WEP WEISSHAUPT AG

CE

# CHAINDRIVEN SINGLE POST LIFT

## WEP ESL LIGHT 0,25t/2200-4000


SINCE 1868

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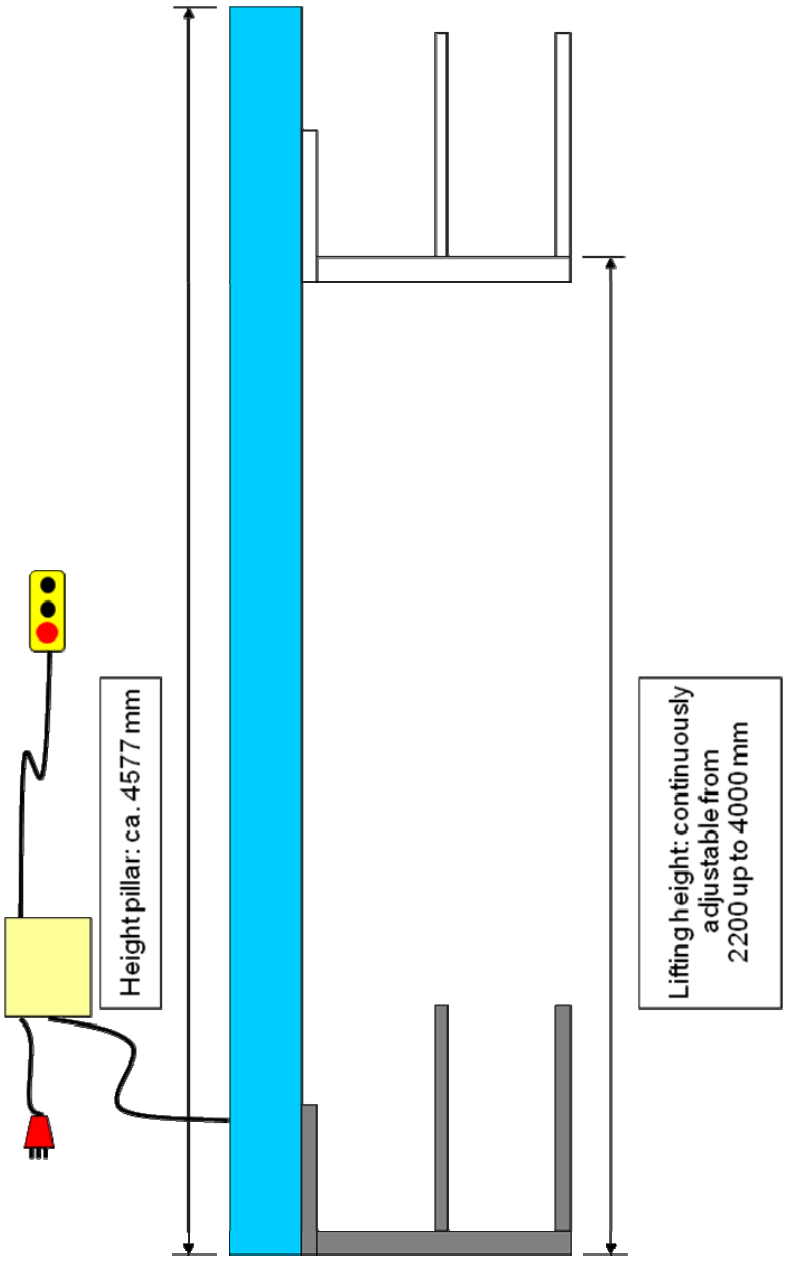
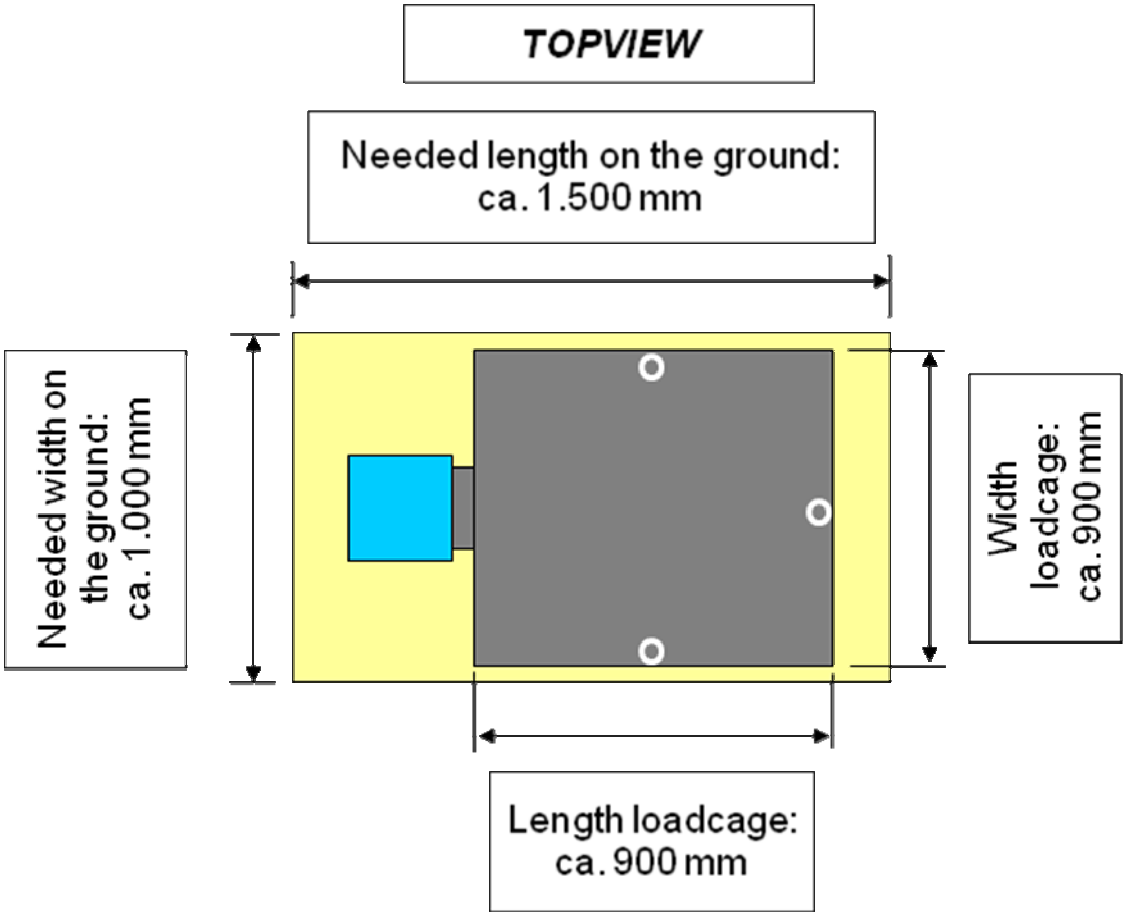
# ESL-light 0,25t-2200-4000
# Schematic representation

***SIDEVIEW***




TOPVIEW
Needed length on the ground:
ca. 1.500 mm
Needed width on the ground:
ca. 1.000 mm
Width loadcage:
ca. 900 mm
Length loadcage:
ca. 900 mm

## Short description :

**The WEP ESLlight 0,25T/2200-4000 is a chain driven single post lift for the non-accompanied vertical translation of tyres and other small objects. Its net load capacity is 0,25 tons. The standard lifting height is adjustable in a range between 2200 and 4000 mm due to a shiftable upper limit-switch.**

The device is pre-assembled and pre-cabled. Installation on site through customer self-mounting. It has to be fixed solidly with its foot plate on the ground. All fixing material has to be brought by the customer. After mounting, only plug in the connector and start working!

## Mode of working :

The WEP ESLlight 0,25T/2200-4000 consists of the following main parts:

- Pillar with integrated lift mechanic
- Load cage
- Operator box, default fixing ground floor on the back of the pillar

The main lift mechanic consists of a two strand chain drive that, akin to a chain hoist, pulls the chain strands via gear motor over two, in the pillar head located chain pinions. The chain strands pull on a carriage, that is sliding in the pillar and on which the load cage is fixed. The sliding carriage disposes in the X and Z axis of rollers that are equipped with maintenance free roller bearings and therefore permit a smooth and precise sliding in the pillar. That makes it, together with its S1-brakemotor, a perfect tool for continuous operation as it happens very often in turnover of small parts or tyres in multi-level stores.

After loading and closing of the load cage, the operator makes the lift running by dead man control push button (= continuous contact). He keeps the button pushed until the lift has reached the upper end position and is switched off automatically through the upper limit switch. Downwards running happens in the same manner and is ended up automatically through the lower limit switch.

Because of the standard lifting height up to 4 m, the lift can be operated without additional on-site doors. In fact, 4 m are high enough to lift above an existing railing in case of a 1$^{st}$ level of 3m height. Of course, the lift can also be operated with on-site doors (see herefore accessories).

### Safety devices :

- Securing via self blocking gear motor in case of motor brake collapse.
- Double chain strand with both sixfold security factor as chain break security. The double chain strand including the lower chain rocker with integrated limit switch guarantees immediate power cut off in case of chain slackness or even break.
- Stroke limitation via upper and lower limit switch.
- Upper emergency limit switch: cuts off power if the upper limit switch collapses and is overrunned.
- Thermic motor overload switch: cuts off power in case of overload.
- Beeper at descending movement.

## Construction parts :

- 1 pillar
- 1 sliding carriage on which the load cage is fastened
- 1 load cage
- 1 brake motor
- 1 self contained gear in oil bath
- 2 chains working in two separate strands
- the electrical equipment and the operating via dead man control push buttons
- the safety devices.

**Pillar :**

The pillar is a welded construction with square section consisting of 2 high precision rails, a back assembled by 2 rectangular profiles, collar irons, head- and foot plate. The pillar height is about 4,6 m taking into account the construction height of the chain drive and the carriage in case of a net stroke up to max. 4 m. All the collar irons are equipped with mounting holes. These holes ensure – if needed – the backside / headside fastening of the pillar (e.g. via angle iron, C-rail and t-bolts or telescopic bars). The drive and deflection elements are located in the pillar head. From the pillar head downwards alongside the inner backside are located the 2 rectangular profiles. The wider one serves as chain duct, the smaller one as cable duct storing all the electrical wirings. On one outer side of the pillar head is mounted the gearmotor on the pinion axle. Grounding of the pillar is guaranteed through a solid steel plate. The steel plate is equipped with 4 holes of Ø 18 mm for trespassing the dowels and 4 aditional screws for adjusting the azimuth.

**Sliding carriage bearing the load cage :**

Welded construction made out of thick-walled steel square pipe. The top end of the carriage is equipped with the opening to receive the chain rocker. The precise and smooth sliding of the carriage is guaranteed through high-precision roller bearings. The mounting bracket for the load cage is equipped with all necessary holes to tighten the load cage.

**Load cariage :**

Welded construction with a floor made out of a 15 mm thick laser cut steel plate. Towards the pillar side, it is equipped with a fix railing. The front side is also equipped with a fix railing. One of the 2 short sides is equipped with a single-wing door, the other short side with a fix railing.

**Gear :**

The gearbox is self contained, sealed and contains a lifetime oil filling.

First transmission in the gear : steel worm / bronze worm wheel;
second transmission : pinion / cog wheel.
Roller bearing steel axles.

**Chain drive :**

The outcoming axle of the gearbox goes, from one pillar side to he other, through 2 pillow block bearings and bears among them a double pinion. Due to the 2 pillow block bearings, pulling-off the gear motor from the axle for repare puposes remains possible at any moment.

**Chains (bush chains) :**

Their safety coefficient is K6.
The load taking of the lift happens basically through 2 chains that run parallel in the pillar.
The chains are fixed in parallel manner on the load taking end of the carriage through a chain rocker. From there on, they go upwards to the pillar head, where they are pulled in a safe way over a double pinion and chain bracket. The uncoiled end of the chains including its counterweight hangs free in the chain duct.

**Electrical equipment :**

- Brakemotor
- Upper and lower limit switch
- Emergency limit switch
- Chain slackness contactor (in the same time cut off in case of chain break)
- Ground control box with lockable main switch (serves also as emergency stop button), push button “UP” and “DOWN” (dead man control), green light „RUN“. The control box is delivered by default with a 2 m long cable in order to make possible a fixing in the immediate surrounding of the lift.
- Level control box with emergency stop button, push button “UP” and “DOWN” (dead man control).
- Limit switch on cage door.
- Wiring
- Power cord with CE-male connector.

**Safety devices :**

- Safety coefficient K6 for the chains superior to European Machinery Directive.
- 2 chain strands.
- Security device against chain slackness or break: cuts off power immediately.
- Electric motor with integrated brake. The movement of the lift is stopped immediately through releasing the push button (dead man control) or through the limit switch at the end of the stroke.
- Self blocking gear motor.
- Upper and lower limit switch.
- Emergency limit switch on top (behind the upper limit switch).
- Beeper at descending movement.

**Corrosion protecting and painting :**

Pre-treatment with zinc containing primer. Finish painting of pillar and carriage in blue RAL 5015, load cage in orange RAL 2004.

## Operating :


Ground control:
Easy operating of the lift through dead man push buttons. On the control box are
2 push buttons with arrows indicating UP and DOWN.
Other control elements are:

- the lockable main switch (serves also as emergency stop button)
- the green control light „RUN“: lights up permanently when the lift is in stand-by.

Level control:
Easy operating of the lift through dead man push buttons. On the control box are
2 push buttons with arrows indicating UP and DOWN.
Other control elements are:

- the emergency stop button.

## Installation :

Installation of the standard lift goes quite easy because the pillar including drive, carriage, control box and all electrical components is pre-assembled and pre-cabled in our factory. The load cage is also pre-assembled and pre-cabled. On installation site, pillar and load cage are put together and achored on the ground and on top end (if needed). After that, just plug in the CE male connector. Therefore, an electrician is not needed and a mechanics team is generally sufficient.

## Maintenance :

Less maintenance needed! All maintenance instructions are written down in the User’s Manual.

## Anchoring with the building:

| | |
|---|---|
| On the ground: | through 4 heavy-duty anchors M16x150. |
| On top end (if needed): | relating to the walldistance, an anchoring is realized through angle iron, C-rail and t-bolts or telescopic bars. |

## Scope of delivery :

Single post lift entirely pre-assembled, ground control box, level control box (with 5 m wire) and power cord (2 m) with CE-male connector included. Load cage separate and standard with 1 single-wing door on short side. All ex-works ready for shipment.

## Warranty :

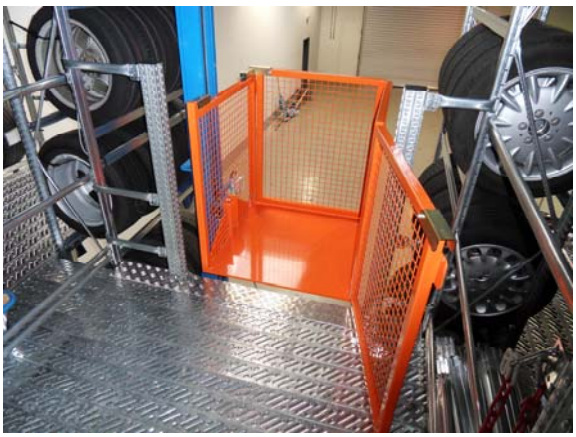
Maximum 5 years on the steel construction.
Maximum 1 year on electrical parts and all parts submitted to wear and tear.
All warranty claims are submitted to the conclusion of a service contract of 5 years minimum duration.

## Technical specifications :

| Type | WEP ESL 0,25T/2200-4000 | Unit |
|---|---|---|
| **Maximum load capacity** | 250 | kg |
| **Weight** | ca. 150 | kg |
| **Stroke** | 2.200 - 4.000 | mm |
| **Maximum lift / descending time** | 20 – 36 | sec. |
| **Lift / descending speed** | 6,8 | m/min. |
| **Maximum construction width (= external width of load cage)** | 900 | mm |
| **Maximum construction depth (from backside pillar to frontside load cage)** | ca. 1.332 | mm |
| **Maximum construction height (of pillar)** | ca. 4.577 | mm |
| **External width of load cage** | 900 | mm |
| **Construction depth of load cage** | 900 | mm |
| **Construction height of load cage (= rails)** | ca. 1.015 | mm |
| **Power** | 1,1 | kW |
| **Supply line** | 3 x 400V + N + PE | |
| **Control voltage** | 230 | V |
| **Degree of protection** | IP 54 | |

## Standard execution :

⇨ **Loadcage with railing** (height 1.000 mm) on 3 sides (pillar, front and left/right) **and 1 single access-door** (left/right). The door is equipped with a limit switch and connected to the lift steering (no lift use possible as long as the load cage door is not closed).



## Options :

- **Other strokes** from minimum 2000 mm up to maximum 6000 mm in 500 mm steps on request. In case of higher strokes, the pillar may consist of several parts that are screwed together in order to allow easier mounting on installation site.

- **Additional access-door** on the loadcage (left/right/front). The door is equipped with a limit switch and connected to the lift steering (no lift use possible as long as the load cage door is not closed).

- Instead of the serial loadcage, the lift can be delivered with an **open loadplatform** (without fencing at all). In that case, the 3 assessible sides are equipped with a stake to insert in an opening on the platform.

- **Additional inclined access-ramp** on the 3 open sides of the loadplatform.

⇨ **On-site railing** (height 1.000 mm) as welded construction out of square pipe 40 x 40 mm including handrail, kneerail and baseboard to secure landings. Also available herefore: **on-site single-wing-door** (height 1.000 mm) including handrail, kneerail and baseboard, as well limit-switch-coupled door-lock (door locks as soon as the lift quits the landing). Price: per m for the railing, per unit for the door.


⇨ **Additional electrical safety-lock** for fixing on existing on-site door (to connect the door to the lift-steering)

**Technical modifications :**

In the course of technical progress, our products are subject to modifications without any further announcement.
The shown illustration may contain optional equipment, which is not part of the standard delivery.