

# TRANSFLUID

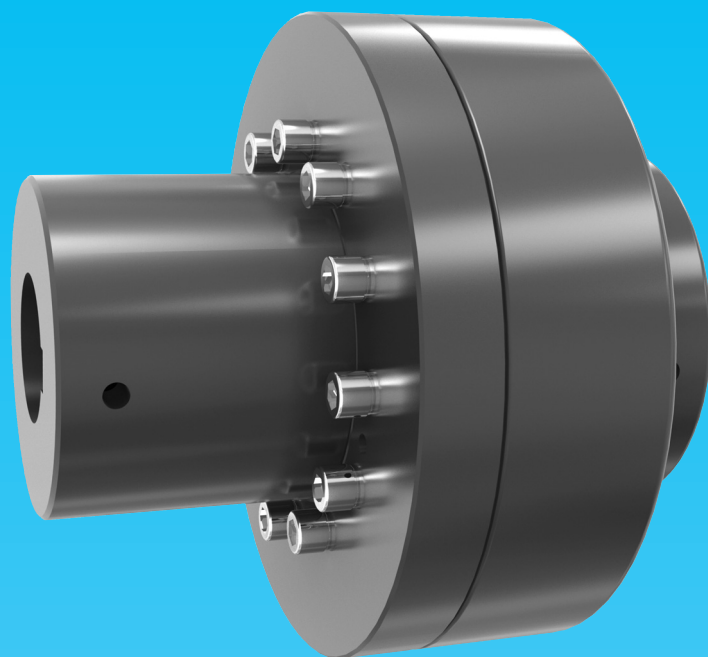
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# TRANSFLUID

trasmissioni industriali



**B3M-BM-BMS**  
FLEXIBLE COUPLINGS

# GENERAL DESCRIPTION

With decades of experience and thousands of applications on TRANSFLUID fluid couplings the BT flexible coupling line has been expanded to include couplings for shaft-to-shaft application. The new series has been studied to provide an exceptionally robust coupling with excellent misalignment capabilities and easy installation and assembly. The B3M/BM/BMS couplings high quality flexible elements provide reliable performance while protecting the coupled machines.

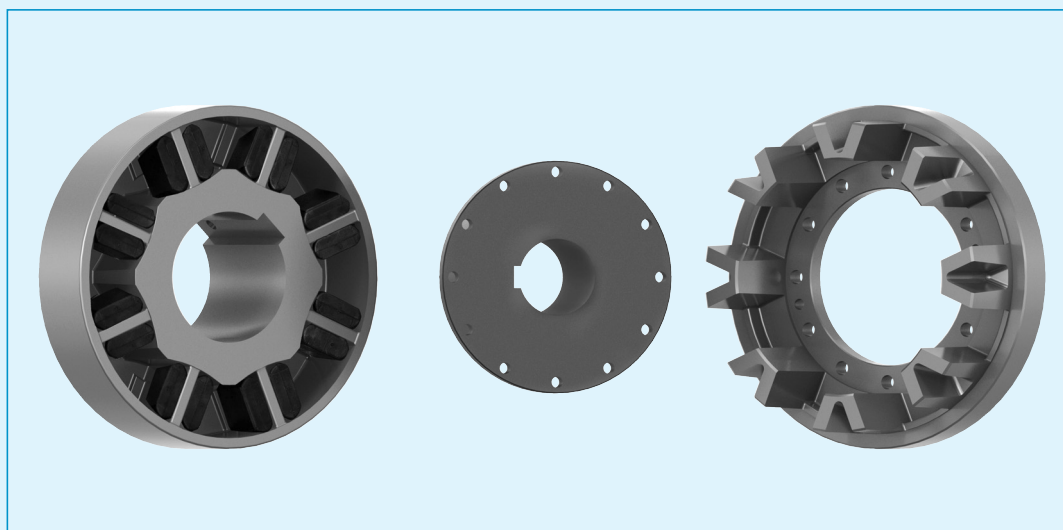
The B3M/BM/BMS require minimal maintenance except for a periodical inspection and replacement of the rubber elements. To simplify in this check, especially in alignment free drives, the B3M was developed. This version allows for inspection and removal of the rubber elements while preserving alignment.

Manufactured with the highest quality materials in TRANSFLUID's factory in Gallarate Italy the new B3M/BM/BMS series is available in 17 different sizes with torque capability exceeding 33100Nm (24,494 lbs-ft)

## ADVANTAGES:

- Compensation of misalignments
- Shocks and vibrations damping
- Fail - safe and capable of withstanding high overloads
- Quick and easy change of flexible elements
- Maintenance free

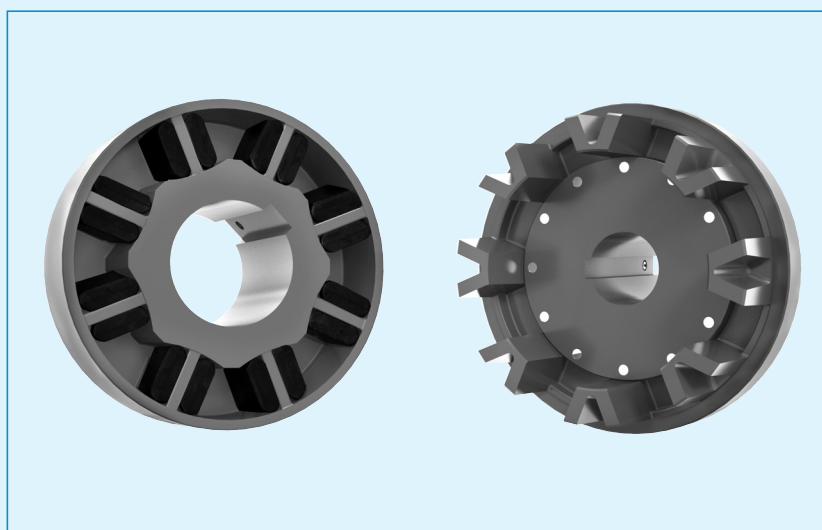
**B3M**



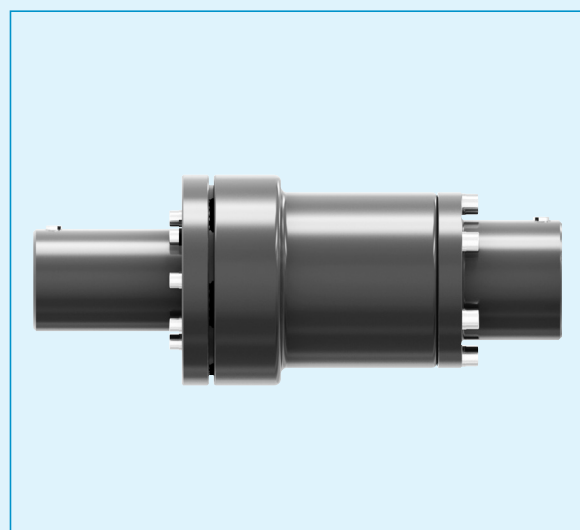
**B3MBP**



**BM**

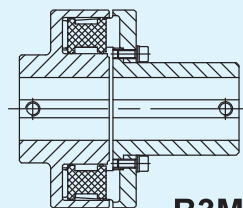


**BMS**

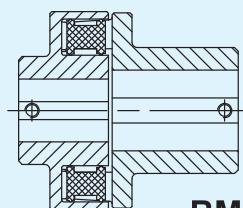


## Shaft couplings

Standard version for connecting two shafts. The **B3M** allows changing of flexible elements with no need for axial movement of either of the couplings hubs.



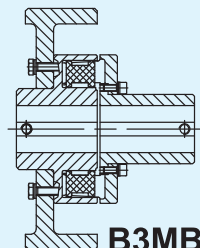
**B3M**



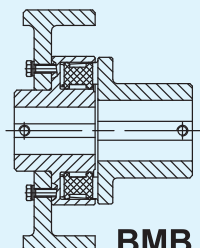
**BM**

## Brake drum couplings

With brake drum.  
See **Catalogue 355** for **TRANSFLUID BRAKES**.



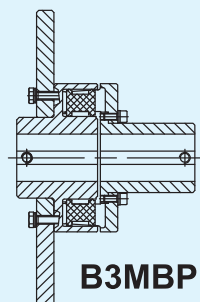
**B3MB**



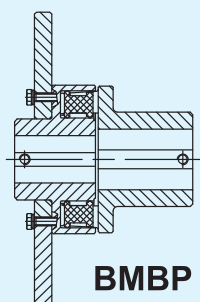
**BMB**

## Brake disc couplings

With brake disc.  
See **Catalogue 355** for **TRANSFLUID BRAKES**.



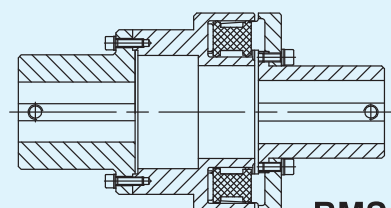
**B3MBP**



**BMBP**

## Spacer couplings

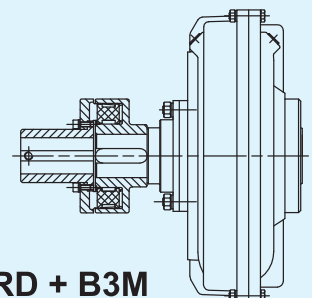
B3M with removable spacer.



**BMS**

## Combination

For connection with a TRANSFLUID fluid coupling.



**KRD + B3M**

## ATEX VERSIONS

It is possible to get BM series couplings, **with finished bores**, certified as equipment for intended use in hazardous zones according to directive 94/9/EC (ATEX).

Certification can be provided for the following categories:

**Ex II 3 G/D c T4** Surface (Non-mining) application

**Ex II 2 G/D c T4** Surface (Non-mining) application

**Ex I M2 c T4** Mining application

In case of inquiry for ATEX products, you have to apply providing the application form TF6735 duly filled up.

# TECHNICAL DATA

Tab. 1

| Coupling size | Technical data for standard rubber elements |          |                                     |          |                                                  |              |                                       |
|---------------|---------------------------------------------|----------|-------------------------------------|----------|--------------------------------------------------|--------------|---------------------------------------|
|               | Nominal torque<br>T <sub>KN</sub>           |          | Maximum torque<br>TK <sub>max</sub> |          | Dynamic torsional stiffness<br>CT <sub>dyn</sub> |              | Max. (*)<br>N <sub>max</sub><br>(rpm) |
|               | (Nm)                                        | (lbs-ft) | (Nm)                                | (lbs-ft) | (Nm/rad)                                         | (lbs-ft/rad) |                                       |
| 01            | 20                                          | 15       | 40                                  | 30       | 2000                                             | 1480         | 5000                                  |
| 02            | 55                                          | 41       | 110                                 | 81       | 3000                                             | 2220         | 5000                                  |
| 05            | 75                                          | 56       | 150                                 | 111      | 5200                                             | 3848         | 5000                                  |
| 10            | 160                                         | 118      | 320                                 | 237      | 14800                                            | 10952        | 5000                                  |
| 20            | 320                                         | 237      | 640                                 | 474      | 25100                                            | 18574        | 5000                                  |
| 40            | 630                                         | 466      | 1260                                | 932      | 63000                                            | 46620        | 4000                                  |
| 43            | 630                                         | 466      | 1260                                | 932      | 41800                                            | 30932        | 4000                                  |
| 45            | 940                                         | 696      | 1880                                | 1391     | 82200                                            | 60828        | 3600                                  |
| 48            | 1480                                        | 1095     | 2960                                | 2190     | 90700                                            | 67118        | 3600                                  |
| 50            | 2060                                        | 1524     | 4120                                | 3049     | 209700                                           | 155178       | 3000                                  |
| 53            | 2060                                        | 1524     | 4120                                | 3049     | 106600                                           | 78884        | 3000                                  |
| 55            | 3160                                        | 2338     | 6320                                | 4677     | 187400                                           | 138676       | 3000                                  |
| 60            | 5220                                        | 3863     | 10440                               | 7726     | 412400                                           | 305176       | 2200                                  |
| 70            | 7650                                        | 5661     | 15300                               | 11322    | 627600                                           | 464424       | 2000                                  |
| 80            | 11550                                       | 8547     | 23100                               | 17094    | 936100                                           | 692714       | 1800                                  |
| 90            | 21030                                       | 15562    | 42060                               | 31124    | 971400                                           | 718836       | 1800                                  |
| 95            | 33100                                       | 24494    | 66200                               | 48988    | 1956000                                          | 1447440      | 1500                                  |

\*Referred to standard materials

Tab. 2 - IEC electric motors

| Motor |                 |                   | Motor power at 1500 rpm |             | Coupling size |
|-------|-----------------|-------------------|-------------------------|-------------|---------------|
| Size  | Shaft dia. (mm) | Shaft lenght (mm) | Power (kW)              | Torque (Nm) |               |
| 56    | 9               | 20                | 0.06                    | 0.4         | 01            |
|       |                 |                   | 0.09                    | 0.57        | 01            |
| 63    | 11              | 23                | 0.12                    | 0.76        | 01            |
|       |                 |                   | 0.18                    | 1.15        | 01            |
| 71    | 14              | 30                | 0.25                    | 1.60        | 01            |
|       |                 |                   | 0.37                    | 2.5         | 01            |
| 80    | 19              | 40                | 0.55                    | 3.50        | 01            |
|       |                 |                   | 0.75                    | 4.50        | 01            |
| 90S   | 24              | 50                | 1.1                     | 7.00        | 02            |
| 90L   | 24              | 50                | 1.5                     | 10.00       | 02            |
| 100L  | 28              | 60                | 2.2                     | 14.00       | 02            |
|       |                 |                   | 3                       | 19.00       | 02            |
| 112M  | 28              | 60                | 4                       | 25.50       | 02            |
| 132S  | 38              | 80                | 5.5                     | 35.00       | 10            |
| 132M  | 38              | 80                | 7.5                     | 48.00       | 10            |
| 160M  | 42              | 110               | 11                      | 70.00       | 10            |
| 160L  | 42              | 110               | 15                      | 95.50       | 10            |
| 180M  | 48              | 110               | 18.5                    | 118.00      | 20            |
| 180L  | 48              | 110               | 22                      | 140.00      | 20            |
| 200L  | 55              | 110               | 30                      | 191.00      | 20            |
| 225S  | 60              | 140               | 37                      | 235.50      | 20            |
| 225M  | 60              | 140               | 45                      | 286.50      | 20            |
| 250M  | 65              | 140               | 55                      | 350.00      | 40            |
| 280S  | 75              | 140               | 75                      | 477.50      | 48            |
| 280M  | 75              | 140               | 90                      | 573.00      | 48            |
| 315S  | 80              | 170               | 110                     | 700.00      | 48            |
| 315M  | 80              | 170               | 132                     | 840.50      | 48            |
|       |                 |                   | 160                     | 1020.00     | 48            |
| 355S  | 100             | 210               | 250                     | 1595.00     | 60            |
| 355M  | 100             | 210               | 315                     | 2005.00     | 60            |

Tab. 2A - NEMA electric motors

| Motor |                   |                     | Motor power at 1800 rpm |                 | Coupling size |
|-------|-------------------|---------------------|-------------------------|-----------------|---------------|
| Size  | Shaft dia. (inch) | Shaft lenght (inch) | Power (hp)              | Torque (lbs-ft) |               |
| 143T  | 0.875             | 2.250               | 1                       | 2.92            | 02            |
| 145T  | 0.875             | 2.250               | 1.5                     | 4.38            | 02            |
|       |                   |                     | 2                       | 5.84            | 02            |
| 182T  | 1.125             | 2.750               | 3                       | 8.75            | 02            |
| 184T  | 1.125             | 2.750               | 5                       | 14.59           | 02            |
| 213T  | 1.375             | 3.375               | 7.5                     | 21.88           | 10            |
| 215T  | 1.375             | 3.375               | 10                      | 29.18           | 10            |
| 254T  | 1.625             | 4.000               | 15                      | 43.77           | 10            |
| 256T  | 1.625             | 4.000               | 20                      | 58.36           | 10            |
| 284T  | 1.875             | 4.625               | 25                      | 72.95           | 20            |
| 286T  | 1.875             | 4.625               | 30                      | 87.54           | 20            |
| 324T  | 2.125             | 5.250               | 40                      | 116.71          | 20            |
| 326T  | 2.125             | 5.250               | 50                      | 145.89          | 20            |
| 364T  | 2.375             | 5.875               | 60                      | 175.07          | 40            |
| 365T  | 2.375             | 5.875               | 75                      | 218.84          | 40            |
| 405T  | 2.875             | 7.250               | 100                     | 291.78          | 48            |
| 444T  | 3.375             | 8.500               | 125                     | 364.73          | 60            |
| 445T  | 3.375             | 8.500               | 150                     | 437.68          | 60            |
| 447T  | 3.375             | 8.500               | 200                     | 583.57          | 60            |
| 447T  | 3.375             | 8.500               | 250                     | 729.46          | 60            |
| 449T  | 3.375             | 8.500               | 300                     | 875.35          | 60            |

Tab. 2-2A Selection based on max allowable bore of the flexible coupling, assuming value 1 for all factors (Sm, St, Sz, S<sub>Alex</sub>). For applications where the factors are different from 1, the coupling must be properly selected according to selection procedure at page 4

The coupling must be selected so that the operating conditions of the coupling, do not exceed the maximum allowable load of the coupling itself. For driving machines not generating cyclic torque loads the selection of the coupling can be performed using the driving torque and the corresponding service factor. When the driving machine generates cyclic torque loads (e.g. internal combustion engines) the selection of the coupling must be checked by a torsional analysis of the complete system. Steps to be followed are as follows.

1) Using the power and rotational speed, calculate the torque of the driving machine  $T_{AN}$ :

where:

$P$  = power of driving machine (kW) -  $n$  = rotational speed of driving machine (rpm)

$T_{AN}$  = torque of driving machine (Nm)

$$T_{AN} = 9550 \times P / n$$

2) Once the torque of the driving machine  $T_{AN}$  has been calculated, determine the service factor and check that the torque of the driving machine times the service factor, temperature factor and starting factor is lower than the characteristic torque of the chosen coupling  $T_{KN}$ :

where:

$T_{KN}$  = characteristic torque of the chosen coupling (Nm)

$S_m$  = service factor from Tab. 4 and Tab. 6

$S_t$  = temperature factor from Tab. 3

$S_z$  = starting factor from Tab. 5

$S_{Atex}$  = 1,2 in case of use in hazardous zones acc. to 94/9/EC (Atex). In normal zones,  $S_{Atex}$  = 1

$$T_{KN} \geq T_{AN} \times S_m \times S_t \times S_z \times S_{Atex}$$

Load classifications and service factors of Tab. 6 are referred to turbines and hydraulic or electric motor as the prime mover. If the prime mover is a single or multi cylinder engine, the service factor from Tab. 6 must be replaced by its corresponding value from Tab. 4

Tab. 3 - Temperature factor

| Ambient temperature | -40 °C<br>+30 °C | +40 °C  | +60 °C  | +80 °C  | >+80 °C    |
|---------------------|------------------|---------|---------|---------|------------|
|                     | -40° F<br>+86° F | +104° F | +140° F | +176° F | >+176° F   |
| $S_t$               | 1.0              | 1.1     | 1.4     | 1.8     | on request |

Tab. 5 - Starting factor

| Starting frequency per hour | 30  | 60  | 120 | 240 | >240       |
|-----------------------------|-----|-----|-----|-----|------------|
| $S_z$                       | 1.0 | 1.1 | 1.2 | 1.3 | on request |

3) Known the maximum possible torque during operation  $T_{max}$ , check that the maximum torque times the temperature factor is lower than the maximum characteristic torque of the chosen coupling  $T_{Kmax}$ :

$$T_{Kmax} \geq T_{max} \times S_t$$

### Calculation example

#### 1) Application data

A torsionally elastic coupling type **BM** installed between an electric motor and a rotary pump gear type.

Power of the electric motor:  $P = 160$  kW

Rotational speed:  $n = 1490$  rpm

#### 2) Calculation of driving torque $T_{AN}$

The driving torque  $T_{AN}$  of the driving machine is:

$$T_{AN} = 9550 \times 160 / 1490 = 1025 \text{ Nm}$$

#### 3) Check of the nominal $T_{KN}$

From Tab. 6 the service factor corresponding to the driven machine load classification is:  $S_m = 1.5$ . Because the prime mover is an electric motor, it is not necessary to use conversion Tab. 4

From Tab. 3 for an ambient temperature of 40 °C, the temperature factor is:  $S_t = 1.1$

From Tab. 5 for starting frequency per hour of 60 the starting factor is:  $S_z = 1.1$

The nominal torque  $T_{KN}$  of the driving machine is:

$$T_{KN} \geq 1025 \text{ Nm} \times 1.5 \times 1.1 \times 1.1 = 1861 \text{ Nm}$$

#### 4) Selection of the coupling

From Tab. 1, with torque values  $T_{KN} \geq 1861$  Nm the choice is for coupling size **BM 50**.

5) As final selection step, check compatibility between equipment shaft and max allowable bore of selected coupling

Tab. 4

Conversion table for single or multi-cylinder engines

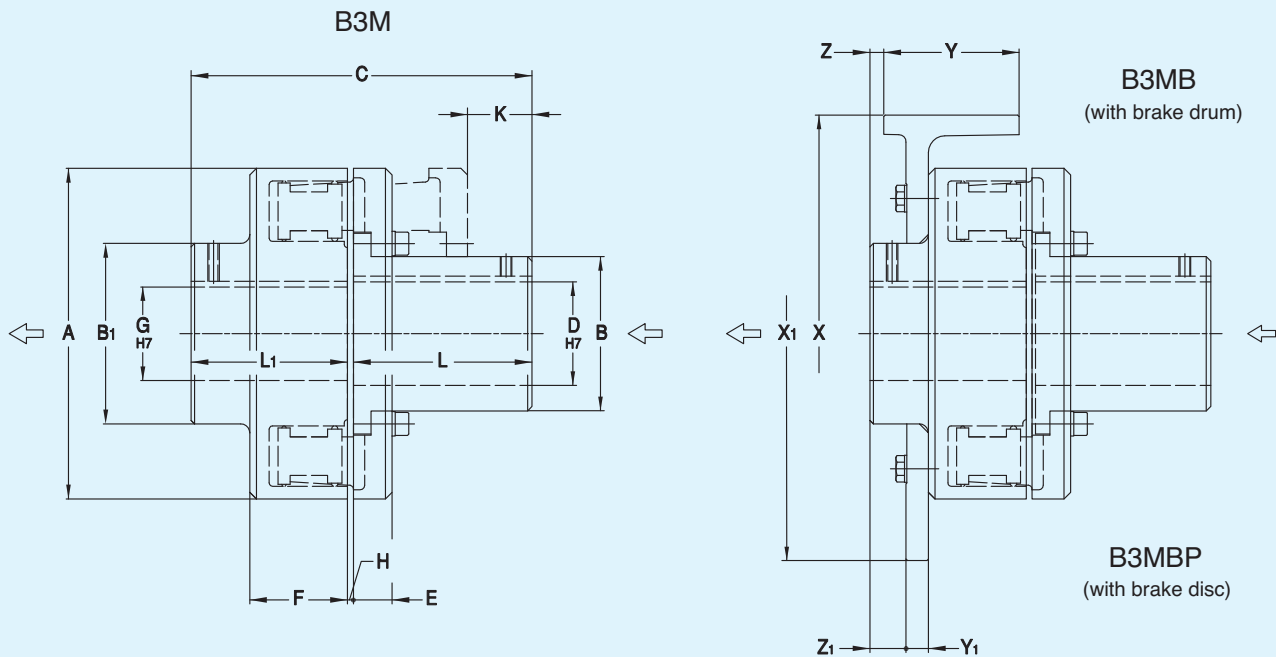
| Steam and gas turbines, hydraulic or electric motors (from Tab. 6) | Single cylinder engines | Multi-cylinder engines |
|--------------------------------------------------------------------|-------------------------|------------------------|
| 1.00                                                               | 1.50                    | 1.25                   |
| 1.25                                                               | 1.75                    | 1.50                   |
| 1.50                                                               | 2.00                    | 1.75                   |
| 1.75                                                               | 2.25                    | 2.00                   |
| 2.00                                                               | 2.50                    | 2.25                   |
| 2.25                                                               | 2.75                    | 2.50                   |
| 2.50                                                               | 3.00                    | 2.75                   |

# LOAD CLASSIFICATION AND SERVICE FACTOR

Tab. 6 - Service factor for steam turbines, hydraulic or electric motors, as prime mover

|                                         |      |                                   |      |                                        |      |
|-----------------------------------------|------|-----------------------------------|------|----------------------------------------|------|
| <b>Agitators</b>                        |      | <b>Feeders</b>                    |      | <b>Paper industry</b>                  |      |
| Pure liquids                            | 1.00 | Belt                              | 1.25 | Barker                                 | 2.00 |
| Liquids and solids                      | 1.25 | Reciprocating                     | 2.50 | Barking drum (spur gear only)          | 2.25 |
| <b>Blowers</b>                          |      | Screw                             | 1.25 | Beater & pulper                        | 1.75 |
| Centrifugal                             | 1.00 | <b>Food industry</b>              |      | Bleacher                               | 1.00 |
| Lobe                                    | 1.50 | Beet slicer                       | 1.75 | Calenders                              | 2.00 |
| Vane                                    | 1.25 | Filling machines                  | 1.00 | Couch                                  | 1.75 |
| <b>Car dumpers</b>                      |      | Cereal cooker                     | 1.25 | Cutters. platers                       | 2.00 |
| <b>Car pullers - intermittent duty</b>  |      | Dough mixer                       | 1.75 | Cylinders                              | 1.75 |
| <b>Chemical industry</b>                |      | Meat grinders                     | 1.75 | Dryers                                 | 1.75 |
| Agitators                               | 1.75 | Bottling, can filling machine     | 1.00 | Felt stretcher                         | 1.25 |
| Centrifuges (heavy)                     | 1.75 | <b>Generators, transformers</b>   |      | Felt whipper                           | 2.00 |
| Centrifuges (light-weight)              | 1.25 | Frequency transformers            | 2.00 | Log haul                               | 2.00 |
| Cooling drums                           | 1.75 | Generators                        | 2.00 | Suction roll                           | 1.75 |
| Drying drums                            | 1.75 | Welding generators                | 2.00 | Washers and thickeners                 | 1.50 |
| Mixers                                  | 1.75 | <b>Laundries</b>                  |      | Wet presses                            | 2.00 |
| <b>Compressors</b>                      |      | Washing machines                  | 2.00 | Winders                                | 1.50 |
| Centrifugal                             | 1.25 | <b>Lumber industry</b>            |      | <b>Printing presses</b>                |      |
| Lobe                                    | 1.50 | Barkers - drum type               | 2.00 | <b>Pullers</b>                         |      |
| Reciprocating -multi-cylinder           | 2.00 | Live rolls                        | 2.00 | <b>Pumps</b>                           |      |
| <b>Conveyors - uniform loaded</b>       |      | Log haul                          | 2.00 | Centrifugal                            | 1.00 |
| Belt                                    | 1.00 | Off bearing rolls                 | 2.00 | Reciprocating                          | 2.00 |
| Bucket                                  | 1.25 | Slab conveyor                     | 1.50 | Rotary - gear, lobe, vane              | 1.50 |
| Chain                                   | 1.25 | Sorting table                     | 1.50 | <b>Rubber calender industry</b>        |      |
| Screw                                   | 1.25 | Trimmer feed                      | 1.75 | Calender                               | 2.00 |
| <b>Conveyors - Not uniformly loaded</b> |      | <b>Machine tools</b>              |      | Mixer - Banbury                        | 2.50 |
| Belt                                    | 1.25 | Bending roll                      | 2.00 | Rubber mill                            | 2.25 |
| Bucket                                  | 1.50 | Punch press - gear driven         | 2.00 | Sheeter                                | 2.00 |
| Chain                                   | 1.50 | Tapping machines                  | 2.50 | Tire building machines                 | 2.50 |
| Reciprocating                           | 2.50 | Other machine tools:              |      | Tire & tube press openers              | 1.00 |
| Screw                                   | 1.50 | Main drives                       | 1.50 | Tubers and strainers                   | 2.00 |
| Table                                   | 2.00 | Auxiliary drives                  | 1.25 | <b>Screens</b>                         |      |
| <b>Cranes and hoists</b>                |      | <b>Metal rolling mills</b>        |      | Air washing                            | 1.00 |
| Main hoists                             | 2.00 | Billet shears                     | 2.25 | Rotary - stone or gravel               | 1.50 |
| Trolley drive                           | 1.75 | Chain transfers                   | 1.50 | Travel water intake                    | 1.25 |
| Bridge drive                            | 1.75 | Cold rolling mills                | 2.25 | <b>Sewage disposal equipment</b>       |      |
| Slope                                   | 1.50 | Continuous casting plants         | 2.00 | <b>Stone and clay working machines</b> |      |
| <b>Crushers - Grinders</b>              |      | Ingot handling machinery          | 2.25 | Ball mills                             | 2.25 |
| <b>Dredges</b>                          |      | Ingot pushers                     | 2.25 | Beater mills                           | 2.25 |
| Bucket conveyors                        | 1.50 | Manipulators                      | 2.25 | Breakers                               | 2.25 |
| Cable reels                             | 1.75 | Roller adjustment drivers         | 2.00 | Brick presses                          | 2.25 |
| Cutter heads                            | 2.25 | Roller straighteners              | 2.00 | Hammer mills                           | 2.25 |
| Maneuvering winches                     | 1.75 | Sheet mills                       | 2.25 | Rotary kilns                           | 2.00 |
| Pumps                                   | 1.75 | Trimming shears                   | 2.00 | Tube mills                             | 2.00 |
| Screen drive                            | 1.75 | Tube welding machines             | 2.25 | <b>Textile machines</b>                |      |
| Slewing gears                           | 2.00 | Winding machines (strip and wire) | 2.00 | Batchers                               | 1.50 |
| <b>Elevators</b>                        |      | Wire drawing benches              | 2.25 | Looms                                  | 1.50 |
| Bucket                                  | 1.75 | <b>Mixers</b>                     |      | Printing and dyeing machines           | 1.50 |
| Freight                                 | 2.00 | Concrete mixers                   | 1.75 | Tanning vats                           | 1.50 |
| Gravity discharge                       | 1.50 | Drum type                         | 1.50 | <b>Water treatment</b>                 |      |
| <b>Fans</b>                             |      | <b>Oil industry</b>               |      | Aerators                               | 1.00 |
| Centrifugal                             | 1.00 | Chillers                          | 1.25 | Screw pumps                            | 1.50 |
| Cooling towers                          | 2.00 | Oil pipeline pumps                | 1.75 | <b>Wood working machines</b>           |      |
| Forced draft                            | 1.50 | Rotary drilling equipment         | 2.00 | Debarking drums                        | 2.00 |
| Induced draft                           |      |                                   |      | Planing machines                       | 1.50 |
| w/o damper control                      | 2.00 |                                   |      | Wood chippers                          | 2.75 |



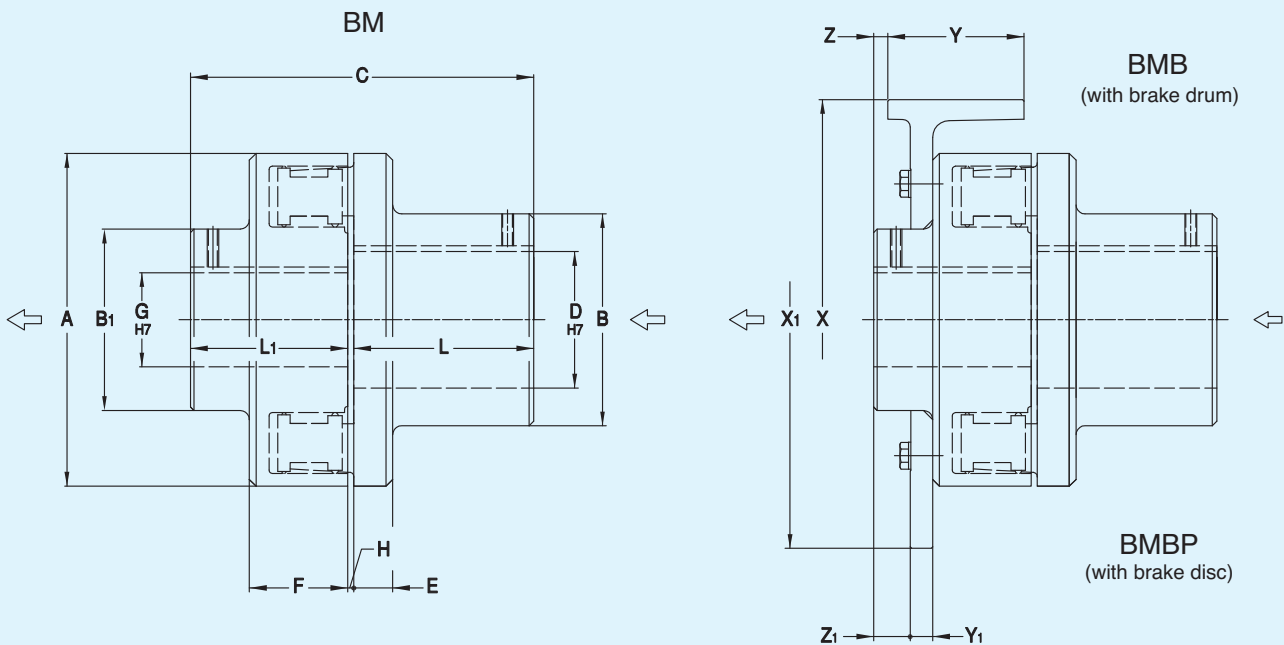


Tab. 7 Dimensions

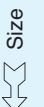
| Size | D             |                | G             |                | L              | L1             | A               | B              | B1             | C               | E             | F              | H            | K             | Brake Drum mm   |                | Z               | Brake Disc mm    |               | Z1 | Rubber Element |     | Weight           | INPUT                               | OUTPUT                              |
|------|---------------|----------------|---------------|----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|---------------|----------------|--------------|---------------|-----------------|----------------|-----------------|------------------|---------------|----|----------------|-----|------------------|-------------------------------------|-------------------------------------|
|      | mm (inch)     | mm (inch)      | mm (inch)     | mm (inch)      | mm (inch)      | mm (inch)      | mm (inch)       | mm (inch)      | mm (inch)      | mm (inch)       | mm (inch)     | mm (inch)      | mm (inch)    | mm (inch)     | X               | Y              |                 | X1               | Y1            |    | Type           | Nr. | kg (lbs)         | PD <sup>2</sup> (kgm <sup>2</sup> ) | PD <sup>2</sup> (kgm <sup>2</sup> ) |
|      | Min           | Max            | Min           | Max            | Min            | Max            | Min             | Max            | Min            | Max             | Min           | Max            | Min          | Max           |                 |                |                 |                  |               |    |                |     |                  |                                     |                                     |
| 20   | -             | 48<br>(1.781)  | -             | 55<br>(2.063)  | 110<br>(4.344) | 80<br>(3.156)  | 132<br>(5.188)  | 64<br>(2.531)  | 85<br>(3.344)  | 192<br>(7.563)  | 17<br>(0.656) | 42<br>(1.656)  | 2<br>(0.094) | 64<br>(2.531) | 200<br>(7.874)  | 75<br>(2.953)  | 5<br>(0.197)    | On request       |               | -  | C              | 12  | 8<br>(17.64)     | 0.022                               | 0.023                               |
| 43   | -             | 50<br>(1.938)  | -             | 60<br>(2.25)   | 110<br>(4.344) | 80<br>(3.156)  | 150<br>(5.906)  | 70<br>(2.75)   | 90<br>(3.531)  | 193<br>(7.594)  | 17<br>(0.656) | 43<br>(1.688)  | 3<br>(0.125) | 59<br>(2.313) | 250<br>(9.843)  | 95<br>(3.740)  | -               | 400<br>(15.748)  | 30<br>(1.181) | 7  | S              | 12  | 9.5<br>(20.95)   | 0.028                               | 0.029                               |
| 45   | -             | 60<br>(2.25)   | -             | 65<br>(2.375)  | 110<br>(4.344) | 80<br>(3.156)  | 175<br>(6.875)  | 80<br>(3.156)  | 100<br>(3.938) | 193<br>(7.594)  | 20<br>(0.787) | 42<br>(1.656)  | 3<br>(0.125) | 60<br>(2.375) | 250<br>(9.843)  | 95<br>(3.740)  | -               | 400<br>(15.748)  | 30<br>(1.181) | 7  | S              | 16  | 14<br>(30.86)    | 0.074                               | 0.076                               |
| 48   | -             | 75<br>(2.75)   | 35<br>(1.375) | 70<br>(2.625)  | 110<br>(4.344) | 80<br>(3.156)  | 185<br>(7.281)  | 100<br>(3.938) | 110<br>(4.344) | 193<br>(7.594)  | 23<br>(0.906) | 52<br>(2.063)  | 3<br>(0.125) | 42<br>(1.656) | 250<br>(9.843)  | 95<br>(3.740)  | -               | 400<br>(15.748)  | 30<br>(1.181) | -2 | N              | 12  | 17.2<br>(37.91)  | 0.116                               | 0.114                               |
| 53   | -             | 80<br>(3)      | 35<br>(1.375) | 80<br>(3)      | 110<br>(4.344) | 110<br>(4.344) | 200<br>(7.875)  | 110<br>(4.344) | 125<br>(4.906) | 223<br>(8.781)  | 28<br>(1.094) | 61<br>(2.406)  | 3<br>(0.125) | 28<br>(1.094) | 315<br>(12.394) | 118<br>(4.646) | -8<br>(-0.315)  | 400<br>(15.748)  | 30<br>(1.181) | 20 | E              | 12  | 24<br>(52.91)    | 0.163                               | 0.184                               |
| 55   | -             | 95<br>(3.438)  | 40<br>(1.563) | 90<br>(3.25)   | 110<br>(4.344) | 110<br>(4.344) | 240<br>(9.438)  | 130<br>(5.125) | 140<br>(5.5)   | 224<br>(8.813)  | 28<br>(1.094) | 65<br>(2.563)  | 4<br>(0.156) | 28<br>(1.094) | 400<br>(15.748) | 150<br>(5.906) | -40<br>(-1.575) | 560<br>(21.999)  | 30<br>(1.181) | 15 | P              | 12  | 34<br>(74.96)    | 0.290                               | 0.360                               |
| 60   | 42<br>(1.656) | 110<br>(4)     | 45<br>(1.75)  | 110<br>(4)     | 170<br>(6.688) | 140<br>(5.5)   | 290<br>(11.406) | 150<br>(5.906) | 170<br>(6.688) | 314<br>(12.375) | 28<br>(1.094) | 65<br>(2.563)  | 4<br>(0.156) | 88<br>(3.469) | 400<br>(15.748) | 150<br>(5.906) | -50<br>(-1.969) | 560<br>(21.999)  | 30<br>(1.181) | 45 | P              | 16  | 59<br>(130)      | 0.833                               | 0.856                               |
| 70   | 55<br>(2.156) | 120<br>(4.5)   | 55<br>(2.156) | 120<br>(4.5)   | 170<br>(6.688) | 140<br>(5.5)   | 315<br>(12.403) | 160<br>(6.313) | 185<br>(7.281) | 315<br>(12.406) | 38<br>(1.5)   | 81<br>(3.188)  | 5<br>(0.188) | 62<br>(2.438) | 500<br>(19.685) | 190<br>(7.480) | -20<br>(-0.787) | 630<br>(24.815)  | 30<br>(1.181) | 29 | R              | 16  | 79<br>(174.2)    | 1.400                               | 1.430                               |
| 80   | 65<br>(2.563) | 135<br>(4.938) | 65<br>(2.563) | 130<br>(4.625) | 210<br>(8.281) | 210<br>(8.281) | 354<br>(13.938) | 178<br>(7)     | 200<br>(7.875) | 425<br>(16.719) | 38<br>(1.5)   | 100<br>(3.938) | 5<br>(0.188) | 90<br>(3.531) | 500<br>(19.685) | 190<br>(7.480) | 58<br>(2.283)   | 710<br>(27.949)  | 30<br>(1.181) | 80 | T              | 16  | 120.1<br>(264.8) | 2.589                               | 2.540                               |
| 90   | 75<br>(2.938) | 150<br>(5.5)   | 75<br>(2.938) | 140<br>(5.188) | 210<br>(8.281) | 210<br>(8.281) | 395<br>(15.563) | 205<br>(8.063) | 220<br>(8.656) | 426<br>(16.781) | 51<br>(2)     | 122<br>(4.813) | 6<br>(0.25)  | 56<br>(2.219) | 630<br>(24.815) | 236<br>(9.291) | 8<br>(0.315)    | 1000<br>(39.370) | 30<br>(1.181) | 58 | I              | 12  | 157<br>(346.1)   | 4.711                               | 4.450                               |
| 95   | 85<br>(3.344) | 180<br>(6.5)   | 85<br>(3.35)  | 155<br>(5.625) | 210<br>(8.281) | 210<br>(8.281) | 460<br>(18.126) | 250<br>(9.844) | 260<br>(10.25) | 426<br>(16.781) | 56<br>(2.219) | 122<br>(4.813) | 6<br>(0.25)  | 51<br>(2)     | 630<br>(24.815) | 236<br>(9.291) | -20<br>(-0.787) | 1000<br>(39.370) | 30<br>(1.181) | 58 | I              | 16  | 232<br>(524.7)   | 8.392                               | 8.020                               |

- Metric max bore with a keyway ISO 773 - DIN 6885/1  
(Inch max bore with a keyway USAS B17.1 square)
- H tolerance: +1/-0.5 mm (+0.04/-0.02 inch)
- PD<sup>2</sup> (1kgm<sup>2</sup>) = Wk<sup>2</sup> (7.233 lbs-ft<sup>2</sup>)

Dimensions are subject to alteration without notice



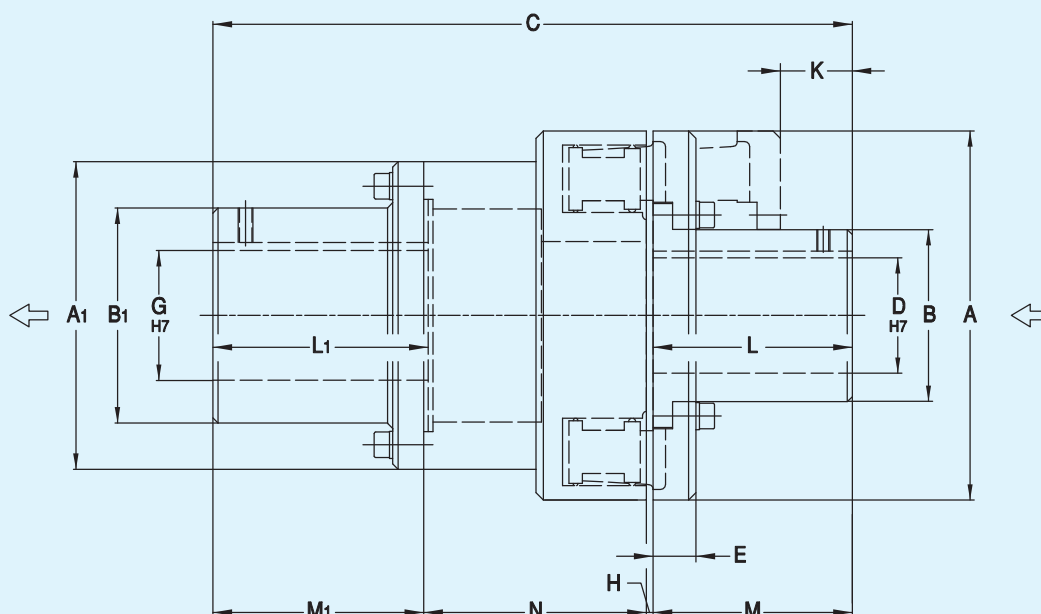
Tab. 8 Dimensions

| Size<br> | D                   |                       | G                   |                       | L              | L1             | A               | B              | B1             | C               | E             | F              | H                  | Brake Drum<br>mm  |                  | Z            | Brake Disc<br>mm   |                | Z1 | Rubber Element |     | Weight          | INPUT<br>PD <sup>2</sup><br>...<br>(kgm²) | OUTPUT<br>PD <sup>2</sup><br>...<br>(kgm²) |
|-------------------------------------------------------------------------------------------|---------------------|-----------------------|---------------------|-----------------------|----------------|----------------|-----------------|----------------|----------------|-----------------|---------------|----------------|--------------------|-------------------|------------------|--------------|--------------------|----------------|----|----------------|-----|-----------------|-------------------------------------------|--------------------------------------------|
|                                                                                           | mm<br>(inch)<br>Min | mm<br>(inch)<br>Max • | mm<br>(inch)<br>Min | mm<br>(inch)<br>Max • | mm<br>(inch)   | mm<br>(inch)   | mm<br>(inch)    | mm<br>(inch)   | mm<br>(inch)   | mm<br>(inch)    | mm<br>(inch)  | mm<br>(inch)   | mm<br>(inch)<br>•• | X                 | Y                |              | X1                 | Y1             |    | Type           | Nr. | kg<br>(lbs)     |                                           |                                            |
|                                                                                           |                     |                       |                     |                       |                |                |                 |                |                |                 |               |                |                    |                   |                  |              |                    |                |    |                |     |                 |                                           |                                            |
| 01                                                                                        | -                   | 19<br>(0.75)          | -                   | 19<br>(0.75)          | 35<br>(1.375)  | 35<br>(1.375)  | 62<br>(2.438)   | 35<br>(1.375)  | 35<br>(1.375)  | 72<br>(2.844)   | 8<br>(0.313)  | 25<br>(0.969)  | 2<br>(0.094)       | -----             |                  | -            | -----              |                | -  | A              | 8   | 0.8<br>(1.76)   | 0.007                                     | 0.007                                      |
| 02                                                                                        | -                   | 28<br>(1.125)         | -                   | 25<br>(1)             | 40<br>(1.563)  | 40<br>(1.563)  | 73<br>(2.875)   | 45<br>(1.781)  | 45<br>(1.781)  | 82<br>(3.219)   | 9<br>(0.344)  | 27<br>(1.063)  | 2<br>(0.094)       | On request        |                  | -            | On request         |                | -  | A              | 8   | 1.4<br>(3.86)   | 0.011                                     | 0.004                                      |
| 05                                                                                        | -                   | 32<br>(1.25)          | -                   | 32<br>(1.25)          | 50<br>(1.969)  | 50<br>(1.969)  | 86<br>(3.375)   | 55<br>(2.156)  | 55<br>(2.156)  | 102<br>(4.031)  | 11<br>(0.438) | 30<br>(1.188)  | 2<br>(0.094)       | On request        |                  | -            | On request         |                | -  | B              | 8   | 2.3<br>(5.07)   | 0.023                                     | 0.027                                      |
| 10                                                                                        | -                   | 42<br>(1.656)         | -                   | 42<br>(1.656)         | 60<br>(2.375)  | 60<br>(2.375)  | 110<br>(4.344)  | 70<br>(2.75)   | 70<br>(2.75)   | 122<br>(4.813)  | 11<br>(0.438) | 33<br>(1.313)  | 2<br>(0.094)       | 160<br>200        | 60<br>75         | -            | On request         |                | -  | B              | 12  | 4.3<br>(9.5)    | 0.081                                     | 0.009                                      |
| 20                                                                                        | -                   | 60<br>(2.25)          | -                   | 55<br>(2.063)         | 110<br>(4.344) | 80<br>(3.156)  | 132<br>(5.188)  | 90<br>(3.531)  | 85<br>(3.344)  | 192<br>(7.563)  | 14<br>(0.551) | 42<br>(1.656)  | 2<br>(0.094)       | 200<br>250        | 75<br>95         | 5<br>-15     | On request         |                | -  | C              | 12  | 10.1<br>(22.26) | 0.021                                     | 0.023                                      |
| 40                                                                                        | -                   | 80<br>(3)             | -                   | 80<br>(3)             | 110<br>(4.344) | 110<br>(4.344) | 170<br>(6.688)  | 120<br>(4.719) | 120<br>(4.719) | 223<br>(8.781)  | 25<br>(0.969) | 45<br>(1.781)  | 3<br>(0.125)       | 250<br>315        | 95<br>118        | 15<br>-8     | 395<br>450         | 30<br>30       | 35 | C              | 16  | 22<br>(48.5)    | 0.082                                     | 0.064                                      |
| 45                                                                                        | 40<br>(1.563)       | 70<br>(2.625)         | -                   | 65<br>(2.375)         | 110<br>(4.344) | 80<br>(3.156)  | 175<br>(6.875)  | 110<br>(4.344) | 100<br>(3.938) | 193<br>(7.594)  | 17<br>(0.656) | 42<br>(1.656)  | 3<br>(0.125)       | 250<br>315        | 95<br>118        | -            | 400<br>450         | 30<br>30       | 7  | S              | 16  | 17<br>(37.5)    | 0.079                                     | 0.076                                      |
| 48                                                                                        | 40<br>(1.563)       | 80<br>(3)             | 35<br>(1.375)       | 70<br>(2.625)         | 110<br>(4.344) | 80<br>(3.156)  | 185<br>(7.281)  | 120<br>(4.719) | 110<br>(4.344) | 193<br>(7.594)  | 22<br>(0.875) | 52<br>(2.063)  | 3<br>(0.125)       | 250<br>315<br>400 | 95<br>118<br>150 | 15<br>-<br>- | 400<br>450         | 30<br>30       | -2 | N              | 12  | 19<br>(41.9)    | 0.117                                     | 0.114                                      |
| 50                                                                                        | 35<br>(1.375)       | 90<br>(3.25)          | 35<br>(1.375)       | 90<br>(3.25)          | 140<br>(5.51)  | 110<br>(4.344) | 250<br>(9.844)  | 140<br>(5.5)   | 135<br>(5.313) | 253<br>(9.96)   | 30<br>(1.188) | 65<br>(2.563)  | 3<br>(0.125)       | 315<br>400        | 118<br>150       | -8<br>-40    | 400<br>450         | 30<br>30       | 15 | D              | 16  | 34<br>(74.9)    | 0.182                                     | 0.470                                      |
| 55                                                                                        | 45<br>(1.75)        | 90<br>(3.25)          | 40<br>(1.563)       | 90<br>(3.25)          | 140<br>(5.51)  | 110<br>(4.344) | 240<br>(9.438)  | 150<br>(5.906) | 140<br>(5.5)   | 254<br>(10)     | 27<br>(1.063) | 65<br>(2.563)  | 4<br>(0.156)       | 400<br>500        | 150<br>190       | -40<br>-90   | 560<br>630         | 30<br>30       | 15 | P              | 12  | 38<br>(83.8)    | 0.290                                     | 0.360                                      |
| 60                                                                                        | 65<br>(2.563)       | 110<br>(4)            | 45<br>(1.75)        | 110<br>(4)            | 170<br>(6.688) | 140<br>(5.5)   | 290<br>(11.406) | 170<br>(6.688) | 170<br>(6.688) | 314<br>(12.375) | 27<br>(1.063) | 65<br>(2.563)  | 4<br>(0.156)       | 400<br>500        | 150<br>190       | -            | 560<br>630<br>710  | 30<br>30<br>30 | 45 | P              | 16  | 60<br>(132.2)   | 0.790                                     | 0.856                                      |
| 70                                                                                        | 75<br>(2.938)       | 120<br>(4.5)          | 55<br>(2.156)       | 120<br>(4.5)          | 170<br>(6.688) | 140<br>(5.5)   | 315<br>(12.406) | 185<br>(7.281) | 185<br>(7.281) | 315<br>(12.406) | 33<br>(1.313) | 81<br>(3.188)  | 5<br>(0.188)       | 500               | 190              | -20          | 630<br>710         | 30<br>30       | 29 | R              | 16  | 80<br>(176.2)   | 1.310                                     | 1.430                                      |
| 80                                                                                        | 85<br>(3.344)       | 130<br>(4.625)        | 65<br>(2.563)       | 130<br>(4.625)        | 210<br>(8.281) | 210<br>(8.281) | 354<br>(13.938) | 200<br>(7.875) | 200<br>(7.875) | 425<br>(16.719) | 36<br>(1.406) | 100<br>(3.938) | 5<br>(0.188)       | 500<br>630        | 190<br>236       | 58<br>82     | 710<br>795<br>1000 | 30<br>30<br>30 | 80 | T              | 16  | 108<br>(238.1)  | 2.480                                     | 2.540                                      |
| 90                                                                                        | 85<br>(3.344)       | 140<br>(5.188)        | 75<br>(2.938)       | 140<br>(5.188)        | 210<br>(8.281) | 210<br>(8.281) | 395<br>(15.563) | 220<br>(8.656) | 220<br>(8.656) | 426<br>(16.781) | 51<br>(2)     | 122<br>(4.813) | 6<br>(0.250)       | 630<br>710        | 236<br>265       | 60<br>-      | 1000               | 30             | 58 | I              | 12  | 171<br>(377)    | 4.777                                     | 4.777                                      |

- Metric max bore with a keyway ISO 773 - DIN 6885/1  
(Inch max bore with a keyway USAS B17.1 square)
- H tolerance: +1 /-0.5 mm (+0.04/-0.02 inch)
- PD<sup>2</sup> (1kgm<sup>2</sup>) = Wk<sup>2</sup> (7.233 lbs-ft<sup>2</sup>)

Dimensions are subject to alteration without notice





Tab. 9 ⇨ Dimensions

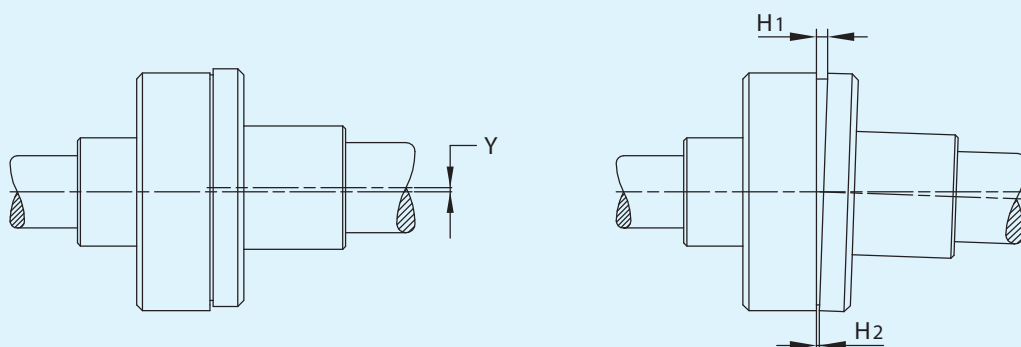
| Size<br>⇩ | D         |               | G             |               | L              | L1             | A              | A1             | B              | B1             | C               | E             | H            | K             | M              | M1             | N              | Rubber Element |     | Weight         | INPUT                                   | OUTPUT                                  |
|-----------|-----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|---------------|--------------|---------------|----------------|----------------|----------------|----------------|-----|----------------|-----------------------------------------|-----------------------------------------|
|           | mm (inch) | mm (inch)     | mm (inch)     | mm (inch)     | mm (inch)      | mm (inch)      | mm (inch)      | mm (inch)      | mm (inch)      | mm (inch)      | mm (inch)       | mm (inch)     | mm (inch)    | mm (inch)     | mm (inch)      | mm (inch)      | mm (inch)      | Type           | Nr. | kg (lbs)       | PD <sup>2</sup> ●●● (kgm <sup>2</sup> ) | PD <sup>2</sup> ●●● (kgm <sup>2</sup> ) |
|           | Min       | Max           | Min           | Max           | Min            | Max            | Min            | Max            | Min            | Max            | Min             | Max           | Min          | Max           | Min            | Max            | Min            |                |     |                |                                         |                                         |
| 20        | -         | 48<br>(1.781) | -             | 45<br>(1.75)  | 110<br>(4.344) | 80<br>(3.156)  | 132<br>(5.188) | 110<br>(4.344) | 64<br>(2.531)  | 75<br>(2.938)  | 331<br>(13.031) | 17<br>(0.656) | 3<br>(0.125) | 64<br>(2.531) | 110<br>(4.344) | 78<br>(3.063)  | 140<br>(5.5)   | C              | 12  | 16<br>(35)     | 0.022                                   | 0.057                                   |
| 43        | -         | 50<br>(1.938) | -             | 48<br>(1.781) | 110<br>(4.344) | 110<br>(4.344) | 150<br>(5.906) | 120<br>(4.719) | 70<br>(2.750)  | 82<br>(3.219)  | 361<br>(14.219) | 17<br>(0.656) | 4<br>(0.156) | 59<br>(2.313) | 110<br>(4.344) | 107<br>(4.219) | 140<br>(5.5)   | S              | 12  | 22<br>(48.5)   | 0.028                                   | 0.103                                   |
| 45        | -         | 60<br>(2.25)  | -             | 65<br>(2.375) | 110<br>(4.344) | 110<br>(4.344) | 175<br>(6.875) | 145<br>(5.719) | 80<br>(3.156)  | 100<br>(3.938) | 361<br>(14.219) | 20<br>(0.781) | 4<br>(0.156) | 60<br>(2.375) | 110<br>(4.344) | 107<br>(4.219) | 140<br>(5.5)   | S              | 16  | 27.5<br>(60.6) | 0.074                                   | 0.208                                   |
| 48        | -         | 75<br>(2.75)  | 35<br>(1.375) | 70<br>(2.625) | 110<br>(4.344) | 110<br>(4.344) | 185<br>(7.281) | 155<br>(6.094) | 100<br>(3.938) | 110<br>(4.344) | 401<br>(15.781) | 23<br>(0.906) | 4<br>(0.156) | 42<br>(1.656) | 110<br>(4.344) | 107<br>(4.219) | 180<br>(7.094) | N              | 12  | 32<br>(70.5)   | 0.116                                   | 0.290                                   |
| 53        | -         | 80<br>(3)     | 35<br>(1.375) | 80<br>(3)     | 110<br>(4.344) | 110<br>(4.344) | 200<br>(7.875) | 170<br>(6.688) | 110<br>(4.344) | 125<br>(4.906) | 421<br>(16.563) | 28<br>(1.094) | 4<br>(0.156) | 28<br>(1.094) | 110<br>(4.344) | 107<br>(4.219) | 200<br>(7.875) | E              | 12  | 41<br>(90.4)   | 0.163                                   | 0.421                                   |
| 55        | -         | 95<br>(3.438) | 40<br>(1.563) | 90<br>(3.25)  | 110<br>(4.344) | 140<br>(5.5)   | 240<br>(9.438) | 200<br>(7.875) | 130<br>(5.125) | 140<br>(5.5)   | 451<br>(17.75)  | 28<br>(1.094) | 5<br>(0.188) | 28<br>(1.094) | 110<br>(4.344) | 137<br>(5.406) | 200<br>(7.875) | P              | 12  | 56<br>(123.5)  | 0.290                                   | 1.053                                   |

- Metric max bore with a keyway ISO 773 - DIN 6885/1  
(Inch max bore with a keyway USAS B17.1 square)
- H tolerance: +1/-0.5 mm (+0.04/-0.02 inch)
- PD<sup>2</sup> (1kgm<sup>2</sup>) = Wk<sup>2</sup> (7.233 lbs-ft<sup>2</sup>)

Dimensions are subject to alteration without notice

# INSTALLATION AND MAINTENANCE

Flexible couplings **BM** series can withstand radial, axial, angular misalignment values according to Tab. 10; such values are just approximate because the coupling compensation capability depends on applied load and rotational speed values. It is recommended anyway to perform the best possible alignment during installation.



Tab. 10

|                                |              | Max shaft misalignment (up to 1800 rpm) |                |                |                |                 |                |                 |                 |                 |                |                 |                 |                 |                 |                 |                 |                |
|--------------------------------|--------------|-----------------------------------------|----------------|----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|
| Size                           |              | 01                                      | 02             | 05             | 10             | 20              | 40             | 43              | 45              | 48              | 50             | 53              | 55              | 60              | 70              | 80              | 90              | 95             |
| Y                              | mm<br>(inch) | 0.2<br>(0.008)                          | 0.2<br>(0.008) | 0.2<br>(0.008) | 0.3<br>(0.012) | 0.35<br>(0.014) | 0.4<br>(0.016) | 0.35<br>(0.014) | 0.35<br>(0.014) | 0.35<br>(0.014) | 0.5<br>(0.020) | 0.35<br>(0.014) | 0.41<br>(0.016) | 0.45<br>(0.018) | 0.50<br>(0.020) | 0.60<br>(0.024) | 0.80<br>(0.031) | 1<br>(0.039)   |
| B3M/BM                         | mm<br>(inch) | 2<br>(0.08)                             | 2<br>(0.08)    | 2<br>(0.08)    | 2<br>(0.08)    | 2<br>(0.08)     | 3<br>(0.12)    | 3<br>(0.12)     | 3<br>(0.12)     | 3<br>(0.12)     | 3<br>(0.12)    | 3<br>(0.12)     | 4<br>(0.16)     | 4<br>(0.16)     | 5<br>(0.20)     | 5<br>(0.20)     | 6<br>(0.24)     | 6<br>(0.24)    |
| *H <sub>nominal</sub><br>BMS   | mm<br>(inch) | -                                       | -              | -              | -              | 3<br>(0.12)     | -              | 4<br>(0.16)     | 4<br>(0.16)     | 4<br>(0.16)     | -              | 4<br>(0.16)     | 5<br>(0.20)     | -               | -               | -               | -               | -              |
| H <sub>1</sub> -H <sub>2</sub> | mm<br>(inch) | 1.1<br>(0.043)                          | 1.3<br>(0.051) | 1.5<br>(0.059) | 1.7<br>(0.067) | 1.9<br>(0.075)  | 2.2<br>(0.086) | 1.9<br>(0.075)  | 2.3<br>(0.090)  | 1.9<br>(0.075)  | 2.5<br>(0.098) | 2<br>(0.08)     | 2.4<br>(0.094)  | 2<br>(0.08)     | 1.8<br>(0.071)  | 1.5<br>(0.059)  | 1.4<br>(0.055)  | 1.4<br>(0.055) |

\*H nominal tolerance: + 1 /-0.5 mm (+0.04 / -0.02 inch)

For operating rotational speed **higher than 1800 rpm**, it is recommended to reduce by 50% the max allowable misalignment.

Maximum rotational speed cannot exceed the allowable values indicated on Tab. 1 pag. 3.

## BALANCING

All our flexible couplings are balanced according to ISO 1940 G16 @ 1500 rpm.

A grade of G6,3 balancing is recommended for application with operative speed higher than 2800 rpm. Please ask if required.

For such applications is moreover recommended to perform the balancing after the machining of holes and key ways. In that case, unless otherwise specified, the balancing of the machined hubs, is proper made installing the half keys.

## MAINTENANCE

Replace rubber elements when total thickness is lower than 90% of its nominal dimension (see dimension data on Tab. 14).

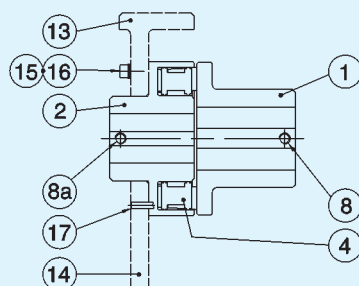
ATTENTION: the rubber elements must never get in contact with paint thinner, petrol or other chemicals.

## SAFETY

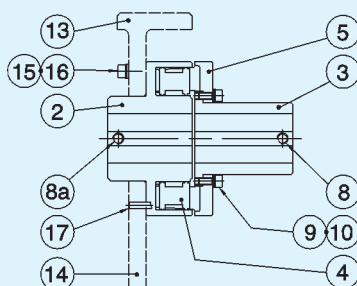
The couplings must be installed complete with proper protection guards in order to provide complete safety for personnel during operation.

The installer and the end user are responsible to assure adequate protection of the rotating parts and to comply to the required standards of the country where the equipment is installed.

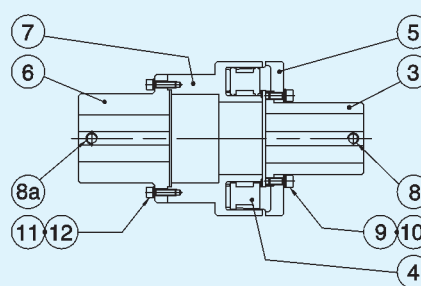
**BM**  
(BMB / MBP)



**B3M**  
(B3MB / B3MBP)



**BMS**



Tab. 11

| Pos. | Name               | Material                                                    |
|------|--------------------|-------------------------------------------------------------|
| • 1  | MALE HUB           | Cast Iron EN-GJL-250                                        |
| • 2  | FEMALE             |                                                             |
| • 3  | HUB                |                                                             |
| • 4  | RUBBER ELEMENT     | Special mix 70°Sh(A) ±5<br>[-40°C (-40°F); +120°C (+248°F)] |
| • 5  | MALE               | Cast Iron EN-GJL-250                                        |
| • 6  | FLANGE             | Cast Iron EN-GJL-250 or Steel Fe 510                        |
| • 7  | SPACER             | Cast Iron EN-GJL-250                                        |
| 8-8a | SET SCREW (metric) | Steel 12.9                                                  |

| Pos. | Name           | Material                                                     |
|------|----------------|--------------------------------------------------------------|
| 9    | SCREW (metric) | Steel 12.9                                                   |
| 10   | LOCK WASHER    | Steel SS 2343                                                |
| 11   | SCREW (metric) | Steel 12.9                                                   |
| 12   | LOCK WASHER    | Steel SS 2343                                                |
| • 13 | BRAKE DRUM     | Cast iron EN-GJL-250 or Steel Fe 510                         |
| • 14 | BRAKE DISC     |                                                              |
| 15   | SCREW (metric) | Steel 8.8                                                    |
| 16   | LOCK WASHER    | Steel SS 2343                                                |
| 17   | DOWEL PIN      | Steel C72 (elastic)<br>or Steel hardened HRC 60±2 (parallel) |

- On request special nodular Iron EN-GJS-350-22 LT for low temperature -40°C (-40°F)
- On request special rubber 60°Sh(A) or 80°Sh(A)

Tab. 12 - Screw tightening torque

| Pos. | Size                                                                                                  |    | 01    |    | 02    |    | 05    |    | 10    |    | 20    |    | 40    |    | 43    |    | 45    |    | 48    |    | 50    |    | 53    |     | 55    |     | 60    |    | 70    |     | 80    |     | 90    |      | 95    |      |  |  |
|------|-------------------------------------------------------------------------------------------------------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|-----|-------|-----|-------|----|-------|-----|-------|-----|-------|------|-------|------|--|--|
|      | SCREW                                                                                                 | Nm | SCREW | Nm | SCREW | Nm | SCREW | Nm | SCREW | Nm | SCREW | Nm | SCREW | Nm | SCREW | Nm | SCREW | Nm | SCREW | Nm | SCREW | Nm | SCREW | Nm  | SCREW | Nm  | SCREW | Nm | SCREW | Nm  | SCREW | Nm  | SCREW | Nm   | SCREW | Nm   |  |  |
| 9    | -                                                                                                     | -  | -     | -  | -     | -  | -     | -  | -     | -  | M6    | 18 | -     | -  | M6    | 18 | M8    | 42 | M10   | 85 | -     | -  | M12   | 143 | M14   | 228 | M10   | 85 | M12   | 143 | M14   | 228 | M24   | 1170 | M24   | 1170 |  |  |
| 11   | -                                                                                                     | -  | -     | -  | -     | -  | -     | -  | -     | -  | M8    | 42 | -     | -  | M10   | 85 | M10   | 85 | M10   | 85 | -     | -  | M10   | 85  | M12   | 143 | -     | -  | -     | -   | -     | -   | -     | -    | -     | -    |  |  |
| 8-8a | For max bore set screw should be placed at 90° from keyway - for type and dimensions see table TF5726 |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |     |       |     |       |    |       |     |       |     |       |      |       |      |  |  |
| 15   | Tightening torque according to screw size and class, please refer to table N 1152                     |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |     |       |     |       |    |       |     |       |     |       |      |       |      |  |  |
| 17   | For dowel pin dimensions contact TRANSFLUID                                                           |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |     |       |     |       |    |       |     |       |     |       |      |       |      |  |  |

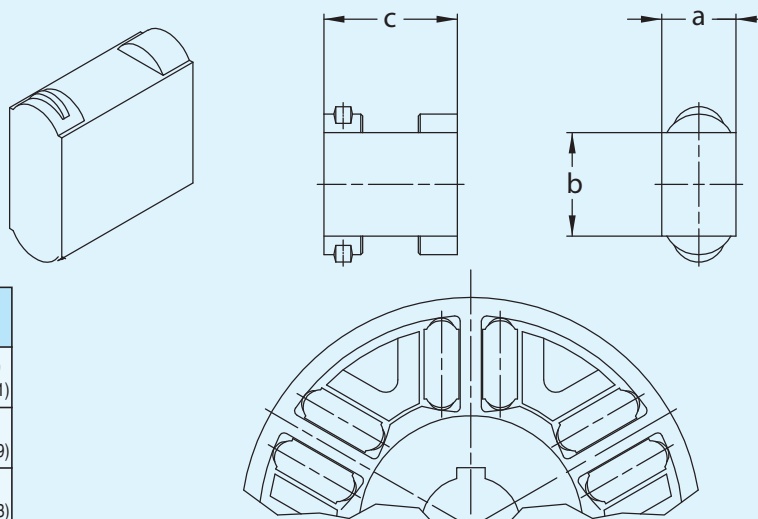
Tab. 13 - Rubber element type and quantity

| 01   |     | 02   |     | 05   |     | 10   |     | 20   |     | 40   |     | 43   |     | 45   |     | 48   |     | 50   |     | 53   |     | 55   |     | 60   |     | 70   |     | 80   |     | 90   |     | 95   |     |
|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|
| TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. | TYPE | Nr. |
| A    | 8   | A    | 8   | B    | 8   | B    | 12  | C    | 12  | C    | 16  | S    | 12  | S    | 16  | N    | 12  | D    | 16  | E    | 12  | P    | 12  | P    | 16  | R    | 16  | T    | 16  | I    | 12  | I    | 16  |

Tab. 14 - Rubber element dimensions

➡ Type

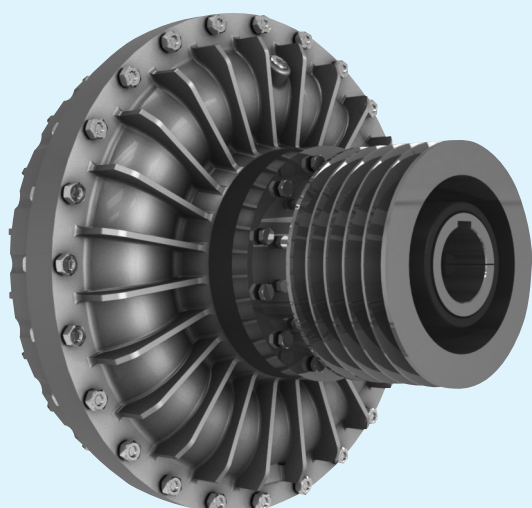
| Dimensions |  | A    |         | B     |         | C    |         | D  |         | E    |         | I  |         | N    |         | P    |         | R    |         | S    |         | T    |         |
|------------|--|------|---------|-------|---------|------|---------|----|---------|------|---------|----|---------|------|---------|------|---------|------|---------|------|---------|------|---------|
|            |  | mm   | (inch)  | mm    | (inch)  | mm   | (inch)  | mm | (inch)  | mm   | (inch)  | mm | (inch)  | mm   | (inch)  | mm   | (inch)  | mm   | (inch)  | mm   | (inch)  | mm   | (inch)  |
| a          |  | 6.7  | (0.264) | 7     | (0.275) | 10.9 | (0.429) | 16 | (0.630) | 19.6 | (0.772) | 35 | (1.378) | 14.7 | (0.579) | 19.7 | (0.775) | 20.5 | (0.807) | 11.8 | (0.464) | 23.9 | (0.941) |
| b          |  | 10   | (0.394) | 13.5  | (0.531) | 17   | (0.669) | 22 | (0.866) | 30   | (1.181) | 68 | (2.677) | 29   | (1.142) | 40   | (1.575) | 40   | (1.575) | 19.5 | (0.768) | 49   | (1.929) |
| c          |  | 14.5 | (0.571) | 18.25 | (0.719) | 25   | (0.984) | 39 | (1.535) | 50   | (1.968) | 98 | (3.858) | 39   | (1.535) | 49   | (1.929) | 64   | (2.520) | 30   | (1.181) | 74   | (2.913) |



Dimensions are subject to alteration without notice

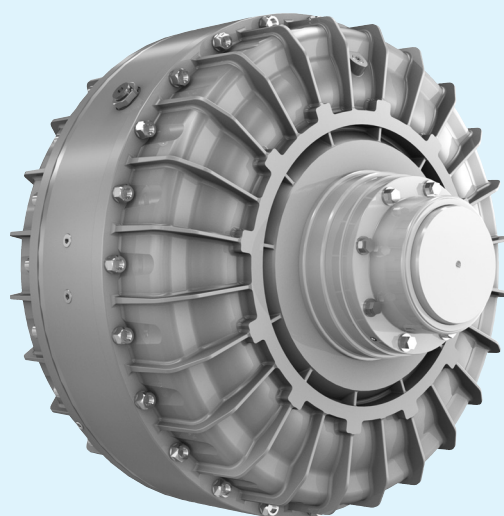
**FLUID COUPLING**  
K series

Constant filling  
up to 2500 kW



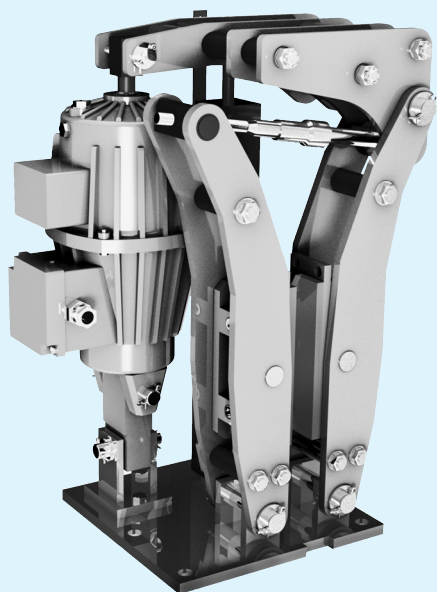
**FLUID COUPLING**  
KX series

Constant filling  
up to 1000 kW



**DISC AND DRUM BRAKE**  
TFDS-NBG series

up to 19000 Nm



**PNEUMATIC CLUTCH**  
TP series

up to 11500 Nm

