

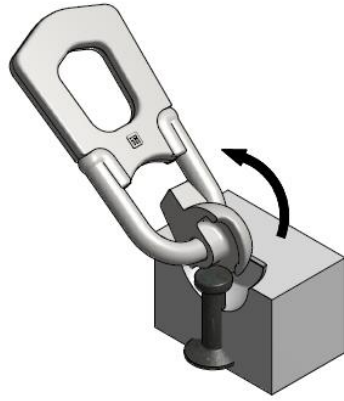


OPERATING INSTRUCTIONS



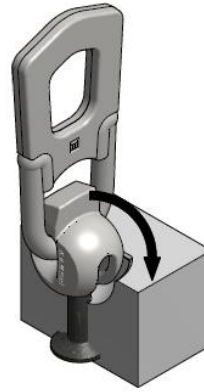
1

The clutch is placed in the right position.



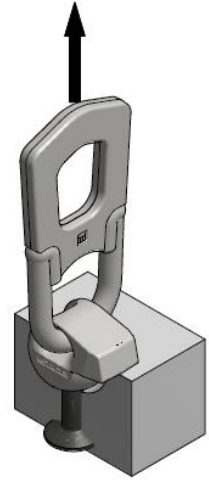
2

Rotate the shackle, until the opening corresponds with the anchor head.



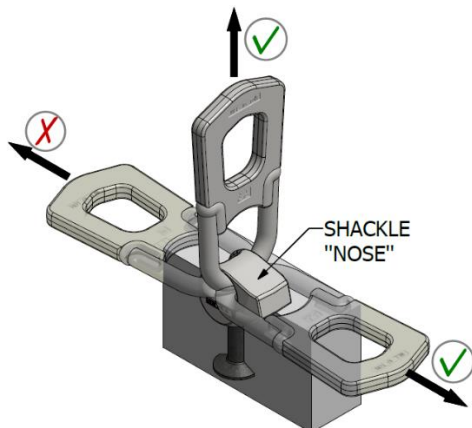
3

The shackle rotates to its locking position.

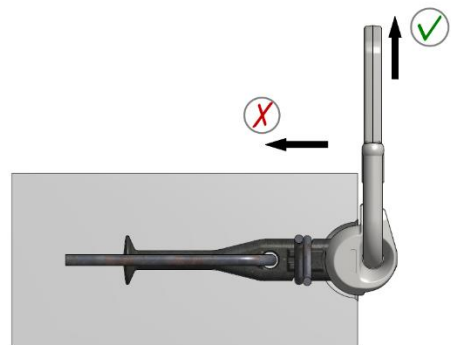


4

The nose of the shackle is pushed against the concrete element.

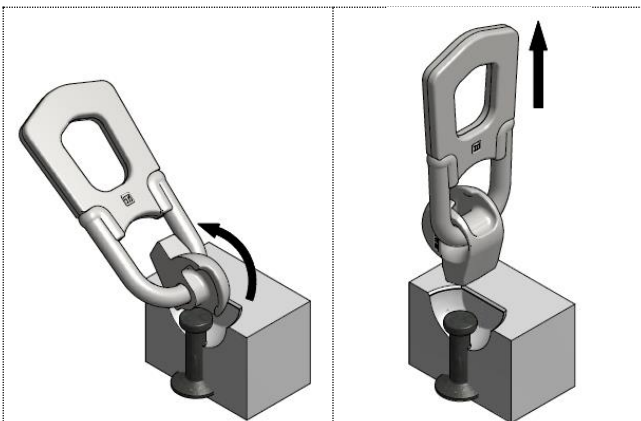


Angled lifting

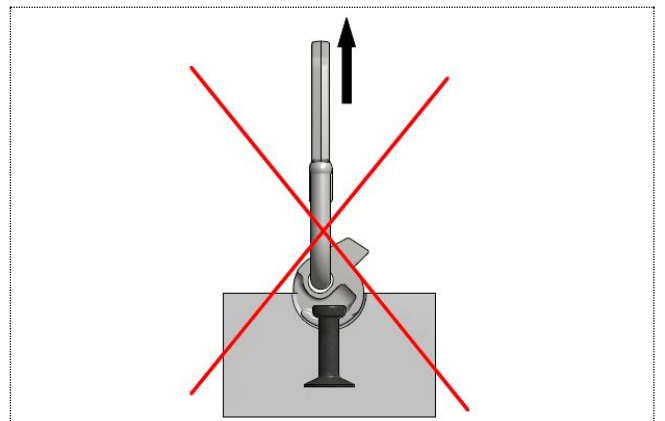


Tilt-up lifting

When pitching the concrete unit with the 3D Lifting System, the nose must face the same direction as the load (see illustration above). Due to the counterweight of the nose, the shackle remains connected, even in an unloaded state. To release the 3D Lifting System, the load hook is lowered and the shackle is turned up and out. The crane can only be withdrawn after the Lifting System is completely detached from the recess and anchor. The 3D lifting System can remain attached to the crane hook until the next use.



Release operation after lifting

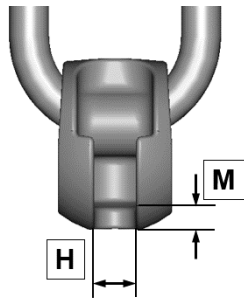


If the shackle remains in the position showed above, the lifting of the concrete unit is not allowed



LIFTING CLUTCHES - SYSTEM MAINTENANCE

As with all lifting devices, the lifting systems TH1, TH2 and THR2 must be checked at least twice a year by trained personnel. Any defects found should be corrected before use. It is important to determine the amount of wear. The lettering and identification of the lifting system must be visible. If the shackle is deformed or the mouth opening is enlarged, the 3D Lifting System must be taken out of use and cannot be repaired. If the limiting dimensions for H given in the tables below are exceeded or fall short for "M", further use of the Lifting System is unsafe. Repairs, especially welding operations on the Lifting System are strictly forbidden. Do not combine our products with accessories from other manufacturers.



Shackle dimensions



Checking TH calibre

A checking calibre for each type is available on request.

TYPE	TH2 NUMBER	H MAXIMUM [mm]	M MINIMUM [mm]	CALIBRE "GO/NO-GO" NUMBER
TH2 13	43143	13	5.5	46193
TH2 25	43144	18	7	46194
TH2 50	43145	24	9	46195
TH2 100	43146	33	12	46196
TH2 200	43147	45	18	46197
TH2 320	43148	56	25	46198
TH2 450	44500	56	25	46199

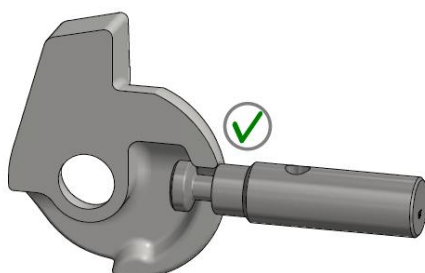
TYPE	THR2 NUMBER	H MAXIMUM [mm]	M MINIMUM [mm]	CALIBRE "GO/NO-GO" NUMBER
THR2 40/50	45281	24	9	46195
THR2 75/100	45279	33	12	46196

CHECKING DIMENSION "M"

The dimension "M" must be checked in this zone for risk of fracture during use.

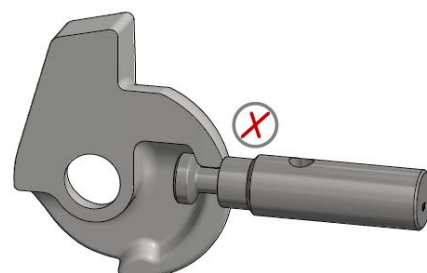
ACCEPTABLE

Dimension "M" is greater than the minimum permitted.



NOT ACCEPTABLE

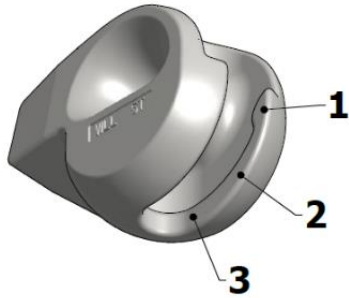
In this case, dimension "M" is less than permitted.





CHECKING DIMENSION "H"

The "H" dimension must be checked in at least 3 zones for the risk of expansion during use.



PRIMARY ZONE

ACCEPTABLE

Dimension "H" is less than the maximum permitted.



NOT ACCEPTABLE

In this case, dimension "H" is greater than permitted.



SECONDARY ZONE

ACCEPTABLE

Dimension "H" is less than the maximum permitted.



NOT ACCEPTABLE

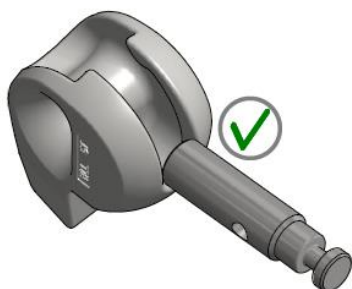
In this case, dimension "H" is greater than permitted.



THE THIRD ZONE

ACCEPTABLE

Dimension "H" is less than the maximum permitted.



NOT ACCEPTABLE

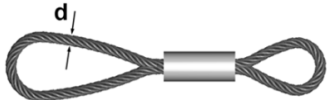
In this case, dimension "H" is greater than permitted.





CHECKING WIRE CABLE

Connection elements (bracket) to the crane hook which have visible signs of damage or excessive wear must be immediately taken out of use. The wear on the bracket must be less than the limits shown in the table below.

	Cable type	Number of visible ruptured wires over a length of		
		3d	6d	30d
Braided cable	4	6	16	

d = cable diameter

WIRE CABLES SHOULD BE INSPECTED FOR THE FOLLOWING FLAWS:

- Kinking
- One braid broken
- Separation of the outer layer of braids
- Crushed braids
- Crushing at the shackle contact point with more than 4 ruptured wires on braided cables or more than 10 ruptured wires on cable-laid rope
- Signs of corrosion
- Damage to or severe wear of the closing bush.
- Signs of slipping between the cable and the closing bush
- Large number of ruptured wires. A cable with a number of ruptured wires as in the table above must be taken out of use.