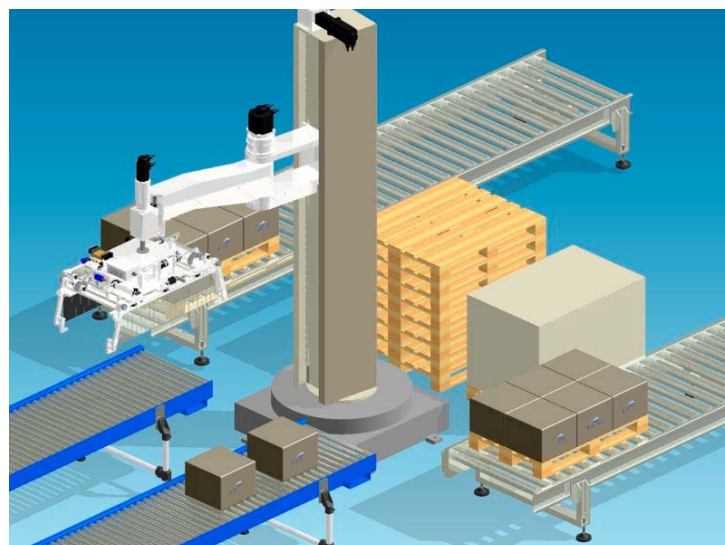
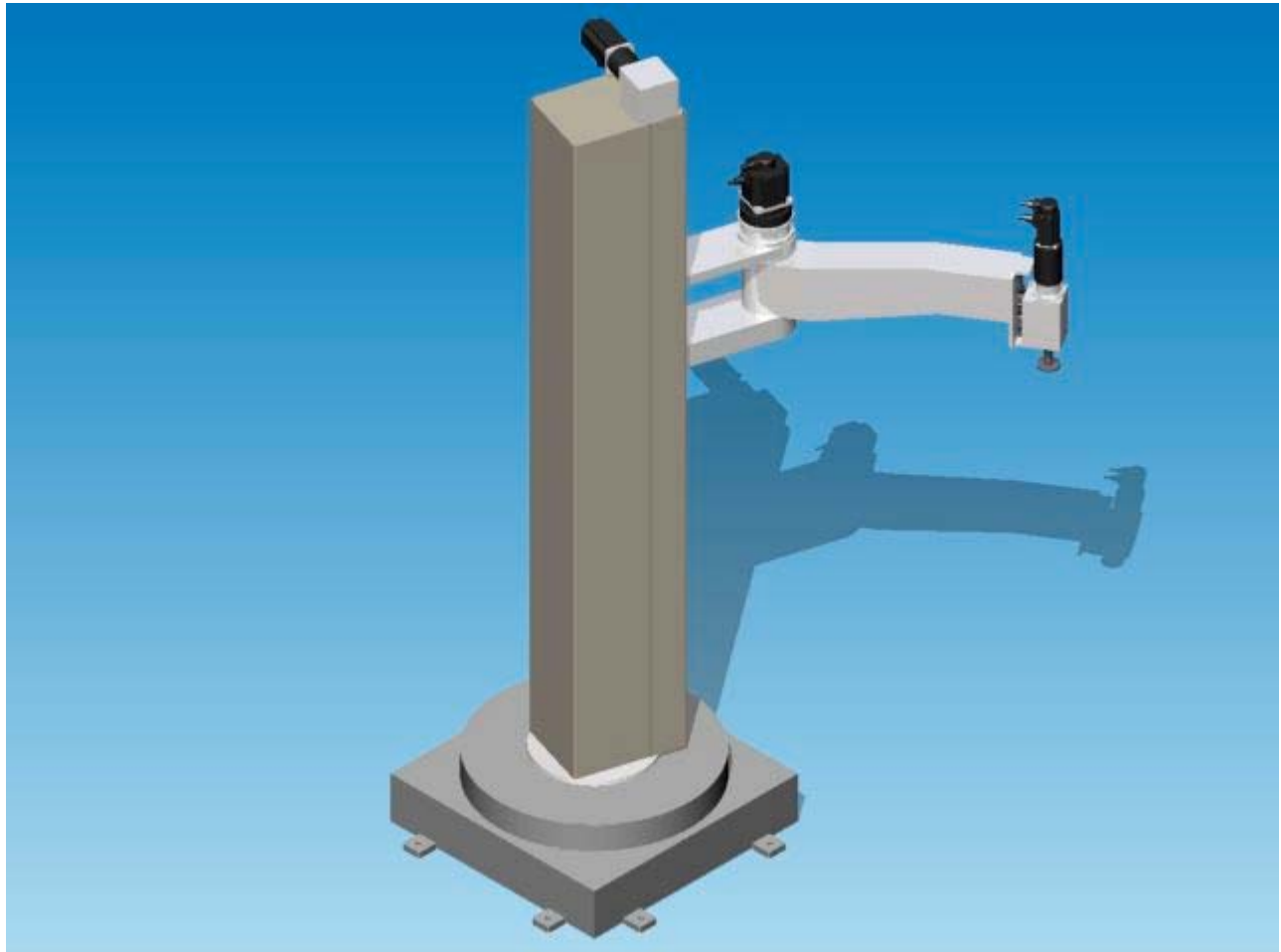


SCARA ROBOTS

Solaut produces three models of SCARA robots that find their main application for the realization of palletizing cells. The three models differ in their payload at the wrist and the volume of covered space.

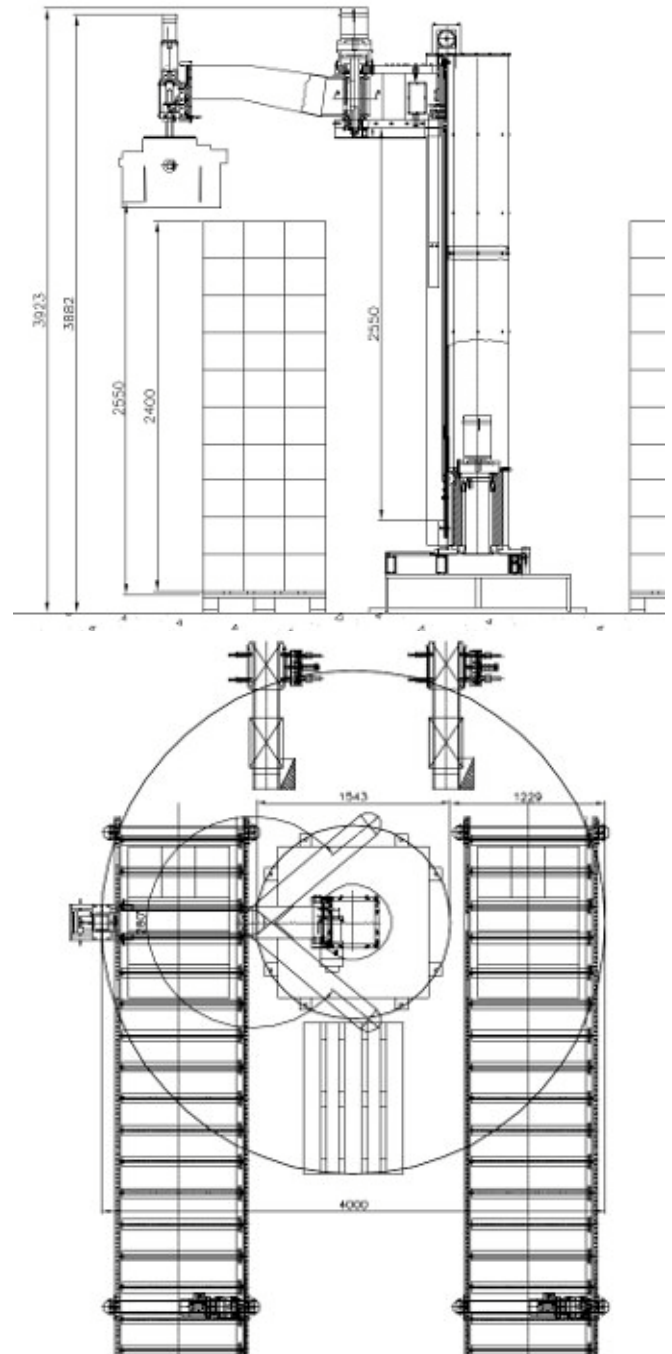


HEAVY SCARA ROBOT RC

The SCARA robot is a high productivity machine capable of palletizing on one or two pallet positions. The performances are similar to those of articulated arm palletising robots. The standard vertical stroke is 2500mm.

The vertical dimension is limited and is therefore ideal for those applications in which the available vertical space is reduced.

The vertical column can rotate 340 °, allowing to fully exploit the outreach of the wrist.



Essential features:

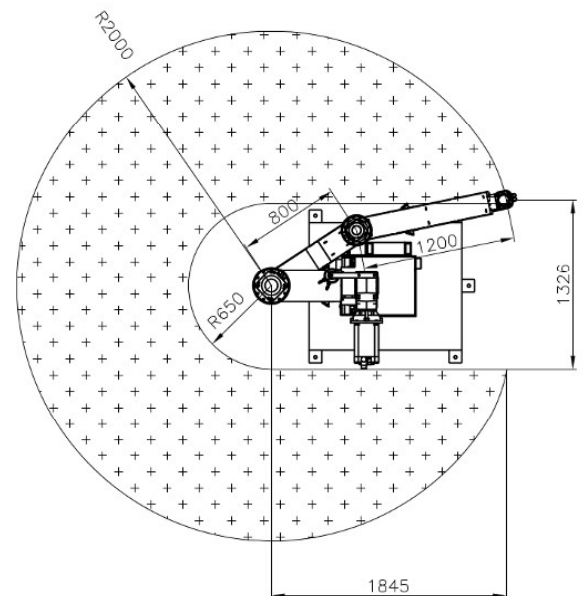
- Maximum operating radius of the gripper axis 2000mm.
 - Minimum operating radius axis gripper 760mm.
 - Gripping element rotation 360 °.
 - Productivity up to 14 picks per minute
 - Lenze servomotors.
 - Servomotors, controlled by PLC Lenze 3200C.
 - Cycloidal gearboxes with zero backlash for column rotation and elbow, low backlash epicyclical (< 10') for the wrist, coaxial for the vertical translation.
 - 7" touch screen color operator panel
-
- Hardened and ground vertical translation guides with recirculating ball carriages.
 - Maximum payload 120, 180Kg depending on the model
 - Standard vertical stroke 2400mm.

HEAVY SCARA ROBOT DA

The SCARA DA robot differs from the RC model because it does not have the rotating column and to have two rotating arms.

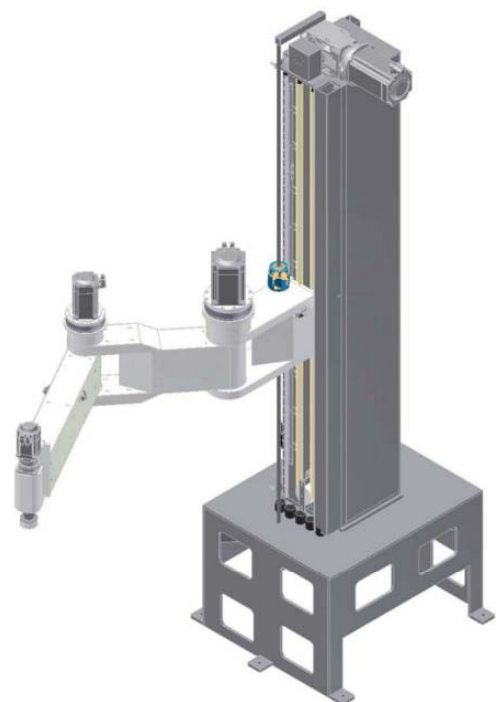
The figure on the side shows the plan drawing of the robot where the hatched area is the positioning area of the wrist axis.

The double arm scara robot is cheaper than the rotating column model and is used in applications that do not require positioning on all sides of the column.



Essential features:

- Maximum operating radius of the gripper axis 2000mm.
- Minimum operating radius axis gripper 650mm.
- Gripping element rotation 360 °.
- Productivity up to 14 picks per minute.
- Lenze servomotors.
- Servomotors, controlled by PLC Lenze 3200C.
- Cycloidal gearboxes with zero backlash for arms rotation, low backlash epicyclical (< 20') for the wrist, coaxial for the vertical translation.
- 7" touch screen color operator panel
- Hardened and ground vertical translation guides with recirculating ball carriages.
- Maximum payload 120 or 180Kg depending on the model
- Standard vertical stroke 2400mm.



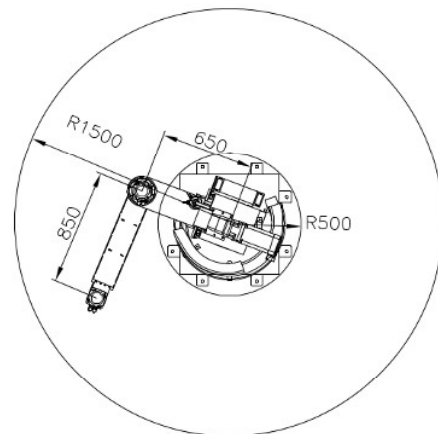
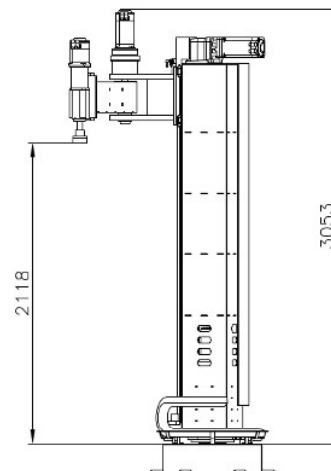
SCARA ROBOTS MEDIUM RC

The medium scara robot is a high productivity machine. Compared to the heavy model it has dimensions and therefore reduced operating volumes. The standard vertical stroke is 2000mm. The vertical dimension is limited and is therefore ideal for those applications in which the available vertical space is reduced. The vertical column can rotate 340 °, allowing to fully exploit the outreach of the wrist.



Essential features:

- Maximum operating radius of the gripper axis 1500mm.
- Minimum operating radius axis gripper 500mm.
- Gripping element rotation 360 °.
- Productivity up to 14 picks per minute.
- Servomotors, controlled by PLC Lenze 3200C.
- Servomotors and gearboxes with the same characteristics as the heavy model
- 7" touch screen color operator panel
- Hardened and ground vertical translation guides with recirculating ball carriages.
- Payload 60 or 90Kg depending on the model
- Standard vertical stroke 2000mm.



Vertical safety brake

All scara robot models are equipped with a safety brake on the vertical axis, which in the event of a component of the mechanical transmission breaking, prevents the arms from descending with the machine stopped and the safety circuits not powered (safety devices not restored) .

Feedback vertical axis

The linear encoder also allows to avoid the fall of the vertical carriage, in case of breakage of the transmission. The Z axis drive has a safety circuit that compares the positions of the motor encoder and the linear encoder; if the difference between the two positions exceeds a predetermined value, a safety contact opens which cuts off the voltage to the motor drives and discharges the pneumatic circuit that controls the opening of the safety brake.

ATEX versions

For applications in environments with danger of combustion (presence of solvents or dust) ATEX certified versions are made.

Stainless steel versions

For applications in humid or corrosive environments, we can build scara robots in anodized aluminum and AISI304 stainless steel or entirely in stainless steel.

Scara robot technical specifications

Denomination	SCARA HEAVY RC	SCARA HEAVY DA	SCARA MEDIUM RC
Machine type	4-axis scara robot	4-axis scara robot	4-axis scara robot
Rotating column	Yes	No	Yes
Payload	120 or 180Kg	120 or 180Kg	90 or 60 Kg
Motor	Brushless	Brushless	Brushless
Motor feedback	Absolute encoders	Absolute encoders	Absolute encoders
Gearboxes	Cycloidal (arm and column) epicyclic (wrist) coaxial (column)	Cycloidal (arms) epicyclic (wrist) coaxial (column)	Cycloidal (arm and column) epicyclic (wrist) coaxial (column)
Cycloidal gearboxes hysteresis	3' standard (1' on request)	3' standard (1' on request)	3' standard (1' on request)
Positioning repeatability in the horizontal plane	±1.2mm standard (±0.6 on request)	±1.2mm standard (±0.6 on request)	±1.2mm standard (±0.6 on request)
Linear encoder on the vertical axis	on request	on request	on request
Static and dynamic vertical safety brake	Yes static (dynamic on request with linear encoder)	Yes static (dynamic on request with linear encoder)	Yes static (dynamic on request with linear encoder)
Productivity	14 cycles / min.	14 cycles / min.	14 cycles / min.
Standard vertical stroke	2400mm	2400mm	2000mm
Wrist rotation	360°	360°	360°
Maximum operating radius	2000mm	2000mm	1500mm
Minimum operating radius	770mm	650mm	500mm
Arms center distance	800/1200	800/1200	650/850
	-	-	-
Vertical speed	1.5 m/s	1.5 m/s	1.5 m/s
Column rotation / first arm speed	150 °/s	150 °/s	150 °/s
Elbow rotation / second arm speed	120°/s	120°/s	120 °/s
Wrist rotation speed	250°/s	250°/s	250 °/s
Floating gripper, along vertical axis	Yes 100mm	Yes 100mm	Yes 100mm
Vertical dimensions	3500mm	3500mm	3040mm
PLC	PLC Lenze 3200C	PLC Lenze 3200C	PLC Lenze 3200C
Motion control	PLC Lenze 3200C	PLC Lenze 3200C	PLC Lenze 3200C
Number of axes	4	4	4
Safety control unit	Included	Included	Included
Electrical panel	Separate	Separate	Separate
Installed power	17 Kw	16.1 Kw	13 Kw