Cover, flanged to the output impeller, with an oil-tight seal.
The first two elements can work both as pump and/or turbine.

## 2. OPERATING CONDITIONS

The TRANSFLUID coupling is a hydrokinetic transmission. The impellers perform like a centrifugal pump and a hydraulic turbine. With an input drive to the pump (i.e. electric motor or Diesel engine) kinetic energy is transfered to the oil in the coupling. The oil moves by centrifugal force across the blades of the turbine towards the outside of the coupling.
This absorbs the kinetic energy and develops a torque which is always equal to input torque thus causing rotation of the output shaft. The wear is practically zero since there are no mechanical connections.
The efficiency is influenced only by the speed difference (slip) between pump and turbine.

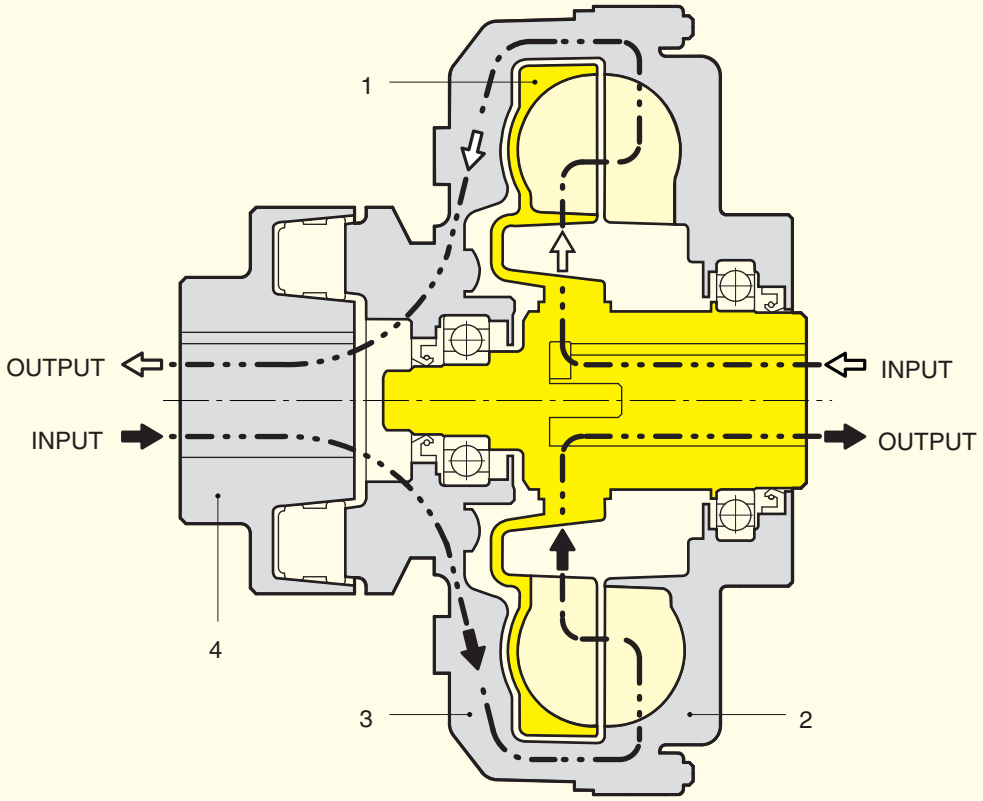
The slip is essential to the functioning of the coupling: there could not be torque transmission without slip! The formula for slip, from which the power loss can be deduced is as follows:

$$\text{slip } \% = \frac{\text{input speed} - \text{output speed}}{\text{input speed}} \times 100$$

In normal conditions (standard duty), slip can vary from 1.5% (large power) to 6% (small power).

TRANSFLUID couplings follow the laws of all centrifugal machines:

1 Transmitted torque is proportional to the square of input speed;
2 Transmitted power is proportional to the cube of input speed;
3 Transmitted power is proportional to the fifth power of circuit outside diameter.




**1** INTERNAL IMPELLER
**2** EXTERNAL IMPELLER
**3** COVER
**4** FLEX COUPLING

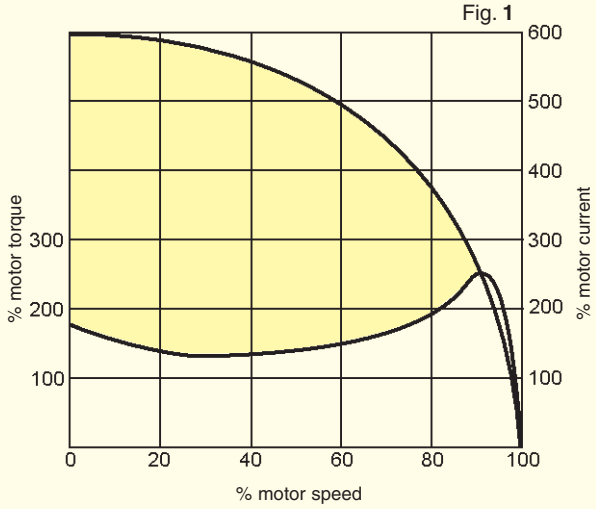
### 2.1 TRANSFLUID COUPLING FITTED ON ELECTRIC MOTORS

Three phase synchronous squirrel cage motors are able to supply maximum torque only near 100% synchronous speed. Direct starting the system utilizes the most current. Figure 1 illustrates the relationship between torque and current. It can be seen that the absorbed current is proportional to the torque only between 85% and 100% of the synchronous speed. With a motor connected directly to the load, there are the following disadvantages:

– The difference between available torque and the torque required by the load is very low until the rotor has accelerated to between 80-85% of the synchronous speed
– The absorbed current is high (up to 6 times the nominal current) throughout the starting phase causing overheating of the windings, overloads in the electrical lines and, in cases of frequent starts, major production costs.
– Oversized motors are required by the limitations indicated above.

To limit the absorbed current of the motor during the acceleration of the load, a Y-Δ (wye – delta) starting system is frequently used which reduces the absorbed current by about 1/3 during starting. Unfortunately, during operation of the motor under the delta configuration, the available torque is also reduced by 1/3 and for machines with high inertias to accelerate, oversizing of the motor is still required. Finally, this system does not eliminate current peaks originating from the insertion or the commutation of the device.

Fig. **1**




Any drive system using a Transfluid fluid coupling has the advantage of the motor starting without load. Figure 2 compares the current demands of an electric motor when the load is directly attached verses the demand when a fluid coupling is mounted between the motor and load. The colored area shows the energy that is lost, as heat, during start-up when a fluid coupling is not used. A Transfluid fluid coupling reduces the motor's current draw during start-up thus reducing peak current demands. This not only reduces power costs but also reduces brown outs in the power grid and extends the life of the motor. Also at start-up, a fluid coupling allows more torque to pass to the load for acceleration than in drive systems without a fluid coupling.

Figure 3 shows two curves for a single fluid coupling and a characteristic curve of an electric motor. It is obvious from the stall curve of the fluid coupling (s=100%) and the available motor torque, how much torque is available to accelerate the rotor of the motor (colored area). In about 1 second, the rotor of the motor accelerates passing from point A to point B. The acceleration of the load, however, is made gradually by the fluid coupling, utilizing the motor in optimal conditions, along the part of the curve between point B, 100% and point C, 2-5%. Point C is the typical point of operation during normal running.

Fig. **2**

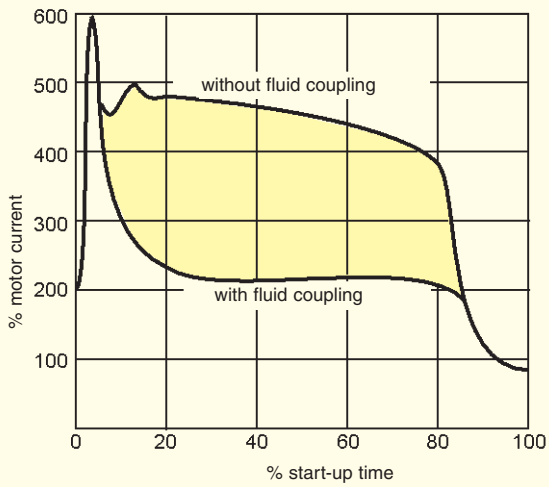
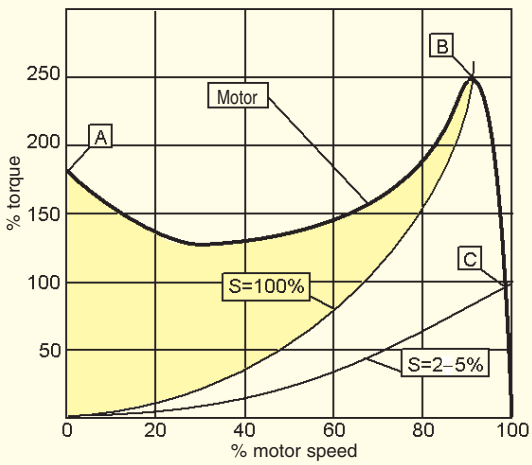



Fig. **3**



### 2.2 TRANSFLUID FLUID COUPLINGS WITH A DELAYED FILL CHAMBER

With the standard circuit in a maximum oil fill condition, fluid couplings may transmit over **200%** of the nominal motor torque. It is possible to decrease the starting torque **down to 160%** of the nominal torque, by decreasing oil fill. This, however, leads to higher slip and working temperature in the fluid coupling, during the steady running conditions.
The most convenient solution to provide lower starting torque while maintaining low slip at steady running is to provide a delayed fill chamber mounted on the main circuit. This chamber holds a percentage of the oil which at start-up is gradually released into the main circuit through **calibrated bleed orifices** as the coupling spins. For couplings sized **15CK** and above these orifices are set in **externally mounted valves**.
The external mounting provides easy adjustment of the orifice size which controls starting time and the maximum transmitted torque.

When the coupling is at rest, the **delay fill chamber** contains a percentage of oil quantity in the main circuit (Fig. **4a**). This **reduces the torque** the coupling transmits and allows the motor to quickly reach its steady running speed, **as if it was started without load**.

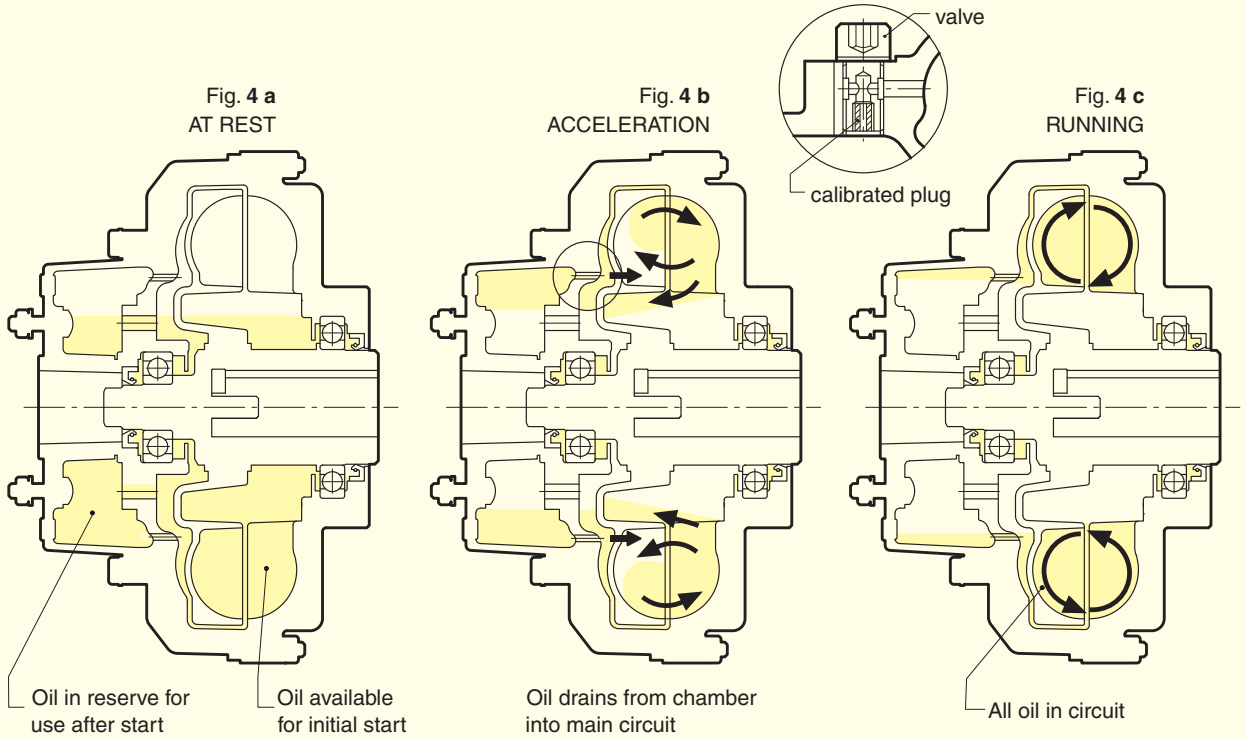
As the coupling accelerates, the oil flows from the **delay fill chamber** to the main circuit (Fig. **4b**) at a rate proportional to the coupling's rotational speed.
The oil continues to transfer from the delay fill chamber the to the main circuit emptying the delay fill chamber. Once all the oil is in the main circuit (Fig. **4c**) the coupling is then transmitting 100% of the motor torque and the **minimum slip value is reached**.

With a **single delay fill chamber**, the ratio between starting and nominal torque may reach **150** %. This ratio can be reduced to **120 % with a double delay fill chamber**. This lower start-up torque results from a smaller amount of oil in the main circuit due to more oil in the bigger delay fill chamber.

Fluid couplings with single or double delay fill chamber provide very smooth start-ups with low start-up torque transmission, and this makes them excellent for applications with high inertia loads and for use on belt conveyors.
The single size chamber is available from size 11CK and above. The double size chamber is available from size 15CCK and above

### 3. SUMMARY OF THE ADVANTAGES GIVEN BY FLUID COUPLINGS:

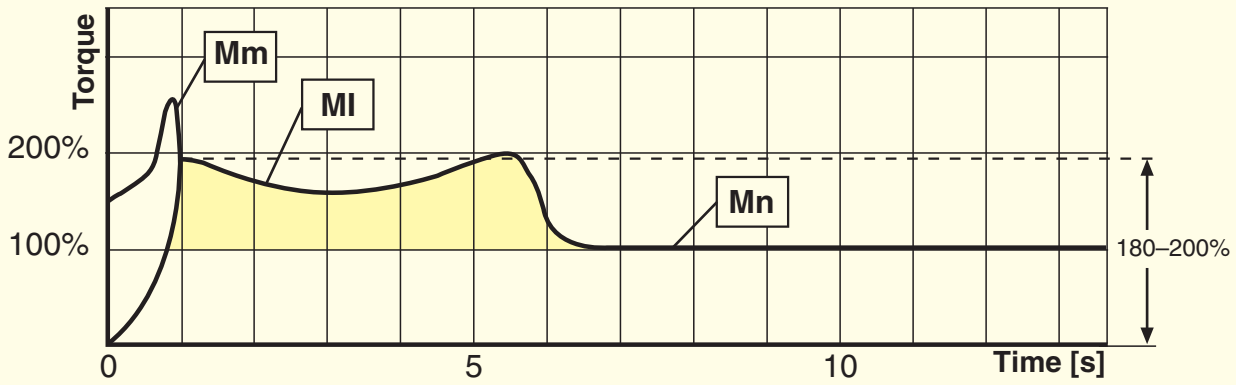
- **Very smooth start-ups**
- **Reduction** of **absorbed current** during the starting phase: the motor starts with very low load
- **Protection** of the motor and the driven machine **from jams and overloads**
- Utilization of **asynchronous squirrel cage motors** instead of special motors with soft start devices
- **Longer life** and **up time** of the whole drive train, thanks to the protection provided by the fluid coupling
- **Energy saving**, due to current peak reduction
- **Limits starting torque** to 120% with a double delayed fill chamber
- **Same torque at input and output**: the motor can supply the maximum torque even when load is jammed
- Torsional **vibration** absorption for internal combustion engines, thanks to the presence of a fluid as a power transmission element
- Possibility to achieve a high number of **start-ups**, or reversal of the rotational direction.
- **Load balancing** with dual motor drive: fluid couplings **automatically adjust** load speed to the individual motor's speed
- **High efficiency** and **minimum maintenance**
- Viton rotating seals and O-rings



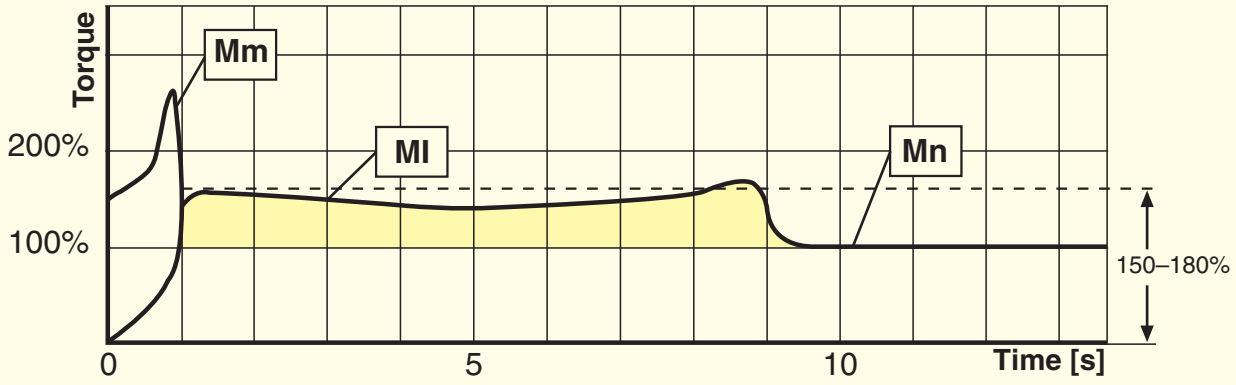
**4. CHARACTERISTIC CURVES**

MI : transmitted torque from fluid coupling
Mm : starting torque of the electric motor
Mn : nominal torque at full load
..... : accelerating torque

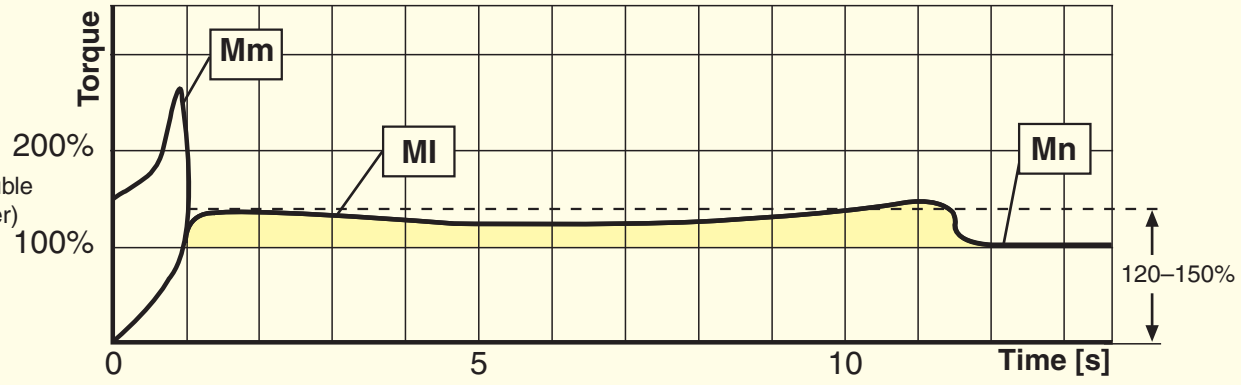
**K type**
(standard circuit)




**CK type**
(circuit with a delayed chamber)




**CCK type**
(circuit with a double delayed chamber)



## 5. VERSIONS

### 5.1 IN LINE

**KR-CKR-CCKR** : Basic coupling (KR), with a single (CKR) or double (CCKR) delayed fill chamber.

**KRG-CKRG-CCKRG** : Basic coupling with elastic coupling
**KRM-CKRM-CCKRM** (clamp type), or superelastic.

**KRB-CKRB-CCKRB** : like ..KRG, but with brake drum or
**...KRBP** brake disc.

**KRD-CKRD-CCKRD** : basic coupling ..KR with output shaft. It allows the utilization of other flex couplings; it is possible to place it (with a convenient housing) between the motor and a hollow shaft gearbox.

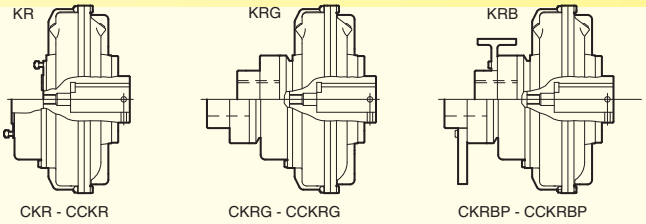
**EK** : fluid coupling fitted with a bell housing, to be placed between a flanged electric motor and a hollow shaft gearbox.

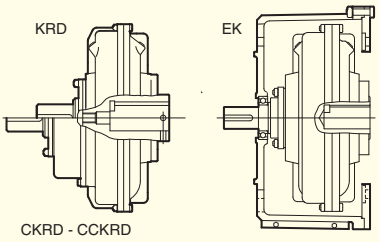
**KCM-CKCM-CCKCM** : basic coupling for half gear couplings.

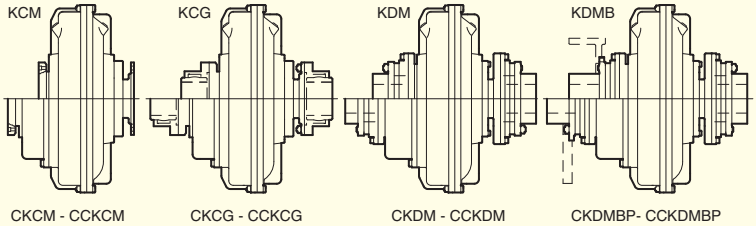
**KCG-CKCG-CCKCG** : basic ..KCM with half gear couplings. On request, is available with brake drum or brake disc.

**KDM-CKDM-CCKDM** : fluid coupling with disc couplings.

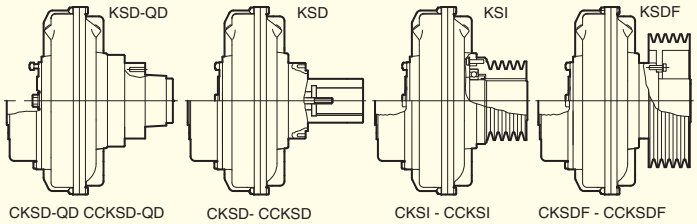
**...KDMB** : like ..KDM, but with brake drum or
**...KDMBP** brake disc.




**Note: The ..KCG - ..KDM versions allow a radial disassembly without moving the motor or the driven machine.**




## 6. MOUNTING

### 6.1 IN LINE VERSIONS MOUNTING EXAMPLES

Fig. **A** Horizontal axis between the motor and the driven machine (KR-CKR-CCKR and similar).

Fig. **B** It allows a radial disassembly without moving the motor and the driven machine (KCG-KDM and similar).

Fig. **C** Between a flanged electric motor and a hollow shaft gearbox by means of a bell housing (..KRD and EK).

Fig. **D** Vertical axis mounting between the electric motor and a gearbox or driven machine. **When ordering, please specify motor shaft pointing up (type 1) or motor shaft pointing down (type 2)**.

Fig. **E** Between the motor and a supported pulley for high powers and heavy radial loads.

Fig. **F**

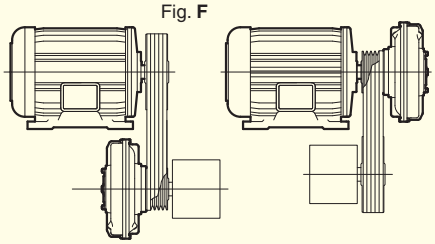
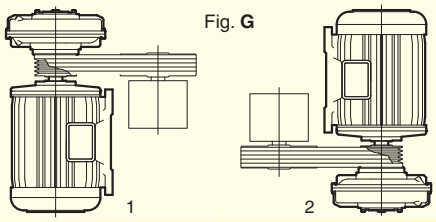


Fig. **G**




### 5.2 PULLEY

**KSD-QD–CKSD-QD CCKSD-QD** : fluid coupling that will use a QD style pulley

**KSD–CKSD–CCKSD** : basic coupling that accepts a flanged pulley, with single (CK..) or double (CCK..) delayed fill chamber

**KSI-CKSI-CCKSI** : fluid coupling with an incorporated pulley, which is fitted from inside.

**KSDF-CKSDF CCKSDF** : basic ..KSD coupling with flanged pulley, externally mounted and therefore to be easily disassembled.

Fig. **A**

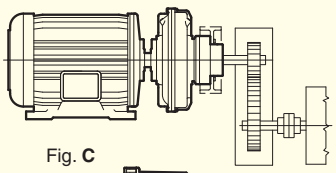


Fig. **B**

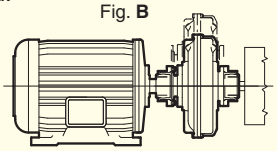


Fig. **C**

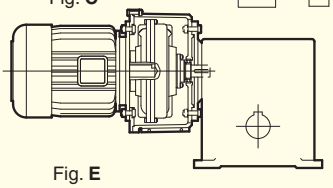


Fig. **E**

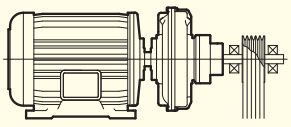
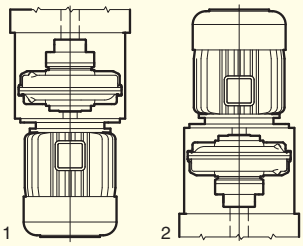


Fig. **D**




**N.B.** Version EK (fig. **C**) also for vertical mounting (fig. **D 1-2**)

### 6.2 PULLEY VERSIONS MOUNTING EXAMPLES

Fig. **F** Horizontal axis.

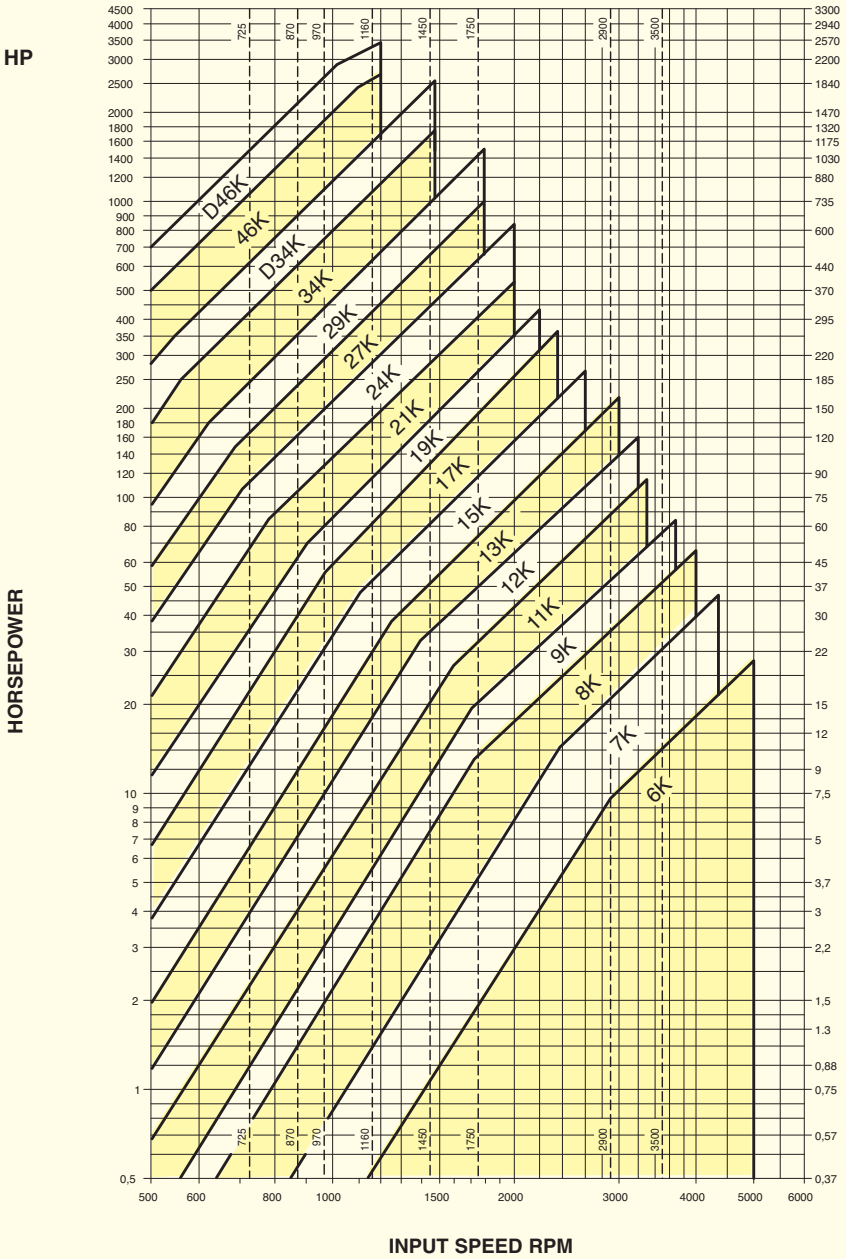
Fig. **G** Vertical axis. **When ordering, please specify motor shaft pointing up (type 1) or motor shaft pointing down (type 2)**.

## 7. SELECTION

### 7.1 SELECTION CHART

The chart below may be used to select a unit size from the horsepower and input speed. If the selection point falls on a size limit line dividing one size from the other, it is advisable to select the larger size with a proportionally reduced oil fill.

**GENERAL REFERENCE HORSEPOWER CHART**




**THE CURVES SHOW LIMIT CAPACITY OF COUPLING**

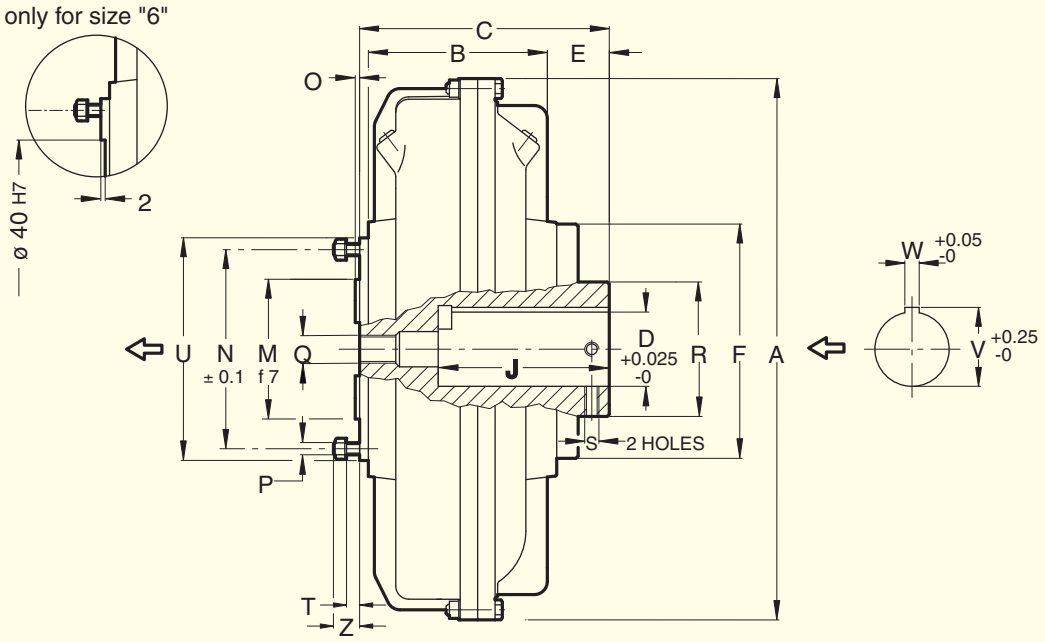
### 7.2 SELECTION TABLE

Fluid couplings for standard electric motor

| MOTOR | | (1) 3600 rpm | | 1800 rpm | | 1200 rpm | | 900 rpm | |
|---|---|---|---|---|---|---|---|---|---|
| FRAME | SHAFT DIA. mm (inch) | HP | COUPLING | HP | COUPLING | HP | COUPLING | HP | COUPLING |
| 143T | 22.275 (0.875) | 1.5 | 6 K | 1 | 6 K | 0.75 | 7 K | 0.5 | 7 K |
| 145T | | 2 | | 1.5 - 2 | | 1 | | 0.75 | 8 K |
| 182T | 28.575 (1.125) | 3 | 7 K | 3 | 7 K | 1.5 | 8 K | 1 | |
| 184T | | 5 | | 5 | | 2 | | 1.5 | 9 K |
| 213T | 34.925 (1.375) | 7.5 | | 7.5 | 8 K | 3 | | 2 | |
| 215T | | 10 - 15 | | 10 | | 5 | 9 K | 3 | 11 K |
| 254 | 41.275 (1.625) | 15 - 20 | 8K | 15 | 9 K | 7.5 | 11 K | 5 | 12 K |
| 256T | | 20 - 25 | | 20 | | 10 | | 7.5 | 13 K |
| 284T | 47.625 (1.875) | - | - | 25 | 11 K | 15 | 12 K | 10 | |
| 284TS | 41.275 (1.625) | 30 | 9K | - | - | - | - | - | - |
| 286T | 47.625 (1.825) | - | - | 30 | 12 K | 20 | 13 K | 15 | 15 K |
| 286TS | 41.275 (1.625) | 40 | 9K | - | - | - | - | - | - |
| 324T | 53.975 (2.125) | - | - | 40 | 12 K | 25 | 13 K | 20 | 17 K |
| 324TS | 47.625 (1.875) | 50 | 9K | - | - | - | - | - | - |
| 326T | 53.975 (2.125 | - | - | 50 | 13 K | 30 | 15 K | 25 | 17 K |
| 364T | 60.325 (2.375) | | | 60 | | 40 | | 30 | |
| 365T | | | | 75 | 15 K | 50 | | 40 | |
| 404T | 73.025 (2.875) | | | 100 | | 60 | 17 K | 50 | 19 K |
| 405T | | | | 125 | 17 K | 75 | | 60 | |
| 444T | 85.725 (3.375) | | | 150 | | 100 | 19 K | 75 | 21 K |
| 445T | | | | 200-250 | 19 K | 125 | 21 K | 100 | |
| | | | | max | | max | | max | |
| NON - STANDARD MOTOR | | | | 400 | 21 K | 270 | 24 K | 150 | 24 K |
| | | | | 600 | 24 K | 400 | 27 K | 220 | 27 K |
| | | | | 958 | 27 K | 598 | 29 K | 350 | 29 K |
| | | | | 1360 | 29 K | 1088 | 34 K | 600 | 34 K |
| | | | | | | 1350 | D 34 K | 1000 | D 34 K |
| | | | | | | 2700 | 46 K | 1800 | 46 K |
| | | | | | | 3400 | D 46 K | 2400 | D 46 K |

**General note:** The fluid coupling size is tied to the motor shaft dimensions
(1) Special version, 24 hours/day service

## 8. DIMENSIONS




**KR**

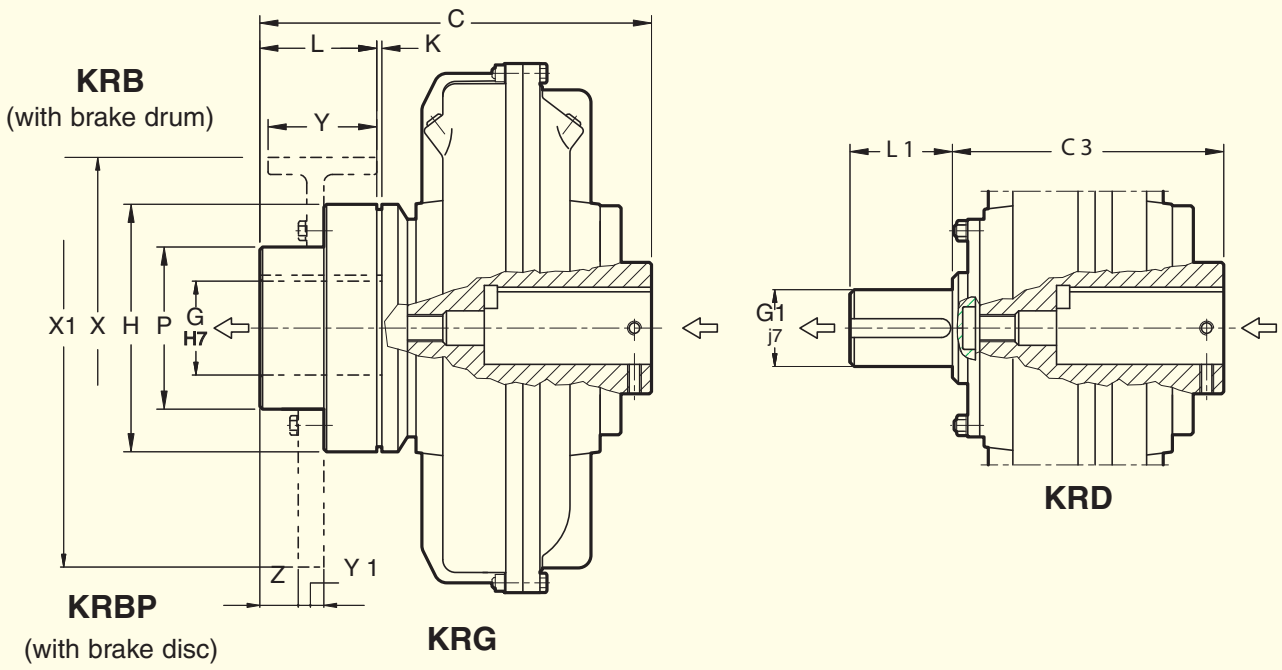
**Note: The arrows ⇦ indicate input and output of the standard version.**

⇨ Dimensions

| Size | D mm. | D inch | J | W | V | A | B | C | E | F | M | N | O | P Nr. | P Ø | Q | R | S | T | U | Z | Weight kg (less oil) | Oil lt max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | •22.225 | .875 | 57.2 | 4.762 | 24.5 | 195 | 60 | 90.5 | 29 | 88 | * | 53 | * | 4 | 7 | – | 33 | 1/4 20 UNC | 6 | 68 | 16.5 | 2.7 | 0.5 |
| | 15.875 | .625 | 47.6 | | 18 | | | | | | | | | | | | | | | | | | |
| 7 | •34.925 | 1.375 | 79.4 | 7.937 | 38.6 | 228 | 77 | 124 | 34 | 114 | 60 | 73 | 3 | 6 | | 1/2 13 UNC | 50 | 5/16 18 UNC | | 88 | 14 | 5.1 | 0.92 |
| | 28.575 | 1.125 | 63.5 | 6.35 | 31.5 | | | | | | | | | | | | | | | | | | |
| | 22.225 | .875 | 57 | 4.762 | 24.5 | | | | | | | | | | | | | | | | | | |
| 8 | •34.925 | 1.375 | 79.4 | 7.937 | 38.6 | 256 | 91 | 129 | 30 | | | | | | | | | | | | 15 | 5.5 | 1.5 |
| | 28.575 | 1.125 | 63.5 | 6.35 | 31.5 | | | | | | | | | | | | | | | | | | |
| 9 | •41.275 | 1.625 | 95.3 | 9.525 | 45.6 | 295 | 96 | 160 | 46 | 128 | 80 | 88.9 | 8 | | 8 | 3/4 10 UNC | 70 | 7/16 14 UNC | | 107 | | 10 | 1.95 |
| | 34.925 | 1.375 | 79.4 | 7.937 | 38.6 | | | | | | | | | | | | | | | | | | |

- • MAX BORE WITH A KEYWAY AS PER USAS SQUARE B17.1
- * SEE DRAWING
- – WHEN ORDERING, SPECIFY SIZE, MODEL AND **D** DIAMETER, EXAMPLE: 7 KR D. 34.925

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE



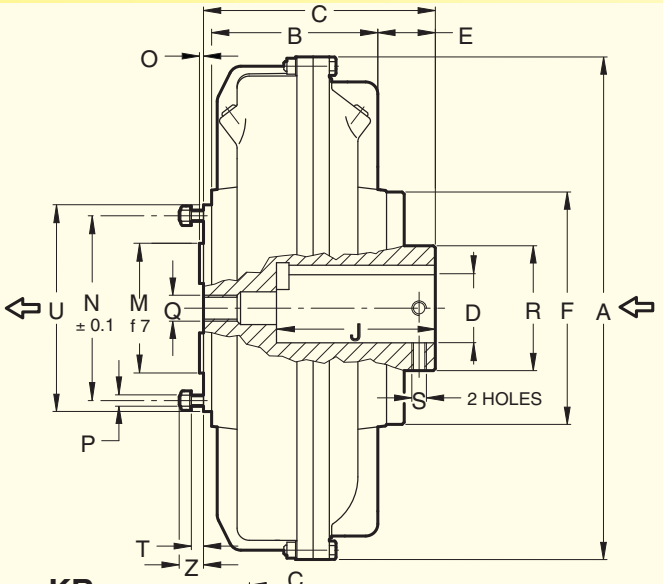

**Note: The arrows ⇦ indicate input and output of the standard version.**

Dimensions mm

| Size | C | $C_3$ | G max | $G_1$ | H | K | L | $L_1$ | P | Flex coupling | Brake drum X - Y | Weight kg (less oil) KRG | KRD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 149 | 107 | 28 | 22.225 | 73 | 2 | 40 | 41.275 | 45 | BT02 | on request | 3.9 | 3 |
| 7 | 201 | 145 | 42 | 34.925 | 110 | | 60 | 50.8 | 70 | BT10 | 160 - 60 | 8.3 | 5.7 |
| 8 | 206 | 150 | | | | | | | | | | 8.7 | 6.1 |
| 9 | 261 | 191 | 55 | 47.625 | 132 | | 80 | 63.5 | 85 | BT20 | 160 - 60<br>200 - 75 | 16 | 11.6 |

- $G_1$ SHAFT WITH SQUARE KEYWAY AS PER USAS B17.1
- UPON REQUEST: BORE **G** MACHINED - $G_1$ SPECIAL SHAFT
- WHEN ORDERING, SPECIFY SIZE, MODEL AND **D** DIAMETER, EXAMPLE: 8 KRB D.28.575 BRAKE DRUM 160 x 60

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

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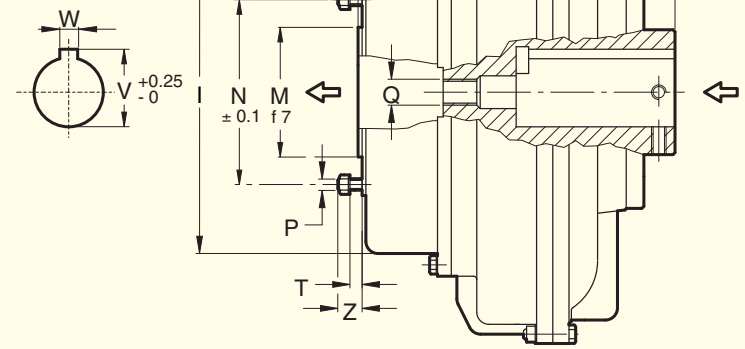
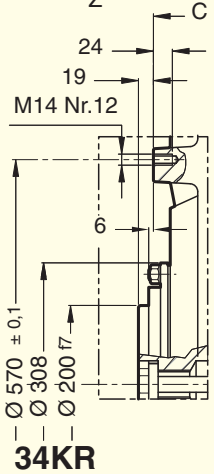
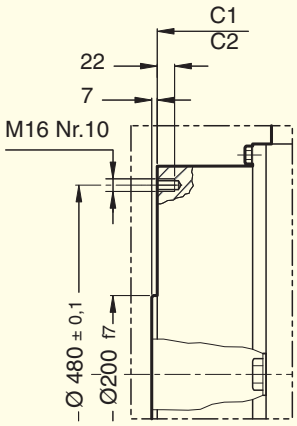



**CKR - CCKR**

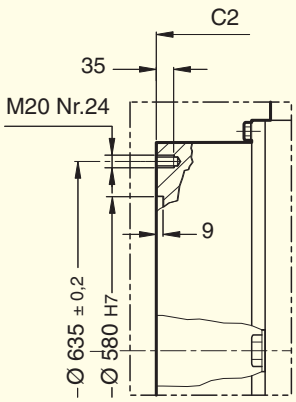



**34KR**




**34CKR - 34CCKR**




**46CCKR**

| Size | Weight Kg (less oil) | | | Oil max lt | | |
|---|---|---|---|---|---|---|
| | KR | CKR | CCKR | KR | CKR | CCKR |
| 11 | 12 | 14.5 | – | 2.75 | 3.35 | – |
| 12 | 155 | 18.5 | | 4.1 | 4.8 | |
| 13 | 24 | 27 | | 5.2 | 5.8 | |
| 15 | 37 | 41 | 48.7 | 7.65 | 8.6 | 9.3 |
| 17 | 51 | 57 | 66 | 11.7 | 13.6 | 14.9 |
| 19 | 58 | 64 | 73 | 14.2 | 16.5 | 18. 5 |
| 21 | 87 | 97 | 105 | 19 | 23 | 31 |
| 24 | 105 | 115 | 129 | 28.4 | 31.2 | 39 |
| 27 | 161 | 179 | 198 | 42 | 50 | 61 |
| 29 | 214 | 232 | 242 | 55 | 63 | 73 |
| 34 | 350 | 367 | 377 | 82.5 | 92.5 | 101 |

Dimensions

**Note: The arrows ⇦ indicate input and output of the standard version.**

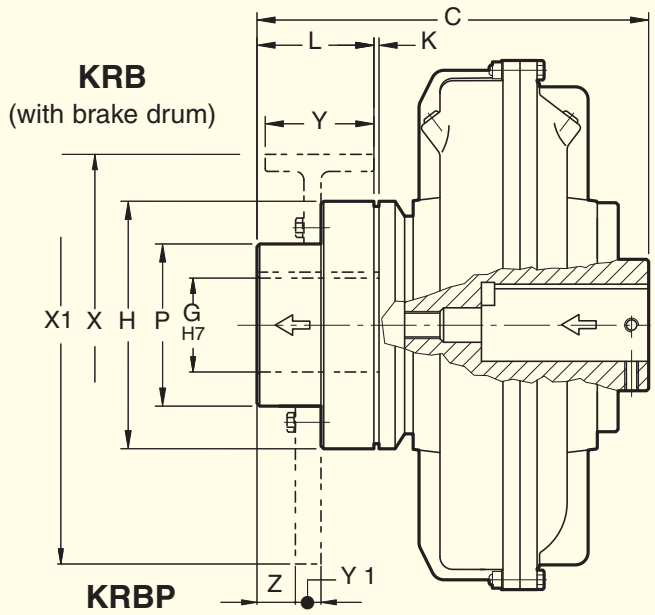
| Size | D mm. | D inch | J | W | V | A | B KR | $B_1$ CKR | $B_2$ CCKR | C KR | $C_1$ CKR | $C_2$ CCKR | E | F | I | M | N | O | P Nr. | P Ø | Q | R | S | T | U | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 47.625•• | 1.875 | 111 | 12.7 | 50 | 325 | 107 | 68.5 | – | 169 | 215 | – | 42 | 128 | 195 | 60 | 88.9 | 8 | 6 | M8 | 3/4 10 UNC | 70 | 7/16 14 UNC | 6 | 107 | 15 |
| | 41.275 | 1.625 | 95.3 | 9.525 | 45.6 | | | | | | | | | | | | | | | | | | | | | |
| 12 | 47.625•• | 1.875 | 111 | 12.7 | 50 | 370 | 122 | 75 | | | 236 | | 39 | 145 | 224 | | | | | | | | | | | |
| 13 | 60.325•• | 2.375 | 143 | 15.875 | 63 | 398 | 137 | | | 199 | 258 | | 46 | 179 | | 80 | 122.2 | 5 | 8 | M10 | 7/8 9 UNC | 89 | 9/16 12 UNC | 7 | 142 | 17 |
| | 53.975 | 2.125 | 127 | 12.7 | 59.7 | | | | | | | | | | | | | | | | | | | | | |
| 15 | 73.025•• | 2,875 | 178 | 19.05 | 76 | 460 | 151 | 87 | 135 | 226 | 294 | 342 | 56 | 206 | 259 | 90 | 136 | | | | | 101 | 5/8 11 UNC | 8 | 156 | 19 |
| | 60.325 | 2.375 | 143 | 15.875 | 67.3 | | | | | | | | | | | | | | | | | | | | | |
| | 53.975 | 2.125 | 127 | 12.7 | 59.7 | | | | | | | | | | | | | | | | | | | | | |
| 17 | 85.725•• | 3.375 | 194 | 22.225 | 92.3 | 520 | 170 | 96 | 176 | 248 | 328 | 408 | 62 | 225 | 337 | 125 | 160 | 15 | 12 | | | 126 | 3/4 10 UNC | | 180 | |
| | 73.025 | 2.875 | 178 | 19.05 | 81.4 | | | | | | | | | | | | | | | | 1 1/4 7 UNC | | | | | |
| 19 | 85.725•• | 3.375 | 194 | 22.225 | 92.3 | 565 | 190 | | | | | | 42 | | | | | | | | | | | | | |
| | 73.025 | 2.875 | 178 | 19.05 | 81.4 | | | | | | | | | | | | | | | | | | | | | |
| 21 | 98.425•• | 3.875 | 216 | 25,4 | 104.3 | 620 | 205 | 110 | 200 | 286 | 386 | 476 | 71 | 250 | 400 | 160 | 228 | 5 | 8 | M14 | | 136 | | 14 | 255 | 30 |
| | 85.725 | 3.375 | 210 | 22.225 | 95.5 | | | | | | | | | | | | | | | | | | | | | |
| 24 | 98.425•• | 3,875 | 216 | 25.4 | 104.3 | 714 | 229 | | | | | | 47 | | | | | | | | | | | | | |
| | 85.725 | 3.375 | 210 | 22.225 | 95.5 | | | | | | | | | | | | | | | | | | | | | |
| 27 | 120.65•• | 4,750 | 216 | 31.75 | 129.8 | 780 | 278 | 131 | 231 | 322 | 440 | 540 | 41 | 315 | 537 | 200 | 275 | 7 | | M16 | 1 3/4 5 UNC | 185 | 7/8 9 UNC | | 308 | 33 |
| 29 | 133.35•• | 5.250 | 241 | 31.75 | 142.7 | 860 | 295 | | | 349 | 467 | 567 | | 350 | | | | | | | | 205 | | | | |
| 34 | 150.8•• | 5.938 | 265 | 38.1 | 161.2 | 1000 | 368 | | | 422 | 553 | 653 | 54 | 400 | | * | * | * | * | * | | 240 | | – | – | – |
| 46 | 177.8 | 7 | 317.5 | 44.45 | 197.3 | 1330 | 487 | – | 310 | 576 | – | 857 | – | – | 695 | * | * | * | * | * | 2 4 1/2 UNC | 310 | 1 1/8 7 UNC | * | * | * |

•• MAX BORE WITH REDUCED **V** DEPTH KEY WAY
* SEE DRAWING
– WHEN ORDERING, SPECIFY SIZE, MODEL AND **D** DIAMETER, EXAMPLE: 29 CCKR D. 133.36

Dim. **D** tolerance: up to 50.8 $^{+0.025}_{-0}$; from 50.8 to 101.6 $^{+0.038}_{-0}$; from 101.6 to 152.4 $^{+0.05}_{-0}$

Dim. **W** tolerance: up to 12.7 $^{+0.05}_{-0}$; from 15.875 to 25.4 $^{+0.076}_{-0}$; from 25.4 to 38.1 $^{+0.1}_{-0}$

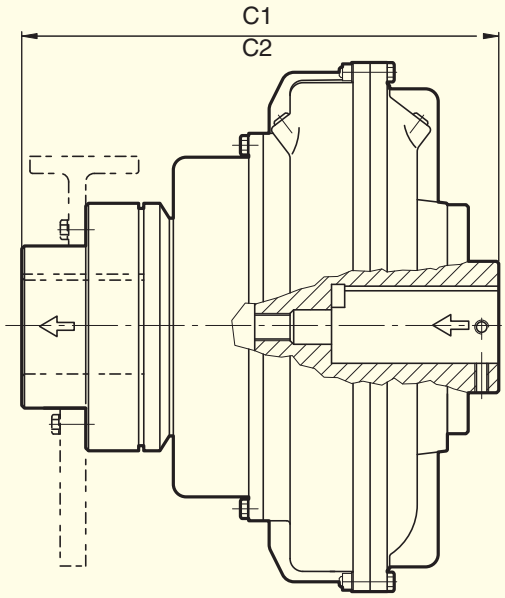
DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE



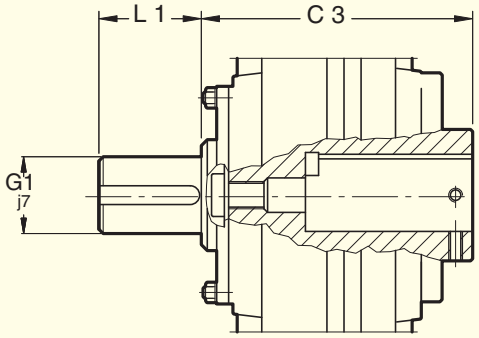

**KRB**
(with brake drum)

**KRBP**
(with brake disc)

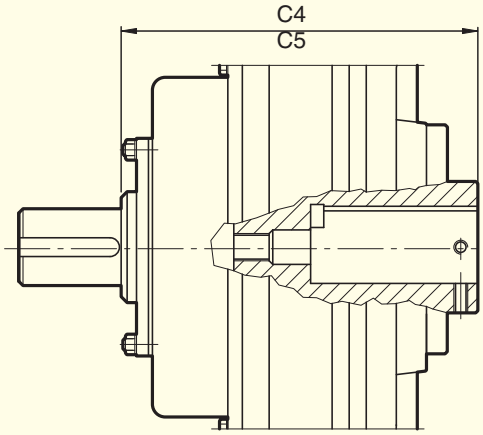
**KRG**




**CKRG - CCKRG**




**KRD**




**CKRD - CCKRD**

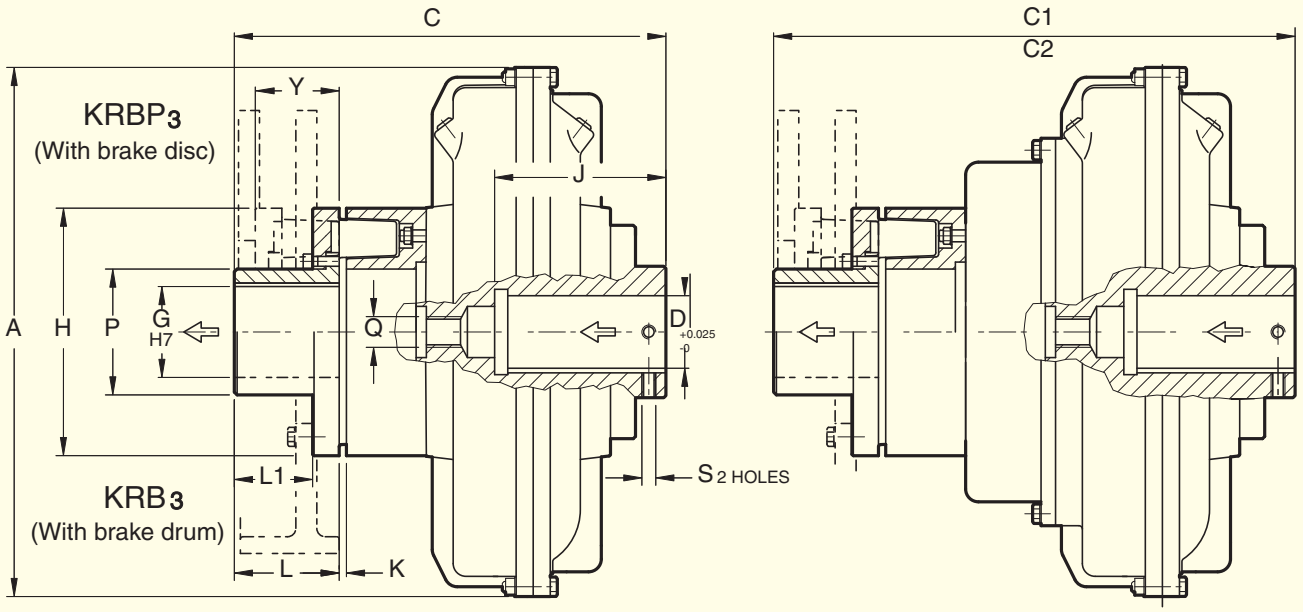
Dimensions mm.

**Note: The arrows ⇦ indicate input and output of the standard version.**

| Size | C KRG | $C_1$ CKRG | $C_2$ CCKRG | $C_3$ KRD | $C_4$ CKRD | $C_5$ CCKRD | G max | $G_1$ | H | K | L | $L_1$ | P | Flex coupling | Brake drum X - Y | Brake disc $X_1$ - $Y_1$ | Z | Weight kg (less oil) KRG | CKRG | CCKRG | KRD | CKRD | CCKRD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 270 | 316 | – | 200 | 246 | – | 55 | 47.625 | 132 | 2 | 80 | 63.5 | 85 | BT20 | 160 - 60<br>200 - 75 | on request | – | 18 | 20.5 | – | 13 | 15.5 | – |
| 12 | | 337 | | | 267 | | | | | | | | | | | | | 21.5 | 24.5 | | 16.7 | 19.7 | |
| 13 | 303 | 363 | | 230 | 290 | | 70 | 53.975 | 170 | | | 89 | 100 | BT30 | 200 - 75<br>250 - 95 | 400 - 30<br>450 - 30 | 5 | 34 | 37 | | 26.3 | 29.3 | |
| 15 | 364 | 432 | 480 | 251 | 319 | 367 | 80 | 60.325 | | | | | 120 | BT40 | 250 - 95<br>315 - 118 | 400 - 30<br>450 - 30 | 35 | 50.3 | 54.3 | 62 | 40.4 | 44.4 | 52.1 |
| 17 | 387 | 467 | 547 | 288 | 368 | 448 | 90 | 73.025 | 250 | 3 | 110 | 108 | 135 | BT50 | 315 - 118<br>400 - 150 | 445 - 30<br>450 - 30 | 15 | 77 | 83 | 92 | 58.1 | 64.1 | 73.1 |
| 19 | | | | | | | | | | | | | | | | | | 84 | 90 | 99 | 65.1 | 71.1 | 80.1 |
| 21 | 459 | 559 | 649 | 318 | 418 | 508 | 110 | 85.725 | 290 | | 140 | 127 | 170 | BT60 | 400 - 150<br>500 - 190 | 560 - 30<br>630 - 30 | 45 | 129 | 139 | 147 | 99.5 | 109.5 | 117.5 |
| 24 | | | | | | | | | | | | | | | | 710 - 30<br>795 - 30 | | 147 | 157 | 165 | 117.5 | 127.5 | 135.5 |
| 27 | 509 | 627 | 727 | 358 | 476 | 576 | 130 | 101.6 | 354 | 4 | 150 | 139.7 | 200 | BT80 | 500 - 190 | 710 - 30<br>795 - 30 | 20 | 231 | 249 | 268 | 181 | 189 | 218 |
| 29 | 536 | 654 | 754 | 385 | 503 | 603 | | | | | | | | | | | | 284 | 302 | 311 | 234 | 252 | 261 |
| 34 | 673 | 784 | 884 | 472 | 603 | 703 | 160 | 139.7 | 395 | 5 | 170 | 152.4 | 240 | BT90 | 630 - 236 | 1000 - 30 | 18 | 491 | 486 | 496 | 376 | 395 | 401 |

– $G_1$ SHAFT WITH SQUARE KEYWAY AS PER USAS B17.1
– UPON REQUEST BORE **G** MACHINED - $G_1$ SPECIAL SHAFT
– WHEN ORDERING, SPECIFY SIZE, MODEL AND **D** DIAMETER, EXAMPLE: 17 CKRBP D. 73.025
BRAKE DISC 450 x 30

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE




**KRG3** **CKRG3 - CCKRG3**

The three pieces flexible coupling **B3T**, allows the removal of the elastic elements (rubber blocks), without removal of the electric motor; only with the **..KRB3** (with brake drum) coupling the electric motor must be moved by the value of **'Y'**.
**'Y'** = axial displacement male part of the coupling **B3T** necessary for the removal of the elastic elements.

**Note: The arrows ⇦ indicate input and output of the standard version.**

Dimensions

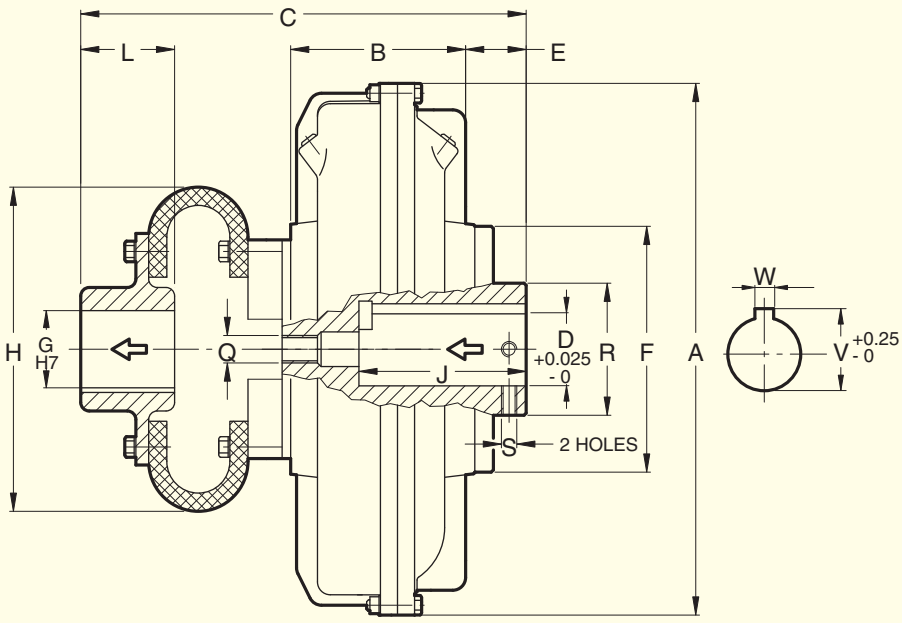
| Size | D mm. | D inch. | J | W | V | A | C KRG3 | $C_1$ CKRG3 | $C_2$ CCKRG3 | G max | H | K | L | $L_1$ | P | Q | Y | Elastic coupling | Weight kg (less oil) KRG3 | Weight kg (less oil) CKRG3 | Weight kg (less oil) CCKRG3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 85.725•• | 3.375 | 194 | 22.225 | 92.3 | 520 | 443 | 523 | 603 | 80 | 240 | 3 | 110 | 82 | 130 | 1 1/4 7 UNC | 82 | B3T50 | 84 | 90 | 99 |
| | 73.025 | 2.875 | 178 | 19.05 | 81.4 | | | | | | | | | | | | | | | | |
| 19 | 85.725•• | 3.375 | 194 | 22.225 | 92.3 | 565 | | | | | | | | | | | | | 91 | 97 | 106 |
| | 73.025 | 2.875 | 178 | 19.05 | 81.4 | | | | | | | | | | | | | | | | |
| 21 | 98.425•• | 3.875 | 216 | 25.4 | 104.3 | 620 | 483 | 583 | 673 | 110 | 290 | | 140 | 78 | 150 | | | B3T60 | 134 | 144 | 152 |
| | 85.725 | 3.375 | 210 | 22.225 | 95.3 | | | | | | | | | | | | | | | | |
| 24 | 98.425•• | 3.875 | 216 | 25.4 | 104.3 | 714 | | | | | | | | | | | | | 152 | 162 | 176 |
| | 85.725 | 3.375 | 210 | 22.225 | 95.3 | | | | | | | | | | | | | | | | |
| 27 | 120.65•• | 4.750 | 216 | 31.75 | 128.8 | 780 | 591 | 709 | 809 | 130 | 354 | 4 | 150 | 112 | 180 | 1 3/4 5 UNC | 120 | B3T-80 | 250 | 268 | 287 |
| 29 | 133.35•• | 5.250 | 241 | 31.75 | 142.7 | 860 | 618 | 736 | 836 | | | | | | | | | | 303 | 321 | 391 |
| 34 | 150.8•• | 5.938 | 265 | 38.1 | 161.2 | 1000 | 721 | 850 | 950 | | 395 | 5 | 170 | 119 | 205 | | 151 | B3T-90 | 488 | 496 | 506 |
| 46 | 177.8 | 7 | 317.5 | 44.45 | 197.3 | 1330 | - | - | 1152 | 180 | 490 | 7 | 195 | 138 | 270 | 2 4 1/2 UNC | 122 | B3T-100 | – | – | 1132 |

- • MAX BORE WITH A KEYWAY AS PER USAS B17.1
- •• MAX BORE WITH REDUCED **V** DEPTH KEYWAY
- – UPON REQUEST BORE G MACHINED
- – WHEN ORDERING, SPECIFY SIZE, MODEL AND **D** DIAMETER, EXAMPLE: 15 KRM D. 60.325

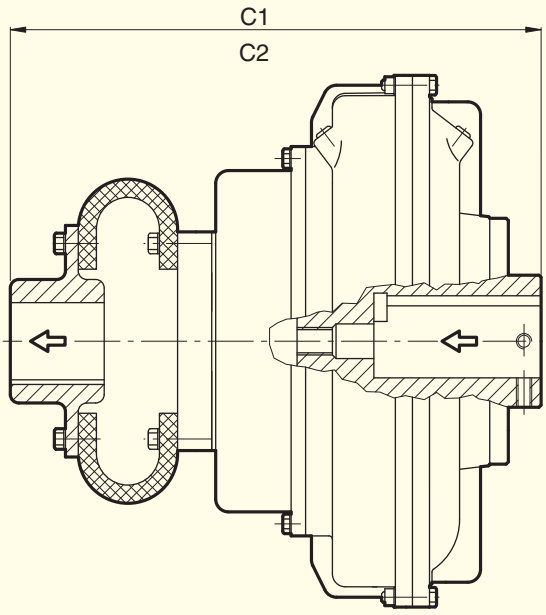
Dim. **D** tolerance: up to 50.8 $^{+0.025}_{-0}$; from 50.8 to 101.6 $^{+0.038}_{-0}$; from 101.6 $^{+0.05}_{-0}$

Dim. **W** tolerance: up to 12.7 $^{+0.05}_{-0}$; from 15.875 to 25.4 $^{+0.076}_{-0}$; from 25.4 to 38.1 $^{+0.1}_{-0}$

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE




**KRM**




**CKRM - CCKRM**

**Note: The arrows ⇦ indicate input and output of the standard version.**

⇨ Dimensions

| Size | D mm. | D inch. | J | W | V | A | B | C KRM | $C_1$ CKRM | $C_2$ CCKRM | E | F | G max | H | L | Q | R | S | Flex coupling | Weight kg (less oil) KRM | CKRM | CCKRM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 41.275• | 1.625 | 95.3 | 9.525 | 45.6 | 295 | 96 | 291 | – | | 46 | 128 | | | | | | | | 14.5 | – | |
| | 34.925 | 1.375 | 79.4 | 7.937 | 38.6 | | | | | | | | | | | | | | | | | |
| 11 | 47.625•• | 1. 875 | 111 | 12.7 | 50 | 325 | 107 | 300 | 346 | – | 42 | | 50 | 185 | 50 | 3/4 10 UNC | 70 | 7/16 14 UNC | 53 F | 16.5 | 19 | – |
| | 41.275 | 1.625 | 95.3 | 9.525 | 45.6 | | | | | | | | | | | | | | | | | |
| 12 | 47.625•• | 1.875 | 111 | 12.7 | 50 | 370 | 122 | | 367 | | 39 | 145 | | | | | | | | 20 | 23 | |
| 13 | 60.325•• | 2.375 | 143 | 15.875 | 63 | 398 | 137 | 351 | 411 | | 46 | 179 | 65 | 228 | 72 | 7/8 9 UNC | 89 | 9/16 12 UNC | 55 F | 33 | 36 | |
| | 53.975 | 2.125 | 127 | 12.7 | 59.7 | | | | | | | | | | | | | | | | | |
| 15 | 73.025•• | 2.875 | 178 | 19.05 | 76 | 460 | 151 | 388 | 456 | 504 | 56 | 206 | 70 | 235 | 80 | | 101 | 5/8 11 UNC | 56 F | 48 | 52 | 59.7 |
| | 60.325 | 2.375 | 143 | 15.875 | 67.3 | | | | | | | | | | | | | | | | | |
| | 53.975 | 2.125 | 127 | 12.7 | 59.7 | | | | | | | | | | | | | | | | | |
| 17 | 85.725•• | 3.375 | 194 | 22.225 | 92.3 | 520 | 170 | 405 | 485 | 565 | 62 | 225 | 75 | 288 | 90 | 1 1/4 7 UNC | 126 | 3/4 10 UNC | 58 F | 67 | 73 | 82 |
| | 73.025 | 2,875 | 178 | 19.05 | 81.4 | | | | | | | | | | | | | | | | | |
| 19 | 85.725•• | 3.375 | 194 | 22.225 | 92.3 | 565 | 190 | | | | 42 | | | | | | | | | 74 | 80 | 89 |
| | 73.025 | 2.875 | 178 | 19.05 | 81.4 | | | | | | | | | | | | | | | | | |
| 21 | 98.425•• | 3.875 | 216 | 25.4 | 104.3 | 620 | 205 | 522 | 622 | 712 | 71 | 250 | 90 | 378 | 110 | | 136 | | 65 F | 124 | 134 | 142 |
| | 85.725 | 3.375 | 210 | 22.225 | 95.5 | | | | | | | | | | | | | | | | | |
| 24 | 98.425•• | 3.875 | 216 | 25.4 | 104.3 | 714 | 229 | | | | 47 | | | | | | | | | 142 | 152 | 160 |
| | 85.725 | 3.375 | 210 | 22.225 | 95.3 | | | | | | | | | | | | | | | | | |
| 27 | 120.65•• | 4.750 | 216 | 31.75 | 129.8 | 780 | 278 | 550 | 668 | 768 | 41 | 315 | 100 | 462 | 122 | 1 3/4 5 UNC | 185 | 7/8 9 UNC | 66 F | 214 | 232 | 251 |
| 29 | 133.35•• | 5.250 | 241 | 31.75 | 142.7 | 860 | 295 | 600 | 718 | 818 | | 350 | 120 | 530 | 145 | | 205 | | 68 F | 296 | 314 | 324 |
| 34 | 150.8•• | 5.938 | 265 | 38.1 | 161.2 | 1000 | 368 | 683 | 814 | 914 | 54 | 400 | 140 | 630 | 165 | | 240 | | 610 F | 480 | 497 | 507 |

- • MAX BORE WITH A KEYWAY AS PER USAS B17.1
- •• MAX BORE WITH REDUCED **V** DEPTH KEYWAY
- – UPON REQUEST BORE G MACHINED
- – WHEN ORDERING, SPECIFY SIZE, MODEL AND **D** DIAMETER, EXAMPLE: 15 KRM D. 60.325

Dim. **D** tolerance: up to 50.8 $^{+0.025}_{-0}$; from 50.8 to 101.6 $^{+0.038}_{-0}$; from 101.6 $^{+0.05}_{-0}$

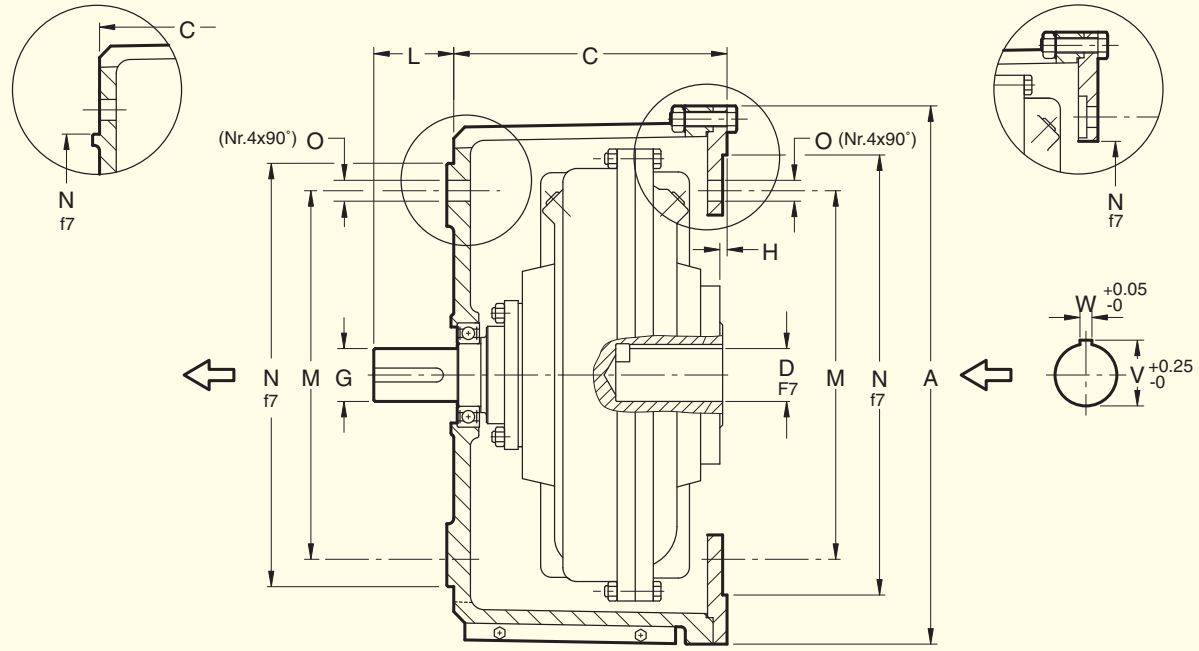
Dim. **W** tolerance: up to 12.7 $^{+0.05}_{-0}$; from 15.875 to 25.4 $^{+0.076}_{-0}$; from 25.4 to 38.1 $^{+0.1}_{-0}$

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

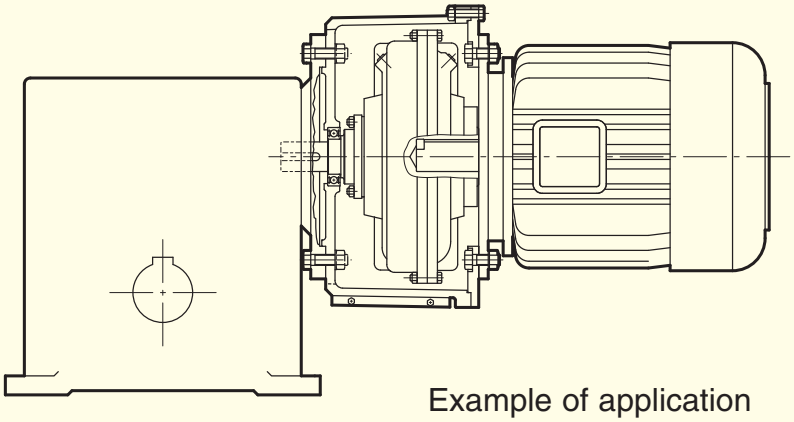
only for size “6”

## EK

only for size “6”




**Note: The arrows ⇦ indicate input and output of the standard version.**



Example of application

Dimensions

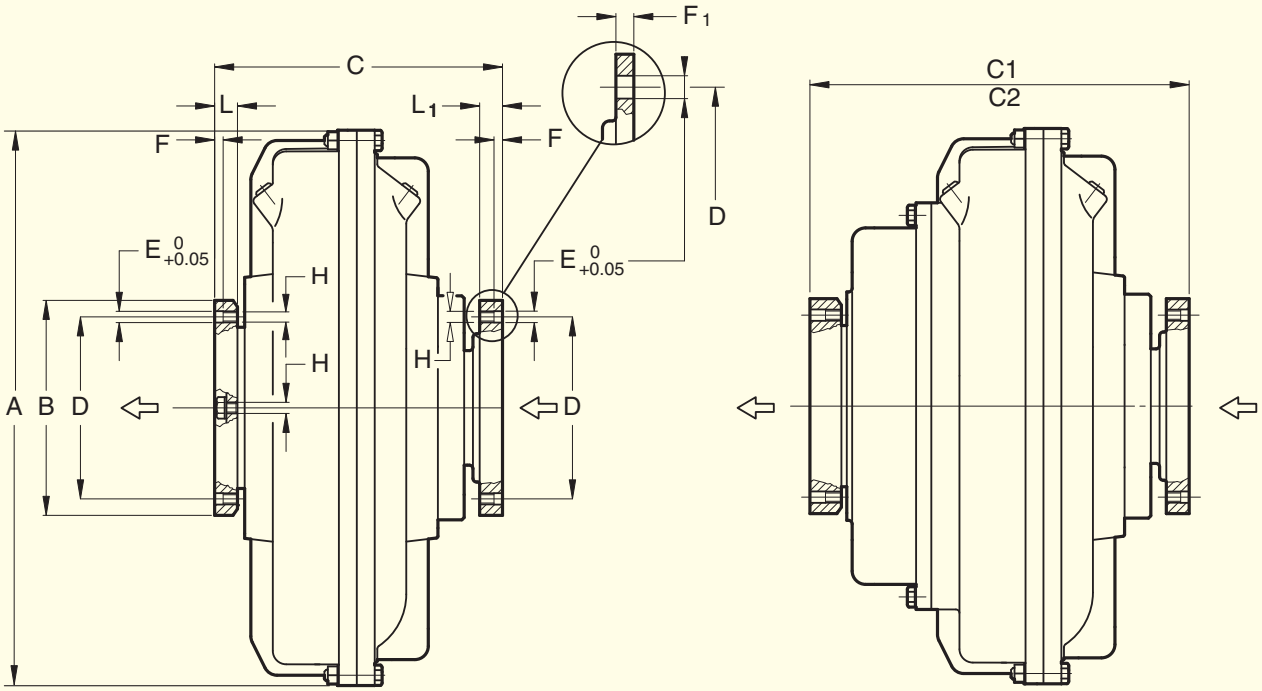
| Size | D mm. | D inch | J | W | V | G | L | A | C | H | M | N | O | Oil max lt | Electric Motor HP at 1800 RPM size | HP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | •22.225 | .875 | 50.5 | 4.762 | 24.5 | 22.225 | 50,2 | 248 | 110 | 4.7 | 149.2 | 114.3 | 11 | 0.5 | 145TC | 1.5 - 2 (2) |
| | 15.875 | .625 | 48 | | 18 | 15.875 | 44,8 | | | 3.8 | | | | | 145TC | 1 |
| | | | | | | | | | | | | | | | 56C | 0.75 |
| 7 | 28.575 | 1.125 | 71 | 6.35 | 31.5 | 28.575 | 47 | 269 | 132 | –2.6 | 184.2 | 215.9 | 13.5 | 0.92 | 182TC | 3 |
| | | | | | | | | | | | | | | | 184TC | 5 |
| 8 | 34.925 | 1.375 | 80 | 7.937 | 38.5 | 34.925 | 54 | 299 | 145.5 | 1.4 | | | | 1.5 | 213TC | 7.5 |
| | | | | | | | | | | | | | | | 215TC | 10 |
| 9 | 41.275 | 1,625 | 95.2 | 9.525 | 45.6 | 41.275 | 63 | 399 | 187 | 0 | | | | 1.95 | 254TC | 15 |
| | | | | | | | | | | | | | | | 256TC | 20 (2) |
| 11 | ••47.625 | 1.875 | 111 | 12.7 | 50 | 47.625 | 73 | | | | 228.6 | 266.7 | | 2.75 | 284TC | 25 |
| | | | | | | | | | | | | | | | 286TC | 30 |
| 12 | Upon request. | | | | | | | | | | | | | | | |
| 13 | Upon request. | | | | | | | | | | | | | | | |

- • MAX BORE WITH A KEYWAY AS PER USAS B17.1
- •• MAX BORE WITH REDUCED **V** DEPTH KEYWAY
- **G** SHAFT SUPPLIED WITH SQUARE KEY USAS B 17.1
- (2) WHEN FULL POWER IS ABSORBED USE HIGH DENSITY FIRE RESISTANT OIL

Dim. **G** tolerance: up to 34.925 $^{+0}_{-0.013}$; from 41.925 to 47,625 $^{+0}_{-0.025}$

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

For 7 ÷ 13 and 17 ÷ 24 sizes




**KCM**

**CKCM - CCKCM**

**Note: The arrows ⇦ indicate input and output of the standard version.**

THIS FLUID COUPLING MOUNTS ONE (1) HALF GEAR COUPLING ON EACH SIDE.
THIS ALLOWS THE REMOVAL OF THE FLUID COUPLING WITHOUT MOVING THE MOTOR OR THE DRIVEN MACHINE

Dimensions

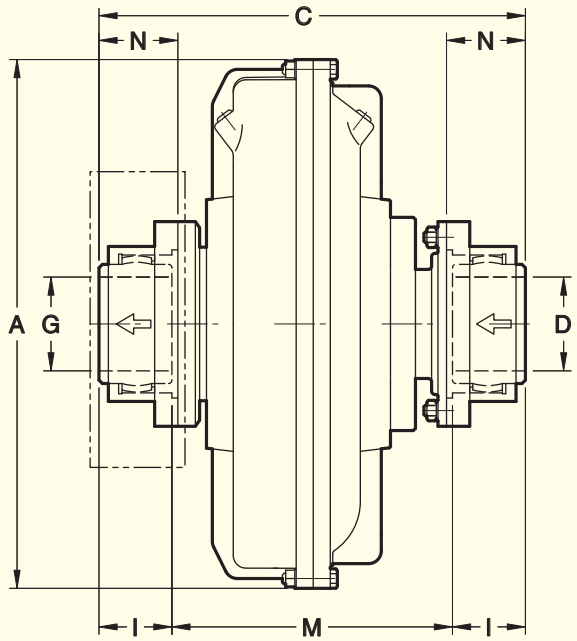
| Size | A | B | C KCM | $C_1$ CKCM | $C_2$ CCKCM | D | E Nr. | E Ø | F | $F_1$ | H | L | $L_1$ | Weight kg (less oil) KCM | Weight kg (less oil) CKCM | Weight kg (less oil) CCKCM | Gear coupling size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 228 | 116 | 140 | – | – | 95.25 | 6 | 6.4 | 7 | 6.5 | 1/4 28 UNF | 17 | – | 7.3 | – | – | 1" S (3) |
| 8 | 256 | | 145 | | | | | | | | | | | 7.7 | | | |
| 9 | 295 | 152.5 | 189 | – | – | 122.22 | 8 | 9.57 | | | 3/8 24 UNF | 18.5 | – | 14 | – | – | 1" 1/2 S (3) |
| 11 | 325 | | 198 | 244 | | | | | | | | | | 16 | 19.4 | | |
| 12 | 370 | | 198 | 265 | | | | | | | | 21 | | 20.5 | 23.4 | | |
| 13 | 398 | | 208 | 283.5 | | | | | | | | | | 28 | 32.6 | | |
| 15 | 460 | 213 | 251 | 319 | 367 | 180.975 | 6 | 15,87 | | – | 5/8 11 UNC | 23 | 22 | 50.5 | 54.5 | 62.2 | 2" 1/2 E (4) |
| 17 | 520 | | 250 | 332 | 412 | 177.8 | 10 | 12.75 | 9,5 | 10 | 1/2 20 UNF | 25.4 | – | 66 | 72 | 81 | 2" 1/2 S (3) |
| 19 | 565 | | | | | | | | | | | | | 75 | 81 | 90 | |
| 21 | 620 | | 320 | 422 | 512 | | | | | | | 32 | | 108 | 114 | 122 | |
| 24 | 714 | | | | | | | | | | | | | 129 | 132 | 140 | |
| 27 | 780 | 280 | 408 | 526 | 626 | 241.3 | 8 | 19.05 | 22 | 28 | 3/4 10 UNC | 51 | 51 | 194 | 213 | 232 | 3" 1/2 E (4) |
| 29 | 860 | | 437 | 555 | 655 | | | | | | | | | 248 | 266 | 276 | |
| 34 | 1000 | 318 | 503 | 634 | 734 | 279.4 | | | | | | 58 | 58 | 403 | 418 | 428 | 4" E (4) |
| 46 | 1330 | 452.7 | - | - | 929 | 400.05 | 14 | 22.225 | 22 | – | 7/8 9 UNC | – | 56 | – | – | 1058 | 6" E (4) |

(3) S = SHROUDED BOLTS

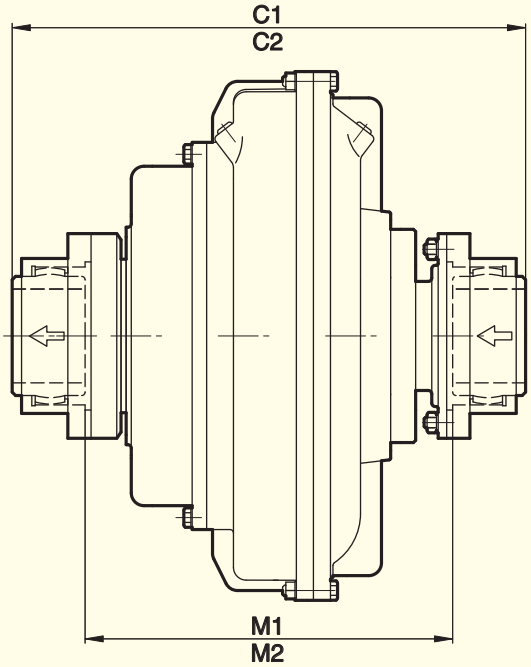
(4) E = EXPOSED BOLTS

**WHEN ORDERING, SPECIFY SIZE AND MODEL EXAMPLE: 34 CKCM**

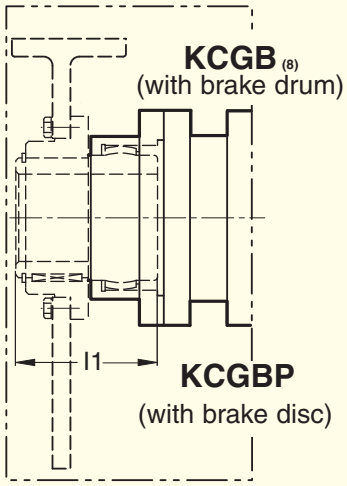
DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE




**KCG**




**CKCG - CCKCG**




Brake drum or disc upon request
(8) For ...KCGB dimension
M - M1 - M2 may vary
(contact Transfluid)

**Note: The arrows ⇦ indicate input and output of the standard version.**

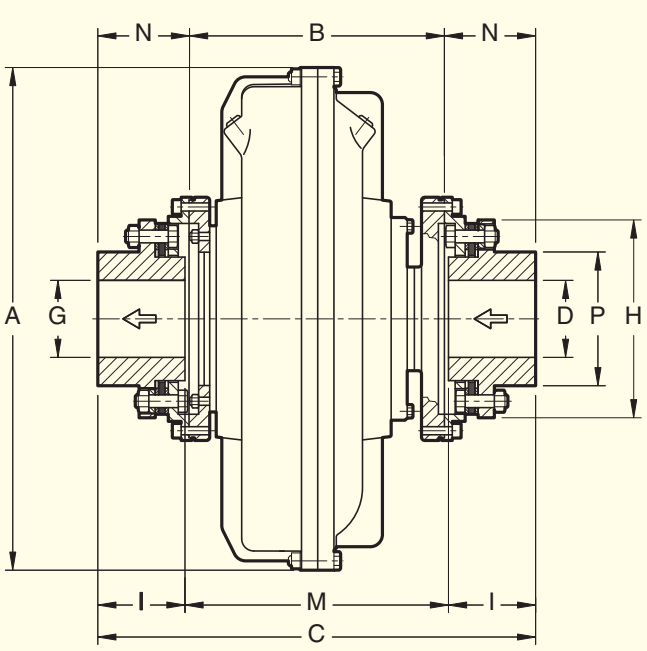
THIS FLUID COUPLING MOUNTS ONE (1) HALF GEAR COUPLING ON EACH SIDE. THIS ALLOWS THE REMOVAL OF THE FLUID COUPLING WITHOUT MOVING THE MOTOR OR THE DRIVEN MACHINE

Dimensions

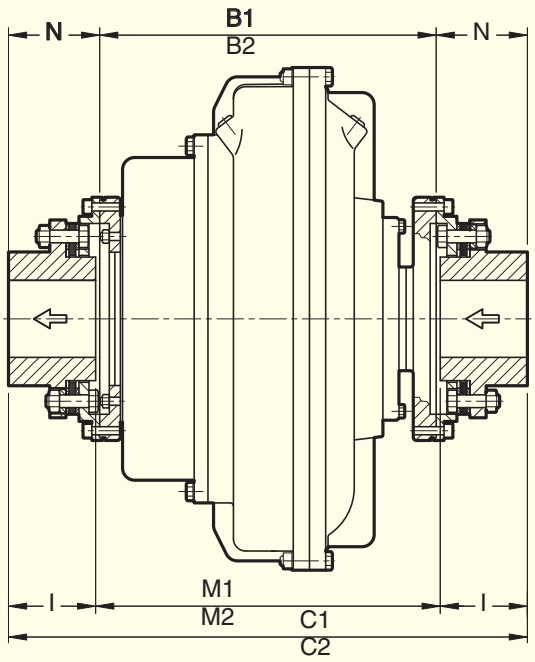
| Size | A | C | $C_1$ | $C_2$ | D G | $G_1$ | I | $I_1$ | M | $M_1$ | $M_2$ | N | Gear coupling | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | KCG | CKCG | CCKCG | max | max | | | KCG | CKCG | CCKCG | | Size | Weight Kg |
| 7 | 228 | 229 | – | – | 50 | – | 43 | 101.6 | 143 | – | – | 44.5 | 1" S (3) | 4 |
| 8 | 256 | 234 | | | | | | | 148 | | | | | |
| 9 | 295 | 278.6 | | | 65 | 45 | 49.3 | 114.3 | | 180 | | 50.8 | 1" 1/2 S (3) | 8 |
| 11 | 325 | 287.6 | 345.6 | | | | | | 189 | 247 | | | | |
| 12 | 370 | 299.6 | 366.6 | | | | | | 201 | 268 | | | | |
| 13 | 398 | 309.6 | 385.1 | | | | | | 211 | 286.5 | | | | |
| 15 | 460 | 411 | 479 | 527 | 95 | 65 | 77 | 149.4 | 256 | 324 | 372 | 79.5 | 2" 1/2 E (4) | 29.5 |
| 17 | 520 | 409 | 491 | 571 | | | | | 255 | 337 | 417 | | 2" 1/2 S (3) | |
| 19 | 565 | | | | | | | | | | | | | |
| 21 | 620 | 479 | 581 | 671 | | 90 | | | 325 | 427 | 517 | | | |
| 24 | 714 | | | | | | | | | | | | | |
| 27 | 780 | 627 | 745 | 845 | 134 | 110 | 106.5 | 184.2 | 414 | 532 | 632 | 109.5 | 3" 1/2 E (4) | 68 |
| 29 | 860 | 656 | 774 | 874 | | | | | 443 | 561 | 661 | | | |
| 34 | 1000 | 750 | 881 | 981 | 160 | 120 | 120.5 | 203.2 | 509 | 640 | 740 | 123.5 | 4" E (4) | 97.5 |
| 46 | 1330 | - | - | 1313.4 | 244 | 175 | 188.2 | 304.8 | - | - | 937 | 192.2 | 6" E (4) | 306 |

(3) S = SHROUDED BOLTS
(4) E = EXPOSED BOLTS
**WHEN ORDERING, SPECIFY SIZE AND MODEL EXAMPLE: 34 CKCG**

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE




**KDM**




**CKDM - CCKDM**

**Note: The arrows ⇦ indicate input and output of the standard version.**

THIS FLUID COUPLING MOUNTS A HALF DISC COUPLING TO THE INPUT AND OUTPUT SIDE. THE DISC PACK REQUIRES MINIMAL MAINTENANCE AND ALLOWS THE REMOVAL OF THE FLUID COUPLING WITHOUT MOVING THE MOTOR OR DRIVEN MACHINE.

Dimensions

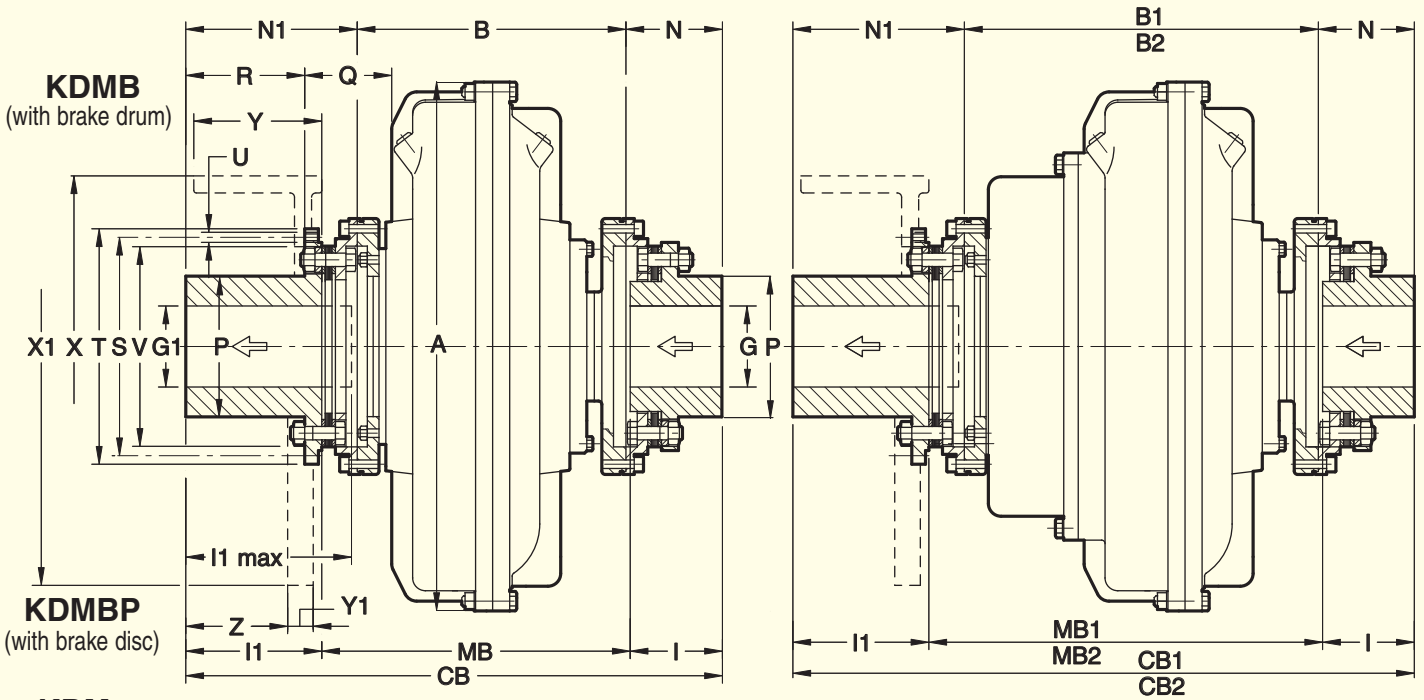
| Size | A | B | $B_1$ | $B_2$ | C | $C_1$ | $C_2$ | D G | H | I | M | $M_1$ | $M_2$ | N | P | Disc coupling | Weight kg (less oil) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | KDM | CKDM | CCKDM | KDM | CKDM | CCKDM | max | | | KDM | CKDM | CCKDM | | | | KDM | CKDM | CCKDM |
| **9** | 295 | 177 | – | | 278 | – | | | | | 180 | – | | | | | 20.5 | – | |
| **11** | 325 | 186 | 232 | – | 289 | 336 | – | 55 | 123 | 50 | 189 | 235 | – | 51.5 | 76 | 1055 | 22.5 | 25 | – |
| **12** | 370 | | 253 | | | 356 | | | | | | 256 | | | | | 26 | 29 | |
| **13** | 398 | 216 | 276 | | 339 | 399 | | 65 | 147 | 60 | 219 | 279 | | 61.5 | 88 | 1065 | 41.3 | 44.3 | |
| **15** | 460 | 246 | 314 | 362 | 391 | 459 | 507 | 75 | 166 | 70 | 251 | 319 | 367 | 72.5 | 104 | 1075 | 65 | 69 | 76.7 |
| **17** | 520 | 269 | 349 | 429 | 444 | 524 | 604 | 90 | 192 | 85 | 274 | 354 | 434 | 87.5 | 122 | 1085 | 89 | 95 | 104 |
| **19** | 565 | | | | | | | | | | | | | | | | 96 | 102 | 111 |
| **21** | 620 | 315 | 415 | 505 | 540 | 640 | 730 | 115 | 244 | 110 | 320 | 420 | 510 | 112.5 | 154 | 1110 | 159 | 169 | 177 |
| **24** | 714 | | | | | | | | | | | | | | | | 177 | 187 | 195 |
| **27** | 780 | 358 | 476 | 576 | 644 | 762 | 862 | 135 | 300 | 140 | 364 | 482 | 582 | 143 | 196 | 1140 | 289 | 307 | 326 |
| **29** | 860 | 387 | 505 | 605 | 673 | 792 | 892 | | | | 393 | 511 | 611 | | | | 342 | 360 | 370 |
| **34** | 1000 | 442 | 573 | 673 | 768 | 899 | 999 | 165 | 340 | 160 | 448 | 579 | 679 | 163 | 228 | 1160 | 556 | 562 | 572 |

– UPON REQUEST BORED **G** MACHINED

– WHEN ORDERING, SPECIFY SIZE AND MODEL, EXAMPLE: 27 CKDM

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

# SERIES 12 ÷ 34 KDMB / CKDMB / CCKDMB
# KDMBP / CKDMBP / CCKDMBP




**Note: The arrows ⇦ indicate input and output of the standard version.**

KDM / CKDM / CCKDM TYPE FLUID COUPLING, BUT MODIFIED TO INCORPORATE A BRAKE DRUM OR DISC

Dimensions

| Size | Brake drum X - Y | Brake disc $X_1$ x $Y_1$ | Weight kg (less oil) KDM | CKDM | CCKDM |
|---|---|---|---|---|---|
| 12 | 200 - 75 | on request | 27 | 30 | – |
| 13 | | | 42.8 | 45.8 | |
| 15 | 250 - 95 | 450 - 30 | 69.3 | 73.3 | 81 |
| 17 | 315 - 118 | 500 - 30 | 99 | 105 | 114 |
| 19 | 400 - 150 | 560 - 30 | 105 | 112 | 125 |
| 21 | 400 - 150 | 630 - 30 | 179 | 189 | 197 |
| 24 | 500 - 190 | 710 - 30 | 197 | 207 | 215 |
| 27 | 500 - 190 | 800 - 30 | 317 | 335 | 354 |
| 29 | | | 370 | 388 | 398 |
| 34 | on request | 800 - 30<br>1000 - 30 | 599 | 587 | 597 |

Dimensions

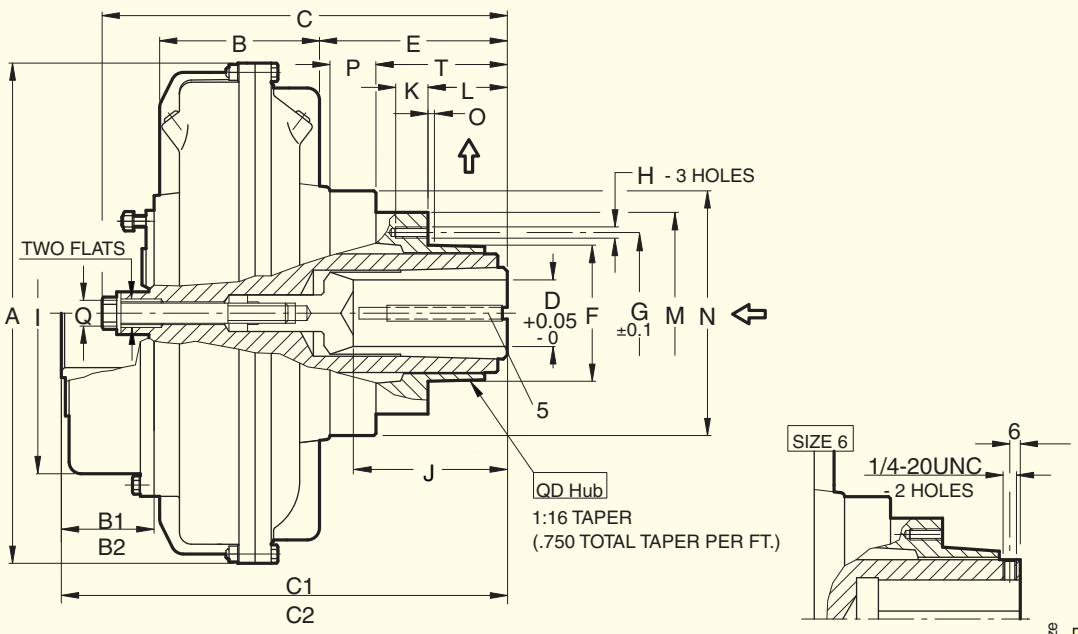
| Size | A | B KDM | $B_1$ CKDM | $B_2$ CCKDM | CB KDM | $CB_1$ CKDM | $CB_2$ CCKDM | D G max | $G_1$ max | I | $I_1$ std | $I_1$ max | MB KDM | $MB_1$ CKDM | $MB_2$ CCKDM | N std | $N_1$ | O | P | Q | R | S ±0.1 | T f7 | U Nr. | U Ø | V | Z | Disc coupling size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 370 | 186 | 253 | – | 336.5 | 403.5 | – | 55 | 60 | 50 | 80 | | 206.5 | 273.5 | – | 51.5 | 99 | 17.5 | 76 | 67 | 69 | 128 | 142 | 8 | M8 | 114 | – | 1055 |
| 13 | 398 | 216 | 276 | | 440.5 | 500.5 | | 65 | 70 | 60 | 140 | 170 | 240.5 | 300.5 | | 61.5 | 163 | 21.5 | 88 | 78 | 129 | 155 | 170 | 12 | | 140 | | 1065 |
| 15 | 460 | 246 | 314 | 362 | 495.5 | 563.5 | 611.5 | 75 | 80 | 70 | 150 | | 275.5 | 343.5 | 391.5 | 72.5 | 177 | 24.5 | 104 | 98 | 134 | 175 | 192 | | M10 | 157 | 109 | 1075 |
| 17 | 520 | 269 | 349 | 429 | 548.5 | 628.5 | 708.5 | 90 | 95 | 85 | 160 | 210 | 303.5 | 383.5 | 463.5 | 87.5 | 192 | 29.5 | 122 | 107 | 143 | 204 | 224 | | | 185 | 118 | 1085 |
| 19 | 565 | | | | | | | | | | | | | | | | | | | 87 | | | | | | | | |
| 21 | 620 | 315 | 415 | 505 | 628.5 | 728.5 | 818.5 | 115 | 120 | 110 | | 240 | 358.5 | 458.5 | 548.5 | 112.5 | 201 | 38.5 | 154 | 133 | 137 | 256 | 276 | | M12 | 234 | 112 | 1110 |
| 24 | 714 | | | | | | | | | | | | | | | | | | | 109 | | | | | | | | |
| 27 | 780 | 358 | 476 | 576 | 731.5 | 849.5 | 949.5 | 135 | 145 | 140 | 180 | | 411.5 | 529.5 | 629.5 | 143 | 230.5 | 47.5 | 196 | 107 | 155 | 315 | 338 | | M14 | 286 | 133 | 1140 |
| 29 | 860 | 987 | 505 | 605 | 760.5 | 878.5 | 978.5 | | | | | | 440.5 | 558.5 | 658.5 | | | | | 109 | | | | | | | | |
| 34 | 1000 | 442 | 573 | 673 | 845.5 | 976.5 | 1076.5 | 165 | 175 | 160 | | | 505.5 | 636.5 | 736.5 | 163 | 240.5 | 57.5 | 228 | 124 | 152 | 356 | 382 | | M16 | 325 | 130 | 1160 |

– UPON REQUEST BORES **G** AND $G_1$ MACHINED

– WHEN ORDERING, SPECIFY SIZE, MODEL AND **D** DIAMETER, EXAMPLE: 17 KDMB BRAKE DRUM 400 x 150

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

## KSD-QD




## CKSD-QD - CCKSD-QD

**Note: The arrows ⇦ indicate input and output of the standard version.**

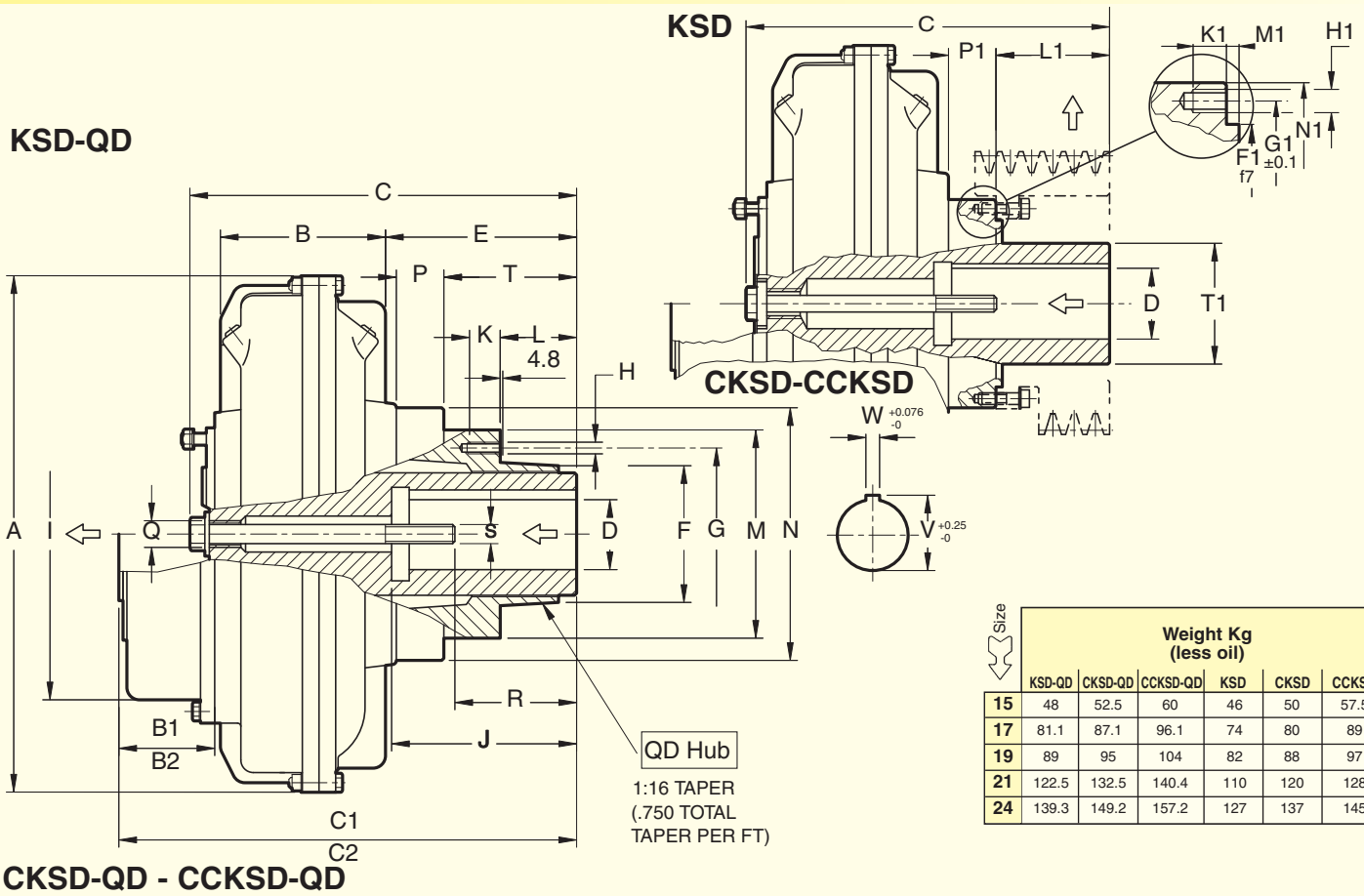
| Size | Weight Kg (less oil) | | |
|---|---|---|---|
| | KSD-QD | CKSD-QD | CCKSD-QD |
| 6 | 3.4 | – | – |
| 7 | 6 | – | – |
| 8 | 6.7 | – | – |
| 9 | 13 | – | – |
| 11 | 15.5 | 18 | – |
| 12 | 23 | 26 | – |
| 13 | 33.5 | 36.5 | – |
| 15 | 48 | 52 | 59.5 |
| 17 | 70 | 76 | 85 |
| 19 | 78 | 84 | 93 |

Dimensions

| Size | D mm. | D Inch | J | A | B KSD | $B_1$ CKS.. | $B_2$ CCKS.. | C KSD | $C_1$ CKS.. | $C_2$ CCKS.. | E | F | G | H Nr. | H DIA | I | K | L | M | N | O | P | Q | T | QD hub size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 22.225• | .875 | 50.8 | 195 | 60 | | | 140 | | | 62 | 47.5285 | 57.2 | | | | | 33 | 68 | 88 | | 14.5 | – | 44.5 | SH |
| | 15.875 | .625 | 47.6 | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 34.925• | 1.375 | | | | | | | | | | | | | | | | | | | | | | | |
| | 28.575 | 1.125 | | 228 | 77 | | | 180 | | | 70.3 | | | | 1/4 20 UNC | | | | | | | | 1/2 13 UNC | | |
| | 22.225 | .875 | 61 | | | – | | | – | | | 55.5625 | 68.3 | | | – | 15 | 29.3 | 79 | 114 | | 15 | | 49.3 | SDS |
| 8 | 34.925• | 1.375 | | | | | | | | | | | | | | | | | | | | | | | |
| | 28.575 | 1.125 | | 256 | 91 | | | 186 | | | 66.3 | | | | | | | | | | | | | | |
| 9 | 41.275• | 1.625 | | | | | | | | | | | | | | | | | | | | | | | |
| | 34.925 | 1.375 | 84 | 295 | 96 | | – | 249 | | – | 101 | 71.4375 | 84.1 | 3 | 5/16 18 UNC | | 18 | 36.8 | 98 | 128 | 3 | 26.5 | | 63 | SK |
| 11 | 47.625• | 1.875 | 101.6 | 325 | 107 | 73.5 | | 259 | 289.5 | | 98 | 79.375 | 98.4 | | 3/8 16 UNC | 195 | 21 | | 116 | 140 | | 20 | | 70 | SF |
| 12 | 53.975• | 2.125 | | | | | | | | | | | | | | | | | | | | | | | |
| | 47.625 | 1.875 | | 370 | 122 | | | 293.5 | 331.5 | | 129.5 | | | | 1/2 13 UNC | | | | | | | | 3/4 10 UNC | | |
| | 41.275 | 1.625 | 108 | | | 80 | | | | | | 97.3836 | 127 | | | 224 | 27 | 47.5 | 152 | 155 | | 23.5 | | 101 | E |
| 13 | 60.325• | 2.375 | | | | | | | | | | | | | | | | | | | | | | | |
| | 53.975 | 2.125 | | 398 | 137 | | | 353 | 380 | | 163 | | | | | | | 71.4 | | 178 | | 27.5 | | 132.5 | |
| | 47.625 | 1.875 | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 73.025• | 2.875 | | | | | | | | | | | | | | | | | | | | | | | |
| | 60.325 | 2.375 | 143 | 460 | 151 | 92 | 140 | 396 | 424 | 472 | 181 | 112.7125 | 142.9 | | 9/16 12 UNC | 259 | 30 | 86 | 168 | 204 | | 35 | 7/8 9 UNC | 138 | F |
| | 53.975 | 2.125 | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 85.725 | 3.375 | | | | | | | | | | | | | | | | | | | 3 | | | | |
| | 73.025 | 2.875 | | 520 | 170 | | | | | | 245 | | | | | | | | | | | 70 | | | |
| | 85.725 | 3.375 | 171.5 | | | 101 | 181 | 487 | 516 | 596 | | 130.7694 | 158.75 | 3 | 5/8 11 UNC | 337 | 35 | 110 | 184 | 228 | | | 1-1/4 7 UNC | 170 | J |
| 19 | 73.025 | 2.875 | | 565 | 190 | | | | | | 225 | | | | | | | | | | | 45 | | | |

• MAX BORE WITH A KEYWAY AS PER USAS B 17-1
(5) STEP KEY INCLUDED AS PER USAS B 17-1
– WHEN ORDERING, SPECIFY SIZE, MODEL AND **D** DIAMETER, EXAMPLE: 11 KSD-QD D.34.925

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE




| Size | Weight Kg (less oil) | | | | | |
|---|---|---|---|---|---|---|
| | KSD-QD | CKSD-QD | CCKSD-QD | KSD | CKSD | CCKSD |
| 15 | 48 | 52.5 | 60 | 46 | 50 | 57.5 |
| 17 | 81.1 | 87.1 | 96.1 | 74 | 80 | 89 |
| 19 | 89 | 95 | 104 | 82 | 88 | 97 |
| 21 | 122.5 | 132.5 | 140.4 | 110 | 120 | 128 |
| 24 | 139.3 | 149.2 | 157.2 | 127 | 137 | 145 |

## CKSD-QD - CCKSD-QD

Dimensions

| Size | D mm. | D Inch | J | W | V | A | B KSD | $B_1$ CKS.. | $B_2$ CCK.. | C max KSD | $C_1$ CK.. | $C_2$ CCK.. | E | F | G | H Nr. | H Ø | I | K | L | M | N | P | Q | R | S | T | QD hub size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 73.025•• | 2.875 | 177.8 | 19.05 | 76 | 460 | 151 | 92 | 140 | 384 | 438 | 486 | 195 | 112.7125 | 142.9 | | 9/16 12 UNC | 259 | 30 | 100 | 168 | 204 | 49 | 7/8 9 UNC | 136 | 3/4 10 UNC | 152 | F |
| | 60.325 | 2.375 | 143 | 15.875 | 67.3 | | | | | | | | | | | | | | | | | | | | 99 | | | |
| 17 | 85.725•• | 3.375 | 210 | 22.225 | 92.3 | 520 | 170 | 101 | 181 | 455 | 516 | 596 | 245 | 130.7694 | 158.75 | 3 | 5/8 11 UNC | 337 | 35 | 110 | 210 | 228 | 70 | 1-1/4 7 UNC | 160 | 7/8 9 UNC | 214.6 | J |
| | 73.025 | 2.875 | 177.8 | 19.05 | 81.4 | | | | | | | | | | | | | | | | | | | | 127 | | | |
| 19 | 85.725•• | 3.375 | 210 | 22.225 | 92.3 | 565 | 190 | | | | | | 225 | | | | | | | | | | 55 | | 160 | | | |
| | 73.025 | 2.875 | 177.8 | 19.05 | 81.4 | | | | | | | | | | | | | | | | | | | | 127 | | | |
| 21 | 98.425• | 3.875 | 216 | 25.4 | 109.6 | 620 | 205 | 115 | 205 | 545 | 620 | 710 | 300 | 165.1 | 200 | 4 | 3/4 10 UNC | 400 | 40 | 180 | 229 | 264 | 55 | | 167 | | 280 | M |
| | 85.725 | 3.375 | 210 | 22.225 | 95.5 | | | | | 505 | 580 | 670 | 260 | | | | | | | 140 | | | | | 165 | | 240 | |
| 24 | 98.425• | 3.875 | 216 | 25.4 | 109.6 | 714 | 229 | | | 545 | 620 | 710 | 276 | | | | | | | 180 | | | 36 | | 167 | | 280 | |
| | 85.725 | 3.375 | 210 | 22.225 | 95.5 | | | | | 505 | 580 | 670 | 236 | | | | | | | 140 | | | | | 165 | | 240 | |

- • MAX BORE WITH A KEYWAY AS PER USAS B 17-1
- •• MAX BORE WITH REDUCED **V** DEPTH KEY WAY
- – WHEN ORDERING, SPECIFY SIZE, MODEL AND **D** DIAMETER, EXAMPLE: 15 KSD D. 73.025 OR 15KSD-QD D.73.025

Dim. **D** tolerance
up to 50.8 $^{+0.025}_{-0}$
from 50.8 to 101.6 $^{+0.038}_{-0}$
from 101.6 to 152.4 $^{+0.05}_{-0}$

Dim. **W** tolerance
up to 12.7 $^{+0.05}_{-0}$
from 15.875 to 25.4 $^{+0.076}_{-0}$
from 25.4 to 38.1 $^{+0.1}_{-0}$

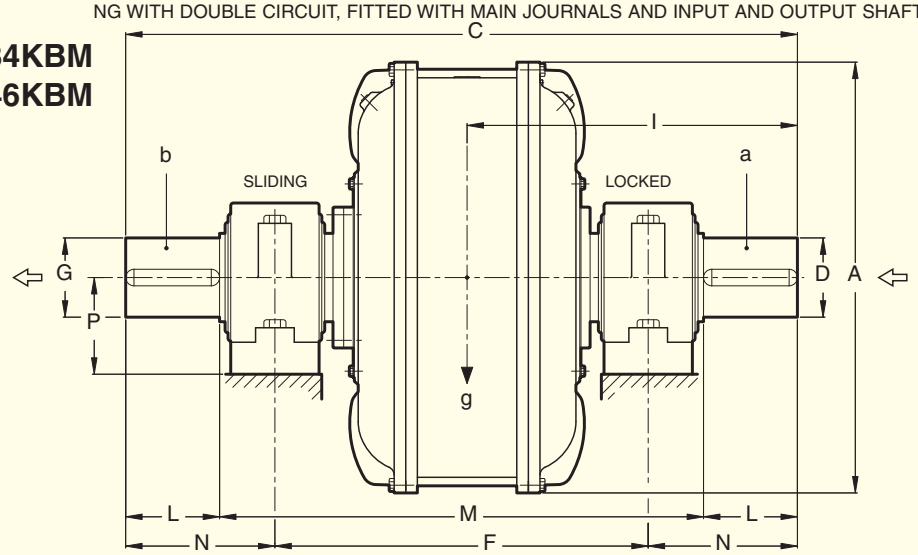
Dimensions (Only for ...KSD)

| Size | $F_1$ | $G_1$ | $H_1$ Nr. | $H_1$ Ø | $K_1$ | $L_1$ | $M_1$ | $N_1$ | $P_1$ | $T_1$ |
|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 150 | 178 | 12 | M10 | 17 | 159 | 7 | 206 | 28 | 100 |
| 17 | 180 | 200 | | | | 180 | | 225 | 60 | 132 |
| 19 | | | | M14 | | | | | 45 | |
| 21 | 200 | 228 | 8 | | 20 | 230 | | 250 | 57 | 145 |
| | | | | | | 190 | | | | |
| 24 | | | | | | 230 | | | 46 | |
| | | | | | | 190 | | | | |
| 27 | CONSULT OUR ENGINEERING | | | | | | | | | |

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

NG WITH DOUBLE CIRCUIT, FITTED WITH MAIN JOURNALS AND INPUT AND OUTPUT SHAFTS

**D34KBM**
**D46KBM**



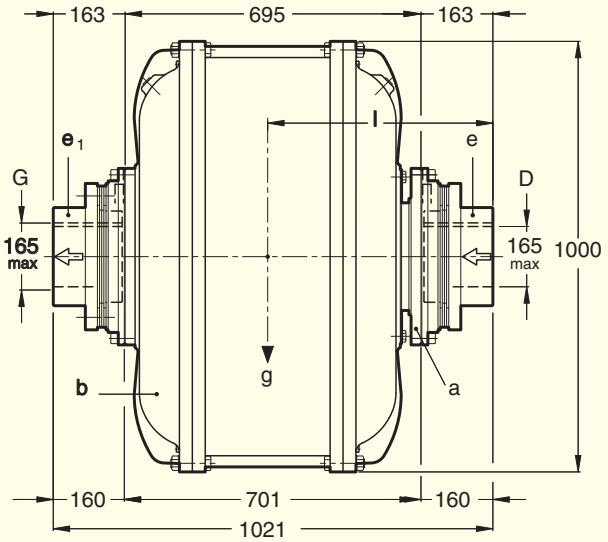

| SERIES | A | C | F | D-G m6 | L | M | N | P | WEIGHT Kg (without oil) KBM | KDM | KCG | OIL max. lt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D34KBM | 1000 | 1400 | 855 | 140 | 140 | 1120 | 257.5 | 170 | 810 | 880 | – | 162 |
| D46KBM | 1330 | 1900 | 1275 | 160 | 200 | 1550 | 312.5 | 170 | 2200 | – | 2339 | 390 |

KEYWAYS ACCORDING TO ISO 773 - DIN 6885/1

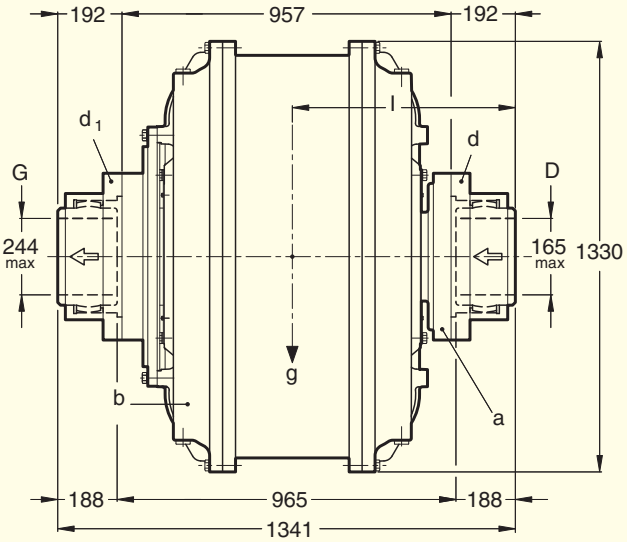
FLUID COUPLINGS FITTED WITH DOUBLE CIRCUIT, TO BE RADIALLY DISASSEMBLED WITHOUT MOVING THE MACHINES.
WITH HALF DISC COUPLINGS, WITHOUT MAINTENANCE AND PRESCRIBED
FOR PARTICULAR AMBIENT CONDITIONS

WITH HALF GEAR COUPLINGS

**D34KDM**




**D46KCG**




Dimensions

**NB: The arrows ⇦ indicate input and output in the standard version.**

| Size | CENTER OF GRAVITY Kgm² KBM g kg | KBM l mm | KDM g kg | KDM l mm | KCG g kg | KCG l mm |
|---|---|---|---|---|---|---|
| D34 | 952 | 710 | 1022 | 512 | – | |
| D46 | 2514 | 955 | – | | 2680 | 675 |

| MOMENT OF INERTIA J(WR²) Kgm² KBM a | KBM b | KDM a | KDM b | KDM e | KDM $e_1$ | KCG a | KCG b | KCG d | KCG $d_1$ |
|---|---|---|---|---|---|---|---|---|---|
| 26.19 | 64.25 | 26.08 | 65.53 | 0.955 | 0.955 | – | | | |
| 91.25 | 183.7 | – | | | | 92.51 | 183.6 | 2.665 | 2.665 |

g = TOTAL WEIGHT INCLUDING OIL (MAX FILL)
a = INTERNAL ELEMENT
b = EXTERNAL ELEMENT
d-e = HALF FLEXIBLE COUPLING (INTERNAL ELEMENT)
$d_1$-$e_1$ = HALF FLEXIBLE COUPLING (EXTERNAL ELEMENT)

## 9. FILLING

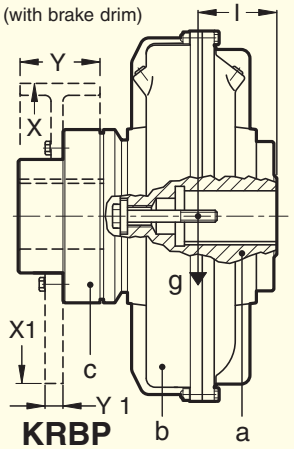
Transfluid hydraulic couplings are supplied without oil.
Standard filling: X for K series, 2 for CK series, and 3 for CCK series.
The quantities are indicated on page 9 and 11 of this catalog.

Follow the procedure indicated on Installation and Maintenance manuals 151 and 152 delivered with each coupling.
Suggested oil: **ISO32 HM** for normal operating temperatures.
For temperatures near zero, **ISO FD 10 (SAE 5W)** and for temperatures lower than –10° contact Transfluid.

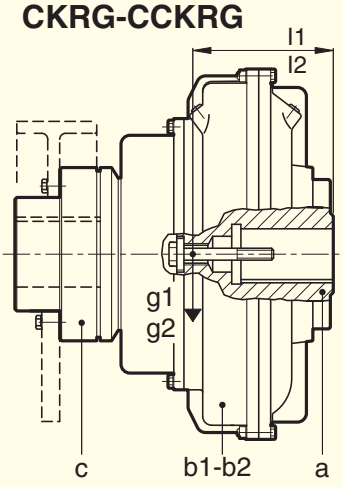
DIMENSIONS ARE SUBJECT TO ALTERATION WITHOUT NOTICE

# CENTER OF GRAVITY
# MOMENT OF INERTIA

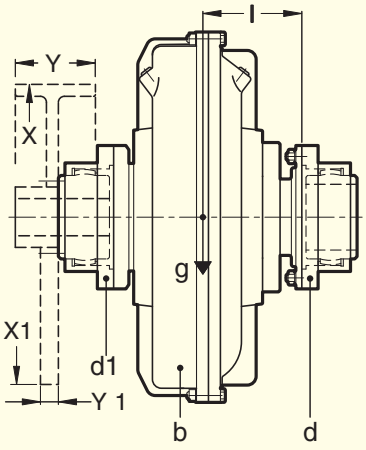
**KRB** (with brake drim) **KRG**



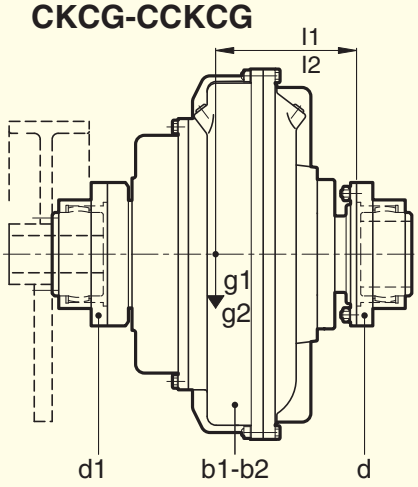

**CKRG-CCKRG**



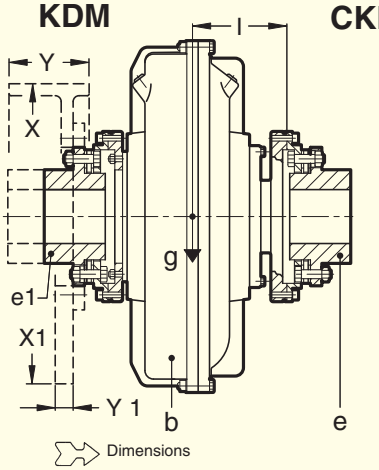

**KCG**



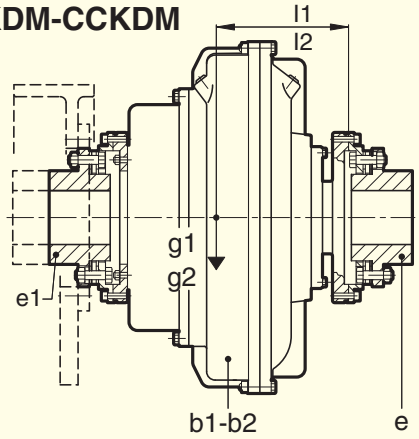

**CKCG-CCKCG**




**KRBP** (with disc brake) **KDM**




**CKDM-CCKDM**




Dimensions

Dimensions

| Size | MOMENT OF INERTIA With brake drum X - Y | Kgm² | Weight Kg | With disc brake X1 - Y1 | | Kgm² | Weight Kg |
|---|---|---|---|---|---|---|---|
| 13-15 | 250 - 95 | 0.143 | 11.9 | 400 | | 0.587 | 27 |
| | 315 - 118 | 0.379 | 20.1 | 450 | | 0.944 | 34.9 |
| 17-19 | 315 - 118 | 0.378 | 19.8 | 450 | | 0.941 | 34.2 |
| | | | | 500 | | 1.438 | 43 |
| | 400 - 150 | 1.156 | 37.5 | 560 | | 2.266 | 54.7 |
| 21-24 | 400 - 150 | 1.201 | 38.9 | 560 | | 2.255 | 52.7 |
| | | | | 630 | 30 | 3.623 | 68.1 |
| | 500 -190 | 3.033 | 64.1 | 710 | | 5.856 | 88 |
| | | | | 795 | | 9.217 | 111.6 |
| 27-29 | 500 - 190 | 3.022 | 62.8 | 710 | | 5.840 | 86 |
| | | | | 795 | | 9.200 | 109.6 |
| | | | | 800 | | 9.434 | 111.1 |
| 34 | 630 - 236 | 10.206 | 132.6 | 800 | | 9.418 | 109.6 |
| | | | | 1000 | | 23.070 | 176.2 |

| Size | CENTER OF GRAVITY KRG g Kg. | l mm. | CKRG $g_1$ Kg. | $l_1$ mm. | CCKRG $g_2$ Kg. | $l_2$ mm. | KCG g Kg. | l mm. | CKCG $g_1$ Kg. | $l_1$ mm. | CCKCG $g_2$ Kg. | $l_2$ mm. | KDM g Kg. | l mm. | CKDM $g_1$ Kg. | $l_1$ mm. | CCKDM $g_2$ Kg. | $l_2$ mm. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 4.3 | 68 | | | | | – | – | | | | | | | | | | |
| 7 | 9.1 | 92 | – | – | | | 12.1 | 70 | – | – | | | – | – | – | – | | |
| 8 | 10 | 93 | | | | | 13 | 73 | | | | | | | | | | |
| 9 | 17.7 | 134 | | | – | – | 24.6 | 86 | | | – | – | 22.2 | 81 | | | – | – |
| 11 | 20.4 | 136 | 23.4 | 151 | | | 27.3 | 93 | 30.2 | 107 | | | 24.9 | 85 | 27.9 | 98 | | |
| 12 | 25.1 | 142 | 28.7 | 154 | | | 32.1 | 98 | 35.6 | 113 | | | 29.6 | 92 | 33.2 | 104 | | |
| 13 | 38.5 | 157 | 42 | 176 | | | 42.2 | 104 | 45.7 | 115 | | | 45.8 | 101 | 49.3 | 109 | | |
| 15 | 57 | 174 | 61.8 | 195 | 70.2 | 216 | 80.7 | 124 | 85.5 | 135 | 93.8 | 147 | 71.7 | 121.5 | 76.5 | 130 | 85.7 | 145 |
| 17 | 87.2 | 205 | 94.8 | 225 | 106.5 | 238 | 88.7 | 138 | 106.5 | 152 | 130 | 185 | 99.2 | 135 | 106.9 | 145 | 118.3 | 163 |
| 19 | 96.4 | 201 | 104.4 | 221 | 116 | 227 | 108 | | 116 | | 139.4 | 182 | 108.4 | | 116.4 | | 127.4 | 161 |
| 21 | 145.6 | 233 | 159 | 265 | 169.3 | 288 | 156 | 157 | 169.3 | 174 | 205 | 211 | 175.6 | 156 | 189 | 168 | 201 | 182 |
| 24 | 172 | 227 | 184 | 255 | 195.5 | 280 | 182 | | 195 | 170 | 230 | 201 | 202 | | 214.3 | 166 | 226 | 178 |
| 27 | 265 | 262 | 290 | 298 | 313 | 312 | 287 | 185 | 313 | 210 | 370 | 248 | 326 | 164 | 351 | 174 | 378 | 195 |
| 29 | 329 | 277 | 354 | 305 | 368 | 321 | 353 | 198 | 368 | 218 | 424 | 251 | 383 | 176 | 411 | 188 | 432 | 200 |
| 34 | 521 | 333 | 549 | 364 | 580 | 376 | 557 | 235 | 580 | 253 | 591 | 282 | 628 | 209 | 636 | 214 | 650 | 222 |
| 46 | – | | | | 1294 | 485 | – | | | | 1555 | 368 | – | | | | | |

g-$g_1$-$g_2$ = TOTAL WEIGHT, INCLUDING OIL (MAX FILL)

| MOMENT OF INERTIA J Kgm² ..K.. a | b | $b_1$ | $b_2$ | ..KRG c | ..KCG d | $d_1$ | ..KDM e | $e_1$ |
|---|---|---|---|---|---|---|---|---|
| 0.003 | 0.008 | | | 0.001 | – | – | | |
| 0.006 | 0.019 | | | 0.004 | 0.004 | 0.004 | – | – |
| 0.012 | 0.034 | – | | | | | | |
| 0.020 | 0.068 | | – | | | | | |
| 0.039 | 0.109 | | | 0.011 | 0.017 | 0.016 | 0.014 | 0.014 |
| 0.072 | 0.189 | 0.217 | | | | | | |
| 0.122 | 0.307 | 0.359 | | 0.032 | | | 0.032 | 0.036 |
| 0.236 | 0.591 | 0.601 | 0.887 | 0.082 | 0.091 | 0.102 | 0.063 | 0.064 |
| 0.465 | 1.025 | 1.281 | 1.372 | 0.192 | 0.091 | 0.102 | 0.121 | 0.125 |
| 0.770 | 1.533 | 1.788 | 1.879 | | | | | |
| 1.244 | 2.407 | 2.997 | 3.181 | 0.370 | 0.145 | 0.375 | 0.210 | 0.373 |
| 2.546 | 4.646 | 5.236 | 5.420 | | | | | |
| 3.278 | 7.353 | 9.410 | 10.037 | 1.350 | 0.500 | 0.436 | 0.934 | 0.887 |
| 4.750 | 11.070 | 13,126 | 13.754 | | | | | |
| 11.950 | 27.299 | 29.356 | 29.983 | 3.185 | 0.798 | 1.649 | 1.565 | 2.773 |
| 52.2 | – | | 106.6 | 6.68 | 4.35 | 7.14 | – | |

a = INTERNAL ELEMENT - b = EXTERNAL ELEMENT + COVER
$b_1$ = b + DELAY CHAMBER - $b_2$ = b + DOUBLE DELAY CHAMBER
c FLEXIBLE COUPLING
d-e = HALF FLEXIBLE COUPLING (INTERNAL ELEMENT)
$d_1$-$e_1$= HALF FLEXIBLE COUPLING (EXTERNAL ELEMENT)
EXAMPLE: J..CCKCG = a+d (INT. ELEM.) - $b_2$+$d_1$ (EXT. ELEM.)

DIMENSIONS ARE SUBJECT TO ALTERATION WITHOUT NOTICE

## 10. SAFETY DEVICES

### FUSIBLE PLUG

In case of a load lock-up or high slip in the fluid coupling the oil temperature in the coupling will reach very high levels. This heat damages the seals causing them to leak.
To avoid this problem Transfluid uses melt-out or fusible plugs to release the oil when the the temperature reaches certain set points. Once the coupling is empty, it can neither transmit power or create internal heat. The standard fusible plug melts out at 280°F ± 5° (other temperatures available are 250°F and 390°F).

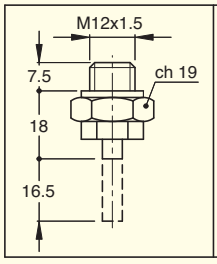
### SWITCHING PIN

For applications where the release of oil through the fusible plug is not acceptable, Transfluid provides a switching pin device. This device has a meltout ring that releases a pin which slides out and trips a relay cam switch. The relay provides a signal that can be used to either stop the power source or send out an alarm. No oil is released from the coupling when this device activates, and the pins are available to trip at the two fusible plug temperatures. Page 25 provides a more detailed description of this device.

### 10.1 SWITCHING PIN DEVICE

This device includes a percussion fusible plug installed on the taper plug pos. 13 (Fig. 5).
The percussion fusible plug is made of a threaded plug and a pin, held by a fusible ring, coming out due to the centrifugal force when the foreseen melting temperature is reached.
Such increase of temperature can be due to overload, machinery blockage or insufficient oil filling. The pin, moving by approx. 16 mm, intercepts the cam of the switch to operate an alarm or motor trip signal.
After a possible intervention and removal of the over-temperature cause, this device can be easily restored with the replacement of the percussion plug or even the fusible ring following the specific instructions included in the instruction manual.
With external wheel as driver, as indicated in Fig. 6, the percussion plug operates in any condition, while in case of driven external wheel it can operate correctly only during an increase of slip due to overload or excessive absorption.
It is possible to install this system on all fluid couplings starting from size 13K even when it has not been included in the initial supply, by asking for a kit including percussion fusible plug, gasket, taper plug, counterweight for balancing, glue and installation instructions.
In order to increase the safety of the fluid coupling a standard fusible plug is always installed with a set temperature greater than that of the percussion fusible plug.
For a correct operation, please refer to the instructions relevant to the standard or reverse installation described at page 28.

Switching pin




| MELTING TEMPERATURE | | +10°C 0 |
|---|---|---|
| 250°F | SPEC. | 1004-B |
| 280°F | SPEC. | 1004-C |

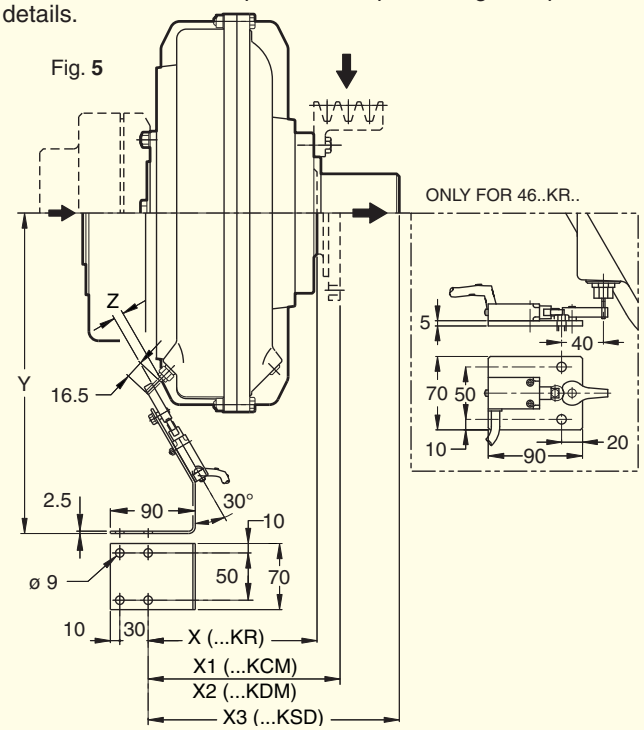
### ELECTRONIC OVERLOAD CONTROLLER

This device consists of a proximity sensor, speed controller panel, and (as an option) an LED rpm readout panel. The sensor measures the fluid coupling output speed and when this speed falls below a settable threshold in the control panel, a signal is produced that can be used for an alarm or as a power source shut down. This device does not require any replacement parts when it trips. It only requires that the control panel be reset, and it is ready for reuse. Page 26 provides a more detailed description.

### INFRARED TEMPERATURE CONTROLLER

This device consists of an infrared heat sensor and control panel with temperature readout display. Like the proximity sensor above, no contact with the coupling is required and the controller has two settable thresholds at which an alarm or a shut down signal is produced. Since this device monitors heat it is the most effective safety device for preventing heat damage to a fluid coupling. Also, like the speed controller above, this unit can be reset and reused without replacements parts. Page 27 provides more details.

Fig. **5**




| DIM. | X | $X_1$ | $X_2$ | $X_3$ | Y | Z |
|---|---|---|---|---|---|---|
| 7 | 127 | 128 | – | 148 | 262 | – |
| 8 | 136 | 137 | | 172 | 272 | |
| 9 | 158 | 166.5 | 156 | 213 | 287.5 | |
| 11 ••• | 165 | 173.5 | 163 | 221 | 300.5 | |
| 12 | 175 | 183.5 | 173 | 265.5 | 323 | 15 |
| 13 | 193 | 195 | 187 | 309 | 335 | 16 |
| 15 | 218 | 220 | 214 | (6) 343 | 358 | 16 |
| 17 | 242 | 220 | 235 | 425 | 382 | 12 |
| 19 | 234 | 210 | 227 | 417 | 400.5 | 9 |
| 21 | 282 | 284 | 276 | (7) 471 | 423 | 8 |
| 24 | 282 | 285 | 277 | (7) 471 | 460 | 4 |
| 27 | 296.5 | 331 | 295.5 | – | 491 | 9 |
| 29 | 319.5 | 356 | 322 | | 524 | 8 |
| 34 | 381 | 404 | 369 | | 584 | 4 |

(6) For cylindrical bore: +14 mm
(7) For bore 98.425: +40 mm
••• Only for K.. (CK.. upon request)
REFERENCE DIMENSIONS

DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

### 10.2 OVERLOAD CONTROLLER (Fig. 6)

When load torque increases, slip also increases and output speed consequently decreases.
The said speed variation can be measured by means of a sensor sending a pulse train to the speed controller. If the rotating speed goes lower than the set threshold (see diagram) on the controller, a signal is given through the activation of the controller's relays.
The device has got a "TC" timer with a blind time before starting (1 - 120 s) avoiding the alarm intervention during the starting phase, and another "T" timer (1 – 30 s) preventing from undesired relay intervention during sudden changes of torque.
The device also provides a speed proportional analogic output signal (0 – 10 V), to be forwarded to a display or a signal transducer (4 – 20 mA).
Standard supply is 230 V ac, other supplies are available upon request: 115 V ac, 24 V ac or 24 V dc, to be specified with the order.

### CONTROLLER PANEL (Fig. 7)

**TC Blind time for starting**

Set screw regulation up to 120 s.

**DS Speed range regulation**

Programmable DIP-SWITCH (5 positions), selecting relay status, proximity type, reset system, acceleration or deceleration. Programming speed Dip-Switch with 8 positions allows to choose the most suitable speed range, according to the application being performed.

**SV Speed level** (set point)

Set screw regulation with digits from 0 to 10. The value 10 corresponds to full range set with Dip-Switch.

**R Reset**

Local manual reset is possible through R button, or remote reset by connecting a N.O. contact at pins 2-13.

**SS Threshold overtaking**

(RED LED) It lights up every time that the set threshold (set point) is overtaken.

**A Alarm led**

(RED LED) It lights up when alarm is ON and the inner relay is closed.

**E Enable**

(YELLOW LED) It lights up when the device is enabled.

**T Delay time**

Set screw regulation up to 30 s.

**ON Supply**

(GREEN LED) It shows that the device is electrically supplied.

FOR FURTHER DETAILS, ASK FOR TF 5800-A.

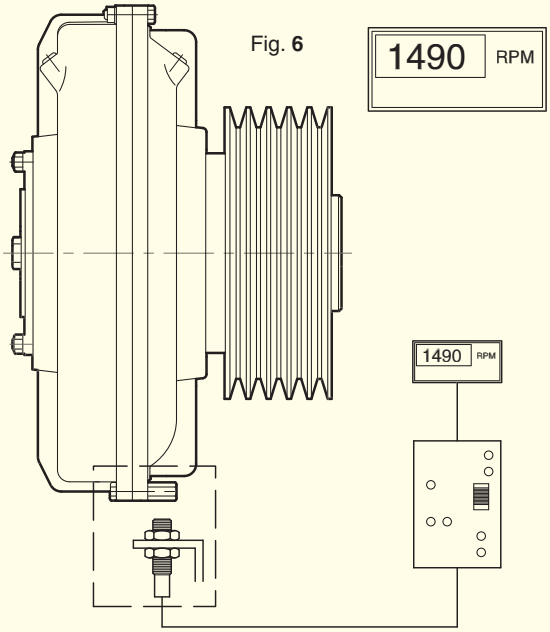



Fig. 6

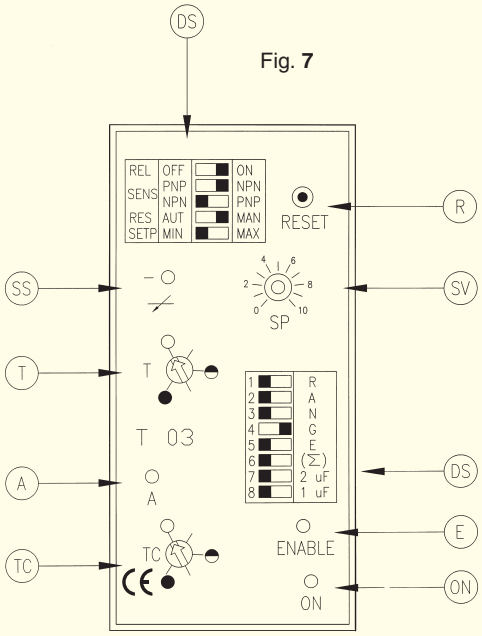
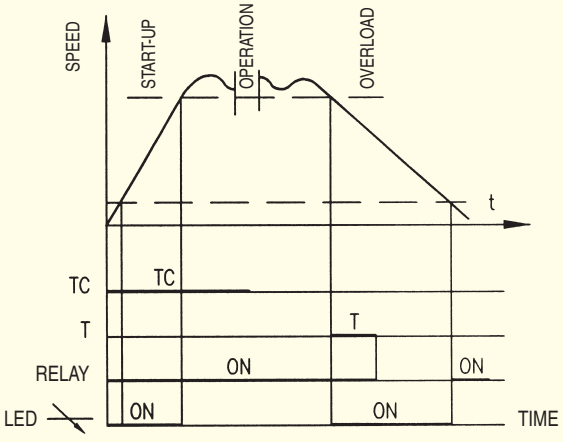



Fig. 7



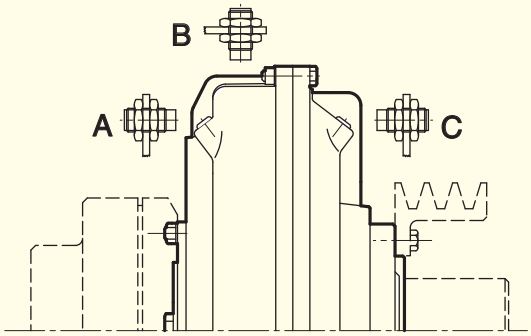

Diagram

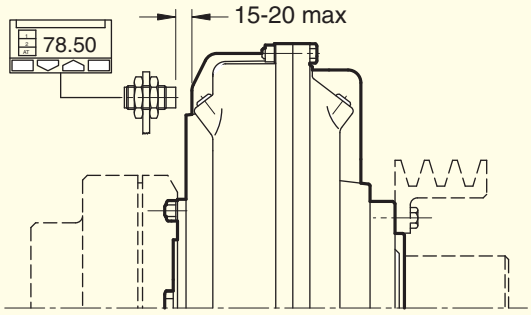
### 10.3 INFRARED TEMPERATURE CONTROLLER (Fig. 8)

This is a non contacting system to check fluid coupling temperature. It is reliable and easily mounted.
It has 2 adjustable thresholds with a logical alarm on the former, and a relay alarm on the latter.

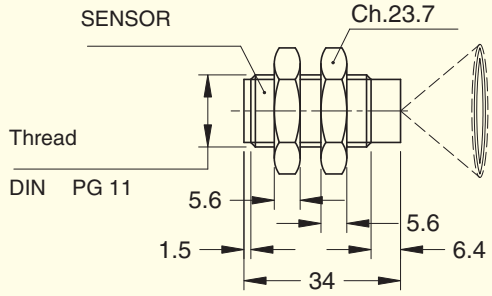
The proximity sensor must be positioned near the fluid coupling outer impeller or cover, according to one of the layouts shown in Fig. **8**.
It is adviced to place it in **A** or **C** positions, as the air flow generated by the fluid coupling during rotation helps to remove possible dirt particles that may lay on the sensor lens.
The distance between the sensor and the fluid coupling must be about 15-20 mm (cooling fins do not disturb the correct operation of the sensor).
To avoid the bright surface of the fluid coupling reflecting light and producing an incorrect temperature reading, it is necessary to paint the surface, which is directly facing the sensor, a flat black color (a stripe of 6-7 cm is sufficient).
The sensor cable has a standard length of 90 cm. In the case where, a longer cable is required, use one that is twisted and shielded as per type “K” thermocouples.

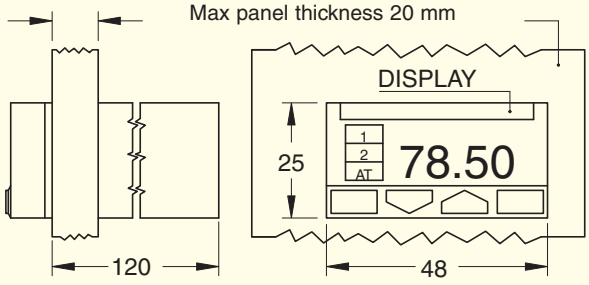
Fig. **8**




| SENSOR | |
|---|---|
| Temperature range | 0 ÷ 200 °C |
| Ambient temperature | -18 ÷ 70 °C |
| Accuracy | 0.0001 °C |
| Dimensions | 32.5 x 20 mm |
| Standard wire length • | 0.9 m |
| Body | ABS |
| Protection | IP 65 |
| **CONTROLLER** | |
| Power supply | 85…264 Vac / 48…63 Hz |
| Relay output OP1 | NO (2A – 250V) |
| Logical output OP2 (5Vdc, ±10%, 30 mA max) | Not insulated |
| AL1 alarm (display) | Logic (OP2) |
| AL2 alarm (display) | Relay (OP1) (NO, 2A / 250Vac) |
| Pins protection | IP 20 |
| Body protection | IP 30 |
| Display protection | IP 65 |
| Dimensions | 1/32 DIN – 48x24x120 mm |
| Weight | 100 gr |

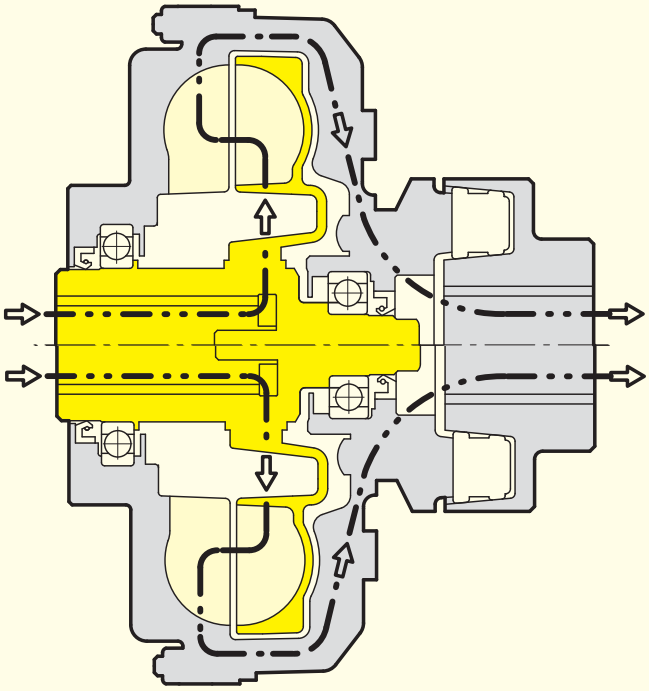



• TO BE MADE LONGER WITH TWISTED AND SHIELDED WIRES FOR TYPE K THERMOCOUPLES (NOT SUPPLIED)

## 11. INSTALLATION

### 11.1 STANDARD MOUNTING
Driver **inner** impeller



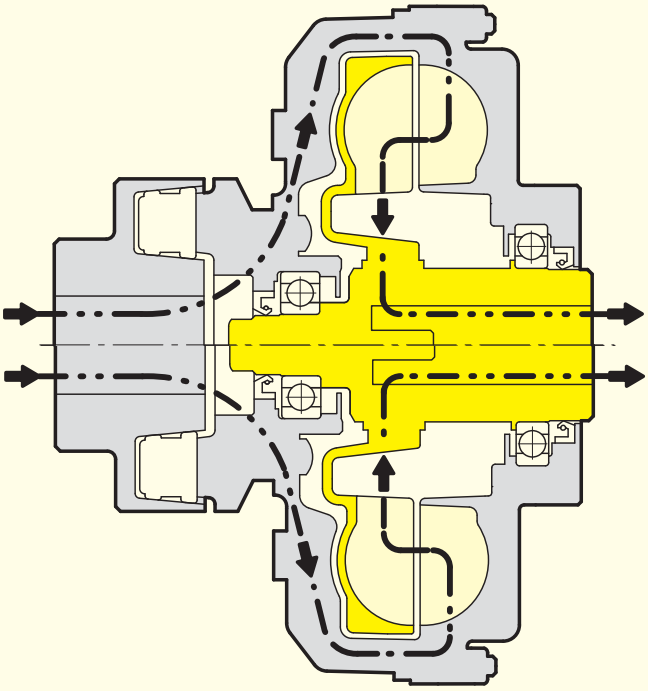
**Minimum possible inertia** is added to the motor, which allows it to accelerate more quickly.

If a braking system is required, it is **convenient and easy to install a brake drum or disc** on the flex coupling.

The delayed fill chamber, when present, is fitted on the driven side. The rotating speed of the chamber gradually increases during start-up, thus **leading to a longer starting time,** given the bleed orifices diameters are not changed.

Flex coupling is protected by the presence of the fluid coupling in front of it, and therefore this configuration is fit for applications with **frequent start-ups or reversals**.

### 11.2 REVERSE MOUNTING
Driver **outer** impeller



The outer impeller, being directly connected to the motor, reaches synchronous speed at once. **Ventilation** is therefore **maximum** from the beginning.

The outer impeller and cover are connected to the motor, **it is possible to manually rotate the coupling** to check alignment and oil level, and for refilling.

The delayed fill chamber is fitted on the driver side, and reaches the synchronous speed in a few seconds. Oil is therefore centrifuged into the main circuit gradually and completely.

The **switching pin operation is always assured,** as the outer impeller, always rotates because it is mounted on the driver shaft.

**FIELDS OF APPLICATION**

• MISCELLANEOUS
- Centrifugal fans
- Centrifugal and reciprocating compressors
- Belt and bucket conveyors
- Chain conveyors
- Bridge cranes (translation and rotation)
- Rotating jib cranes
- Winders
- Winches
- Ski lifts
- Merry-go-round, thrill rides
- Mine car haulage

• BUILDING MACHINERY
- Tower cranes (translation and rotation)
- Screw and slat conveyors

• MACHINES FOR QUARRIES
- Crushers
- Ball, barrel and hammer mills
- Bucket excavators
- Screening drums

• MACHINES FOR CONCRETE
- Mixers
- Rotating furnaces

• MACHINES FOR CERAMIC INDUSTRY
- Continuous and non continuous ball mills
- Mixers
- Presses

• BRICK MACHINES
- Clod crushers
- Crushing mills
- Rolling mills
- Brick-molding machines

• MACHINES FOR STONE CUTTING AND FINISHING
- Frame cranes
- Stone cutting machines

• TEXTILE MACHINES
- Barrels for tannery
- Centrifuges
- Carding machines
- Washing machines

• WOOD WORKING MACHINES
- Debarking drums
- Plywood pressing machines
- Chipping machines

• PULP AND PAPER MACHINERY
- Paper winding drums
- Pulpers

• BITUMINOUS ROAD MIX MACHINES

• MACHINES FOR WASTE DISPOSAL
- Grinders
- Water depurators

• CHEMICAL, FOOD AND BOTTLING MACHINERY
- Centrifugal agitators
- Centrifugal idroextractors
- Rotating filters
- Soap cutters
- Rubber calenders and mixers
- Pallettizers
- Labeling machines

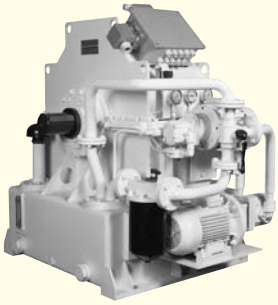
• MECHANICAL AND AUTOMOTIVE INDUSTRY
- Balancing machines
- Gate closing control drives

• METAL WORKING MACHINES
- Machines to twist ropes and wires
- Bar-straightening machines
- Presses
- Forming machines
- Wiredrawing machines

# OTHER TRANSFLUID PRODUCTS

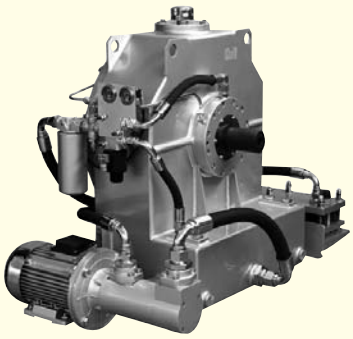
## FLUID COUPLING
*KSL SERIES*

Start up and variable
speed drive up to 3300 kW



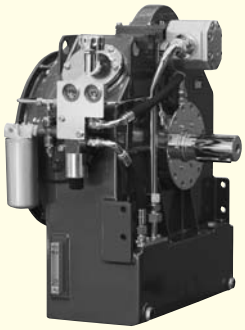
## FLUID COUPLING
*KPT SERIES*

Start up and variable
speed drive up to 1700 kW



## FLUID COUPLING
*KPTO SERIES*

For internal combustion engine
P.T.O. for pulley and cardan shaft
up to 1700 kW



## FLUID COUPLING
*KX SERIES*

Constant fill
Up to 1000 kW

## FLUID COUPLING
*K SERIES*

For diesel engines
Up to 1300 kW

## OIL OPERATED POWER TAKE OFF
*HF SERIES*

Up to 800 kW

## FLEXIBLE COUPLING
*BM SERIES*

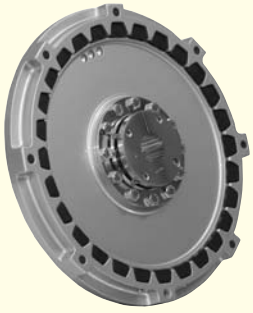
Up to 33100 Nm

## STELLADRIVE
*MPD - SPD SERIES*

Up to 1100 kW

## ELASTIC COUPLING
*RBD SERIES*

For internal combustion engine
up to 16000 Nm



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