

TRASCO is a torsionally flexible jaw coupling. It is able to compensate for shaft angular, radial and axial displacement.



## TABLE OF CONTENTS

<b>1. Technical Data</b>	1.1 Description 1.2 Hubs 1.3 Spider
<b>2. Hints</b>	2.1 General Hints 2.2 Proper Use 2.3 Performance
<b>3. Storage</b>	
<b>4. Assembly</b>	4.1 Components 4.2 Hub production 4.3 Screw position and size 4.4 Assembly of the hubs 4.5 Displacements of the couplings
<b>5. Enclosure ATEX</b>	Hints and instruction regarding the use in hazardous areas 5.1 Control and maintenance for utilize in hazardous areas 5.2 Spider Control 5.3 Marking of coupling for the hazardous area 5.4 Starting 5.5 Conformity Declaration

### 1.1 Description

In its class TRASCO® coupling transmits more power in relation to the physical space occupied. It has a very compact design and allows safe power transmission by absorbing peak loads and torsional vibrations.

Moreover, the elastic deformation of the polyurethane gear ring compensates angular and radial misalignments and also absorbs small shaft length variation.

The involute profile of the gear ring teeth prevents high stress concentration on reduced surfaces and the crowned profile avoids the transmission of axial stress.

The high duty factor of TRASCO® couplings is due to the fact that the elastic element works under compression and never under flexion. TRASCO® couplings are suitable for working both in horizontal and in vertical positions and easily support any load variation or reversal. The two coupling halves are electrically insulated from each other.

## 1.2 Hubs

Each hub is available in two types "A" and "B", which can accommodate maximum bore size in mm corresponding respectively to the first and second number of the coupling designation. Besides the various executions shown in the catalogue, it is always possible to manufacture coupling hubs for special applications.

## 1.3 Spider

The gear ring is made of a particular polyurethane resin which shows great advantages in comparison to the standard polyurethane on the market.

In fact it is very resistant to ageing and hydrolysis (therefore also suitable to tropical climates) as well as fatigue proof and abrasion proof. It is self dampening and shows a great resistance to the main chemical agents, acids, oils and ozone.

## 2.1 General Hints

Please read through these mounting instruction carefully before you set the coupling into operation. Please pay special attention to the safety instructions.

The TRASCO coupling is approved for the use in hazardous areas. When using the coupling in hazardous areas please observe the special hints and instructions regarding safety in enclosure ATEX point 5.

The mounting instructions are part of your product.

Please keep them carefully and close to the coupling.

The copyright for these mounting instruction remains with INDUKONT GmbH.

## 2.2 Proper use

Unauthorized modifications on the coupling design are not admissible. INDUKONT do not take any warranty for resulting damages. To further develop the product we reserve the right for technical modifications.

The TRASCO described in here corresponds to the technical status at the time of printing of these mounting instructions.

## 2.3 Performances

Size	Yellow TKN	Red TKN	Green TKN	Rpm
19/24	10	17	21	14000
24/32	35	60	75	10600
28/38	95	160	200	8500
38/45	190	325	405	7100
42/55	265	450	560	6000
48/60	310	525	655	5600
55/70	410	680	825	4750
65/75	625	950	1175	4250

## 3. Storage

The coupling hubs are supplied in preserved condition and can be stored at a dry and roofed place. It is very **IMPORTANT** that the storage rooms may not include any ozone-generating devices, like e.g. fluorescent light sources, mercury-vapour lamps or electrical high-voltage appliances.

The best relative air humidity is under 65%. In case of favourable stock conditions, the coupling spider (elastomer) remain unchanged for up to 6 years.

#### 4. Assembly

Basically the coupling is supplied in individual parts.

Before assembly the coupling has to be controlled for completeness.

##### 4.1 Components

The TRASCO coupling is supplied with 2 hubs 1 spider and 2 screws. The TRASCO coupling for taper bushes is supplied with 2 hubs, 1 spider , 2 taper bushes and 4 screws.

##### 4.2 Hub production

It is **IMPORTANT** that for all materials, you do not exceeded in maximum permissible bore diameter.

This diameter is for "A" hubs execution the first number in the size and for "B" hubs execution the second number in the size. If this value is not respected, the coupling can be crashed and during rotation may cause serious danger.

Hub bores machined by the customer have to observe concentric running or axial running, respectively as indicated in IT8 general tolerance.

##### 4.3 Screw position and size

Size	Bore	Distance [mm]	Torque Screw [Nm]
19/24	M5	10	2
24/32	M5	10	2
28/38	M6	15	4,8
38/45	M8	15	10
42/55	M8	20	10
48/60	M8	20	10
55/70	M10	20	17
65/75	M10	20	17

The distance is from the external hub's side

##### 4.4 Assembly of the Hub

Before to begin the assembly of the Hubs, we recommend to check bores diameter, shafts, screwed, etc. Heating the hubs slightly (approx 80°C) allows for an easier installation on the shaft. In case of use in hazardous areas (Ex), please verify the injection temperature.

During the assembly of the hubs, we recommend to wear safety gloves in order to avoid burns. Be sure that the distance M (see table 4.5.1) should be correct. Assemble the hubs on the shafts.

Move the coupling in axial direction since reaching of M dimension. Fasten the hubs by tightening the setscrew before mentioned.

##### 4.5 Displacement of the Couplings

The displacements indicated in the table, offer sufficient safety to compensate for environmental influences like, for example heat expansion or lowering of foundation.

In order to ensure a long lifetime of the coupling is necessary to pay a best attention to the alignment.

It is absolutely necessary that during the use in hazardous areas, the misalignment values indicated in table should be respected.

If this values are not respected, the coupling is considered damaged.

In case of a use in hazardous areas for the explosion group IIC (marking II 2G c) is permissible only the half displacement indicated in the table.

#### 4.5.1

Size	M [mm]	K <sub>A</sub> [mm]	K <sub>W</sub> [°]	K <sub>R</sub> [mm]
19/24	16	1,2	1,3	0,20
24/32	18	1,4	1,3	0,22
28/38	20	1,5	1,3	0,25
38/45	24	1,8	1,3	0,28
42/55	26	2,0	1,3	0,32
48/60	28	2,1	1,3	0,36
55/70	30	2,2	1,3	0,38
65/75	35	2,6	1,3	0,42

K<sub>A</sub> = Axial Misalignment (mm)  
K<sub>W</sub> = Angular Misalignment (°)  
K<sub>R</sub> = Radial Misalignment (mm)

### 5.Enclosure ATEX

Hints and instructions regarding the use in hazardous areas.

#### 5.1 Control and maintenance for utilize in hazardous areas GROUP II 2GD c

##### 5.2 Spider control

The wear control of the flexible spider must be effected after 2000 hours of work for the first time and than after 3 months starting from the utilize. If you note an unconsiderable or no wear at the spider after this first inspection, the further inspection can be effected, in case of the same operating parameters, respectively after 4000 operating hours or after 12 months at the leatest.

If you note a considerable wear during the first inspection, we recommend you to change the spider with another ATEX spider. In case of a backlash of more than Z max (mm), the flexible spider must be replaced with another ATEX spider.

The reaching of the replacement values depends on the operating conditions and the existing operating parameters

##### 5.2.1

Size	19/24	24/32	28/38	38/45	42/55	48/60	55/70	65/75
Z [mm]	3	3	3	3	4	4	5	5

#### 5.3 Marking of coupling for the hazardous areas

Couplings for the use in hazardous areas are marked, where is possible, for the respectively permissible condition of use, as following indicated:

**SIT Spa 20143 MILANO ITA**  
**TRASCO 28/38**  
**TÜV 03 ATEX 2371X**  
  
**CE** **II 2 GD c**  
**-20°C<Ta<+80°C A4**

#### 5.4 Starting

Before putting the coupling into operation, please check:

- The tightness of the hub's set screws
- The alignment
- The right distance between hubs

Using in hazardous areas, the setscrews must be additionally secured against self-loosening to fix the hub with Loctite (medium strength)

#### Guarantee grounding

Fender for couplings in hazardous area

The couplings for hazardous area, must be provided with firm coverings (if possible, made from stainless steel) protecting the couplings against falling objects. There can be regular openings in the coverings which may not exceed the following dimensions:

- side parts max. 8 mm,
- top surface max. 4 mm

The distance between the cover and the rotating parts must be at least 5 mm (up and down) (right and left). The cover must be electrically conductive and be included in the admitted values of regulations.

The covers made in aluminium and NBR can be used between pump and electro motor if the magnesium part is below 7,5%. The cover may be removed only after stopped the unit.

During operation, please pay attention to :- Strange running noises

- Occurring vibrations

#### 5.5 Conformity Declaration

<b>CONFORMITY DECLARATION</b>	
Corresponding to EG Standard 94/9/CE dated 23 March 1994 And to legal regulations	
The manufacturer SIT S.p.A: Via G. Watt n°15 20143 Milano States that the :	
<b>Flexible coupling TRASCO</b>	
Describe d in these mounting instructions are in accord of Standard 94/9/EGThey correspond of Standard EN 13463-1 -5.	
The couplings are certified by Conformity Declaration n° :	
<b>TÜV ATEX 2371X- II 2 GD c</b>	
The production was certify by Enclosure IV from :	
<b>TÜV NORD CERT GmbH &amp; Co KG</b> <b>Am TÜV 1</b> <b>30519 Hannover</b> <b>Milan 15.01.04</b>	
<b>Mr. Antonio Bonizzoni</b> <b>Research &amp; Development</b>	<b>Ing. Riccardo Scaglia</b> <b>Legal Administrator</b>
	