INSTRUCTIONS FOR USE

ANTI-TWISTING BRAIDED ROPE MOD. FUX - FUH

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IMPORTANTE

Per qualsiasi informazione riguardante questa macchina/attrezzatura (utilizzo, manutenzione, ricambi) citare sempre Modello, Numero di matricola, Commessa, Anno di fabbricazione rilevabile nella targa d'identificazione della macchina.
Questo manuale non descrive le procedure di tesatura, né si è cercato di dare istruzioni all'utilizzatore sui metodi di tesatura.
Il contenuto di questo manuale prevede unicamente un testo di base per l'uso, manutenzione e l'elenco dei pezzi di ricambio della macchina stessa e come s'intende e si suggerisce di utilizzarla.
Saranno graditi suggerimenti da parte degli Utilizzatori per migliorare questa pubblicazione. Scriveteci all'indirizzo sottoindicato.

IMPORTANT NOTE

State always "Model, Serial Number and Manufacturing Year" of the machine/equipment in case you need information on use, maintenance and spare parts. The a/m data can be found on the identification plate of the machine itself.
This is not a stringing procedures manual, and no attempt is made or implied herein to instruct the user in stringing methods.
The contents of this manual are intended as base line for operation, maintenance and part list of the unit as it stands alone and as it is intended and anticipated to be used. Recommendation by the individual user for improving this publication is encouraged and should be forwarded to the address on this page.

IMPORTANT

Indiquer toujours le modèle, le numéro de série et l'année de fabrication de la machine/équipement même, en demandant à TESMEC renseignements sur l'utilisation, l'entretien et les pièces de rechange.
Ces informations se trouvent sur la plaque d'identification de la machine.
Ce manuel ne décrit pas les procédures de déroulage, ni on a tache de donner instructions à l'Utilisateur sur les méthodes de déroulage. Le contenu de ce manuel prévoit seulement un texte pour l'utilisation, l'entretien et la liste de pièces de rechange et comme TESMEC conseille d'utiliser la machine même. Pour chaque suggestion pour améliorer cette machine, écrire à l'adresse au-dessous.

IMPORTANTE

Para cualquier información relativa a esta máquina/equipo (utilización, mantenimiento, repuestos) citar siempre Modelo, Número de serie, Orden de compra, Año de fabricación que se hallan en la tarjeta de identificación de la máquina.
Este manual no describe los procedimientos de tensado y tampoco se ha tratado de dar instrucciones al utilizador acerca de los métodos de tensado. El contenido de este manual prevé únicamente un texto básico para el uso, mantenimiento y el listado de repuestos de la misma máquina y cómo se pretende y se sugiere utilizarla.
Se apreciarán sugerencias por parte de los utilizadores para mejorar esta publicación.
Nos pueden escribir a la dirección indicada abajo.

IMPORTANTE

Para qualquer informação a respeito desta máquina/equipamento (utilização, manutenção, peças sobresselentes) citar sempre o Modelo, o Número de Série, a Encomenda, o Ano de fabrico,dados que podem ser encontrados na placa de identificação da máquina. Este manual não descreve os procedimentos de entesadura, tão pouco foi nossa intenção dar instruções ao utilizador sobre os métodos de entesadura. O conteúdo deste manual de instruções prevê unicamente um texto básico para o uso, a manutenção e a lista das peças sobresselentes da mesma máquina e como se entende e se sugere utilizá-la.
Serão muito bem aceitas sugestões por parte dos Utilizadores, no intento de melhorar esta publicação.
Escrevam-nos no endereço abaixo indicado.

WICHTIG

Geben Sie für alle Informationen über diese Maschine/Ausrüstung (Verwendung, Wartung, Ersatzteile) immer Modell, Matrikelnummer, Bestellung und Baujahr an, was Sie dem Identifizierungsschild der Maschine entnehmen können.
Dieses Handbuch beschreibt nicht die Verfahren des Spannens, und es wurde auch nicht versucht, dem Verwender Anleitungen über die Methoden des Spannens zu geben. Der Inhalt dieses Handbuchs enthält allein einen Basistext für den Gebrauch und die Wartung, die Ersatzteilliste der Maschine und außerdem, welche Verwendung für sie bezweckt und empfohlen wird.
Wir freuen uns über Tipps von Seiten der Verwender, um diese Veröffentlichung zu verbessern.
Schreiben Sie uns an unten angegebene Adresse.

ВАЖНОЕ ПРИМЕЧАНИЕ

Всегда следует указывать модель, серийный номер и год выпуска машины/оборудования в случае, если Вам необходима информация по эксплуатации, техническому обслуживанию и запасным частям. Вышеупомянутые данные можно найти на паспортной табличке на самой машине.
Это — не руководство по методикам натяжения, и здесь не делается никаких попыток инструктирования пользователя способам натяжения, и они не подразумеваются. Цель настоящего руководства состоит только в том, чтобы дать описание эксплуатации и технического обслуживания, а также список запасных частей машины, и указать ее назначение и рекомендуемое использование. Рекомендации отдельных пользователей по улучшению данной публикации приветствуются, и их следует направлять по адресу, указанному в руководстве.

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ANTI-TWISTING BRAIDED ROPE

Model: FUX - FUH

Manufacturing year

.....

Working order

.....

USE AND MAINTENANCE INSTRUCTIONS

1. GENERAL INDEX

2. INTRODUCTION

2.1 MANUFACTURER

TESMEC S.p.A.

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2.2 COMMUNICATIONS WITH THE MANUFACTURER

For any information related to the equipment (use, maintenance, spare parts) always state Model, Manufacturing Year, Order, and the identification data of the rope indicated on the tightening bushing of the eye. These data can be found in the equipment-identifying table or in the present manual.

2.3 DEFINITIONS

ANTI-TWISTING BRAIDED ROPE: steel rope consists of several strands twisted together.
STRAND: together more strands wound in helical form around a metal core
PRIMARY WIRE: basic unit of the strand, proceeds from the drawing of the wire rod.
GUARANTEED MINIMUM BREAKING STRENGTH: the breaking force of the rope obtained by breaking a piece of rope sample. The value of the guaranteed minimum tensile strength is the only value, divided by the safety factor must be taken into account in determining the workload of the rope.
WORK LOAD: Load the use of the safety rope.
SAFETY FACTOR (OR USE): the ratio between the guaranteed minimum tensile strength and the max working load applied to the rope.

2.4 TYPOLOGY AND USING FIELD

The anti-twisting braided rope model FUX has been suitably studied to pull conductors during overhead and underground works; it is made up of high resistance galvanised steel strands suitably braided and presents the following characteristics:

- high flexibility
- complete stability to rotation
- homogeneous distribution of pressure between the elementary wires
- increased efficiency during stringing operations.
- galvanizing on individual strands of each strand.

Usually the rope is supplied with eyes on the ends to connect different sections and it is wound on steel reels suitably studied for ropes.

The anti-twisting braided rope FUH model has all the advantages of the rope FUX described in the previous paragraph, but it is made with high-strength steel, providing greater failure loads and operating at constant linear mass.

The ropes FUX and FUH are made with strands having a composition with a high number of elementary wires, to ensure maximum flexibility characteristics in operation; can be realized both in configuration to 8 strands that in configuration to 12 strands, depending on the production methods: The specifications given in the next section refers to the minimum guaranteed value of the two configurations

To grant the correct identification of the rope cable is installed a sleeve stamped on the tightening bushing of the eye, the manufacturer prints the following data:

- manufacturer trade-mark
- rope code
- rope diameter in mm
- min. granted breaking load of the rope in kN
- progressive serial number
- production lot.

2.5 TECHNICAL CHARACTERISTICS

Model FUX

Model	Nominal diameter [mm]	Indicative mass of lubricated rope [kg/m]	Minimum guaranteed breaking load with joined eye on the ends [kN]	Standard sections length [m]
FUX 006	6	0.11	21.5	1800 – 3600
FUX 008	8	0.22	42	1600
FUX 010	10	0.35	68	1200
FUX 012	12	0.49	90	800 – 1600
FUX 013	13	0.55	101	800 – 1600
FUX 014	14	0.61	117	800 – 1600
FUX 016	16	0.84	160	900
FUX 018	18	1.21	212	800
FUX 020	20	1.37	262	1000
FUX 022	22	1.52	320	900
FUX 024	24	1.76	371	800
FUX 026	26	1.98	409	700
FUX 028	28	2.33	479	600

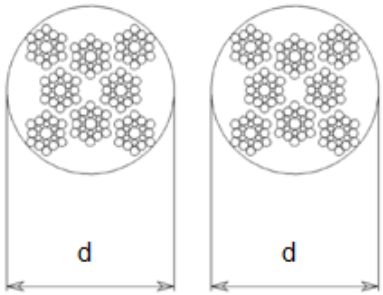
Model FUH

Model	Nominal diameter [mm]	Indicative mass of lubricated rope [kg/m]	Minimum guaranteed breaking load with joined eye on the ends [kN]	Standard sections length [m]
FUH 009	9	0.25	60	1600
FUH 013	13	0.50	121	800-1600
FUH 016	16	0.76	183	900
FUH 018	18	1.01	243	800
FUH 022	22	1.48	358	900
FUH 025	25	2.02	480	800
FUH 031	31	3.00	713	500

The cables are also available in continuous lengths without intermediate mechanical joints.

2.6 DIAMETER

The correct measurement of the diameter "d" of the rope must be referred to the circle that inscribes the formation of the rope, according to the following figures:



2.7 EYES SPLICING

The eyes are formed by the ends of splice manual method in which after the formation of the slot the end of the rope is attached by twisting the strands in the rope.

The failure loads tabulated means joined with loop at the end.
Tesmec responds exclusively buttonholes made at the factory of production or Tesmec performed by personnel at the customer.

Sections are supplied with spliced eyes as per the following models:
- **ALF001** – for diameters 6 – 12 mm
- **ALF002** – for diameters 13 – 18 mm
- **ALF003** – for diameters 20 – 31 mm

Generally speaking, the eye presents a free length equal to about 10 times the diameter of the rope, while the splicing length of the eye is about 4 times the eye length.

2.8 BREAKING LOAD AND USE

The guaranteed minimum breaking load shown in the table refers to the rope properly used and maintained, with regular and straight pull.

In use, it is recommended to apply a workload of no more than 33% of the guaranteed minimum breaking load for a safety factor of 3; overload situations than this value can lead to an appreciable reduction also guaranteed minimum breaking load.

In the presence of twisting, bending, or localized damage with leakage of the strands from the original training, the scope of the rope is reduced to the extent that is prevented the regular distribution of the load on all the elementary strands that make up the rope. In this regard, see the notes to Chapter 6 Maintenance.

2.9 REELS

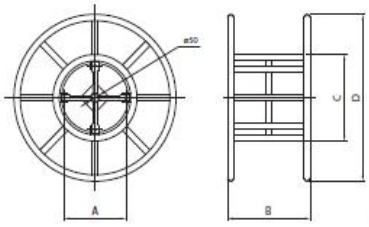
Usually the rope is wound on spools supplied steel wire rope, compatible with the accessories installed on the equipment manufactured by Tesmec. The use of coils not manufacturing Tesmec can lead to non-compatibility with the machines and work equipment Tesmec.

The reels are made of welded steel with protective coating.
Each reel is provided with two cross supports and connecting bolts in separate package.

BOF

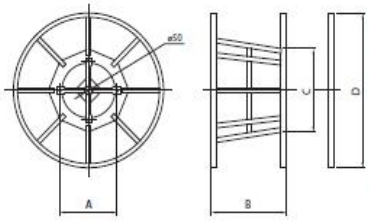
BOC

Standard Reels - BOF



Detachable Reels - BOC

The reels are made of welded steel with protective coating.
A detachable side and the conical drum facilitate removal of rope or conductor coil.



Cross support - BOS360

Mass with bolts: 2.6 kg

Certified Quality System
ISO 9001:2008

Standard Reels

Model	Dimensions [mm]				Mass [kg]
	A	B	C	D	
BOF010	420	560	570	1100	53
BOF020	420	560	570	1400	73
BOF030	420	560	570	1900	135
BOF330	420	1560	1010	2200	1000

Detachable Reels

Model	Dimensions [mm]				Mass [kg]
	A	B	C	D	
BOC040	420	560	590	1100	75
BOC050	420	560	590	1400	86
BOC310	420	890	626	1900	210
BOC320	420	1310	605	2050	250

Reel Max Capacity for Anti-Twisting Braided Rope [m]

(See page 1470)

Ø Rope	Reels							
	BOF010	BOF020	BOF030	BOF330	BOC040	BOC050	BOC310	BOC320
6	7700	13400	27300	93200	6950	13200	43400	76000
8	4300	7500	15100	52400	3800	7250	24450	42750
10	2700	4850	9800	33550	2350	4570	15600	27350
13	1600	2720	5550	19850	1400	2700	9250	16200
16	1000	1800	3750	13100	910	1740	6100	10650
18	-	1400	2950	10350	-	1400	4800	8400
20	-	1120	2400	8350	-	1100	3900	6800
22	-	940	1950	6900	-	940	3200	5630
24	-	800	1600	5800	-	760	2700	4720
25	-	750	1520	5200	-	730	2500	4350
26	-	660	1400	4950	-	640	2300	4020
28	-	580	1200	4270	-	560	1970	3450
31	-	500	990	3360	-	450	1600	2820

2.10 DIAMETER OF WINDING

The winding ratio D / d is the ratio between the diameter of curvature of the capstans or bodies on which is wound the rope and the nominal diameter of the rope, when the same is subjected to the workload.
Tesmec provides a winding ratio between the winches and capstans rope (or in any event when the total deviation of the rope is greater than 90 ° up to 180 °) equal to 25; for pulleys or deviation of the shot (with a deviation of less than or equal to 90 °), a precautionary value of the winding ratio is equal to 20.
Values of the winding ratio lower than the previous lead to an acceleration of wire rope wear, and consequently to a decrease in the duration, and to a decrease of the breaking load guaranteed minimum, the more marked as the lower the values of the ratio winding.
As order of magnitude may be considered that for winding ratio equal to 15, the breaking load of the rope may decrease guaranteed minimum of 10-15%, while the duration may crash up to 50%. These values, however, are to be considered generic and the result of empirical experience, and must be demonstrated and verified by means of appropriate laboratory tests for each specific configuration of use.
Values of the winding ratio of less than 15 or 12, respectively for full or partial deviations, are considered prohibited.

2.11 GENERAL PRESCRIPTIONS FOR THE EQUIPMENT USE

a. Only authorised and trained personnel must use the equipment.
   Trained personnel are intended to be the person who has received a qualified training from the using Company or, as alternative, from the manufacturer.
b. Equipment must be used **only** for the work it was designed for.
c. The max. working load of the rope **must be** fixed in conformity with the standards in force.
d. Equipment cannot be used with non-authorised personnel on the working site.
e. For any doubt concerning use, functioning, maintenance or everything else, contact the After-sale Service of the manufacturer.

The indicated breaking load is intended to be for rope correctly used and maintained, with regular and rectilinear pull.

It is recommended to apply a working load not higher than the 35% of the min. granted breaking load during the use; experimentally it has been noticed a reduction of the 5% of the min. granted breaking load when exceeding this value.

In presence of twists or folding the rope capacity is reduced in the measure in which the regular distribution of the load on all the elementary strands that compose the same rope is prevented.

Experimentally it has been verified that the rope, if not used, suffers a diminution of the breaking load equal to the 0.25% of the theoretical breaking load for each year of ageing.

2.12 GENERAL PRESCRIPTIONS FOR THE OPERATOR CHARGED OF THE EQUIPMENT USE

a. Operator **has** to know safety directives for accident prevention in force in the equipment using country, for a correct use of the same.
b. The operator in charge with the installation and maintenance of the equipment must use **suitable clothes** to the working site and to the situation where he finds himself; in particular he must avoid the use of very large clothes, chains, bracelets, rings or whatever can get entangled with moving parts of the equipment.
c. The operator has to use the necessary protecting devices (i.e. gloves, boots, helmet, etc.).
d. The operator must not carry out on his own initiative operations or interventions that are not up to him.
e. The operator must carefully follow danger and/or prohibition prescriptions contained in the instruction manual or indicated on the equipment.
f. The working area of the operator has to be cleaned from possible oil or liquids wastes and free of materials or equipment that may be considered as on obstacle for the operator work.

2.13 GENERAL PRESCRIPTIONS FOR THE OPERATOR CHARGED OF THE EQUIPMENT MAINTENANCE

a. **It is absolutely forbidden** to carry out any work of maintenance, adjustment or setting on units while stringing (except for the operations indicated in the present manual).
b. All the maintenance operations of the equipment must be carried out with machine on a level surface and not under load.
c. Authorised and trained personnel must carry out all the maintenance operations, ordinary and not ordinary. Trained personnel are intended to be the person who has received a qualified training from the using Company or, as alternative, from the manufacturer.
d. The operator in charge with the maintenance of the equipment must use suitable clothes to the working site and to the situation where he finds himself; in particular he must avoid the use of very large clothes, chains, bracelets, rings or whatever can get entangled with moving parts of the equipment.
e. The operator has to use the necessary protecting devices (i.e. gloves, boots, helmet, etc.).
f. All the maintenance operations, ordinary and not ordinary, must be effectuated respecting the prescriptions indicated in the present manual or following technical indications written by the manufacturer. The non-respect of the prescribed restrains relieves the manufacturer from any responsibility causing also the loss of warranty.

2.14 KNOWLEDGE AND CARE OF THE INSTRUCTION MANUAL

a. The information contained in the instruction manual applies to all the operators charged with the use and/or the maintenance of the equipment.
b. The instruction manual **is not** a training manual.
c. Before using the equipment the chief of the job site and the operator **must** read the instruction manual.
d. The chief of the job site **is obliged** to inform all the operators about the instructions contained in the manual.
e. The user **must** carefully follow the instructions listed in the present manual.
f. The chief of the job site **must** verify that the instructions contained in the manual are applied.
g. The instruction manual **must** be kept, in order to be consulted, for all the life of the equipment and also when it is given to another user.
h. The instruction manual **must** be kept in a sheltered and dry place.

2.15 USE NOT ALLOWED

The equipment **must not be used**:

a. for lifting persons and/or goods
b. on structures not sufficiently stable to grant a correct anchoring of the guiding units and/or the pulling of the rope
c. for pulling flexible elements at low extension and that can produce big accumulations of elastic energy
d. for pulling conductors with applied pulls that require a high capacity than the one declared at paragraph 2.4 (Technical characteristics)
e. with anchoring and/or connecting systems of the ropes different from the foreseen ones and produced by the rope manufacturer
f. when winding on reels with diameter lower than the standard one and/or not compatible with devices retractors or to take charge of reels.
g. Winding on drums or pulleys of diameter less than that specified in this manual

2.16 RESPONSIBILITY

The use of the equipment for scopes different from those foreseen on paragraph 2.3 (Typology and using field), even if not well described in this manual, has to be considered extremely **dangerous** and then **forbidden.**

The non-respect of the prescribed restrains causes a situation of improper use for technical and persons safety purposes and relieves the manufacturer from any responsibility, civil or penal, in case of accidents to persons or damages to things, causing the loss of warranty.

The manufacturer responsibility declines even when one of the following situations happens:

a. for the consequences caused by tampering and/or modifications carried out without the manufacturer's written acceptance (in this case the operator becomes the manufacturer with relevant obligations and responsibilities, both civil and penal)
b. for the use of not original spare parts
c. for bad maintenance.

3. TRANSPORT INSTRUCTIONS

3.1 EQUIPMENT MOVEMENT

Usually the rope is wound on steel reels especially studied for this use.

For the reel lifting with wound rope, use only devices with a capacity suitable for the mass to be lifted.

The devices used for the equipment lifting (ropes, cables, hooks, etc.) have to be exactly dimensioned as compared to the mass to be lifted.

⚠ **DANGER:** the non-respect of the above mentioned conditions may cause dangerous situations as well as damages to the equipment with the consequent decline of any warranty condition.

3.2 PACKAGE TYPOLOGIES

Materials usually used for the package are:
⇒ wooden
⇒ nails and/or steel screws
⇒ cardboard and/or paper
⇒ polyethylene extensible film
⇒ adhesive tape.

3.3 UNPACKING

When receiving the equipment verify the integrity of the package; advise immediately the manufacturer and the person in charge of the transport (even with photos) when possible damages due to transport or tampering with removal, even partial, of the content happen.

Verify if the supplied material corresponds to the ordered one; immediately advise the manufacturer if there are some discrepancies.

In case of transport on wooden case, remove, in sequence, the upper cover and lateral panels, before removing the equipment.

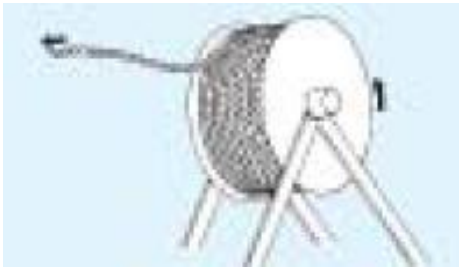
During unpacking operations, avoid any shock to the structure or to the equipment units, in order to avoid any damage to the equipment itself.

⚠ **ATTENTION:** the elimination of packaging materials must be effectuated in conformity with the norms in force in the using country.

3.4 UNWINDING AND INSTALLATION

The rope is packed and supplied wound on reels.
The course of the rope must always take place with the coil supported on suitable stands and constantly keeping the rope under tension, to avoid any kinking.

YES



NO

4. INSTRUCTION FOR USE

4.1 PRESCRIPTIONS FOR THE OPERATOR

PROHIBITION: it is forbidden to walk or stop under the towing rope due to a constant residual risk of crushing in case of a possible giving in of the rope or of the anchoring.

The operator must not carry out on his own initiative operations or interventions that are not up to him.

4.2 PRELIMINARY OPERATIONS

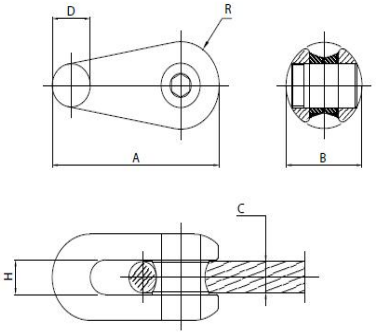
ATTENTION: before each use, **it is necessary** to arrange a visual checking taking particular care to the integrity of the elementary wires that compose the strands, in particular near the eyes.

4.3 USING INSTRUCTIONS

1. Connect the rope sections with the fixed sock joints mod. GFT manufactured by Tesmec, paying attention to use the joint dimensionally correct for the using rope.

CONNECTORS - GFT

The connectors are specifically designed to connect pilot rope lengths or pulling rope lengths and to pass over the puller or puller-tensioner bull wheels. The special profile minimises the overload on the rope spliced eyes during this passage. They are made of highly tensile galvanised steel.



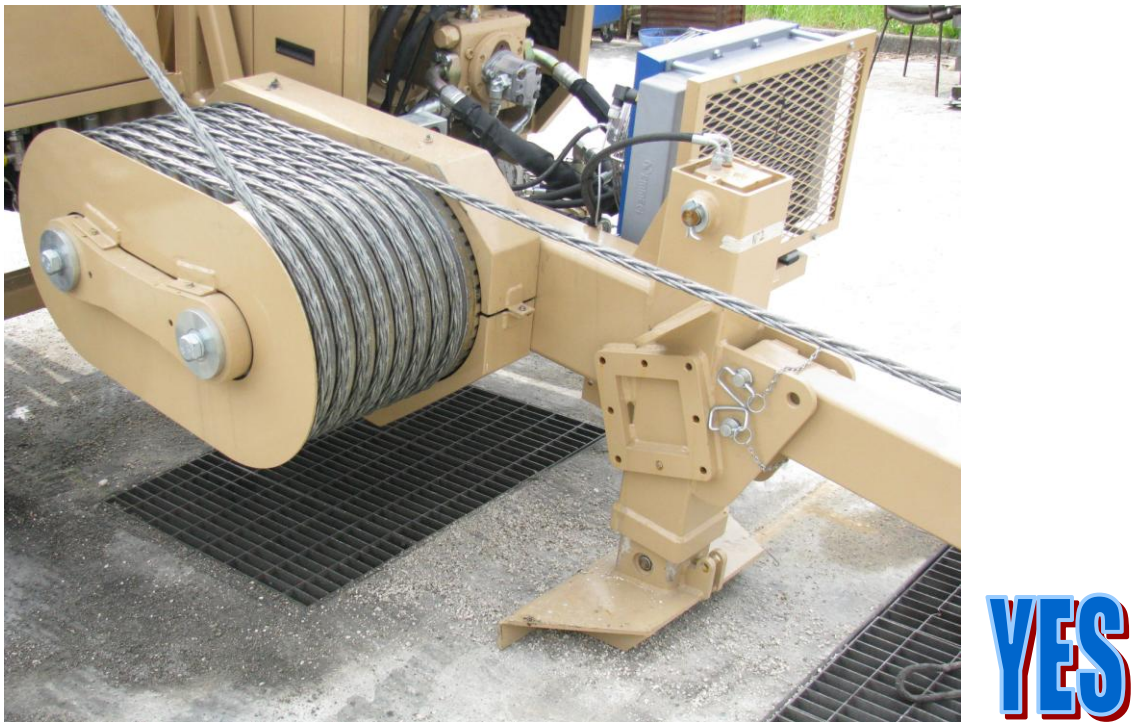
Model	Dimensions [mm]						Breaking load	Mass
	A	B	C max	D	H	R	[kN]	[kg]
GFT001	59	28	10	15	11	11	70	0.125
GFT010	74	40	13	19.5	14	15	110	0.325
GFT020	91	48	16	20	19	18	160	0.525
GFT030	102	54	18	22	19	20	220	0.75
GFT040	121	60	24	27	26	22	360	1.025
GFT050	174	75	28	42	30	32	750	3.025
GFT060	183	81	32	42	34	34.5	750	3.4

2. Avoid sliding the rope on sand or earth because the duty can be hold inside the structure of the rope and may produce dangerous abrasive slurry that may damage the rope.

3. It is recommended always flatten the hauling anti-twisting rope with the braking system of stringing in order to preserve as much as possible the state of the rope to avoid sliding on the ground and / or obstacles that can cause damage to the structure of the rope.

4. In addition, it is always recommended to protect any cable terminals free by placing them flat on a base of wood, metal or fabric to protect the rope from accidental contact, crushing, etc.

5. Load the rope on the capstan winch machine following the instructions given in the instruction manual of the machine used. To load the rope on the capstan is recommended to use a nylon rope wrapped advance on capstans, whose free end connects the head of the anti-twist rope: during this operation to maintain a voltage applied to the rope rotation-aa manual to ensure sufficient coverage of the gorges in proper form, checking the absence of jumps throat or double winding up of the same throat.



5. SAFETY CONDITIONS

5.1 RESIDUAL RISKS

During the equipment use, there are still the following residual risks:

1. **Sudden break of the rope.** The break of the rope causes sudden movements of the equipment and a whip effect of the rope section connected to the equipment.
   To reduce to min. the risks the operator has to:
   ⇒ check the rope and replace it as soon as appear some defects or wear signs
   ⇒ respect the working positions indicated in the manual.

2. **Limbs squeeze during the manipulation of the rope.** These operations have a large risk margin due to the use of mechanical parts to be moved.
   To reduce to min. the risks the operator has to:
   ⇒ know the directives for accident prevention and apply them.
   ⇒ follow the indications described in the present manual

6. MAINTENANCE

6.1 GENERAL PRESCRIPTIONS

ATTENTION: possible repairs not carried out by the manufacturer and not allowed by a written authorisation relieve the manufacturer for any responsibility in case of accidents to persons or damages to things and/or to the equipment, causing also the loss of warranty.

6.2 MAINTENANCE

To prevent dangerous winding over stresses, once at year the rope has to be completely unwound from the reel on which it is positioned and successively rewound with an applied pull of about 1 kN granting a correct winding. During this operation, it is necessary to carry out a visual check of the rope so that to find out wear traces or defects that may produce a degrading or elimination from service.

During the periodic check is very important to find:

- any elementary wires broken, since the appearance of the individual wires is broken signal of an early fatigue failure of the material
- crushing or flattening of the strands, a symptom that can result in accelerated wear short time to break the strands themselves
- obvious corrosion of strands, often caused by the consumption of surface zinc treatment, and therefore can be a source or cause of broken early
  In such situations, the rope should be subject to more frequent inspections until it reaches a defect such that must be removed from service.

The carried out operations have to be indicated in the enclosed control table.

In case of ropes particularly dry or visibly lacking of the original grease, first of all it is necessary to operate a careful cleaning of the rope by means of a brushing and then a removal of the residual products with water-polisher; successively it is possible to lubricate the rope with grease specific for metallic ropes (i.e. NYROSTEN T55-13-20510 - CHEVRON 100 NC – MOBIL Mobiltac 81 or similar).

ATTENTION: avoid to grease ropes that present traces of duty or defects because the mixture that would create is greatly abrasive and may produce a quick and anomalous damage of the rope.

ATTENTION: limit the quantity of applied grease to the min. to avoid successive sliding of the rope on the bull-wheels of the pullers.

6.3 CONDITIONS TO ELIMINATE THE ROPE FROM SERVICE

The rope must be eliminated from service when it presents at least one of the following defects:
a. a broken strand

b. some loosen strands or projecting from the rope structure

c. a total number of broken elementary wires In a stretch of length equal to 6 times the cable diameter, greater than:
   - 8 for cables with a diameter up to 16 mm
   - 15 for cables with a diameter of over 18 mm

d. after a deflection, a crash or an anomalous bending that may produce a local deformation of the rope strands.

e. when at terminal of joint shanks of the strands or wires protrude from the formation of the same rope

6.4 STRIPPING

Equipment stripping has to be carried out by the manufacturer or by a specialised factory.

All stripping operations have to be effectuated in conformity with the norms in force for accidents prevention.

Waste materials have to be divided for typology (i.e. iron scrap, aluminium, plastic, rub, etc.) and disposed of by means of authorised structures in conformity with the laws in force in the using country.

6.5 CONTROL TABLE

Manufacturer	Equipment	Manufacturing year
	ANTI-TWISTING BRAIDED ROPE MOD. FUX - FUH	..... Working order .....

The filling in of the table is reserved to trained personnel.

Purchase date	Date of first starting	Name of user/users

PERIODICAL CONTROLS

DATE	CHECKED BY	REMARKS