

Product Portfolio

LEANPRODUCTS[®]

Lean manufacturing

www.LeanProducts.eu

K.HARTWALL

Logistics Efficiency through Innovation



LEAN LOGISTICS

The backbone of Lean manufacturing

Index

Lean Dolly Type I	4
Lean Dolly Type II	5
Lean Dolly Type III	6
Lean Dolly Type V	7
Lean Dolly Type VII	8
Lean Dolly Type VIIC with Elevated Deck	9
Lean Dolly 800 x 600 mm	10
Lean Dolly 1200 x 800 mm	11
Lean Dolly 600 x 800 mm	12
Lean Adaptor Pallet	13
Lean Pallet Size Dolly	14
Mini Lean Pallet Size Dolly	15
Lean Pallet Size Dolly with elevated deck	16
Lean Shelf Wagon	17
Lean Taxiliner	18
LiftLiner®	20
elephantboard® and Daughter Cart for the LiftLiner	21
Accessories – Wheel overview	22
Accessories – Safety and ergonomics	23
Accessories – Dirt prevention	24
Accessories – Connecting devices	25
Floor marking, visual management.....	26



Keep things rolling with Lean Logistics

Benefits

- Improve work flow
- Reduce handling costs
- Enable reduction of stock level
- Reduce need for floor space
- Improve ergonomics
- Fast and safe truck loading

Lean Dolly Type I



www.tuv.com
ID 0000040591



TECHNICAL SPECIFICATION	
External dimensions	600 x 400 x 162 mm
Tare weight with CPD wheels, no corners	6,5 kg
Wheel size	100 mm wheels
Wheel configuration	2 fixed & 2 swivel
Wheel material	CPD, rubber or PU
Working capacity	
- CPD – standard and ESD	250 kg
- Rubber – standard and ESD	250 kg
- PU – standard and ESD	250 kg
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 15 units (1950 mm)
Compatibility with Lean Adaptor Pallets	- Next Generation (HADP10030, HADP10032, HADP10045)

OPTIONS

- Total brake on 1 or 2 swivel wheels
- RFID and Tracking compatibility
- Corner supports
- ESD compatibility

ALSO AVAILABLE IN ISO- AND US-DIMENSIONS

- 600 x 500 mm
- 24" x 15"
- 24" x 22.5"

DESIGNED TO CARRY SLC'S AND TRAYS

- 1 stack of 600 x 400 mm
- 2 stacks of 300 x 400 mm
- 4 stacks of 300 x 200 mm

ACCESSORIES

- Ergonomic handle
- Strapping device
- Oil dripping pan



Watch
the video

Lean Dolly Type II



www.tuv.com
ID 0000040591



TECHNICAL SPECIFICATION	
External dimensions	600 x 400 x 162 mm
Tare weight with CPD wheels, no corners	7,0 kg
Wheel size	100 mm wheels
Wheel configuration	4 swivel
Wheel material	CPD, rubber or PU
Working capacity:	
- CPD – standard and ESD	250 kg
- Rubber – standard and ESD	250 kg
- PU – standard and ESD	250 kg
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 15 units (1950 mm)
Compatibility with Lean Adaptor Pallets	- Next Generation (HADP10030, HADP10032, HADP10045)

OPTIONS

- Total brake on 1 or 2 swivel wheels
- RFID and Tracking compatibility
- Corner supports
- ESD compatibility

ALSO AVAILABLE IN ISO- AND US-DIMENSIONS

- 600 x 500 mm
- 24" x 15"
- 24" x 22.5"

DESIGNED TO CARRY SLC'S AND TRAYS

- 1 stack of 600 x 400 mm
- 2 stacks of 300 x 400 mm
- 4 stacks of 300 x 200 mm

ACCESSORIES

- Ergonomic handle
- Strapping device
- Oil dripping pan



Watch
the video

Lean Dolly Type III



With 4 swivel wheels



TECHNICAL SPECIFICATION	
External dimensions	400 x 400 x 178,5 mm
Tare weight with CPD wheels	6 kg
Wheel size	100 mm wheels
Wheel configuration	2 fixed & 2 swivel or 4 swivel
Wheel material	CPD, rubber or PU
Working capacity:	
- CPD – standard and ESD	160 kg
- Rubber – standard and ESD	160 kg
- PU – standard and ESD	160 kg
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 8 units (1200 mm)
Compatibility with Lean Adaptor Pallets	- Next Generation (HADP10030, HADP10032, HADP10045)

OPTIONS

- Total brake on 1 or 2 swivel wheels •
- RFID & Tracking compatibility
- ESD compatibility

DESIGNED TO CARRY SLC'S AND TRAYS •

1 stack of 400 x 400 mm

ACCESSORIES

- Ergonomic handle •
- Strapping device



Watch
the video

Lean Dolly Type V



TECHNICAL SPECIFICATION	
External dimensions	604 x 404 x 157 mm
Tare weight with CPD wheels, with corners	7,5 kg
Wheel size	100 mm wheels
Wheel configuration	4 swivel
Wheel material	CPD, rubber or PU
Working capacity:	
- CPD – standard and ESD	250 kg
- Rubber– standard and ESD	250 kg
- PU – standard and ESD	250 kg
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 15 units (1950 mm)
Compatibility with Lean Adaptor Pallets	- Next Generation (HADP10030, HADP10032, HADP10045)

OPTIONS

- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- ESD compatibility

ALSO AVAILABLE IN ISO- AND US-DIMENSIONS

- 600 x 500 mm
- 24" x 15"
- 24" x 22.5"

DESIGNED TO CARRY SLC'S AND TRAYS

- 1 stack of 600 x 400 mm
- 2 stacks of 300 x 400 mm
- 4 stacks of 300 x 200 mm

ACCESSORIES

- Ergonomic handle
- Strapping device
- Oil dripping pan

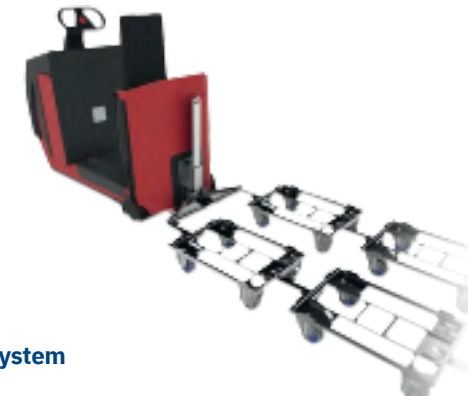


Watch
the video

Lean Dolly Type VII



With sliding draw bar system



www.tuv.com
ID 0000040591



TECHNICAL SPECIFICATION	
External dimensions	604 x 404 x 162 (382) mm
Tare weight with CPD wheels, no corners	7 kg
Wheel size	100 mm wheels
Wheel configuration	2 fixed & 2 swivel
Wheel material	CPD, rubber or PU
Maximum Load Capacity:	
- CPD – standard and ESD	250 kg
- Rubber – standard and ESD	250 kg
- PU – standard and ESD	250 kg
Working capacity in tugger train	1000 kg
Max amount per tugger train	7–8 units
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 15 units (1955 mm)
Compatibility with Lean Adaptor Pallets	- Next Generation (HADP10030, HADP10032, HADP10045)
Recommended max speed	6 km/h

OPTIONS

- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- Corner supports
- Stealth version sliding tow system
- ESD compatibility

ALSO AVAILABLE IN ISO AND US-DIMENSIONS

- 600 x 500 mm, 24" x 15", 24" x 22.5"

DESIGNED TO CARRY SLC'S AND TRAYS

- 1 stack of 600 x 400 mm
- 2 stacks of 300 x 400 mm
- 4 stacks of 300 x 200 mm

ACCESSORIES

- Ergonomic handle
- Strapping device
- Oil dripping pan



Watch
the video

Lean Dolly Type VIIC with Elevated Deck



TECHNICAL SPECIFICATION	
External dimensions	612 x 404 x 683 mm
Tare weight with CPD wheels, no corners	18 kg
Wheel size	100 mm wheels
Wheel configuration	2 fixed & 2 swivel
Wheel material	CPD, rubber or PU
Maximum Load Capacity:	
- CPD – standard and ESD	70 kg
- Rubber – standard and ESD	70 kg
- PU – standard and ESD	70 kg
Working capacity in tugger train	1000 kg
Max amount per tugger train	7–8 units
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 3 units (1955 mm)
Compatibility with Lean Adaptor Pallets	- Next Generation (HADP10030, HADP10032, HADP10045)
Recommended max speed	4 km/h

OPTIONS

- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- ESD compatibility

DESIGNED TO CARRY SLC'S AND TRAYS

- 1 stack of 600 x 400 mm
- 2 stacks of 300 x 400 mm
- 4 stacks of 300 x 200 mm

ACCESSORIES

- Ergonomic handle
- Oil dripping pan



Lean Dolly 600 x 800 mm



With 5 swivel wheels



With draw bar



With draw bar and plywood deck



TECHNICAL SPECIFICATION	
External dimensions	600 x 806 x 158 (495) mm
Tare weight with CPD wheels	12 kg
Wheel size	100 mm wheels
Wheel configuration	2 fixed & 3 swivel or 5 swivel
Wheel material	CPD, rubber or PU
Maximum Load Capacity:	
- CPD – standard and ESD	500 kg
- Rubber – standard and ESD	500 kg
- PU – standard and ESD	500 kg
Working capacity in tugger train	1600 kg
Max amount per tugger train	5–6 units
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 15 units (1955 mm) with towing arm 2,3 m
Compatibility with Lean Adaptor Pallets	- Next Generation (HADP10030, HADP10032, HADP10045)
Recommended max speed	6 km/h

OPTIONS

- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- Corner supports
- Draw bar
- ESD compatibility

ALSO AVAILABLE IN ISO-DIMENSIONS

- 600 x 1000 mm

DESIGNED TO CARRY SLC'S AND TRAYS

- 1 stack of 600 x 800 mm
- 2 stack of 600 x 400 mm
- 4 stacks of 300 x 400 mm
- pallets, foldable cages and stillages

ACCESSORIES

- Strapping device
- Multipurpose plywood deck



Watch
the video

Lean Dolly 1200 x 800 mm



TECHNICAL SPECIFICATION	
External dimensions	1212 x 800 x 162 (502) mm
Tare weight with CPD wheels	19 kg
Wheel size	100 mm wheels
Wheel configuration	2 fixed & 4-5 swivel
Wheel material	CPD, rubber or PU
Maximum Load Capacity:	
- CPD – standard and ESD	4 swivel 300 kg 5 swivel 500 kg
- Rubber – standard and ESD	4 swivel 300 kg 5 swivel 500 kg
- PU – standard and ESD	4 swivel 300 kg 5 swivel 500 kg
Working capacity in tugger train	1600 kg
Max amount per tugger train	5–6 units
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 15 units (1955 mm) with towing arm 2,3 m
Compatibility with Lean Adaptor Pallets	- Next Generation (HADP10030, HADP10032, HADP10045)
Recommended max speed	6 km/h

OPTIONS

- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- Corner supports
- Draw bar
- ESD compatibility

DESIGNED TO CARRY SLC'S AND TRAYS

- 3 stacks of 800 x 400 mm
- 4 stack of 600 x 400 mm
- 8 stacks of 300 x 400 mm
- pallets, foldable cages and stillages

ACCESSORIES

- Strapping device
- Multipurpose plywood deck



Watch
the video

Lean Dolly 800 x 600 mm



TECHNICAL SPECIFICATION	
External dimensions	800 x 600 x 162 (499) mm
Tare weight with CPD wheels	10,5 kg
Wheel size	100 mm wheels
Wheel configuration	2 fixed and 2 swivel
Wheel material	CPD, rubber or PU
Maximum Load Capacity:	
- CPD – standard and ESD	500 kg
- Rubber – standard and ESD	500 kg
- PU – standard and ESD	500 kg
Working capacity in tugger train	1600 kg
Max amount per tugger train	5–6 units
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 15 units (1955 mm) with towing arm 2,3 m
Recommended max speed	6 km/h

OPTIONS

- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- Corner supports
- Draw bar
- ESD compatibility

DESIGNED TO CARRY SLC'S AND TRAYS

- 2 stack of 600 x 400 mm
- 4 stacks of 300 x 400 mm
- pallets, foldable cages and stillages

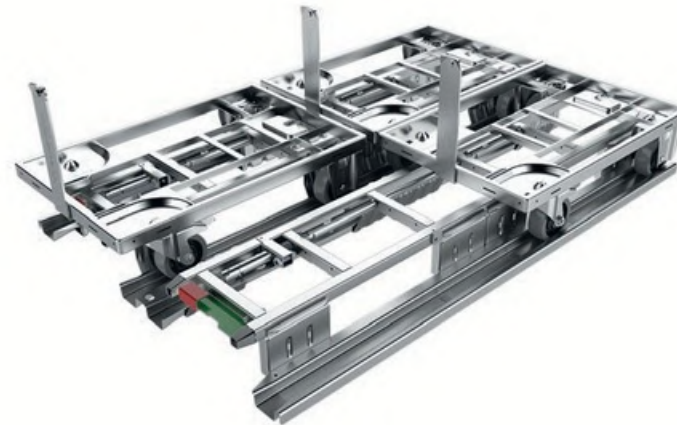
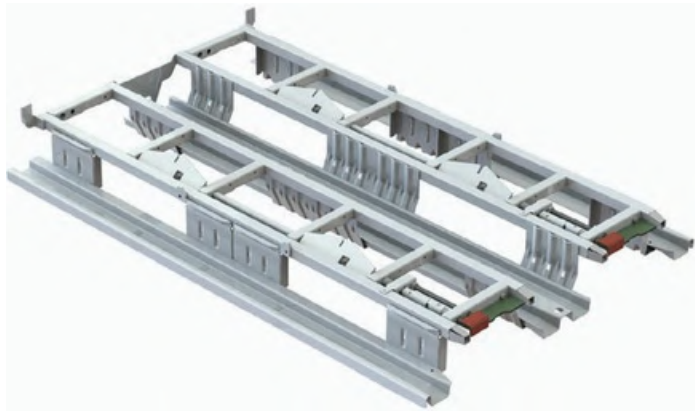
ACCESSORIES

- Strapping device
- Multipurpose plywood deck



Watch
the video

Lean Adaptor Pallet



www.tuv.com
ID 000040591



TECHNICAL SPECIFICATION	
External dimensions	1210 x 800 x 149 mm
Tare weight	32 kg
Working capacity	1000 kg
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	
- loaded in transport	2 units
- loaded at warehouse	3 units
- empty	15 units

DESIGNED FOR ALL STANDARD LEAN DOLLIES

OPTIONS

- Non-slip features
- RFID & Tracking compatibility
- ESD compatibility

ALSO AVAILABLE IN ISO AND US-DIMENSIONS

- 1200 x 1000 mm
- 48" x 30"
- 48" x 45"

ACCESSORIES

- EasyStrap
- Compatible with industry standard lids



Lean Pallet Size Dolly



With 6 wheels
for 360° spinning



TECHNICAL SPECIFICATION	
External dimensions	1200 x 800 x 275 (1017) mm
Tare weight	66 kg
Wheel size	160 mm wheels
Wheel configuration	2 fixed & 2 swivel 4 swivel 2 fixed & 4 swivel
	Wheel material PU and CPD
	Working capacity 1000 kg
	Working capacity in tugger train 4000 kg
	Max amount per tugger train 6 units
	Surface treatment Blue zinc plated acc. to EN-ISO2081
	Safe stacking up to 6 units (1680 mm) with "draw bar" (2,4 m)
	Recommended max speed 6 km/h

COMPATIBLE WITH ALL LEAN DOLLIES, LEAN SHELF WAGON, TAXI WAGON AND TAXILINER.

OPTIONS

- Available with anti slip material or plywood deck
- Integrated strapping device
- ESD compatibility
- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- Corner supports
- 360° spinning on 6 wheels
- Catch for towing one or two lines of Lean dollies
- Wheel spacer
- Forklift guide

ALSO AVAILABLE IN ISO- AND US-DIMENSIONS

- 1200 x 1000 mm (72 kg)
- 48" x 45" (77 kg)
- 32" x 30" (53 kg)

DESIGNED TO CARRY SLC'S, PALLETS AND BOXES

- Pallet sizes: Euro, ISO & 48" x 45"
- SLC's in Euro, ISO or US boxes
- Cages and foldable boxes



Watch
the video

Mini Lean Pallet Size Dolly



TECHNICAL SPECIFICATION

External dimensions	923 x 600 x 280 (1019) mm
Tare weight	55 kg
Wheel size	160 mm wheels
Wheel configuration	2 fixed & 2 swivel or 4 swivel
Wheel material	PU and CPD
Working capacity	1000 kg
Working capacity in tugger train	4000 kg
Max amount per tugger train	6 units
Surface treatment	Blue zinc plated acc. to EN-ISO2081
Safe stacking	up to 6 units (1680 mm) with draw bar (2,4 m)
Recommended max speed	6 km/h

OPTIONS

- Available with anti slip material or plywood deck
- Integrated strapping device
- ESD compatibility
- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- Corner supports
- Catch for towing one or two lines of Lean dollies
- Wheel spacer

ALSO AVAILABLE IN US-DIMENSIONS

- 32" x 30"

DESIGNED TO CARRY SLC'S, PALLETS AND BOXES

- Pallet sizes:
800 x 600 mm or 32" x 30"
- Cages and foldable boxes

COMPATIBLE WITH ALL LEAN DOLLIES, LEAN SHELF WAGON, TAXI WAGON AND TAXILINER.



Watch
the video

Lean Pallet Size Dolly with elevated deck



TECHNICAL SPECIFICATION	
External dimensions	1200 x 800 x 600 mm
Tare weight	89 kg
Wheel size	160 mm wheels
Wheel configuration	2 fixed & 2 swivel 4 swivel 2 fixed & 4 swivel
	Wheel material PU and PA
	Working capacity 1000 kg
	Working capacity in tugger train 4000 kg
	Max amount per tugger train 6 units
	Surface treatment Blue zinc plated acc. to EN-ISO 2081
	Safe stacking up to 1680 mm with "handlag" (2,4 m)
	Recommended max speed 6 km/h

COMPATIBLE WITH ALL LEAN DOLLIES, LEAN SHELF WAGON, TAXI WAGON AND TAXILINER.

OPTIONS

- Available with anti slip material or plywood deck
- Integrated strapping device
- ESD compatibility
- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- Corner supports
- 360° spinning on 6 wheels
- Catch for towing one or two lines of Lean dollies
- Wheel spacer
- Forklift guide

ALSO AVAILABLE IN ISO- AND US-DIMENSIONS

- 1200 x 1000 mm (97 kg)
- 48" x 45" (90 kg)

DESIGNED TO CARRY SLC'S, PALLETS AND BOXES

- Pallet sizes: Euro, ISO & 48" x 45"
- SLC's in Euro, ISO or US boxes
- Cages and foldable boxes



Watch
the video

Lean Shelf Wagon



TECHNICAL SPECIFICATION

External dimensions 1260 x 806 x 1680 mm

Tare weight (2 shelves + floor) 113 kg

Wheel size 160 mm wheels

Wheel configuration 2 fixed and 2 swivel

Wheel material PU and CPD

Surface treatment Blue zinc plated acc. to EN-ISO2081

Working capacity Per Shelf: 150 kg or 250 kg (heavy-duty)

Per Unit: 450 kg or 800 kg (heavy-duty)

Max amount in tuggler trains 6 units

Recommended max speed 6 km/h

OPTIONS

- ESD compatibility
- Total brake on 1 or 2 swivel wheels
- RFID & Tracking compatibility
- 6 wheel option for 360° spinning
- Catch for towing one or two lines of Lean dollies
- Wheel spacer
- Forklift guide

DESIGNED TO CARRY SLC'S AND TRAYS AND OTHER BOXES

ACCESSORIES

- Transport & non-contamination cover

COMPATIBLE WITH ALL LEAN DOLLIES, LEAN SHELF WAGON, TAXI WAGON AND TAXILINER.



Watch
the video

Lean Taxiliner



3 Bay Version



4 Bay Version



TECHNICAL SPECIFICATION 3 Bay Version 4 Bay version	
External dimensions	2031 x 1425 x 725 mm 2496 x 1430 x 725 mm
Length including the draw bar	2540 mm 3001 mm
Space between dividers	410 mm 410 mm
Working capacity	750 kg 750 kg
Tare weight	215 kg 282 kg
Maximum Train load	2250 kg 2250 kg
Maximum speed	15 km/h 12 km/h
Min. turning circle	3800 mm 4350 mm
Ramp elevation for Dollies	72 mm 80 mm
Ground clearance	40 mm 38 mm
Steering system	SpurTrak™ All wheel Steer All wheel Steer
Surface treatment	Powder coating Powder coating

COMPATIBLE WITH ALL LEAN PALLET SIZE DOLLY AND LEAN SHELF WAGON.

DESIGNED TO CARRY

- 600 x 400 mm Dollies
- Also ISO and US sized Dollies

BENEFITS

- Ideal for logistic flows where the sequence cannot be controlled
- Reduce handling costs
- Enables the delivery of multiple article numbers in one delivery sequence
- Improve ergonomics
- Fast and safe internal transport
- Excellent tracking and steering stability

OPTIONS

- Non-slip feature for the ramps
- Double locking device
- Additional floor guidance
- ESD compatibility
- RFID & Tracking compatibility
- 600 x 800 mm Dollies compatibility



Watch
the video





Watch the video

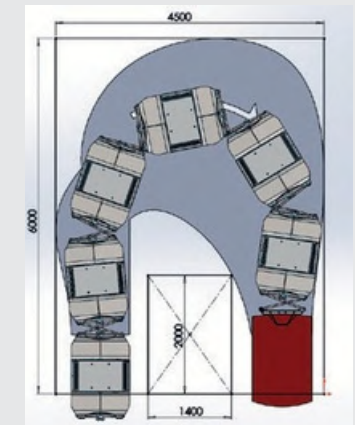
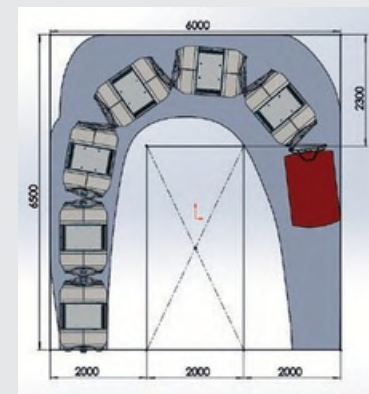


TECHNICAL SPECIFICATION

External dimensions	820 x 620 mm, height when down/up 290/350 mm 1220 x 820 mm, height when down/up 290/350 mm 1220 x 1010 mm, height when down/up 290/350 mm
Ground clearance when down/up	0/60 mm
Tare weight with CPD wheels, no corners	18 kg
Wheel size	200 mm wheels
Wheel configuration	2 per wagon
Wheel material	PU
Maximum Load Capacity	1000 kg
Tare weight	approx. 180 kg
Coupling:	
- Length	200 mm
- Type	A&A crossbar coupling system
Maximum speed	16 km/h
Surface treatment	Powder coating
Time to lift	Less than 3 seconds

BENEFITS

- Easy one man operation
- No turnaround needed
- Extremely manoeuvrable
- No additional routing needed
- Safe and high track stability
- Loading/unloading from both sides



elephantboard® and Daughter Cart for the LiftLiner



TECHNICAL SPECIFICATION ELEPHANTBOARD (4 SHELVES)

External dimensions 820 x 1450 x 1810 mm

Maximum working capacity 500–1000 kg

Shelf material Rotomoulding plastic

Number of shelves 1–4

Distance between shelves 365 mm

Tare weight 65 kg

Wheel type 2 swivel and 2 fixed

Wheel material Heavy-duty polyurethane wheels

Wheel size 200 mm

Surface treatment Blue Zinc Plated

Amount per LiftLiner 1 unit

TECHNICAL SPECIFICATION DAUGHTER CART

External dimensions 840 x 1240 x 318 mm

Maximum working capacity 1000 kg

Tare weight 29 kg

Wheel type 2 fixed and 2 swivel
or 4 swivel

Wheel material Polyamide wheels

Wheel size 200 mm

Surface treatment Blue Zinc Plated

Amount per LiftLiner 1 unit

Also available in ISO size.

OPTIONS

- Eliminate the need for forklifts and reduce the risk of accidents at manufacturing and assembly lines
- Lower maintenance costs
- Reduce overall operator costs
- Require only one operator making multiple deliveries on one route trip
- Enable to carry smaller and kitted loads in addition to pallet units in the same train
- Faster delivery rates - takes seconds to unload



Accessories – Wheel overview

∅ 100 MM WHEELS



CPD WHEEL



RUBBER WHEEL



POLYURETHANE WHEEL



ESD RUBBER WHEEL



**ESD HYBRID WHEEL
NON-MARKING**



**ESD POLYURETHANE
WHEEL**



CLEAN WHEEL

∅ 160 MM WHEELS



POLYURETHANE WHEEL



SOLID WHEEL PA

- All our wheels are equipped with ball bearings to ensure
 - lower rolling resistance
 - lower noise
- - long life span
- Very high load capacity and quality
The wheels are designed to be used also in a tugger train



Accessories – Safety and ergonomics



**MULTIPURPOSE DECK
FOR 600 X 800 MM LEAN DOLLIES**

TECHNICAL SPECIFICATION	
External dimensions	598 x 798 mm
Material	Coated plywood
Max. load	500 kg
Supplied	Ready to use

DESIGN

- Compatible with 600 x 800 Lean Dollies

BENEFITS

- Provides a close deck for smaller packages
- Easy to use
- Equipped with two ergonomic handles



**ERGONOMIC HANDLE
FOR TOWING OF DOLLIES**

TECHNICAL SPECIFICATION	
External dimensions	470 (L) x 405 (W) x 900 (H) mm
Surface treatment	Blue zinc plating
Weight	5 kg
Wheel type and size	CPD 100 mm
Supplied	Ready to use

DESIGN

- Both for 600 x 400 and 600 x 800 Lean Dollies

BENEFITS

- Ergonomic and safe way to move the dollies



EASY STRAP To be used in connection with the Lean Adaptor Pallet and **FOR LEAN ADAPTOR PALLET** secure the transported boxes.

TECHNICAL SPECIFICATION	
Modular length	2300 – 3800 mm
Material	Textile with metal hook
Max. load to be tripped	1000 kg = max. load to be distributed on one or more Adaptor Pallets
Max. load by stacking	1000 kg in total
Supplied	Ready to use and to be attached to the Adaptor Pallet.

DESIGN

- Adjustable length
- Directly attached to the Lean Adaptor Pallet

BENEFITS

- Safer transportation
- Easy to attach
- Reusable



**COVER
FOR LEAN SHELF WAGON**

TECHNICAL SPECIFICATION	
External dimensions	806 x 1260 x 1680 mm
Material	PVC (polyvinyl chloride)
Packing	Delivered as complete kit for 1 unit
Supplied	Delivered ready for use and to be attached to the Adaptor Pallet

Designed for closed transportation of the Lean Shelf Wagon between warehouses or from for example unloading areas outside to inside. The cover is very easy to flip over and open as well as closing.

DESIGN

- Access from both long and short sides if needed
- Easy manual handling due to Velcro-closing
- Flip-up and attach sides for less space consuming handling

BENEFITS

- Weather protection
- Protection against contamination
- Transport safety under truck transportation
- Internal transport safety
- Easy manual handling
- Space friendly solution



**DRIPPING PAN
FOR 600 X 400 MM LEAN DOLLIES**

TECHNICAL SPECIFICATION	
External dimensions	604 x 404 mm
Material	PVC (Polyvinyl chloride)
Supplied	Ready to use

Designed to be placed between the Dolly and the packages transported.

BENEFITS

- Prevents liquid dripping from boxes on the floor
- Prevents accidents
- The solution stays stackable while being attached with the dripping pan

Accessories – Connecting devices



**TOW TRACTOR
DRAW BAR**

TECHNICAL SPECIFICATION	
Max. load on the draw bar	6000 kg
Max. load on the pin	2000 kg
Compatible with	Lean Dolly 600 x 500 mm Lean Dolly 600 x 400 mm Lean Dolly 600 x 800 mm Lean Dolly 600 x 1000 mm Lean Pallet Size Dolly Lean Shelf Wagon
Surface treatment	Blue zinc plated
Supplied	Assembled ready to mount on the tugger

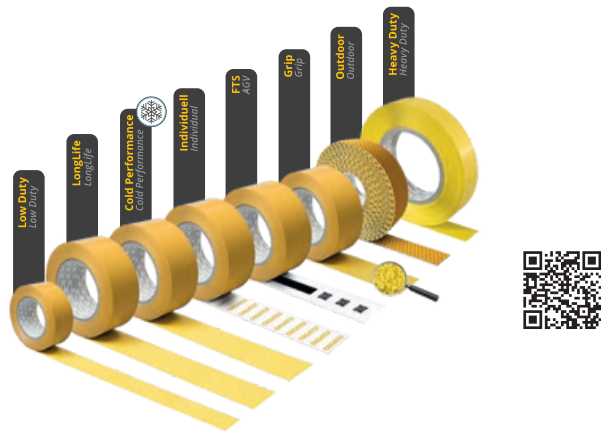
DESIGN

For the tractor types:
Jungheinrich EZS350 and Linde P30/P50.
It can also be adjusted for other tractor types.

BENEFITS

- Enable towing of all Lean Dollies in various combinations.





LongLife Floor Marking Tape

TECHNICAL SPECIFICATION

Adhesive strength 3,65 N/cm – 27,4 N/cm

Thickness 0,16 mm – 2,8 mm

Temperature range -40°C – +120°C

Widths 50 mm – 100 mm

DESIGN

Available in different colors, sizes and surfaces

BENEFITS

sticks quickly, durable, for various substrates



eOX-Spot

TECHNICAL SPECIFICATION

Luminous flux of 1.150 Lumen
the projector

Luminous duration 35.000 hours

Input Voltage 220 – 240 V AC, 50 / 60 Hz

Ambient temperature -30 °C to +35 °C

DESIGN

Steel, Aluminium, powder coated, active cooling

BENEFITS

High-Power-LED, quickly interchangeable motifs, use on wall and ceiling



eOX-Station

TECHNICAL SPECIFICATION

Voltage 240 VDC

Sensors Magnetic Hall Sensors

Reaction time < 1 Sek.

Maximum number of 120
tracks

DESIGN

Compatible with Lean Dollies

BENEFITS

FiFo station digitally enhanced, pick-by-light, calculation of the FiFo-Logic, input and output detection

**MAKE THE NEXT
SMART MOVE
IN LOGISTICS**

**COST SAVINGS
UP TO 40 %**

**PRODUCTIVITY
INCREASED BY
UP TO 55%**

**3-4 TIMES LESS
MANUAL HANDLING
OPERATIONS
PER TOTE**

**BETTER
SAFETY AND
ERGONOMICS**



DAIMLER

MAHLE



BOSCH

SCHAEFFLER



brose
Technik für Automobile

Continental

LEANPRODUCTS®

Lean manufacturing

www.LeanProducts.eu

Via Pietro Bassani 8 33170 Pordenone PN - Italy
info@leanproducts.eu | www.LeanProducts.eu