

# Couplings



# BASICS ON COUPLINGS

Mechanical couplings are designed to connect rotating shafts in a way that they have to be capable to transmit torque, angular speed and at the same time accommodate for misalignments and address vibration, all in all improving the dynamics of the system.

Basically, the mechanical couplings may be grouped in two types, the rigid and the flexible.

The rigid couplings connect firmly the two shafts together without any capability to handle the misalignment. These types are very simple and cost-effective but can only be used in applications where misalignment is of no concern.

The flexible couplings have a flexing element which is devised to absorb the misalignments. There are different types which can be grouped in, Elastomeric, Shear loaded, Metallic flexible, Lubricated, Non lubricated.

Misalignment between the shafts is present from the start at a different degree and develops due to wear of the bearings supporting the shafts, vibration and deflection of the shafts. These effects combined make the wear on the shafts, bearings and the coupling.

Three misalignment forms are recognized to be present between shafts, Axial, Radial or Parallel and Angular.

Axial misalignment or in-out movement is often associated with thermal shaft growth and floating rotors. Thermal growth is the result of high temperature in rotating equipment causing an unconfined growth along the length of its shaft.

Radial or Parallel misalignment occurs when the driving and driven shafts are parallel but with some offset between their axial centers. Accommodating such offset requires either a full-flex coupling, with

two flex planes, or two single-flex couplings in series. In either case, the greater the axial distance between the two flex planes, the greater the coupling's parallel or radial capability. Typical full-flex couplings include gear, grid and dual-element disk or diaphragm types.

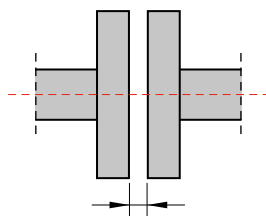
Although the elastomeric type has only one flex-plane, the elastomer can distort enough in some cases to provide significant parallel offset capability if it has sufficient resilience. Elastomeric couplings can also be made as spacer or floating shaft types to a limited extent.

Angular misalignment occurs when the axial centers of driving and driven shafts intersect. Flex-rigid or half couplings provide only for angular misalignment because there is only one flex plane. Single-element disk or diaphragm couplings provide for angular misalignment only. Single element couplings are used on three-bearing systems and on one end of floating shaft systems.

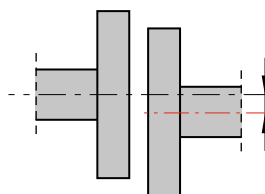
Another well-known source of axial movement is the electric motor rotor that seeks its magnetic center. The coupling must either accommodate axial movement or contain it by transferring the thrust to the bearing system of the rotor. Those that contain it are known limited-end float couplings. Sometimes axial thrust is deliberately transferred to another machine through the coupling. Limited-end float may or may not be used in such a case.

Gear couplings exhibit the best capability to handle axial misalignment because the hub teeth are free to slide axially within the sleeve while enmeshed.

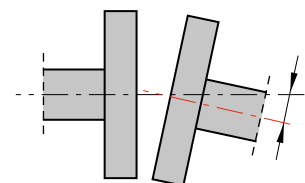
Other types of couplings, such as diaphragm couplings can flex or stretch to allow some axial displacement. Disk couplings can also do this, but to a lesser degree than the diaphragm coupling. In both the disk and diaphragm coupling, axial movement is met with resistance that increases as the displacement increases.



*Axial misalignment*



*Radial misalignment*



*Angular misalignment*

The combined forms of misalignments compound and affect to the coupling and to the equipment, thus an adequate selection of the coupling will prevent premature wear and failure of the coupling and will protect the equipment.

The main factors to be taken into account include:

- The torque to be transmitted
- The tolerance to misalignment
- The maintenance
- The ease of installation and removal
- The positive shaft engagement
- The service life
- The purchase cost

# STANDARDS

The standards that follow are related either entirely or partially with the Couplings, which we mention for the sake of reference.

**ISO 14691:** Petroleum, petrochemical and natural gas industries. Flexible couplings for mechanical power transmission – General purpose applications.

Applicable to couplings designed to accommodate parallel (or lateral) offset, angular misalignment and axial displacement of the shafts without imposing excessive mechanical loading on the coupled machines. Couplings covered by ISO 14691:2008 include gear (and other mechanical contact types), metallic flexible-element and various elastomeric types. Such couplings can be of all metal construction or can include components of non-metallic materials, such as composites.

**DIN 740 1 & 2:** Power transmission engineering; flexible shaft couplings, parameters and design principles.

Flexible shaft couplings as specified in this standard are used in the field of power transmissions engineering and it may be used for rigid shaft couplings as well. The standards comprises the technical requirements for design and manufacture of flexible shaft couplings.

**AGMA 922 (American Gear Manufacturers Association):** This document lists and classify the character of the load and suggest the service factors.

**ANSI/AGMA 9003-B08:** This standard presents information on design, dimensions, tolerances, inspection, mounting, removal, and equipment that is common use with keyless tapered and keyless straight bore hubs for flexible couplings.

**ANSI/AGMA 9004-B08:** This standard presents information and calculation methods for the mass elastic properties and other characteristic.

**ANSI/AGMA 9006-A16:** Basis for ratings of standard flexible couplings.

## TYPES OF COUPLINGS

As mentioned in the Couplings introduction, there are two basic families of couplings, the Rigid and the Flexible. The Rigid Couplings are the most basic and cost effective and they are used when the shafts to be coupled are well aligned. Although there are different types of Rigid Couplings as the Flange, the Sleeve, the Compression, the Spline and others we present the Sleeve and the Flange types only.

As far as the Flexible Couplings family, they are grouped in two, the Material Flexing Couplings and the Mechanical Flexing Couplings.

The nomenclature we use to distinguish the type of couplings in this catalog is:

**Nomenclature:** To distinguish the different types of Couplings we use the following acronyms:

|                                     |            |
|-------------------------------------|------------|
| Rigid Couplings                     | <b>RC</b>  |
| Flexible Couplings,                 |            |
| <i>Material Flexible Couplings</i>  |            |
| Jaw Couplings                       | <b>L</b>   |
| Hub Rubber Couplings                | <b>HRC</b> |
| Sleeve Couplings                    | <b>SC</b>  |
| Disc Couplings                      | <b>DC</b>  |
| Diaphragm Couplings                 | <b>DHC</b> |
| Tire Couplings                      | <b>TC</b>  |
| Grid Couplings                      | <b>GRC</b> |
| Oldham Couplings                    | <b>OC</b>  |
| Pin Bush Couplings                  | <b>PB</b>  |
| <i>Mechanical Flexing Couplings</i> |            |
| Chain Couplings                     | <b>CC</b>  |
| Gear Couplings                      | <b>GC</b>  |

### Rigid Couplings

These type of couplings provide a strong connection between the driving and driven shafts. They do not absorb any misalignment, thus they may be used in applications where the shafts are very well aligned. In such situations, these couplings offer a high performance with zero backlash. Are not recommended for high speed, as they cannot adjust for thermal changes in the shafts. They are indicated for vertical applications with uniform loads.

#### Clamp Type

Used in a wide variety of industrial applications, consists in a two-piece split alongside the axis, clamped by 4 or 6 high tensile bolts or socket head cap screws. This type of coupling stands up to high axial loads and display high torque capacity transmission without marring the shafts.

Available in Aluminum, Steel Casting and Stainless Steel, a wide choice of bores in Metric and Imperial and driving types either Plain Bore or Keyway.

Ask our Commercial Service for details on sizes.

There are many types of Rigid Couplings, namely the Flange, the Sleeve, the Clamp, the Ring compression, the Setscrew and the Spline. Out of these, we offer the Clamp, the Flange and the Ring Compression Couplings types. These latest types are presented in the Chapter B, Locking devices.



Two-piece Steel  
Clamp Coupling

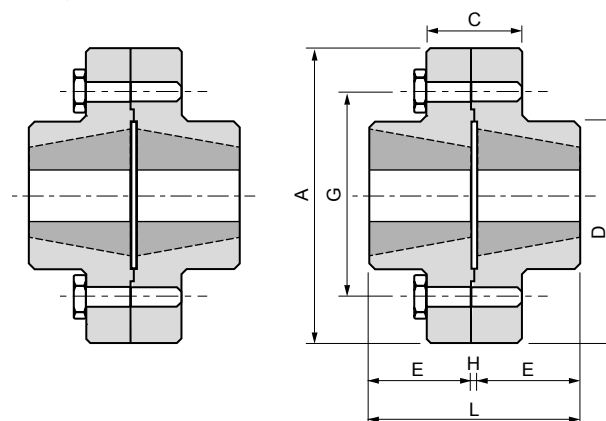


Two-piece Stainless Steel  
Clamp Coupling

## Flange Type

They consist of two flanges, Male and Female bolted together thus backlash is not possible. The fixing to the shafts is by Keyway, or by Taper Bush. We offer the BTS, Keyway and Taper Bush versions.

The Taper Bush version permits two configurations obtained by fitting the Taper Bush on the Male Flange Hub side or on its Flange side while the Female Flange always receives the Taper Bush on its Flange side.



**Flange Type Rigid Coupling. Taper Bush**

| REFERENCE* | TAPER BUSH | BORE MAX. |      | A   | C  | D   | E      | G   | H | J  | L   |
|------------|------------|-----------|------|-----|----|-----|--------|-----|---|----|-----|
|            |            | mm        | inch |     |    |     |        |     |   |    |     |
| TL-RC12    | 1210       | 32        | 32   | 118 | 35 | 83  | 25,50  | 102 | 7 | 38 | 58  |
| TL-RC16    | 1615       | 42        | 42   | 127 | 43 | 80  | 38,00  | 105 | 7 | 38 | 83  |
| TL-RC25    | 2517       | 60        | 60   | 178 | 51 | 123 | 45,00  | 149 | 7 | 48 | 97  |
| TL-RC30    | 3030       | 75        | 75   | 216 | 65 | 146 | 76,00  | 181 | 7 | 54 | 159 |
| TL-RC35    | 3535       | 100       | 100  | 248 | 75 | 178 | 89,00  | 213 | 7 | 67 | 185 |
| TL-RC40    | 4040       | 110       | 110  | 298 | 76 | 210 | 102,00 | 257 | 7 | 79 | 211 |
| TL-RC45    | 4545       | 125       | 125  | 330 | 86 | 230 | 114,00 | 286 | 7 | 89 | 235 |
| TL-RC50    | 5050       | 125       | 125  | 362 | 92 | 266 | 127,00 | 314 | 7 | 92 | 261 |

\* All measures in mm unless otherwise indicated.

## Flexible Couplings

### Material Flexing Couplings

As mentioned, these type of couplings operate with an intermediate material in between the shafts from which the coupling attains the

flexibility. This material may be either an elastomer, metallic grid or disc.

### Jaw Couplings

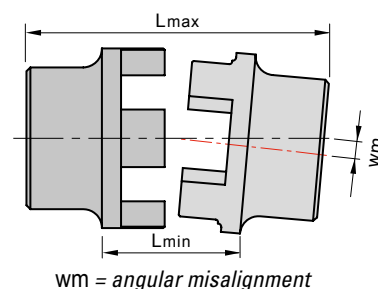
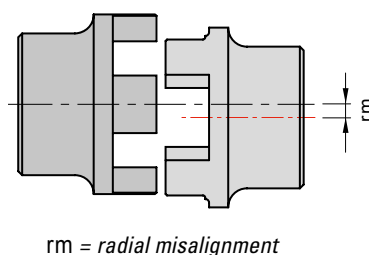
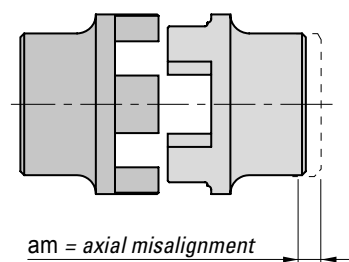
Consist of two toothed hubs with a flexible element in between, the 'spider', which give to the set a 'flexing' capacity.

Jaw couplings are of elastomeric type whereas they transmit torque from the driving to the driven hubs through an elastomeric element, 'the spider'.

The elastomeric type couplings transmit the torque by compression or shear. Jaw couplings are of compression type whereas the driving hub pushes through the driven hub in the same plane compressing the elastomeric element.

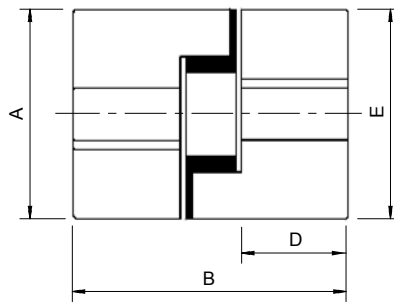
The flexible element can have different Shore Hardness so to create a stiffer or softer connection between shafts. With the pressing of the toothed elements, the backlash it may be eliminated which for applications of precise positioning is very important. There are two versions, the straight and curved teeth.

This type of couplings are usually applied in electric motors with driven machinery as large industrial machines either pumps, blowers, compressors, mixers and others.

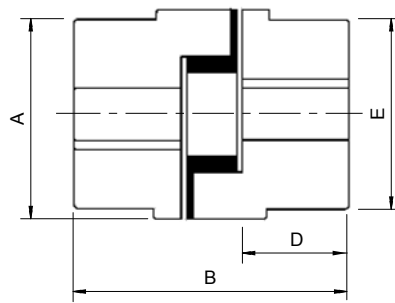


## Straight teeth

TYPE 1



TYPE 2



Stainless Steel Jaw Coupling Type 1



Jaw Coupling Keyway Type 2

### Elastomer properties

| HARDNESS SHORE* | COLOR  | PERMANENT TEMP RANGE | SHORT TERM TEMPERATURE |
|-----------------|--------|----------------------|------------------------|
| 92SHA           | Yellow | -40°C ~ 80°C         | 120°C                  |
| 98SHA           | Red    | -40°C ~ 90°C         | 120°C                  |
| 64SHD           | Green  | -40°C ~ 110°C        | 130°C                  |

\* See Chapter L, page L3

### Jaw Couplings. Straight Teeth 'Spiders'

| REFERENCE* | TYPE | A      | B      | D     | E      | BORE MM  |     |     | BORE INCH |       |
|------------|------|--------|--------|-------|--------|----------|-----|-----|-----------|-------|
|            |      |        |        |       |        | Standard | min | max | min       | max   |
| TL-L-035   | 1    | 19,00  | 15,60  | 6,60  |        | 3        | 3   | 8   | 1/8       | 3/8   |
| TL-L-050   | 1    | 28,00  | 43,20  | 15,60 |        | 6        | 6   | 15  | 3/16      | 5/8   |
| TL-L-070   | 1    | 35,00  | 50,80  | 19,00 |        | 9        | 9   | 19  | 3/16      | 3/4   |
| TL-L-075   | 1    | 45,00  | 54,70  | 21,00 |        | 9        | 9   | 25  | 3/16      | 1     |
| TL-L-090   | 1    | 54,00  | 54,70  | 21,00 |        | 9        | 9   | 28  | 3/16      | 1 1/8 |
| TL-L-095   | 1    | 54,00  | 63,70  | 25,50 |        | 9        | 9   | 28  | 3/8       | 1 1/8 |
| TL-L-099   | 1    | 64,50  | 72,50  | 27,00 |        | 12       | 12  | 35  | 7/16      | 1 3/8 |
| TL-L-100   | 1    | 64,50  | 88,50  | 35,00 |        | 12       | 12  | 35  | 7/16      | 1 3/8 |
| TL-L-110   | 1    | 85,00  | 108,00 | 43,00 |        | 15       | 15  | 48  | 1/2       | 1 7/8 |
| TL-L-150   | 1    | 96,00  | 115,40 | 45,00 |        | 15       | 15  | 48  | 5/8       | 1 7/8 |
| TL-L-190   | 2    | 115,00 | 133,40 | 54,00 | 101,60 | 19       | 19  | 55  | 5/8       | 2 1/4 |
| TL-L-225   | 2    | 127,00 | 153,40 | 64,00 | 108,00 | 19       | 19  | 65  | 3/4       | 2 5/8 |

\* All measures in mm unless otherwise indicated.

### Service Factors

| LOAD-TORQUE TYPE |             | PRIME MOVER    |                       |             |
|------------------|-------------|----------------|-----------------------|-------------|
|                  |             | ELECTRIC MOTOR | RECIPROCATING ENGINES |             |
|                  |             |                | > 6 pistons           | < 6 pistons |
| LD               | Light Duty  | 1,00           | 1,50                  | 2,00        |
| MD               | Medium Duty | 1,50           | 2,00                  | 2,50        |
| HD               | Heavy Duty  | 2,00           | 2,50                  | 3,00        |

### Jaw Couplings misalignment

| SPIDER TYPE | TEMP. RANGE (°C) | MAX MISALIGNMENT ALLOW |       | POWER FACTOR |
|-------------|------------------|------------------------|-------|--------------|
|             |                  | mm°                    | pm mm |              |
| NBR         | -40 @ 100        | 1                      | 0,38  | 1            |
| Urethane    | -35 @ 70         | 1                      | 0,38  | 1            |
| Hytrel      | -50 @ 120        | 1/2                    | 0,38  | 1,5          |
| Bronze      |                  | 1/2                    | 0,25  | 3            |

## Elastomer Elements: "Spiders"

We have four choices: NBR<sup>1</sup>, Urethane<sup>2</sup>, Hytrel<sup>®3</sup> and Bronze.

NBR



URETHANE



HYTREL



BRONZE



## Power Ratings in kW with NBR elastomer

| SPEED. REVS/MIN |        | JAW COUPLING SIZE |       |       |       |       |       |        |        |        |        |        |
|-----------------|--------|-------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
|                 |        | 035               | 050   | 070   | 075   | 090   | 095   | 100    | 110    | 150    | 190    | 225    |
| 100             |        | 0,005             | 0,037 | 0,06  | 0,12  | 0,20  | 0,27  | 0,58   | 1,10   | 1,50   | 2,01   | 2,76   |
| 300             |        | 0,01              | 0,11  | 0,16  | 0,29  | 0,48  | 0,67  | 1,50   | 2,70   | 4,30   | 5,40   | 8,40   |
| 720             |        | 0,04              | 0,26  | 0,43  | 0,90  | 1,44  | 1,95  | 4,18   | 7,94   | 11,23  | 15,07  | 21,09  |
| 960             |        | 0,05              | 0,35  | 0,58  | 1,20  | 1,93  | 2,59  | 2,58   | 10,59  | 17,98  | 20,09  | 28,13  |
| 1200            |        | 0,05              | 0,45  | 0,63  | 1,16  | 1,97  | 2,70  | 5,90   | 10,70  | 17,00  | 21,50  | 32,20  |
| 1440            |        | 0,07              | 0,53  | 0,87  | 1,80  | 2,89  | 3,89  | 8,36   | 15,88  | 22,35  | 30,14  | 41,40  |
| 1800            |        | 0,10              | 0,70  | 0,90  | 1,87  | 3,00  | 4,00  | 8,90   | 16,10  | 25,50  | 32,20  | 48,30  |
| 2880            |        | 0,14              | 1,05  | 1,73  | 3,61  | 5,78  | 7,78  | 16,73  | 31,77  | 44,70  | 60,28  | 82,80  |
| 3600            |        | 0,18              | 1,30  | 2,17  | 4,51  | 7,22  | 9,73  | 20,91  | 39,71  | 51,00  | 64,40  | 96,60  |
| Nominal         | NBR    | 0,46              | 3,51  | 5,77  | 11,94 | 19,60 | 25,80 | 46,40  | 89,00  | 141,00 | 190,00 | 265,00 |
| Torque. N.m     | Hytrel |                   | 10,70 | 14,20 | 27,30 | 47,50 | 64,10 | 141,00 | 256,00 | 405,00 | 512,00 | 768,00 |

<sup>1</sup> Stands for **Nitrile Butadiene Rubber** and was developed in 1931 by the German IG Farben. Known Buna N as well is a synthetic rubber copolymer of Acrylonitrile and Butadiene. Is very resistant to oils, acids and alkaline. Has a Shore A Hardness from 30 to 90 and an UTS between 3,4 to 17,2 MPa and an elongation of 600% after fracture. When hydrogenated can reach to a UTS of 20 to 31 MPa. Stands to a temperature range from -40°C to 108°C and is highly resilient. Widely used, amongst other applications, transmissions belts, O-Rings, gaskets, oil seals and power elastomers.

<sup>2</sup> **Urethane**, derived from urea and ether was developed by IG Farbe in 1937. Known as well as Polyurethane as a result of adding urethane groups. There are many groups of urethanes, each one with specific properties. Generically, urethanes are resistant

to oils, to weather, to ozone and chemical agents. They have a high tensile and tear strength, abrasion resistance, high load bearing capacity, high impact resistance and resilience. Commonly used, amongst other applications in bonding hubs and bearings, rollers, Industrial wheels and castors, conveyor belts and in mechanical engineering in general.

<sup>3</sup> **Hytrel**. Thermoplastic polyester elastomer developed by Dupont. Highly performing after combining the features of elastomers and flexibility of plastic materials. It is tough, resistant to fatigue, to impact and to creeping. Stands up to a wide range of temperatures, resistant to chemicals and very versatile, as there is a wide choice of grades to adapt to a particular application. Has an operative temperature of -54°C to 121°C.

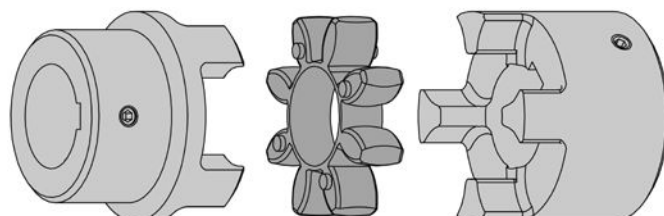
## Curved teeth

Unlike the previous series, this series incorporates curved jaws and elastomers. The curved concave jaws mesh with the convex spider's teeth with the result of improving the performance of the assembly as compared with the straight teeth.

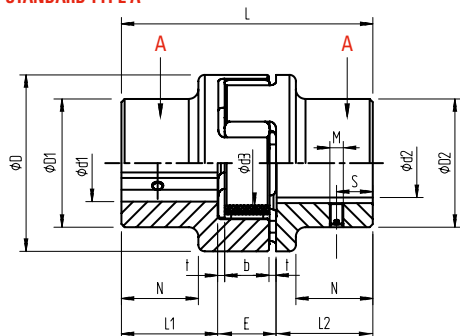
This design provides a greater contact area between the spider and the jaws than the straight teeth equivalent what results in a greater

capacity of load transmission. It reduces the vibration, absorbs bigger misalignments and prolongs the life of the spider after avoiding edge stress due to the curvature.

Our program of curved teeth Jaw Couplings has three types, the Standard Type A, the Large Hub Type B and the Lengthened Hub Type C.



## STANDARD TYPE A

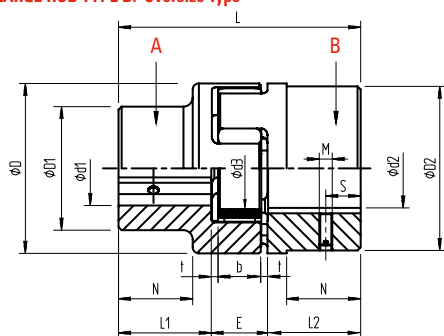


Curved Teeth Jaw Coupling.  
Hub types AA



Hardness\* 92SHA  
Yellow Color  
Working temp range  
-40 °C @ +80 °C  
Instant temp 120 °C

## LARGE HUB TYPE B: Oversize Type

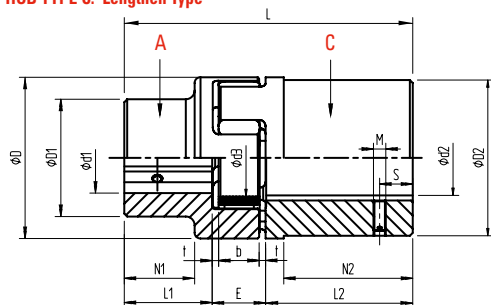


Curved Teeth Jaw Coupling.  
Hub types BB



Hardness\* 98SHA  
Red Color  
Working temp range  
-40 °C @ +90 °C  
Instant temp 120 °C

## HUB TYPE C: Lengthen Type



Curved Teeth Jaw Coupling.  
Hub types AC



Hardness\* 64SHD  
Green Color  
Working temp range  
-40 °C @ +130 °C  
Instant temp 130 °C

## Elastomer Specifications

| REFERENCE  | MAXIMUM SPEED<br>REVS/MIN |              | TORQUE N.m      |       |           |                 |       |           |                 |       |           |           |        |        |        |
|------------|---------------------------|--------------|-----------------|-------|-----------|-----------------|-------|-----------|-----------------|-------|-----------|-----------|--------|--------|--------|
|            | CAST IRON                 | STEEL        | 92 SHA SHORE A* |       |           | 98 SHA SHORE A* |       |           | 64 SHA SHORE D* |       |           | 92/98 SHA |        | 64 SHD |        |
|            | Speed 35 m/s              | Speed 40 m/s | Rated           | Max   | Alternate | Rated           | Max   | Alternate | Rated           | Max   | Alternate | α°        | α° max | α°     | α° max |
| TL-E-LC14  | 22200                     | 25400        | 7,5             | 15    | 2         | 12,5            | 25    | 3,3       | 16              | 32    | 4,2       | 6,4       | 10     | 4,5    | 7      |
| TL-E-LC19  | 16700                     | 19000        | 10              | 20    | 2,6       | 17              | 34    | 4,4       | 21              | 42    | 5,5       | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC24  | 12100                     | 13800        | 35              | 70    | 9,1       | 60              | 120   | 16        | 75              | 150   | 19,5      | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC28  | 10100                     | 11500        | 95              | 190   | 25        | 160             | 320   | 42        | 200             | 400   | 52        | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC38  | 8300                      | 9500         | 190             | 380   | 49        | 325             | 650   | 85        | 405             | 810   | 105       | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC42  | 7000                      | 8000         | 265             | 530   | 69        | 450             | 900   | 117       | 560             | 1120  | 146       | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC48  | 6350                      | 7250         | 310             | 620   | 81        | 525             | 1050  | 137       | 655             | 1310  | 170       | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC55  | 5550                      | 6350         | 410             | 820   | 107       | 685             | 1370  | 178       | 825             | 1650  | 215       | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC65  | 4950                      | 5650         | 625             | 1250  | 163       | 940             | 1880  | 244       | 1175            | 2350  | 306       | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC75  | 4150                      | 4750         | 1280            | 2560  | 333       | 1920            | 3840  | 499       | 2400            | 4800  | 624       | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC90  | 3300                      | 3800         | 2400            | 4800  | 624       | 3600            | 7200  | 936       | 4500            | 9000  | 1170      | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC100 | 2950                      | 3350         | 3300            | 6600  | 858       | 4950            | 9900  | 1287      | 6185            | 12370 | 1608      | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC110 | 2600                      | 2950         | 4800            | 9600  | 1248      | 7200            | 14400 | 1872      | 9000            | 18000 | 2340      | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC125 | 2300                      | 2600         | 6650            | 13300 | 1729      | 10000           | 20000 | 2600      | 12500           | 25000 | 3250      | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC140 | 2050                      | 2350         | 8550            | 17100 | 2223      | 12800           | 25600 | 3328      | 16000           | 32000 | 4160      | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC160 | 1800                      | 2050         | 12800           | 25600 | 3328      | 19200           | 38400 | 4992      | 24000           | 48000 | 6240      | 3,2       | 5      | 2,5    | 3,6    |
| TL-E-LC180 | 1550                      | 1800         | 18650           | 37300 | 4849      | 28000           | 56000 | 7280      | 36000           | 70000 | 9100      | 3,2       | 5      | 2,5    | 3,6    |

\* See page La3.



**Nomenclature:** We identify this type of Jaw Couplings by -L-C- for Jaw Couplings – Curved as displayed in the tables of sizes ahead. There are available different choices on materials and treatments.

<sup>1</sup> See page Ma3.

<sup>2</sup> See page Ma4.

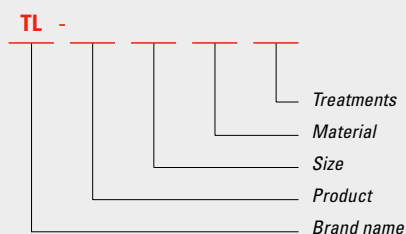
<sup>3</sup> See page Ma6.

## Jaw Couplings Series L-C. Material Aluminum

| REFERENCE* | HUB    | BORE d    | L          | L <sub>1</sub> L <sub>2</sub> | E  | b  | t    | D   | D <sub>1</sub> D <sub>2</sub> | N    | d <sub>3</sub> | M   | S  | N   |
|------------|--------|-----------|------------|-------------------------------|----|----|------|-----|-------------------------------|------|----------------|-----|----|-----|
|            | Type   | min - max |            |                               |    |    |      |     |                               |      |                |     |    |     |
| TL-L-C14   | B<br>C | 0 - 16    | 35<br>50   | 11<br>18,5                    | 13 | 10 | 1,5  | 30  | 30                            | —    | 10             | M4  | 5  | 1,5 |
| TL-L-C19   | B<br>C | 0 - 25    | 66<br>90   | 25<br>37                      | 16 | 12 | 2    | 40  | 40                            | —    | 18             | M5  | 10 | 2   |
| TL-L-C24   | B<br>C | 0 - 35    | 78<br>118  | 30<br>50                      | 18 | 14 | 2    | 55  | 55                            | —    | 27             | M5  | 10 | 2   |
| TL-L-C28   | B<br>C | 0 - 40    | 90<br>140  | 35<br>60                      | 20 | 15 | 2,5  | 65  | 65                            | —    | 30             | M8  | 15 | 10  |
| TL-L-C38   | A<br>C | 0 - 48    | 114<br>164 | 45<br>70                      | 24 | 18 | 3    | 80  | 70<br>80                      | 27   | 38             | M8  | 15 | 10  |
| TL-L-C42   | A<br>C | 0 - 55    | 126<br>176 | 50<br>75                      | 26 | 20 | 3    | 95  | 85<br>95                      | 28   | 46             | M8  | 20 | 10  |
| TL-L-C48   | A<br>C | 0 - 62    | 140<br>188 | 56<br>80                      | 28 | 21 | 3,5  | 105 | 95<br>105                     | 32   | 51             | M8  | 20 | 10  |
| TL-L-C55   | A<br>C | 0 - 74    | 160<br>210 | 65<br>90                      | 30 | 22 | 4    | 120 | 110<br>120                    | 37   | 60             | M10 | 20 | 17  |
| TL-L-C65   | A<br>C | 0 - 80    | 185<br>235 | 75<br>100                     | 35 | 26 | 4,5  | 135 | 115<br>135                    | 47   | 68             | M10 | 20 | 17  |
| TL-L-C75   | A<br>C | 0 - 95    | 210<br>260 | 85<br>110                     | 40 | 30 | 5    | 160 | 135<br>160                    | 53   | 80             | M10 | 25 | 17  |
| TL-L-C90   | A<br>C | 0 - 110   | 245<br>295 | 100<br>125                    | 45 | 34 | 5,5  | 200 | 160<br>200                    | 62   | 100            | M12 | 30 | 40  |
| TL-L-C100  | A      | 50 - 115  | 270        | 110                           | 50 | 38 | 6    | 225 | 160                           | 89   | 113            | M12 | 30 | 40  |
| TL-L-C110  | A      | 60 - 125  | 295        | 120                           | 55 | 42 | 6,5  | 255 | 200                           | 96   | 127            | M16 | 35 | 80  |
| TL-L-C125  | A      | 60 - 145  | 340        | 140                           | 60 | 46 | 7    | 290 | 230                           | 11   | 147            | M16 | 40 | 80  |
| TL-L-C140  | A      | 60 - 160  | 375        | 155                           | 65 | 50 | 7,5  | 320 | 255                           | 2124 | 165            | M20 | 45 | 140 |
| TL-L-C160  | A      | 60 - 185  | 425        | 175                           | 75 | 57 | 9    | 370 | 290                           | 140  | 192            | M20 | 50 | 140 |
| TL-L-C180  | A      | 85 - 200  | 475        | 195                           | 85 | 64 | 10,5 | 425 | 325                           | 155  | 220            | M20 | 50 | 140 |

\* All measures in mm.

## GUIDE TO ORDER



**Treatments:**  
**PH** Phosphating  
**BO** Black Oxide  
**AN** Anodizing

**Material:**  
**ST** Steel  
**SS** Stainless Steel  
**CI** Cast Iron  
**AL** Aluminum

**Size:**  
**L** 035 through 225  
**L-C** 14 through 180

**Product:**  
**JC** Jaw couplings  
 Straight teeth  
**JC-C** Jaw couplings  
 Curved teeth

**Brand name:**  
**TL-**

## HRC Couplings

Is an elastomeric type of Coupling, which has become a generic coupling name after its broadly use. Is a Hub-Rubber-Coupling type consisting of two cast-iron halves attached to shafts by means of either Hub or Flange Taper Bushes.

The two halves sandwich a flexible rubber-star-shaped, the 'spider' which acts as a shock absorber compensating vibrations and misalignments. The range of use goes to Taper Bushes up to 90 mm bore or shafts up to 130 mm when bored with keyway.

These type of couplings are for general purpose, are indicated for high-speed operation, behave very well absorbing shocks, but at the side of compensating misalignments, they do not respond as much

as with the shocks, accommodating parallel misalignments up to 0,5 mm and axial misalignments up to 1,7 mm. Are very useful in situations of high acceleration/deceleration motion due to their capacity to absorb shocks. It is of interest mentioning the isolating effect of the electric motor from driven equipment.

Our program have MPB and Taper Bush versions.

As mentioned, this type of couplings have a good response to shocks, but the intensity of shocks, the vibration and torque variations will determine the appropriate model to use in the particular application and consequently the Service Factor attached to every application is of high importance.

### Service Factors

| DRIVEN TYPE<br>OF MOVEMENT*                    | PRIME MOVERS                     |         |      |                                     |         |      |
|------------------------------------------------|----------------------------------|---------|------|-------------------------------------|---------|------|
|                                                | ELECTRIC MOTORS - STEAM TURBINES |         |      | COMBUSTION ENGINES - WATER TURBINES |         |      |
|                                                | DAILY WORKING HOURS              |         |      |                                     |         |      |
|                                                | < 8                              | 8 to 16 | < 16 | < 8                                 | 8 to 16 | < 16 |
| <b><i>Uniform type of movement</i></b>         |                                  |         |      |                                     |         |      |
| Agitators, Brewing machinery                   | 1,00                             | 1,12    | 1,26 | 1,25                                | 1,40    | 1,60 |
| Centrifugal Blowers, Fans and Pumps            |                                  |         |      |                                     |         |      |
| Conveyors, Generators                          |                                  |         |      |                                     |         |      |
| <b><i>Moderate schock type of movement</i></b> |                                  |         |      |                                     |         |      |
| Crane Hoists, Clay Machinery                   |                                  |         |      |                                     |         |      |
| Laundry Machinery, Machine Tools               | 1,60                             | 1,80    | 2,00 | 2,00                                | 2,24    | 2,50 |
| Textile Machinery and others                   |                                  |         |      |                                     |         |      |
| <b><i>High Schock type of movement</i></b>     |                                  |         |      |                                     |         |      |
| Crushers, Shakers, Metal Mills                 |                                  |         |      |                                     |         |      |
| Banburies, Machine Tools                       | 2,50                             | 2,80    | 3,12 | 3,12                                | 3,55    | 4,00 |
| Reciprocating Compressors                      |                                  |         |      |                                     |         |      |

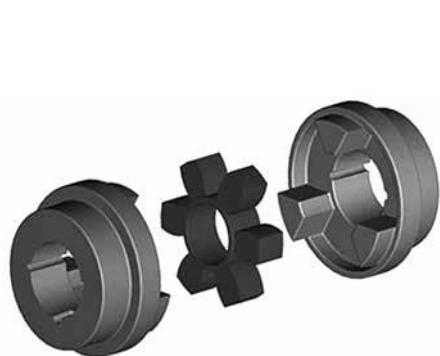
\* The Service Factors in this table have to be used as a guide, and adapted to the particular application.



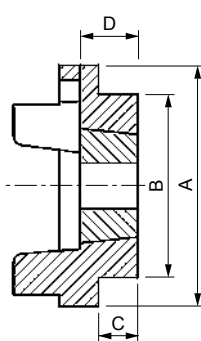
HRC MPB version



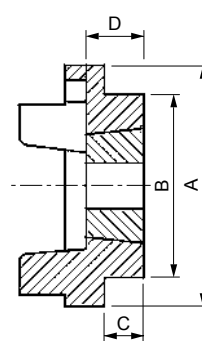
HRC. Taper Bush type version



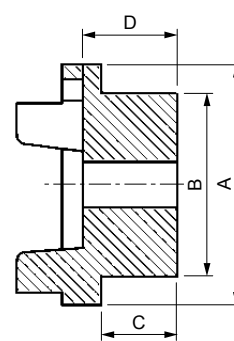
HRC Coupling



Flange B (MPB)

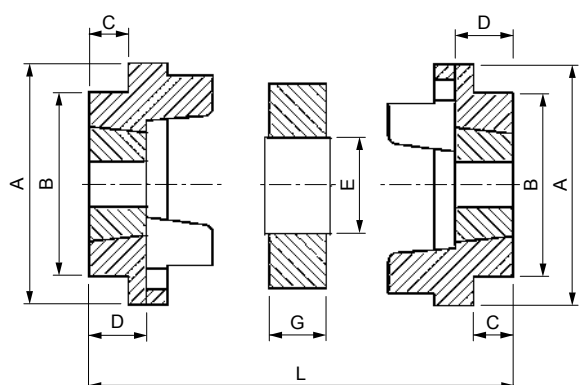


Flange F (Taper Bush)

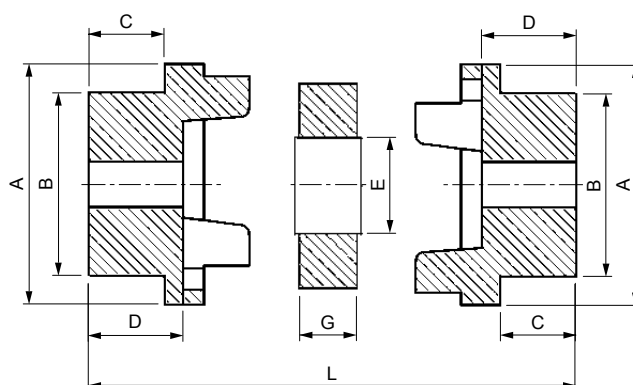


Flange H (Taper Bush)

### Assembly F&H Flanges



### Assembly B Flanges



## HRC Couplings Sizes

| HRC<br>COUPLING | A      | B      | E      | G     | FLANGE HUB TYPE F&H |       |               |       |       |        |        | FLANGE HUB TYPE B |        |       |        |        | POWER IN kW<br>TRANSMITTED<br>AT 1000 rpm |       |
|-----------------|--------|--------|--------|-------|---------------------|-------|---------------|-------|-------|--------|--------|-------------------|--------|-------|--------|--------|-------------------------------------------|-------|
|                 |        |        |        |       | BORE                |       | TAPER<br>BUSH | C     | D     | F      | L      | BORE              |        | C     | D      | F      |                                           | L     |
| REFERENCE*      |        |        |        |       | MPB                 | max   |               |       |       |        |        | MPB               | max    |       |        |        |                                           |       |
| TL-HRC70        | 69,00  | 60,00  | 31,00  | 18,00 | 9,00                | 25,00 | 1008          | 20,00 | 24,00 | 26,00  | 66,00  | 10,00             | 32,00  | 20,00 | 24,00  | 26,00  | 66,00                                     | 0,33  |
| TL-HRC90        | 85,00  | 70,00  | 32,00  | 22,50 | 9,00                | 28,00 | 1108          | 19,50 | 24,00 | 31,50  | 70,50  | 10,00             | 35,00  | 26,00 | 30,00  | 30,50  | 82,50                                     | 0,84  |
| TL-HRC110       | 112,00 | 100,00 | 45,00  | 29,00 | 11,00               | 32,00 | 1610          | 18,50 | 27,00 | 46,00  | 83,00  | 10,00             | 55,00  | 37,00 | 45,00  | 45,00  | 119,00                                    | 1,68  |
| TL-HRC130       | 130,00 | 105,00 | 50,00  | 36,00 | 14,00               | 42,00 | 1610          | 18,00 | 27,00 | 54,00  | 90,00  | 60,00             | 60,00  | 47,00 | 56,00  | 54,00  | 148,00                                    | 3,30  |
| TL-HRC150       | 150,00 | 115,00 | 62,00  | 40,00 | 14,00               | 50,00 | 2012          | 23,50 | 34,00 | 61,00  | 108,00 | 70,00             | 70,00  | 50,00 | 60,00  | 60,00  | 160,00                                    | 6,28  |
| TL-HRC180       | 180,00 | 125,00 | 77,00  | 49,00 | 16,00               | 60,00 | 2517          | 34,50 | 47,00 | 74,00  | 143,00 | 80,00             | 80,00  | 58,00 | 70,00  | 73,00  | 189,00                                    | 9,95  |
| TL-HRC230       | 225,00 | 155,00 | 99,00  | 59,50 | 25,00               | 75,00 | 3020          | 39,50 | 53,00 | 86,50  | 165,50 | 100,00            | 100,00 | 77,00 | 90,00  | 85,50  | 239,50                                    | 20,90 |
| TL-HRC280       | 275,00 | 206,00 | 119,00 | 74,50 | 35,00               | 90,00 | 3525          | 51,00 | 67,00 | 106,50 | 208,50 | 115,00            | 115,00 | 90,00 | 105,00 | 104,50 | 284,50                                    | 33,00 |

\* All measures in mm.

## Standard Electric Motors

| THREE<br>PHASE<br>MOTOR | SHAFT<br>DIA | MOTOR REVS 3000 |          | MOTOR REVS 1500 |          | MOTOR REVS 1000 |          | MOTOR REVS 750 |          |
|-------------------------|--------------|-----------------|----------|-----------------|----------|-----------------|----------|----------------|----------|
|                         |              | MOTOR POWER     | COUPLING | MOTOR POWER     | COUPLING | MOTOR POWER     | COUPLING | MOTOR POWER    | COUPLING |
| Size                    | mm           | kW              | Size     | kW              | Size     | kW              | Size     | kW             | Size     |
| 90S                     | 24           | 1,5             | 70       | 1,1             | 70       | 0,75            | 70       |                |          |
| 90L                     | 24           | 2,2             | 70       | 1,5             | 70       | 1,1             | 70       |                |          |
| 112M                    | 28           | 4               | 90       | 4               | 90       | 2,2             | 90       |                |          |
| 132S                    | 38           | 5,5             | 110 A    | 5,5             | 110A     | 3               | 110A     | 2,2            | 110A     |
|                         |              | 7,5             | 110 A    |                 |          |                 |          |                |          |
| 132M                    | 38           |                 |          | 7,5             | 110A     | 4               | 110A     | 3              | 110A     |
|                         |              |                 |          |                 |          | 5,5             | 110A     |                |          |
| 160M                    | 42           | 11              | 110 A    | 11              | 110A     | 7,5             | 110A     | 4              | 110A     |
|                         |              | 15              | 110 A    |                 |          |                 |          | 5,5            | 110A     |
| 160L                    | 42           | 18,5            | 110 A    | 15              | 110A     | 11              | 130      | 7,5            | 110A     |
| 180M                    | 48           | 22              | 150      | 18,5            | 150      |                 |          |                |          |
| 180L                    | 48           |                 |          | 22              | 150      | 15              | 150      | 11             | 150      |
| 200L                    | 55           | 30              | 180      |                 |          |                 |          |                |          |
|                         |              | 37              | 180      |                 |          | 22              | 180      |                |          |
| 225S                    | 60           |                 |          | 37              | 180      |                 |          | 18,5           | 180      |
| 225M                    | 55*          | 45              | 180      | 45              | 180      | 30              | 180      | 22             | 180      |
|                         | 60           |                 |          |                 |          |                 |          |                |          |
| 250M                    | 60*          | 55              | 180      | 55              | 230      | 37              | 230      | 30             | 230      |
|                         | 65           |                 |          |                 |          |                 |          |                |          |
| 280S                    | 75           |                 |          | 75              | 230      | 45              | 230      | 37             | 230      |
| 280M                    | 75           |                 |          | 90              | 230      | 55              | 230      | 37             | 230      |
| 315S                    | 80           |                 |          | 110             | 280      | 75              | 280      | 55             | 280      |
| 315M                    | 80           |                 |          | 132             | 280      | 90              | 280      | 75             | 280      |

\* 3000 revs only.

## Power Ratings

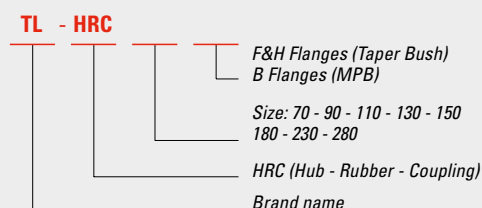
| REVS/<br>MIN | HRC COUPLING SIZE |       |       |        |        |        |        |        |
|--------------|-------------------|-------|-------|--------|--------|--------|--------|--------|
|              | 70                | 90    | 110   | 130    | 150    | 180    | 230    | 280    |
| 100          | 0,33              | 0,84  | 1,68  | 3,30   | 6,28   | 9,95   | 20,90  | 33,00  |
| 200          | 0,66              | 1,68  | 3,35  | 6,60   | 12,60  | 19,90  | 41,90  | 66,00  |
| 400          | 1,32              | 3,35  | 6,70  | 13,20  | 25,10  | 39,80  | 83,80  | 132,00 |
| 600          | 1,98              | 5,03  | 10,10 | 19,80  | 37,70  | 59,70  | 126,00 | 198,00 |
| 720          | 2,37              | 6,03  | 12,10 | 23,80  | 45,20  | 71,60  | 151,00 | 238,00 |
| 800          | 2,64              | 6,70  | 13,40 | 26,40  | 50,30  | 79,60  | 168,00 | 264,00 |
| 960          | 3,17              | 8,40  | 16,10 | 31,70  | 60,30  | 95,50  | 201,00 | 317,00 |
| 1200         | 3,96              | 10,10 | 20,10 | 39,60  | 75,40  | 119,00 | 251,00 | 396,00 |
| 1440         | 4,75              | 12,10 | 24,10 | 47,50  | 90,50  | 143,00 | 302,00 | 475,00 |
| 1600         | 5,28              | 13,40 | 26,80 | 52,80  | 101,00 | 159,00 | 335,00 | 528,00 |
| 1800         | 5,94              | 15,10 | 30,20 | 59,40  | 113,00 | 179,00 | 377,00 | 594,00 |
| 2000         | 6,60              | 16,80 | 33,50 | 66,00  | 126,00 | 199,00 | 419,00 | 660,00 |
| 2200         | 7,26              | 18,40 | 36,90 | 72,60  | 138,00 | 219,00 | 461,00 |        |
| 2400         | 7,92              | 20,10 | 40,20 | 79,20  | 151,00 | 239,00 | 503,00 |        |
| 2600         | 8,58              | 21,80 | 43,60 | 85,80  | 163,00 | 259,00 | 545,00 |        |
| 2880         | 9,50              | 24,10 | 48,30 | 95,00  | 181,00 | 286,00 |        |        |
| 3000         | 9,90              | 25,10 | 50,30 | 99,00  | 188,00 | 298,00 |        |        |
| 3600         | 11,90             | 30,10 | 60,30 | 118,00 | 226,00 |        |        |        |

## HRC Specs

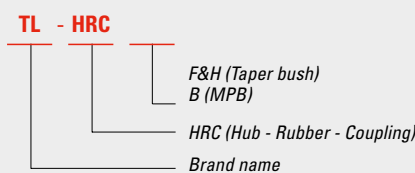
| SPECS                            | HRC COUPLING SIZE |      |      |      |      |      |      |      |
|----------------------------------|-------------------|------|------|------|------|------|------|------|
|                                  | 70                | 90   | 110  | 130  | 150  | 180  | 230  | 280  |
| Maximum speed revs/min           | 8300              | 6740 | 5110 | 4400 | 3800 | 3180 | 2540 | 2080 |
| Nominal Torque N.m               | 32                | 80   | 160  | 315  | 600  | 950  | 2000 | 3150 |
| Maximum Parallel Misalignment mm | 0,30              | 0,30 | 0,30 | 0,40 | 0,40 | 0,40 | 0,50 | 0,50 |
| Maximum Axial Misalignment mm    | 0,20              | 0,50 | 0,60 | 0,80 | 0,90 | 1,10 | 1,30 | 1,70 |

## GUIDE TO ORDER

### Flanges:

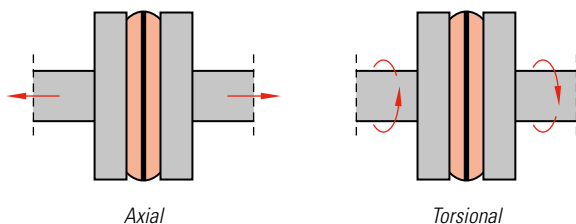


### Assemblies:



## Sleeve Couplings

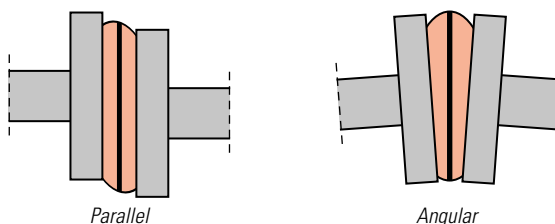
Known as well as the S-Flex couplings, consist of two hubs or flanges with a flexible sleeve sitting in between the two hubs. The flanges with internal teeth mesh with the external teeth of the sleeve, which transmits torque through its shearing.



**Axial:** This type of coupling has a limited capacity to absorb axial misalignments. In reverse, it minimizes the thrust load transmitted to bearings.

**Torsional:** The material of the elastomer and its design is well suited to absorb angular misalignments, shocks and lessens the vibration.

This type of coupling absorbs well the misalignments and torsional shock loads, by shear deflection in the sleeve and is able to transmit average torques ranging from 6,8 N.m to 8170 N.m. This type of couplings do not need maintenance nor lubrication and are of easy installation.



**Parallel:** The parallel misalignment varies according the size, from 0,38 mm to 1,5 mm.

**Angular:** Due to the flexing capacity it adjusts well to angular misalignments up to 1°.

We have a choice of highly performing sleeves, EPDM<sup>1</sup>, Neoprene and Hytrel<sup>®2</sup>. EPDM and Neoprene admit a torsion flex of 15°, and Hytrel a much less, 7°. In revenge, Hytrel transmits around four times as much power as the equivalent EPDM or Neoprene. There are two Series available, the J and the S.

At the time of choosing the best adapted size for the power transmission application, it is important to ascertain the type of load-torque transmitted and in consequence apply a service factor accordingly. We distinguish three service factor levels as, light, medium and heavy.

### Service Factors

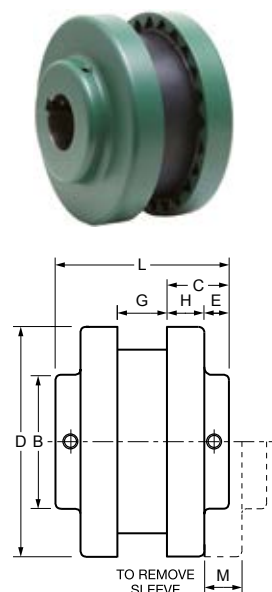
| TYPE OF LOAD-TORQUE | STANDARD TORQUE ELECTRIC MOTOR | HIGH TORQUE ELECTRIC MOTOR | TURBINES | RECIPROCATING ENGINES |
|---------------------|--------------------------------|----------------------------|----------|-----------------------|
| LD Light Duty       | 1,25                           | 1,50                       | 1,00     | 1,50                  |
| MD Medium Duty      | 1,50                           | 2,00                       | 1,25     | 2,00                  |
| HD Heavy Duty       | 2,00                           | 2,50                       | 1,50     | 2,50                  |



### Serie J

| REFERENCE* | D      | BORE  |       | C     | E     | G     | B      | L      | H     | M     |
|------------|--------|-------|-------|-------|-------|-------|--------|--------|-------|-------|
|            |        | min   | max   |       |       |       |        |        |       |       |
| TL-SC-3J   | 52,40  | 9,00  | 22,20 | 20,60 | 11,10 | 9,50  | 38,10  | 50,80  | 9,50  | 14,30 |
| TL-SC-4J   | 62,50  | 12,00 | 25,40 | 22,20 | 11,10 | 15,90 | 41,30  | 60,30  | 11,10 | 14,30 |
| TL-SC-5J   | 82,60  | 12,00 | 28,60 | 27,00 | 11,90 | 19,10 | 47,60  | 73,00  | 15,10 | 19,10 |
| TL-SC-6J-1 | 101,60 | 15,00 | 31,80 | 31,00 | 15,10 | 22,20 | 49,20  | 84,20  | 15,90 | 24,60 |
| TL-SC-6J-2 | 101,60 | 15,00 | 34,90 | 31,00 | 15,10 | 22,20 | 63,50  | 84,20  | 15,90 | 27,80 |
| TL-SC-6J-3 | 101,60 | 15,00 | 44,50 | 33,30 | 13,50 | 22,20 | 63,50  | 88,90  | 19,80 | 27,80 |
| TL-SC-6J-4 | 101,60 | 15,00 | 47,60 | 39,70 | 19,80 | 22,20 | 71,40  | 101,60 | 19,80 | 27,80 |
| TL-SC-8J   | 138,40 | 18,00 | 60,30 | 49,20 | 26,20 | 28,60 | 82,60  | 127,00 | 23,00 | 38,10 |
| TL-SC-9J   | 161,30 | 22,00 | 73,00 | 57,90 | 31,80 | 36,50 | 104,80 | 152,40 | 26,20 | 44,50 |
| TL-SC-10J  | 190,50 | 28,00 | 85,70 | 68,30 | 37,30 | 41,30 | 120,70 | 177,80 | 30,90 | 50,80 |
| TL-SC-11J  | 219,10 | 30,00 | 98,40 | 77,80 | 39,70 | 47,80 | 142,90 | 203,30 | 38,10 | 60,50 |

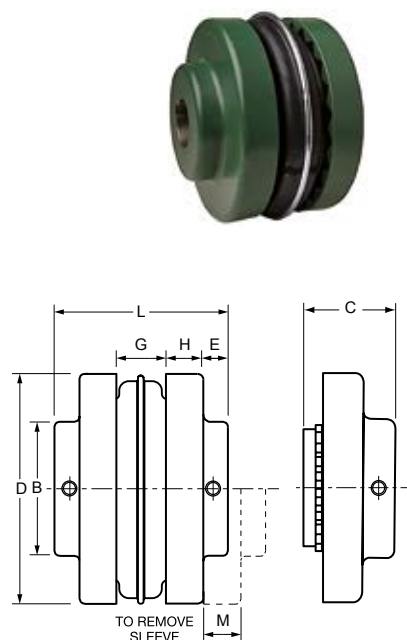
\* All measures in mm unless otherwise indicated.



### Serie S

| REFERENCE*  | D      | BORE  |        | C      | E     | G     | B      | L      | H     | M     |
|-------------|--------|-------|--------|--------|-------|-------|--------|--------|-------|-------|
|             |        | min   | max    |        |       |       |        |        |       |       |
| TL-SC-5S    | 82,60  | 12,00 | 31,80  | 34,10  | 11,50 | 19,10 | 47,60  | 72,20  | 15,10 | 24,60 |
| TL-SC-6S    | 101,60 | 15,00 | 38,10  | 41,30  | 14,30 | 22,20 | 63,50  | 90,50  | 19,80 | 27,80 |
| TL-SC-7S    | 117,50 | 16,00 | 47,60  | 46,80  | 17,50 | 25,40 | 71,40  | 100,00 | 19,80 | 33,30 |
| TL-SC-8S    | 138,40 | 18,00 | 57,20  | 53,20  | 19,10 | 28,60 | 82,60  | 112,70 | 23,00 | 38,10 |
| TL-SC-9S    | 161,30 | 22,00 | 63,50  | 61,10  | 19,80 | 36,54 | 92,10  | 128,60 | 26,20 | 44,50 |
| TL-SC-10S   | 190,50 | 28,00 | 79,40  | 67,50  | 20,60 | 41,30 | 111,10 | 144,40 | 30,90 | 50,80 |
| TL-SC-11S-1 | 219,10 | 30,00 | 57,20  | 87,30  | 28,60 | 47,80 | 95,30  | 181,10 | 38,10 | 60,50 |
| TL-SC-11S-2 | 219,10 | 30,00 | 73,00  | 87,30  | 28,60 | 47,80 | 123,80 | 181,10 | 38,10 | 60,50 |
| TL-SC-11S-3 | 219,10 | 30,00 | 92,10  | 87,30  | 28,60 | 47,80 | 133,40 | 181,10 | 38,10 | 60,50 |
| TL-SC-12S-1 | 254,00 | 38,00 | 57,20  | 101,60 | 32,50 | 58,70 | 95,30  | 209,50 | 42,90 | 68,30 |
| TL-SC-12S-2 | 254,00 | 38,00 | 73,00  | 101,60 | 32,50 | 58,70 | 123,80 | 209,50 | 42,90 | 68,30 |
| TL-SC-12S-3 | 254,00 | 38,00 | 100    | 101,60 | 32,50 | 58,70 | 146,10 | 209,50 | 42,90 | 68,30 |
| TL-SC-13S-1 | 298,50 | 50,00 | 73,00  | 111,10 | 33,30 | 68,30 | 123,80 | 235,00 | 50,00 | 77,70 |
| TL-SC-13S-2 | 298,50 | 50,00 | 114,30 | 111,10 | 33,30 | 68,30 | 171,50 | 235,00 | 50,00 | 77,70 |
| TL-SC-14S-1 | 352,40 | 50,00 | 73,00  | 114,30 | 27,00 | 82,60 | 123,80 | 250,90 | 57,20 | 88,90 |
| TL-SC-14S-2 | 352,40 | 50,00 | 127,00 | 114,30 | 27,00 | 82,60 | 190,50 | 250,90 | 57,20 | 88,90 |

\* All measures in mm.



<sup>1</sup> **EPDM.** Ethylene, Propylene, Diene, Monomer. Synthetic elastomer of SHA hardness from 50 to 65, Tensile strength from 3 to 14 MPa according grade. Mainly used as elastomer in external applications. Resists to aging, ozone, UV rays, water and environmental action. Resist to abrasion, to acids, alkaline and a range of temperature from -40°C to 120°C.

<sup>2</sup> **Hytrel.** Thermoplastic polyester elastomer developed by Dupont. Highly performing after combining the features of elastomers and flexibility of plastic materials. It is tough, resistant to fatigue, to impact and to creeping. Stands up to a wide range of temperatures, resistant to chemicals and very versatile, as there is a wide choice of grades to adapt to a particular application. Has an operative temperature of -54°C to 121°C.

## Power Ratings

| COUPLING SIZE | ELASTOMER | POWER RATING IN kW PER GIVEN RPM* |        |        |        |        |         |         |        |        |        | RATED TORQUE N.M |
|---------------|-----------|-----------------------------------|--------|--------|--------|--------|---------|---------|--------|--------|--------|------------------|
|               |           | 100                               | 250    | 500    | 725    | 950    | 1450    | 2000    | 2500   | 2850   | 3500   |                  |
| 3             | EPDM      | 0,07                              | 0,18   | 0,35   | 0,51   | 0,67   | 1,00    | 1,40    | 1,80   | 2,00   | 2,50   | 34,10            |
| 4             | EPDM      | 0,14                              | 0,35   | 0,71   | 1,03   | 1,35   | 2,10    | 2,80    | 3,50   | 4,00   | 5,00   | 41,30            |
| 5             | EPDM      | 0,28                              | 0,71   | 1,42   | 2,06   | 2,70   | 4,10    | 5,70    | 7,10   | 8,10   | 9,90   | 46,80            |
| 6             | EPDM      | 0,53                              | 1,33   | 2,66   | 3,86   | 5,06   | 7,70    | 10,60   | 13,30  | 15,20  | 18,60  | 53,20            |
| 7             | EPDM      | 0,86                              | 2,14   | 4,29   | 6,22   | 8,15   | 12,40   | 17,20   | 21,40  | 24,40  | 30,00  | 61,10            |
| 8             | EPDM      | 1,34                              | 3,36   | 6,71   | 9,73   | 12,76  | 19,50   | 26,90   | 33,60  | 38,30  | 47,00  | 67,50            |
| 9             | EPDM      | 2,13                              | 5,32   | 10,65  | 15,44  | 20,23  | 30,90   | 42,60   | 53,20  | 60,70  | 74,50  | 87,30            |
| 10            | EPDM      | 3,40                              | 8,50   | 17,01  | 24,66  | 32,31  | 49,30   | 68,00   | 85,00  | 96,90  | 119,00 | 87,30            |
| 11            | EPDM      | 5,40                              | 13,40  | 26,80  | 38,90  | 50,90  | 77,70   | 107,20  | 134,00 | 152,70 | 187,60 | 87,30            |
| 12            | EPDM      | 8,50                              | 21,30  | 42,60  | 61,80  | 80,90  | 123,50  | 170,40  | 212,90 |        |        | 101,60           |
| 13            | EPDM      | 13,40                             | 33,60  | 67,10  | 97,30  | 127,60 | 194,70  | 268,50  | 335,70 |        |        | 101,60           |
| 14            | EPDM      | 21,30                             | 53,20  | 106,50 | 154,40 | 202,30 | 308,80  | 425,90  |        |        |        | 101,60           |
| 6             | HYTREL    | 2,10                              | 5,30   | 10,60  | 15,40  | 20,20  | 30,90   | 42,60   | 53,20  | 60,70  | 74,50  | 111,10           |
| 7             | HYTREL    | 3,40                              | 8,50   | 17,00  | 24,70  | 32,30  | 49,30   | 68,00   | 85,00  | 96,90  | 119,00 | 111,10           |
| 8             | HYTREL    | 5,50                              | 13,70  | 27,40  | 39,70  | 52,00  | 79,40   | 109,50  | 136,90 | 156,10 | 191,70 | 114,30           |
| 9             | HYTREL    | 8,50                              | 21,30  | 42,60  | 61,80  | 80,90  | 123,50  | 170,40  | 212,90 | 242,80 | 298,10 | 114,30           |
| 10            | HYTREL    | 13,40                             | 33,60  | 67,10  | 97,30  | 127,60 | 194,70  | 268,50  | 335,70 | 382,70 | 470,00 |                  |
| 11            | HYTREL    | 21,30                             | 53,20  | 106,50 | 154,40 | 202,30 | 308,80  | 425,90  | 532,40 | 606,90 | 745,30 |                  |
| 12            | HYTREL    | 37,30                             | 93,20  | 186,30 | 270,20 | 354,00 | 540,40  | 745,30  | 931,60 |        |        |                  |
| 13            | HYTREL    | 55,90                             | 139,80 | 279,60 | 405,40 | 531,20 | 810,80  | 1118,40 |        |        |        |                  |
| 14            | HYTREL    | 85,70                             | 214,40 | 428,70 | 621,70 | 814,60 | 1243,30 |         |        |        |        |                  |

\* Measured at 24°C.



Split Elastomer Type J



Split Elastomer Type S

## GUIDE TO ORDER



## Disc Couplings

These couplings transmit the torque by means of driving bolts, which pull the driven bolts on the same bolt circle. They have driving and driven bolts with a disc. The more bolts installed the greater the torque transmitted, but the flexibility needed and the loads are keen to determine the number of bolts. They absorb misalignments of most shaft situations.

### Series DC, Single and Double

Made out of high strength aluminum alloy body and the diaphragm of high strength spring stainless steel, providing high torsional stiffness, a low moment of inertia and resistance to high temperatures.

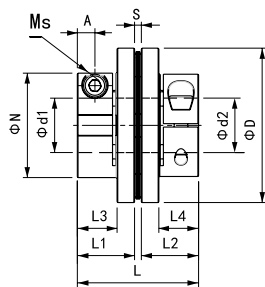
Offered in two versions of Single, coded as O, and Double Diaphrag-

ms, coded as T.

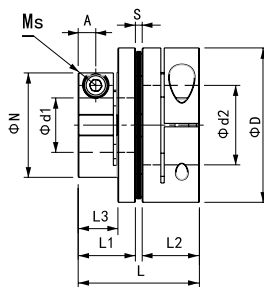
Main applications: Machine tools, Textile machinery, Printing presses and in general used in applications of high speed, high transmission accuracy and low moment of inertia.

## Series DC Single

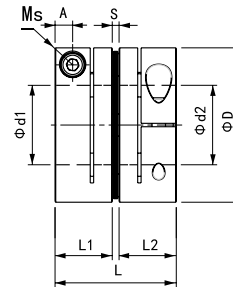
DC 0-A



DC 0-B



DC 0-C



| REFERENCE*    | d <sub>1</sub> |     | d <sub>2</sub> |     | D      | N     | t     | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | S    | A    | P**   | M <sub>s</sub> | LOCKING TORQUE |
|---------------|----------------|-----|----------------|-----|--------|-------|-------|----------------|----------------|----------------|----------------|------|------|-------|----------------|----------------|
|               | min            | max | min            | max |        |       |       |                |                |                |                |      |      |       |                | N.m            |
| TL-DC-005-O-C | 3              | 6   | 3              | 6   | 16,00  |       | 16,60 | 7,85           | 7,85           |                |                | 0,90 | 2,50 | 6,50  | M2             | 0,4 - 0,5      |
| TL-DC-010-O-C | 3              | 8   | 3              | 8   | 19,00  |       | 19,20 | 9,15           | 9,15           |                |                | 0,90 | 3,15 | 8,50  | M2             | 0,4 - 0,5      |
| TL-DC-020-O-C | 4              | 10  | 4              | 11  | 26,00  |       | 23,00 | 10,75          | 10,75          |                |                | 1,50 | 3,30 | 10,50 | M2.5           | 1,0-1,1        |
| TL-DC-025-O-C | 5              | 14  | 5              | 14  | 29,00  |       | 23,30 | 10,75          | 10,75          |                |                | 1,80 | 3,30 | 14,50 | M2.5           | 1,0-1,1        |
| TL-DC-030-O-A | 5              | 10  | 5              | 10  | 34,00  | 21,60 | 27,40 | 12,40          | 12,40          | 8,90           | 8,90           | 2,60 | 3,80 | 14,50 | M3             | 1,5-1,9        |
| TL-DC-030-O-B | 5              | 10  | 5              | 16  | 34,00  | 21,60 | 27,40 | 12,40          | 12,40          | 8,90           |                | 2,60 | 3,80 | 14,50 | M3             | 1,5-1,9        |
| TL-DC-030-O-C | 5              | 14  | 5              | 16  | 34,00  |       | 27,40 | 12,40          | 12,40          |                |                | 2,60 | 3,80 | 14,50 | M3             | 1,5-1,9        |
| TL-DC-035-O-C | 6              | 16  | 6              | 18  | 39,00  |       | 34,20 | 15,50          | 15,50          |                |                | 3,20 | 4,50 | 17,00 | M4             | 3,4-4,1        |
| TL-DC-040-O-A | 8              | 15  | 8              | 15  | 44,00  | 29,60 | 34,20 | 15,50          | 15,50          | 10,50          | 10,50          | 3,20 | 4,50 | 19,50 | M4             | 3,4-4,1        |
| TL-DC-040-O-B | 8              | 15  | 8              | 22  | 44,00  | 29,60 | 34,20 | 15,50          | 15,50          | 10,50          |                | 3,20 | 4,50 | 19,50 | M4             | 3,4-4,1        |
| TL-DC-040-O-C | 8              | 22  | 8              | 22  | 44,00  |       | 34,20 | 15,50          | 15,50          |                |                | 3,20 | 4,50 | 19,50 | M4             | 3,4-4,1        |
| TL-DC-050-O-A | 8              | 19  | 8              | 19  | 56,00  | 38,00 | 43,40 | 20,50          | 20,50          | 14,00          | 14,00          | 2,40 | 6,00 | 26,00 | M5             | 7,0-8,5        |
| TL-DC-050-O-B | 8              | 19  | 8              | 30  | 56,00  | 38,00 | 43,40 | 20,50          | 20,50          | 14,00          |                | 2,40 | 6,00 | 26,00 | M5             | 7,0-8,5        |
| TL-DC-050-O-C | 8              | 25  | 8              | 30  | 56,00  |       | 43,40 | 20,50          | 20,50          |                |                | 2,40 | 6,00 | 26,00 | M5             | 7,0-8,5        |
| TL-DC-060-O-A | 11             | 24  | 11             | 24  | 68,00  | 46,00 | 53,40 | 25,20          | 25,20          | 17,50          | 17,50          | 3,00 | 7,75 | 31,00 | M6             | 14-15          |
| TL-DC-060-O-B | 11             | 24  | 11             | 35  | 68,00  | 46,00 | 53,40 | 25,20          | 25,20          | 17,50          |                | 3,00 | 7,75 | 31,00 | M6             | 14-15          |
| TL-DC-060-O-C | 11             | 30  | 11             | 35  | 68,00  |       | 53,40 | 25,20          | 25,20          |                |                | 3,00 | 7,75 | 31,00 | M6             | 14-15          |
| TL-DC-080-O-C | 18             | 35  | 18             | 40  | 82,00  |       | 68,00 | 30,00          | 30,00          |                |                | 8,00 | 9,00 | 38,00 | M8             | 27-30          |
| TL-DC-090-O-C | 25             | 40  | 25             | 45  | 94,00  |       | 68,30 | 30,00          | 30,00          |                |                | 8,30 | 9,00 | 42,00 | M8             | 27-30          |
| TL-DC-100-O-C | 32             | 45  | 32             | 45  | 104,00 |       | 69,80 | 30,00          | 30,00          |                |                | 9,80 | 9,00 | 48,00 | M8             | 27-30          |

\* All measures in mm.

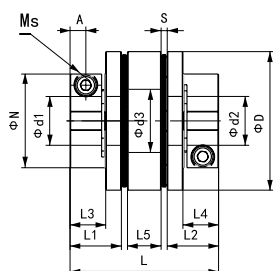
\*\* Diaphragm center distance in mm.

| REFERENCE*    | MAX TORQUE | MAX SPEED | TORSIONAL RIGIDITY | AXIAL RIGIDITY | WEIGHT |
|---------------|------------|-----------|--------------------|----------------|--------|
|               | N.m        | rpm       | N.m/rad            | N/mm           | Kg     |
| TL-DC-005-O-C | 0,6        | 10000     | 500                | 140            | 0,007  |
| TL-DC-010-O-C | 1          | 10000     | 1400               | 140            | 0,011  |
| TL-DC-020-O-C | 2          | 10000     | 3700               | 64             | 0,025  |
| TL-DC-025-O-C | 4          | 10000     | 5600               | 60             | 0,030  |
| TL-DC-030-O-A | 5          | 10000     | 8000               | 64             | 0,035  |
| TL-DC-030-O-B | 5          | 10000     | 8000               | 64             | 0,041  |
| TL-DC-030-O-C | 5          | 10000     | 8000               | 64             | 0,050  |
| TL-DC-035-O-C | 8          | 10000     | 18000              | 112            | 0,086  |
| TL-DC-040-O-A | 10         | 10000     | 20000              | 80             | 0,079  |
| TL-DC-040-O-B | 10         | 10000     | 20000              | 80             | 0,090  |
| TL-DC-040-O-C | 10         | 10000     | 20000              | 80             | 0,105  |
| TL-DC-050-O-A | 25         | 10000     | 32000              | 48             | 0,164  |
| TL-DC-050-O-B | 25         | 10000     | 32000              | 48             | 0,182  |
| TL-DC-050-O-C | 25         | 10000     | 32000              | 48             | 0,213  |
| TL-DC-060-O-A | 60         | 10000     | 70000              | 76             | 0,286  |
| TL-DC-060-O-B | 60         | 10000     | 70000              | 76             | 0,331  |
| TL-DC-060-O-C | 60         | 10000     | 70000              | 76             | 0,392  |
| TL-DC-080-O-C | 100        | 10000     | 140000             | 128            | 0,736  |
| TL-DC-090-O-C | 180        | 10000     | 100000             | 108            | 0,973  |
| TL-DC-100-O-C | 250        | 10000     | 120000             | 111            | 1,229  |

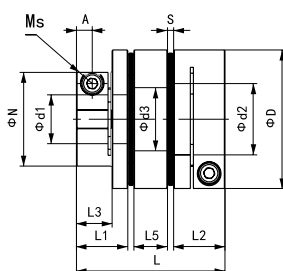


## Series DC Double

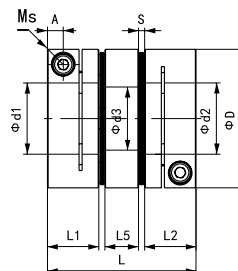
DC T-A



DC T-B



DC T-C



| REFERENCE*     | d <sub>1</sub> |     | d <sub>2</sub> |     | d <sub>3</sub> | D      | N     | L      | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | L <sub>5</sub> | S    | A    | P**   | M <sub>5</sub> | LOCKING TORQUE |
|----------------|----------------|-----|----------------|-----|----------------|--------|-------|--------|----------------|----------------|----------------|----------------|----------------|------|------|-------|----------------|----------------|
|                | min            | max | min            | max |                |        |       |        |                |                |                |                |                |      |      |       |                | N.m            |
| TL-DC2-005-T-C | 3              | 6   | 3              | 6   | 6,5            | 16,00  |       | 23,60  | 7,85           | 7,85           |                |                | 6,10           | 0,90 | 2,50 | 6,50  | M2             | 0,4 - 0,5      |
| TL-DC2-010-T-C | 3              | 8   | 3              | 8   | 8,5            | 19,00  |       | 19,20  | 9,15           | 9,15           |                |                | 6,20           | 0,90 | 3,15 | 8,50  | M2             | 0,4 - 0,5      |
| TL-DC2-020-T-C | 4              | 10  | 4              | 11  | 11             | 26,00  |       | 26,30  | 10,75          | 10,75          |                |                | 9,10           | 1,50 | 3,30 | 10,50 | M2.5           | 1,0-1,1        |
| TL-DC2-025-T-C | 5              | 14  | 5              | 14  | 15             | 29,00  |       | 33,60  | 10,75          | 10,75          |                |                | 8,50           | 1,80 | 3,30 | 14,50 | M2.5           | 1,0-1,1        |
| TL-DC2-030-T-A | 5              | 10  | 5              | 10  | 15             | 34,00  | 21,60 | 33,60  | 12,40          | 12,40          | 8,90           | 8,90           | 8,00           | 2,60 | 3,80 | 14,50 | M3             | 1,5-1,9        |
| TL-DC2-030-T-B | 5              | 10  | 5              | 16  | 15             | 34,00  | 21,60 | 38,00  | 12,40          | 12,40          | 8,90           |                | 8,00           | 2,60 | 3,80 | 14,50 | M3             | 1,5-1,9        |
| TL-DC2-030-T-C | 5              | 14  | 5              | 16  | 15             | 34,00  |       | 38,00  | 12,40          | 12,40          |                |                | 8,00           | 2,60 | 3,80 | 14,50 | M3             | 1,5-1,9        |
| TL-DC2-035-T-C | 6              | 16  | 6              | 18  | 17             | 39,00  |       | 38,00  | 15,50          | 15,50          |                |                | 11,00          | 3,20 | 4,50 | 17,00 | M4             | 3,4-4,1        |
| TL-DC2-040-T-A | 8              | 15  | 8              | 15  | 20             | 44,00  | 29,60 | 48,40  | 15,50          | 15,50          | 10,50          | 10,50          | 11,00          | 3,20 | 4,50 | 19,50 | M4             | 3,4-4,1        |
| TL-DC2-040-T-B | 8              | 15  | 8              | 22  | 20             | 44,00  | 29,60 | 48,40  | 15,50          | 15,50          | 10,50          |                | 11,00          | 3,20 | 4,50 | 19,50 | M4             | 3,4-4,1        |
| TL-DC2-040-T-C | 8              | 22  | 8              | 22  | 20             | 44,00  |       | 48,40  | 15,50          | 15,50          |                |                | 11,00          | 3,20 | 4,50 | 19,50 | M4             | 3,4-4,1        |
| TL-DC2-050-T-A | 8              | 19  | 8              | 19  | 26             | 56,00  | 38,00 | 48,40  | 20,50          | 20,50          | 14,00          | 14,00          | 14,00          | 2,40 | 6,00 | 26,00 | M5             | 7,0-8,5        |
| TL-DC2-050-T-B | 8              | 19  | 8              | 30  | 26             | 56,00  | 38,00 | 59,80  | 20,50          | 20,50          | 14,00          |                | 14,00          | 2,40 | 6,00 | 26,00 | M5             | 7,0-8,5        |
| TL-DC2-050-T-C | 8              | 25  | 8              | 30  | 26             | 56,00  |       | 59,80  | 20,50          | 20,50          |                |                | 14,00          | 2,40 | 6,00 | 26,00 | M5             | 7,0-8,5        |
| TL-DC2-060-T-A | 11             | 24  | 11             | 24  | 31             | 68,00  | 46,00 | 72,90  | 25,20          | 25,20          | 17,50          | 17,50          | 16,50          | 3,00 | 7,75 | 31,00 | M6             | 14-15          |
| TL-DC2-060-T-B | 11             | 24  | 11             | 35  | 31             | 68,00  | 46,00 | 72,90  | 25,20          | 25,20          | 17,50          |                | 16,50          | 3,00 | 7,75 | 31,00 | M6             | 14-15          |
| TL-DC2-060-T-C | 11             | 30  | 11             | 35  | 31             | 68,00  |       | 72,90  | 25,20          | 25,20          |                |                | 16,50          | 3,00 | 7,75 | 31,00 | M6             | 14-15          |
| TL-DC2-080-T-C | 18             | 35  | 18             | 40  | 40             | 82,00  |       | 101,00 | 30,00          | 30,00          |                |                | 25,00          | 8,00 | 9,00 | 38,00 | M8             | 27-30          |
| TL-DC2-090-T-C | 25             | 40  | 25             | 45  | 47             | 94,00  |       | 101,60 | 30,00          | 30,00          |                |                | 25,00          | 8,30 | 9,00 | 42,00 | M8             | 27-30          |
| TL-DC2-100-T-C | 32             | 45  | 32             | 45  | 50             | 104,00 |       | 104,60 | 30,00          | 30,00          |                |                | 25,00          | 9,80 | 9,00 | 48,00 | M8             | 27-30          |

\* All measures in mm.

\*\* Diaphragm center distance in mm.

| REFERENCE*     | MAX TORQUE | MAX SPEED | TORSIONAL RIGIDITY | AXIAL RIGIDITY | WEIGHT |
|----------------|------------|-----------|--------------------|----------------|--------|
|                | N.m        | rpm       | N.m/rad            | N/mm           | Kg     |
| TL-DC2-005-T-C | 0,6        | 10000     | 250                | 70             | 0,011  |
| TL-DC2-010-T-C | 1          | 10000     | 700                | 70             | 0,016  |
| TL-DC2-020-T-C | 2          | 10000     | 1850               | 32             | 0,038  |
| TL-DC2-025-T-C | 4          | 10000     | 2800               | 30             | 0,043  |
| TL-DC2-030-T-A | 5          | 10000     | 4000               | 32             | 0,055  |
| TL-DC2-030-T-B | 5          | 10000     | 4000               | 32             | 0,620  |
| TL-DC2-030-T-C | 5          | 10000     | 4000               | 32             | 0,070  |
| TL-DC2-035-T-C | 8          | 10000     | 9000               | 56             | 0,127  |
| TL-DC2-040-T-A | 10         | 10000     | 10000              | 40             | 0,127  |
| TL-DC2-040-T-B | 10         | 10000     | 10000              | 40             | 0,139  |
| TL-DC2-040-T-C | 10         | 10000     | 10000              | 40             | 0,154  |
| TL-DC2-050-T-A | 25         | 10000     | 16000              | 24             | 0,259  |
| TL-DC2-050-T-B | 25         | 10000     | 16000              | 24             | 0,277  |
| TL-DC2-050-T-C | 25         | 10000     | 16000              | 24             | 0,308  |
| TL-DC2-060-T-A | 60         | 10000     | 35000              | 38             | 0,451  |
| TL-DC2-060-T-B | 60         | 10000     | 35000              | 38             | 0,495  |
| TL-DC2-060-T-C | 60         | 10000     | 35000              | 38             | 0,556  |
| TL-DC2-080-T-C | 100        | 10000     | 70000              | 64             | 1,102  |
| TL-DC2-090-T-C | 180        | 10000     | 50000              | 54             | 1,444  |
| TL-DC2-100-T-C | 250        | 10000     | 60000              | 55,5           | 1,827  |

\* All measures in mm.



## Series DC-A. Single and Double

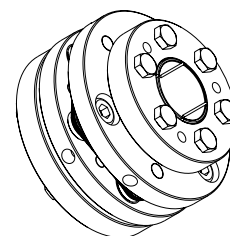
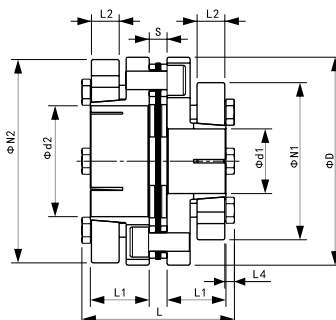
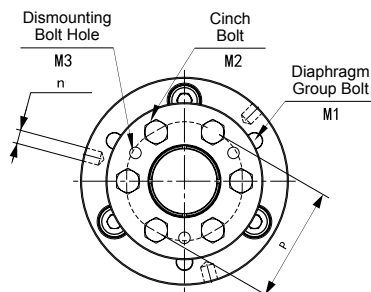
Made out of carbon steel body and disc of high strength spring steel for a high torsional stiffness.

Offered in two versions of Single, coded as O, and Double disc, co-

ded as T.

Main applications, in compressors, pumps, mixer and in other high load situations.

### Series DC-A Single



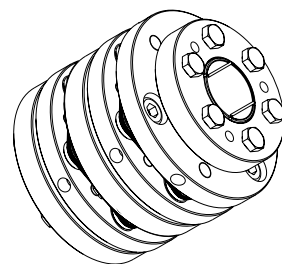
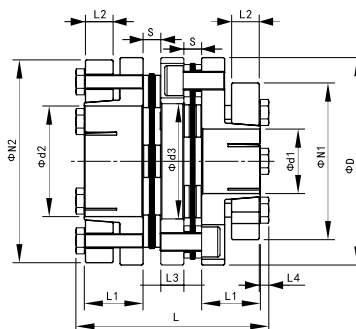
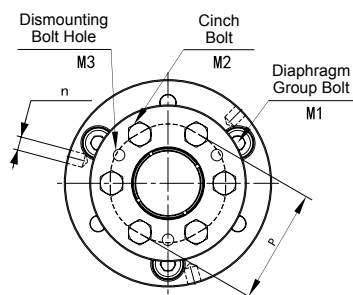
| REFERENCE*      | D   | L     | d <sub>1</sub> /d <sub>2</sub> | N <sub>1</sub> /N <sub>2</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>4</sub> | S    | P     | n        | M <sub>1</sub> | LOCKING TORQUE<br>N.m | M <sub>2</sub> | LOCKING TORQUE<br>N.m | M <sub>3</sub> |
|-----------------|-----|-------|--------------------------------|--------------------------------|----------------|----------------|----------------|------|-------|----------|----------------|-----------------------|----------------|-----------------------|----------------|
| TL-DC-A070-0-A- | 70  | 60,50 | 18-19                          | 53                             | 23,50          | 12,00          | 4,00           | 6,50 | 31,00 | 4 x 5,10 | M6             | 14,00                 | 4 X M6         | 12,00                 | 2 x M6         |
| TL-DC-A070-0-A- | 70  | 60,50 | 20-22-24-25                    | 58                             | 23,50          | 12,00          | 4,00           | 6,50 | 31,00 | 4 x 5,10 | M6             | 14,00                 | 4 X M6         | 12,00                 | 2 x M6         |
| TL-DC-A070-0-A- | 70  | 60,50 | 28-30                          | 63                             | 23,50          | 12,00          | 4,00           | 6,50 | 31,00 | 4 x 5,10 | M6             | 14,00                 | 4 X M6         | 12,00                 | 2 x M6         |
| TL-DC-A070-0-A- | 70  | 60,50 | 32-35                          | 68                             | 23,50          | 12,00          | 4,00           | 6,50 | 31,00 | 4 x 5,10 | M6             | 14,00                 | 4 X M6         | 12,00                 | 2 x M6         |
| TL-DC-A080-0-A- | 80  | 66,30 | 22-24-25                       | 58                             | 25,50          | 12,00          | 4,00           | 8,30 | 37,00 | 4 x 5,10 | M8             | 34,00                 | 4 X M6         | 12,00                 | 2 x M6         |
| TL-DC-A080-0-A- | 80  | 66,30 | 28-30                          | 63                             | 25,50          | 12,00          | 4,00           | 8,30 | 37,00 | 4 x 5,10 | M8             | 34,00                 | 4 X M6         | 12,00                 | 2 x M6         |
| TL-DC-A080-0-A- | 80  | 66,30 | 32-35                          | 68                             | 25,50          | 12,00          | 4,00           | 8,30 | 37,00 | 4 x 5,10 | M8             | 34,00                 | 4 X M6         | 12,00                 | 3 x M6         |
| TL-DC-A090-0-A- | 90  | 66,00 | 28                             | 68                             | 25,50          | 12,00          | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A090-0-A- | 90  | 66,00 | 30-32-35                       | 73                             | 25,50          | 12,00          | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A090-0-A- | 90  | 66,00 | 38-40                          | 78                             | 25,50          | 12,00          | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A090-0-A- | 90  | 66,00 | 42-45                          | 83                             | 25,50          | 12,00          | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A090-0-A- | 90  | 66,00 | 48                             | 88                             | 25,50          | 12,00          | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A100-0-A- | 100 | 66,00 | 32-35                          | 73                             | 25,50          | 12,00          | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A100-0-A- | 100 | 66,00 | 38-40                          | 78                             | 25,50          | 12,00          | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A100-0-A- | 100 | 66,00 | 42-45                          | 83                             | 25,50          | 12,00          | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A100-0-A- | 100 | 66,00 | 48-50-52                       | 88                             | 25,50          | 12,00          | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A100-0-A- | 100 | 66,00 | 55                             | 93                             | 25,50          | 12,00          | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |
| TL-DC-A100-0-A- | 100 | 66,00 | 60                             | 98                             | 25,50          | 12,00          | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00                 | 6 x M6         | 12,00                 | 3 x M6         |

\* All measures in mm.

| REFERENCE*      | MAX TORQUE | MAX SPEED | TORSIONAL RIGIDITY | AXIAL RIGIDITY | WEIGHT |
|-----------------|------------|-----------|--------------------|----------------|--------|
|                 | N.m        | rpm       | N.m/rad            | N/mm           | Kg     |
| TL-DC-A070-0-A- | 70         | 18000     | 60000              | 105            | 0,88   |
| TL-DC-A080-0-A- | 130        | 17000     | 64000              | 96             | 1,20   |
| TL-DC-A090-0-A- | 200        | 15000     | 140000             | 320            | 1,57   |
| TL-DC-A100-0-A- | 300        | 13000     | 160000             | 360            | 1,78   |



## Series DC-A Double



| REFERENCE*      | D   | L     | d <sub>1</sub> /d <sub>2</sub> | N <sub>1</sub> /N <sub>2</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | D <sub>3</sub> | L <sub>4</sub> | S    | P     | n        | M <sub>1</sub> | LOCKING TORQUE | M <sub>2</sub> | LOCKING TORQUE | M <sub>3</sub> |
|-----------------|-----|-------|--------------------------------|--------------------------------|----------------|----------------|----------------|----------------|----------------|------|-------|----------|----------------|----------------|----------------|----------------|----------------|
|                 |     |       |                                |                                |                |                |                |                |                |      |       |          |                | N.m            |                | N.m            |                |
| TL-DC2-A070-T-A | 70  | 75,00 | 18-19                          | 53                             | 23,50          | 12,00          | 8,00           | 35             | 4,00           | 6,50 | 31,00 | 4 x 5,10 | M6             | 14,00          | 4 x M6         | 12,00          | 2 x M6         |
| TL-DC2-A070-T-A | 70  | 75,00 | 20-22-24-25                    | 58                             | 23,50          | 12,00          | 8,00           | 35             | 4,00           | 6,50 | 31,00 | 4 x 5,10 | M6             | 14,00          | 4 x M6         | 12,00          | 2 x M6         |
| TL-DC2-A070-T-A | 70  | 75,00 | 28-30                          | 63                             | 23,50          | 12,00          | 8,00           | 35             | 4,00           | 6,50 | 31,00 | 4 x 5,10 | M6             | 14,00          | 4 x M6         | 12,00          | 2 x M6         |
| TL-DC2-A070-T-A | 70  | 75,00 | 32-35                          | 68                             | 23,50          | 12,00          | 8,00           | 35             | 4,00           | 6,50 | 31,00 | 4 x 5,10 | M6             | 14,00          | 4 x M6         | 12,00          | 2 x M6         |
| TL-DC2-A080-T-A | 80  | 84,60 | 22-24-25                       | 58                             | 25,50          | 12,00          | 10,00          | 40             | 4,00           | 8,30 | 37,00 | 4 x 5,10 | M8             | 34,00          | 4 x M6         | 12,00          | 2 x M6         |
| TL-DC2-A080-T-A | 80  | 84,60 | 28-30-                         | 63                             | 25,50          | 12,00          | 10,00          | 40             | 4,00           | 8,30 | 37,00 | 4 x 5,10 | M8             | 34,00          | 4 x M6         | 12,00          | 2 x M6         |
| TL-DC2-A080-T-A | 80  | 84,60 | 32-35-                         | 68                             | 25,50          | 12,00          | 10,00          | 40             | 4,00           | 8,30 | 37,00 | 4 x 5,10 | M8             | 34,00          | 4 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A090-T-A | 90  | 83,40 | 28                             | 68                             | 25,50          | 12,00          | 10,00          | 50             | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A090-T-A | 90  | 83,40 | 30-32-35                       | 73                             | 25,50          | 12,00          | 10,00          | 50             | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A090-T-A | 90  | 83,40 | 38-40                          | 78                             | 25,50          | 12,00          | 10,00          | 50             | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A090-T-A | 90  | 83,40 | 42-45                          | 83                             | 25,50          | 12,00          | 10,00          | 50             | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A090-T-A | 90  | 83,40 | 48                             | 88                             | 25,50          | 12,00          | 10,00          | 50             | 4,00           | 7,70 | 50,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A100-T-A | 100 | 84,00 | 32-35                          | 73                             | 25,50          | 12,00          | 10,00          | 60             | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A100-T-A | 100 | 84,00 | 38-40                          | 78                             | 25,50          | 12,00          | 10,00          | 60             | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A100-T-A | 100 | 84,00 | 42-45                          | 83                             | 25,50          | 12,00          | 10,00          | 60             | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A100-T-A | 100 | 84,00 | 48-50-52                       | 88                             | 25,50          | 12,00          | 10,00          | 60             | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A100-T-A | 100 | 84,00 | 55                             | 93                             | 25,50          | 12,00          | 10,00          | 60             | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |
| TL-DC2-A100-T-A | 100 | 84,00 | 60                             | 98                             | 25,50          | 12,00          | 10,00          | 60             | 4,00           | 8,00 | 58,00 | 3 x 6,50 | M8             | 34,00          | 6 x M6         | 12,00          | 3 x M6         |

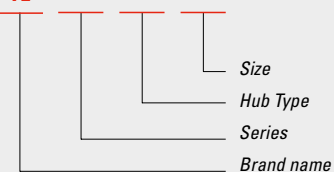
\* All measures in mm.

| REFERENCE*      | MAX TORQUE | MAX SPEED | TORSIONAL RIGIDITY | AXIAL RIGIDITY | WEIGHT |
|-----------------|------------|-----------|--------------------|----------------|--------|
|                 | N.m        | rpm       | N.m/rad            | N/mm           | Kg     |
| TL-DC2-A070-T-A | 70         | 14000     | 30000              | 55             | 1,08   |
| TL-DC2-A080-T-A | 130        | 13000     | 32000              | 50             | 1,54   |
| TL-DC2-A090-T-A | 200        | 12000     | 70000              | 160            | 1,98   |
| TL-DC2-A100-T-A | 300        | 10000     | 80000              | 180            | 2,26   |



## GUIDE TO ORDER

TL -



Size:  
DC 005 to 100  
DCA 070 to 100

Hub Type:  
OA - OB - OC  
Double TA - TB - TC

Series:  
DC Single  
DC Double  
DC-A Single  
DC-A Double

Brand name:  
TL

## Diaphragm Couplings

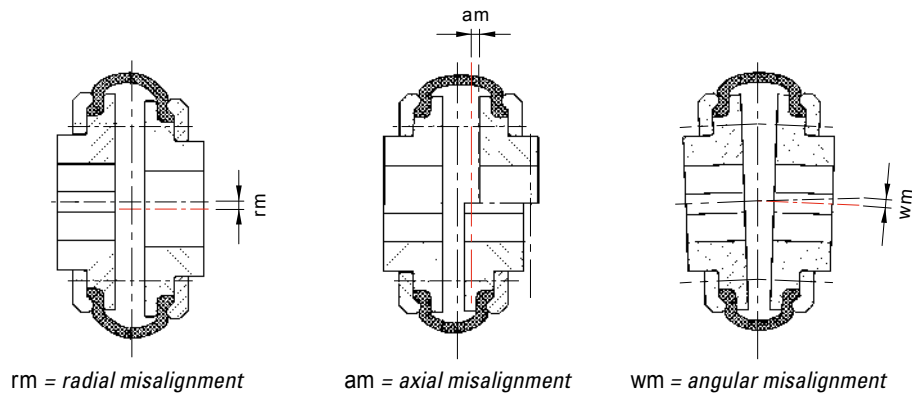
With an all-metal construction and no moving parts they look very similar than Disc Couplings. As the torque, transmission is obtained from spring steel wafers contained inside the membrane, which by deforming, accommodate for misalignment. It suits well to high tor-

que and high speed applications, allow for angular, parallel and high axial misalignment. The design provides a nil-backlash and do not require lubrication.

## Tire couplings

Consist of a tire-shaped rubber element that bridges the two hubs of the coupling. The torque is transmitted by shearing the rubber element. This type of coupling absorbs well the shock loads, the vibration, is backlash free and copes with very high misalignments.

Due to the high flexibility of the elastomer, the tyre, the transmission of the torque is backlash free. The tyre is made out of rubber or neoprene with inserted fabric and the set is designed in a way that can be mounted and dismounted radially without the need to assemble-disassemble the set.

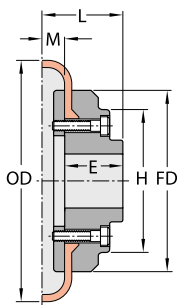


The values of the  $am$ , axial misalignment in the table, are based on an angular misalignment  $wm$  of  $4^\circ$ . This misalignment allowance is based on the fact there is no any radial, nor axial misalignment. The

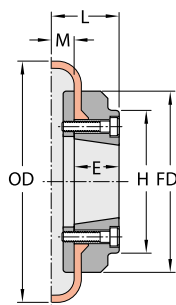
existence of these other two misalignments will reduce the acceptable angular misalignment.

We offer two versions Single and Split:

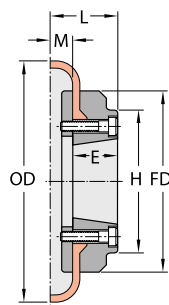
**TYPE B**



**TYPE F**

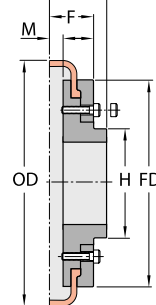


**TYPE H**

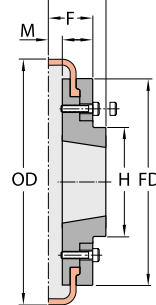


Series TC-40 to TC-60

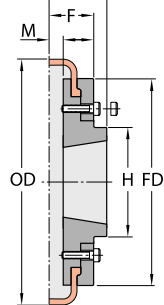
**TYPE B**



**TYPE F**



**TYPE H**



Series TC-70 to TC-250

This standard Tire Coupling has two versions related to the way it is fixed to the shafts, either BTS for Bored to Size or the Taper Bush

version, which details are displayed in the table ahead.



Unfitted Coupling



Fitted Elastic tire

There are three flanges available, the types B, F and H, for Bore, Face and Hub respectively and two materials, Casting and Steel. While the B Flange is of BTS type, the F and H are tapered to accommodate

a Taper Bush. These two latter tapered flanges can be Face Mounted or Hub mounted.

The B type flanges can be delivered in Metric and Imperial Bores.

## Tire Coupling Sizes

| REFERENCE* | FLANGE | TAPER BUSH | BORE MAX<br>mm / inch |       |         |       | L      | E   | OD  | FD  | H   | F   | CASTING | STEEL |
|------------|--------|------------|-----------------------|-------|---------|-------|--------|-----|-----|-----|-----|-----|---------|-------|
|            | Type   | Type**     | Casting               | Steel | Casting | Steel |        |     |     |     |     |     | M       | M     |
| TL-TC-40   | B      |            | 30                    | 1 1/8 | 30      | 1 1/8 | 33,00  | 22  | 104 | 82  |     |     | 11,00   | 11,00 |
| TL-TC-40   | F      | 1008       | 25                    | 1     | 25      | 1     | 33,00  | 22  | 104 | 82  |     |     | 11,00   | 11,00 |
| TL-TC-40   | H      | 1008       | 25                    | 1     | 25      | 1     | 33,00  | 22  | 104 | 82  |     |     | 11,00   | 11,00 |
| TL-TC-50   | B      |            | 38                    | 1 1/2 | 38      | 1 1/2 | 45,00  | 32  | 133 | 100 | 79  |     | 12,50   | 12,50 |
| TL-TC-50   | F      | 1210       | 32                    | 1 1/4 | 32      | 1 1/4 | 38,00  | 25  | 133 | 100 | 79  |     | 12,50   | 12,50 |
| TL-TC-50   | H      | 1210       | 32                    | 1 1/4 | 32      | 1 1/4 | 38,00  | 25  | 133 | 100 | 79  |     | 12,50   | 12,50 |
| TL-TC-60   | B      |            | 42                    | 1 5/8 | 45      | 1 3/4 | 55,00  | 38  | 165 | 125 | 70  |     | 16,50   | 16,50 |
| TL-TC-60   | F      | 1610       | 42                    | 1 5/8 | 42      | 1 5/8 | 42,00  | 25  | 165 | 125 | 103 |     | 16,50   | 16,50 |
| TL-TC-60   | H      | 1610       | 42                    | 1 5/8 | 42      | 1 5/8 | 42,00  | 25  | 165 | 125 | 103 |     | 16,50   | 16,50 |
| TL-TC-70   | B      |            | 48                    | 1 7/8 | 50      | 2     | 47,00  | 35  | 187 | 142 | 80  | 50  | 10,50   | 11,50 |
| TL-TC-70   | F      | 2012       | 50                    | 2     | 50      | 2     | 44,00  | 32  | 187 | 142 | 80  | 50  | 10,50   | 11,50 |
| TL-TC-70   | H      | 1610       | 42                    | 1 5/8 | 42      | 1 5/8 | 37,00  | 25  | 187 | 142 | 80  | 50  | 10,50   | 11,50 |
| TL-TC-80   | B      |            | 55                    | 2 1/4 | 60      | 2 3/8 | 55,00  | 42  | 211 | 165 | 98  | 54  | 12,50   | 12,50 |
| TL-TC-80   | F      | 2517       | 60                    | 2 1/2 | 60      | 2 1/2 | 58,00  | 45  | 211 | 165 | 98  | 54  | 12,50   | 12,50 |
| TL-TC-80   | H      | 2010       | 50                    | 2     | 50      | 2     | 45,00  | 32  | 211 | 165 | 98  | 54  | 12,50   | 12,50 |
| TL-TC-90   | B      |            | 65                    | 2 1/2 | 75      | 3     | 63,50  | 49  | 235 | 188 | 108 | 60  | 13,50   | 13,50 |
| TL-TC-90   | F      | 2517       | 60                    | 2 1/2 | 60      | 2 1/2 | 58,50  | 45  | 235 | 188 | 108 | 60  | 13,50   | 13,50 |
| TL-TC-90   | H      | 2517       | 60                    | 2 1/2 | 60      | 2 1/2 | 58,50  | 45  | 235 | 188 | 108 | 60  | 13,50   | 13,50 |
| TL-TC-100  | B      |            | 80                    | 3 1/8 | 80      | 3 1/8 | 70,50  | 56  | 254 | 216 | 120 | 62  | 13,50   | 13,50 |
| TL-TC-100  | F      | 3020       | 75                    | 3     | 75      | 3     | 64,50  | 51  | 254 | 216 | 125 | 62  | 13,50   | 13,50 |
| TL-TC-100  | H      | 3020       | 60                    | 2 1/2 | 60      | 2 1/2 | 58,50  | 45  | 254 | 216 | 113 | 62  | 13,50   | 13,50 |
| TL-TC-110  | B      |            | 90                    | 3 1/2 | 90      | 3 1/2 | 75,50  | 63  | 279 | 233 | 128 | 62  | 12,50   | 12,50 |
| TL-TC-110  | F      | 3020       | 75                    | 3     | 75      | 3     | 63,50  | 51  | 279 | 233 | 134 | 62  | 12,50   | 12,50 |
| TL-TC-110  | H      | 3020       | 75                    | 3     | 75      | 3     | 63,50  | 51  | 279 | 233 | 134 | 62  | 12,50   | 12,50 |
| TL-TC-120  | B      |            | 95                    | 3 3/4 | 100     | 4     | 84,50  | 70  | 314 | 264 | 140 | 67  | 14,50   | 14,50 |
| TL-TC-120  | F      | 3525       | 100                   | 4     | 100     | 4     | 79,50  | 65  | 314 | 264 | 144 | 67  | 14,50   | 14,50 |
| TL-TC-120  | H      | 3020       | 75                    | 3     | 75      | 3     | 65,50  | 51  | 314 | 264 | 144 | 67  | 14,50   | 14,50 |
| TL-TC-140  | B      |            | 120                   | 4 3/4 | 125     | 5     | 110,50 | 94  | 359 | 311 | 178 | 73  | 16,00   | 16,00 |
| TL-TC-140  | F      | 3525       | 100                   | 4     | 100     | 4     | 81,50  | 65  | 359 | 311 | 178 | 73  | 16,00   | 16,00 |
| TL-TC-140  | H      | 3525       | 100                   | 4     | 100     | 4     | 81,50  | 65  | 359 | 311 | 178 | 73  | 16,00   | 16,00 |
| TL-TC-160  | B      |            | 130                   | 5 1/8 | 140     | 5 1/2 | 117,00 | 120 | 402 | 345 | 187 | 78  | 15,00   | 15,00 |
| TL-TC-160  | F      | 4030       | 115                   | 4 1/2 | 115     | 4 1/2 | 92,00  | 77  | 402 | 345 | 197 | 78  | 15,00   | 15,00 |
| TL-TC-160  | H      | 4030       | 115                   | 4 1/2 | 115     | 4 1/2 | 92,00  | 77  | 402 | 345 | 197 | 78  | 15,00   | 15,00 |
| TL-TC-180  | B      |            | 140                   | 5 1/2 | 150     | 6     | 137,00 | 114 | 470 | 394 | 205 | 94  | 23,00   | 23,00 |
| TL-TC-180  | F      | 4535       | 125                   | 5     | 125     | 5     | 112,00 | 89  | 470 | 394 | 205 | 94  | 23,00   | 23,00 |
| TL-TC-180  | H      | 4535       | 125                   | 5     | 125     | 5     | 112,00 | 89  | 470 | 394 | 205 | 94  | 23,00   | 23,00 |
| TL-TC-200  | B      |            | 140                   | 5 1/2 | 150     | 6     | 138,00 | 114 | 508 | 429 | 205 | 103 | 24,00   | 24,00 |
| TL-TC-200  | F      | 4535       | 125                   | 5     | 125     | 5     | 113,00 | 89  | 508 | 429 | 205 | 103 | 24,00   | 24,00 |
| TL-TC-200  | H      | 4535       | 125                   | 5     | 125     | 5     | 113,00 | 89  | 508 | 429 | 205 | 103 | 24,00   | 24,00 |
| TL-TC-220  | B      |            | 150                   | 6     | 160     | 6 1/4 | 154,50 | 127 | 562 | 474 | 223 | 118 | 27,50   | 27,50 |
| TL-TC-220  | F      | 5040       | 125                   | 5     | 125     | 5     | 129,50 | 102 | 562 | 474 | 223 | 118 | 27,50   | 27,50 |
| TL-TC-220  | H      | 5040       | 125                   | 5     | 125     | 5     | 129,50 | 102 | 562 | 474 | 223 | 118 | 27,50   | 27,50 |
| TL-TC-250  | B      |            | 180                   | 7     | 190     | 7 1/2 | 161,50 | 132 | 628 | 532 | 254 | 125 | 29,50   | 29,50 |

\* All measures unless otherwise indicated are expressed in mm.

\*\* Taper Bush Bores available in Metric and Imperial. See pages A4 and A5. Taper Bush Keyway according to DIN 6885/1.



Pilot Bore Tire Coupling



QD Tire Coupling



Keyway Tire Coupling



Tire Coupling Element

## Tire Couplings, Torque & Misalignment

| REFERENCE | SPEED | TORQUE*<br>Type N.m |         |               | TORSION<br>RIGIDITY | MAX SHAFT MISALIGNMENT.<br>mm |       |            |
|-----------|-------|---------------------|---------|---------------|---------------------|-------------------------------|-------|------------|
|           |       | Nominal             | Maximum | Alternating** |                     | Radial                        | Axial | Angular*** |
| TL-TC-40  | 4500  | 24                  | 64      | 11            | 285                 | 1,10                          | 1,30  | 5,70       |
| TL-TC-50  | 4500  | 66                  | 160     | 26            | 745                 | 1,30                          | 1,70  | 7,00       |
| TL-TC-60  | 4000  | 127                 | 318     | 53            | 1500                | 1,60                          | 2,00  | 8,70       |
| TL-TC-70  | 3600  | 250                 | 487     | 41            | 2350                | 1,90                          | 2,30  | 10,00      |
| TL-TC-80  | 3100  | 375                 | 759     | 127           | 3600                | 2,10                          | 2,60  | 12,00      |
| TL-TC-90  | 3000  | 500                 | 1096    | 183           | 5200                | 2,40                          | 3,00  | 13,00      |
| TL-TC-100 | 2600  | 675                 | 1517    | 252           | 7200                | 2,60                          | 3,30  | 15,00      |
| TL-TC-110 | 2300  | 875                 | 2137    | 356           | 10000               | 2,90                          | 3,70  | 16,00      |
| TL-TC-120 | 2050  | 1330                | 3547    | 591           | 17000               | 3,20                          | 4,00  | 18,00      |
| TL-TC-140 | 1800  | 2325                | 5642    | 940           | 28000               | 3,70                          | 4,60  | 22,00      |
| TL-TC-160 | 1600  | 3770                | 9339    | 1556          | 44500               | 4,20                          | 5,30  | 24,00      |
| TL-TC-180 | 1500  | 6270                | 16455   | 2742          | 78500               | 4,80                          | 6,00  | 28,00      |
| TL-TC-200 | 1300  | 9325                | 23508   | 3918          | 110000              | 5,30                          | 6,60  | 30,00      |
| TL-TC-220 | 1100  | 11600               | 33125   | 5521          | 160000              | 5,80                          | 7,30  | 33,00      |
| TL-TC-250 | 1000  | 14675               | 42740   | 7124          | 200000              | 6,60                          | 8,20  | 37,00      |

\* Torques understood for keyed shaft.

\*\* Maximum allowed up to a frequency of 10 Hz.

\*\*\* Understood without the coexistence of Radial and Axial misalignments.

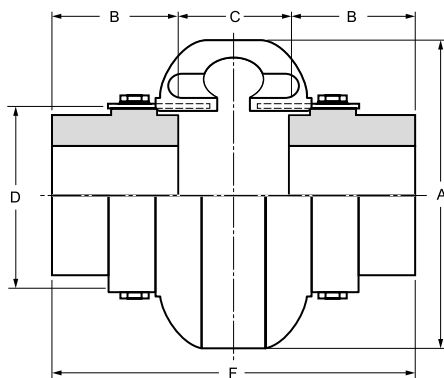
## Split Tire Couplings

This Tire Coupling version adds to the characteristics described of the Single Tire Coupling the feature of being split in two halves bolted to reversible hubs.

This feature makes the installation and removal of the coupling very easy.

We offer this coupling in different executions, MPB with Keyway and Taper Bush. Under MTO we can deliver with QD, in Metric and Imperial.

### MPB

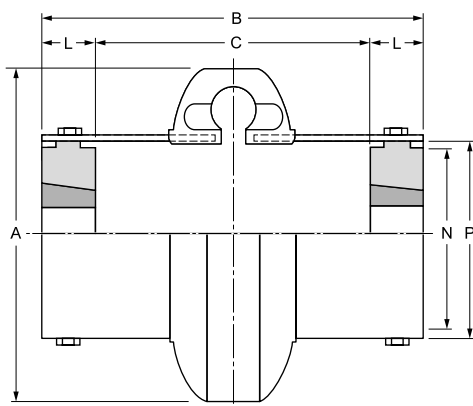


*Tire Coupling Split MPB*



*Tire Coupling Split Keyway*

### TAPER BUSH



*Tire Coupling Split Taper Bush*

## Split Tire Couplings. MPB Bores & Keyway version

| REFERENCE* | d <sub>1</sub> /d <sub>2</sub> |          | POWER<br>kW/100 | MAXIMUM<br>SPEED | A   | B   |     | C   |     | L   | N   | P   |
|------------|--------------------------------|----------|-----------------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|
|            | MINIMUM                        | MAXIMUM  |                 |                  |     |     |     |     |     |     |     |     |
|            | Bore. Mm                       | Bore. Mm | RPM             | RPM              |     | min | max | min | max |     |     |     |
| TL-TC-S2   | 13                             | 28       | 0,22            | 7500             | 89  | 84  | 94  | 36  | 456 | 24  | 38  | 47  |
| TL-TC-S3   | 13                             | 34       | 0,41            | 7500             | 102 | 84  | 122 | 8   | 46  | 38  | 50  | 59  |
| TL-TC-S4   | 13                             | 42       | 0,62            | 7500             | 116 | 84  | 122 | 8   | 46  | 38  | 57  | 66  |
| TL-TC-S5   | 13                             | 48       | 1,05            | 7500             | 137 | 97  | 147 | 8   | 59  | 44  | 70  | 80  |
| TL-TC-S10  | 13                             | 55       | 1,64            | 7500             | 162 | 97  | 147 | 8   | 59  | 44  | 84  | 93  |
| TL-TC-S20  | 19                             | 60       | 2,6             | 6600             | 184 | 113 | 165 | 13  | 65  | 50  | 102 | 114 |
| TL-TC-S30  | 19                             | 75       | 4,12            | 5800             | 210 | 125 | 182 | 12  | 69  | 58  | 118 | 138 |
| TL-TC-S40  | 19                             | 85       | 6,22            | 5000             | 241 | 135 | 202 | 8   | 75  | 63  | 146 | 168 |
| TL-TC-S50  | 26                             | 90       | 8,64            | 4200             | 279 | 151 | 230 | 11  | 91  | 70  | 152 | 207 |
| TL-TC-S60  | 26                             | 105      | 14,12           | 3800             | 318 | 173 | 262 | 8   | 97  | 82  | 165 | 222 |
| TL-TC-S70  | 32                             | 120      | 24,9            | 3600             | 356 | 189 | 281 | 18  | 109 | 85  | 175 | 235 |
| TL-TC-S80  | 32                             | 155      | 44,6            | 2000             | 406 | 245 | 377 | 17  | 149 | 114 | 240 | 286 |

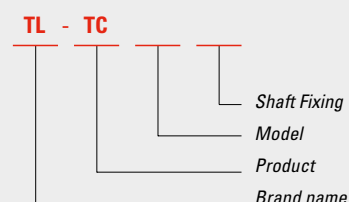
\* All measures in mm.

## Split Tire Couplings. Taper Bush version

| REFERENCE*  | TAPER<br>BUSH | d <sub>1</sub> /d <sub>2</sub> | POWER<br>kW/100 | MAXIMUM<br>SPEED | A   | B   | C  | N   | P   |
|-------------|---------------|--------------------------------|-----------------|------------------|-----|-----|----|-----|-----|
|             |               | MAXIMUM                        |                 |                  |     |     |    |     |     |
|             | Number        | Bore. Mm                       | RPM             | RPM              |     |     |    |     |     |
| TL-TC-S3TB  | 1008          | 25                             | 0,41            | 7500             | 102 | 87  | 43 | 50  | 59  |
| TL-TC-S4TB  | 1008          | 25                             | 0,62            | 7500             | 116 | 87  | 43 | 57  | 66  |
| TL-TC-S5TB  | 1210          | 32                             | 1,05            | 7500             | 137 | 102 | 52 | 70  | 80  |
| TL-TC-S10TB | 1610          | 42                             | 1,64            | 7500             | 162 | 102 | 52 | 84  | 93  |
| TL-TC-S20TB | 1610          | 42                             | 2,60            | 6600             | 184 | 114 | 64 | 102 | 114 |
| TL-TC-S30TB | 2012          | 50                             | 4,12            | 5800             | 210 | 129 | 56 | 118 | 138 |
| TL-TC-S40TB | 2517          | 65                             | 6,22            | 5000             | 241 | 150 | 60 | 146 | 168 |
| TL-TC-S50TB | 2517          | 65                             | 8,64            | 4200             | 279 | 166 | 76 | 152 | 207 |
| TL-TC-S60TB | 3020          | 75                             | 14,12           | 3800             | 318 | 186 | 84 | 165 | 222 |
| TL-TC-S70TB | 3535          | 100                            | 24,90           | 3600             | 356 | 238 | 60 | 175 | 235 |
| TL-TC-S80TB | 4040          | 110                            | 44,60           | 2000             | 406 | 299 | 95 | 204 | 286 |

\* All measures in mm.

## GUIDE TO ORDER



Shaft Fixing:  
**MPB** Minimum Plain Bore  
**KW** Keyway  
**TB** Taper Bush  
**QD** Quick Detachable

Model:  
 Single Tire 40 through 250  
 Single Tire 52 through 580

Product:  
**TC** Tire Coupling

Brand name:  
**TL**

## Grid couplings

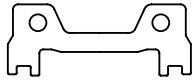
Consist of a heavy spring that weaves between two radial slotted hubs. The spring steel provides torsional damping and flexibility of an elastomer with the difference of the strength of the steel.

This type of coupling, transmits torque while absorbs angular, parallel

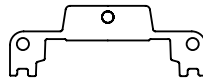
and axial misalignments from the two hubs as well as shock loads.

We offer these couplings in two versions, Horizontal and Vertical. As far as the fixing to the shafts, we have different choices, RSB (Raw Stock Bore), BTS (Bore to Size), KW (Keway).

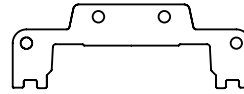
### Cover Profiles:



Sizes 1020~1140



Series 1150 - 1200



Sizes 1210~1230

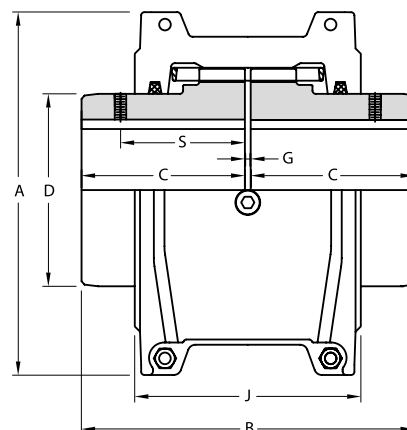
### Horizontal Split Cover

| REFERENCE*  | POWER kW       | NOMINAL    | MAX SPEED | BORE MM |     | A      | B      | C      | D      | J      | F      | S     | G    |       | LUBRICANT |
|-------------|----------------|------------|-----------|---------|-----|--------|--------|--------|--------|--------|--------|-------|------|-------|-----------|
|             | x 100 revs/min | Torque N.m | revs/min  | min     | max |        |        |        |        |        |        |       | min  | max   | Oil Kg    |
| TL-GRC-1020 | 0,54           | 52         | 4500      | 12      | 30  | 101,60 | 98,20  | 47,50  | 39,70  | 66,00  |        | 39,10 | 1,50 | 4,50  | 0,027     |
| TL-GRC-1030 | 1,60           | 149        | 4500      | 12      | 36  | 110,00 | 98,20  | 47,50  | 49,20  | 68,30  |        | 39,10 | 1,50 | 4,50  | 0,040     |
| TL-GRC-1040 | 2,60           | 249        | 4500      | 12      | 44  | 117,50 | 104,60 | 50,80  | 57,20  | 70,00  |        | 40,10 | 1,50 | 4,50  | 0,054     |
| TL-GRC-1050 | 4,60           | 435        | 4500      | 12      | 50  | 138,00 | 123,60 | 60,30  | 66,70  | 79,50  |        | 44,70 | 1,50 | 4,50  | 0,068     |
| TL-GRC-1060 | 7,20           | 684        | 4500      | 19      | 57  | 150,50 | 130,00 | 63,56  | 76,20  | 92,00  |        | 52,30 | 1,50 | 4,50  | 0,086     |
| TL-GRC-1070 | 10,40          | 994        | 4125      | 19      | 65  | 161,90 | 155,40 | 76,20  | 87,30  | 95,00  |        | 53,80 | 1,50 | 4,50  | 0,113     |
| TL-GRC-1080 | 21,50          | 2050       | 3600      | 27      | 79  | 194,00 | 180,80 | 88,90  | 104,80 | 116,00 |        | 64,50 | 1,50 | 6,00  | 0,172     |
| TL-GRC-1090 | 39,00          | 3730       | 3600      | 27      | 95  | 213,00 | 199,80 | 98,40  | 123,80 | 122,00 |        | 71,60 | 1,50 | 6,00  | 0,254     |
| TL-GRC-1100 | 65,70          | 6280       | 2440      | 41      | 107 | 250,00 | 246,20 | 120,60 | 142,10 | 155,50 |        |       | 1,50 | 9,50  | 0,426     |
| TL-GRC-1110 | 97,60          | 9320       | 2250      | 41      | 117 | 270,00 | 259,00 | 127,00 | 160,30 | 161,50 |        |       | 1,50 | 9,50  | 0,508     |
| TL-GRC-1120 | 143,00         | 13700      | 2025      | 60      | 136 | 308,00 | 304,40 | 149,20 | 179,40 | 191,50 |        |       | 1,50 | 12,50 | 0,735     |
| TL-GRC-1130 | 208,00         | 19900      | 1800      | 66      | 165 | 346,00 | 329,80 | 161,90 | 217,50 | 195,00 |        |       | 1,50 | 12,50 | 0,907     |
| TL-GRC-1140 | 299,00         | 28600      | 1650      | 66      | 184 | 384,00 | 374,40 | 184,20 | 254,00 | 201,00 |        |       | 1,50 | 12,50 | 1,130     |
| TL-GRC-1150 | 416,00         | 39800      | 1500      | 108     | 203 | 453,10 | 371,80 | 182,90 | 269,20 | 271,30 | 391,20 |       | 1,50 | 12,50 | 1,950     |
| TL-GRC-1160 | 586,00         | 55900      | 1350      | 120     | 228 | 501,40 | 402,20 | 198,10 | 304,80 | 278,90 | 436,90 |       | 1,50 | 12,50 | 2,810     |
| TL-GRC-1170 | 781,00         | 74600      | 1225      | 133     | 279 | 566,40 | 437,80 | 215,96 | 355,60 | 304,30 | 487,20 |       | 1,50 | 12,50 | 3,490     |
| TL-GRC-1180 | 1080,00        | 103000     | 1100      | 152     | 311 | 629,9  | 483,6  | 238,8  | 393,7  | 321,1  | 554,7  |       | 1,50 | 12,50 | 3,760     |
| TL-GRC-1190 | 1430,00        | 137000     | 1050      | 152     | 339 | 675,6  | 524,2  | 259,1  | 436,9  | 325,1  | 607,8  |       | 1,50 | 12,50 | 4,400     |
| TL-GRC-1200 | 1950,00        | 186000     | 900       | 177     | 361 | 756,9  | 564,8  | 279,4  | 497,8  | 355,6  | 660,4  |       | 1,50 | 12,50 | 5,620     |
| TL-GRC-1210 | 2611,00        | 249000     | 820       | 177     | 390 | 844,5  | 622,3  | 304,8  | 533,4  | 431,8  | 750,8  |       | 1,50 | 12,70 | 10,500    |
| TL-GRC-1220 | 3523,00        | 336000     | 730       | 203     | 420 | 920,7  | 662,9  | 325,1  | 571,5  | 490,2  | 822,2  |       | 1,50 | 12,70 | 16,100    |

\* All measures in mm unless otherwise indicated.



Spring detail



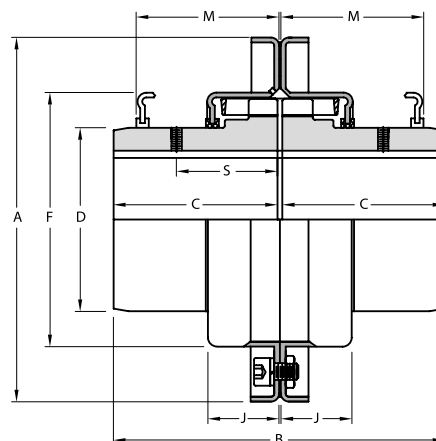
## Vertical Split Cover

| REFERENCE*   | POWER kW       | NOMINAL    | MAX SPEED | BORE MM |     | A      | B      | C      | D      | F      | H     | J      | M      | S     | G    |       | LUBRICANT |
|--------------|----------------|------------|-----------|---------|-----|--------|--------|--------|--------|--------|-------|--------|--------|-------|------|-------|-----------|
|              | x 100 revs/min | Torque N.m | revs/min  | min     | max |        |        |        |        |        |       |        |        |       | min  | max   | Oil Kg    |
| TL-GRC-A1020 | 0,54           | 52         | 6000      | 12      | 30  | 111,10 | 98,00  | 47,50  | 39,70  | 64,30  | 9,70  | 24,20  | 47,80  | 39,10 | 1,50 | 4,50  | 0,027     |
| TL-GRC-A1030 | 1,60           | 149        | 6000      | 12      | 36  | 120,70 | 98,00  | 47,05  | 49,20  | 73,80  | 9,70  | 25,00  | 47,80  | 39,10 | 1,50 | 4,50  | 0,040     |
| TL-GRC-A1040 | 2,60           | 249        | 6000      | 12      | 44  | 128,50 | 104,60 | 50,80  | 57,20  | 81,38  | 9,70  | 25,70  | 50,80  | 40,10 | 1,50 | 4,50  | 0,054     |
| TL-GRC-A1050 | 4,60           | 435        | 6000      | 12      | 50  | 147,60 | 123,60 | 60,30  | 66,70  | 97,60  | 11,90 | 31,20  | 60,50  | 44,70 | 1,50 | 4,50  | 0,068     |
| TL-GRC-A1060 | 7,20           | 684        | 6000      | 19      | 57  | 162,00 | 130,00 | 63,50  | 76,20  | 111,10 | 12,70 | 32,20  | 63,50  | 52,30 | 1,50 | 4,50  | 0,086     |
| TL-GRC-A1070 | 10,40          | 994        | 5500      | 19      | 65  | 173,00 | 155,40 | 76,20  | 87,30  | 122,30 | 12,70 | 33,70  | 66,50  | 53,80 | 1,50 | 4,50  | 0,113     |
| TL-GRC-A1080 | 21,50          | 2050       | 4750      | 27      | 79  | 200,00 | 180,80 | 88,90  | 104,80 | 149,20 | 12,70 | 44,20  | 88,90  | 64,50 | 1,50 | 6,00  | 0,172     |
| TL-GRC-A1090 | 39,00          | 3730       | 4000      | 27      | 95  | 231,80 | 199,80 | 98,40  | 123,80 | 168,30 | 12,70 | 47,70  | 95,20  | 71,60 | 1,50 | 6,00  | 0,254     |
| TL-GRC-A1100 | 65,70          | 6280       | 3250      | 41      | 107 | 266,70 | 245,70 | 120,60 | 142,10 | 198,00 | 15,70 | 60,00  | 120,70 |       | 1,50 | 9,50  | 0,426     |
| TL-GRC-A1110 | 97,60          | 9320       | 3000      | 41      | 117 | 285,80 | 258,50 | 127,00 | 160,30 | 216,30 | 16,00 | 64,20  | 124,00 |       | 1,50 | 9,50  | 0,508     |
| TL-GRC-A1120 | 143,00         | 13700      | 2700      | 60      | 136 | 319,00 | 304,40 | 149,20 | 179,40 | 245,50 | 17,50 | 73,40  | 142,70 |       | 1,50 | 12,50 | 0,735     |
| TL-GRC-A1130 | 208,00         | 19900      | 2400      | 66      | 165 | 377,80 | 329,80 | 161,90 | 217,50 | 283,80 | 20,60 | 75,10  | 146,00 |       | 1,50 | 12,50 | 0,907     |
| TL-GRC-A1140 | 299,00         | 28600      | 2200      | 66      | 184 | 416,00 | 371,60 | 184,20 | 254,00 | 321,90 | 20,60 | 78,20  | 155,40 |       | 1,50 | 12,50 | 1,130     |
| TL-GRC-A1150 | 416,00         | 39800      | 2000      | 108     | 203 | 476,30 | 371,80 | 182,90 | 269,20 | 374,40 | 19,30 | 106,90 | 203,20 |       | 1,50 | 12,50 | 10,950    |
| TL-GRC-A1160 | 586,00         | 55900      | 1750      | 120     | 228 | 533,40 | 402,20 | 198,10 | 304,80 | 423,90 | 30,00 | 114,30 | 215,90 |       | 1,50 | 12,50 | 2,810     |
| TL-GRC-A1170 | 781,00         | 74600      | 1600      | 133     | 279 | 584,20 | 437,80 | 215,90 | 355,60 | 474,70 | 30,00 | 119,40 | 226,10 |       | 1,50 | 12,50 | 3,490     |
| TL-GRC-A1180 | 1080,00        | 103000     | 1400      | 152     | 311 | 630,00 | 483,60 | 238,80 | 393,70 |        |       | 130,00 | 265,00 |       | 1,50 | 12,50 | 3,760     |
| TL-GRC-A1190 | 1430,00        | 137000     | 1300      | 152     | 339 | 685,00 | 524,20 | 259,10 | 436,90 |        |       | 135,00 | 275,00 |       | 1,50 | 12,50 | 4,400     |
| TL-GRC-A1200 | 1950,00        | 186000     | 1100      | 177     | 361 | 737,00 | 564,80 | 279,40 | 497,80 |        |       | 145,00 | 295,00 |       | 1,50 | 12,50 | 5,620     |

\* All measures in mm unless otherwise indicated.



Grid



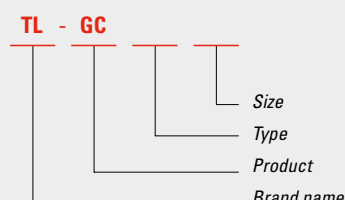
## Service Factors

At the time of selecting the model to fit the appropriate application, the Service Factors are to be taken much into account. These vary according the type of load of the driven shaft demands. As a guide, Service factors vary from 1 for constant uniform torque, 1,5 for some torque variations, 2 for light shock loads, 2,5 for moderate shock loads and 3 for heavy shock loads.



Grid Hub MPB

## GUIDE TO ORDER



Size:  
1020 through 1220

Type:  
H Horizontal  
V Vertical

Product:  
GC Grid Coupling

Brand name:  
TL

## Oldham<sup>1</sup> couplings

Consists of two identical metal elements with slots that sandwich a slider block between them. This type of couplings are well suited for shaft's parallel misalignment but they are less effective in compensating the angular misalignments. The slider block is usually made out of a polymer. By pressing the metal slotted elements, the backlash is minimized but in revenge, the friction developed makes the sliding block to wear and ultimately the backlash appears. The metal elements are attached to the shafts either by the pair keyway-key or a friction locking device.

Indicated for stepper-motor driven angular positioning, in robotics, in printers and in general in applications with pronounced parallel misalignments.

**Nomenclature:** We identify this type of Jaw Coupling by OC with four versions all of them of Aluminum, OC-A for One-piece Set Screw with PA66\* Polyamide Sliding Block (Nylon), OC-B as OC-A with a Bronze Sliding Block, OC-C for Two-piece Clamp Type with Nylon Sliding Block and OC-D as OC-C with Bronze Sliding Block.

### One piece type A. SetScrew

| REFERENCE* | OD | L  | BORES d <sub>1</sub> /d <sub>2</sub> | L <sub>f</sub> | L <sub>p</sub> | F    | M         |
|------------|----|----|--------------------------------------|----------------|----------------|------|-----------|
| TL-OC-A16  | 16 | 18 | 4 to 6,35                            | 7,25           | 11,60          | 3,35 | 4 M3 x 5  |
| TL-OC-A20  | 20 | 23 | 6 to 10                              | 9,15           | 12,70          | 5,51 | 4 M3 x 5  |
| TL-OC-A25  | 25 | 28 | 6,35 to 12                           | 11,50          | 16,60          | 5,70 | 4 M4 x 6  |
| TL-OC-A32  | 32 | 33 | 8 to 16                              | 13,75          | 19,50          | 6,75 | 4 M5 x 8  |
| TL-OC-A40  | 40 | 35 | 8 to 18                              | 15,10          | 18,40          | 8,30 | 4 M6 x 12 |
| TL-OC-A50  | 50 | 38 | 10 to 22                             | 19,00          | 15,00          | 5,75 | 4 M6 x 12 |
| TL-OC-A55  | 55 | 57 | 10 to 22                             | 28,00          | 20,00          | 9,25 | 4 M8 x 14 |
| TL-OC-A63  | 63 | 47 | 15 to 25                             | 22,75          | 17,50          | 7,38 | 4 M8 x 14 |
| TL-OC-A70  | 70 | 57 | 19 to 35                             | 27,50          | 19,00          | 9,50 | 4 M8 x 16 |

\* All measures in mm unless otherwise indicated.

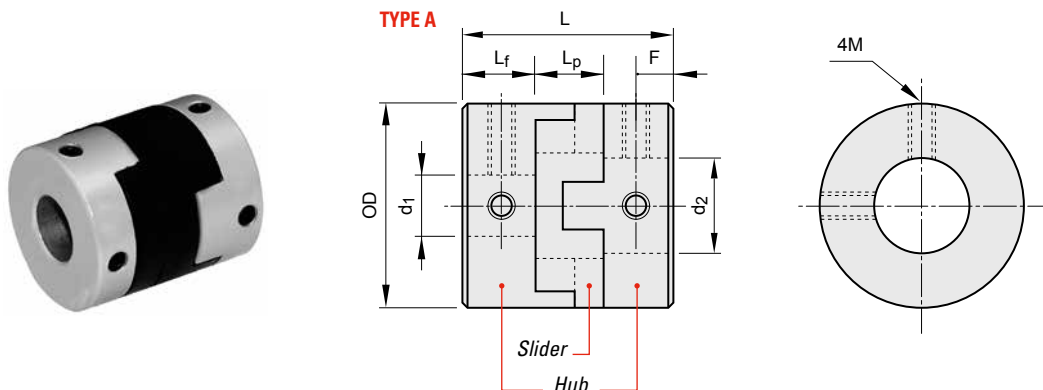
### Technical Specifications

| REFERENCE* | RATED      | MAX        | MISALIGNMENT ALLOWANCE |           |             | MAX SPEED | STIFFNESS | WEIGHT |
|------------|------------|------------|------------------------|-----------|-------------|-----------|-----------|--------|
|            | Torque N.m | Torque N.m | Axial am +             | Radial rm | Angular wm° | revs/min  | N.m/rad   | Gramm  |
| TL-OC-A16  | 0,70       | 1,40       | 0,20                   | 0,80      | 3           | 10000     | 30        | 6      |
| TL-OC-A20  | 1,20       | 2,40       | 0,20                   | 1,00      | 3           | 10000     | 58        | 15     |
| TL-OC-A25  | 2,00       | 4,00       | 0,20                   | 1,20      | 3           | 10000     | 130       | 25     |
| TL-OC-A32  | 4,50       | 9,00       | 0,20                   | 1,50      | 3           | 9000      | 270       | 44     |
| TL-OC-A40  | 9,00       | 1,80       | 0,20                   | 1,80      | 3           | 7500      | 520       | 81     |
| TL-OC-A50  | 19,00      | 38,00      | 0,20                   | 2,00      | 3           | 7000      | 800       | 142    |
| TL-OC-A55  | 25,00      | 50,00      | 0,20                   | 2,00      | 3           | 6700      | 900       | 280    |
| TL-OC-A63  | 33,00      | 68,00      | 0,20                   | 2,00      | 3           | 6300      | 1200      | 320    |
| TL-OC-A70  | 36,00      | 72,00      | 0,20                   | 2,00      | 3           | 6000      | 4800      | 430    |

\* All measures in mm unless otherwise mentioned.

Sliding block element of Polyamide PA66.

Material, Anodized High Strenght Aluminum.



<sup>1</sup> After John Oldham (1779-1840) the Irish engineer inventor.

## One piece type B. Set Screw

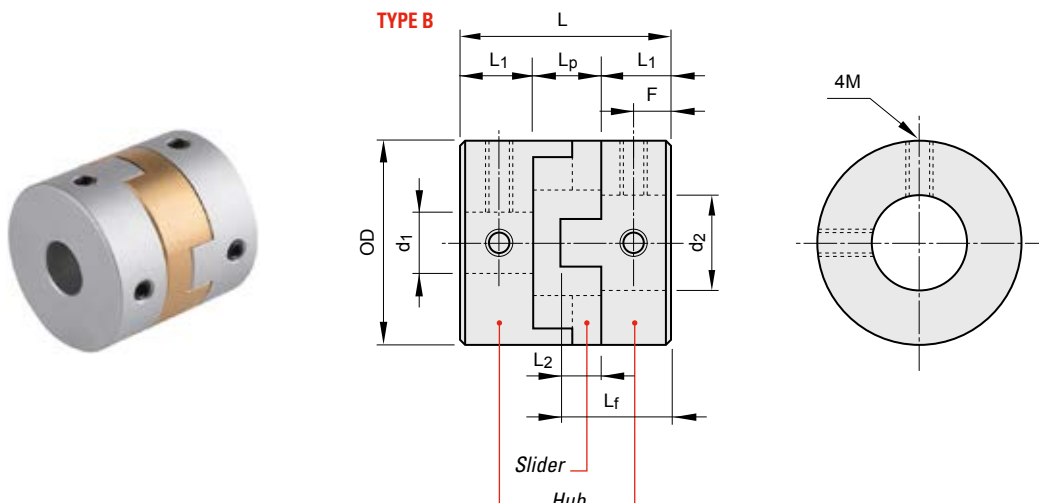
| REFERENCE* | OD | L  | BORES d <sub>1</sub> /d <sub>2</sub> | L <sub>f</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>p</sub> | F    | M          |
|------------|----|----|--------------------------------------|----------------|----------------|----------------|----------------|------|------------|
| TL-OC-B15  | 15 | 16 | 4 to 6,35                            | 7,80           | 5,20           | 2,60           | 5,60           | 2,50 | 4 M3 x 4   |
| TL-OC-B17  | 17 | 20 | 5 to 8                               | 9,80           | 6,70           | 3,30           | 6,60           | 3,25 | 4 M4 x 4   |
| TL-OC-B20  | 20 | 23 | 6 to 10                              | 11,30          | 8,00           | 3,30           | 7,00           | 4,00 | 4 M4 x 5   |
| TL-OC-B26  | 26 | 26 | 6 to 12,7                            | 14,30          | 9,00           | 5,30           | 8,00           | 4,50 | 4 M4 x 6   |
| TL-OC-B30  | 30 | 33 | 8 to 14                              | 16,20          | 10,50          | 5,70           | 12,00          | 5,52 | 4 M4 x 8   |
| TL-OC-B34  | 34 | 35 | 10 to 15                             | 17,20          | 11,50          | 5,70           | 12,00          | 5,75 | 4 M5 x 10  |
| TL-OC-B38  | 38 | 40 | 10 to 20                             | 19,70          | 13,00          | 6,70           | 14,00          | 6,50 | 4 M5 x 10  |
| TL-OC-B44  | 44 | 46 | 12 to 22                             | 22,00          | 14,00          | 8,00           | 18,00          | 7,50 | 4 M6 x 12  |
| TL-OC-B55  | 55 | 50 | 14 to 28                             | 24,50          | 17,00          | 7,50           | 16,00          | 8,50 | 4 M8 x 14  |
| TL-OC-B70  | 70 | 57 | 19 to 35                             | 27,50          | 19,00          | 8,50           | 19,00          | 9,50 | 4 M10 x 16 |

\* All measures in mm unless otherwise indicated.

## Technical Specifications

| REFERENCE* | RATED      | MAX        | MISALIGNMENT ALLOWANCE |           |             | MAX SPEED | STIFNESS | WEIGHT |
|------------|------------|------------|------------------------|-----------|-------------|-----------|----------|--------|
|            | Torque N.m | Torque N.m | Axial am +             | Radial rm | Angular wm° | revs/min  | N.m/rad  | Gramm  |
| TL-OC-B15  | 3,00       | 6,00       | 0,10                   | 0,50      | 1,5         | 5000      | 860      | 15     |
| TL-OC-B17  | 5,00       | 10,00      | 0,10                   | 0,50      | 1,5         | 4000      | 1200     | 25     |
| TL-OC-B20  | 7,00       | 14,00      | 0,10                   | 0,60      | 1,5         | 4000      | 1600     | 37     |
| TL-OC-B26  | 10,00      | 20,00      | 0,10                   | 0,80      | 1,5         | 3800      | 3200     | 79     |
| TL-OC-B30  | 30,00      | 60,00      | 0,10                   | 1,00      | 1,5         | 3500      | 4500     | 120    |
| TL-OC-B34  | 34,00      | 68,00      | 0,10                   | 1,00      | 1,5         | 3200      | 6000     | 180    |
| TL-OC-B38  | 40,00      | 80,00      | 0,10                   | 1,00      | 1,5         | 3000      | 7200     | 255    |
| TL-OC-B44  | 50,00      | 100,00     | 0,10                   | 1,00      | 1,5         | 2500      | 15000    | 365    |
| TL-OC-B55  | 80,00      | 160,00     | 0,10                   | 1,00      | 1,5         | 2000      | 29000    | 620    |
| TL-OC-B70  | 160,00     | 320,00     | 0,10                   | 1,00      | 1,5         | 2000      | 45000    | 1050   |

\* All measures in mm unless otherwise mentioned.  
Sliding block element of Aluminum Bronze.  
Material, Stainless Steel 316F.



## Clamping type

| REFERENCE* | OD | L  | BORES $d_1/d_2$ | $L_f$ | $L_1$ | $L_2$ | $L_p$ | F    | M           |
|------------|----|----|-----------------|-------|-------|-------|-------|------|-------------|
| TL-OC-C16  | 16 | 22 | 4 to 6,35       | 10,80 | 3,00  | 3,30  | 7,00  | 3,40 | 2 M2.5 x 8  |
| TL-OC-C16  | 16 | 30 | 4 to 6,35       | 13,20 | 3,90  | 3,90  | 11,30 | 3,40 | 2 M2.5 x 8  |
| TL-OC-C20  | 20 | 28 | 5 to 8          | 13,80 | 3,50  | 3,30  | 7,00  | 4,00 | 2 M2.5 x 10 |
| TL-OC-C20  | 20 | 33 | 5 to 10         | 14,10 | 4,00  | 4,00  | 12,70 | 3,50 | 2 M2.5 x 10 |
| TL-OC-C25  | 25 | 28 | 6 to 11         | 13,70 | 5,00  | 5,00  | 10,00 | 3,90 | 2 M3 x 12   |
| TL-OC-C25  | 25 | 39 | 6 to 11         | 17,00 | 6,20  | 5,80  | 16,60 | 4,00 | 2 M3 x 12   |
| TL-OC-C32  | 32 | 35 | 8 to 14         | 17,20 | 6,00  | 5,70  | 12,00 | 4,75 | 2 M4 x 14   |
| TL-OC-C32  | 32 | 45 | 8 to 14         | 19,80 | 7,20  | 7,00  | 19,50 | 4,80 | 2 M4 x 14   |
| TL-OC-C40  | 40 | 50 | 8 to 19         | 22,60 | 7,20  | 6,80  | 18,40 | 5,60 | 2 M5 x 16   |
| TL-OC-C44  | 44 | 46 | 10 to 22        | 22,00 | 7,00  | 8,00  | 18,00 | 6,00 | 2 M5 x 16   |
| TL-OC-C50  | 50 | 58 | 10 to 22        | 28,50 | 9,00  | 9,50  | 20,00 | 7,50 | 2 M6 x 25   |
| TL-OC-C63  | 63 | 71 | 15 to 32        | 37,00 | 9,00  | 13,50 | 24,00 | 9,00 | 2 M8 x 25   |
| TL-OC-C70  | 70 | 77 | 19 to 35        | 41,50 | 16,50 | 16,50 | 27,00 | 9,00 | 2 M8 x 30   |

\* All measures in mm unless otherwise indicated.

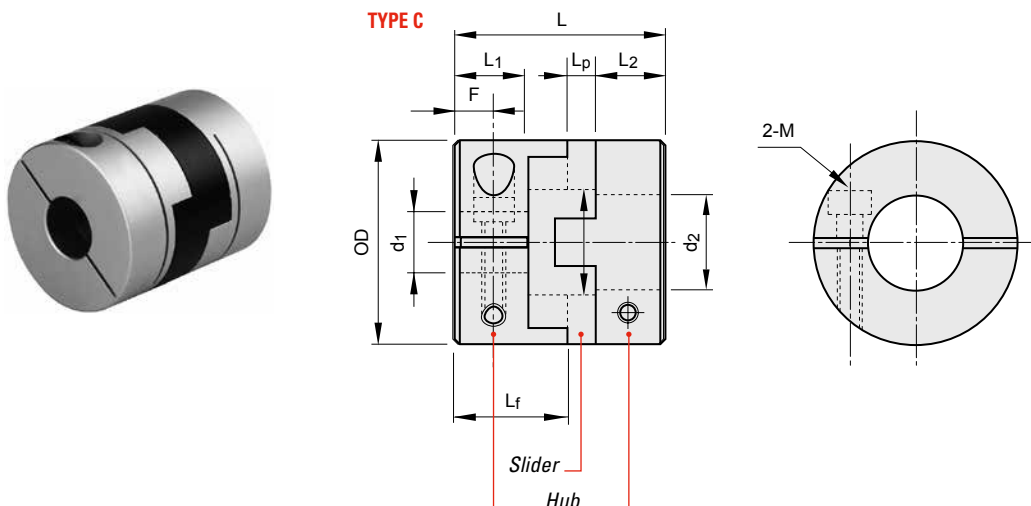
## Technical Specifications

| REFERENCE* | RATED      | MAX        | MISALIGNMENT ALLOWANCE |                      |                           | MAX SPEED | STIFFNESS | WEIGHT |
|------------|------------|------------|------------------------|----------------------|---------------------------|-----------|-----------|--------|
|            | Torque N.m | Torque N.m | Axial $\mu\text{m}$ +  | Radial $\mu\text{m}$ | Angular $\text{wm}^\circ$ | revs/min  | N.m/rad   | Gramm  |
| TL-OC-C16  | 0,70       | 1,40       | 0,20                   | 0,80                 | 3                         | 10000     | 30        | 9      |
| TL-OC-C16  | 0,70       | 1,40       | 0,20                   | 0,80                 | 3                         | 10000     | 30        | 12     |
| TL-OC-C20  | 1,00       | 2,00       | 0,20                   | 1,00                 | 3                         | 10000     | 45        | 16     |
| TL-OC-C20  | 1,20       | 2,40       | 0,20                   | 1,20                 | 3                         | 10000     | 58        | 19     |
| TL-OC-C25  | 1,50       | 3,00       | 0,20                   | 1,20                 | 3                         | 10000     | 120       | 32     |
| TL-OC-C25  | 2,00       | 4,00       | 0,20                   | 1,50                 | 3                         | 10000     | 130       | 35     |
| TL-OC-C32  | 3,50       | 7,00       | 0,20                   | 1,50                 | 3                         | 9000      | 250       | 47     |
| TL-OC-C32  | 4,50       | 9,00       | 0,20                   | 1,80                 | 3                         | 8000      | 270       | 67     |
| TL-OC-C40  | 9,00       | 16,00      | 0,20                   | 2,00                 | 3                         | 7500      | 520       | 114    |
| TL-OC-C44  | 12,00      | 24,00      | 0,20                   | 2,00                 | 3                         | 7500      | 560       | 136    |
| TL-OC-C50  | 19,00      | 38,00      | 0,20                   | 2,00                 | 3                         | 7000      | 800       | 215    |
| TL-OC-C63  | 33,00      | 66,00      | 0,20                   | 2,00                 | 3                         | 6300      | 1200      | 465    |
| TL-OC-C70  | 36,00      | 72,00      | 0,20                   | 2,00                 | 3                         | 6000      | 4800      | 490    |

\* All measures in mm unless otherwise mentioned.

Sliding block element of Polyamide PA66.

Material, Anodized High Strength Aluminum.



## Clamping type

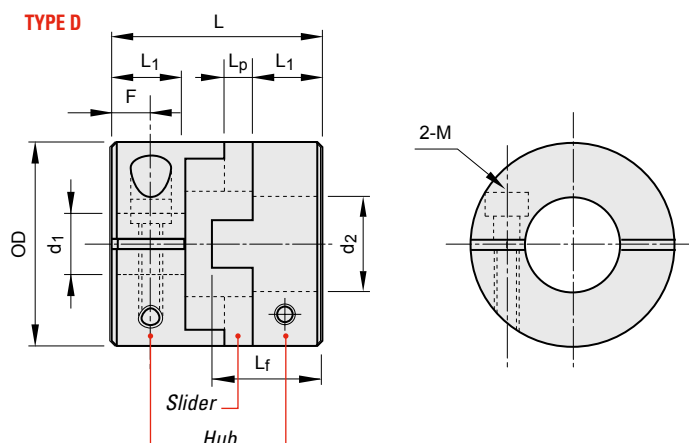
| REFERENCE* | OD    | L     | BORES d <sub>1</sub> /d <sub>2</sub> | L <sub>f</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>p</sub> | F    | M      |
|------------|-------|-------|--------------------------------------|----------------|----------------|----------------|----------------|------|--------|
| TL-OC-D16  | 16,00 | 22,00 | 3 to 6                               | 10,80          | 7,50           | 3,30           | 3,30           | 3,40 | 2 M2,5 |
| TL-OC-D20  | 20,00 | 28,00 | 5 to 8                               | 13,80          | 10,50          | 3,30           | 3,30           | 4,00 | 2 M3   |
| TL-OC-D26  | 26,00 | 30,00 | 5 to 12                              | 14,70          | 9,50           | 5,20           | 5,20           | 3,90 | 2 M3   |
| TL-OC-D30  | 30,00 | 35,00 | 5 to 14                              | 17,20          | 11,50          | 5,70           | 5,70           | 4,75 | 2 M4   |
| TL-OC-D32  | 32,00 | 35,00 | 5 to 14                              | 17,20          | 11,50          | 5,70           | 5,70           | 4,75 | 2 M4   |
| TL-OC-D34  | 34,00 | 35,00 | 5 to 16                              | 17,20          | 11,50          | 5,70           | 5,70           | 4,75 | 2 M4   |
| TL-OC-D38  | 38,00 | 40,00 | 8 to 19                              | 19,70          | 13,00          | 5,70           | 5,70           | 5,25 | 2 M4   |
| TL-OC-D44  | 44,00 | 46,00 | 8 to 22                              | 22,00          | 14,00          | 8,00           | 8,00           | 6,00 | 2 M5   |
| TL-OC-D55  | 54,50 | 53,00 | 12 to 28                             | 26,00          | 16,50          | 9,50           | 9,50           | 7,50 | 2 M6   |
| TL-OC-D55  | 54,50 | 58,00 | 12 to 28                             | 28,50          | 19,00          | 9,50           | 9,50           | 7,50 | 2 M6   |
| TL-OC-D63  | 63,00 | 71,00 | 14 to 32                             | 37,00          | 23,50          | 13,50          | 13,50          | 9,00 | 2 M8   |
| TL-OC-D70  | 69,50 | 77,00 | 14 to 35                             | 41,50          | 25,00          | 16,50          | 16,50          | 9,00 | 3 M8   |

\* All measures in mm unless otherwise indicated.

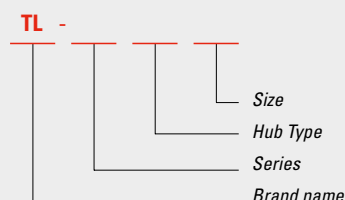
## Technical Specifications

| REFERENCE* | RATED      | MAX        | MISALIGNMENT ALLOWANCE |           |             | MAX SPEED | STIFFNESS | WEIGHT |
|------------|------------|------------|------------------------|-----------|-------------|-----------|-----------|--------|
|            | Torque N.m | Torque N.m | Axial am +             | Radial rm | Angular wm° | revs/min  | N.m/rad   | Gramm  |
| TL-OC-D16  | 4,00       | 8,00       | 0,10                   | 0,50      | 1,5         | 4500      | 1100      | 28     |
| TL-OC-D20  | 7,00       | 14,00      | 0,10                   | 0,60      | 1,5         | 4000      | 1600      | 47     |
| TL-OC-D26  | 10,00      | 20,00      | 0,10                   | 0,80      | 1,5         | 3800      | 3200      | 85     |
| TL-OC-D30  | 30,00      | 60,00      | 0,10                   | 1,00      | 1,5         | 3500      | 4500      | 135    |
| TL-OC-D32  | 32,00      | 64,00      | 0,10                   | 1,00      | 1,5         | 3300      | 5000      | 150    |
| TL-OC-D34  | 34,00      | 68,00      | 0,10                   | 1,00      | 1,5         | 3200      | 6000      | 173    |
| TL-OC-D38  | 40,00      | 80,00      | 0,10                   | 1,00      | 1,5         | 3000      | 7200      | 235    |
| TL-OC-D44  | 50,00      | 100,00     | 0,10                   | 1,00      | 1,5         | 2500      | 15000     | 370    |
| TL-OC-D55  | 70,00      | 140,00     | 0,10                   | 1,00      | 2,5         | 2000      | 29000     | 720    |
| TL-OC-D55  | 80,00      | 160,00     | 0,10                   | 1,00      | 3,5         | 2000      | 29000     | 750    |
| TL-OC-D63  | 120,00     | 240,00     | 0,10                   | 1,00      | 4,5         | 2000      | 41000     | 1213   |
| TL-OC-D70  | 160,00     | 320,00     | 0,10                   | 1,00      | 5,5         | 2000      | 45000     | 1360   |

\* All measures in mm unless otherwise mentioned.  
Sliding block element of Aluminum Bronze.  
Material, Stainless Steel 316F.



## GUIDE TO ORDER



Size:  
DC 005 to 100  
DCA 070 to 100

Hub Type:  
OA - OB - OC  
Double TA - TB - TC

Series:  
DC Single  
DC Double  
DC-A Single  
DC-A Double

Brand name:  
TL

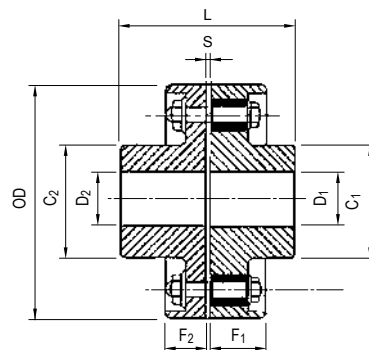
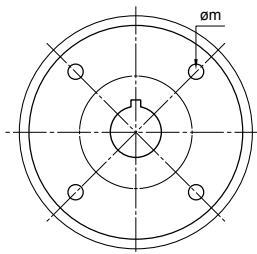
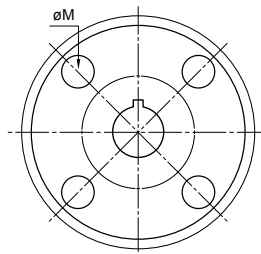
## Pin Bush Couplings

Consist of two hub sections connected by steel pins and elastomer buffers. They are able to transmit high torque at high speeds while the elastomers compensate for the misalignments produced by either the shaft's load or temperature variations. They can operate at environment temperatures from -20°C to +70°C, they require only a little maintenance, the buffer elastomers are the only wearing parts and they are suitable for horizontal and vertical applications.

The elastomer and pins are mounted on one side and on bigger models can be delivered with elastomers mounted on the hubs on alternate sides.

**Materials:** Hubs made of Cast Iron and elastomers are of NBR Shore A65, Shore A80 or Shore A90.

The Hubs are connected to the driving shaft by keyway. The torque is transmitted through the elastomers to the Hub onto the driven shaft side connected by keyway as well. We supply them with Pilot Bore (MPB), Bored to Size (BTS) or Keyway.



| REFERENCE* | OD  | L      | MAX D <sub>1</sub> /D <sub>2</sub> | C <sub>1</sub> | C <sub>2</sub> | F <sub>1</sub> | F <sub>2</sub> | n  | DIA   |       | s | BOLT SIZE | ELEMENT TYPE |
|------------|-----|--------|------------------------------------|----------------|----------------|----------------|----------------|----|-------|-------|---|-----------|--------------|
|            |     |        |                                    |                |                |                |                |    | m     | M     |   |           |              |
| TL-PB-76   | 76  | 27,00  | 15                                 | 33,50          | 33,50          | 11,00          | 11,00          | 3  | 8,00  | 18,00 | 3 | M8 x 46   | F0           |
| TL-PB-90   | 90  | 28,00  | 20                                 | 35,50          | 35,50          | 14,00          | 14,00          | 4  | 8,00  | 19,00 | 3 | M8 x 50   | F1           |
| TL-PB-100  | 100 | 35,50  | 25                                 | 42,50          | 42,50          | 16,00          | 16,00          | 4  | 10,00 | 23,00 | 3 | M10 x 56  | F2           |
| TL-PB-112  | 112 | 40,00  | 28                                 | 50,00          | 50,00          | 16,00          | 16,00          | 4  | 10,00 | 23,00 | 3 | M10 x 56  | F2           |
| TL-PB-125  | 125 | 45,00  | 32                                 | 56,00          | 50,00          | 18,00          | 18,00          | 4  | 14,00 | 32,00 | 3 | M12 x 64  | F3           |
| TL-PB-130  | 130 | 45,00  | 32                                 | 61,00          | 55,00          | 18,00          | 18,00          | 4  | 14,00 | 32,00 | 3 | M12 x 64  | F3           |
| TL-PB-140  | 140 | 50,00  | 38                                 | 71,00          | 63,00          | 18,00          | 18,00          | 6  | 14,00 | 32,00 | 3 | M12 x 64  | F3           |
| TL-PB-150  | 150 | 55,00  | 40                                 | 75,00          | 70,00          | 18,00          | 18,00          | 8  | 14,00 | 32,00 | 3 | M12 x 64  | F3           |
| TL-PB-160  | 160 | 56,00  | 45                                 | 80,00          | 80,00          | 18,00          | 18,00          | 8  | 14,00 | 32,00 | 3 | M12 x 64  | F3           |
| TL-PB-165  | 165 | 60,00  | 45                                 | 83,00          | 83,00          | 18,00          | 18,00          | 8  | 14,00 | 32,00 | 3 | M12 x 64  | F3           |
| TL-PB-180  | 180 | 63,00  | 50                                 | 90,00          | 90,00          | 18,00          | 18,00          | 8  | 14,00 | 32,00 | 3 | M12 x 64  | F3           |
| TL-PB-200  | 200 | 71,00  | 56                                 | 100,00         | 100,00         | 22,40          | 22,40          | 8  | 20,00 | 41,00 | 4 | M20 x 85  | F4           |
| TL-PB-224  | 224 | 80,00  | 63                                 | 112,00         | 112,00         | 22,40          | 22,40          | 8  | 20,00 | 41,00 | 4 | M20 x 85  | F4           |
| TL-PB-235  | 235 | 85,00  | 65                                 | 117,00         | 117,00         | 22,40          | 22,40          | 8  | 20,00 | 41,00 | 4 | M20 x 85  | F4           |
| TL-PB-250  | 250 | 90,00  | 71                                 | 125,00         | 125,00         | 28,00          | 28,00          | 8  | 25,00 | 51,00 | 4 | M24 x 100 | F5           |
| TL-PB-280  | 280 | 100,00 | 80                                 | 140,00         | 140,00         | 28,00          | 40,00          | 8  | 25,00 | 57,00 | 4 | M24 x 116 | F6           |
| TL-PB-300  | 300 | 110,00 | 85                                 | 155,00         | 155,00         | 28,00          | 40,00          | 8  | 28,00 | 57,00 | 4 | M24 x 116 | F6           |
| TL-PB-315  | 315 | 112,00 | 90                                 | 160,00         | 160,00         | 28,00          | 40,00          | 10 | 28,00 | 57,00 | 4 | M24 x 116 | F6           |
| TL-PB-355  | 355 | 125,00 | 100                                | 180,00         | 180,00         | 35,50          | 56,00          | 8  | 28,00 | 72,00 | 5 | M30 x 150 | F7           |
| TL-PB-380  | 380 | 125,00 | 105                                | 190,00         | 190,00         | 35,50          | 56,00          | 10 | 35,50 | 72,00 | 5 | M30 x 150 | F7           |
| TL-PB-400  | 400 | 125,00 | 110                                | 200,00         | 200,00         | 35,50          | 56,00          | 10 | 35,50 | 72,00 | 5 | M30 x 150 | F7           |
| TL-PB-420  | 420 | 130,00 | 115                                | 210,00         | 210,00         | 35,50          | 56,00          | 10 | 35,50 | 72,00 | 5 | M30 x 150 | F7           |
| TL-PB-430  | 430 | 132,00 | 120                                | 213,00         | 213,00         | 35,50          | 56,00          | 12 | 35,50 | 72,00 | 5 | M30 x 150 | F7           |
| TL-PB-450  | 450 | 140,00 | 125                                | 224,00         | 224,00         | 35,50          | 56,00          | 12 | 35,50 | 72,00 | 5 | M30 x 150 | F7           |

\* All measures in mm unless otherwise mentioned.

Supplied MPB, BTS or Keyway.

GG25 Cast Iron Hubs.

C45 Steel Bolts and Nuts.



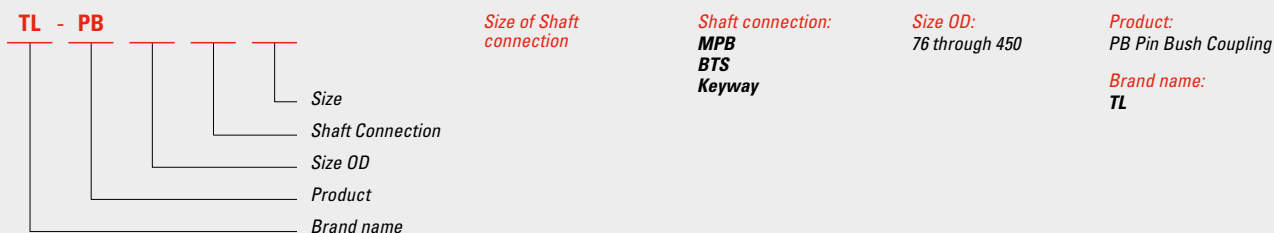
## Service Factors Guide

| LOAD TORQUE |             | PRIME MOVER    |               |                       |           |
|-------------|-------------|----------------|---------------|-----------------------|-----------|
| TYPE        |             | ELECTRIC MOTOR | WATER TURBINE | RECIPROCATING ENGINES |           |
|             |             |                |               | > pistons             | < pistons |
| LD          | Light Duty  | 1              | 1,25          | 1,5                   | 2         |
| MD          | Medium Duty | 1,75           | 2             | 2,25                  | 3         |
| HD          | Heavy Duty  | 2,25           | 2,5           | 2,75                  | 3,5       |



Yellow zinc plated  
Elastomer Buffer Pin with Grower  
and Nut

## GUIDE TO ORDER



## Mechanical Flexing Couplings

As described these types operate with mechanisms between shafts,

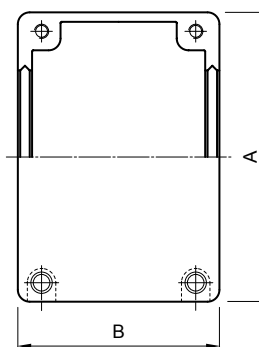
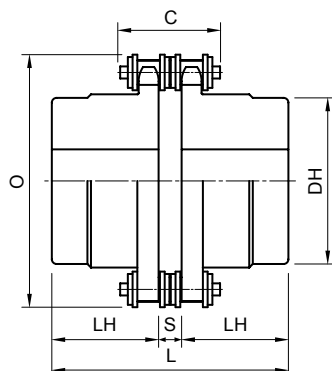
from which they attain their flexibility.

## Chain Couplings

Consist of two symmetric hub-sprockets connected together with a double strand roller chain. The result is a very simple and compact coupling set. The torque is transmitted by the roller chain and is distributed throughout the whole of it. This type of coupling absorbs vibrations and pulsating loads. For this type of loads it is recommended using one size above than the technical data prescribes.

This type of couplings are mainly used in low to moderate speed.

A cover case is available, protecting the coupling on one side and as a grease reservoir for the roller chain.



## Chain Couplings Sizes

| REFERENCE** | CHAIN PITCH | COUPLING        |         |     |     |        |        |      |       |       |                   | COUPLING CASE |     |                   |
|-------------|-------------|-----------------|---------|-----|-----|--------|--------|------|-------|-------|-------------------|---------------|-----|-------------------|
|             |             | PILOT BORE BORE | BORE MM |     | O   | L      | DH     | LH   | S     | C     | APPROX. WEIGHT KG | A             | B   | APPROX. WEIGHT KG |
|             |             |                 | min     | max |     |        |        |      |       |       |                   |               |     |                   |
| TL-CC-3012  | 9,525       | 12,00           | 13,50   | 16  | 45  | 65,00  | 27,20  | 29,5 | 6,00  | 10,10 | 0,31              | 69            | 63  | 0,22 €            |
| TL-CC-4012  | 12,700      | 12,00           | 14,00   | 22  | 62  | 79,40  | 36,00  | 36   | 7,40  | 14,40 | 0,73              | 77            | 72  | 0,30 €            |
| TL-CC-4014  | 12,700      | 12,00           | 14,00   | 28  | 69  | 79,40  | 45,00  | 36   | 7,40  | 14,40 | 1,12              | 84            | 75  | 0,31 €            |
| TL-CC-4016  | 12,700      | 13,50           | 16,00   | 32  | 77  | 87,40  | 51,50  | 40   | 7,40  | 14,40 | 1,50              | 92            | 72  | 0,35 €            |
| TL-CC-5014  | 15,875      | 14,50           | 17,00   | 35  | 86  | 99,70  | 56,00  | 45   | 9,70  | 18,10 | 2,15              | 101           | 85  | 0,47 €            |
| TL-CC-5016  | 15,875      | 14,50           | 18,00   | 40  | 96  | 99,70  | 64,00  | 45   | 9,70  | 18,10 | 2,75              | 110           | 87  | 5,00 €            |
| TL-CC-5018  | 15,875      | 16,00           | 18,00   | 45  | 106 | 99,70  | 7,35   | 45   | 9,70  | 18,10 | 3,60              | 122           | 85  | 0,60 €            |
| TL-CC-6018  | 19,050      | 20,00           | 22,00   | 56  | 127 | 123,50 | 89,50  | 56   | 11,50 | 22,80 | 6,55              | 147           | 105 | 1,20 €            |
| TL-CC-6020  | 19,050      | 20,00           | 24,00   | 60  | 139 | 123,50 | 102,50 | 56   | 11,50 | 22,80 | 8,38              | 158           | 105 | 1,20 €            |
| TL-CC-6022  | 19,050      | 20,00           | 28,00   | 71  | 151 | 123,50 | 115,00 | 56   | 11,50 | 22,80 | 10,40             | 168           | 117 | 1,20 €            |
| TL-CC-8018  | 20,400      | 20,00           | 32,00   | 80  | 169 | 141,20 | 115,00 | 63   | 15,20 | 29,30 | 13,20             | 190           | 129 | 1,90 €            |
| TL-CC-8020  | 20,400      | 20,00           | 36,00   | 90  | 185 | 145,20 | 125,00 | 65   | 15,20 | 29,30 | 16,20             | 210           | 137 | 2,50 €            |
| TL-CC-8022  | 20,400      | 20,00           | 40,00   | 100 | 202 | 157,20 | 142,00 | 71   | 15,20 | 29,30 | 21,80             | 226           | 137 | 2,70 €            |
| TL-CC-10020 | 31,750      | 25,00           | 45,00   | 110 | 233 | 178,80 | 162,00 | 80   | 18,80 | 35,80 | 32,40             | 281           | 153 | 4,10 €            |
| TL-CC-12018 | 38,100      | 35,00           | 50,00   | 125 | 256 | 202,70 | 173,00 | 90   | 22,70 | 45,40 | 43,20             | 307           | 181 | 5,20 €            |
| TL-CC-12022 | 38,100      | 35,00           | 56,00   | 140 | 304 | 222,70 | 213,00 | 100  | 22,70 | 45,40 | 69,10             | 357           | 181 | 6,70 €            |

Offered with Pilot Bore as Standard, BTS or Keyway. Delivery under MTO with QD Type Bush.

\*\* All measures in mm unless otherwise indicated.



Chain Coupling Assembly



Chain Coupling Keyway



Chain Coupling Pilot Bore

## Power Ratings, kW

| SPEED<br>REVS/MIN | COUPLING TL-CC- |       |       |       |       |       |       |       |        |        |        |        |        |        |
|-------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
|                   | 3012            | 4012  | 4014  | 4016  | 5014  | 5016  | 5018  | 6018  | 6022   | 8018   | 8022   | 10020  | 12018  | 12022  |
| 1                 | 0,01            | 0,02  | 0,03  | 0,04  | 0,06  | 0,08  | 0,10  | 0,18  | 0,25   | 0,41   | 0,59   | 0,93   | 1,40   | 1,81   |
| 5                 | 0,05            | 0,11  | 0,16  | 0,21  | 0,30  | 0,39  | 0,50  | 0,93  | 1,25   | 2,07   | 2,96   | 4,66   | 7,02   | 9,07   |
| 10                | 0,11            | 0,22  | 0,32  | 0,41  | 0,60  | 0,78  | 0,99  | 1,87  | 2,51   | 4,14   | 5,93   | 9,33   | 14,00  | 1,81   |
| 25                | 0,26            | 0,58  | 0,79  | 1,03  | 1,50  | 1,95  | 2,48  | 4,67  | 6,31   | 10,30  | 14,80  | 23,30  | 35,10  | 45,30  |
| 50                | 0,52            | 1,15  | 1,58  | 2,06  | 3,00  | 3,91  | 4,95  | 9,33  | 12,50  | 20,70  | 29,60  | 46,60  | 70,20  | 90,70  |
| 100               | 0,79            | 1,73  | 2,36  | 3,09  | 4,48  | 5,86  | 7,43  | 14,00 | 18,80  | 31,00  | 44,50  | 70,00  | 105,00 | 136,00 |
| 200               | 1,21            | 2,63  | 3,59  | 4,69  | 6,80  | 8,92  | 11,30 | 21,30 | 28,60  | 47,20  | 67,20  | 106,00 | 160,00 | 206,00 |
| 300               | 1,58            | 3,46  | 4,72  | 6,17  | 8,95  | 11,70 | 14,90 | 28,00 | 37,70  | 62,10  | 89,00  | 140,00 | 210,00 | 272,00 |
| 400               | 1,89            | 4,15  | 5,66  | 7,41  | 10,70 | 14,10 | 17,80 | 33,60 | 45,30  | 74,50  | 106,00 | 168,00 | 252,00 | 326,00 |
| 500               | 2,26            | 4,96  | 6,77  | 8,85  | 12,80 | 16,80 | 21,30 | 40,10 | 54,10  | 89,00  | 127,00 | 200,00 | 302,00 | 390,00 |
| 600               | 2,58            | 5,67  | 7,72  | 10,10 | 14,70 | 19,20 | 24,40 | 45,90 | 61,90  | 101,00 | 146,00 | 229,00 | 345,00 | 446,00 |
| 800               | 3,19            | 7,01  | 9,56  | 12,50 | 18,10 | 23,80 | 30,10 | 56,80 | 76,50  | 126,00 | 180,00 | 283,00 | 426,00 | 551,00 |
| 1000              | 3,88            | 8,53  | 11,60 | 15,30 | 22,10 | 28,90 | 36,60 | 69,10 | 93,10  | 153,00 | 219,00 | 345,00 | 519,00 | 671,00 |
| 1200              | 4,41            | 9,68  | 13,20 | 17,30 | 25,10 | 32,90 | 41,60 | 78,40 | 105,00 | 174,00 | 249,00 | 392,00 | 590,00 | 762,00 |
| 1500              | 5,35            | 11,60 | 15,80 | 21,00 | 30,00 | 39,90 | 50,50 | 95,20 | 128,00 | 211,00 | 302,00 | 476,00 | 716,00 |        |

NEXT >



## Power Ratings, kW

| SPEED<br>REVS./MIN | COUPLING TL-CC- |       |       |       |       |       |       |        |        |        |        |        |       |       |
|--------------------|-----------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|-------|
|                    | 3012            | 4012  | 4014  | 4016  | 5014  | 5016  | 5018  | 6018   | 6022   | 8018   | 8022   | 10020  | 12018 | 12022 |
| 1800               | 6,25            | 13,70 | 18,70 | 24,40 | 35,40 | 46,40 | 58,80 | 111,00 | 149,00 | 246,00 | 352,00 | 554,00 |       |       |
| 2500               | 6,73            | 14,80 | 20,20 | 26,30 | 38,30 | 50,00 | 63,40 | 120,00 | 161,00 | 265,00 | 379,00 |        |       |       |
| 2800               | 8,12            | 17,90 | 24,40 | 31,90 | 46,20 | 60,60 | 76,80 | 145,00 | 195,00 |        |        |        |       |       |
| 3000               | 9,44            | 20,70 | 28,30 | 37,00 | 53,60 | 70,40 | 89,20 |        |        |        |        |        |       |       |
| 3600               | 11,00           | 24,10 | 32,90 | 43,00 | 62,40 | 81,60 |       |        |        |        |        |        |       |       |
| 4000               | 12,00           | 26,30 | 35,90 | 46,90 |       |       |       |        |        |        |        |        |       |       |
| 4800               | 14,00           | 30,80 | 42,10 | 54,90 |       |       |       |        |        |        |        |        |       |       |
| 5200               | 14,80           |       |       |       |       |       |       |        |        |        |        |        |       |       |
| 6000               | 16,70           |       |       |       |       |       |       |        |        |        |        |        |       |       |

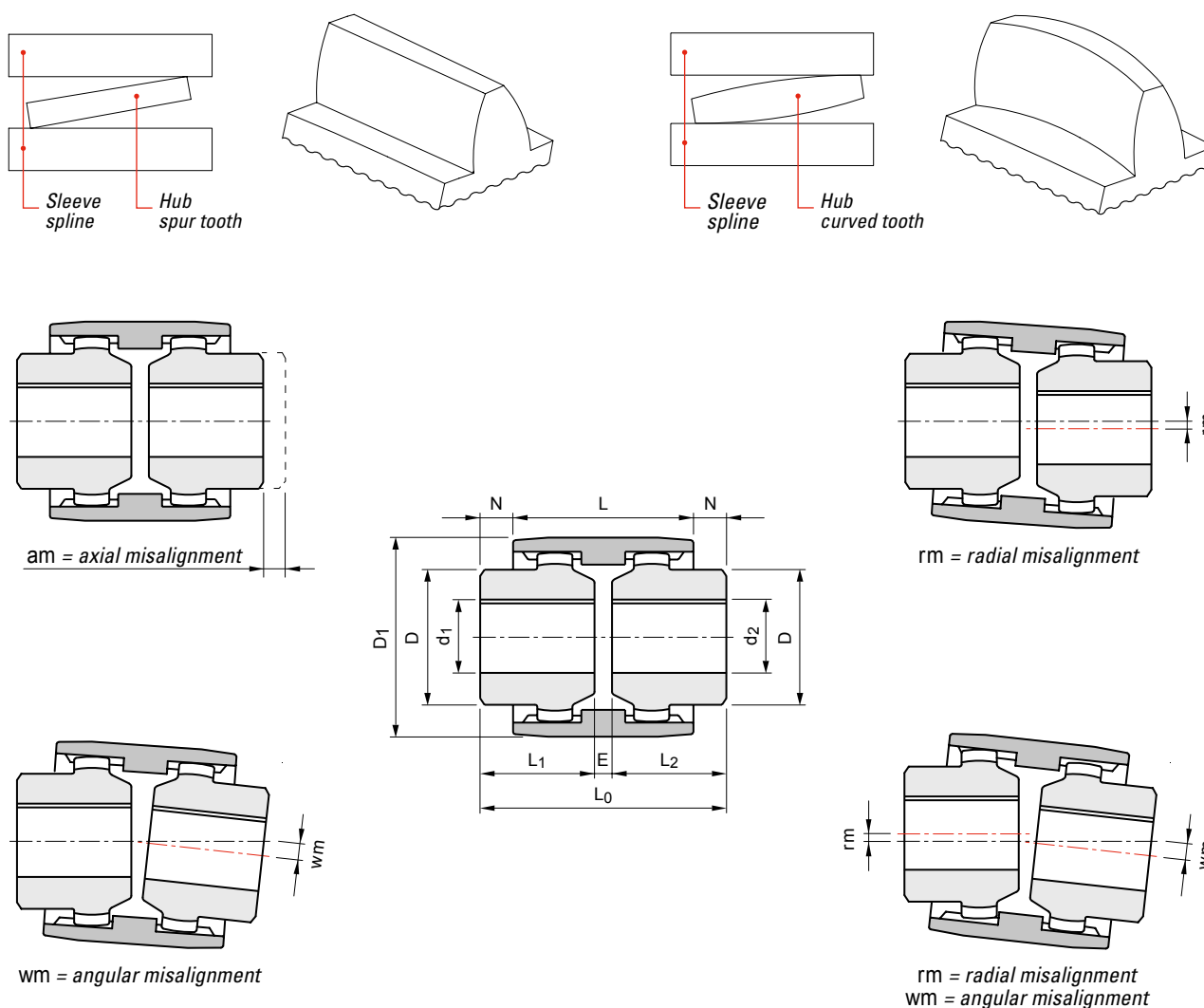
## Gear couplings

Consist of two hubs with external crown gears, which mesh with internal gear of flanged sleeves, bolted together. This type of couplings absorb angular and axial misalignments, the former by the rocking of the crown gear and the latter by the sliding against the sleeve teeth. They transmit the highest torque in the smallest diameter.

Our Series GC is a combination of a Sleeve and Gear Coupling where an inside-geared nylon and the outside-geared steel hubs mesh. The external hub teeth is designed according the curved tooth principle resulting to a minimum edge pressure in the spline.

The splined sleeve is made out of nylon, which provides smoothness, hardness, flexibility, sliding ease, no embrittlement at low temperature, high mechanical properties, high resistance to chemical agents, high electrical insulation and high stiffness.

The combination of the nylon sleeve and the steel-curved-tooth hubs make their meshing action to be practically free of wear. In this type of coupling the double-cardanic action counterbalance the axial, parallel and angular misalignments at the time its transmits power.





## Nylon-Sleeve Gear Coupling

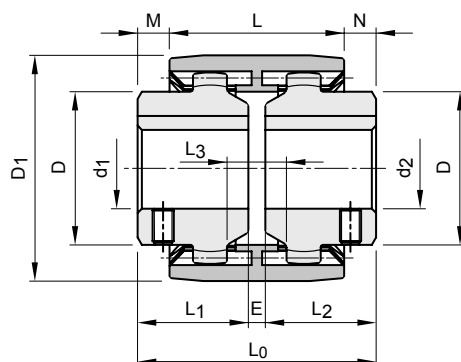
| REFERENCE*   | d <sub>1</sub> | d <sub>2</sub> | L   | L <sub>0</sub> | N - M | E  | L <sub>1</sub> - L <sub>2</sub> | D   | D <sub>1</sub> | TORQUE<br>N.m |      | MAX<br>SPEED | WEIGHT<br>Kg |        |
|--------------|----------------|----------------|-----|----------------|-------|----|---------------------------------|-----|----------------|---------------|------|--------------|--------------|--------|
|              | MPB            | max            |     |                |       |    |                                 |     |                | Rated         | max  | rpm          | Hub          | Sleeve |
| TL-GC14-37   |                | 14             | 37  | 50             | 6,50  | 4  | 23                              | 24  | 40             | 10            | 30   | 14000        | 0,110        | 0,030  |
| TL-GC19-37   |                | 19             | 37  | 54             | 8,50  | 4  | 25                              | 30  | 48             | 16            | 48   | 11800        | 0,180        | 0,030  |
| TL-GC24-41   |                | 24             | 41  | 56             | 7,50  | 4  | 26                              | 36  | 52             | 20            | 60   | 10600        | 0,210        | 0,040  |
| TL-GC28-46   |                | 28             | 46  | 84             | 19,00 | 4  | 40                              | 44  | 66             | 45            | 135  | 8500         | 0,540        | 0,080  |
| TL-GC32-48   |                | 32             | 48  | 84             | 18,00 | 4  | 40                              | 50  | 76             | 80            | 180  | 7500         | 0,740        | 0,090  |
| TL-GC38-48   |                | 38             | 48  | 84             | 18,00 | 4  | 40                              | 58  | 83             | 80            | 240  | 6700         | 0,910        | 0,130  |
| TL-GC42-50   |                | 42             | 50  | 88             | 19,00 | 4  | 42                              | 65  | 92             | 100           | 300  | 6000         | 1,270        | 0,140  |
| TL-GC48-50   |                | 48             | 50  | 104            | 27,00 | 4  | 50                              | 67  | 95             | 140           | 420  | 5600         | 1,200        | 0,230  |
| TL-GC55-55   |                | 55             | 58  | 108            | 25,00 | 4  | 52                              | 82  | 114            | 240           | 800  | 5000         | 2,140        | 0,360  |
| TL-GC65-65   |                | 65             | 68  | 114            | 23,00 | 4  | 55                              | 95  | 132            | 380           | 1140 | 4000         | 3,030        | 0,550  |
| TL-GC80-93   | 25             | 80             | 93  | 186            | 46,50 | 6  | 90                              | 124 | 175            | 700           | 2100 | 3150         | 9,800        | 1,130  |
| TL-GC100-102 | 35             | 100            | 102 | 228            | 63,00 | 8  | 110                             | 152 | 210            | 1200          | 3600 | 3000         | 17,690       | 1,780  |
| TL-GC125-134 | 45             | 125            | 134 | 290            | 78,00 | 10 | 140                             | 192 | 270            | 2500          | 7500 | 2120         | 36,850       | 3,880  |

\* All measures in mm.

Bore tapered versions of 1:5 and 1:8 are available.

Inch bores available.

**Hubs available:** With Feather Keyway & Setscrew - **With Spline Bore:** Metric DIN5480 & Imperial ANSI B92.1 - With Single Clamping Hub & Feather Keyway - With Clamping Hub & Spline Bore.



Nylon-Sleeve-Gear-Coupling  
Hub. MPB



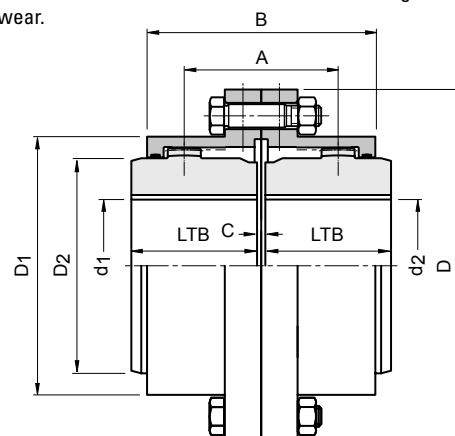
Nylon Sleeve

## All metal Gear Coupling

All metal gear coupling is a torsional rigid gear coupling whereas two hubs crowned by gear teeth are connected to the shafts. The crown gear teeth mesh with the internal gear teeth of two flanged sleeves, which in turn are bolted together.

The driving shaft transmits the torque to the driven shaft through the

coupling teeth. This type of coupling absorbs the axial misalignment given that the gear teeth sleeve is far wider than the external hub gear teeth, absorbs angular misalignment as the teeth of the coupling are crowned what permits an angular shift which at the same time benefits to distribute the lubricant film in the teeth flange and improving the wear.

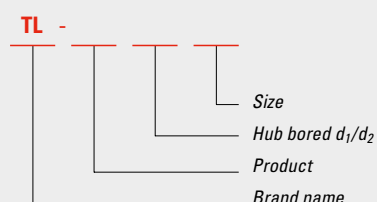


### All Metal Gear Couplings Sizes

| REFERENCE* | D    | D <sub>1</sub> | D <sub>2</sub> | LTB      | C  | A   | B   | d <sub>1</sub> /d <sub>2</sub> | TORQUE | SPEED |
|------------|------|----------------|----------------|----------|----|-----|-----|--------------------------------|--------|-------|
| TL-GC-A-1  | 103  | 71             | 50             | 38 to 82 | 8  | 36  | 76  | 16 to 35                       | 0,40   | 4000  |
| TL-GC-A-2  | 115  | 83             | 60             | 39 to 82 | 8  | 42  | 88  | 20 to 45                       | 0,71   | 4000  |
| TL-GC-A-3  | 127  | 95             | 75             | 40 to 82 | 8  | 44  | 90  | 22 to 55                       | 1,12   | 4000  |
| TL-GC-A-4  | 149  | 116            | 90             | 41 to 82 | 8  | 49  | 98  | 38 to 65                       | 1,80   | 4000  |
| TL-GC-A-5  | 157  | 134            | 105            | 42 to 82 | 10 | 55  | 108 | 40 to 75                       | 3,15   | 4000  |
| TL-GC-A-6  | 187  | 153            | 125            | 43 to 82 | 10 | 56  | 110 | 45 to 90                       | 5,00   | 4000  |
| TL-GC-A-7  | 204  | 170            | 140            | 44 to 82 | 10 | 60  | 118 | 50 to 100                      | 7,10   | 3735  |
| TL-GC-A-8  | 230  | 186            | 155            | 45 to 82 | 12 | 67  | 142 | 55 to 110                      | 10,00  | 3300  |
| TL-GC-A-9  | 256  | 212            | 180            | 46 to 82 | 12 | 69  | 146 | 60 to 130                      | 16,00  | 3000  |
| TL-GC-A-10 | 287  | 239            | 200            | 47 to 82 | 14 | 78  | 164 | 65 to 150                      | 22,40  | 2650  |
| TL-GC-A-11 | 325  | 276            | 235            | 48 to 82 | 14 | 81  | 170 | 70 to 175                      | 35,50  | 2350  |
| TL-GC-A-12 | 362  | 313            | 270            | 49 to 82 | 16 | 89  | 190 | 75 to 200                      | 50,00  | 2100  |
| TL-GC-A-13 | 412  | 350            | 300            | 50 to 82 | 18 | 98  | 208 | 150 to 220                     | 71,00  | 1850  |
| TL-GC-A-14 | 462  | 420            | 335            | 51 to 82 | 22 | 172 | 296 | 170 to 250                     | 112,00 | 1650  |
| TL-GC-A-15 | 512  | 470            | 380            | 52 to 82 | 22 | 182 | 316 | 190 to 280                     | 180,00 | 1500  |
| TL-GC-A-16 | 580  | 522            | 430            | 53 to 82 | 28 | 209 | 354 | 220 to 320                     | 250,00 | 1300  |
| TL-GC-A-17 | 644  | 582            | 490            | 54 to 82 | 28 | 198 | 364 | 250 to 360                     | 355,00 | 1200  |
| TL-GC-A-18 | 726  | 658            | 540            | 55 to 82 | 32 | 222 | 430 | 280 to 400                     | 500,00 | 1050  |
| TL-GC-A-19 | 818  | 748            | 630            | 56 to 82 | 32 | 232 | 440 | 300 to 460                     | 710,00 | 950   |
| TL-GC-A-20 | 928  | 838            | 720            | 57 to 82 | 32 | 247 | 470 | 360 to 530                     | 1000   | 800   |
| TL-GC-A-21 | 1022 | 928            | 810            | 58 to 82 | 40 | 255 | 490 | 400 to 600                     | 1400   | 750   |
| TL-GC-A-22 | 1134 | 1036           | 915            | 59 to 82 | 40 | 262 | 510 | 450 to 670                     | 1800   | 650   |
| TL-GC-A-23 | 1282 | 1178           | 1030           | 60 to 82 | 50 | 299 | 580 | 530 to 750                     | 2500   | 600   |
| TL-GC-A-24 | 1428 | 1322           | 1175           | 61 to 82 | 50 | 317 | 610 | 560 to 850                     | 3550   | 550   |
| TL-GC-A-25 | 1644 | 1538           | 1390           | 62 to 82 | 50 | 325 | 620 | 670 to 1000                    | 4500   | 460   |

\* All measures in mm unless otherwise indicated.  
Delivery choice: MPB, Keyway.

### GUIDE TO ORDER



Size:  
GC 40 to 270  
GC-A 103 to 1644

Hub Bored d<sub>1</sub>/d<sub>2</sub>:  
GC: 1 With feather keyway and Set Screw.  
2 With Spline Bore:  
2.1 Metric  
2.2 Imperial  
3 With Clamping hub and feather keyway.  
4 With Clamping hub and Spline Bore.

Product  
GC Gear Coupling  
GC-A Gear Coupling

Brand name:  
TL

GC-A: Feather Keyway