ABB ROBOTICS

Základné parameter pri navrhovaní a implementácii robotov ABB - Omnicore

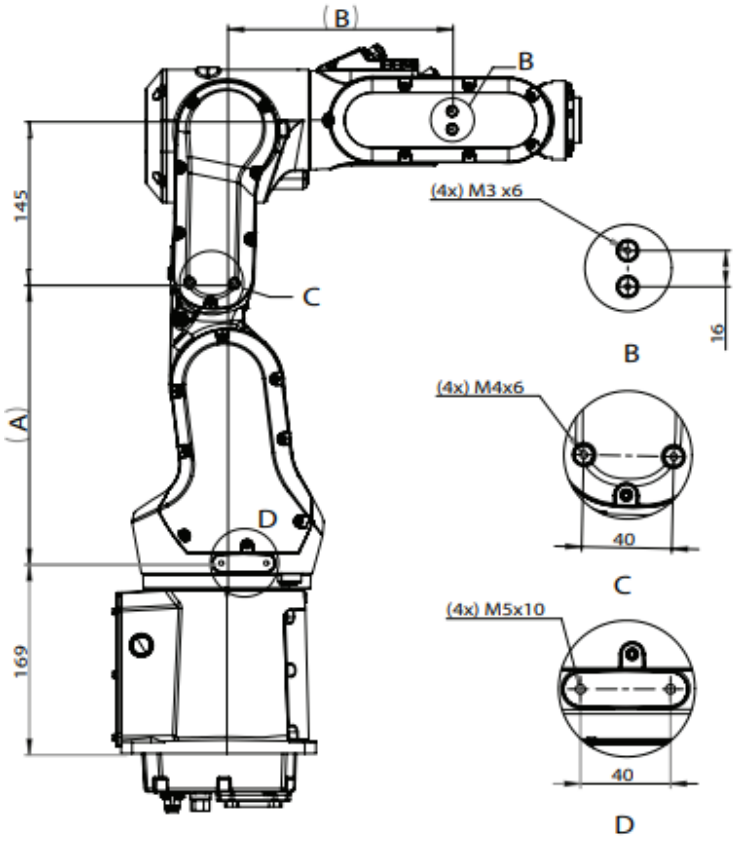


1. IRB 1100

Specification

Robot version	Reach (m)	Payload (kg)	Armload (kg)
IRB 1100-4/0.475	0.475	4	0.5
IRB 1100-4/0.58	0.58	4	0.5
Number of axes	6		
Protection	Standard IP40. Option IP67.		
Cleanroom	Option ISO 4		
Mounting	Any angle		
Controller	OmniCore C30/C90XT		
Integrated signal and power supply	Up to 16 Signals (C1+C2) on wrist (optional)		
Integrated air supply	4 air on wrist (Max. 6 Bar) (optional)		
Integrated ethernet	One 1000 Base-T ethernet port (optional)		





Performance (according to ISO 9283)

1 kg picking cycle	
25 x 300 x 25 mm	0.42 s

Performance (according to ISO 9283)

	IRB 1100 -4/0.475	IRB 1100 -4/0.58
Pose repeatability, RP	0.01 mm	0.01 mm
Pose stabilization time, PSt (s) within 0.1 mm of the position	0.08	0.19
Path repeatability, RT	0.05 mm	0.05 mm

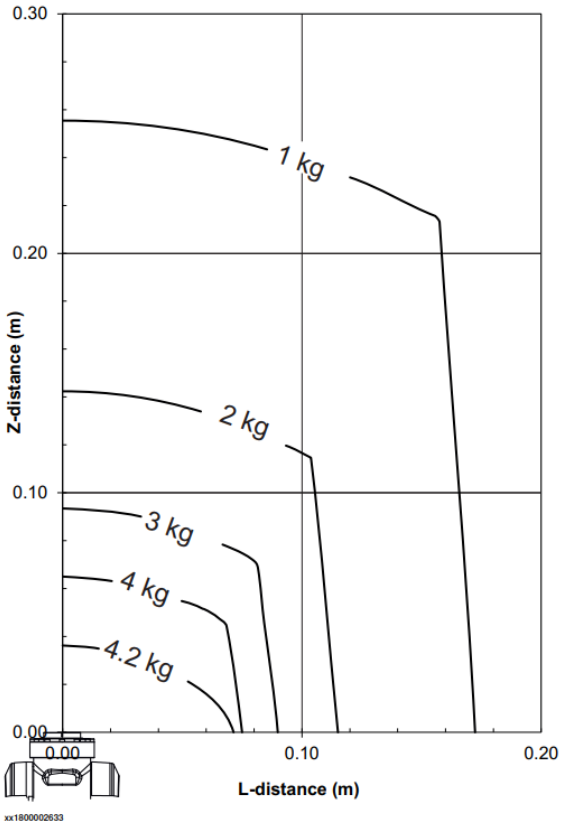
Technical information

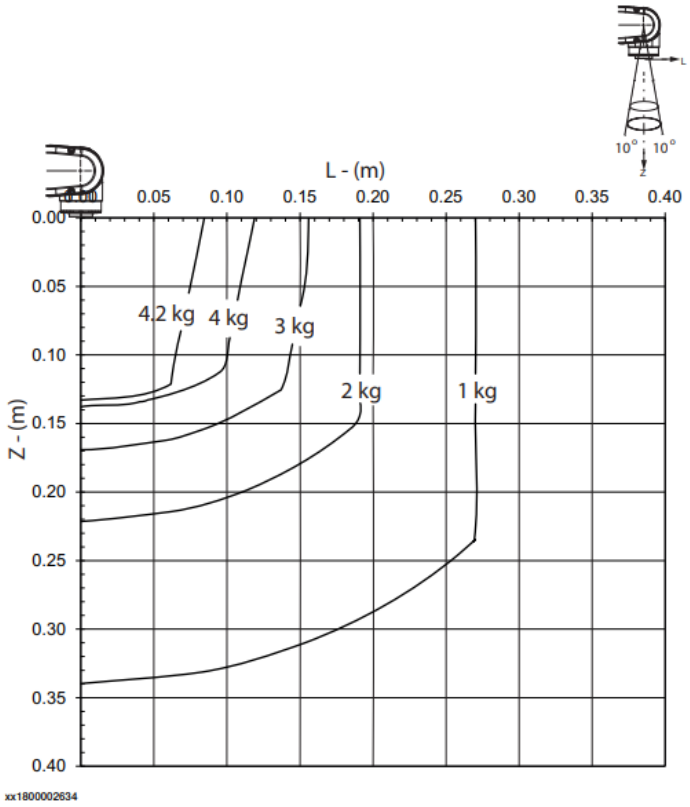
Physical	
Dimensions robot type	160 x 172 mm
Weight IRB 1100-4/0.475	21 kg
Weight IRB 1100-4/0.58	21 kg

Data and dimensions may be changed without notice.

1. IRB 1100

1.2a Záťažový diagram v horizontálnom a vertikálnom smere IRB1100-4/0,47



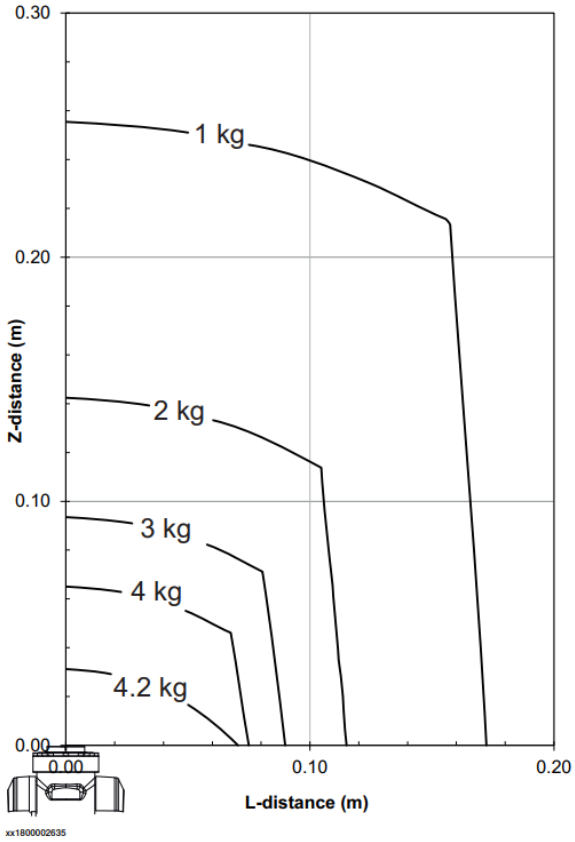


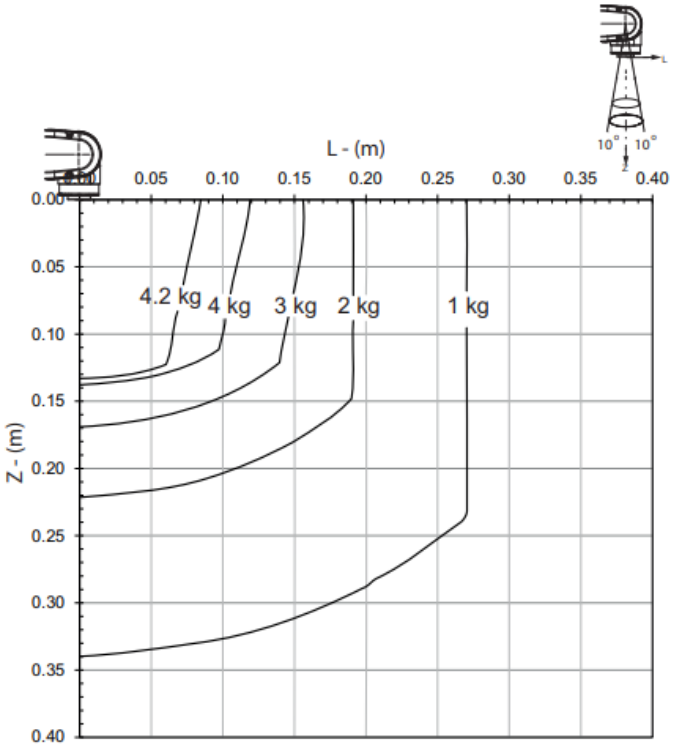




1. IRB 1100

1.2b Záťažový diagram v horizontálnom a vertikálnom smere IRB1100-4/0,58

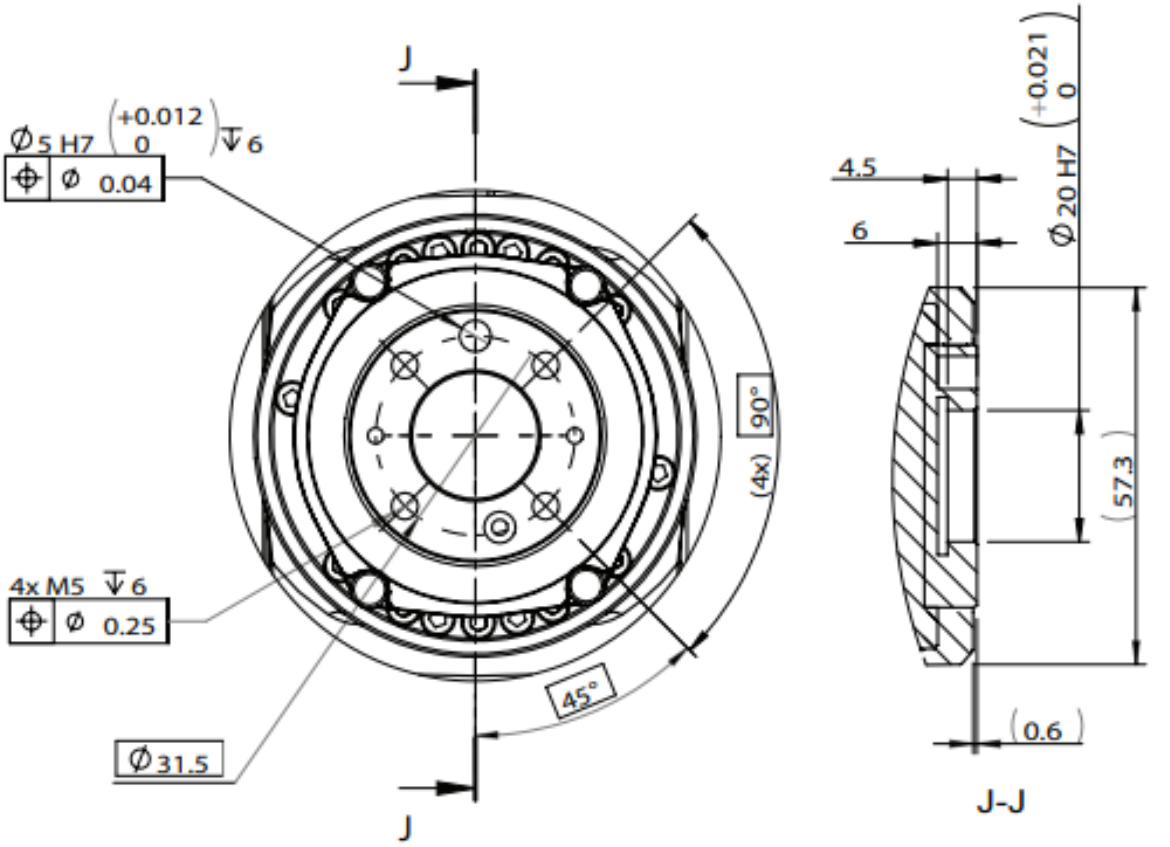


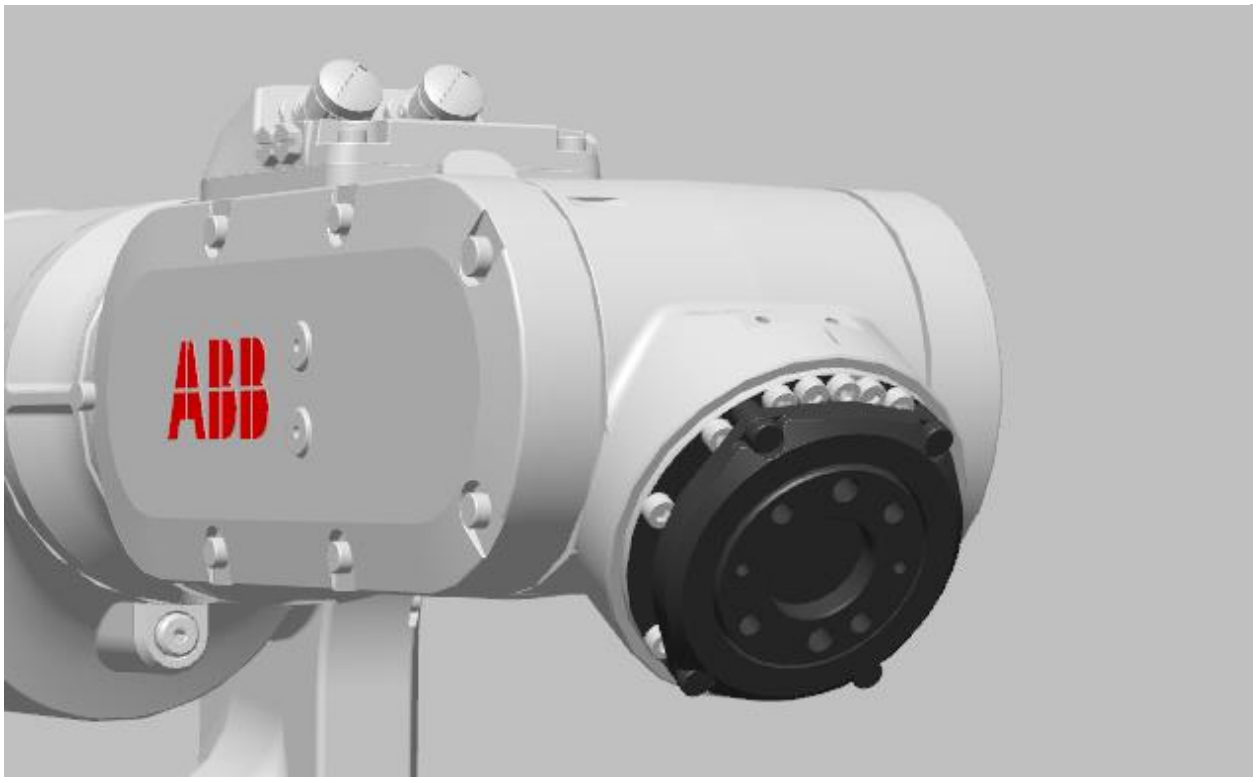




1. IRB 1100

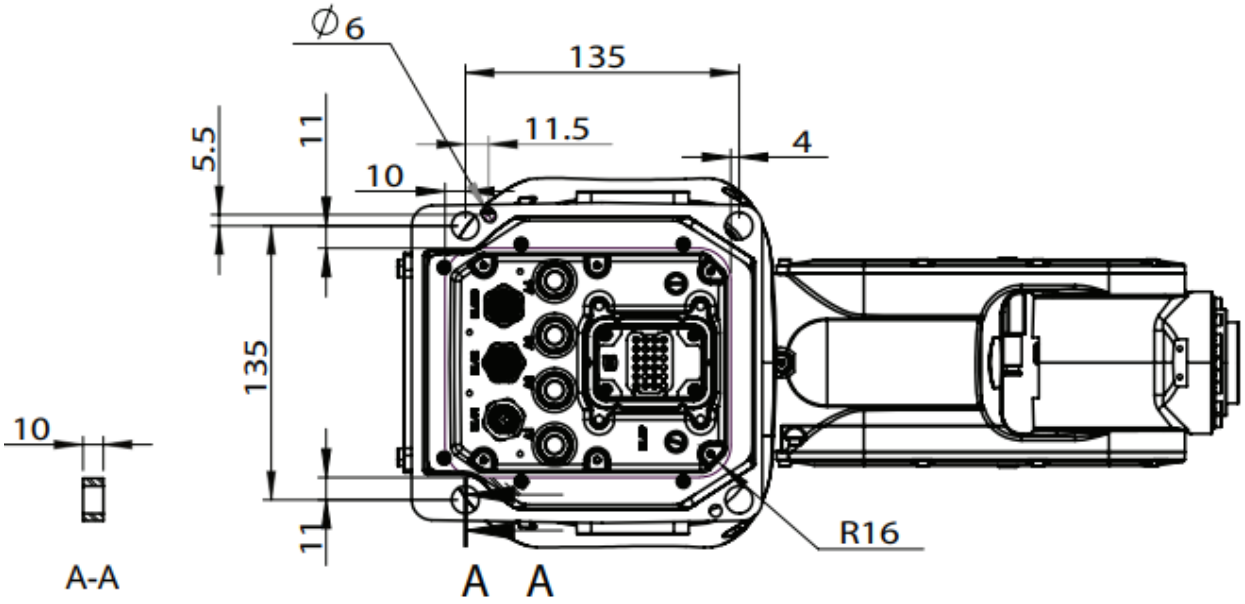
1.3 Príruba pre upínanie nástroja

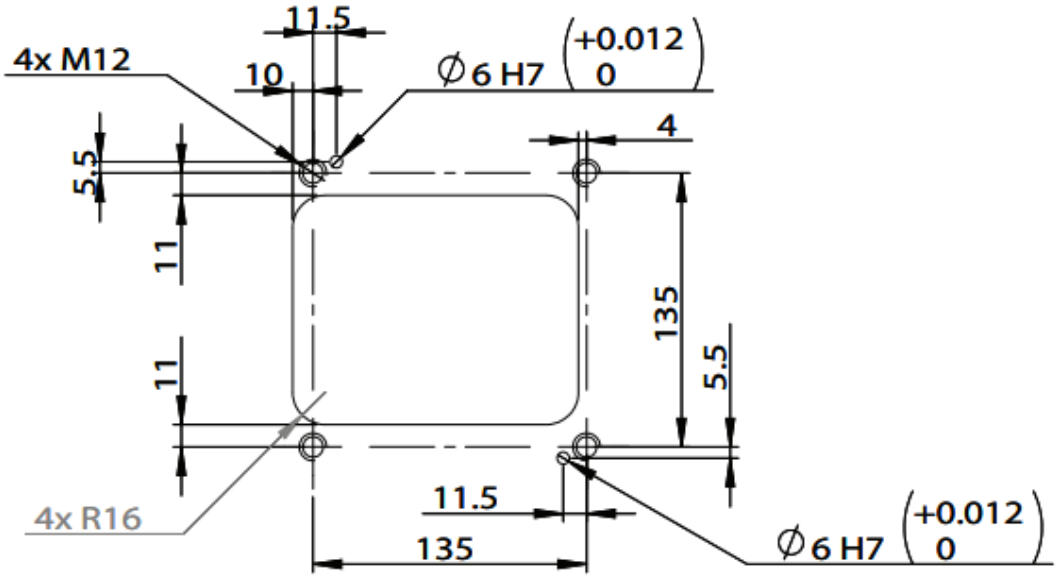




1. IRB 1100

1.4 Podstava robota



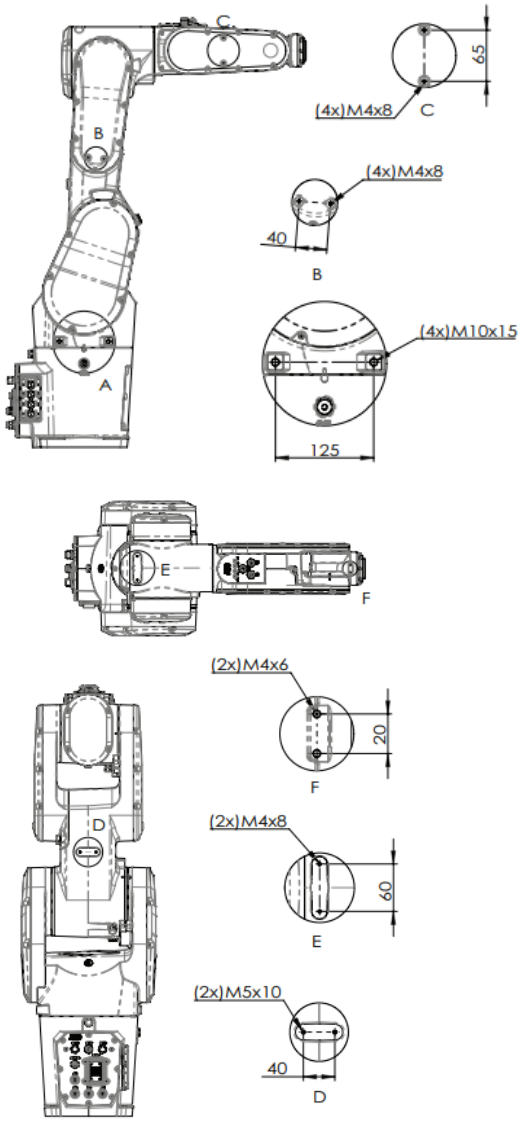


2. IRB 1300

Specification

Robot version	Reach (mm)	Payload (kg)	Armload (kg)
IRB 1300-11/0.9	900	11	1
IRB 1300-10/1.15	1150	10	0.5
IRB 1300-7/1.4	1400	7	0.5
Protection	Standard IP40		
Mounting	Any angle (1)		
Controllers	OmniCore C30/C90XT		
Integrated signal and power supply	Up to 24 Signals (C1+C2+C3) on wrist (optional)		
Integrated air supply	Φ6 x 4 air on wrist (Max. 6 Bar) (optional)		
Integrated ethernet	One 1000 Base-T ethernet port (optional)		

Note: (1) There are some reachable space limitation when the payload/pose is tough.





Performance

1 kg picking cycle	IRB 1300-11/0.9	IRB 1300-10/1.15	IRB 1300-7/1.4
25* 300 * 25mm	0.42s	0.45s	0.45s

Performance (according to ISO 9283)

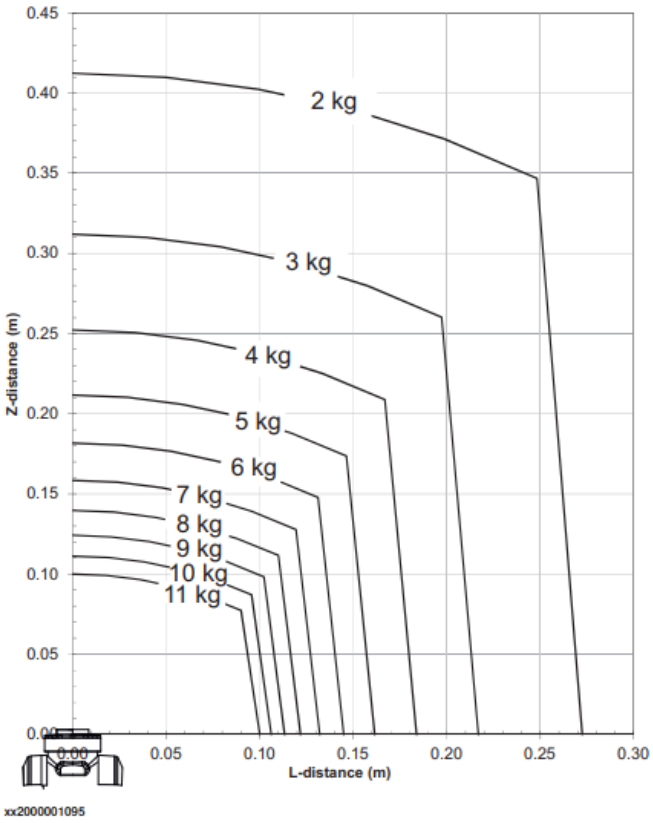
	Position repeatability RP (mm)	Pose stabilization time, PSt (s) within 0.1 mm of the position
IRB 1300-11/0.9	0.02	0.28
IRB 1300-10/1.15	0.023	0.27
IRB 1300-7/1.4	0.03	0.38

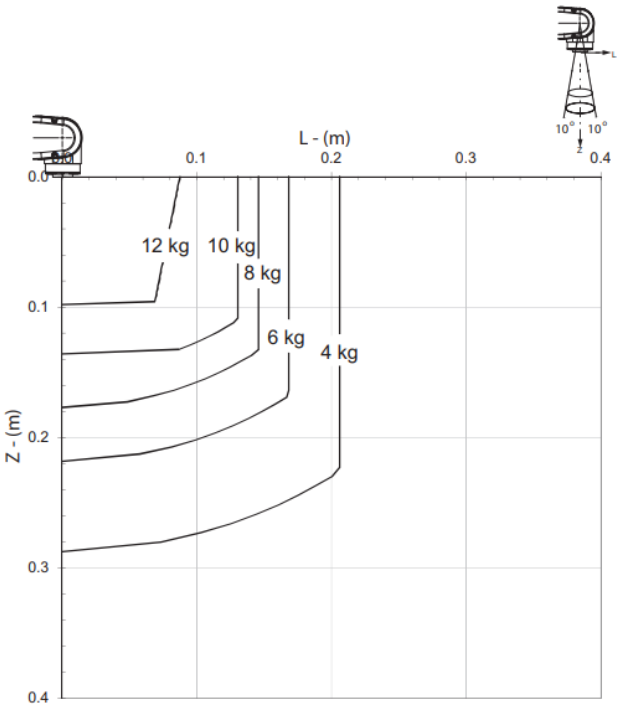
Technical information

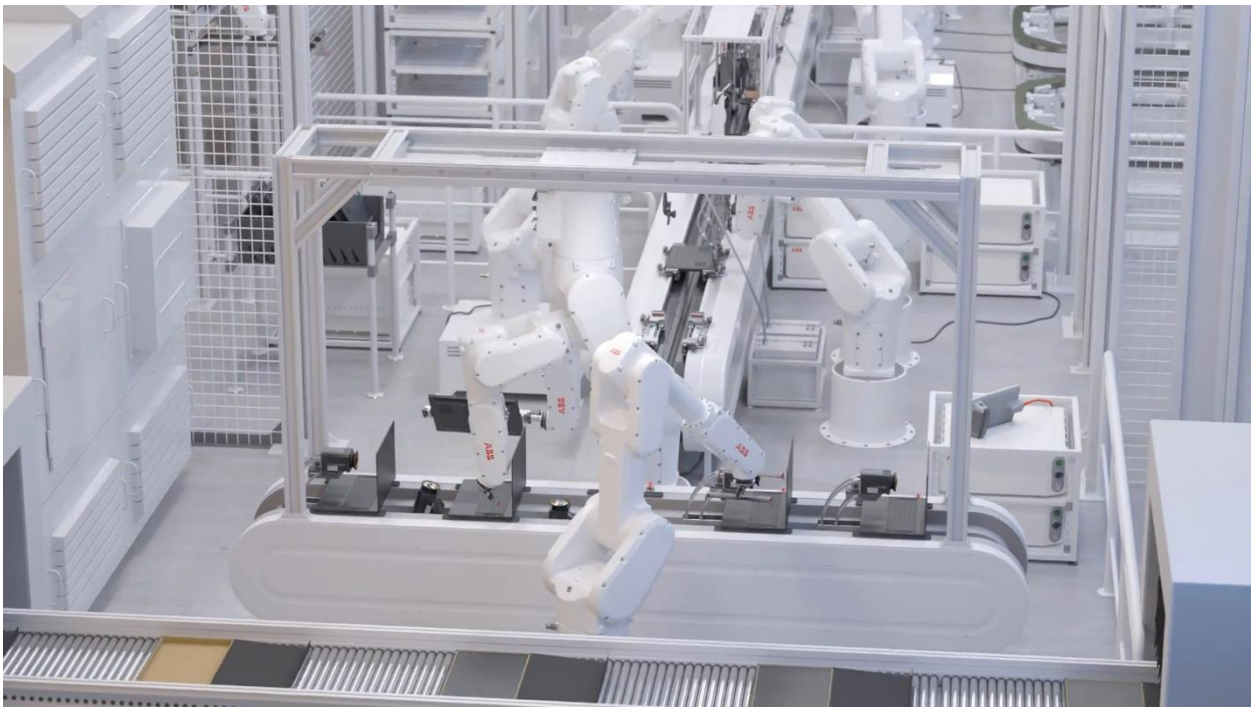
Physical	IRB 1300-11/0.9	IRB 1300-10/1.15	IRB 1300-7/1.4
Dimensions robot base (mm)	220x220	220x220	220x220
Weight (kg)	74.5	77	78.5

2. IRB 1300

2.2a Záťažový diagram v horizontálnom a vertikálnom smere IRB1300-11/0,9

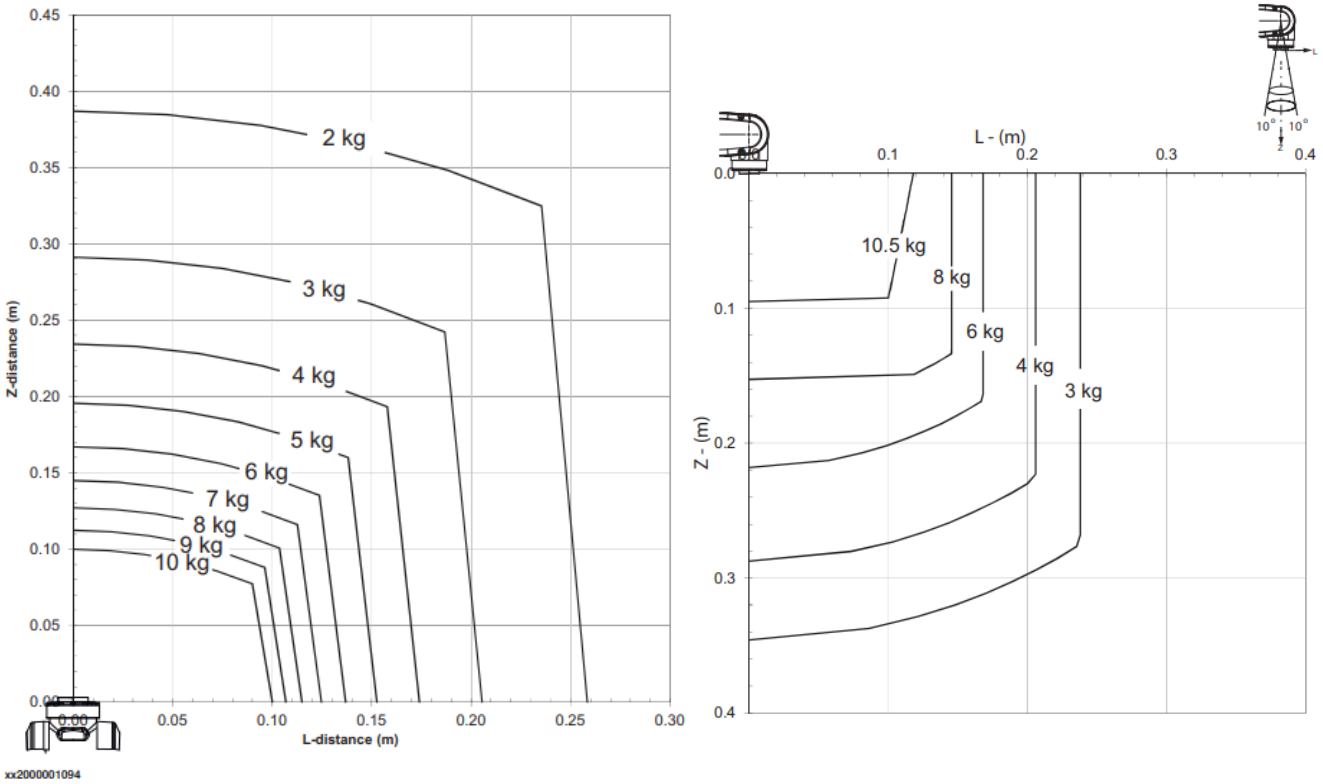


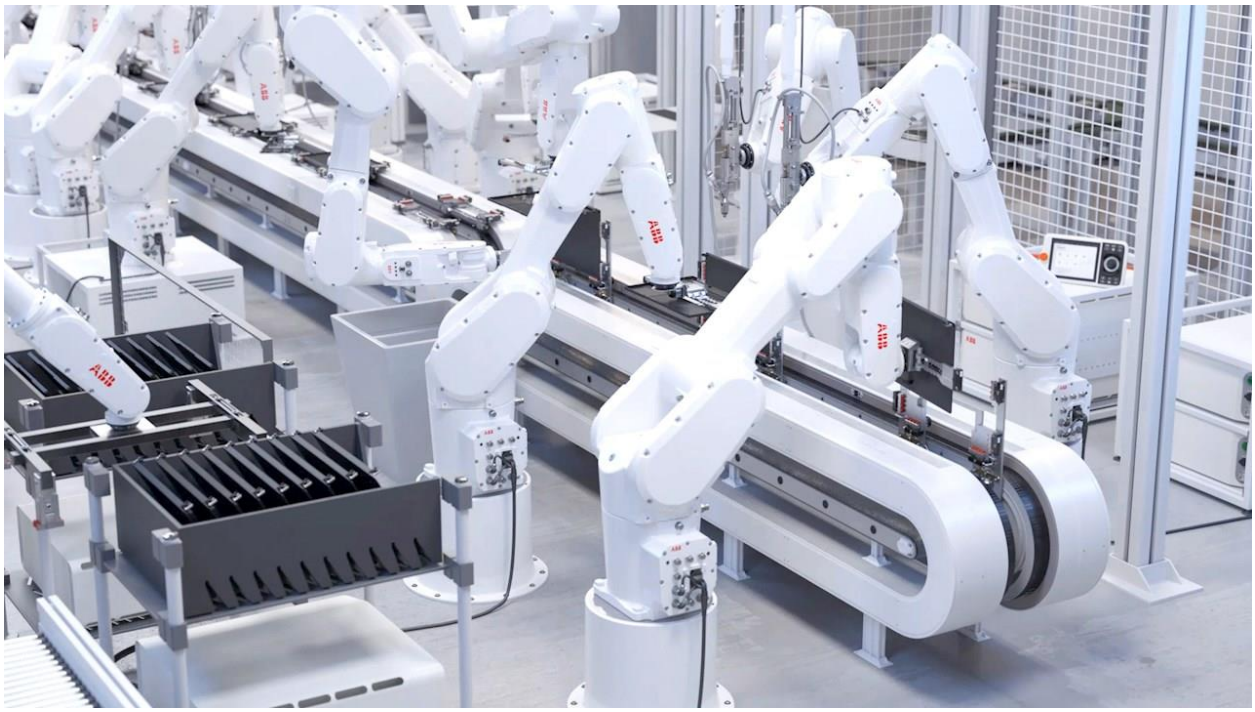




2. IRB 1300

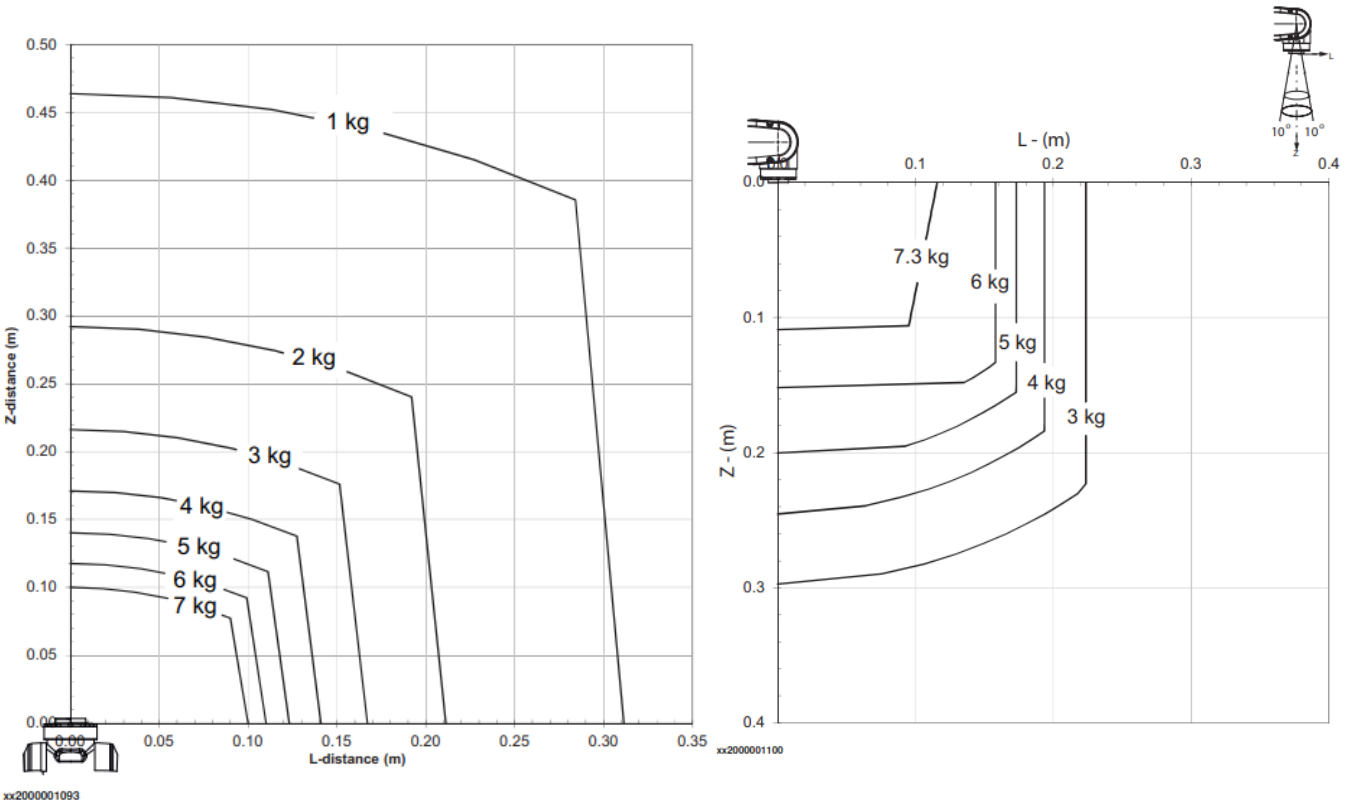
2.2b Záťažový diagram v horizontálnom a vertikálnom smere IRB1300-10/1,15

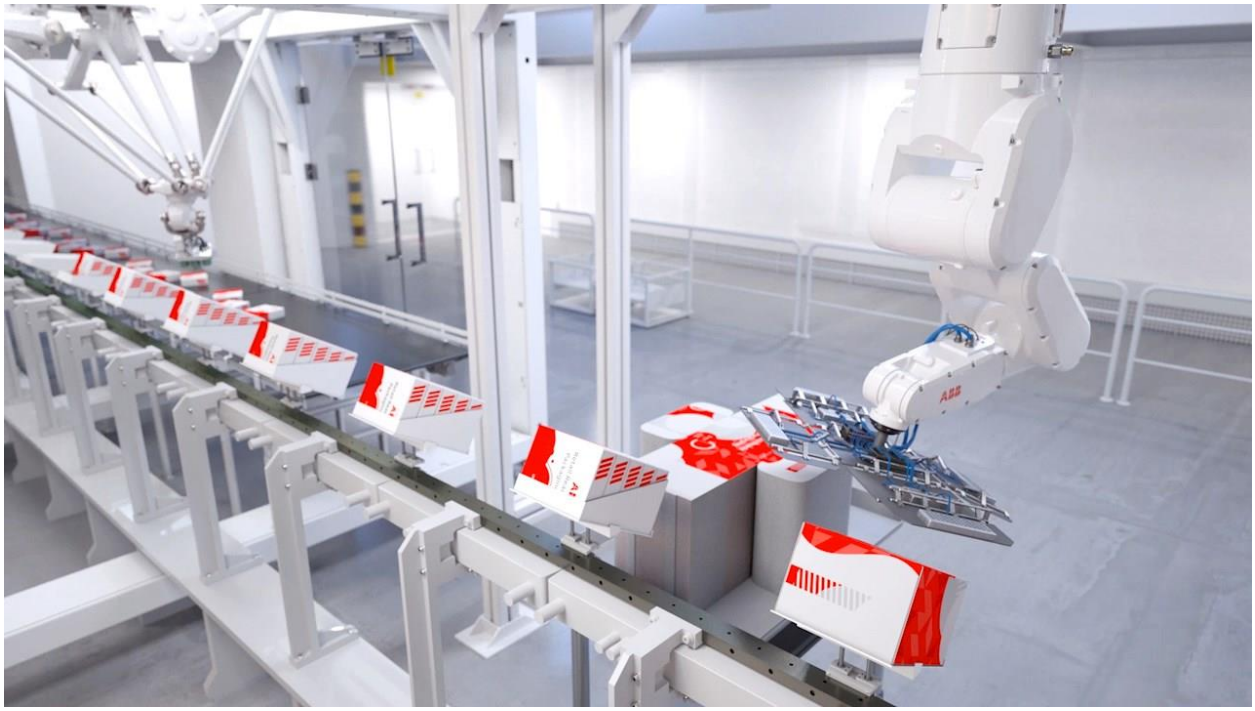




2. IRB 1300

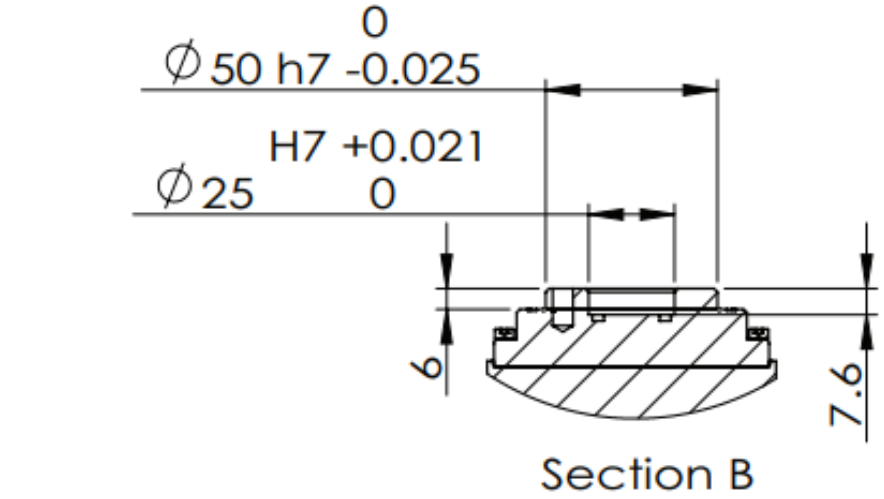
2.2c Záťažový diagram v horizontálnom a vertikálnom smere IRB1300-7/1,4

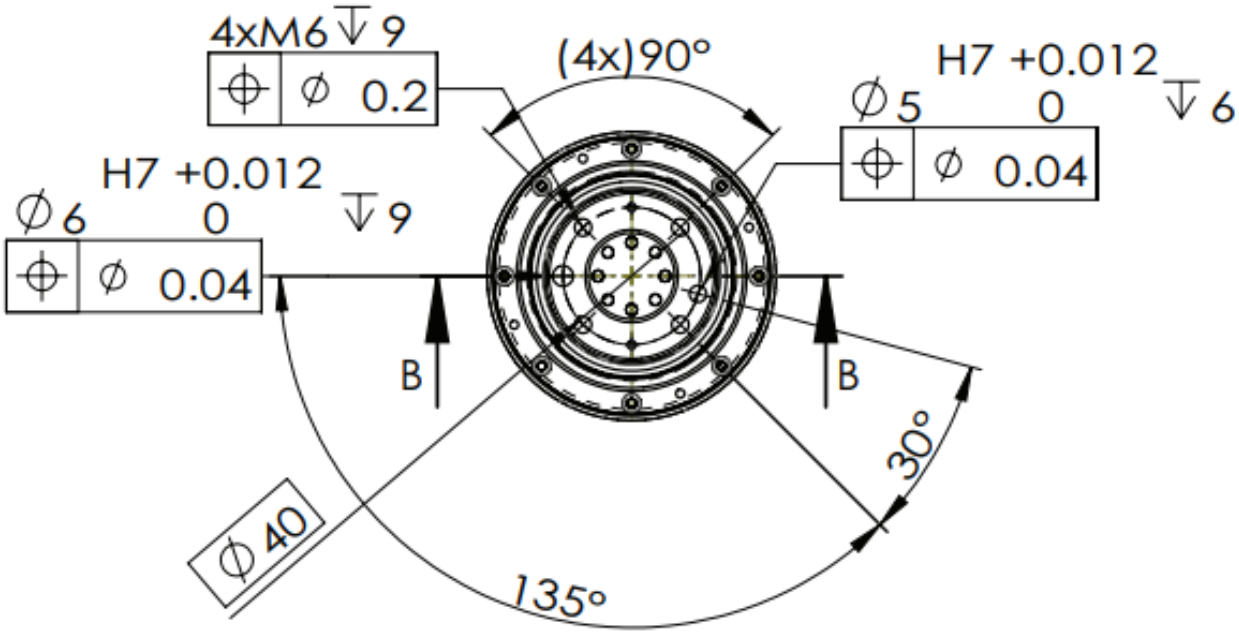


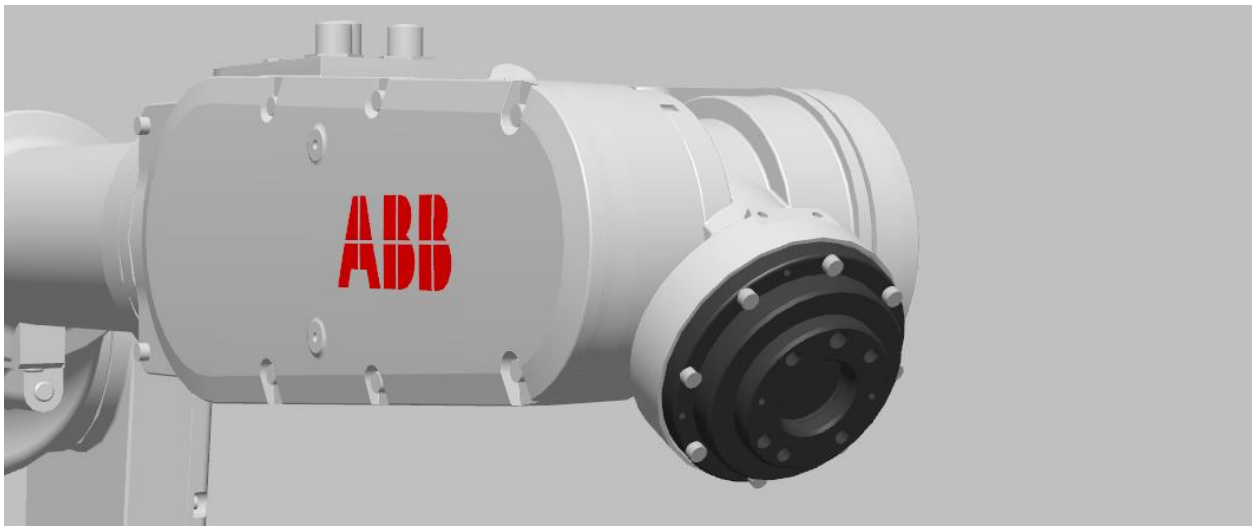


2. IRB 1300

2.3 Príruba pre upínanie nástroja

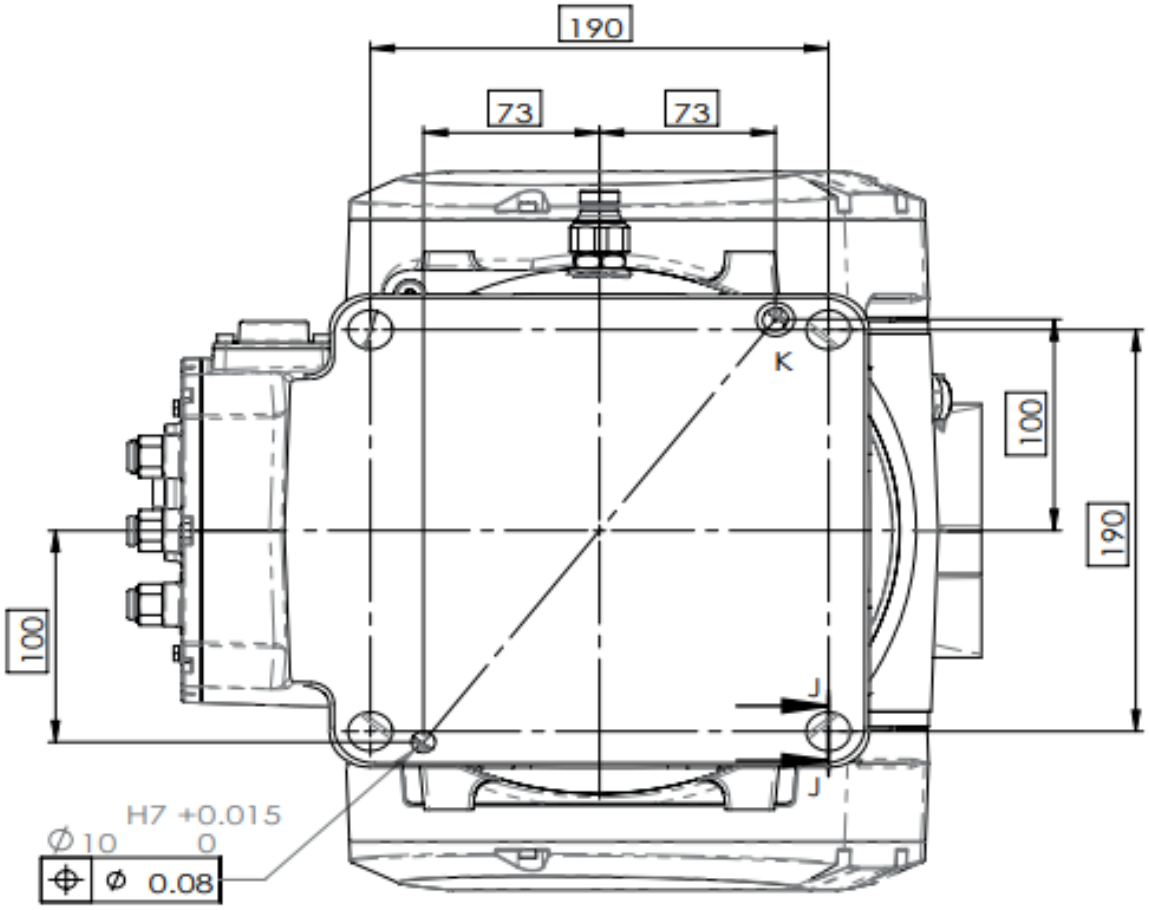


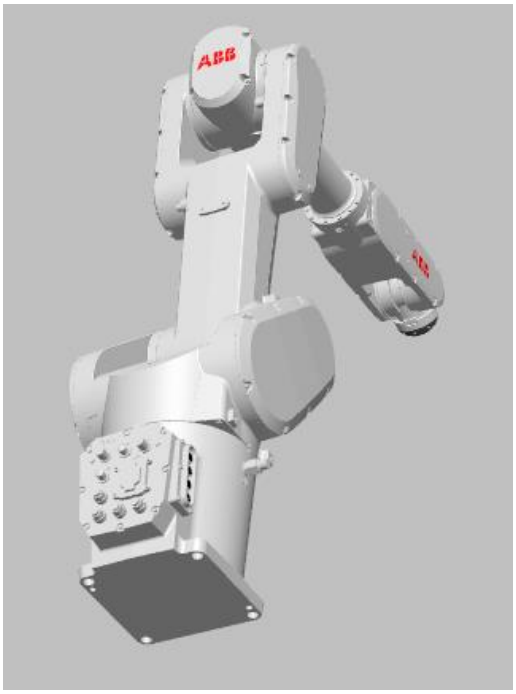


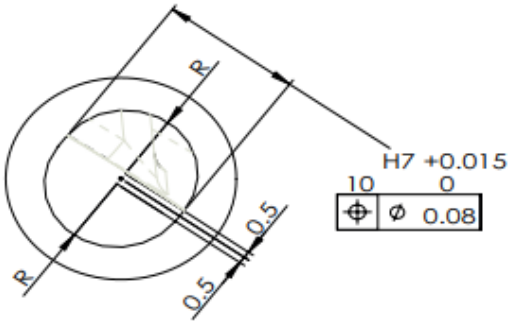


2. IRB 1300

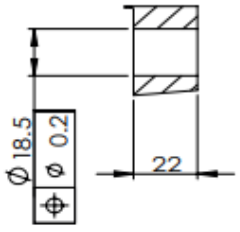
2.4 Podstava robota







DETAIL K



SECTION J-J

3. IRB 14050

Specification

Robot version	Reach (mm)	Payload (g)	Armload
IRB 14050	559	500	No armloads
Features			
Integrated signal and power supply		24V Ethernet or 4 Signals	
Integrated air supply		4 Bar	
Integrated ethernet		One 100/10 Base-TX ethernet port	
Robot mounting		All angles, including table mounting, wall mounting, and ceiling mounting	
Degree of protection		IP30	
Functional safety		PL d Cat 3 Protective stop and emergency stop SafeMove as option	
Controller		OmniCore	



Picking cycle information

0.5 kg picking cycle	
25* 300 * 25 mm	0.86s











Performance

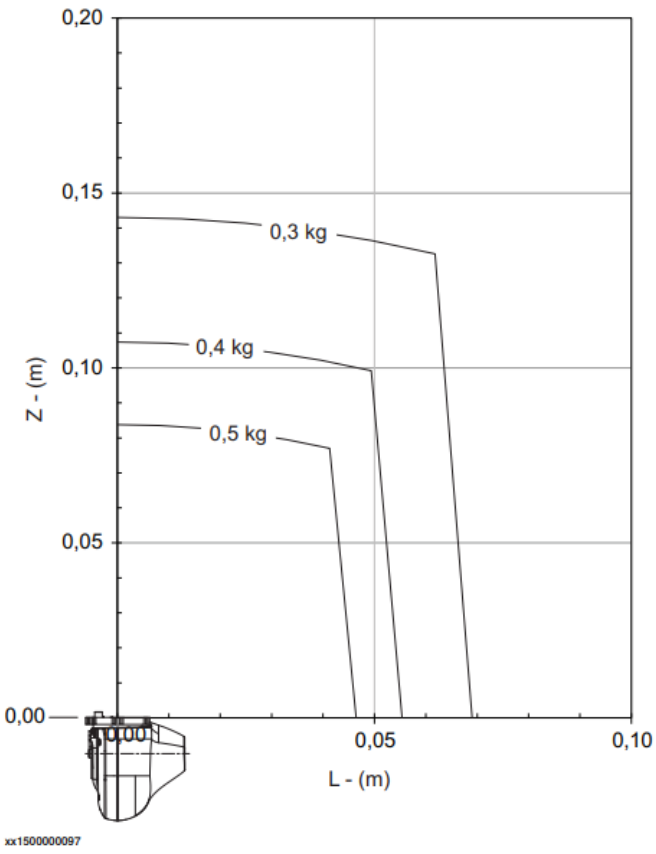
Position repeatability	0.02 mm
Max TCP Velocity	1.5 m/s
Max TCP Acceleration	11 m/s*s
Acceleration time 0-1m/s	0.12s

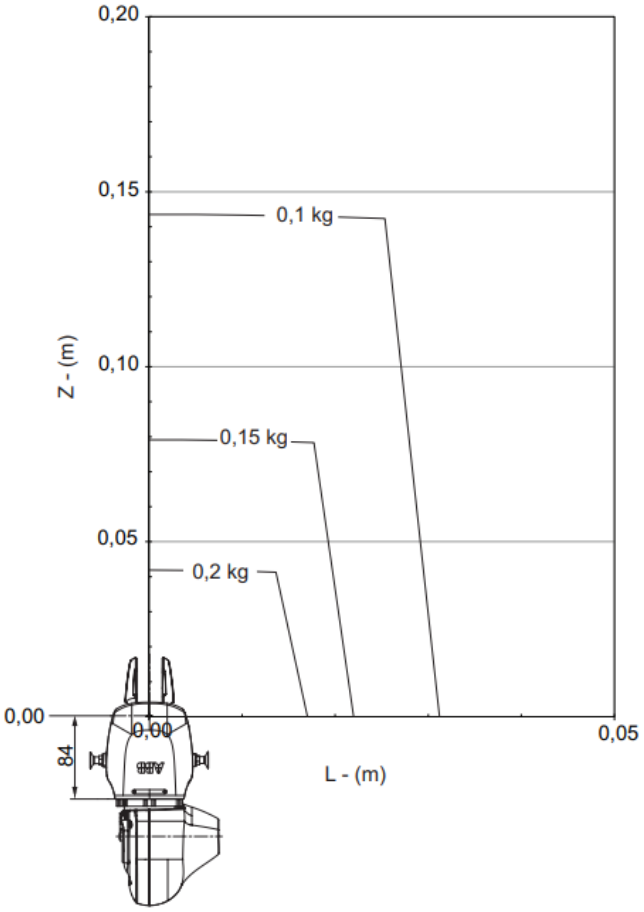
Technical information

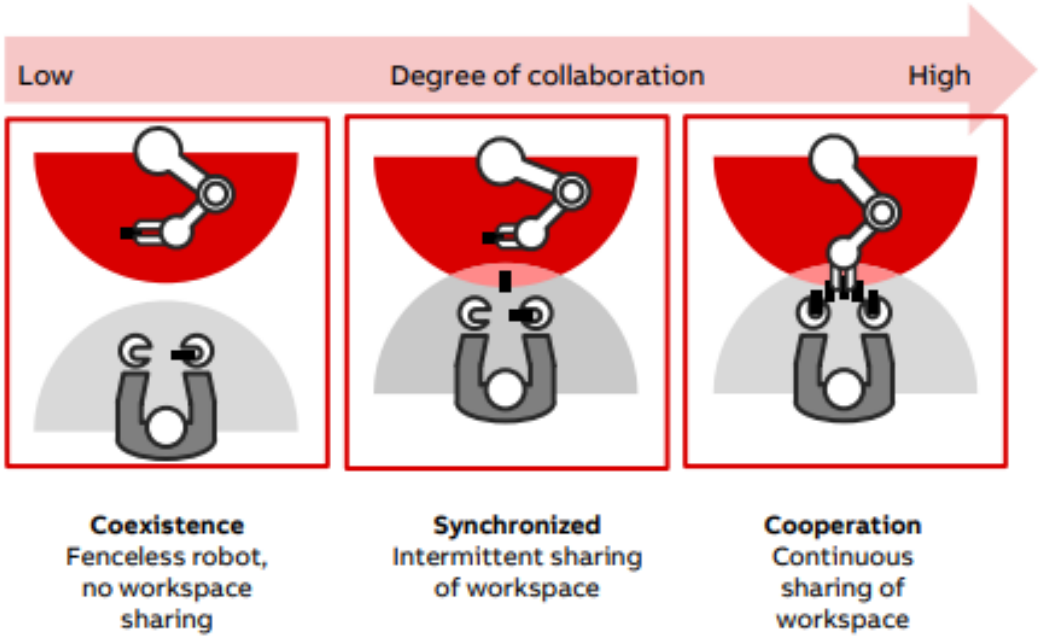
Physical	
Dimensions bottom	160 mm x 160 mm
Weight	9.5 kg

3. IRB 14050

3.2 Záťažový diagram s gripprom a bez grippra IRB14050-0,5/0,5

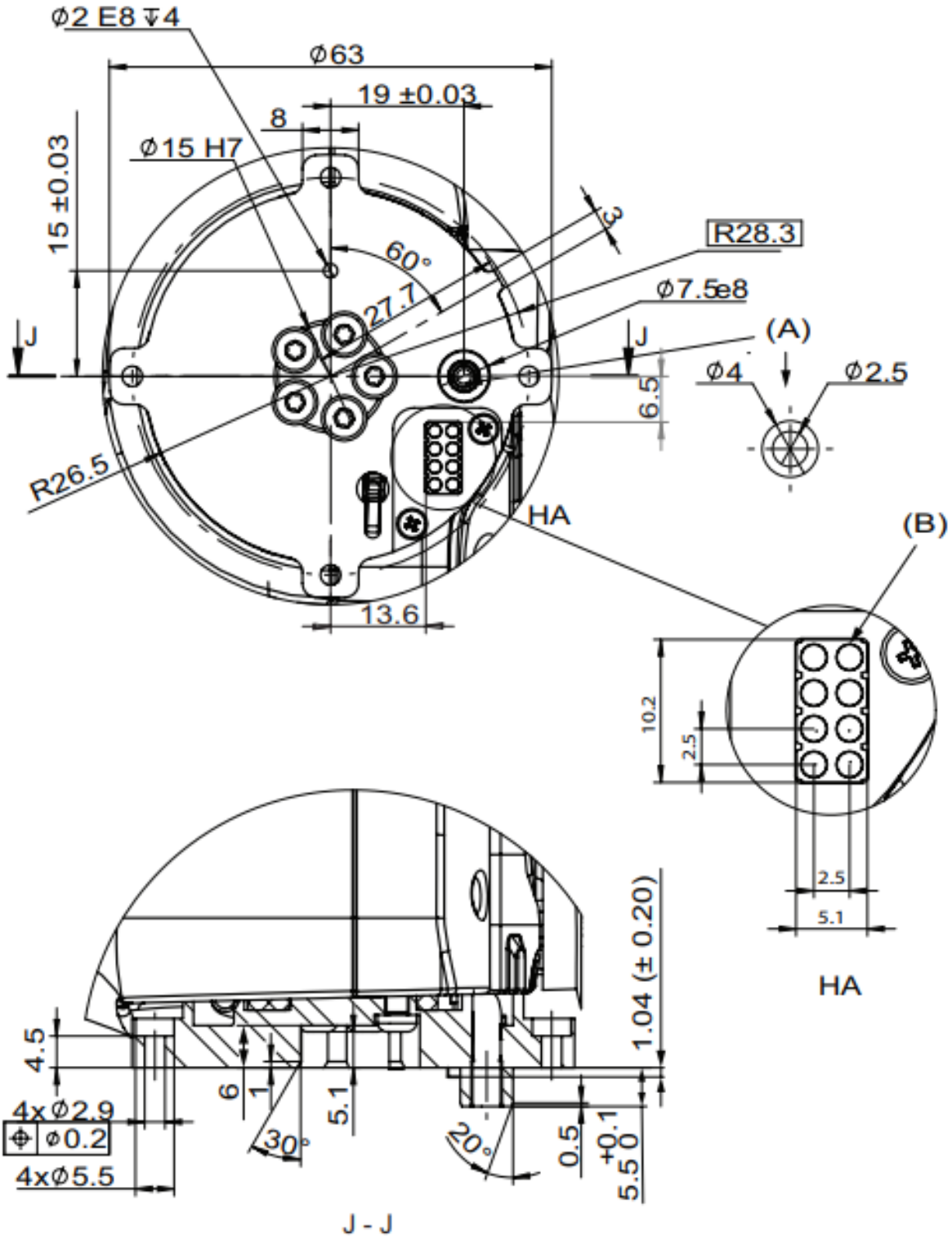






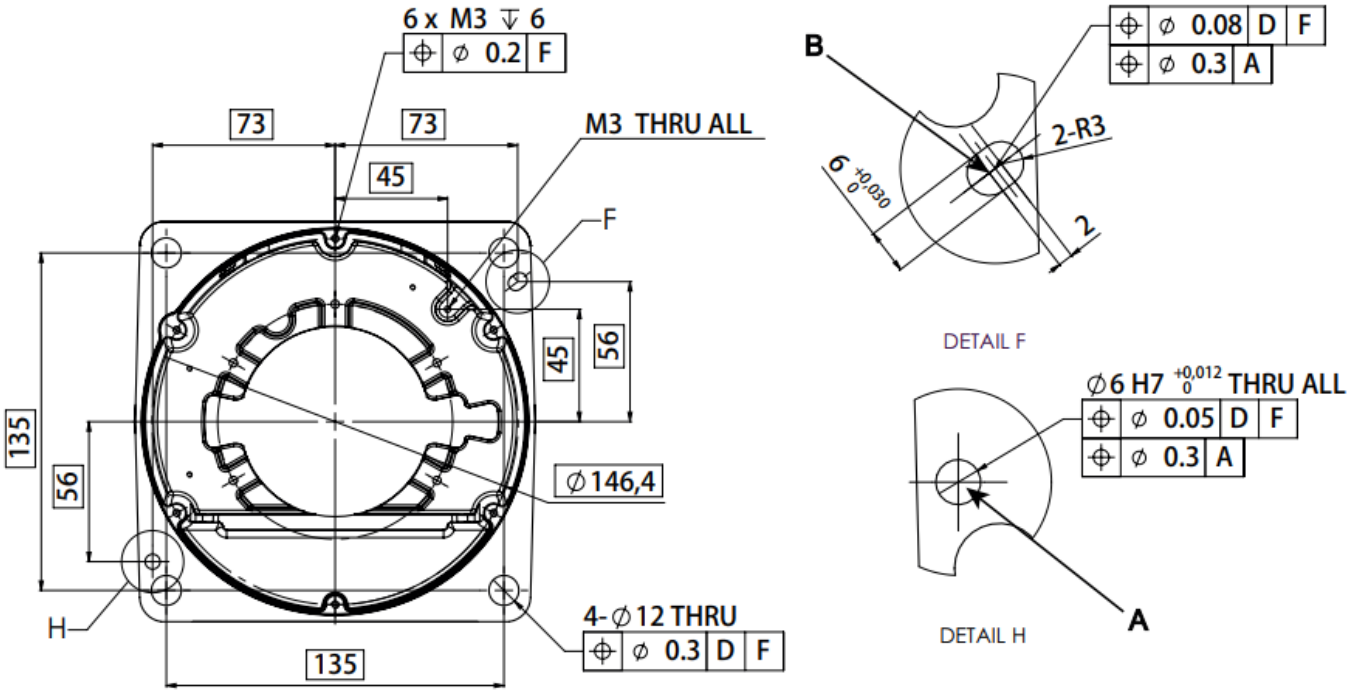
3. IRB 14050

3.3 Príruba pre upínanie nástroja



3. IRB 14050

3.4 Podstava robota



xx1700002303



4. IRB 910INV

Specification

Robot version	Reach (m)	Payload (kg)	Armload (kg)
IRB 910INV-3/0.35	0.35	3	-
IRB 910INV-6/0.55	0.55	6	-
Number of axes	4		
Protection	Standard: IP30[1] Options: IP54 or Cleanroom ISO1		
Mounting	Inverted		
Controller	OmniCore		
Integrated signal and power supply	8 signals on outer arm[2]		
Integrated air supply	4 air on outer arm (Max. 6 Bar)[2]		
Integrated ethernet	1 Gbit/s port[2]		

[1] Ballscrew area: IP20
[2] Optional



Movement, IRB 910INV-3/0.35

Axis movement	Working range	Axis max speed
Axis 1	-225° to 225°	672°/s
Axis 2	-225° to 225°	748°/s
Axis 3	-140 mm to 0 mm	1.1m/s
Axis 4	-720° to 720°	3000°/s

Movement, IRB 910INV-6/0.55

Axis movement	Working range	Axis max speed
Axis 1	-225° to 225°	420°/s
Axis 2	-225° to 225°	780°/s
Axis 3	-190 mm to 0 mm	1.1m/s
Axis 4	-720° to 720°	3000°/s



Performance (according to ISO 9283)

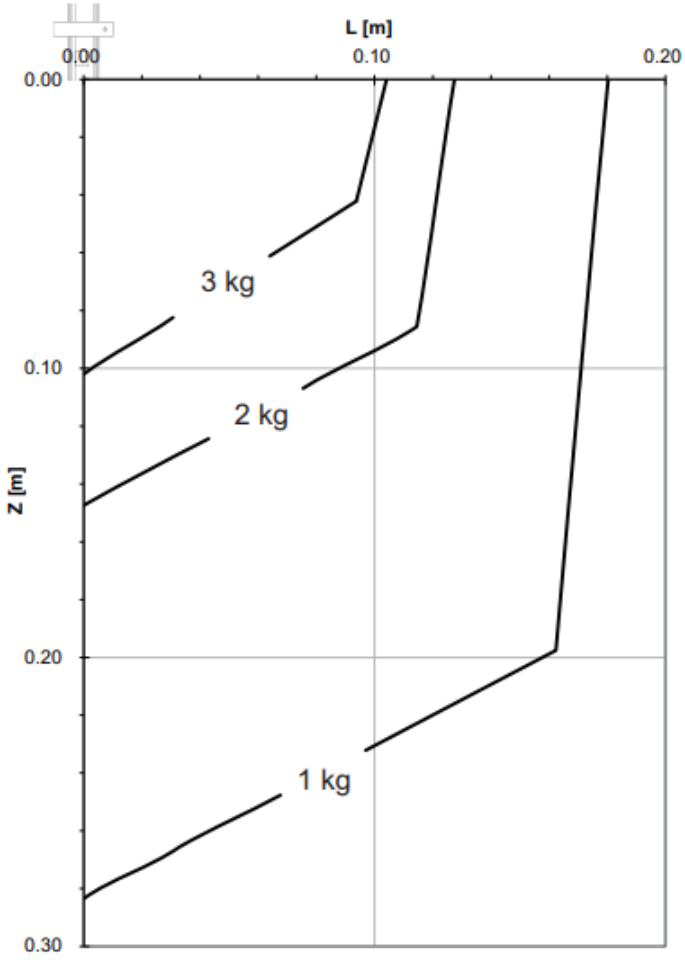
1 kg picking cycle		
IRB 910Inv-3/0.35 25 x 300 x 25 mm	0.35 s	
IRB 910Inv-6/0.55 25 x 300 x 25 mm	0.40 s	
Version	**3/0.35**	**6/0.55**
Pose repeatability (mm)	0.01	0.01
Linear path repeatability (mm)	0.06	0.05
Pose stabilization time within 0.1 mm of the position	0.61	1.05

Technical information

Physical	
Dimensions robot base	200 x 200 mm
Weight IRB 910INV-3/0.35	19 kg
Weight IRB 910INV-6/0.55	22 kg

4. IRB 910INV

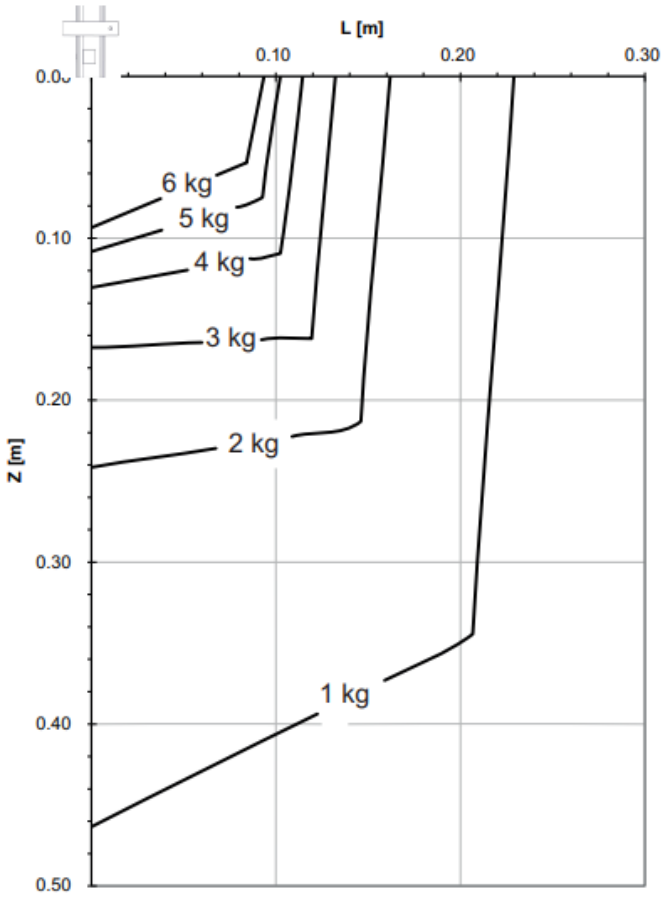
2.2a Záťažový diagram IRB910INV-3/0,35





4. IRB 910INV

2.2b Záťažový diagram IRB910INV-6/0,55



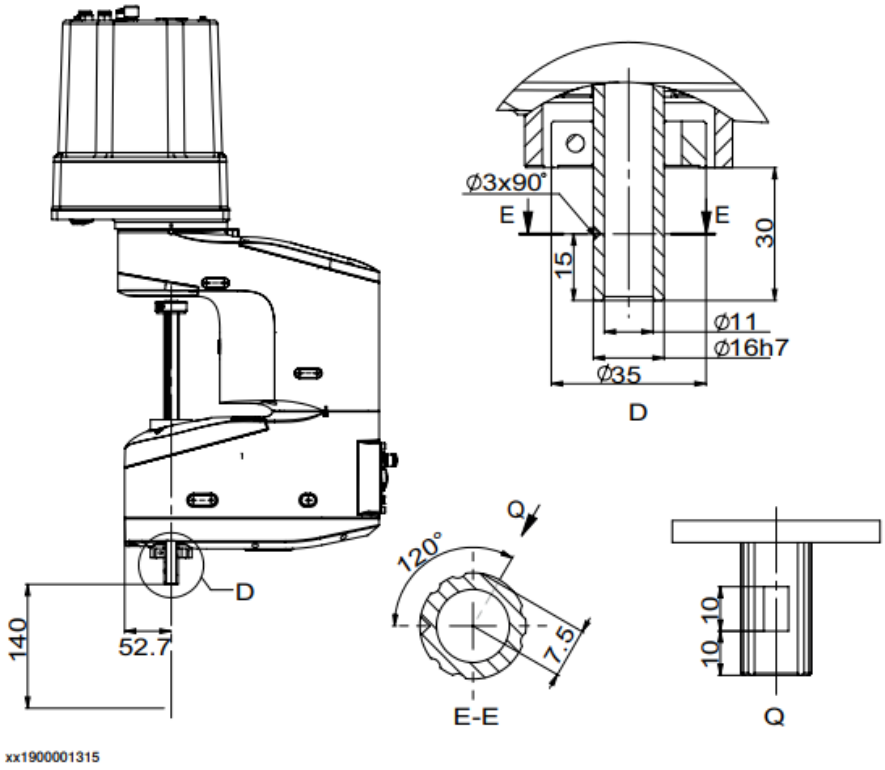


4. IRB 910INV

2.3 Príruba pre upínanie nástroja

End effector flange of IRB 910INV-3/0.35

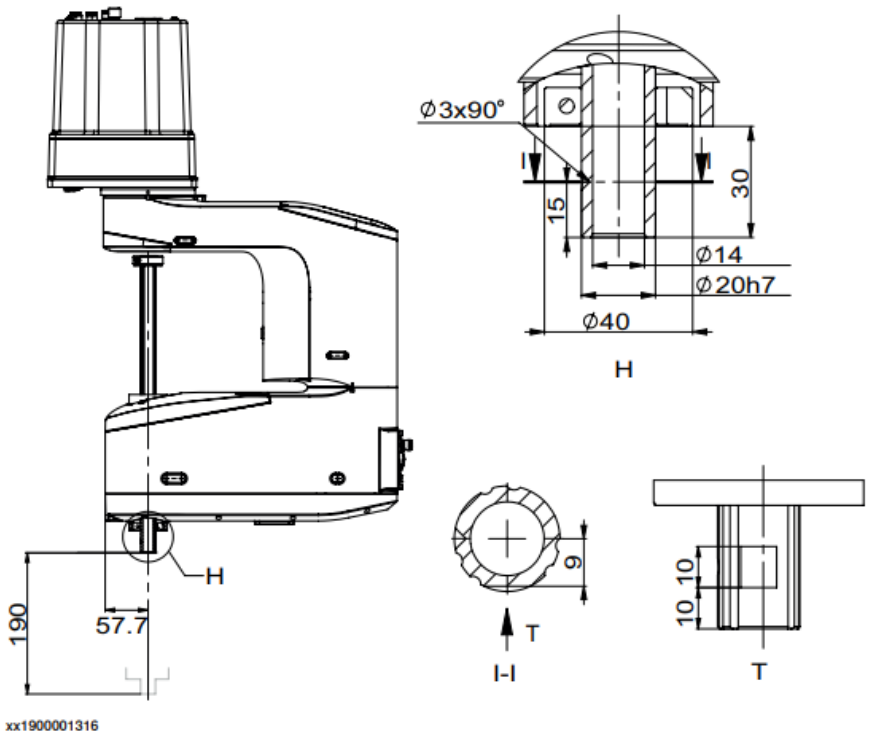
IP30



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End effector flange of IRB 910INV-6/0.55

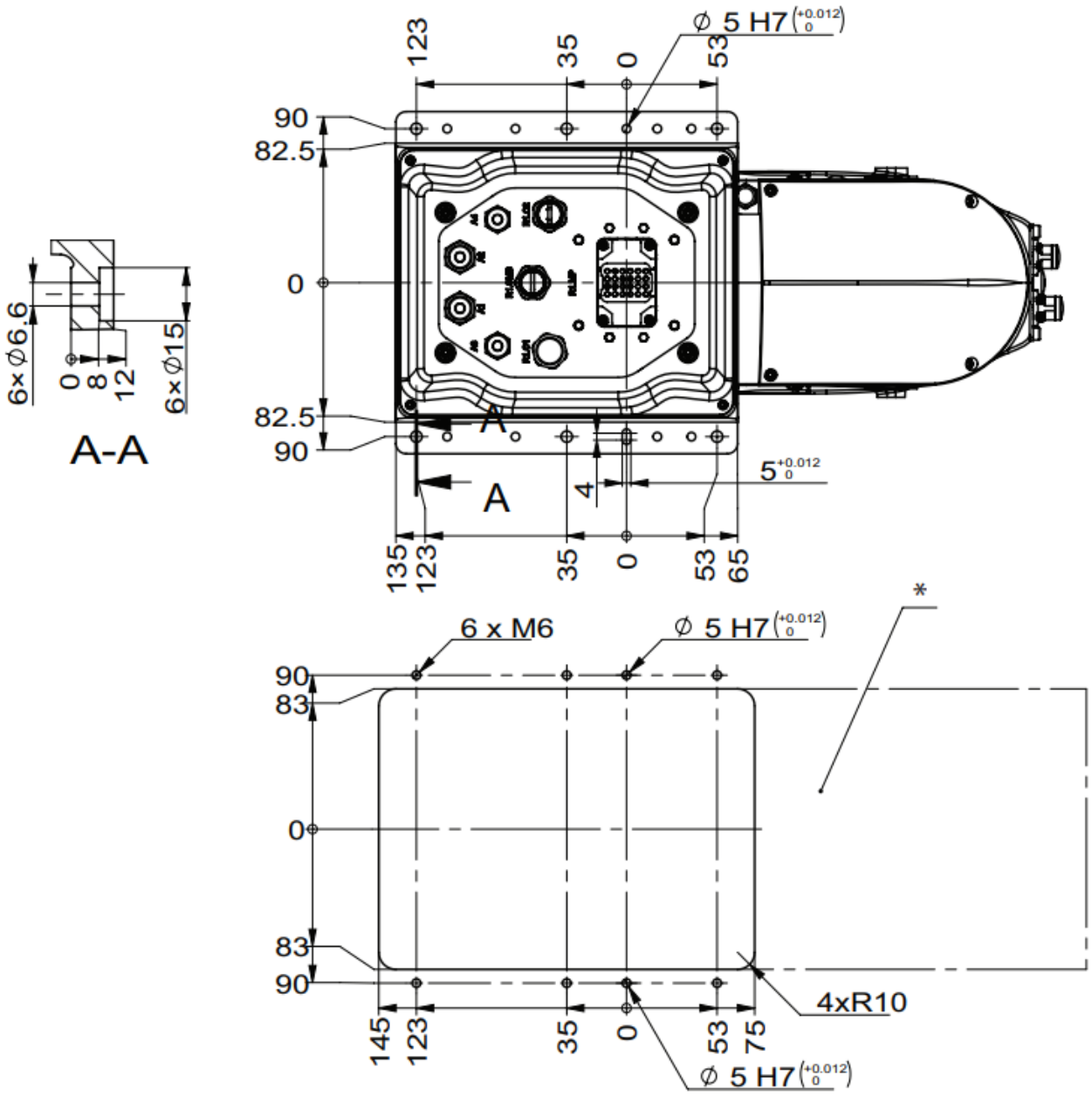
IP30



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4. IRB 910INV

2.4 Podstava robota



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