21,8 t
10 m
97 kW (Stage IV)
90 kW (Electro)
Mobile material handling machine
Advanced. The E-Series

What makes up the E-Series

- More than 65 years of experience in designing and constructing hydraulic material handling machines
- Uncompromisingly high performance in all areas: Focus on material handling
- Technology that can be mastered: High-quality components without over-engineering
- Long product service life and high value retention

Your top benefits

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

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

3. **Maximum usability**
   - Comfortable Maxcab operator cab - relaxed work
   - SENCON - work program selection made easy

4. **Maximum safety**
   - Safe entry and exit - no-slip steps
   - State-of-the-art camera - entire work area in view

5. **Maintenance and service made easy**
   - SENNEBOGEN Control System SENCON - easy fault diagnosis
   - Easy Maintenance - clear labeling

6. **Consultation and support in your area**
   - 3 production sites - 2 subsidiaries
   - more than 130 sales partners - worldwide and also in your area

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1962: rope-driven 5833 with elevated operator cab

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SENNEBOGEN Control System SENCON - easy fault diagnosis
Easy Maintenance - clear labeling
Subject to technical changes. Further options available upon request.
The E-Series. At a glance.

**Four ways to save fuel**

- Up to 20% savings: working in Eco Mode with reduced engine speed
- Idle automation reduces speed to 40% of operating speed
- Stop automation switches the engine off when not needed
- Optimized settings of engine and hydraulics reduces fuel consumption

<table>
<thead>
<tr>
<th>Arbeiten</th>
<th>Leerlauf</th>
<th>Stopp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800 ECO min⁻¹</td>
<td>1400 min⁻¹</td>
<td>800 min⁻¹</td>
</tr>
<tr>
<td>0 s</td>
<td>5 s</td>
<td>8 s</td>
</tr>
<tr>
<td>5 min</td>
<td>5 min</td>
<td></td>
</tr>
</tbody>
</table>

**Quiet operation**

- Consistently quiet operation thanks to decoupled engine mounts and soundproofing in the doors
- Soundpower level according to 2000/14/EC up to 2 dB lower than required

**High-capacity cooling**

- Constant, reliable performance thanks to large-dimensioned and robust fans and coolers
- Water and oil coolers with top-notch efficiency thanks to axial-piston pump and motor control and on demand thermostatic control
- Fan reversal for cleaning in series
Maximum safety
- No-slip work surfaces 1
- 2 cameras to the right and rear
- Step grid with railing* next to cab sliding door 2

Powerful hydraulic system 5
- Strong pumps with power reserves
- Top efficiency thanks to large-dimensioned hydraulic valves and lines
- Extra-long change intervals of 4,000 operating hours through initial fill-up with special oil with extended service life when using SENNEBOGEN HydroClean*

* optional
Features

- optimum cab climate with automatic air conditioning system, partial tinted glass
- pleasant and equal temperature dispersion by means of 9 nozzles
- panoramic view
- climatic comfort seat with air suspension and air conditioning*
- very quiet through optimized noise insulation
- Highest safety & comfort with sliding door, wide door opening
- ergonomically arranged operating controls for fatigue-free and relaxed working
- 12 V, 24 V, and USB charging sockets hands-free telephone preparation, document box
- various options: electric cooler behind`s, protective covers, seat air conditioning

Our SENNEBOGEN joysticks

- consoles and ergonomic joysticks that move with the seat
- pleasant grip through ergonomic design
- precise control of all movements through direct and sensitive function activation
- quick access to all operating controls through optimized design of all push-buttons and switches

* Option
Hydro Clean*

- Optimal protection of hydraulic components thanks to 3 µm micro-filter
- Cleaner hydraulic oil, longer service life

Central measuring points

- Easily accessible
- Quickly inspect entire hydraulic system

Clear labeling

- All parts labeled with a unique part number
- Easy and reliable spare parts ordering

Optimized for maintenance

- Fast and easy diagnosis thanks to straightforward and clearly labeled electrical distributor
- Easy access to all service points on the machine
- Automatic central lubrication for equipment and slewing gear raceway

* Option
Modular design - versatile solutions

Attachments

- Orange peel grab
- Clamshell grab
- Magnetic plate
- Scrap metal shears
- Sorting grab

Equipment options (others available upon request)

- Diesel-hydraulic drive
- Electrohydraulic drive
- Motorized cable reel
- Transformer

Cabs

- Maxcab
- Maxcab Industry

Uppercarriage

- Cab elevation

Options

Undercarriage variants

- Mobile M max. 0,6 m
- Crawler R25/240* max. 0,6 m
- 4-point pedestal max. 1,5 m

* Further information about our crawler undercarriages can be found in the separate brochure 818 R E-Series.
Advantages at a glance

- Reliable operation through robust and FEM-optimized equipment
- High load capacities even when fully extended, thanks to massive cylinders
- Better illumination of the work area through powerful LED headlights*
- Safe entry and exit thanks to railings*, grip handles and no-slip steps
- High stability due to the broad outrigger area
- Sliding door for convenient entry and exit
- Ideal overview and safe working height thanks to stable cab elevation
- Robust side cover made of recyclable sheet steel

* Option
**MACHINE TYPE**

Model (type) 818

**ENGINE**

Power 97 kW at 2200 rpm

Model Cummins QSB 4,5 Stage IIIa / IV
Direct injection, turbo charged, charge air cooler, reduced emissions, Eco Mode, idle automation, stop automation

Cooling Water-cooled

Air filter Dry filter with integrated cyclone pre-separator, safety element, contamination indicator

Fuel tank 300 l
DEF tank 30 l
Electr. system 24 V
Batteries 2 x cold-start high-performance batteries

Options
- Engine block heater
- Electric fuel pump
- Jump-start battery terminals

**UPPERCARRIAGE**

Design Torsion-resistant box design, precision crafted, steel bushings for boom bearings. Extremely service-friendly design, longitudinal engine

Central lubrication Automatic central lubrication for equipment and slewing gear

Electrical system Central electrical distributor, battery disconnect switch

Cooling system 3-circuit cooling system with high cooling output, thermostatically regulated fan drive for oil cooler and water cooler, fan reversal for cleaning

Options
- Slewing gear brake via foot pedal
- Hand rail at the upper structure for additional safety
- LED lighting packages
- Fire extinguisher
- Sea climate resistant coating
- Electric heater for hydraulic tank
- Low-temperature packages
- Hydraulically driven magnetic generator 9 kW
- Telematic system SENtrack DS

**HYDRAULIC SYSTEM**

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

Pump type Swashplate-type variable-displacement piston pump, 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 as much oil as will actually be used, pressure purging, load limit sensing control

Delivery rate max. 310 l/min

Operating pressure max. 350 bar

Filtration High-performance filtration with long change interval

Hydraulic tank 260 l

Control system Proportional, precision hydraulic actuation of work movements, 2 hydraulic servo joysticks for the work functions, additional functions via switches and foot pedals

Options
- Bio-oil – environmentally friendly
- ToolControl for programming pressure/rate for up to 10 tools
- Additional hydraulic circuit for shear attachment
- Load moment warning with capacity utilization indicator
- Overload safeguard with overload shutdown
- 3 µm hydraulic micro-filter - SENNEBOGEN HydroClean

**SLEWING DRIVE**

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

Parking brake Spring-loaded, hydraulically vented safety multi-disk brake

Slewing ring Strong slewing ring, sealed

Slewing speed 0-8 rpm, stepless. Hydraulic brake valves integrated in motor ensure wear-free braking.
**CAB**

- **Cab type**: Hydraulically elevating cab E270
- **Cab equipment**: Sliding door, excellent ergonomics, climate automation, seat heater, air-suspension comfort seat, fresh air filter / circulating air filter, joystick steering, 12 V / 24 V connections, SENCON
- **Options**:
  - active seat air conditioning
  - Auxiliary heating system with timer
  - Cabs with active carbon filter
  - Armored-glass windshield
  - Armored-glass sunroof
  - Safety side window and rear window
  - Rolling shade for roof window and windshield
  - Protection guards
  - FOPS protective roof grating
  - Protective front grating
  - Radio with speakers
  - Maxcab industrial cab with undivided armored glass windshield
  - electrical cooling box

**EQUIPMENT**

- **Design**: Sealed and soiling-protected box design with oversized bearing points for long service life. Oversized bearing points with low-maintenance, sealed special bushings, precision-crafted
- **Cylinders**: Special hydraulic cylinder with hydraulic end position damping, optimized kinematics for high lifting power. The material handling attachment is specifically designed for high-performance applications.
- **Central lubrication**: Automatic central lubrication system
- **Options**: Ball valves on the hydraulic lines - open and close grapple
  - Multi-coupling
  - Adjustable hoisting limiter/stick limiter

**UNDERCARRIAGE**

- **Design**: Strong undercarriage with 4-point outrigger support or combination of stabilizer blade and claw support (option), hydraulically locking pendulum steering axle. Pendulum axle cylinder with pipe-fracture safety valves
- **Drive**: All-wheel drive powered by a variable-displacement hydraulic motor with direct-mounted, automatically actuated brake valve and 2-stage power shift transmission. Strong planetary axles with integrated steering cylinder, 2-circuit multi-disk service brake.
- **Parking brake**: Spring-loaded multi-disk brake
- **Tires**: 8 x 10.00-20 solid rubber
- **Speed**: Stage I: 0-5.5 km/h; Stage II: 0-20 km/h
- **Options**: 8 x 10.00-20 pneumatic tires
  - Individual outrigger actuation
  - Additional pushing blade for 4-point outrigger (front or rear)
  - 2-point outrigger and stabilizer blade (front or rear)
  - Protection for travel drive/shunting coupling

**ELECTRIC DRIVE**

- **Option**: Power: 90 kW / 400 V / 50 Hz
  - Total connected load 200 kVA, machine fusing 200 (alternatively 200 A with magnet system) for 400 V, motor start-up via star-delta circuit
  - Advantages: lowest operating costs, quiet and virtually vibration-free work, long service life of hydraulic components

**OPERATING WEIGHT**

- **Mass**: 818 M with 4-point outrigger, K9 compact loading equipment and 600 l orange peel grab
  - Approx. 21,800 kg
- **Notice**: Operating weight varies by model and equipment.
All load ratings are in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grapple, magnet, load hook, etc. are part of the specified load ratings. The ratings constitute 75% of the static tipping load or 87% of the hydraulic lifting power in accordance with ISO 10567. In accordance with EU standard EN 474-5, material handling machines used for hoisting must be equipped with pipe-fracture safety devices on the hoist cylinders and an overload warning device. Load ratings apply for a machine with deployed 4-point outrigger support and for 360° slewing. Load ratings in square brackets [ ] apply for blocked pendulum axle, undeployed outriggers, free-standing, and 360° slewing.

Subject to change.
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Subject to change.
Transport dimensions

Transport width 2.540 mm

818 M with MP21 undercarriage and type E270 hydraulically elevating cab

818 M with 6.2 m K10 compact boom and 4.2 m grab stick with SENNEBOGEN orange peel grab

Technical features and dimensions subject to change.
### Transport dimensions

#### 818 M with undercarriage MP21

<table>
<thead>
<tr>
<th>Model</th>
<th>Load boom</th>
<th>Grab stick</th>
<th>Transport length (L)</th>
<th>Transport height (H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K9 ULM</td>
<td>5.3 m</td>
<td>3.8 m ULM</td>
<td>8.7 m</td>
<td>3.25 m</td>
</tr>
<tr>
<td>K9</td>
<td>5.3 m</td>
<td>3.8 m</td>
<td>8.7 m</td>
<td>3.25 m</td>
</tr>
<tr>
<td>K10 ULM</td>
<td>6.2 m</td>
<td>3.8 m ULM</td>
<td>9.6 m</td>
<td>3.25 m</td>
</tr>
<tr>
<td>K10</td>
<td>6.2 m</td>
<td>4.2 m</td>
<td>9.6 m</td>
<td>3.25 m</td>
</tr>
</tbody>
</table>

#### 818 M with 6.2 m K10 compact boom ULM and 3.8 m grab stick

Technical features and dimensions subject to change.
Recommended grapples

SGM Orange peel grab (4 shells)

<table>
<thead>
<tr>
<th>Design / size</th>
<th>Grab capacity</th>
<th>Weight $^3$</th>
<th>Max. piled density</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO</td>
<td>G</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SGM</td>
<td>l</td>
<td>kg</td>
<td>kg t/m$^3$</td>
</tr>
<tr>
<td>500</td>
<td>835</td>
<td>975</td>
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<tr>
<td>600.30-4</td>
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<tr>
<td>800.30-4</td>
<td>1345</td>
<td>1510</td>
<td></td>
</tr>
</tbody>
</table>

SGM Orange peel grab (5 shells)

<table>
<thead>
<tr>
<th>Design / size</th>
<th>Grab capacity</th>
<th>Weight $^3$</th>
<th>Max. piled density</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO</td>
<td>G</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SGM</td>
<td>l</td>
<td>kg</td>
<td>kg t</td>
</tr>
<tr>
<td>500.20</td>
<td>990</td>
<td>1085</td>
<td>2.0</td>
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<tr>
<td>600</td>
<td>1430</td>
<td>1550</td>
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</tr>
<tr>
<td>800</td>
<td>1460</td>
<td>1600</td>
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</tr>
</tbody>
</table>

Clamshell grab SGZ

<table>
<thead>
<tr>
<th>Design / size</th>
<th>Grab capacity</th>
<th>Weight $^3$</th>
<th>Max. piled density</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO</td>
<td>G</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000.40</td>
<td>1270</td>
<td></td>
<td>2.0</td>
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<tr>
<td>1200.40</td>
<td>1360</td>
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</tbody>
</table>

Magnetic plates

<table>
<thead>
<tr>
<th>Type series / model</th>
<th>Power</th>
<th>Weight</th>
<th>Pull-off strength</th>
<th>Load-bearing capacity in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOKO</td>
<td>kW</td>
<td>kg</td>
<td>kN</td>
<td></td>
</tr>
<tr>
<td>S-RLB 10</td>
<td>4.8</td>
<td>730</td>
<td>190</td>
<td>9500</td>
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<tr>
<td>S-RLB 11.5</td>
<td>5.5</td>
<td>1060</td>
<td>240</td>
<td>12000</td>
</tr>
<tr>
<td>S-RLB 12.5</td>
<td>8.8</td>
<td>1310</td>
<td>280</td>
<td>14000</td>
</tr>
</tbody>
</table>

*) Available upon request
$^1$ Weight information without grapple suspension, stick bolts, hose system
$^2$ Half-open shells: shell sheet steel width 400 mm, 500 mm wide for 1250 l capacity and higher

Dimensions in [mm] Detailed information on grapples, as well as log grapples, quick-release systems, and other attachments can be found in the “Attachments” brochure.

Recommended magnetic generator: 9 kW
818 M - Loading of a baler with sorting grab

818 M - best overview when loading and unloading trains due to stepless cab elevation
This catalog describes machine models, scopes of equipment of individual models, and configuration options (standard equipment and optional equipment) of the machines delivered by SENNEBOGEN Maschinenfabrik. Machine illustrations can contain optional equipment and supplemental equipment. Actual equipment may vary depending on the country to which the machines are delivered, especially in regard to standard and optional equipment.

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