



870E

GREEN HYBRID MATERIAL HANDLER



Cummins QSG12, Tier 4F
355 HP (261 kW)



Rubber Tired (M) - 203,900 lb (92,500 kg) - 217,705 lb (98,750 kg)
Crawler (R-HD) - 205,690 lb (93,300 kg) - 220,200 lb (99,880 kg)

PURPOSE-BUILT TO SUIT **YOUR** PURPOSE

We're building smarter, to build *your* business.

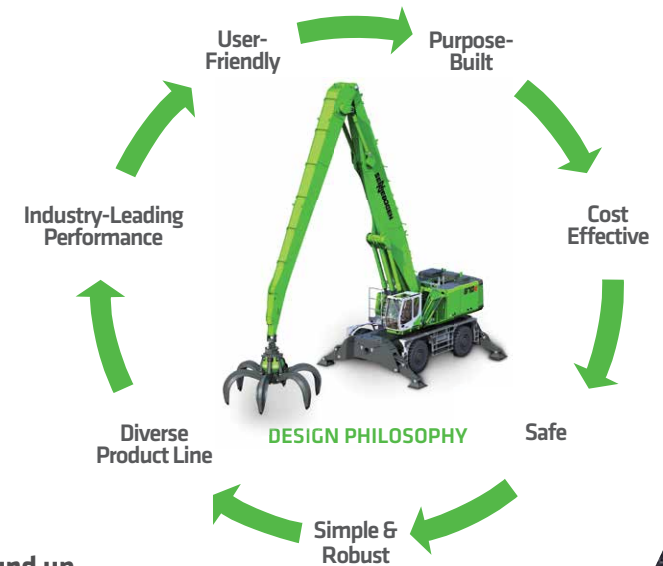
Every SENNEBOGEN material handler begins with you, our customer, and the challenges you face every day. Our singular focus leads us to the simplest, most efficient engineering solutions.

With our Green Hybrid series of purpose-built material handlers, we're meeting our commitment to help you move more material, safely, at a lower cost:

- Innovative energy recovery system saves costs with every lift
- Interchangeable components across multiple platforms
- Industry standard parts for service & repairs
- Intelligent hydraulics in place of complex electronics
- Robust structures matched to heavy loads and stresses

Now in our third generation as a family-owned business, SENNEBOGEN takes pride in understanding the needs of our customers. Thanks to our customers feedback we've been able to continually develop and deliver the world's best material handling solutions since 1952.

When you purchase a SENNEBOGEN machine, you'll know it was purpose-built for you, **from the ground up.**





Lift More. Pay Less.

SENNEBOGEN's innovative Green Hybrid energy recovery system saves energy costs every time it lifts a load. By utilizing power more efficiently, the 870 will outlift larger conventional machines while it consumes 30% less energy and reduces emissions.

QUICK SPECS	870 M RUBBER TIRED	870 R-HD CRAWLER TRACKS
Net Power	355 HP (261 kW)	355 HP (261 kW)
Operating Weight	203,900 lb (92,500 kg) - 217,705 lb (98,750 kg)	205,690 lb (93,300 kg) - 220,200 lb (99,880 kg)
Magnet System	33 kW	33 kW
Max reach	68'10" (21.0 m)	68'10" (21.0 m)

Power

With its engineered efficiency and Green Hybrid energy recovery system, the 870 reduces operating costs and your environmental footprint whether you choose diesel power, electric drive, or a combination of the two.

For reliable performance and ease of maintenance, SENNEBOGEN diesel machines are powered by industry-preferred Cummins engines.

Cab Configurations and Elevations

The elevating Maxcab with optional floor window allows for an unobstructed view in all directions, increasing safety and productivity, even under harsh and adverse conditions.

Optional features include front and skylight bulletproof glass protection guards

Cabs



Maxcab

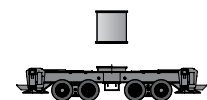
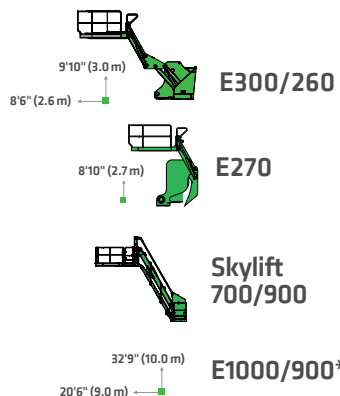


Maxcab Industry

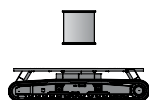


Mastercab

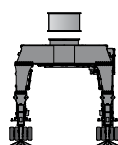
Cab elevations



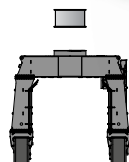
Railcar



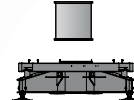
Crawler



Rubber Tired Gantry



Crawler Gantry



4-Point Pedestal

Booms and Sticks

A wide choice of powerful boom and stick configurations allows the 870 to easily adapt to match the specific lift and reach requirements for your operations.



Attachments

SENNEBOGEN grapples and magnets complete your purpose-built solution with the same reliability as our 870 material handling machines. Your machine will also accept a full range of standard attachments from all brand-name manufacturers including:



Orange peel grab



Clamshell grab



Magnet plate

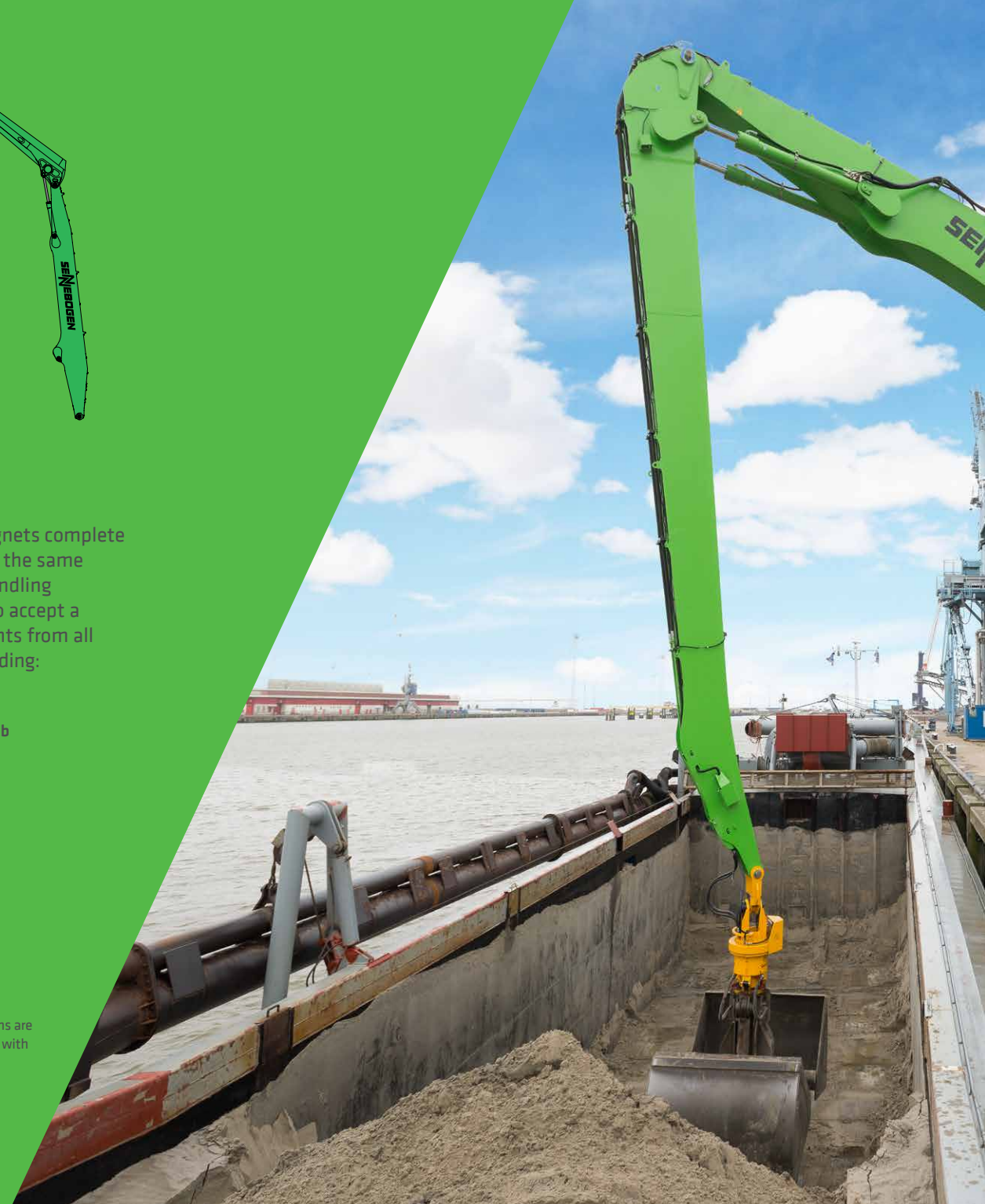


Timber grab

SENNEBOGEN magnet systems are powered by Baldor generators with Hubbell controllers

Platforms

The modular design of the 870 easily adapts to any required mounting for gantries, rail cars, barges, and ship applications.





UNDERCARRIAGE

■ Stable footprint

The centered point of rotation for the swing bearing allows for 360° equal lift capacity

■ Swing system

The large-diameter slewing ring provides excellent cycle times and swing torque for large loads

■ Multiple platforms

The modular 870 is designed to adapt to standard wheeled and tracked platforms as well as specialized mounts

CAB

■ Elevating Maxcabs

Various cab configurations maximize safety, loading accuracy, and stability. Optionally available with an elevated fixed cab

■ Joystick steering

Unobstructed view for operator with highly responsive controls

■ SENCON

Advanced diagnostic system with user-friendly multicolored interface, available in multiple languages

■ Entry/exit

Maxcab sliding door with permanent catwalk for safe, easy entry and exit

■ Superior visibility

Large bulletproof glass front window and skylight, as well as large side windows supplemented by 2-camera system, are standard. Also available with glass floor

HYDRAULIC SYSTEM

■ Purpose-built design

Fully hydraulic controls require no special software to troubleshoot

■ Hybrid Technology

SENNEBOGEN's exclusive Green Hybrid captures energy on each downstroke of the boom and releases it as "free" load-lifting power on each upstroke

■ HydroClean filtration

3-micron oil filtering with 99.95% efficiency absorbs water and prevents acid generation

■ Convenient servicing

All test ports are easily accessible in one place

UPPER CHASSIS

■ Upper carriage

Guarding surrounds upper deck to enhance safety for service technicians

■ One-piece center frame

Optimizes distribution of stresses and machine balance from boom pivot to counterweight

■ Reversible fan

Closed circuit drive with axial displacement pump allows fast change between normal and reverse

■ OSHA-compliant

Continuous 3-point contact access to upper deck with handrails and guarding from ground to cab

■ Longitudinal engine mount

Allows safe, easy access and unequaled fuel efficiency due to efficient cooling

■ Automatic lubrication

Extend component life with no waste or spill hazards

BOOM & STICK

■ Limit switches

To provide a cushion for rod movement and to prevent attachments from colliding with the cab, limit switches on the boom and stick cylinders prevent high pressure peaks

■ Cylinder protection

The boom and stick have been designed specifically for material handling applications. Hydraulic cylinders are mounted and protected by an open box frame to ensure uptime

■ Boom pivot

Purpose-designed boom mounting point on the chassis for enhanced balance and lifting capacity

SAFETY

■ Safety rails

Full guarding on upper decks provide safety for technicians on North American models

■ Fuses and relays

All fuses and relays are clearly labeled and easily accessible in a centrally located terminal box

■ Sliding door

The door slides open for safe ease of entry and exit from the cab

■ Bulletproof glass

Bulletproof windshield and skylight are standard on all new SENNEBOGEN models

HEALTH & SAFETY: THE FIRST STEP TO PRODUCTIVITY

Bulletproof windshield and skylight are now standard on all new SENNEBOGEN material handlers.

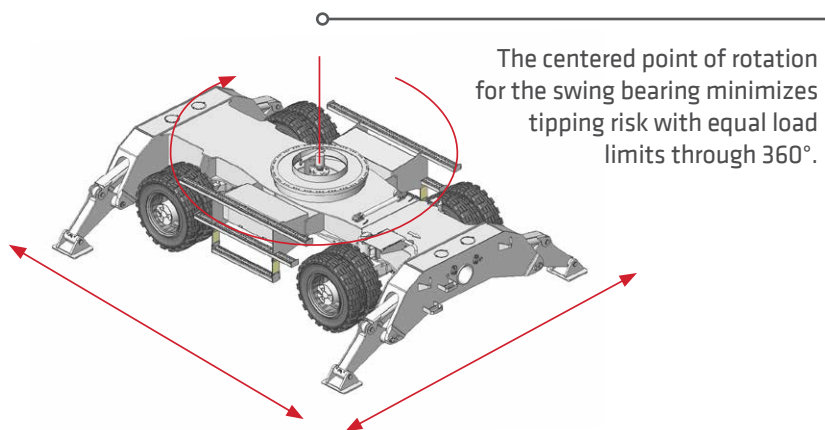
Various optional guarding packages available to meet industry safety requirements.



SENNEBOGEN is renowned as the industry leader in protecting people.

Safety-conscious owners look for equipment that prevents liability costs and protects their most valued assets. SENNEBOGEN works closely with the operators and technicians who know our equipment best. We listen to their ideas to make our machines the safest on any jobsite.

That's why ease of access, ground-to-cab guarding, sliding door cab entry, 360° visibility, cameras, and travel alarm are all standard features of your SENNEBOGEN.



Handrails around the upper deck and anti-slip walking surfaces provide a safe working environment for service and maintenance crews.

All daily service is completed with easy access to all maintenance points.



Safe access to the upper deck is achieved with a permanent 3-point contact ladder with railings.

Accessible safety switches including emergency shut-off, battery disconnect, and travel alarm.



Dual cameras with views to the rear and to the right side are standard equipment.

Maxcab's sliding door and guarded permanent catwalk provide the safest entry and exit in the industry.



Optional Mastercab's maximized window area (shown) and elevating mount give the operator an unobstructed wide-angle view of the work zone.

Intuitive joystick controls connect the operator seamlessly to the industry's most responsive hydraulic system for precise, easy handling.

Ergonomic comfort and climate control features keep operators alert, adapting to individual preferences to fight fatigue through long shifts.

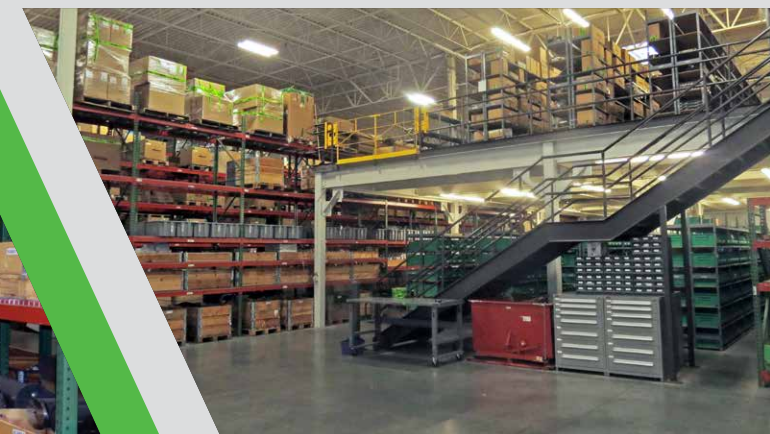
BEYOND THE MACHINE

SENNEBOGEN is on a mission to deliver the lowest Total Cost of Ownership with industry-leading after-sales support. Factory technical support, 55 million parts in inventory, and 24/7 parts availability means less downtime and more production.

- Our 100,000 sq. ft. (9,300 m²) headquarters in Stanley, NC is a multipurpose facility dedicated to supporting customers “beyond the machine.”
- Our coast-to-coast network of factory-trained distributors, authorized service providers, and technicians sets the industry standard for outstanding field service.
- SENNEBOGEN application specialists provide customers and dealer sales staff with expert insight into the unique challenges.
- SENNEBOGEN's in-house engineering solutions provides customers with custom machine solutions to meet their application.

The largest inventory of material handler parts in the Americas ensures fast delivery for repairs and service to every fielded SENNEBOGEN machine currently in operation.

**98% ORDER FULFILLMENT
WITHIN 24 HOURS**



TRAINING CENTER OF EXCELLENCE

Our dedicated Training Center in Stanley, North Carolina provides both primary and advanced courses free of charge for our customers. This free training is the same level as Dealer's and Authorized Service Providers (ASP's) receive.

Purpose-built For America's Best-Trained Technicians

The main demonstration bay allows hands-on access to machines and the meeting rooms and classrooms are all equipped with the technology required for today's interactive instruction methods.

Truly a center for developing excellence in service and support for dealers, ASPs, and customer personnel, the SENNEBOGEN Training Center has earned accolades for the quality of the instructors, facilities, and materials.

Free Training Courses Include:

Service • Parts Training • Tree Care • Operator Familiarization

Visit us online at
www.sennebogen-na.com/training



Service Level 1

Class Size: 8 Students

Required: Basic Technical Knowledge

Course Content:

- Machine Safety, Operation, & Functions
- Preventive Maintenance
- Read & Understand Hydraulic & Electric Schematics
- Basic Troubleshooting:
Magnet System, Hydraulics, Electrics

Service Level 2

Class Size: 8 Students

Required: Completion of Level 1 Class

Course Content:

- Remote Troubleshooting
- Component Training & Repair
- Failure Analysis
- In-Depth Troubleshooting:
Magnet System, Hydraulics, Electrics

———— **Course fees:** No charge to SENNEBOGEN dealers, staff, and customers. ————

Courses offered in English and Spanish sessions

5 Day Courses

PROVEN UPTIME

To find out how to make SENNEBOGEN machines easier to maintain than any other material handler, we ask the technicians who service our equipment.

Our support team, instructors, dealers, and customers are all in constant contact to troubleshoot problems and find permanent solutions. Even our senior management and the Sennebogen family take a hands-on approach to product improvement by meeting customer mechanics and operators in their own shops and yards.

Their innovative ideas help us to deliver machines that spend more time on the job and less time in the shop.

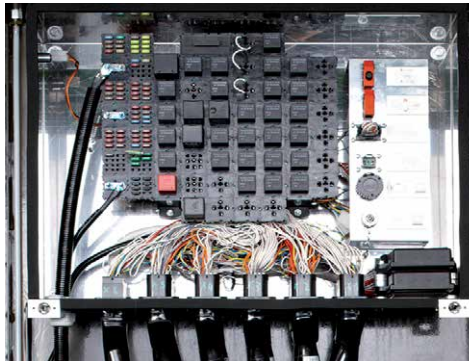


SENNEBOGEN Uptime Kits are matched to specific service tasks and machines. Hundreds of assorted parts, connectors, fittings, and electrical components are easy to locate and access.

In the shop or in the field, these fully stocked kits bring together all the parts and materials required for a specific service need, conveniently sorted and organized in one place.



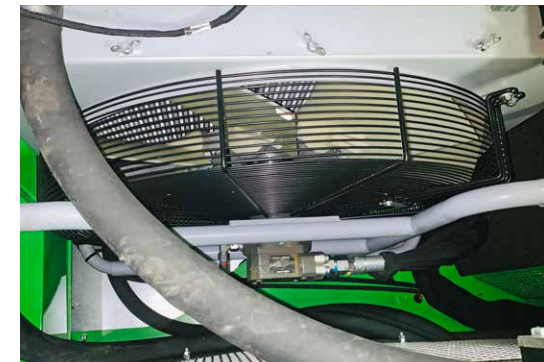
Solid steel top-opening compartment access doors on the sides, top of the upper deck, and above the engine compartment maintain a secure fit, even after repeated opening for service access.



All the fuses and relays are in a centrally located box for easy access.



Simple hydraulic controls replace complex electronics, so the 870 requires no special software or "black box" components to troubleshoot your machine.



The large reversing fan provides up to 45% more cooling surface than comparable machines.



SENCOR

The advanced SENCOR diagnostic and reporting system presents a multicolored user-friendly interface, now available in multiple languages.



With no bypass in the fluid circuit, SENNEBOGEN's HydroClean system continuously protects hydraulic components with industry-leading 3-micron oil filtration.



Automatic central lubrication, standard on all SENNEBOGEN machines, saves servicing time every day while improving component life cycles.

BIG SAVINGS

“Green Efficiency” powers a new generation of electric machines that reduce operating costs through every working hour and on every lift.

All SENNEBOGEN E-Series machines are built on layers of smart engineering and system innovations aimed at doing more with less. Our “Green Efficiency” solution combines with multiple design features that utilize an electric motor to achieve **savings of up to 50%** compared to traditional diesel-fueled machines.

This design also adds structural strength to the upper carriage, with two mount frame plates running consistently from boom pin mount to counterweight.



Optional eGreen electric-drive systems reduce energy costs up to 50%, reduce vibration wear and maintenance cycles, and eliminate refueling stops.



50% LOWER OPERATING COSTS WITH SENNEBOGEN ENERGY SOLUTIONS

LITTLE FOOTPRINT




Whether you choose a Tier 4F engine or electric motor to power your 870, our efficient hydraulics and green hybrid technology provide for eco-friendly material handling.

**REDUCE ENERGY
COSTS BY 30%
WITH GREEN HYBRID TECHNOLOGY**

By utilizing power more efficiently, the 870 will outlift larger conventional machines while it consumes **30% less energy** and reduces emissions

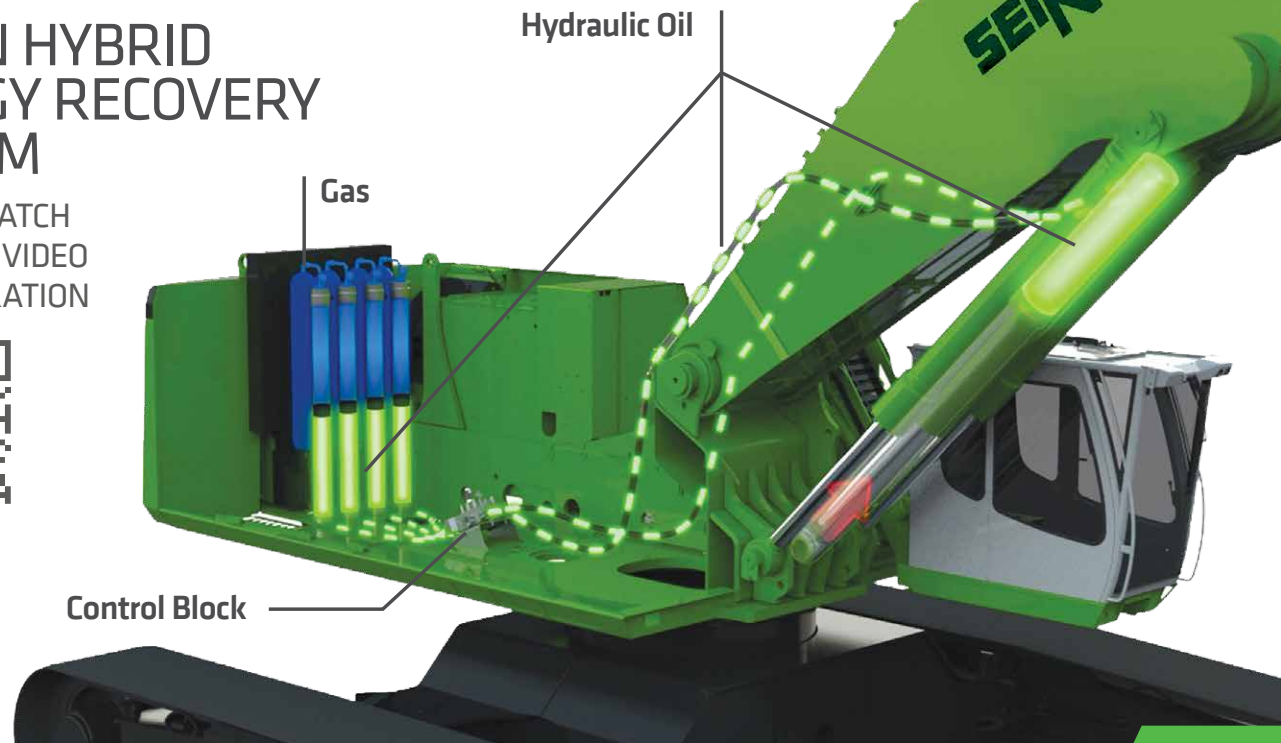
- Vertical boom movements generate potential energy
- Our hybrid cylinder (standard hydraulic cylinder) captures energy in gas accumulators
- Released energy supports the boom through the next lift cycle
- Simple, safe energy recovery with no electronics

Eco-mode engine control automatically reduces engine speed to 1800 rpm.

Operating ECO Mode	Automatic Idle		Stop
			
2000 ECO min ⁻¹	1800 min ⁻¹	800 min ⁻¹	0 min ⁻¹
0 s	5 s	8 s	5 min

GREEN HYBRID ENERGY RECOVERY SYSTEM

SCAN TO WATCH
AN ONLINE VIDEO
DEMONSTRATION

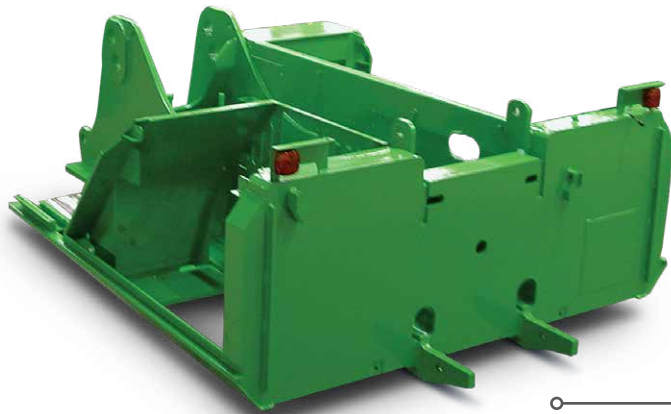


ATTENTION TO DETAILS MAKES US STRONGER

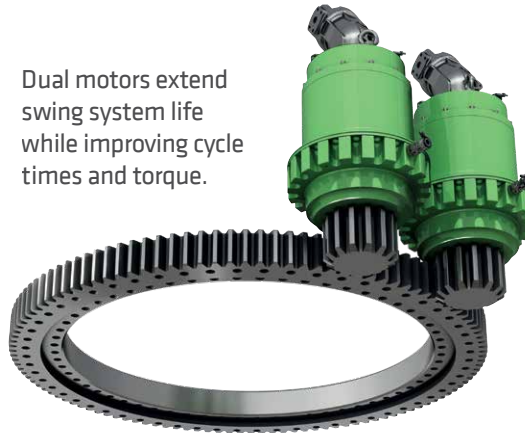
Strong-and-smart SENNEBOGEN machines stand up to your toughest work environments.

Reliability and durability are engineered into the details of your 870, from heavy-duty structural components to natural flow-through engine cooling. Each of SENNEBOGEN's manufacturing, fabrication, and assembly facilities is ISO-certified to deliver the same outstanding quality in every machine, every time.

By going to work every day and staying on the job year after year, your 870 is built to deliver the best return on your equipment investment.



Dual motors extend swing system life while improving cycle times and torque.



The swing bearing is equipped with automatic lubrication to withstand extreme 360° duty cycle operation.

A continuous flange ring reduces stress and improves distribution of swing loads to the undercarriage.

The upper carriage is built around a large, continuous one-piece center frame for added structural strength and improved air flow.

Fully hydraulic controls require no special software to troubleshoot and all test ports are easily accessible in one place.



Fabricating booms and sticks in our own shops lets SENNEBOGEN eliminate welding stresses inside the box structure and maximize service life.



Low-vibration engine mounting reduces wear on components and lowers sound levels.



SEE HOW OUR QUICK
COUPLER ADAPTS
THE 870 TO ANY LOAD,
QUICKLY AND EASILY

Built on SENNEBOGEN's renowned expertise with intelligent hydraulics, the 870 and its Green Hybrid system minimize the need for delicate electronics and computers, preventing their related failures and the associated downtime in harsh environments.



PURPOSE-BUILT FACILITIES

With nearly 1,000,000 sq. ft. (93,000 m²) of production space in our four manufacturing facilities in Europe, every step of production at SENNEBOGEN is planned to serve individual customer needs. Every critical component and process is completed in-house to assure quality, efficiency, and flexibility on the production line.

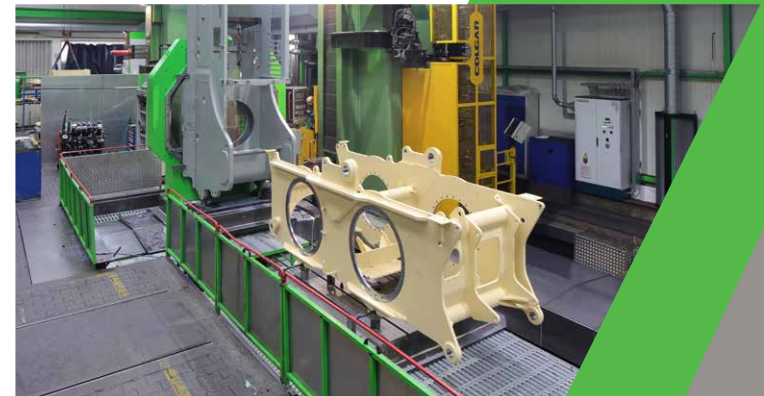
- We fabricate our own booms and sticks
- Our lineup is based on a full line of interchangeable platforms
- Our plants are designed to customize each machine, built-to-order
- Your machine is fully inspected and live-tested before it leaves the factory

Our four factories in Europe support the full range of capabilities for SENNEBOGEN to machine, fabricate, and assemble all major components to our own standards, in-house.

(Pictured here is our main plant in Straubing, Germany)



Modular components used across multiple products allow SENNEBOGEN to deliver built-to-order machine competitively. Shared systems also streamline after-sale parts inventories for customers and their local SENNEBOGEN distributors.





Every configuration of a SENNEBOGEN begins as an identical machine up until the final stage of assembly. The unit is then mounted on your choice of undercarriage or platform, and completed with your preferred equipment and choice of cab.

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Technical Specifications - 870 M “E”

ENGINE	
model	Cummins QSG12, Tier 4F
type	in-line, 6 cylinder, cooled exhaust gas recirculation, DPF diesel particulate filter water cooled
emission	EPA Tier 4F
net power	355 HP (261 kW) @ 1,800 rpm
injection	high pressure common-rail
displacement	15.0 L (915 cu. in.)
bore	5.39 in (137 mm)
stroke	6.65 in (169 mm)
aspiration	turbo charged, charge air cooled
fuel tank	264 gal (1,000 L)
air filtration	direct flow filtration system dual stage filter with pre-filter
control	integrated ECM automatic idle - stop eco mode
HYDRAULIC SYSTEM	
system type	LUDV load sensing pilot pressure controlled open center
pump type	variable displacement axial piston pump
max. pressure	5,076 psi (350 bar)
hydraulic tank	237 gal (900 L)
filtration	dual filtration system 3 micron (HydroClean)
COOLING	
cooling type	cool-on-demand, suction-type fan system, side by side
hydraulic / water	hydraulic fan drive axial piston pump, reversible fan thermostatically controlled, closed loop system
charge air	direct fan drive

ELECTRICAL	
alternator	100 V/Ah
starter	24 Vm 7.8 kW
battery	2 x 12 V, 210 Ah
lights	2 x cab roof, type halogen 2 x frame upper carriage, type H4
SWING SYSTEM	
swing speed	0 - 5 rpm
swing hydraulic	closed loop
drive	axial piston motor driving planetary gearbox, integrated brake valves
swing brake	multidisc brake, spring loaded
swing bearing	external teeth sealed triple roller bearing
UPPER CARRIAGE	
design	torsion-free upper frame with continuous bearing-plates for optimal power introduction, precision pivot; excellent design; very low noise emission
TRAVEL / UNDERCARRIAGE	
type	rubber tired
drive	all-wheel drive powered by a variable-displacement hydraulic motor with direct-mounted, automatic brake valve and 2-gear power shift transmission planetary axles with integrated steering cylinder and dual-circuit service brake
speed	low: 0-3.4 mph (0-5.4 kph) high: 0-6.2 mph (0-10 kph)
tires	23.5x25 (4)
parking brake	spring-loaded multidisc brake
steering	joystick steering
safety	travel alarm

REFILL CAPACITIES	
fuel tank	264 gal (1,000 L)
hydraulic tank	237 gal (900 L)
WEIGHT	
operating weight	203,900 lb (92,500 kg) - 217,705 lb (98,750 kg)
MAGNET SYSTEM	
rating	33 kW
voltage (magnetized)	230 V
current (cold condition)	175 Amps
controller	Hubbell
generator	Baldor
drive	hydraulic

Subject to technical modification.

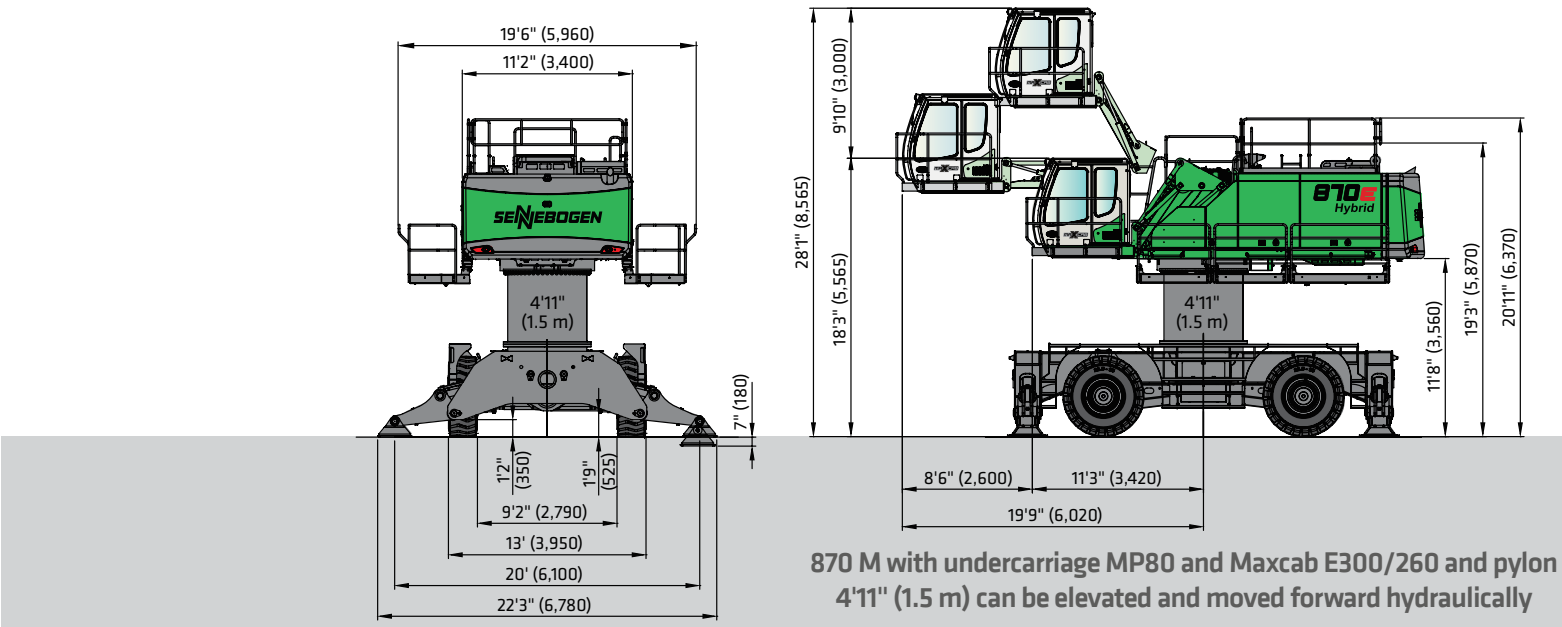
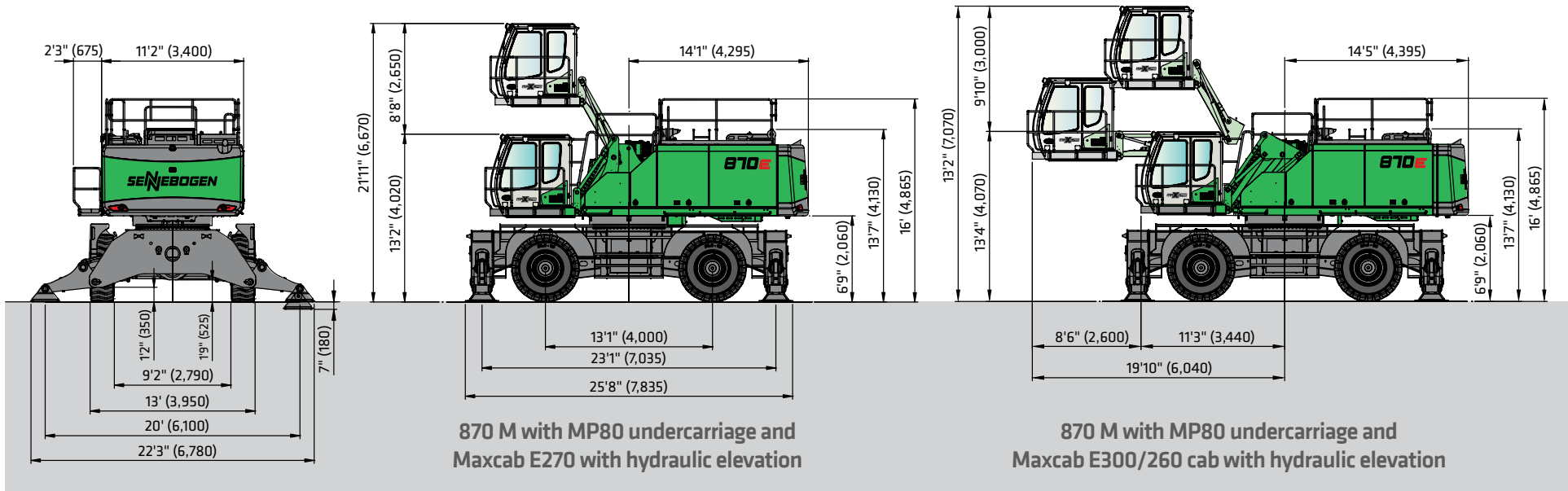
Standard / Optional Equipment - 870 M “E”

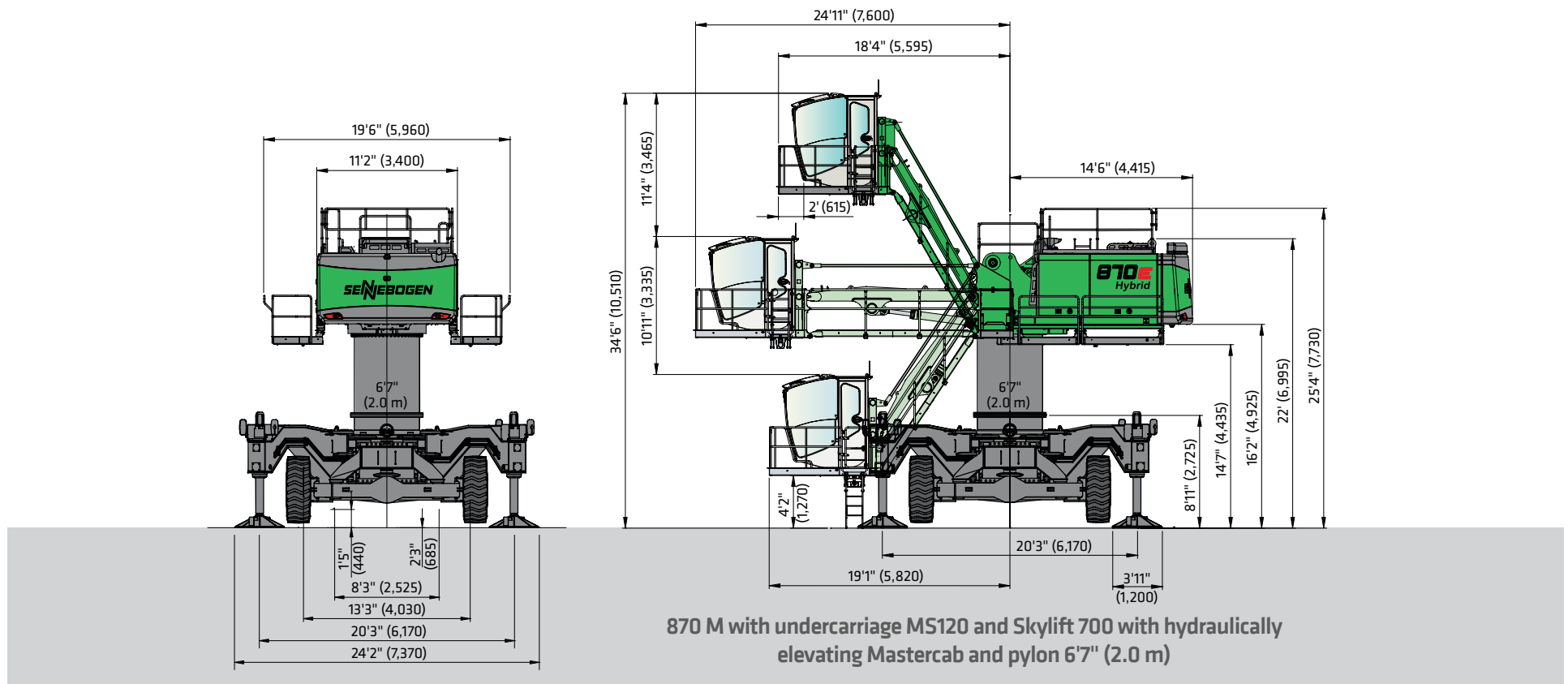
ENGINE		OPERATOR'S CAB (Maxcab Industry)		UNDERCARRIAGE	
Water separator in fuel line	●	Hydraulic elevating up and out cab E300/260	●	Heavy-duty designed material handling undercarriage	●
Automatic idle / engine stop control	●	Multi-adjustable, air suspended operator's seat	●	MP80 E undercarriage with integrated 4-point outrigger system	●
Eco mode	●	3" (76 mm) seat belt	●	All wheel drive	●
Muffler	●	Seat heater	●	Planetary axles with integrated steering cylinders	●
Visual fuel tank check	●	Automatic climate control (heater / AC)	●	Travel alarm	●
Engine block & water separator pre-heater	○	Air outlets w/ defroster	●		
ELECTRIC		Storage area for lunch box	●	WORKING EQUIPMENT	
Battery disconnect switch	●	Large cup holder	●	Purpose-built material handling boom	●
Centralized fuse box	●	Fire extinguisher	●	Green Hybrid energy recovery system	●
HYDRAULIC		Tinted windows with safety glass	●	Purpose-built material handling stick	●
Pilot pressure controlled variable displacement pump	●	Door window as sliding window	●	Attachment hydraulic line connections with ball valves	●
Thermostatically controlled cooling system	●	Radio with USB and SD port, MP3 and Bluetooth	●	Safety check valves for stick cylinders	●
Centralized hydraulic test ports	●	Removable floor mat	●	Safety check valves for boom cylinders	●
Protection covers for pilot pressure control valves	●	SenCon diagnostic system	●	Cylinder end position dumping	●
3 micron dual filtration system	●	Multicolor Monitor	●	Boom hoist limitation	●
Load sensing, flow on demand hydraulic system	●	Tilt out front window	●	Bronze bushings connected to automatic lubrication system	●
Optimized hydraulic pump regulation (GLR)	●	Halogen light package on cab roof	●	Stick limitation	●
Visual hydraulic tank check from ground level	●	Mechanical hour meter	●	LED light package boom	○
Attachments open, close & rotation hydraulics	●	Sliding door	●	LED light package stick	○
Hydraulic tank shut off valve	●	Catwalk w/ handrail	●	Purpose-built material handling boom for scrap shears	○
Electrical hydraulic tank pre-heater	○	12 V / 24 V power outlet	●		
Biodegradable hydraulic oil	○	Windshield wiper and washers	●	MAGNET SYSTEM	
Hydraulic circuit for scrap shear	○	Emergency exit hammer	●	Hydraulic driven generator	○
Additional hydraulic circuits	○	Safety lever	●	Magnet controller	○
Attachment return filtration filters (60 µm)	○	Sun shades	●	Magnet suspension link	○
UPPER CARRIAGE		Interior lighting	●	ATTACHMENTS	
Rearview & right side view camera system	●	Rain cover front window	●	Orange peel grapple	○
Automatic lubrication system	●	Outside mirror	●	Mag grapple	○
Anti-slip mats on walking area	●	Optical and acoustic warning system	●	Clamshell	○
Lockable side doors	●	Positive filtered ventilation (pressurized cab)	●	Magnet	○
Handrails on top of upper carriage	●	Safety check valves for elevating cab cylinder	●	Log grapple	○
Mirror left side	●	Foot rest	●	Scrap shear	○
Removable panels	●	Bulletproof windshield	●	Power attachment	○
Additional light package	○	Bulletproof skylight	●	Pipe handler	○
Custom colors	○	Maxcab industry	○		
Seawater paint coating	○	Windshield protection guard	○	SWING SYSTEM	
		Skylight protection guard	○	360° protection cover, removable	●
		Skylight FOPS guard	○	Electrical driven swing gear pinion lubrication pump	●
		Polycarbonate side windows	○		
		Additional light package	○		
		Fixed cab elevation	○		
		Operator's cab with floor window	○		
		Additional cameras	○		

Standard Equipment ● Optional Equipment ○

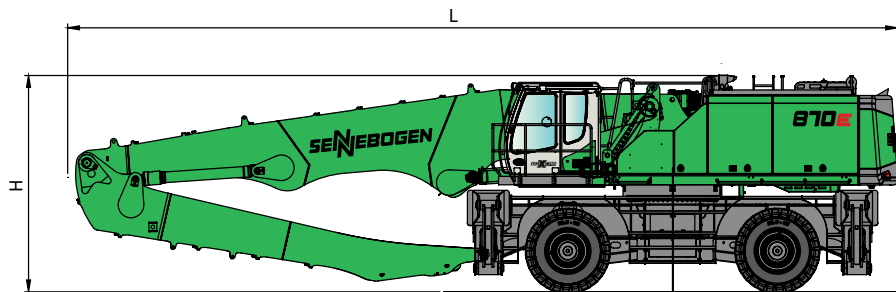
Subject to technical modification.

Dimensions - 870 M "E"





Transport Dimensions - 870 M "E"



Reach	Boom Length	Stick Length	Transport Length (L)	Transport Height (H)
K18	35'5" (10.8 m)	25'7" (7.8 m)	52' (15.85 m)	13'5" (4.10 m)
K20	38'8" (11.8 m)	28'10" (8.8 m)	55'5" (16.9 m)	13'5" (4.10 m)
K22	41' (12.5 m)	35'5" (10.8 m)	58'4" (17.8 m)	13'5" (4.10 m)
K25	45'11" (14.0 m)	40'4" (12.3 m)	63'11" (19.5 m)*	13'5" (4.10 m)
B21	44'3" (13.5 m)	32'2" (9.8 m)	60' (18.3 m)*	13'5" (4.10 m)
B24	44'3" (13.5 m)	40'4" (12.3 m)	60' (18.3 m)*	13'5" (4.10 m)

*stick removed

Lift Capacities - 870 M "E"

Working Equipment K18

Reach	59'1" (18.0 m)
Boom	35'5" (10.8 m)
Stick	25'7" (7.8 m)

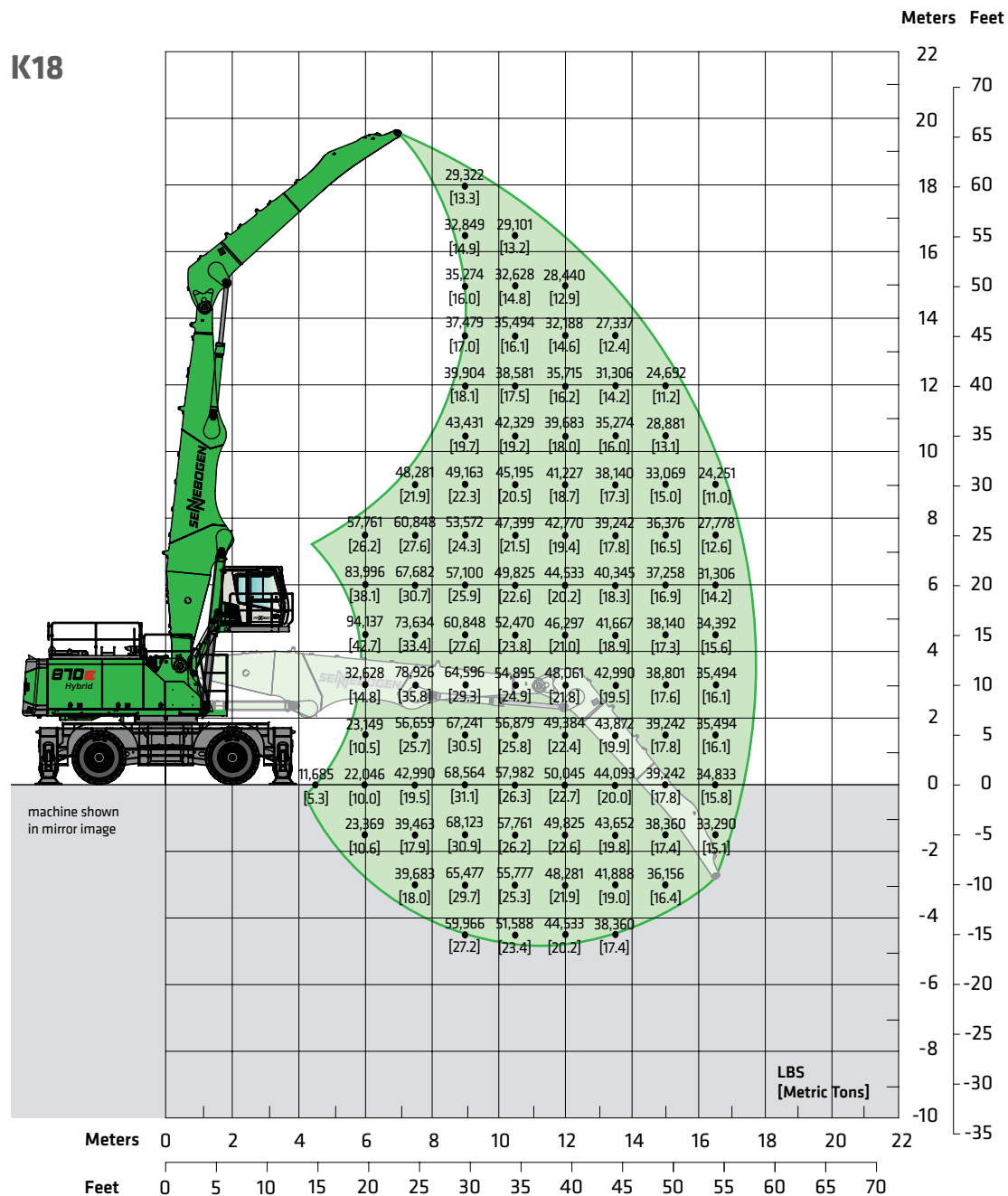
Operator's Cab

Model	Maxcab E270, cab with hydraulic elevation
Eye level	approx. 20'8" (6.3 m)

Undercarriage

Model	MP80
Tires	4 x 23.5-25 solid rubber

K18



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

Lift Capacities - 870 M "E"

Working Equipment K20

Reach	65'7" (20.0 m)
Boom	38'8" (11.8 m)
Stick	28'10" (8.8 m)

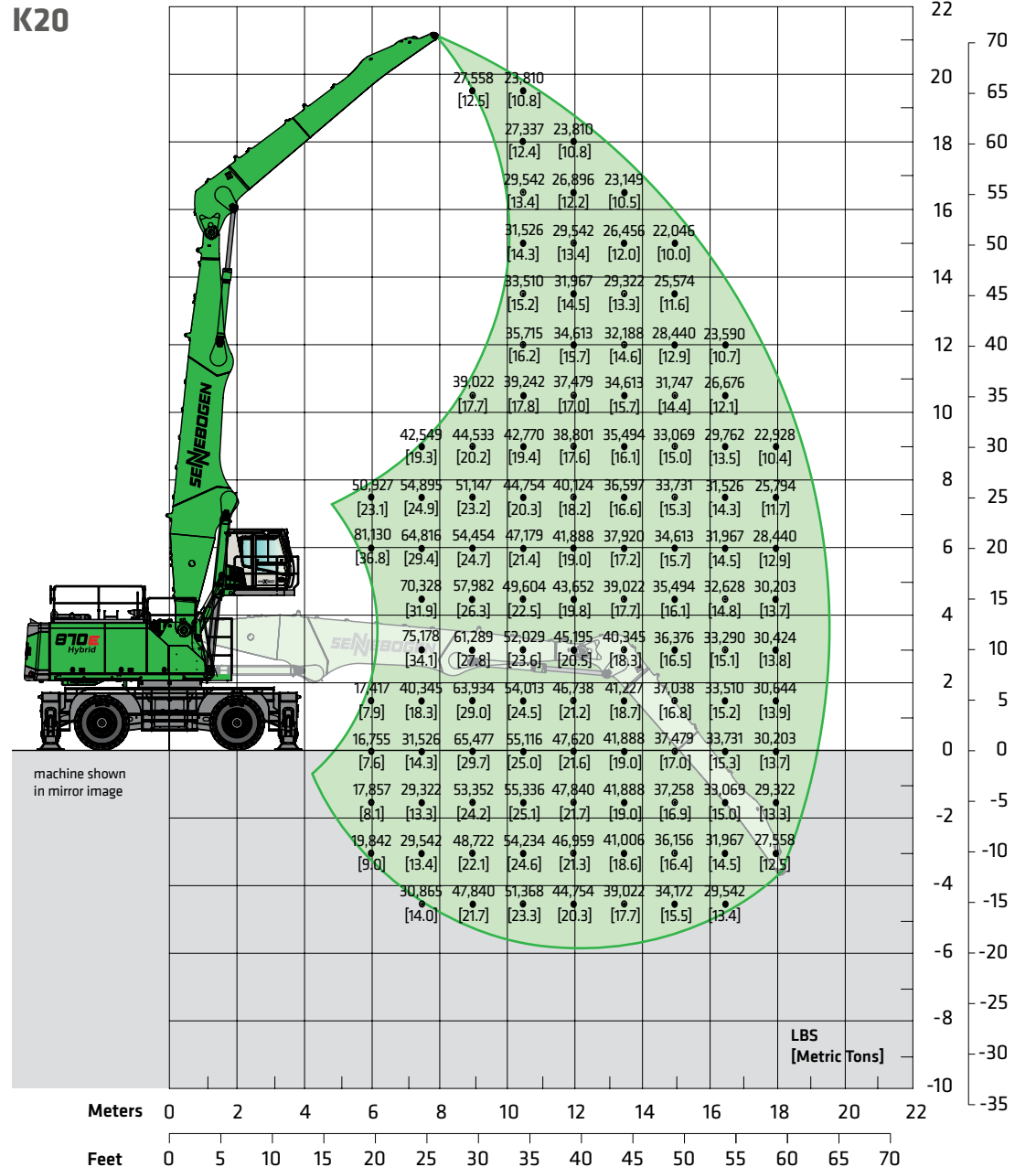
Operator's Cab

Model	Maxcab E270, hydraulically elevating
Eye level	approx. 20'8" (6.3 m)

Undercarriage

Model	MP80E
Tires	4 x 23.5-25 solid rubber

K20



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

Lift Capacities - 870 M "E"

Working Equipment K22

Reach	72'2" (22.0 m)
Boom	41' (12.5 m)
Stick	35'5" (10.8 m)

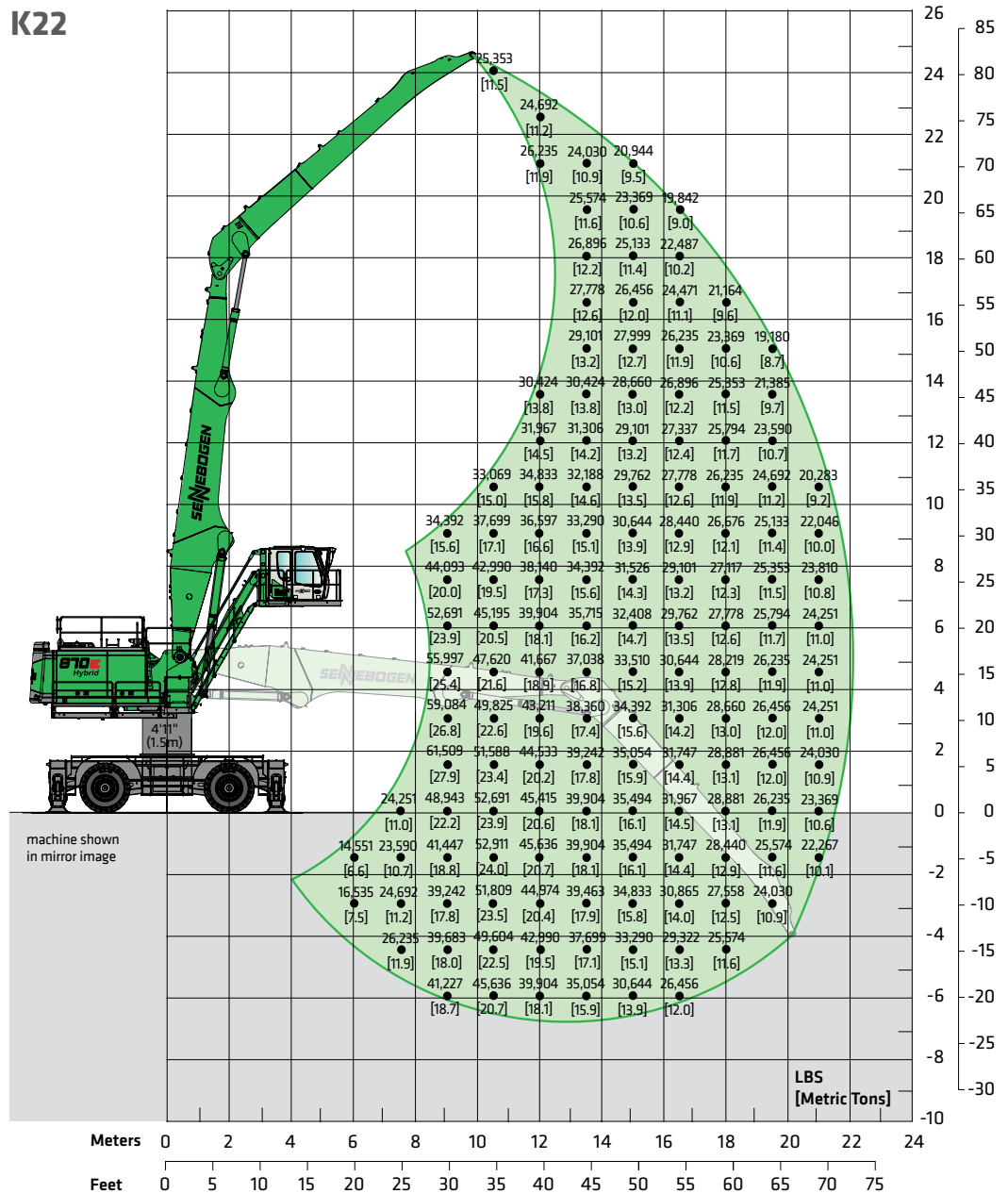
Operator's Cab

Model	Maxcab Skylift 700, hydraulic elevating (option)
Eye level	approx. 28' (8.5 m)

Undercarriage

Model	MP80
Pylon	4'11" (1.5m)
Tires	4 x 23.5-25 solid rubber

K22



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

Lift Capacities - 870 M "E"

Working Equipment K25

Reach	82' (25.0 m)
Boom	45'11" (14.0 m)
Stick	40'4" (12.3 m)

Operator's Cab

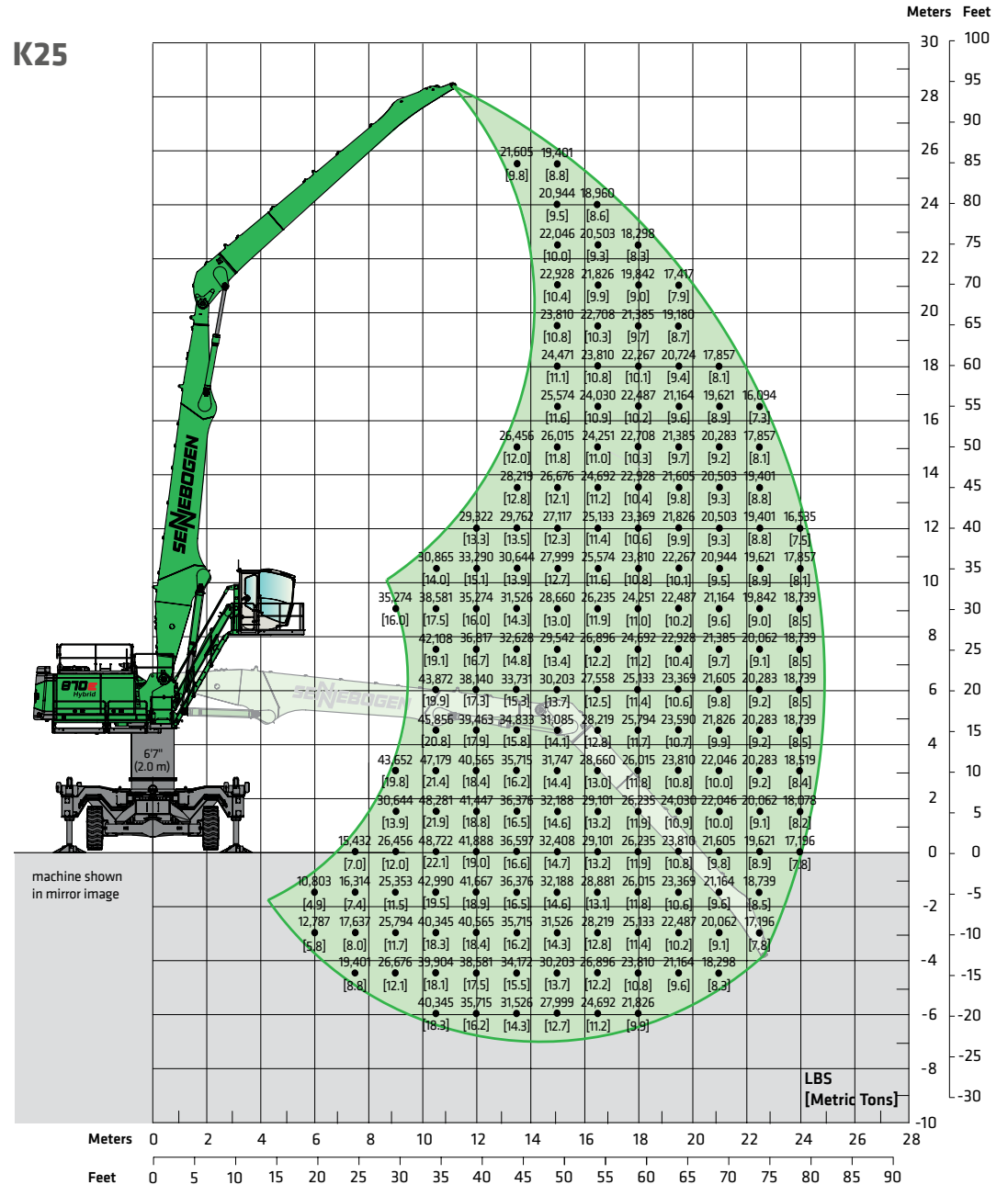
Model	Maxcab Skylift 700, hydraulic elevating (option)
Eye level	approx. 33' (10.0 m)

Undercarriage

Model	MS120
Pylon	6'7" (2.0 m)
Tires	4 x 23.5-25 solid rubber

Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

K25



Lift Capacities - 870 M "E"

Working Equipment B21

Reach	68'10" (21.0 m)
Boom	44'3" (13.5 m) Banana
Stick	32'2" (9.8 m)

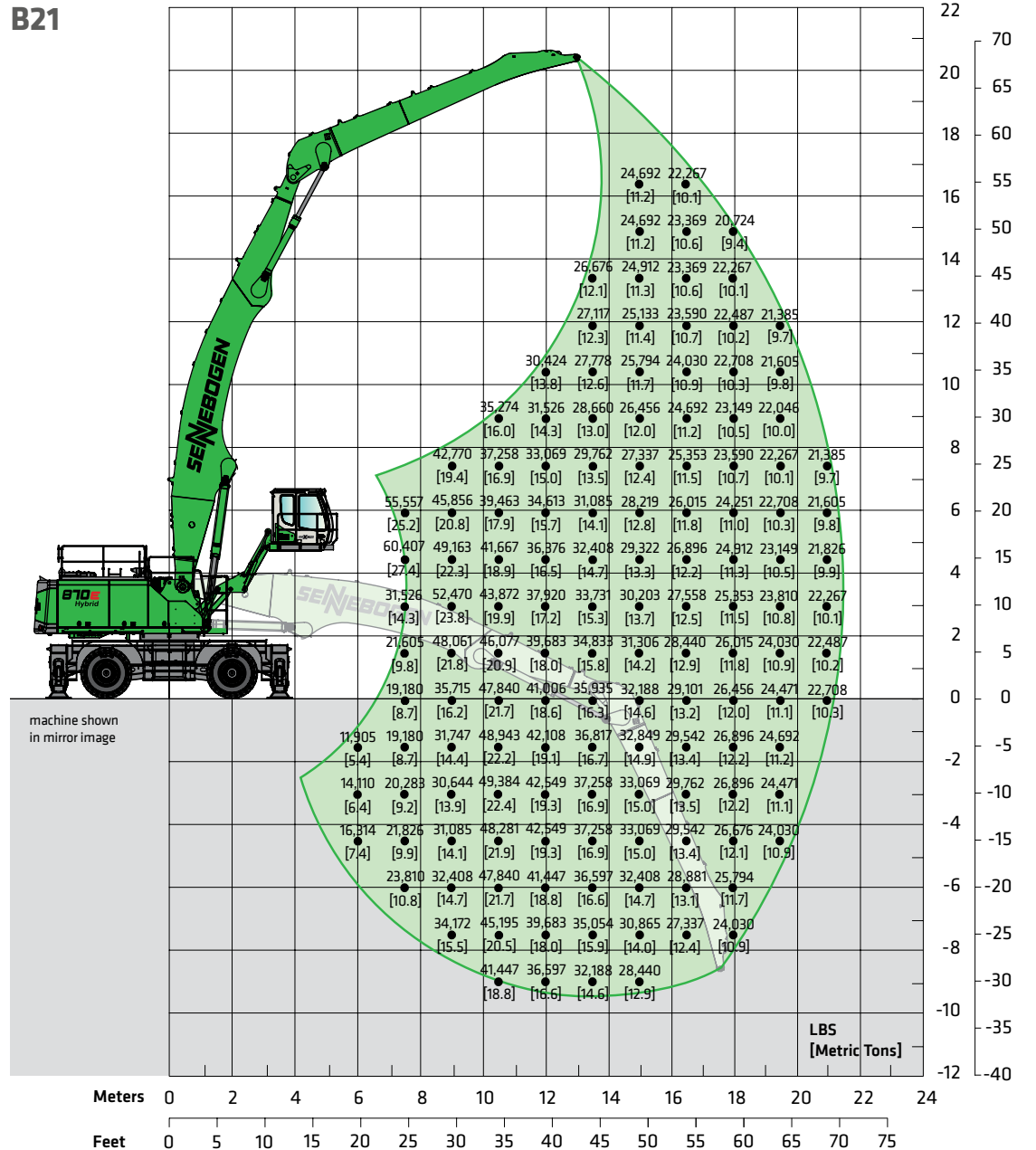
Operator's Cab

Model	Maxcab E300/260, can be elevated and moved forward hydraulically
Eye level	approx. 22' (6.7 m)

Undercarriage

Model	MP80
Tires	4 x 23.5-25 solid rubber

B21



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

Lift Capacities - 870 M "E"

Working Equipment B24

Reach	78'9" (24.0 m)
Boom	44'3" (13.5 m)
Stick	40'4" (12.3 m)

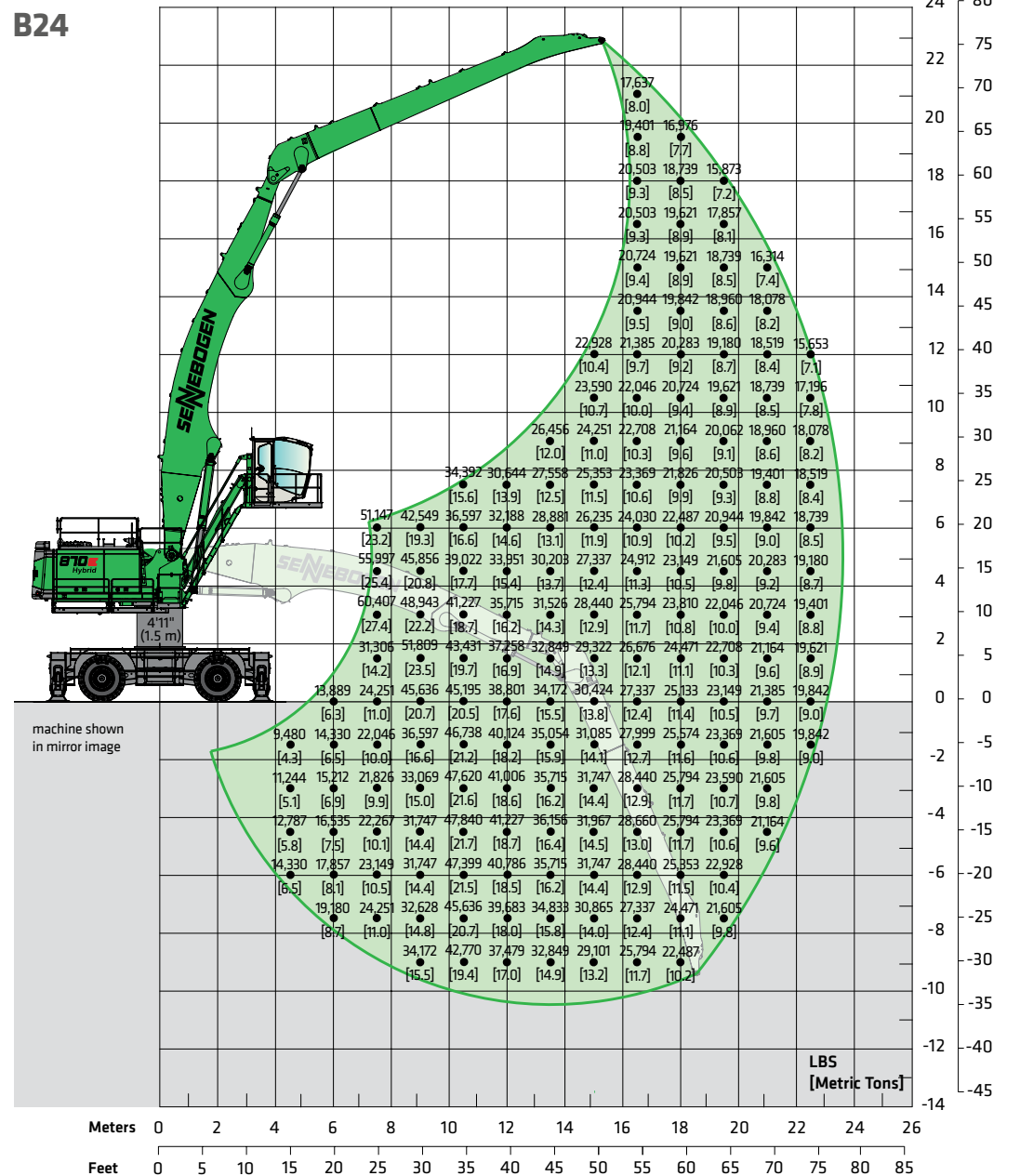
Operator's Cab

Model	Maxcab Skylift 700, hydraulic elevating (option)
Eye level	approx. 28'6" (8.7 m)

Undercarriage

Model	MS120
Pylon	4'11" (1.5m)
Tires	4 x 23.5-25 solid rubber

B24



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

Technical Specifications - 870 R-HD “E”

ENGINE	
model	Cummins QSG12, Tier 4F
type	in-line, 6 cylinder, cooled exhaust gas recirculation, DPF diesel particulate filter water cooled
emission	EPA Tier 4F
net power	355 HP (261 kW) @ 1,800 rpm
injection	high pressure common-rail
aspiration	turbo charged, charge air cooled
fuel tank	264 gal (1,000 L)
air filtration	direct flow filtration system dual stage filter with pre-filter
control	integrated ECM automatic idle - stop eco mode
HYDRAULIC SYSTEM	
system type	LUDV load sensing pilot pressure controlled open center
pump type	variable displacement axial piston pump
max. pressure	5,076 psi (350 bar)
hydraulic tank	237 gal (900 L)
filtration	dual filtration system 3 micron (HydroClean)
COOLING	
cooling type	cool-on-demand, suction-type fan system, side by side
hydraulic / water	hydraulic fan drive axial piston pump, reversible fan thermostatically controlled, closed loop system
charge air	direct fan drive

ELECTRICAL	
alternator	100 V/Ah
starter	24 Vm 7.8 kW
battery	2 x 12 V, 210 Ah
lights	2 x cab roof, type halogen 2 x frame upper carriage, type H4
SWING SYSTEM	
swing speed	0 - 5 rpm
swing hydraulic	closed loop
drive	axial piston motor driving planetary gearbox, integrated brake valves
swing brake	multidisc brake, spring loaded
swing bearing	external teeth sealed triple roller bearing
UPPER CARRIAGE	
design	torsion-free upper frame with continuous bearing-plates for optimal power introduction, precision pivot; excellent design; very low noise emission
TRAVEL / UNDERCARRIAGE	
type	crawler R83-450
system	mechanical, extendable tracks
drive	independent driven by an axial piston motor through a compact planetary
travel speed	stage I - 0-0.99 mph (0-1.6 km/h) stage II - 0-1.86 mph (0-3.0 km/h)
shoes	triple grouser, 35.4" (900 mm)
crawler	B8b maintenance free tracks
steering	joystick steering
safety	travel alarm

REFILL CAPACITIES	
fuel tank	264 gal (1,000 L)
hydraulic tank	237 gal (900 L)
WEIGHT	
operating weight	205,690 lb (93,300 kg) - 220,200 lb (99,880 kg)
MAGNET SYSTEM	
rating	33 kW
voltage (magnetized)	230 V
current (cold condition)	175 Amps
controller	Hubbell
generator	Baldor
drive	hydraulic

Subject to technical modification.

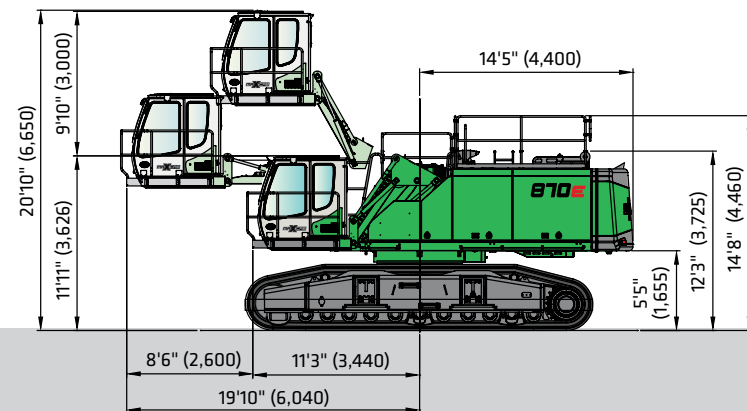
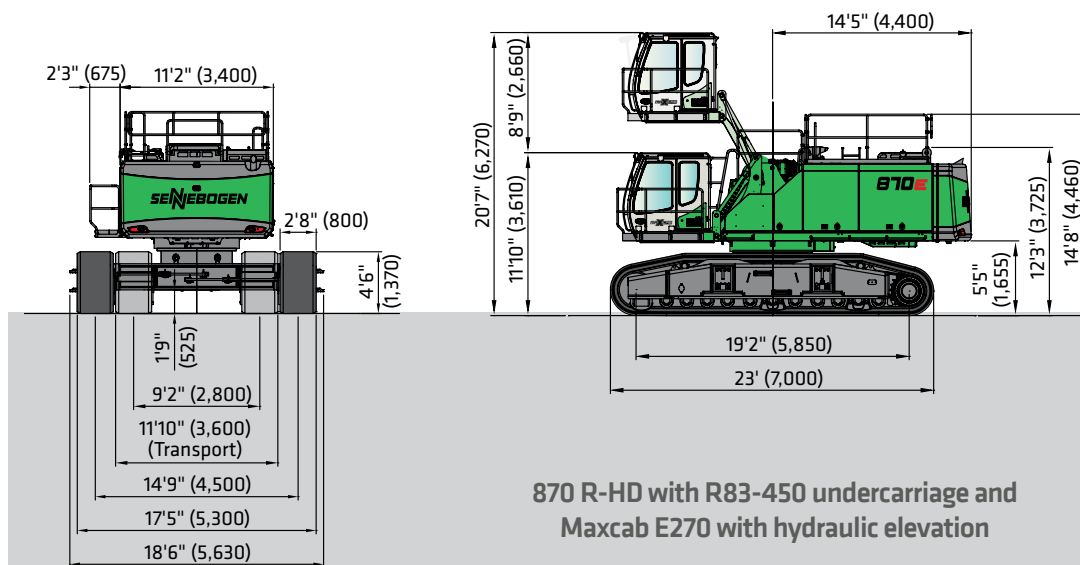
Standard / Optional Equipment - 870 R-HD “E”

ENGINE		OPERATOR'S CAB (Maxcab Industry)		UNDERCARRIAGE	
Water separator in fuel line	●	Hydraulic elevating up and out cab E300/260	●	Heavy-duty designed material handling undercarriage	●
Automatic idle / engine stop control	●	Multi-adjustable, air suspended operator's seat	●	Heavy-duty crawler track frame	●
Eco mode	●	3" (76 mm) seat belt	●	B8b maintenance free tracks	●
Muffler	●	Seat heater	●	Hydraulic chain tension device	●
Visual fuel tank check	●	Automatic climate control (heater / AC)	●	Travel alarm	●
Engine block & water separator pre-heater	○	Air outlets w/ defroster	●		
		Storage area for lunch box	●	WORKING EQUIPMENT	
ELECTRIC		Large cup holder	●	Purpose-built material handling boom	●
Battery disconnect switch	●	Fire extinguisher	●	Green Hybrid energy recovery system	●
Centralized fuse box	●	Tinted windows with safety glass	●	Purpose-built material handling stick	●
HYDRAULIC		Door window as sliding window	●	Attachment hydraulic line connections with ball valves	●
Pilot pressure controlled variable displacement pump	●	Radio with USB and SD port, MP3 and Bluetooth	●	Safety check valves for stick cylinders	●
Thermostatically controlled cooling system	●	Removable floor mat	●	Safety check valves for boom cylinders	●
Centralized hydraulic test ports	●	SenCon diagnostic system	●	Cylinder end position dumping	●
Protection covers for pilot pressure control valves	●	Multicolor Monitor	●	Boom hoist limitation	●
3 micron dual filtration system	●	Tilt out front window	●	Bronze bushings connected to automatic lubrication system	●
Load sensing, flow on demand hydraulic system	●	Halogen light package on cab roof	●	Stick limitation	●
Optimized hydraulic pump regulation (GLR)	●	Mechanical hour meter	●	LED light package boom	○
Visual hydraulic tank check from ground level	●	Sliding door	●	LED light package stick	○
Attachments open, close & rotation hydraulics	●	Catwalk w/ handrail	●	Purpose-built material handling boom for scrap shears	○
Hydraulic tank shut off valve	●	12 V / 24 V power outlet	●		
Electrical hydraulic tank pre-heater	○	Windshield wiper and washers	●	MAGNET SYSTEM	
Biodegradable hydraulic oil	○	Emergency exit hammer	●	Hydraulic driven generator	○
Hydraulic circuit for scrap shear	○	Safety lever	●	Magnet controller	○
Additional hydraulic circuits	○	Sun shades	●	Magnet suspension link	○
Attachment return filtration filters (60 µm)	○	Interior lighting	●		
UPPER CARRIAGE		Rain cover front window	●	ATTACHMENTS	
Rearview & right side view camera system	●	Outside mirror	●	Orange peel grapple	○
Automatic lubrication system	●	Optical and acoustic warning system	●	Mag grapple	○
Anti-slip mats on walking area	●	Positive filtered ventilation (pressurized cab)	●	Clamshell	○
Lockable side doors	●	Safety check valves for elevating cab cylinder	●	Magnet	○
Handrails on top of upper carriage	●	Foot rest	●	Log grapple	○
Mirror left side	●	Bulletproof windshield	●	Scrap shear	○
Removable panels	●	Bulletproof skylight	●	Power attachment	○
Additional light package	○	Maxcab industry	○	Pipe handler	○
Custom colors	○	Windshield protection guard	○		
Seawater paint coating	○	Skylight protection guard	○	SWING SYSTEM	
		Skylight FOPS guard	○	360° protection cover, removable	●
		Polycarbonate side windows	○	Electrical driven swing gear pinion lubrication pump	●
		Additional light package	○		
		Fixed cab elevation	○		
		Operator's cab with floor window	○		
		Additional cameras	○		

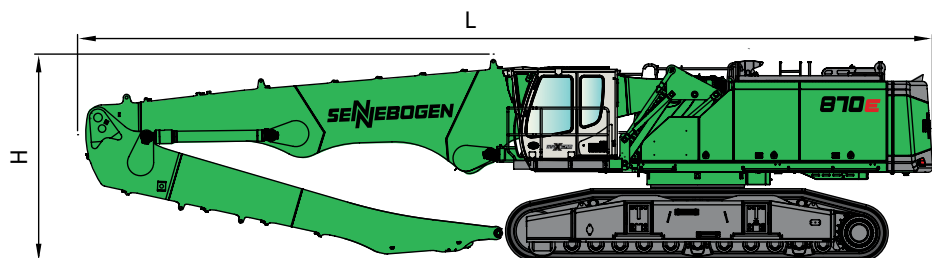
Standard Equipment ● Optional Equipment ○

Subject to technical modification.

Dimensions - 870 R-HD "E"

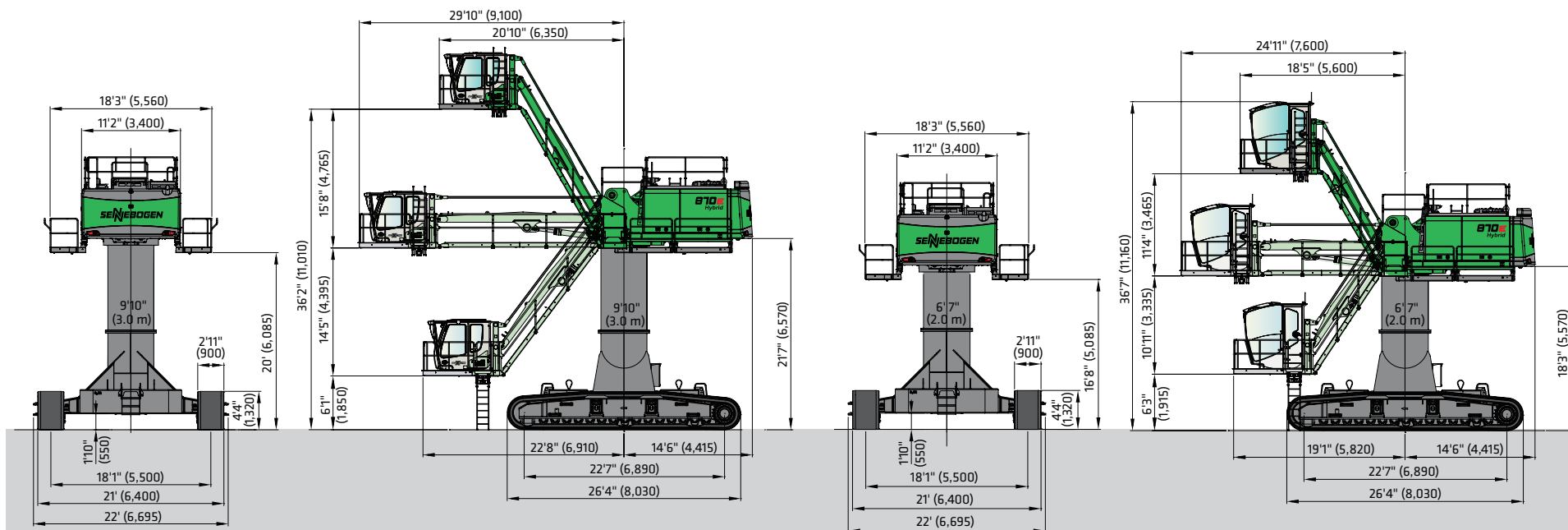


Transport Dimensions - 870 R-HD "E"



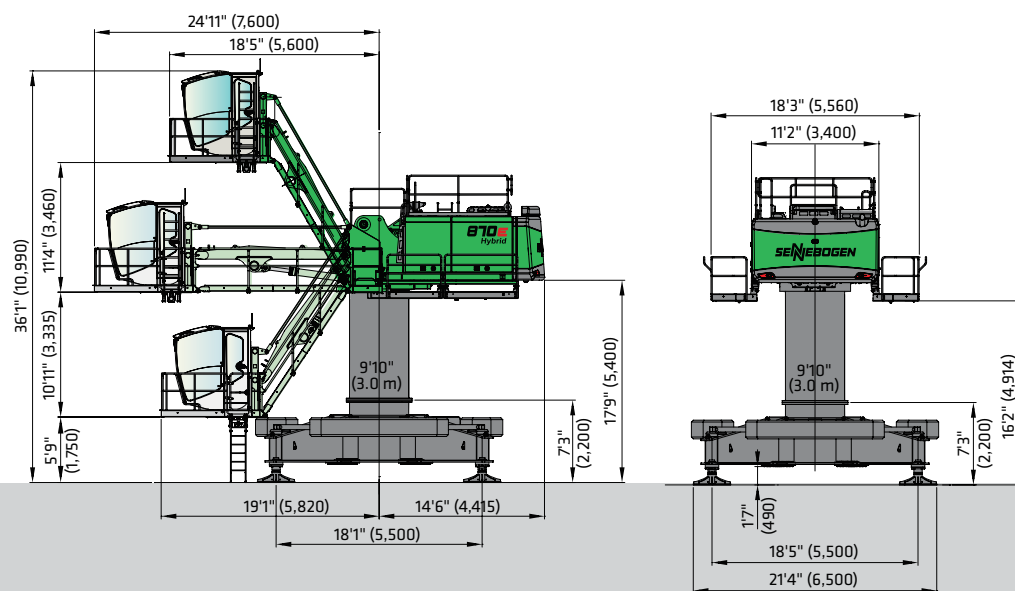
Reach	Boom Length	Stick Length	Transport Length (L)	Transport Height (H)
K18	35'5" (10.8 m)	25'7" (7.8 m)	52' (15.85 m)	13'5" (4.10 m)
K20	38'8" (11.8 m)	28'10" (8.8 m)	55'5" (16.9 m)	13'5" (4.10 m)
K22	41' (12.5 m)	35'5" (10.8 m)	59' (18.0 m)	13'5" (4.10 m)
K25	45'11" (14.0 m)	40'4" (12.3 m)	63'7" (19.4 m)*	13'5" (4.10 m)
B21	44'3" (13.5 m)	32'2" (9.8 m)	60' (18.3 m)*	13'5" (4.10 m)
B24	44'3" (13.5 m)	40'4" (12.3 m)	61'8" (18.8 m)*	13'5" (4.10 m)

*Stick removed



870 R-HD special with R90-550 undercarriage and hydraulically elevating Maxcab Industry with Skylift 900 and 9'10" (3.0 m) pylon

870 R-HD special with R90/550 undercarriage with hydraulically elevating Mastercab with Skylift 700 and 6'7" (2.0 m) pylon



870 special with ST88-550 4-point pedestal and hydraulically elevating Mastercab with Skylift 700 and 9'10" (3.0 m) pylon

Lift Capacities - 870 R-HD "E"

Working Equipment K18

Reach	59'1" (18.0 m)
Boom	35'5" (10.8 m)
Stick	25'7" (7.8 m)

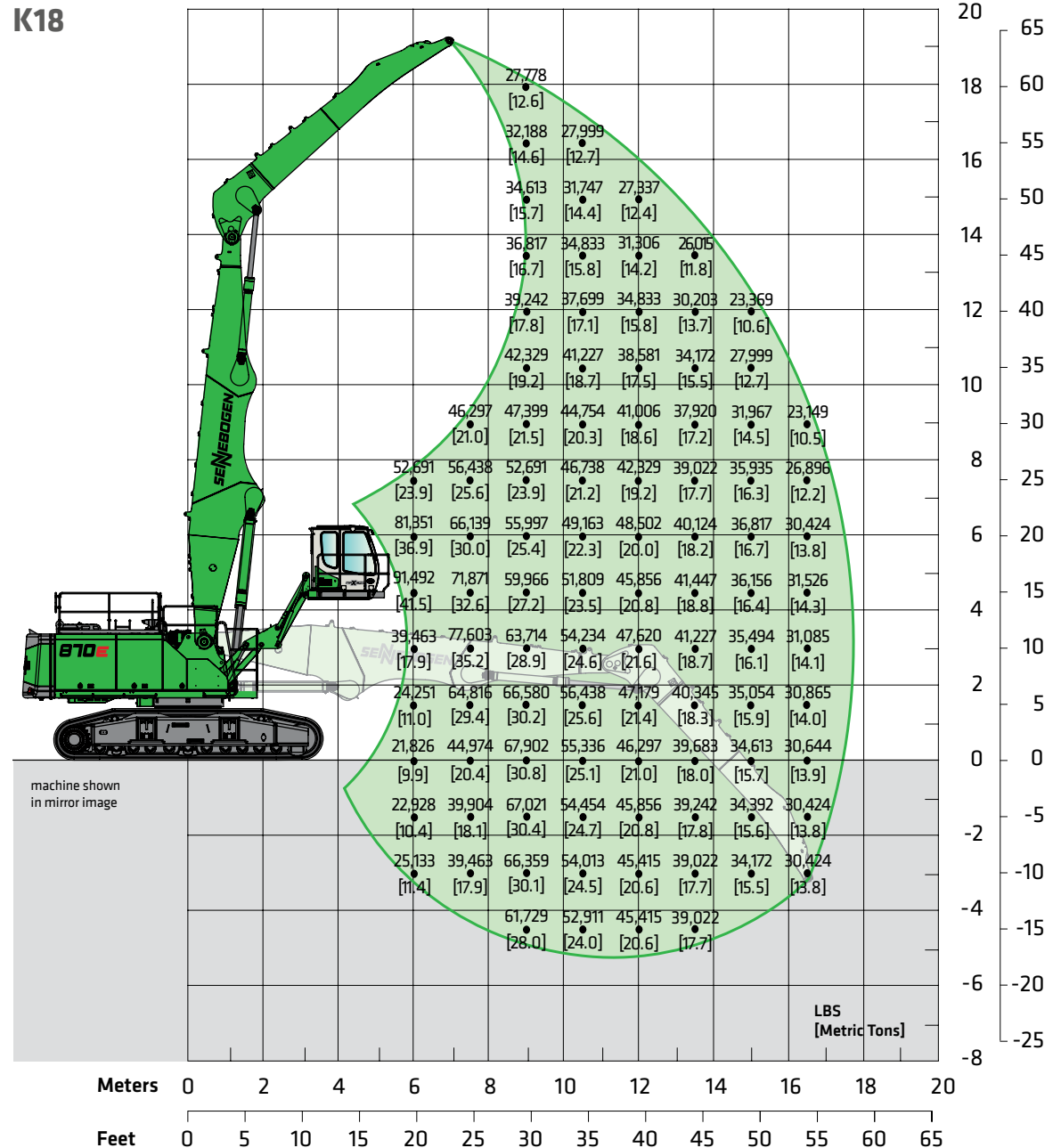
Operator's Cab

Model	Maxcab E300/260, can be elevated and moved forward hydraulically
Eye level	approx. 19'4" (5.9 m)

Undercarriage

Model	R83-450
Tracks	B8b triple grouser shoes 31.5" (800 mm)

K18



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

Lift Capacities - 870 R-HD "E"

K20

Working Equipment K20

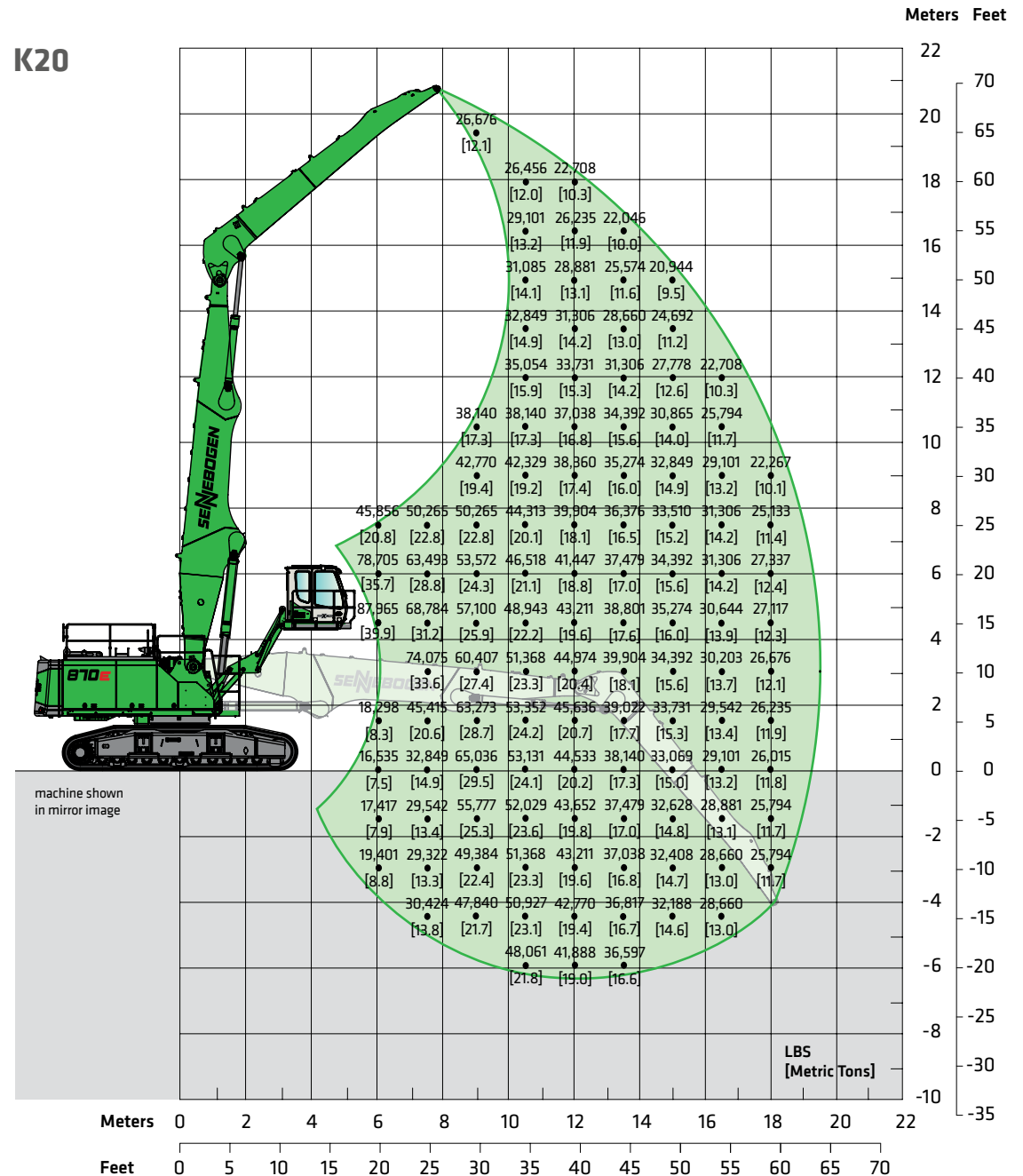
Reach	65'7" (20.0 m)
Boom	38'8" (11.8 m)
Stick	28'10" (8.8 m)

Operator's Cab

Model	Maxcab E300/260, can be elevated and moved forward hydraulically
Eye level	approx. 19'4" (5.9 m)

Undercarriage

Model	R83-450
Tracks	B8b triple grouser shoes 31.5" (800 mm)



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

Lift Capacities - 870 R-HD "E"

Working Equipment K22

Reach	72'2" (22.0 m)
Boom	41' (12.5 m)
Stick	35'5" (10.8 m)

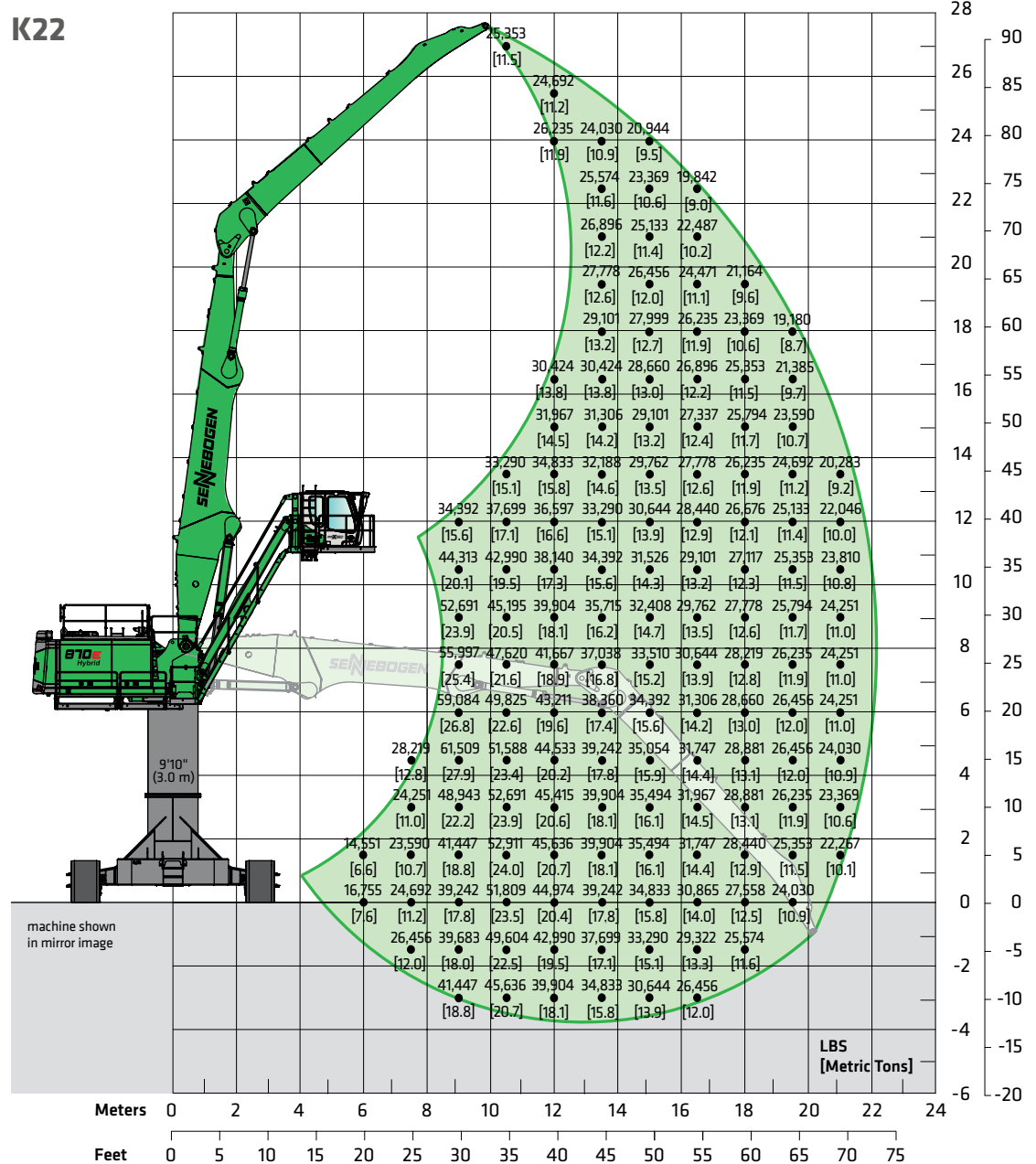
Operator's Cab

Model	Maxcab Skylift 900, hydraulically elevating (option)
Eye level	approx. 42' (12.8 m)

Undercarriage

Model	R90-550
Pylon	9'10" (3.0 m)
Tracks	B8b triple grouser shoes 31.5" (800 mm)

K22



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Lift Capacities - 870 R-HD "E"

Working Equipment K25

Reach	82' (25.0 m)
Boom	45'11" (14.0 m)
Stick	40'4" (12.3 m)

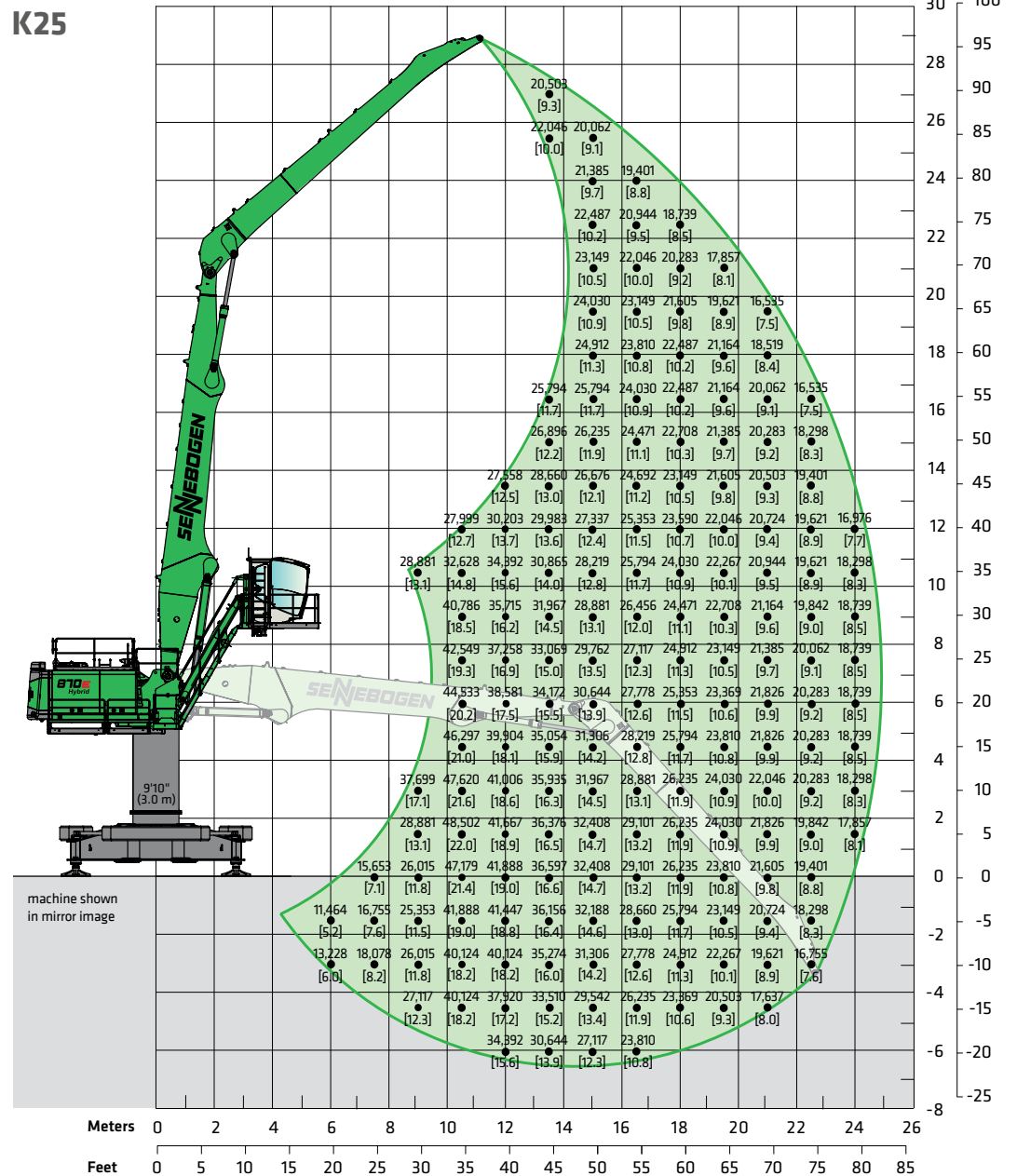
Operator's Cab

Model	Maxcab Skylift 700, hydraulically elevating (option)
Eye level	approx. 35' (10.6 m)

Undercarriage

Model	ST88-550
Pylon	9'10" (3.0 m)
Mounting	4-point pedestal

K25



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

Lift Capacities - 870 R-HD "E"

Working Equipment B21

Reach 68'10" (21.0 m)

Boom 44'3" (13.5 m) Banana

Stick 32'2" (9.8 m)

Operator's Cab

Model Maxcab E300/260,
can be elevated and moved
forward hydraulically

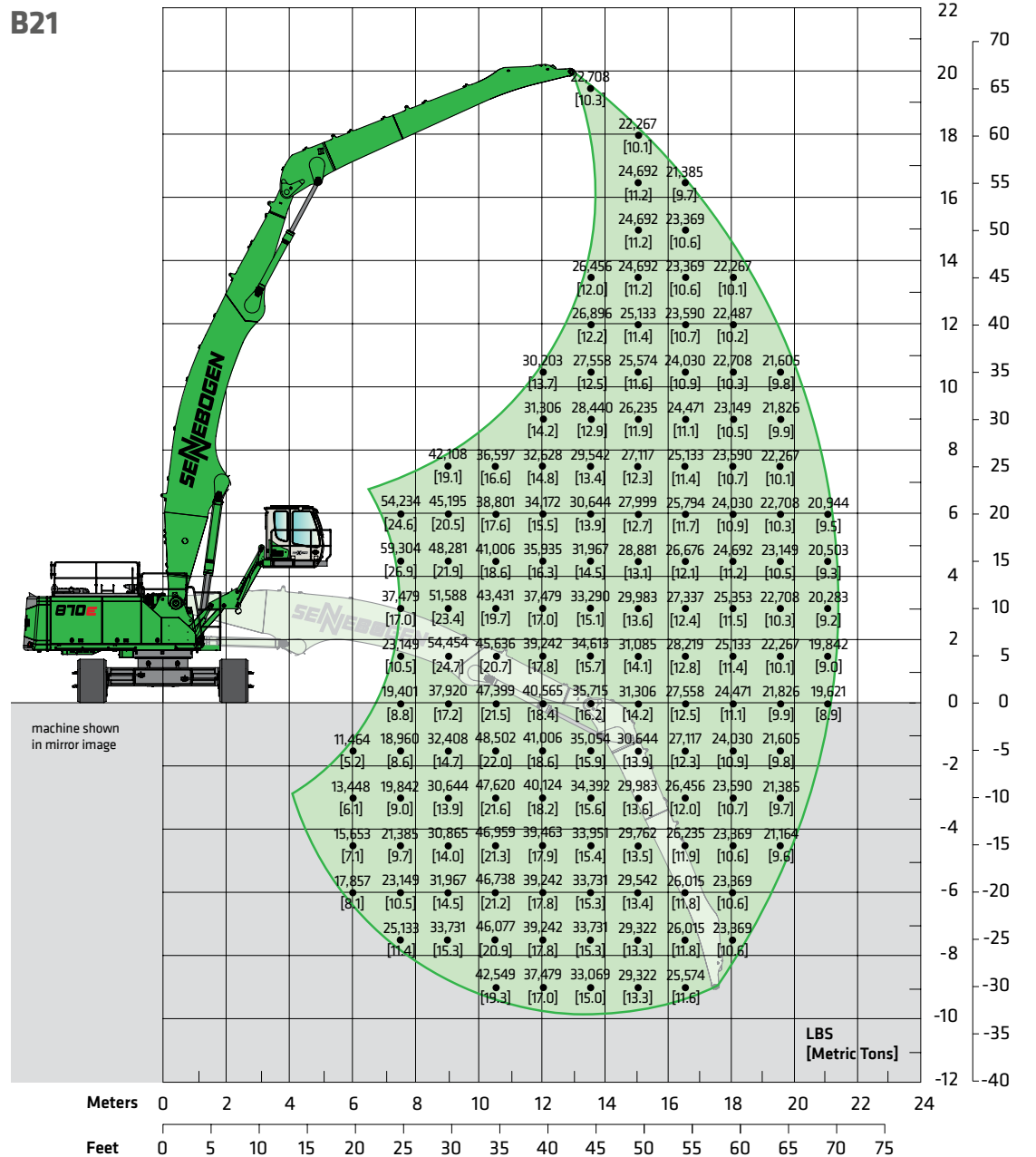
Eye level approx. 19'4" (5.9 m)

Undercarriage

Model R83-450

Tracks B8b
triple grouser shoes
31.5" (800 mm)

B21



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

Lift Capacities - 870 R-HD "E"

Working Equipment B24

Reach	78'9" (24.0 m)
Boom	44'3" (13.5 m) Banana
Stick	40'4" (12.3 m)

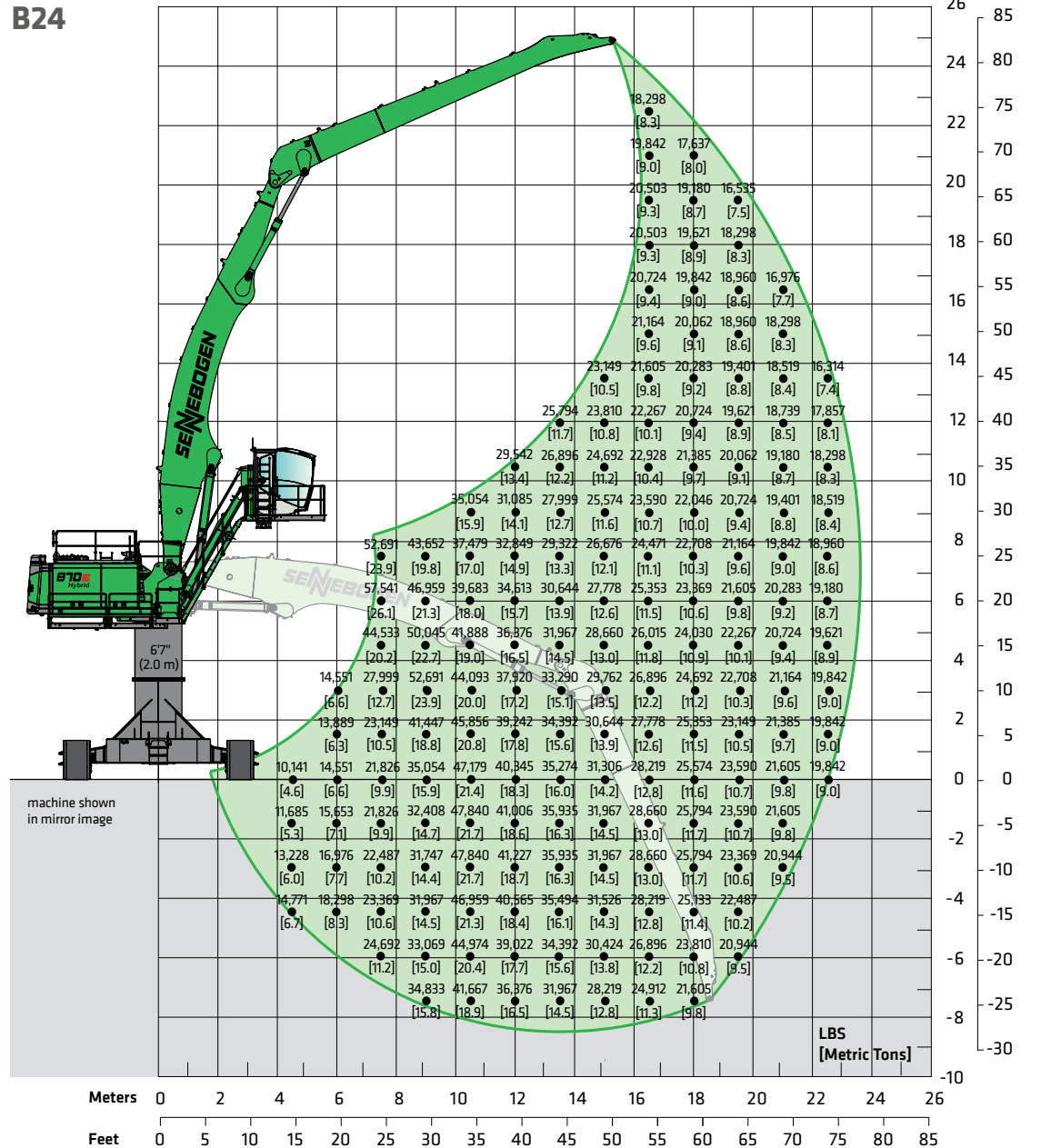
Operator's Cab

Model	Maxcab Skylift 700, hydraulically elevating (option)
Eye level	approx. 35' (10.6 m)

Undercarriage

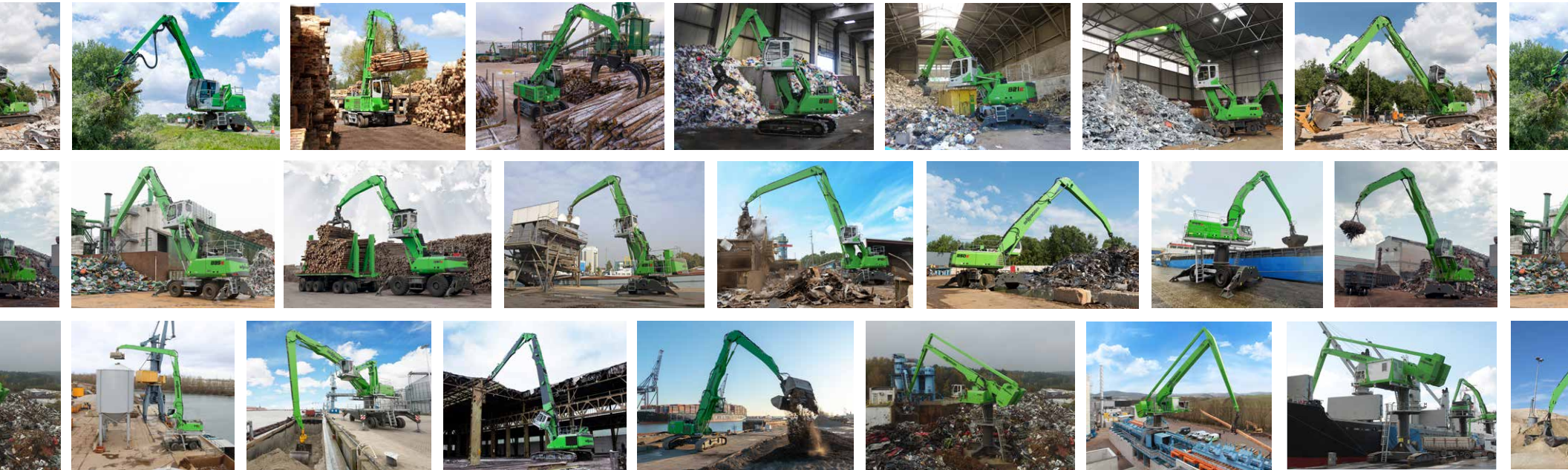
Model	R83-450
Pylon	6'7" (2.0 m)
Tracks	B8b triple grouser shoes 31.5" (800 mm)

B24



Lift capacities are stated in pounds. Values in [] are stated in metric tons. Indicated figures are based on ISO 10567 and do not exceed 75% of tipping and 87% of hydraulic capacity and machine standing on firm, level supporting surface. Loads are valid for 360° with machine support outriggers. Lifting capacities do not include working equipment such as orange peel grapples, magnets, clamshells, etc. The load point is the center line of the attachment pivot mounting pin on the stick. Their weights must be deducted from the numbers indicated in the lift charts. Please contact SENNEBOGEN or your local dealer for optimum attachment selection. The operator / user of the machine should be fully acquainted with the operator's & safety manuals provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

OUR COMPLETE LINE OF PURPOSE-BUILT MATERIAL HANDLERS



SENNEBOGEN®

SENNEBOGEN LLC
1957 Sennebogen Trail
Stanley, NC 28164 USA

Phone +1 (704) 347-4910
Fax +1 (704) 347-8894
Email sales@sennebogenllc.com