

PURPOSE-BUILT FROM THE GROUND UP



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)

SENNEBOGEN®

Purpose-Built – To Suit **Your** Purpose

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

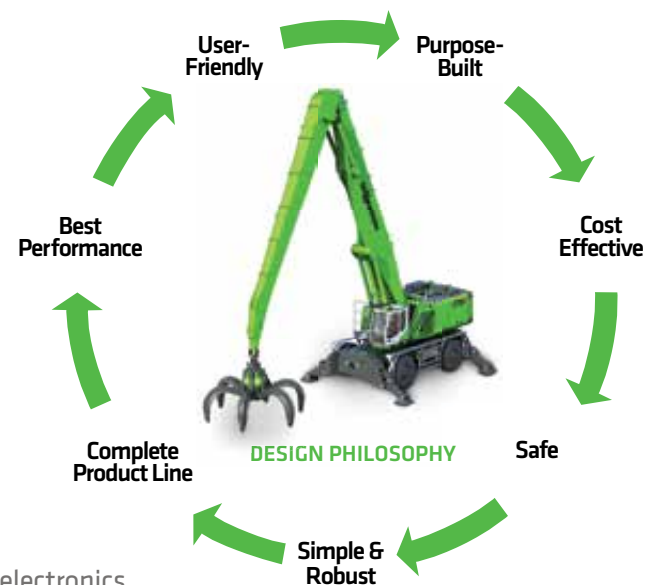
Every SENNEBOGEN material handler begins with you, our customer, and the challenges you face every day. Our singular focus leads us to the simplest, most efficient engineering solutions.

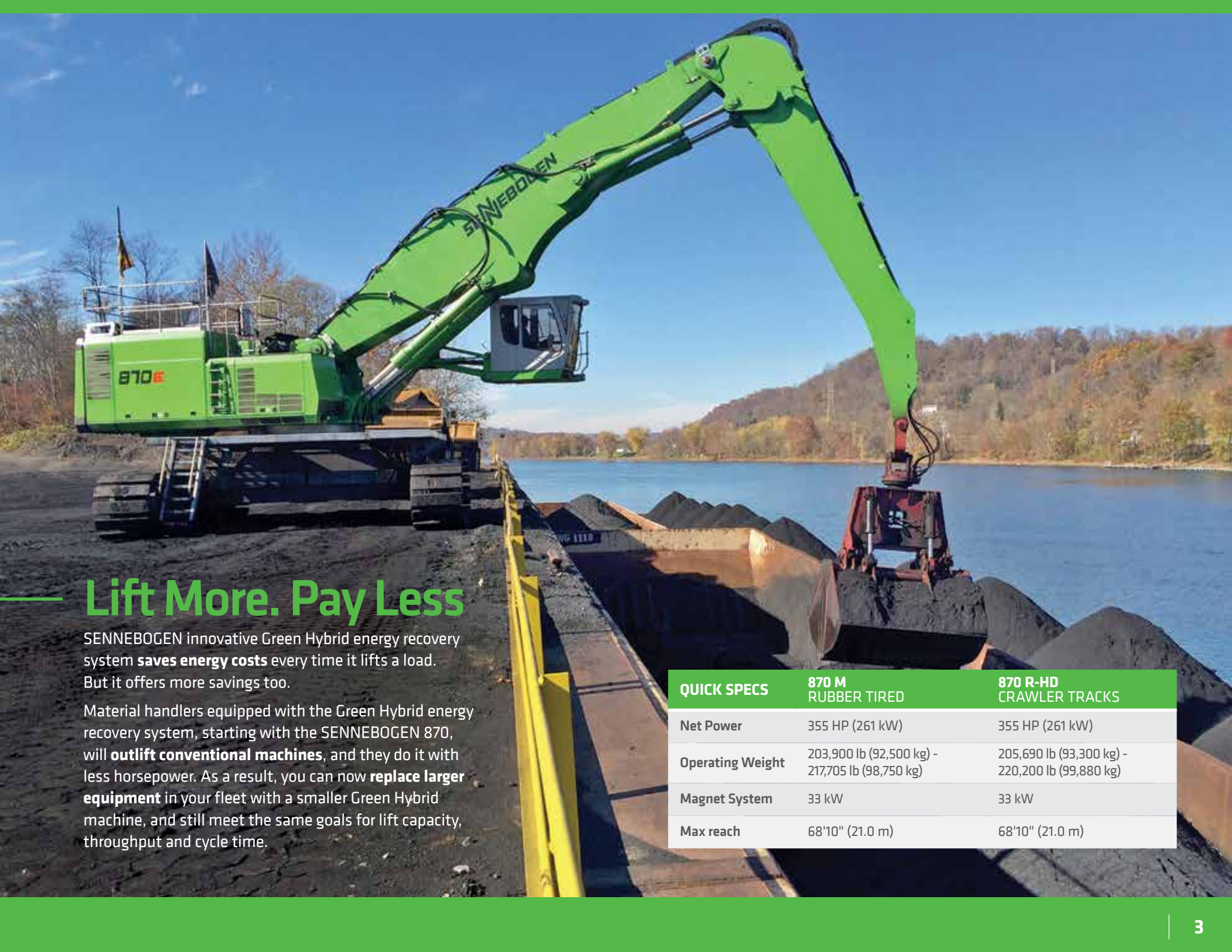
With our Green Hybrid series of purpose-built material handlers, we're meeting our commitment to help you move more material, safely, at a lower cost:

- 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 taking a personal interest in the needs of our customers. By listening and responding to their requirements, we have continuously delivered 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 innovative Green Hybrid energy recovery system **saves energy costs** every time it lifts a load. But it offers more savings too.

Material handlers equipped with the Green Hybrid energy recovery system, starting with the SENNEBOGEN 870, will **outlift conventional machines**, and they do it with less horsepower. As a result, you can now **replace larger equipment** in your fleet with a smaller Green Hybrid machine, and still meet the same goals for lift capacity, throughput and cycle time.

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, now with bulletproof windshield and skylight as standard equipment, allows an unobstructed view in all directions for increased safety and productivity, even under harsh and adverse conditions. Optional features include:

- Windshield protective guard
- Skylight protection guard and/or FOPS guard
- Floor window

Cabs



Maxcab

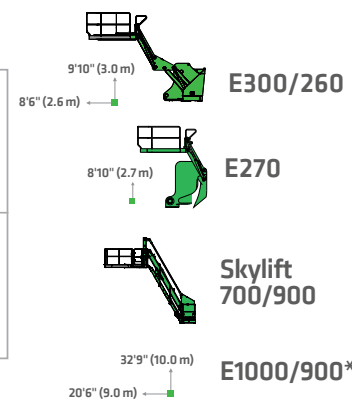


Maxcab Industry



Mastercab

Cab elevations



Platforms

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



Booms and Sticks

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



Magnet Plates



Mobile Shear Types



Vacuum Lifting Device

*Shown with E1000/900 Mastercab

SENNEBOGEN magnet systems are powered by Baldor generators with Hubbell controllers





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

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 multi-colored interface, available in multiple languages

Multiple platforms

The modular 870 is designed to adapt to standard wheeled, tracked and pedestal mounts

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

Automatic lubrication

Extend component life with no waste, no spill hazards

BOOM & STICK

Limit switches

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

Boom pivot

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

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

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

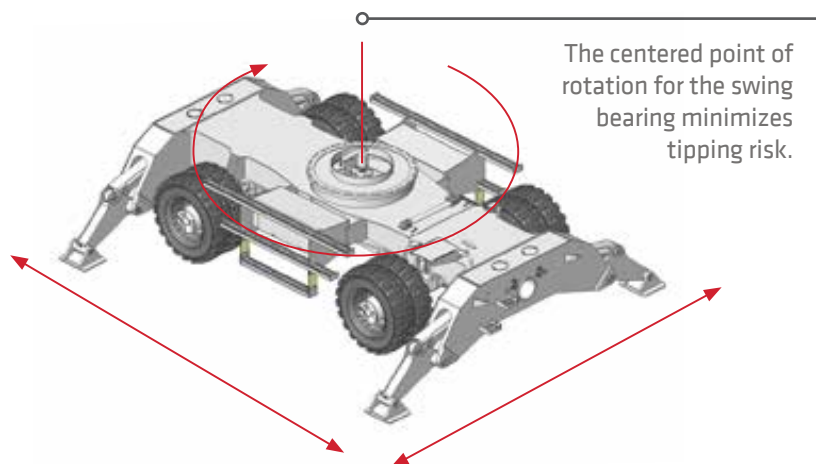
Bulletproof windshield and skylight are standard on all new SENNEBOGEN models

Health & Safety: The First Step To Productivity

SENNEBOGEN is renowned as the industry leader in preventing downtime, and in protecting people.

Safety-conscious producers 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, and 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, battery disconnect switch and travel alarm are all standard features of your 870.



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

Various optional guarding packages available to meet industry safety requirements.



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

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

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



All high pressure hydraulic hoses in the engine compartment are secured in sleeves to protect service personnel.





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

SENNEBOGEN's Maxcab puts you in the driver's seat for jobsite safety.



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

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

Positioning the gas accumulators of the SENNEBOGEN Green Hybrid System at the rear of the deck add an extra measure of safety for operators.



Maxcab's maximized window area and elevating mount gives 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.

Big Savings

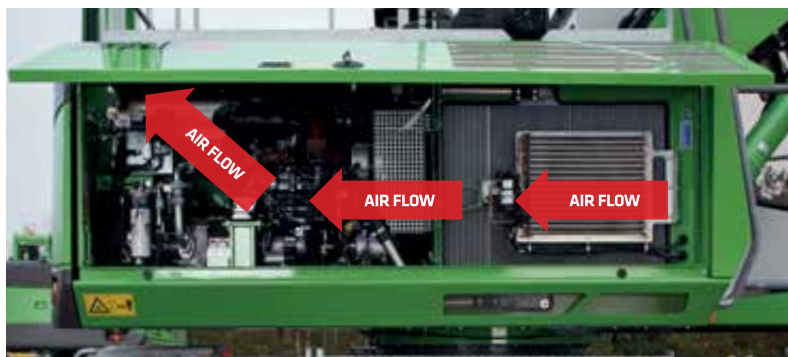
“Green Efficiency” powers a new generation of machines that reduce operating costs through every working hour and on every lift.

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 power more effectively to achieve **savings of up to 50%** compared to traditional diesel-fueled machines.



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

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



Longitudinally mounted engines provide a natural, flow-through air tunnel for efficient cooling and additional fuel economy, while adding structural strength to the upper carriage from boom pin point to counterweight.



Optional electrically powered eGreen models achieve an additional 50% reduction of energy costs over diesel models, along with low noise and vibration-free operation.



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

EXPERIENCE THE SYSTEM

SCAN TO WATCH
AN ONLINE VIDEO
DEMONSTRATION



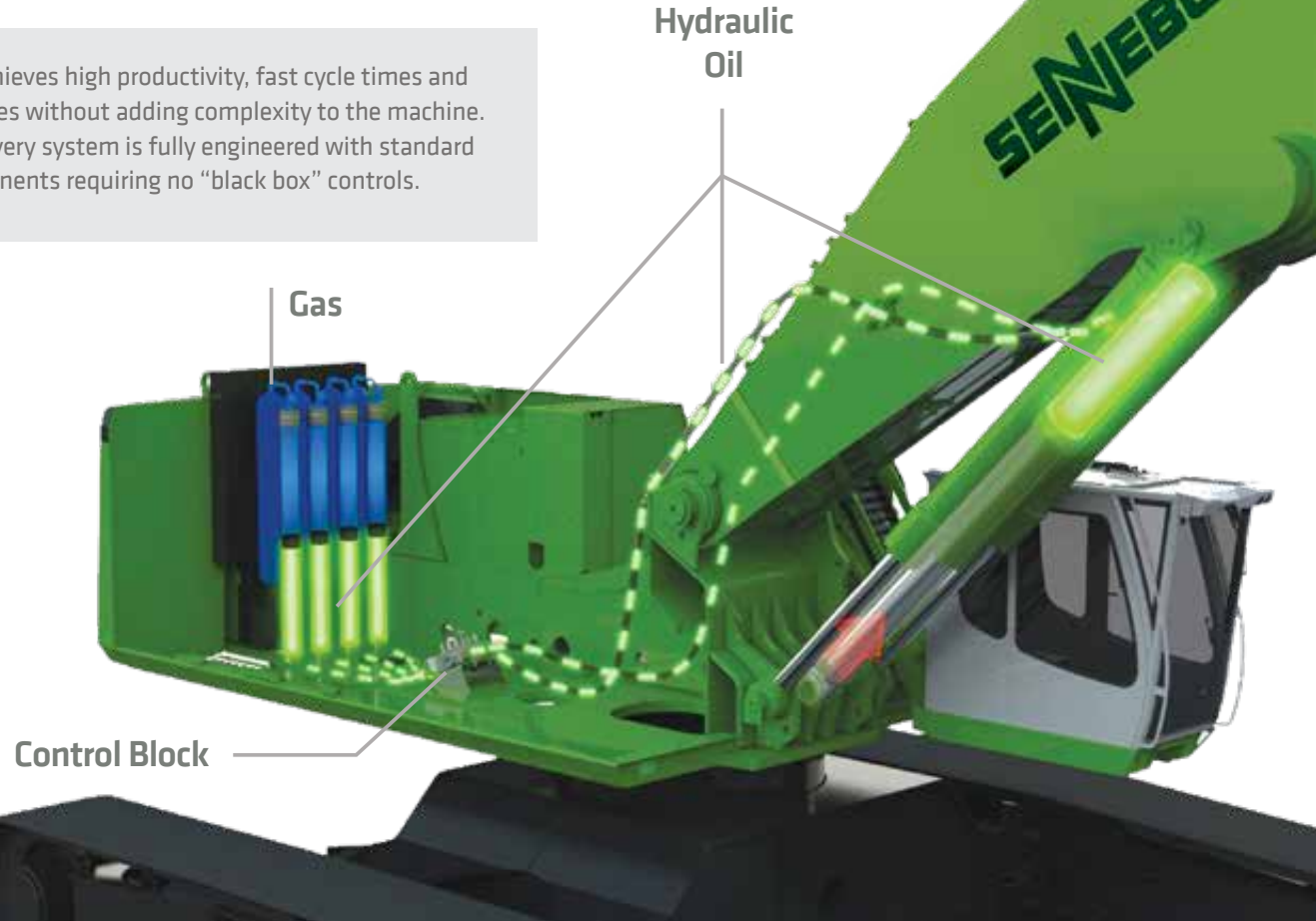
Little Footprint

Green Hybrid technology: the industry's new standard for eco-friendly material handling.

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
- Recovery cylinder captures energy in gas accumulators
- Released energy supports the boom through the next lift cycle

Green Hybrid achieves high productivity, fast cycle times and high lift capacities without adding complexity to the machine. The energy recovery system is fully engineered with standard hydraulic components requiring no “black box” controls.

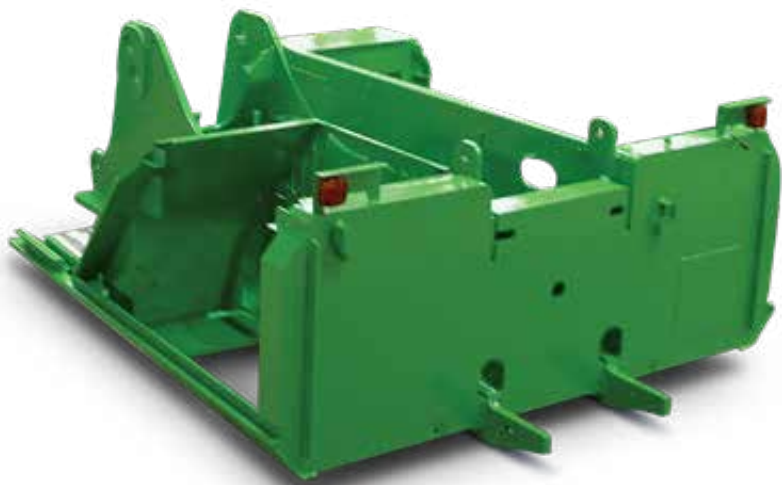


Attention To Details Makes Us Stronger

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



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.

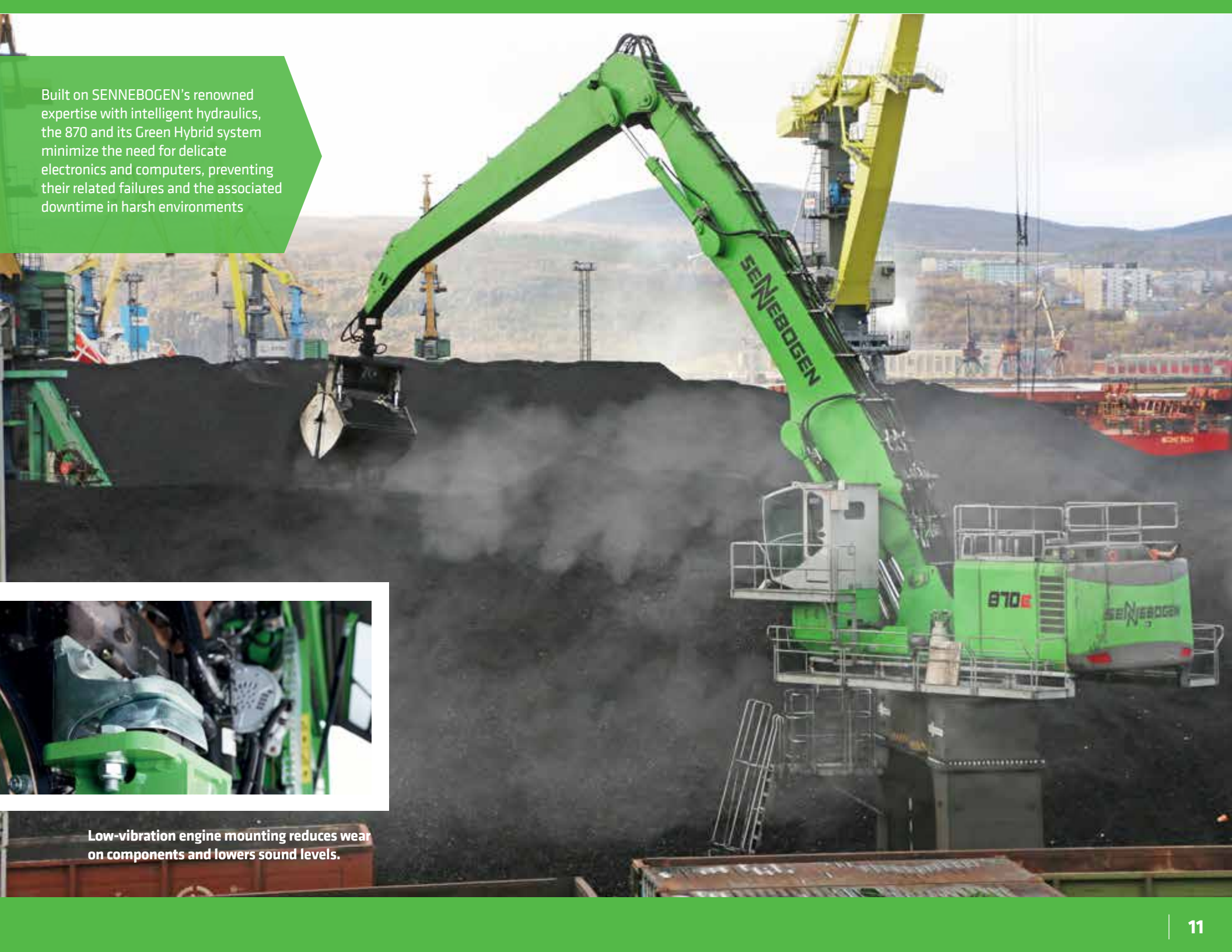


Fully hydraulic controls require no special software to troubleshoot and all test ports are easily accessible in one place.



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

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



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

Proven Uptime

To find out how to make SENNEBOGEN machines easier to maintain than any other material handler, we ask the experts...

... we talk to the technicians who actually service our equipment.

Our own support team, our instructors, our 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, 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, matched to specific service tasks and machines. Hundred of assorted parts, connectors, fittings, 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 material required for a specific service need, conveniently sorted and organized in one place.



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



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.



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



SENCON

The advanced SENCON diagnostic and reporting system presents a multi-colored user-friendly interface, now available in multiple languages.



All the fuses and relays are in a centrally located box for easy access. Test and service points are conveniently arranged together behind the cab and within reach from ground level.



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

Our Commitment To Your Business

SENNEBOGEN's investment in service support is unmatched in the industry, providing the capabilities and resources to build success for our customers.

- Our headquarters in Stanley, NC is a 100,000 sq. ft. (9,300 m²) multi-purpose facility dedicated to supporting SENNEBOGEN material handlers throughout the Americas.
- Our coast-to-coast network of factory-trained distributors 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.
- Our in-house engineering services respond quickly to customer needs for unique solutions.

Our large parts warehouse maintains inventories of service parts and replacement components for all of our fielded machines, from O-rings to engines, axles and complete boom and stick assemblies.





Training Center of Excellence

The dedicated Training Center in our North American head office complex provides primary and advanced courses. Offered free of charge for our dealers and their customers, the Training Center has working units, demonstration modules and is staffed with professional trainers each with many years of in-field experience and hands-on knowledge.

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

Purpose-built for America's Best-Trained Technicians

The main demonstration bay allows hands-on access to machines while 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 dealer and customer personnel, the SENNEBOGEN Training Center has earned accolades for the quality of the instructors, facilities and materials.



5 Day Course

Service Level 1

Min 6 / Max 10 Students per class

Required: Basic Technical Knowledge

Course Content:

- Machine Safety, Operation & Functions
- Preventive Maintenance
- Read & Understand Hydraulic Schematics
- Read & Understand Electric Schematics
- Basic Trouble Shooting:

Magnet System, Hydraulics, Electrics
Offered in English and Spanish sessions

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

ALL TRAINING COURSES AVAILABLE FREE

Service Level 1
Service Level 2
Parts Training
Operator Familiarization

5 Day Course

Service Level 2

Min 4 / Max 6 Students per class

Required: Completion of Level 1 Class

Course Content:

- Remote Trouble Shooting
 - Component Training & Repair
 - Failure Analysis
 - In-Depth Trouble Shooting
- Magnet System, Hydraulics, Electrics

Offered in English and Spanish sessions

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

Level 2 classes are smaller & more intensive & build on Level 1.

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 line-up 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 purpose-built machines competitively. Shared systems also streamline aftersale 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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870 R-HD “E”

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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 thermo-statically 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 multi-disk 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.

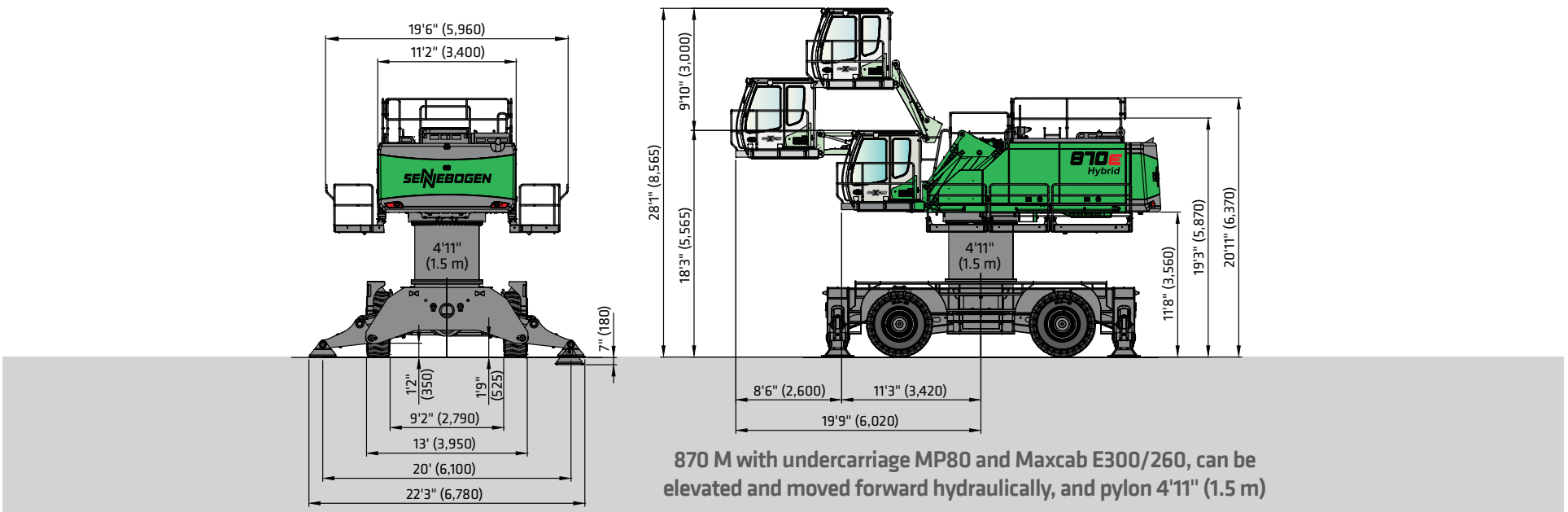
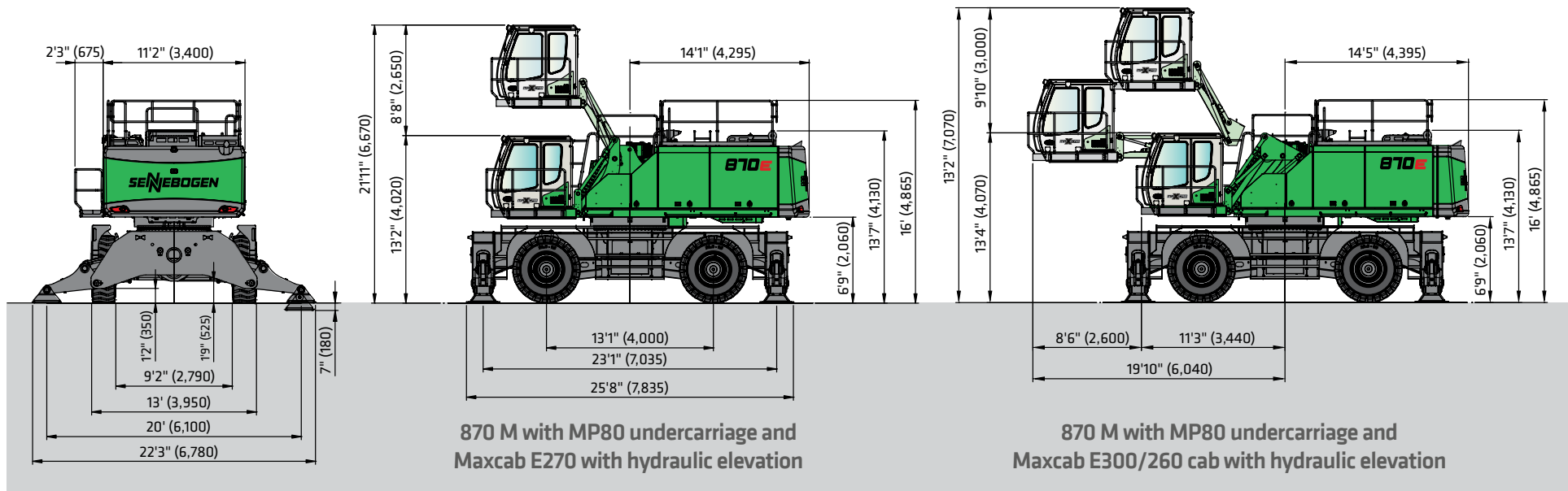
Standard / Optional Equipment - 870 M “E”

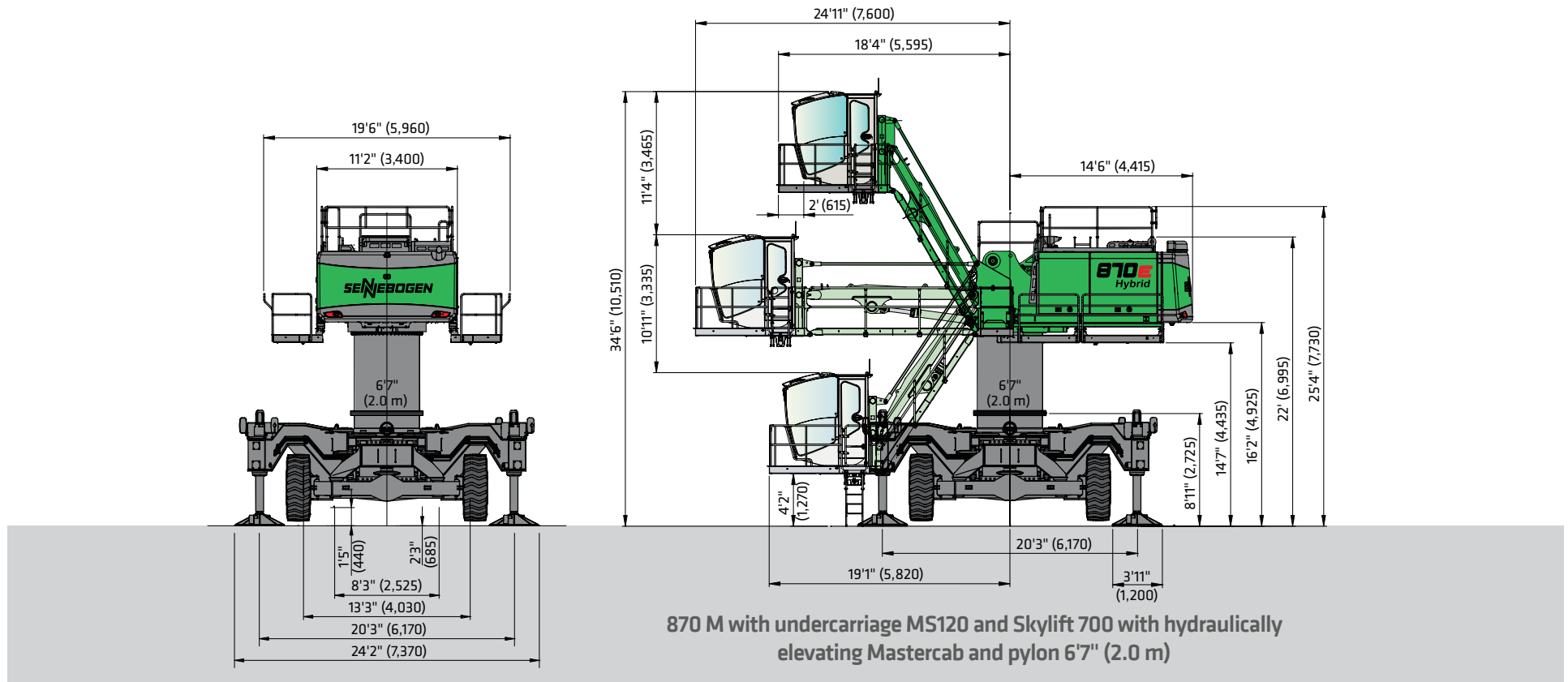
ENGINE		OPERATOR'S CAB (Maxcab Industry)		UNDERCARRIAGE	
Water separator in fuel line	●	Hydraulic elevating up and out cab E300/260	●	Heavy duty designed material handling undercarriage	●
Automatic idle / engine stop control	●	Multi adjustable, air suspended operator's seat	●	MP80 E undercarriage with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

Standard Equipment ● Optional Equipment ○

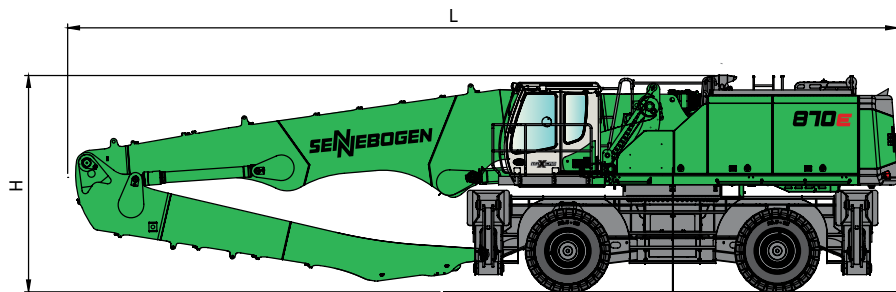
Subject to technical modification.

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)

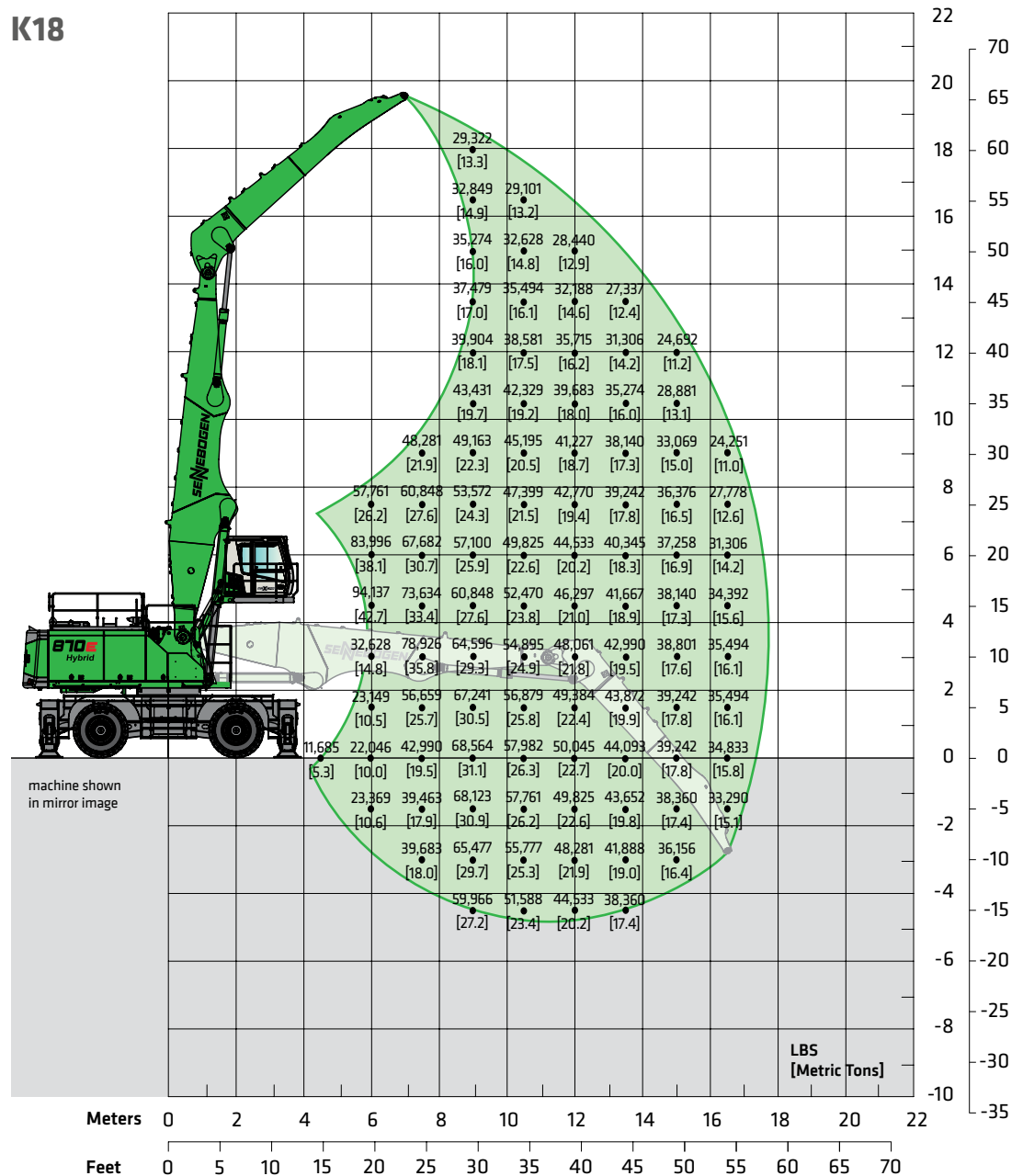
Operator's Cab

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% or 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 manual 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)

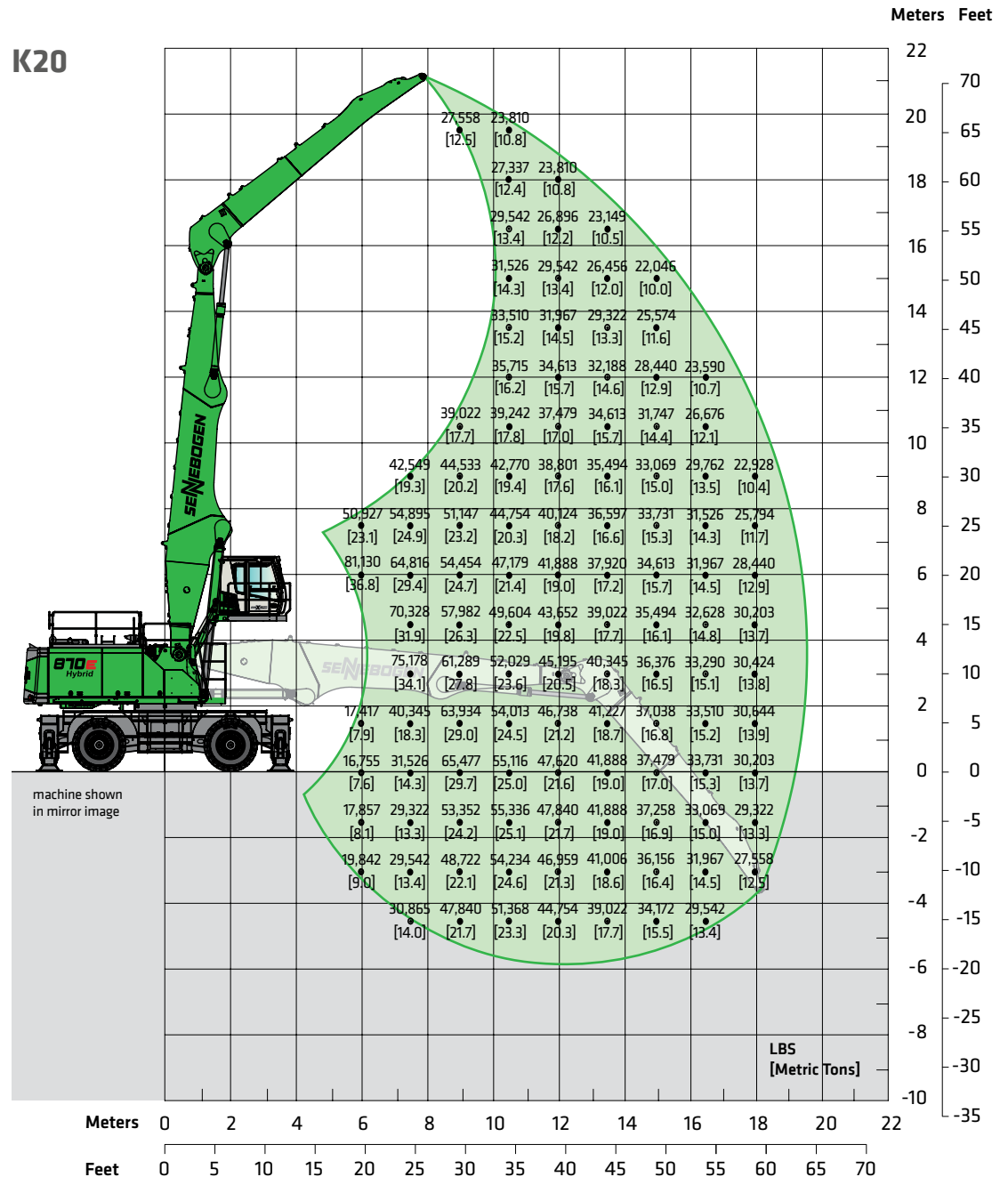
Operator's Cab

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% or 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 manual 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)

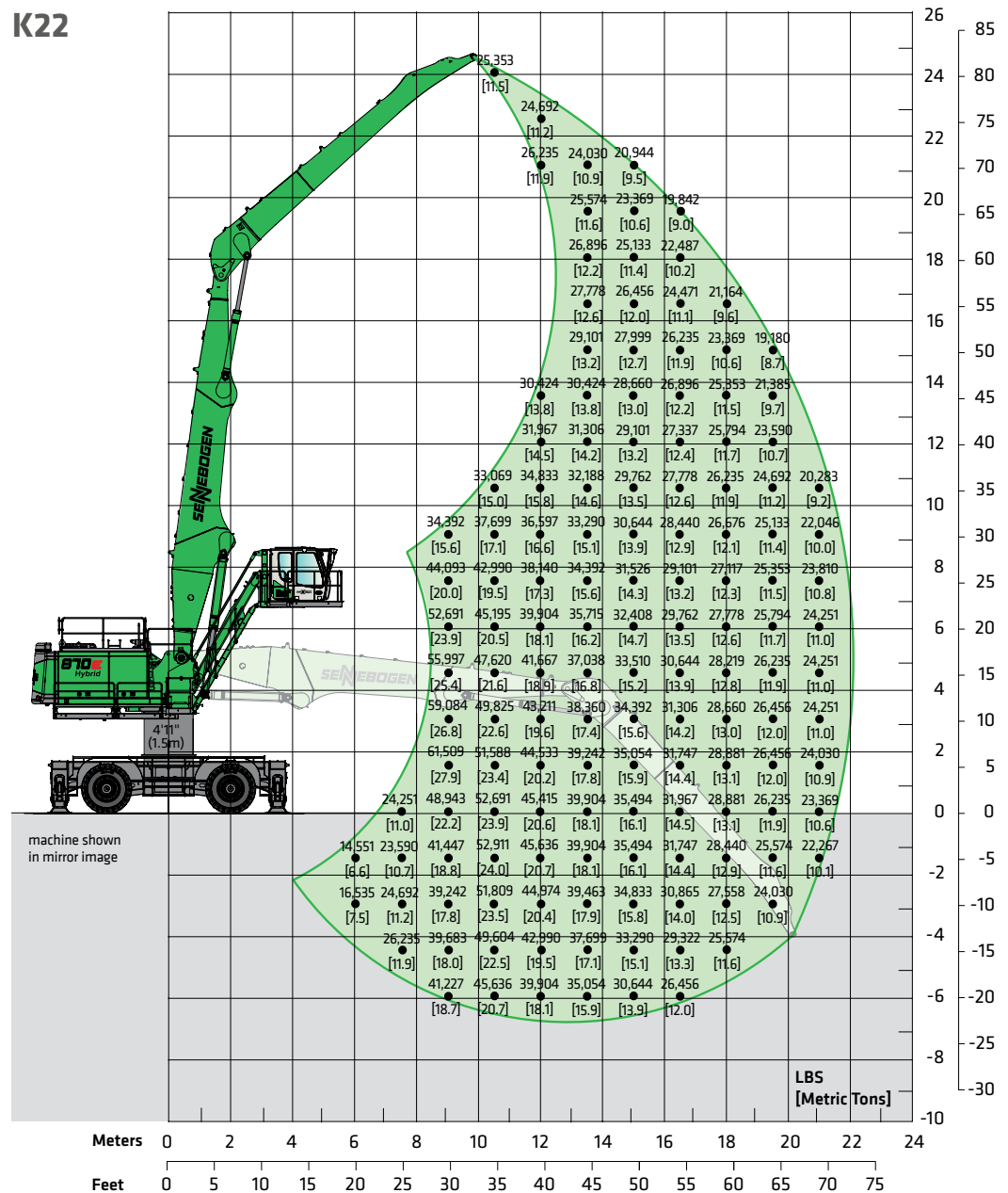
Operator's Cab

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% or 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 manual 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)

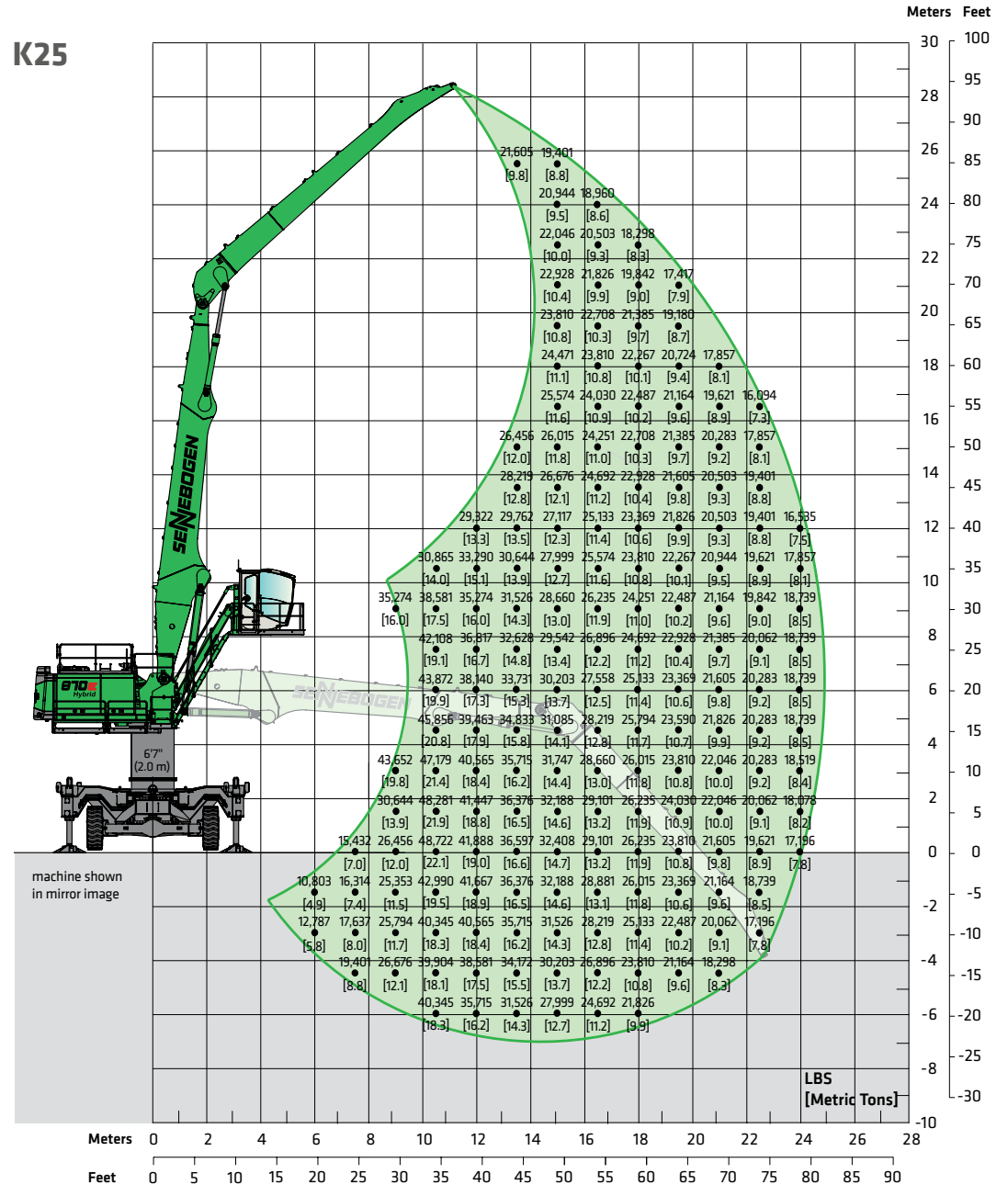
Operator's Cab

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

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% or 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 manual provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

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)

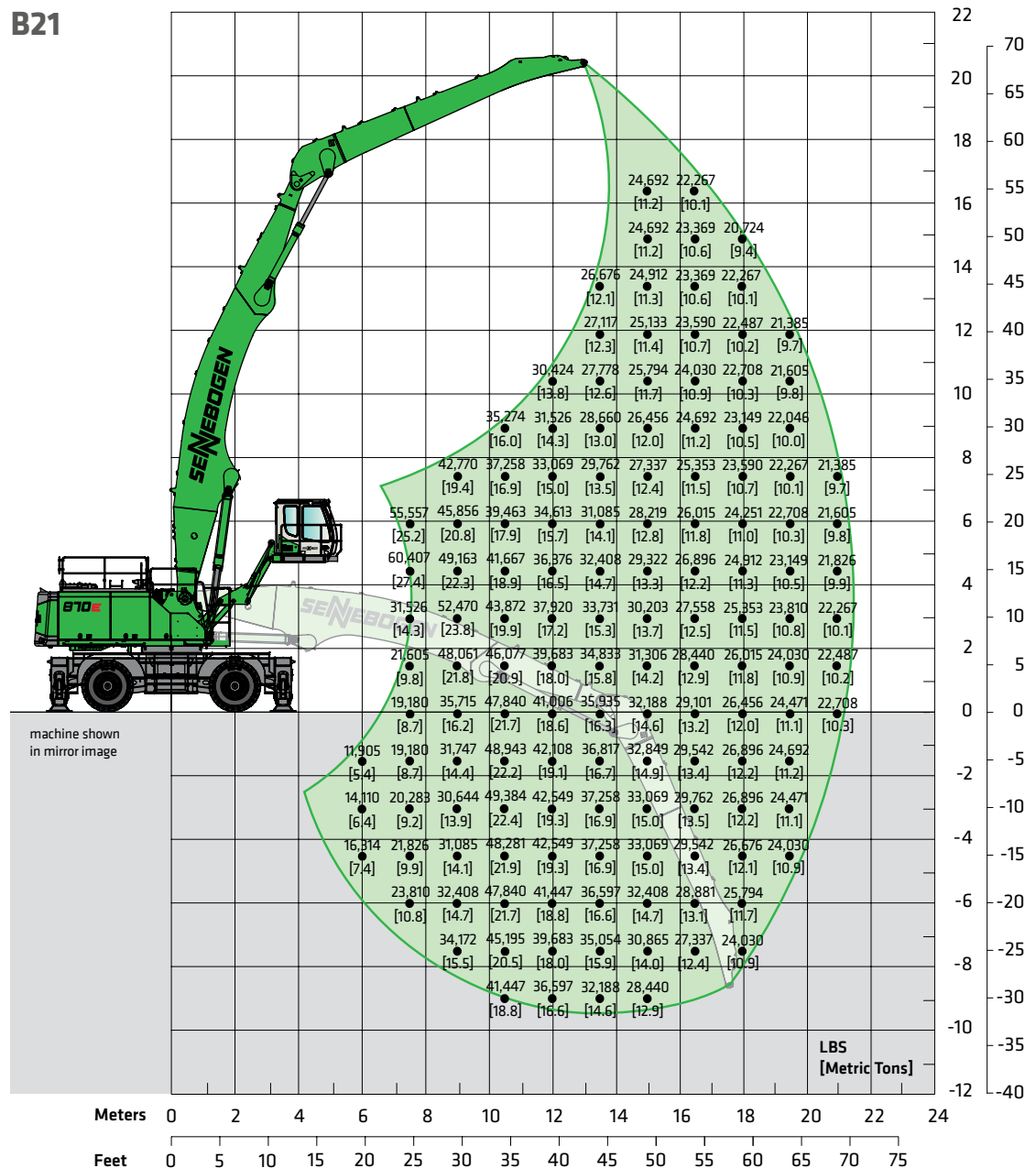
Operator's Cab

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% or 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 manual 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)

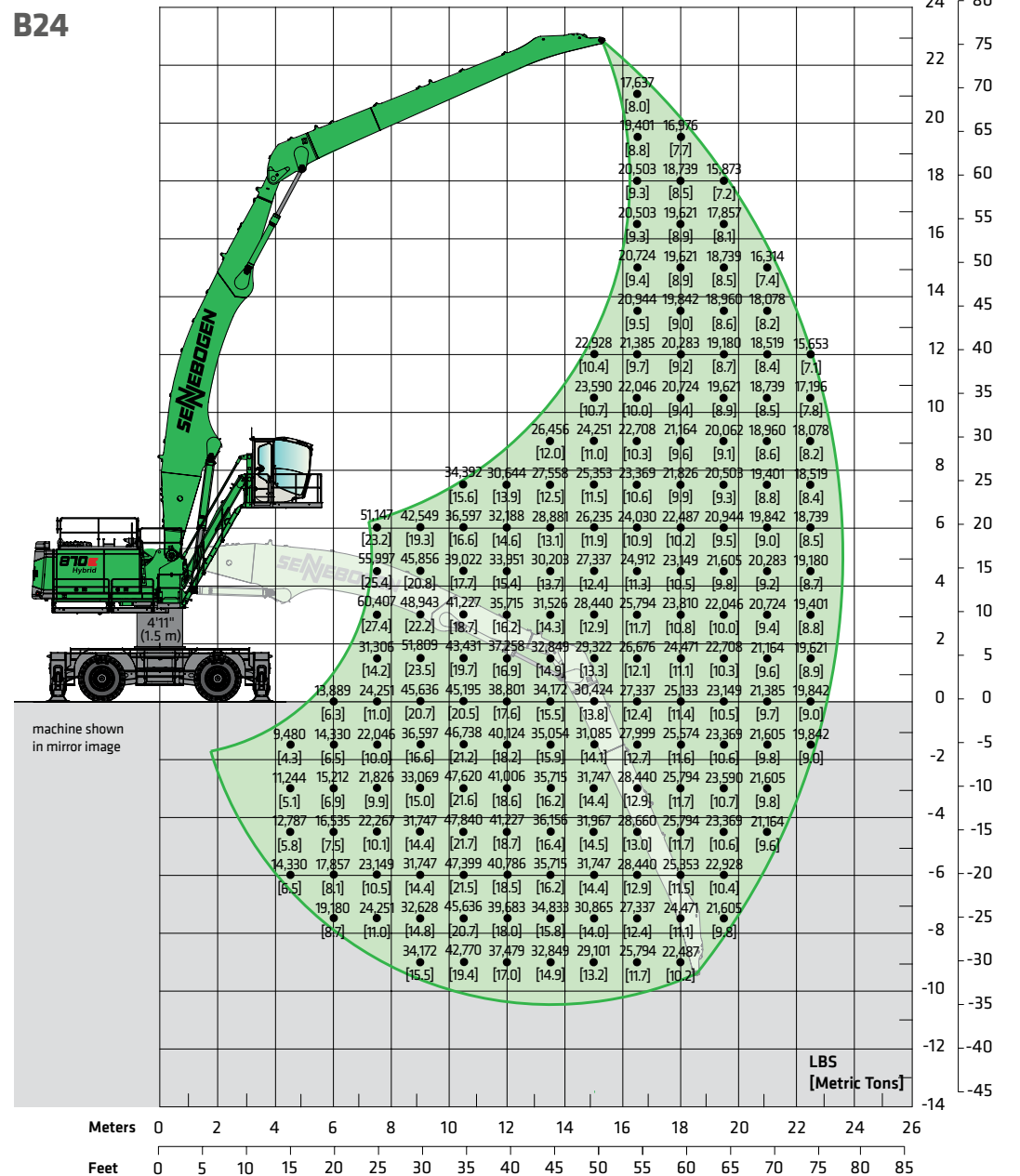
Operator's Cab

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

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 thermo-statically 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	
Water separator in fuel line	●
Automatic idle / engine stop control	●
Eco mode	●
Muffler	●
Visual fuel tank check	●
Engine block & water separator pre-heater	○
ELECTRIC	
Battery disconnect switch	●
Centralized fuse box	●
HYDRAULIC	
Pilot pressure controlled variable displacement pump	●
Thermostatically controlled cooling system	●
Centralized hydraulic test ports	●
Protection covers for pilot pressure control valves	●
3 micron dual filtration system	●
Load sensing, flow on demand hydraulic system	●
Optimized hydraulic pump regulation (GLR)	●
Visual hydraulic tank check from ground level	●
Attachments open, close & rotation hydraulics	●
Hydraulic tank shut off valve	●
Electrical hydraulic tank pre-heater	○
Biodegradable hydraulic oil	○
Hydraulic circuit for scrap shear	○
Additional hydraulic circuits	○
Attachment return filtration filters (60 µm)	○
UPPER CARRIAGE	
Rearview & right side view camera system	●
Automatic lubrication system	●
Anti-slip mats on walking area	●
Lockable side doors	●
Handrails on top of upper carriage	●
Mirror left side	●
Removable panels	●
Additional light package	○
Custom colors	○
Seawater paint coating	○

OPERATOR'S CAB (Maxcab Industry)	
Hydraulic elevating up and out cab E300/260	●
Multi adjustable, air suspended operator's seat	●
3" (76 mm) seat belt	●
Seat heater	●
Automatic climate control (heater / AC)	●
Air outlets w / defroster	●
Storage area for lunch box	●
Large cup holder	●
Fire extinguisher	●
Tinted windows with safety glass	●
Door window as sliding window	●
Radio with USB and SD port, MP3 and Bluetooth	●
Removable floor mat	●
SenCon diagnostic system	●
Multicolor Monitor	●
Tilt out front window	●
Halogen light package on cab roof	●
Mechanical hour meter	●
Sliding door	●
Catwalk w / handrail	●
12 V / 24 V power outlet	●
Windshield wiper and washers	●
Emergency exit hammer	●
Safety lever	●
Sun shades	●
Interior lighting	●
Rain cover front window	●
Outside mirror	●
Optical and acoustic warning system	●
Positive filtered ventilation (pressurized cab)	●
Safety check valves for elevating cab cylinder	●
Foot rest	●
Bulletproof windshield	●
Bulletproof skylight	●
Maxcab industry	○
Windshield protection guard	○
Skylight protection guard	○
Skylight FOPS guard	○
Polycarbonate side windows	○
Additional light package	○
Fixed cab elevation	○
Operator's cab with floor window	○
Additional cameras	○

UNDERCARRIAGE	
Heavy duty designed material handling undercarriage	●
Heavy duty crawler track frame	●
B8b maintenance free tracks	●
Hydraulic chain tension device	●
Travel alarm	●

WORKING EQUIPMENT	
Purpose built material handling boom	●
Green Hybrid energy recovery system	●
Purpose built material handling stick	●
Attachment hydraulic line connections with ball valves	●
Safety check valves for stick cylinders	●
Safety check valves for boom cylinders	●
Cylinder end position dumping	●
Boom hoist limitation	●
Bronze bushings connected to automatic lubrication system	●
Stick limitation	●
LED light package boom	○
LED light package stick	○
Purpose built material handling boom for scrap shears	○

MAGNET SYSTEM	
Hydraulic driven generator	○
Magnet controller	○
Magnet suspension link	○

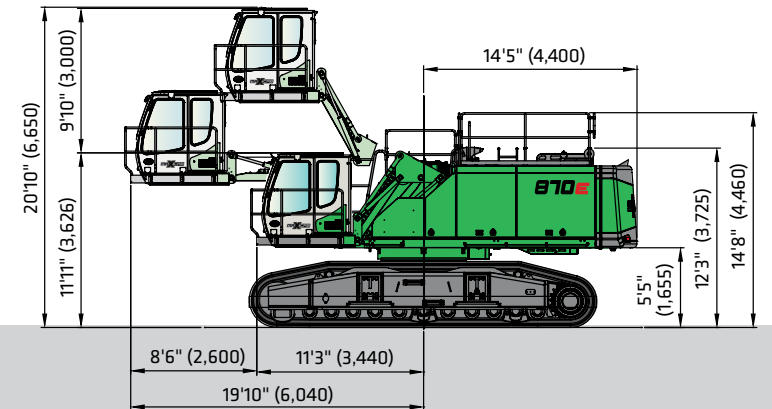
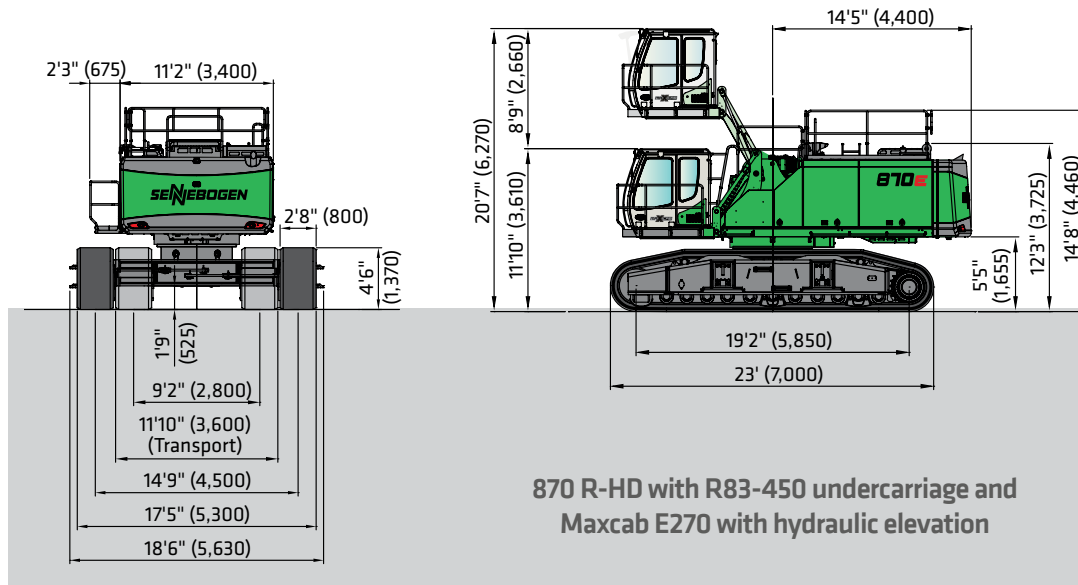
ATTACHMENTS	
Orange peel grapple	○
Mag grapple	○
Clamshell	○
Magnet	○
Log grapple	○
Scrap shear	○
Power attachment	○
Pipe handler	○

SWING SYSTEM	
360° protection cover, removable	●
Electrical driven swing gear pinion lubrication pump	●

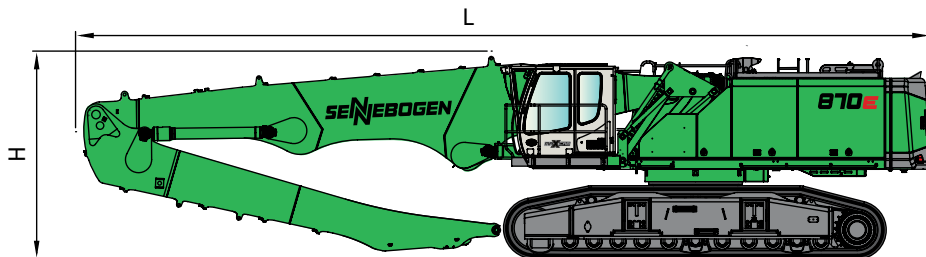
Standard Equipment ● Optional Equipment ○

Subject to technical modification.

Dimensions - 870 R-HD “E”

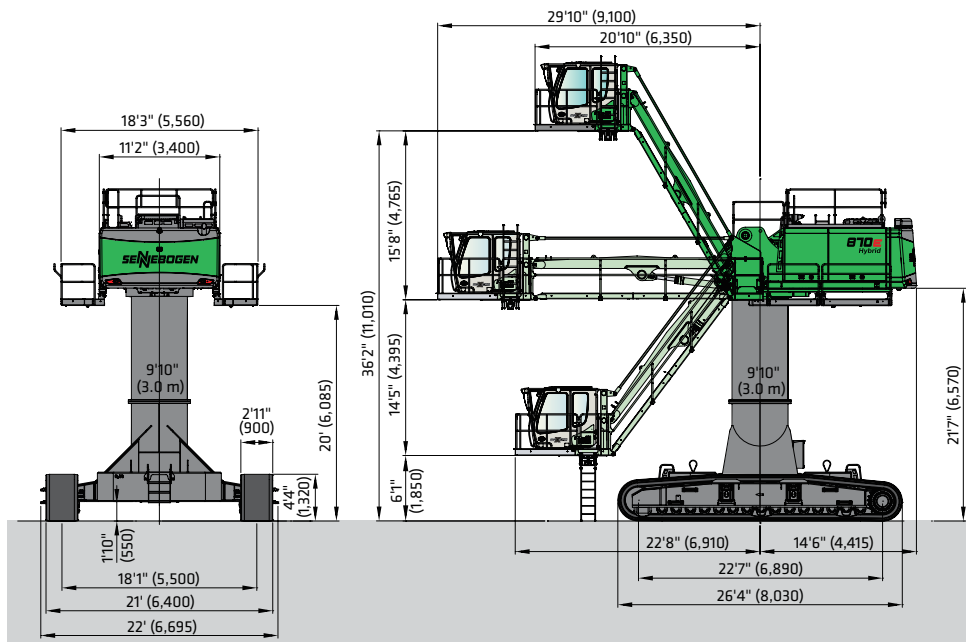


Transport Dimensions - 870 R-HD “E”

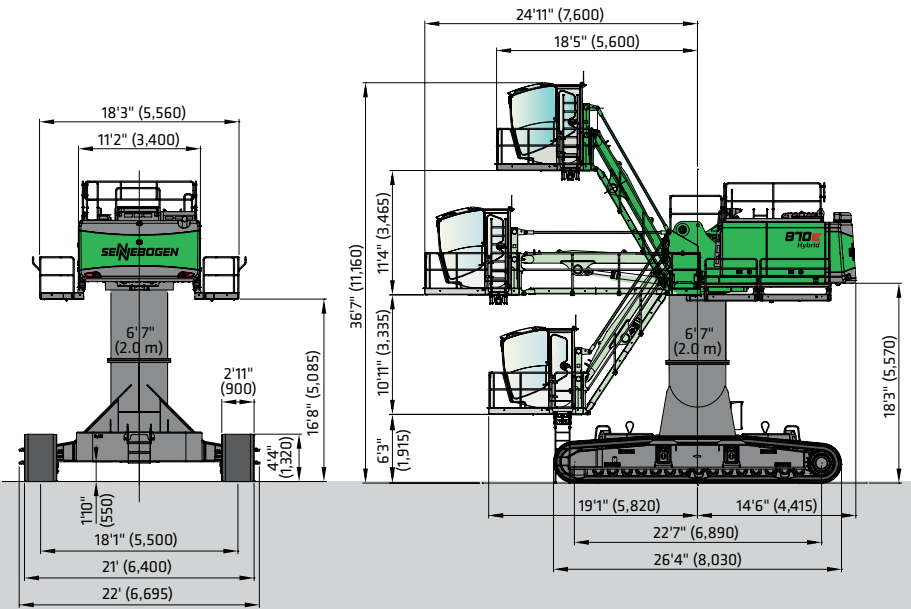


Reach	Boom Length	Stick Length	Transport Length (L)	Transport Height (H)
K18	35'5" (10.8 m)	25'7" (7.8 m)	52' (15.85 m)	13'5" (4.10 m)
K20	38'8" (11.8 m)	28'10" (8.8 m)	55'5" (16.9 m)	13'5" (4.10 m)
K22	41' (12.5 m)	35'5" (10.8 m)	59' (18.0 m)	13'5" (4.10 m)
K25	45'11" (14.0 m)	40'4" (12.3 m)	63'7" (19.4 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)

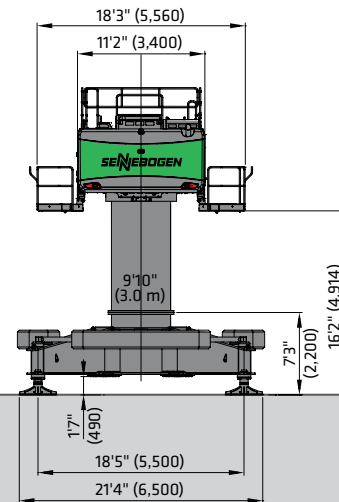
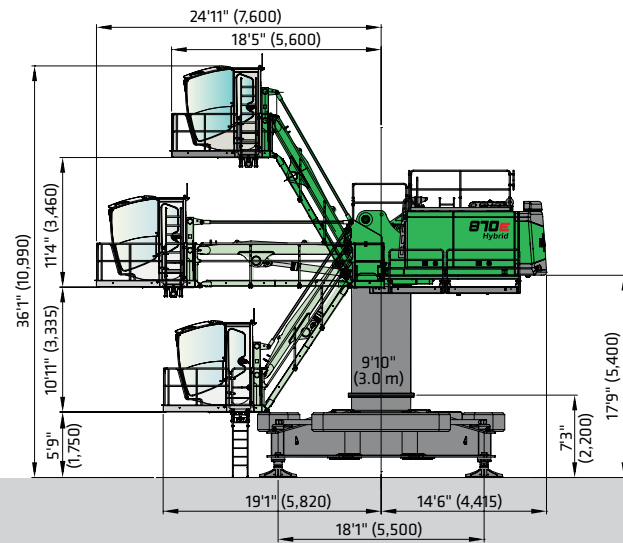
*Stick removed



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" in. (10.8 m)
Stick	25'7" (7.8 m)

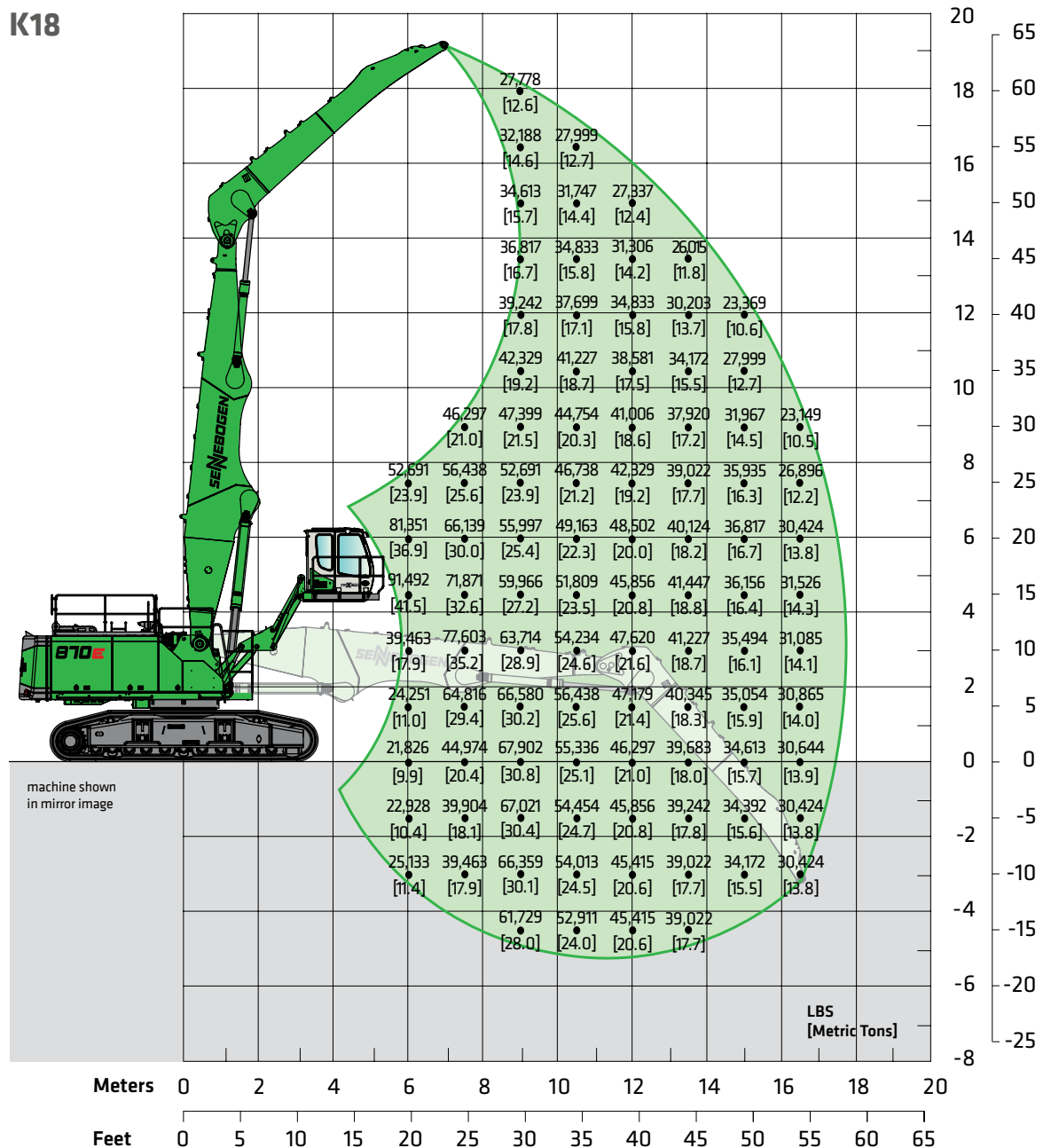
Operator's Cab

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 - 870 R-HD "E"

K20

Working Equipment K20

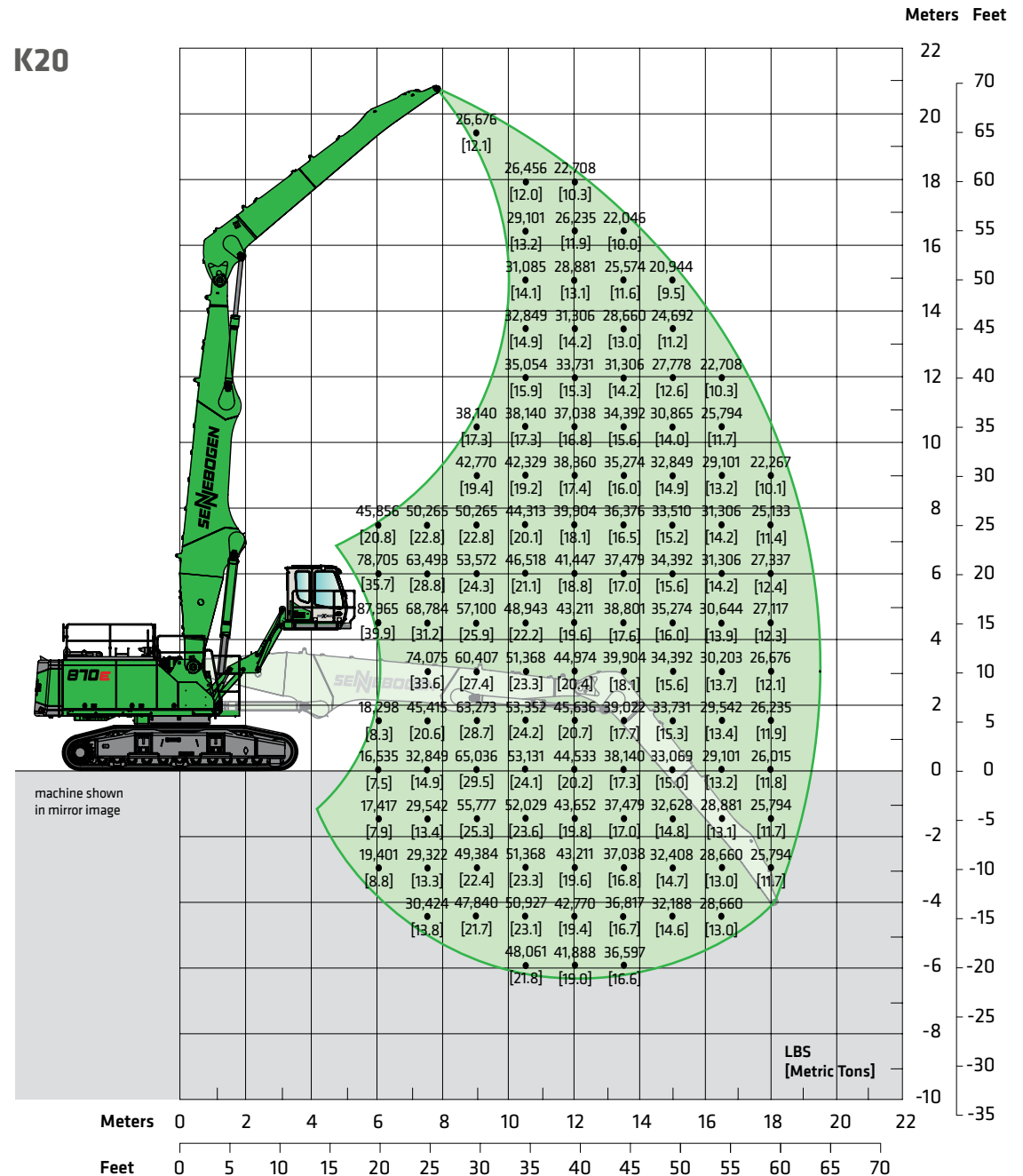
Reach	65'7" (20.0 m)
Boom	38'8" (11.8 m)
Stick	28'10" (8.8 m)

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% or 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 manual 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)

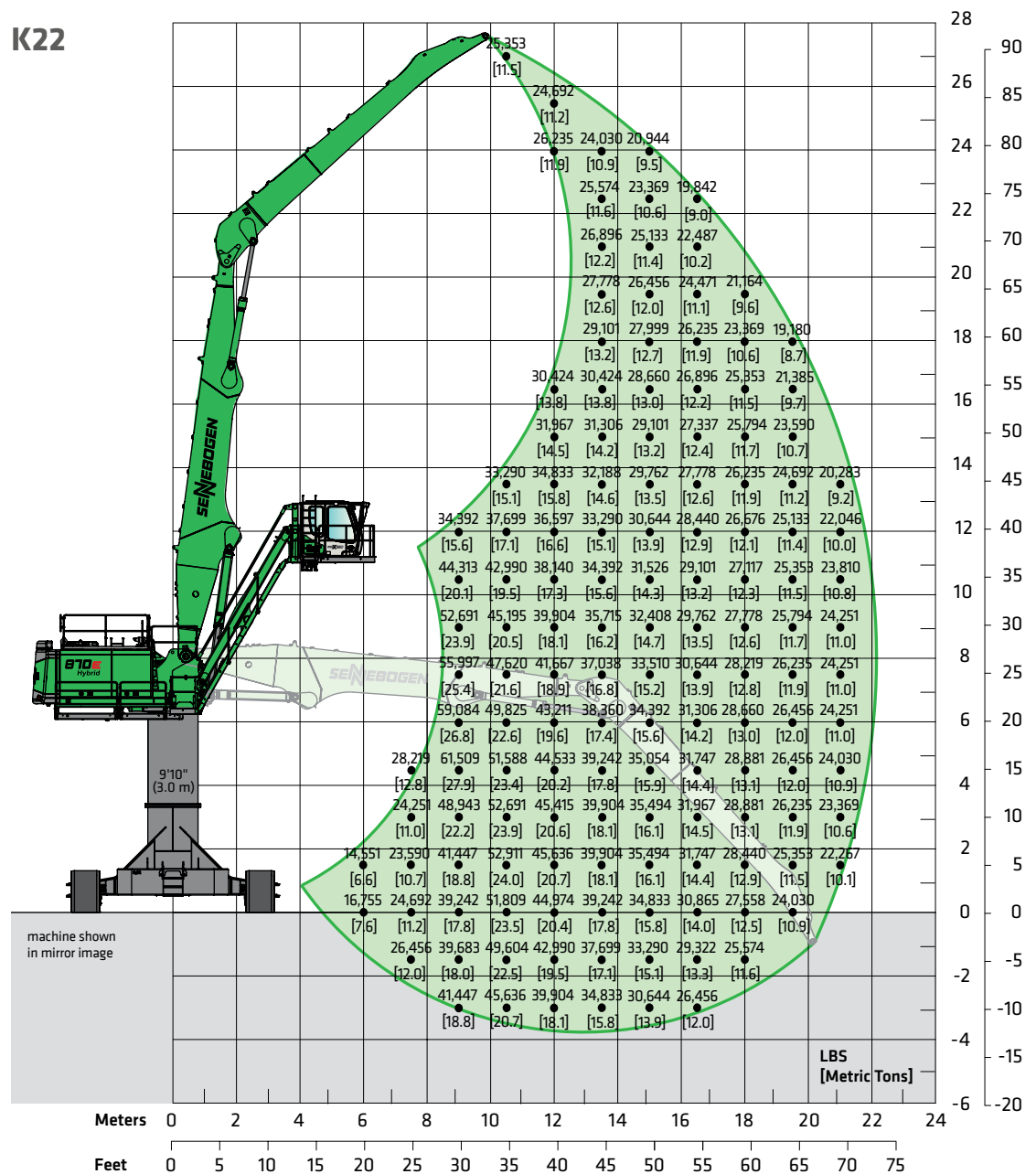
Operator's Cab

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

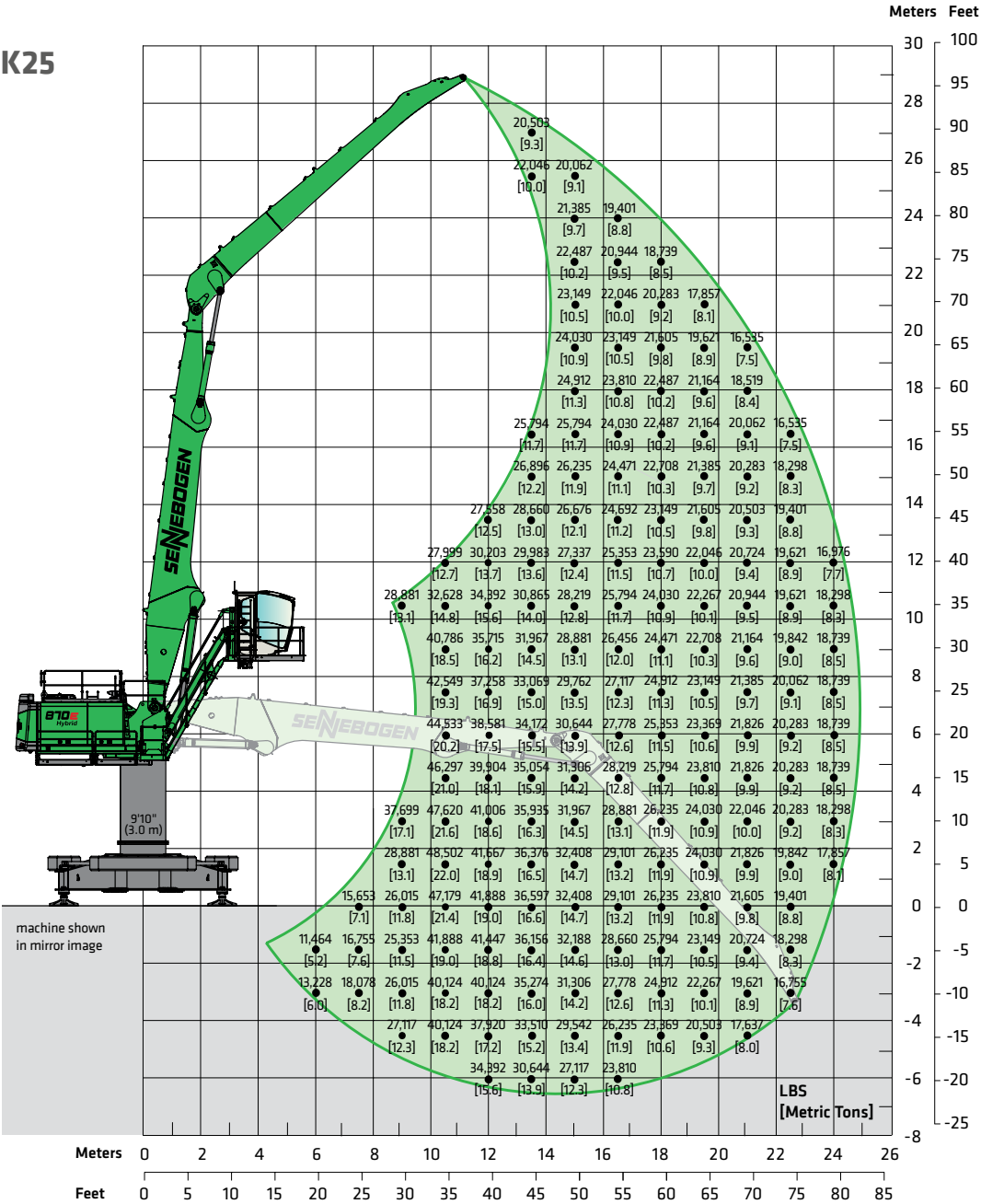
Model	Maxcab Skylift 700, hydraulically elevating (option)
Eye level	approx. 35' (10.6 m)

Undercarriage

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

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% or 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 manual provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

K25



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)

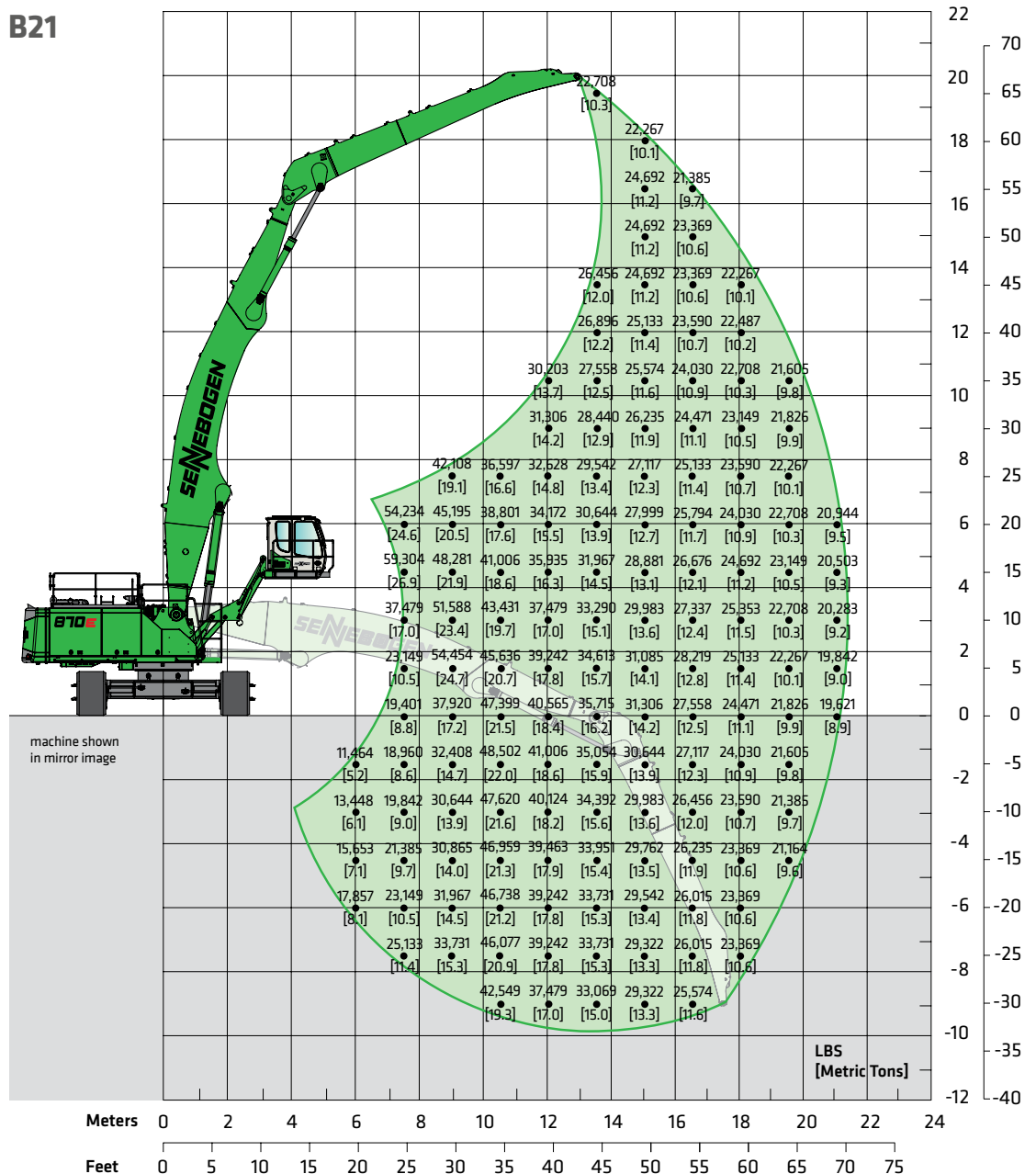
Operator's Cab

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% or 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 manual 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)

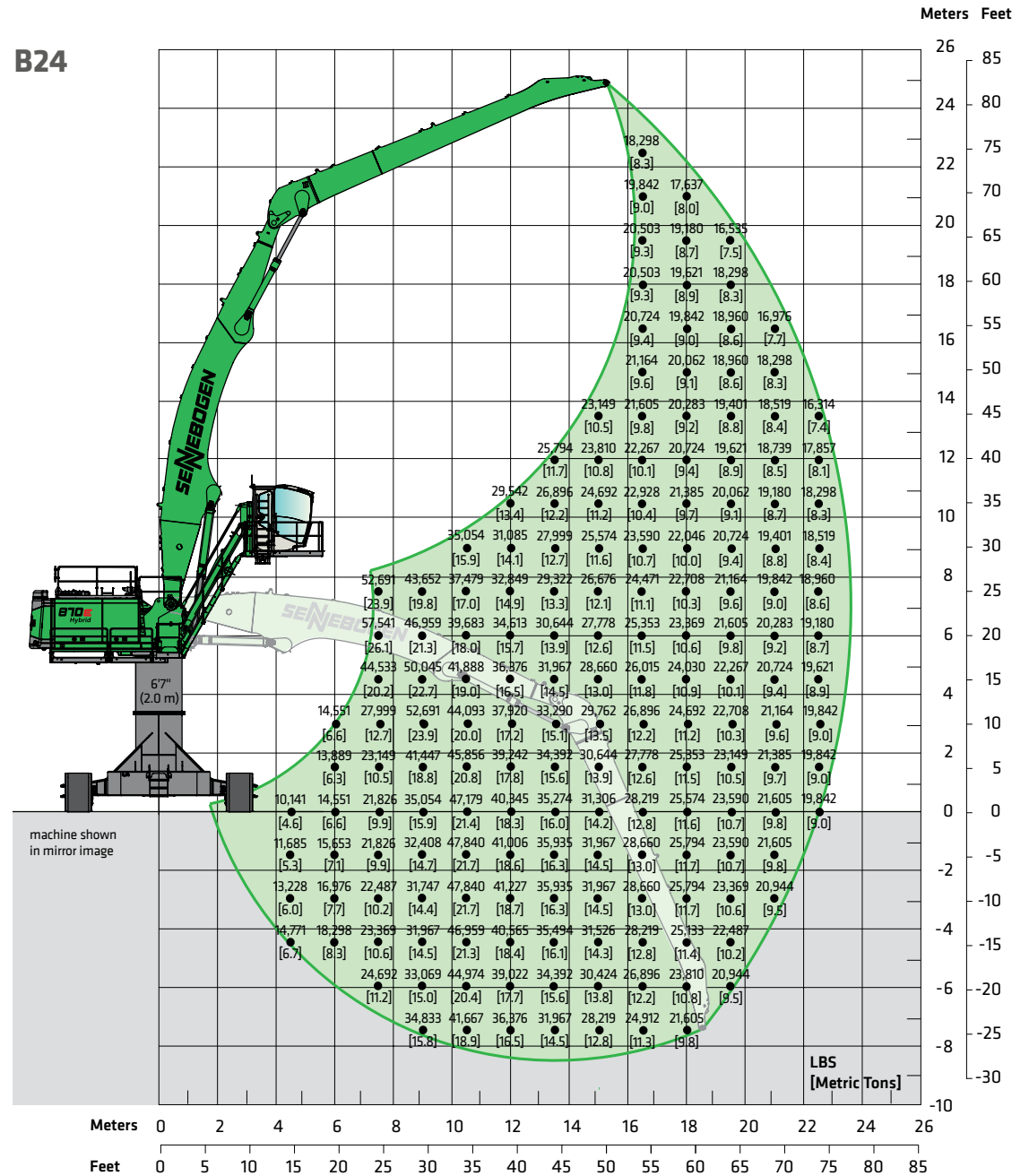
Operator's Cab

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% or 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 manual provided by SENNEBOGEN. Capacities apply only to the machine as originally manufactured and equipped by SENNEBOGEN.

OUR COMPLETE LINE OF **PURPOSE-BUILT MATERIAL HANDLERS**



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