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Mobile material handling machine

Stagev



BHDE Advanced. The E-Series



1962: Rope-driven S833 with elevated operator cab

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: Highquality components without over-engineering
- Long product service life and high value retention

Your top benefits



Green Efficiency



Save fuel - reduce operating costs Work quietly - protect operator and environment



Peak performance

Durable mechanical systems - stressed parts optimized High speeds - high load capacities



Maximum usability



Comfortable Maxcab operator cab - relaxed work SENCON - work program selection made easy



Maximum safety

Safe entry and exit - no-slip steps State-of-the-art camera - entire work area in view

Maintenance and service made easy

SENNEBOGEN Control System SENCON - easy fault diagnosis Easy Maintenance - clear labeling



Consultation and support in your area

3 production sites - 2 subsidiaries more than 180 sales partners - worldwide and also in your area







Subject to technical changes. Further options available upon request.

BHDE 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



Quiet operation **I**

- 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 <a>I

- Constant, reliable performance thanks to largedimensioned and robust fans and coolers
- Water and oil coolers with top-notch efficiency thanks to axial-piston pump and motor control and ondemand thermostatic control
- Fan reversal for cleaning in series

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Maximum safety

- No-slip work surfaces
- Hand rails* 1
- 2 cameras to the right and to the rear
- Step grid with railing next to cab sliding door

Powerful hydraulic system

- 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*

BDGE





Features

- optimum cab climate with automatic air conditioning system, partial tinted glass
- pleasant and equal temperature dispersion by means of 9 nozzles
- panoramic view
- comfort seat with air suspension
- 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 cool box behind operator's seat, protective covers, seat air conditioning

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

ebogen

BHDE Maintenance and service made easy.



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



SENNEBOGEN Hydro Clean*

- Optimal protection of hydraulic components thanks to 3 µm microfilter
- 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

BHDE Modular structure - versatile solutions

Attachments

Equipment (additional equipment on request)





8 * Additional information on our crawler undercarriages can be found in the separate 840 R E-Series brochure





Reliable work through robust and FEM-optimized equipment

> Sliding door for convenient entry and exit, step grid with railing

Better illumination of the work area through powerful LED headlights*

High load capacities even when fully extended, thanks to massive cylinders

Safe entry and exit thanks to railings*, grip handles and non-slip steps

High stability due to the broad outrigger area Ideal overview and safe working height, thanks to stable cab elevation

> Robust side cover of recyclable steel sheet

> Robust slewing gear (2x) for fast work cycles and highperformance material handling

840

* Option

BHDE Technical data, equipment

MACHINE TYPE

Model (type) 840

🔲 мото	R
Power	Stage V: Rated Power: 231 kW at 2100 rpm 237 kW at 2000 rpm / 242 kW at 1800 rpm Stage IIIa: Rated Power: 227 kW at 2000 rpm 254 kW at 1800 rpm
Model	Cummins L9 Direct injection, turbo charged, charge air cooling, reduced emissions, ECO mode, idle automation, stop automation, fuel pre-warming
Cooling	Water-cooled, direction of rotation changeover of the cooler fan
Diesel filter	With water separator and heater
Air filter	Dry filter with integrated pre-separator, automatic dust discharge, main element and safety element, contamination indicator
Fuel tank	625 l
DEF tank	75 l
Electr. system	24 V
Batteries	2 x 150 Ah, battery disconnect switch
Options	 Engine block pre-warming at temperatures under -20 °C Electric fuel pump

Design	Torsion-resistant box design, precision crafted, steel bushings for boom bearing arrangement Extremely service-friendly concept, engine installed in the longitudinal direction
Central lubrication	Autom. central lubrication for equipment and slewing ring
Electrical	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 rails at the upper structure LED light packages Fire extinguisher Sea climate resistant coating

Options

- Electrical hydraulic tank pre-warming at temperatures under -20 °C Low temperature packages
- Hydraulically-driven magnetic generator 20 kW
- Telematic system SENtrack DS

🛃 HYDRAULIC SYSTEM

Load sensing / LUDV hydraulic system, hydraulic, pilot-controlled work functions, load limit sensing control

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 as much oil as will actually be used, pressure purging, load limit sensing control		
Delivery rate	maximum 740 l/min		
Operating pressure	to 350 bar		
Filtration	High-performance filtration with long-term change interval		
Hydraulic tank	500 l		
Control system	Proportional, precision hydraulic activation of work movements, 2 hydraulic servo joysticks for work functions, supplemental functions via switches and foot pedals		
Safety	Hydraulic circuits with safety valves, secured emergency lowering of the equipment at en- gine standstill, pipe fracture safety valves for lift cylinder and stick cylinder		
Options	 Bio-oil filling ecologically sound Tool Control for easy change of attachments Supplemental hydraulic circuit for attachment of shears Load moment warning with overload shutdown Overload safeguard with overload shutdown 3 μm micro filter system SENNEBOGEN HydroClean 		
SLEWI	NG DRIVE		
Gearbox	Compact planetary gear with bent-axis		

Gearbox	hydraulic motor, integrated brake valves
Parking brake	Spring-loaded disk brake
Slewing ring	External gear slewing ring with 360° protection and pinion tooth lubrication
Slewing speed	0-8 RPM, stepless



BHDE Technical data, equipment

🗳 САВ	
Cab elevation	E270, hydraulically elevating cab
Cab equipment	Sliding door inc. sliding pane, vibration damped, tinted safety glass, front pane can be openend, roof window, windscreen wiper for front pane, radio preparation, air-suspended comfort seat, joystick steering, SENNEBOGEN SENCON control & diagnosis system
Options	 Cab elevation E300/260, can be elevated and moved forward hydraulically Maxcab Industry Armored-glass windshield Armored-glass sunroof Safety side window and rear window Windscreen wiper for front window/ skylight Rolling shade for roof window and windshield FOPS protective roof guard Protective front guard Charcoal filter for circulating and outside air Auxiliary heating Climatic seat Radio Electric cool box
	IENT
Design	Decades of experience, state-of-the-art com- puter simulation, highest level stability, longest service life, large-dimensioned bearing points, sealed special bearing bushes, precision-crafted, quick-release couplings on the grab connections - open/closed/rotate
Cylinders	Hydraulic cylinders with high-quality sealing and guide elements, end position damping, sealed bearing points
Options	 Ball valves on the hydraulic lines grab open, closed, rotate Kinematic position II for greater working depth Sea climate resistant coating Float position for equipment Lift limitation / stick limitation adjustable for the stop settings, for example in the hall

Design	Mobile undercarriage with integrated 4-point outrigger, steering axle as hydraulically locking pendulum axle, pendulum axle cylinder with pipe fracture safety valves, type MP42
Drive	All-wheel drive powered by a variable-displace- ment hydraulic motor with direct-mounted, au- tomatically actuated brake valve and planetary axles with integrated steering cylinders, service brake in 2-circuit system
Parking brake	Spring-loaded disk brake
Tires	12.00-24 , 8x, option: 14.00-24 , 8x
Speed	0-14 km/h , stepless
Options	 Individual activation of the outriggers for firm stance on uneven substrate Protection for travel drive Shunting coupling Pvlon extension

ELECTRIC DRIVE PEREEN

Option

- Power: 200 kW, 400 V, 50 Hz Total connected load 340 kVA, machineprovided 400 A fuse (alternatively 425 A with magnet system) for 400 V – stardelta connection motor start
 - Advantages: Lowest operating costs, quiet and virtually vibration-free work, long service life of hydraulic components

OPERATING WEIGHT

Mass	approx: 53,000 kg Basic machine 840 M with attachment K18 and 600 I orange peel grab
Note	The operating weight varies depending on the design.

BHDE Lift capacities



All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grabs, magnets, load hooks, etc. are part of the specified load ratings. The specified values are 75 % of the static tipping load or 87 % of the hydraulic lifting force in accordance with ISO10567. In accordance with EU standard EN 474/5, hydraulic material handling machines used for hoisting must be equipped with pipe fracture safety devices on the hoist and stick cylinders and an overload warning device. Load ratings apply to a machine with deployed 4-point outrigger support and 360° slewing.

12 Technical data and dimension information subject to change.



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BHDE Grab recommendation

Orange peel grab SGM (4 shells)



Orange peel grab SGM (5 shells)



Clamshell grab SGZ



Magnetic plates



Design (size	Cuch contout	Weight ¹ Shell shape		max.
Design / size	Grab content			piled density
		HO G		
SGM	I	kg	kg	t/m³
400.40-4	400	1570	1720	
600.40-4	600	1600	1790	
800.40-4	800	1685	1930	
1000.40-4	1000	1755	2085	
1250.40-4	1250	1850	2200	2.0
800.50-4	800	2245	2490	
1000.50-4	1000	2345	2585	
1500.50-4	1500	2420	2830	
2000.50-4	2000	2660	3075	

Design (size	Carl cartered	Weight ¹ Shell shape ²		max.
Design / size	Grab content			piled density
		НО	G	
SGM	I	kg	kg	t/m³
400.40	400	1800	1910	
600.40	600	1900	2020	
800.40	800	1950	2120	
1000.40	1000	2030	2280	
1250.40	1250	2180	2420	2.0
1400.40	1400	2190	2460	2.0
800.50	800	2510	2660	
1000.50	1000	2650	2760	
1500.50	1500	2790	3030	
2000.50	2000	2930	3210	
2500.50	2500	3200	3500	
3000.50	3000	3260	3880	1.5
3500.50	3500	3420	4140	

Design / size	Grab content	Weight ¹	max. piled density	
SGZ	I	kg	t/m³	
1500.50	1500	2100	2.6	
2000.50	2000	2310	2.0	
2500.50	2500	2530	2.0	
3000.50	3000	2830	2.0	
4000.50	4000	3050	1.6	

Type series / model	Power	Deadweight	Pull-off strength	Load-bearing capacity in kg		
WOKO	kW	kg	kN	Bramme (safety factor 2)		
S-RLB 13,5	10.0	1700	300	15000		
S-RLB 15 11.7 2400 380 19000						
S-RLB 17	17.8	3300	640	32000		
Recommended magnetic generator 20 kW						

*) On request

 Weight information without grab suspension, stick bolts, hose system ²) Half-open shells: Shell sheet steel 400 mm wide, from content 1250 I shell sheet steel 500 mm wide

Detailed information concerning the grabs, as well as log grabs, quick-release systems, and other attachments is provided in the "Attachments" brochure

Dimension information in [mm]



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840 M with Maxcab and cab elevation E300/260, can be elevated and moved forward hydraulically



840 M with hydraulically elevating cab type E270, transport width 3500 mm



840 M with Maxcab and cab elevation E300/260, hydraulically elevating and forward moving





Transport dimensions 840 M with undercarriage type MP42E

	Load boom	Grab stick	Transport length (L)	Transport height (H)
K17	10.6 m	7.1 m	15.2 m	3.65 m
K18	10.6 m	8.0 m	15.2 m	3.65 m
B18	11.0 m banana	8.0 m	15.5 m	3.7 m
B19	11.0 m banana	9.4 m	15.5 m	3.65 m*
K20	11.7 m	9.4 m	16.2 m	4.2 m (3.65 m*)

* Stick is dismounted

This catalog describes machine models, scopes of equipment of individual models, and configuration options (standard equipment and optional equipment) of the machines delivered by SENNEBOCEN Maschinenfabrik. Machine illustrations can contain optional equipment and supplemental equipment. Actual equipment may vary in a tolerance range depending on the country to which the machines are delivered, especially in regard to standard and optional equipment

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SENNEBOGEN Maschinenfabrik GmbH Sennebogenstrasse 10 94315 Straubing, Germany

Tel. +49 9421 540-144/146 marketing@sennebogen.de BestellNr. / Item No. 179538 840M-E-011615-021910-1119du-200710