



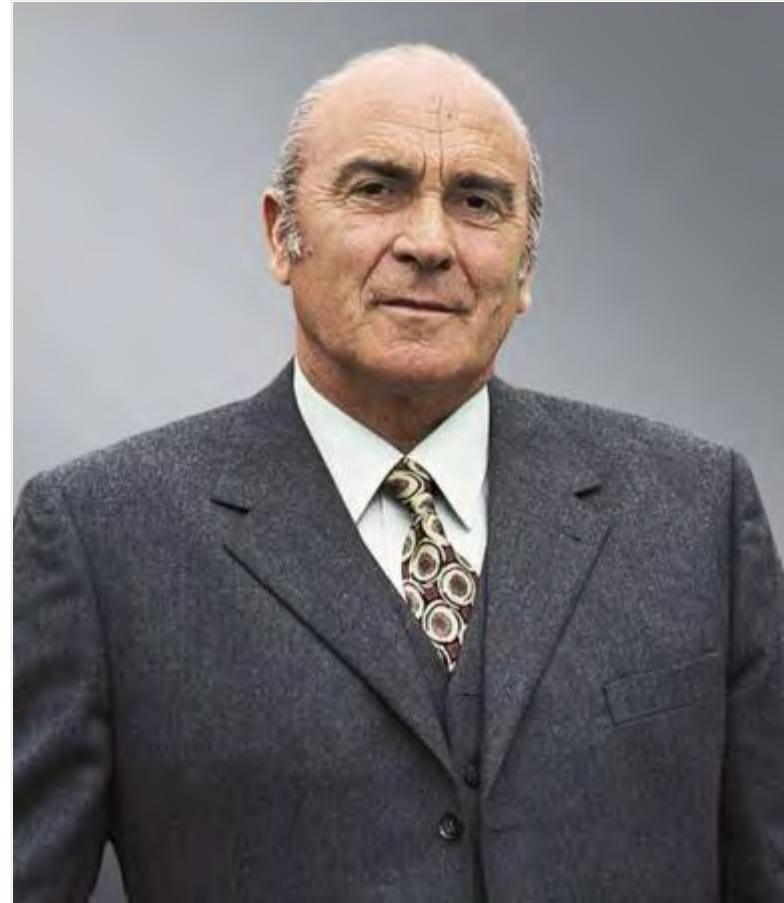
[facebook.com/LiebherrMaritime](https://www.facebook.com/LiebherrMaritime)
www.liebherr.com

LIEBHERR

Maritime Cranes

Liebherr – a Family Business

- Company founded in 1949 by Dr.-Ing. E.h. Hans Liebherr
- The Liebherr Group today: over 130 companies worldwide, over 39,000 employees and about € 8.963 billion turnover (2013)
- Decentralised structure with straightforward, autonomous corporate units – divisional structure
- Holding company: Liebherr-International AG, Bulle, Switzerland



Liebherr-International AG

Divisional Structure



New Innovations introduced in 2015:

Reachstacker Series – LRS 545

Smart Grip

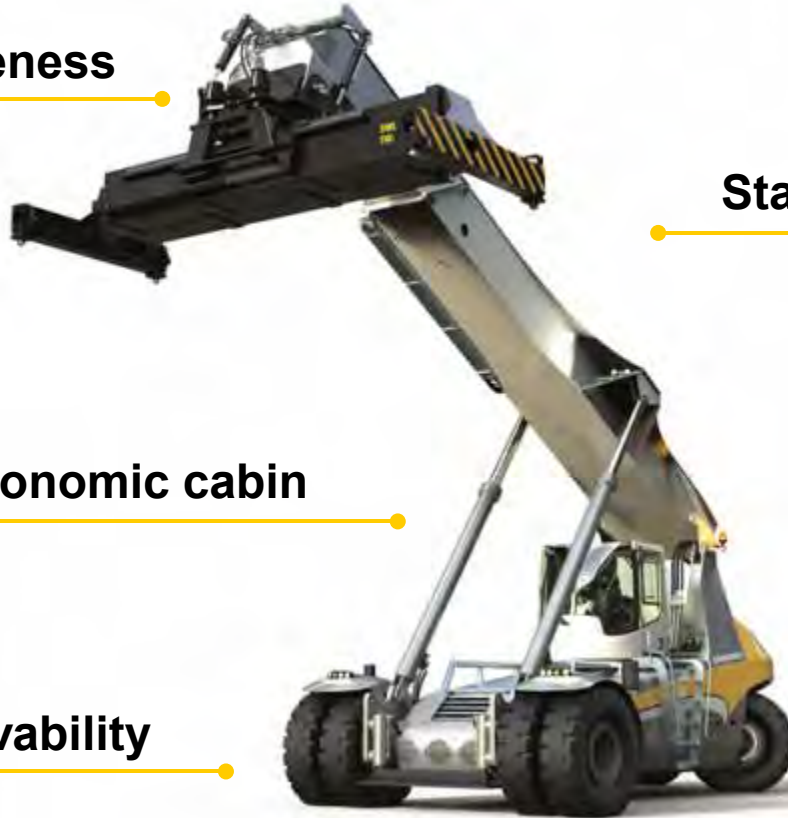
LHM 800 Mobile Harbour Crane

Liebherr Reachstacker Series – LRS 545



Provides new impulses for your Terminal

High cost-effectiveness



State-of-the-art technology

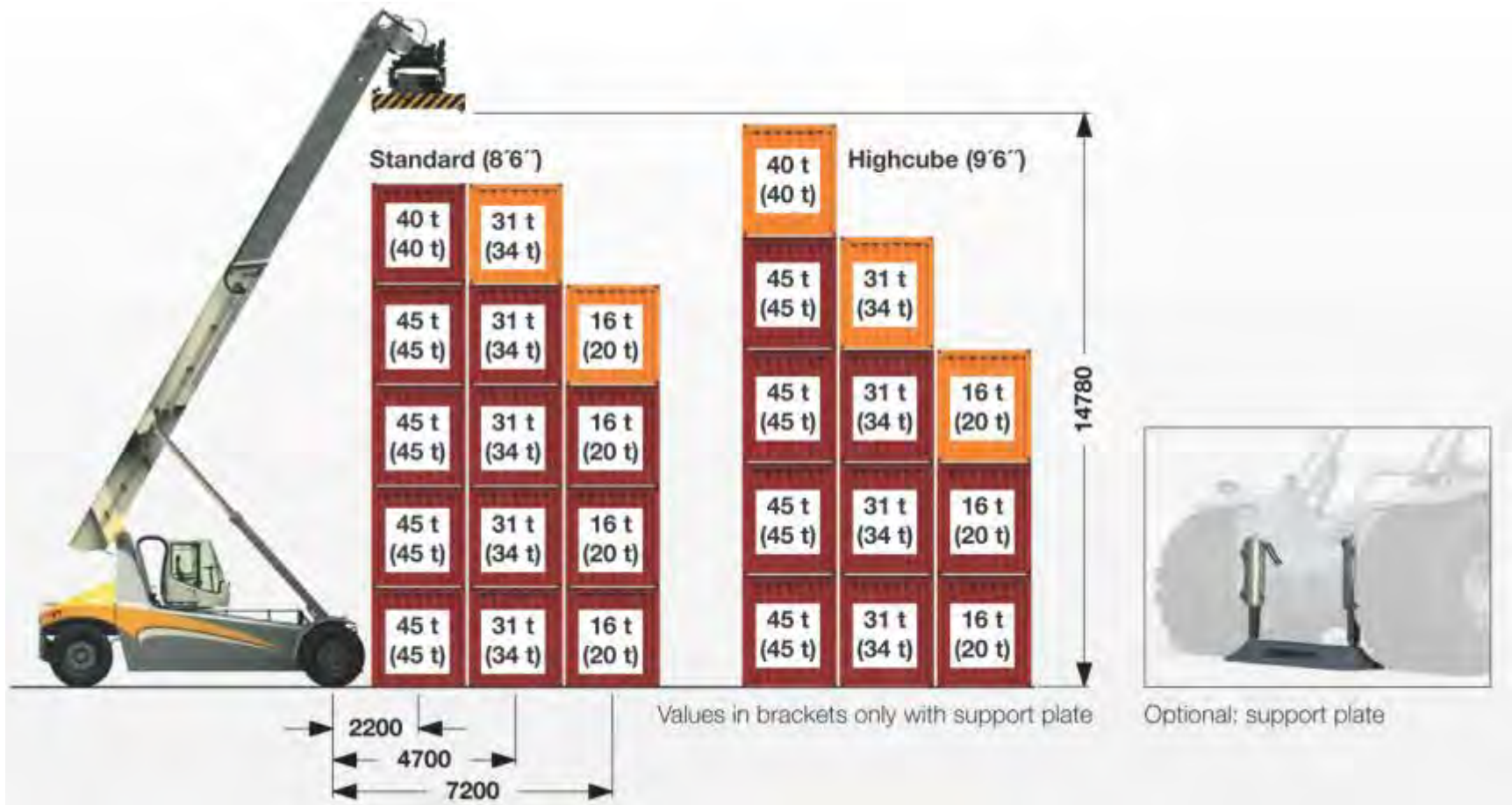
Spacious and ergonomic cabin

Outstanding visibility

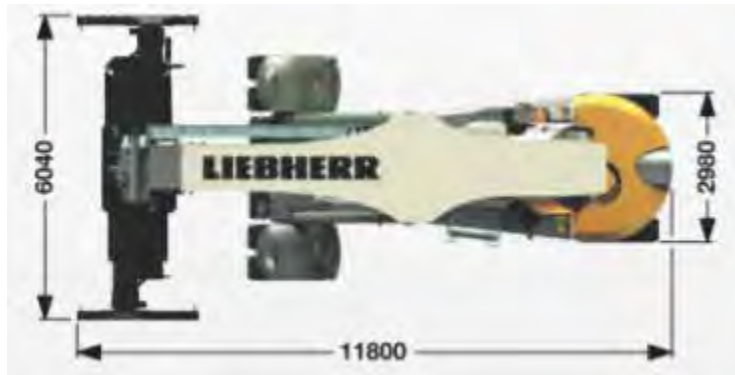
Excellent drivability

MAIN DATA

Performance

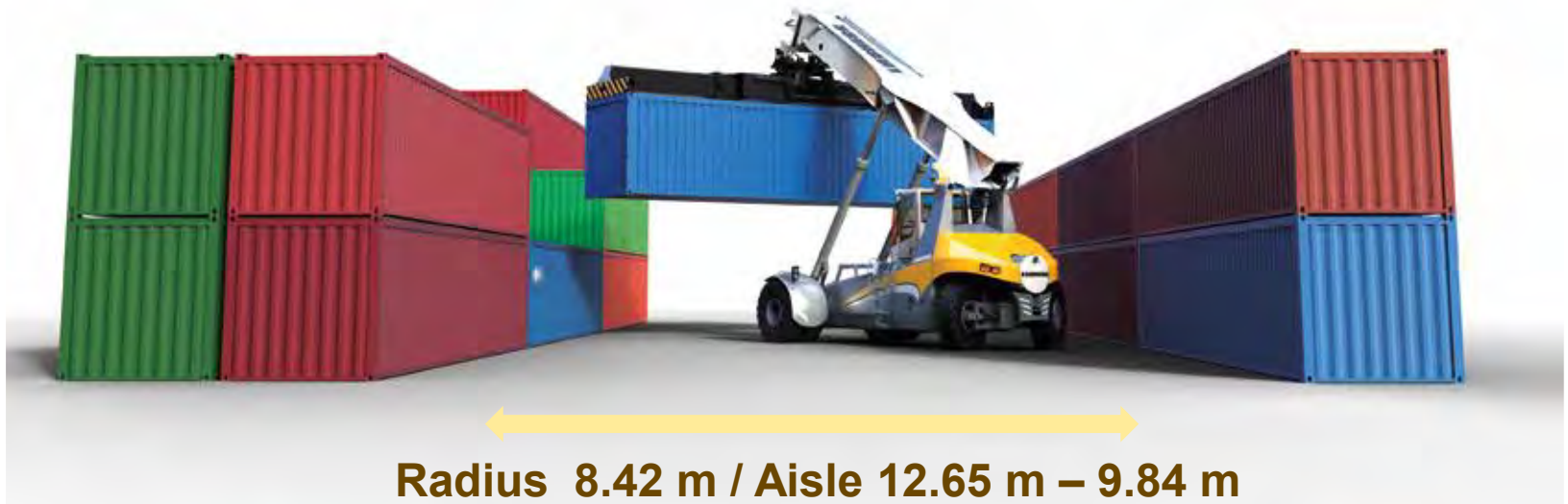


Dimensions



Net weight: 69 tons

Agility



Performance Data

	LRS 545
Lifting speed (full load / empty)	0.25 m/s / 0.40 m/s
Lowering speed (full load / empty)	0.40 m/s / 0.40 m/s
Driving speed (full load / empty)	20 km/h / 25 km/h
Engine	Liebherr Diesel
Engine performance	230 kW
EPA / EU	Tier 4 final / Stage IV
Displacement / Cylinder	8 Litre / 4 Cylinder
Drive	Hydrostatic
Pactronic® hybrid drive (optional)	110 kW

ERGONOMIC / SAFETY

Cabin



Ergonomic cabin

- Ø Outstanding panorama view
- Ø Heatable windows
- Ø Automatic climate control

Ergonomic



Unique suspension systems

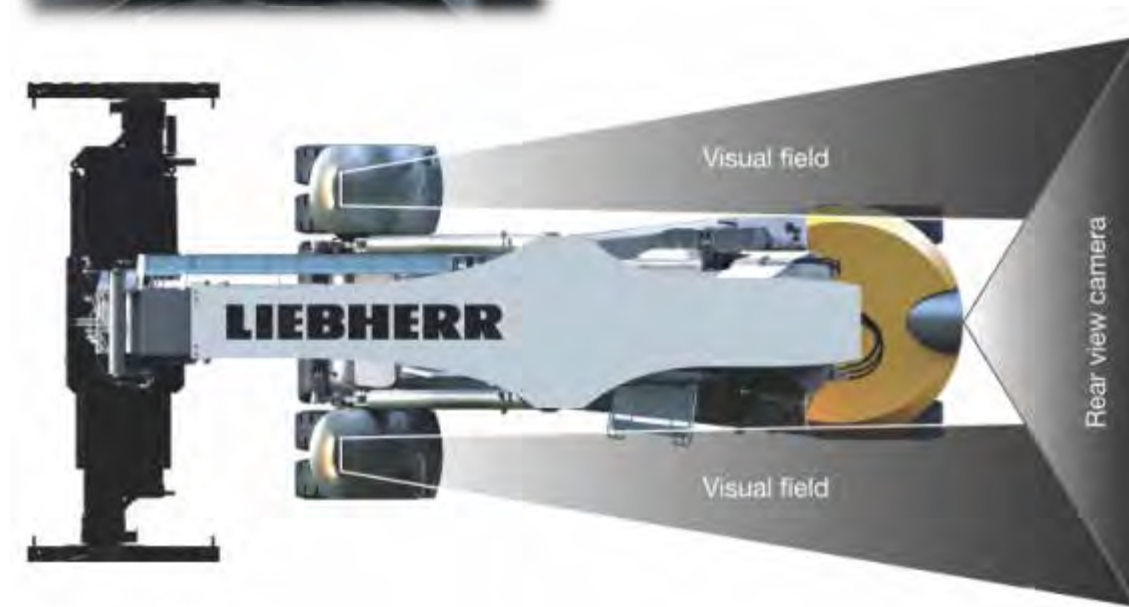
- Reduces noise
- Absorbs shocks
- Reduces drivers fatigue

Safety



Excellent visual field

- In all directions
- Improves safety at work



Safety



Camera - Spreader

- Specially for intermodal- applications
- Improves safety

Safety

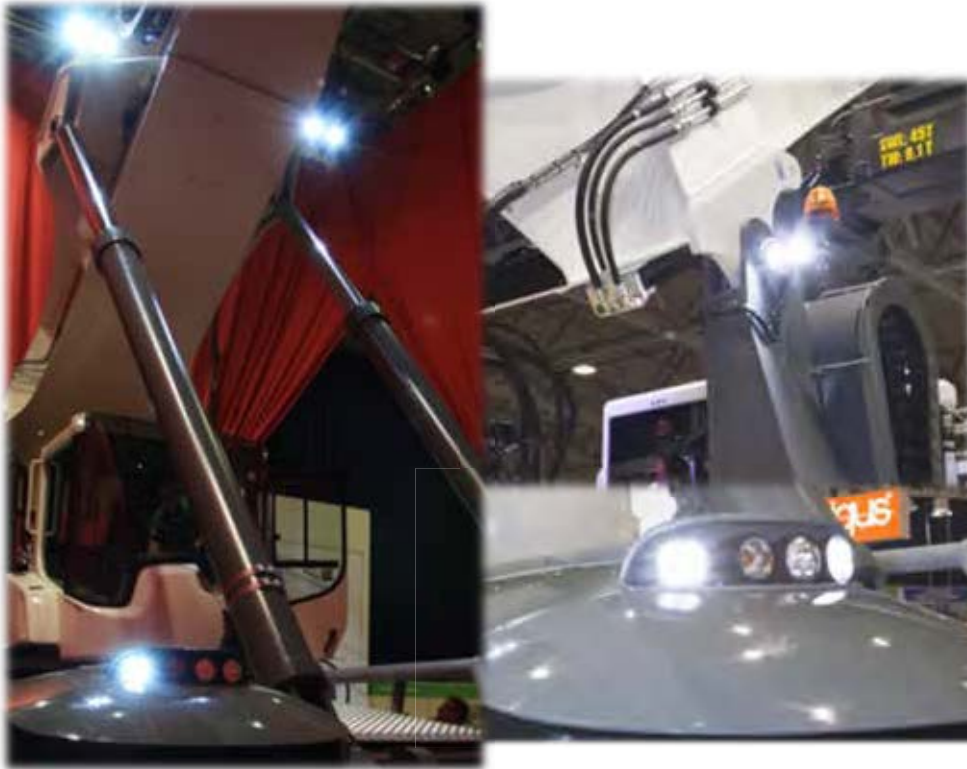


Wedge shape design

∅ Reduces front blind spot



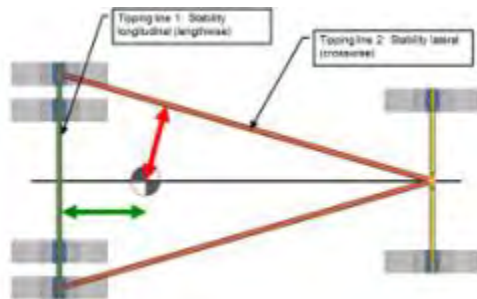
Safety



High illumination

- Provides good working conditions

Safety



Wider track with

- More lateral stability
- Improves safety at work



Safety



Operation brake

- Two independent brake systems
 - Hydraulic brake
 - Wet disc brake
- Excellent response



Fire extinguisher systems

- Two aerosol generator
- Located near power pack
- ... and hydraulic components

Safety – Assistance systems



Litronic® - Control System

- Information System
- Engine Management
- Machine Data Recording
- Diagnostic System
- Power Management
- Communication System

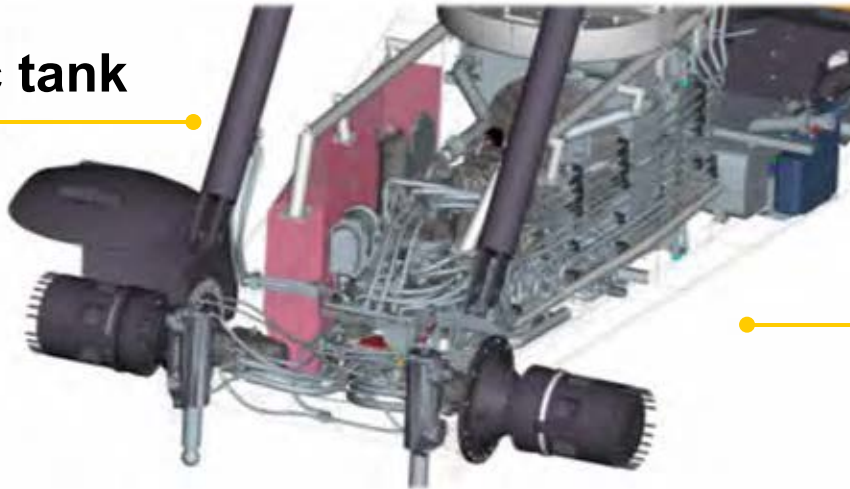
Safety – Assistance systems

- Ø **Monitoring and controlling the load- and outreach indication**
- Ø **Vertical and horizontal lift path incl. automatic container positioning**
- Ø **Speed limitation**
- Ø **Luffing height limitation**

DRIVE SYSTEM

Hydrostatic drive

Hydraulic tank



Hydrostatic drive

- Step less speed control
- Long life-time
- Maintenance-free

Individual wheel drive



Individual wheel drive

- Reducing wear and tear
- No one side tire wear
- Longer service life of steering components
- Small radius – improves agility

Conventional
Wheel Drive

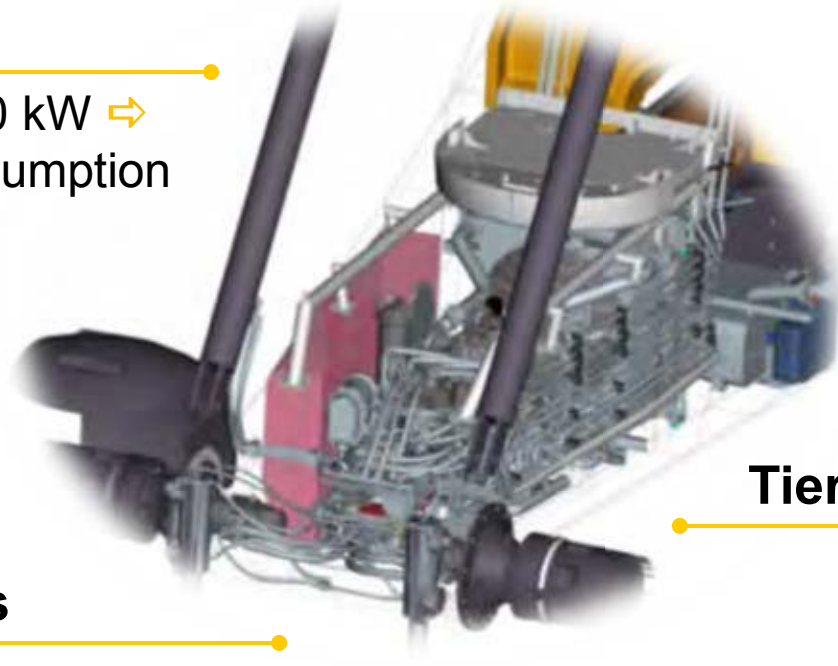
Individual Wheel Drive



Diesel-engine

Downsizing

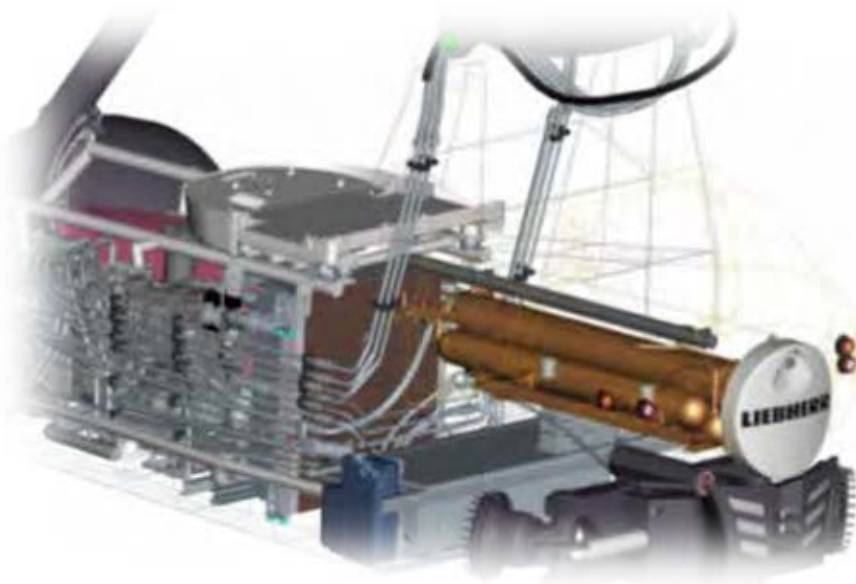
- 4 cylinder 230 kW ⇒ less fuel consumption



Tier 4 final / Stage IV

Low service costs

- Easy accessible
- High service interval (1.000 h)



Pactronic® hybrid drive

- Another 110 kW
- Upgrade is possible
- Maintenance-free

LIFETIME - MAINTENANCE - SERVICE

Lifetime



Direct stress flow

- Ø Boom a wheel suspension a tires a ground
- Ø Nearly no stress flow
- Ø Long lifetime

Maintenance



Low maintenance cost

- Service intervals – 1000 h
- Easy access

Maintenance

Single rim



14 bolts

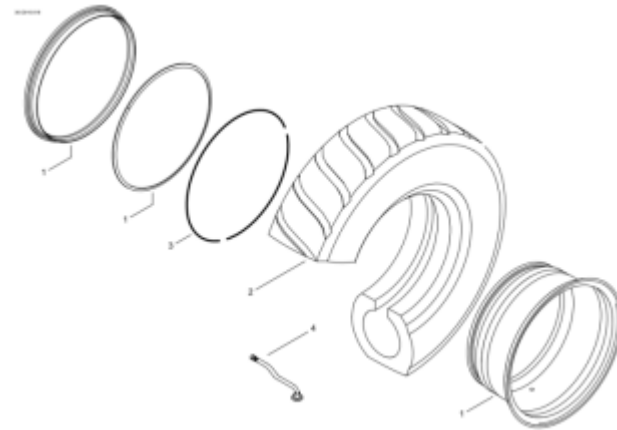
Split rim



26 bolts

Single rim

- Fast and safe tire-changing
- Time saving ~ 50%



LIFTING ATTACHMENTS / OPTIONS

Spreader



ELME 817 top-lift spreader



ELME 857 intermodal spreader

Options

- **Movable cabin**
- **Low temperature package**
- **Central Lubrication – easier maintenance, save time**
- **LiDAT®**
 - LIDAT® Basic package
 - LIDAT® Teleservice



USP's

- Ø *Outstanding visibility*
- Ø *Ergonomic cabin*
- Ø *Excellent drivability*
- Ø *State-of-the-art technology*
- Ø *High cost effectiveness*

Smart Grip



System

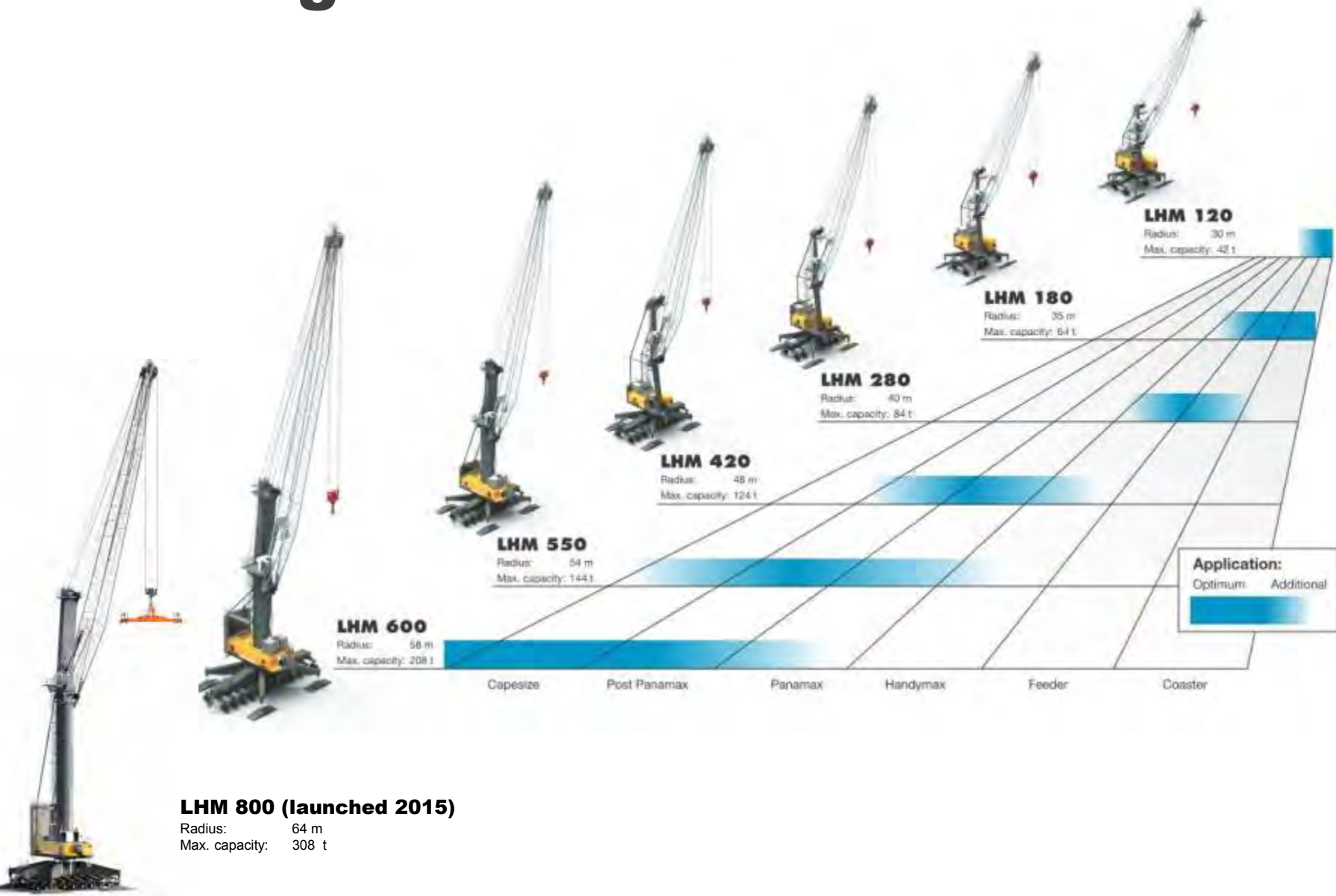
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Liebherr Mobile Harbour Cranes



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The Range



LHM 120

Max outreach: 30 m

Max capacity: 42 t

Power Pack: 450 kW



LIEBHERR

LHM 180

Max outreach: 35 m
Max capacity: 64 t

Power Pack: 450 kW

Optional:
Customer-specific painting
Customer-specific logo



LHM 280

Max outreach: 40 m
Max capacity: 84 t

Power Pack:

450 kW

670 kW



LIEBHERR

LHM 420

Max outreach: 48 m
Max capacity: 124 t

Power Pack:

670 kW

670 kW + Pactoric®



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LHM 550

Max outreach: 54 / 48 m
Max capacity: 144 t

Power Pack:

670 kW

670 kW + Pactronic®



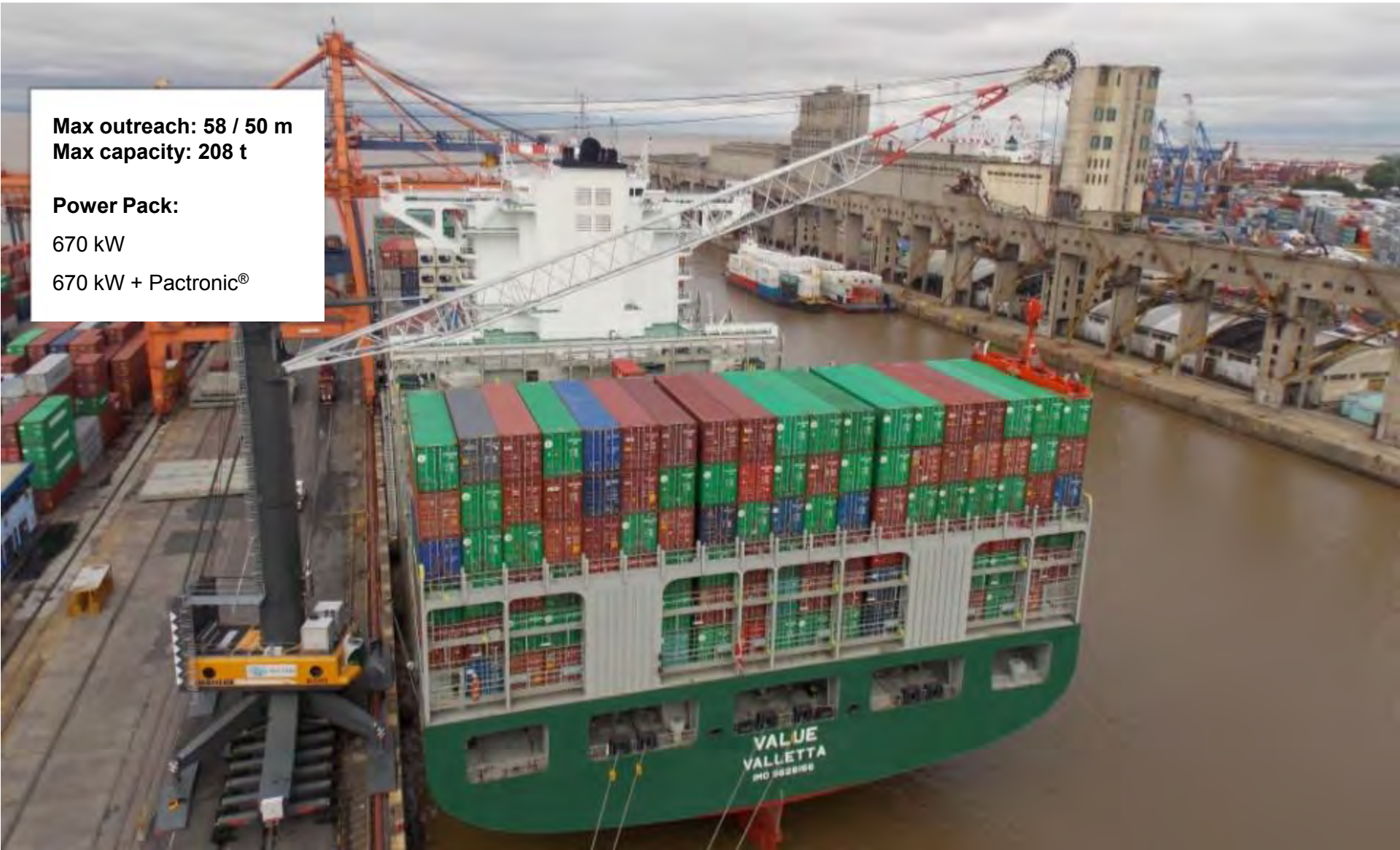
LHM 600

Max outreach: 58 / 50 m
Max capacity: 208 t

Power Pack:

670 kW

670 kW + Pactronic®



LHM 800

Max outreach: 64 / 52 m
Max capacity: 308 t

Power Pack:

725 kW

725 kW + Pactronic®

725 kW + 2x Pactronic®



suitable for

■ Heavy Load Operation

➤ up to **SWL 308t**

■ Container Operation

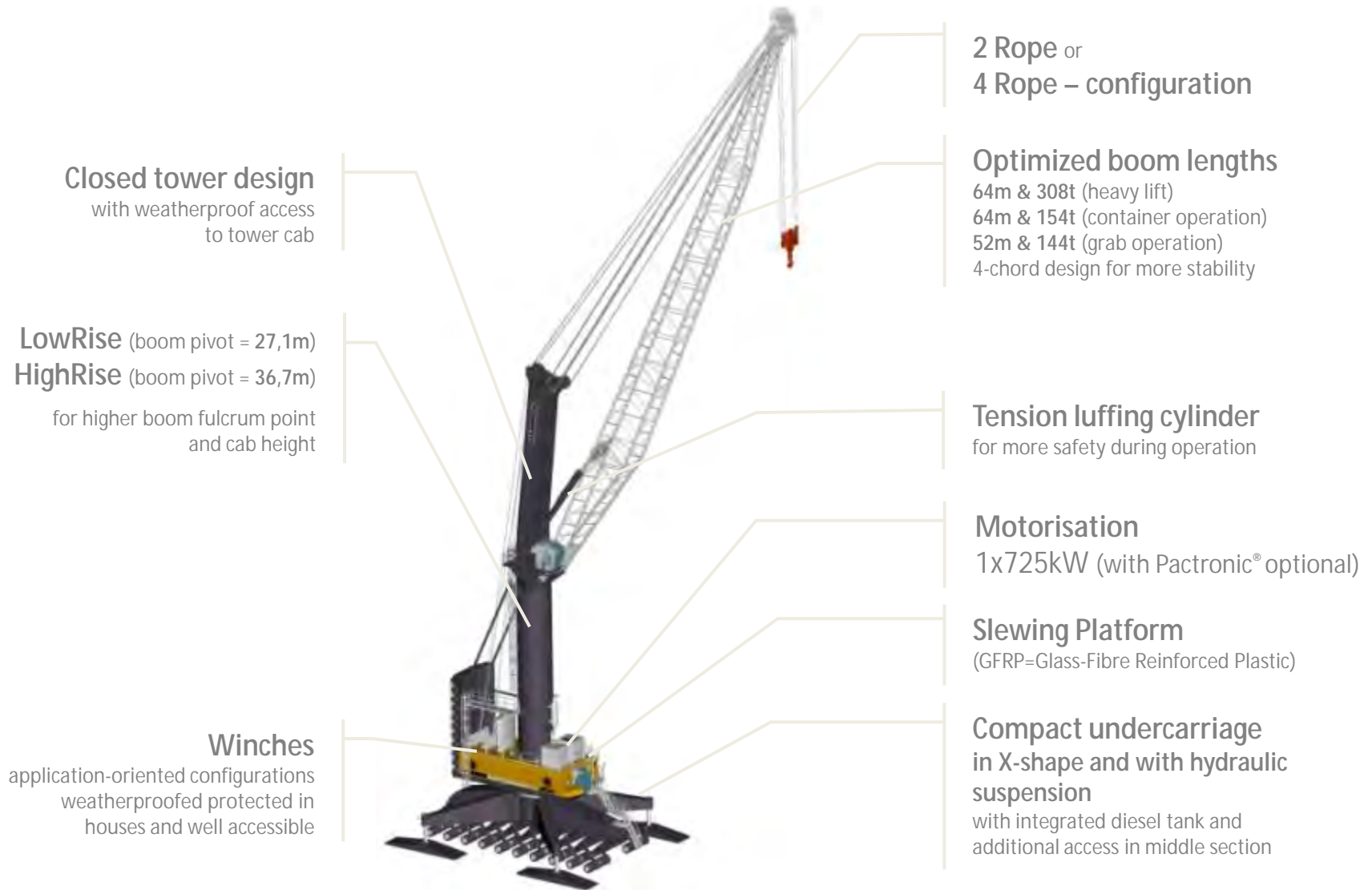
➤ for ships with **22 boxes**
across

■ Bulk Operation

➤ turnover up to **2500t/h**
(with Pactronic®)



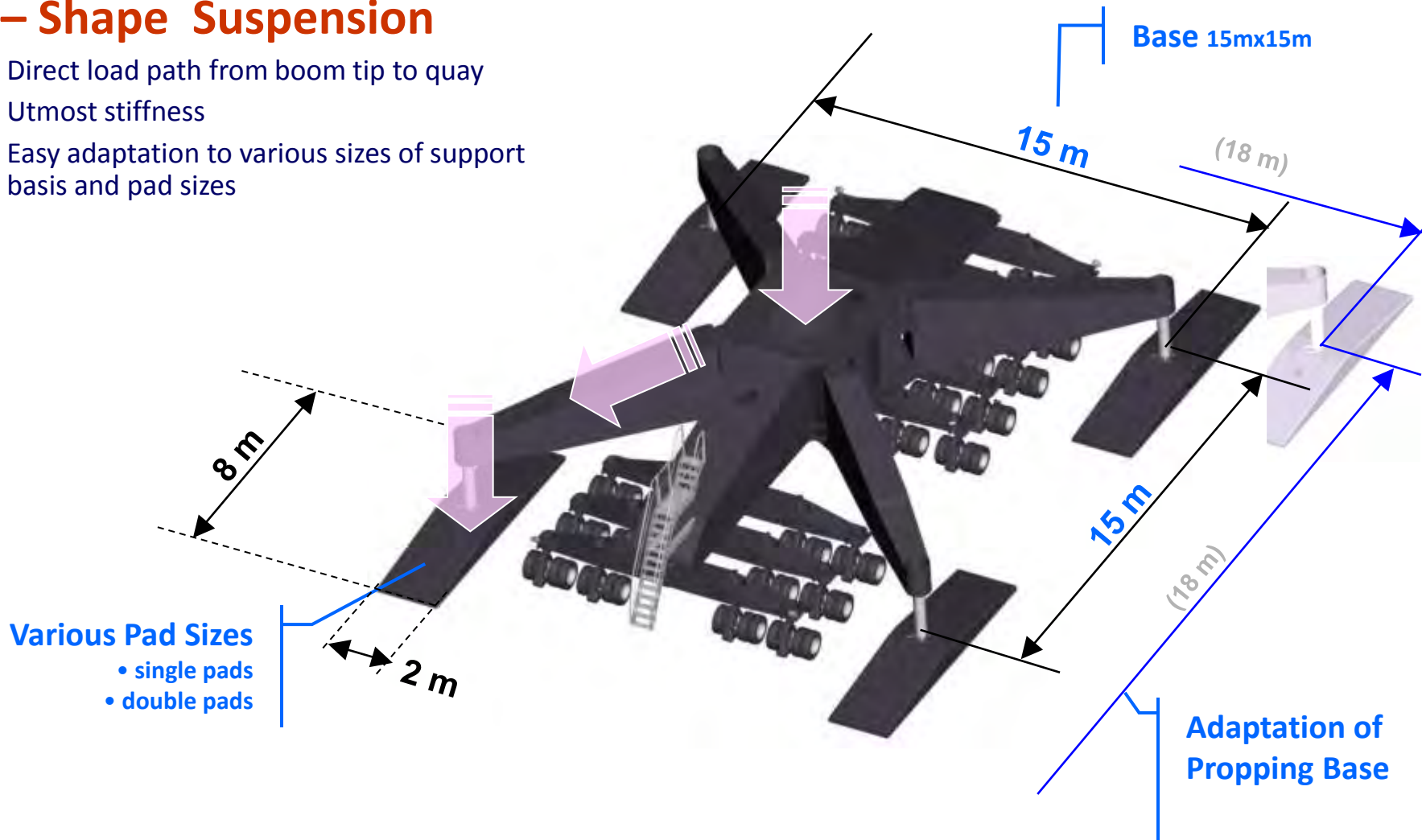
LHM 800 - Design Overview



Propping System

X – Shape Suspension

- ❖ Direct load path from boom tip to quay
- ❖ Utmost stiffness
- ❖ Easy adaptation to various sizes of support basis and pad sizes



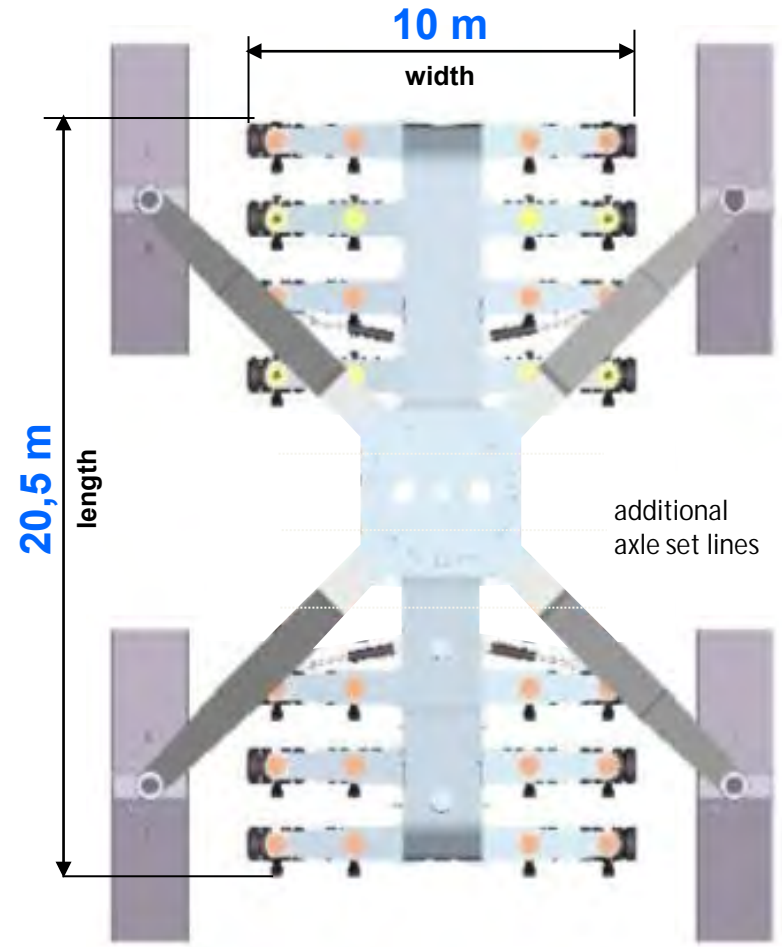
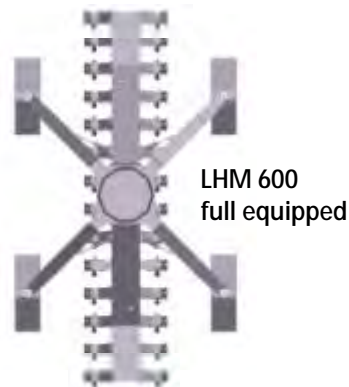
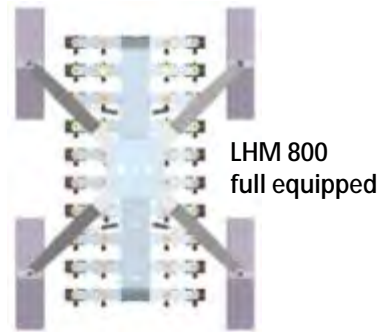
Axle Set Arrangement

Enlarged Width of Axle Set Line

- ✓ 4 axle sets in one row
- ✓ Number of axle sets from 28 to 40
- ✓ Width undercarriage 10m

Compact Undercarriage

- ✓ Length in maximum 20.5m
(4-8m shorter than LHM600)
- ✓ Additional axle sets placed in middle part of UC



Liebherr Mobile Harbour Cranes

Features Mechatronic

Litronic®

Pactronic®

Cycoptronic®

Teach-In

Vertical Line Finder

Sycratronic®

Dynamic Anti Collision®

Soft Touch Down

Smart Grip



Thank you for your attention