K.HARTWALL

*Logistics Efficiency through Innovation*

# LIFTLINER®

Say goodbye to forklifts

# WHAT DO YOU WANT TO ACHIEVE?

- Implement forklift-free operations?
- Improve the efficiency of an existing tugger train system?
- Improve ergonomics and health & safety?
- Find a solution to support new production layout?
- Move to partial or fully automated operations?

LIFTLINER®

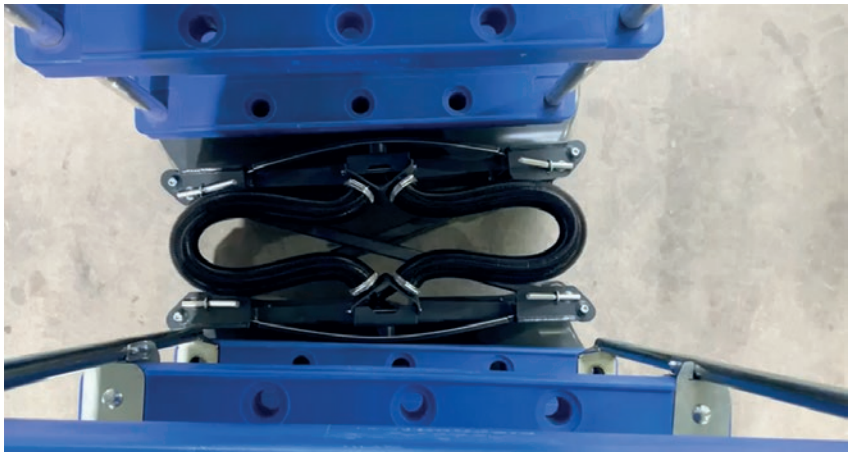
# Extremely space-efficient & agile

**27%**

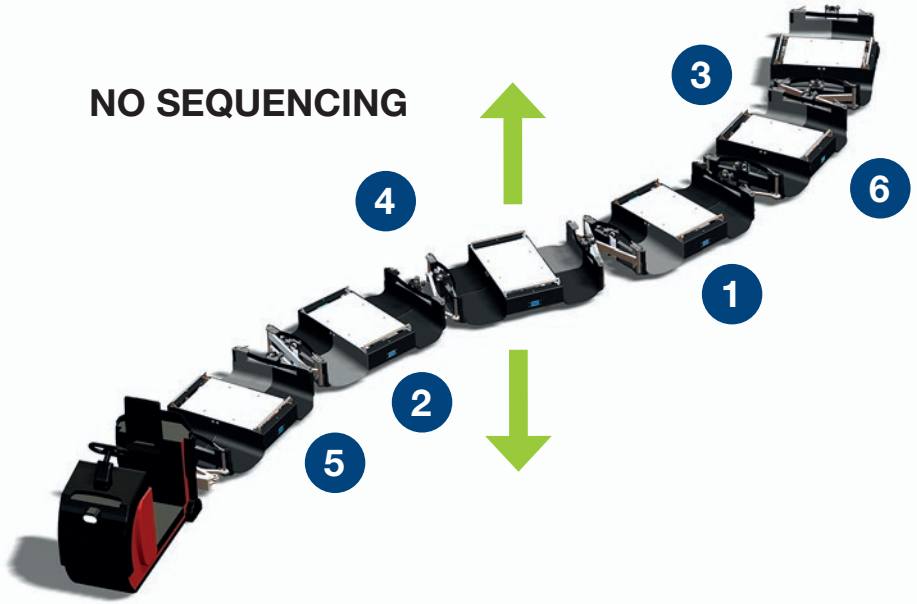
**Shorter**

- ✓ Shorter train and excellent tracking – less space required for transportation…save the space for production!
- ✓ Shorter train equals less walking & handling time

**Save the space for what generates revenue**



# Loading and unloading from either side



< 3 SECONDS
Time to lift
1 tonne

- ✓ Load/unload from either side
- ✓ No need to U-Turn
- ✓ Create the fastest and most efficient routes through your facility without any worry of sequencing deliveries

**Save time of the operator**

# Best ergonomics, improve Health & Safety

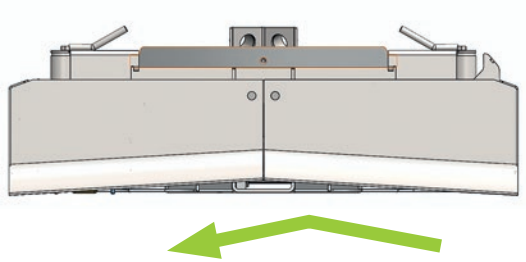
## HEALTH AND SAFETY

- ✓ Walk-through between mother carts prevented
- ✓ Train doesn’t move if carts are not locked
- ✓ Excellent tracking creates a safe work environment
- ✓ Smooth rounded corners of the carts a safe work environment

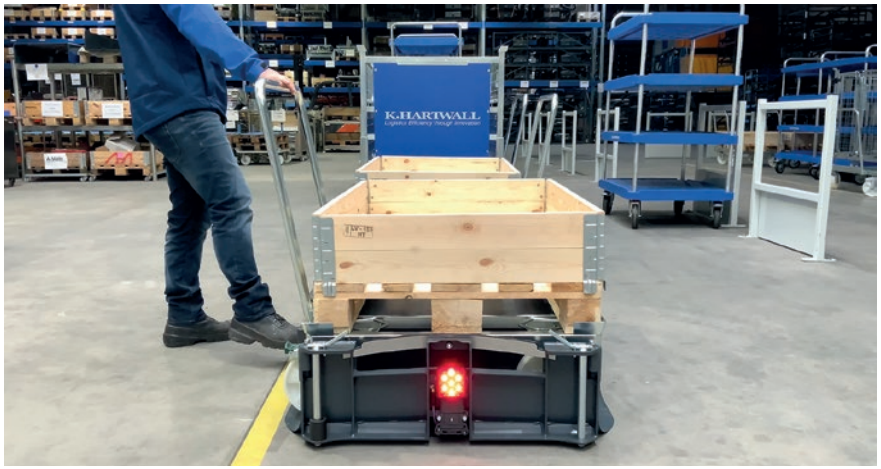
## ERGONOMICS

- ✓ Ergonomic handling of up to 1.000 kg per cart!
- ✓ The load tilts toward the operator when unloading
- ✓ Rooftop shape of the frame for the most ergonomic loading
- ✓ Daughter Cart wheels turn automatically in rolling direction when tilting

**Save sick leave costs**



# Flexible unit for different loads and processes




## FLEXIBILITY

- ✓ Carries multiple cart sizes without losing train capacity
- ✓ Compatible with all standard tuggers

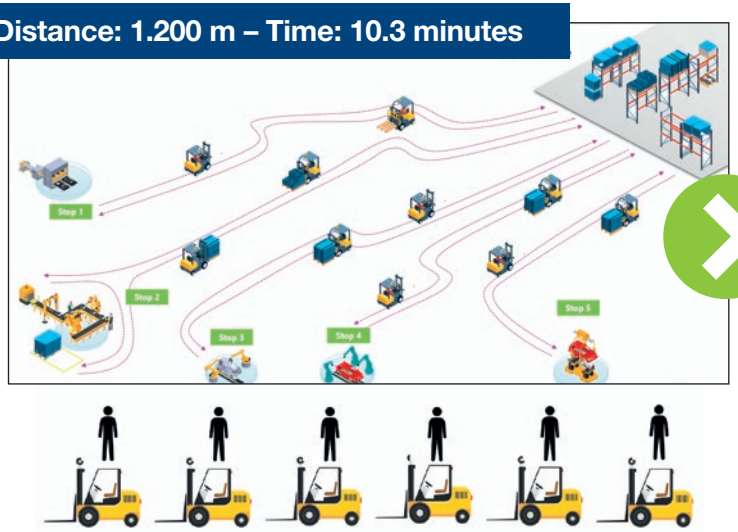
## FIT FOR AUTOMATION

- ✓ Compatible with automated tuggers – future proof
- ✓ The LiftLiner® can communicate with the AGV tugger
- ✓ High safety standard for AGV communication (PLd)

**Reduced manpower, traffic and number of trains needed, supports standardization**

# Benefits

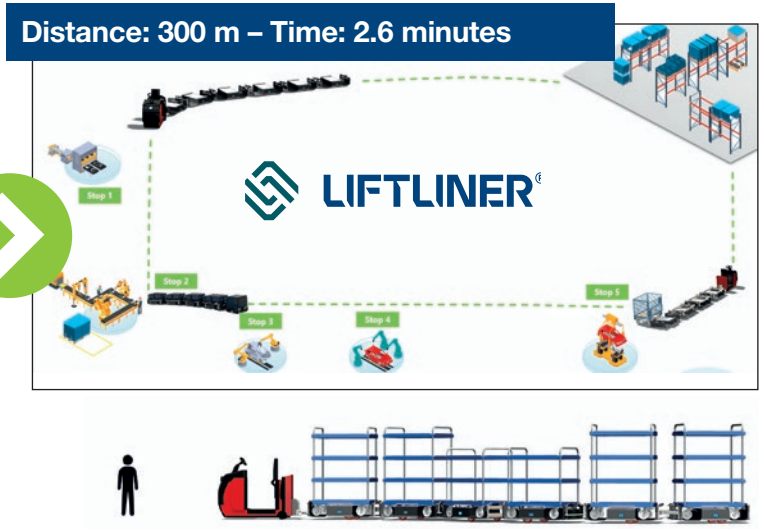
**Distance: 1.200 m – Time: 10.3 minutes**



## BE MORE EFFICIENT

**6 FORKLIFTS =**
**1 LIFTLINER TRAIN**

**Distance: 300 m – Time: 2.6 minutes**



## MILKRUN SYSTEM VS FORKLIFT

### BENEFIT 1

✓ Less waiting times and less accidents

### BENEFIT 2

✓ Fight against labor shortage: LiftLiner can replace 3–6 forklifts and drivers

# Datasheet

## LIFTLINER®

| | |
|---|---|
| **External width** | 1000 mm |
| **External length** | 3200 mm |
| **Tare weight** | 350 kg |
| | |
| **Max load per mother cart** | 1000 kg |
| **Wheel material** | Polyurethane |
| **Wheel size** | 200 mm |
| **Lifting range** | 60 mm |
| **Train length with 3 LiftLiner®** | 9600 mm |
| | |
| **Maximum train speed** | |
| **3 LiftLiner pairs** | 8 km/h |
| **4 LiftLiner pairs (max length)** | 6 km/h |
| | |
| **U turn radius with 3 LiftLiner** | 4500 mm |
| **Ground clearance** | 0/60 mm |
| **Maximum slope** | 10 % |
| **Coupling system** | Crossbar system |

LiftLiner® is made out of a pair of 2 mother carts. Each mother cart carries a daughter cart or an elephantboard.

## ELEPHANTBOARD®

| | |
|---|---|
| **External dimensions** | |
| - EURO | 1220 x 820 x 1810 mm |
| - ISO | |
| **Working load capacity** | 500–1000 kg |
| **Shelf material** | Heavy-duty plastic |
| **Number of shelves** | 1–6 |
| **Distance between shelves** | 228–365 mm |
| **Tare weight** | 65 kg |
| **Wheel combination** | 4 swivel |
| **Wheel material** | Polyamide |
| **Wheel size** | 200 mm |
| **Surface treatment** | - |

## DAUGHTER CART

| | |
|---|---|
| 1240 x 840 x 318 mm | |
| 1240 x 1040 x 318 mm | |
| 1000 kg | |
| - | |
| - | |
| - | |
| 29 kg | |
| 4 swivel | |
| Polyamide | |
| 200 mm | |
| Blue zinc plated | |

The LiftLiner® can carry daughter carts sized:
800 x 600 mm
1200 x 1000 mm
1200 x 800 mm

LIFTLINER®

- Fully electric
- Improves employee safety
- AGV compatible
- 25% more space-efficient compared to other tugger trains
- Lifts in 3 seconds and carries 1 tonne per loading position

# They are already using LiftLiner®

“We always look for ways to improve our operations. With the LiftLiner® our internal logistics is handled in a more efficient and ergonomic way.

The fact that the LiftLiner® is very compact has also enabled us to reserve more space for our production line.”

Webasto

DEUTZ®

BMW

Valeo

ZF

CLAAS

BOSCH

THE HOME DEPOT

## IDEAL APPLICATIONS

+ Retail
+ E-commerce
+ Warehousing
+ Manufacturing
+ Automotive
+ Postal & Parcel
+ DIY

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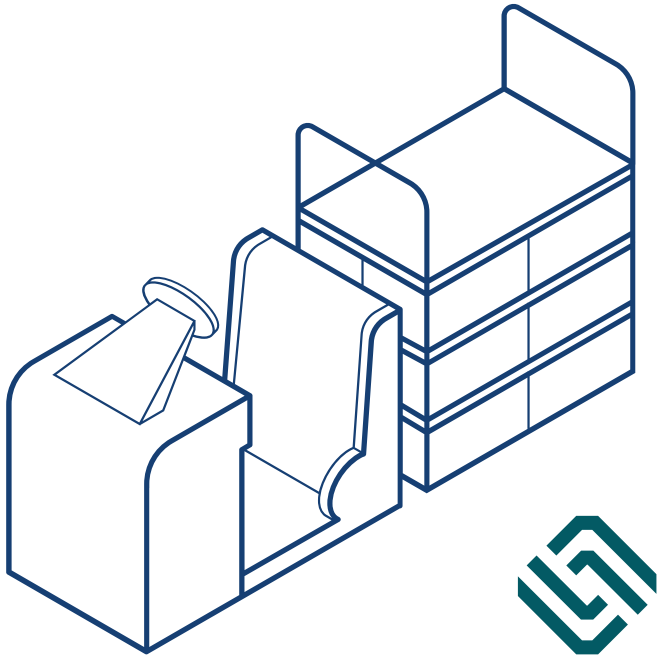
Watch
the video



LIFTLINER®

**MAKE THE NEXT**
**SMART MOVE**
**IN LOGISTICS**