

One Stop Shop for Collaborative Applications

All the tools you need at one
place to automate more



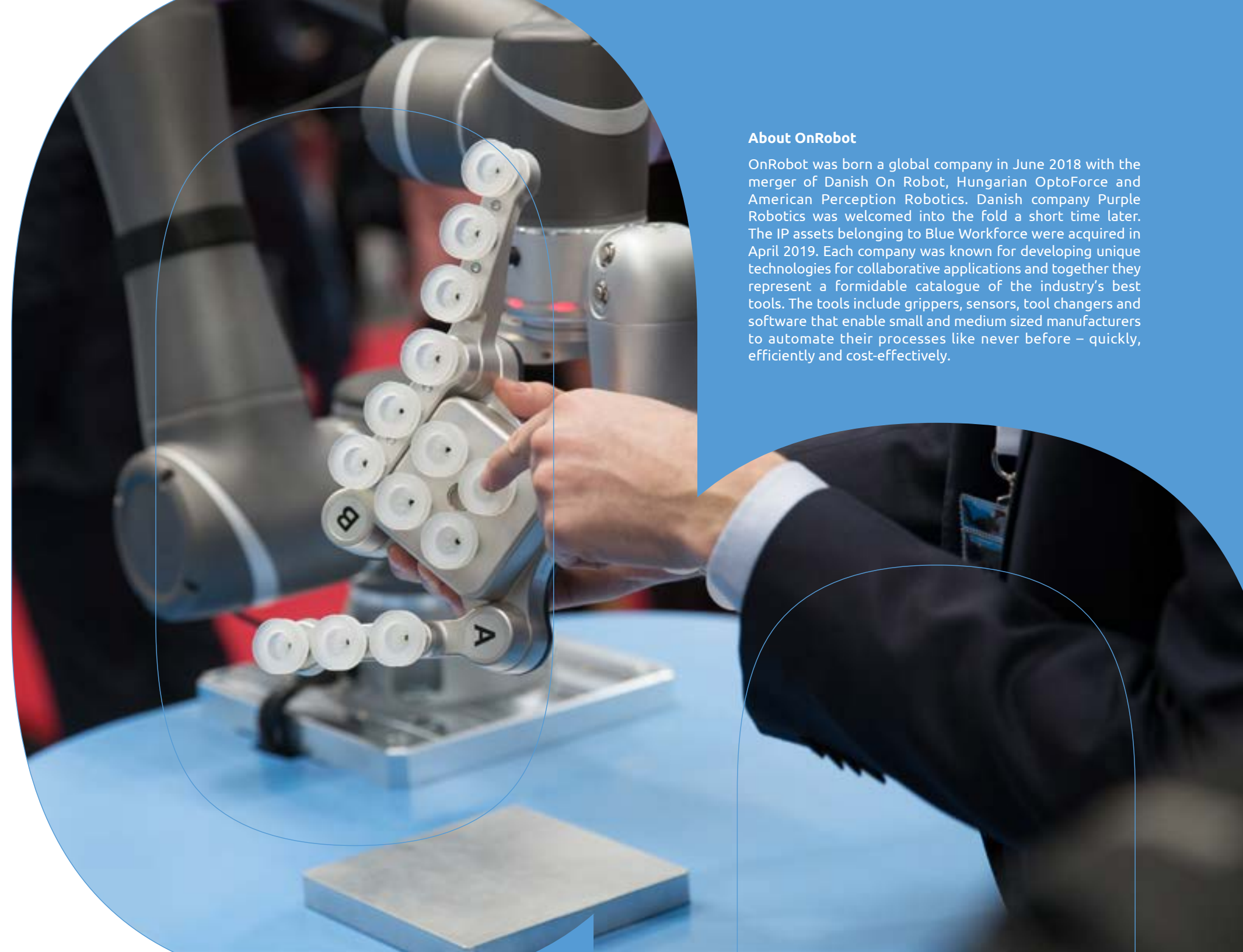


Collaborative applications are the future of automation, enabling rapid deployment, easy changeovers, and safe operation alongside human workers. Manufacturers gain true value from innovative collaborative applications that are enabled by a full range of Plug & Produce grippers, sensors, vision, and the software that drives them.

We offer the industry's broadest range of end-of-arm tooling and software solutions for collaborative applications, using a unified mechanical interface that helps manufacturers automate quickly and efficiently. Our innovative, manufacturer-focused approach saves you time and money so you can get on with the business of production.

We are excited to show you what you can accomplish with flexible, cost-effective collaborative applications.

Enrico Krog Iversen, CEO OnRobot



About OnRobot

OnRobot was born a global company in June 2018 with the merger of Danish On Robot, Hungarian OptoForce and American Perception Robotics. Danish company Purple Robotics was welcomed into the fold a short time later. The IP assets belonging to Blue Workforce were acquired in April 2019. Each company was known for developing unique technologies for collaborative applications and together they represent a formidable catalogue of the industry's best tools. The tools include grippers, sensors, tool changers and software that enable small and medium sized manufacturers to automate their processes like never before – quickly, efficiently and cost-effectively.

Any robot you choose. One **OnRobot** system.

Save integration time and simplify deployment with our complete solution.

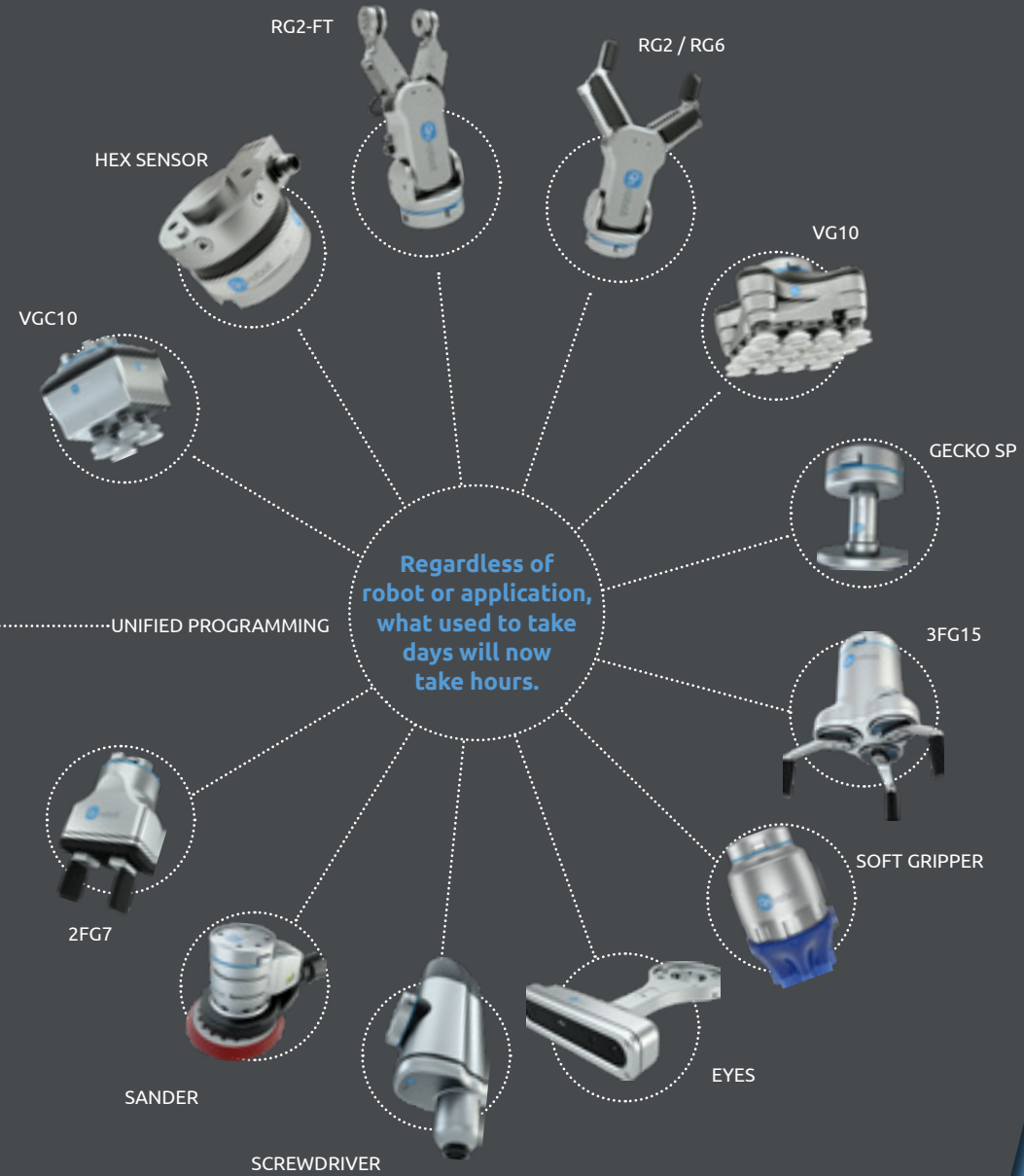


QUICK CHANGER



DUAL QUICK CHANGER

Fits all robots



ANY APPLICATION

– What do you want to automate?

Now you can automate processes that were previously too complicated



Assembly



Material Handling



Material Removal



Machine Tending



Quality

*If your robot arm is not represented above, contact your local partner for information on compatibility on other robot brands.

RG2/RG6

Plug & Produce grippers for multiple purposes

RG2 TECHNICAL SPECIFICATIONS

General Properties	Minimum	Maximum	Unit
Payload Force Fit	-	2 4.4	[kg] [lb]
Total stroke (adjustable)	0 0	110 4.33	[mm] [inch]
Gripping force (adjustable)	3	40	[N]
Gripping speed	38	127	[mm/s]
Gripping time	0.06	0.21	[s]
IP Classification	IP54		

RG6 TECHNICAL SPECIFICATIONS

General Properties	Minimum	Maximum	Unit
Payload Force Fit	-	6 13,2	[kg] [lb]
Total stroke (adjustable)	0 -	160 6.3	[mm] [inch]
Gripping force (adjustable)	25	120	[N]
Gripping speed	51	160	[mm/s]
Gripping time	0.05	0.15	s
IP Classification	54		

POWER UP PRODUCTION

- Flexible grippers can be used for a **wide range of part sizes and shapes.**
- Plug & Produce design **reduces deployment time from a day to an hour.**
- Easy deployment with out-of-the box grippers **reduces programming time by 70%**

Applications:



Machine Tending



Assembly



Material Handling



Plastic



Metal



Cardboard



Glass

Can be used with products of various sizes and materials, including:

RG2



RG6



2FG7

Parallel gripper for tight spaces and demanding payloads

TECHNICAL SPECIFICATIONS

General Properties		Minimum	Typical	Maximum	Unit	
Payload Force Fit		-	-	7 [15.5]	kg [lb]	
Payload Form Fit		-	-	11 [24.3]	kg [lb]	
Total stroke		-	38	-	mm	
Grip Width range	External	Fingers inwards	1 [0.039]	-	39 [1.53]	mm [inch]
		Fingers outwards	35 [1.37]	-	73 [2.87]	mm [inch]
	Internal	Fingers inwards	11 [0.43]	-	49 [1.92]	mm [inch]
		Fingers outwards	45 [1.77]	-	83 [3.26]	mm [inch]
Gripping force		20	-	140	N	
Gripping speed		16	-	450	mm/s	
Gripping repeatability		-	+/-0.1 [+/-0.004]	-	mm [inch]	
Hold workpiece if power loss?		Yes				
IP Classification		IP67				
Dimensions [L, W, D]		144 x 90 x 71 [5.67 x 3.54 x 2.79]			mm [inch]	
Weight		1.14 [2.4]			kg [lb]	

POWER UP PRODUCTION

- Complete, easy-to-program, collaborative parallel gripper gets to work fast in a wide range of applications
- Strong parallel gripper is easy to deploy in tight spaces and handles even demanding payload requirements
- Get fast ROI with a single flexible, intelligent, and precise gripper that can be easily customized and adapted for many different tasks
- Ready for use almost anywhere, with IP67 rating for harsh environments and ISO Class 5 certification for cleanroom use

Applications:



Material Handling



Assembly



Machine Tending



2FG7

Can be used with products of various sizes and materials, including:



Plastic



Metal



Wood



Glass



3FG15

Flexible, large-stroke 3-finger gripper

TECHNICAL SPECIFICATIONS

General Properties		Minimum	Typical	Maximum	Unit
Payload Force Fit		-	-	10 / 22	[kg] / [lb]
Payload Form Fit		-	-	15 / 33	[kg] / [lb]
Grip Diameter*	External	4 / 0.16	-	152 / 5.98	[mm] / [inch]
	Internal	35 / 1.38	-	181 / 7.12	[mm] / [inch]
Finger position resolution		-	0.1 / 0.004	-	[mm] / [inch]
Repetition accuracy		-	0.1 / 0.004	0.2 / 0.007	[mm] / [inch]
Gripping force		10	-	240	[N]
Gripping force (adjustable)		3	-	100	[%]
Gripping speed (diameter change)		-	-	125	[mm/s]
Gripping time (including brake activation)		-	500	-	[ms]
Hold workpiece if power loss?		Yes			
IP Classification		IP67			
Dimensions [L, W, Ø]		156 x 158 x 180 / 6.14 x 6.22 x 7.08		[mm] / [inch]	
Weight		1.15 / 2.5		[kg] / [lb]	

POWER UP PRODUCTION

- Flexible production - large-stroke **optimizes CNC lathe-tending for multiple part sizes** with a single 3-finger gripper
- Accurate centric positioning drives **higher quality, consistency, and output with minimal programming**
- Strong, stable grip and 3 contact points makes gripper **fast and easy to redeploy for multiple processes**
- Accomplish more with customizable fingertips to **flexibly grip a wide range of part sizes and shapes**

Applications:



Machine Tending



Material Handling



3FG15

Can be used with products of various sizes and materials, including:



Plastic



Metal



Cardboard



Wood



Soft Gripper

Explore new automation possibilities with certified food-grade soft gripper

TECHNICAL SPECIFICATIONS

General Properties	Minimum	Typical	Maximum	Unit
Material	Two-component silicone rubber			
Food approval	FDA 21 CFR 177.2600 & EC/EU - 1935/2004			
Operation cycles	2.000.000			[cycles]
Operation temperature	-20 / -4		80 / 176	[C] / [F]
SG-tool attachment mechanism	Quick-lock and Smart-lock			
Weight Base Part	0.77 / 1.69			[kg] / [lb]
SG-a-H / SG-a-S				
Max payload	-	-	2.2 / 1.5 4.85 / 3.3	[kg] / [lb]
Work range, Grip dimensions (A)	11 / 0.43	-	75 / 2.95	[mm] / [inch]
Work range, Grip depth (B)	-	38 / 1.496	-	[mm] / [inch]
Soft part (SG-a-S) (C)	-	16 / 0.63	-	[mm] / [inch]
Dimensions (HxØmax)	76x112 / 3 x 4.4			[mm] / [inch]
Weight (smart lock included)	0.168 / 0.37			[kg] / [lb]
SG-b-H				
Max payload	-	-	1.1 / 2.42	[kg] / [lb]
Work range, Grip dimensions (A)	24 / 0.94	-	118 / 4.65	[mm] / [inch]
Work range, Grip depth (B)	-	40 / 1.57	-	[mm] / [inch]
Dimensions (HxØmax)	77x109 / 3.03 x 4.29			[mm] / [inch]
Weight (smart lock included)	0.172 / 0.379			[kg] / [lb]

POWER UP PRODUCTION

- Explore new possibilities for food and beverage automation with certified food-grade soft gripper
- Easily handle a wide array of irregular shapes and delicate objects with flexible silicon-molded gripper
- Safely handle fragile and delicate objects for higher production quality and reduced waste
- No external air supply means no dust, no noise, no complexity, and no additional costs

Applications:



Material Handling

Soft Gripper



Can be used with products of various sizes and materials, including:



Organic material

Plastic

Metal

Wood

Glass



OnRobot Eyes

Adding vision to robotic applications has never been easier

TECHNICAL SPECIFICATIONS

Camera Characteristics		
Interface	USB-C 3.x	
Output Resolution	1280 x 1080	
Working distance	400-1000 mm	
Operating Temperature	0 – 35 °C	
IP rating	IP 54	
Eyes Features		
Type of vision system	2.5 D	
Minimum part size	10x10 mm or 15 mm diameter	
Applications Supported	Detection, Sorting	
Mounting options supported	Robot and External	
Reconfigurability when Robot mounted	12 configurations (4 x 3)	
	Around robot's flange	Tilt orientations
	0 - 90 - 180 - 270 (degrees)	0 - 45 - 90 (degrees)
Detection processing time	Typ: 0.5 s	
Detection Repeatability	< 2 mm	
Detection Accuracy	External Mount	Robot Mount
	Typ: 2 mm	Typ: 2 mm
Application and set-up recommendations		
Light conditions	No drastic, instant change	
Reflections and focused light spots	Keep minimal	
Characteristics of objects	Different from background	
Camera with respect to workspace	Looking straight to it	

POWER UP PRODUCTION

- Quickly and easily add vision to robotic applications with one-picture calibration, fast programming and seamless gripper integration
- Affordable, efficient 2.5D vision offers depth perception for varying heights or stacked objects
- Flexible, adaptable vision system with on-robot or external mounting is ideal for almost any collaborative application
- Easily sort, pick and place unstructured applications with high reliability using any robot arm

Applications:



Material Handling



Machine Tending



Plastic



Metal



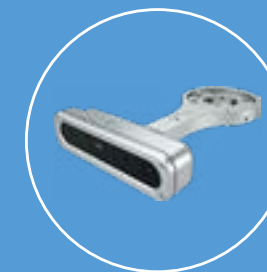
Wood



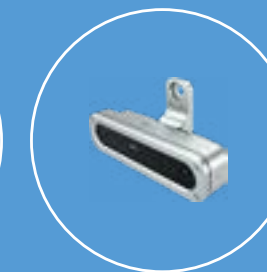
Cardboard



Organic



Robot wrist mount



External mount

OnRobot Eyes

Can be used with products of various sizes and materials, including:



OnRobot Screwdriver Smart screwdriving solution for multiple processes

TECHNICAL SPECIFICATIONS

General Properties		Minimum	Typical	Maximum	Unit
Screw size range		M1.6	-	M6	
Torque range		0.15 / 0.11	-	5 / 3.68	[Nm] / [lbft]
Torque accuracy	If torque < 2Nm/1.47lbft	-	0.04 / 0.03	-	[Nm] / [lbft]
	If torque > 2Nm/1.47lbft	-	3	-	[%]
Output speed		-	-	340	[RPM]
Screw length within full safety		-	-	35 / 1.37	[mm] / [inch]
Shank stroke (screw axis)		-	-	55 / 2.16	[mm] / [inch]
Shank preload (adjustable)		0	10	25	[N]
Safety feature force		35	40	45	[N]
Motor (x2)		Integrated, electric BLDC			
IP Classification		IP54			
Dimensions		308x86x114 12.1x3.4x4.5		[mm] [inch]	
Weight		2.5 / 5.51		[kg] / [lb]	
Screw presenter sizes		M1.6 ; M2 ; M2.5 ; M3 ; M4 ; M5 ; M6			

POWER UP PRODUCTION

- Smart screwdriver easily automates multiple screwdriving processes with no downtime for manual changeovers
- Get the job done right—consistently and faster—with dynamic force control and intelligent error detection
- Expand your collaborative automation possibilities with built-in protective functions
- Get fast and easy deployment with automatic screw-feeding system and OnRobot's easy One System setup for any leading robot

Applications:



Assembly



Plastic



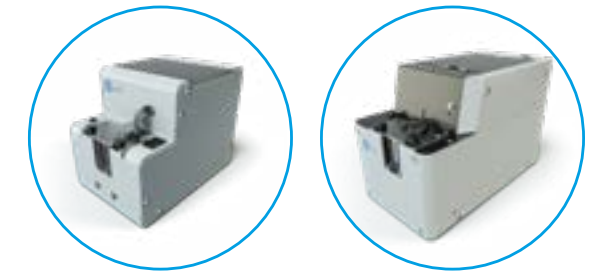
Metal



Wood

Can be used with products of various sizes and materials, including:

OnRobot Screwdriver



OnRobot Sander

Complete surface finishing solution with fast and easy setup reduces complexity

TECHNICAL SPECIFICATIONS

General Properties		Minimum	Typical	Maximum	Unit
Pad diameter		-	-	127 [5]	mm [inch]
Pad height		-	-	9.5 [0.37]	mm [inch]
Orbit size		-	-	5 [3/16]	mm [inch]
Rotation speed		1,000	-	10,000	RPM
Pad type (3M: 20353)		Clean Sanding Disc Pad			
Pad media type		Hookit™			
Pad weight		0.1 [0.22]			kg [lb]
Weight		1.2 [2.645]			kg [lb]
IP rating		IP54			
Dimensions (outer)		87 x 123 x 214 [3.42 x 4.84 x 8.42]		mm [inch]	
Operating Conditions		Minimum	Typical	Maximum	Unit
Sanding power		-	150	-	W
Operation voltage	External voltage	-	30	-	V
	External power	-	150	-	W
	Tool connector voltage	-	24	-	V
	Tool connector power	-	2.4	-	W
Operation temperature		0 [32]	-	50 [122]	°C [°F]
Noise level at 10,000 RPM (3,000 RPM)		-	74 [44]	-	[dB]

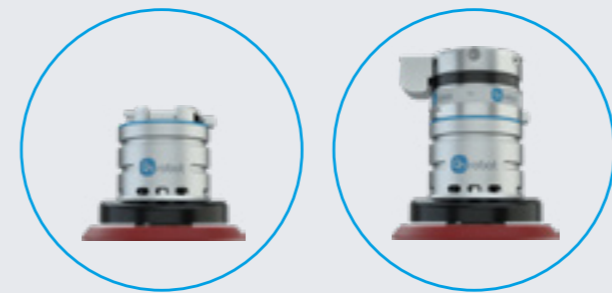
POWER UP PRODUCTION

- Powerful and durable electric sander requires no compressed air, significantly reducing running and maintenance costs
- Cost-effective Grit Changer allows automatic switching between sanding grits without operator intervention for increased efficiency
- Flexible tool can be used on a wide range of part geometries and materials
- Sensing capabilities ensure precise adaptation to surface variations or part misalignment, improves product quality and consistency while reducing scrap
- Eliminates operator fatigue and hazards for easy compliance with local health and safety regulations

Applications:



Material Removal:
Sanding, Polishing, Buffing



OnRobot Sander

Can be used with products of various sizes and materials, including:



Plastic



Metal



Wood



Glass



SP1/SP3/SP5 Gecko Single Pad Gripper

TECHNICAL SPECIFICATIONS

General Properties			Unit
Maximum payload	SP1	1 / 2.2	[kg] / [lb]
	SP3	3 / 6.6	[kg] / [lb]
	SP5	5 / 11	[kg] / [lb]
Preload required	Minimum	SP1: 2.8 SP3: 8.2 SP5: 11.6	[N]
	Medium	SP1: 8.2 SP3: 23.4 SP5: 33	[N]
	Maximum	SP1: 13.3 SP3: 38.6 SP5: 54.4	[N]
Detachment time	100-1000 (dependent on robot speed)		[msec]
Holds workpiece on power loss?	Yes. How long? Potentially days if well centered and undisturbed		
IP Classification	IP42		
Dimensions (HxW)	69 x 71 / 2.7 x 2.8		[mm] / [inch]
Weight	SP1	0.267 / 0.587	[kg] / [lb]
	SP3	0.297 / 0.653	[kg] / [lb]
	SP5	0.318 / 0.7	[kg] / [lb]

Pads general properties		Unit
Material	Proprietary silicone blend	
Wear properties	Depends on surface roughness	
Change-out interval	~200.000	[cycles]
Cleaning systems	1) OnRobot cleaning station 2) Silicone roller 3) Isopropyl Alcohol and lint-free cloth	
Cleaning interval	variable	
Recovery	100%	

POWER UP PRODUCTION

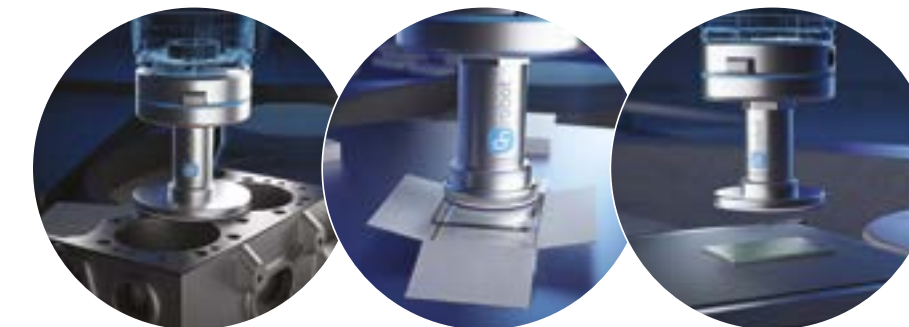
- Compact, lightweight Gecko Single Pad Gripper requires no cables, electricity, air, or programming for **cost-effective, plug-and-play performance**
- Innovative adhesive gripper for flat, smooth, or perforated objects **automates tasks that were previously not possible**
- No-mark gripping even for shiny surfaces means no cleaning step is required, **saving time and improving productivity**
- No requirement for external air supply **reduces noise and dust, lowers maintenance costs, and speeds deployment**

Applications:



Material Handling

Gecko Single Pad Gripper



Can be used with products of various sizes and materials, including:



Pick & Collaborate – helping hand with a sense of touch

The world's first gripper that can detect objects using built-in force/torque and proximity sensors.

RG2-FT TECHNICAL SPECIFICATIONS

General Properties	Minimum	Maximum	Unit
Payload Force Fit	-	2 4.4	[kg] [lb]
Total stroke (adjustable)	0 0	100 3.93	[mm] [inch]
IP Classification	IP54		

Force Sensor Properties	Fxy	Fz	Txy	Tz	Units
Nominal capacity (N.C.)	20	40	0.7	0.5	[N] [Nm]
Noise free resolution	0.1	0.4	0.008	0.005	[N] [Nm]

POWER UP PRODUCTION

- Accurate sensing improves production quality **by reducing defect rate as much as 60% in delicate Pick & Place processes.**
- Easy-to-program sensing **allows robot to act like an operator's third arm, with human-like part hand-offs.**
- Ability to automate insertion tasks **that weren't previously possible can reduce operation costs by 40%.**

Applications:



Machine Tending



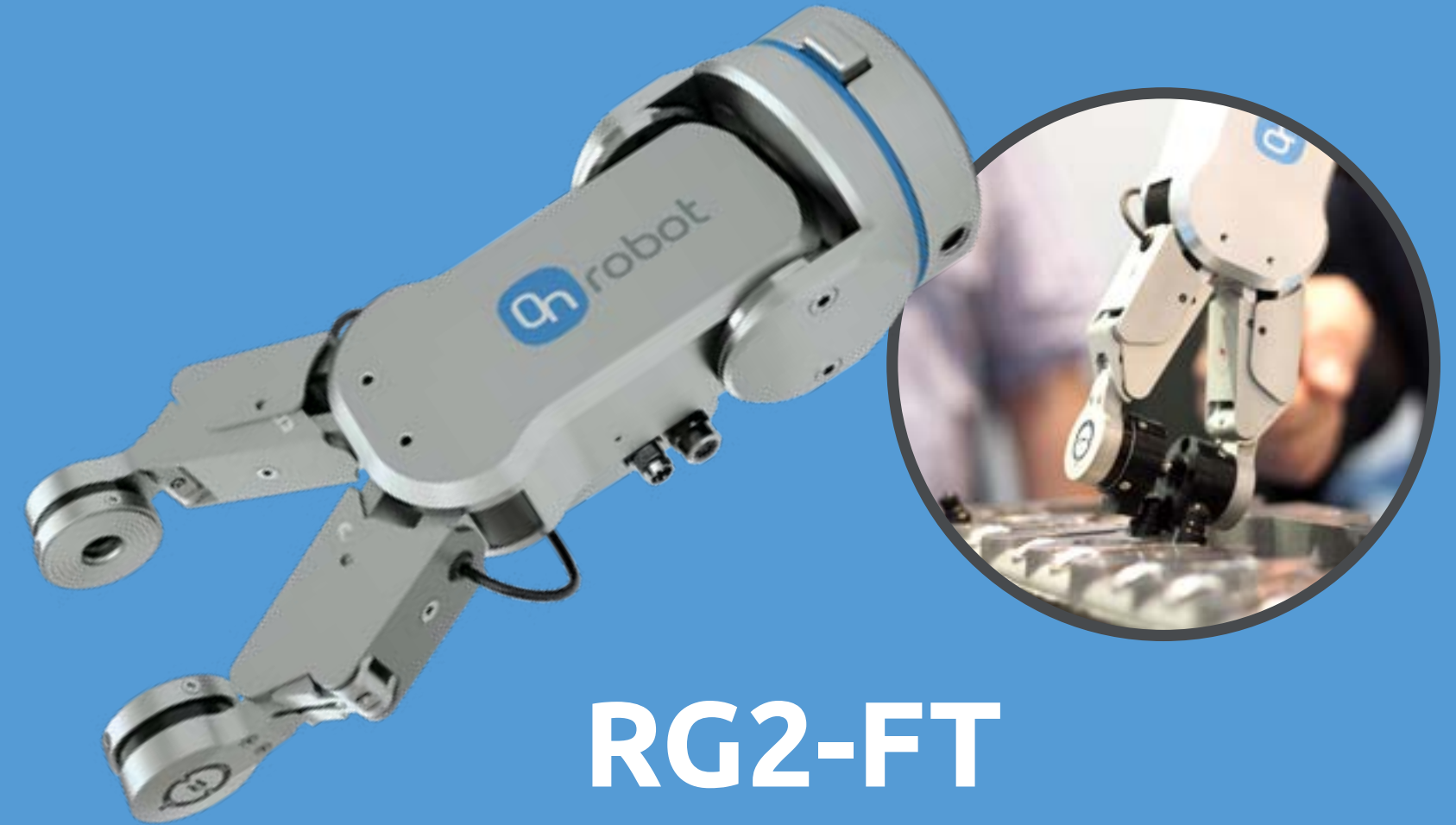
Assembly



Material Handling



Quality



RG2-FT

Can be used with products of various sizes and materials, including:



Plastic



Metal



Cardboard



Wood



Glass

Grab & Go - flexible, adjustable electrical vacuum gripper

VG10 TECHNICAL SPECIFICATIONS

General Properties	Minimum	Maximum	Unit
Vacuum	5 % -0.05 1.5	80 % -0.810 24	[Vacuum] [Bar] [inHg]
Air Flow	0	12	[NL/min]
Payload	0 0	15 33	[kg] [lb]
Recommended workpiece size	10x10 0.5x0.5	500x500 20x20	[mm] [inch]
Vacuum cups	1	16	[pcs.]
Gripping time	-	0.35	[s]
Releasing time	-	0.20	[s]
Vacuum pump	Integrated, electric BLDC		
Arms	4, adjustable by hand, 2 vacuum channels		
IP Classification	IP54		
Dimensions (folded)	105 x 146 x 146 4.13 x 5.75 x 5.75		[mm] [inch]
Dimensions (unfolded)	105 x 390 x 390 4.13 x 15.35 x 15.35		[mm] [inch]
Weight	1.62 3.57		[kg] [lb]

POWER UP PRODUCTION

- Out-of-the-box deployment – **plug into the robot arm and configure the gripper to fit the product – provides fast productivity and ROI.**
- No external air supply required **reduces maintenance costs and speeds deployment.**
- Dual gripping functionality **enables shorter cycle time.**

Applications:



Material Handling



VG10

Can be used with products of various sizes and materials, including:



Plastic

Metal

Glossy Packaging

Glass

VGC10

Compact vacuum gripper for all your needs

VGC10 TECHNICAL SPECIFICATIONS

General Properties	Minimum	Typical	Maximum	Unit
Vacuum	5 % -0.05 1.5	- - -	80 % -0.810 24	[Vacuum] [Bar] [inHg]
Air flow	0		12	[l/min]
Payload	0	-	15 33	[kg] [lb]
Recommended workpiece size	Unlimited, depends on custom arms			
Vacuum cups	1	-	7	[pcs.]
Gripping time	-	0.35	-	[s]
Releasing time	-	0.20	-	[s]
Vacuum pump	Integrated, electric BLDC			
Arms	Replaceable, customizable			
Dust filters	Integrated 50µm, field replaceable			
IP Classification	IP54			
Dimensions (folded)	101 x 100 x 100 3.97 x 3.94 x 3.94			[mm] [inch]
Weight	0.814 1.79			[kg] [lb]

POWER UP PRODUCTION

- Flexible electric vacuum gripper with unlimited customization fits all your application needs
- Small, lightweight gripper is perfect for tight spaces but with plenty of power for objects up to 15kg
- No external air supply needed for reduced maintenance costs and faster deployment

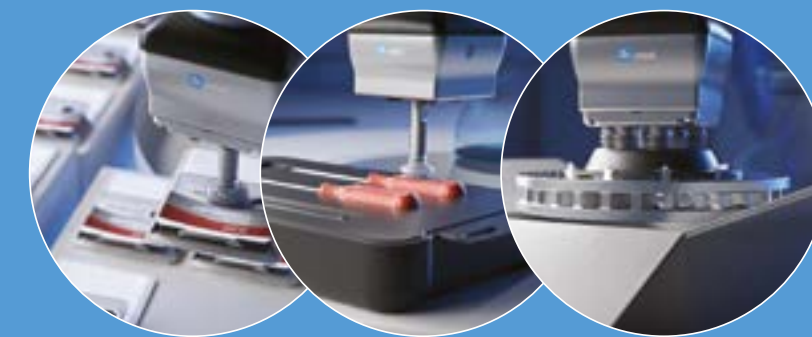
Applications:



Material Handling



Machine Tending



VGC10

Can be used with products of various sizes and materials, including:



Plastic



Metal



Glossy Packaging



Glass



Touch & Go – automation made simple with a sense of touch

HEX-E QC TECHNICAL SPECIFICATIONS

General Properties	6-Axis Force/Torque Sensor		Unit		
	Fxy	Fz	Txy	Tz	
Nominal Capacity (N.C)	200	200	10	5.5	[N] [Nm]
Single axis deformation at N.C (typical)	± 1.7 ± 0.067	± 0.3 ± 0.011	± 2.5 ± 2.5	± 5 ± 5	[mm] [°] [inch] [°]
Resolution (Noise-free)	0.2	0.8	0.01	0.002	[N] [Nm]
IP Classification	67				
Dimensions	50 x 71 x 93 1.97 x 2.79 x 3.66				[mm] [inch]

HEX-H QC TECHNICAL SPECIFICATIONS

General Properties	6-Axis Force/Torque Sensor		Unit		
	Fxy	Fz	Txy	Tz	
Nominal Capacity (N.C)	200	200	20	13	[N] [Nm]
Single axis deformation at N.C (typical)	± 0.6 ± 0.023	± 0.25 ± 0.009	± 2 ± 2	± 3.5 ± 3.5	[mm] [°] [inch] [°]
Resolution (Noise-free)	0.5	1	0.036	0.008	[N] [Nm]
IP Classification	67				
Dimensions	50 x 71 x 93 1.97 x 2.79 x 3.66				[mm] [inch]

POWER UP PRODUCTION

- Flexible sensor extends automation **possibilities to processes that weren't previously possible.**
- Out-of-the-box integration **reduces deployment time for precise insertion tasks from months to days.**
- High-accuracy sensor technology **provides 95% better quality in insertion and assembly tasks.**
- Sensor-based applications speed cycle time **by up to 60% to produce more with the same number of employees.**
- Easy programming gets even **complex polishing tasks up and running in less than a day.**

Applications:



Material Removal



Material Handling



Assembly



Quality



HEX Force/Torque SENSOR

Can be used with products of various sizes and materials, including:



Plastic



Metal



Wood



Glass

Quick Changer & Dual Quick Changer Bracket

With the Dual Quick Changer, you can now use two tools in one cycle, achieving higher utilization of your robots.



DUAL QUICK CHANGER

QUICK CHANGER

Quickly switch between tools to meet changing production needs.

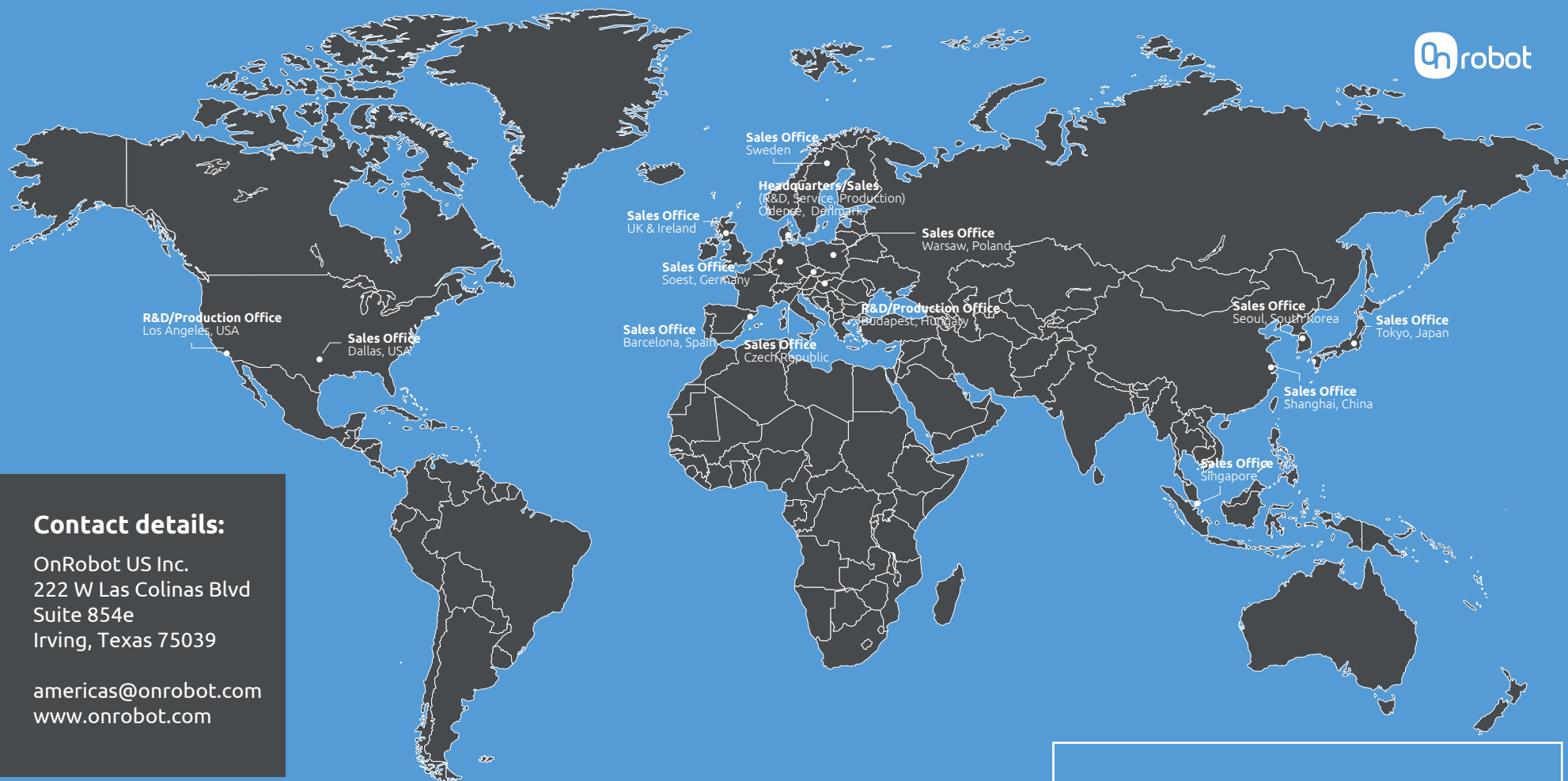
Dual Gripper:

- Dual gripper speeds cycle time and can improve productivity by 50% or more.
- Increased productivity offers faster payback, with ROI in as little as 3 months.

One Stop Shop for Collaborative Applications

All the tools you need at one place to automate more





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Find an OnRobot partner near you

We sell our products through a global network of valued partners – who have the tools, software, inspiration and training to develop any collaborative application their customers can imagine.

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Business Card