



**BRANO a.s., 747 41 Hradec nad Moravicí
Czech Republic**

tel.: +420/ 553 632 316, 553 632 303
<http://www.brano.eu>; zz-info@brano.eu; info@brano.eu

INSTRUCTIONS FOR USE SAFETY PRINCIPLES, USE AND CHECKS FOR

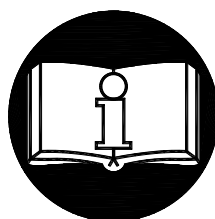
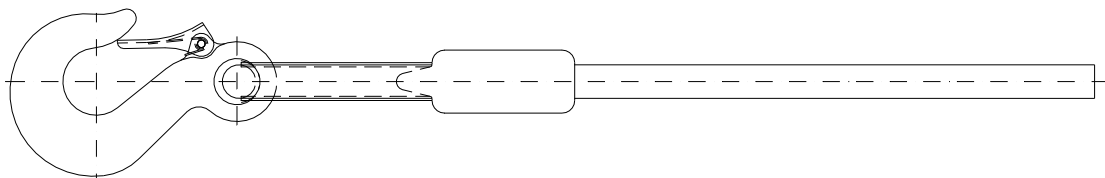
CABLE WITH CARTRIDGE

**for 30-10/0.8t, 30-00/1.6t and 30-11/3.2t
type cable jacks**

and

CABLE WITH HOOK

**for LN type cable winches
with lifting capacities of 0.5t and 1t**



Please carefully read these Instructions for Use before using the cable. You will be given important safety instructions and instructions for use, checking and maintaining the product. Please make sure that all persons responsible have these Instructions for Use at their disposal.

Please keep these Instructions for Use for further reference!

Edition 3th
March 2014
Registration number: 1-52508-0-1



CONTENTS

1 DEFINITIONS.....	3
2 THE PURPOSE OF THE PRODUCT	3
3 SAFETY PRINCIPLES	3
3.1 SUMMARY OF SAFETY PRINCIPLES	3
3.2 SAFETY PRINCIPLES	4
4 PACKAGING, STORAGE AND HANDLING.....	4
4.1 PACKAGING.....	4
4.2 STORAGE.....	5
5 MAIN TECHNICAL PARAMETERS.....	5
6 USE	6
6.1 IN GENERAL.....	6
6.2 CHECKS PRIOR TO INSTALLATION	6
6.3 CABLE THREADING.....	6
6.4 SAFE WORKING ENVIRONMENT	6
6.5 CABLE SERVICE LIFE.....	6
7 CABLE CHECKS.....	7
7.1 INSPECTION	7
7.2 CABLE RECORDS.....	10
8 LUBRICATION	10
8.1 IN GENERAL.....	10
8.2 LUBRICATION PRINCIPLES	10
9 TAKING CABLES OUT OF SERVICE – LIQUIDATION	10
10 RELATING DOCUMENTATION.....	10
11 PRODUCER’S FINAL REQUIREMENTS ON THE CUSTOMER	10

1 DEFINITIONS

! WARNING

Warnings draw your attention to situations that may be dangerous and which could be the cause of death or serious injury should operators fail to take heed of them.

Lifting capacity (Q): This is the maximum permitted weight of a load for lifting (limiting workload) or the maximum permitted force for other handling regardless of the weight of the load for which the cable has been constructed under the conditions laid down by these Instructions for Use

2 THE PURPOSE OF THE PRODUCT

Cables with cartridges and cables with hooks (hereinafter referred to as 'cable(s)') are designed for the manual lifting, lowering, pulling and handling of free loads in any direction with the use of cable jacks (type 30-00, 30-10 and 30-11) and cable winches (LN type). Please first consult any other form of use with the producer.

The weight of the load when lifted or lowered may never exceed the indicated admissible lifting capacity. Where free loads are pulled, the maximum force may not exceed the indicated admissible lifting capacity regardless of the weight of the pulled load.

2.1 The cable design complies with the requirements laid down by Directive 98/37/EC of the European Parliament and of the Council, as amended by the Czech Technical Regulation – Government Decree 24/2003 Sb., as amended, and it also complies with the requirements laid down by harmonized Czech technical standards, i.e. ČSN EN ISO 12100 and ČSN EN 13157+A1.

3 SAFETY PRINCIPLES

3.1 SUMMARY OF SAFETY PRINCIPLES

Where loads are handled, casualties and serious injuries may occur, especially in cases when the cable is not used correctly or when it is not maintained well. That is why special safety measures should be observed when doing work with the cable and when checking and maintaining it.

The Safety Principles for cable jacks and winches are stated in separate Instructions for Use that are supplied with each hoisting apparatus.

! WARNING

NEVER burden the cable more than what is the lifting capacity of the equipment for which it is designed.

ALWAYS handle the cable with manual force only.

ALWAYS read the Instructions for Use and Safety Instructions.

Please keep in mind that operators are responsible for the correct binding, lifting and lowering of loads.

3.2 SAFETY PRINCIPLES

! WARNING

3.2.1 Before use

ALWAYS ensure that only competent and instructed persons older than 18 who are acquainted with these Instructions for Use and who have undergone training in regards to safety at work and methods of work handle the cable.

ALWAYS check the cable each day before starting work in accordance with 7.1.

ALWAYS check the cable label on the sleeve.

ALWAYS make sure that the cable is long enough for the work you plan to do.

ALWAYS make sure that the cable is not corroded and that it is clean, intact and lubricated.

NEVER use a modified or deformed hook.

NEVER connect or extend cables using clamps or otherwise.

NEVER use a cable where the safety-catch of the hook is sprung out, damaged or missing.

NEVER use cables without labeling.

ALWAYS consult the producer or his authorized representative when the cable is to be used in non-standard or extreme situations.

3.2.2 During use

ALWAYS straighten the cable so that it does not twist; remove any sagging of the cable and loops before you attach the cable to the hoisting apparatus or wind it onto the drum.

NEVER use twisted, rusty or otherwise damaged cables.

NEVER connect or extend cables using clamps or otherwise.

NEVER use the cable as a sling.

NEVER pull the cable over any edges. Use a pulley with a diameter of at least 12 times the nominal diameter of the cable.

NEVER use the cable for earthing during welding.

NEVER handle the cable without gloves.

3.2.3 Maintenance

ALWAYS allow competent persons to regularly inspect the cable.

ALWAYS make sure that the cable is clean and intact.

ALWAYS make sure that the cable is oiled sufficiently.

During maintenance, only such interventions may be carried out which will be in compliance with the producer's requirements stated in 7 and 8 of these Instructions for Use.

IT IS NOT PERMISSIBLE to do repairs or maintenance in other way than which is prescribed by the producer. This especially concerns the restriction of making changes to the product without the producer's approval.

4 PACKAGING, STORAGE AND HANDLING

4.1 PACKAGING

Cables up on 40m long are supplied packed in cardboard boxes. Cables for cable jacks are wound onto cartridges.

4.1.2 The delivery includes the following accompanying documentation:

- a) Instructions for Use
- b) Certificate of quality and completeness of the product and the warranty card.
 - b1) The warranty period is stated on the warranty card.
 - b2) The warranty does not apply to defects caused by failure to comply with instructions stated in the Instructions for Use and to defects caused as a result of incorrect use or unqualified intervention.
 - b3) The warranty also does not apply to changes to the product made without the producer's approval.
 - b4) A claim for defects in the product must be applied according to the relevant provisions of the Commercial Code or the Civil Code, as amended.
- c) A list of repair centers (only for the Czech Republic and for the Slovak Republic)

4.2 STORAGE

Store cables in dry and clean warehouses that are free of chemical influences and fumes. When storing cables, make sure that each cable can be easily matched with inspection records.

- (1) Keep cables free from dust, water and impurities.
- (2) Wind up the cable in such a way that it is not twisted.
- (3) Lubricate the cable and the springs of the safety-catches of the hooks.
- (4) Store the cable in a dry place.
- (5) For further use follow the instructions laid down in 7.1.2 "Daily checks" and 7.1.4 "Occasionally used winch".

5 MAIN TECHNICAL PARAMETERS

BRANO type of hoisting apparatus	Lifting capacity (t)	∅ cable	Id. no. of hook according to ČSN EN1677	Weights of cable (including cartridge and packaging) for lengths (kg) ³⁾				Scope of operating temperature
		Labeling according to EN 12385-4	Lifting capacity of hook ²⁾ (t)	10m	20m	30m	40m	
30-10	0,8	∅ 8	5 - 6	4	6	9	11	-20°C until +50°C
		6x19 SFC 1770 BsZ	0,8 – 1,12					
30-00	1,6	∅ 11	8	8	12	16	21	
		6x19 SFC 1770 BsZ	2					
30-11	3,2	∅ 16	10	14	23	35	50	
		6x27 WSC 1770 BsZ	3,2					
LN	0,5	∅ 5	5 - 6	Cable length (m)		Weight (kg)		
		6x25F-SFC 1770 BzZ	0,8 – 1,12	10,67		1,4		
	1	∅ 8	5 - 6	10,74		2,7		
		6x25F-SFC 1770 BzZ	0,8 – 1,12					

- 1) Cables of a different length can be delivered on the basis of a purchase order and following agreement with the supplier.
- 2) Lifting capacity information on the hook may differ from the data contained in the table.
- 3) The information on weight is just for orientation – it may differ depending on the specific type of hook.

6 USE

6.1 IN GENERAL

The steel cable with a hook is designed for the lifting, pulling or lowering of loads with the use of the respective cable jack or the BRANO winch. Before use, please carefully study the Instructions for Use for the cable and for the respective hoisting apparatus.

6.2 CHECKS PRIOR TO INSTALLATION

Before installation, please check properly whether the cable is clean, not-twisted and intact. If the cable is twisted, untwist it into its right position. The cable may not create loops and any tension due to twists must be eliminated prior to installation. Replace the cable if it is damaged.

6.3 CABLE THREADING

A description of how to thread the cable into the hoisting apparatus (winding it up onto the winch drum) is provided in the respective Instructions for Use for the given hoisting apparatus.

6.4 SAFE WORKING ENVIRONMENT

! WARNING

- (1) Operators must be acquainted in detail with these Instructions for Use and with national regulations that apply to the operation of the equipment and pulleys used in connection with the cable.
- (2) Operators must be equipped with a safety helmet and gloves while handling the cable.
- (3) If operators handle the cable in restricted places, it must be ensured that the cable does not rub against obstacles.

6.5 CABLE SERVICE LIFE

The maximum service life of a cable is five (5) years following the production date. All cables must be taken out of service following the lapse of this period. Nonetheless, the real service life of a cable depends on the frequency and method of use.

7 CABLE CHECKS

7.1 INSPECTION

7.1.1 Types of checks

The checks of cables that are operated on a regular basis are generally divided into two groups depending on the interval among checks. The intervals depend on the level of wear and tear or damage. Two main groups are below described as daily checks and regular checks. The corresponding intervals are defined as follows:

- a) **Daily checks:** Visual check carried out by operators or responsible persons determined by the user at the beginning of each use.
- b) **Regular checks:** Visual check carried out by qualified persons determined by the user in intervals according to the traffic flow diagram – see the Service Instructions for the respective hoisting apparatus:
 - 1) Ordinary operation – once every half year
 - 2) Heavy operation – once every 3 months
 - 3) Special or occasional operation – in accordance with the recommendations of responsible persons during first use and in accordance with instructions stated by qualified employees (maintenance workers).

7.1.2 Daily checks

In what regards the parts recommended in 7.1.6 "Daily checks" check whether the cables are intact and without any defects. Please also do this check during operation in the interval between regular checks. Technical workers will determine whether any defect or damage may represent a danger and whether a more detailed check is necessary.

7.1.3 Regular checks

Please carry out overall checks of cables in view of recommended regular checks. The recommended regular checks stated in 7.1.6 must be carried out under the supervision of qualified persons. These checks also include the requirements of daily checks.

7.1.4 Occasional use

- (1) Check cables that have not been in use for a month or more, but less than one year, before again putting them into operation. The check should comply with the requirements laid down in 7.1.2.
- (2) Check cables that have not been in use for one year before again putting them into operation. The check should comply with the requirements laid down in 7.1.3.
- (4) ALWAYS check cables in accordance with the requirements laid down in 7.1.3 before putting the jack into operation again, provided it was out of operation for 3 or more months.

7.1.5 Records on checks

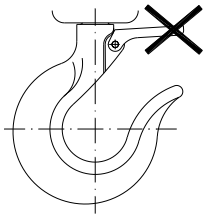

ALWAYS keep records on checks that have been carried out on cables.

Make dated records on checks in the intervals specified in 7.1.1 (2) (b) and keep them in the place determined by the user.

Defects exposed by the check or recorded during work must be reported to the person in charge of safety and determined by the user.

7.1.6 Check procedure

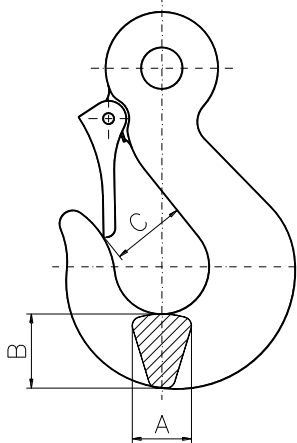
(1) Daily checks (carried out by operators or responsible persons)

Part	Check method	Limit / criterion for being taken out of service	Remedy
1. Hooks (1) Appearance	Visually 	Jumped out safety-catch from the tip of the hook, bent shank of the hook, other visual deformations of the hook	Outstretched hook – replace cable
(2) Safety-catch of hook	Manual spring-back of safety-catch	When pressed down, the safety-catch does not return	Clean, lubricate, repair or replace
2. Cable (1) Appearance	Visually check the entire cable	Dust, impurities Damaged, deformed cable, excessive wear and tear, corrosion	Clean using a brush, lubricate and wipe the surface with a cloth Replace cable
(2) Labeling	Check cable labeling on the sleeve	Illegible	Discard
(3) Lubrication	Visually	Cable not lubricated	Clean cable and lubricate it, wipe the surface with a cloth
(4) Cable setup	Visual check whether the cable is not twisted 	Cable is twisted or contorted	Straighten the cable and put it into its normal position

(2) Regular checks (carried out by qualified persons)

Part	Check method	Limit / criterion for being taken out of service	Remedy
1. Hooks (1) Deformation of hook (opening)	Measure size "C" with the help of a	Measured value is greater by 10% in	Replace the cable

(2) Wear and tear of hooks	sliding gauge	comparison to the standard	Replace the cable
	Visual check	Deformation is visible when checked visually	
	Measure the sizes "A" and "B" with the help of a sliding gauge	Do not use the hook if size "A" or "B" have decreased by more than 10% in comparison to the standard	Replace the cable



Note:
 Sizes "A", "B" and "C" are stated in ČSN EN 1677-2 for individual hook identification numbers.

However, the real sizes of the hooks do not ALWAYS have to correspond with the above stated standard and differ according to the various producers of the hooks.

3. Cable - limit/criterion for taking cables out of service

(1) Number of visibly broken wires – see the table according to ČSN ISO 4309

First do the check on the length stated in line 1 (shorter). If the maximum is achieved, continue checking the length according to line 2. Take the cable out of service if several broken wires appear closely next to each other so that together they create a group in the given place or if the entire wire strand is cut.

Cable diameter (mm)	Controlled length (mm)	Maximum number of broken wires
5	30	5
	150	10
8	48	5
	240	10
11	68	3
	336	6
16	96	3
	480	6

(2) Reduction of the cable diameter – by a maximum 10%.

(3) External wear and tear – reduction of cable diameter owing to imprints, surface wear and tear, internal wear and tear, etc., may be a maximum of 7% of the nominal diameter of the cable.

(4) Cable corrosion (external and internal).

(5) Cable deformation – visible change in cable shape compared to its normal shape.

(6) Fault caused by fire or electric arc.

Individual factors must be taken into account in what concerns all checks while individual criteria are monitored. Typical examples of damage that affect steel cables are stated in ČSN ISO 4309.

7.2 CABLE RECORDS

The cable must be recorded. Apart from the registration number and technical data, the results of checks carried out must also be recorded, including any repairs to the cable.

8 LUBRICATION

8.1 IN GENERAL

Before applying a new lubricant, remove the old lubricant, clean the cable with a solvent and apply the new lubricant. Use lubricants specified by the producer. Clean the cable using a brush or steam.

8.2 LUBRICATION PRINCIPLES

Incorrect maintenance and insufficient lubrication of the cable considerably reduce its service life and may be the cause of serious accidents. Apply a fine layer of oil on the cable and wipe it off with a cloth. Regular lubrication will prevent wear and tear and corrosion of the cable and will extend its service life.

ALWAYS lubricate the cable once per week or more frequently depending on intensity of operation.

ALWAYS lubricate the cable more frequently than under normal circumstances if in a corrosive environment (salt water, sea climate, acids).

ALWAYS use machine oil according to ISO - VG 46 or VG 48 or their equivalent.

ALWAYS properly wipe off the surface of the cable after lubrication.

9 TAKING CABLES OUT OF SERVICE – LIQUIDATION

The cable does not contain any hazardous substances; its parts are made out of steel; the stamped sleeve is made out of aluminium alloy. If you decide to take it out of service, pass it on to a company that focuses on the liquidation of metal waste.

10 RELATING DOCUMENTATION

10.1 EC Declaration of Conformity

10.2 These Instructions for Use have been drawn up in accordance with the following technical regulations, technical standards and national regulations:

- Government Decree 24/2003 Sb., as amended (Directive 98/37/EC of the European Parliament and of the Council)
- ČSN EN ISO 12100
- ČSN EN 13157+A1

11 PRODUCER'S FINAL REQUIREMENTS ON THE CUSTOMER

Any changes to the product may be made only subject to the producer's approval.

The producer is not liable for the safety of his product if this condition is not observed.

In such an event, the producer's warranty does not apply to the product.