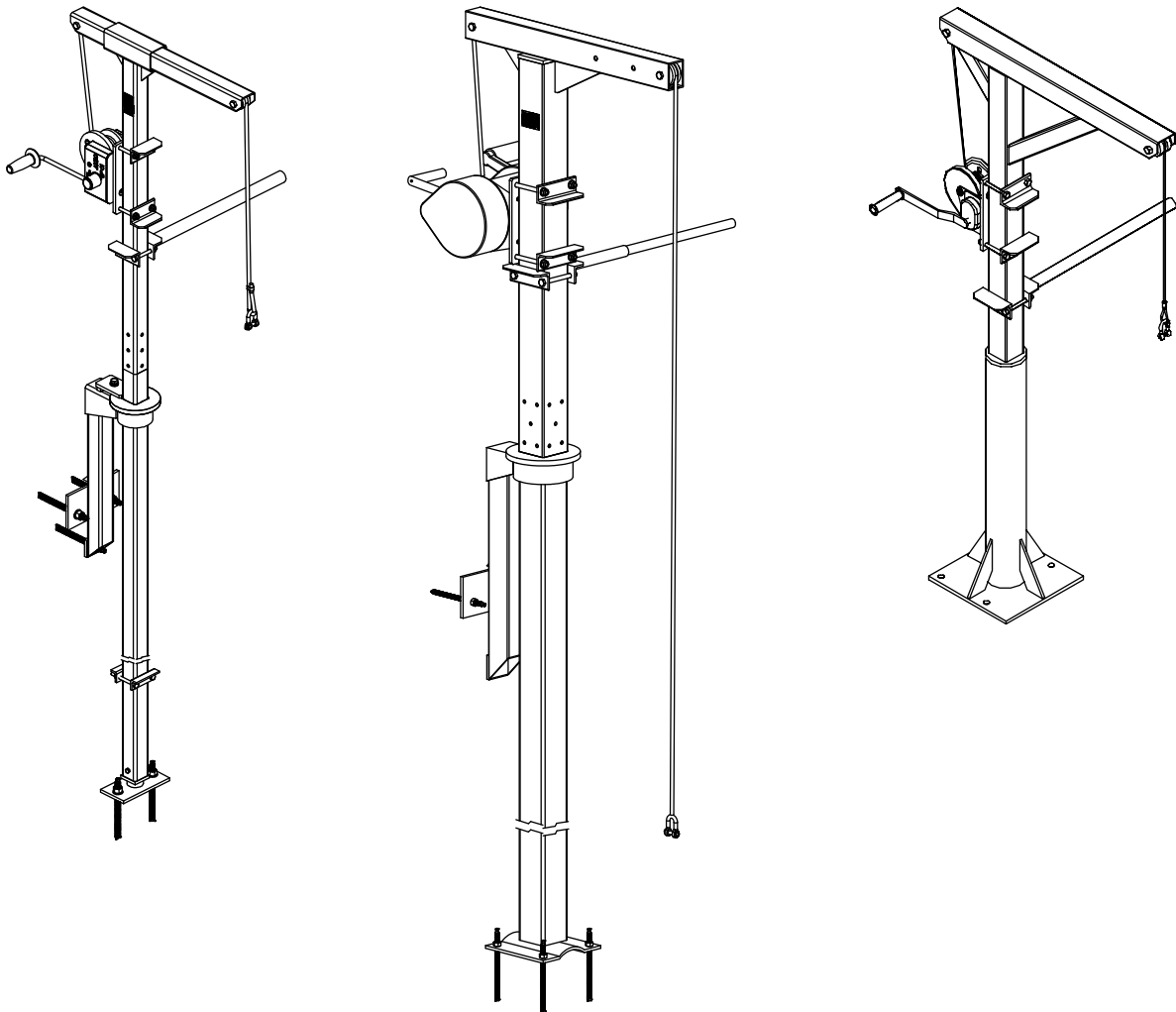

Lifting Device Type ABS 60 mm, 100 mm and 2.3 kN



Installation and Operating Instructions (Translation of Original Instructions)

Lifting Device Type ABS 60 mm, 100 mm, and 2.3 kN

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1 General

1.1 Introduction

These **Installation and Operating Instructions** and the separate booklet **Safety Instructions for Sulzer Products Type ABS** contain basic instructions and safety hints which must be observed during transport, installation and commissioning. For this reason it is essential that they are read by the installing technician as well as by relevant skilled operators or users. They should also be always available where the unit is installed.



Safety Instructions which might cause danger to life in case of non-observance have been specifically highlighted with the general danger symbol.

ATTENTION *Appears at safety hints, the non-observance of which could damage the unit or affect its functioning.*

NOTE *Used for important pieces of information.*

Illustrations code; e.g. (3/2). The first digit refers to the figure no. and the second digit to the position in that figure.

The documents listed below are integral parts of these installation and operating instructions:

- Installation and operating instructions for Sulzer lifting device.
- Declaration of conformity for Sulzer lifting device as defined by: Machinery Directive 2006/42/EC.
- Checklist for the expert inspection of winches, pulling and lifting devices.

The documents listed below are also substantial parts of these instructions:

- Operating instructions for the winch.
- Instructions for the handling of chemical anchors.

1.2 Application areas

The Sulzer lifting device is suitable to lift and lower submersible mixers manually. It can be rotated 360°; the boom can be adjusted to the required overhang and lifting capacity by tilting it.

In the working position the lifting device is pushed into a lifting device support which is connected to the building.

1.3 Application limitations

The Sulzer lifting device and the lifting device supports are weather proof. Some of the winches are not and should be stored in a sheltered place when not being used.

If the lifting device is operated in an aggressive atmosphere, or the wire rope in an aggressive liquid, they have to be cleaned after operation and must be checked by an expert at shorter intervals.



The maximum allowable loads must be observed when using the Sulzer lifting device.

ATTENTION *Special attention must be paid to the safety and processing instructions from the manufacturer of the fastening systems used!*

1.4 Type designation and components of the Sulzer lifting device

See pages 8 - 9.

1.5 Dimensions

See pages 10 - 12.



The maximum lifting capacity for the different overhangs can be obtained from the nameplate on the lifting device.

1.6 Nameplate

We recommend that you record the data from the original nameplate on the nameplate illustrated *in Fig. 1* below so that you can refer to the data at any time.

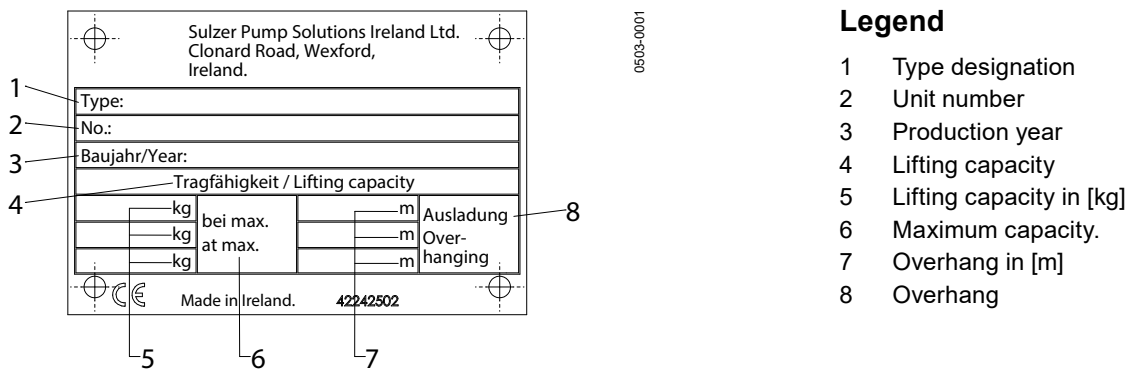


Figure 1: Nameplate

2 Security

The following standards and regulations have to be observed:

- DIN 15020 T1 and 2
- UVV VBG 1, 8, 9, 9a

The owner of the lifting device has to make sure of the following:

- These instructions are always available to the operator.
- The lifting device is only operated by skilled and instructed individuals.
- The operator is using all required personal protection equipment.
- The lifting device is checked by an expert before commissioning (faultless assembly and installation, ready for work). A written report on this inspection is required.
- The unit will be checked by an expert at least once a year (see check list at the end of this booklet). When operating the unit under unfavourable conditions more frequent checks may be required.
- No changes on the unit are to be made without prior written consent from the manufacturer.
- Damage to the unit is immediately repaired and faulty units are not operated.

2.1 Safety instructions for the operator of the lifting device



Study installation and operating instructions with care!



Prior to any operation, the lifting device has to be checked carefully, including correct guidance in the lifting device support. In case of faults the owner has to be informed immediately and the unit has to be blocked!



Make sure no persons are within the working radius of the unit. If required, this area is to be blocked by suitable means.



Do not stand under the suspended load!



Never exceed the maximum load related to the actual overhang!



Use suitable sling elements only (according to VBG UVV 9a)!



Make sure that there is no risk of jamming or catching of the load!



Moving human beings with the lifting device is strictly prohibited!



The load must never move out of perpendicular!



The winch is not to be operated by a motor!



The wire rope must not be used to sling the load!



The load must always be visible to the operator. If this is not possible, the assistance of a second person is required (marshal)!



When winding the wire rope it always has to be held tight! If the rope is not wound tight enough on the winch drum the breaking load of the rope can be reduced dramatically! An additional weight attached to the end of the wire rope will reduce the risk of loose winding.



Attaching the wire rope to the winch drum is to be done according to the instructions of the winch manufacturer!



At least three turns of wire rope must remain on the winch drum when the load is in its lowest position!



When operating the unit all bolts have to be secured by security pins!



Use your safety helmet, gloves and safety shoes!



Connect the equipotential bonding!

These hints are only supplementary to the regulations of DIN 15018 and the regulations for the prevention of accidents from the authorities VBG 8, VGB 9a.

Furthermore, any local regulations are to be observed!

3 Installation of the bottom fixing support

NOTE Please find the necessary dimension for installation at pages 10 - 12.

- First check all parts whether they are correct and all available according to the parts list.
- Inspection of the installation site according to the drawings:
 - a. check the installation site regarding stability (min. B25).
 - b. check the installation place regarding suitability for the safe operation of the lifting device.
- Take care to ensure the correct conditions for anchoring, e.g:
 - depth of holes
 - drill diameter
 - edge spacings
 - working temperature
 - expiration date of plastic mortar
 - curing time
 - fastening torque of nuts
 - nut lockings
- Before the first operation of the lifting device the support installation has to be inspected by an expert. A written report on this inspection is required.

4 Installation of the Sulzer lifting device

See pages 13 - 15.

NOTE The square guide tube section of the lifting device is supplied in a standard length of 6000 mm and will need to be cut to the required length as determined on site by the installation.

5 Tightening torque

Tightening torque for Sulzer stainless steel screws A4-70:								
Thread	M8	M10	M12	M16	M20	M24	M27	M30
Tightening torque	17 Nm	33 Nm	56 Nm	136 Nm	267 Nm	460 Nm	500 Nm	600 Nm

6 Check list / Hints for check by an expert

1. Manufacturer: Sulzer Pump Solutions Ireland Ltd., Clonard Road, Wexford, Ireland.
2. Year of production: _____
3. Serial number: _____
4. Lifting capacity: _____
5. Manufacturer of rope winch: _____ Type: _____
6. Lifting rope: Diameter: Ø _____ mm Min. breaking load: _____ kN
7. Check before first operation: On: _____ By: _____

Recurring checks (at least once a year)

Date	Result	Signature	Repaired	
			On	By

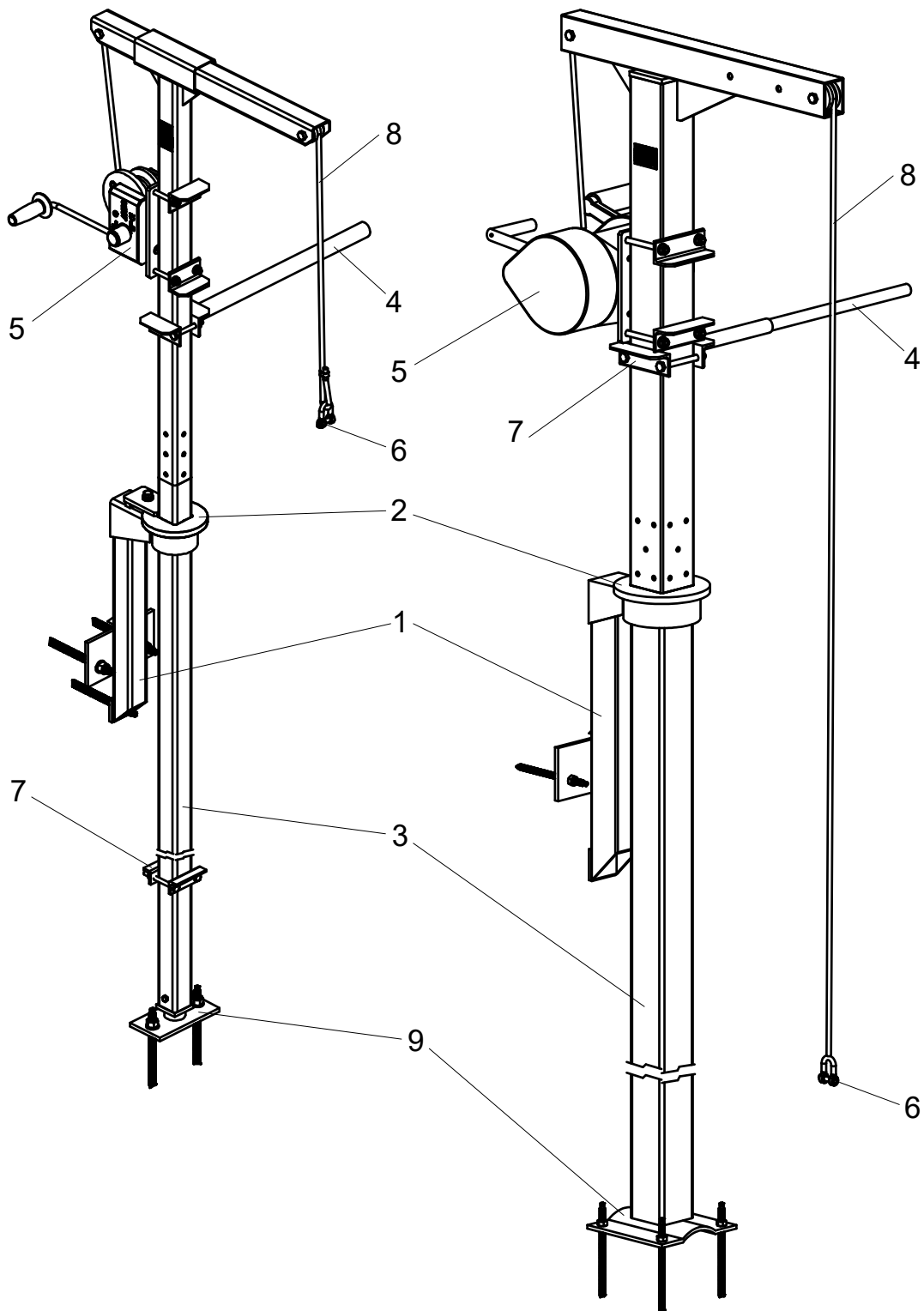
Hints for checks by an expert

1. Are the nameplate, load rating, and warning labels complete and readable?
2. Check the post, boom and lifting device supports regarding damages, wear, corrosion and deformation.
3. Check the load bearing elements regarding smooth function (post, pulley).
4. Check all bolts regarding wear and deformation. Are all securing pins in the bolts?
5. Check the wire rope regarding damage, corrosion and correct dimensions.
6. Winch: inspection according to the instructions of the manufacturer.
7. Installation of the lifting device supports: check regarding damage on the load bearing parts of the building, corrosion, deformation and tight fastening of the base parts.
8. Use your personal protective equipment (PPE).

60 mm & 100 mm

Legend:

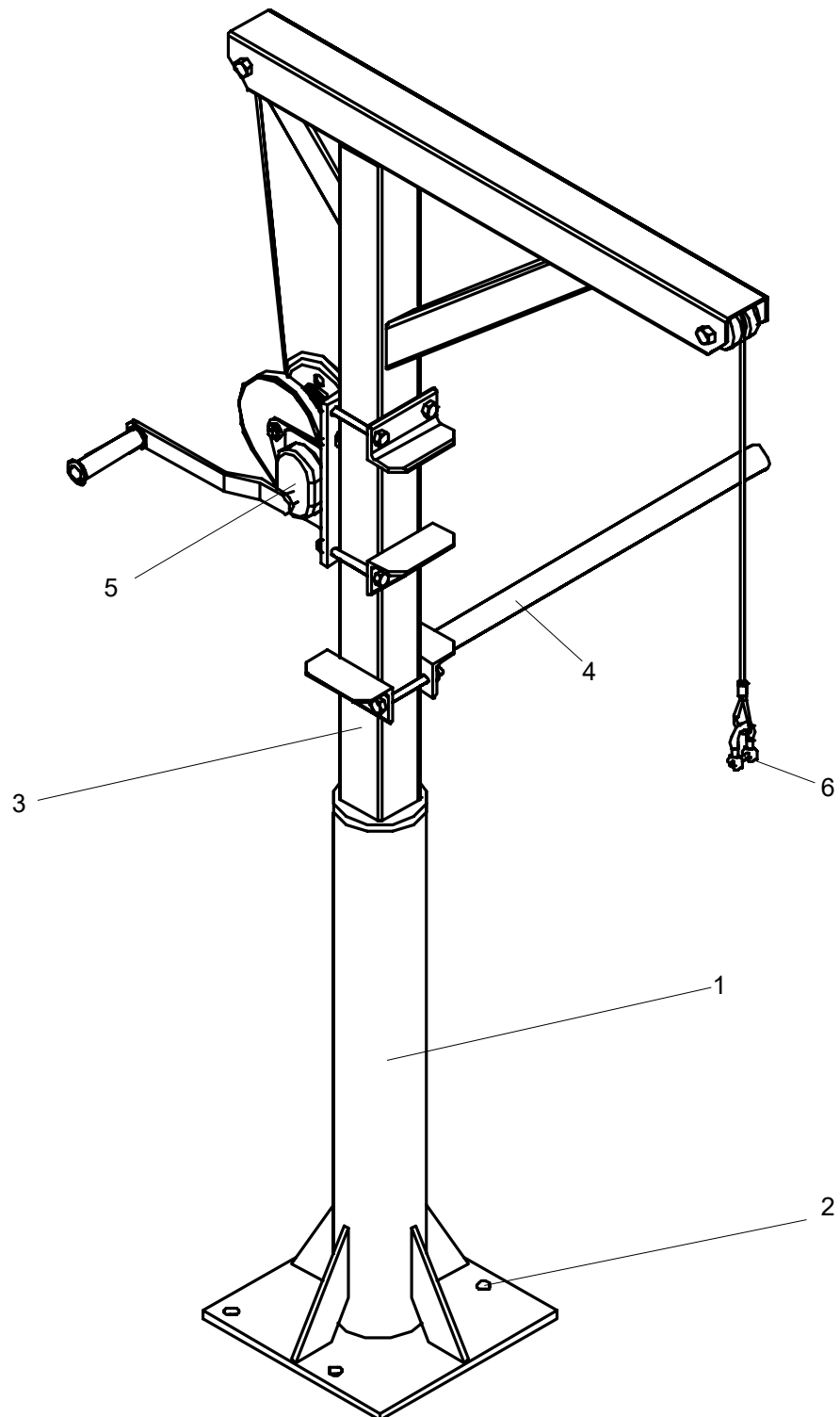
- | | | |
|-----------------------|---------------|-----------------|
| 1 Wall fixing support | 4 Handle grip | 7 Stopper clamp |
| 2 Square tube support | 5 Rope winch | 8 Rope |
| 3 Square tube max.6m | 6 Shackle | 9 Bottom plate |

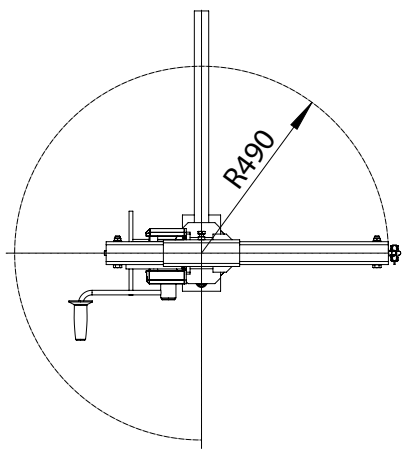
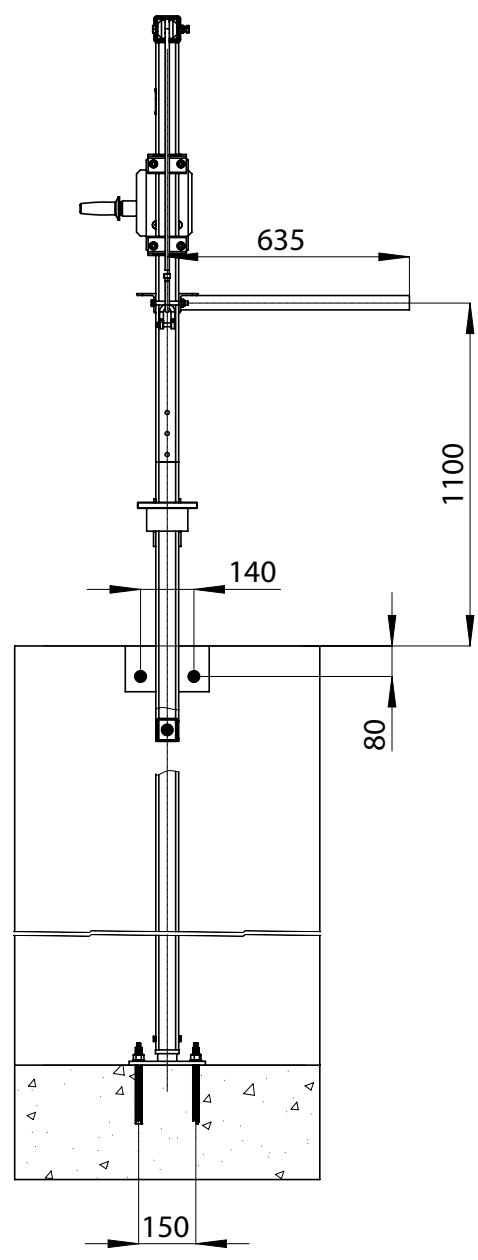
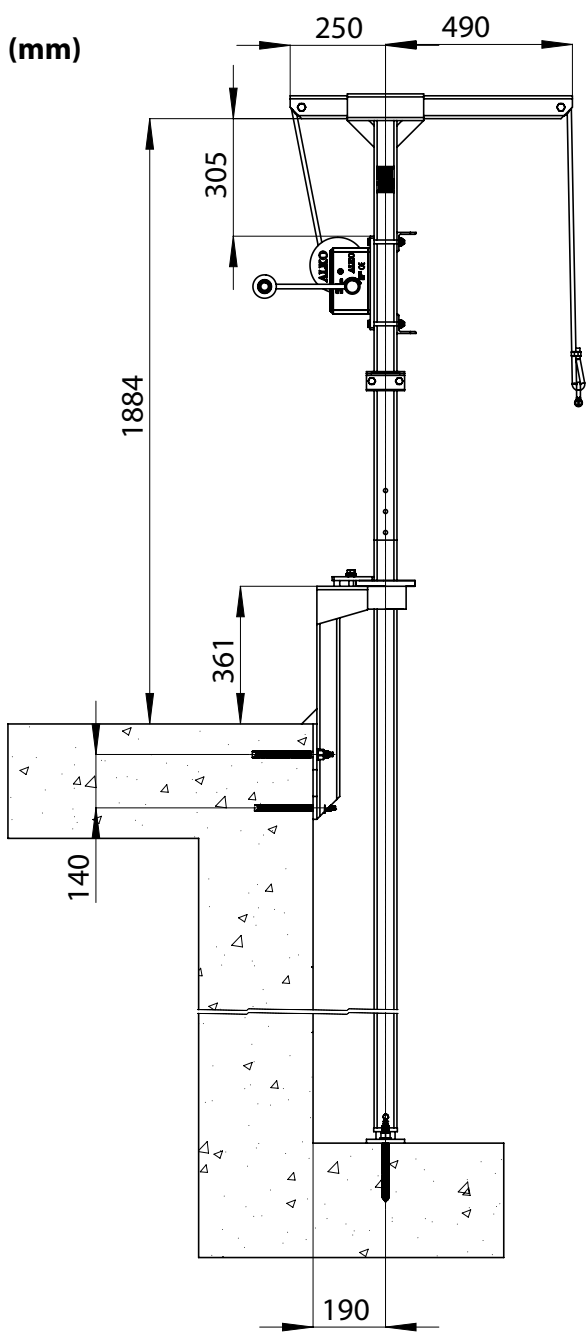


2.3 kN

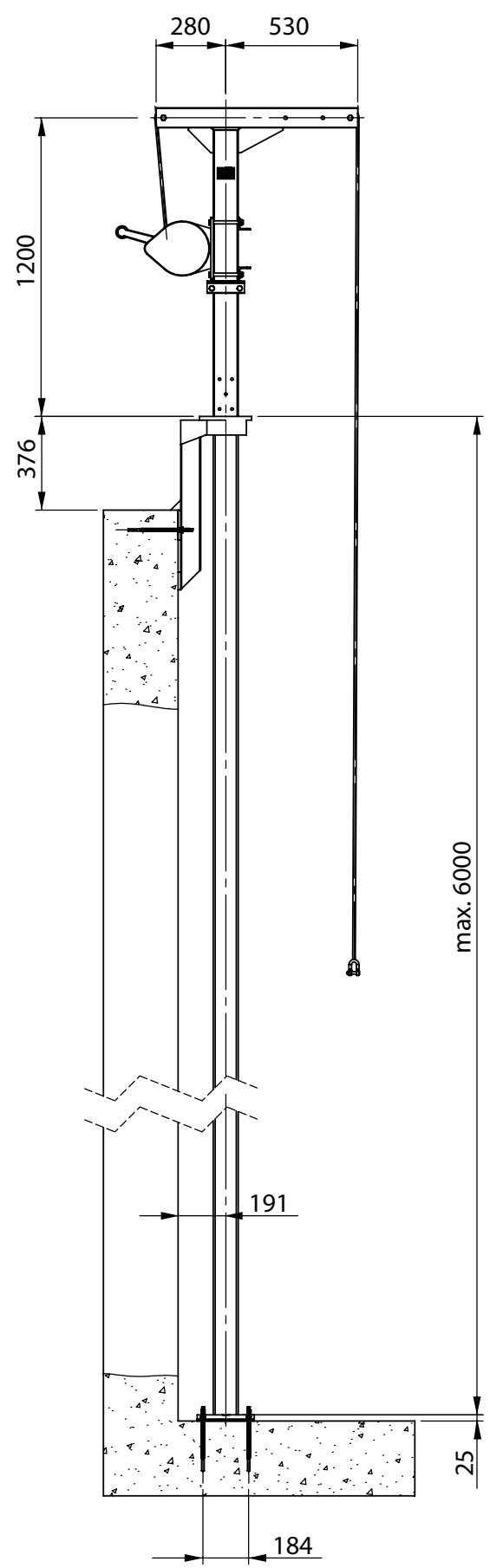
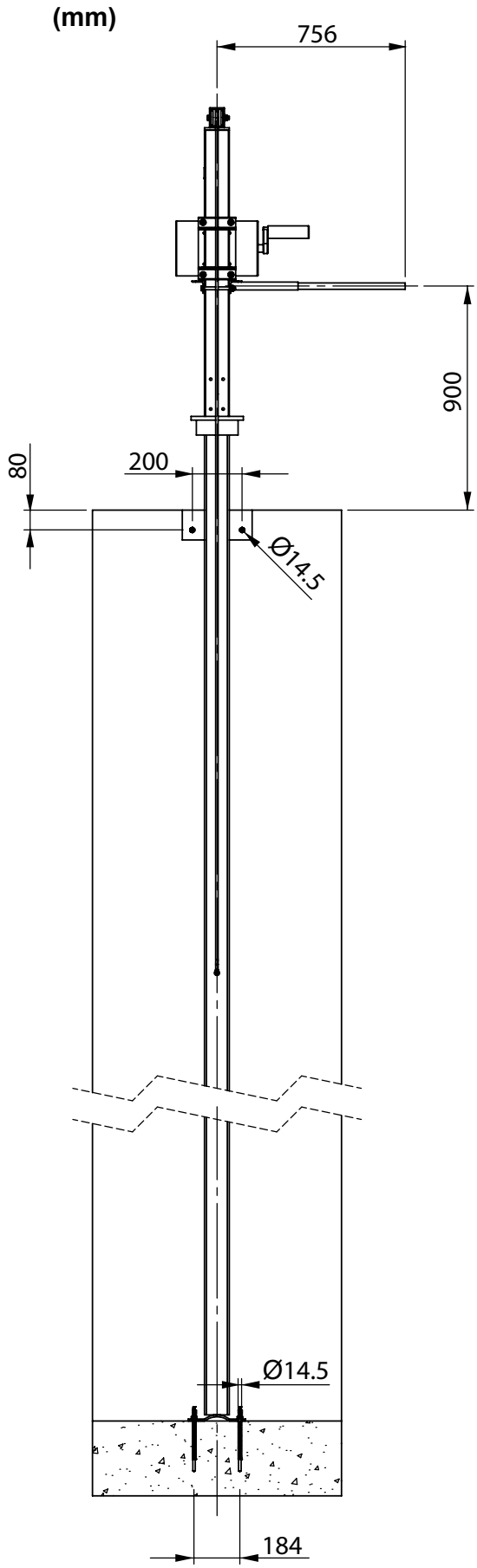
Legend:

- | | |
|-------------------------|---------------|
| 1 Bottom fixing support | 4 Handle grip |
| 2 Chemical anchor bolts | 5 Rope winch |
| 3 Lifting unit | 6 Shackle |



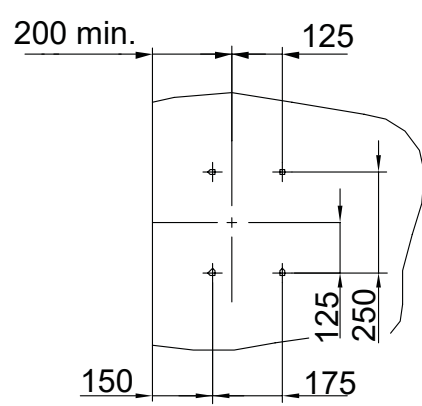
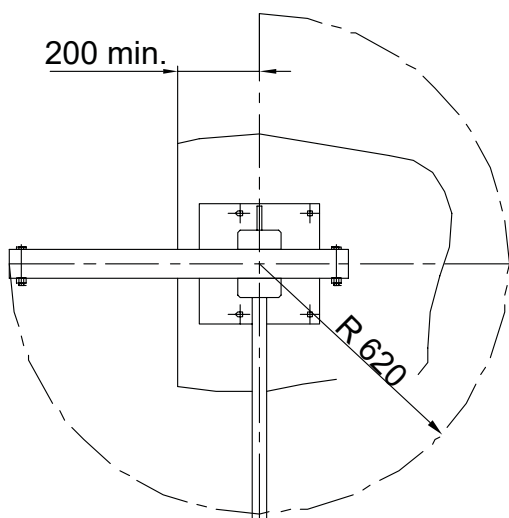
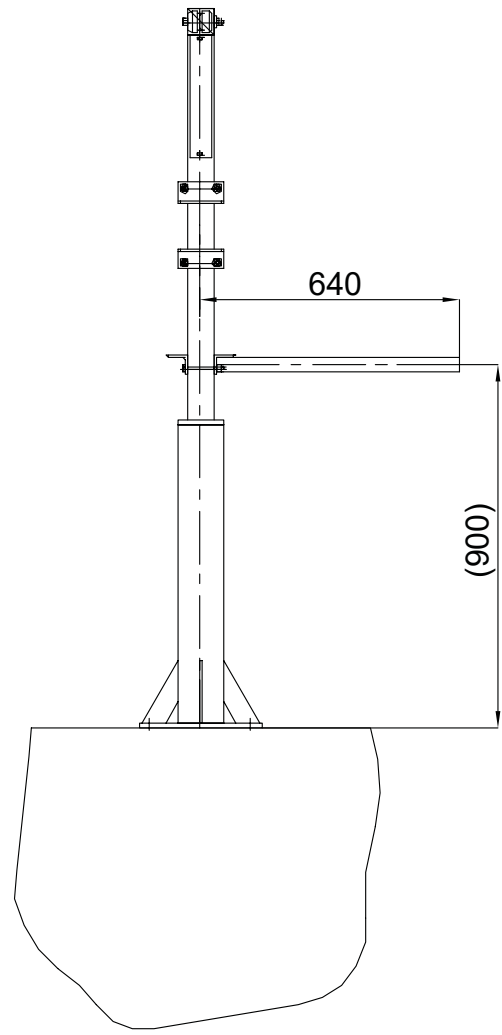
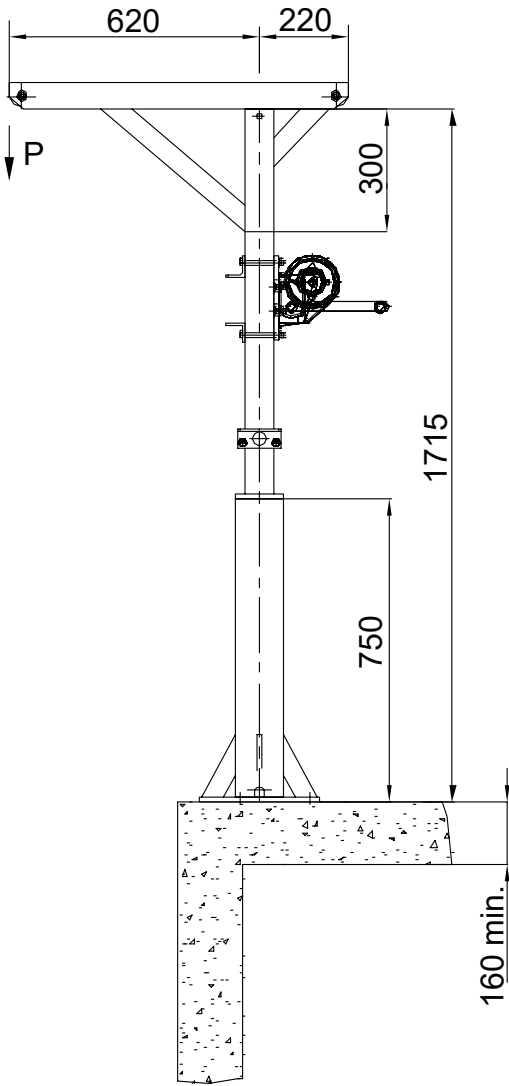


60 mm

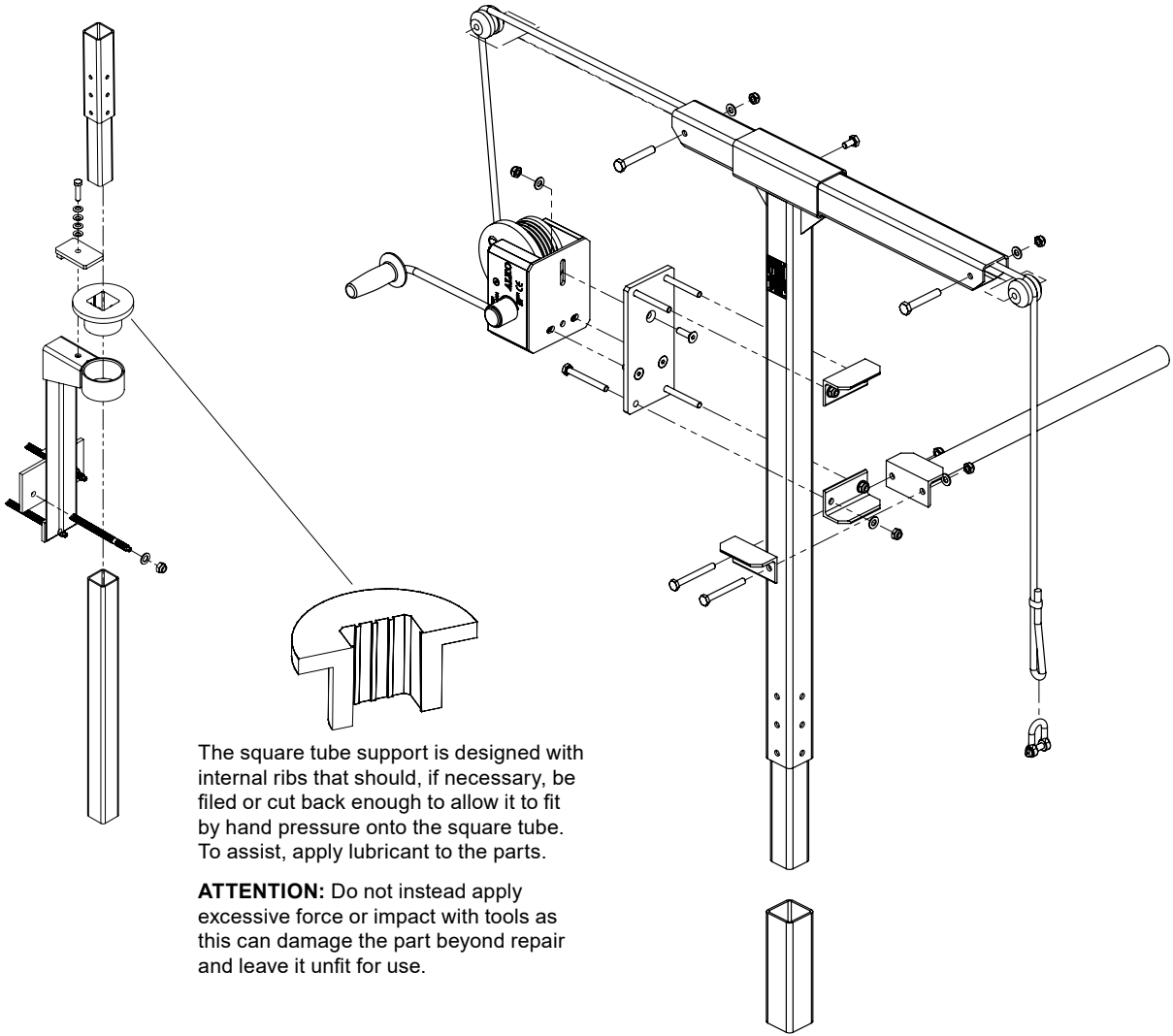


100 mm

(mm)

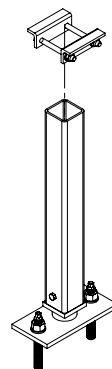
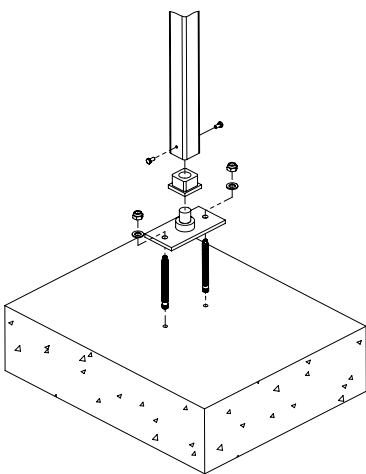


2.3 kN

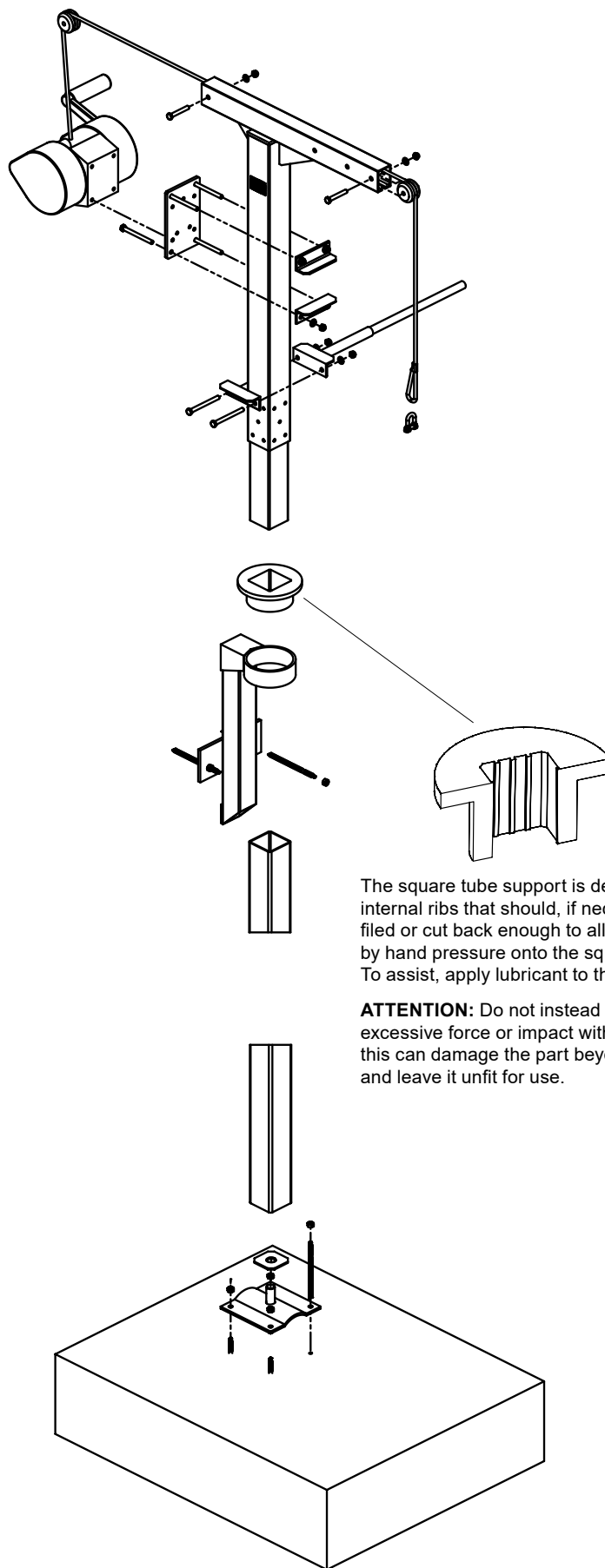


The square tube support is designed with internal ribs that should, if necessary, be filed or cut back enough to allow it to fit by hand pressure onto the square tube. To assist, apply lubricant to the parts.

ATTENTION: Do not instead apply excessive force or impact with tools as this can damage the part beyond repair and leave it unfit for use.



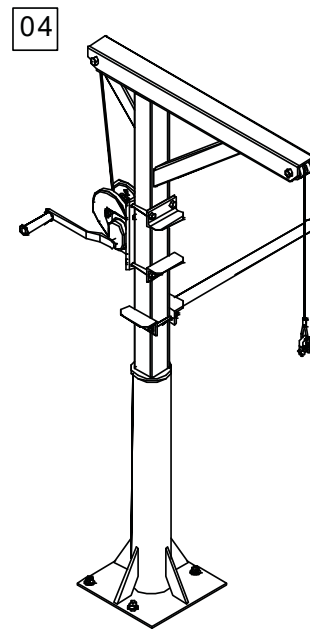
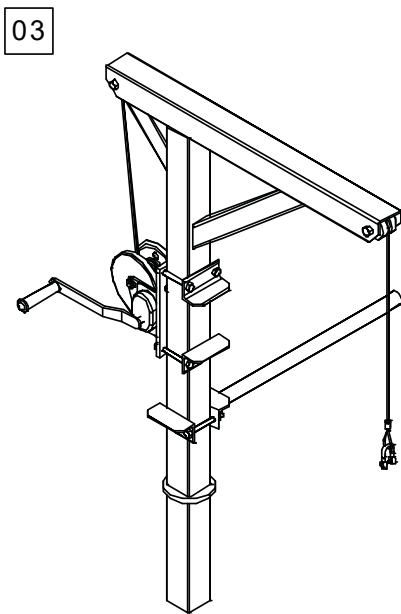
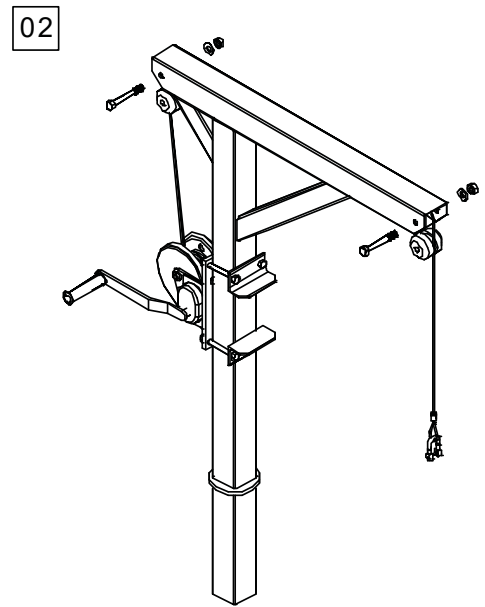
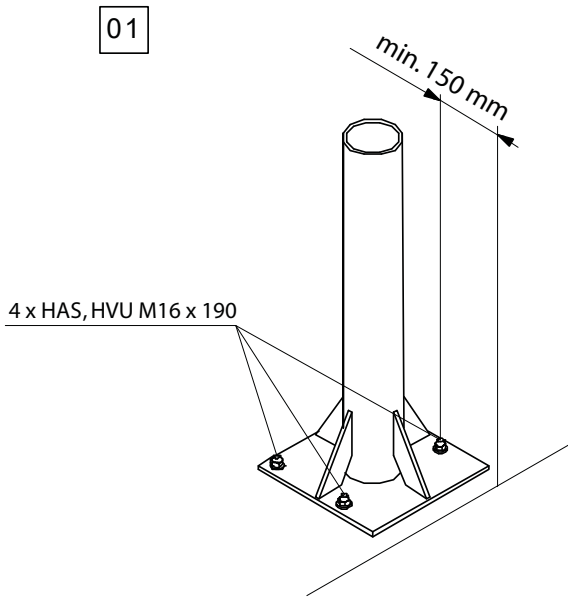
60 mm



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ATTENTION: Do not instead apply excessive force or impact with tools as this can damage the part beyond repair and leave it unfit for use.

100 mm



2.3 kN

