

EXP 50ZE
ZERO EMISSION



NEW EXP 50ZE: TECHNOLOGICAL CHALLENGE FOR OUR FUTURE

Important worldwide innovation in the rehandling machines sector: the production of the first model completely electric powered. At least for the next decade, the electric power will remain the only alternative to the diesel engines: the supply through accumulators ensure the same performances of the standard diesel version.

The Solmec EXP50ZE is designed to work continuously for approximately 8 hours without any decrease in performance. The recharging time is also approximately 8 hours. With these characteristics the Solmec EXP50ZE is an ideal machine for working inside warehouses, industrial plants or any other application where normal engine exhaust fumes are a hazard.

The Solmec EXP50ZE has a two Boom and three Arm configuration:

The first has a 3.8m long Gooseneck Boom and a straight industrial stick 2.6m long. Also as an alternative we can offer a telescopic stick 1.8m extending to 2.6m long.

The second version has a 4.5m long Gooseneck Boom and a straight industrial stick 3.3m long.

The Solmec EXP50ZE is the ideal low operating cost machine for handling light materials within restricted areas. It is a very Environmental Friendly Machine with no engine Gas Emissions.



The rear counterweight of the machine has been replaced by two groups of batteries of 80 volt and 930 Ah each, equipped with a centralized topping up system for the electrolyte. In case of use for more than one shift per day, the two empty batteries can be replaced with two recharged batteries. The replacement can be carried out with a normal forklift (by using the dedicated slots for the forks) or with lifting hooks (by using the hook-up points on the upper part of the batteries). The batteries are connected at the machine with special quick bayonet electric couplings.

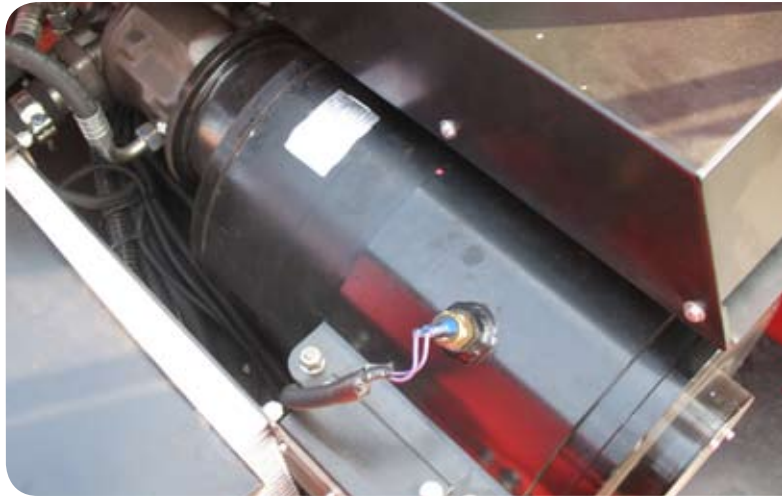
Mechanical lock of the battery group. The locks are on both the sides of the undercarriage, one for each battery group.

Turning the safety lock levers right allows you to extract the battery group mechanical locks which in turn allows the removal of the batteries from the machine.

Pulling out the mechanical locks, it's possible to remove the batteries from the machine.



The three phase electric motor at alternating current with electric control and 28 kW power at 2200 rpm. Directly from the cabin, the operator can choose between three different working speeds. At the motor is connected a LOAD SENSING variable displacement hydraulic pump, with a flow rate of 100 lt/min.



The cooling of the hydraulic oil is ensured by a large wide mesh radiator that allows a better temperature exchange thus avoiding occlusion of the air passages when working in a dust or contaminated air environment. The radiator is fitted with an thermostatically controlled electric fan.

Electric fans for the motor and for the motor's compartment. This electronically controlled system is governed by the preset values of temperature and only works when these temperatures are reached. This system minimizes the waste of battery power



The power sets (one for each battery), supplied as standard equipment with the machine, allow a full recharge of the batteries in only 8 hours. The power set is powered with the normal 380 V electric current and will be automatically disabled when the recharge is completed.



80 V inverter for an accurate management of the torque and of the speed of the electric motor. Equipped with special alloy tabs for ensure a better heat exchange and a better reliability.



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The clear **visual instrumentation** panel allows monitoring of all machines functions: battery charge level, electric motor diagnostic, warning light for low hydraulic oil level, congested hydraulic oil filter, and stability limit. There are also controls dedicated to electric motor speed, automatic switch off, parking brake, gear box.

Operators cab
With large windows
in heater for winter
standard. We offer
tioning. This system
operator comfort
(3). Full cabin pro



Cab guard with openable and tinted canopy. Orange flashing beacon



Operator comfort

Well-Sprung, extra large seat, with 10 regulation modalities, safety seat belt with winding mechanism, adjustable arms, and headrest.

In addition, an integrated safety device to turn on machine controls only when the operator is in driving position and the safety arm rest is in the down position.



in (as option)

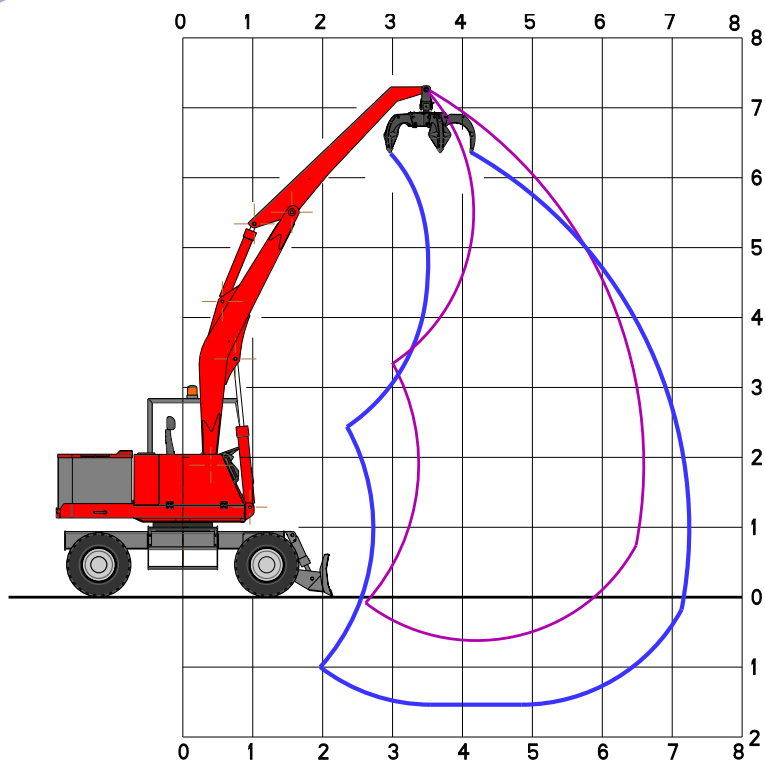
ows for better visibility plus a cab-
ter and summer ventilation is fitted
er as an Option : (1). Air Condi-
em provides cool air in the cabin for
. (2). Cabin Front Window Screen.
rotection guard.



Halogen working lights and the orange flashing beacon fitted on the top of the cab guarantee a good visibility during the darker hours of the day. It is possible, as option, to fit extra working lights on stick and on the counterweight to increase visibility.

EXP 50ZE

Technology serving the environment



WORKING DIAGRAM

Gooseneck boom: 3,80 m

Industrial Stick : 2.60 m

LIFTING CAPACITIES ARE ON HOOK WITHOUT GRABS, MACHINE STATIC, LEVEL SOLID GROUND, WITH AXLE LOCKED.

LIFTING CAPACITIES TONS.

HEIGHT m	CONFIG.	LIFTING RANGE (m)														
		3,0			4,0			5,0			6,0			6,7		
6,0	○○○				2,80*	2,80*	2,25									
5,0	○○○				2,80*	2,80*	2,25	2,70*	2,00	1,50						
4,0	○○○				3,00*	3,00*	2,25	2,75*	2,00	1,50						
3,0	○○○	3,80*	3,80*	3,00	3,35	3,00	2,25	2,90*	2,00	1,50	2,30	1,80	1,35			
2,0	○○○	4,80*	4,00	3,00	3,70	3,00	2,25	3,00*	2,00	1,50	2,30	1,80	1,35	2,20	1,70	1,25
1,0	○○○	5,40*	4,00	3,00	4,10	3,00	2,25	3,00*	2,00	1,50	2,30	1,80	1,35			
0	○○○	5,50*	4,00	3,00	4,20	3,00	2,25	3,00*	2,00	1,50						



lifting capacities on longitudinal axis

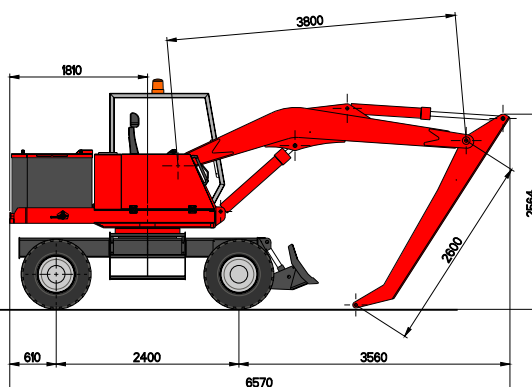
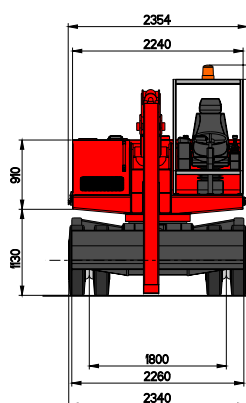


lifting capacities on 360° without safety factor

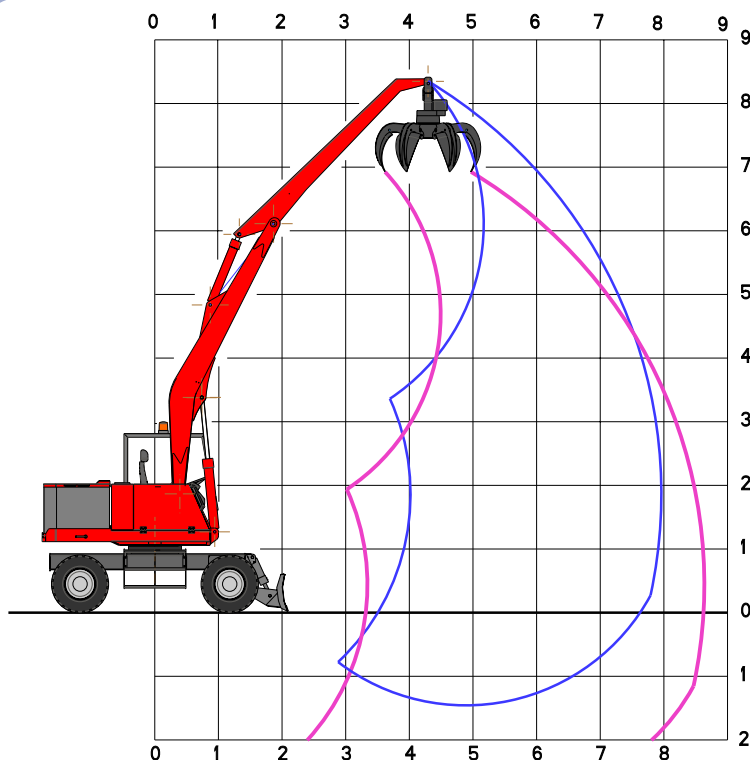


lifting capacities on 360° according with ISO 10567 standard

* = hydraulic limit



OPERATING WEIGHT : 12.500 kg



WORKING DIAGRAM

Gooseneck boom : 4,50 m

Industrial Stick: 3,30 m

LIFTING CAPACITIES ARE ON HOOK WITHOUT GRABS, MACHINE STATIC, LEVEL SOLID GROUND, WITH AXLE LOCKED.

LIFTING CAPACITIES TONS.

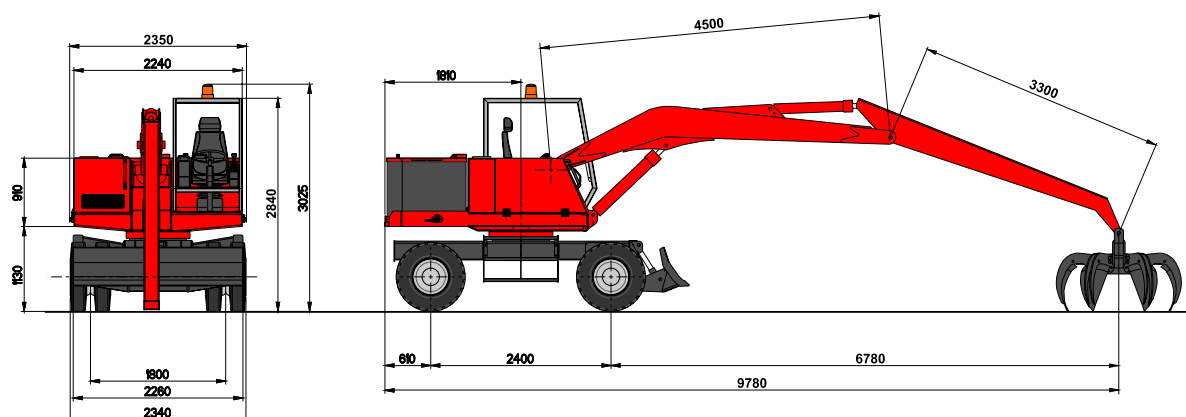
HEIGHT m	CONFIG	LIFTING RANGE (m)					
		3,0		4,0		5,0	
		↗	○	↗	○	↗	○
7,0	○○					2,70*	2,00 1,50
6,0	○○					2,70*	2,00 1,50
5,0	○○					2,70*	2,00 1,50
4,0	○○					2,75*	2,00 1,50
3,0	○○	3,80*	3,80*	3,00	3,35	3,00 2,25	2,90* 2,00 1,50
2,0	○○	4,80*	4,00 3,00	3,70 3,00 2,25	3,00*	2,00 1,50	2,30 1,80 1,35
1,0	○○	5,40*	4,00 3,00	4,10 3,00 2,25	3,00*	2,00 1,50	2,30 1,80 1,35
0	○○	5,50*	4,00 3,00	4,20 3,00 2,25	3,00*	2,00 1,50	2,30 1,80 1,35

↗ lifting capacities on longitudinal axis

○ lifting capacities on 360° without safety factor

⊙ lifting capacities on 360° according with ISO 10567 standard

* = hydraulic limit



OPERATING WEIGHT: 12.700 kg

TECHNICAL DATA EXP 50ZE

ELECTRIC MOTOR

Threephase electric motor with electronic control by 80 Volts inverter.
3 work speed are available.

Setting power: 28 kW @ 2200 rpm.

Starting: 38kW

Feed through 2 batteries of 930 Ah.

HYDRAULIC SYSTEM

Open "load sensing" circuit constituted by a variable displacement axial pump, with automatic flow setting, connected to the electric motor, feeding a LS distributor block composed by 5 elements, with high pressure control valves and anti-shock valves on each element.

Maximum flow: 100 l/min.

Maximum pressure: 280 bar.

Two additional pumps for the auxiliary functions.

Large mesh oil heat exchanger combined.

TRAVEL

Hydrostatic with 4 wheel drive by means of a variable displacement hydraulic axial piston motor mounted on a two speed gearbox hydraulically operated from the cab coupled to the rear axle. Travel controlled by two separate pedals (one for each travelling direction).

Travel speed (in both directions)

Working speed from 0 to 4 km/h

Travel speed from 0 to 11 km/h

STEERING

Hydraulic steering system powered by an independent pump.

The floating steering axle can be hydraulically locked from the cabin in any position.

TYRES

8 twinned full rubber tyres "SUPERELASTIC" 8.25x20

BRAKES

Service brakes:

Having effect on the travel and taking advantage of the auto-breaking feature of the hydrostatic system.

Parking and emergency brakes:

Multidisk spring applied/pressure released parking brakes..

SLEWING

Unlimited rotation in both directions by means of an axial piston hydraulic motor , splined to a double stage reduction gear with oil bath gears. Anti-shock valves protect the system. Double row ball bearing ring with internal teeth.

Max rotation speed:9,5 rpm.

UPPERSTRUCTURE

Installed on silent block with protective roll-bar with transparent openable canopy and large "GRAND CONFORT" adjustable operator's seat in its entirety with hydraulic joysticks incorporated in its arms to control the four main movements; each joystick incorporate electric push button for rotating grab, telescopic extension of the jib, and blade. Electro-hydraulic devices for controlling gear box, parking brakes, front axle oscillation lock. Dashboard with diagnosis and batteries level indicator. Integrated safety device to turn on machine controls only when the operator is in driving position and the safety arm rest is in the down position.

As option, driver's cab with large windows of tinted, heat resistant safety glass. Front sliding windows can be stored overhead. Lateral opening window, winter heating. On request can be installed an air conditioning system.

OVERLOAD WARNING DEVICE

Dir. 98/37/CE

In accordance with EEC DIRECTIVES 2006/42 this device provides to check the crane stability while loading in accordance with loads and distances (as standard).

Optical warning advise danger and conditions locking movement when the stability limits are reached. Visualising of the lifting charge and the liftable charge limit, in each position..



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