Pinguely-Haulotte

CE

OPERATING AND MAINTENANCE INSTRUCTIONS

SELF-PROPELLED LIFT
HA 20PX - HA 26PX

242 031 6110 - E 10.02 GB

ISO 9001
GROUPE
PINGUELY
HAULOTTE

ARTICULEES MATS TELESCOPIQUES CISEAUX TRACTEES

Haulotte®
L'ACCES A L'ESPACE

PINGUELY HAULOTTE • LA PERONNIERE - BP 9 - 42152 L'HORME • Tél. +33 (0) 4 77 29 24 24 • Fax SAV +33 (0) 4 77 31 28 11
email haulotte@haulotte.com • Web www.haulotte.com

To reduce the risks of **serious falls, operators must respect the following instructions**:

- Hold the guardrail firmly when lifting or driving the platform.
- Remove any traces of oil or grease from the platform steps, floor or guardrails.
- Wear personal protective equipment suited to working conditions and conform to local regulations, particularly when working in hazardous areas.
- Never disable the limit switches of the safety devices.
- Avoid contact with stationary or moving obstacles.
- Do not increase the platform operating height by means of ladders or other accessories.
- Never use the guardrails to climb into or out of the platform (use the steps provided).
- Never climb on the guardrails when the platform is up.
- Avoid driving the machine at high speed in narrow or congested areas.
- Never use the machine without putting in place the platform safety bar or closing the safety gate.
- Never climb on the covers.

Caution !
Never use the platform as a crane, hoist or lift.
Never use the machine to pull or tow.
Never use the boom as a ram or thruster or to lift the wheels.

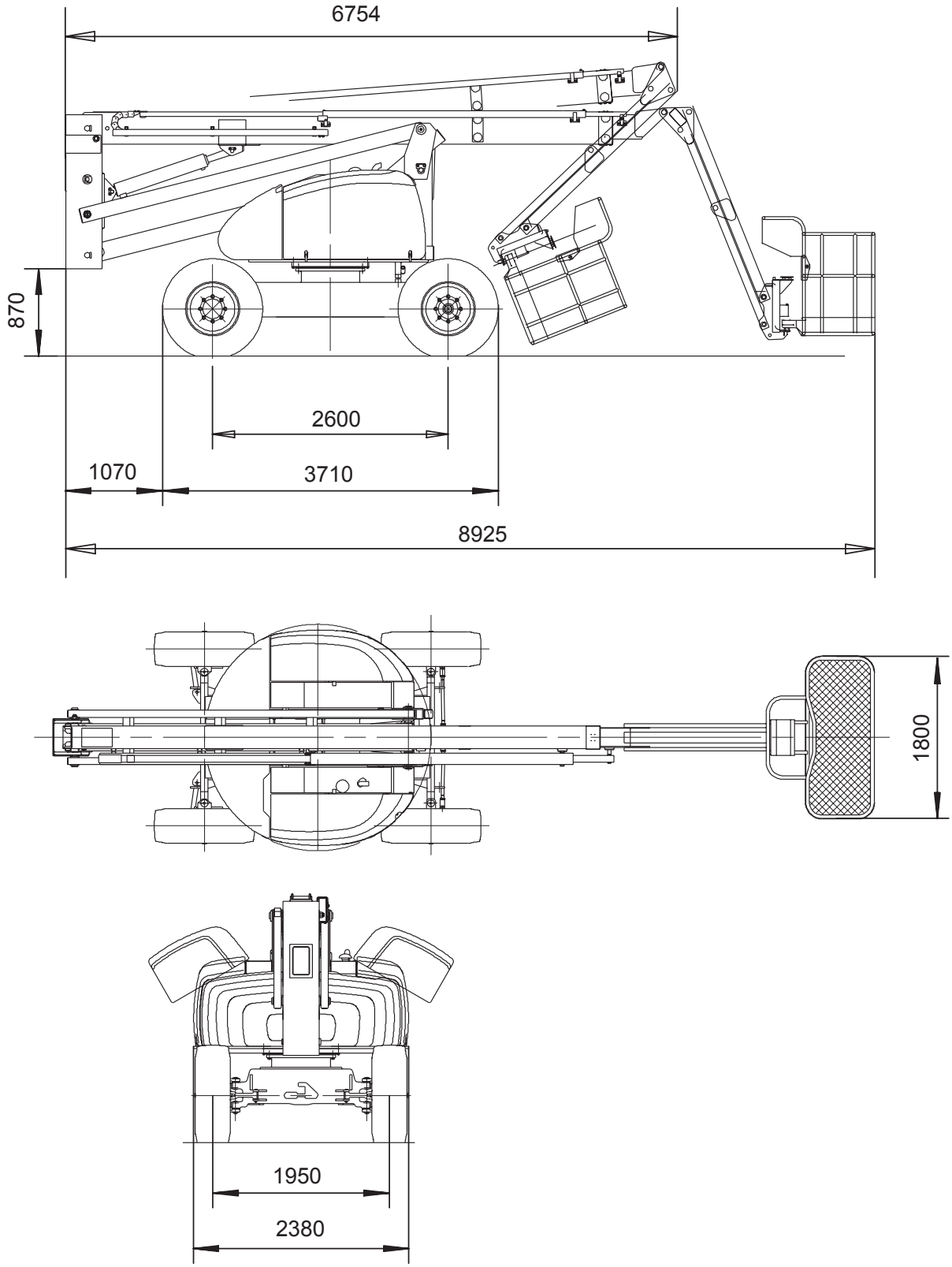
To reduce the risks of tipping over, operators **must follow these instructions**:

- Never disable the limit switches of the safety devices.
- Never move the control handles from one direction to the other without stopping in the «O» position. (To stop when travelling, gradually move the handle to «O», keeping your foot down on the pedal.).
- Do not exceed the maximum load or the number of occupants allowed in the platform.
- Spread the load and if possible place in the centre of the platform.
- Check that the ground resists the pressure and load per wheel.
- Avoid contact with stationary or moving obstacles.
- Do not drive the platform at high speed in narrow or congested areas.
- Do not drive the platform in reverse gear (poor visibility).
- Do not use the machine with a congested platform.
- Do not use the machine with equipment or objects hanging from the guardrails or boom.
- Do not use the machine with items liable to increase the wind load (e.g. panels).
- Never carry out maintenance on the machine with the platform raised, without first installing the required safety provisions (overhead crane, crane).
- Perform the daily checks and monitor the machine's good working order during periods of use.
- Preserve the machine from any uncontrolled intervention when it is not in operation.

NOTE : Do not tow the platform. (It has not been designed for towing and must be transported on a trailer).

2.5 - OVERALL DIMENSIONS

2.5.1 - HA 20PX overall dimensions



3 - OPERATING PRINCIPLE

3.1 - HYDRAULIC CIRCUIT

All the machine's movements are performed by the hydraulic power supplied by an open-circuit self-regulating piston pump, equipped with a «LOAD SENSING» compensator.

3.1.1 - Travel, slewing, arm lifting and boom raising movements

Carried out in pressure-compensated proportional distribution. The pump's flow rate, through the «LOAD SENSING» line, adapts automatically to suit the demand. In neutral, there is no pump flow.

3.1.2 - Telescoping, pendular, platform rotation, compensation and steering movements

Are controlled by 4-way solenoid valves. On/off flow. A spool in the proportional position valve supplies the flow necessary for these movements.

3.1.3 - Telescoping, boom raising, arm lifting and pendular cylinders

Are equipped with leaktight and flanged balancing valves.

3.1.4 - Platform rotation

Caution!
Adjustment can only be carried out by specialist personnel.

Uses a hydraulic motor. The rotation speed is adjustable by the chokes

3.1.5 - Compensation

Works by oil transfer between 2 cylinders with similar characteristics.

The compensation input cylinder is equipped with a flanged piloted valve double.

3.1.6 - Travel (moving the machine)

Four two-speed hydraulic motors mounted in the wheels drive the wheels via epicyclic reducers.

The pressure supply of these motors eliminates the action of the brake. As soon as the movement stops, the brake puts itself back in position under the action of springs

On each axle there is provided a hydraulic differential lock.

The two travel speeds (high, low) are controlled by a switch.

Low travel speed	High travel speed
The four motors are high-output.	The four motors are piloted by a solenoid valve, low-output.
Each axle receives half of the flow supplied by the pump, thanks to two proportional sliding spools, controlled by the same manipulator. On each axle, the motors are supplied in parallel. They each receive a quarter of the pump's flow. A hydraulic differential lock is provided.	The manipulator controls the two proportional trays and the pump output is shared between the right and left wheels. On either side, the motors are in series.

4.2.2 - Offloading with ramps

Precautions : make sure that the ramps can support the load and that adherence is sufficient to avoid any risk of slipping during the operation and that they are correctly fixed.

Caution!
Since this method requires the machine to be switched on, refer to Chapter 4.4, page 40 to avoid any risk of incorrect operation.

Select low travel speed.

NOTE : Since the slope of the ramp is practically always greater than the maximum working slope (5°), it is necessary to have the boom and the arms lowered to authorise travel. In this case, the buzzer sounds but travel is possible.

If the slope is greater than the maximum travel slope (see Chapter 2.4, page 11): use a hoist in addition to traction.

4.2.3 - Loading

Fig 4, page 33

The precautions are identical to the offloading precautions.

Chocks must be provided in accordance with the sketch below.

In order to go up a lorry's ramps, select high speed.

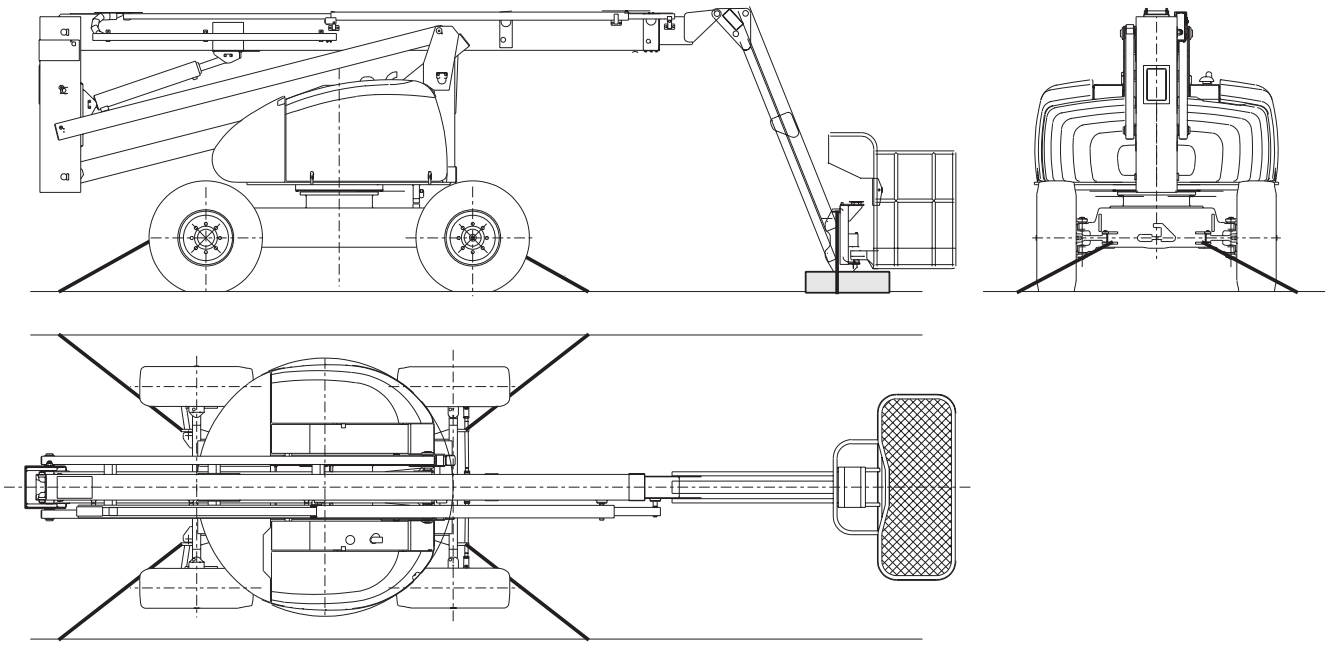


Fig. 4 - Loading

4.5.3 - Uncoupling

Photo 14 Cap

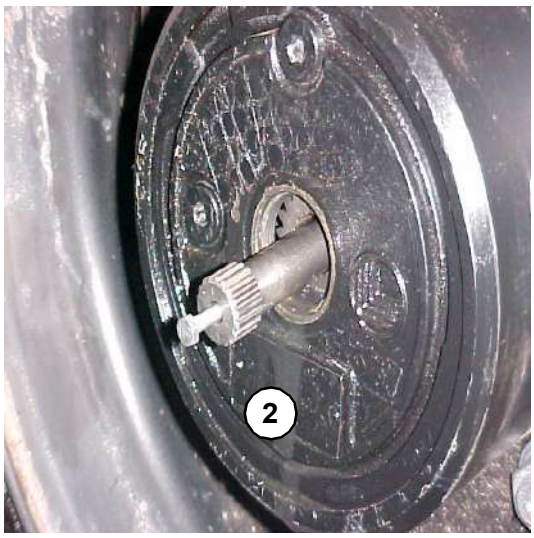


Photo 15 Grooved central pin

It is possible to uncouple the reducers of the 2 wheels in 4x2x4 and 4 wheels in 4x4x4 so as to be able to tow the machine.

To tow the machine, use a rigid tow bar in order to avoid any risk of accident.

- Unscrew the cap (item 1 - Photo 14, page 43) (central nut).
- Using a 6 x 50 screw, remove the grooved central pin (item 2 - Photo 15, page 43).
- Screw the cap back into place.

When the cap is removed, oil flows from the reducer.

NOTE : After repair work on the machine it will be necessary :
** to correctly reposition the cap on each wheel.*
** to top up according to the instructions in Chapter 5.3.2, page 49.*

Caution!
In this configuration, the machine is no longer braked. To tow the machine, it is essential to use a rigid bar and not to exceed 5 kph.

7 - SAFETY SYSTEM

7.1 - FUNCTIONS OF THE TURRET CABINET FUSES AND RELAYS

(see Chapter 8, page 55)

KA2	Heat engine starting
KP1	Heat engine stopping
KT2	Acceleration of movements (electromotor)
KMG	Mains supply
KM4	Electropump contactor
FU1–10 A	Engine stop circuit fuse
FU3–80 A	Accelerator circuit fuse
FU4–30 A	General circuit fuse
FU5–3 A	Fuse for circuit for controlling movements from turret
FU6–3 A	Fuse for circuit for controlling movements from platform
FU7–20 A	Solenoid valve supply circuit fuse
FU8–5 A	Turret/platform control circuit fuse
FU9–20 A	Accessories circuit fuse
FU10–3 A	Circuit fuse
FU11–250 A	Engine circuit fuse

7.2 - FUNCTION OF THE SAFETY SWITCHES

(see Chapter 8, page 55)

SB1	Mushroom-headed emergency stop button (turret)
SB2	Mushroom-headed emergency stop button (platform)
SQ1	Tilt unit, prohibits by a cut, the arm lifting, boom raising, telescoping, pendular raising and travel movements
SQ4	Tilt reset, if machine folded (arm)
SQ5	Overload 1st audible alarm. Threshold of 90% of maximum charge reached
SQ6	Overload 2nd alarm - Cut-out. Cuts all the movements on platform except basket rotation
B1	Air filter switch: Engine cut-out if air filter clogged
B2	Engine temperature switch: Engine cut-out if temperature too high
B3	Engine oil pressure switch: Engine cut-out if pressure insufficient
B4	Hydraulic oil temperature switch: audible warning if temperature too high