



“Part of your drive”

COBOTS & GRIPPERS

STOCK CATALOGUE

EDITION 01



kassow robots

strong · fast · simple

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Here at **APEX** we provide the latest cutting-edge technology in the world of collaborative robots and automation.

Strong, fast and simple: The Kassow 7 Axis cobot brings a revolutionary new dimension to factory automation. Payloads of up to 10KG, reaches exceeding 1-meter, simple programming and 225 degrees per second joint speeds make the Kassow Cobot stand above the conventional 6 axis robots on the marketplace.

The story behind the seventh axis: As you will know, when manipulating arms into confined spaces (CNC machine loading for example), the path taken can often be long and difficult. Our 7th axis technology allows for linear movement from point to point, manipulating radially around the top elbow much like a human arm. This allows for much leaner movement and thus decreased cycle time and less headaches for programmers!

Why Collaborative? Our cobot and gripper solutions allow for the end-user as well as established integrators to install, program and use robots with absolute confidence and ease. Drag and drop principle programming tree controls the movement of the robot and actuation of gripper via a simple teach pendant.

Rapid Deployment: Collaborative robot arms and grippers lend themselves to the ever-changing production requirements of industry. Onrobot grippers can be changed at the click of a button and doubled up, even using finger type and vacuum type at the same time, on the same arm! Our fully programmable two finger grippers allow for a wide range of different size and shape workpieces without changing anything on our program.

With the ever-changing needs of production and handling, collaborative solutions are essential in all industries to stay ahead of the competition and to maximise profitability.

Here at **APEX** we provide you with the tools to help you do so!

Kassow Robots Collaborative Robotic Arms – 5 kg & 10 kg Payload	06 – 07	
Controller & Teach Pendant For Kassow Collaborative Robotic Arms	08 – 09	
Robotiq Finger Grippers Two Finger Grippers – 2.5 kg & 5 kg Payload	12 – 15	
Robotiq Vacuum Grippers Internal or External Supply – 10 kg payload	16 – 19	
Robotiq Wrist Camera Workpiece visualisation & Identification	20	
Onrobot Finger Grippers Two Finger Grippers – 2 kg & 6 kg Payload	22 – 23	
Onrobot Gecko Gripper Non-Marking Adhesive Gripper – 6.5 kg Payload	24	
Onrobot Vacuum Gripper Internal Supply – 10 kg payload	25	
Onrobot Quick Changers For Mounting One Or Two Grippers	26 – 27	

Here at **APEX**, we are dedicated to quality customer service, high quality products and fast delivery. We pride ourselves on next day delivery on stock items and delivery of non stock or special built gearboxes in a few weeks.

With years of commercial experience, ISO 9001/2008 accreditation and a highly skilled workforce from the shop floor through to management, you can be confident in choosing **APEX** for all your planetary gearhead needs.

APEX specialise in the handling, design and supply of low backlash precision helical gearboxes for servo driven applications including:

- In-line & right angle planetary gearheads -
- Rotary output gearheads to ISO 9409 -
- Low backlash spiral bevel gearboxes -
- Hypoid right angle gearheads -
- Up to 1000:1 reduction ratio -

Here at **APEX**, we offer unrivalled linear motion services such as:

- Express dispatch of stock products -
- Design of planetary gearbox applications -
- Short lead times on non stock gearboxes -
- Cutting & butt jointing linear rails -
- In-house design & machining of ballscrews -
- Selection & service lifetime calculations -
- Design & modification of special guides -
- Cutting & building of aluminium profile & panels -
- Design of bespoke rack drive systems -

Our in-house, fully equipped CNC machine shop combined with years of industry experience gives us the capability to tailor products to suit specific customer requirements – contact our professional sales team today.





Kassow Robotic Arms

7 Axis Collaborative Robot

kassow robots
strong · fast · simple



Teachpendant (3)



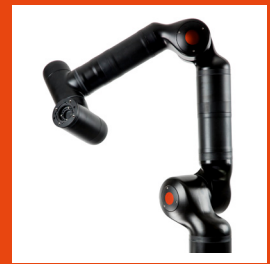
Controller (2)



Robotarm (1)

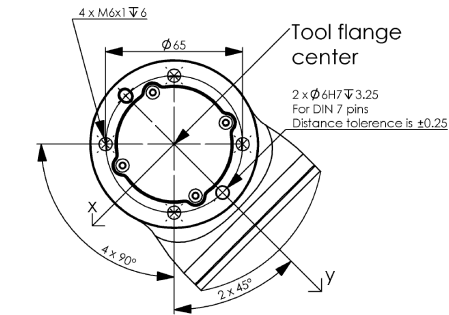
850mm / 10 kg – 1200mm / 5kg

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING

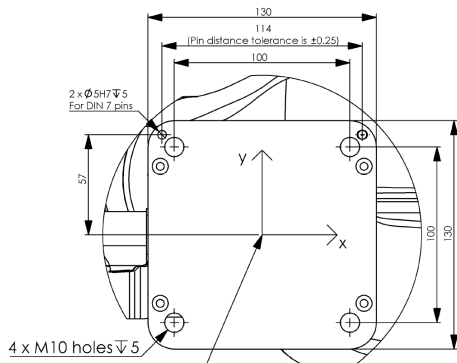


KR810 – 850mm / 10kg

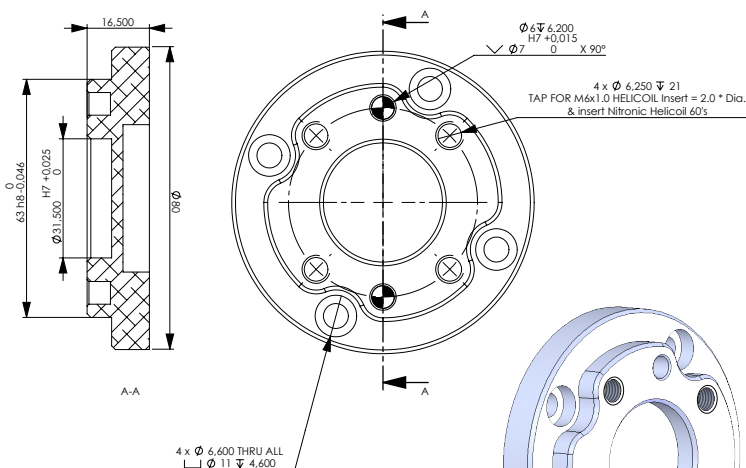
7 Axis Collaborative Robot – 850mm Reach



View O-O

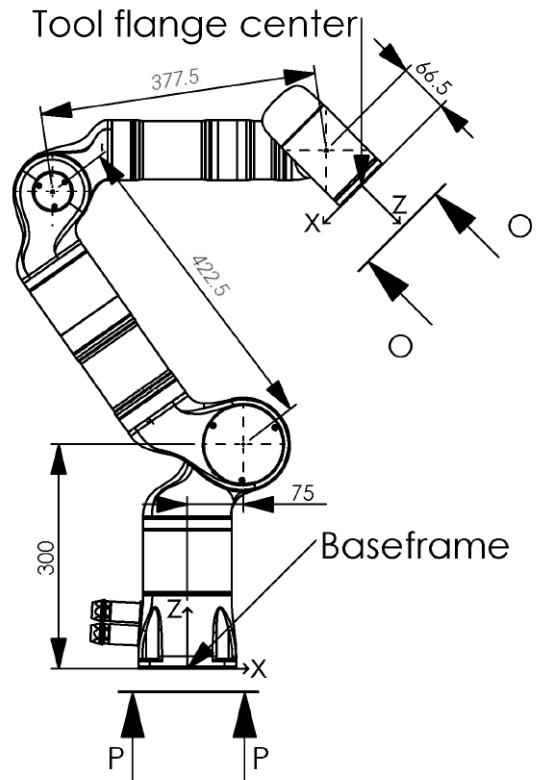
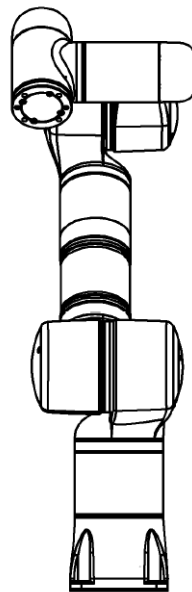


Baseframe
View P-P



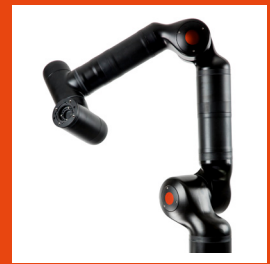
TOOL FLANGE ADAPTER ISO 9409-1-50-4-M6

INCLUDED WITH EVERY ROBOT
6082-T6 ALUMINIUM MASS = 135g



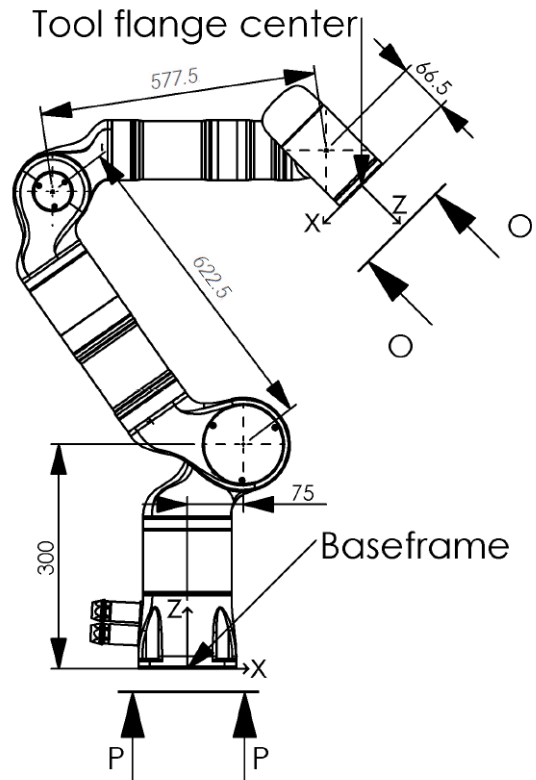
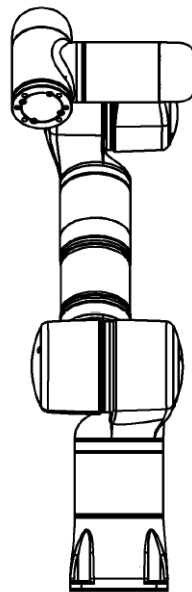
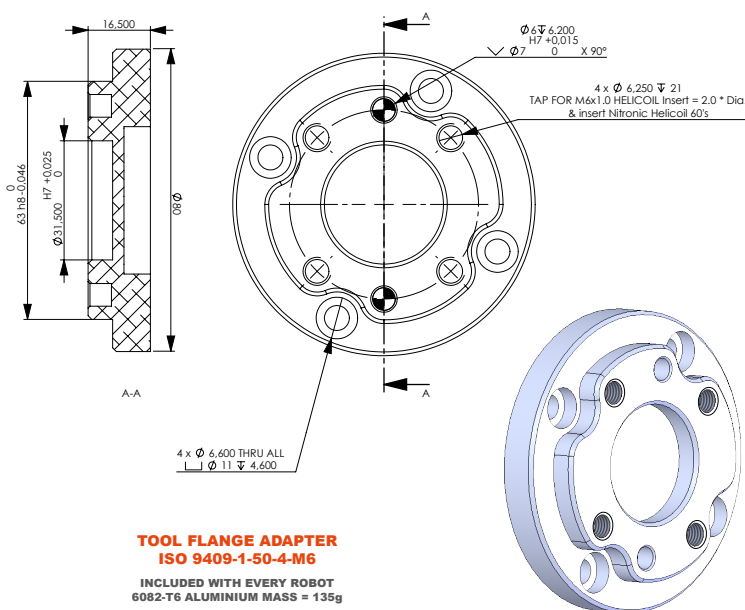
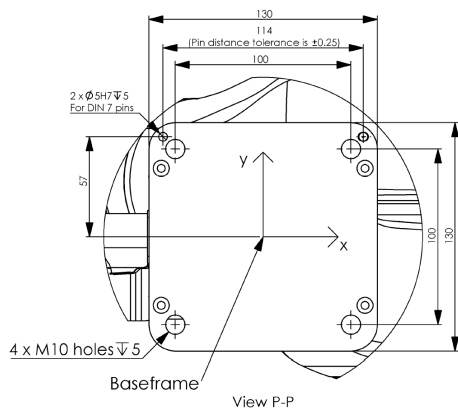
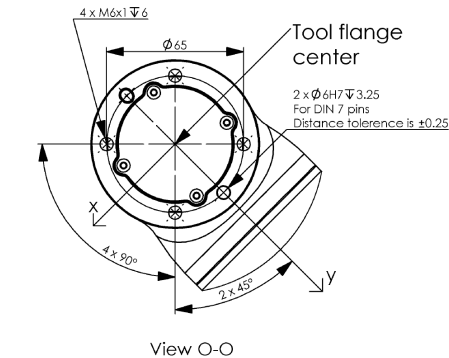
Design Parameter	Value
Reach In All Directions (mm)	850
Maximum Payload (kg)	10
Robot Arm Mass (kg)	24
Number Of Joints (DOF)	7
Max. Joint Speed (deg/s)	225
Joint Range J1 J3 J5 J6 J7 (°)	- 360 / + 360
Joint Range J2 J4 (°)	- 70 / + 180
Max. Linear Speed (mm/s)	2500
Repeatability (mm)	± 0.1
Max. Tool Flange Torque (Nm)	25
Min. Base Flatness (mm/m)	0.5
Max. Noise Level (dB.A)	≤ 70
Ingress Protection (IP)	IP54
Operating Temp Range (°C)	- 0 / + 45
Non-Condense Humidity (%RH)	30 ~ 85
Max. Operating Altitude (m)	3000
Power Supply (Phase CEE)	Single
Supply Voltage (V AC)	200 ~ 240
Supply Current Pre-Fuse (A)	16
Supply Frequency (Hz)	50 / 60
Power Consumption (W)	400 ~ 600
Controller Cable Length (m)	5

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN
INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



KR1205 – 1200mm / 5kg

7 Axis Collaborative Robot – 1200mm Reach



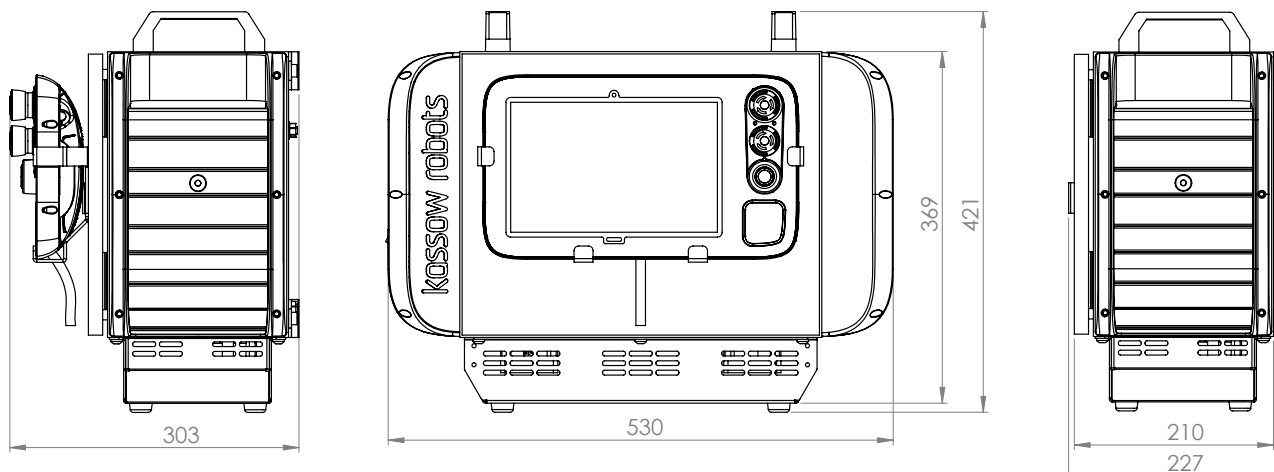
Design Parameter	Value
Reach In All Directions (mm)	1200
Maximum Payload (kg)	5
Robot Arm Mass (kg)	25
Number Of Joints (DOF)	7
Max. Joint Speed (deg/s)	225
Joint Range J1 J3 J5 J6 J7 (°)	- 360 / + 360
Joint Range J2 J4 (°)	- 70 / + 180
Max. Linear Speed (mm/s)	2500
Repeatability (mm)	± 0.1
Max. Tool Flange Torque (Nm)	25
Min. Base Flatness (mm/m)	0.5
Max. Noise Level (dB.A)	≤ 70
Ingress Protection (IP)	IP54
Operating Temp Range (°C)	- 0 / + 45
Non-Condense Humidity (%RH)	30 ~ 85
Max. Operating Altitude (m)	3000
Power Supply (Phase CEE)	Single
Supply Voltage (V AC)	200 ~ 240
Supply Current Pre-Fuse (A)	16
Supply Frequency (Hz)	50 / 60
Power Consumption (W)	400 ~ 600
Controller Cable Length (m)	5

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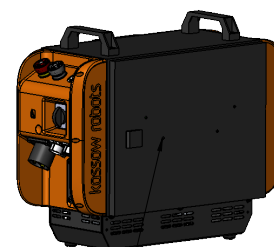
Controller

For All Kassow KR Robots

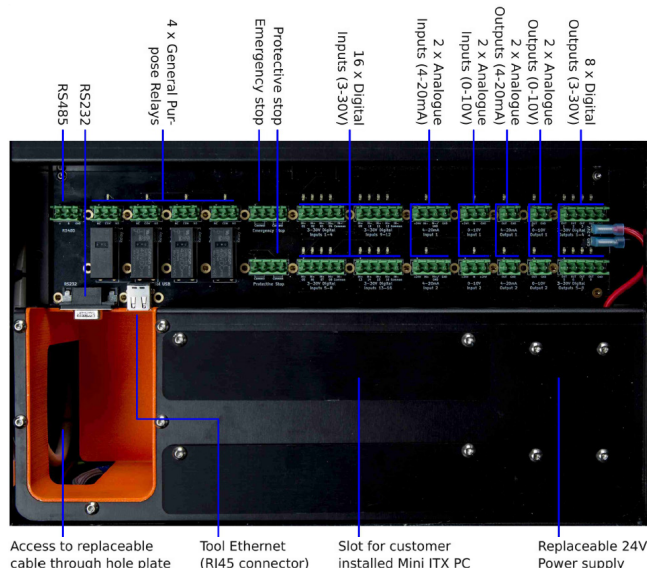


Controller w/ Teach Pendant

Controller w/out Teach Pendant



Teach Pendant mount can be removed by unscrewing 4x M4 bolts



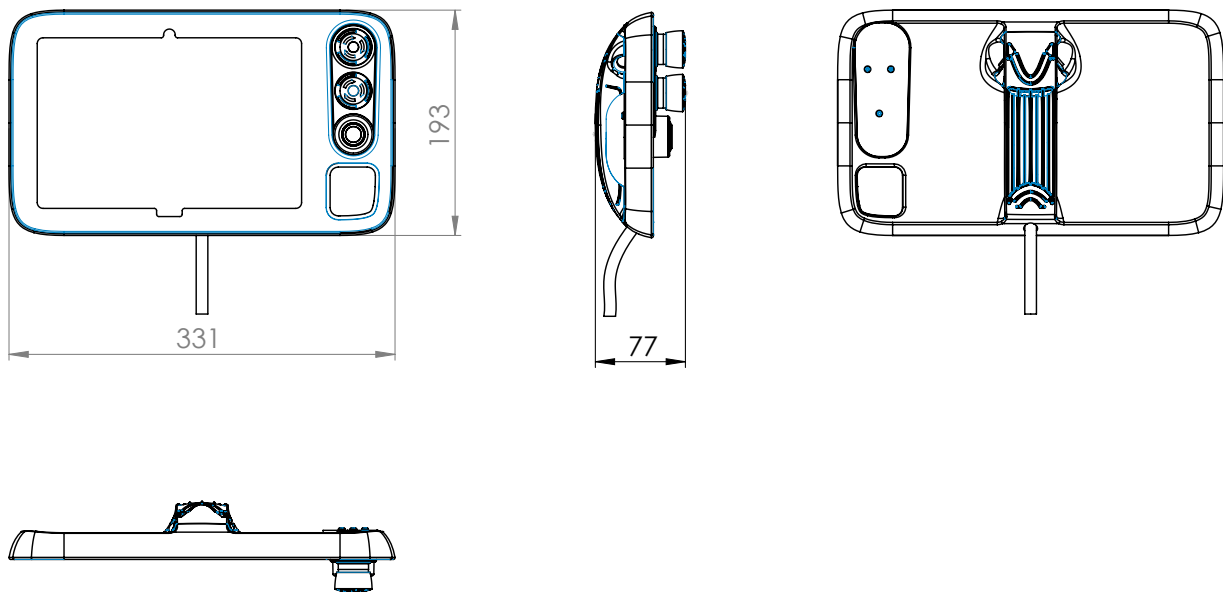
Design Parameter	Value
Power Supply Type (CEE)	1 Phase 3 pin
Supply Voltage (V AC 530)	200 ~ 240
Max. Current Load (A)	16
No. Digital Inputs	16 x 3~30 V
No. Digital Outputs	8 x 24 V (4A Max.)
No. Relay Outputs	4
No. Analogue I/O	2 x 0~10 V
No. Analogue I/O	2 x 4~20 mA
E-Stop On Controller ?	Yes
Protected Stop On Controller ?	Yes
Controller Mass (kg)	17
Ingress Protection (IP)	IP54
Cable To Robot Length (m)	5
Cable To Pendant Length (m)	4.5

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Teach Pendant

For All Kassow KR Robots



A button on the teach pendant show shows different states of the robot.

- **Green:** Robot is operating normally
- **Blinking green:** Robot is holding its position/is paused, program can be resumed
- **Red:** Emergency stop / Protective stop is activated
- **Yellow:** RC detected a unnormal situation
- **Blue:** Resets robot after emergency stop

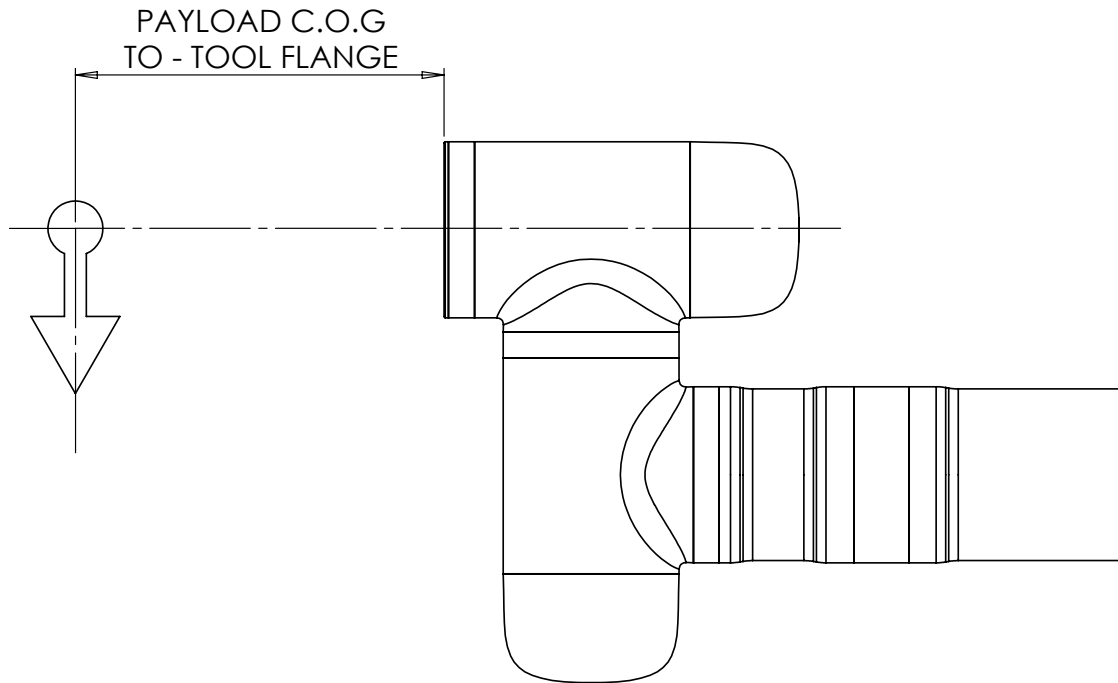


Design Parameter	Value
Programming Interface	Touch Screen
Programming Style	Drag & Drop
E-Stop On Teach Pendant ?	Yes
Protect Stop On Teach Pendant ?	Yes
Teach Mode On Teach Pendant ?	Yes
Teach Pendant Mass (kg)	5
Ingress Protection (IP)	IP54
Controller Cable Length (m)	4.5

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



Load & Tooling Offset



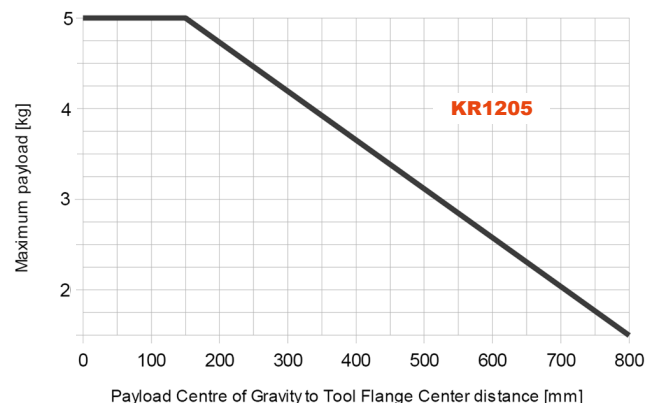
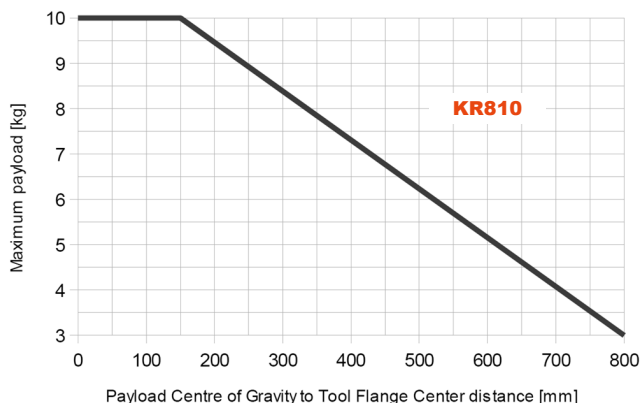
WHEN SELECTING COLLABORATIVE ROBOTIC ARMS, IT IS IMPORTANT TO CONSIDER THE FORCES INDUCED AT EACH JOINT.

AS WITH ALL COLLABORATIVE AND INDUSTRIAL ROBOTS, THE MAXIMUM PAYLOAD CAPACITY OF THE ARM IS QUOTED AT THE CENTRE OF THE TOOL FLANGE AT THE END OF THE ROBOTIC ARM.

DUE TO THE STATIC TORQUE LIMITS ABOUT THE WRIST JOINTS, THE ALLOWED PAYLOAD IS REDUCED IF THE DISTANCE BETWEEN THE PAYLOAD CENTRE OF GRAVITY (C.O.G) AND THE TOOL FLANGE CENTRE IS GREATER THAN 150MM.

THE PAYLOAD VS OFFSET DIAGRAMS BELOW SHOW THE ALLOWED MAXIMUM PAYLOAD FOR BOTH KR810 AND KR1205 MODELS AS A FUNCTION OF THIS OFFSET DISTANCE BEYOND 150MM.

PLEASE NOTE THAT IT IS IMPORTANT TO CONSIDER THE MASS AND ALSO THE ADDED THICKNESS OF ANY GRIPPERS, ADAPTER PLATES AND ANY OTHER END EFFECT DEVICES USED WHEN CALCULATING THE PAYLOAD C.O.G DISTANCE.



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Robotiq End Effectors

Grippers For Collaborative Robots



ADAPTIVE GRIPPERS



HAND-E

2F-85



WRIST
CAMERA



2F-140

VACUUM GRIPPERS



AIR PICK



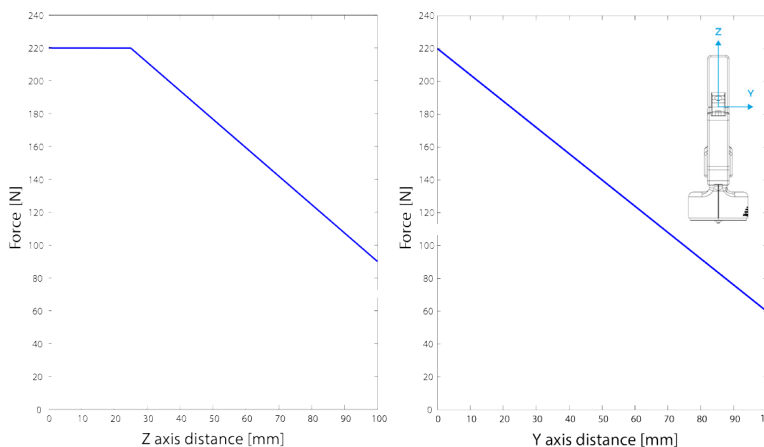
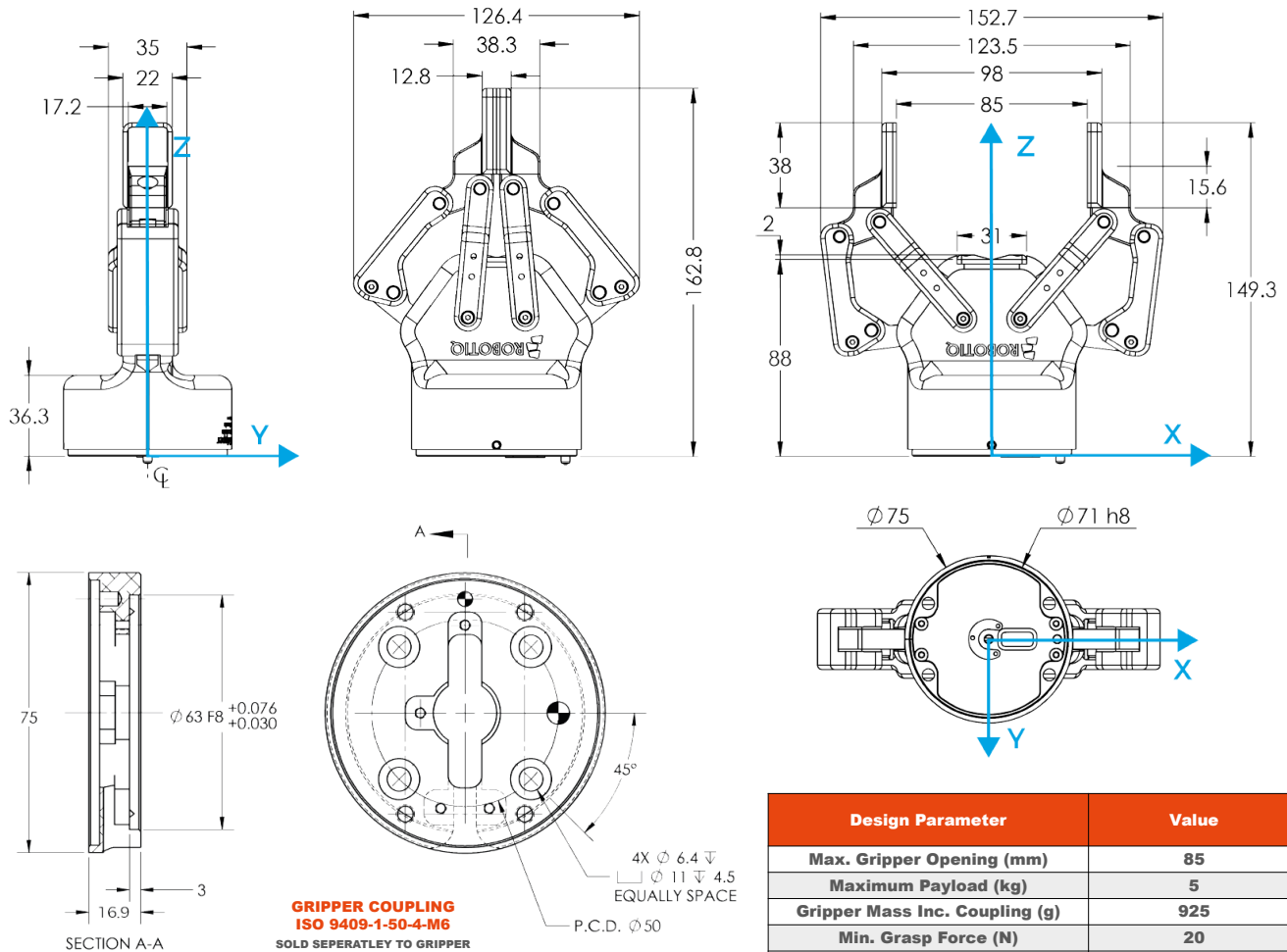
E PICK

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



2F85 – 85mm / 5kg

2 Finger Adaptive Gripper – 85mm Jaw



Design Parameter	Value
Max. Gripper Opening (mm)	85
Maximum Payload (kg)	5
Gripper Mass Inc. Coupling (g)	925
Min. Grasp Force (N)	20
Max. Grasp Force (N)	235
Max. Shear Force Fx Fy Fz (N)**	50
Max. Finger Moment Mx My (Nm)*	5
Max. Finger Moment Mz (Nm)**	3
Min. Finger Speed (mm/s)	20
Max. Finger Speed (mm/s)	150
Min. Load Encompassing (mm)	Ø 43
Force Repeatability (%)	± 10
Positional Repeatability (mm)	0.05
Positional Resolution (mm)	0.4
Supply Voltage (V DC)	24 ± 10%
Abs. Max. Supply Voltage (V DC)	28
Peak Current (A)	1
Min. Power Consumption (W)	< 1
Ingress Protection (IP)	IP40
Operating Temp Range (°C)	- 10 / + 50

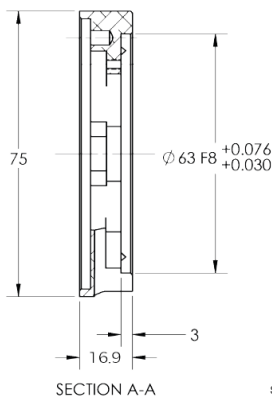
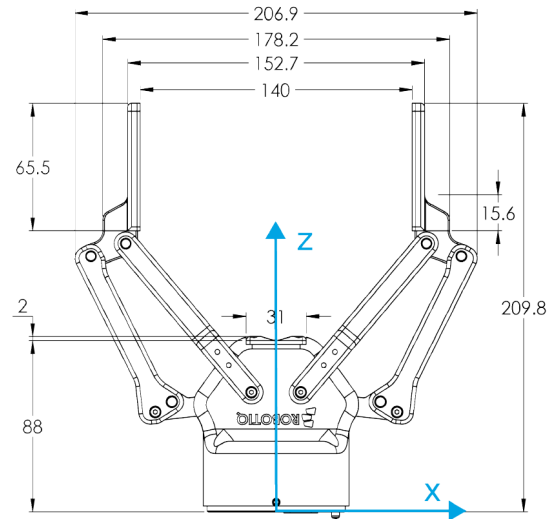
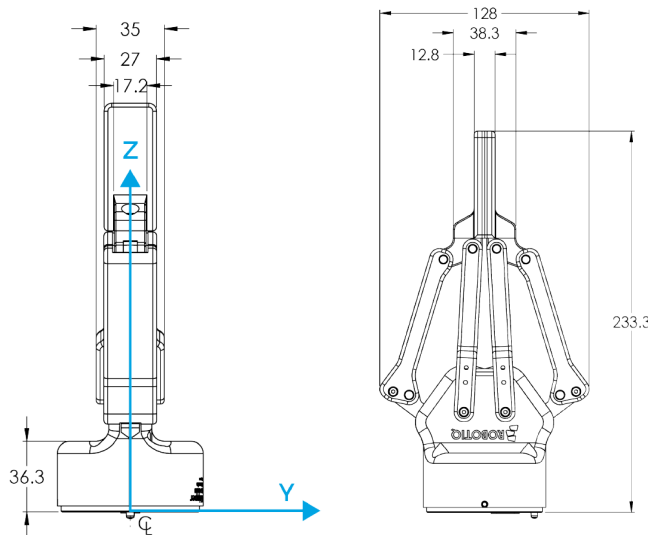
* About base of fingers ** About base of gripper

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING

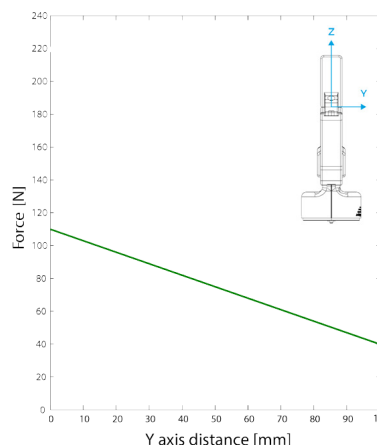
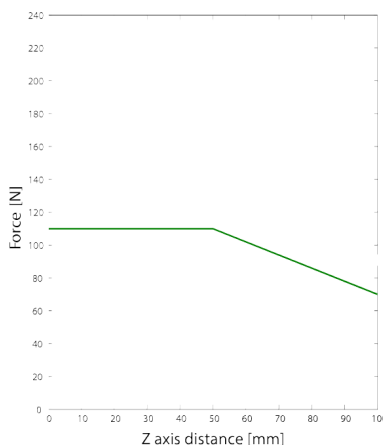
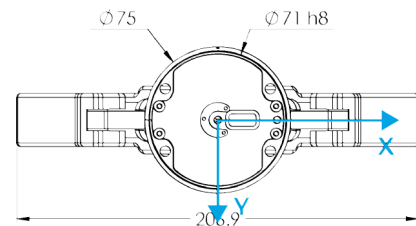
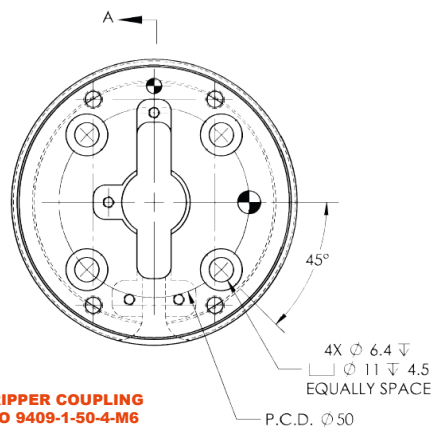


2F140 – 140mm / 2.5kg

2 Finger Adaptive Gripper – 140mm Jaw



GRIPPER COUPLING
ISO 9409-1-50-4-M6
SOLD SEPARATELY TO GRIPPER



Design Parameter	Value
Max. Gripper Opening (mm)	140
Maximum Payload (kg)	2.5
Gripper Mass Inc. Coupling (g)	1025
Min. Grasp Force (N)	10
Max. Grasp Force (N)	125
Max. Shear Force Fx Fy Fz (N)**	25
Max. Finger Moment Mx My (Nm)*	5
Max. Finger Moment Mz (Nm)**	3
Min. Finger Speed (mm/s)	30
Max. Finger Speed (mm/s)	250
Min. Load Encompassing (mm)	$\varnothing 90$
Force Repeatability (%)	± 10
Positional Repeatability (mm)	0.08
Positional Resolution (mm)	0.6
Supply Voltage (V DC)	$24 \pm 10\%$
Abs. Max. Supply Voltage (V DC)	28
Peak Current (A)	1
Min. Power Consumption (W)	< 1
Ingress Protection (IP)	IP40
Operating Temp Range (°C)	-10 / +50

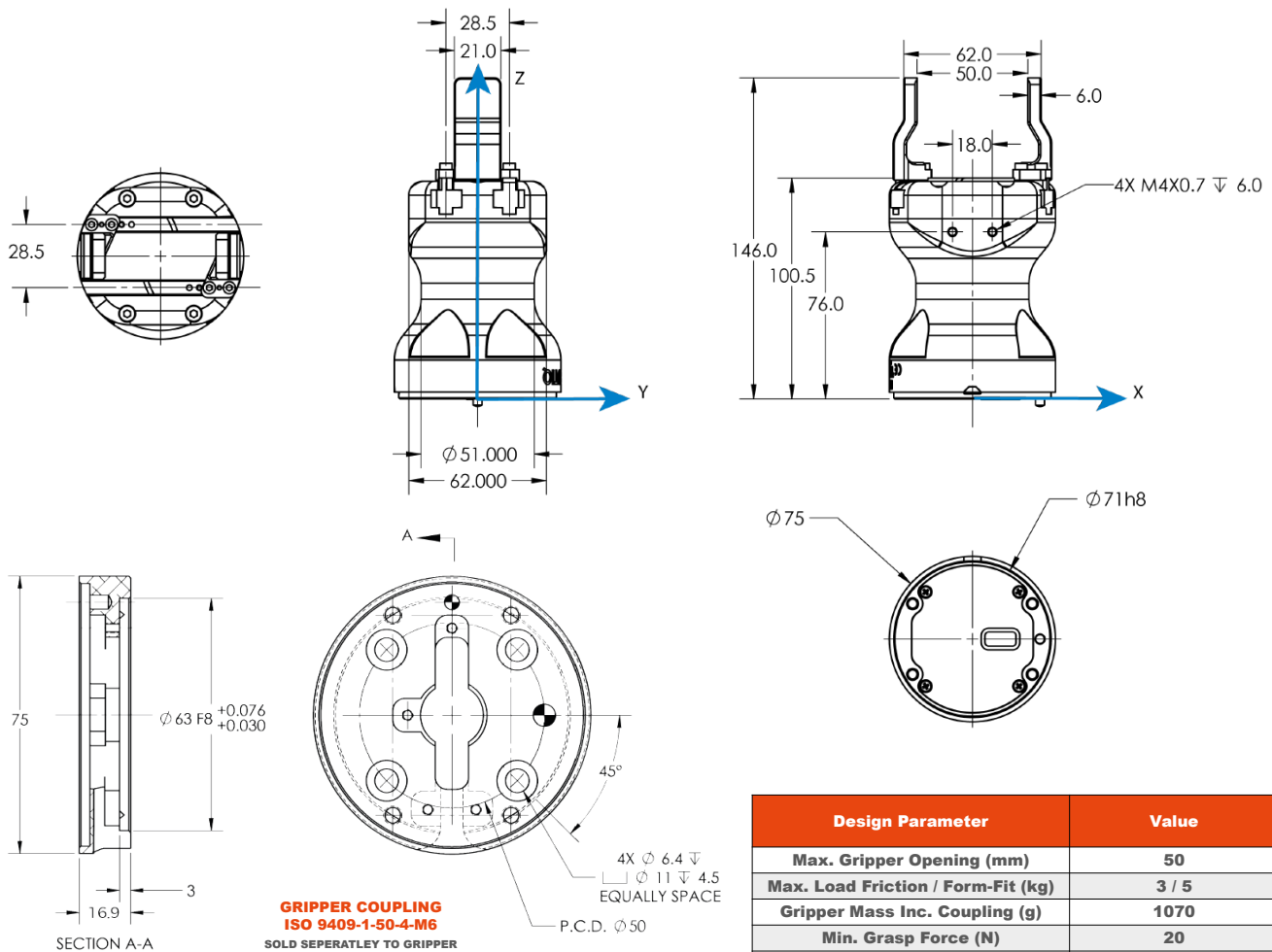
* About base of fingers ** About base of gripper

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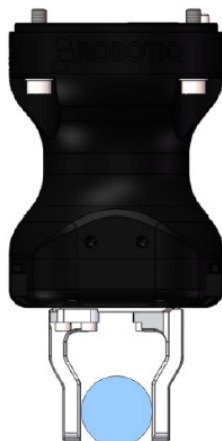


HAND E – 50mm / 5kg

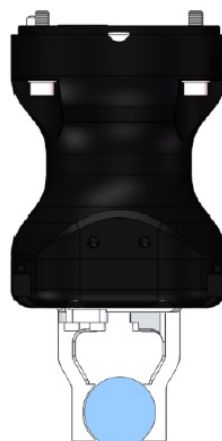
2 Finger Rack Drive Gripper – 50mm Jaw



FRICTION GRASP = 3KG MAX



FORM FIT GRASP = 5KG MAX



Design Parameter	Value
Max. Gripper Opening (mm)	50
Max. Load Friction / Form-Fit (kg)	3 / 5
Gripper Mass Inc. Coupling (g)	1070
Min. Grasp Force (N)	20
Max. Grasp Force (N)	130
Max. Shear Force Fx Fy Fz (N)**	100
Max. Finger Moment Mx (Nm)*	2.65
Max. Finger Moment My (Nm)*	3.74
Max. Finger Moment Mz (Nm)**	2
Min. Finger Speed (mm/s)	20
Max. Finger Speed (mm/s)	150
Force Repeatability (%)	± 10
Positional Repeatability (mm)	0.05
Supply Voltage (V DC)	24 ± 10%
Peak Current (A)	1.1
Min. Power Consumption (W)	< 1
Ingress Protection (IP)	IP67
Operating Temp Range (°C)	- 10 / + 50

* About base of fingers ** About base of gripper

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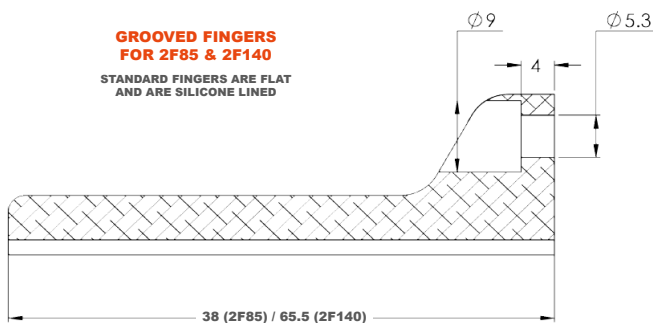


Finger Options

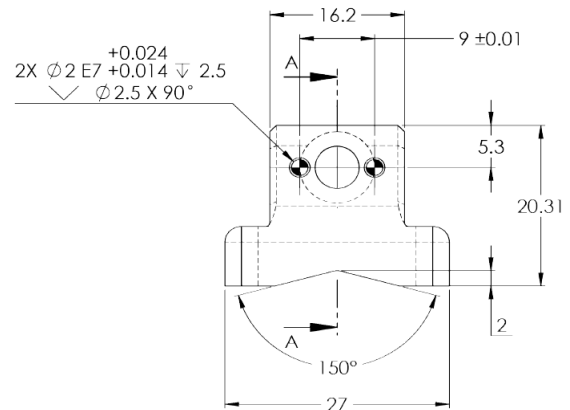
For All Robotiq 2 Finger Grippers

GROOVED FINGERS FOR 2F85 & 2F140

STANDARD FINGERS ARE FLAT
AND ARE SILICONE LINED

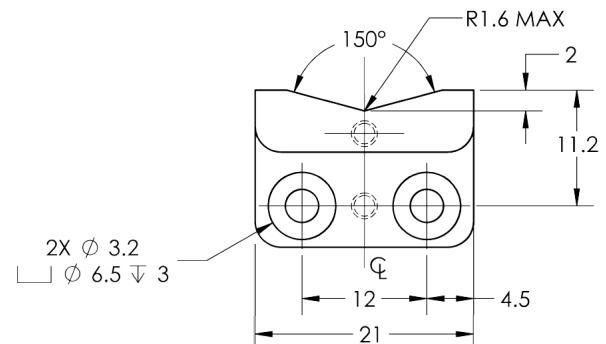
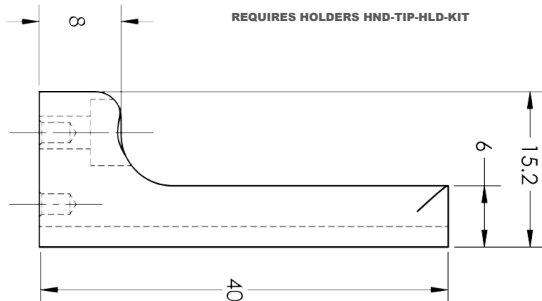


SECTION A-A



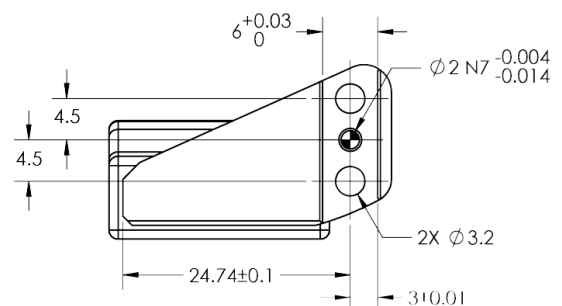
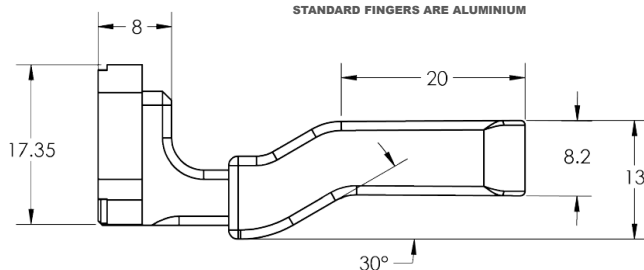
GROOVED FINGERS FOR HAND E

REQUIRES HOLDERS HND-TIP-HLD-KIT



FLAT OVERMOLDED RUBBER FINGERS FOR HAND E

STANDARD FINGERS ARE ALUMINIUM

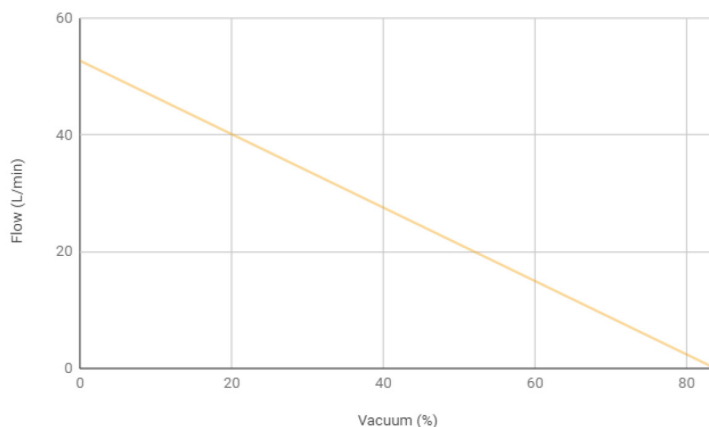
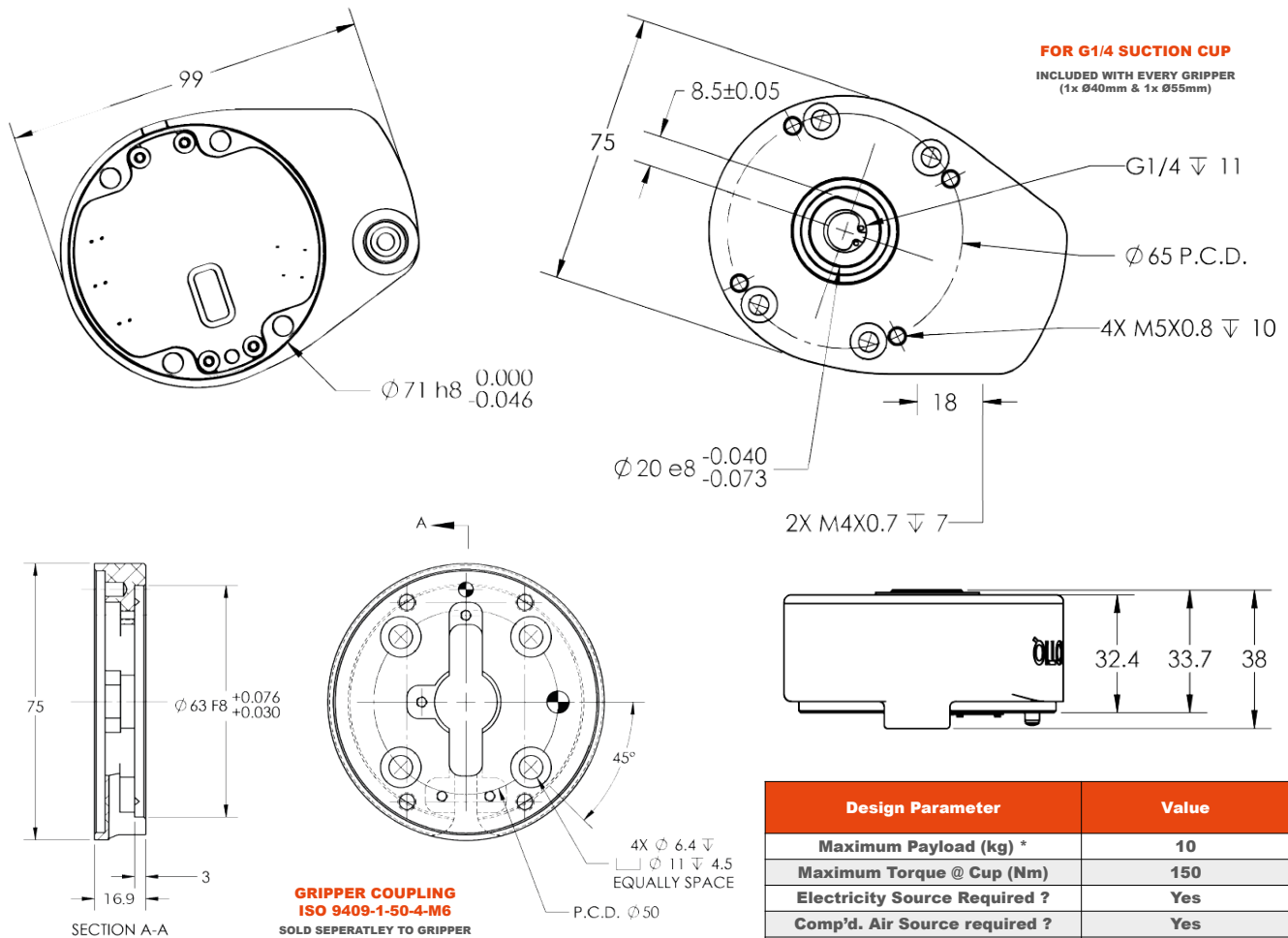


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Air Pick – 10kg

Vacuum Gripper – External Supply



Design Parameter	Value
Maximum Payload (kg) *	10
Maximum Torque @ Cup (Nm)	150
Electricity Source Required ?	Yes
Comp'd. Air Source required ?	Yes
Mass Inc. Coupling / Inc. Cup (g)	481 / 515
Min. Feed Pressure (Bar)	3
Max. Feed Pressure (Bar)	7
Consumption @ Optimal pressure	135.9 SLPM
Max. Vacuum @ Opt. pressure (%)	85
Gripping Time (ms) **	40
Release Times (ms) **	10
Max. Gripper Acceleration (m/s ²)	19.6
Operating Noise Level (dBA)	70.5
Supply Media Requirement	ISO 8573-1 3.4.3
Supply Voltage (V DC)	24 ± 10%
Abs. Max. Supply Voltage (V DC)	28
Peak Current (mA)	150
Min. Power Consumption (W)	1.2
Ingress Protection (IP)	IP40
Operating Temp Range (°C)	0 / + 50

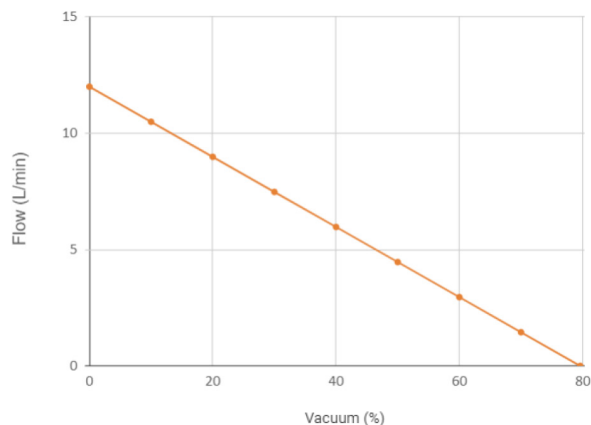
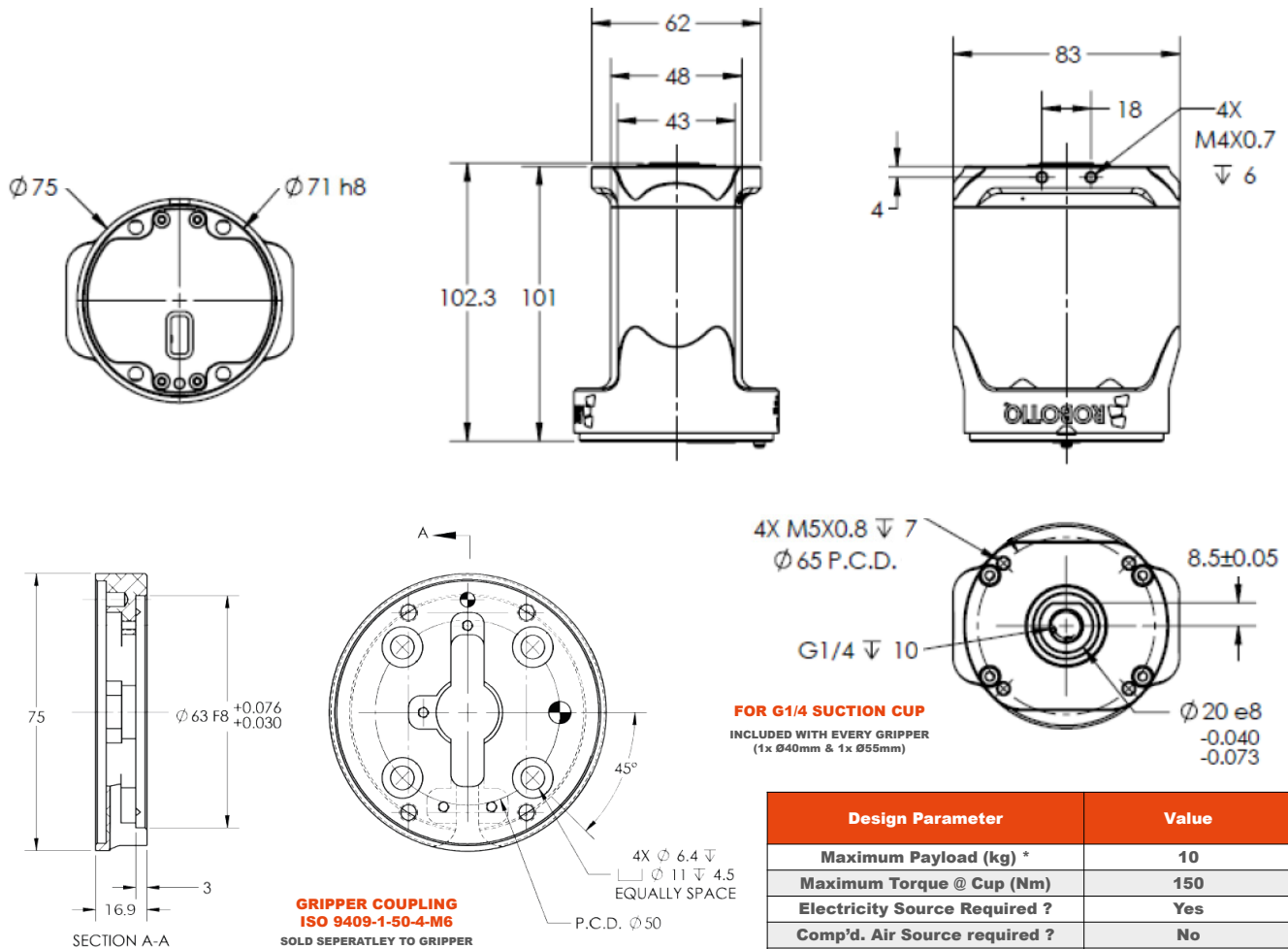
* On non-porous surface ** For one Ø40mm suction cup

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E Pick – 10kg

Vacuum Gripper – Internal Supply



Design Parameter	Value
Maximum Payload (kg) *	10
Maximum Torque @ Cup (Nm)	150
Electricity Source Required ?	Yes
Comp'd. Air Source required ?	No
Mass Inc. Coupling / Inc. Cup (g)	710 / 745
Maximum Vacuum (%)	80
Gripping Time (ms) **	150
Release Times (ms) **	180
Max. Gripper Acceleration (m/s ²)	19.6
Operating Noise Level (dBA)	64
Supply Voltage (V DC)	24 ± 10%
Abs. Max. Supply Voltage (V DC)	28
Peak Current (A)	1.8
Min. Power Consumption (W)	1
Ingress Protection (IP)	IP40
Operating Temp Range (°C)	+ 5 / + 40

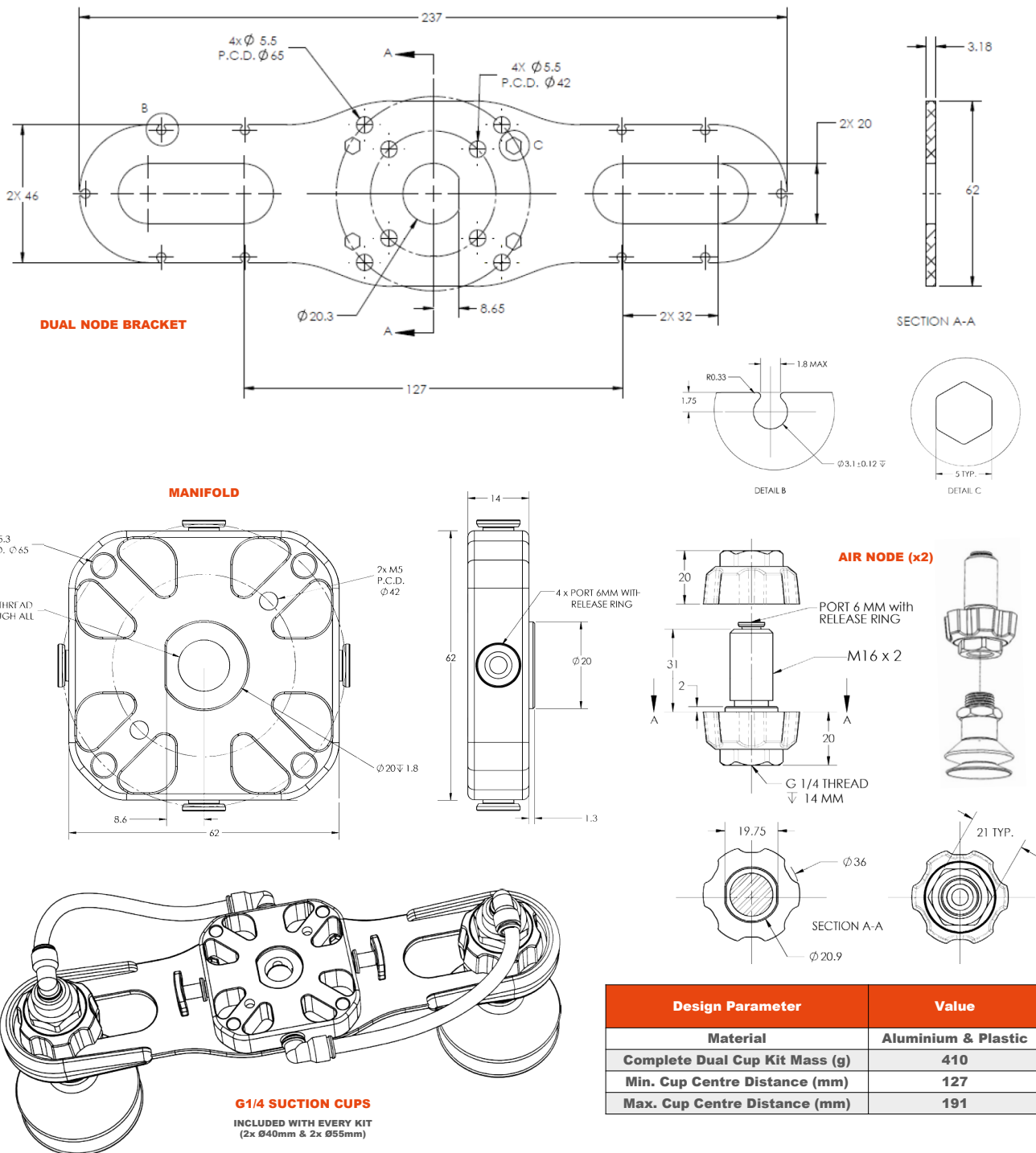
* On non-porous surface ** For one Ø40mm suction cup

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



Dual Suction Cup Kit

For Air Pick & E Pick Vacuum Grippers



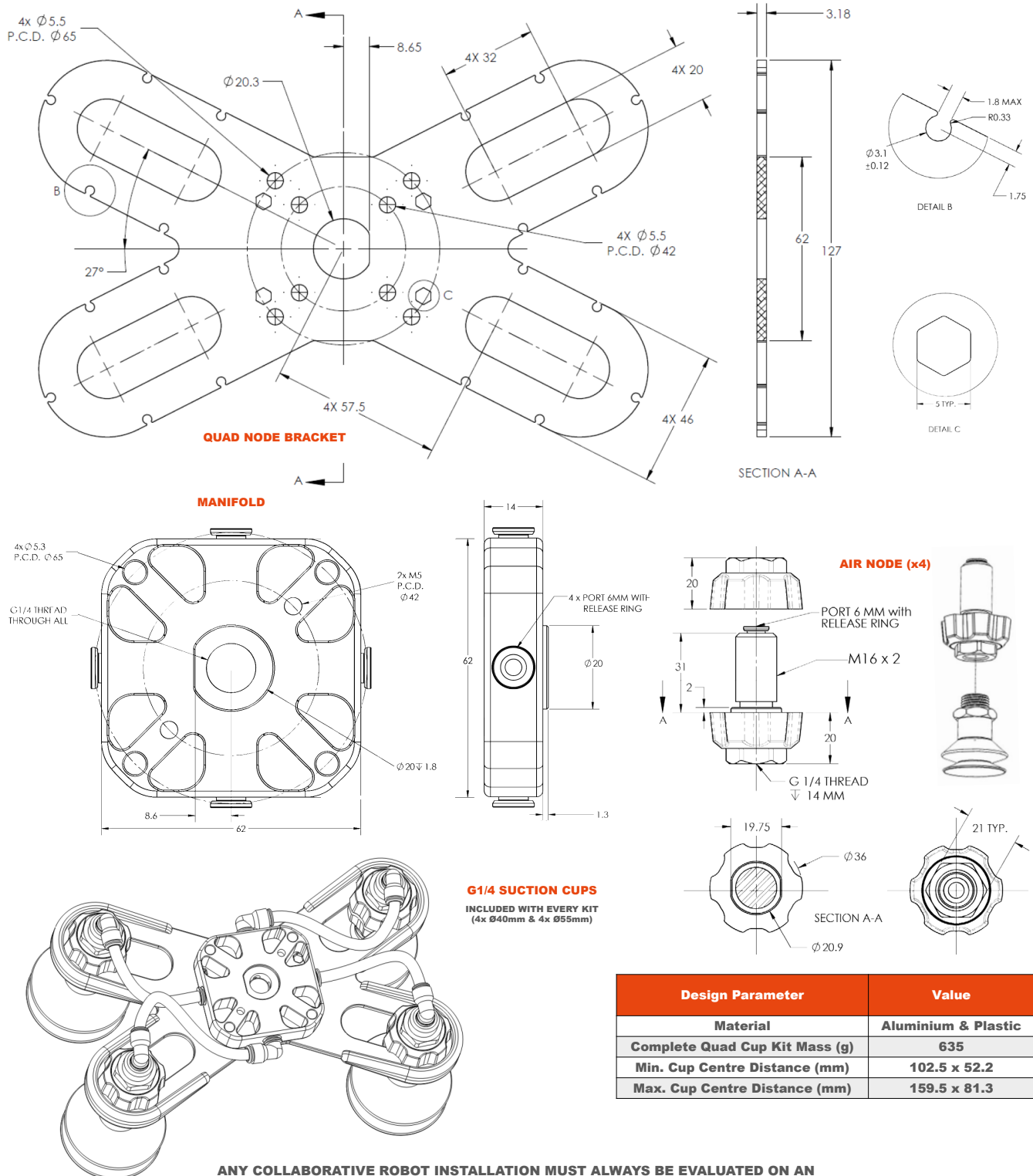
Design Parameter	Value
Material	Aluminium & Plastic
Complete Dual Cup Kit Mass (g)	410
Min. Cup Centre Distance (mm)	127
Max. Cup Centre Distance (mm)	191

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



Quad Suction Cup Kit

For Air Pick & E Pick Vacuum Grippers



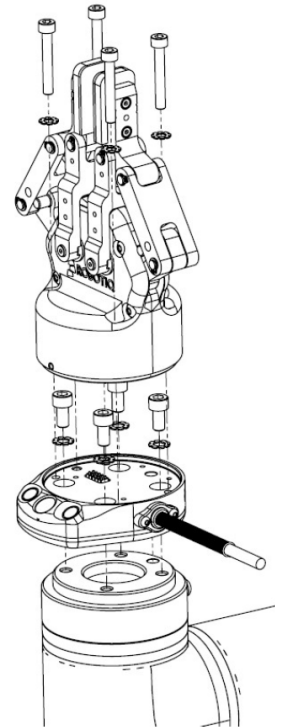
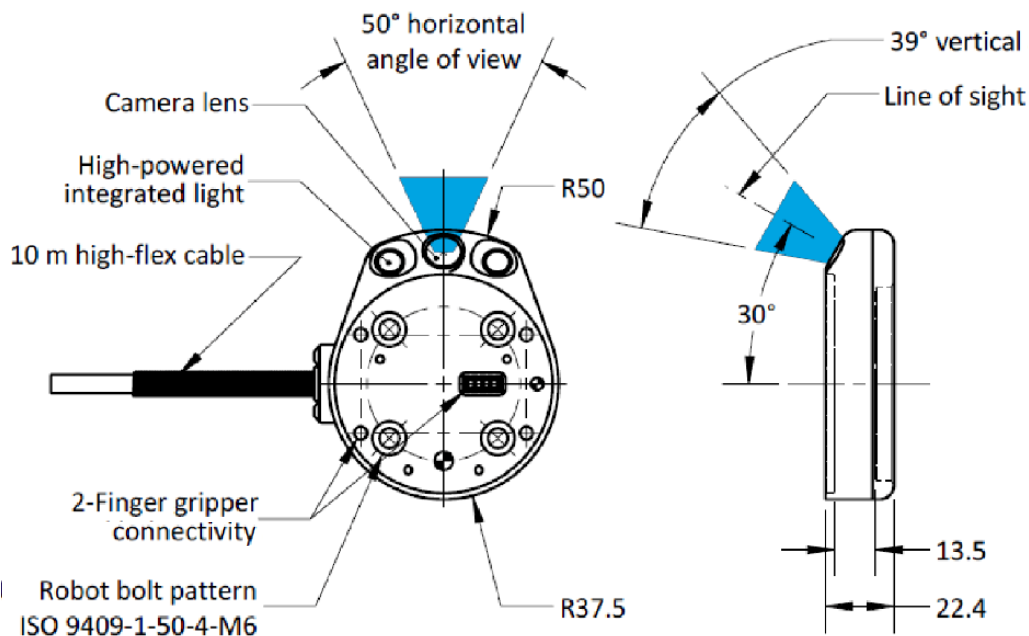
Design Parameter	Value
Material	Aluminium & Plastic
Complete Quad Cup Kit Mass (g)	635
Min. Cup Centre Distance (mm)	102.5 x 52.2
Max. Cup Centre Distance (mm)	159.5 x 81.3

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



Wrist Camera

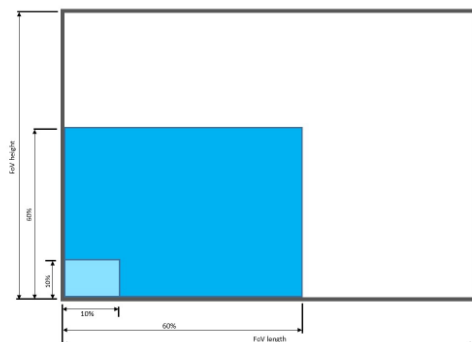
For All Robotiq Finger & Vacuum Grippers



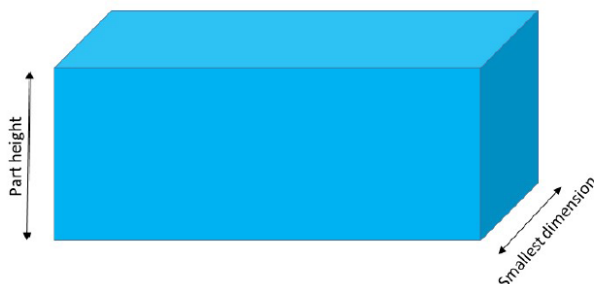
DIRECT COUPLING
TO ISO 9409-1-50-4-M6 FLANGE

Part dimensions

The maximum part size that can be detected by the Wrist Camera is 60% field of view's dimension. The minimum is 10%, no matter the robot or the field of view size.



The part must not be higher than its smallest dimension (width or length) : maximum of 1:1 ratio.



Design Parameter	Value
Communication Interface	USB 2.0
Integrated Lighting	6 LED White
Wrist Camera Mass (g)	160
Maximum Resolution	5 Mpx @ 2 fps
Max. Resolution (Pixels)	2560 x 1920
Maximum Frame Rate	30 fps @ 0.3 Mpx
Max. Frame Rate (Pixels)	640 x 480
Active Array Size (Pixels)	2592 x 1944
Focus Range (mm)	70 to Infin.
Lense type	Liquid
Supply Voltage (V DC)	24 ± 20%
Peak Current (A)	1
Min. Power Consumption (W)	1
Max. Power Consumption (W)	22
Ingress Protection (IP)	IP67
Operating Temp Range (°C)	0 / + 50

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



Onrobot End Effectors

Grippers For Collaborative Robots



VG10 ELECTRIC VACUUM



RG2 RG6 GRIPPER



GECKO GRIPPER



QUICK CHANGER



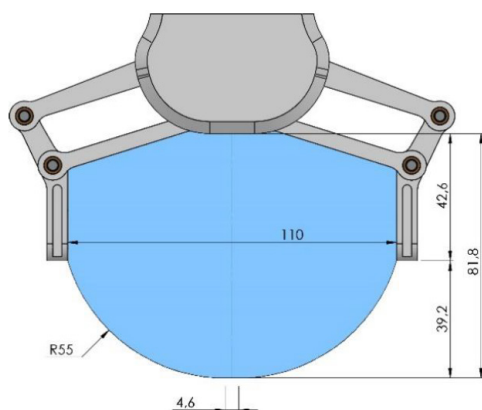
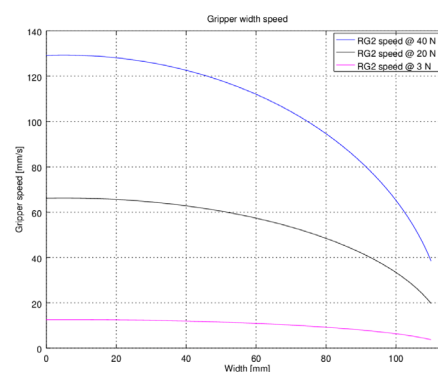
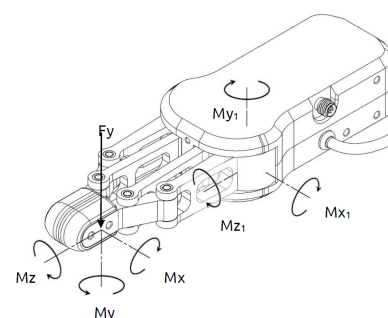
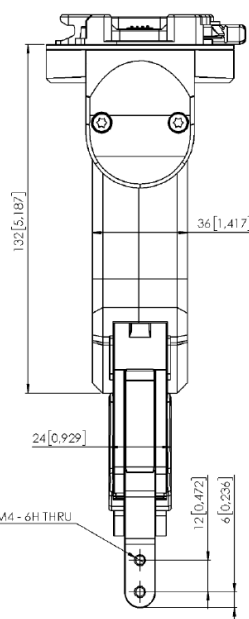
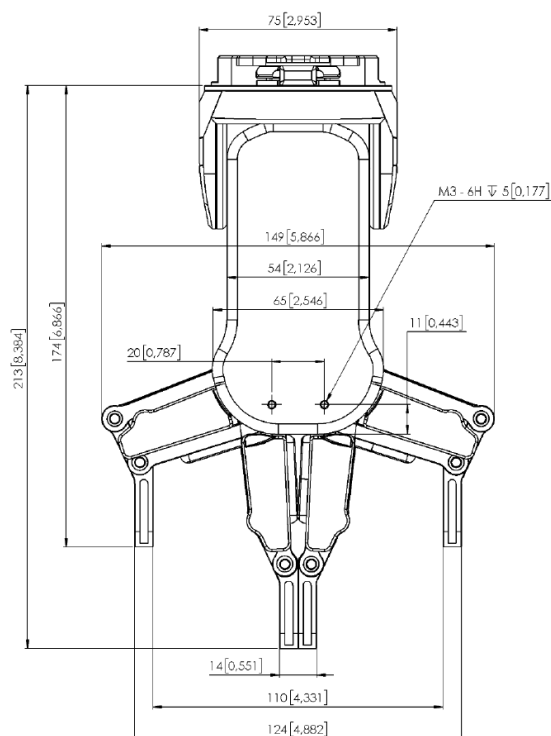
DUAL QUICK CHANGER

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING

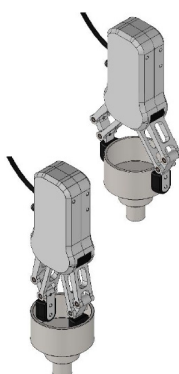


RG2 – 110mm / 2kg

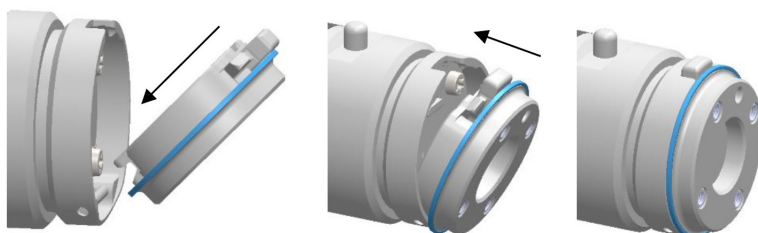
2 Finger Gripper – 110mm Jaw



POLYMER FINGERTIPS
INCLUDED WITH EVERY GRIPPER



FOR USE WITH QUICK CHANGER
INCLUDED WITH EVERY GRIPPER



Design Parameter	Value
Max. Gripper Opening (mm)	110
Maximum Payload (kg)	2
Gripper Mass (g)	650
Min. Grasp Force (N)	3
Max. Grasp Force (N)	40
Max. Shear Force Fy (N)	362
Max. Moment Mx / Mx1 (Nm)	7.55 / 22
Max. Moment My / My1 (Nm)	4.10 / 11
Max. Moment Mz / Mz1 (Nm)	6.92 / 22
Min. Finger Speed (mm/s)	38
Max. Finger Speed (mm/s)	127
Grip Force Repeatability (%)	± 25
Positional Repeatability (mm)	0.1
Positional Resolution (mm)	0.1
Supply Voltage (V DC) *	10 ~ 24
Abs. Max. Supply Voltage (V DC)	26
Current Draw (mA)	25 ~ 600
Power Consumption (W)	1.9 ~ 14.4
Ingress Protection (IP)	IP54
Operating Temp Range (°C)	+ 5 / + 50

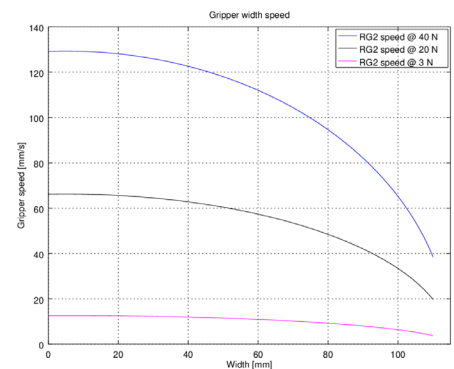
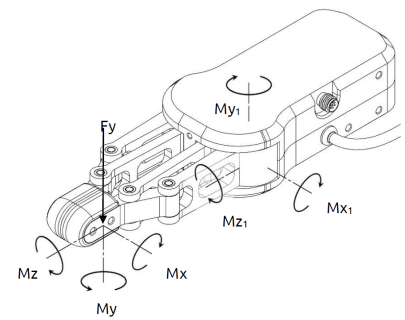
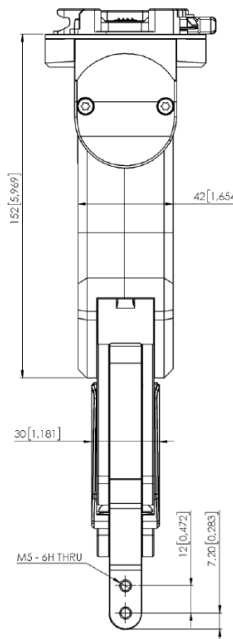
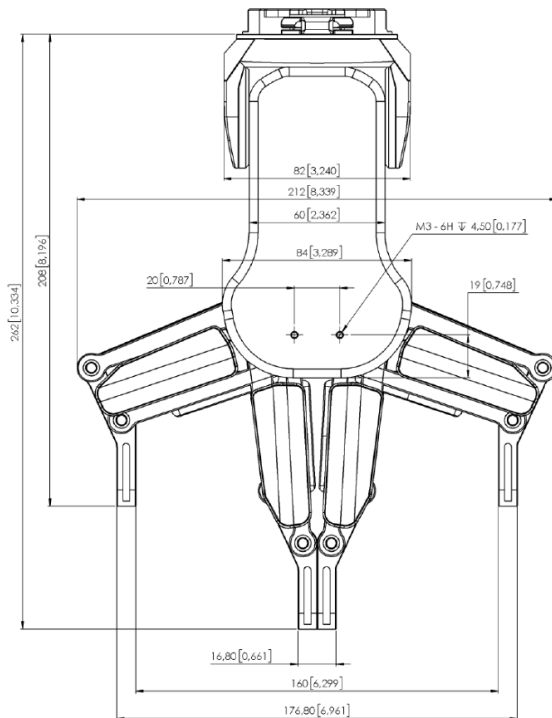
* 24V Nominal (i.e. @ 12V the gripper runs at half speed)

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING

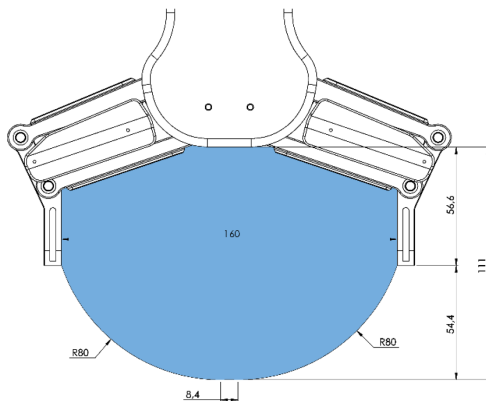


RG6 – 160mm / 6kg

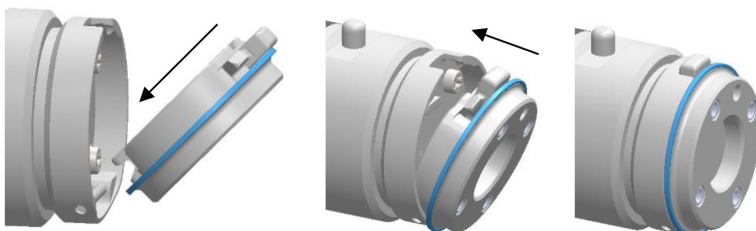
2 Finger Gripper – 160mm Jaw



POLYMER FINGERTIPS
INCLUDED WITH EVERY GRIPPER



FOR USE WITH QUICK CHANGER
INCLUDED WITH EVERY GRIPPER



Design Parameter	Value
Max. Gripper Opening (mm)	160
Maximum Payload (kg)	6
Gripper Mass (g)	1000
Min. Grasp Force (N)	25
Max. Grasp Force (N)	120
Max. Shear Force Fy (N)	1890
Max. Moment Mx / Mx1 (Nm)	38 / 120
Max. Moment My / My1 (Nm)	20 / 56
Max. Moment Mz / Mz1 (Nm)	35 / 120
Min. Finger Speed (mm/s)	51
Max. Finger Speed (mm/s)	160
Grip Force Repeatability (%)	± 25
Positional Repeatability (mm)	0.15
Positional Resolution (mm)	0.15
Supply Voltage (V DC) *	10 ~ 24
Abs. Max. Supply Voltage (V DC)	26
Current Draw (mA)	25 ~ 600
Power Consumption (W)	1.9 ~ 14.4
Ingress Protection (IP)	IP54
Operating Temp Range (°C)	+ 5 / + 50

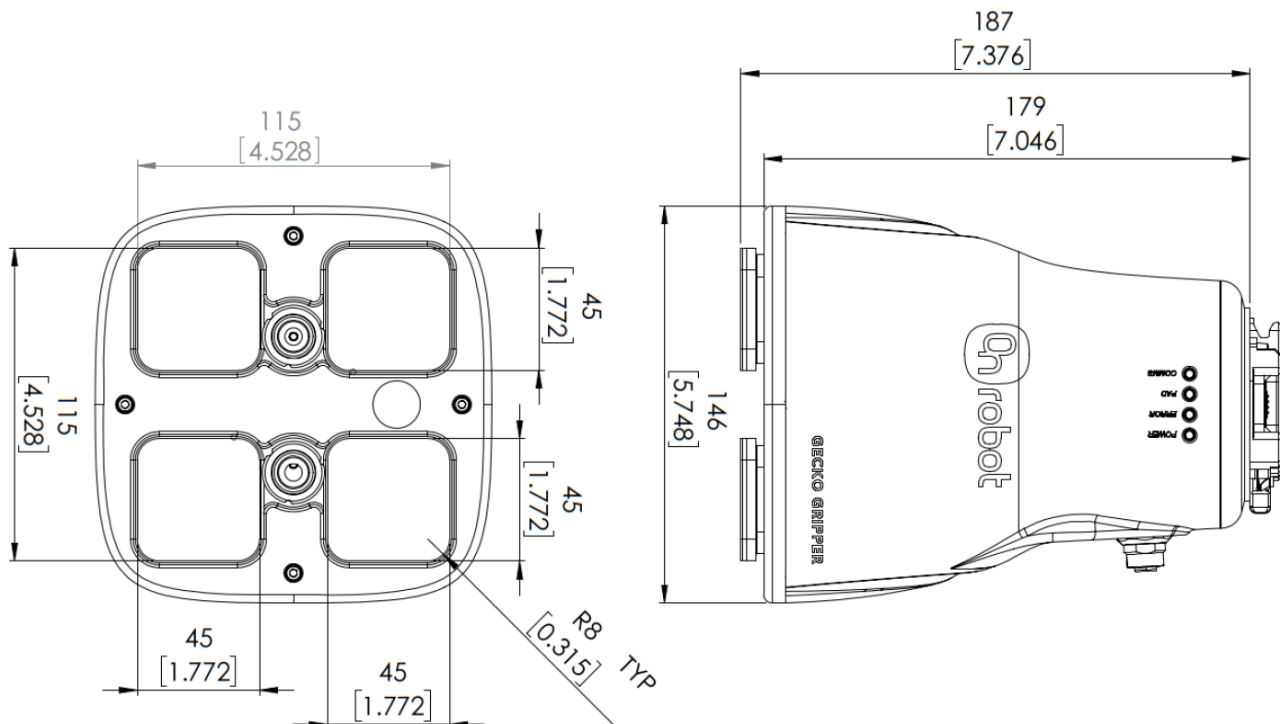
* 24V Nominal (i.e. @ 12V the gripper runs at half speed)

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING

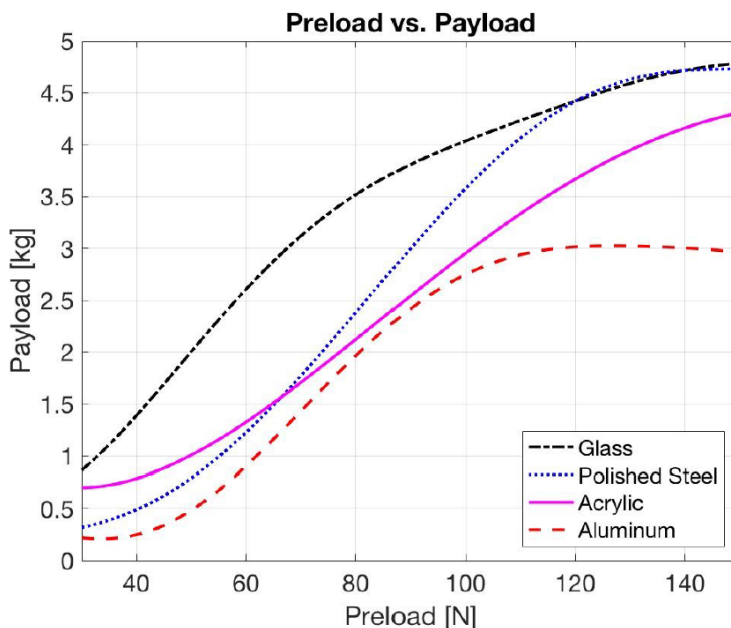


Gecko – 6.5kg

Adhesive Gripper – Non Marking



FOR USE WITH QUICK CHANGER
INCLUDED WITH EVERY GRIPPER



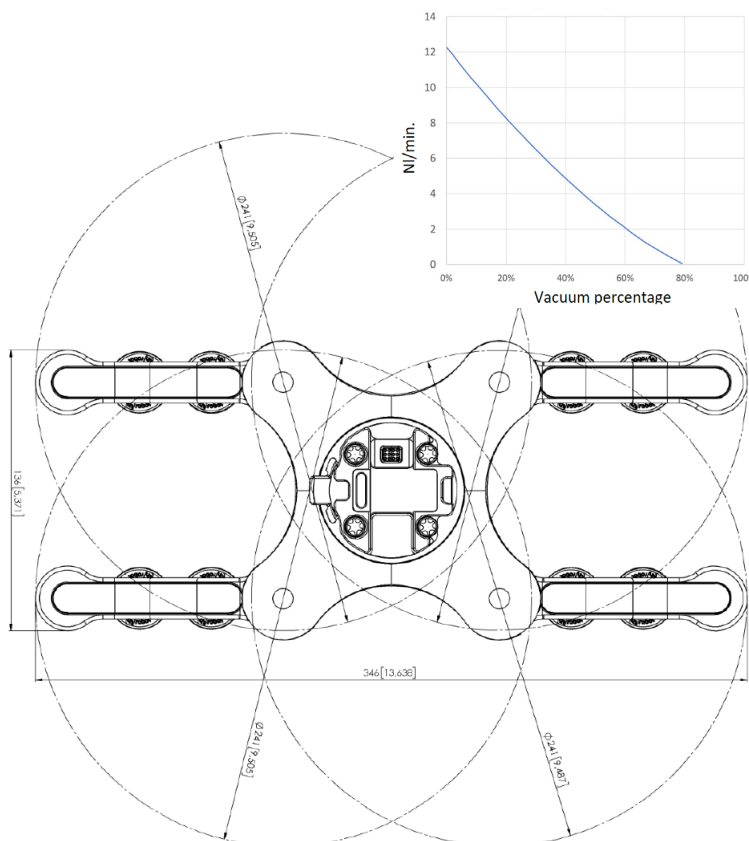
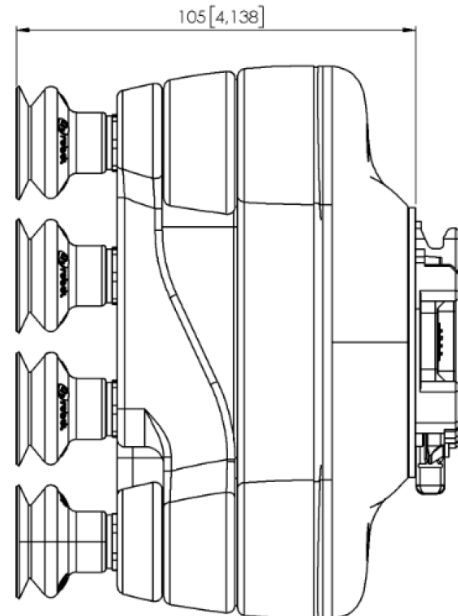
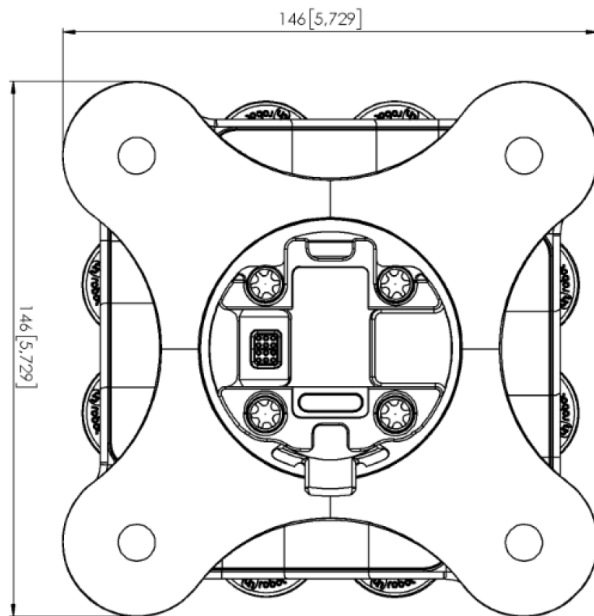
Design Parameter	Value
Gripper Mass (kg)	2.4
Max. load (Polished Steel) (kg)	6.5
Max. load (Acrylic Sheet) (kg)	6.5
Max. load (Glass Pane) (kg)	5.5
Max. load (Sheet Metal) (kg)	5.5
Min. Pad Preload Force (N)	40
Max. Pad Preload Force (N)	140
Preload Sensor Error (%)	7
Proximity Sensor Range (mm)	< 260
Proximity Sensor Error (%)	2
Gecko Pad Material Base	Non Marking Silicone
Manual Cleaning Method	Tac Cloth & Alcohol
Robotic Cleaning Method	Cleaning Station
Pad Replacement (No. Cycles)	150k ~ 250k
Load Held On Power Loss ?	Yes
Pad Detach Times (s)	0.3
Supply Voltage (V DC)	24
Current Draw (A)	0.5 ~ 0.8
Ingress Protection (IP)	IP42
Operating Temp Range (°C)	0 / + 50

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VG10 – 10kg

Vacuum Gripper – Internal Supply



FOR USE WITH QUICK CHANGER
INCLUDED WITH EVERY GRIPPER

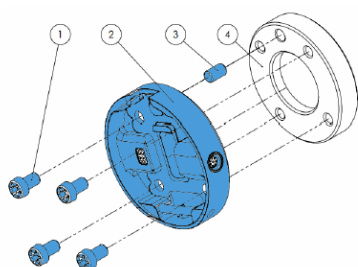
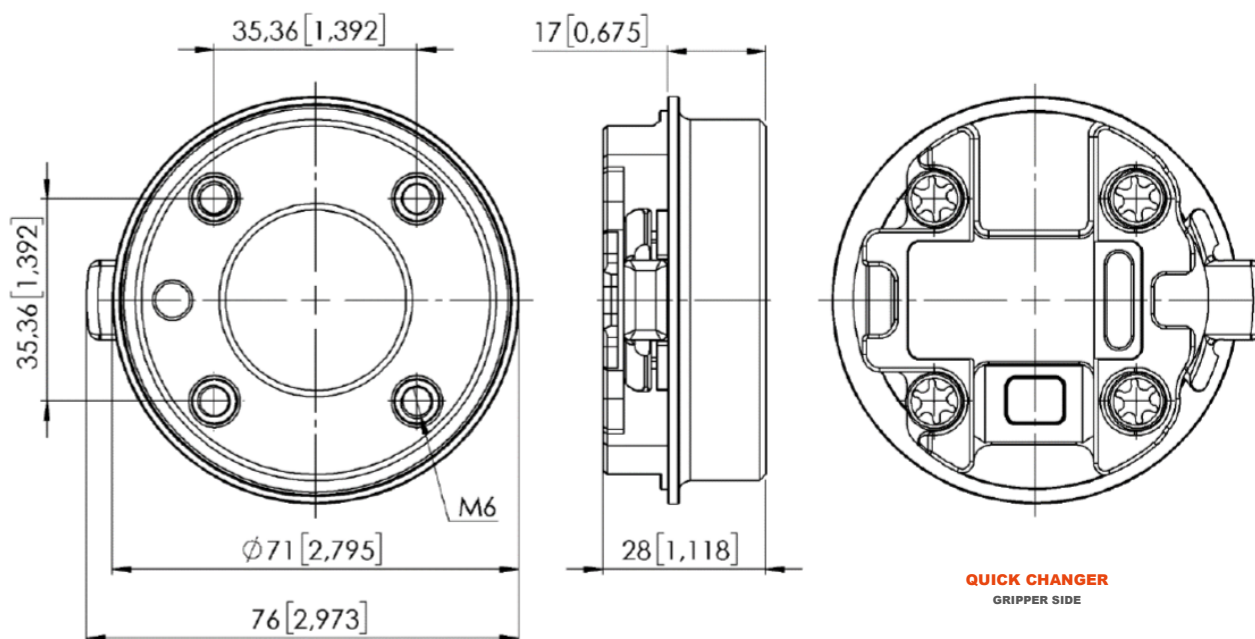
Design Parameter	Value
Maximum Payload (kg) *	10
Arm Holding Torque (Nm)	6
Electricity Source Required ?	Yes
Comp'd. Air Source required ?	No
Mass Including Cups (g)	1620
Maximum Vacuum (%)	80
Gripping Time (ms) **	350
Release Times (ms) **	200
Number Of Cup Arms	4
Number Of Vacuum Circuits	2
Number Of Vacuum Cups	1 ~ 16
Supply Voltage (V DC)	24 ± 4
Current Range (mA)	50 ~ 1500
Typical Current Draw (mA)	600
Ingress Protection (IP)	IP54
Operating Temp Range (°C)	0 / + 50

ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



Single Quick Changer

For All Onrobot Grippers

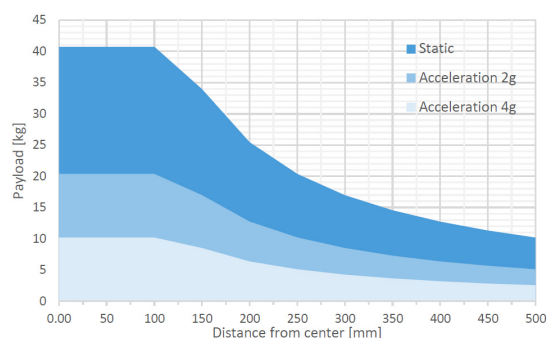
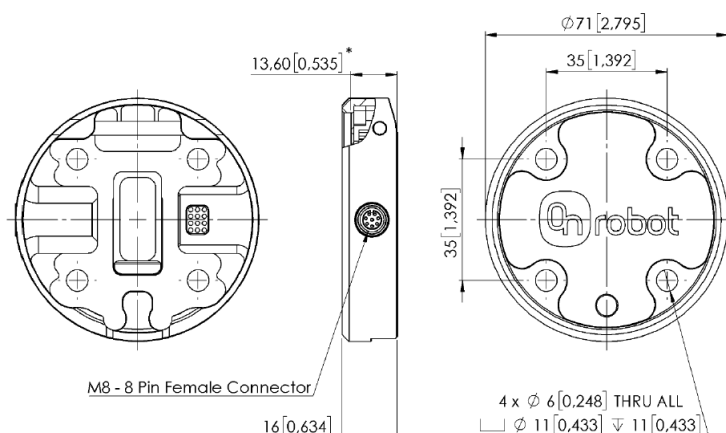


Quick Changer - Robot Side

- 1 M6x8mm (ISO14580 8.8)
- 2 Quick Changer (ISO 9409-1-50-4-M6)
- 3 Dowel pin Ø6x10 (ISO2338 h8)
- 4 Adapter/ Robot tool flange (ISO 9409-1-50-4-M6)

Use 10 Nm tightening torque.

Design Parameter	Value
Mass (g)	200
Max. Permissible Force (N)	400
Max. Permissible Torque (Nm)	50
Max. Rated Payload (kg)	20
Positional Repeatability (mm)	± 0.02
Max. Acceleration (m/s ²)	40
Ingress Protection (IP)	IP64
Life (Number Of Changes)	5000



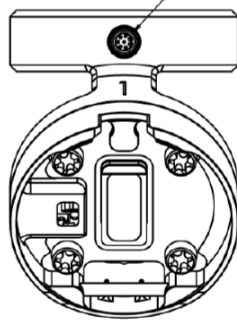
ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



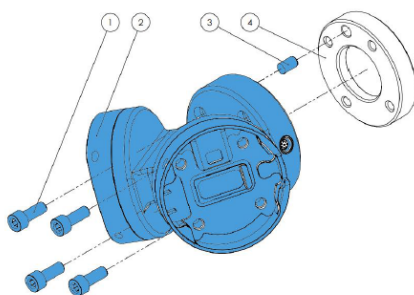
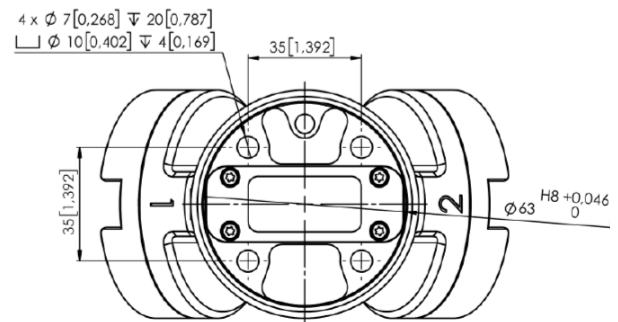
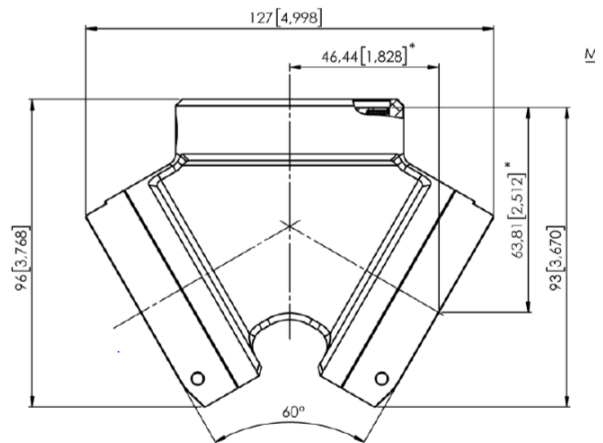
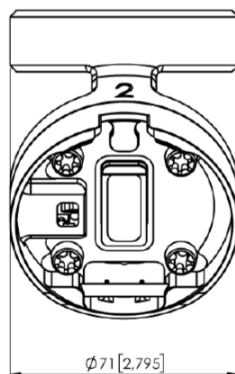
Dual Quick Changer

For All Onrobot Grippers

M8 - 8 Pin Female Connector



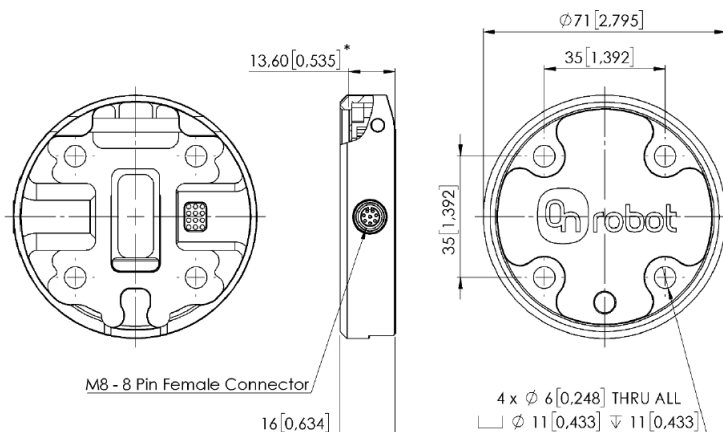
QUICK CHANGER
GRIPPER SIDE



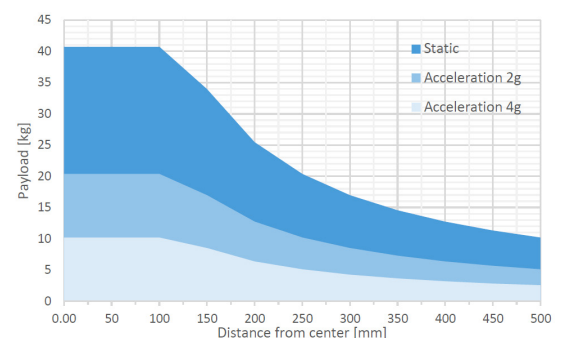
Dual Quick Changer

- 1 M6x20mm (ISO14580 8.8)
- 2 Dual Quick Changer
- 3 Dowel pin $\varnothing 6 \times 10$ (ISO2338 h8)
- 4 Adapter/ Robot tool flange (ISO 9409-1-50-4-M6)

Use 10 Nm tightening torque.



Design Parameter	Value
Mass (g)	500
Max. Permissible Force (N)	400
Max. Permissible Torque (Nm)	50
Max. Rated Payload (kg)	20
Positional Repeatability (mm)	± 0.02
Max. Acceleration (m/s ²)	40
Ingress Protection (IP)	IP64
Life (Number Of Changes)	5000



ANY COLLABORATIVE ROBOT INSTALLATION MUST ALWAYS BE EVALUATED ON AN INDIVIDUAL BASIS TO DETERMINE THE SUITABILITY FOR WORKING WITHOUT GUARDING



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