ILUK
INSTALLATION MANUAL
& CHECK-OFF SHEET
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If you received this product with damaged or missing parts,
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1 Safety Information

This manual follows the Guidelines set forth in “ANSI Z535.4-2007” for alerting you to possible hazards and their potential severity.

⚠️ DANGER

⚠️ DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠️ WARNING

⚠️ WARNING indicates potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠️ CAUTION

⚠️ CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

⚠️ CAUTION

CAUTION without the safety alert symbol is used to address practices not related to personal injury. (In this manual we use it to alert you to potentially hazardous situation which, if not avoided, may result in property damage.)

⚠️ NOTICE

⚠️ NOTICE without the safety alert symbol is used to address practices not related to personal injury. (In this manual we use it to alert you to special instructions, steps, or procedures.)
2 Important Notes:

1. **Read Manual completely before beginning any work**
2. Refer to your truck manufacturer’s instructions before adding any auxiliary equipment.
3. Pay Special attention to items marked with this symbol: ⚠️
4. All welding should be performed by qualified personnel per AWS standards
5. Always Ground closest to your welding point to prevent arcing through moving parts
6. Contact MBB Palfinger for Special Installations not covered in this Installation Manual
7. **Do not paint cylinder shafts or nylon rollers**
   a. (Use non-chlorinated brake cleaner to remove over spray)
8. Verify that pin lock bolts are tight
9. Grease all pivot points
10. Verify that ALL decals are placed properly (Contact MBB to replace any missing decals)
11. ⚠️ Final Check-Off-Sheet at rear of this manual MUST be filled out and kept in your records for future reference.
12. Refer to owner’s manual for troubleshooting & repairs.

**Important Dimensions:** (Refer to line drawing on following pages)

1) **BED HEIGHT**  Bed Height Ranges: Max=Unloaded / Min=Loaded Truck  
   - Measure from top of body floor to ground. Vehicle must be on flat level ground

2) **MOUNT FRAME CLEARANCE**  
   - Measure from **BACK** of truck/trailer to spring/tire or air suspension components that can interfere with the liftgate installation

3) **REAR SILL HEIGHT** and **DESIGN**  
   - Measure top of floor to bottom of buck plate and verify design regarding to Figure 1
Mounting Notes:
Read and clearly understand manual BEFORE beginning ANY work

⚠️ Important!!! ⚠️

The basic rule for installing a MBB Palfinger ILUK is to MOUNT THE FRAME AS HIGH AS POSSIBLE to achieve MAXIMUM GROUND CLEARANCE and MINIMIZE THE “F” DIMENSION.

⚠️ WARNING ⚠️

- Minimum bed height dimensions are ALWAYS MAXIMUM LOADED TRUCK
- Floor Height Ranges: Max=Unloaded Truck; Min=Loaded

Installing a gate at or close to minimum bed height normally results in a gate that will NOT open and close from stored position if the minimum floor height is exceeded when truck is loaded.

Call tech support before starting the installation if you have any questions or concerns on mounting dimensions → 888-774-5844
Chassis Dimension Sheets

Fill out and send to Interlift if specific install drawing is needed

A= Bedheight, top of floor to even ground
B= Top of floor to bottom of frame
C= Rear sill height, top of floor to bottom of buck plate
D= Spring hanger to end of body
E= Tire to end of body
F= Gas tank to end of body (if applicable)
G= Bottom of frame to bottom of gas tank

Company:.............................
Phone..........................  Fax..........................  E-mail..........................................

Figure 1 Trailer dimension sheet

Figure 2 Truck dimension sheet
4 Installation Dimensions

- Installation Dimension sheets are supplied with each individual ILUK, as there are too many different setup combinations for a generic installation drawing. When ordered a liftgate, MBB supplies a drawing based upon the Chassis dimension sheet (Figure 1 and Figure 2) supplied by your company.

**IMPORTANT:**

Before starting the installation, make sure that you have your own reference sheet that was supplied to MBB together with the MBB supplied installation lay-out drawing. Compare it with the truck you are about to start the installation on. If the units are different than the supplied lay-out, contact your supervisor and MBB to go over the differences.

Typical lay-out that you need before starting the install.

**NOTICE**

Do not start installation if your truck/trailer does not match up with MBB supplied drawing!

Figure 3 Installation Drawing - provided by MBB Palfinger engineering department
4.1 General Bed Height Ranges for ILUK liftgates.

Minimum bed height is when truck/trailer is loaded to MAX GVW (all dimensions in inches)

NOTICE

- ILUK 33 700 mm arm 36” - 49”
- ILUK 33 800 mm arm 40” - 56”
- ILUK 44 - 55 700 mm arm 36” – 49”
- ILUK 44 – 55 800 mm arm 40” – 56”
- ILUK 66 900 mm arm 37” – 58”
4.2 Chassis and Body Preparation

4.2.1 Mount frame clearance

The ILUK liftgate will require different mounting space requirements depending on model, lift arm lengths and platform sizes.

**NOTICE**

- Determine the correct mounting clearance according to your specific lift and chassis.
- With long overhangs it is even more important to maintain Max ground clearance.
  - GROUND CLEARANCE = BOTTOM OF LIFTGATE FRAME TO GROUND
- Determine if you need to move chassis U-bolts or if you have any other interferences, then proceed with installing the liftgate slide rails to the frame

**IMPORTANT (Truck Installation):**

- Before start of installation make sure body long rails are connected to truck frame welded with flat bars and secured against forward movement of the body
  - If body and frame are not connected lift gate might push body forward

---

**Figure 4 Mounting clearance**

- Bed height = top of bed to floor when air bags are inflated and on flat ground (dim "Y")
- Mount frame clearance = dimension from back of truck to spring / tire or air ride suspension components that would interfere with liftgate installation (dim "X")
- Flat bars to connect body and frame securely
4.2.2 Rear sill preparation

To assure that the gate is reaching the body floor, you need to cut out the rear sill of your truck/trailer.

**NOTICE**
- If sill is less than 4” high → No sill cut out needed
- If no cut out height is determined in drawing, cut out for best fit. **Keep at least a minimum of 4” of sill.**

**CAUTION**
- Reinforce every cut out of the sill to regain sill strength, required by truck/trailer OEM.

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**Figure 5 Sill cut-out dimensions - rear view**
• On trailers, you have to check the eyebrow clearance, and in case of interference cut eyebrow down until platform clears.

• The eyebrow cut out can be done when gate and platform are installed and you raise up gate for the first time. That gives the opportunity to keep as much of the eyebrow as possible to keep rear frame strength.

**IMPORTANT!!!**

• A proper preparation of the truck/trailer sets the basics for a safe, clear and fast installation process and assures a proper function of the lift gate without damage to truck/trailer or lift gate.
5 Gate Installation

5.1 Truck Installation

WARNING Never work under mount frame or platform without safety supports

5.1.1 Slide rail and Push–Pull mount bracket installation

Figure 7 Slide rail and push-pull installation

Make sure the specific install drawing sent with the liftgate matches the truck and gate you’re about to install

1) Install slider rail brackets according to drawing sent with the gate.
   a. Weld on with minimum of 8” of ¼” weld. **MAKE SURE, BRACKETS ARE STRAIGHT.**

2) Bolt or weld the slide rails to the 3 brackets, make sure the rails are exactly parallel to each other as the liftgate will not slide properly otherwise.

3) Install front push-pull bracket on truck chassis in compliance with drawing.
   a. Weld in place with 100% ¼” weld
5 Gate Installation

5.1.2 Liftgate attachment

4. Slide in liftgate assembly and connect pin in front of push-pull cylinder to bracket
5. Attach platform to gate with lift arm and tilt cylinders
6. Hook up the power connections (note that since the gate slides it is extremely important that a ground cable is installed). See electrical installation section for details

---

Figure 8 Liftgate installation to previous installed rails

1) Slide in liftgate assembly and connect pin in front of push-pull cylinder to bracket
2) Attach platform to gate with lift arm and tilt cylinders (see 5.3.2)
3) To install platform you have to set up the power wiring setup (see 5.3.1 Control power wiring setup)
5 Gate Installation

5.2 Trailer Installation

5.2.1 Different mounting setups for trailer applications

1) Rapid mount bolt-on

Includes **bolt on sub frame** with lift gate slide rails, frame and platform preinstalled ready to lift up and bolt into **existing sliding tandem rails** on trailer.

![Figure 9 Rapid mount bolt-on setup](image)

**Figure 9 Rapid mount bolt-on setup**

2) Quick mount weld-on

Includes **weld-on subframe** with lift gate slide rails, frame and platform preassembled ready to lift up and weld onto **trailer cross members**

![Figure 10 Quick mount weld-on setup](image)

**Figure 10 Quick mount weld-on setup**

**NOTICE**

Height of subframe (in each case) is determined by bed height and arm length. MBB is choosing the optimal subframe height based on customer supplied truck dimension sheet (see 3 Chassis Dimension Sheets).

If quick mount weld-on setup is not preassembled, refer to drawing for placement of sub frame. Slide in main frame assembly and attach platform. For final adjustments see Chapter 5.3.4.
5 Gate Installation

5.3 Liftgate basic power connection and battery cable routing

**NOTICE**

12 Volt Control power needs to be connected to operate the “Down Function” and release pressure at the lift cylinders to get lift arm in correct location (see Figure 13 and Figure 14)

7 Power and ground cables have to be routed so they can’t catch on anything during the operation of the liftgate. Make sure the cables are properly secured and test the slide function several times.

Figure 11 Power cable routing on driver side

8. Power and ground cord - Make sure it does not hang up while sliding the gate in or out
   - slack in cable should be equal with liftgate in “out position” and in “travel position”

9. When platform has been aligned and squared with the truck floor install lift arm up stops and rear slide clamps so the lift is always aligned for correct position for the user. (see Stop installation segment)

- Run the positive cable along a cross member towards the passenger side to battery kit on curb side and attach to positive post on battery.

- Attach ground cable to loop of positive cable and attach to frame on street side. Grind down frame to bare metal, use star washer to maintain good contact and spray protective sealant over connection.

Figure 12 Up-stop and slide clamp setup
5.3.1 Control power wiring setup

To maintain the best possible power supply, install the auxiliary batteries as close as possible to the gate.

- Truck installations might not have an auxiliary battery kit (MBB always recommends a kit). In this case you have to run the control power straight off the truck battery.

- Trailer installations always have a trailer battery kit (at least 2 batteries recommended)

Connect your control power to the positive (#2 & #4) and the negative (#1 & gr/ye) post of the batteries.

Figure 13 Board control power wiring connection

![Control Power Wiring Diagram]

Figure 14 Main Power supply setup
5.3.2 Platform installation

To install the platform (if not preinstalled by manufacturer) follow these steps:

1) Unfold platform and clamp on to forklift or overhead crane.
2) Slide out gate to the point that you are able to attach platform clevis to lift arm and tilt cylinders.
3) Bring platform close to gate and attach lift arm to platform using provided pins.
4) To attach tilt cylinders hold B-15 platform sensor so that you are able to extend tilt cylinders when turning the tilt switch until you match pinholes on platform and tilt cylinder head. Wire retrainer pointing towards front of truck/trailer.
5) If all 4 pins (2 each side) are in place and secured with lock bolts install B-15 sensor to platform and connect foot control and warning light cables.
6) Push all excessive cable inside platform to protect connections from environmental influences.

---

Figure 15 Platform installation and wiring

5.3.3 Swing-door platform modifications

On swing door applications there might be cutouts necessary to clear the lower cam locks

- If cut outs have not been made, damage to platform tip is possible.
- To avoid unnecessary gaps between trailer and platform, keep cut out as small as possible
5.3.4 Lift arm Up-stop installation and rail stops setup

With gate power set up and fully functional, place gate and platform in final operational position for installation of up and slide out stops. Start with up stops and verify flush fit, then continue with slide stops.

- Make sure platform is aligned and flush with floor.
- Up Stops **MUST** be installed to avoid damage to platform or sill
- Install stops when 3/16” Angle is still between platform and body
- make sure Up-stops are sitting tight against lift arm when platform in upper position

![Figure 16 Installation of up-stops](image)

**NOTICE**

Assure that platform main section is not set under pressure against truck/trailer body when install up stops

- Use 3/16” Angle to create gap
- 3/16”

When platform is in correct position (see Figure 16) and up stops are in place, set slide stops tight against Mount plates and fasten bolts tight.

![Figure 17 Mount plate slide stops](image)

With Up-stops and slide stops in place, run gate through several cycles and check perfect match of gate and body floor. Make sure slide stops are tight and alignment of platform and body is ok.
5.4 Control box installation

Determine location for control box; locate it in a way that the operator can view the platform and surrounding areas while operating the liftgate. Also, locate in a way where the lid does not extend outside the van body when open.

- To mount the gate’s control box, weld the supplied pedestal to the top of the 7” x 7” mount frame on the passenger side.
- Before welding the supplied pedestal to the frame, push the power pack deep inside the tube to make sure no cables and hydraulic hoses get burned.
- Install the control box on top of the supplied pedestal. Route the cable down, tied to the tube and inside the main square tube.

Figure 18 Control box placement
6 Gate adjusting and detailing

6.1 Setting B-13 lift arm sensor

- To set the sensor correctly, lift unfolded platform up about 10" to 12" above ground.
- Adjust the B-13 sensor in a way that it is level with the ground like shown in Figure 19.
- Raise gate all the way up after adjusting and lower to the ground. Platform tip will tilt toward the ground if operator stays on the lower switch for about “3” seconds after nylon rollers touching ground.
- Cycle platform several times to check operation after tightening.
- Fold down Lock Tab tightly onto Lift Arm (see Figure 19).

**NOTICE**

- At NO time the platform tip should tilt towards ground **while lowering**.
- Platform should **only tilt** after Nylon rollers contact ground and operator is on the down switch.
- After sensor is properly set, tighten lock bolt to 43 in.lbs/3.5 ft.lbs
- Never over torque B-13 lock bolt. Sensor will break and malfunction.
- Verify epoxy, colored side of sensor is out (facing away from arm)
- Under torqueing B-13 lock bolt may allow sensor to shift during normal gate operation.
6 Gate adjusting and detailing

6.2 Setting B-15 Platform sensor

- Mount the platform sensor B-15 to the right-hand side of the platform as shown in Figure 21. Make sure to loop wire around to give it enough slack in normal operation and route clear of any pinch points.
- Verify B-15 is set correct, when cable restrainer is parallel with platform surface.
- **B-15 is working correct if platform finds preset level position while tilting up form ground position**
- If platform is only lifting, without leveling out - battery power supply is low, check and charge battery. (On trucks – start truck and run in high idle for 5 – 10 Min)

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**Figure 20** B-15 adjustment on platform

**Figure 21** Platform wiring with B-15 and controls
6.3  **Platform adjusting with bolts**

At the bottom between the main and the tip section are 4 bolts to adjust the platform. These adjusting bolts are horizontal to the platform. To level the platform the bolts need to be adjusted. To tilt the tip section up the bolts have to be rotated counter clockwise. To tilt the tip down the bolts have to be rotated clockwise.

To adjust the bolts the platform needs to be folded.

1. Adjust bolts to the right length for a level platform
2. Tighten down the lock nut properly for a safe fit.
7 Electrical Installation

When performing electrical installation, be certain to install and secure everything in a way where it is not subject to damage from moving parts, sharp edges, exhaust systems, etc.

**WARNING**

- Every deviation from MBB Palfinger recommended power setup (see 7 Electrical Installation) will avoid warranty and product liability unless you have a written confirmation by MBB Palfinger that allows you to do specific changes.
- Never tie the power cables to gas or diesel lines on trucks – it is a fire hazard.

**NOTICE**

- Never exceed rating of existing fuses located at the battery, control board and/or the pump and motor which may result in serious damage to the equipment.
- Never jump the 150 Amp circuit breaker at the batteries unless otherwise instructed by the MBB Palfinger technical support center
- Assure all connections are tight and securely fastened
- Heat shrink any connection to all cables.
- Never secure a cable in a way where it can make contact with other wiring, brake-, fuel- or air-lines etc. or get pinched against other objects.

7.1 Breaker Installation

- Mount circuit breaker securely in battery box or at positive battery post using supplied buss bar
- Connect liftgate 2Ga. cable to open stud on circuit breaker
- Connect 2Ga. jumper from open stud on breaker to positive battery post if circuit breaker was not mounted straight at battery with buss bar

![Circuit breaker installation](image)

*Figure 22 Circuit breaker installation*
7 Electrical Installation

7.2 Wiring schematic main battery power - Truck setup

Figure 23 Main wiring - truck setup
7.3 **Wiring schematic main battery power - Trailer setup**

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**Figure 24** Main wiring - trailer setup - dual pole charging system

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**Figure 25** Main wiring - trailer setup - single pole charging system

---
7.4 Trail charger installation

- Install the 2 Ga. positive and negative battery cables securely from mount frame to battery and truck/trailer chassis with proper service loop for sliding liftgate. Make sure the cables can not catch on anything during the slide - test several times.

- Running the cables along the frame, secure the cables every 12 inches.
7.5 On/off switch installation

7.5.1 Truck setup

Lead the 4-wire cab switch (J-11 plug) with the 4 wires for the control power (J1 #2 and #27; J2 #“-“) to the batteries along the sub-wood, run the battery cable to the auxiliary batteries (if no aux. kit ordered, run battery cables also to the truck battery). Secure the cable every 12 inches against the sub-wood with cable staples. Run the cab switch only into the cab.

![Diagram of Cab Cut-Off Switch](image)

*Figure 27 Cab Cut-off switch connection*

7.5.2 Trailer setup

Trailer units do not have a cab switch. The on-off switch is integrated into the control box. The switch is on the right hand side in the control box. It is prewired and does not need any additional work.

Main power is been taken of J-11 #2 and returns to the board through J-30 #4. All #4 terminals are internally hardwired on the board and have 12 V the moment the switch gets turned to “on” position.

![Diagram of 10 wire harness ILUK Plus control box setup](image)

*Figure 28 On-Off setup trailer*
7.6 Control board wiring and connector setup

Verify that this jumper is set; otherwise there will be no flashing light on the platform.

Figure 29 Control board wiring schematic
7.7 Control board plug setup

This graphic describes the different functions of each plug and where it is connected to. Make sure every plug is in its correct position and fuses are in good conditions.

Connector description:

J-1: Main power input and connection to pump & motor tray
J-2: Ground connection
J-3: Platform equipment (Warning lights and foot controls)
J-31: 6 way wireless radio control (optional)
J-32: Control button input for slide function
J-4: Lift cylinder- (#15) and Tilt cylinder valves (#14)
J-41: Sensors B-13 Lift arm and B-15 Platform Sensor
J-42.1: Output to Slide valves S-7 (slide in) and S-8 (slide out)
7.8 Control box wiring (internal)

Figure 31 Control box wiring schematic

J-2 #2: Main Battery power input
J-30: Control box PC-board input gate operation functions
J-32: Control box PC-board input gate sliding functions (#80 slide in; #81 slide out)

7.9 2 Button Remote Hand Control

The hand held remote control plug is integrated into the control box. No separate wiring is needed.

Wire coding inside hand control:

UP - RED
DOWN - YELLOW
12V HOT - GREEN
Functions:

Lift: \( M + S1 + S2 \)
Lower: \( S1 + S2 + S5 + S11 \)
Tilt Up: \( M + S5 \)
Tilt Down: \( S3 + S4 \)
Slide Out: \( M + S8 \)
Slide In: \( M + S7 \)

S1, S2 on lift cylinder and S7, S8 on push pull valve block are double acting release valves:
They have to be activated for fluid to go through them in either direction.

To slide out S8 is activated to allow fluid to both sides of retractable cylinders.
To slide in S7 is activated to allow fluid to piston rod side of retractable cylinders.

Figure 32 Hydraulic schematic ILUK
8.1 Lubrication

Location of Grease Zerks (6 on each side, 12 total)

Oil level in the power pack tank (see marking inside of power pack reservoir)

Platform hinges, Slide Rails and optional Cart Stops (use WD-40 spray for lubrication)

- Open platform and raise lift gate to bed level
- Remove red caps, apply grease until grease begins to flow from bushing ends
- Lower platform to ground and repeat
- Cycle platform open and closed several times and grease again
- Wipe excess grease from joints and replace ALL red caps
9 Decal Placement

For operator’s safety, all decals appearing in “Decal Kit” must be in a conspicuous place on control side of liftgate to be read by operator. This is typically a combination of decals on the liftgate and truck body. Please make sure to place the maximum capacity decal (D) on driver and curb side.

(A) 1 ATG-URGWA - Urgent warning: Elevating gate instructions
(C) 1 ATG-FT - Notice for Foot Control (if applicable)
(D) 2 ATG-XXXX - Max. Capacity (please check the serial number plate to find out your specific capacity)
(E) 1 ATG ILUK - Operational Instructions (placed on your Control Box).
(F) 2 ATG-WLH - Warning: liftgate can crush
(G) 2 ATG-CTN - Caution: Always stand clear of platform area
(H) 1 ATG-BKR - Circuit Breaker Reset (must be located at the circuit breaker)
(J) 1 ATG-RESET - Circuit Breaker Protection
(K) 1 ATG-CAB - Liftgate Shut-Off (must be placed next to the Shut-Off Switch)
(L) 1 ATG-WNG - Warning: Use handle to open (must be located underneath handle (main section))
The picture below will help you to place all decals visible in order to get maximum operational safety.
### 10 Check Off Sheet

**JOB NO.**

**GATE NO.**

**VIN NO.**

#### WIRING
- 1. Power Cord Secured
- 2. Cables Not Rubbing Steel
- 3. 12V Control Wire Secured
- 4. Loomed & Stapled
- 5. Circuit Breaker & Fuse Installed & Decal In Place

#### OPERATION
- 1. All Functions Operate On Up/Down Control, Hand Control
- 2. Up Stops In Place
- 3. Platform Meets Body
- 4. Wheel Set For Proper Opening When Lowering
- 5. Coil Springs At Platform Adjusted
- 6. Torsion Rod Installed On Platform And Adjusted
- 7. Snubber Pads Tight Against Platform
- 8. Bolts Removed on Auto Tilt Knuckles

#### HYD. LINES SECURED
- 1. No Rubbing On Frame
- 2. No Rubbing On Platform
- 3. Up-Down Clear
- 4. Storing Platform Clear

#### HYD. OIL LEAKS
- 1. None At Hoses
- 2. None At Power Pack
- 3. Cylinders

#### WELDS
- 1. Full Welds Mount Plates
- 2. Ground Off / Clean
- 3. Dock Bumper Welded
- 4. Frame Capped Off

#### FINAL INSPECTION
- 1. Platform Touches Ground
- 2. Lights Working On Chassis
- 3. Lic. Plate Bolts & Light
- 4. Decals Installed
- 5. Rubber & Plastic Caps In Place
- 6. Gate Painted Completely
- 7. Body Clean Around Gate
- 9. Cylinders Clean

#### OPTIONS
- 1. All Options On Gate
- 2. Cart Stops Working

#### PINS
- 1. Grease Zerks In Place
- 2. Red Grease Caps On Zerks
- 3. Bolts Tight On Pins

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**Note:**
This must be filled out and kept for your records. A copy of this sheet must be presented to Interlift for warranty reimbursement.