

i Further technical data for HORST600 robot system.
Technical data version: V240311

1 Technical Data - HORST1500

Robot	HORST1500
Number of axes	6
Maximum payload	12 kg (up to 15 kg at the TCP) *
Nominal load	8 kg
Max. range	1485 mm
Repeatability	+/- 0.05 mm
Max. TCP speed	4.6 m/s
Protection classification	IP54
Sound level	<70 dB (A)
Weight	99 kg
Power supply	230 V AC, 50-60 Hz
Ambient temperature	5-40 °C
Installation area (L x W)	380 x 380 mm
Base drilling pattern	300 x 300 mm
Standard color	RAL 5021 (water blue)

* in consultation with fruitcore robotics

2 Axis data HORST1500

Axis	Range of movement	Speed (With a payload of 0 kg; rounded down)
1	+/- 176°	260 °/s
2	+90° / -19°	100 °/s
3	+/- 62°	150 °/s
4	+/- 170°	550 °/s
5	+/- 116°	430 °/s
6	+/- 300°	770 °/s

i The maximum axis speeds were determined with a payload of 0 kg as this is the only way to ensure that the measured values can be compared properly. At maximum payload, the maximum speed can vary greatly since it depends directly on the position of the center of mass. The maximum speed at 0 kg payload, on the other hand, is unambiguous as the influence of the center of mass of a payload does not apply.

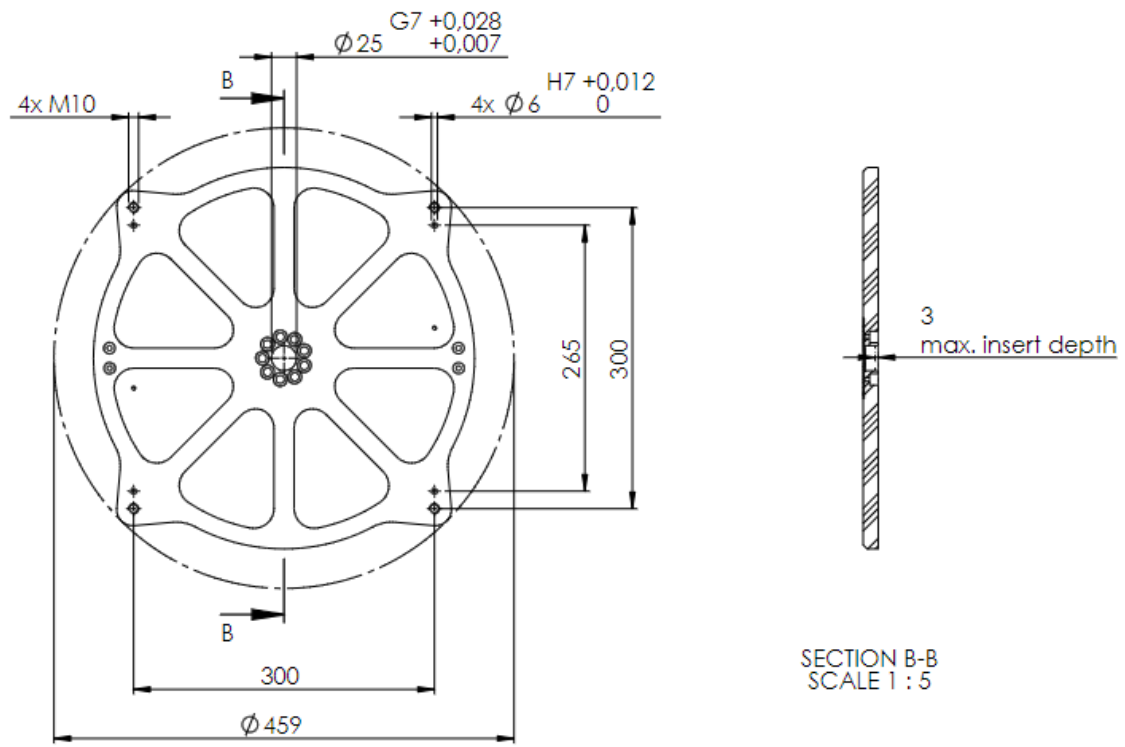
In general, speed is rather less suitable as a basis of decision-making in robot selection, as it only shows the actual performance of a robot to a limited extent. Depending on the range of motion and the motion profile of the application, high accelerations, for example, can have a significantly greater influence on cycle time and economic efficiency than speed. It is therefore recommended to analyze the application with the corresponding framework conditions by using [horstFX Web](https://horstcosmos.com/apps/horstfxweb)¹ or via a feasibility analysis, for example.

¹ <https://horstcosmos.com/apps/horstfxweb>

3 Technical Data Control

Dimensions (H x W x D)	313 mm x 174 mm x 446 mm
Weight	ca. 10 kg
Protection classification	IP20
I/O connections on switch cabinet	20 digital inputs (expandable to 28) 18 digital outputs (expandable to 30)
I/O connections on tool flange	2 digital inputs and outputs each M8 male, 4-pin, angled, A-coded
I/O power supply	24 V / 7 A at control 24 V / 2.5 A at tool flange
Communication	TCP/IP 100-Mbit/s Ethernet (Sockets), Primary interface (XML-RPC) (Activation of the primary interface via horstFX extension "horstFX External")
Fieldbuses	Modbus/TCP, Profinet (Activation of the interfaces via horstFX extension "horstFX External")
Safety-relevant Interfaces (2 channels each)	Emergency stop [input and output] Safety stop [input and output] In accordance with DIN EN ISO 10218-1; PL d. + 4 config. safe inputs (also configurable as 8 digital inputs) + 6 config. safe outputs (including 2 potential-free contacts)
USB ports	2x USB port 3.0
Wiring of HORST	3 m cable between robot and switch cabinet
Wiring of operating panel	5 m cable between operating panel and switch cabinet

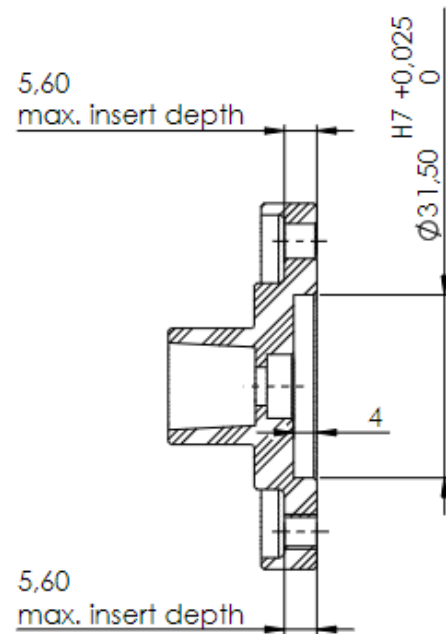
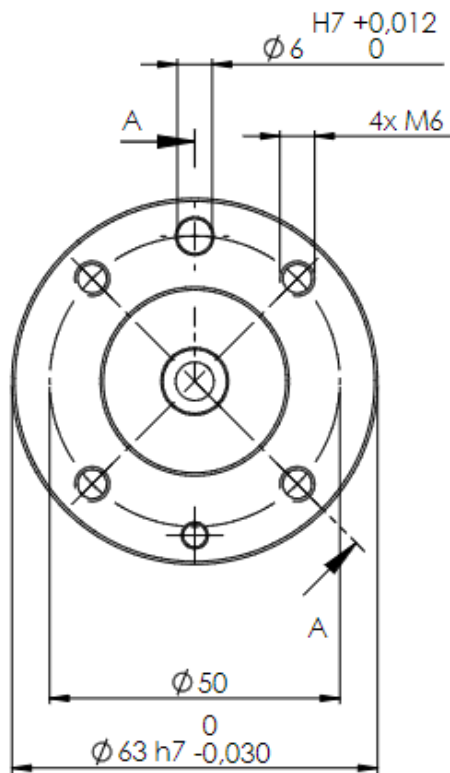
4 HORST1500 Base drilling pattern



ROBOT BASE
SCALE 1:5

Dimensions of the installation area and base drilling pattern of HORST1500

5 HORST1500 Robot flange

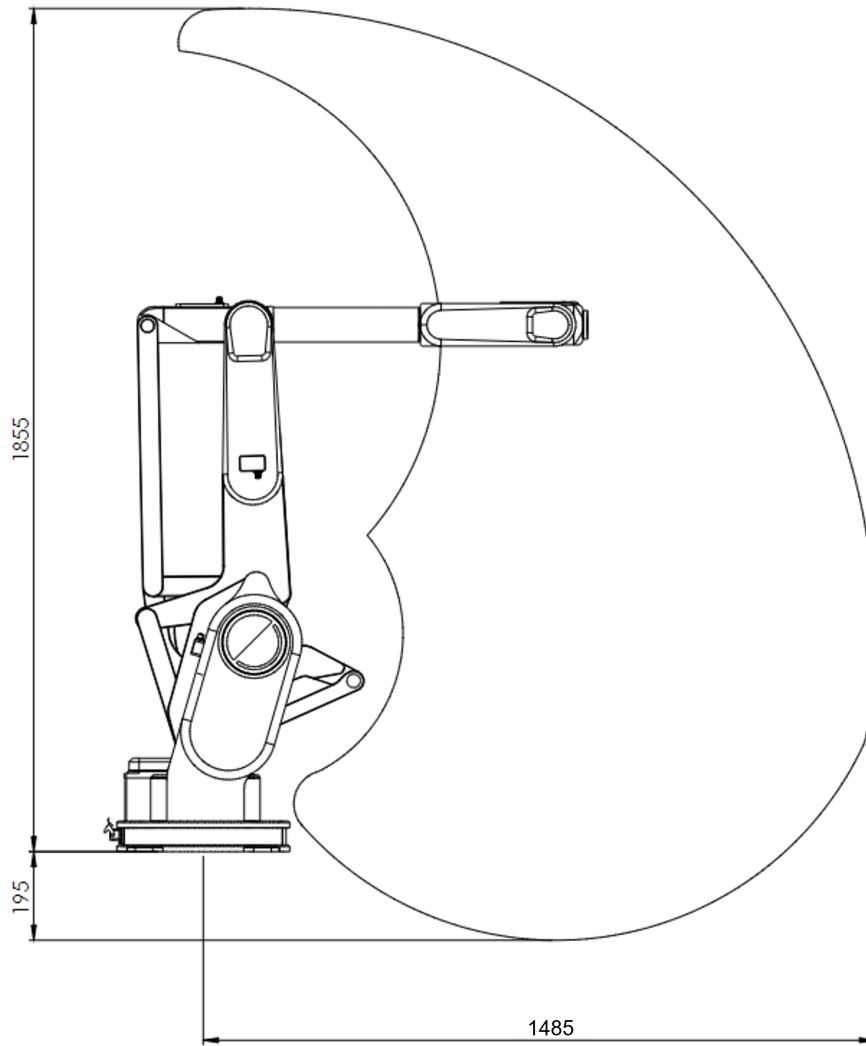


SECTION A-A
SCALE 1 : 1

ROBOT FLANGE according to ISO 9409-1-50-4-M6
SCALE 1:1

Robot flange of HORST1500

6 HORST1500 Workspace



Lateral section of the HORST1500 workspace