

BLASTRAC EBE Rigging System

“ Cone Roof “



RIGGING SYSTEM FOR PROCESSING VERTICAL STEEL STORAGE TANK SURFACES

The BLASTRAC EBE Cone Roof rigging systems are especially developed for the BLASTRAC EBE 350 Vertical machine. This machine is designed to suspend with a winch rigging system and works in an up or down pattern to clean and profile vertical steel external shell tank surfaces.

The rigging system is operated and controlled from a mobile control station.

TECHNOLOGY

The Rigging Systems that USF EBE supplies are made with

high grade components, all the necessary certification are include in this system and it is made out of several components, the benefit of this is that the building uptime is extremely short. This because the system is so developed that it consists of 5 major components,

- 1.** The drive frame which arrange the movements during the blasting to the left and right,
- 2.** Winch unit which is controlling the travel speed for blasting down and the movements going upwards,
- 3.** Side support arm give you a constant distance from tank

shell and middle point of the machine,

- 4.** Hoist arm and pulley frame that controls the winch cable,
- 5.** Turnbuckle that is an extra safety point.

All the major components are build up together, the winch system which is a separate system is mounted on top of the Cone Roof rigging system.

The winch systems that USF EBE provide are exchangeable for use on all the other manufactured rigging systems.

COMMON WARNINGS AND DIRECTIONS:

All certificates and tests are according to Dutch law and regulations.

Certified according to Dutch law:

- Load test at 125% of S.W.L. (Save Work Load)
- Hoisting points at 125% of death weight (approx. 650 Kg)
- See our certificates in this manual

Irrespective of the following information, the local safety regulations are valid in any case for the operation of the machine.

All safety and hazard notices at or on the machine must be kept complete and legible!

The machine may only be used for an EBE 350 VH. It's not allowed to use the winch for any other purposes!

Changes, add-ons or conversions to the machine which might impair safety must not be undertaken without the manufacturers permission!

Make sure that only authorized personnel operate or work on the machine.

Personnel being trained or made acquainted with the equipment may only be deployed on the machine under constant supervision of an experienced person!

Check the machine visually for any damage and defects at least once a day!

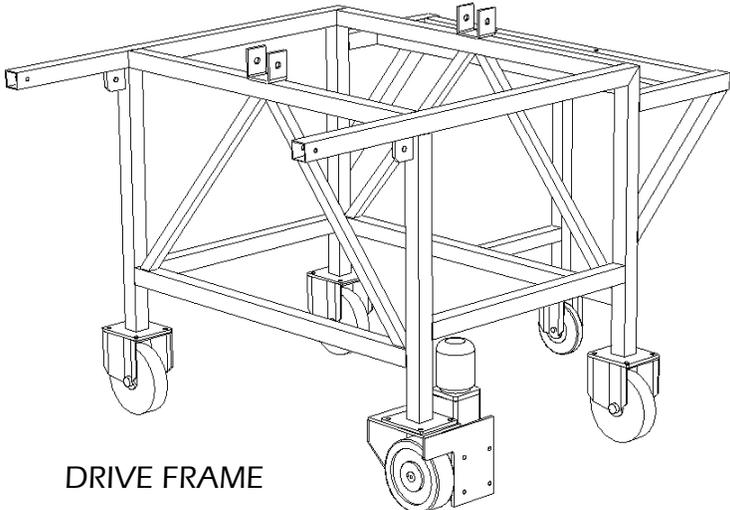
The electrical equipment for the plant must be inspected regularly. Please note in particular the specified recurring inspections according EN60204-1. Work on electrical equipment or operating materials may only be undertaken by a skilled electrician or by trained persons under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.

Only operate the machine when all safety devices and related safety equipment, e.g. detachable safety devices, emergency stops are present and operational!

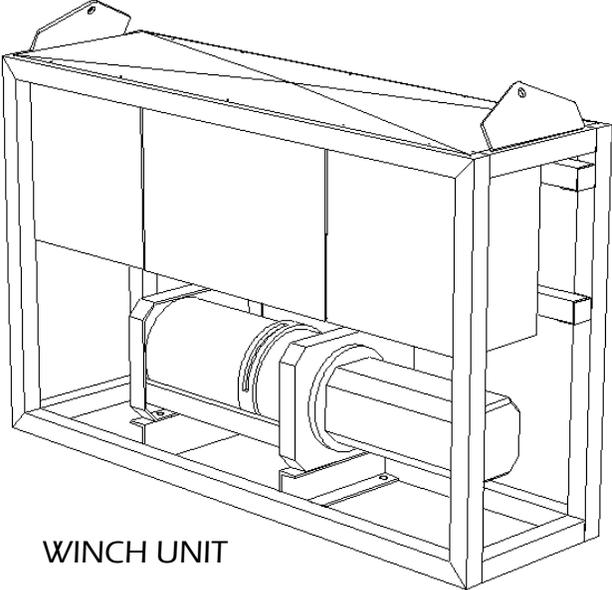
Secure the work area around the machine in public areas. Never walk under a load that is lifted!

MAJOR COMPONENTS

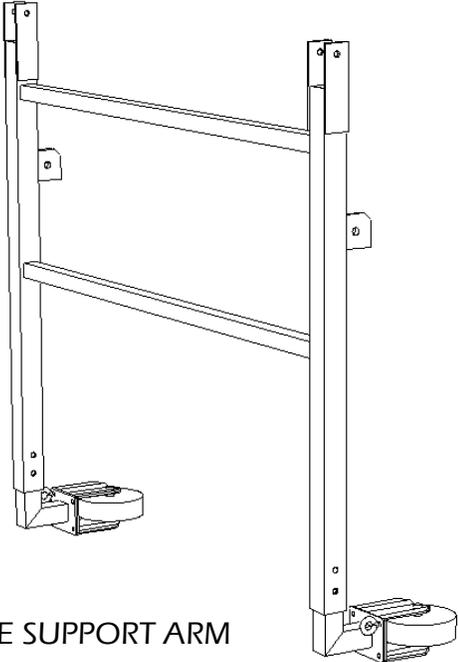
The Cone Roof Rigging System consists of the following 6 major components:



DRIVE FRAME

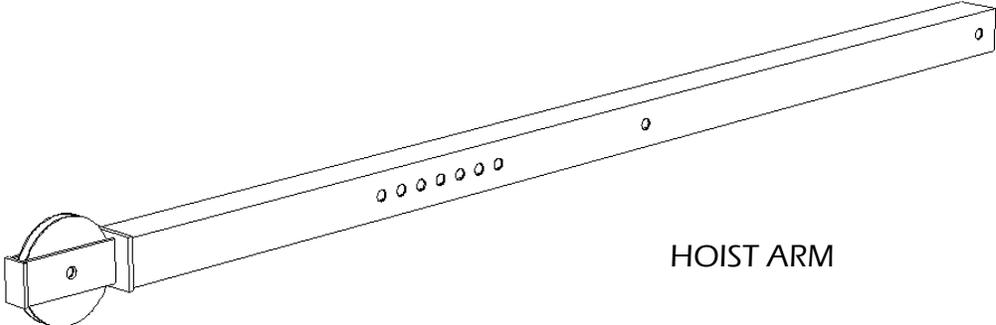


WINCH UNIT



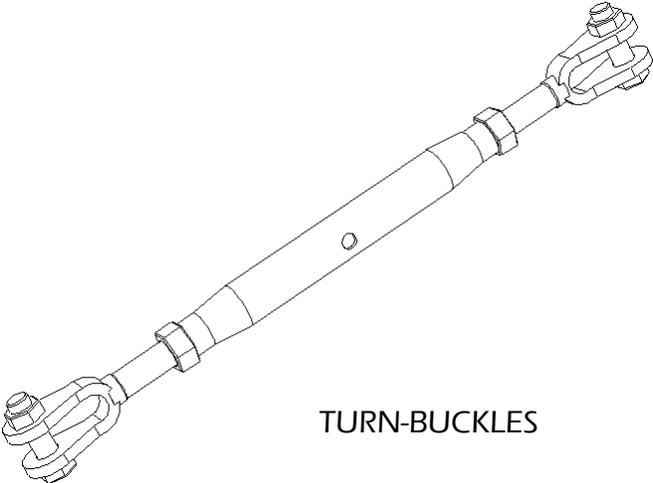
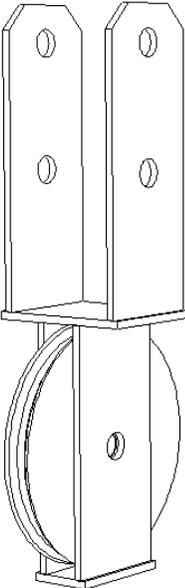
SIDE SUPPORT ARM

MAJOR COMPONENTS



HOIST ARM

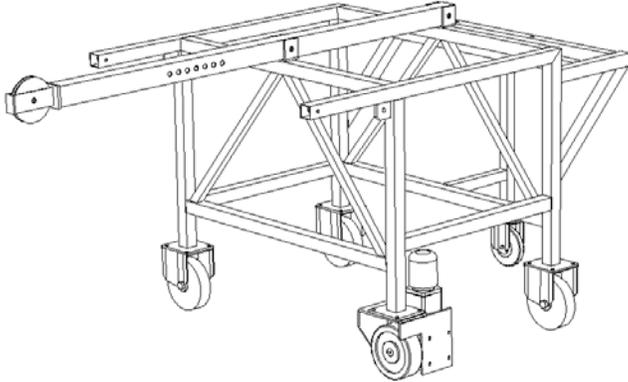
PULLEY FRAME



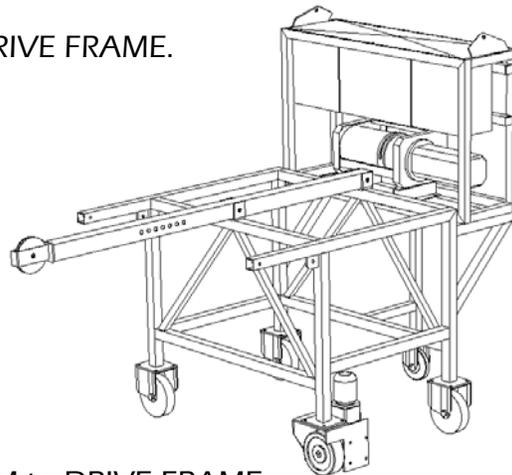
TURN-BUCKLES

PREPARATIONS

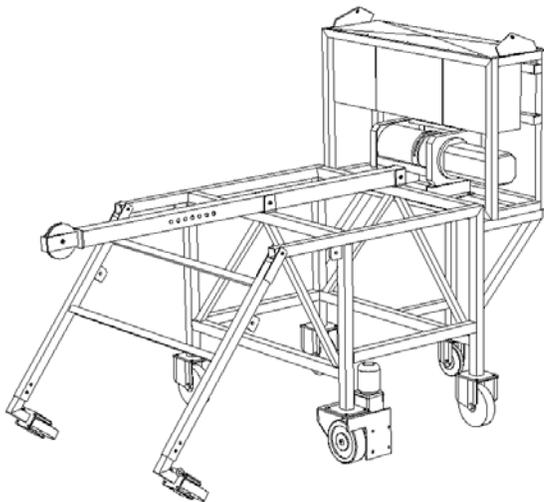
1. Attach HOIST ARM to DRIVE FRAME.



2. Attach WINCH UNIT to DRIVE FRAME.

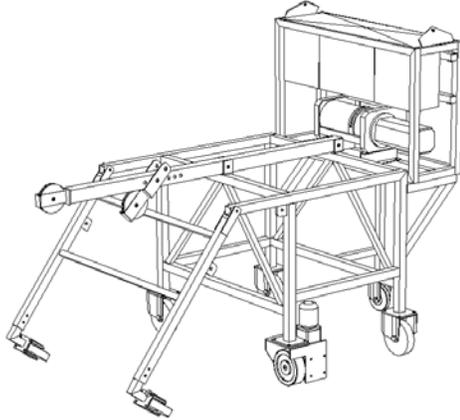


3. Attach SIDE SUPPORT ARM to DRIVE FRAME.

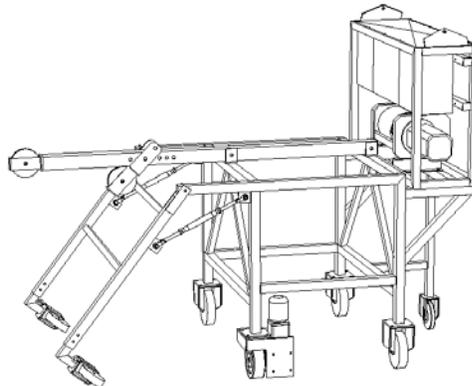


PREPARATIONS

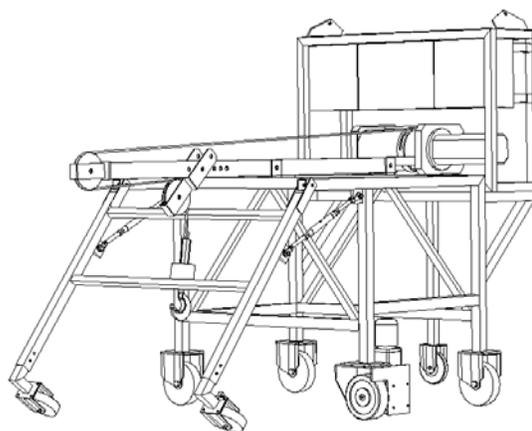
4. Attach PULLEY FRAME to HOIST ARM.



5. Attach TURN-BUCKLES to DRIVE FRAME and SIDE SUPPORT ARM.

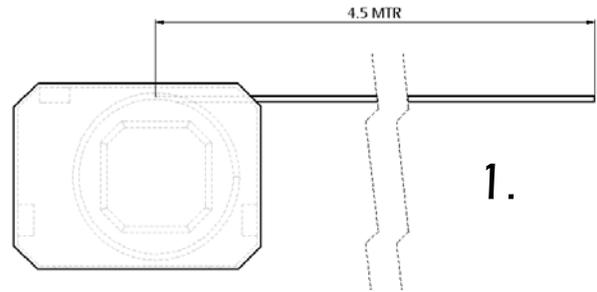


6. Pull through WINCH CABLE and connect CABLE HOOK.

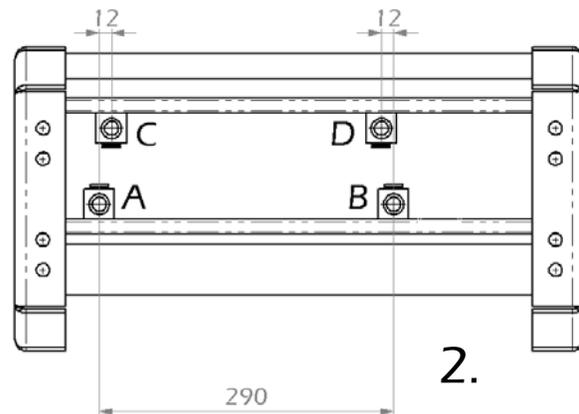


Limit Switch Settings Cone Roof Rigging

1. Switch on the power of the Winch Unit.
2. Release the cable until the distance from the centre of the winch drum to the lifting block is **4.5 mtr**.



3. Change the settings of limit switch A by loosening the two bolts and sliding the limit switch left or right to the position that will stop the winch from lifting (when cable length is 4.5 mtr).
4. Change the other 3 limit switches According to Figure 2.

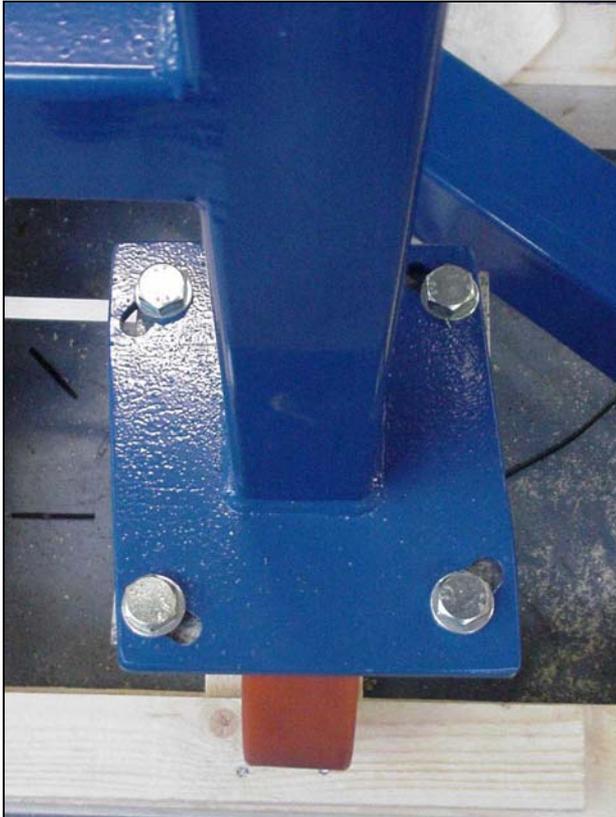


- A. Start/Stop winch cable
- B. End/Stop winch cable (± 20 mtr cable)
- C. Slow/Start
- D. Slow/End

Adjusting the drive wheels to different tank diameters

The drive wheels of the Cone Roof Rigging System can be turned as to follow the radius / diameter of the tank. Use the following adjustments:

1. Diameter of the tank is bigger than 25 m:
Fix the wheels straight, as if the tank diameter is infinite.



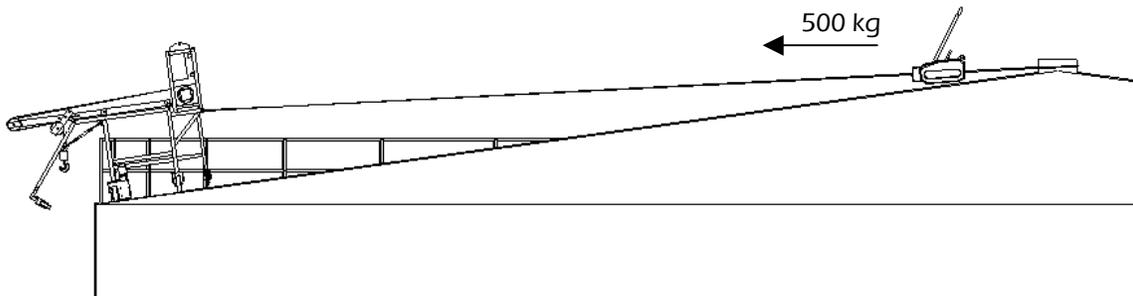
2. Diameter of the tank is between 15 and 25 m:
Fix the wheels halfway turned in the slotted holes of the wheel brackets.
3. Diameter of the tank is smaller than 15 m:
Fix the wheels maximal turned in the slotted holes.

WARNING: Do NOT adjust the wheels on a DOME ROOF TANK !

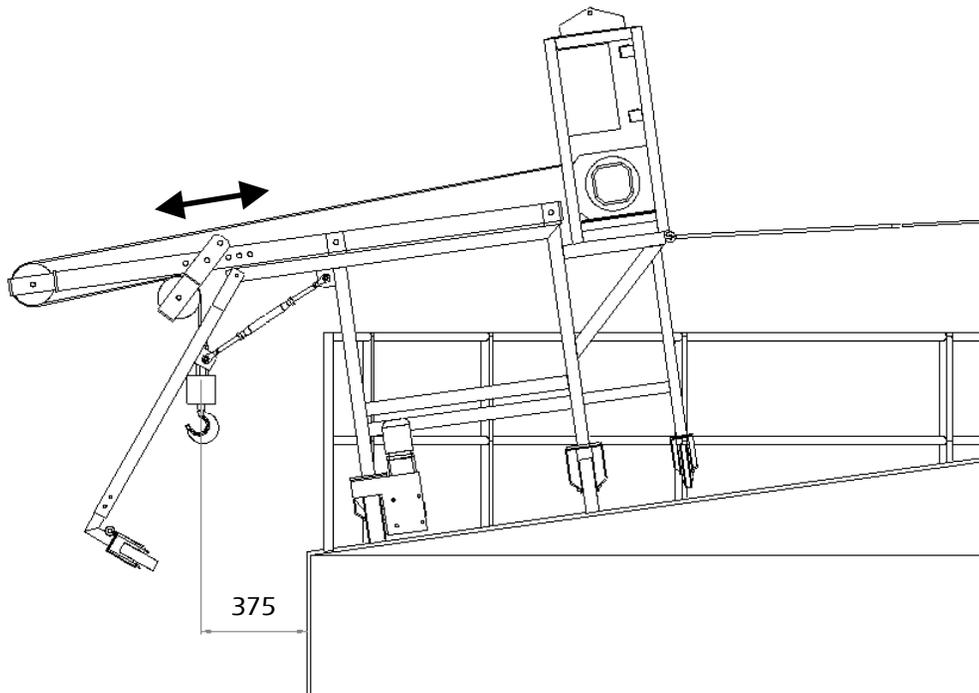
INSTALLATION

1. Hoist the RIGGING SYSTEM on top of the Cone Roof Tank and attach the RIGGING SYSTEM to the centre of the roof with a Safety Line and a Tirfor.

WARNING: Check with the local safety authorities to which part of the roof the Safety Line can be attached ! The tractive power in the Safety Line will be max. 500 kg !

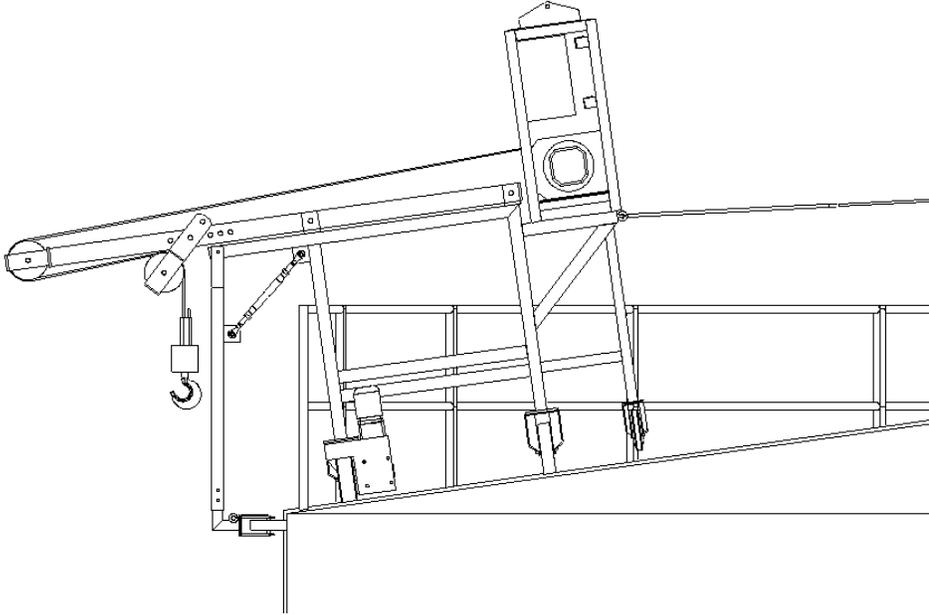


2. Pull the RIGGING SYSTEM with the Tirfor until the distance between the WINCH CABLE and the Tank Wall is 375 mm (if necessary move the PULLEY FRAME).

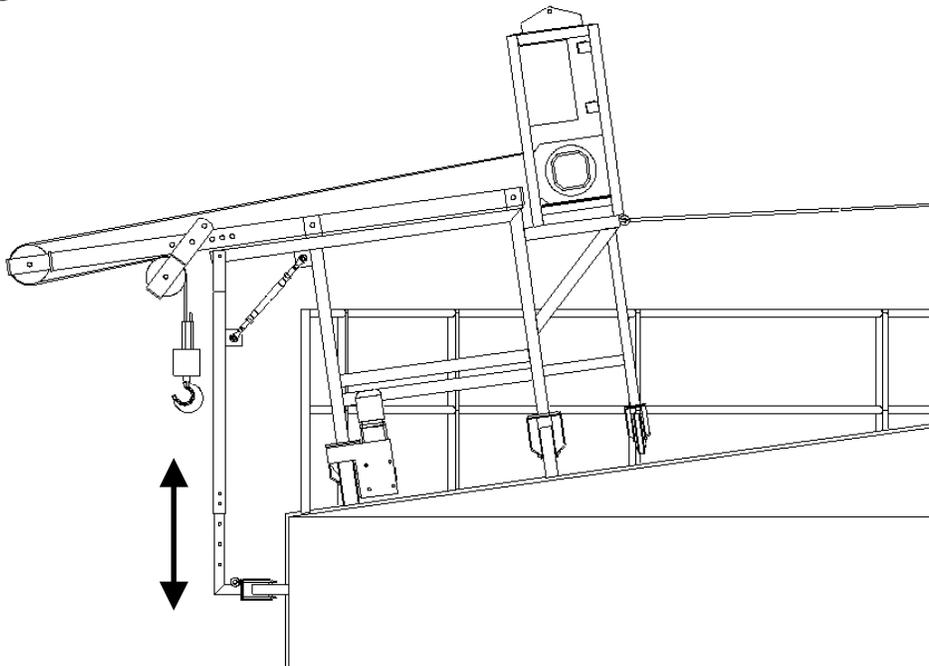


INSTALLATION

3. Turn the TURN-BUCKLES until the SIDE SUPPORT ARM is touching the Tank Wall.

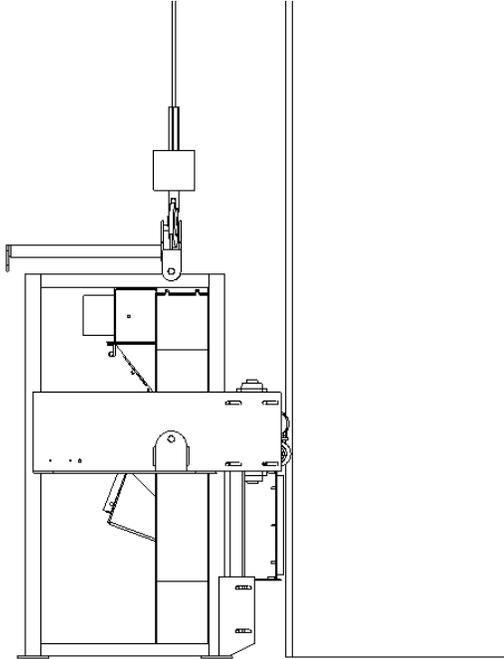


4. Lower or higher the SIDE SUPPORT ARM Wheels to avoid obstacles on the Tank Wall. If there are no obstacles, the ideal position is approximately 30 cm below the edge of the tank roof.



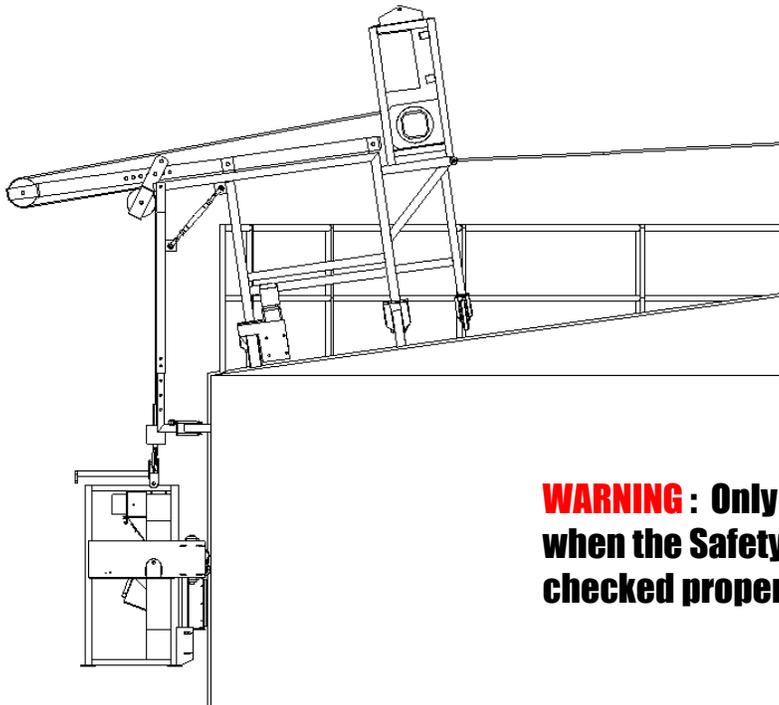
OPERATION

1. Lower the CABLE HOOK and attach it to the EBE 350 VH machine.



WARNING : When the machine is hoisted for the first time, hoist it only **10 cm** and check if all connections are fixed properly and make sure that the **Safety Line on the tank roof is checked!**

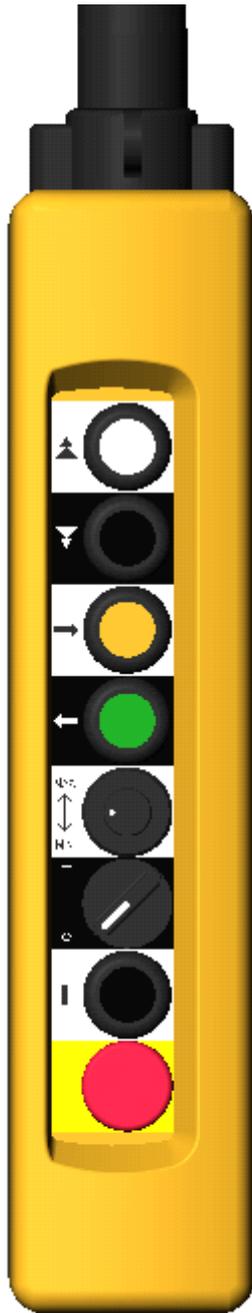
2. Hoist the EBE 350 VH machine to the top of the Cone Roof Tank.



WARNING : Only hoist the machine when the **Safety Line on the tank roof is checked properly !**

OPERATION

3. Remote Control Box of the CONE ROOF RIGGING SYSTEM.



- WINCH UP

- WINCH DOWN

- RIGGING DRIVE RIGHT

- RIGGING DRIVE LEFT

- BLASTING SPEED BLAST MACHINE

- 0 = FIXED BLASTING SPEED (0.5 or 16 mtr/min)

- 1 = ADJUSTABLE BLASTING SPEED (0.5 - 16 mtr/min)

- RESET ON

- EMERGENCY STOP