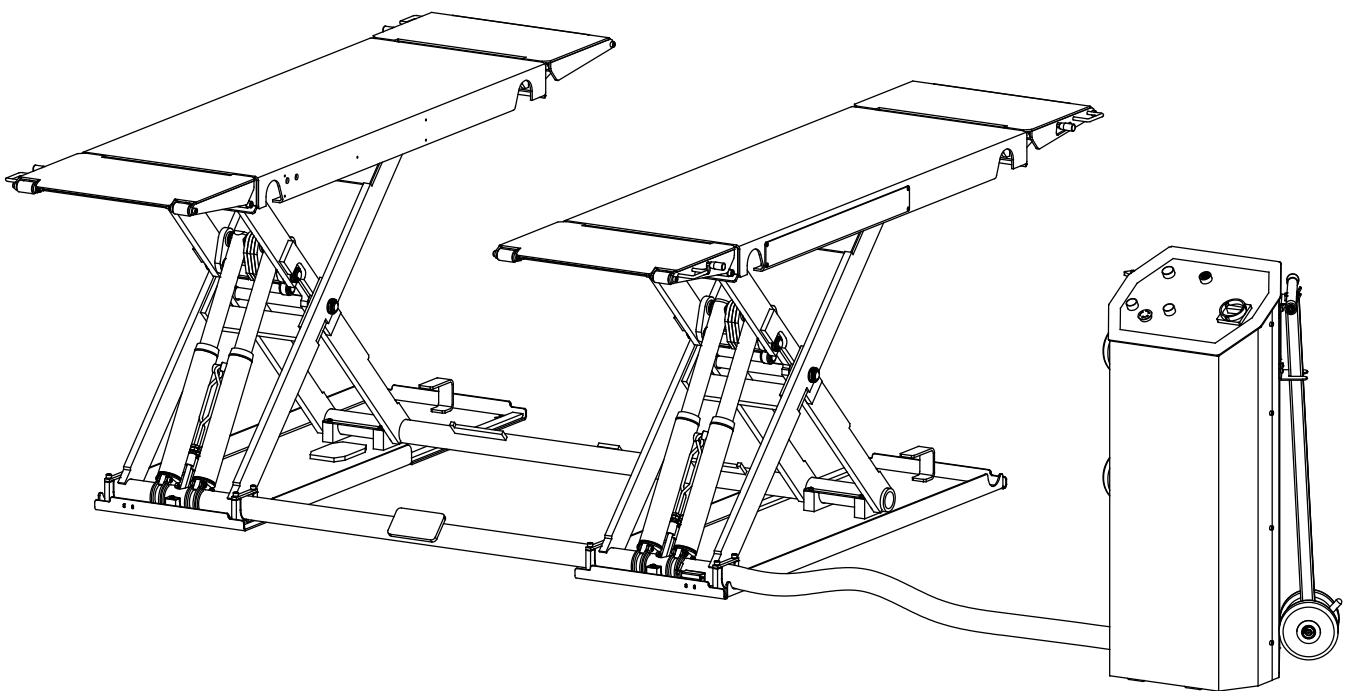




MOLNAR
BY NEXION

CM350-LS

Installation & Operation Instructions



ALWAYS KEEP
operating instructions
ready to hand on the
unit

Read the operating
instructions before
working with the
unit

Date: 02/02/2023

**Before
taking into operation
check system compo-
nents, control, emer-
gency stop and safety
equipment for conditi-on,
damage and correct
function!**

Please read this manual before you get started.

You must read and understand the precautions for safety purposes and any damages that may occur to your property.

If these installation instructions are not followed strictly, the hoist is not covered by warranty.



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Table of contents

1	General	5
1.1	Information about the operating manual	5
1.2	Explanation of symbols	5
1.3	Warranty and liability	6
1.4	Spare parts	6
1.5	Copyright protection	7
1.6	Waste disposal	7
2	Safety	7
2.1	General	7
2.1.1	Hoist maintenance and usage guide	8
2.2	Customer's responsibility	9
2.3	Intended use	9
2.4	Work safety	10
2.5	Personal safety equipment	10
2.6	Dangers which may arise from the machine	10
2.7	Operating personnel	11
2.8	Behavior in case of danger or accidents	11
2.8.1	Preventive measures	11
2.8.2	If the worst comes to the worst: Do the right things!	11
3	General information	12
3.1	Type designation	12
3.2	Name plate	12
3.3	Application	12
3.4	Features	12
3.5	Technical specifications	13
3.6	Environment requirements	13
3.7	Load distribution	14
4	Symbols of short operation instructions	15
5	Transport, packing and storage	16
5.1	Safety notes	16
5.2	Transport inspection	16
5.3	Packaging	16
5.4	Storage	17
5.5	Scrapping	17
6.	Installation and test before start-up	17
6.1	Overall layout	17
6.2	Control desk installation	18
6.3	Connecting power	18
6.4	Preparation before test	19
6.5	Functionel test	19
6.6	Safety rules for electrical control system	20
7	Operation	21
7.1.	Operation panel	21
7.2	Preparatory inspections	21
7.3	Operational procedures	21
7.4	Emergency lowering	22
7.5	Safety precautions	23
8	Maintenance	24
8.1	Daily maintenance	24
8.2	Monthly maintenance	24
8.3	Biannual maintenance	24
8.4	Maintenance for 3 years or 5000 times operation	24
9	Inspections	24
10.	Troubleshooting	25
10.1	Actions in case of malfunctions	25
10.2	Trouble shooting chart	25

11.	Hydraulic oil data	26
12.	Service	26
12.1	Spare parts ordering	26
13.	Electrical diagram	27
14.	Hydraulic diagram	28

1 General

1.1 Information about the operating manual

This operating manual describes the installation, operation and maintenance of the machine. Strict compliance with all the specified notes on safety and instructions is essential for safe working and proper handling of the equipment.

Apart from that, all accident prevention instructions valid at the place of use and the general safety regulations must also be adhered to.

This operating manual is part of the product and should always be kept in the immediate vicinity of the machine, accessible for the personnel entrusted with installation, operation, maintenance and cleaning.

For better representation of the explanations, the graphical artwork in this manual is not strictly according to scale, but may slightly vary from the actual design of the machine.

The operating manuals of the supporting components apply alongside this operating manual. Please observe the notes contained therein - especially the safety notes.

1.2 Explanation of symbols

Important safety and machine technical notes in this operating manual are marked with symbols. The notes must be adhered to in order to avoid accidents, personal injuries and damage to property.



WARNING!

This symbolizes dangers that can lead to adverse effects on health, injuries, permanent physical damage or to death. Adhere at all costs to the notes specified regarding work safety, and be particularly careful in these cases.



WARNING! Danger of electric current!

This symbol draws attention to dangerous situations involving electrical currents. There is a danger of serious injury or death if the safety notes are not complied with. The work may only be carried out by qualified electricians.



ATTENTION!

This symbolizes notes, which if not complied with, can lead to damages, malfunctions and/or break-down of the machine.



NOTE!

This symbol highlights tips and information that are to be observed for efficient and disruption-free operation of the machine.

1.3 Warranty and liability

All information and notes in this operation manual are provided under due consideration of valid regulations, the latest technical status of development as well as our years of expertise and experience.

The translation of this operation manual has also been made to the best of our knowledge.

We do not accept any liability for errors in translation. The version marked of the operation manual supplied with the hoist shall be binding. "Original version" on the front page of the operation manual supplied with the hoist shall be binding.

For optional design versions, the use of additional ordering options or the implementation of the latest technical modifications the actual scope of delivery may differ from the descriptions and illustrations in this manual. If you have any questions please contact the manufacturer.



NOTE!

This operation manual must be thoroughly read before starting any work with the equipment, especially before commissioning ! The manufacturer assumes no liability for damages or disruptions that occur as a result of non-compliance with the operation manual.

This operation manual must be kept at the hoist and accessible for all persons working on or with the hoist. Handing over the manual to third party is not permitted and is subject for compensation. Further rights remain reserved.

We reserve the right to technical changes to the product within the framework of improving the usability and further development.

This hoist is guaranteed, covering faults due to manufacturing or material defects, provided that the installation, operation and maintenance instructions are observed. The warranty implies that during the warranty period the manufacturer is committed either to repair or to replace – after own decision - defective spare parts fitted in the hoist. No other warranty claim can be put in under warranty.

1.4 Spare parts

IMPORTANT: Spare parts used in the lifts are quality tested and comply with the criteria laid down in DS/EN 1493:2010. Please note that the use of safety spare parts or other essential components which do not fulfill these criteria may result in the type approval becoming void and the hoist will thereby no longer keep the safety regulations defined by the manufacturer together with the relevant authorities.

The manufacturer's product/deficiency liability and warranty cannot be claimed if concrete damages or failures are a result of the use of spare parts not originating from the factory.

1.5 Copyright protection

This operating manual is to be treated as confidential. It is solely intended for persons having to work on or with the equipment. Passing this operating manual on to third parties without a written confirmation is not permitted. If this should be required, please contact the manufacturer.



NOTE!

Contents, texts, drawings, pictures and other representations are protected by copyright law and are subject to further commercial protection rights. Any misuse is punishable.

Reproduction of any kind - even in form of excerpts - as well as the utilization and/or disclosure of its content without the written consent of the manufacturer is not permitted.

Violations oblige to compensation. Further rights remain reserved.

1.6 Waste disposal

If no agreement concerning take-back or waste disposal has been made, disassembled components must be passed on for recycling after correct dismantling:

- Metal material residues must be scrapped
- Plastic elements must be forwarded for recycling of plastics
- Other components must be sorted by material properties



ATTENTION!

Electric scrap, electronic components, lubricants and other auxiliary materials must be treated as hazardous waste and must only be disposed of by specially approved waste disposal companies!

Consumables like greases, oils, conserving and cleansing agents must be removed from the device in a type specific and environmental manner. Use suitable and approved storage containers for the respective consumables. Mark these containers according to their content, filling level and data and store them until final waste disposal in such a way, that any accidental use is ruled out.

2 Safety

This section offers an overview of all important safety aspects for an optimal protection of personnel against danger and ensures safe and disruption-free operation of the machine.

In addition to this, concrete notes on safety to avert danger are provided and marked with symbols in the individual chapters. Furthermore, any pictograms, signs and labels on the machine are to be observed and kept legible at all times.

2.1 General

At the time of development and manufacture the equipment complies with the valid and established technical rules and regulations and is safe to operate. However, danger may arise from this machine if it is used unprofessionally by untrained personnel, or if it is used improperly or not for the purpose it is intended for. Each person entrusted with work on or with the machine must have read and understood the operating manual before starting work.

The customer is advised to demand a written confirmation that all relevant persons have read the operating manual. Changes of any kind as well as attachments or conversions to the machine are prohibited.

Safety, warning and operation related decals on the machine must always be kept in legible condition. Damaged decals or stickers must be immediately replaced.

Specified settings and adjustment ranges must be strictly complied with.

Hoist Maintenance & Usage Rating

Based on Usage Rating (as determined over), use this chart to ascertain how often you need to professionally service your hoist (Servicing Intervals) and when your hoist requires major servicing.

USAGE DEPENDENT MAINTENANCE REQUIREMENTS

USAGE RATING	SERVICING INTERVALS	MAJOR INSPECTIONS					ENGINEERING ASSESSMENT
		1ST	2ND	3RD	4TH	5TH	
MEDIUM	12 months	Year 10	Year 20	Year 25	/	/	Year 25
HEAVY	6 -12 months	Year 10	Year 15	Year 20	Year 25	/	Year 25
VERY HEAVY	6 months	Year 5	Year 10	Year 15	Year 20	Year 25	Year 25
EXTREME	3 months	Year 5	Year 10	Year 15	Year 20	/	Year 20

Local Call **1300 MOLNAR** = 1300 665 627
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Managed Hoist Maintenance

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USAGE RATING

LIFTS PER DAY	AVERAGE LOADING ON HOIST AS PERCENTAGE OF CAPACITY					
	50%	60%	70%	80%	90%	100%
40	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME	EXTREME
38	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME	EXTREME
36	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME	EXTREME
34	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME	EXTREME
32	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME	EXTREME
30	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME	EXTREME
28	VERY HEAVY	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME
26	VERY HEAVY	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME
24	VERY HEAVY	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME
22	VERY HEAVY	VERY HEAVY	EXTREME	EXTREME	EXTREME	EXTREME
20	HEAVY	VERY HEAVY	VERY HEAVY	EXTREME	EXTREME	EXTREME
18	HEAVY	VERY HEAVY	VERY HEAVY	EXTREME	EXTREME	EXTREME
16	HEAVY	VERY HEAVY	VERY HEAVY	EXTREME	EXTREME	EXTREME
14	HEAVY	HEAVY	VERY HEAVY	EXTREME	EXTREME	EXTREME
12	HEAVY	HEAVY	VERY HEAVY	VERY HEAVY	EXTREME	EXTREME
10	MEDIUM	HEAVY	HEAVY	VERY HEAVY	VERY HEAVY	VERY HEAVY
8	MEDIUM	HEAVY	HEAVY	VERY HEAVY	VERY HEAVY	VERY HEAVY
6	MEDIUM	MEDIUM	HEAVY	HEAVY	HEAVY	HEAVY
4	MEDIUM	MEDIUM	MEDIUM	HEAVY	HEAVY	HEAVY
2	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM

LIFTS PER DAY = Average number of hoist lifts, based on 5 days a week, 50 weeks a year for design life of 25 years
Average Loading = e.g. A three tonne hoist lifting an average weight of 2.1 tonnes is operating at **70%** or
 A four tonne hoist lifting an average weight of 3.6 tonnes is operating at **90%**

2.2 Customer's responsibility

This operating manual should always be kept in the immediate vicinity of the machine, accessible for the personnel entrusted with installation, operation, maintenance and cleaning.

The machine must only be operated in technically perfect and safe condition.

Always ensure free access to all safety features and check these at regular intervals.

Details concerning industrial safety refer to directives of the European Union valid at the time the machine was manufactured. The customer is obliged to determine compliance of work safety measures specified with the current status of legal statutes and to observe any new regulations over the entire period in which the machine is used. Outside of the European Union, the laws on industrial safety and regional directives and regulations valid at the place of use of the machine are to be complied with.

The generally valid notes on industrial safety and accident prevention instructions as well as the valid environmental protection regulations applicable at the place of use are to be observed and adhered to alongside the notes on industrial safety in this operating manual.

The customer and personnel authorised by him/her are responsible for the disruption-free operation of the machine as well as for unambiguous determination of responsibilities during installation, operation, maintenance and cleaning of the machine.

Details of the operating manual are complete and must be adhered to without limitation!

Furthermore, the customer must also ensure that:

- Other dangers that result from special working conditions at the place of use are determined in a risk assessment.
- All other instructions and notes on safety that result from the risk assessment of workplaces on the machine are summarized in operating instructions.

2.3 Intended use

Operational safety is only guaranteed when adhering to the intended use of the device.

This lifting device is specially developed to lift motor cars and we strongly recommend not to lift any other equipment with this automotive hoist.

The lifting platform has been designed and built for the use inside workshops.

Use of the hoist for under-sealing of cars and car wash is not allowed.

Riding, climbing and/or standing on the lifting platform as well as using it for lifting or lowering loads other than the ones specified above or installing and operating it outside in an unprotected environment is prohibited.



ATTENTION!

Any other use of the device that differs from this or exceeds this is prohibited and is not considered unintended use!

Claims of any kind against the manufacturer and/or his authorised representatives resulting from damage caused by unintended use of the device are excluded. The customer is solely liable for any damage occurring during unintended use.

Intended use also includes correct adherence to assembly, operating, maintenance and cleaning instructions.

2.4 Work safety

Compliance with the notes on safety can help to avoid personal injury and material damage when working on the machine. Failure to comply with these notes will cause a considerably risk of injury for persons and danger of damage or destruction of the machine.

Non-compliance with the safety regulations causes the exclusion of any liability or compensation claims against the manufacturer or his representative.

2.5 Personal safety equipment

In principle, the following is to be worn when working on or with the machine:

Protective working clothes

Tight fitting work clothing (minimal tear strength, no wide sleeves, no rings or other jewelers etc.)

Safety gloves



Safety boots

for protection against heavy falling down objects and slipping on non-skid proof ground



2.6 Dangers which may arise from the machine

The machine was subjected to a risk analysis. The resultant construction and design of the machine corresponds to the current status of technology.

However, certain remaining risks cannot be avoided!

This device works with electrical voltage.



WARNING! Danger of electric current!

Electrical power can cause severe injuries. There is a danger to life caused by electric current if the insulation or individual components are damaged.

Switch off the main switch and secure against switching on again before maintenance, cleaning or repair work. Switch off the power supply before starting work in the electrical system and make sure that the system is dead. Do not remove any safety features or do not modify such installations in a way that would adversely affect their function.

The equipment is supported by hydraulic components.



WARNING! Danger of injury!

Hydraulic power can cause severe injuries. In case of damage to individual components fluid may escape under high pressure and cause injury and material damage!

Always relieve all pressures before starting work in the hydraulic system.

Do not remove any safety features or make them inoperative as a result of modifications.

Do not change any pressure settings beyond the values specified in this operating manual.

2.7 Operating personnel

The device must only be operated and serviced by authorized, trained and instructed expert persons who:

- are at least 18 years of age and
- have been thoroughly instructed in operation and
- can provide evidence of their suitability to operate lifting platforms and
- have been entrusted in writing by the operating company to operate the lifting platform

An instructed person is someone who has been trained and, if necessary, instructed practically in the tasks entrusted to him/her and the possible dangers resulting from improper actions; and who has been instructed both about the necessary protective features and about protective measures.

Qualified personnel include those who can assess the work entrusted to them and recognize potential dangers based on their specialist training, knowledge and experience as well as their knowledge of appropriate conditions.

If personnel do not have the necessary knowledge, then they are to be trained accordingly.

The equipment must only be operated and serviced by persons who are able to perform their work in a reliable manner. For this purpose, any mode of operation that adversely affects the safety of persons, the environment or the machine is to be avoided. Persons who are under the influence of drugs, alcohol or medication that affects their responsiveness may under no circumstances carry out work on or with the machine.

The employment of personnel must be based on the applicable regulations concerning age and qualification.

The responsibilities concerning operation and maintenance must be clearly specified in order to avoid uncertainties in competence.

The operator must ensure that unauthorized persons keep a sufficient clearance to the equipment.

The operator is obliged to report immediately any changes to the equipment which adversely affect the safety to the operator.

2.8 Behavior in case of danger or accidents

2.8.1 Preventive measures

- Always be prepared for accidents or fire !
- Keep first aid equipment (first aid kit, blankets, etc.) and firefighting equipment close to hand.
- Make personnel familiar with the location and use of safety, accident reporting, first aid and rescue equipment and have this training confirmed.
- Clear access routes for rescue vehicles.

2.8.2 If the worst comes to the worst: Do the right things!

- Shut down the machine immediately.
- Inform the responsible person at the place of use.
- Alarm a physician and the fire brigade.
- Rescue persons from the danger zone, start first aid measures.
- Keep access routes for rescue vehicles clear.

3. General information

3.1 Type designation

Example: CM350-LS 230/1/50

Mains voltage

Low Scissor, mobile, galvanized

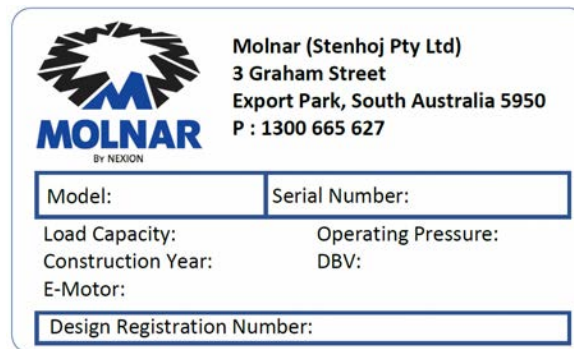
Capacity: 35 = 3.500 kg

Series designation: CM

3.2 Name plate

The name plate is located on the control post and contains following information:

- Manufacturer
- Serial no.
- Model no.
- Year of manufacturing
- Capacity



3.3 Application

This hoist is designed for the purpose of lifting light vehicles under 3.5 t for vehicle test, service and cleaning.

3.4 Features

- The hoist features advanced design, durability, compact layout
- The hidden type ultra-thin structure, floor installation, without construction pit, small occupied space
- Independent control box, low voltage control, good safety performance
- Hydraulic volume synchronous cylinder, platform operation synchronization, smooth.
- Mechanical cross bar system keeps both platforms level, operates safely
- Automatic lubricating system and oil-less bearings

3.5 Technical specifications

Max. lifting capacity	3500 kg
Max. lifting height	1000 mm
Min. height	≤ 105 mm
Number of platforms	2
Lifting time	≤ 20 s
Lowering time	≤ 20 s
Weight	570 kg
Synchronization precision	≤ 40 mm
Height difference	≤ 8
Working temperature	5-40°C
Air humidity (when working)	30-95%
Noise level	< 70 db

3.6 Environment requirements

Temperature: 0°C ~ +40°C

Relative humidity: ≤ 80% at 30°C

Transportation/storage temperature: -25°C ~ +55°C


Altitude: ≤ 2000 m (78740")

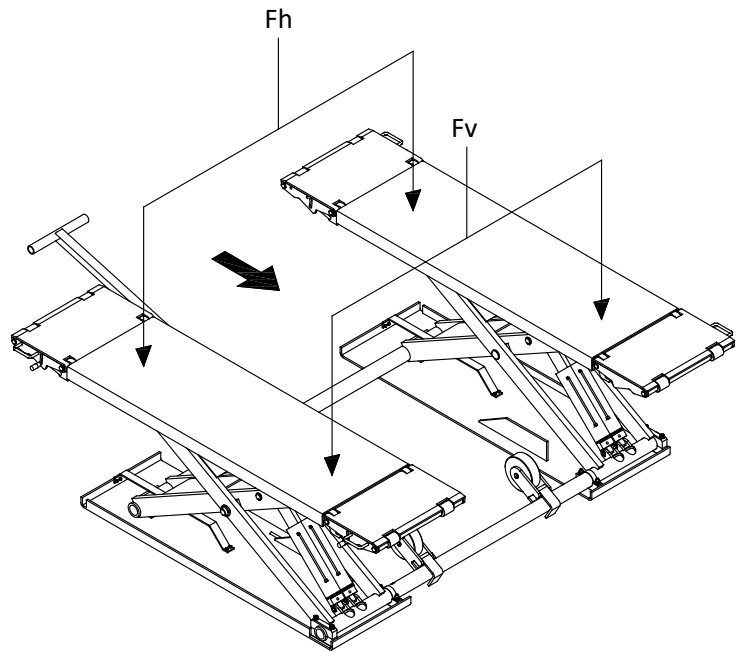
3.7 Load distribution

Front load ratio (Fv) : rear load ratio (Fh)

FV : Fh = 3 : 2 and 2 : 3

This assumption is based on a vehicle with a wheel base from 1.00 m to 1.70 m.


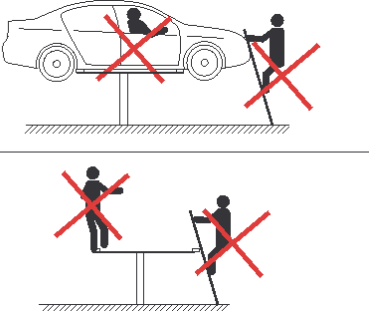
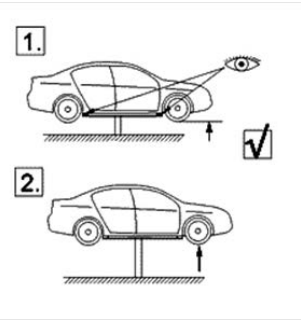
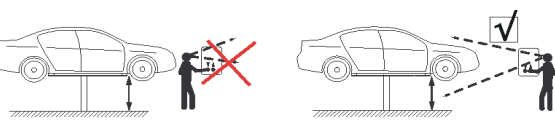
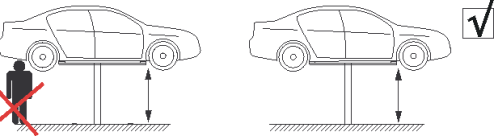
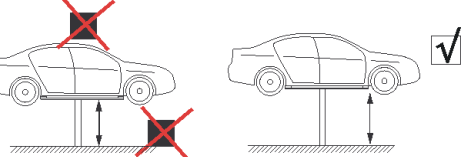
 = Recommended drive-on direction



The hoist can only be taken into operation when the center of gravity of the lifted load is within the area marked with the yellow sticker. The sticker is shown on both sides of the hoist.



4 Symbols of short operation instructions

	<p>The lifting platform must only be operated by authorized persons. Strict compliance with the comprehensive operating manual is mandatory, especially in case of faults</p>
	<p>Climbing up or standing on lifted load or load bearing device is strictly prohibited.</p>
	<p>After slight initial lifting the operator must check that the load is correctly positioned on the load bearing device. Only then the load may be lifted further.</p>
	<p>Always keep an eye on load bearing device and load when moving the lifting platform.</p>
	<p>No persons must be in the movement range of load bearing device or load while the lifting platform is in motion.</p>
	<p>The movement range of load and load bearing device must be kept clear of any obstructions.</p>

5 Transport, packing and storage

5.1 Safety notes



WARNING! Danger of injury!

There is a danger of injury from falling parts when lifting, swinging and lowering. The machine can be damaged or destroyed by improper transporting.

For this reason, fundamentally observe the following safety notes:

Only use permissible lifting tackle and sling gear with sufficient bearing capacity.

Only secure the machine on the fastening points provided; do not fasten onto projecting machine parts or eye-lets of attached components. Make sure the sling gear is secure !

Ropes and chords must be equipped with safety hooks. Do not use any torn or worn ropes. Do not lay ropes and chords on sharp edges and corners, do not knot and do not twist. Pay attention to the centre of gravity of the machine when fastening tackle.

Never lift, swing or lower loads over people.

Always move the machine with the greatest of care and attention.



WARNING! Danger of life!

Suspended loads can fall down and lead to severe injuries. Do not stand or pass under suspended loads when transporting with lifting tackle!

5.2 Transport inspection

Check delivery immediately on receipt for completeness and transport damage.

Do not accept delivery or only accept under proviso if there is externally recognizable transport damage. Note the scope of damage on the transport documents/delivery note of the carrier. Start complaints procedure. Complain about hidden deficiencies as soon as they are discovered as compensation claims can only be asserted within the applicable complaints period.

5.3 Packaging

If there is no returns agreement for the packaging, separate materials according to type and size and direct to further use or recycling.



ATTENTION!

Always dispose of packaging materials in an environmentally friendly manner and in accordance with the applicable, local disposal guidelines. If necessary, commission a recycling company.



NOTE! Good for environmental protection!

Packaging materials are valuable raw materials and can continue to be used in many cases or sensibly reconditioned and recycled.

5.4 Storage

Keep packed goods packed up until installation and store such items as specified on the externally attached installation and storage information.

Store packing units only under the following conditions:

- Do not keep in the open-air.
- Store in a dry and dust-free environment.
- Do not subject to aggressive media.
- Protect against direct sunlight.
- Avoid mechanical vibrations.
- Storage temperature: 15 to 25 °C
- Relative humidity: max. 60 %
- For longer periods of storage (> 3 months), check the general condition of all parts and the packaging at regular intervals. If necessary touch up or renew the conservation.

5.5 Scrapping

When the hoist has exceeded its lifespan and can not be used any more, disconnect it from the electrical supply and dispose of it as required by the local regulations

6. Installation and test before start-up

6.1 Overall layout

Installation position:

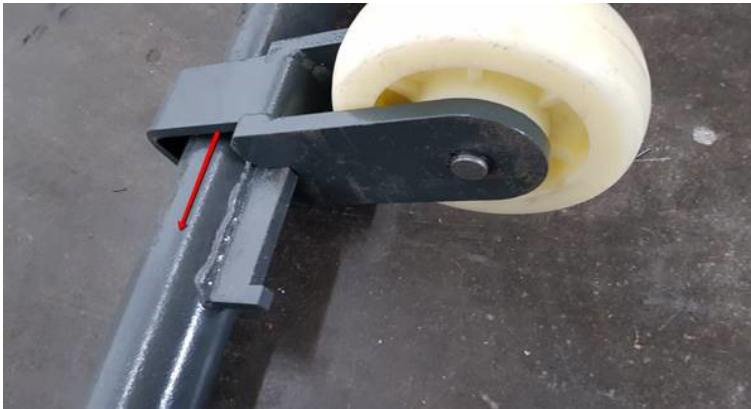
- Machine supply status for the whole package, i.e. that the control unit, oil pipes and platforms are in the correct condition
- Open the package, remove the packing material to check the hoist for any damage during the transportation
- Place the packing material away from children to prevent any danger. Dispose properly of the packing materials that may cause pollution
- Inspect for possible hindrance such as low ceiling, overhead pipelines in the working area, passageways and escapes. The working area of the hoist should be 4.2 m high to give enough space
- Allow enough space (1.5 m) at the front
- Power should be prepared before installation. Electrical wiring should be conducted by certified electrician.
- It is default installation, the control unit could be installed at the right side of hoist as well. The installation should be performed by qualified people.
- The lifter is mobile and can be moved by mounting the drawbar and rollers.



Assembly takes place as follows:

1. By means of the UP-button, raise the hoist until approx. 500 mm above floor
2. The rollers can now be mounted on the shaft closest to the control unit (see picture below)
3. Using the DOWN button, lower the hoist to bottom position and the rollers are now resting on the floor
4. Now fit the drawbar on the opposite shaft and the hoist can be moved to the desired location by means of the drawbar.
5. Dismantle the drawbar and the rollers in reverse order

NOTE: It is important that the drawbar is dismantled BEFORE raising the hoist from the floor, otherwise the drawbar will be damaged.



6.2 Control desk installation

- Place the control desk in place according to the ground layout
- Use cover plate to protect the wires if there is no wire channel on the concrete floor
- Fill hydraulic oil* (approx. 7 l) into the oil tank (using oil dipstick to check the level). Pay special attention to avoid dust and contaminants into the oil.

Recommended Oil: Castrol Hyspin AWH 46

* Hotter or colder climates may require 32 or 68, consult with your hoist technician

6.3 Connecting power

- Open the control desk, connect the wires according to the electrical diagram. After having checked the connection, switch on the power. Turn on the power supply switch which is on the panel of control desk. The indication light will turn on.
- Power switch is needed, and installed near control desk. Cut the power during maintenance or emergency. The damage which is caused by wrong wire connection is not covered by warranty. Make sure the oil level is above the standard level. DO NOT operate the hoist if oil tank is empty.
- Fix all the oil hoses and press UP button, test the electrical parts: if motor does not operate, abnormal sound, platform does not rise, motor is hot, STOP operating immediately and check the wire connection.

6.4 Preparation before test

- Lubricate the moving surface of the sliders with lithium lubricant (NLGI class 2). Lubricant should be applied evenly from left to right
- Lubricate the joints of the lifts with lithium lubricant

6.5 Functional test

- Check if all the connection bolts are tightly fastened
- Press UP-button, the platforms are raising; release the UP-button, the platforms stop raising. Press DOWN button, the platforms are lowering. Check function of CE-stop (see 7.5 Safety precautions).
- This hoist contains self-bleeding cylinders. To bleed the system move the hoist 5 times complete up and down. Every time, when the hoist is in the highest position wait min. 30 sec. before you lower it.
- Check the lowering speed and adjust manually to 20 seconds if necessary, see picture below; valve has to be secured by the counter nut afterwards **(must only be carried out by authorized engineer)**.



Attention

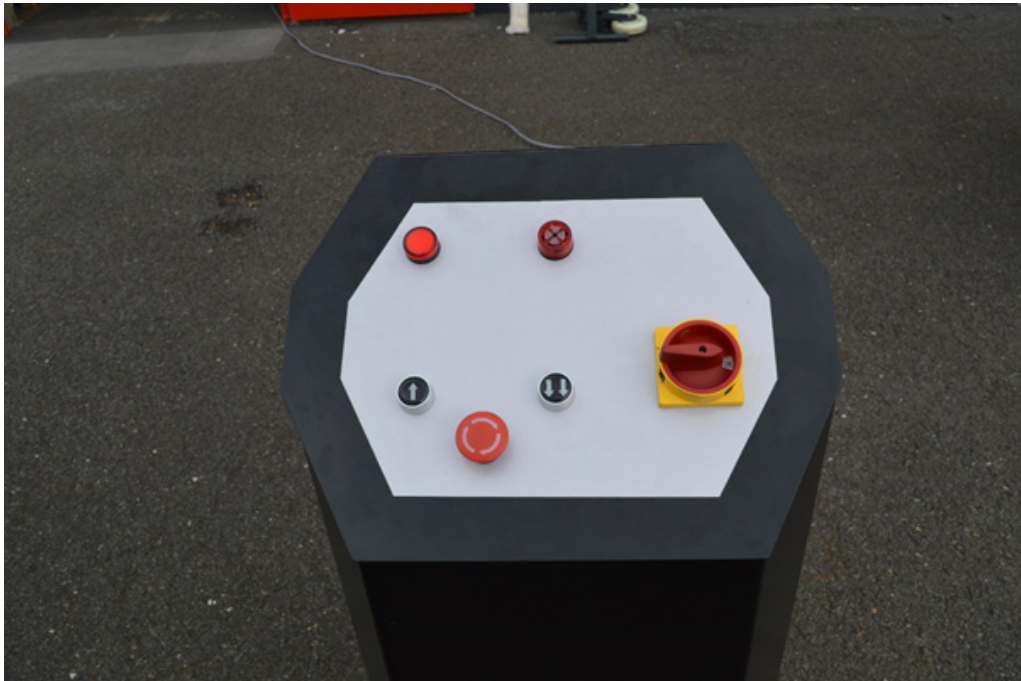
Attention should be paid to the position of oil pipes and hydraulic hose when the platforms move to the minimal height for the first time. Make sure they do not get stuck with platforms moving downward.

6.6 Safety rules for electrical control system

- Only personnel who are properly trained and have adequate knowledge and skill should undertake all electrical/ electronic troubleshooting and repair
- Do not alter or bypass protective safety devices
- Before starting, read and observe all warning labels
- When troubleshooting make sure the power source has been disconnected and main switch has been locked
- Take extra precautions in damp areas to protect you from accidental grounding
- Before applying power to any equipment it must be established, without a doubt, that all persons are clear
- Do not open the electrical control panel unless it is necessary to check the electrical equipment
- Do not alter the electrical circuits unless authorized to do so by the manufacturer
- When replacing electrical components, make sure they are conform to the manufacturer's specifications, including proper color coding
- Do not wear metal frame glasses, metallic necklaces or chains while working on any electrical equipment. Also do not wear any ring, watch or bracelet while operating electrical equipment

7. Operation

7.1. Operation panel



Operation instructions:

Lifting process: Press UP button, left and right platforms raising. Release the button, the platforms will stop raising. If you continue to press the button, the hoist will raise to the limited height and then stop.

Lowering process: Press DOWN button, the platforms begin to lower.

7.2 Preparatory inspections

- Check for the synchronized and steady movement of the platforms
- Make sure the platforms would automatically stop when they reach the max lifting height
- Check too that both platforms move up and down consistently and smoothly
- Check for possible leakage in the cylinder, hoses and fittings. Check for possible air leakage in the soleno-id valve, cylinder, pressure regulator valve and fittings
- Check for any abnormal action and sound in pump and motor

7.3 Operational procedures

- Keep speed below 5 km/h when driving onto the platforms
- Stop the vehicle when the platforms are between its front and rear wheels
- Press UP button to hoist the vehicle to 200mm~300mm from the floor
- Make sure that the two platforms are level and nothing unusual is found
- Keep pressing UP-button until the vehicle rises to the required height
- After the maintenance is done, keep the work area clear and safe before lowering hoist

7.4 Emergency lowering



ATTENTION !

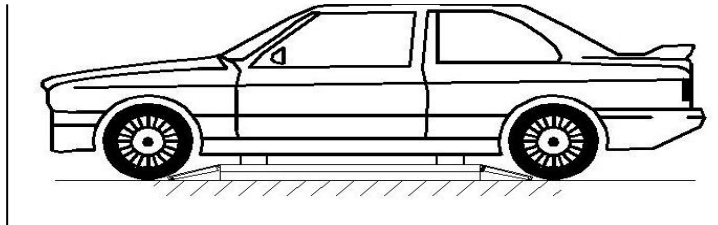
During emergency lowering all normal safety functions are out of operation. Therefore proceed with utmost caution and consideration during the entire procedure.

- Turn off main switch.
- Remove cover for control unit.
- Turn golden ON/OFF screw at valve A anti-clockwise until it "is loose".
- Loosen screw at valve B by turning anti-clockwise.
- Hoist will now lower to bottom position; the lowering speed can be increased or decreased by turning the screw at valve B.
- Check constantly the area around the hoist and tighten the screw at valve B in case of danger or if the lowering is to be stopped.
- During the emergency lowering an assistant must be in contact with the person who is lowering the hoist manually in order to stop the lowering in case of danger (otherwise reaction would not be immediate and this might cause damage to persons and equipment).
- When hoist has reached bottom position fasten screws at valves A and B.



7.5 Safety precautions

- The hydraulic relief valves are well-adjusted before leaving factory. The manufacturer will not be responsible for any damage caused by unauthorized adjustment
- Operation and maintenance personnel are not allowed to enter the unsafe working area (such as machine and vehicle) when lifting the vehicle.
- Ensure correct position of the vehicle on the platform



- Ensure that the hoist does not exceed the allowable weight, maximum height, length range
- Personnel may not be standing on the platform when lifting
- Place rubber pads on the platforms and position them correctly.
- In case of any leakage in the hydraulic system, fix the problem and refill oil to the proper level
- CE-stop: the hoist will stop at around 450 mm above floor level with a beep. Then release the lower button, check that nothing /no one is in the danger area and push it again to lower the hoist to the bottom position.
- Keep the hoist area clean to avoid any danger

RISKS OF FALLING OFF



Oil under the platform must be wiped off to avoid persons from falling.



During up and down operations, personnel are prohibited from standing on the platforms and in the vehicle to avoid falling off.



This hazard may arise in the case of incorrect positioning of the vehicle on the platforms, overweight of the vehicle, or in the case of vehicles of dimensions that are not compatible with the capacity of the hoist.



When the platform is being tested, the vehicle engine can not be turned on. No hindrance should be placed in the hoist working area and the movable parts of the hoist

RISK OF ELECTRIC SHOCK



There is a risk of electric shock in the isolated areas of the electrical equipment. Do not use jets of water, steam solvents or paint next to the hoist, and take special care to keep such substances clear of the electrical control panel.

RISKS RELATED TO INAPPROPRIATE LIGHTING



The operator and the maintenance fitter must be able to assure that there is sufficient light on all the areas of the hoist, in order to avoid person danger.

During up and down operations, the operator should continually observe the hoist and can operate it only in the position of operator. When lifting and lowering the vehicle, rubber pads must be placed correctly between platform and vehicle.



The handling of safety devices is strictly forbidden. Never exceed the maximum carrying capacity of the hoist, make sure the vehicles to be lifted have no load

8. Maintenance

8.1 Daily maintenance

- Keep the hoist clean. Make sure power is cut off before cleaning the hoist
- Keep the working area clean. Excessive dust in the work area will shorten the lifespan of the hoist
- Before operation, inspect and keep all the safety devices of hoist in order. If any problems are found, adjust, maintain or replace the parts timely
- Make sure that the recesses are kept dry and clean
- Inspect if there is leakage in the air valve and if it is well-lubricated

8.2 Monthly maintenance

- Check all the hoses and fittings for possible wearing and leakage. If any leakage is found to be caused by worn sealing parts, replace with parts meeting the specifications
- Check if the moving parts are well-lubricated with high-quality lithium lubricant
- Apply lithium lubricant on a monthly basis

8.3 Biannual maintenance

- Check all the moving parts for possible wearing, interference and damage
- Inspect the lubrication of all the rollers. If the roller is dragged along in lifting or lowering, apply lubricant to the roller shaft
- At the end of the first six months, clean the hydraulic system and replace the hydraulic oil.

8.4 Maintenance for 3 years or 5000 times operation

- Replace the bushings at all joints
- Replace all seals
- Replace sliding blocks

9. Inspections

Before commissioning the hoist must be inspected according to the local national health and safety regulations.

Operational safety and reliability can only be guaranteed when the condition and function of the hoist are inspected at regular intervals – still according to the local national safety regulations.

10. Troubleshooting

10.1 Actions in case of malfunctions In case

of breakdown check the following points:

1. Electricity cut
2. Main fuses
3. Electric motor
4. Obstruction under hoist

If these points are found in order but the hoist is still not working, the safety system has probably been activated, and the hoist must not be started or repaired by unqualified staff. Contact the nearest authorized service shop.

Do not start repairing the hoist until the main switch has been cut off.

Do not disconnect the safety system and do not operate the hoist after breakdown and prior to repair.

10.2 Trouble shooting chart

Symptoms	Reasons	Solutions
The motor does not work	Check the molten core is burned	Reset molten core
	Voltage is not correct	Supply power of correct voltage
	Fuse burning	Change fuse
	Motor is broken	Change motor
The motor works, but the platforms do not move	The motor rotates in the wrong direction	Change wiring of motor to change direction
	Oil level is too low	Add oil
	Oil leak	Check the oil hose
The motor works, but the platforms cannot lift the vehicle	The voltage to the motor is too low	Supply motor with correct voltage
	Pressure of relief valve is not right	Adjust the pressure of relief valve
	The hoist is overloaded	Check the weight of the vehicle
	The hydraulic pump is damaged	Replace the hydraulic pump
Lowering speed is slow	There is foreign substance in the lowering solenoid valve	Clean the lowering solenoid valve
	Lowering speed valve is turned too low	Turn the lowering speed valve up
Lifting speed is slow or oil spill	Oil and air are mixed	Change oil or eject air

11. Hydraulic oil data

Recommended Oil: Castrol Hyspin AWH 46

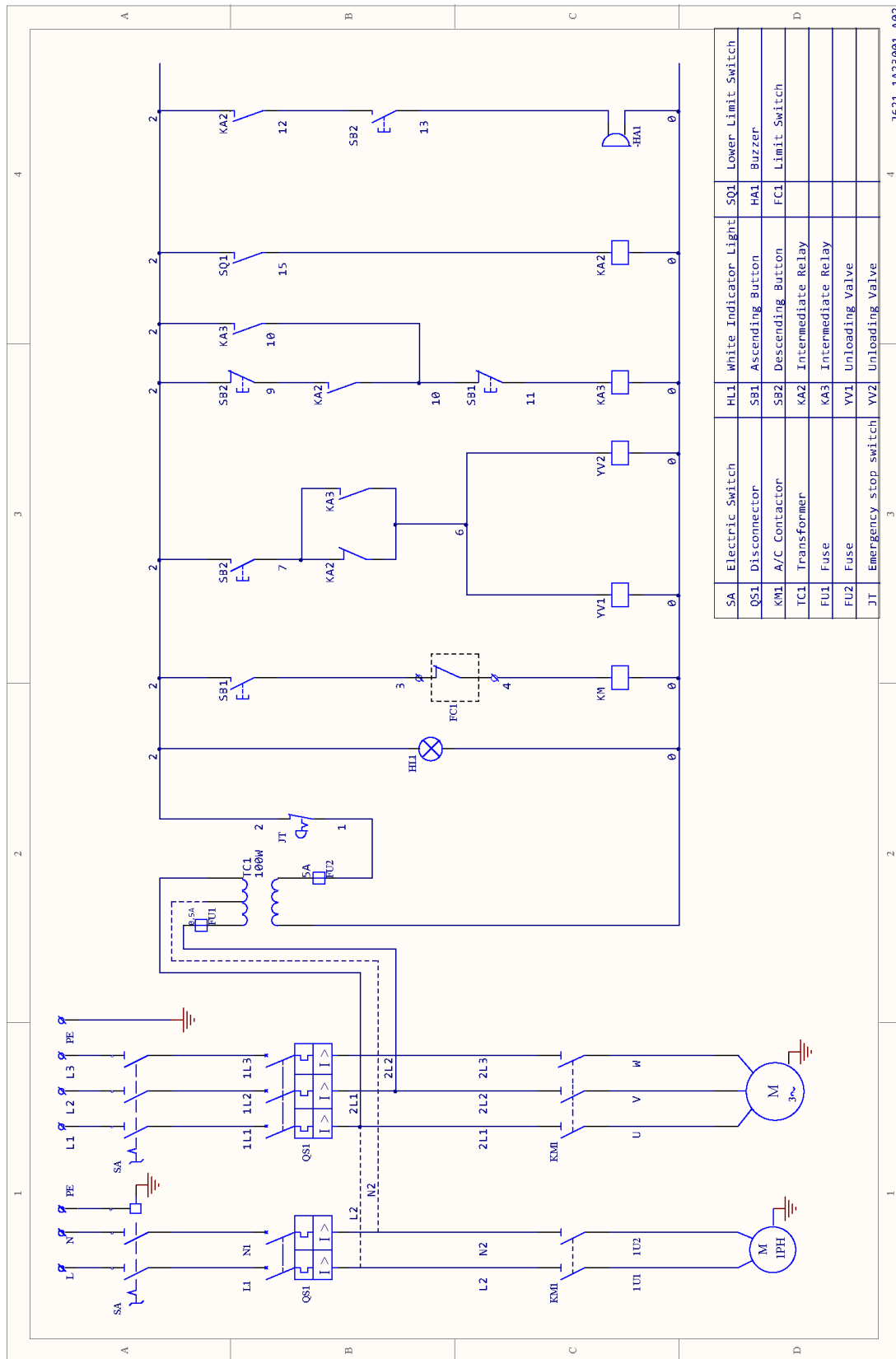
Hotter or colder climates may require 32 or 68, consult with your hoist technician

12. Service

12.1 Spare parts ordering

To ensure correct deliveries of spare parts orders, please always state the following information: part number, designation, quantity (in the spare parts list) and serial number and year of manufacturing (on the name plate) of the hoist.

13. Electrical diagram



Lifting:

Press the UP-button SB1, the motor will drive the gear pump to provide the oil and the cylinder will then push the hoist up.
 Loosen the button SB1, the hoist will stop going up.
 If you continue pressing the SB1 button, the hoist will raise to max height.

14. Hydraulic diagram

