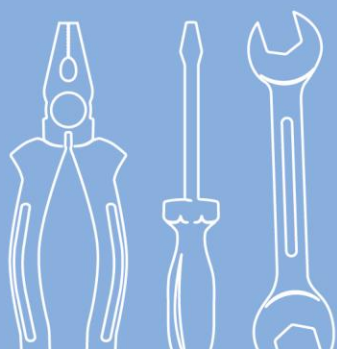


Installation, Operating and Maintenance Instructions

Pedestal

108/99 - 108/22



**NOTICE!**

The installation or mounting instructions for incomplete machines you'll find in chapter "Installation".

© by Heinrich de Fries GmbH

Heinrich de Fries GmbH, Gauss Str. 20, D-40235 Düsseldorf

Heinrich De Fries GmbH will be named HADEF in the following text.

Original operating- and maintenance instructions in German language.

Translation in other languages is made of the German original.

A copy may be requested in writing or is available for download on www.hadef.com

Subject to changes.

Table of Contents

1	Information	3
2	Safety	3
2.1	Warning notice and symbols.....	3
2.2	Duty of care of the owner.....	3
2.3	Requirements for the operating personnel	4
2.4	Appropriate use of the product.....	4
2.5	Basic safety measures	5
3	Transport and Storage	5
3.1	Transport.....	5
3.2	Storage	5
4	Description	5
4.1	Areas of application	5
4.2	Design.....	6
4.3	Functional description	6
4.4	Important components.....	6
5	Technical data.....	6
6	Installation.....	7
6.1	Wire rope deflection	7
6.2	Rope exit.....	8
6.3	Tools	8
7	Control	8
7.1	General	9
8	Safety check.....	9
9	Maintenance	9
9.1	General	9
9.2	Monitoring	9
10	Inspection.....	9
10.1	Periodic checks	9
10.2	Inspection intervals	9
10.3	Inspection.....	10
11	Service	10
12	Trouble.....	10
13	Remedy.....	10

14	Decommissioning	10
14.1	Temporary decommissioning	10
14.2	Final decommissioning/disposal	10

1 Information

The products meet European Union requirements, in particular the validated EU Machine Directive.

The entire company works acc. to a certified quality assurance system as per ISO 9001.

The stated performance of the devices and meeting any warranty claims require adherence to all instructions in this manual.

Before delivery, all products are packed properly. Check the goods after receipt for any damage caused during transport. Report any damage immediately to the forwarding agent.

This manual allows a safe and efficiently use of equipment. Images of this manual are for a principle understanding and can be different from the real design.

2 Safety

2.1 Warning notice and symbols

Warnings and notice are shown as follows in these instructions:

 DANGER!	This means that there is a high risk that leads, if it is not avoided, to death or severe injury.
 WARNING!	This means that there is a risk that could lead, if it is not avoided, to death or severe injury.
 CAUTION!	This means that there is little risk that could lead, if it is not avoided, to slight injury or damage to the device or its surrounding.
 NOTICE!	Gives advice for use and other useful information.



Danger from electricity.



Danger from explosive area.

2.2 Duty of care of the owner

 DANGER!
Failure to follow the instructions of this manual can lead to unpredictable hazards. For any resulting damage or personal injury, HADEF assumes no liability.

The unit was designed and built following a risk analysis and careful selection of the harmonized standards that are to be complied with, as well as other technical specifications. It therefore represents state-of-the-art technology and provides the highest degree of safety.

Our delivery includes the hoist supplied beginning at its suspension and ending at the load hook and if supplied with control, the control line/hose that leads to the hoist. Further operating material, tools, load attaching devices as well as main energy supply lines must be assembled according to the valid rules and regulations. For explosion-proof equipment, all these parts must be approved for use in area prone to explosion, or they must be suitable for use in area prone to explosion. The owner is responsible for this.

However, in everyday operation this degree of safety can only be achieved if all measures required are taken. It falls within the duty of care of the owner/user of the devices to plan these measures and to check that they are being complied with.

Complete the operating and installation instructions by any instructions (regarding supervision or notifications) that are important for the special kind of use of the equipment, i.e. regarding organization of work, work flow and human resources.

In particular, the owner/user must ensure that:

- The unit is only used appropriately.
- The device is only operated in a fault-free, fully functional condition, and the safety components, in particular, are checked regularly to ensure that it is functioning properly.
- The required personal protective equipment for the operators, service and repair personnel is available and is used.

- The operating instructions are always available at the location where the equipment is used and that they are legible and complete.
- The unit is only operated, serviced and repaired by qualified and authorized personnel.
- This personnel is regularly trained in all applicable matters regarding safety at work and environmental protection, and that they are familiar with the operating manual and, in particular, the safety instructions it contains.
- Any safety and warning signs on the devices are not removed and remain legible.
- customers equipment at site must comply with currently applicable ATEX-regulations

**WARNING!**

It is not allowed to make constructive changes of the equipment!

2.3 Requirements for the operating personnel

The units may only be operated by qualified persons that are appropriately trained and that are familiar with it. They must have their employer's authorization for operation of the units.

Before starting work, the operating personnel must have read the operating and installation instructions, especially the chapter "Safety Instructions".

This is especially important for operating personnel that rarely uses the equipment, i.e. for installation or maintenance work.

**DANGER!**

In order to avoid severe injury, please pay attention to the following when using the equipment:

- Use protective clothes/equipment.
- Do not wear long hair hanging down open.
- Do not wear rings or other jewelry.
- Do not wear clothes that are too big/wide.
- Do not reach into ropes, chains, drive parts or other moving parts with your hands

2.4 Appropriate use of the product

Devices are intended for deflecting a wire rope in all directions.

- The permitted safe working load of the devices must not be exceeded!
- The permitted environmental temperature during operation is -20°C up to +50°C.
- Defective devices must not be used until they have been repaired! Only original HADEF spare parts must be used. In case of non-compliance all warranty claims will expire.
- In case of unauthorized modification of the devices by the user, liability and warranty will lapse.

These pedestals described are classified as „ready to use device“ according to all national regulations with corresponding CE Declaration Of Conformity.

**NOTICE!**

If the units are not used appropriately, it is not possible to ensure safe operation.

The owner and operator have sole liability for all personal injury and damage to property arising from inappropriate use.

**DANGER!**

In particular, use is not permitted:

- in potentially explosive atmospheres, unless the equipment has been modified for this purpose and this is shown on special type plates it carries for this purpose.
- in reactor containments
- for transporting persons
- for holding lifted loads
- for scenic use
- when persons are under suspended loads

2.5 Basic safety measures

- Observe installation-, operation- and maintenance instruction.
- Pay attention to caution notes at units and in the manual.
- Observe safety distances.
- Take care for a free view on the load.
- Only use this devices appropriately.
- The equipment is to be used exclusively for movement of goods. Under no circumstances persons may be moved.
- Never load the devices beyond their working load limit.
- Observe the relevant national accident prevention regulations.
- Building walls, ceilings, floors or constructions - on which the units are mounted or suspended - must be checked by a structural engineer for sufficient stability.
- After the unit has been standing for a longer period of time, visually inspect all components that are important for its function and replace damaged components with new original spare parts.
- Do not use a defective device.
- Stop working immediately in case of disturbances and remedy failures.
- Any damage and faults must be reported to a responsible supervisor immediately.
- If the unit is put into operation, any persons in the immediate vicinity must be informed by calling to them!
- Observe the provisions for load suspension equipment in accordance with the relevant national regulations for the positive and non-positive slinging of loads.
- The lifting tackle or the load must be securely attached to the device.

3 Transport and Storage

3.1 Transport

The goods are checked and adequately packed before delivery.

- Do not throw or drop the accessories
- Use adequate means of transport

Transport and means of transport must be suitable for the local conditions.

3.2 Storage

- Store the accessories at a clean and dry place
- Protect the accessories against dirt, humidity, corrosion and damage by an appropriate cover

4 Description

4.1 Areas of application

The devices must be as far as possible installed in a covered room.

If they are used in the open, protect the units against the effects of weather such as rain, hail, snow, direct sunshine, dust, etc. - we recommend to use a cover in parking position. If the device is set up in a continuously humid environment with strong temperature fluctuations, the correct functionings are endangered by the forming of condensation.

NOTICE!

Use only in the intended atmosphere with a humidity of up to 100%, but not under water!

DANGER!

In particular, use is not permitted:

- for tearing loose fixed loads, dragging of loads as well as diagonal pulling
- for pulling against a fixed point without additional safety and/or measuring equipment against exceeding the nominal load
- in potentially explosive atmospheres, unless the equipment has been modified for this purpose and this is shown on special type plates it carries for this purpose.
- in reactor containments
- for transporting persons
- for holding lifted loads
- for scenic use
- when persons are under suspended loads

4.2 Design

Pedestal with wire rope pulley and roller bearing



4.3 Functional description

Free insertion as well as deflection of wire rope in all directions.

NOTICE!

The best protection against functional failures in case of extreme environmental impact is the regular use of the equipment.

4.4 Important components

Rope pulley with machined groove

Maintenance-free roller bearing

Side plates made of bended steel plate

Rope slip off guard (only 108/22)

5 Technical data

108/99

capacity kg	rope pulley diameter		max. rope diameter mm	weight
	outer Ø mm	groove base Ø mm		
250	85	60	6	1,4
500	125	90	9	3,7
1000	180	135	13	10,2
2000	240	185	18	23,8
3200	300	230	23	44
5000	360	280	27	75
12500	530	420	38	195
20000	645	510	46	360

108/22

capacity kg	rope pulley diameter		max. rope diameter mm	weight
	outer Ø mm	groove base Ø mm		
250	85	65	4	1,9
500	118	100	6	5,1
1000	178	145	9	14,3
2000	238	200	12	32,4
3200	305	255	16	57
5000	348	290	18	90
12500	465	390	24	199
20000	530	450	28	313

6 Installation

Fixing screws on site. Rope diameter acc. duty classification 1Em.

The installation surface must be plan.

Install stainless.

108/99

Size	Rope Ø max.	A	A1	B	B1	D5	Schraube 8.8
	mm	mm	mm	mm	mm	mm	M
025	6	80	60	86	66	9	8
05	9	110	80	127	97	13	12
10	13	170	130	162	127	17	16
20	18	210	160	216	166	21	20
32	23	270	210	252	192	25	24
50	27	320	260	294	234	32	30
125	38	450	380	323	263	32	30
200	46	570	480	370	300	32	30

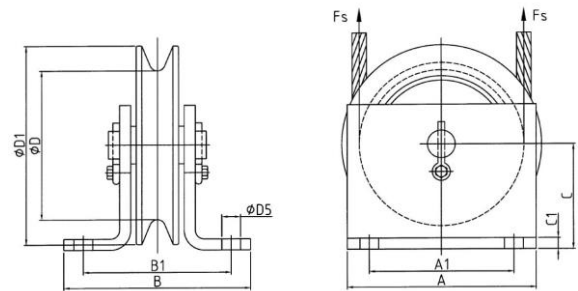


Illustration 1

108/22

Size	Rope Ø max.	A	A1	B	B1	D5	Schraube 8.8
	mm	mm	mm	mm	mm	mm	M
025	4	110	90	86	66	9	8
05	6	160	130	127	97	13	12
10	9	220	180	162	127	17	16
20	12	250	200	216	166	21	20
32	16	310	250	247	187	25	24
50	18	360	260	294	234	32	30
125	24	470	400	323	263	32	30
200	28	570	480	370	300	32	30

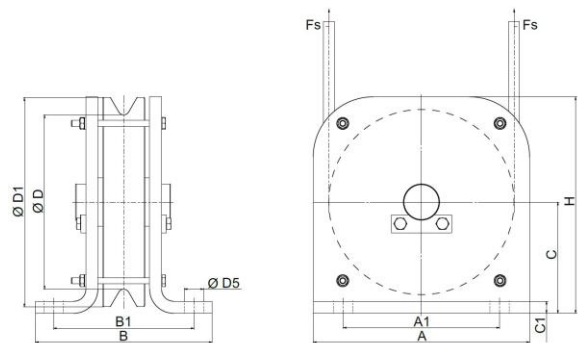


Illustration 2

6.1 Wire rope deflection

- maximum wire rope deflection angle
4° for standard wire ropes
2° for non-twisting resp. twist-resistant wire ropes
- The minimum dimension (M) from the centre of the drum to the centre of the sheave, or from sheave to sheave, must be observed.

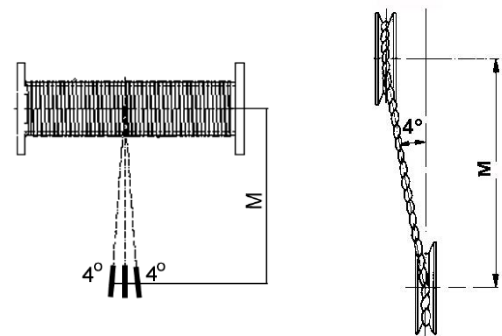


Illustration 3

NOTICE!

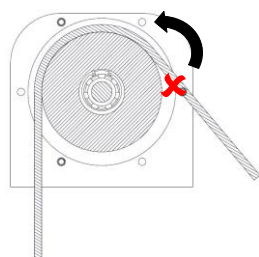
Skewed running and non-compliance with the minimum distances of deflection points can result in increased wear and lead to premature rope discard!

6.2 Rope exit

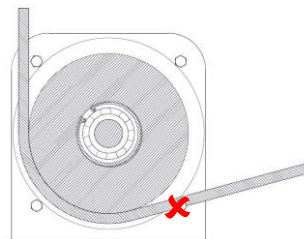
Rope exit is possible in all directions.

Only 108/22

For rope exits at certain angles, individual rope slip off guard can be moved or removed.



up to 1000kg

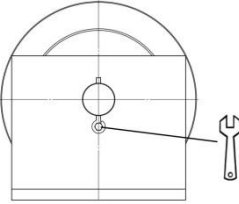


from 2000kg

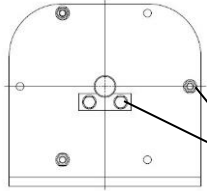
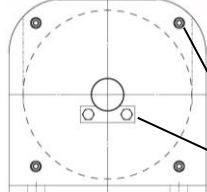
To prevent the rope from slipping off when slack, the rope must be guided under at least one rope slip off guard.

6.3 Tools

108/99

capacity	tool	size	usage	
250kg – 1000kg		M6	axial securing	
2000kg – 5000kg		M8		

108-22

capacity	tool	size	usage	
250kg – 500kg		M6	axial securing Rope slip off guard	
1000kg		M8		
2000 - 5000kg		M10		
12500kg		M16		
20000kg		M20		

7 Control

Only people that are familiar with the operation of the lifting devices and cranes may be entrusted with their operation. They must be authorized by the employer for the operation of the equipment. The employer must ensure that the operating instructions are available near the equipment and that they are accessible for the operating personnel.

- Only use wire ropes, that do not exceed the maximum permitted diameter.
- Put the wire rope properly on the pulley and ensure that the rope rests on the groove base.
- Check screw connections.

7.1 General

The operator of the unit is responsible for the entire system.

According to the Ordinance on Industrial Safety and Health, a hazard analysis must be carried out by the operator.

Observe the respective national standards, regulations and directives of the responsible bodies at the place of operation.



NOTICE!

Hoists up to 1000 kg capacity and without motor-driven trolleys of hoisting unit must be tested by a “qualified person” before putting into operation for the first time.

Hoists of 1000 kg capacity and up or with more than one motor-driven hoist movement; i.e. lifting and trolley movement, must be tested by a “licensed qualified person” before putting in operation.

An exception is “hoists ready for operation” acc. validated national regulations with EU-declaration of conformity.

Definition “qualified person” (former expert)

A “qualified person” has learned, due to occupational training and experience and the job that the person has done, the skills needed to test the material for one’s work.

Definition “licensed qualified person” (former approved expert)

A “licensed qualified person” has, due through special occupational training, knowledge about testing of the material for one’s work and knows the national accident prevention regulations and other prescriptions and technical regulations. This person must test the material for one’s work regularly with regard to design and kind of use. The license will be given to qualified person by the approved supervision authorities (ZÜS).

8 Safety check

Before putting into service initially or when putting back into service, it must be checked whether:

- All fastening screws (if existent), socket pins, flap socket and safety devices are tightened and secured.

9 Maintenance

9.1 General

All monitoring, servicing and maintenance operations are to ensure correct functioning of the equipment; they must be effected with utmost care.

- Only “qualified persons” may do this work.
- Servicing and maintenance work must only be done when the hoist is not loaded.
- Records must be kept of all test results and measures taken.

9.2 Monitoring

The monitoring and servicing intervals stated are valid for operation under normal conditions and single-shift operation. In case of severe operating conditions (e.g. frequent operation with full load) or special environmental conditions (e.g., heat, dust, etc.), the intervals must be shortened correspondingly

10 Inspection

10.1 Periodic checks

Independently from the regulations of the individual countries, lifting devices must be checked at least yearly by a qualified person or licensed qualified person regarding its functional safety.

10.2 Inspection intervals

	daily checks	inspection, service every 3 months	inspection, service every 12 months
check screw connections	X		
check wear and tear of rope pulley		X	
check smooth running of rope pulley		X	
check smooth running of rope within pulley		X	
equipment check by a qualified person (periodic inspection)			X

10.3 Inspection

- Examine for bearing damage.
The rope pulley should have a firm seating on its axle and should turn smoothly.
- Check for wear and tear.
The wire rope must not stick in the groove and has to be liftable effortlessly.

11 Service

The wire rope pulley and the ball bearings are maintenance-free.

12 Trouble

Please pay attention to the following in case of problems:

- Troubles with the equipment must only be repaired by qualified personnel.
- Secure the unit against unintended operation start.
- Put up a warning note indicating that the unit is not to be used.
- Secure the working area of moving parts of the unit.
- Please read the chapter "Safety instructions".

Notes on the repair of faults are found in the following table.

For the repair of failures please contact our service department.

 **CAUTION!**

Trouble caused by wear or damage to parts such as wire ropes, chains, chain wheels, axes, bearings, brake parts, etc., must be remedied by replacing the parts with original spare parts.

13 Remedy

trouble	cause	remedy
loud noise while turning rope pulley	ball bearing worn or defective	replace ball bearing
loose seating or sluggishness of rope pulley		
Rope pulley does not turn		
rope sticking in pulley groove	rope pulley worn or deformed	replace rope pulley

14 Decommissioning

 **WARNING!**

It is essential that the following points are observed in order to prevent damage to the equipment or critical injury when the device is being decommissioned:

It is mandatory that all steps for decommissioning the machine are carried out in the indicated sequence:

- First secure the working area for decommissioning, leaving plenty of space.
- Read the chapter "Safety instructions".
- Disassembly is carried out in reverse order to the assembly.
- Please make sure that all operating material is disposed of in accordance with environmental regulations.

14.1 Temporary decommissioning

- Measures are as above.
- Also read the chapter "Transport and storage".

14.2 Final decommissioning/disposal

- Measures are as above.
- After disassembly, ensure that the disposal of the equipment and any materials it contains is carried out in accordance with environmental regulations.