

OPTION AND SPECIFICATION MANUAL

EP40N EP45N
EP50CN EP50N
EP50NH EP55NH
80V



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1 STANDARD CONFIGURATION

For a better understanding of the standard configuration and features, please follow the E-learning on our Academy at <https://logisnextacademy.com/my/>.

As a standard, the truck is supplied with:

4-wheel chassis, 80 volts, front wheel drive	Overhead guard that protects the operator from falling objects
AC pump motor 34 kW	Pneumatic solid tires
TruckTool setup and diagnostics	Load backrest
Seat Switch Timeout: All functions are disabled, the truck goes into the stop mode, parking brake is applied automatically	Full-suspension Grammer MSG65 vinyl seat with seat belt switch, backrest extension and armrest
Tiltable steering column	Rear mud flaps
3-valve hydraulic fingertip control mounted on an adjustable armrest	Preset economy or high-performance mode (ECO/PRO)
LED working lights (2 in the front, 1 in the rear)	Battery compartment side door
Battery rollers	Lift control
Automatic performance reduction based on lift height	Load weight indicator
Forward/Reverse drive direction selection switch on the armrest	

2 ENERGY CONSUMPTION, NOISE, VIBRATION, OPERATING TEMPERATURE AND IP RATING

2.1 Energy consumption

		EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Energy consumption according to EN 16796 (60 cycle)	kWh/h	10.2	10.6	11.0	11.2	-	-
Energy consumption according to EN 16796 (45 cycle)	kWh/h	-	-	-	-	7.8	8.2

2.2 Noise level

		EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
In work, LpA	dB A	88	88	88	88	88	88
Operation / Drive / Lift	dB A	94/85/28	94/85/28	94/85/28	94/85/28	94/85/28	94/85/28
Noise level, value at operator's ear (EN12053)	dB A	65	65	65	65	65	65

2.3 Vibration level

		EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Vibration level according to EN13059 2002 per seat (MSG65)	m/s ²	0.5	0.5	0.5	0.5	0.5	0.5

2.4 Operating temperature

		EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Truck operating temperature range	°C	-20...+40	-20...+40	-20...+40	-20...+40	-20...+40	-20...+40

2.5 Available IP ratings for components

COMPONENT	IP RATING
Display	IPx7
Armrest	IP66
Controllers	IP65
Pump motor	IP20
Steering motor	IP20
Traction motors	IP54

3 MAST

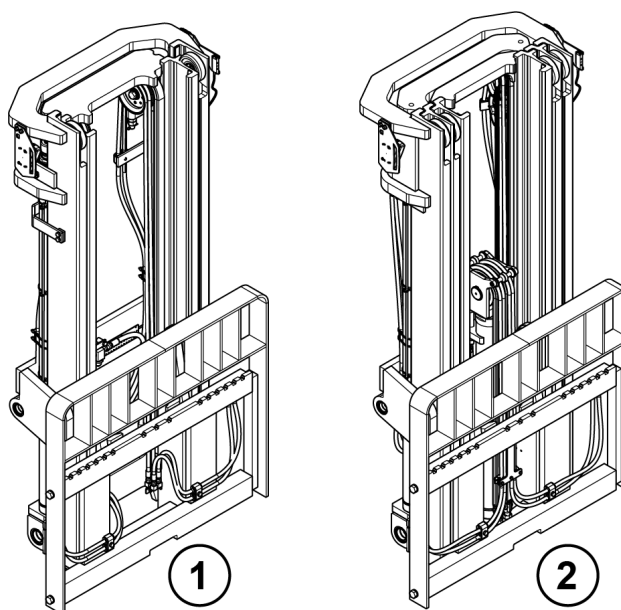


Figure 1: Masts

1. Simplex mast

2. Triplex mast

Mast availability

o	Standard equipment
•	Available option
—	Not available

Table 1: Mast availability chart

MAST TYPE	CODE	AVAILABILITY	HEIGHT [MM]
Simplex	2SP300	o	3000
	2SP330	o	3300
	2SP350	o	3500
	2SP370	o	3700
	2SP410	o	4000
	2SP450	o	4500
	2SP500	o	5000
	2SP550	o	5500
	2SP600	o	6000
Triplex	3FP370	o	3700
	3FP400	o	4000
	3FP430	o	4300
	3FP450	o	4500
	3FP480	o	4700
	3FP500	o	5100
	3FP550	o	5500
	3FP600	o	6000
	3FP650	o	6500
	3FP700	o	7000

For more details on the mast weight and height, see *APPENDIX A: Mast technical data*.

Mast detaching

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Loose mast	LOOSE/MAST	●	●	●	●	●	●
Customer required mast detachment	DETACH/M	●	●	●	●	●	●

LOOSE MAST	LOOSE/MAST
Option for ordering an individual mast.	
CUSTOMER REQUIRED MAST DETACHMENT	DETACH/M
Option to remove the mast for shipment in a standard container.	

4 FRAME

4.1 Chassis and battery exchange

For a better understanding of the battery exchange system, please follow the E-learning on our Academy at <https://logisnextacademy.com/my/>.

Option availability

o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Roller bed	BATT/ROLL	o	o	o	o	o	o
Battery sideway exchange without roller bed	BATT/ROLL/X	•	•	•	•	•	•
Battery tray for sideway exchange	SWE/TRY	•	•	•	•	•	•
Battery sideway exchange tool	SWE/TOOL	•	•	•	•	•	•
Battery sideway exchange with fork pockets	BATT/FORK	•	•	•	•	•	•
T-bar battery stand	T-PARK	•	•	•	•	•	•

Option descriptions

The truck can be equipped with a battery tray for the battery exchange. The battery sideway exchange tool is used in combination with the battery tray for secure battery handling during the battery exchange. The tool latches to the front bracket of the battery tray and enables the battery to be pulled out using a power pallet truck.

More information on the battery exchange is available in the Operations and Maintenance Manual, available on the DSS.

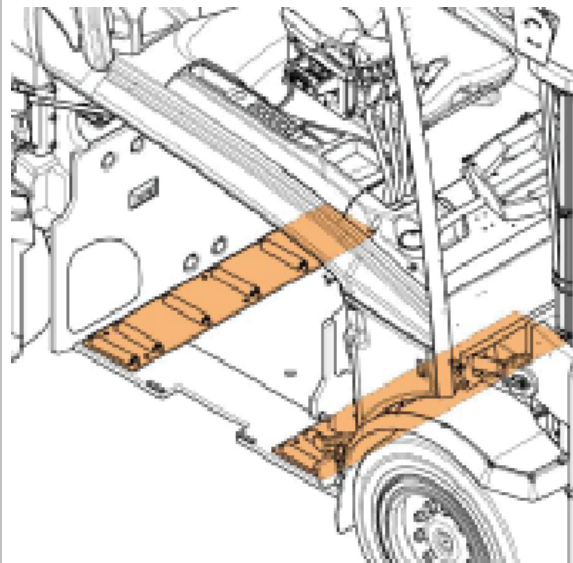
ROLLER BED, INTEGRATED TO CHASSIS

The battery box stands on a roller bed for sideway exchange. Includes a comfortable 'swing open' side door. The roll height from the floor is approximately 196 mm depending on the tire wear.

Please follow a video link for a demonstration:

<https://catliftdealer.com/training-materials/battery-access-and-charging-ep40-55cnh-click-more-languages>

BATT/ROLL



BATTERY SIDEWAY EXCHANGE WITHOUT ROLLER BED

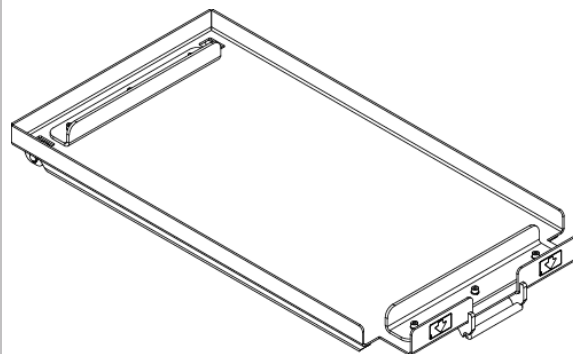
BATT/ROLL/X

The truck can be ordered without the standard battery roller bed.

BATTERY TRAY

SWE/TRY

The battery is placed on the battery tray. During the sideway exchange procedure the tray slides out of the battery compartment on the integrated roller bed when pulled from the front bracket.



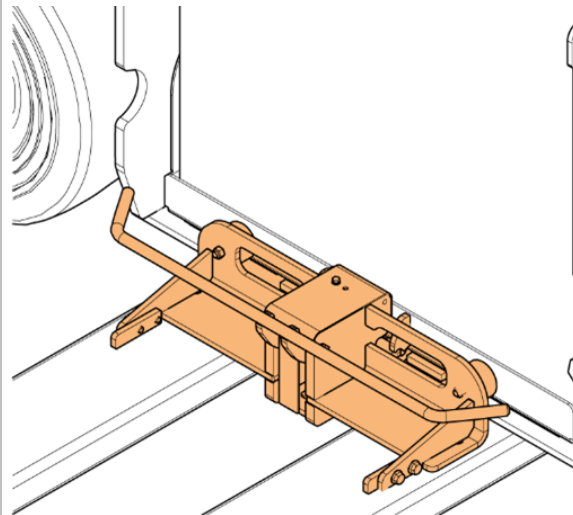
BATTERY SIDEWAY EXCHANGE TOOL

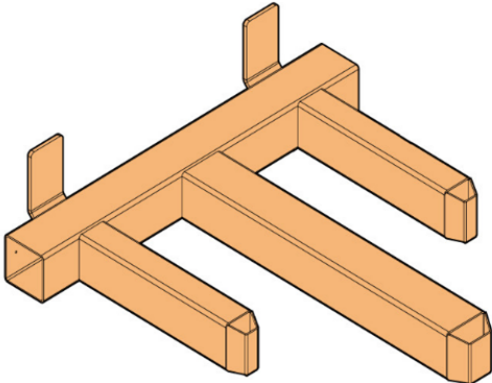
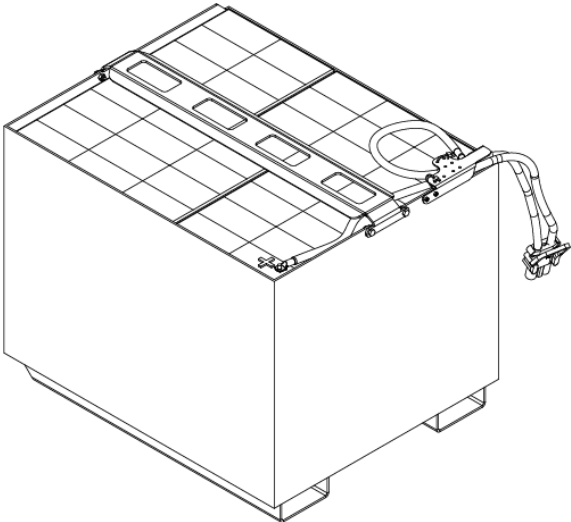
SWE/TOOL

Battery sideway exchange tool is installed on the forks of a power pallet truck. It is strongly recommended to use the battery sideway exchange tool in combination with SWE/TRY option for secure and safe battery handling. The exchange tool has an automatic locking and release lever for the battery tray to enable easy battery replacement.

The fork width of the pallet truck must be 540 mm and length of forks can be up to 1250 mm.

NOTE: The power pallet truck must have suitable capacity to handle truck batteries.



T-BAR BATTERY STAND	T-PARK
A secure floor stand for charging or servicing the replacement batteries. Recommendation to optimize battery exchange is to have one stand for each replacement battery and one extra stand for the battery when removed from the truck. Dimensions: 892 mm (L) x 980 mm (W) x 212 mm (H)	
BATTERY SIDEWAY EXCHANGE WITH FORK POCKETS	BATT/FORK
Battery box including fork pockets to change the battery using another lift truck.	

4.2 Overhead guard

Option availability

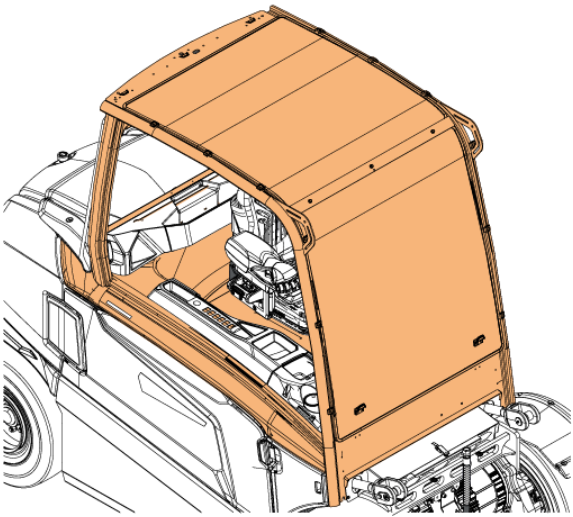
o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Low overhead guard ¹⁾	HG/LOW	•	•	•	•	•	•
Battery inspection hatch ²⁾	HG/BATT	•	•	•	•	•	•

¹⁾Not in combination with HG/BATT, SEAT/SLX, SEAT/CLX, STRB, RED/STRIPE, SWIVEL/PLT or BOTTLESPEC.

²⁾Not in combination with HG/LOW, CABIN/FELT, LUX/CABIN or LUX/CABIN/AC.

Option descriptions

LOW OVERHEAD GUARD	HG/LOW
Low overhead guard with a height of 2222 mm. The OHG is equipped with a scratch-resistant polycarbonate roof for added visibility. NOTE: The scratch-resistant polycarbonate roof for the HG/LOW does not include bars. The HG/LOW has passed the same safety tests as the default overhead guard. The following options are not available in combination with HG/LOW: • Air suspension seat MSG75 (SEAT/SLX, SEAT/CLX). • Amber strobe light above the overhead guard (STRB) • Red stripe safety light (RED/STRIPE) • Battery inspection hatch (HG/BATT) • Swivel plate (SWIVEL/PLT) • Raised operator compartment (BOTTLESPEC)	

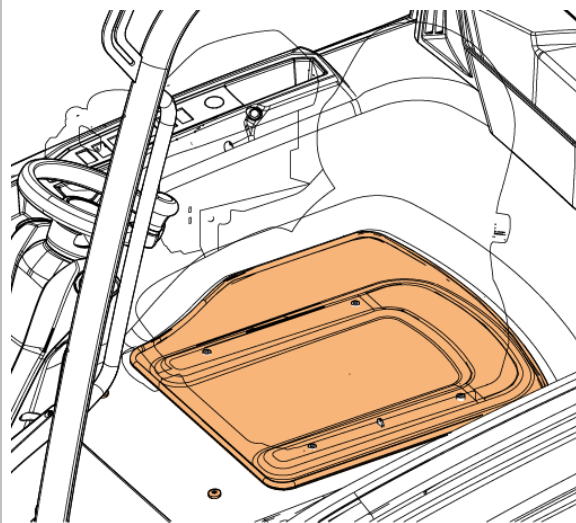
BATTERY INSPECTION HATCH

A hatch located under the operator's seat for more convenient daily checks and maintenance of lead-acid batteries. Battery electrolyte levels can be checked through the hatch without removing the battery from the lift truck.

The battery inspection hatch is part of a welded structure that makes the hatch part of the overhead guard.

The following options are not available in combination with HG/BATT:

- Low overhead guard (HG/LOW)
- Felt cover for battery hood (CABIN/FELT)
- Deluxe cabin (LUX/CABIN)
- Deluxe cabin with air conditioner (LUX/CABIN/AC)

HG/BATT

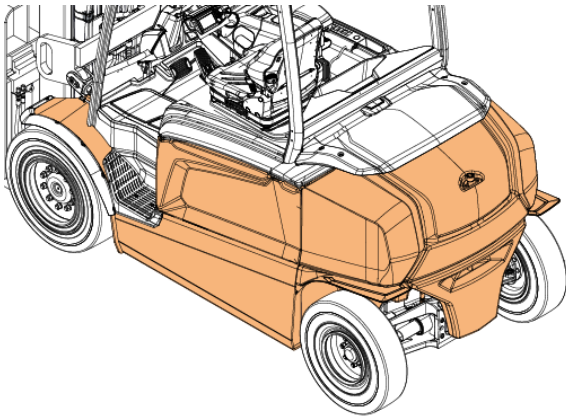
4.3 Other

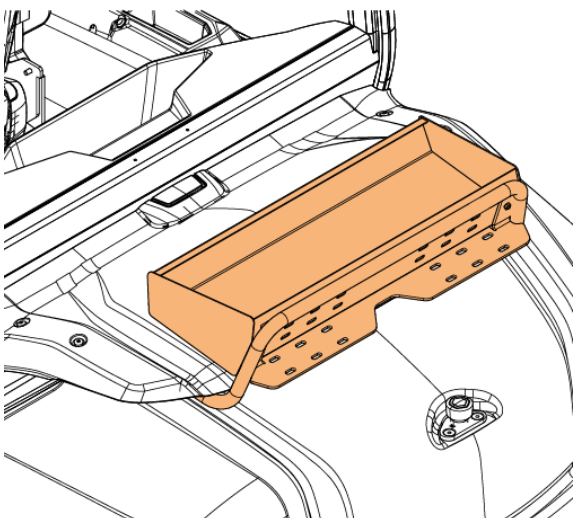
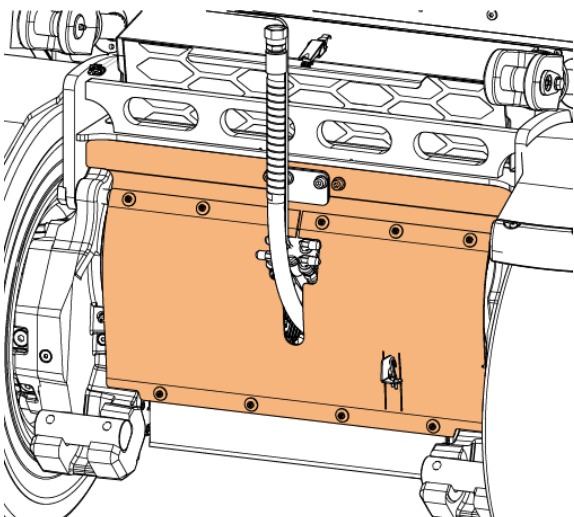
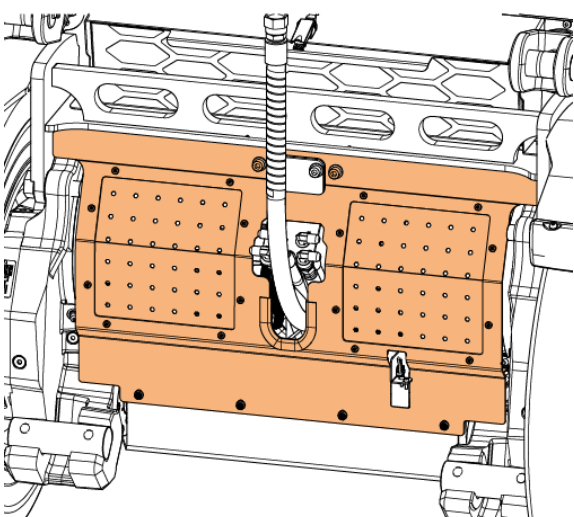
Option availability

o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Special (RAL) color	SP/CLR FR	•	•	•	•	•	•
Toolbox	TOOLBOX	•	•	•	•	•	•
Front cover, rubber	F/RUB/COV	•	•	•	•	•	•
Front cover, metal	F/MET/COV	•	•	•	•	•	•

Option descriptions

SPECIAL (RAL) COLOR FOR THE FRAME AND COUNTERWEIGHT	SP/CLR FR
The frame can be ordered in a special RAL color. When placing the order, include the RAL color code. The option includes a special color for the lift truck frame and counterweight with a black overhead guard. RAL classic colors: https://www.ralcolorchart.com Other color charts and systems are available only as CSM. Special colors are accomplished as high gloss (80%+) level colors. Semi-gloss (50%) and low gloss (20%) level colors can be ordered as CSM. For the available RAL colors, see <i>APPENDIX B: RAL color chart</i>.	

TOOLBOX	TOOLBOX
A toolbox mounted on the top of the counterweight.	 A technical line drawing of a lift truck's counterweight. An orange toolbox is mounted on top of the counterweight structure. The toolbox has a handle on its side and several mounting points. A cable or hose is visible running along the side of the counterweight.
FRONT COVER, RUBBER	F/RUB/COVER
A protective rubber cover that is mounted to the front of the lift truck. This reduces the amount of dust and debris that enters the underside of the truck in outdoor use.	 A technical line drawing of the front of a lift truck. An orange rubber cover is mounted to the front of the truck, covering the lower section. The cover is secured with several bolts. A cable or hose is visible running through the center of the cover.
FRONT COVER, METAL	F/MET/COVER
A protective metal mesh that is mounted to the front of the lift truck. This reduces the amount of dust and debris that enters the underside of the truck in outdoor use.	 A technical line drawing of the front of a lift truck, similar to the previous one. An orange metal mesh cover is mounted to the front of the truck, covering the lower section. The mesh is secured with several bolts. A cable or hose is visible running through the center of the mesh.

5 CABIN

5.1 Cabin

Option availability

o	Standard equipment
•	Available option
—	Not available

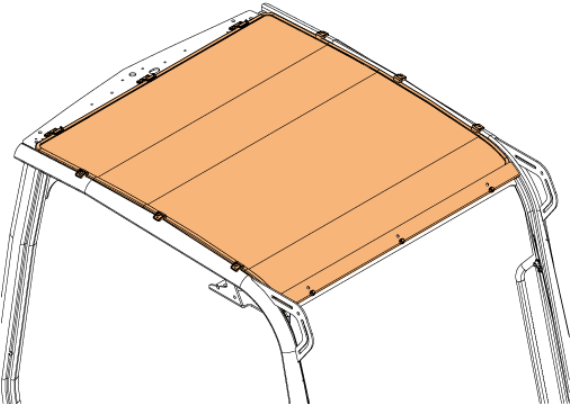
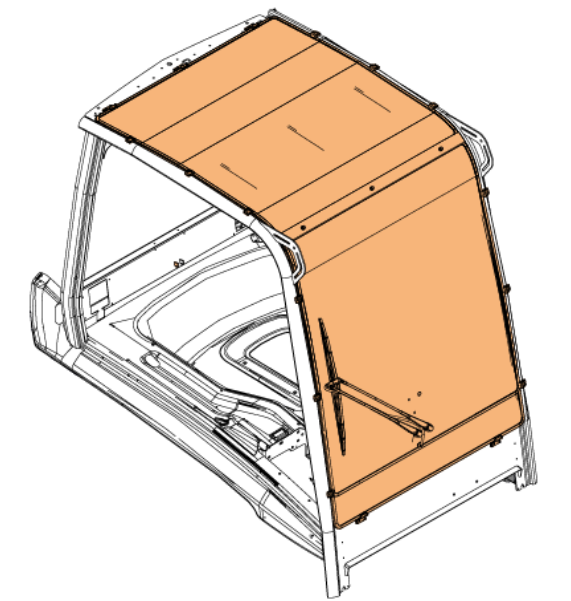
OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Plexi roof	HG/COV	•	•	•	•	•	•
Panel cabin front + top ¹⁾	FR+TP	•	•	•	•	•	•
Panel cabin rear screen	REAR	•	•	•	•	•	•
Panel cabin steel doors	STL/D	•	•	•	•	•	•
PVC doors	PVC/D	•	•	•	•	•	•
Summer doors	SUMMER/D	•	•	•	•	•	•
Interior package	INT/PACKAGE	•	•	•	•	•	•
Cabin heater	HEAT	•	•	•	•	•	•
Air conditioner	AIRCO	•	•	•	•	•	•
Felt cover for battery hood ²⁾	CABIN/FELT	•	•	•	•	•	•
Deluxe cabin ^{1) 2)}	LUX/CABIN	•	•	•	•	•	•
Deluxe cabin with air conditioner ^{1) 2)}	LUX/CABIN/AC	•	•	•	•	•	•
Raised operator compartment ³⁾	BOTTLESPEC	•	•	•	•	•	•

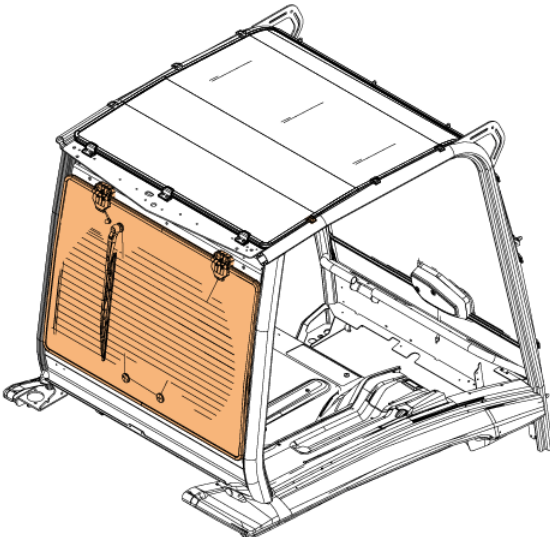
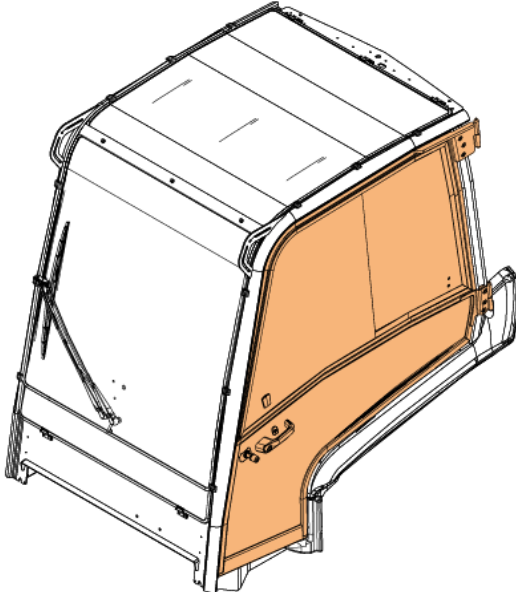
¹⁾Requires the power supply for external equipment with front cable (F/DC240W).

²⁾Not in combination with HG/BATT.

³⁾Not in combination with FORK/H, FORK/HMC, FORK/H2 or HG/LOW.

Option descriptions

PLEXI ROOF	HG/COV
Polycarbonate roof cover on the basic overhead guard that is fixed in place with clamps.	
PANEL CABIN FRONT + TOP	FR+TP
The front screen is 6 mm toughened glass fitted with clamps on the overhead guard. It follows the exact shape of the OHG, so there is no loss of forward visibility. The front screen is equipped with a wiper with washer function. The wiper switch has three positions: ON, OFF and washer fluid spray. The roof is equipped with a polycarbonate roof cover. NOTE: The overall height of the truck is 10 mm higher due to the battery slot cover on the roof. NOTE: The backward tilt of the mast is limited as follows: • 6 degrees with Simplex mast when combined with BOTTLESPEC • 6 degrees with Triplex 3700-4000 mm • 5 degrees when any Triplex mast when combined with BOTTLESPEC NOTE: The front screen requires a power supply for external equipment in the front of the truck. Select this option together with F/DC240W.	

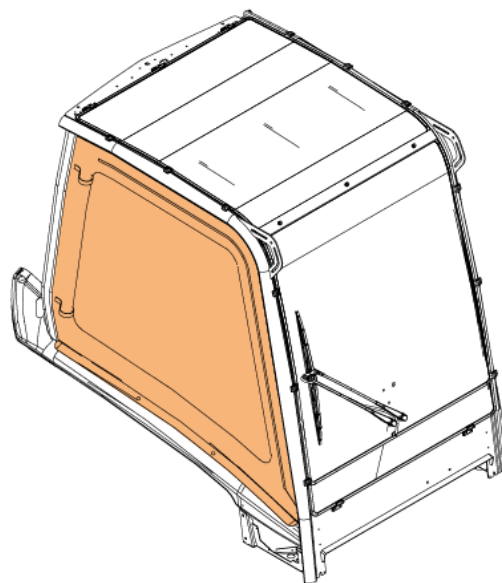
PANEL CABIN REAR SCREEN	REAR
The rear window 6 mm tempered glass. The rear window is equipped with a 1-speed wiper with washer functions. Additionally, the rear window includes a heating element. Switches to control the wiper and heater are located on the side control panel. The rear window can be opened for ventilation or as an emergency exit. Add-on to option FR+TP.	
PANEL CABIN STEEL DOORS	STL/D
This option adds a steel door with sliding windows to the left hand side and a sliding windows to right hand side of the cabin. The inside of the door has a cover lining which adds to temperature and sound isolation. Add-on to options FR+TP and REAR.	

PVC DOORS

This option adds PVC door to the left side and PVC side window to the right side of the cabin. Transparent parts optimize visibility to the sides. Zippers on the front and rear side allow easy access for the operator, and magnets secure a tight fit to the chassis. The PVC door and window can be rolled to the back or completely removed.

Add-on to options FR+TP and REAR.

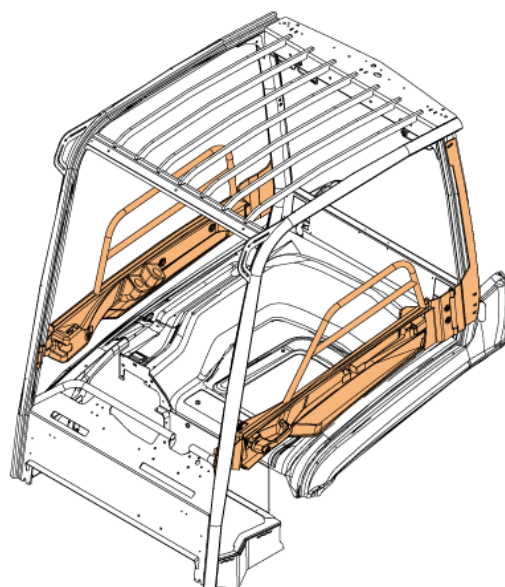
PVC/D

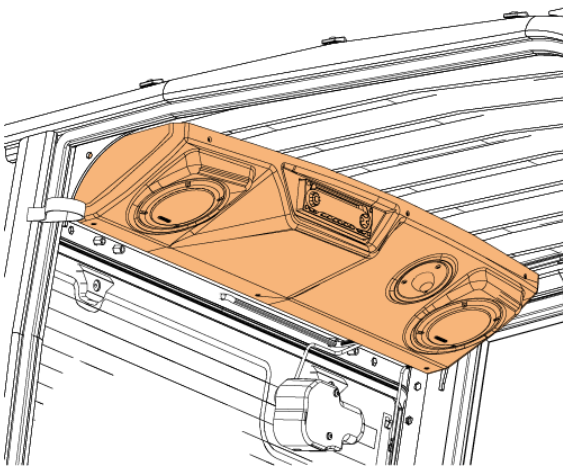
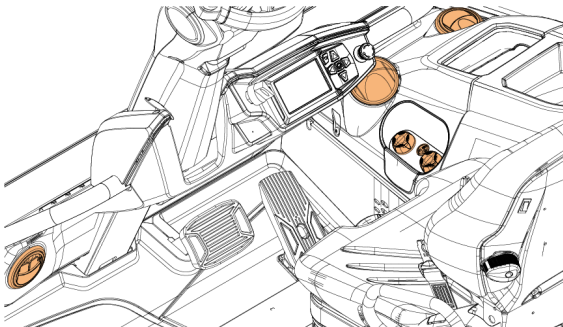
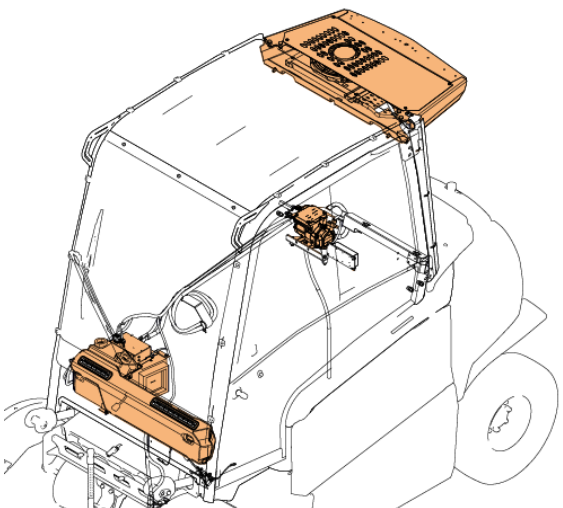


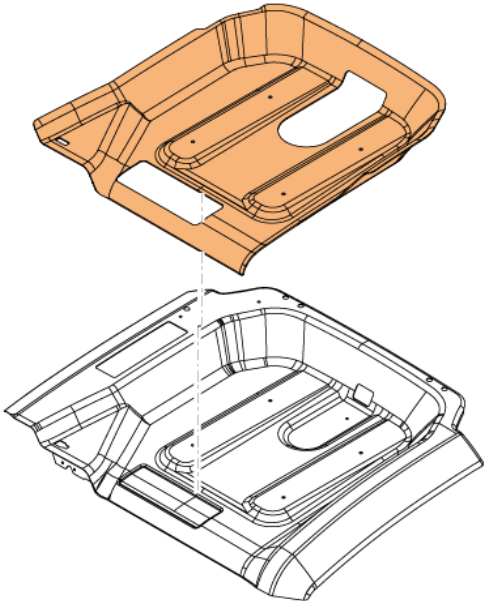
SUMMER DOORS

Protection bars on the cabin side, left side is working as a door.

SUMMER/D



INTERIOR PACKAGE	INT/PACKAGE
The interior package includes: • Reading light • Roof liner • Radio and speakers Available in combination with FR+TP and REAR.	
CABIN HEATER	HEAT
2 kW heater is integrated into the cabin. It provides several adjustable air outlets to defog the front screen and to warm the feet of the truck operator. This option includes an adjustable ventilator switch and heater switch with indicator light within easy reach. The air intake is from the outside of the truck.	
AIR CONDITIONER	AIRCO
4.6 kW air conditioning unit and a heater are integrated into the cabin. They provide several adjustable air outlets on the dashboard and legroom to cool or heat the cabin. This option includes an adjustable ventilator switch, heater and AC compressor switch with indicator light within easy reach. The air intake is from the outside of the truck. The outside AC condenser unit is installed to the rear of the overhead guard.	

FELT COVER FOR THE BATTERY HOOD	CABIN/FELT
Felt cover that is installed on the battery hood under the operator's seat. NOTE: Not available in combination with HG/BATT.	
DELUXE CABIN	LUX/CABIN
Deluxe cabin includes all screens and doors within one option package. To improve the comfort and ergonomics of the operator, this package adds premium interior lining and an integrated heater unit with adjustable air outlets and fresh air intake to the cabin. The deluxe cabin package includes: • Front screen with wipers • Polycarbonate roof cover • Rear screen with heating and wipers • Steel doors with lining • Interior package with reading light, radio and speakers • Felt cover for the battery hood • Integrated 2 kW heater and air filters • Sun visor If you want to add the air conditioner unit to the deluxe cabin in addition to the heater, select option LUX/CABIN/AC. NOTE: The front screen requires a power supply for external equipment in the front of the truck. Select this option together with F/DC240W. NOTE: Not available in combination with HG/BATT.	
DELUXE CABIN WITH AIR CONDITIONER	LUX/CABIN/AC
This option package includes all the options of LUX/CABIN and adds the air conditioner unit. NOTE: Not available in combination with HG/BATT.	

RAISED OPERATOR COMPARTMENT

A raised operator compartment for applications such as bottling and recycling. The operator compartment is raised 300 mm higher than the standard operator compartment.

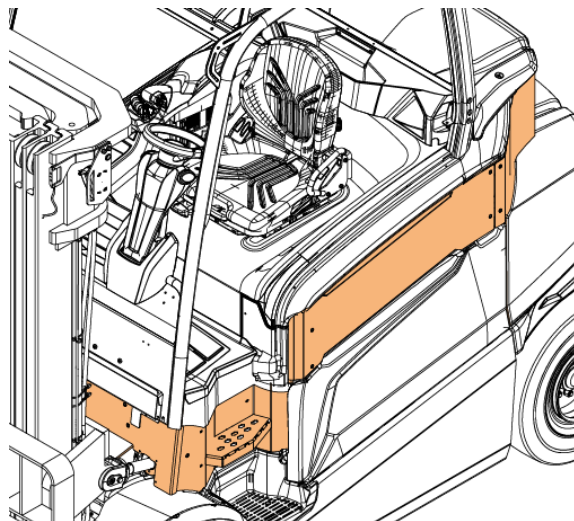
Selecting BOTTLESPEC affects the available backward tilt angle in certain configurations:

- With front screen and Simplex mast, the backward tilt is limited to 6°.
- With front screen and Triplex mast, the backward tilt is limited to 5°.
- With 5,500 mm Triplex mast, the backward tilt is limited to 6°

Not available in combination with the following options:

- Low overhead guard (HG/LOW)
- Automatic tilt centering (FORK/H, FORK/H2)

BOTTLESPEC



5.2 Seat

Option availability

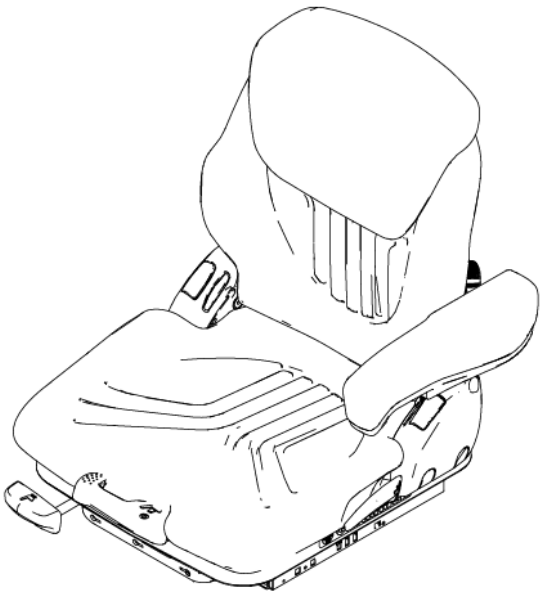
o	Standard equipment
•	Available option
—	Not available

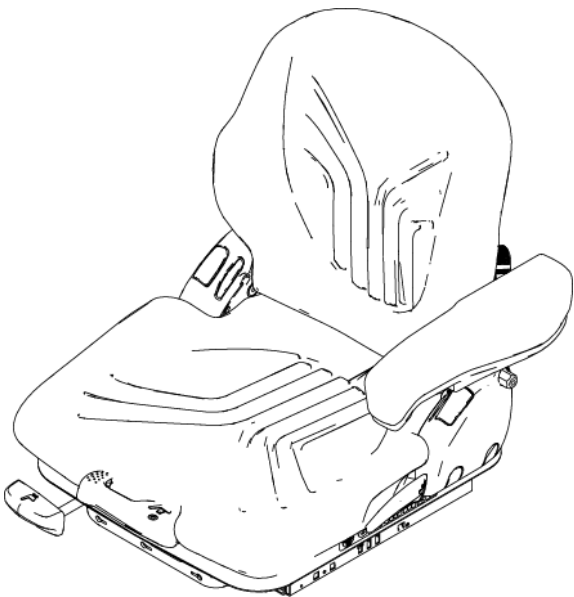
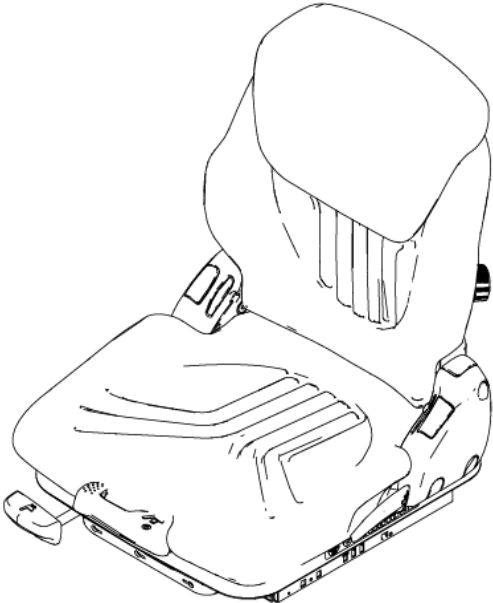
OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
MSG65 vinyl seat	SEAT/LX	o	o	o	o	o	o
MSG65 cloth seat	SEAT/C	•	•	•	•	•	•
MSG65 vinyl seat with heater	S/HEAT/LX	•	•	•	•	•	•
MSG65 cloth seat with heater	S/HEAT/C	•	•	•	•	•	•
Left armrest for MSG65 ¹⁾	ARMRST/LX	o	o	o	o	o	o
Backrest extension for MSG65 vinyl seat	BR/LX	o	o	o	o	o	o
Backrest extension for MSG65 cloth seat	BR/C	o	o	o	o	o	o
MSG75 vinyl seat	SEAT/SLX	•	•	•	•	•	•
MSG75 cloth seat	SEAT/CLX	•	•	•	•	•	•
MSG75 vinyl seat with heater	S/HEAT/SLX	•	•	•	•	•	•
MSG75 cloth seat with heater	S/HEAT/CLX	•	•	•	•	•	•
Swivel plate ²⁾	SWIVEL/PLT	•	•	•	•	•	•

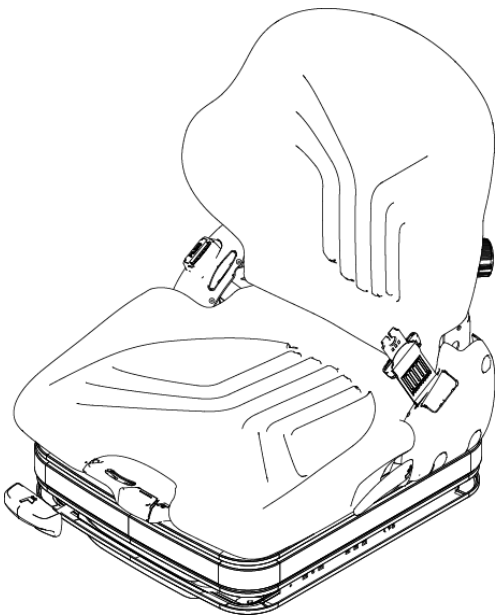
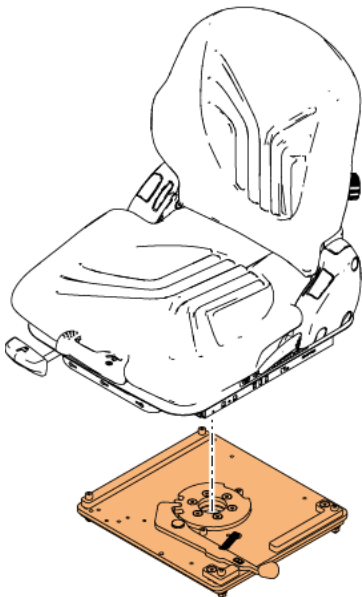
¹⁾Not in combination with MINI/STEER.

²⁾Not in combination with HG/LOW, STL/D, MINI/STEER or ARMRST/LX.

Option descriptions

MSG65 VINYL SEAT	SEAT/LX
Standard operator's seat. • Vinyl upholstery. • Mechanical suspension. • Suspension travel 60 mm. • Mechanical weight adjustment range 45–170 kg. • Backrest angle adjustment range -5° to $+30^{\circ}$ in steps of 2.5°. NOTE: When the seat is in the rear position, the tilt angle adjustability is limited. • Ergonomically shaped seat and back cushions for optimal lateral support. • Dual sensitive retractable seat belt with maximum freedom of movement while still ensuring that the driver is safely restrained in the seat. • Seat belt switch. • Left armrest • Backrest extension	
MSG65 CLOTH SEAT	SEAT/C
MSG65 full suspension seat with cloth upholstery.	
MSG65 VINYL SEAT WITH HEATER	S/HEAT/LX
MSG65 full suspension seat with vinyl upholstery and heater.	
MSG65 CLOTH SEAT WITH HEATER	S/HEAT/C
MSG65 full suspension seat with cloth upholstery and heater.	

ARMREST FOR MSG65	
Left armrest for MSG65 full suspension seat.	
NOTE: MSG65 includes the left armrest by default.	
NOTE: Not available in combination with MINI/STEER.	
	
ARMRST/LX	
BACKREST EXTENSION FOR MSG65 VINYL SEAT	
Backrest extension for MSG65 full suspension vinyl seat.	
NOTE: MSG65 includes the backrest extension by default.	
	
BR/LX	
BACKREST EXTENSION FOR MSG65 CLOTH SEAT	
Backrest extension for MSG65 full suspension vinyl seat.	
NOTE: MSG65 includes the backrest extension by default.	
BR/C	

MSG75 VINYL SEAT	SEAT/SLX
Optional operator's seat. Additional features compared to MSG65 seat: • Air suspension. • Suspension travel 80 mm. • Easy-to-use electro-pneumatic weight adjustment.	
MSG75 CLOTH SEAT	SEAT/CLX
MSG75 air suspension seat with cloth upholstery.	
MSG75 VINYL SEAT WITH HEATER	S/HEAT/SLX
MSG75 air suspension seat with vinyl upholstery and heater.	
MSG75 CLOTH SEAT WITH HEATER	S/HEAT/CLX
MSG75 air suspension seat with cloth upholstery and heater.	
SWIVEL PLATE	SWIVEL/PLT
The swivel plate enables the seat to be rotated $\pm 20^\circ$. Not available in combination with the following options: • Low overhead guard (HG/LOW) • Steel doors (STL/D) • Palm steering (MINI/STEER) • Left armrest (ARMRST/LX) Please follow a video link for a demonstration: https://catliftdealer.com/training-materials/swivel-seat-ep40-55cnh-click-more-languages	

5.3 Accessories

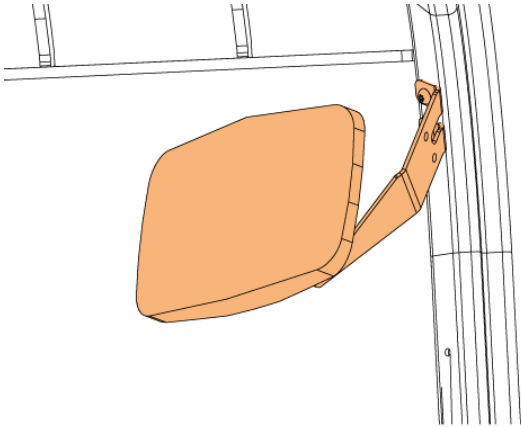
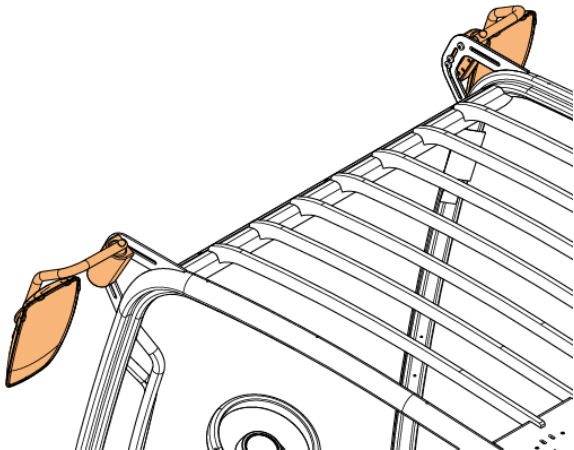
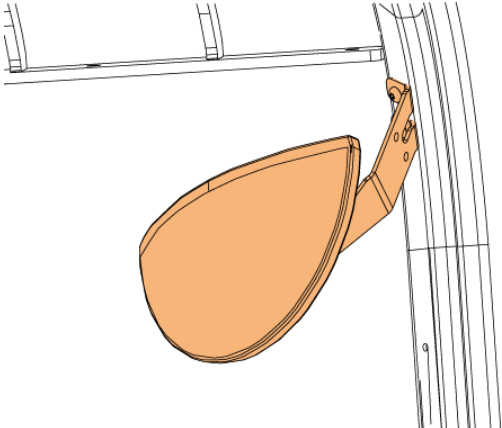
Option availability

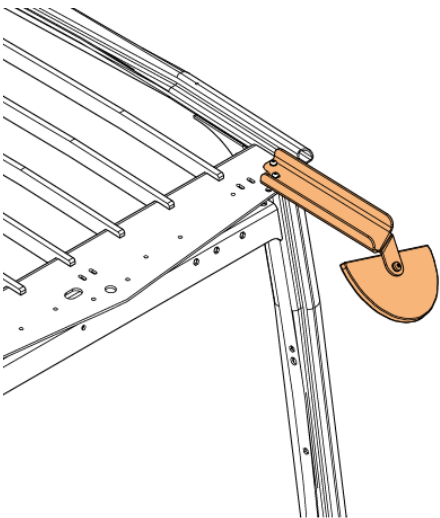
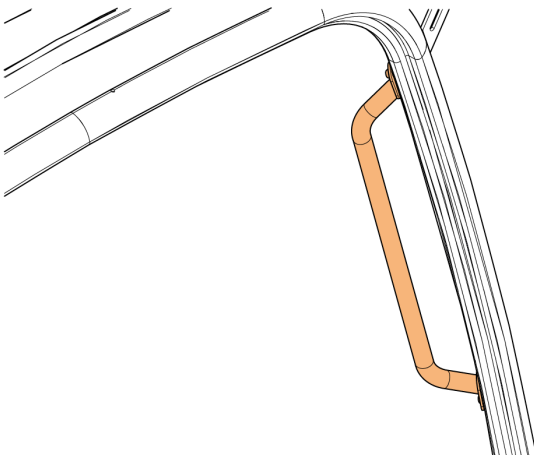
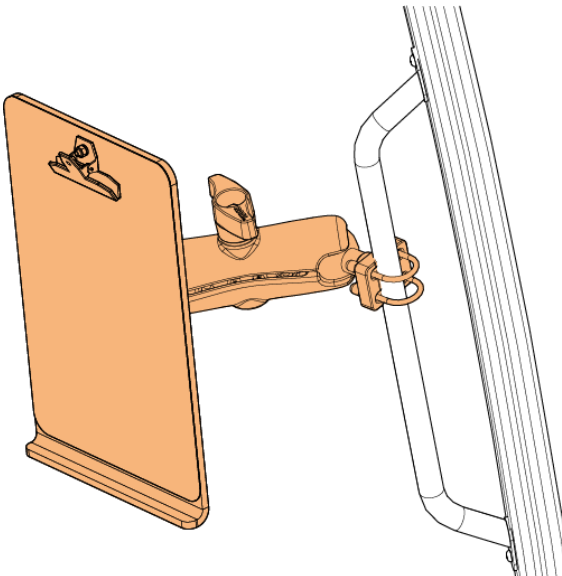
o	Standard equipment
•	Available option
—	Not available

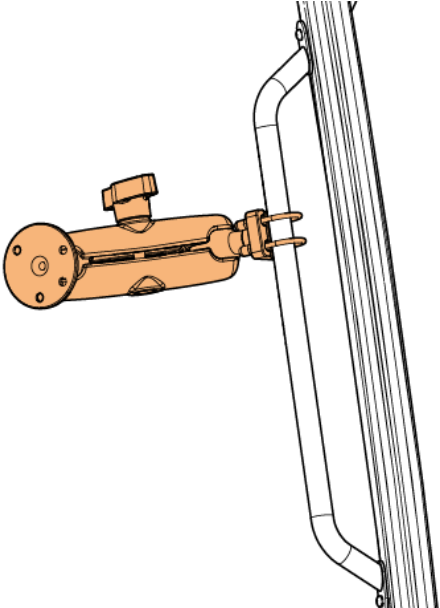
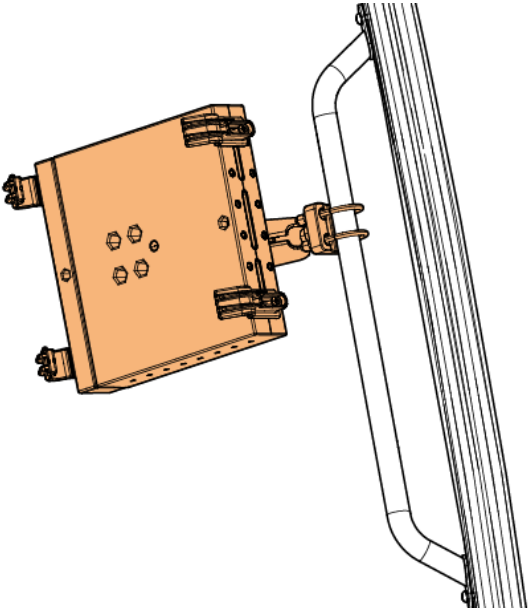
OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Rear view mirror, standard	RVM	•	•	•	•	•	•
Rear view mirrors, outside	RVM/O	•	•	•	•	•	•
Rear view mirror, wide	WVM	•	•	•	•	•	•
Rear dead angle mirror	BS/M	•	•	•	•	•	•
Accessory rack	BAR	•	•	•	•	•	•
List bracket A4 ¹⁾	LBA4	•	•	•	•	•	•
RAM mount dummy, D-series ¹⁾	RM/DUM	•	•	•	•	•	•
RAM mount computer holder ¹⁾	RM/COM	•	•	•	•	•	•
RAM mount scanner holder ¹⁾	RM/SCAN	•	•	•	•	•	•
Fire extinguisher	P/EXT	•	•	•	•	•	•
Sun visor	SUN VISOR	•	•	•	•	•	•
Cabin fan	HG/FAN	•	•	•	•	•	•
Backup handle with horn button	BHORN	•	•	•	•	•	•
Camera and screen	FR/CAM/LCD	•	•	•	•	•	•

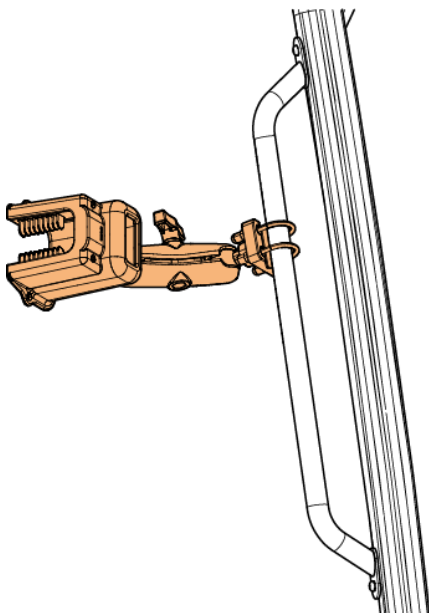
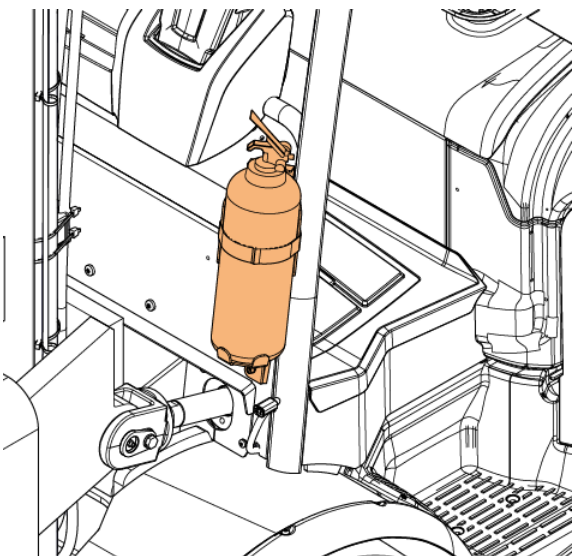
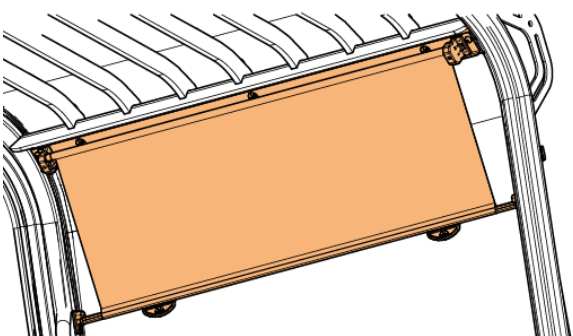
¹⁾Requires the option BAR.

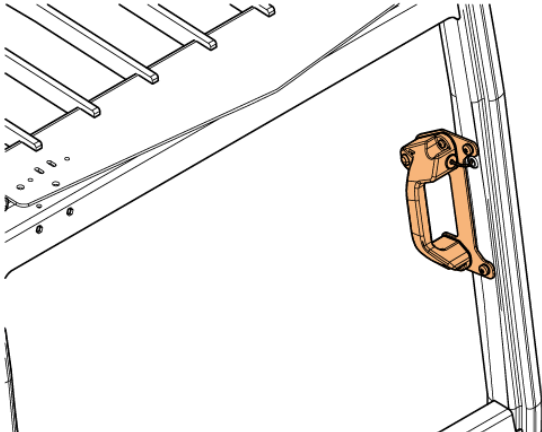
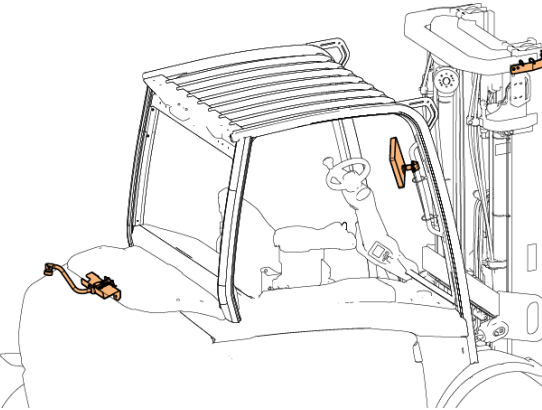
Option descriptions

REAR VIEW MIRROR, STANDARD The parabolic rear view mirror gives the truck operator a better view to the area on the right-hand side of the truck without having to turn their head. The rear view mirror is delivered with an extra mounting bracket.	RVM 
REAR VIEW MIRRORS, OUTSIDE External rear view mirrors on either side of the overhead guard give the truck operator a better view to the area behind the truck.	RVM/O 
REAR VIEW MIRROR, WIDE Wide rear view mirror gives the truck operator a panoramic view to the area behind the truck, increasing the safety of the truck operator and people working around the truck.	WVM 

REAR DEAD ANGLE MIRROR	BS/M
The parabolic dead angle mirror gives the truck operator a view of the area surrounding the counterweight. The mirror is installed on the rear of the overhead guard.	
ACCESSORY RACK	BAR
Adds an extra mounting bar which gives the possibility to add additional accessories to the operator compartment.	
LIST BRACKET A4	LBA4
For holding A4 and A5 sized documents for reading and writing. NOTE: Requires the accessory rack (BAR).	

RAM MOUNT DUMMY, D-SERIES	RM/DUM
Adjustable RAM mounting for customer electronics or other devices. Useful for customizing different types of holders or equipment installations and for allowing the operator to adjust RAM arm for better reach. NOTE: Requires the accessory rack (BAR).	
RAM MOUNT COMPUTER HOLDER	RM/COM
A computer holder that can be mounted to the accessory rack. Compatible with 10" to 16" laptops. NOTE: Requires the accessory rack (BAR).	

RAM MOUNT SCANNER RACK	RM/SCAN
A barcode scanner holder that can be mounted to the accessory rack. NOTE: Requires the accessory rack (BAR).	
FIRE EXTINGUISHER	P/EXT
A 2 kg handheld fire extinguisher that fulfils most cases where additional required fire safety is mandatory.	
SUN VISOR	SUN VISOR
An adjustable sun visor that shades the eyes of the truck operator from the sunlight and protects them from UV radiation. Available in combination with FR+TP. Included in LUX/CABIN.	

CABIN FAN	HG/FAN
A cooling fan installed into the cabin of the truck.	
BACKUP HANDLE WITH HORN BUTTON	BHORN
A handle installed on the overhead guard behind the operator's seat. The handle improves the operator ergonomics while reversing the truck. The handle includes an additional horn button to improve driving safety. NOTE: FC armrest, dual joystick armrest and manual control levers include a horn button by default.	
CAMERA AND SCREEN	FR/CAM/LCD
This option includes two cameras, one reverse and one mast camera. The mast camera is mounted on the right mast beam close to working lights. The reverse camera is installed on a foldable camera arm to prevent contact with possible obstacles. Specifications: • Display size: 10 inches • Display resolution: 1280 x 800 full color • Display housing: IP67 • Camera resolution: 1.3 M pixels • Camera view angle: 150° mast, 180° reverse • Camera housing: IP69K	

6 DRIVING AND STEERING

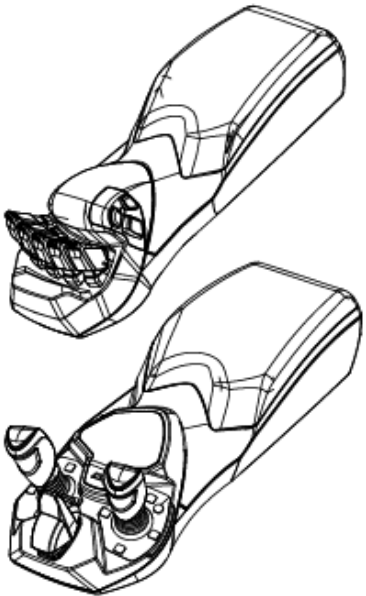
Option availability

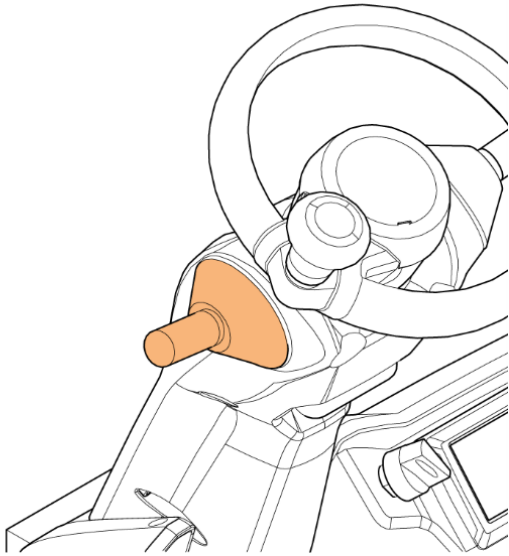
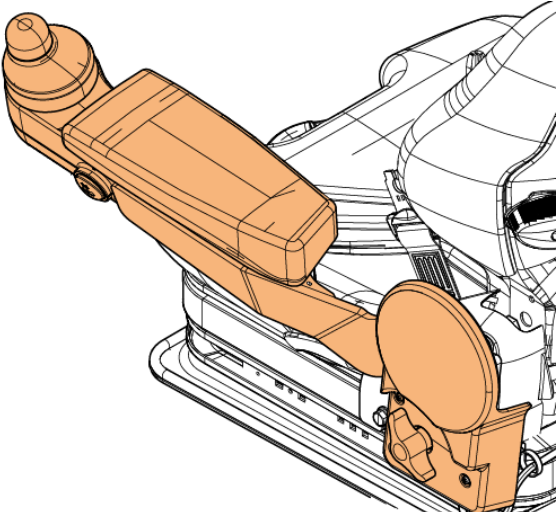
o	Standard equipment
•	Available option
—	Not available

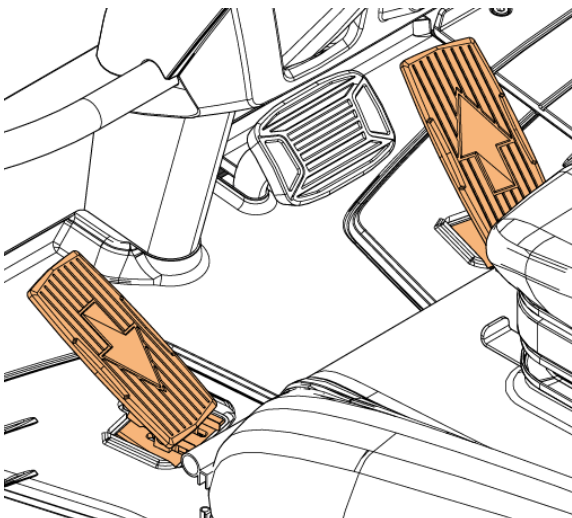
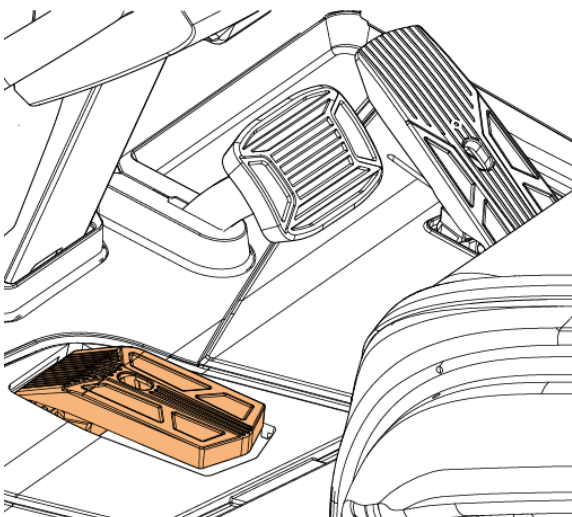
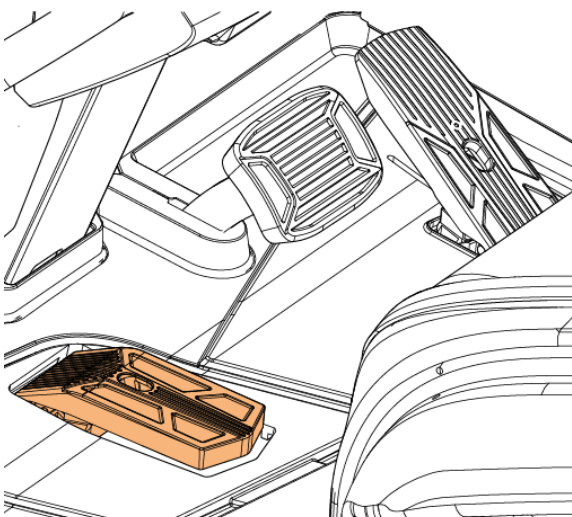
OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Armrest direction control	ARMDC	o	o	o	o	o	o
Forward-Neutral-Reverse (FNR) steering column lever	FNR	•	•	•	•	•	•
Palm steering wheel ¹⁾	MINI/STEER	•	•	•	•	•	•
Double pedal system	DOUBLE/EP	•	•	•	•	•	•
Operator presence pedal	OP/P	•	•	•	•	•	•
Electronic differential lock	OP/P/DIFF	•	•	•	•	•	•
Smart backup alarm	SMART	•	•	•	•	•	•

¹⁾Not in combination with ARMST/LX.

Option descriptions

ARMREST DIRECTION CONTROL	ARMDC
Forward and backward operating direction selection switch on the armrest. NOTE: If DOUBLE/EP is selected, the armrest does not have direction control. In this case the operating direction is selected using the pedals. Please follow a video link for a demonstration: https://catliftdealer.com/training-materials/armrest-and-hydraulic-control-ep40-55cnh-click-more-languages	

FORWARD-NEUTRAL-REVERSE (FNR) STEERING COLUMN LEVER	FNR
Forward and backward operating direction selection switch on the steering column. NOTE: This option is a standard feature for trucks with manual control levers (MC) and optional for trucks with fingertip control (FC) or dual joystick armrest.	 A line drawing of a steering column with a steering wheel. A lever is mounted on the left side of the column, highlighted in orange. The lever has a cylindrical end and a rectangular base.
PALM STEERING WHEEL	MINI/STEER
Palm steering option which is integrated to the left hand armrest providing the best possible operator comfort and ergonomics. The conventional steering wheel on the steering column is replaced with a safety bar and light switches.	 A line drawing of a truck's steering area. The steering wheel is replaced by a large, rectangular, orange-colored armrest. A safety bar is visible on the right side of the armrest. The armrest is mounted on a base with various controls and switches.

DOUBLE PEDAL SYSTEM	DOUBLE/EP
The double pedal system provides mechanically connected forward and reverse accelerator pedals for smooth truck operation in fast paced back-and-forth shuttle applications. While the accelerator pedals are used both for braking and fast travel direction changes, a separate brake pedal is placed in the middle. Releasing all pedals stops the truck safely and engages the automatic parking brake.	
OPERATOR PRESENCE PEDAL	OP/P
The operator presence pedal must be pressed down to operate the truck. This ensures that the operator's feet are always inside the protective area of the truck when driving. The pedal is very sensitive: the weight of the operator's foot resting on the pedal is enough to activate it. NOTE: OP/P can't be ordered together with OP/P/DIFF because they utilize the same optional pedal.	
ELECTRONIC DIFFERENTIAL LOCK	OP/P/DIFF
The electronic differential lock is activated by an additional pedal. Utilizing the modern dual drive motor control, the electronic differential lock provides more traction on harsh or slippery surfaces. When the electronic differential lock is activated, both traction motors are electronically fixed to provide the same amount of traction regardless of the steering angle. NOTE: OP/P/DIFF can't be ordered together with OP/P because they utilize the same optional pedal.	

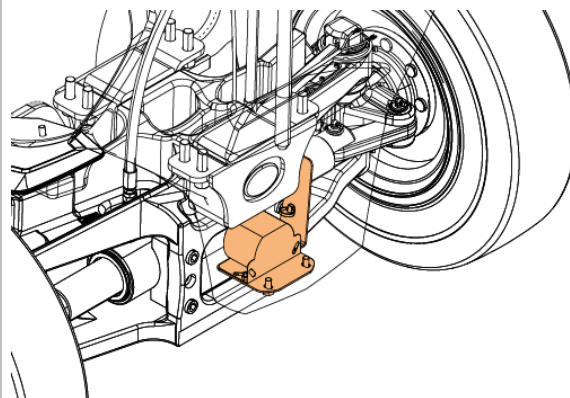
SMART BACKUP ALARM

The smart backup alarm warns people around the truck when the truck is reversing. The sound level of the alarm is adjusted automatically based on the surrounding noise.

Specifications:

- Sound level 82–102 dB
- Nominal voltage 36–80 V
- Housing: IP66

SMART



7 LIGHTING

Option availability

o	Standard equipment
•	Available option
—	Not available

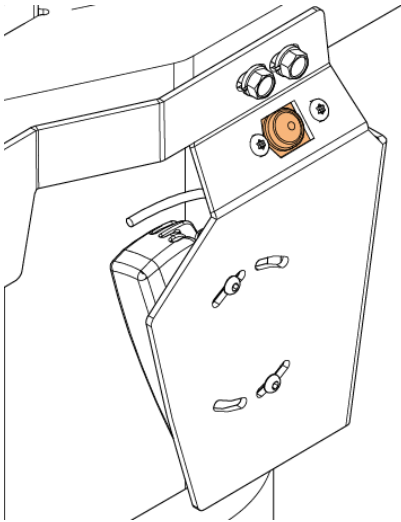
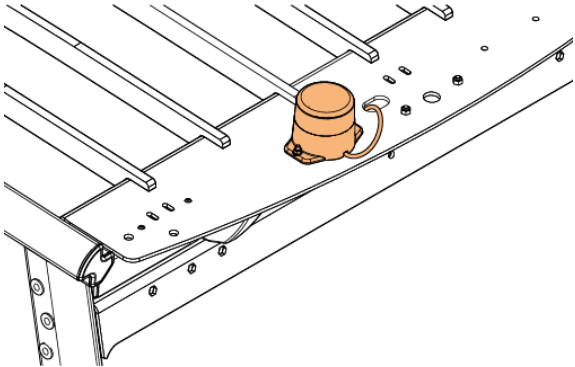
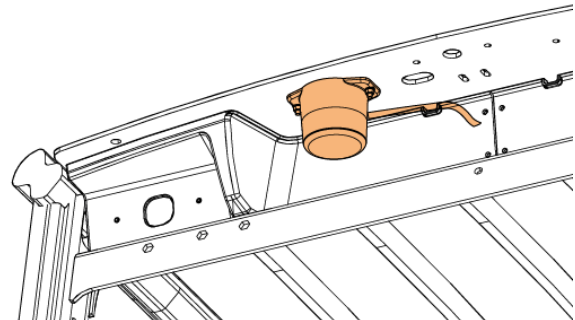
OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Auto light switch ¹⁾	AUTO/LIGHT	•	•	•	•	•	•
Amber strobe ²⁾	STRB	•	•	•	•	•	•
Amber strobe below the overhead guard	STRB/L	•	•	•	•	•	•
Blue point light, front ³⁾	BLUESPOT/F	•	•	•	•	•	•
Blue point light, rear ³⁾	BLUESPOT/R	•	•	•	•	•	•
Red point light, front ³⁾	REDSPOT/F	•	•	•	•	•	•
Red point light, rear ³⁾	REDSPOT/R	•	•	•	•	•	•
Red stripe ²⁾	RED/STRIPE	•	•	•	•	•	•
OHG mounted working lights ¹⁾	WRK/F/OHG	•	•	•	•	•	•
Road light kit	RLDC	•	•	•	•	•	•
Reading light	READL	•	•	•	•	•	•

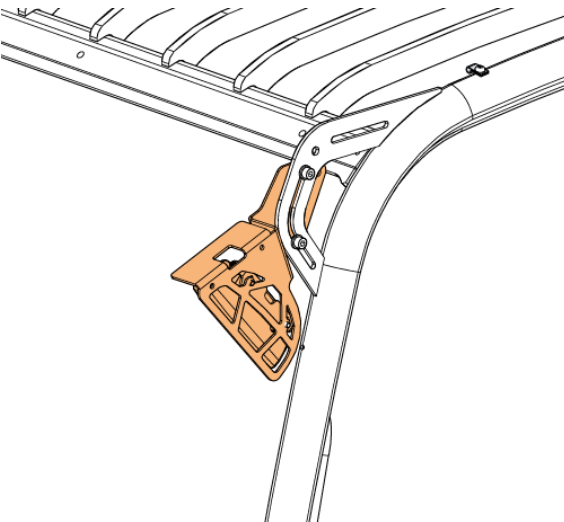
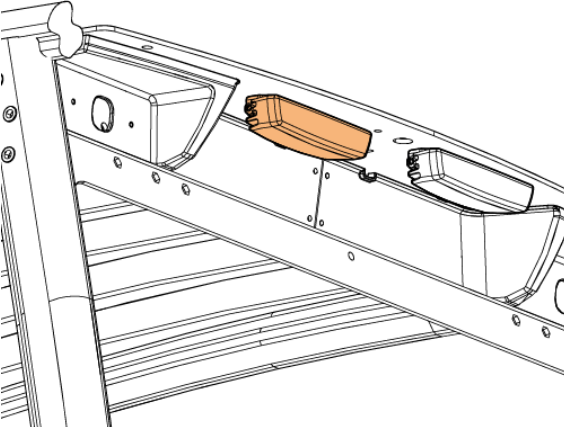
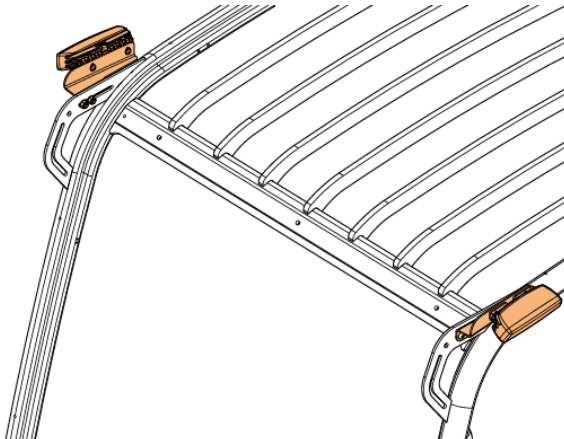
¹⁾It is not possible to combine AUTO/LIGHT and WRK/F/OHG.

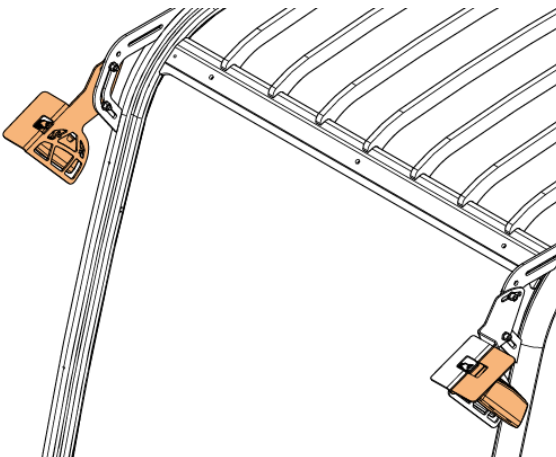
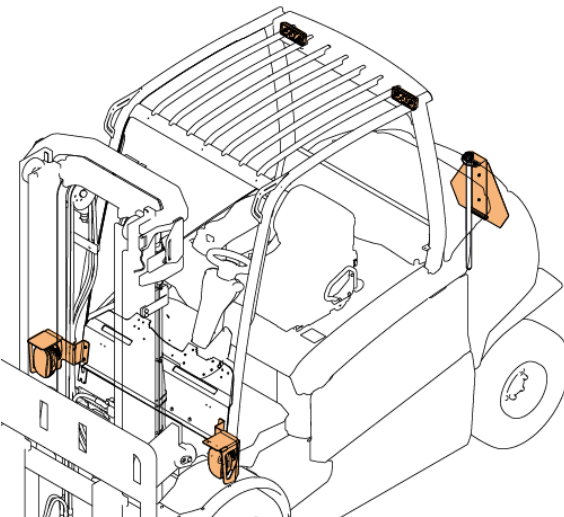
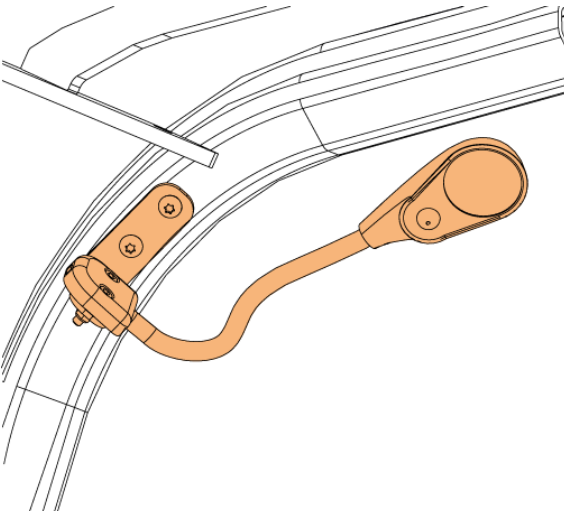
²⁾Not in combination with HG/LOW.

³⁾It is not possible to combine blue and red point lights.

Option descriptions

AUTO LIGHT SWITCH The truck can be equipped with a photodiode light sensor that switches the working lights on automatically when the lighting of the working environment is insufficient. NOTE: Not available in combination with WRK/F/OHG.	AUTO/LIGHT 
AMBER STROBE A strobe that flashes when the truck is powered on. The light is installed to the rear of the truck on top of the overhead guard. Specifications: • Nominal voltage: 12-80V • Color: Amber • Bulb: Class III LED Strobe NOTE: Not available in combination with HG/LOW.	STRB 
AMBER STROBE BELOW THE OHG A strobe that flashes when the truck is powered on. The light is installed to the rear of the truck on the underside of the overhead guard. Specifications: • Nominal voltage: 12-80V • Color: Amber • Bulb: Class III LED Strobe	STRB/L 

BLUE POINT LIGHT, FRONT RED POINT LIGHT, FRONT	BLUESPOT/F REDSPOT/F
Blue or red point warning light that projects a focused beam of light to the ground in front of the truck. Specifications: • Nominal voltage 6–90 V • Power consumption 15 W • Color: Blue (BLUESPOT/F) or red (REDSPOT/F) • Housing: IP69K NOTE: It is not possible to combine blue and red point lights.	
BLUE POINT LIGHT, REAR RED POINT LIGHT, REAR	BLUESPOT/R REDSPOT/R
Blue or red point warning light that projects a focused beam of light to the ground behind the truck. Specifications: • Nominal voltage 6–90 V • Power consumption 15 W • Color: Blue (BLUESPOT/R) or red (REDSPOT/R) • Housing: IP69K NOTE: It is not possible to combine blue and red point lights. NOTE: This option does not increase the OHG height of the truck.	
RED STRIPE	RED/STRIPE
Red stripe warning lights to highlight the pedestrian danger zone on both sides of the truck with visible light barrier. Specifications: • Nominal voltage: 6–90 V • Color: Red • Housing: IP69K NOTE: Not available in combination with HG/LOW.	

OHG MOUNTED WORKING LIGHTS	WRK/F/OHG
Additional working lights mounted to the overhead guard to improve the overall lighting in the load handling area. Specifications: • Nominal voltage: 12 V • Light quantity: 1000 Lumens per light • Housing: IP69K NOTE: Not available in combination with AUTO/LIGHT.	
ROAD LIGHT KIT	RLDC
Using the truck on public roads requires that the truck is registered for road use. The road light kit is necessary the vehicle registration of the truck. NOTE: Additionally, the truck must comply with all applicable national and local regulations. The road light kit includes the following: • Wiring, switches, fuses and relays • Lever for operating the road lights • ECE approved front light unit (12 V LED): ◦ Position lights (2 x 0.6W) ◦ Turn signals (2 x 18W) ◦ Low beam lights (2 x 7.5W) • ECE approved tail light unit (12 V LED): ◦ Tail lights (2 x 0.5W) ◦ Turn signals (2 x 2W) ◦ Brake lights (2 x 2W) ◦ Reverse lights (2 x 1.6 W) • Warning triangle	
READING LIGHT	READL
A lamp with a flexible gooseneck shaft that you can use for reading. Available with the basic overhead guard. NOTE: LUX/CABIN includes a separate reading light mounted on the cabin ceiling that is not available with the basic overhead guard.	



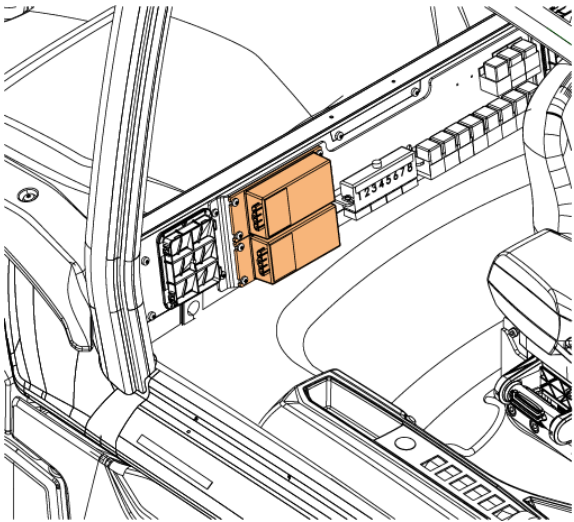
8 ELECTRIC SYSTEM

Option availability

o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Power supply for external equipment, front cable	F/DC240W	•	•	•	•	•	•
Power supply for external equipment, rear cable	R/DC240W	•	•	•	•	•	•
PIN code access	PIN	•	•	•	•	•	•
5V USB power supply connector	USB	•	•	•	•	•	•

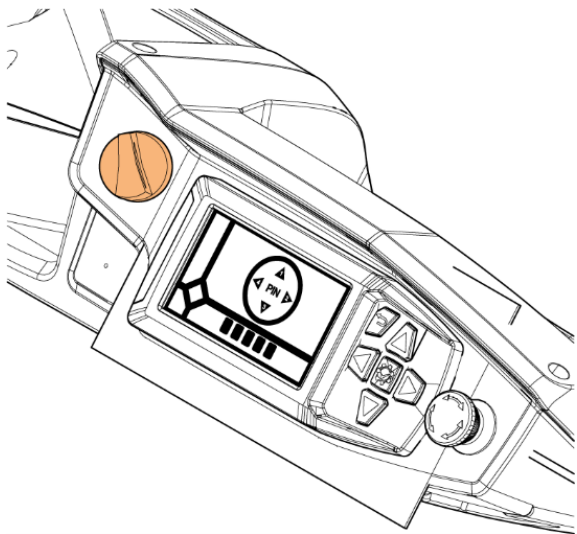
Option descriptions

POWER SUPPLY FOR EXTERNAL EQUIPMENT 240W	F/DC240W R/DC240W
This option is required for customer electric equipment such as handheld devices and computers. It adds an additional power supply that supplies 12.4 V / 20 A (240 W) through a DC/DC converter. With RLDC (takes approx. 8 A), the available power is 180 W. The 12V output can be wired to the front or rear of the truck. • F/DC240W: The output is wired to the front panel. The connector is located inside the dashboard. • R/DC240W: The output is wired to the rear of the truck. The connector is located near the electric panel, behind the battery and in front of the counterweight.	

PIN CODE ACCESS

Provides a personal access code for starting up the truck using the key switch. Up to 10 PIN codes can be assigned via TruckTool for 3 different pre-defined user levels (ECO/PRO/Emergency).

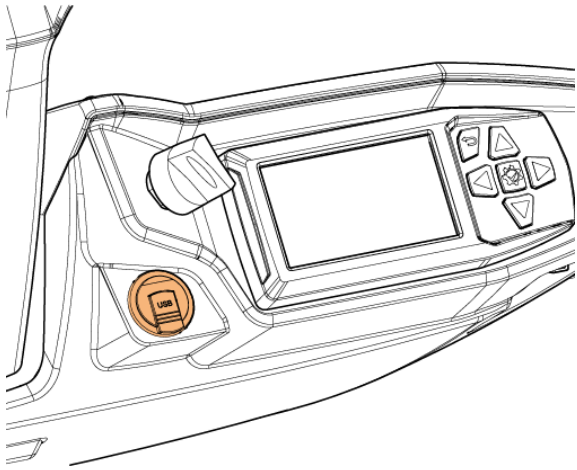
PIN



5V USB POWER SUPPLY CONNECTOR

USB socket for electronics power supply provides 2x2.5 A (max. 4.4 A).
NOTE: Requires DC240W.

USB



9 LOAD HANDLING

9.1 Forks

o	Standard equipment
•	Available option
—	Not available

FORKS	DIMENSIONS (MM)	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
ISO3 (FEM3)	1000 x 150 x 50	L1000	o	o	o	o	—	—
	1100 x 150 x 50	L1100	•	•	•	•	—	—
	1150 x 150 x 50	L1150	•	•	•	•	—	—
	1200 x 150 x 50	L1200	•	•	•	•	—	—
	1400 x 150 x 50	L1400	•	•	•	•	—	—
	1500 x 150 x 50	L1500	•	•	•	•	—	—
	1700 x 150 x 50	L1700	•	•	•	•	—	—
	1800 x 150 x 50	L1800	•	•	•	•	—	—
	2000 x 150 x 50	L2000	•	•	•	•	—	—
	2200 x 150 x 50	L2200	•	•	•	•	—	—
	2400 x 150 x 50	L2400	•	•	•	•	—	—
ISO4 (FEM4)	1000 x 150 x 60	L1000	—	—	—	—	o	o
	1100 x 150 x 60	L1100	—	—	—	—	•	•
	1150 x 150 x 60	L1150	—	—	—	—	•	•
	1200 x 150 x 60	L1200	—	—	—	—	•	•
	1400 x 150 x 60	L1400	—	—	—	—	•	•
	1500 x 150 x 60	L1500	—	—	—	—	•	•
	1700 x 150 x 60	L1700	—	—	—	—	•	•
	1800 x 150 x 60	L1800	—	—	—	—	•	•
	2000 x 150 x 60	L2000	—	—	—	—	•	•
	2200 x 150 x 60	L2200	—	—	—	—	•	•
	2400 x 150 x 60	L2400	—	—	—	—	•	•
Forks deletion		FX	•	•	•	•	•	•

9.2 Lifting carriage

Option availability

o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Integrated sideshift carriage	INSS119	•	•	•	•	•	•
Integrated fork positioner with sideshift	INSS/FP	•	•	•	•	•	•
Hook-on sideshift carriage	SS119	•	•	•	•	•	•
Hook-on positioner with sideshift	SS/FP	•	•	•	•	•	•
Load backrest deletion	BRX	•	•	•	•	•	•
Hydraulic accumulator	HYD/ACC	•	•	•	•	•	•

Option descriptions

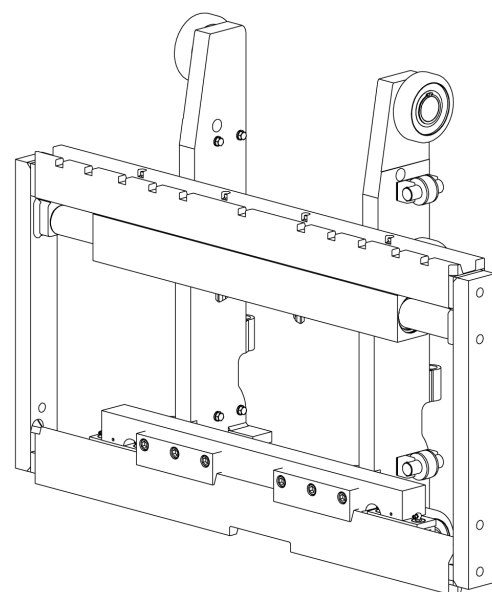
INTEGRATED SIDESHIFT CARRIAGE, WIDTH 1190MM INSS119

An integrated sideshift carriage improves productivity and operator comfort. The standard carriage is replaced by a sideshifting carriage. The sideshift stroke is 100 mm on both sides, 200 mm in total. The standard load backrest is mounted on top of this attachment.

A benefit of an integrated attachment in general compared to a hook-on alternative is its reduced X-dimension or lost load.

Measurements:

- X-dimension: standard X + 33 mm (FEM3) or 18 mm (FEM4).
- Attachment width: 1190 mm.
- Truck width: 1370 mm (4.0–4.5 ton) or 1450 mm (5.0–5.5 ton).
- Minimum fork opening: 192 mm (FEM3) or 310 mm (FEM4).
- Maximum fork opening: 992 mm (FEM3) or 959 mm (FEM4).



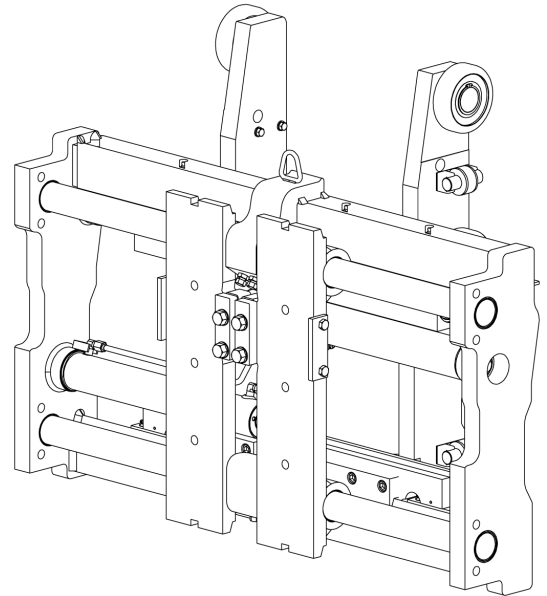
INTEGRATED FORK POSITIONER WITH SIDESHIFT, WIDTH 1190 MM**INSS/FP**

An integrated fork positioner with sideshift improves productivity and operator comfort. The standard carriage is replaced by an integrated fork positioner with a sideshift carriage. The out-to-out fork positioning range is 240–950 mm. The sideshift stroke is 100 mm on both sides, 200 mm in total. Standard forks and load backrest are included with this option.

A benefit of an integrated attachment in general compared to a hook-on alternative is its reduced X-dimension or lost load.

Measurements:

- X-dimension: standard X + 141 mm (FEM3) or 131 mm (FEM4).
- Attachment width: 1190 mm.
- Truck width: 1370 mm (4.0–4.5 ton) or 1450 mm (5.0–5.5 ton).

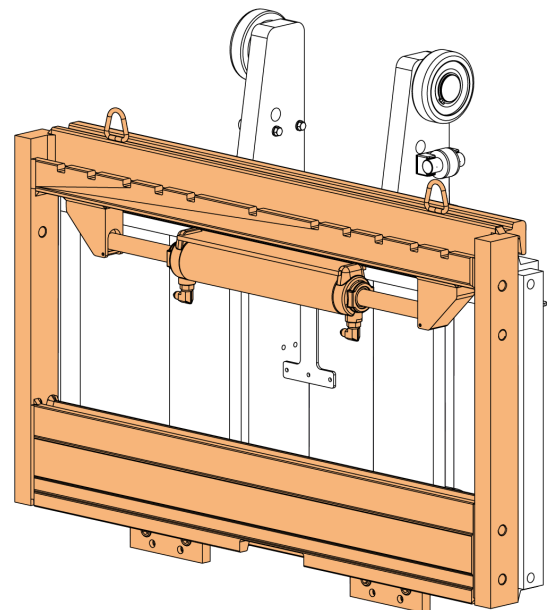
**HOOK-ON SIDESHIFT CARRIAGE, WIDTH 1190 MM****SS119**

The hook-on sideshifter is attached in front of the standard lift carriage. A sideshift improves productivity and operator comfort. The sideshift stroke is 100 (FEM3) or 150 mm (FEM4) on both sides, 200 mm (FEM3) or 300 mm (FEM4) in total. Standard forks and load backrest are available with this option.

One of the benefits of a hook-on attachment is that it is easy to move to other lift trucks in the same FEM mounting class. The hook-on combination will increase the so-called X-dimension or lost load.

Measurements:

- X-dimension: standard X + 77 mm (FEM3) or 84 mm (FEM4).
- Attachment width: 1190 mm.
- Truck width: 1370 mm (4.0–4.5 ton) or 1450 mm (5.0–5.5 ton).
- Minimum fork opening: 267 mm (FEM3) or 310 mm (FEM4), measured from fork center to center.
- Maximum fork opening: 1007 mm (FEM3) or 959 mm (FEM4), measured from fork center to center.



HOOK-ON POSITIONER WITH SIDESHIFT

SS/FP

The hook-on fork positioner is attached in front of the standard lift carriage. A sideshift improves productivity and operator comfort.

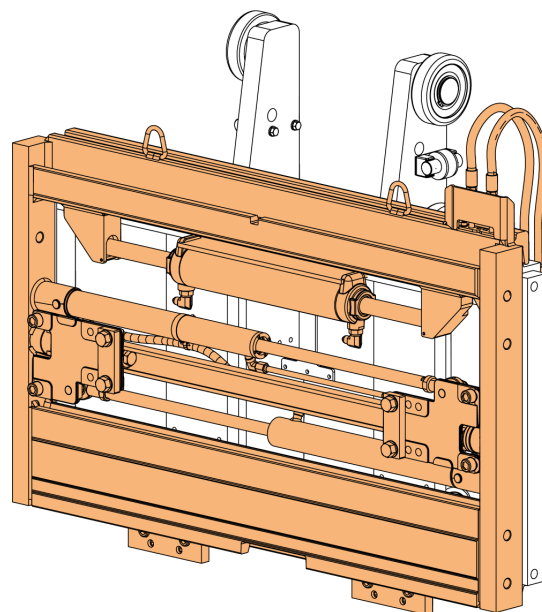
- The fork spread range is 392–1042 mm (FEM3) or 387–1037 mm (FEM4), measured from the outer edge of the forks.
- The sideshift stroke is 100 (FEM3) or 150 mm (FEM4) on both sides, 200 mm (FEM3) or 300 mm (FEM4) in total.

Standard forks and load backrest are available with this option.

One of the benefits of a hook-on attachment is that it is easy to move to other lift trucks in the same FEM mounting class. The hook-on combination will increase the so-called X-dimension or lost load.

Measurements:

- X-dimension: standard X + 77 mm (FEM3) or 84 mm (FEM4).
- Attachment width: 1190 mm.
- Truck width: 1370 mm (4.0–4.5 ton) or 1450 mm (5.0–5.5 ton).



LOAD BACKREST DELETION

BRX

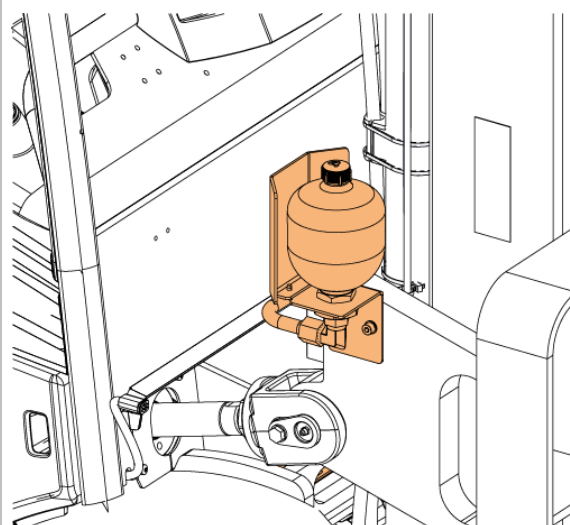
The truck can be ordered without the load backrest. Deletion of the load backrest increases the free lift height with triplex masts. Without the load backrest, the overall height of the truck with the mast fully raised is 207 mm (FEM3) or 128 mm (FEM4) mm lower.

For more information on mast height, see *APPENDIX A: Mast technical data*.

HYDRAULIC ACCUMULATOR

HYD/ACC

The hydraulic accumulator acts as a shock absorber of the lifting device when the truck is used on rough and uneven surfaces.



9.3 Tilt angle

Available tilt angles

TILT CYLINDERS	
6 degrees forward / 8 degrees backward	Standard
6 degrees forward / 6 degrees backward	Simplex mast with BOTTLESPEC and front screen Triplex 3700–4000 mm with front screen Triplex with BOTTLESPEC
6 degrees forward / 5 degrees backward	Triplex with BOTTLESPEC and front screen

Tilt centering

o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Automatic tilt centering with F2 button	FORK/H	•	•	•	•	•	•
Automatic tilt centering for MC levers	FORK/HMC	•	•	•	•	•	•
Tilt centering second function	FORK/H2	•	•	•	•	•	•

AUTOMATIC TILT CENTERING WITH F2 BUTTON

FORK/H

This option makes it possible to automatically move the fork tilt to the center position by pressing the F2 button and activating the tilt function on the armrest. An analogue tilt angle sensor is integrated to this option.

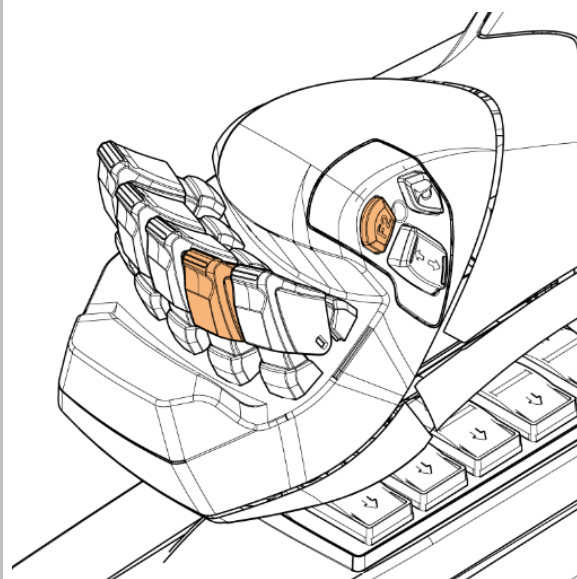
NOTE: Tilt angle can be configured in TruckTool.

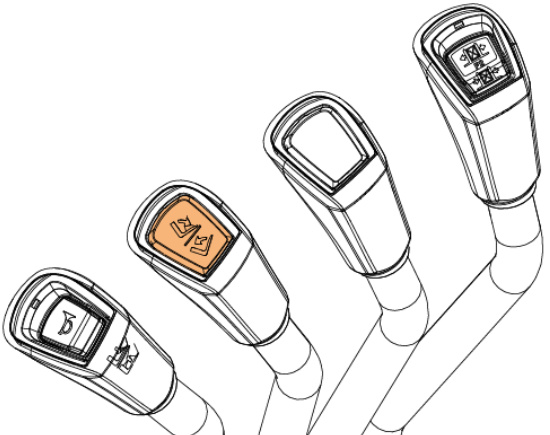
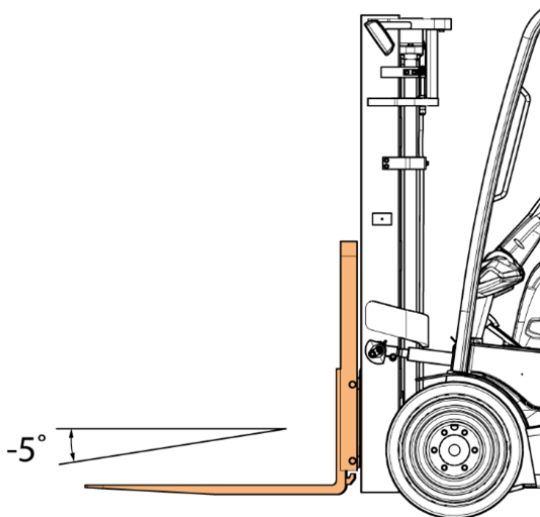
NOTE: Not available in combination with clamp functions.

NOTE: Not available in combination with BOTTLESPEC.

Please follow a video link for a demonstration:

<https://catliftdealer.com/training-materials/f2-ep40-55cnh-click-more-languages>



AUTOMATIC TILT CENTERING FOR MC LEVERS	FORK/HMC
This option makes it possible to automatically move the fork tilt to the center position by pressing the tilt centering button and activating the tilt function with manual levers (MC). An analogue tilt angle sensor is integrated to this option. NOTE: Tilt angle can be configured in TruckTool.	
TILT CENTERING SECOND FUNCTION	FORK/H2
This option makes it possible to automatically tilt the mast to a second predefined position in addition to the center position. The positions are selected by pressing the F2 button and moving the tilt function forward or backward on the armrest. Default tilt settings: • First position: -5° • Second position: 0° This allows individual “pick” and “drop” angles for the forks. An analogue tilt angle sensor is integrated to this option. NOTE: Requires FORK/H. NOTE: Tilt angles can be configured in TruckTool for up to -5°. NOTE: Not available for MC armrest. Please follow a video link for a demonstration: https://catliftdealer.com/training-materials/f2-ep40-55cnh-click-more-languages	

10 HYDRAULIC SYSTEM

10.1 Mast control

Option availability

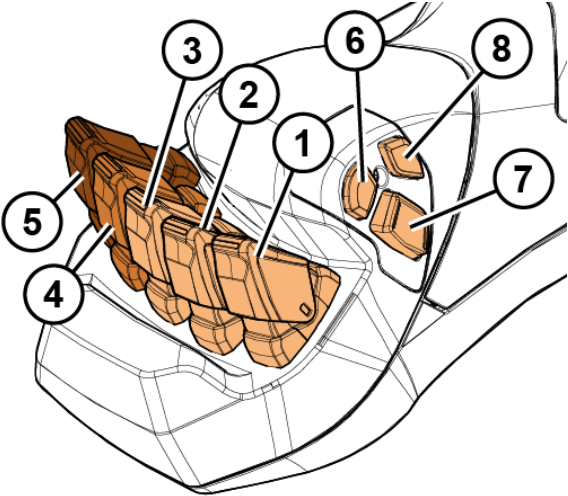
o	Standard equipment
•	Available option
—	Not available

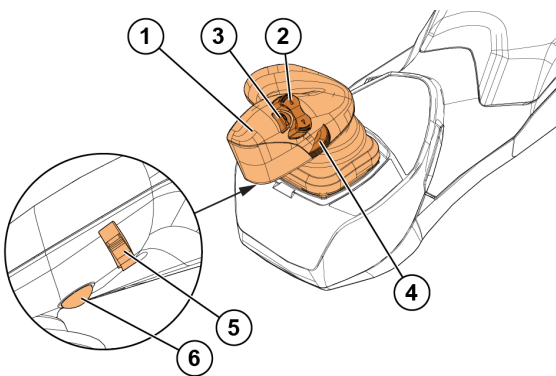
OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Armrest with fingertip control, 3-way valve	3V/FC	o	o	o	o	o	o
Armrest with fingertip control, 4-way valve	4V/FC	•	•	•	•	•	•
Armrest with fingertip control, 5-way valve ¹⁾	5V/FC	•	•	•	•	•	•
Ergologic armrest	ERGO/LOGIC	•	•	•	•	•	•
Ergologic, X-axis Lift/Lower, Y-axis Tilt	ELIFTXY	•	•	•	•	•	•
Ergologic, Y-axis Lift/Lower, X-axis Tilt	ELIFTYX	•	•	•	•	•	•
Ergologic, X-axis Lower/Lift, Y-axis Tilt	ELOWXY	•	•	•	•	•	•
Dual joystick ²⁾	D/JOYSTICK	•	•	•	•	•	•
Dual Joystick, X-axis Lift/Lower, Y-axis Tilt	LIFTXY	•	•	•	•	•	•
Dual Joystick, Y-axis Lift/Lower, X-axis Tilt	LIFTYX	•	•	•	•	•	•
Dual Joystick, X-axis Lower/Lift, Y-axis Tilt	LOWXY	•	•	•	•	•	•
Manual control levers, 3-way valve	3V/MC	•	•	•	•	•	•
Manual control levers, 4-way valve	4V/MC	•	•	•	•	•	•
Clamp release with double action, fingertip controls (FC), 4-way valve	D/A 4VFC	•	•	•	•	•	•
Clamp release with double action, manual control levers (MC), 4-way valve	D/A 4VMC	•	•	•	•	•	•
Clamp release with double action, dual joystick (YC), 4-way valve	D/A 4VYC	•	•	•	•	•	•

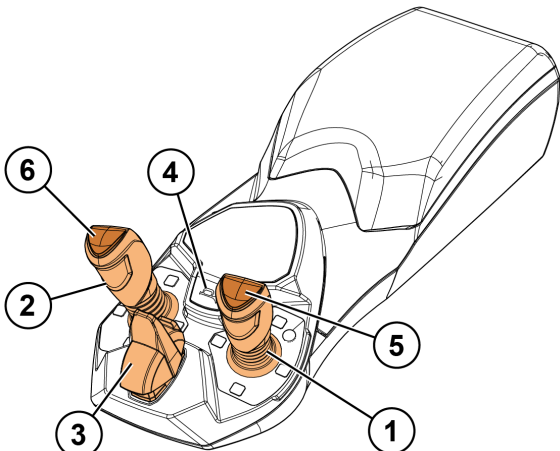
¹⁾Requires the 4-way mast piping option.

²⁾In combination with 3V/FC or 4V/FC.

Option descriptions

ARMREST WITH FINGERTIP CONTROLS (FC)																			
ARMREST WITH FINGERTIP CONTROL, 3-WAY VALVE	3V/FC																		
ARMREST WITH FINGERTIP CONTROL, 4-WAY VALVE	4V/FC																		
ARMREST WITH FINGERTIP CONTROL, 5-WAY VALVE	5V/FC																		
An ergonomic armrest with a 3-way valve fingertip controller is a standard feature in all truck models. The armrest can be equipped up to two additional control levers to enable additional functions for mast control. NOTE: 5V/FC requires the 4-way piping option. An extra valve is located in the lifting carriage.																			
<table><tr><th colspan="2">Functionality description</th></tr><tr><td>1</td><td>Lift lever</td></tr><tr><td>2</td><td>Tilt lever</td></tr><tr><td>3</td><td>Sideshift lever / Attachment lever</td></tr><tr><td>4</td><td>Attachment lever (4V/FC)</td></tr><tr><td>5</td><td>Attachment lever (5V/FC)</td></tr><tr><td>6</td><td>F2 button</td></tr><tr><td>7</td><td>Operating direction selection switch</td></tr><tr><td>8</td><td>Horn button</td></tr></table>		Functionality description		1	Lift lever	2	Tilt lever	3	Sideshift lever / Attachment lever	4	Attachment lever (4V/FC)	5	Attachment lever (5V/FC)	6	F2 button	7	Operating direction selection switch	8	Horn button
Functionality description																			
1	Lift lever																		
2	Tilt lever																		
3	Sideshift lever / Attachment lever																		
4	Attachment lever (4V/FC)																		
5	Attachment lever (5V/FC)																		
6	F2 button																		
7	Operating direction selection switch																		
8	Horn button																		
																			

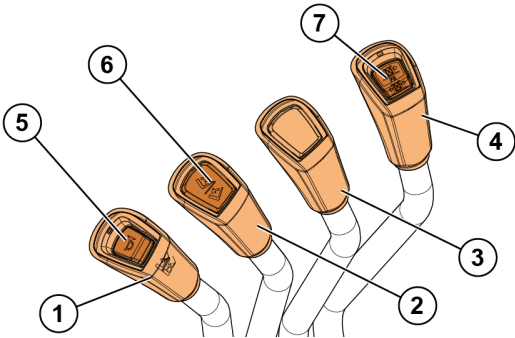
ERGOLOGIC ARMREST		ERGO/LOGIC	
Less fatigue and more performance by the scientifically designed multi-function controller that perfectly fits the hand. All controls are placed for intuitive and simultaneous operation. The functions of the joystick, thumb wheel and slider wheel can be configured by a service technician.			
Functionality description			
1	Joystick		
2	Operating direction selection switch		
3	Horn button		
4	Thumb wheel		
5	Slider wheel		
6	F2 button		
ERGOLOGIC, X-AXIS LIFT/LOWER, Y-AXIS TILT		ELIFTXY	
Forks move up when the joystick is moved left.			
ERGOLOGIC, Y-AXIS LIFT/LOWER, X-AXIS TILT		ELIFTYX	
Forks move up when the left joystick is moved backward.			
ERGOLOGIC, X-AXIS LOWER/LIFT, Y-AXIS TILT		ELOWXY	
Forks move down when the left joystick is moved left.			

DUAL JOYSTICK		D/JOYSTICK	
An ergonomic armrest with two joystick controllers. The left joystick controls lift and tilt, and either function can be configured for X- or Y-axis. The right joystick controls additional mast functions. A service technician can configure the functions of each joystick. D/JOYSTICK is selected in combination with 3V/FC or 4V/FC.			
Functionality description			
1	Left joystick		
2	Right joystick		
3	Operating direction selection switch		
4	Horn button		
5	F2 button		
6	Camp release button		
DUAL JOYSTICK, X-AXIS LIFT/LOWER, Y-AXIS TILT		LIFTXY	
Forks move up when the left joystick is moved left.			
DUAL JOYSTICK, Y-AXIS LIFT/LOWER, X-AXIS TILT		LIFTYX	
Forks move up when the left joystick is moved backward.			
DUAL JOYSTICK, X-AXIS LOWER/LIFT, Y-AXIS TILT		LOWXY	
Forks move down when the left joystick is moved left.			

MANUAL CONTROL LEVERS, 3-WAY VALVE	3V/MC
MANUAL CONTROL LEVERS, 4-WAY VALVE	4V/MC

With the optional manual control, the hydraulic functions of the truck are operated using levers that are located on the right-hand side of the operator's seat.

Functionality description	
1	Lift lever
2	Tilt lever
3	Optional function
4	Optional function
5	Horn button
6	Tilt centering button (FORK/HMC)
7	Clamp release button

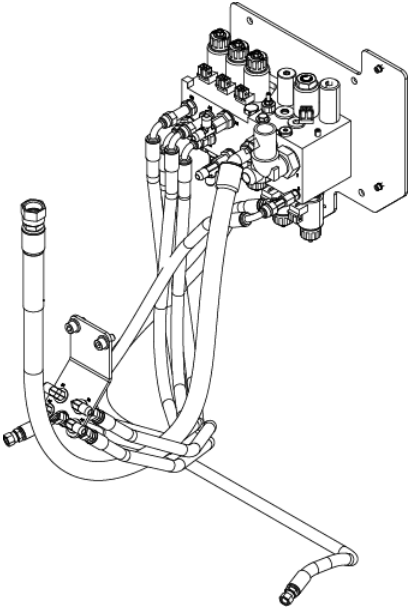


CLAMP RELEASE WITH DOUBLE ACTION, 4V FC	D/A 4VFC
CLAMP RELEASE WITH DOUBLE ACTION, DUAL JOYSTICK (YC), 4-WAY VALVE	D/A 4VYC

If the truck is equipped with a reel clamp attachment, the clamp release function must be enabled with a dedicated button to prevent an accidental releases of the clamp.

If the truck is equipped with an armrest with fingertip controls, the release function is enabled with the F2 button.

Dual joystick has a dedicated clamp release button on the right joystick.



CLAMP RELEASE WITH DOUBLE ACTION, 4V MC D/A 4VMC	
If the truck is equipped with a reel clamp attachment, the clamp release function must be enabled with a dedicated button to prevent an accidental releases of the clamp. With manual control levers, the release function is enabled with a clamp release button on top of the lever. In order to activate the clamp release, the operator must first set the corresponding lever into the neutral position and then press the clamp release button.	

10.2 Piping

3-WAY PIPING, SIMPLEX	3V/PS
3-WAY PIPING, TRIPLEX	3V/PT
4-WAY PIPING, SIMPLEX	4V/PS
4-WAY PIPING, TRIPLEX	4V/PT
5-WAY PIPING, SIMPLEX	5V/PS
5-WAY PIPING, TRIPLEX	5V/PT
3-way, 4-way or 5-way piping for Simplex and Triplex masts.	

10.3 Hydraulic oil

Option availability

o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Hydraulic oil, standard	OIL/VG32	o	o	o	o	o	o
Hydraulic oil, hot area	OIL/VG46	•	•	•	•	•	•
Hydraulic oil, cold area	OIL/VG15	•	•	•	•	•	•
Biodegradable hydraulic oil	BGHYD/OIL	•	•	•	•	•	•
Food grade hydraulic oil	FGHYD/OIL	•	•	•	•	•	•
Hydraulic oil cooler	HYD/COOL	•	•	•	•	o	o
No hydraulic oil cooler	—	o	o	o	o	—	—

Option descriptions

HYDRAULIC OIL, ISO VG 32, STANDARD	OIL/VG32
Hydraulic oil suitable for −10°C...+30 °C ambient temperature.	
HYDRAULIC OIL, ISO VG 46, HOT AREA	OIL/VG46
High temperature hydraulic oil suitable for +10°C...+50 °C ambient temperature.	
HYDRAULIC OIL, ISO VG 15, COLD AREA	OIL/VG15
Cold temperature hydraulic oil suitable for −40°C...+10 °C ambient temperature.	
BIODEGRADABLE HYDRAULIC OIL	BGHYD/OIL
This environmentally friendly hydraulic oil reduces the potential damage to the environment. In case this hydraulic fluid leaks into the ground, it can be decomposed by microorganisms naturally present in water, air and soil.	
FOOD GRADE HYDRAULIC OIL	FGHYD/OIL
Food grade oil is synthetic hydraulic oil developed specifically for use in machinery used in the food and beverage processing plants and in the packaging industry. The risks related to contamination and health are reduced when this oil is used.	

HYDRAULIC OIL COOLER

HYD/COOL

Hydraulic oil cooler for heavy applications and to secure oil functionality between maintenance intervals.
Oil cooler is a standard feature in 5.0 ton FEM4 trucks and 5.5 ton trucks.

11 BATTERY AND CHARGING

11.1 Lead-acid battery

See *11.4 Battery dimensions* for more details about battery and battery compartment dimensions.

The water filling system is included in lead-acid batteries.

Lead-acid battery availability

o	Standard equipment
•	Available option
—	Not available

NOTE: All batteries are available with fork pockets (BATT/FORK).

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Lead-acid 775 Ah, standard	BW80D775E	•	•	•	—	—	—
Lead-acid 840 Ah, Tensor	BW80D840E	•	•	•	—	—	—
Lead-acid 930 Ah, standard	BW80D930E	—	—	—	•	•	•
Lead-acid 990 Ah, Tensor	BW80D990E	—	—	—	•	•	•

Lead-acid battery charger

LEAD-ACID BATTERY CHARGER, 80V/320A	CH80/120E
Charger for 930 Ah and 990 Ah lead-acid batteries.	
LEAD-ACID BATTERY CHARGER, 80V/100A	CH80/100E
Charger for 775 Ah and 840 Ah lead-acid batteries.	

11.2 Lithium-ion battery

When the truck is ordered with a lithium-ion battery, it is equipped with an easy charging hatch located on the battery side door on the left side of the truck.

NOTE: For easy charging with a lead-acid battery, select option EASY/CHARGE.

Lithium-ion battery availability

o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Li-ion 518 Ah	BL80D518T	•	•	•	—	—	—
Li-ion 592 Ah	BL80D592T	—	—	—	•	•	•

Lithium-ion battery charger

LITHIUM-ION BATTERY CHARGER, 200 A	CH80/200T
LITHIUM-ION BATTERY CHARGER, 300 A	CH80/300T
LITHIUM-ION BATTERY CHARGER, 400 A	CH80/400T
Charger for lithium-ion batteries.	

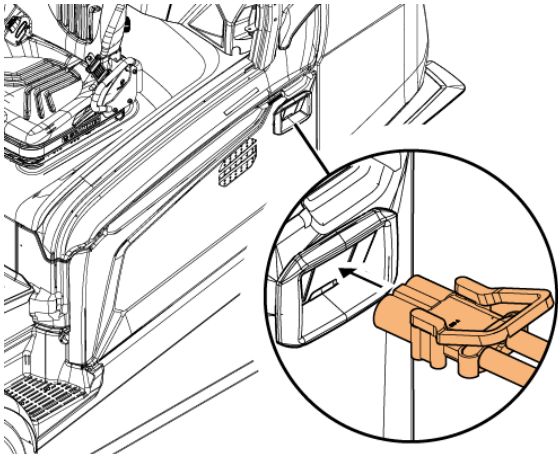
11.3 Battery options

Option availability

o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Easy charging	EASY/CHARGE	•	•	•	•	•	•

Option descriptions

EASY CHARGING	EASY/CHARGE
Easy charging socket is added to the left side of the truck. It is protected by a hatch. Truck functions are disabled when the charger plug is connected to prevent truck operation during charging. When used with a lead-acid battery, there is an automatic ventilation fan for the battery compartment to remove hydrogen gas produced while charging. NOTE: EASY/CHARGE is always included if the truck uses a lithium-ion battery. It is an optional feature for trucks that use lead-acid batteries.	

11.4 Battery dimensions

Battery

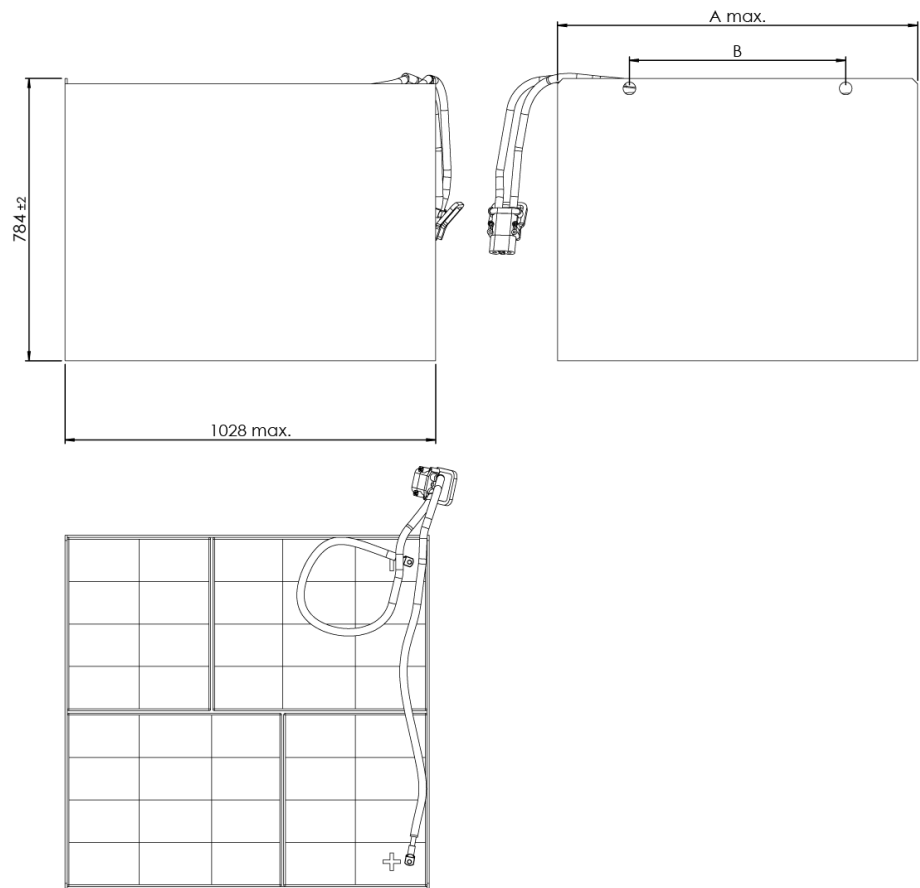


Figure 2: Battery dimensions

CAPACITY	VOLTAGE	CELL	BATTERY BOX	B	A	MIN. WEIGHT	MAX. WEIGHT
775 Ah	80 V	5 PzS	DIN 43536 A	500 mm	855 mm	1760 kg	1960 kg
840 Ah (Tensor)	80 V	5 PzS	DIN 43536 A	500 mm	855 mm	1780 kg	1970 kg
930 Ah	80 V	6 PzS	DIN 43536 A	600 mm	999 mm	2060 kg	2290 kg
990 Ah (Tensor)	80 V	6 PzS	DIN 43536 A	600 mm	999 mm	2010 kg	2230 kg

Battery compartment

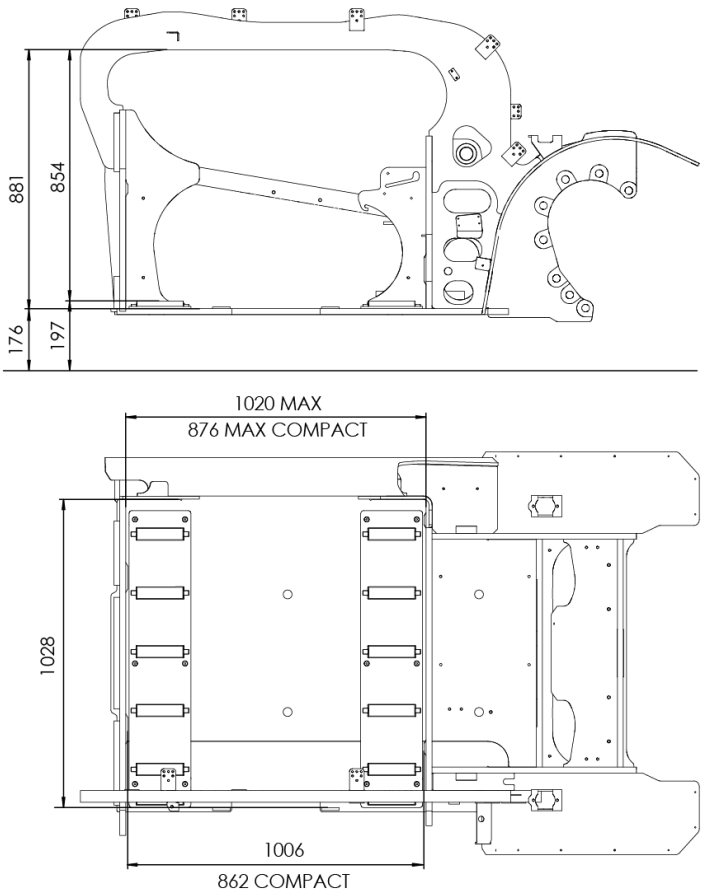


Figure 3: Battery compartment dimensions

Fork pockets

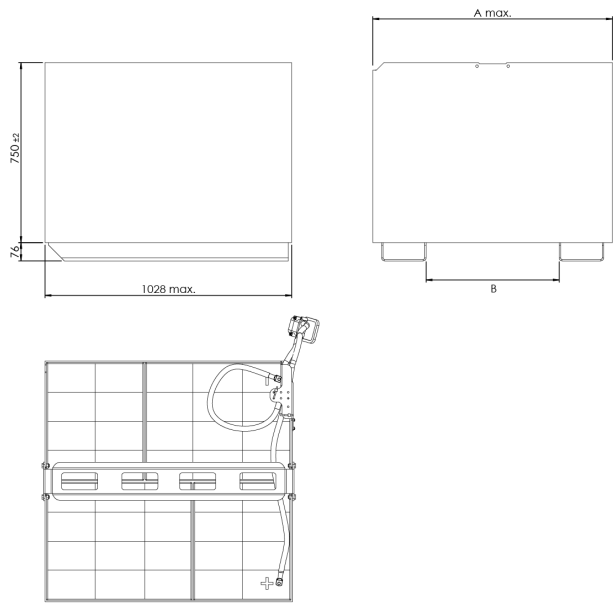


Figure 4: Fork pocket dimensions

CAPACITY	VOLTAGE	CELL	B	A	MIN. WEIGHT	MAX. WEIGHT
775 Ah	80 V	5 PzS	411 mm	855 mm	1760 kg	1960 kg
840 Ah (Tensor)	80 V	5 PzS	411 mm	855 mm	1780 kg	1970 kg
930 Ah	80 V	6 PzS	555 mm	999 mm	2060 kg	2290 kg
990 Ah (Tensor)	80 V	6 PzS	555 mm	999 mm	2010 kg	2230 kg

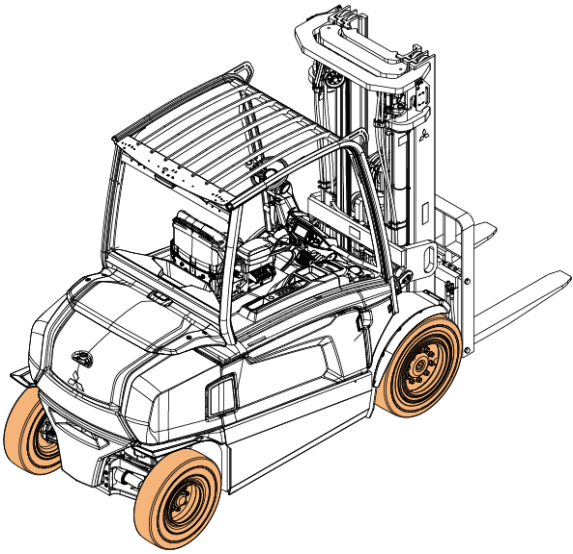
12 TIRES

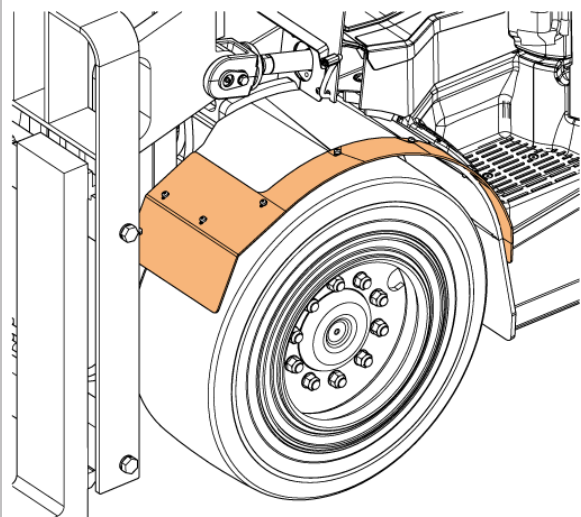
Option availability

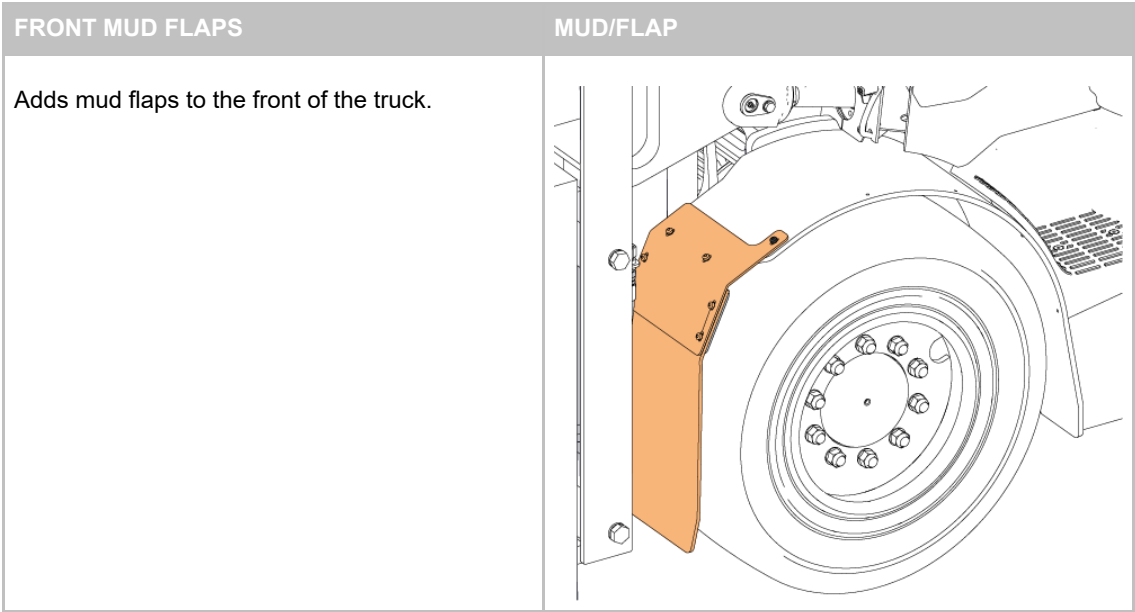
o	Standard equipment
•	Available option
—	Not available

OPTION	CODE	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
Solid pneumatic tires	US/US	o	o	o	o	o	o
Non-marking solid tires	NM/US	•	•	•	•	•	•
Pneumatic tires	LS/LS	•	•	•	•	•	•
Cushion tires, front	CS/CS	•	•	•	•	•	•
Solid pneumatic dual drive	SPEUD	•	•	•	•	•	•
Pneumatic dual drive	SPELD	•	•	•	•	•	•
Fender extensions	FENDER	•	•	o	o	o	o
Front mud flaps	MUD/FLAPS	•	•	•	•	•	•

Option descriptions

SOLID PNEUMATIC TIRES	US/US
Standard tires. Solid pneumatic tires are puncture resistant and provide high residual capacity. Tire dimensions (front / rear): • 250x15 / 7.00x12 (4.0–4.5 ton) • 355/50-15 / 7.00x12 (5.0–5.5 ton)	

NON-MARKING SOLID TIRES	NM/US
Non-marking tires are recommended in applications where the floor must be kept as clean as possible. NOTE: Non-marking tires are not conductive. In order to avoid the accumulation of static electricity on the truck, a ground strap is installed on the truck chassis when the truck is ordered with non-marking tires.	
PNEUMATIC TIRES	LS/LS
Pneumatic tires are same shape as US/US but the tires are air-filled. Pneumatic tires have lower residual capacity and rolling resistance, but they provide increased comfort for the truck operator. Tire dimensions: 250x15, 28x12,5-15 (Wide), 7.00-12 (Rear)	
CUSHION TIRES, FRONT	CS/CS
Low profile solid rubber tires. Tire dimensions: 28-12-22, 28-14-22 (Wide), 645x200x480 (Rear). Cushion tires widen the compact trucks by 60 mm and normal trucks by 70 mm.	
SOLID PNEUMATIC DUAL DRIVE	SPEUD
Dual pneumatic solid tires on the front wheels provide more comfortable truck operation and higher residual capacity. Dual tires are recommended in certain applications to improve the residual capacity of the truck with a high mast.	
PNEUMATIC DUAL DRIVE	SPELD
Dual pneumatic tires on the front wheels provide more comfortable truck operation and higher residual capacity. Dual tires are recommended in certain applications to improve the residual capacity of the truck with a high mast.	
FENDER EXTENSIONS	FENDER
Extends the fenders to protect the area around the truck from debris that can be pushed out from under the tires. NOTE: Standard feature in 5.0–5.5 ton models.	



Truck width with tires

NOTE: All measurements are in mm.

	EP40N	EP45N	EP50CN	EP50N	EP50NH	EP55NH
US/US	1370	1370	1450	1450	1450	1450
NM/US	1370	1370	1450	1450	1450	1450
LS/LS	1370	1370	1480	1480	1480	1480
CS/CS	1490	1490	1590	1590	1590	1590
SPELD	1740	1740	1740	1740	1740	1740
SPEUD	1740	1740	1740	1740	1740	1740

APPENDIX A: MAST TECHNICAL DATA

Mast weight

NOTE: Mast weight does not include the lifting carriage or forks.

MAST TYPE	MAST MODEL	OPTION CODE	LIFTING HEIGHT [MM]	MAST WEIGHT [KG]
Simplex, FEM3	5AE50D	2SP300	3050	772
		2SP330	3350	804
		2SP350	3550	826
		2SP370	3750	849
		2SP400	4050	903
		2SP450	4550	1000
		2SP500	5050	1057
		2SP550	5550	1113
		2SP600	6050	1170
Simplex, FEM4	5AE55DH	2SP300	3060	782
		2SP330	3360	815
		2SP350	3560	838
		2SP370	3760	861
		2SP400	4060	916
		2SP450	4560	1016
		2SP500	5060	1076
		2SP550	5560	1135
		2SP600	6060	1194
Triplex, FEM3	5CE50D	3FP370	3750	1042
		3FP400	4090	1084
		3FP430	4360	1116
		3FP450	4550	1144
		3FP470	4800	1167
		3FP500	5100	1204
		3FP550	5550	1258
		3FP600	6050	1403
		3FP650	6550	1472
		3FP700	7050	1525

Triplex, FEM4	5CE55DH	3FP370	3760	1057
		3FP400	4100	1100
		3FP430	4370	1132
		3FP450	4560	1161
		3FP470	4810	1185
		3FP500	5110	1222
		3FP550	5560	1277
		3FP600	6060	1424
		3FP650	6560	1495
		3FP700	7060	1549

Free lift height with and without load backrest

LIFTING CARRIAGE	MAST MODEL	LIFTING HEIGHT [MM]	OVERALL HEIGHT [MM]	MAST LENGTH [MM]	FREE LIFT HEIGHT	
					WITH BR	BRX
FEM3	5CE50D	3750	2070	1900	986	1193
		4090	2190	2020	1106	1313
		4390	2280	2110	1196	1403
		4550	2340	2170	1256	1463
		4800	2420	2250	1336	1543
		5100	2520	2350	1436	1643
		5550	2670	2500	1586	1793
		6050	2870	2700	1786	1993
		6550	3070	2900	1986	2193
		7050	3270	3100	2186	2393
FEM4	5CE55DH	3760	2070	1900	945	1073
		4100	2190	2020	1065	1193
		4370	2280	2110	1155	1283
		4560	2340	2170	1215	1343
		4810	2420	2250	1295	1423
		5110	2520	2350	1395	1523
		5560	2670	2500	1545	1673
		6060	2870	2700	1745	1873
		6560	3070	2900	1945	2073
		7060	3270	3100	2145	2273

APPENDIX B: RAL COLOR CHART

COLOR	CODE
Signal Yellow	RAL1003
Maize Yellow	RAL1006
Oyster White	RAL1013
Ivory	RAL1014
Light Ivory	RAL1015
Sulfur Yellow	RAL1016
Zinc Yellow	RAL1018
Grey Beige	RAL1019
Curry	RAL1027
Melon Yellow	RAL1028
Yellow Orange	RAL2000
Red Orange	RAL2001
Vermilion	RAL2002
Pastel Orange	RAL2003
Pure Orange	RAL2004
Luminous Bright Orange	RAL2007
Traffic Orange	RAL2009
Deep Orange	RAL2011
Flame Red	RAL3000
Signal Red	RAL3001
Carmines Red	RAL3002
Ruby Red	RAL3003
Purple Red	RAL3004
Wine Red	RAL3005
Light Pink	RAL3015
Traffic Red	RAL3020
Raspberry Red	RAL3027
Orient Red	RAL3031
Claret Violet	RAL4004
Traffic Purple	RAL4006
Signal Violet	RAL4008
Ultramarine Blue	RAL5002
Sapphire Blue	RAL5003
Signal Blue	RAL5005

Azure Blue	RAL5009
Gentian Blue	RAL5010
Steel Blue	RAL5011
Light Blue	RAL5012
Cobalt Blue	RAL5013
Sky Blue	RAL5015
Traffic Blue	RAL5017
Water Blue	RAL5021
Night Blue	RAL5022
Pastel Blue	RAL5024
Emerald Green	RAL6001
Leaf Green	RAL6002
Olive Green	RAL6003
Blue Green	RAL6004
Light Moss Green	RAL6005
Grass Green	RAL6010
Reseda Green	RAL6011
Yellow Green	RAL6018
Chrome Green	RAL6020
Opal Green	RAL6026
Light Green	RAL6027
Mint Green	RAL6029
Pastel Turquoise	RAL6034
Squirrel Grey	RAL7000
Silver Grey	RAL7001
Signal Grey	RAL7004
Mouse Grey	RAL7005
Taurpalin Grey	RAL7010
Iron Grey	RAL7011
Slate Grey	RAL7015
Anthracite Grey	RAL7016
Black Grey	RAL7021
Graphite Grey	RAL7024
Pebble Grey	RAL7032
Light Grey	RAL7035
Agate Grey	RAL7038

Window Grey	RAL7040
Traffic Grey	RAL7042
Chocolate Brown	RAL8017
Cream	RAL9001
Grey White	RAL9002
Signal White	RAL9003
Jet Black	RAL9005
White Aluminium	RAL9006
Pure White	RAL9010
Traffic White	RAL9016

For more information on this range visit:

www.catliftdealer.com

www.catlifttruck.com

CEOC2130 (03/24)

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