

5.3 Checking of torsional backlash

“A” HUB

Turn the “A” hub in opposite direction to the direction of drive, pay attention to not generate an axial motion
Mark sleeve and hub position
Turn the hub “A” in the direction of drive and measure the backlash $?G_{max}$

When reaching the max backlash the sleeve must be changed with another ATEX sleeve

B” HUB

Turn the “B” hub in the direction of drive , pay attention do not generate an axial motion
Mark sleeve and hub
Turn the “B” hub in opposite direction of drive and measure the backlash $?G_{max}$ (mm)
When reaching the max backlash the sleeve must be changed with another ATEX sleeve

SIZE	14	19	24	28	32	38	42	48	56	80	100	125
$?G_{max}$	0,8	0,8	1	1	1	1	1	1	1,4	1,6	1,8	2

5.4 Values of wear

The wear control of the flexible spider must be effected after 3000 hours of work for the first time and than after 6 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 6000 operating hours or after 18 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, and please find out the causes according to the “Breakdowns” and eliminate it as far as possible

If the torsional backlash is greatest of $?G_{max}$, the sleeve must be exchanged with another ATEX sleeve

If you do not respect this indications, the coupling is considered intentionally damaged.

5.5 Starting

Before putting the coupling into operation, please check :
The tightness of the setscrews
The alignment
The right distance between hubs
All screw connection regarding the stipulated tightening torques dependent on the type of coupling

Guarantee the 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 down) (right 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

5.6 Conformity Declaration

CONFORMITY DECLARATION

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 :

SITEX coupling

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° :

TÜV 03 ATEX 2372X- II 2 GD c

The production was certify by Enclosure IV from :

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COUPLINGS

SITEX ATEX

MOUNTING INSTRUCTION



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SITEX couplings are able to compensate axial, radial and angular displacements. Removing all the forces on the shafts.

TABLE OF CONTENTS

1. Technical Data

- 1.1 Description
- 1.2 Operating
- 1.3 Execution

2. Hints

- 2.1 General Hints
- 2.2 Proper Use
- 2.3 Performance

3. Storage

4. Assembly

- 4.1 Components
- 4.2 Hub production
- 4.3 Screw position and size
- 4.4 Assembly of the Hub
- 4.5 Displacements of the Couplings

5. Enclosure ATEX

Hints and instruction regarding the use in hazardous areas

- 5.1 Control intervals for couplings in hazardous areas
- 5.2 Marking of coupling for the hazardous area
- 5.3 Checking of torsional backlash sleeve control
- 5.4 Valuation of wear sleeve
- 5.5 Starting
- 5.6 Conformity Declaration

1.1 Description

SITEX® couplings consist of two toothed hubs which are connected with one internally toothed sleeve. The sleeve is manufactured from stabilized 6.6 super polyamide resin.

1.2 Operating

SITEX® couplings are members of the elastic coupling family range. In an excellent way they compensate for axial, radial and angular displacement of the connected shafts. The double cardanic action eliminates the imposition of loads on the shafts, which results from radial and axial misalignment.

The torsional rigidity of the sleeve prevents angular speed variation.

The combination of steel hubs with polyamide sleeve makes the coupling maintenance and lubrication free.

The particular toothed profile prevents contact of tooth edges with the sleeve, ensuring long life of the coupling. Engage temperature -20°C +80°C.

1.3 Execution

The hubs are made of steel and the teeth, which are both profiled and section crowned, are obtained from milling.

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 SITEX 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 **SIT SPA**.

2.2. Proper use

Unauthorized modifications on the coupling design are not admissible. SIT do not take any warranty for resulting damages.

To further develop the product we reserve the right for technical modifications.

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

2.3 Performance

Tkn = Nominal Torque (Nm) / (Tkmax = 2 x Tkn)

SIZE	14	19	24	28	32	38	42	48	65	80	100	125
Tkn	10	16	21	45	60	81	100	142	380	700	1210	2500
Rpm	14000	11800	10500	8500	7600	6700	6000	5580	4000	3100	3000	2100

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 sleeve remain unchanged for up to 5 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 standard SITEX coupling is compounded of 2 hubs,1 sleeve and 2 set screws.

4.2 Hubs production

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

The max admitted bore is the code number.

If this value is not respected, the coupling can be crash and during rotation may cause serious danger.

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

4.3 Screw position and size

SIZE	14	19	24	28	32	38	42	48	65	80	100	125
Bore	M5	M5	M8	M8	M8	M8	M8	M8	M10	M10	M10	M10
Dist.	6	6	6	10	10	10	10	10	20	20	20	20
Torque	2	2	10	10	10	10	10	10	17	17	17	17
"B"	4	4	4	4	4	4	4	4	4	6	8	10

Bore / Distance / B (mm) Torque Screw (Nm)

4.3 Assembly of the hub

Assemble the hubs on the shafts.

Move the coupling in axial direction since reaching of B dimensi on. Fasten the hubs by thightening the setscrews indicated.

4.5 Displacement of the Couplings

The displacements indicated in the table 4.5.1 offer sufficient safety to compensate for environmental influences, like 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 misaligned values indicated in table should be respected. If this vales are not respected, the coupling is considered damaged.

4.5.1

SIZE	14	19	24	28	32	38	42	48	65	80	100	125
KA	1	1	1	1	1	1	1	1	1	1	1	1
KW	1	1	1	1	1	1	1	1	1	1	1	1
KR	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.8	1.1

KA = Axial Misalignment (+/-mm)

KW = Angular Misalignment (+/-°)

KR = 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 Marking of coupling for the hazardous areas

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

SIT S.p.A. 20143 MILANO ITA
SITEX 28/38

TÜV 03 ATEX 2372X



CE0032 II 2 GD c
-20°C<Ta<+80°C A4