

**Solmec**  
SINCE 1960

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



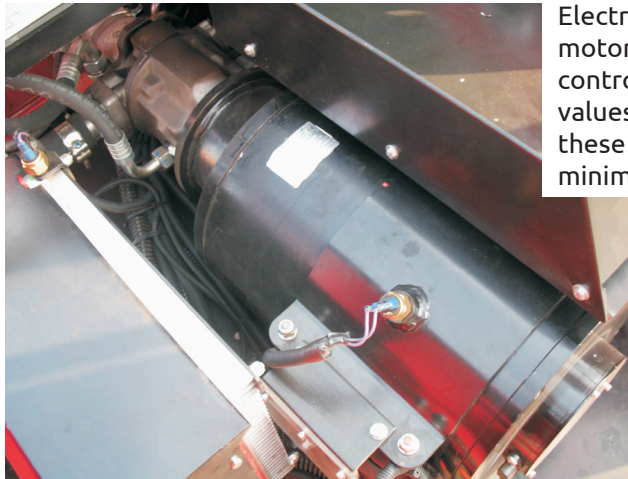
# Technological challenge for our future

The production of the first model completely electric powered. 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.

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.

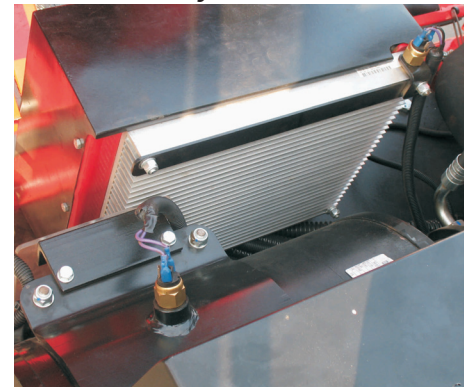


The cooling of the hydraulic oil is ensured by a large wide mesh radiator that allows a better temperature exchange thus avoiding occlusion of the air passages when working in a dust or contaminated air environment. The radiator is fitted with an thermostatically controlled electric fan.

The 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.

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.



By rotating the safety devices, it is possible to extract the mechanical locks of the battery pack, thus allowing the batteries to be removed 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.



# Safety

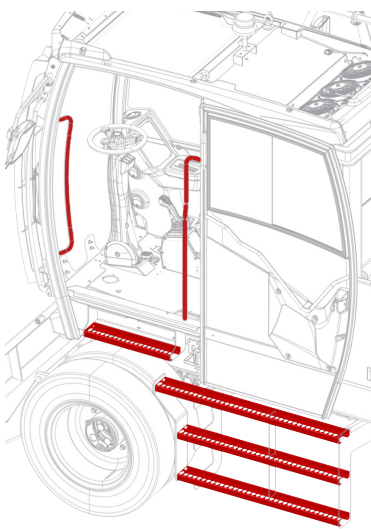
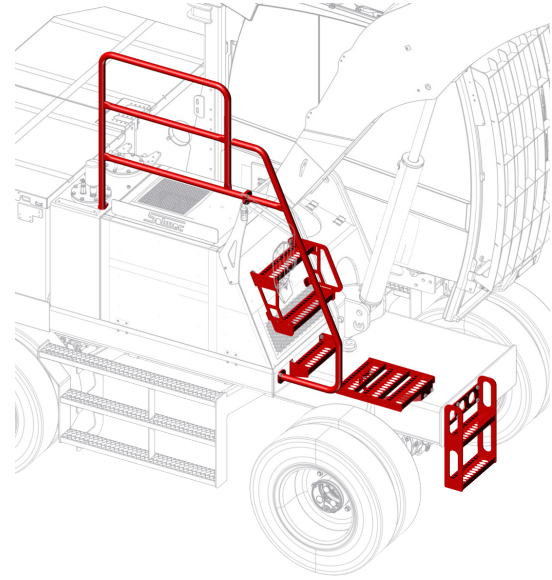
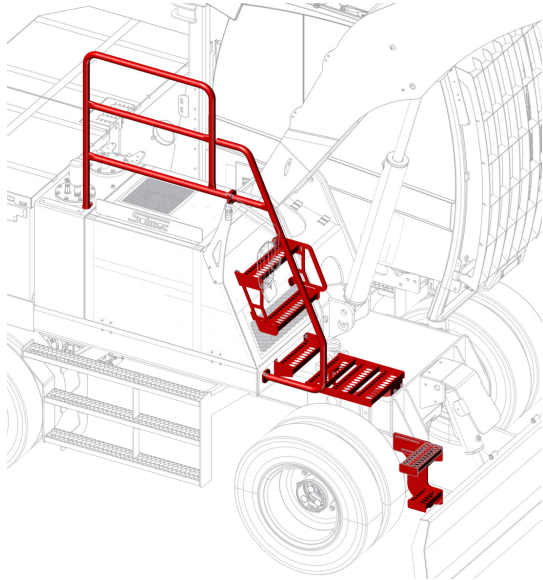
Solmec has always been committed to work safety. The "OWD" (Overload Warning Device), antirollover system, controls the load handled by the machine and stops the movements when it exceeds the maximum load allowed, authorizing only the movements that permit to be brought back the load to the safety position.

The operator presence system allows the use of machine controls only if the operator is seated in the driver's seat with the left armrest lowered.

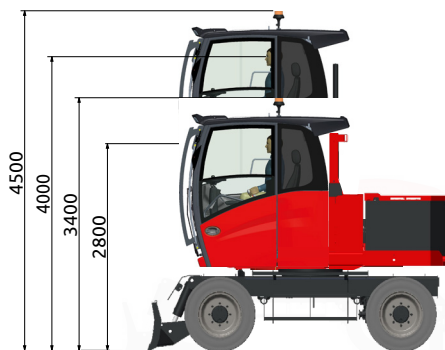
Non-slip steps and side handrails make it easier for the operator to get on and off the machine.

The majority of the grease points are easily accessible from the ground. A programmable automatic lubrication system is standard for the slewing ring and equipment.

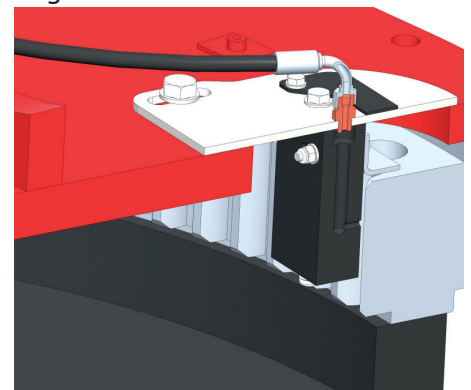
Wide steps standard included, for a safer and easier access on the machine and to the main maintenance and refuelling areas.



Operator's cab with hydraulic vertical elevation provides a 4.0 m operator eye height.



Automatic greasing of the slewing ring teeth.



Double rear mirrors with wide angle view on right and left side.

As option: rear camera with 7" color display into the cabin. Possibility to fit a camera on the right side and/or under the cab (or kit 3 cameras).



## Performance

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 demantlers.

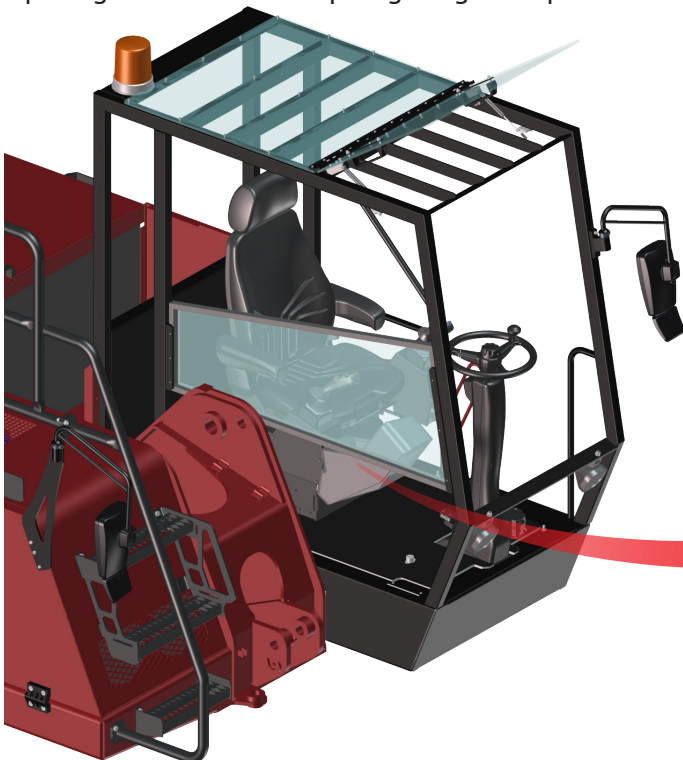
The new spacious cabin, equipped with every comfort, guarantees a pleasant and efficient working environment. The large windows in addition to the elevation cab allow a perfect view of the working area and ensure to the operator a driving in perfect safety .



The instrument panel ensures constant control of all machine parameters, including battery charge status and diagnostics of the electric motor system. It also includes controls for gear selection, electric motor speed, parking brake, automatic shut-down function, and auxiliary functions. Indicator lights inform the operator of hydraulic oil level, hydraulic oil filter clogging, reaching the machine stability limit, and the operation of additional installed attachments.

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

Optional: roll-over protection structure (ROPS) with orange flashing beacon, instead of the closed cab. Opening roof and left-side plexiglass guard optional.



# Comfort



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



Automatic air conditioned as optional.



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



Roll-up sun blind and wiper on the roof



Front-mounted roller sun blind.



Driver's cab with large glass surfaces and left sliding side window.



Adjustable steering column ...

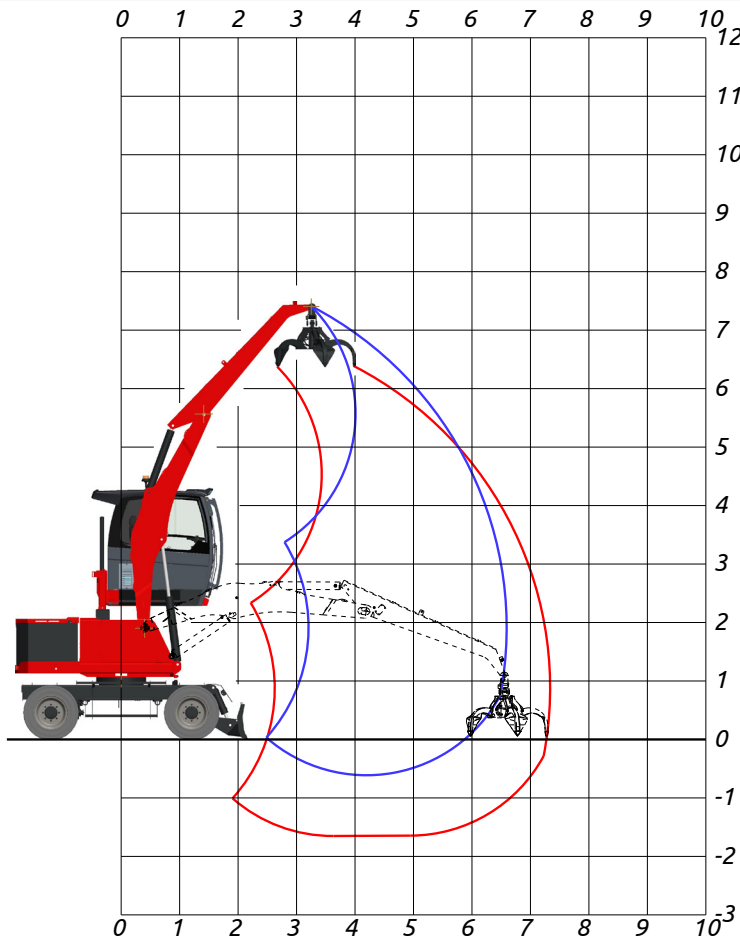


... for a comfortable driving position.



3 Standard LED headlights on cab.

## WORKING DIAGRAM



**AF6:**  
Gooseneck boom  
3,80 m

**Industrial stick**  
2,60 m

**AT6:**  
Gooseneck boom  
3,80 m

**Telescopic stick**  
1,8 - 2,60 m

### OPERATING WEIGHT:

**13.500 kg**

OPERATING WEIGHT WITH FRONT BLADE,  
SOLID RUBBER TYRES,  
GOOSENECK BOOM 3,80 m,  
INDUSTRIAL STICK 2,6 m,  
RP 300 ORANGE PEEL GRAB WITH ROTATOR.

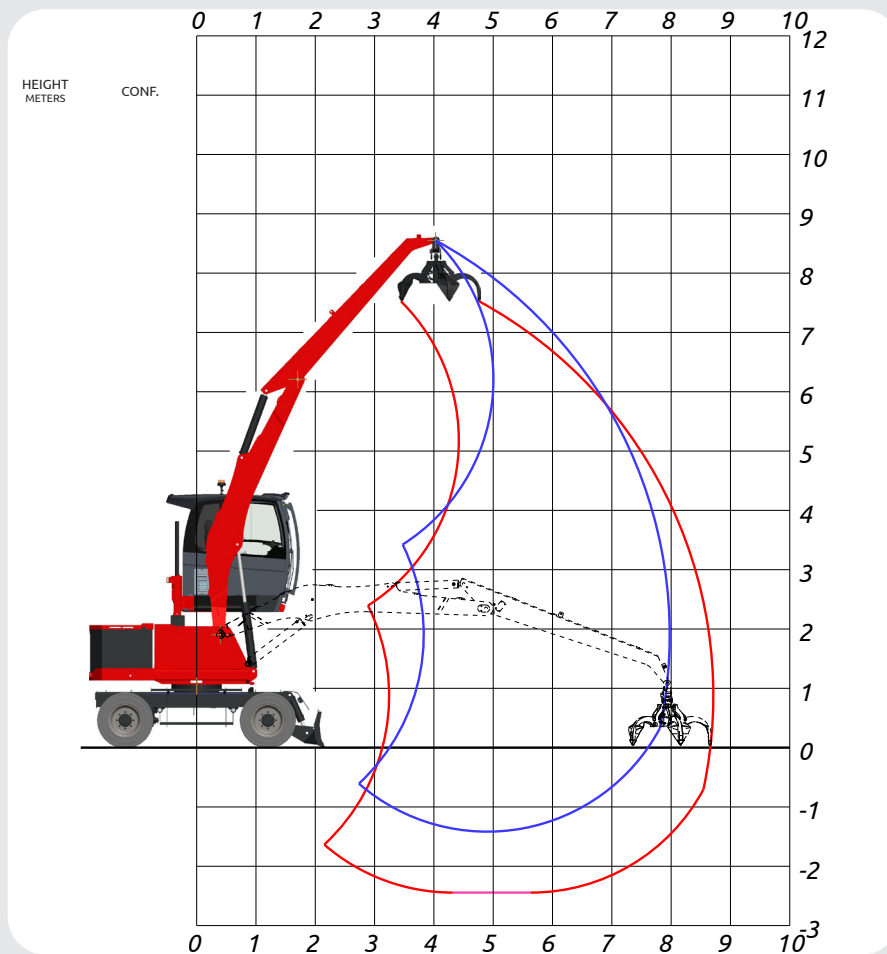
## LIFTING CAPACITIES TONS

LIFTING RANGE (m)

HEIGHT METERS	CONF.	4,0		5,0		6,0		6,6	
		○	⊙	○	⊙	○	⊙	○	⊙
6,0	○○	3,09	2,13	2,64	2,07				
5,0	○○	2,92	2,13	3,04	1,99				
4,0	○○	3,03	2,30	3,22	2,06	2,79	1,92		
3,0	○○	3,87	2,58	3,70	2,20	3,23	1,97		
2,0	○○	4,90	2,92	4,01	2,38	3,45	2,05	2,41	1,91
1,0	○○	5,40	3,20	4,28	2,53	3,42	2,11		
0	○○	5,64	3,33	4,28	2,59				

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

**WORKING DIAGRAM**



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

Industrial stick  
3,30 m

**OPERATING WEIGHT:**

**13.700 kg**

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

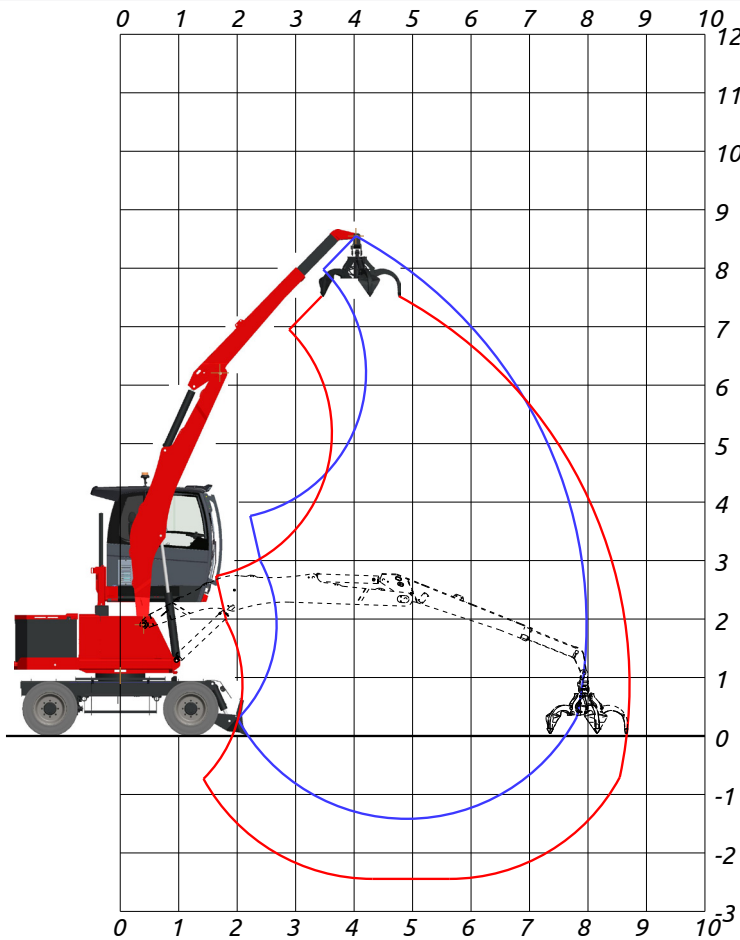
**LIFTING CAPACITIES TONS**

LIFTING RANGE (m)

HEIGHT METERS	CONF.	4,0		5,0		6,0		7,0		7,9	
		○	⊙	○	⊙	○	⊙	○	⊙	○	⊙
6,0	○○			2,65	1,68	2,70	1,62				
5,0	○○			2,60	1,74	2,76	1,63	2,51	1,57		
4,0	○○			2,78	1,87	2,93	1,70	2,79	1,59		
3,0	○○	3,42	2,44	3,41	2,05	3,33	1,81	2,82	1,64		
2,0	○○	5,18	2,81	4,18	2,26	3,40	1,93	2,78	1,71	2,35	1,54
1,0	○○	5,68	3,13	4,23	2,45	3,35	2,04	2,75	1,77		
0	○○	5,58	3,33	4,16	2,58	3,31	2,12	2,73	1,77		
-1,0	○○	5,52	3,37	4,13	2,62	3,28	2,13	2,72	1,76		

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

## WORKING DIAGRAM



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

Telescopic arm  
2,50 - 3,30 m

**OPERATING WEIGHT:**

**13.800 kg**

OPERATING WEIGHT WITH FRONT BLADE,  
SOLID RUBBER TYRES,  
GOOSENECK BOOM 4,50 m,  
TELESCOPIC ARM,  
RP 300 ORANGE PEEL GRAB WITH ROTATOR.

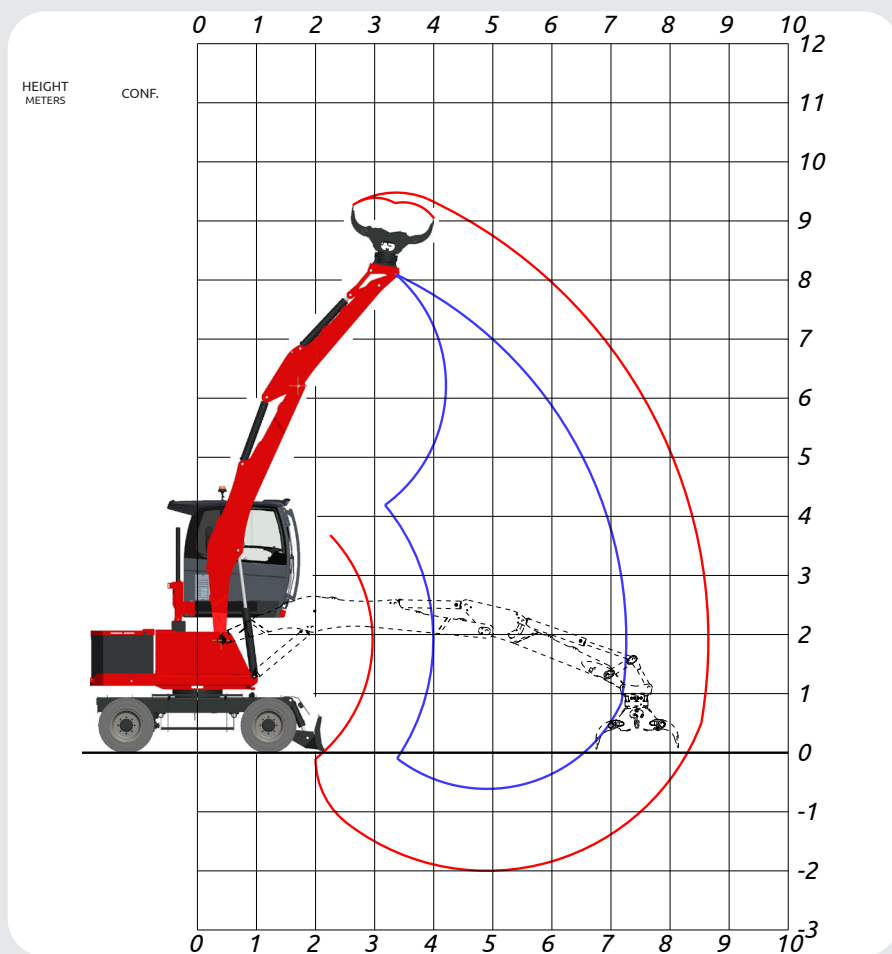
## LIFTING CAPACITIES TONS

LIFTING RANGE (m)

HEIGHT METERS	CONF.	4,0		5,0		6,0		7,0		7,9	
		○	⊙	○	⊙	○	⊙	○	⊙	○	⊙
6,0	○○			2,65	1,68	2,70	1,62				
5,0	○○			2,60	1,74	2,76	1,63	2,51	1,57		
4,0	○○			2,78	1,87	2,93	1,70	2,79	1,59		
3,0	○○	3,42	2,44	3,41	2,05	3,33	1,81	2,82	1,64		
2,0	○○	5,18	2,81	4,18	2,26	3,40	1,93	2,78	1,71	2,35	1,54
1,0	○○	5,68	3,13	4,23	2,45	3,35	2,04	2,75	1,77		
0	○○	5,58	3,33	4,16	2,58	3,31	2,12	2,73	1,77		
-1,0	○○	5,52	3,37	4,13	2,62	3,28	2,13	2,72	1,76		

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

**WORKING DIAGRAM**



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

Selector arm  
2,50 m

**OPERATING WEIGHT:**

**13.900 kg**

OPERATING WEIGHT WITH FRONT BLADE,  
SOLID RUBBER TYRES,  
GOOSENECK BOOM 4,50 m,  
SELECTOR ARM 2,5 m,  
RSG 351X SELECTOR GRAB WITH ROTATOR.

**LIFTING CAPACITIES TONS**

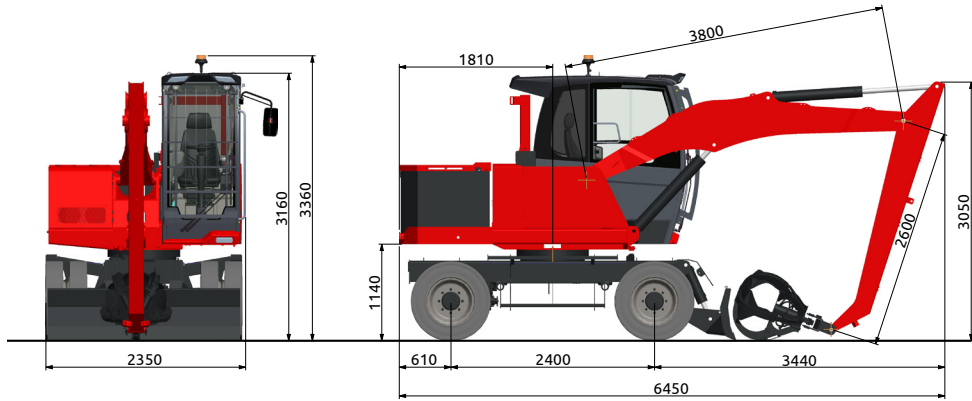
LIFTING RANGE (m)

HEIGHT METERS	CONF.	4,0		5,0		6,0		7,0		7,2	
		○	⊙	○	⊙	○	⊙	○	⊙	○	⊙
7,0	○○			2,83	1,89						
6,0	○○			3,26	1,76						
5,0	○○	3,17	2,04	3,31	1,79	3,08	1,64				
4,0	○○	3,75	2,25	3,53	1,89	3,16	1,67				
3,0	○○	4,73	2,55	3,84	2,05	3,15	1,75	2,52	1,57		
2,0	○○	5,34	2,86	3,96	2,22	3,09	1,84	2,50	1,60	2,40	1,56
1,0	○○	5,25	3,08	3,88	2,35	3,04	1,91	2,47	1,61		
0	○○	5,19	3,15	3,83	2,41	3,01	1,93				

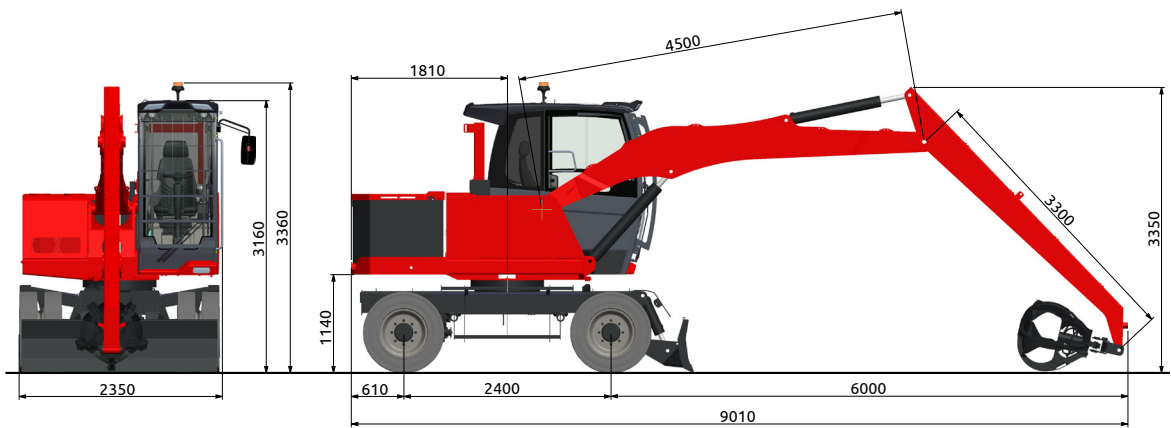
○ LIFTING CAPACITIES ON 360° WITHOUT SAFETY FACTOR    ⊙ LIFTING CAPACITIES ON 360° ACCORDING WITH ISO 10567    \*= HIDRAULIC  
LIMIT LIFTING CAPACITIES ARE ON HOOK WITHOUT GRABS, MACHINE STATIC, LEVEL SOLID GROUND, WITH AXLE LOCKED.

## DIMENSIONS

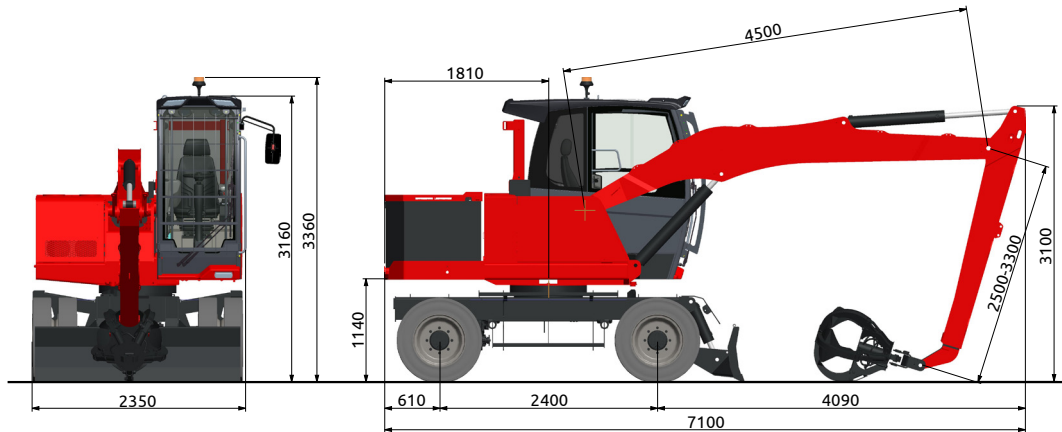
### AF6



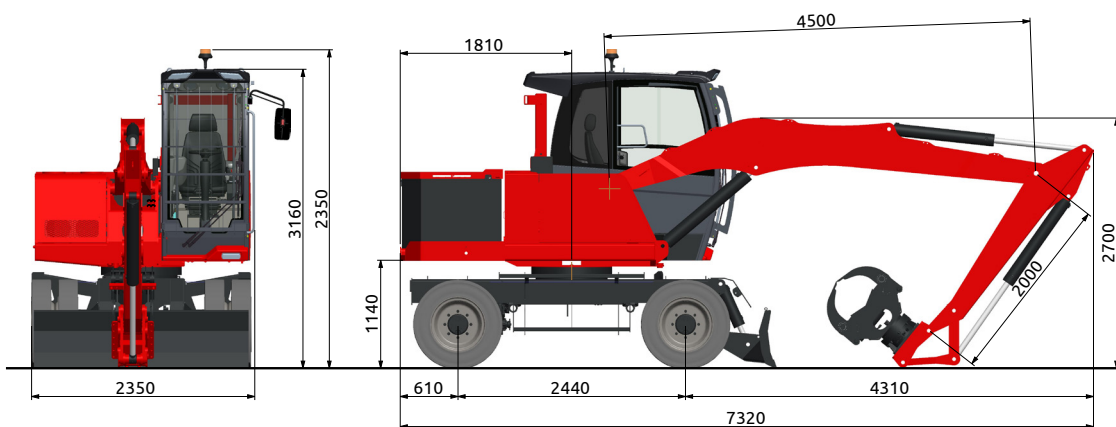
### AF8



### AT8



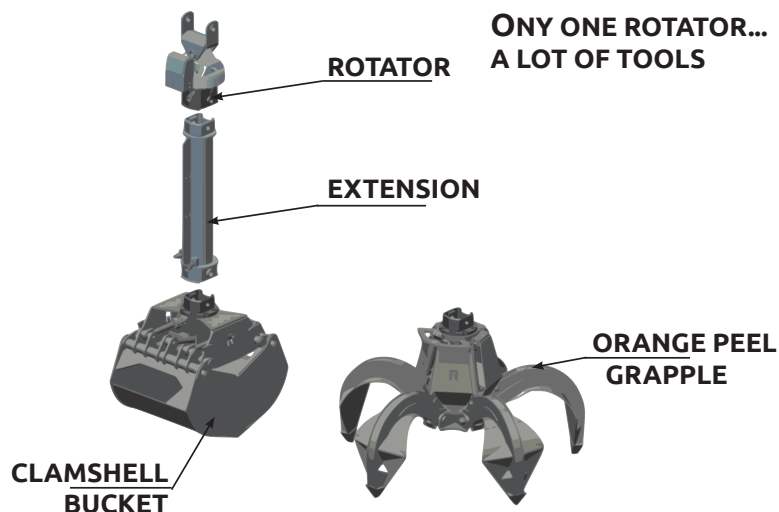
### AS7



# ACCESSORIES

ACCESSORIES	STANDARD	OPTIONAL
- N° 8 TWINNED SOLID RUBBER TYRES 8.25 x 20	•	
- N° 8 TWINNED SOLID RUBBER TYRES 9.00 x 20 WITH SPACER RUBBER RINGS		•
- SELF LUBRICATING ANTI FRICTION BUSHES ON BLADE.	•	
- MANUAL GREASING SYSTEM FOR THE STEERING AXLE.	•	
- STEERING ON JOYSTICK		•
- RADIO WITH BLUETOOTH®		•
- 3 WORKING LIGHTS ON THE CABIN	•	
- FRONT AND ROOF WINDOW SCREEN PROTECTION	•	
- TOTAL CABIN PROTECTION		•
- VERTICAL ELEVATION SYSTEM		•
- AUTOMATIC AIR-CONDITIONING SYSTEM		•
- AIR-CONDITIONING FILTER WITH ACTIVATED CHARCOAL		•
- ROLLBAR PROTECTION (INSTEAD OF THE CABIN)		•
- 2 LED WORKING LIGHTS ON ROLLBAR		•
- OPENABLE CANOPY IN LEXAN® FOR ROLL-BAR		•
- OPERATOR SEAT FULLY ADJUSTABLE.	•	
- SAFETY SEAT BELT	•	
- ANTI-THEFT IMMOBILIZER DEVICE		•
- AUTOMATIC GREASING SYSTEM FOR THE UPPERSTRUCTURE AND SLEW RING	•	
- GENERATOR SYSTEM WITH PLATE		•
- CAMERA WITH 7" COLOURED DISPLAY INTO THE CABIN		•
- 2 LED WORKING LIGHTS ON STICK		•
- SAFETY VALVES ON ALL CYLINDERS	•	
- HEIGHT LIMIT DEVICES		•
- OVERLOAD WARNING DEVICE	•	
- COUPLE OF BATTERY CHARGERS (ONE FOR EACH PACK)	•	
- COUPLE OF MHE BATTERY HIGH EFFICIENCY		•
- COUPLE OF EXTRA BATTERIES		•

## SOLMEC QUICK COUPLER



# TECHNICAL DATA EXP 50ZE

## 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 9 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

N° 8 twinned full rubber tyres

- 8.25 x 20

N° 8 twinned full rubber tyres with rubber spacer rings between tyres

- 9.00 x 20 (optional)

## 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.

## SWING SYSTEM

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: 6 rpm.  
Tail swing radius: 2,35 m

## OPERATOR'S CAB

Hydraulically operated raising driver's cab installed on silent block with large windows of tinted heat resistant safety glass and lateral sliding window, upper and front glasses with safety grids and wipers. Winter heating. Automatic air conditioned installed as optional. Radio preset.

Operator's seat with many possibilities of adjustment according to operator's weight and size.

As option: roll-over protection structure (ROPS) with orange flashing beacon, instead of the closed cab.

## INSTRUMENTATION

Consisting of a digital instrument that displays: battery charge status, hour meter and electric system alarm status. Warning lights indicate: minimum hydraulic oil level, hydraulic oil filter clogging, parking brake, headlights, load limiter alarm, automatic greasing system, gear engaged, etc.

## CONTROLS

N° 2 electronic controlled joysticks to carry out four operations Electronic proportional rollers for front blade/outriggers and grab rotator. Electro hydraulic devices for controlling hydraulic raising of the cab, parking brakes, front axle oscillation lock, gear box, engine speed selection and start and stop function.

## ARMS

With reach from 7 to 9 metres. Dipper stick could be also telescopic or selector arm.

## SOUND LEVELS

NOISE LIMIT

Directive 2000/14/CE  
Directive 2005/88/CE  
Regulation 2024/1208/UE

Sound pressure level at the operator's position: LpA 80 dB (A)

## ELECTROMAGNETIC COMPATIBILITY

(Dir. 2014/30/UE) - The machine complies with the specified limits for both emissions and immunity.

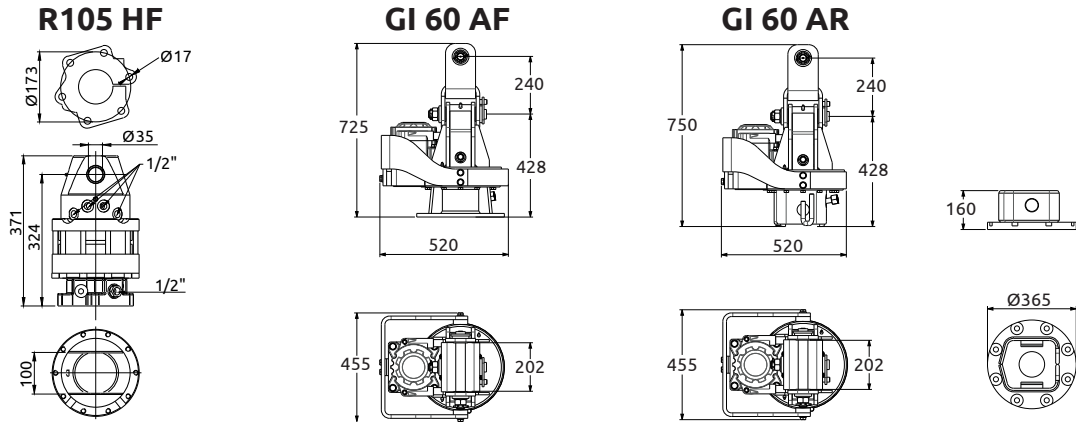
## OVERLOAD WARNING DEVICE

Machinery Directive 2006/42/EC

Device for monitoring the machine's stability based on the load being handled and its position. It provides hazard warnings via acoustic and visual signals and automatically inhibits machine movements when stability limits are reached. It also displays the lifted load and the maximum permissible load in any working position.

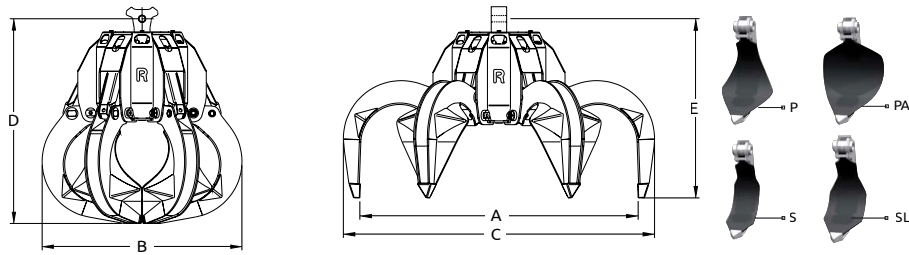
# ACCESSORIES

## HYDRAULIC ROTATORS



Model	Lifting capacity	Weight	Torque	Rotation max pressure	Rotation max flow	Attachement max pressure	Attachement max flow
R105HF	4,5 t	62 kg	180 daNm	250 bar	25 l/min	300 bar	-
GI 60 AF	5 t	200 kg	310 daNm	100 bar	32 l/min	300 bar	180 l/min
GI 60 AR	5 t	210 kg	310 daNm	100 bar	32 l/min	300 bar	180 l/min

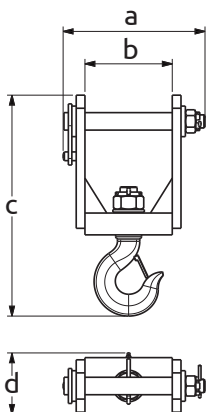
## SPECIAL GRABS FOR TANNERIES



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

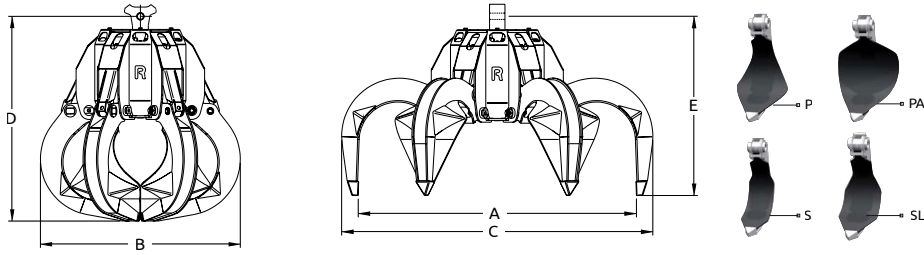
## LIFTING HOOK



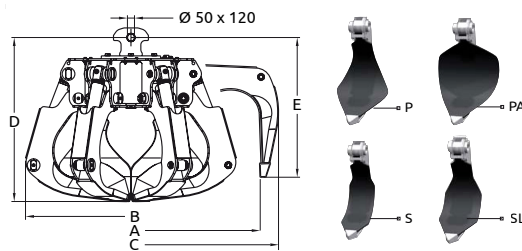
Model	Lifting capacity	Weight	Dimensions in mm			
			a	b	c	d
7.5 T	7.500 kg	30 kg	325	200	510	140

# ATTACHMENTS

## ORANGE PEEL GRABS FOR SCRAP

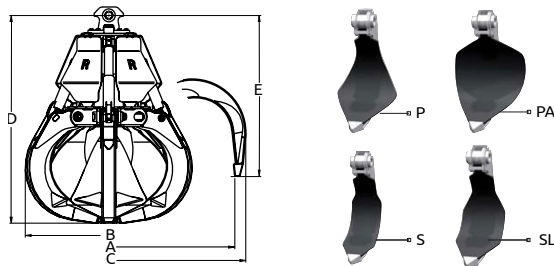


Model	Capacity	Tines	Weight	Nr of Tines	Dimensions in mm				
					A	B	C	D	E
RV255	255 l	P - PA - S - SL	330 kg	5	1450	1070	1620	1090	935
RV255	255 l	P - PA - S - SL	380 kg	6	1450	1070	1620	1090	935
RV280	280 l	P - PA - S - SL	580 kg	5	1600	1090	1720	1270	1080
RV280	280 l	P - PA - S - SL	640 kg	6	1600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



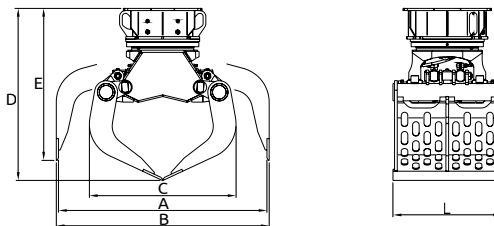
Model	Capacity	Tines	Weight	Nr of Tines	Dimensions in mm				
					A	B	C	D	E
RP300	300 l	P - PA - S - SL	450 kg	5	1630	1210	1850	960	810
RP300	300 l	P - PA - S - SL	500 kg	6	1630	1210	1850	960	810

## ORANGE PEEL GRABS FOR WASTE



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

## SELECTOR GRAB

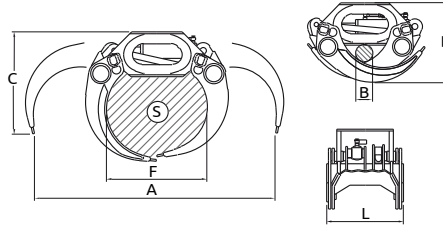


Model	Capacity	Tine Force	Weight	Dimensions in mm					
				A	B	C	D	E	L
RSG351X <sup>1</sup>	180 l	3050 daN	520 kg	1500	1540	980	1080	1000	500

<sup>1</sup> Protection blades on request

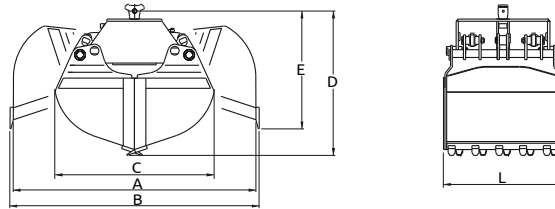
# ATTACHMENTS

## LOGS GRAPPLES



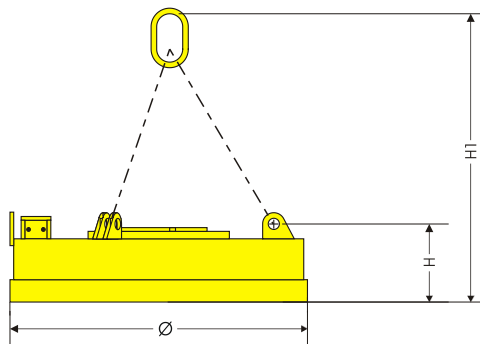
Model	Area	Lifting capacity	Weight	Dimensions in mm					
				A	B	C	D	L	F
R50/401	0,40 m <sup>2</sup>	3000 kg	405 kg	1900	140	810	670	640	800

## 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
R41/700	500 l	4400 daN	720 kg	1990	2070	1270	1230	1070	820

## MAGNETS



Model	Absorbed power at 20°	Nominal	Weight	Ø	H	H1	Hot tear strength (1) Δ= Ø300	Hot Lifting capacity (2)		Hot Lifting capacity (3)			
								Slabs or block	Drop Ball	Cast Iron Pigs	Scrap		
	kW	Vdc	kg	mm	mm	mm	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



The latest version of the brochure is available on the Solmec website.



Viale delle industrie, 9  
45100 ROVIGO - ITALY  
phone +39 0425 474833  
[www.solmec.it](http://www.solmec.it)  
[solmec@solmec.it](mailto:solmec@solmec.it)