

# WINCH MB



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## OWNER'S MANUAL

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**MANUAL WINCHES TYPE MB**

**400 TO 1350 KG CAPACITY**



ANGLAIS

# 1 - EC Declaration of conformity



VERNOUILLET  
France

As defined by the EC directive relating  
to machinery 98/37/EEC.  
Annex II B

Herewith, we declare that the product:

End carriage	Manual trolley	Electrical cubicle	Geared motor	Electrical trolley	Manual winch	Light crane system
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- is to be used for incorporation in an other machine
- being assembled with other machines to produce a single machine. It can not be put into use until the machine in which it is incorporated has been declared as conforming with the provisions of Directive 98/37 EEC

**Complies with the following provisions applying to it:**

- Machinery directive 98/37/EEC.
- Directive 73/23/CEE.
- "EMC" Directive 89/336/EEC

**Applied harmonized standards, in particular:**

- EN 60204-1,
- EN 292, parts 1 and 2 (safety of the machines).

**National regulations, standards and specifications:**

- order of June 9, 1993 / circular of September 22, 1993.
- decree no. 92-765, 92-766, 92-767, of July 29, 1992.
- DIN 15400; DIN 15401,

**Quality system applied:**

- EN29001/ISO9001

**Technical standards and specifications complied with, in particular:**

- FEM 9.511 "classification of the mechanisms".
- FEM 9.661 "dimensions and quality of the drive and cable lifting block elements for mass-produced lifting devices".
- EN 818 "chain quality, choice criteria and technical requirements".
- FEM 9.683 "choice of motors".
- FEM 9.755 "steps to be taken to determine the operating periods for mass-produced motorized lifting mechanisms (S.W.P.)".
- FEM 9.751 "Motorized lifting mechanism: safety"
- FEM 9.901 "bases of design for the mass-produced lifting devices for travelling cranes equipped with mass-produced lifting devices".

Bernard DELEFOSSE

### Guarantee

Our manual winches are guaranteed for one year from the date of delivery.

If for a reason outside the control of the vendor, the delivery is delayed, the time lag cannot exceed three months.

If the use (*installation*) of the hoist is delayed, the corresponding extension of the guarantee (a single extension limited to three months) must be requested, and written confirmation obtained.

The vendor undertakes to eliminate all operating errors originating from the concept, the execution, the components or the materials themselves.

The guarantee does not cover normal wear\*, nor the failures resulting from lack of regular and periodic maintenance. It does not cover damage due to a lack of supervision, to false operation or to a bad utilization of the hoists, particularly due to overload conditions.

The guarantee does not apply when there is disassembly, modification or replacement of parts (*mechanical or electrical*) by an unauthorized party or without our prior agreement.

The guarantee only applies for original, factory-installed spare parts, including the ropes.

For the duration of the guarantee, the vendor undertakes to replace or repair, free of charge, the parts that are acknowledged to be damaged following examination by a qualified and authorized technical service.

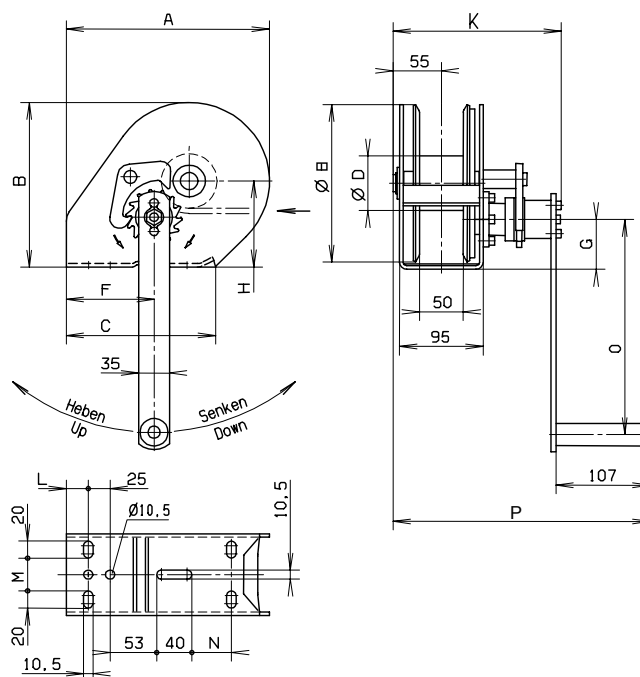
The guarantee excludes any other services or indemnities. The repairs covered by the guarantee are carried out, as a rule, in the workshops of the vendor or authorized agent. When servicing of the equipment is done outside these workshops, the labor costs for disassembly or assembly of these parts are borne by the vendor when these are done exclusively by his staff or by an authorized agent. The replaced parts become the property of the vendor and must be returned to the vendor at his expense.

For components of a relative particular importance that are not manufactured by the vendor and which carry the brand name of specialized manufacturers, the manufacturer's guarantee (which can vary according to the manufacturer) is applicable.

\* The guarantee does not apply for expendable parts defined by the manufacturer :

- Hooks
- Ropes

standard design	MB5 1350 kg	MB3 900 kg	MB2 650 kg	MB1 400 kg
free wheeling device OU decluchable drum	MB5 D 1350 kg	MB3 D 900 kg		
stainless design	MB4 Inox 1000 kg	MB2 Inox 650 kg		



Graphic representation not binding!

	A	B	C	D	E	F	G	H	K	L	M	N	O	P
MB1	232	192	170	63,5	183	100	58	100	192	25	38	-	200	293
MB2	232	192	170	63,5	183	100	58	100	192	25	38	-	250	293
MB2 Inox														
MB3	232	192	170	63,5	183	100	58	100	192	25	38	-	320	293
MB3 D	232	192	170	63,5	183	100	58	100	226	25	38	-	320	303
MB4 Inox	273	266	240	63,5	255	78	75	138	190	35	30	53	250	291
MB5	273	266	240	63,5	255	78	75	138	192	35	30	53	320	293
MB5 D	273	266	240	63,5	255	78	75	138	226	35	30	53	320	303

Before taking into operation, please carefully read this operating instructions!

Observe the safety instructions!

File documentation!

### Destined use

The Hand Winch MB is a manually winch operated for lifting and lowering of loads.

Not suitable for use in explosive danger area.

Power operation is not allowed.

The winch is not designed for continuous operation.

Alterations to the winch or fitting of accessories are only allowed with our written approval.

Pay attention to the technical data and functional description!

### Safety Instructions

Operation, installation and maintenance work should only be executed by personnel who are:

- competent
- trained
- familiar with the relevant regulations

Do not grease or lubricate the brake mechanism.
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Moving of people by the winch or of loads over people is strictly forbidden.

Never touch moving parts.

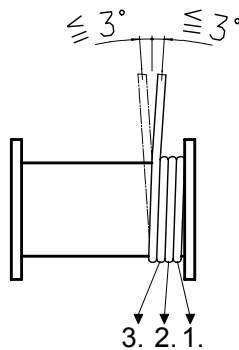
Defects must be repaired immediately by competent trained personnel.

### The load

- must not be left suspended without supervision,
- must not be allowed to swing

### The rope

- ⇒ should only be used for lifting, lowering or pulling of various loads and must not be used for any other purpose.
- ⇒ at least 3 full turns of rope should remain on the drum when loaded.



- ⇒ max. fleet angle  $3^\circ$  (see picture)
- ⇒ when filled to its capacity the drum flanges must project not less than 1.5 times the diameter of the rope.
- ⇒ examine and service regularly according to DIN 15020
- ⇒ only handle with safety gloves
- ⇒ do not touch the rope inlet



- ⇒ slowly position the slack rope to the load

### The Winch

Do not exceed the capacity of each rope layer.

Before taking into operation, a competent person must check:

- the lifting device
- the load bearing parts of the structure
- the carrying medium

### Daily examinations:

- brake functions
- condition of the rope and loading device
- load bearing parts of the structure.
- the load carrying medium

### Load attachment device:

- check it has sufficient carrying capacity
- load hooks must have safety catches.
- load hooks must be secured to the rope with a solid eye and high pressure rope clamp and tested according to the regulations (included into scope of delivery of VERLINDE ropes)
- fix the load correctly



- do not use the winch rope as a hitching device.

The winch should be given a thorough examination by a competent person at least once a year.

Always ensure the maintenance intervals are adhered to.

Only use original accessories and spare parts; otherwise safe function is not guaranteed.

## Technical Data

Type		MB1	MB2 MB2 INOX	MB3 MB3 D	MB4 INOX	MB5 MB 5 D
FEM Group DIN 15020/1		1 Em	1 Em	1 Em	1 Em	1 Em
Capacity 1st rope layer	[daN]	400	650	900	1000	1350
Capacity last rope layer	[daN]	180	290	400	360	480
rec. wire rope DIN3060 FE-znk 1770-sZ spa	[mm]	ø 5	MB2 ø 6	ø 7		
rec. wire rope DIN3060 SE-znk 2160-sZ spa	[mm]					ø 7
rec. wire rope DIN3060 FE BK1770-sZ spa (1.4401)	[mm]		MB2 INOX ø 6		ø 7	
max. rope reception	[m]	28	20	14	26	26
max. number of layers		10	8	7	10	10
max. required crank force	[daN]	18	22	24	24	24
average lift per full turn of crank	[mm]	57	55	58	45	45
securing the load		load pressure brake				
suitable for ambient temperature		- 20°C → + 40°C				

### Stainless design

#### Type MB4 Inox – MB2 Inox

Materials: 1.4057;1.4122;1.4301;1.4305; 1.4541;1.4571;1.4401

Brake lining: phenoplast CuZn 40 Al 2 / PVC

The resistance has to be checked by the operator before use.

Attention: Contact with iron may cause extraneous rust.

### Mounting Instructions

#### Mounting:

#### Mechanical Fixing:

#### ATTENTION:

- the mounting structure must be designed to sustain the max. forces imposed by the winch,
- pay careful attention that the mounting surface is flat and true,
- only fix the winch by means of good quality screws,
- tighten the screws evenly
- secure the screws
- ensure that the crank is free running (crank clearance)

Type	MB1 MB2	MB3 MB3D	MB5 MB5 D	MB2 INOX	MB4 INOX
screws	M 10	M 10	M 10	M 10	M 10
Material grade	min. 8.8	min. 8.8	min. 8.8	stainless A-4-80	stainless A-4-80
number of screws	3	3	4	3	4

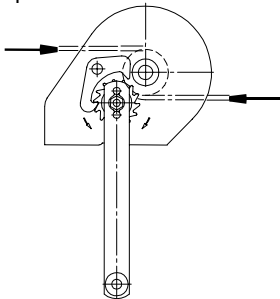
#### Wire rope fixing

#### ATTENTION:

With wrong rope coiling the brake is not effective.

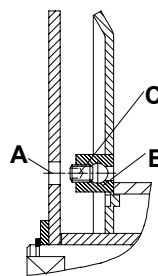
Rope coiling has to be effected according to the drawing (direction by choice).

rope direction



- ⇒ Insert the rope in consideration of rope winding direction.
- ⇒ Tighten clamping screw (in front site of the wire rope drum)

Wire rope fixing



- ⇒ Bring hole **A** and rope clamp **B** into opposite position
- ⇒ insert the rope in consideration of rope winding direction
- ⇒ tighten the clamping screws **C**

For rope selection pay attention to the technical data for the rope (see page 6)

Calculate the rope length in such a way that at least 3 full turns of rope remain on the drum in lowest load position.



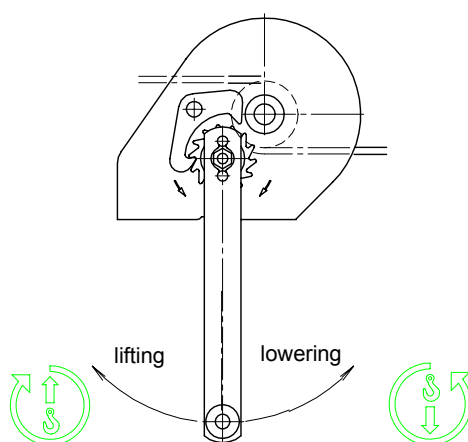
### Operating Instructions

#### Safety Instruction

The winches are only suited for manual operation.

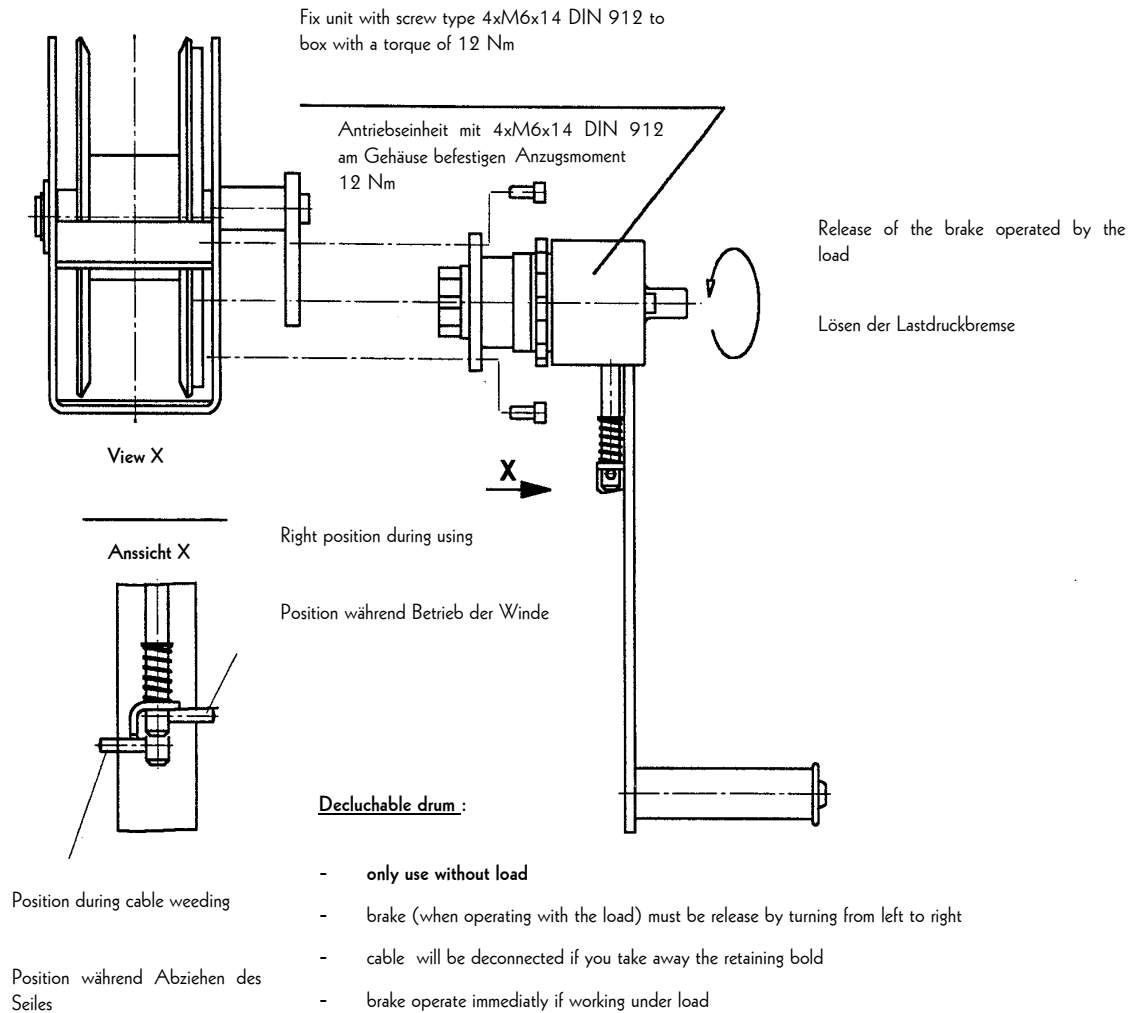
Lifting the load by turning the crank in clockwise direction.

Lowering the load by turning the crank in counter-clockwise direction.



### Decluchable drum : Mounting and using

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**Abrollautomatik :**

- nur im unbelasteten Zustand betätigen
- lastdruckbremse durch Drehen entgegen dem Uhrzeigersinn lösen
- durch Ausrasten des Mitnehmerboizens wird das Seil freigeschaltet
- bei Belastung stellt sich der Bremsmechanismus automatisch in Laststellung zurück

### Inspection- and Maintenance Instructions

#### Safety Instruction

Before carrying out inspection and maintenance works ensure the winch is unloaded.

Maintenance-, Inspection Works	Inspection intervals
Visual examination of rope hook (carrying device)	daily
Function of the winch	
Function of brake	
Lubricate drive gearing	quarterly
Check the brake disc for wear (replace if thickness is < 2,0 mm)	
Check and service rope for wear according to DIN 15020	
Check the fixing screws are tight.	
Check all parts of the winch for wear and, if necessary, replace and grease defect parts.	annually
Check Name-plate for legibility	
Arrange for an examination by a competent person*	

\* f. e. by VERLINDE service department

The working life of the winch is limited, wearing parts have to be replaced in good time.

#### Operating material / Recommended lubricant

Recommended lubricant for all lubricating points:

multipurpose grease acc. to **DIN 51825 T1 K 2 K**

**decomposable lubricant** (acc. to CEC Test L-33 T- 32 approx. 80% after 21 days) <sup>1)</sup>

**BECHEM UWS Multigrase VR 1-2 acc. to DIN 51 502 K 2 G-20**

<sup>1)</sup> for MB2 INOX and MB4 INOX standard lubrication

Waste lubricant has to be disposed according to legal regulations!

### Operating failures and their causes

failure	cause	Elimination
In unloaded state, it is difficult to turn the crank	Lubricant in bearing points is missing.	Execute maintenance works
	Dirt or something similar has accumulated in the bearing.	
	Winch was distorted during mounting	Check the fixing. Is the mounting surface even, are the screws tightened correctly?
Load is not held	Wrong coiling of the rope winding direction for lifting was not correct,	Lay the rope correctly (see picture on page 7)
	Brake is worn-out	Check brake parts and replace worn-out parts
	Too light load	The load has to be at least 20kg resp. 50kg.
Brake does not release, load may only be lowered with high expenditure of force	Brake discs or brake mechanism is distorted.	Release the brake by slightly striking against the crank arm with the flat of the hand in lowering direction

### Disposal

After having placed out of service, the parts of the hand winch have to be recycled or disposed according to legal regulations!