

## TP80 industrial robot



Automotive and equipment  
manufacturers

Electronics

Food

Life Sciences and  
pharmaceutical

Plastics

Machine Tool

Photovoltaics

**TS**

Scara / 4 axis

**TX**

Low payload / 6 axis

**TX/RX**

Medium payload / 6 axis

**TX/RX**

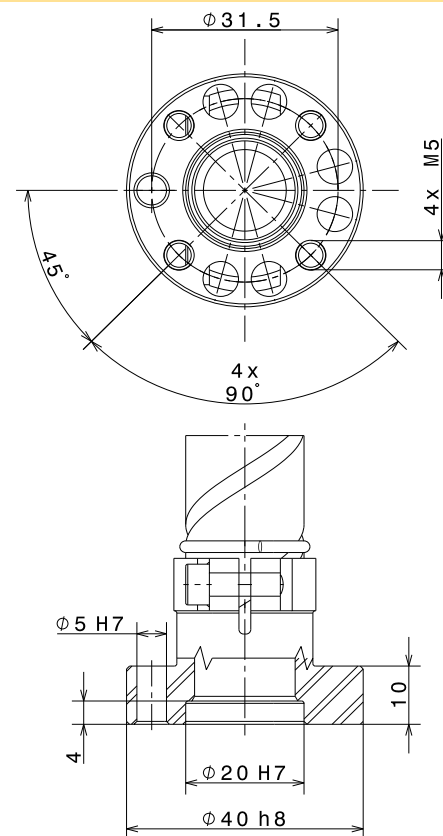
Heavy payload / 6 axis

**TP**

Picker / 4 axis

MODEL		TP80
Characteristics (preliminary data)		
Maximum load <sup>(1)</sup>		1 kg
Nominal load		0,5 kg
Reach		800 mm
Number of degrees of freedom		4
Motion range	Angular reach axis 1 (A)	± 117°
	Angular reach axis 2 (B)	± 153°
	Stroke (C1, C2)	100 mm
	Angular reach axis 4 (D)	± 500° <sup>(2)</sup>
Work Envelope	Maximum radius between axis 1 and 3 (R. M)	800 mm
	Minimum radius between axis 1 and 3 (R. m1)	174 mm
Robot cycle-time <sup>(3)</sup> , sustained, at 25°C temperature	25-300-25 mm cycle:	up to (ppm = picks per minute)
	0,1 kg load	200 ppm
	0,5 kg load	185 ppm
	1 kg load	170 ppm
	50-700-50 mm cycle:	up to
	0,1 kg load	110 ppm
	0,5 kg load	105 ppm
	1 kg load	95 ppm
Repeatability - ISO 9283		< ± 0,05 mm
Maximum inertias (Axis 4)		0,014 kg.m²
Weight		71 kg
User interface		
	On forearm	On tool flange (optional)
Electrical cables	8 x (2 x 0,21 mm²) (AWG24) shielded	8 x (2 x 0,21 mm²) (AWG24) shielded
Pneumatic lines	1 x Ø4 mm + 1 x Ø6 mm	1 x Ø4 mm + 1 x Ø6 mm (coupling of 2 x Ø4 mm)
Tension & maximum current by contact		24 VDC - 2A
Cleanroom standard - ISO 14644-1 (version with bellows)		6 / 5 <sup>(4)</sup>
Protection class according to standard NF EN 60529		IP54 standard, IP65 with bellows
Stäubli CS8 series controller		CS8C
Installation environment		
Working temperature according to standard directive NF EN 60 204-1		+5°C to +40°C
Humidity according to standard directive NF EN 60 204-1		30% to 95% max. non-condensing
Attachment methods		Wall

Tool flange



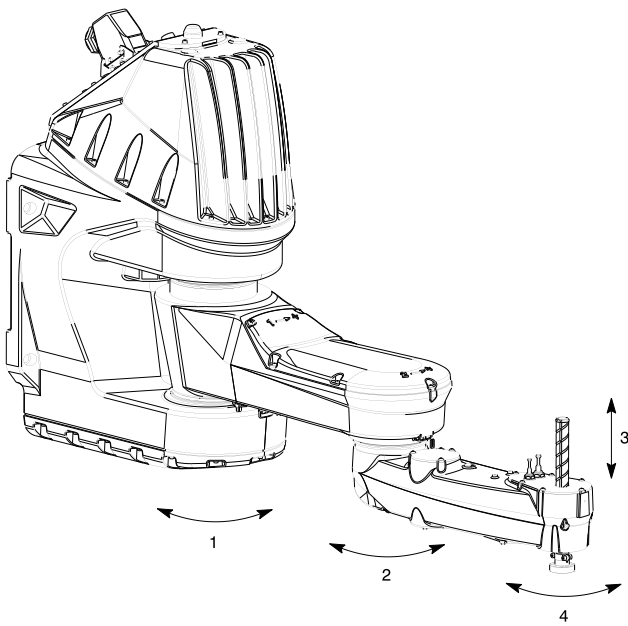
(1) Under special conditions with reduced speed and acceleration, consult us.

(2) Standard =  $\pm 500^\circ$   
Configurable =  $\pm 18000^\circ$   
With user cable optional =  $\pm 200^\circ$

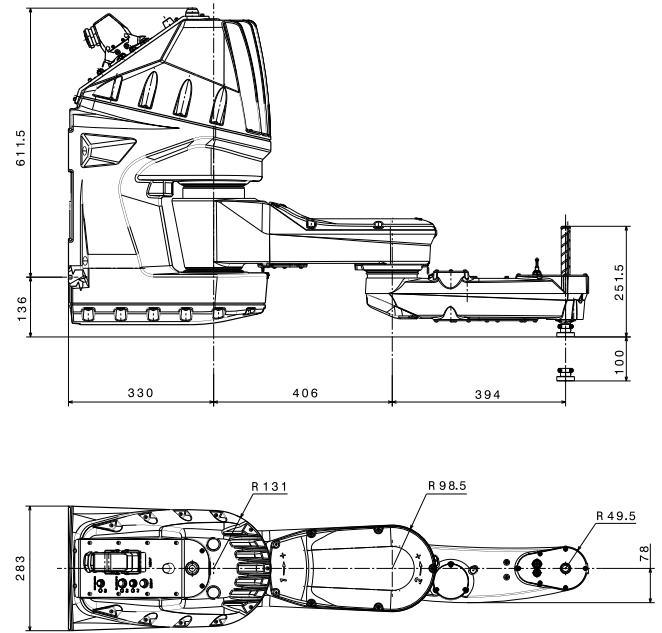
(3) Under special conditions, consult us.

(4) Optional.  
To be confirmed, consult us.

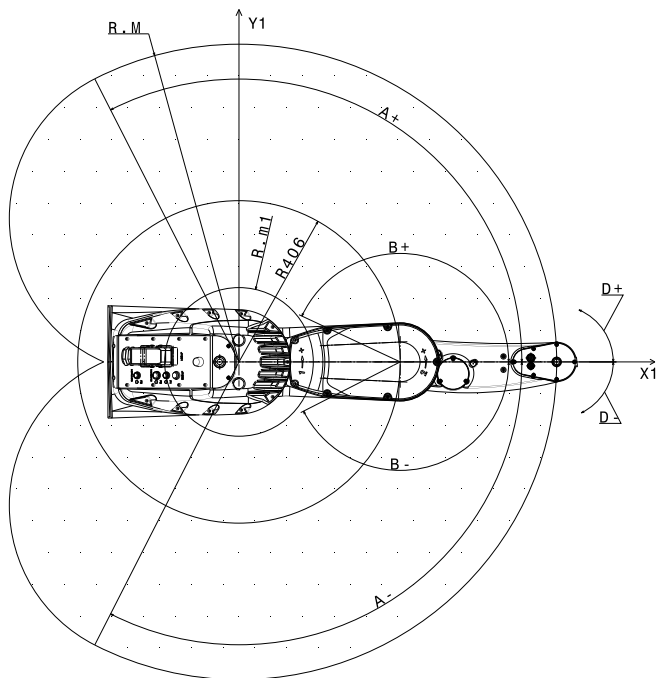
## Motion range



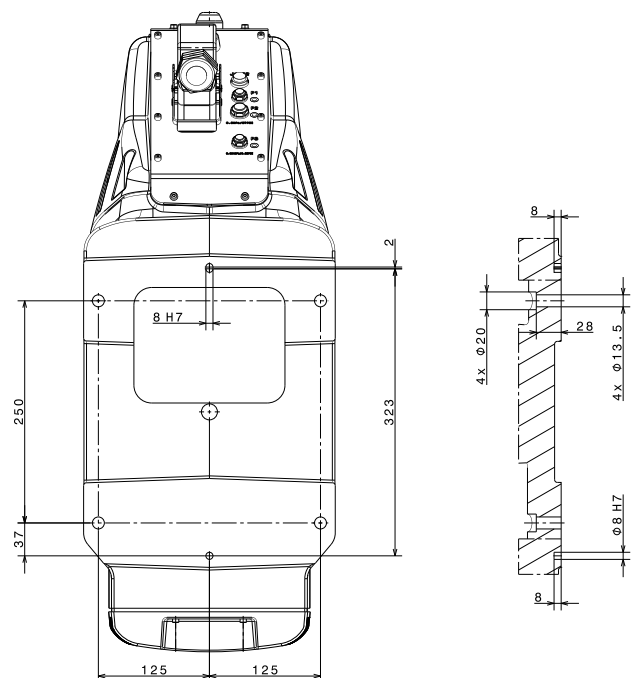
## Dimensions



## Work envelope



## Attachment





## Product benefits

The TP80 fast Picker is an extremely fast robot dedicated to handling operations of small parts (under 1 kg). It is particularly well-suited for packaging applications in various fields such as food, pharmaceutical, photovoltaics or cosmetics.



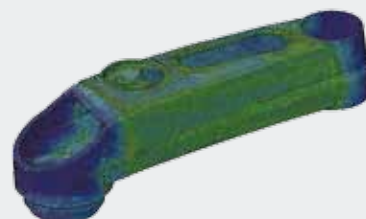
### HIGH SPEED

Extremely fast robot with sustained 200 picks per minute (ppm) capability.



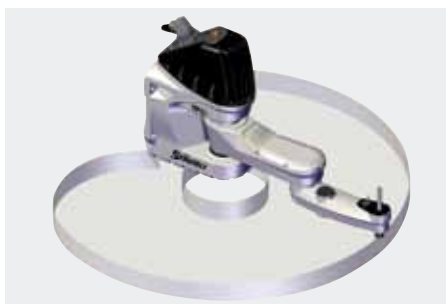
### SIMPLE MOUNTING

Compared to parallel robots where a large gantry structure must be built to attach the robot, the TP80 fast Picker can be mounted on a much lighter base, bringing substantial cost savings and making it easier to integrate in a cell.



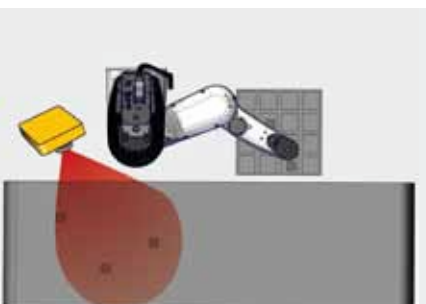
### HIGH PRECISION AND RIGIDITY

The sturdy industrial design of the TP80 makes very repeatable throughout its work envelope.



### LARGE WORK ENVELOPE

Its 800 mm reach with 100 mm stroke enables the TP80 to cover a large work envelope while maintaining high speed.



### NO ARM INTERFERENCE WHEN USED WITH VISION

Unlike parallel robots with their multi-arm design, the TP80 does not interfere with the line of vision of the camera.



### SLIM FOREARM

Its slim forearm enables the robot to access confined areas, for example slotted machine openings.



### ALL USER CABLES RUNNING INSIDE THE ARM

Electrical, pneumatic and I/O connections are available on the tool flange with all cables running inside the arm.



### HIGH PROTECTION

IP65 rating (with optional bellows) and angled connector design bring better protection against dust and liquids.



### CERTIFICATION

TP80 robot meets CE and RoHS certifications, UL pending.

[www.staubli.com/robotics](http://www.staubli.com/robotics)

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