One Stop Shop for Collaborative Applications

All the tools you need at one place to automate more

OnRobot

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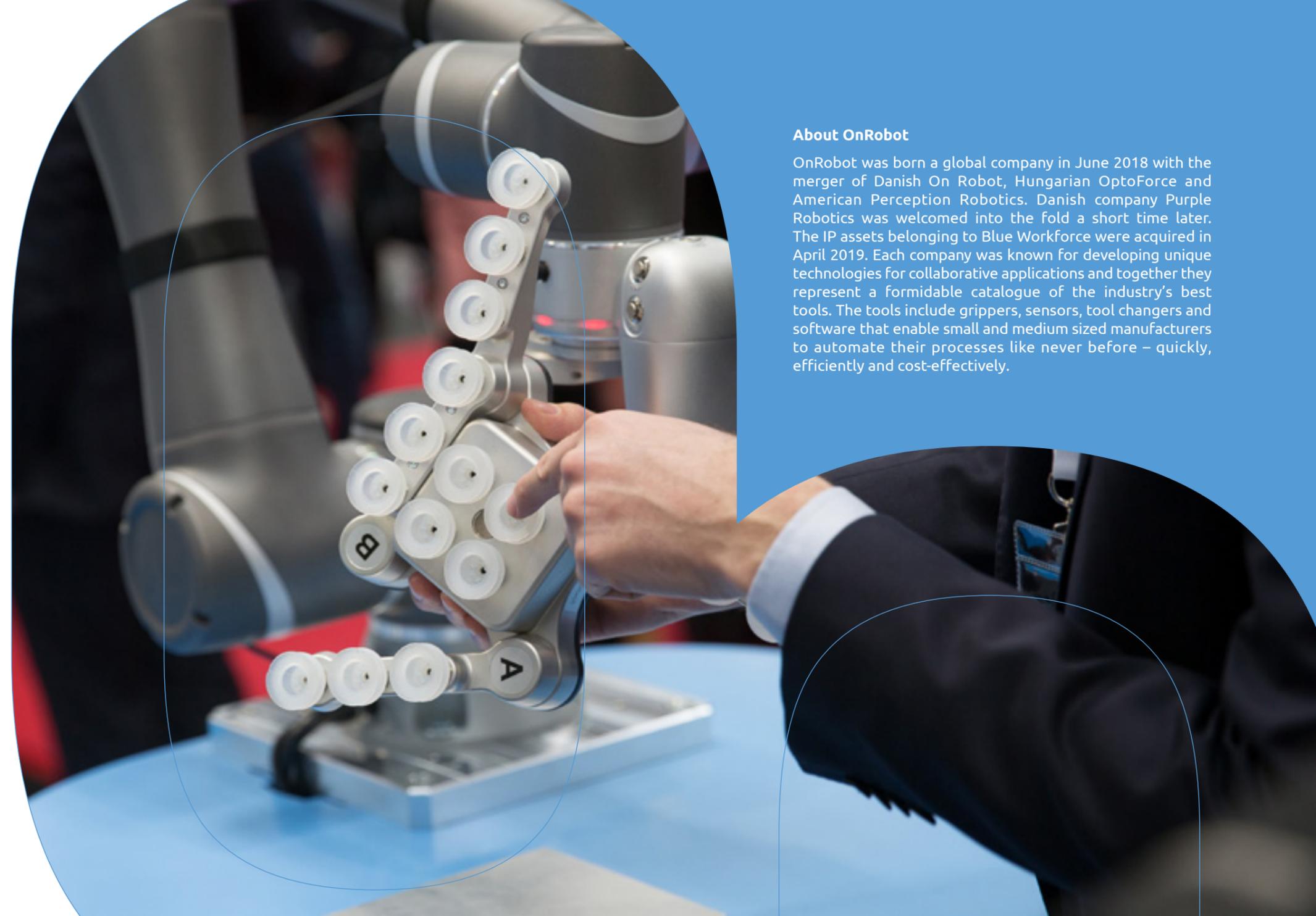
We offer the industry's broadest range of end-of-arm tooling and software solutions for collaborative applications, using a unified mechanical interface that helps manufacturers automate quickly and efficiently. Our innovative, manufacturer-focused approach saves you time and money so you can get on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

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

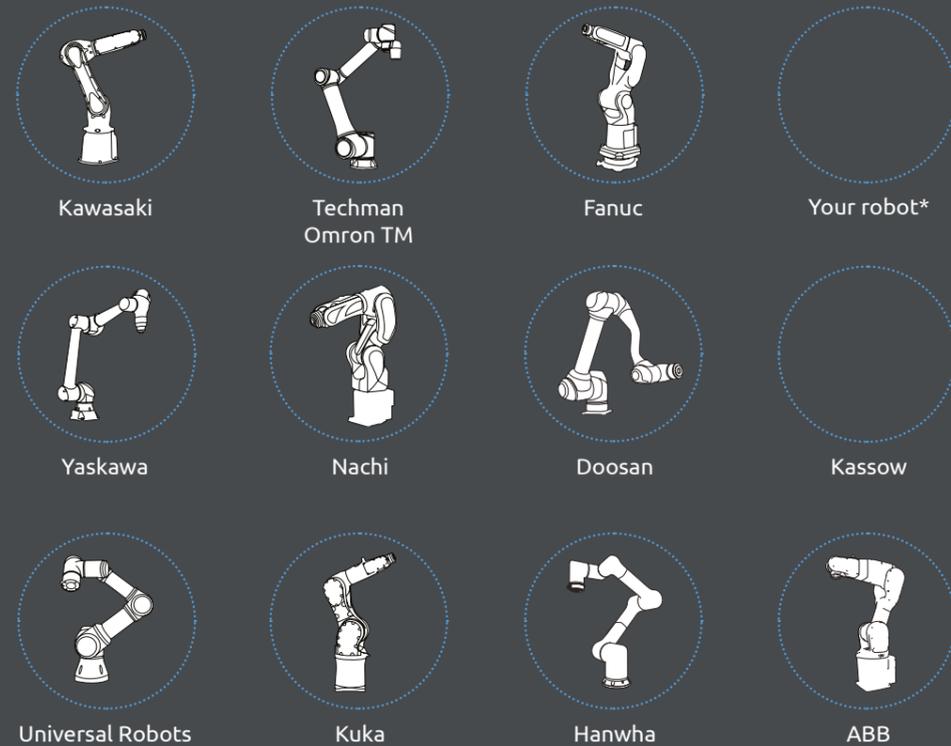**Enrico Krog Iversen, CEO OnRobot**

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.

Kawasaki

Techman
Omron TM

Fanuc

Your robot*

Yaskawa

Nachi

Doosan

Kassow

Universal Robots

Kuka

Hanwha

ABB

QUICK CHANGER

Fits all robots

DUAL QUICK CHANGER

RG2-FT

RG2 / RG6

HEX SENSOR

VG10

VGC10

GECKO SP

UNIFIED PROGRAMMING

Regardless of robot or application, what used to take days will now take hours.

3FG15

SOFT GRIPPER

2FG7

EYES

SANDER

SCREWDRIVER

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

RG2/RG6

Plug & Produce grippers
for multiple purposes

RG2 TECHNICAL SPECIFICATIONS

General Properties	Minimum	Maximum	Unit
Payload Force Fit	-	2	[kg]
	-	4.4	[lb]
Total stroke (adjustable)	0	110	[mm]
	0	4.33	[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	[kg]
	-	13,2	[lb]
Total stroke (adjustable)	0	160	[mm]
	-	6.3	[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

RG2

RG6

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

Plastic   Metal   Cardboard   Glass

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

On robot

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				Unit
Interface	USB-C 3.x			
Output Resolution	1280 x 720			[px]
Working distance	400-1000 [15.75 – 39.37]			mm [inch]
Operating Temperature	0 – 35 [32 – 95]			°C [°F]
IP rating	IP 54			
Weight	0.260 [0.57]			kg [lb]
Eyes Features				**Unit**
Type of vision system	2.5 D			
Minimum part size	10x10 or 15 diameter [0.39x0.39 or 0.59 diameter]			mm [inch]
Applications Supported	Detection, Sorting, Inspection, Landmark			
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	0 - 45 - 90		[degrees]
Detection Repeatability	< 2 [< 0.078]			mm [inch]
Detection Accuracy (typical) measured at 500 mm	External Mount	Robot Mount		
	2 [0.078]	2 [0.078]		mm [inch]
Minimum Inspection Defect Size	5 [0.197]			mm [inch]
Landmark accuracy **	Waypoint distance from Landmark	Minimum error	Typical error	Maximum error	
	200 [7.874]	0.2635 [0.0104]	0.6596 [0.0260]	0.9500 [0.0374]	mm [inch]
	500 [19.68]	0.6586 [0.0259]	1.6490 [0.0649]	2.3750 [0.0935]	mm [inch]
	1000 [39.37]	1.3173 [0.0519]	3.2981 [0.1298]	4.7500 [0.1870]	mm [inch]

POWER UP PRODUCTION

- Adding vision to robotic applications has never been easier, with one-picture calibration, fast programming and seamless gripper integration

- Flexible, adaptable vision system with on-robot or external mounting is ideal for almost any collaborative application

- Affordable, efficient 2.5D vision offers depth perception for varying heights or stacked objects

- Easily sort, pick and place unstructured applications with high reliability using any robot arm

- One-shot detection for multiple objects minimizes cycle time

- Inspect objects using color and contour detection — with or without a robot, and ensure consistent quality

- Automatic landmark enables dynamic working environments and mobile robot setups

Applications:

Material Handling

Machine Tending

OnRobot Eyes

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

Plastic

Metal

Wood

Cardboard

Organic

Robot wrist mount

External mount

OnRobot Screwdriver
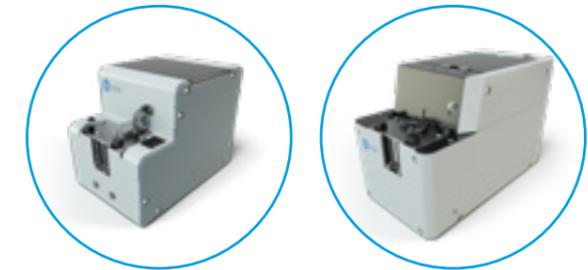### Smart screwdriving solution for multiple processes

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

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 < 1.33Nm/0.98lbft	-	0.04 / 0.03	-	[Nm] / [lbft]
	If torque > 1.33Nm/0.98lbft	-	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			

Applications:

Assembly

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

Plastic

Metal

Wood

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
Ped 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
Operation voltage — External power	-	150	-	W
Operation voltage — Tool connector voltage	-	24	-	V
Operation voltage — 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]

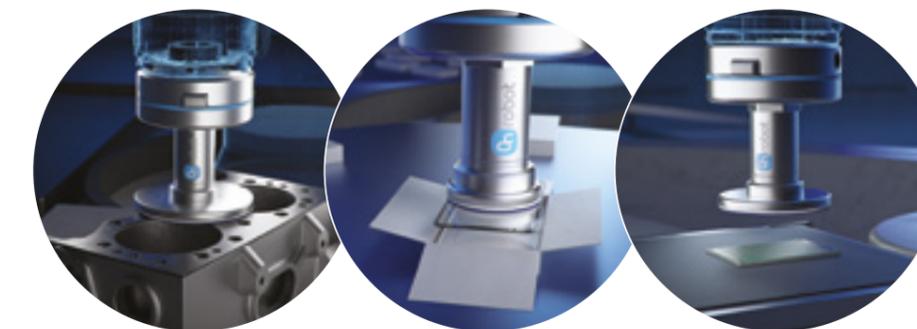| Pads general properties		Unit
Material	Proprietary silicone blend	
Wear properties	Depends on surface roughness	
Change-out interval	~200.000	[cycles]
Cleaning systems	1) OnRobot cleaning station 2) Silicone roller 3) Isopropyl Alcohol and lint-free cloth	
Cleaning interval	variable	
Recovery	100%	

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:

Plastic   Metal   Glossy Packaging   Glass

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:

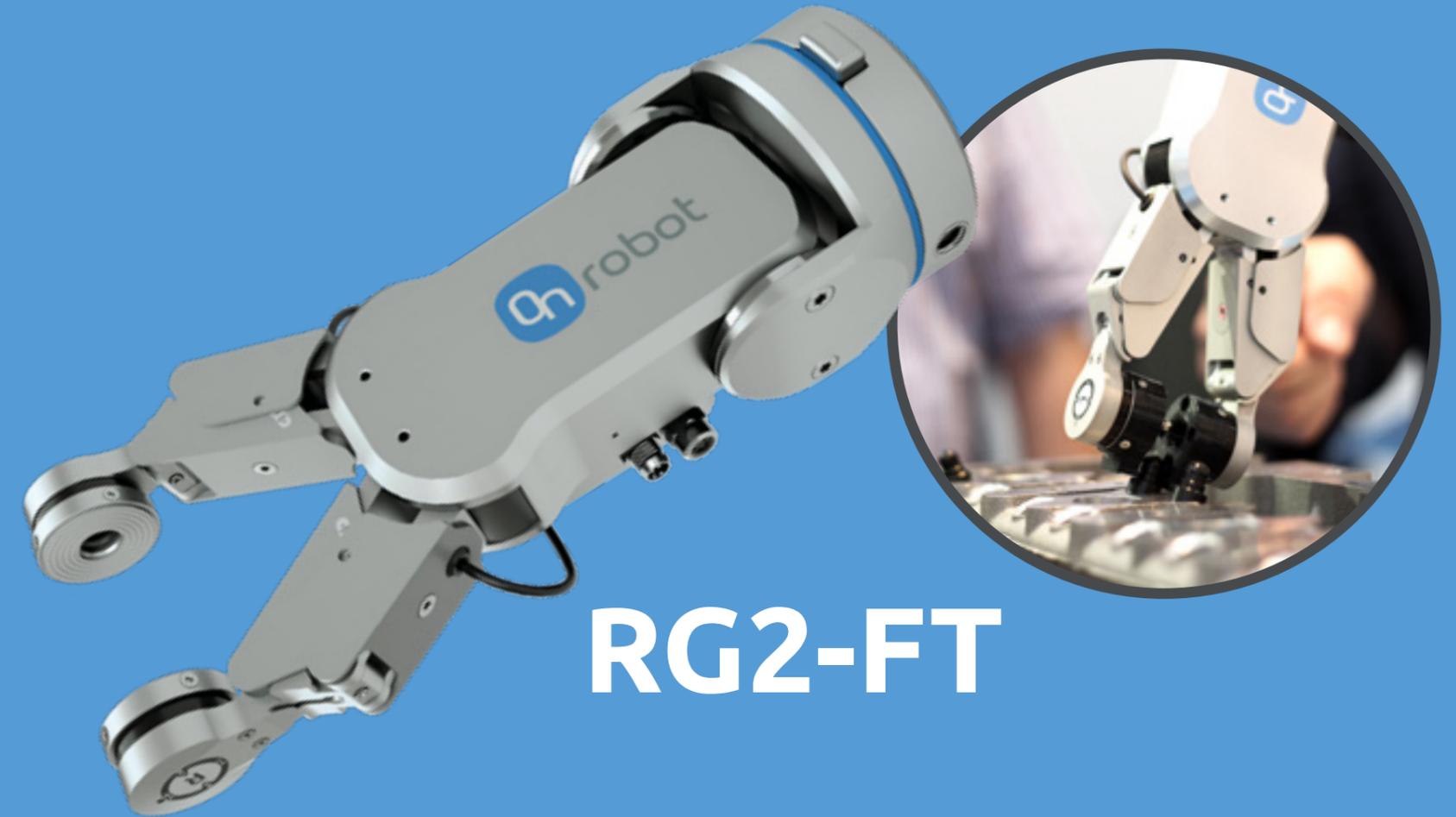Machine Tending   Assembly   Material Handling   Quality

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	[Nl/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

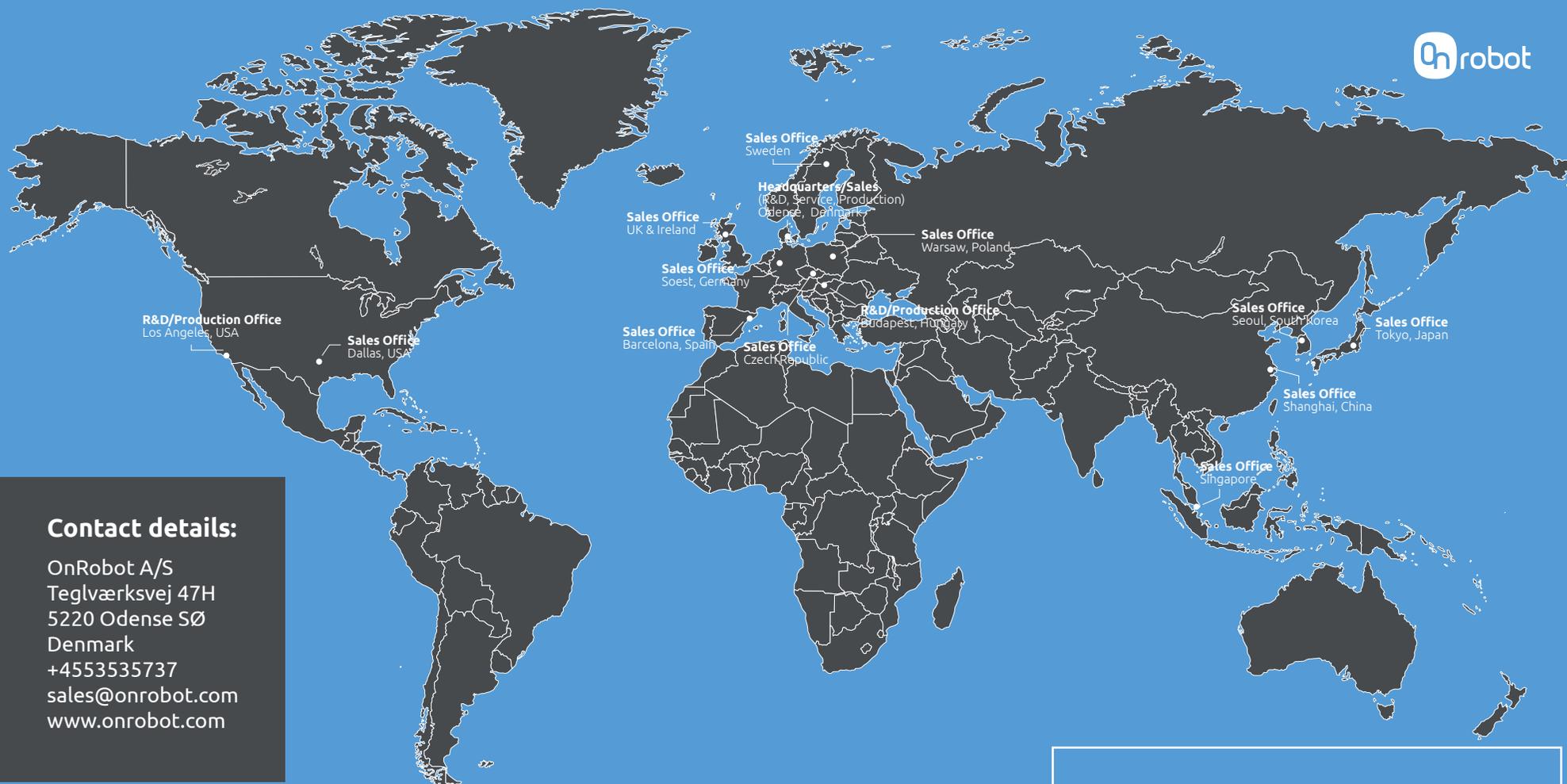Quickly switch between tools to meet changing production needs.

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

Onrobot

Sales Office
Sweden

Headquarters/Sales
(R&D, Service, Production)
Odense, Denmark

Sales Office
UK & Ireland

Sales Office
Warsaw, Poland

Sales Office
Soest, Germany

R&D/Production Office
Los Angeles, USA

Sales Office
Dallas, USA

Sales Office
Barcelona, Spain

Sales Office
Czech Republic

R&D/Production Office
Budapest, Hungary

Sales Office
Seoul, South Korea

Sales Office
Tokyo, Japan

Sales Office
Shanghai, China

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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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https://onrobot.com/en/partners.

Business Card