

3.3. Overspeed BLOCSTOP – BSO models

This version (Fig. 10) protects against hoist failure and, if mounted on a separate safety wire rope, against suspension wire rope failure.

This BLOCSTOP operates at a certain "speed limit" which is directly related to the speed of the wire rope passing through the BLOCSTOP. In the event of overspeed the clamping mechanism, which had been previously set under tension, is released - the clamping jaws grip the wire rope and hold the load safely and instantly.

The BLOCSTOP is also fitted with an EMERGENCY STOP button, which allows manual release of the clamping mechanism so that this BLOCSTOP may also be used as an automatic wire rope clamp.

BLOCSTOP BSO models

model*	code*	nom. cap. kg	weight kg	for TIRAK models	wire rope Ø mm	type
BSO 510	15869	300	4.7	X-310/311/312	6.5	A6
BSO 500	19489	500	4.7	X-300/301/302	8.3	A8
BSO 500	19479	500	4.7	X-500/501/502	8.3	A8
BSO 500	15389	500	4.7	T-500/501/502	8.3	A8
BSO 520	19509	500	4.7	X-520/521/522	9.5	A9
BSO 1000	15889	800	6.0	T-1000/1002	8.3	A8
BSO 1020	15399	1000	6.0	T-1020/1022	9.5	A9
BSO 1030	19499	1000	6.0	T-1030	10.2	A10

*complete with links and anchor pins

4. The BLOCSTOP as an automatic wire rope clamp

The self-locking principle is the guarantee for safety and simple handling. When using the correct TIRFOR/TIRAK wire rope, the following applications are possible:

a) Holding a load

- when exchanging a defective hoist
- for protection when tensioning masts, scaffolding, shuttering. . . (Fig. 14).

Advantages: Unauthorised releasing of the mechanism is impossible (where the tensioning device has been removed), as the BLOCSTOP cannot be opened whilst under load.

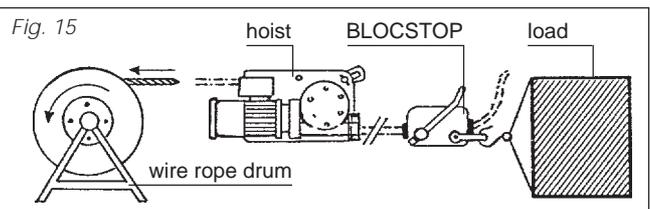
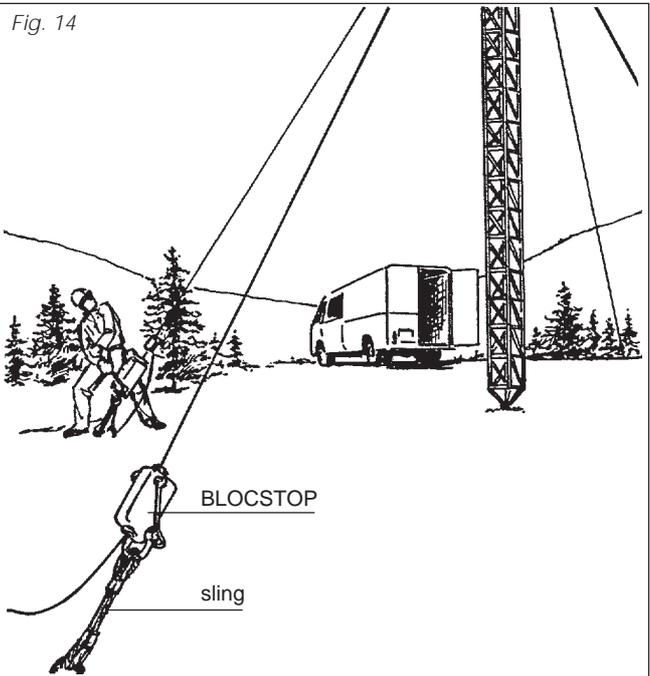
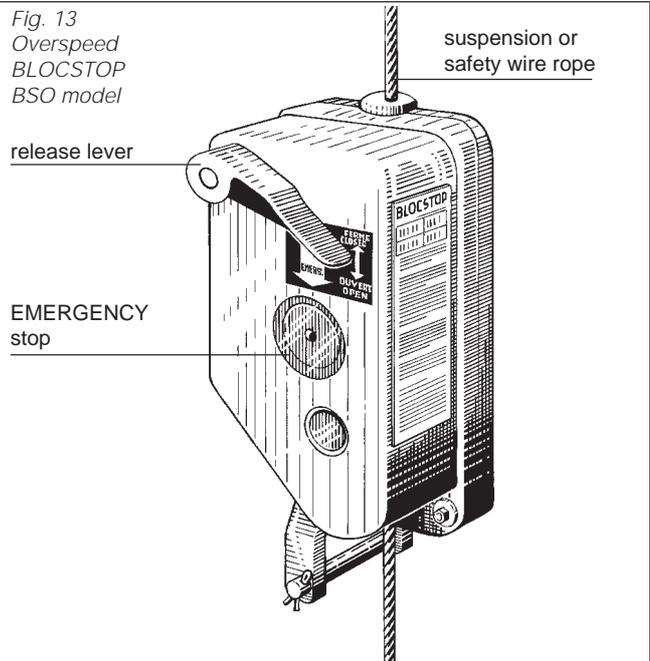
b) For wire rope length adjustment

- for tensioning applications which are adjusted only from time to time.

In both cases a) and b) the tensioning device (e.g. TIRFOR or TIRAK) can be used for other purposes.

c) As connecting device between the wire rope and the load

Instead of a hook/rope eye rigidly fixed to the wire rope, this saves much time when using "endless winches" like TIRFOR/TIRAK: after finishing long lifting/pulling jobs the wire rope need not be run back the whole way - only the short end of the wire rope must pass through the hoist to have both (wire rope and hoist) separated for easier transport (Fig. 15).



1. GENERAL

The OVERSPEED BLOCSTOP, type BSO is a safety device, used as a **secondary brake**, which is required for man-riding operations by the safety organizations of various countries (Denmark, France, Sweden, Switzerland, USA etc.).

In accordance with these safety regulations the BSO is mounted either on the main suspension wire rope or on a separate safety wire rope.

The OVERSPEED BLOCSTOP has been designed for use with TIRAK hoists (T-500 and T-1000 series), 9 or 18 m/mn., and the appropriate wire ropes.

Working temperature from -40° to +80° C (-40° to + 176° F).

2. OPERATING PRINCIPLE

The OVERSPEED BLOCSTOP operates automatically.

It consists essentially of a clamping jaw mechanism of the TIRFOR-type and a centrifugal governor, which permanently checks the speed of the wire rope passing through the BLOCSTOP. The jaw mechanism automatically clamps onto the wire rope when there is a sudden increase in speed.

The OVERSPEED BLOCSTOP can be manually operated by pressing the EMERGENCY-STOP-button (38). The jaws should close automatically and the control lever (04) should return to its CLOSED position. To guarantee the correct operation we recommend that the EMERGENCY STOP (38) be carried out manually at least once a day.

The BSO is reset by means of the control lever (04). The wire rope must always be introduced through the upper wire rope entry (12) = control lever side.

During the operation the centrifugal weights must rotate, which should be regularly checked through the window (51).

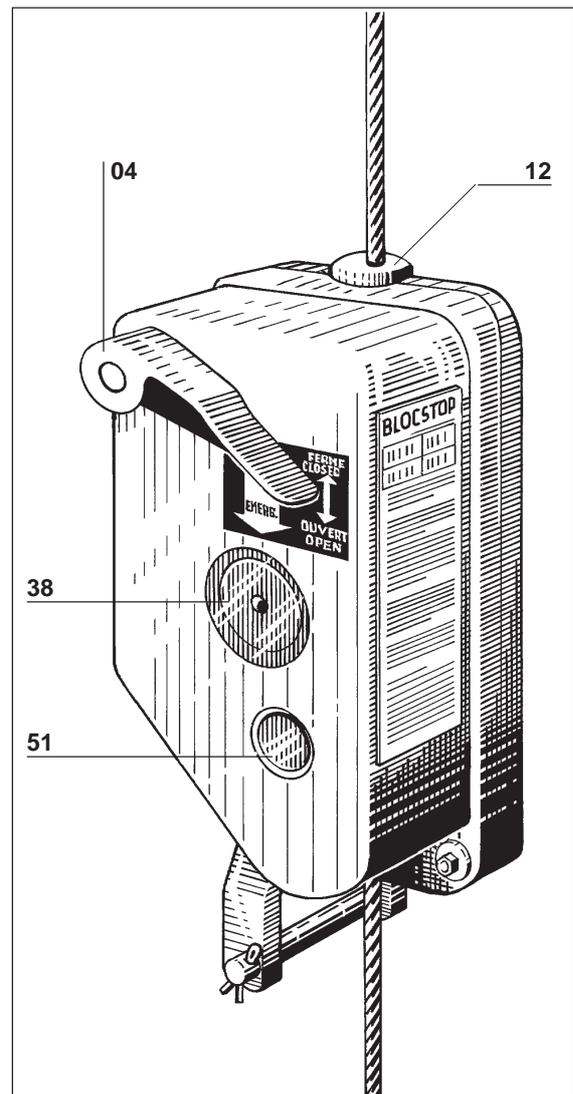
2.1. Operating instructions

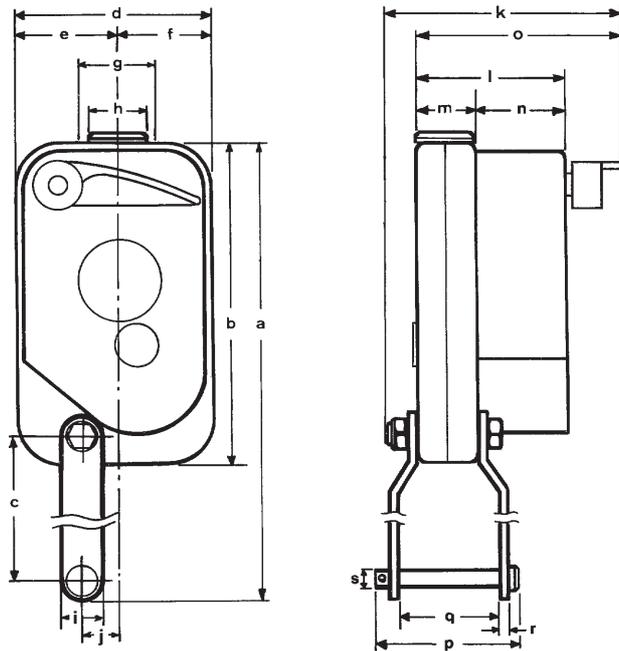
To feed in the wire rope:

- Ensure that the lever (04) is in the "OPEN" position.
- Feed in the wire rope from the top, into the rope guide (12) and pass it through the machine.

To remove the wire rope:

- Maintain the lever (04) in the "OPEN" position.
- **Push in the EMERGENCY STOP button (38) and maintain completely depressed.**
- Remove the wire rope.



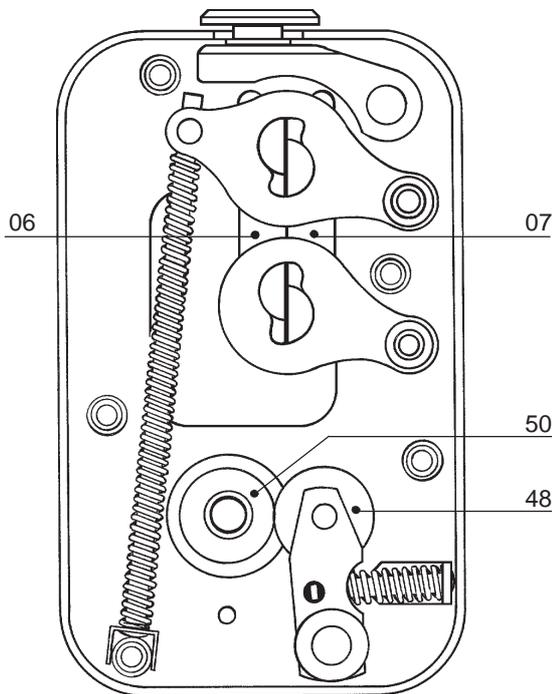


3. TECHNICAL DATA

BLOCSTOP model*	BSO code*	wire rope Ø mm	wire rope type	for TIRAK hoist model	capacity kg
BSO 510	15869	6.5	A6	X-310 / 311 / 312	300
BSO 500	19489	8.3	A8	X-300 / 301 / 302	300
BSO 500	19479	8.3	A8	X-500 / 501 / 502	500
BSO 500	15389	8.3	A8	T-500 / 501 / 502	500
BSO 520	19509	9.5	A9	X-520 / 521 / 522	500
BSO 1000	15889	8.3	A8	T-1000 / 1002	800
BSO 1020	15399	9.5	A9	T-1020 / 1022	1000
BSO 1030	19499	10.2	A10	T-1030	1000

*complete with links and anchor pins

Dimensions (mm)	a	b	c	d	e	f	g	Ø h	i	j	k	l	m	n	o	p	q	r	Ø s
BSO 500 series	252	203	53	121	58	63	48	35	25	18	150	92	37	55	122	79	56	6	12
BSO 1000 series	288	240	53	140	76	64	48	35	25	20	150	92	37	55	122	79	56	6	12



4. PARTS SUBJECT TO WEAR

For complete spare parts, please ask for:

- product information T-279 for BSO 500 series
- product information T-280 for BSO 1000 series

Set out below are the parts which are subject to wear and which must be checked regularly.

For checking and replacing see page 3/3.

Pos.	Designation	Qty	BSO 500	BSO 510	BSO 520	BSO 1000	BSO 1020	BSO 1030
06	upper clamping jaw	1	37295	37355	56935	37165	36245	45375
07	lower clamping jaw	1	37285	37365	56925	37175	36255	45385
50	driving roller complete	1	18237	18237	18237	18237	18237	18237
48	pressure roller complete with bracket	1	18287	18287	18287	18287	18287	18287

5. CHECKING AND MAINTENANCE

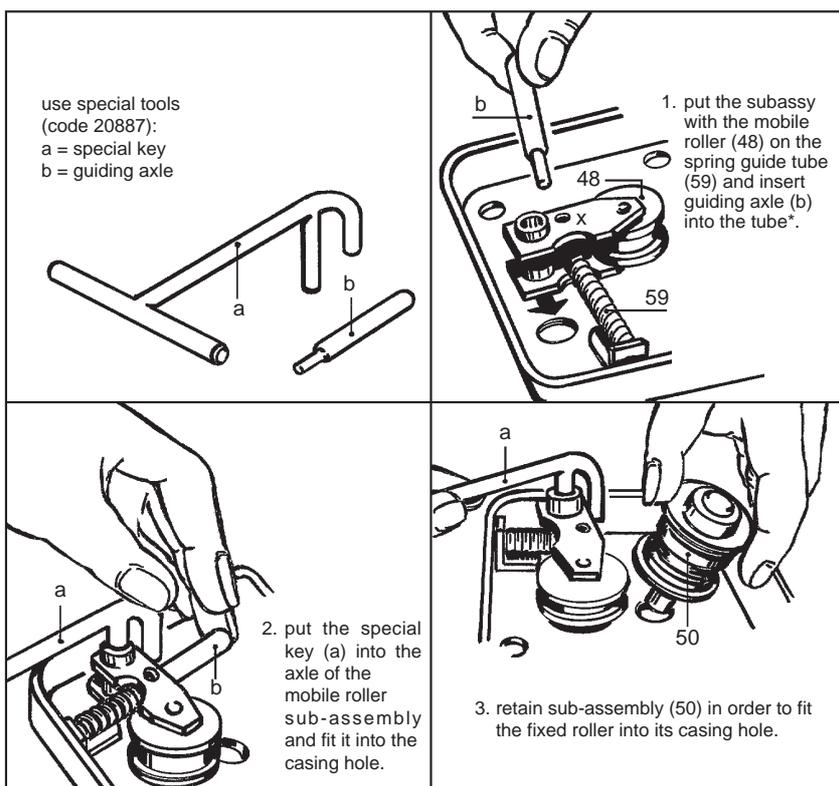
5.1. Checking the BLOCSTOP overspeed function

If the BLOCSTOP is released, its operation can be checked as follows:

- Insert the wire rope from the top (control lever) and push until it comes out of the unit.
- Hold the wire rope above the BLOCSTOP. Allow it to free fall. The jaws should operate and lock onto the wire rope with a travel of less than 10 cm (four inches).
- Repeat this check a minimum of three times.

5.2. Periodic inspection and Maintenance

- Regularly (at least once a year or after 200 hours of operation) the OVERSPEED BLOCSTOP must be cleaned and generally checked by an authorized repairer.
- **Every year** change the roller (items 48 and 50) proceeding as follows:



*Caution: For BSO 500 series the marking(x) must be on the spring side (as shown in the drawing); for BSO 1000 series the marking (x) must be on the other side towards the fixed roller (50).

5.3. Control of the jaws

Although the wear of the clamping jaws of the OVERSPEED BLOCSTOP is minimal, they must be regularly checked by means of a rod with specified diameter:

for	BSO 500/1000	6 mm
	BSO 510	4 mm
	BSO 520/1020	7 mm

If the rod is not held by the clamping jaws, they must be replaced by an authorized repairer.

Use only special clamping jaws, marked with "BSO".

5.4. Control of the wire rope

If the **wire rope diameter** has reduced by 10% of the rated diameter, the wire rope must be replaced.

- Ø 5.8 for wire rope 6.5 mm
- Ø 7.5 for wire rope 8.3 mm
- Ø 8.5 for wire rope 9.5 mm
- Ø 9 for wire rope 10.2 mm

Never use damaged wire ropes.

blocstop

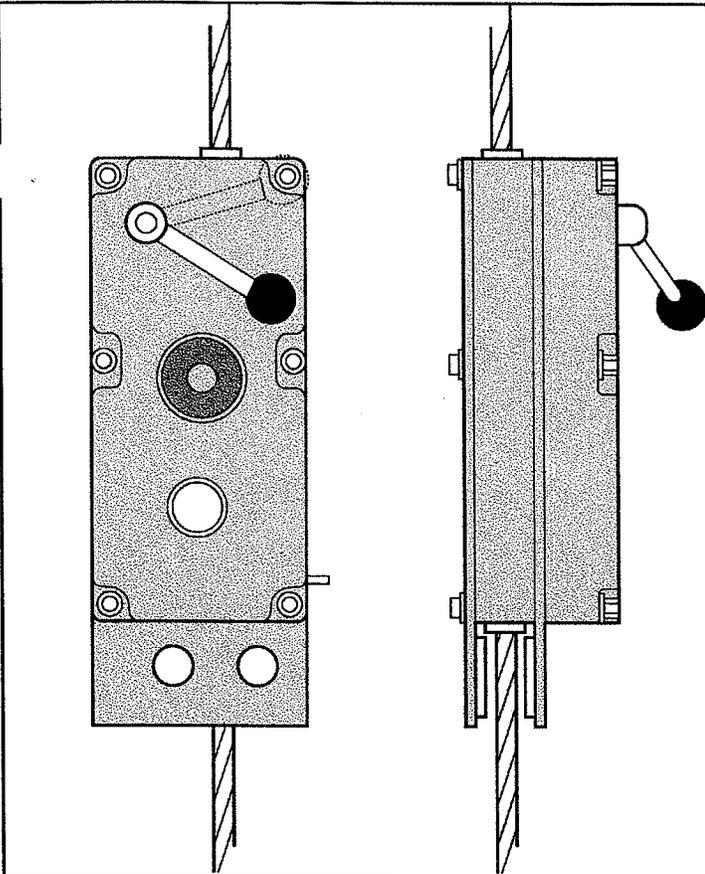
BSO 2000

Overspeed Safety
Device for suspended
platforms.

4,400 lbs. / 2,000 kg.
rated load



CLASSIFIED

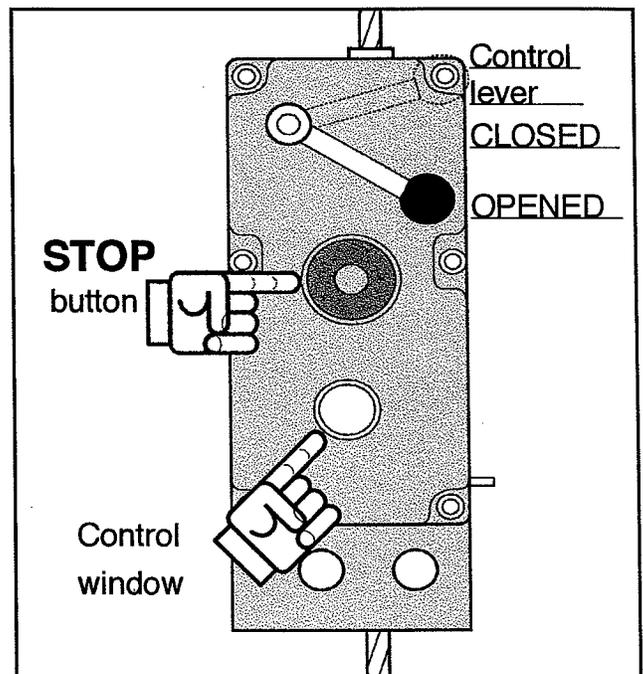


1. GENERAL

The overspeed BLOCSTOP[®] BSO is a fall arrest device, which stops the descent of the load under overspeed conditions. It acts on the suspension wire rope or on a secondary safety wire rope.

2. OPERATING PRINCIPLE

The BLOCSTOP[®] BSO operates automatically. It consists essentially of a GRIPHOIST[®] -type clamping jaw mechanism and a centrifugal governor, which continuously checks the speed of wire rope passing through the BLOCSTOP[®]. The jaw mechanism automatically clamps onto the wire rope, if there is a sudden increase in speed. At the same time it switches off the hoist motor. The overspeed BLOCSTOP[®] BSO can be manually operated by pressing the EMERGENCY-STOP button. The jaws automatically close, and the control lever returns to its CLOSED position. The BLOCSTOP[®] BSO is reset by means of the control lever. During operation the centrifugal weights must rotate, which can be regularly checked through a window.



Technical data

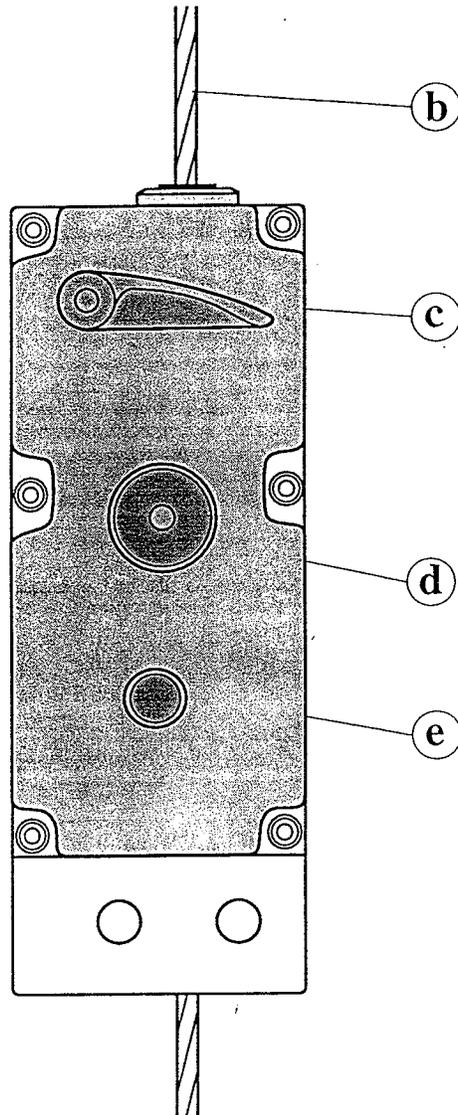
Rated load	4,400 lbs. / 200 kg.
Wire rope \varnothing	9/16 " / 14 mm
Weight	31 lbs. / 14 kg.

 **Tractel** Inc.
GripHoist[®] Division

blocstop BSO 3000

Overspeed Device

Technical Information



1. GENERAL

The OVERSPEED BLOCSTOP, Type BSO is a safety device, used as a **secondary brake**, which is required for man-riding operations by the safety organizations of various countries.

In accordance with these safety regulations the OVERSPEED BLOCSTOP is mounted either on the main suspension wire rope or on a separate safety wire rope.

The OVERSPEED BLOCSTOP has been designed for use with TIRAK hoists and the appropriate wire ropes.

Working temperature from -40 °C to +80 °C (-40 °F to +176 °F).

2. OPERATING PRINCIPLE

The OVERSPEED BLOCSTOP operates automatically.

It consists essentially of a clamping jaw mechanism of the GRIPHOIST-type and a centrifugal governor, which permanently checks the speed of the wire rope passing through the BLOCSTOP.

The jaw mechanism automatically clamps onto the wire rope when there is a sudden increase in speed.

The OVERSPEED BLOCSTOP can be manually operated by pressing the EMERGENCY-STOP button (d).

The jaws automatically close and the control lever (c) returns to its CLOSED position.

To guarantee the correct operation we recommend that the EMERGENCY STOP (d) be carried out manually at least once a day.

The BSO is reset by means of the control lever (c). The wire rope (b) must always be introduced through the upper wire rope entry, i. e. from the control lever side.

During operation the centrifugal weights must rotate, which can be regularly checked through the window (e).

Technical Data

Capacity	3000 kg (6000 lbs)
Wire rope Ø	16 mm (5/8")
Weight	14 kg (31 lbs)

blocstop BSO 3000 Overspeed Device

Technical Information (continued)

3. DIMENSIONS

(see Illustration / dimensions in mm)

4. PARTS SUBJECT TO WEAR

Set out below are the parts which are subject to wear and which must be checked regularly (see par. 5).

Pos.	Description	Code
3	upper jaw	1315
4	lower jaw	1305
15	driving roller assy.	39787
17	pressure roller assy.	39797

For complete spare parts ask for:
- product information T-560

5. CHECKING AND MAINTENANCE

5.1 Periodic inspection and maintenance

- Regularly (at least once a year or after 200 hours of operation) the OVERSPEED BLOCSTOP must be cleaned and generally checked by an authorized repairer.

- Every year change the rollers (item 15 and 17)

5.2 Control of the jaws

Although the wear of the clamping jaws of the OVERSPEED BLOCSTOP is minimal, they must be regularly checked by means of a rod with specific diameter:

for BSO 3000/16 mm rod dia. 10 mm

Insert testing rod and close the BLOCSTOP by pushing the EMERGENCY STOP button.

If the BLOCSTOP is not held on the testing rod, the jaws must be replaced by an authorized repairer.

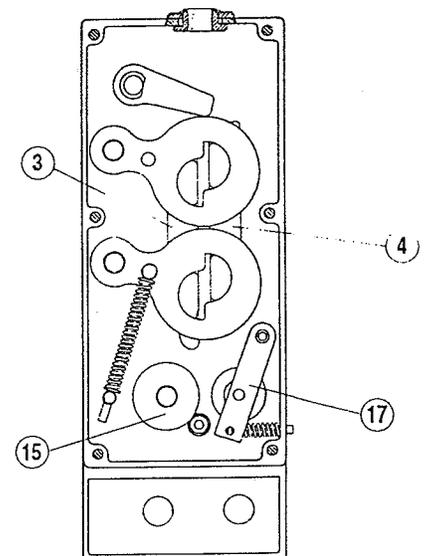
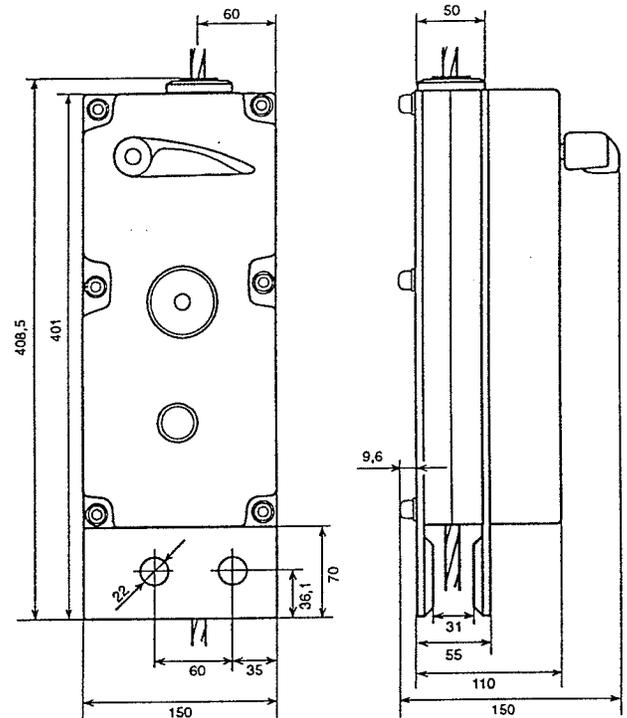
Use only special clamping jaws marked with "BSO".

5.2 Control of the wire rope

If the wire rope diameter has reduced by 10% of the rated diameter, the wire rope must be replaced:

Ø 14,4 mm for wire rope 16 mm

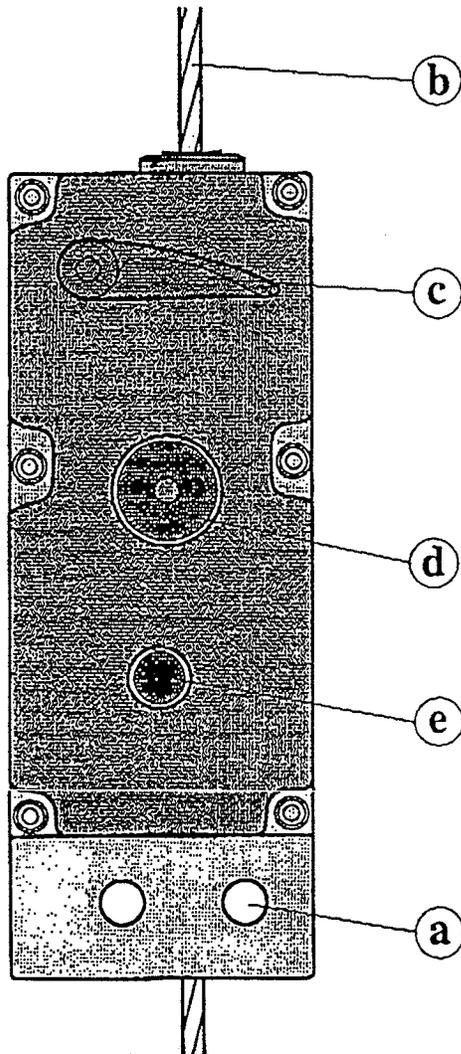
Never use damaged wire ropes.



blocstop BSO 3000

Overspeed Device

Operating Instructions



1. Anchoring

Anchor the BLOCSTOP at holes (a) in that way that the wire rope (b) perpendicularly enters the machine.

2. Wire rope installation

Open the BLOCSTOP by pushing down lever (c) until it locks. Insert wire rope from top and pull it through.

3. BLOCSTOP checks

- Pull the wire rope upwards – the BLOCSTOP must close and hold the wire rope automatically.
- Open the BLOCSTOP again by pushing down lever (c). Press EMERGENCY STOP button (d) – the BLOCSTOP must close and hold the wire rope automatically.
- During operation regularly check through the window (e) that the centrifugal weights are rotating.

4. Overspeed brake action

a) EMERGENCY STOP

Push EMERGENCY STOP button (d), if – for whatever reason – you want to absolutely stop downward travel.

b) To continue with travel:

– Raise the scaffolding until the TIRAK holds the load.

– Open the BLOCSTOP with lever (c).

c) If the overspeed BLOCSTOP has automatically closed:

STOP DOWNWARD TRAVEL!

To continue with descent proceed as described above.

If the overspeed BLOCSTOP repeatedly stops downward travel, contact GRIP-HOIST INC. for advice.

DO NOT DETACH BLOCSTOP!