



60<sup>TH</sup>  
1960  
2020



**EXP 50ZE**  
**ZERO EMISSION**

## 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 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.



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.



Thanks to the housings specially designed to receive the forks of a forklift, it is possible to lift the batteries to remove them from the machine.







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.



The three phase electric motor at alternating current with electric control and 25 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.



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.



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



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 400 V electric current and will be automatically disabled when the recharge is completed.

## EXP 50ZE: TECHNOLOGICAL CHALLENGE FOR OUR FUTURE

For over 60 years, Solmec produces material handling machines for scraps metal and waste recycling industry, for steel mills, for port and rail unloading, for sawmills, tanneries and car dismantlers. The new spacious cabin, equipped with every comfort, guarantees a pleasant and efficient working environment.

The large windows in addition to the elevation cab allow a perfect view of the working area and ensure to the operator a driving in perfect safety .

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.

New electronic joysticks with proportional rollers for precise control of the bucket rotation and the front blade.



Driver's cab with sliding door and large glass surfaces for better visibility, vertical opening front window, left sliding side window (on the door), wiper with washer fluid, LED headlights and orange beacon on the cab roof .



The front vertical opening glass allows the passage of air without letting water in case of rain.



3 air conditioning fans separated from the main radiator for a more efficient cooling system.



Easy access button panel for headlights, windshield wipers and radio.



Automatic air conditioned as option.



Standard LED headlights on cab roof.



Cab guard with openable and tinted canopy



Front roller sun blind.



Roll-up sun blind and wiper on the roof.

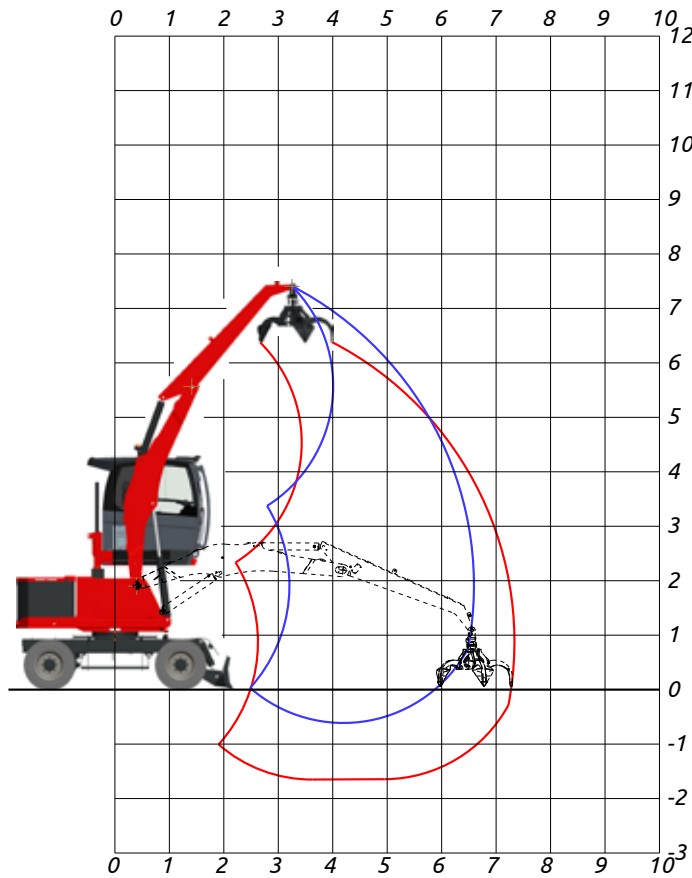


As option:  
Rear camera on counterweight with 7" color display into the cabin.  
(It's also possible to fit a camera on the right side and under the cab).



Adjustable steering column for a better driving position.





**AF6**  
Gooseneck boom  
3,80 m

**Industrial stick**  
2,60 m

**AT6**  
Telescopic stick  
1,80 m - 2,60 m

**OPERATING WEIGHT:**

**13.500 kg**

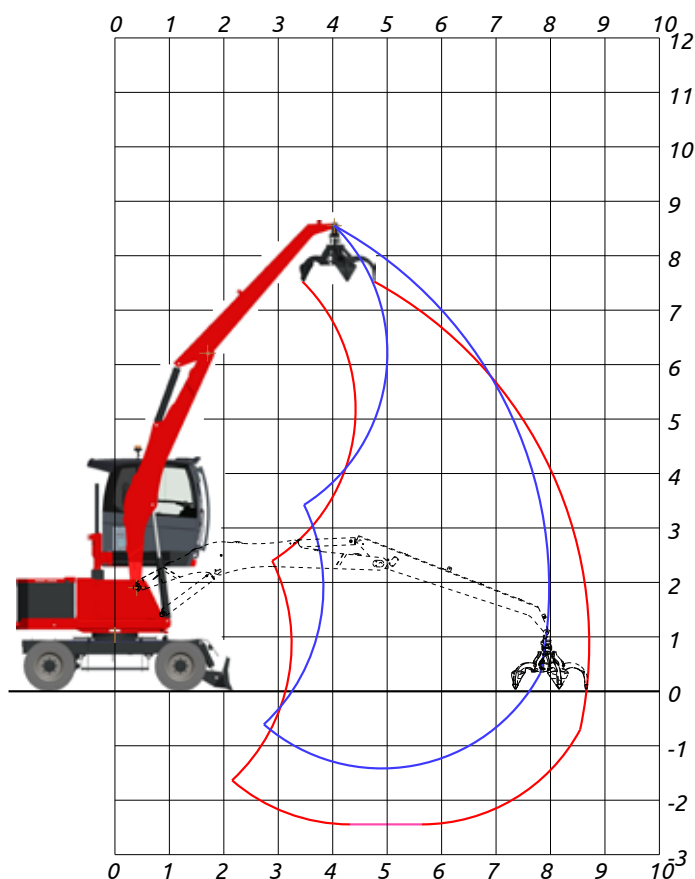
OPERATING WEIGHT WITH FRONT BLADE  
FULL RUBBER TYRES,  
GOOSENECK BOOM 3,80 M,  
INDUSTRIAL STICK 2,60 M,  
RP 300 ORANGE PEEL GRAB WITH ROTATOR

### LIFTING CAPACITIES TONS

LIFTING RANGE (m)

HEIGHT METRES	CONF.	4,0			5,0			6,0			6,7		
6,0	OO	3,54*	3,54*	3,08*	3,13*	3,13*	2,73*						
5,0	OO	3,33*	3,33*	2,90*	3,48*	3,48*	3,03*						
4,0	OO	3,46*	3,46*	3,01*	3,68*	3,68*	3,21*	3,14*	3,14*	2,73*			
3,0	OO	4,40*	4,40*	3,83*	4,23*	3,98	2,99	3,65*	3,11	2,34			
2,0	OO	5,62*	5,36	4,02	4,61*	3,99	3,00	3,70*	3,10	2,33	2,82*	2,75	2,07
1,0	OO	6,22*	5,27	3,96	4,66*	3,86	2,90	3,73*	3,11	2,34			
0	OO	6,24*	5,08	3,81	4,66*	3,85	2,89						

LIFTING CAPACITIES ON LONGITUDINAL AXIS LIFTING CAPACITIES ON 360° WITHOUT SAFETY FACTOR LIFTING CAPACITIES ON 360° ACCORDING WITH ISO 10567  
\*= HYDRAULIC  
LIMIT LIFTING CAPACITIES ARE ON HOOK WITHOUT GRABS, MACHINE STATIC, LEVEL SOLID GROUND, WITH AXLE LOCKED.



**AF8:**  
Gooseneck boom  
4,50 m

Industrial stick  
3,30 m

**OPERATING WEIGHT:**

**13.700 kg**

OPERATING WEIGHT WITH FRONT BLADE  
FULL RUBBER TYRES,  
GOOSENECK BOOM 4,50 M,  
INDUSTRIAL STICK 3,3 M,  
RP 300 ORANGE PEEL GRAB WITH ROTATOR

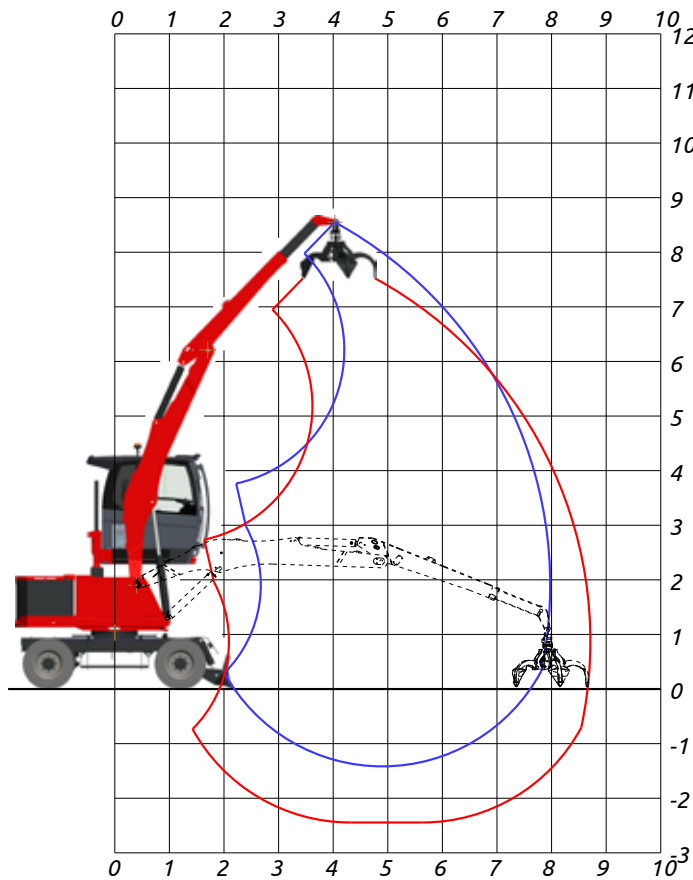
## LIFTING CAPACITIES TONS

LIFTING RANGE (m)

HEIGHT METRES	CONF.	4,0			5,0			6,0			7,0			7,9		
		↗	○	⊙	↗	○	⊙	↗	○	⊙	↗	○	⊙	↗	○	⊙
6,0	○○				2,38*	2,38*	2,07*	2,41*	2,41*	2,10*	2,24*	2,24*	1,95*			
5,0	○○				2,34*	2,34*	2,03*	2,47*	2,47*	2,15*	2,5*	2,50*	2,17*			
4,0	○○				2,51*	2,51*	2,18*	2,62*	2,62*	2,28*	2,76*	2,57	1,93			
3,0	○○	3,07*	3,07*	2,67*	3,10*	3,10*	2,70*	2,99*	2,99*	2,60*	2,76*	2,57	1,93			
2,0	○○	5,10*	5,10*	4,44*	4,16*	3,86	2,90	3,56	3,05	2,29	2,99	2,51	1,89	2,15*	2,14	1,61
1,0	○○	5,72*	5,02	3,77	4,53*	3,81	2,86	3,63	3,02	2,27	2,97	2,48	1,86			
0	○○	6,13	4,96	3,72	4,59	3,77	2,83	3,60	2,98	2,24	2,95	2,46	1,85			

↗ LIFTING CAPACITIES ON LONGITUDINAL AXIS ○ LIFTING CAPACITIES ON 360° WITHOUT SAFETY FACTOR ⊙ LIFTING CAPACITIES ON 360° ACCORDING WITH ISO 10567  
\*= HYDRAULIC

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



**AT8:**  
Gooseneck boom  
4,50 m

Telescopic stick  
2,50 m - 3,30 m

**OPERATING WEIGHT:**

**13.800 kg**

OPERATING WEIGHT WITH FRONT BLADE  
FULL RUBBER TYRES,  
GOOSENECK BOOM 4,50 M,  
TELESCOPIC STICK  
RP 300 ORANGE PEEL GRAB WITH ROTATOR

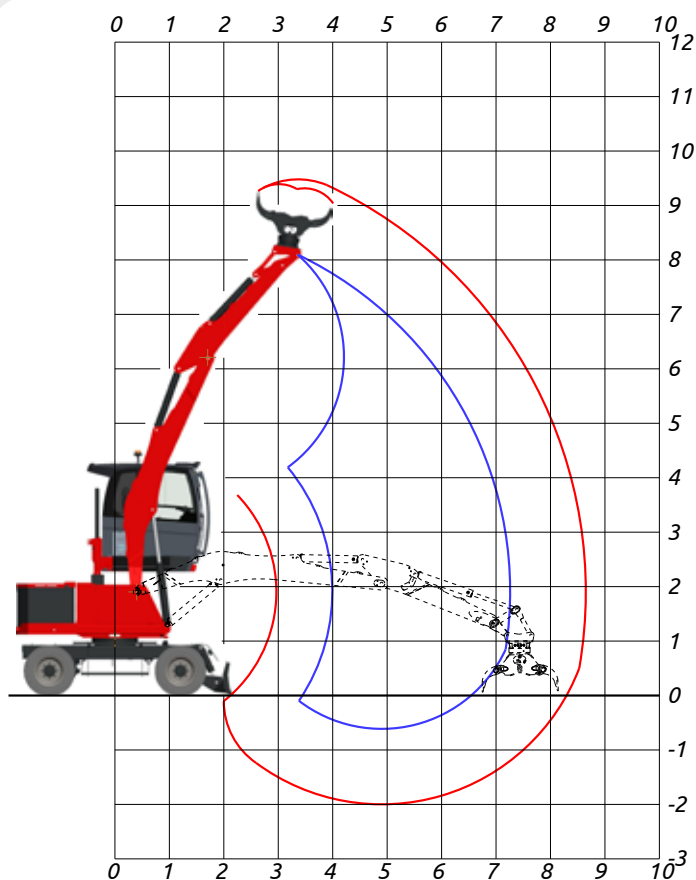
### LIFTING CAPACITIES TONS

LIFTING RANGE (m)

		4,0			5,0			6,0			7,0			7,9		
HEIGHT METRES	CONF.															
6,0	OO				2,38*	2,38*	2,07*	2,41*	2,41*	2,1*	2,24*	2,24*	1,95*			
5,0	OO				2,34*	2,34*	2,03*	2,47*	2,47*	2,15*	2,50*	2,50*	2,17*			
4,0	OO				2,51*	2,51*	2,18*	2,62*	2,62*	2,28*	2,76*	2,57	1,93			
3,0	OO	3,07*	3,07*	2,67*	3,10*	3,10*	2,70*	2,99*	2,99*	2,60*	2,76*	2,57	1,93			
2,0	OO	5,10*	5,10*	4,44*	4,16*	3,86	2,90	3,56	3,05	2,29	2,99	2,51	1,89	2,15*	2,14	1,61
1,0	OO	5,72*	5,02	3,77	4,53*	3,81	2,86	3,63	3,02	2,27	2,97	2,48	1,86			
0	OO	6,13	4,96	3,72	4,59	3,77	2,83	3,60	2,98	2,24	2,95	2,46	1,85			

LIFTING CAPACITIES ON LONGITUDINAL AXIS    LIFTING CAPACITIES ON 360° WITHOUT SAFETY FACTOR    LIFTING CAPACITIES ON 360° ACCORDING WITH ISO 10567  
\* = HYDRAULIC LIMIT  
LIFTING CAPACITIES ARE ON HOOK WITHOUT GRABS, MACHINE STATIC, LEVEL SOLID GROUND, WITH AXLE LOCKED.





**AS7:**  
Gooseneck boom  
4,50 m

Selector arm  
2,50 m

**OPERATING WEIGHT:**

**13.900 kg**

OPERATING WEIGHT WITH FRONT BLADE,  
FULL RUBBER TYRES,  
GOOSENECK BOOM 4,50 M,  
SELECTOR ARM 2,50 M  
RSG 351X SELECTOR GRAB WITH ROTATOR

## LIFTING CAPACITIES TONS

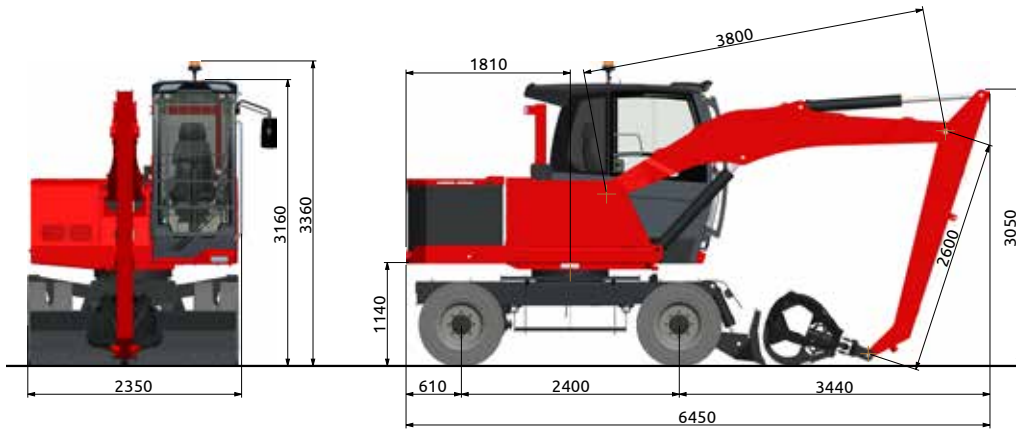
LIFTING RANGE (m)

		4,0			5,0			6,0			7,0			7,2		
HEIGHT METRES	CONF.	↗	○	⊙	↗	○	⊙	↗	○	⊙	↗	○	⊙	↗	○	⊙
7,0	○○				2,98	2,98	2,24									
6,0	○○				2,91	2,91	2,19									
5,0	○○	2,72	2,72	2,04	2,96	2,96	2,22	2,75	2,75	2,07						
4,0	○○	3,13	3,13	2,35	3,17	3,17	2,38	2,82	2,82	2,12						
3,0	○○	4,20	4,20	3,15	3,43	3,43	2,58	2,95	2,75	2,07	2,67	2,19	1,65			
2,0	○○	4,74	4,71	3,54	3,73	3,47	2,61	3,12	2,71	2,04	2,65	2,17	1,63	2,56	2,09	1,57
1,0	○○	5,24	4,67	3,51	4,03	3,44	2,58	3,29	2,68	2,01	2,65	2,16	1,62			
0	○○	5,33	4,54	3,41	4,12	3,38	2,54	3,26	2,65	1,99						

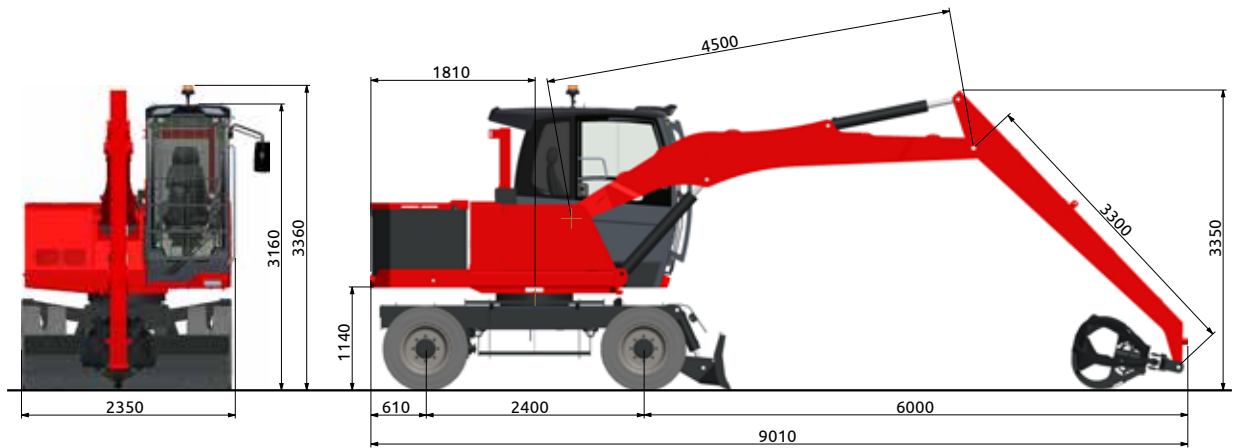
↗ LIFTING CAPACITIES ON LONGITUDINAL AXIS ○ LIFTING CAPACITIES ON 360° WITHOUT SAFETY FACTOR ⊙ LIFTING CAPACITIES ON 360° ACCORDING WITH ISO 10567  
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## DIMENSIONS

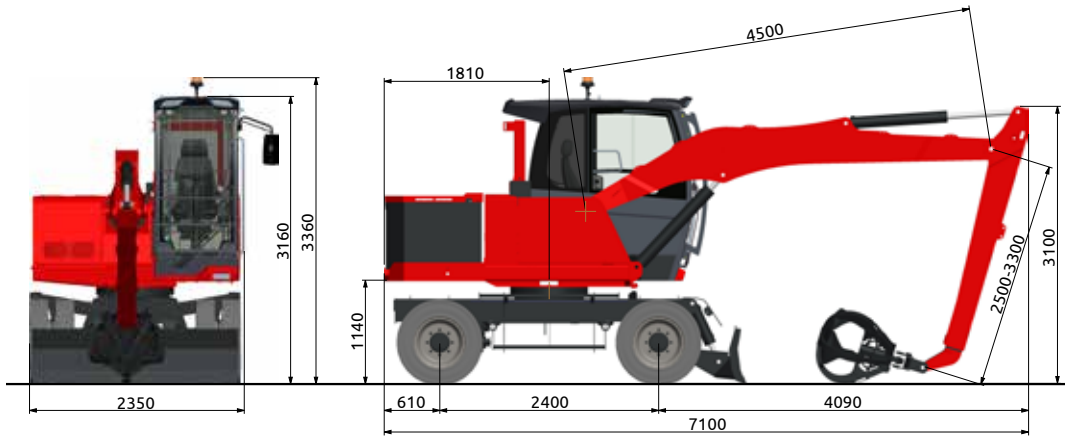
**AF6**



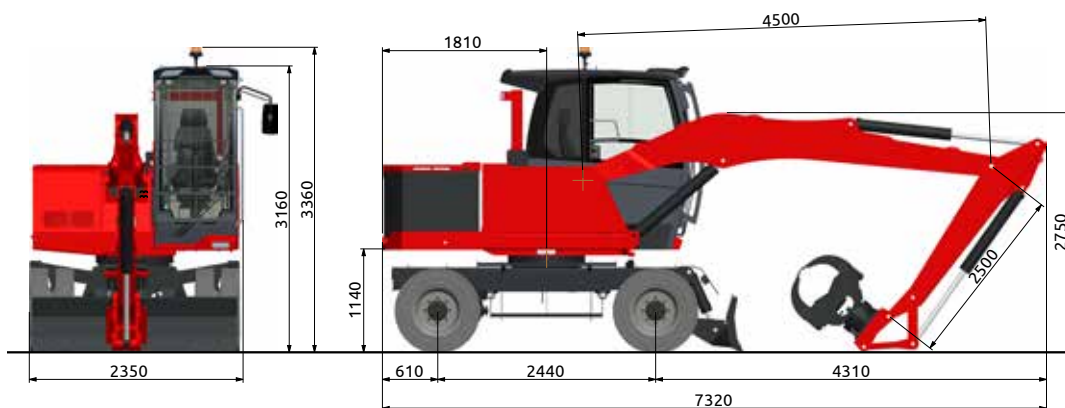
**AF8**



**AT8**



**AS8**



# TECHNICAL DATA EXP 5015

## ELECTRIC MOTOR

Three phase electric motor with electronic control by 80 Volts inverter.

3 work speed are available.

Setting power: 25 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.

Tail swing radius: 2,00 m

## UPPERSTRUCTURE

Hydraulically operated raising driver's cab installed on silent block with sliding door, large windows of tinted heat resistant safety glass; front vertical opening window, and lateral opening window, upper glass with safety grid and wiper. Winter heating. Automatic air-conditioned installed as option. Radio fitting. Operator presence system installed on the left armrest.

"GRAN COMFORT" adjustable operator's seat in its entirety with electronic joysticks incorporated in its arms.

Windscreen wiper with washer; LED lights and orange beacon on the cab roof.

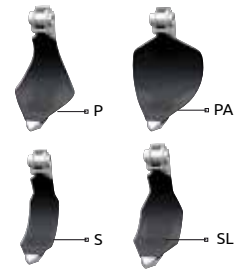
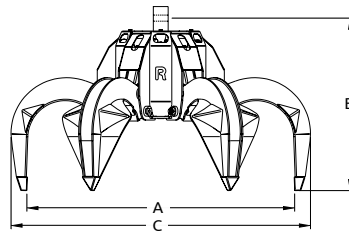
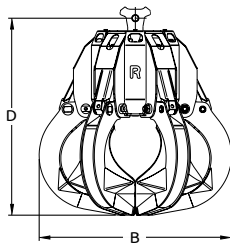
## OVERLOAD WARNING DEVICE

In accordance with CE directive (Dir 2006/42/CE) this device provides to check the crane stability while loading in accordance with loads and distances (as standard). When the stability limits are reached, acoustical and optical warning advise danger conditions before the automatic lock of movements.

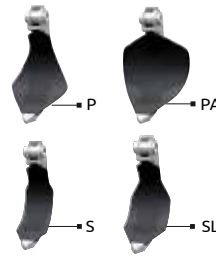
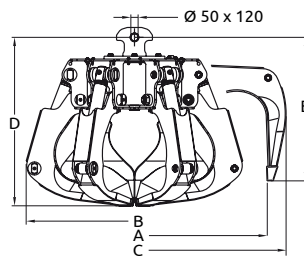


## ATTACHMENTS

### ORANGE PEEL GRABS FOR SCRAP

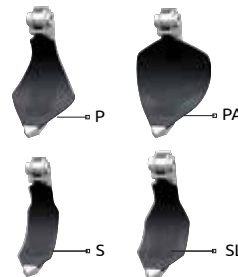
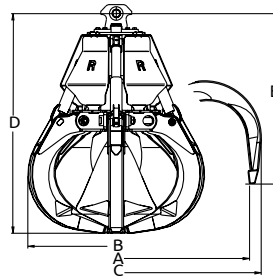


Model	Capacity	Tines	Weight	Nb of Tines	Dimensions in mm				
					A	B	C	D	E
RV255	255l	P - PA - S - SL	330 kg	5	1450	1070	1620	1090	935
RV255	255l	P - PA - S - SL	380 kg	6	1450	1070	1620	1090	935
RV280	280l	P - PA - S - SL	580 kg	5	1600	1090	1720	1270	1080
RV280	280l	P - PA - S - SL	640 kg	6	1600	1090	1720	1270	1080



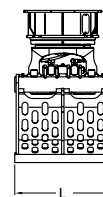
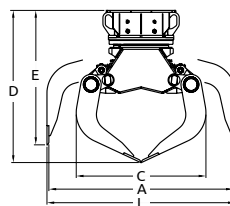
Model	Capacity	Tines	Weight	Nb of Tines	Dimensions in mm				
					A	B	C	D	E
RP300	300l	P - PA - S - SL	450 kg	5	1630	1210	1850	960	810
RP300	380l	P - PA - S - SL	500 kg	6	1630	1210	1850	960	810

### ORANGE PEEL GRABS FOR WASTE



Model	Capacity	Tines	Weight	Nb of Tines	Dimensions in mm				
					A	B	C	D	E
RR360	360l	P - PA - S - SL	410 kg	5	1800	1145	2010	1080	820

### SELECTOR GRAB

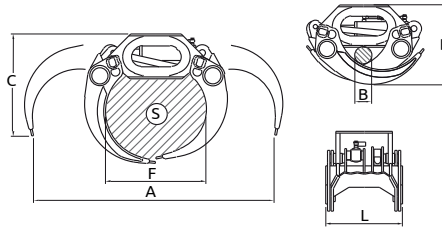


Model	Capacity	Tine Force	Weight	Dimensions in mm					
				A	B	C	D	E	L
RSG351X <sup>1</sup>	180 l	3050 daN	520 kg	1500	1540	980	1080	1000	500

1- Protection blades on request

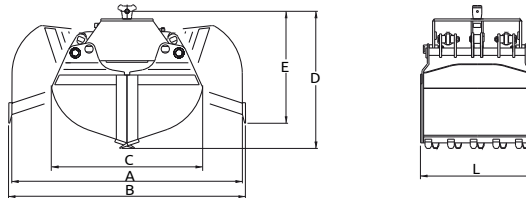
## ATTACHMENTS

### LOGS GRAPPLES



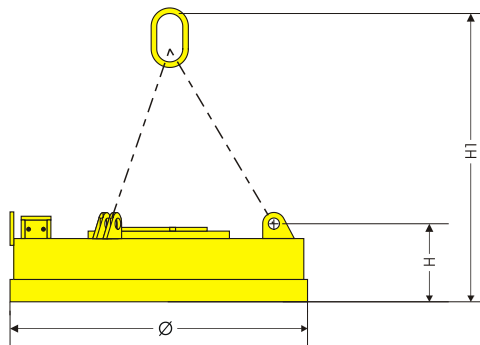
Model	Area	Lifting capacity	Weight	Dimensions in mm					
				A	B	C	D	L	F
R50/401	0,40 m <sup>2</sup>	3000 kg	405 kg	1900	140	810	670	640	800

### CLAMSHELL BUCKETS



Model	Capacity	Tine Force	Weight	Dimensions in mm					
				A	B	C	D	E	L
R75/400	400 l	2050 daN	305 kg	2100	-	1300	1060	735	650
R41/500	480 l	3950 daN	465 kg	1650	1740	1140	940	780	1020
R41/700	500 l	4400 daN	680 kg	1990	2070	1270	1230	1070	840

### MAGNET PLATES



Model	Absorbed power at 20° C	Nominal	Peso	Ø	H	H1	Hot tear strength (1) Δ= Ø300	Hot Lifting Capacity (2)		Hot Lifting Capacity (3)			
								Slabs or blocks	Drop Ball	Cast Iron Pigs	SCRAP		
	kW	Vdc	kg	mm	mm	mm	kg	kg	kg	kg	3A 2,2 ÷ 2,5 t/m <sup>3</sup>	24 1,9 ÷ 2,0 t/m <sup>3</sup>	40 0,8 ÷ 1,0 t/m <sup>3</sup>
EC80/80V	3,4	80	390	830	215	910	6200	3100	1100	125	110	90	45

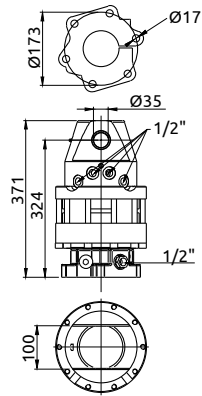
(1) Determined in accordance with VDE 0580 § 36

(2) Determined after 5 hours and an ambient temperature of 20°C in accordance with VDE 0580 § 36.

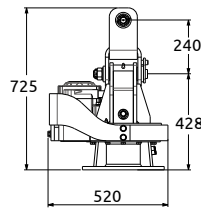
(3) Determined in accordance with VDE 0580 § 44.2-6.

## ATTACHMENTS

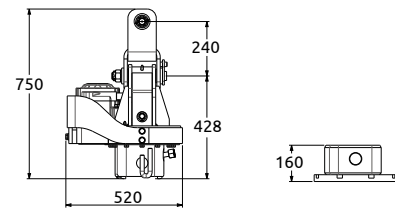
### HYDRAULIC ROTATORS



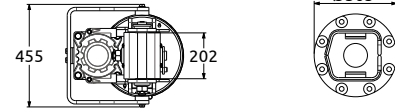
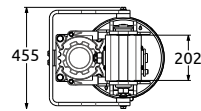
**R105 HF**



**GI 60 AF**

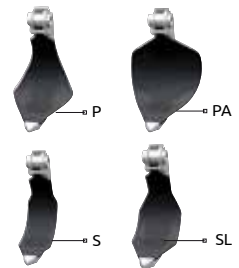
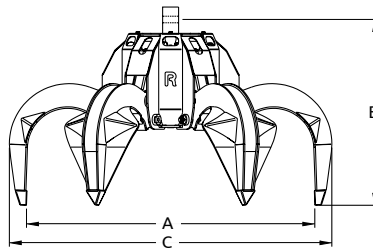
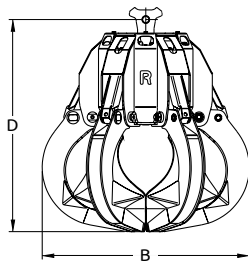


**GI 60 AR**



Model	Lifting capacity	Weight	Couple	Rotation max pressure	Rotation max flow	Attachment max pressure	Attachment max flow
R105HF	4,5 t	62 kg	180 daN.m	250 bar	25 l/min	300 bar	--
GI 60 AF	5 t	200 kg	310 daN.m	100 bar	25 l/min	300 bar	180 lt/mn
GI 60 AR	5 t	210 kg	310 daN.m	100 bar	25 l/min	300 bar	180 lt/mn

### SPECIAL GRABS FOR TANNERIES

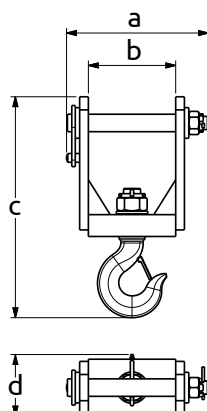


Model	Capacity	Tines	Weight	Nb of Tines	Dimensions in mm				
					A	B	C	D	E
RV255C <sup>1-2</sup>	255l	P	330 kg	5	1450	1070	1620	1090	935
RV255C <sup>1-2</sup>	255l	P	380 kg	6	1450	1070	1620	1090	935
RV280C <sup>1</sup>	280l	P - PA - S - SL	580 kg	5	1600	1090	1720	1270	1080
RV280C <sup>1</sup>	280l	P - PA - S - SL	640 kg	6	1600	1090	1720	1270	1080

1 - Blunt and rounded tips and teeth

2 - Stainless steel tines, bottom and pins; PEC bushings; round on stainless steel tines edge.

### LIFTING HOOK



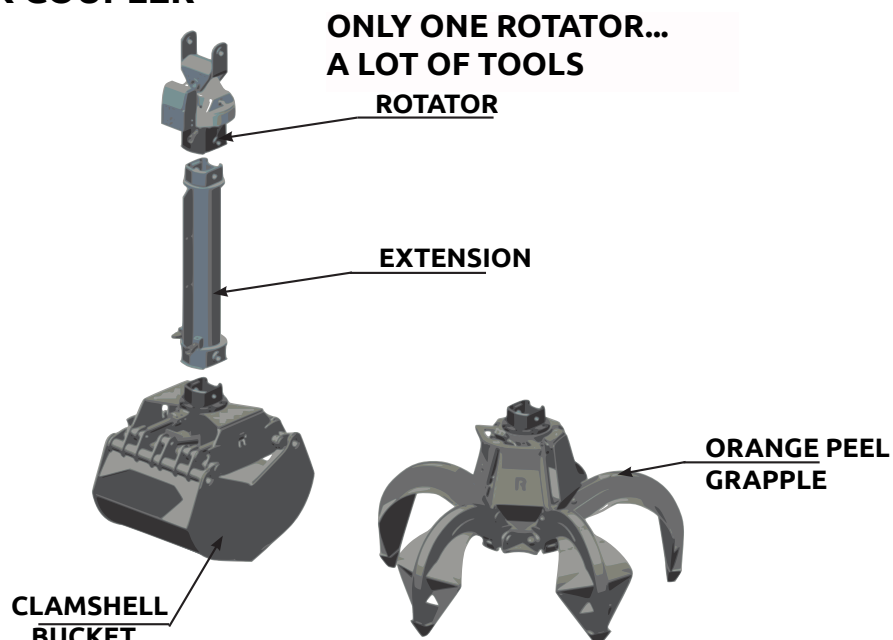
Model	Lifting capacity	Weight	Dimensions in mm			
			a	b	c	d
7.5 T	7500 kg	30 kg	325	200	510	140



## ACCESSORIES

ACCESSORIES	STANDARD	OPTIONAL
- N° 8 TWINNED SOLID RUBBER TYRES 8.25 x 20 WITH SPACER RUBBER RINGS	•	
- N° 8 TWINNED SOLID RUBBER TYRES 9.00 x 20 WITH SPACER RUBBER RINGS		•
- GREASING MANUAL SYSTEM FOR UNDERCARRIAGE		•
- STEERING ON JOYSTICK		•
- RADIO WITH BLUETOOTH®		•
- OPERATOR CAB WITH:		
- 3 WORKING LIGHTS ON THE CABIN	•	
- FRONT AND ROOF WINDOW SCREEN PROTECTION	•	
- TOTAL CABIN PROTECTION		•
- AUTOMATIC AIR-CONDITIONING SYSTEM		•
- ROLLBAR PROTECTION (INSTEAD OF THE CABIN) WITH:		•
- 2 LED WORKING LIGHTS ON ROLLBAR		•
- OPENABLE CANOPY IN LEXAN® FOR ROLL-BAR		•
- "GRAN COMFORT" OPERATOR SEAT	•	
- VERTICAL ELEVATION SYSTEM		•
- AUTOMATIC GREASING SYSTEM FOR THE UPPERSTRUCTURE AND SLEW RING	•	
- GENERATOR SYSTEM WITH PLATE		•
- 2 LED WORKING LIGHTS ON STICK	•	
- SAFETY VALVES ON ALL CYLINDERS	•	
- HEIGHT LIMIT DEVICES		•
- OVERLOAD WARNING DEVICE	•	
- CAMERA WITH 7" COLOURED DISPLAY INTO THE CABIN		•
- COUPLE OF BATTERIES CHARGER (ONE FOR EACH PACK)	•	
- COUPLE OF MHE BATTERIES HIGH EFFICIENCY		•
- COUPLE OF EXTRA BATTERIES		•

## SOLMEC QUICK COUPLER





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