395 kW (Tier IIIa)
391 kW (Tier IV)
390 kW (Electric)

140 – 165 t

21 – 27 m

875E Hybrid

Material handling machine
Advanced. The E-Series.

What the E-Series unique
- 60 years of experience in designing and constructing hydraulic material handling machines
- Uncompromisingly high performance in all areas, with a focus on material handling
- High-quality components and no over-engineering ensure manageable technology
- Long product service life and high value retention

Your key benefits:

1. **Green Efficiency**
   - Save fuel – reduce operating costs
   - Work quietly – protect operator and environment

2. **Peak performance**
   - Durable mechanical systems – optimized stressed parts
   - High speeds – high load capacities

3. **Maximum ease of use**
   - Maxcab comfort cab – work in comfort
   - SENCON – SENNEBOGEN Control System

4. **Maximum safety**
   - Safe entry and exit – non-slip steps
   - State-of-the-art cameras – overview of the entire work area

5. **Easy maintenance and service**
   - Straightforward error diagnostics – central measuring points
   - Simple maintenance – clear labeling

6. **Consultation and support**
   - 3 production sites – 2 subsidiaries
   - 130 sales partners – more than 300 service stations
Maxcab Industry comfort cab
- Air-sprung comfort seat with heating
- Convenient joystick control
- Full-surface, sloped windshield
- Sliding door, platform in front of the cab
- Color monitor for right-side and rear-facing camera feeds
- SENNEBOGEN Optimode: Various modes for optimizing performance
- Floor window

Platform with railing
- Safety when entering and exiting the cab
- Sliding door ensures safe entry and exit

Automatic air conditioning
- Consistently pleasant working climate, thanks to 10 evenly distributed air vents
- Central controls ensure simple operation

SENCON
- Clearly organized menu
- Determine operating values without additional instruments
- Fast troubleshooting using detailed messages
Maintenance and service made easy

**Optimized for maintenance**
- Fast and easy troubleshooting using straightforward and clearly labeled electrical distributor
- Easy access to all service points on the machine
- Automatic central lubrication for equipment and slewing gear raceway

**HydroClean**
- Optimal protection of hydraulic components thanks to 3 μm micro-filter
- Cleaner hydraulic oil means a longer oil service life

**Central measuring points**
- Easily accessible central measuring points
- Quick inspection of the entire hydraulic system

**Clear labeling**
- Labelling of all parts with a unique part number
- Uncomplicated and reliable spare parts ordering

* Optional
Modular design – versatile solutions

Attachments
- Multi-shell grab
- Double shell grab
- Magnetic plate
- Log grapple

Equipment options (others available upon request)
- Diesel-hydraulic drive
- Electrohydraulic drive
- Engine line drum
- Transformer

Cabs
- Maxcab Industry
- Mastercab

Cab elevation
- E300/260
- Skylift 700/900
- Fixed, elevated

Uppercarriage

Options

Undercarriage variants
- Mobile M MS210
- Crawler R147/580
- Crawler gantry P156/580
- 4-point underframe ST98/580

Pylon
- 2 m
- 3 m
Reliable operation through robust and FEM-optimized equipment

High load capacities even when fully extended, due to solid cylinders

Ideal overview and safe working height thanks to stable cab elevation

Sliding door for convenient entry and exit

Safe entry and exit via the platform with railing

Better illumination of the work area from powerful LED headlights*

Safe access ensured by railings*, grip handles and anti-slip steps

Robust side covers made of recyclable sheet steel

* Optional
SENNEBOGEN Green Hybrid Energy Recovery System

Save 30% energy with the Green Hybrid system

- A combination of hydraulic cylinders on the boom and nitrogen-gas piston accumulators recovers energy during operation.
- Using the recovered energy during the next working cycle reduces the required engine power.

Safety
- Usage of Standard hydraulic components
- Energy storage in the enclosed rear section

Reduced operating costs
- Highest-quality components for long service life and reliability
- Proven concept: operating successfully since 2013
- High system efficiency - highly effective even with small lifting movements
Recommended grabs

SGM orange peel grab (5/6 shells)

<table>
<thead>
<tr>
<th>Design / size</th>
<th>Grab capacity</th>
<th>Weight1</th>
<th>Max. load capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Shell shape</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HO</td>
<td>G</td>
</tr>
<tr>
<td>SGM 2600.60</td>
<td>2500</td>
<td>4270</td>
<td>4645</td>
</tr>
<tr>
<td>SGM 3000.60</td>
<td>3000</td>
<td>4310</td>
<td>4675</td>
</tr>
<tr>
<td>SGM 3500.60</td>
<td>3500</td>
<td>4390</td>
<td>4895</td>
</tr>
<tr>
<td>SGM 4000.60</td>
<td>4000</td>
<td>4460</td>
<td>5050</td>
</tr>
<tr>
<td>SGM 3000.70</td>
<td>3060</td>
<td>7015</td>
<td>7360</td>
</tr>
<tr>
<td>SGM 4000.70</td>
<td>4000</td>
<td>7160</td>
<td>7560</td>
</tr>
<tr>
<td>SGM 5000.70</td>
<td>5060</td>
<td>7250</td>
<td>7830</td>
</tr>
</tbody>
</table>

Double-shell grab SGZ

<table>
<thead>
<tr>
<th>Design / size</th>
<th>Grab capacity</th>
<th>Weight1</th>
<th>Maximum load capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>kg</td>
<td>t</td>
</tr>
<tr>
<td>3000.60</td>
<td>3000</td>
<td>3530</td>
<td>12.0</td>
</tr>
<tr>
<td>3500.60</td>
<td>3500</td>
<td>3720</td>
<td></td>
</tr>
<tr>
<td>4000.60</td>
<td>4000</td>
<td>3920</td>
<td></td>
</tr>
<tr>
<td>5000.70</td>
<td>5000</td>
<td>6500</td>
<td></td>
</tr>
<tr>
<td>6000.70</td>
<td>6000</td>
<td>6800</td>
<td></td>
</tr>
<tr>
<td>4000.60-L</td>
<td>4000</td>
<td>3470</td>
<td></td>
</tr>
<tr>
<td>4500.60-L</td>
<td>4500</td>
<td>3610</td>
<td></td>
</tr>
<tr>
<td>5000.60-L</td>
<td>5000</td>
<td>3755</td>
<td></td>
</tr>
<tr>
<td>6000.70-L</td>
<td>6000</td>
<td>6250</td>
<td></td>
</tr>
<tr>
<td>7000.70-L</td>
<td>7000</td>
<td>6490</td>
<td></td>
</tr>
<tr>
<td>2500.60-HD</td>
<td>2500</td>
<td>3850</td>
<td>15</td>
</tr>
<tr>
<td>3500.60-HD</td>
<td>3500</td>
<td>4280</td>
<td>14</td>
</tr>
</tbody>
</table>

Magnetic plates

<table>
<thead>
<tr>
<th>Type series / model</th>
<th>Power</th>
<th>Deadweight</th>
<th>Breakaway force</th>
<th>Load-bearing capacity in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDKO</td>
<td>kW</td>
<td>kg</td>
<td>kN</td>
<td></td>
</tr>
<tr>
<td>S-RLB 15</td>
<td>11.7</td>
<td>2400</td>
<td>380</td>
<td>19000</td>
</tr>
<tr>
<td>S-RLB 17</td>
<td>17.8</td>
<td>3300</td>
<td>640</td>
<td>32000</td>
</tr>
<tr>
<td>S-RLB 19</td>
<td>22.0</td>
<td>5090</td>
<td>730</td>
<td>39500</td>
</tr>
</tbody>
</table>

* Weight information without grapple suspension, stick bolts, hose system

† Half-open shells: sheet steel width 400 mm, from 1.250 t; sheet steel width 500 mm

Detailed information on graps, log grabs, quick release systems, and other attachments can be found in the “Attachments” brochure
# Technical data, equipment

## MACHINE TYPE

| Model (type) | 875 |

## ENGINE

### Power
- 395 kW / 537 HP at 1800 rpm (Tier IIIa)
- 391 kW / 522 HP at 1800 rpm (Tier IIIb)

### Model
- Cummins QSX-15
  - Direct injection, turbo charged, charge air cooler, reduced emissions. ECO-Mode, automatic idle

### Cooling
- Water-cooled

### Air filter
- Dry filter with integrated pre-separator, automatic dust discharge, main element and safety element, contamination indicator

### Fuel tank
- 2300 l

### Electr. system
- 24 V

### Batteries
- 2 x 210 Ah, battery disconnect switch

### Options
- Engine block heater
- Electric fuel pump

## UPPERCARRIAGE

### Design
- Torsion-resistant box design, precision crafted, steel bushes for boom brackets
- Clear, easy-to-service design, engine installed in longitudinal direction

### Central lubrication
- Automatic central lubrication system for equipment and slewing gear raceway

### Cooling system
- Compact 3-circuit cooling system with high cooling capacity, thermostatically regulated
- Fan drive for oil cooler and water cooler reduces fuel consumption and noise emission, fan reversal for simple and regular cleaning

### Options
- Slewing gear brake via foot pedal
- LED lighting package
- Fire extinguisher
- Maritime climate vanishing as corrosion protection
- Electric hydraulic tank pre-warming for temperatures below -20 °C
- Low-temperature package for use at temperatures below -20 °C
- Hydraulically driven magnetic generator 25/33 kW

## HYDRAULIC SYSTEM

### Load sensing / LUDV hydraulic system, pilot-controlled hydraulic work functions

### Pump type
- Variable-displacement piston pump in swash plate design, load pressure-independent flow distribution for simultaneous, independent control of work functions

### Pump control
- Zero-stroke control, on-demand flow control: the pumps only pump the amount of oil that will be consumed, pressure purging, load limit sensing control

### Delivery rate
- 2 x 475 l/min and 1 x 274 l/min for rotary drive in the closed circuit

### Operating pressure
- max. 350 bar

### Hydraulic tank
- 1400 l

### Control system
- Proportional, precise hydraulic control of work movements, 2 hydraulic servo joysticks for the work functions, additional functions via switches and foot pedals

### Safety
- Hydraulic circuits secured by safety valves
- Emergency lowering of the equipment in the case of engine failure
- Pipe-fracture safety valves for hoist cylinders and stick cylinders

### Options
- bio oil filling – environmentally friendly
- TOOLCONTROL for programming pressure rate for up to 10 tools
- Load torque warning with maximum load display
- Overload safeguard with shutdown
- High-performance filtration with long-term change interval SENNEBOGEN HydroClean micro-filter system water separator

## SLEWING DRIVE

### Gearbox
- Compact planetary gear with slant-axis hydraulic motor, integrated brake valves

### Parking brake
- Spring-loaded disk brake

### Slewing ring
- Robust 3-row slewing ring, sealed. External gear slewing ring with 360° protection and pinion gear lubrication

### Slewing speed
- 0–5 rpm, continuously variable
# CAB

**Cab type**
Maxcab Industry E300/260, with hydraulic elevation and tilt feature

**Cab equipment**
- Sliding door, excellent ergonomics, automatic air conditioning, air-sprung comfort seat with heating, fresh/recirculating air filter, joystick control, 12 V/24 V connections, SENCON

**Options**
- Skylift 700 or 900 cab height elevation
- Auxiliary heating system with timer
- Cabs with activated carbon filters for inside/outside air
- Armored-glass windshield
- Armored-glass sunroof
- Safety side window and rear window
- Sunblind for sunroof and windshield
- Radio with speakers
- Mastercab
- Active seat air conditioning

# ATTACHMENTS

**Design**
Decades of experience and the latest computer simulations guarantee maximum stability and service life
- Oversized bearing points with low-maintenance, sealed special bushings, precision crafted

**Cylinders**
Hydraulic cylinders with high-quality sealing and guide elements, end position damping, sealed bearing points

**Central lubrication**
Automatic central lubrication system

**Options**
- Ball valves in the hydraulic lines for quick and easy grapple switching
- Maritime climate vanishing
- Maritime climate coating of all cylinders, nickel- and chrome-plated
- Float position of the equipment
- Hoisting limiter/stick limiter adjustable for stop settings
- LED Lighting
- Camera on a stick
- Special port equipment with increased load capacities

# UNDERRCARRIAGE

**Design**
Undercarriage in stable, torsion-resistant box design, in various versions

**Mobile undercarriage**
Mobile undercarriage with integrated 4-point outrigger system, all-wheel drive powered by a variable-displacement hydraulic motor with direct-mounted, automatically actuated brake valve and 2-stage power shift transmission. Planetary gear axles with integrated steering cylinders, solid-rubber tires, all-wheel drive, mobile undercarriage MSZ10

**Crawler undercarriage**
Crawler undercarriage with hydraulic traction drive for each crawler integrated in the chassis and connected by a compact planetary gear to an axial piston motor, spring-actuated parking brake, hydraulically vantaged multi-disk brakes, crawler undercarriage type R 147/580, crawler portal undercarriage PIS6/580

**4-point underframe**
STI47/580

**Speed**
- 0–2 kph (crawler)
- 0-6 km/h (mobile)

**Options**
- Flat-base plates
- 900 mm, rounded
- 1,000 mm, 3-grouser crawler shoes, canted

# ELECTRIC DRIVE

**Option**
- Power: 390 kW / 400 V / 50 Hz
- Total connected load 720 kVA, 800-A machine-side fuse (also with generator) at 400 V, motor start via star-delta circuit
- Benefits: Lowest operating costs, quiet and virtually vibration-free work, long service life of hydraulic components

# OPERATING WEIGHT

**Mass**
Approximately 140 t
- 875 E with work equipment K27 and grab 3,000 l

**Notice**
Operating weight varies depending on the model and equipment.

Subject to technical changes.

11
### Load ratings

#### Undercarriage
- R147/580

#### Compact boom
- Dipper stick
- 12 m
- 10 m

#### Cab

#### Maxcab Industry E300/260
- Hydraulic elevation and tilt feature

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. Safe working loads include attachments such as multi-shell grappling, magnets, etc. According to harmonized EU standard EN 474-5, hydraulic excavators used for lifting must be equipped with pipe
fracture safety devices on the hoist cylinders and an overload warning device.

---

Technical features and dimensions subject to change.
All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. Safe working loads include attachments such as multi-shell grapples, magnets, etc. According to harmonized EU standard EN 474-5, hydraulic excavators used for lifting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.
All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. Safe working loads include attachments such as multi-shell grapples, magnets, etc. According to harmonized EU standard EN 474-5, hydraulic excavators used for lifting must be equipped with pipe-fracture safety devices on the hoist cylinders and an overload warning device.
All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. Safe working loads include attachments such as multi-shell grapples, magnets, etc. According to harmonized EU standard EN 474-5, hydraulic excavators used for lifting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.
All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. Safe working loads include attachments such as multi-shell grapples, magnets, etc. According to harmonized EU standard EN 474-5, hydraulic excavators used for lifting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.
Load ratings

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. Safe working loads include attachments such as multi-shell grapples, magnets, etc. According to harmonized EU standard EN 474-5, hydraulic excavators used for lifting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.
All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. Safe working loads include attachments such as multi-shell grepples, magnets, etc. According to harmonized EU standard EN 474-5, hydraulic excavators used for lifting must be equipped with pipe-fracture safety devices on the hoist cylinders and an overload warning device.
## Load ratings

**875E Hybrid**

### K29 Port

---

**Undercarriage** | **P156**  
--- | ---
**Compact boom** |  
**Dipper stick** |  
**16 m** |  
**14.5 m** |  
**Cab** | Skylift 900 with Mastercab, hydraulic elevation feature (optional)

---

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. Safe working loads include attachments such as multi-shell grapples, magnets, etc. According to harmonized EU standard EN 474-5, hydraulic excavators used for lifting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.

Technical features and dimensions subject to change.
875 R with undercarriage MS210 and Skylift 700 with Mastercab with hydraulic elevation and tilt feature

MS210 mobile undercarriage
875 R with undercarriage P156/580 and Skylift 900 with Mastercab with hydraulic elevation feature

ST98/680 4-point underframe
Transport dimensions

875 R with undercarriage R147/580 and E300/260 Maxcab Industry cab with hydraulic elevation and tilt feature (standard)

Port handling using a double-shell grab, USA
875E Hybrid

One machine – many applications

Timber loading using a log grapple, Sweden

Coal handling using a double-shell grab, USA

Loading rail cars with coal, Russia

General cargo handling using a spreader, Germany

875 E with port stick at work, Iceland

Note: Photos show applications with various attachments. Attachments and associated control elements are not included in SENNEBOGEN’s scope of supply. Sennebogen Vertreter GmbH & Co KG offers project-specific solutions upon request.

23