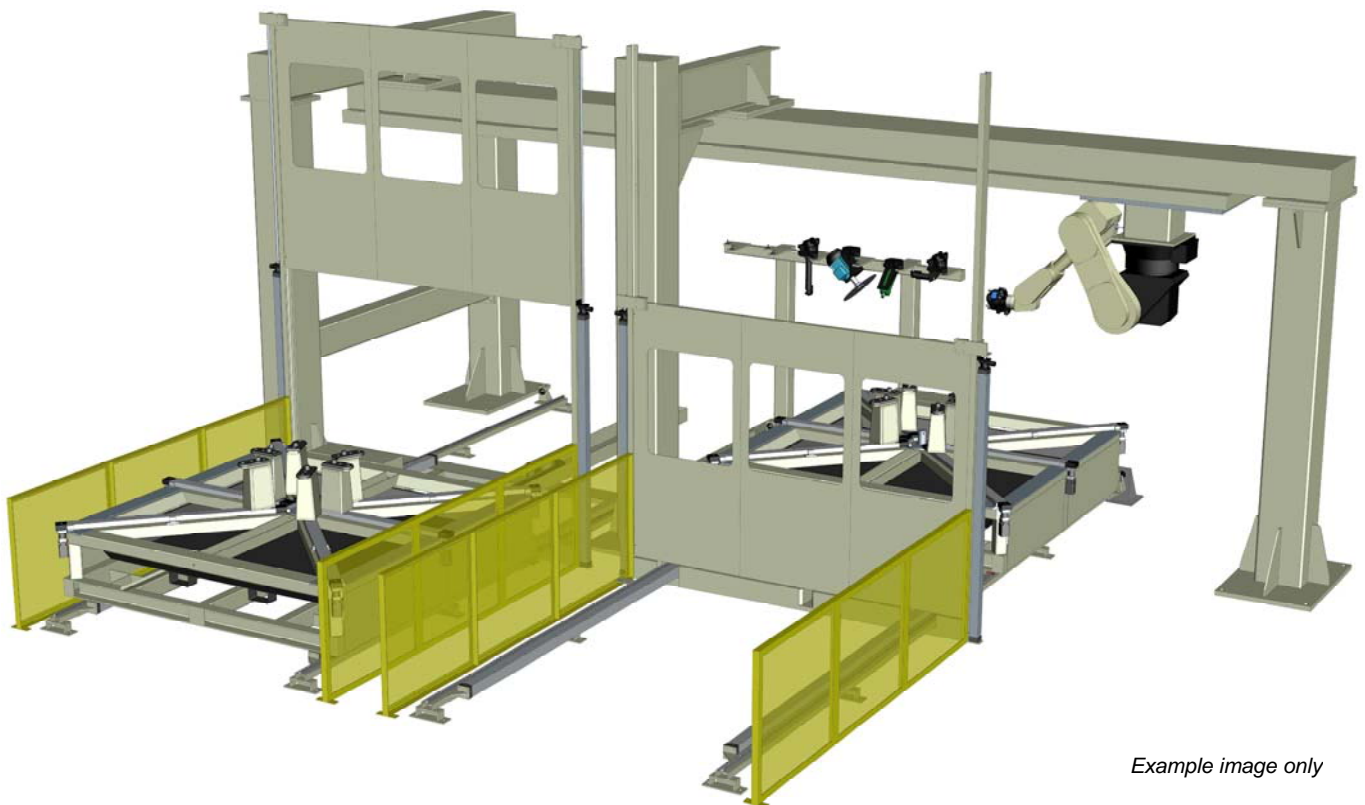




ARMOUR

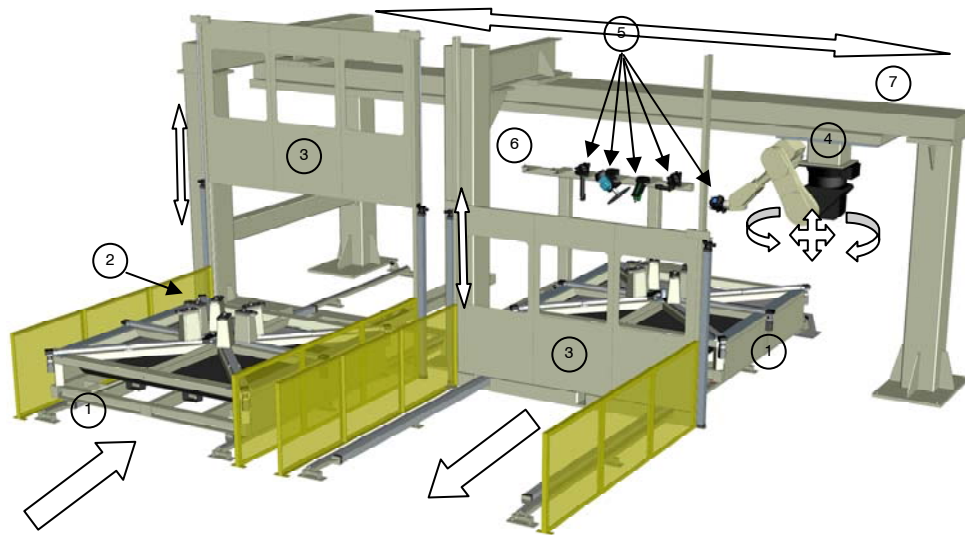
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RT-02-06 ROBO-TRIM



Example image only

The RT-02 Robotic Trimming System is designed to give maximum productivity and flexibility. The 6-axis robot is more versatile than a multi-axis CNC system, and the use of custom designed cutting tools enables the machine to carry out all cutting operations in a far shorter time than previously possible. Two product tables ensure that the robot can be continuously cutting, and product loading and unloading does not stop production. 6 product location axes move quickly between programs and enable easy product loading with a secure vacuum holding system. No holding fixtures are required. Programming can be carried out off-line giving a minimum of machine downtime for program testing. Armour will custom build a robotic solution for your application.



1. Product table
2. Product holding cones
3. Product door
4. Robot
5. Tools
6. Tool changer
7. Beam

The Operator places the product onto the holding table (1) and it is held in position by the six cones (2). The start button is pressed and the product is taken into the enclosure (not shown for clarity) through the product door (3). The robot (4) will select the correct tool (5) from the tool changer (6) and begin trimming the product. The robot travels underneath a support beam (7) in order to be able to fully access product on either table. As scrap is cut away it falls into a large bin under the table. These bins can be removed for emptying via a forklift truck. Operator safety is provided by pressure sensitive mats and interlocks.

MACHINE SPECIFICATION

ELEMENT	SPECIFICATION	
Machine Capabilities	Maximum product size:	2300 x 2000 x 550mm
	Maximum cutting speed (saw):	180mm/s (finish cut) 300mm/s (scrap cut)
	Maximum cutting speed (router):	80mm/s
	Cutting times:	50mm hole in 5 seconds 35 seconds (standard trim rectangular bath)
Machine Construction	Main frame:	Rolled steel sections – BS EN 10025 material
	Casing:	Sheet steel – BS EN 10025 material
	Paint finish:	Textured powder coating
Robot	Robot type:	Panasonic Panarobo VR-032
	Capacity:	32kg
	Number of axis:	6
	Repeatability:	±0.2mm or less
	Maximum speed:	2m/s
Saw Cutting Head	Blade:	400mm diameter tungsten carbide
	Cutting speed:	2820 rpm
	Cutting motor power:	3 kW
Router Cutting Head	Cutting spindle power:	1kW
	Cutting speed:	20,000 rpm
	Speed control:	Inverter
Optional Cutting Head	Air powered router head for access to restricted areas.	
	Cutting power:	570W
	Cutting speed:	15,000 rpm

Robot Shifter Axis	<p>Driven with AC brushless servo-motor using rack and pinion. Motor power: 3.5 kW Maximum speed: 60m/min Precision track with roller bearings. Automatic lubrication for ease of maintenance. Harmonised with robot to give a total of 7 axes.</p>
Product Location	<p>Specially designed location blocks to suit application. 6 Axes location block positioning system. Slide units: Self contained, sealed unit, belt driven with precision linear slides Drive type: AC brushless servo-motors and gearbox Motor rating: 500 W Maximum speed: 375mm/s</p>
Product Holding	<p>Pneumatically operated vacuum system. Vacuum cup holds onto product. Pneumatic cylinder pulls product tight onto the location blocks.</p>
Table Movement	<p>Driven with AC brushless servo-motor using rack and pinion. Motor power: 1.5 kW Maximum speed: 500mm/s</p>
Tool Changer	<p>6 station tool stand with location pins and sensors. Pneumatically operated tool lock mechanism with fail-safe. Tool change time: Up to 10 seconds</p>
Control System	<p>PLC controlled sequence. Touch screen user interface. Standard hole cut programs included. Robot programming via teach pendant. Offline programming option.</p>
Dust Extraction	<p>Specified and supplied separately.</p>
Enclosure	<p>Modular unit with sliding door recommended. Specified and supplied separately.</p>
Electricity	<p>3 Phase supply + Neutral + Earth: 380/415V @ 50Hz Maximum power consumption: 30 kW</p>

example specification only - specification may be subject to change without notice

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