



OB7 | machine shop

MACHINE TENDING SOLUTIONS

Zero Programming
Automation—Any CNC
Or Shop Machine



**Designed & Built
in America**

UNMATCHED AUTOMATION PRODUCTIVITY, ACCURACY AND SAFETY FOR LESS THAN \$5/HOUR.

OB7 Collaborative Robots bring home the competitive edge for job shops and large machine shops. A game changer for machine shops, OB7 CNC tending robots load blanks and unload finished parts, keeping your machines running 100% of the time. With zero breaks or distractions, OB7 minimizes downtime and ensures consistent quality machine output on your shop floor. OB7 works one, two, or three shifts, gaining up to 24 hours 'lights out' operation.

Simply roll OB7 up to your CNC mill, lathe, or other machine and go. OB7 operates any brand of machine. With zero complicated software programming, OB7 allows you to automate instantly and achieve an immediate return on investment, while opening up new productivity horizons.

*"You're only making money
when you're making chips"*

NO INTEGRATION REQUIRED
INSTALLATION IS FAST AND SIMPLE,
IN AS LITTLE AS A FEW HOURS.

ob7
COLLABORATIVE ROBOTS



Run 24/7 'Lights Out'

Designed to tirelessly run 'lights out' shifts, OB7 loads blanks and unloads finished parts consistently 100% of the time. With zero breaks or distractions, OB7 minimizes down time and ensures consistent, quality output.

Set Up in Under an Hour

Just roll OB7 up and go—no outside integration necessary. Your existing staff can set it up in minutes. Interfacing your machine is easy with dedicated machine tending packages. With OB7, you'll be running production in less than an hour.

No Programming

No programming means no coding, classes or special training needed. Anyone can teach OB7 to do hundreds of complex automation jobs simply and quickly. Just 'show' OB7 and it learns.

Any Mix or Volume

OB7 automates practically any job you can throw at it – from high volume production to short runs & high mix/low volume jobs. Automate as little as 5 parts, then switch to another job in no time. OB7 does it all, precisely every time.

Less than \$5/Hour


OB7 operating cost is less than \$5/Hour (40 Hours/Week) or \$2.50/Hour (80 Hours/Week). All while producing consistent, reliable machine output, reducing scrap and optimizing part quality. OB7 productivity generates positive cash flow in less than 1 week

Tend Any Machine


OB7 is versatile and operates any brand of CNC Mills, Lathes, Laser Cutters, Routers, Plasma Cutters, EDM and Grinders. Common compatible machine brands include: HAAS, Mori Seiki, Hurco, Doosan, Mazak, Okuma and others.

MEET YOUR NEXT WORKER. READY TO WORK IMMEDIATELY.


There's an OB7 Robot to Automate Any Shop Task.




Machine Tending
CNC, Lathe, EDM, Injection Molding, and Others




Welding
Dual Station, Large Format, Robot Welder for Your Table and Welder




Deburring
Automated Parts Deburring




Gluing
Bonding, Sealing, Fluid Dispensing




Quality Control
Testing, Inspection, Measuring




Material Handling
Packaging, Palletizing, Pick and Place



Part Marking
Dot Pinning, Laser Engraving



Sanding
Polishing, Finishing and Sanding



Assembly
Part Insertion, Product Assembly

...and More



7-Axis Extreme Maneuverability *Unmatched by Any 6-Axis Robot*

Like a human arm, seven joints give OB7 robots the flexibility to operate in a confined space and reach around obstructions, such as a machine tool's sliding door. It allows the operator access to do maintenance, setups and tool changes without blocking access to the machine.



Payload: 5 kg
Reach: 1 meter

- OB7**
- The Perfect Automation Cobot
 - 7-Axis Extreme Maneuverability
 - No Programming



Payload: 4 kg
Reach: 1.25 meter

- OB7 Stretch**
- Most popular for lathes, offering slightly more reach than OB7.
 - 7-Axis Extreme Maneuverability
 - No Programming



Payload: 16 kg
Reach: 1 meter

- OB7 Max 16**
- Highest weight capacity in the OB7 series cobots.
 - 7-Axis Extreme Maneuverability
 - No Programming



Payload: 12 kg
Reach: 1.3 meter

- OB7 Max 12**
- Middle weight capacity, ideal for handling heavier parts.
 - 7-Axis Extreme Maneuverability
 - No Programming



Payload: 8 kg
Reach: 1.7 meter

- OB7 Max 8**
- Longest reach capacity in the OB7 series cobots.
 - 7-Axis Extreme Maneuverability
 - No Programming

SHARPEN YOUR COMPETITIVE EDGE. GROW YOUR BUSINESS.

“Since adding six robots, we haven’t let go of a single person. We’ve actually ramped up our workforce.”

—ABACORP

✓ Increase Bottom Line

Increase cash flow in 1 week.

✓ Optimize Throughput

OB7 keeps the spindle turning.

✓ Improve Safety

Let OB7 do the dull & dangerous.

✓ Relieve Employees

Reallocate your staff to higher skilled jobs

✓ Reduce Waste

Optimize quality with precision and accuracy.

✓ Gain A Competitive Edge

Grow your business, meet deadlines and win bids.

LATHE TENDING PACKAGE



COMPLETE OUT-OF-THE-BOX ROBOTIC MACHINE TENDING

OB7 installs on your CNC machine in under an hour. Package includes an OB7 robot with all controls plus all the necessary equipment to add robotic machine tending to your CNC Lathe.

ALL-INCLUSIVE PACKAGE:

- **OB7, Stretch, Max 8, Max 12, or Max 16 Robot**
- **Controller & Tablet**
- **Robot Stand**
- **Assembly & Staging Table**
 - 39" x 28" (OB7, Stretch Robots)
 - 47" x 47" (MAX Robots)
- **DUAL PG2 Parallel Programmable Electric Gripper**
(reduces wait time during part reloading)
- **DUAL Gripper Interface and Adapter**
- **Robot Machine Interface**
- **All Necessary Cables**
- **Remote Interface Relay (x3)**

PACKAGE OPTIONS

- OB Vision
- Air Blow Off Kit
- Remote Interface Relay Module-Single
- Remote Interface Relay Module-Double
- Pneumatic Controller
- Laser Safety Scanner

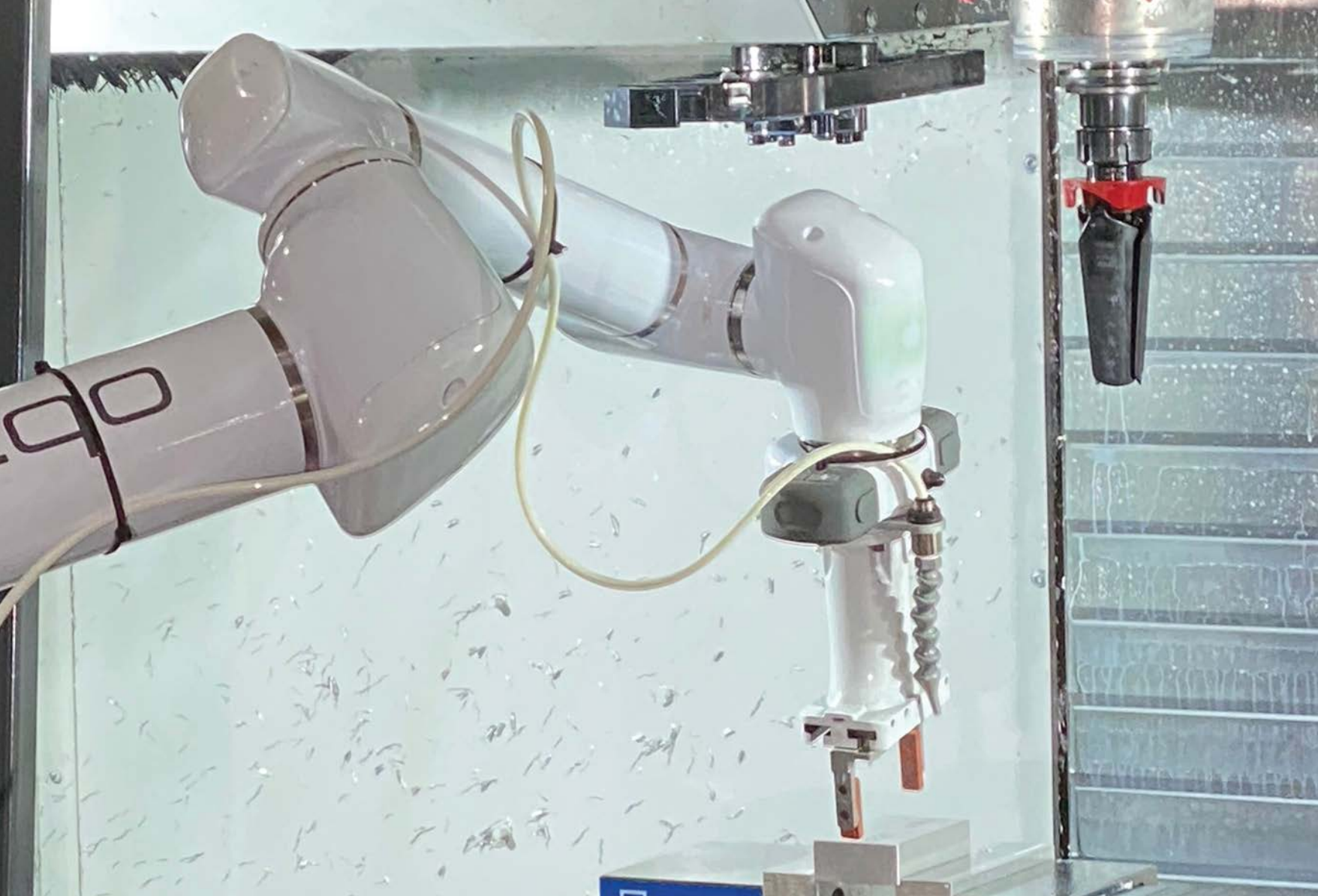
Run Lights Out

OB7 cobots stand in front of your machine, loading blank parts and unloading finished parts, any shift you need.



"We gained many benefits with OB7, including operator happiness, greater productivity of at least 20%, more parts being made, fewer scrapped parts, improved part quality, faster delivery times and more competitive pricing when we quote on new jobs."

—B.I.C. Precision



MILL TENDING PACKAGE



ALL-INCLUSIVE PACKAGE:

- **OB7, Stretch, Max 8, Max 12, or Max 16 Robot**
- **Controller & Tablet**
- **Robot Stand**
- **Assembly & Staging Table**
39" x 28" (OB7, Stretch Robots)
47" x 47" (MAX Robots)
- **PG2 Parallel Programmable Electric Gripper**
- **Robot Machine Interface**
- **AirVise Table Vise AVT4 with 6" Jaws**
Kurt Pneumatic Vise Optional
- **Chip Fan**
- **Air Blow Off Kit**
- **Remote Interface Relay Module-Single**

PACKAGE OPTIONS

- OB Vision
- Air Blow Off Kit
- Remote Interface Relay Module-Single
- Remote Interface Relay Module-Double
- Pneumatic Controller
- Laser Safety Scanner

"Working 'lights out' with OB7 allows us to go home and return the next morning with a job completed, ready to start the next. OB7 has saved us significant time and money, while increasing quality and precision."

—Swiss Productions



Machine Tending Without Programming. OB7 Learns by Doing. Not Coding.

Use the control handle to physically teach OB7 robots without programming or learning any techie jargon. Set details on the Control Tablet with Productive Robotics' famous drag and drop display. Productive Robotics' "No Programming" system allows anyone to easily and quickly automate any shop task, regardless of robotics experience.

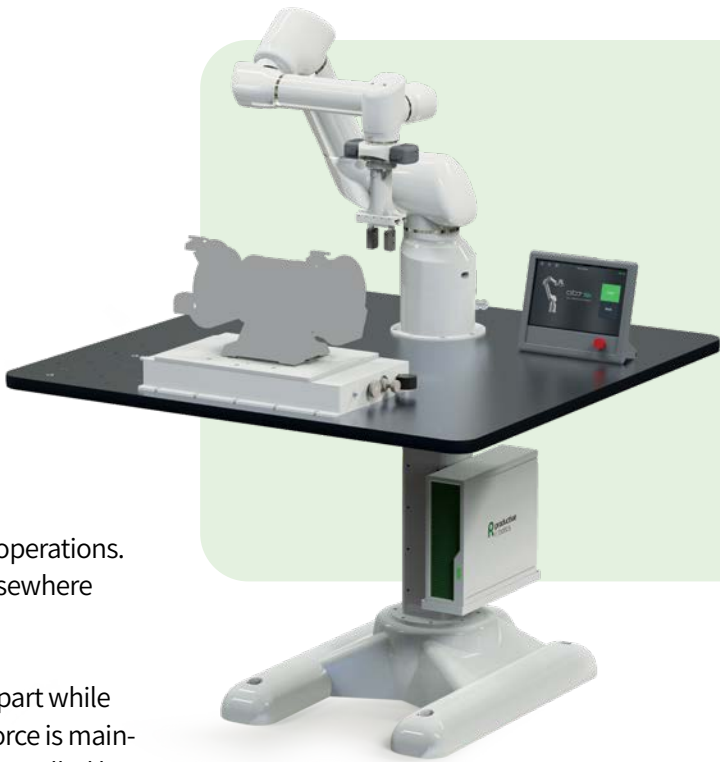


DEBURRING PACKAGE

AUTOMATE DEBURRING IN MINUTES

OB7 provides consistent, nonstop operation in your deburring operations. Begin work in minutes, re-allocate manpower and resources elsewhere and let OB7 run 24/7 if needed.

In operation, the Deburring Stage applies constant force to the part while the OB7 robot guides it along the deburring media. Constant force is maintained as the deburring wheels wear. The deburring motor is controlled by the OB7 robot.



PACKAGE INCLUDES

- **OB7 Robot**
- **Controller & tablet**
- **Robot Stand**
- **47” x 47” Work Table**
- **PG2 Parallel Programmable Electric Gripper**
- **Deburring Stage**
- **Robot Machine Interface**
- **All Necessary Cables**

TECHNICAL SPECIFICATIONS

- | | |
|---|-----------------------------|
| • Force Range | 0-14.9 lb |
| • Air Pressure | 0-60 psi |
| • Max Supply Pressure | 145 psi |
| • Air Consumption (at max supply pressure) | 4.4 L/min |
| • Adjustment Range | 50 mm (2”) |
| • Weight Capacity of Deburring Motor | 22.6 kg (50 lbs) |
| • Dimensions | 332 mm x 594 mm x 73 mm |
| • Parts Weight Capacity | 4 kg (dependent on gripper) |
| • Deburring Force adjustable from: | 1.5 lb to 14.9 lb |

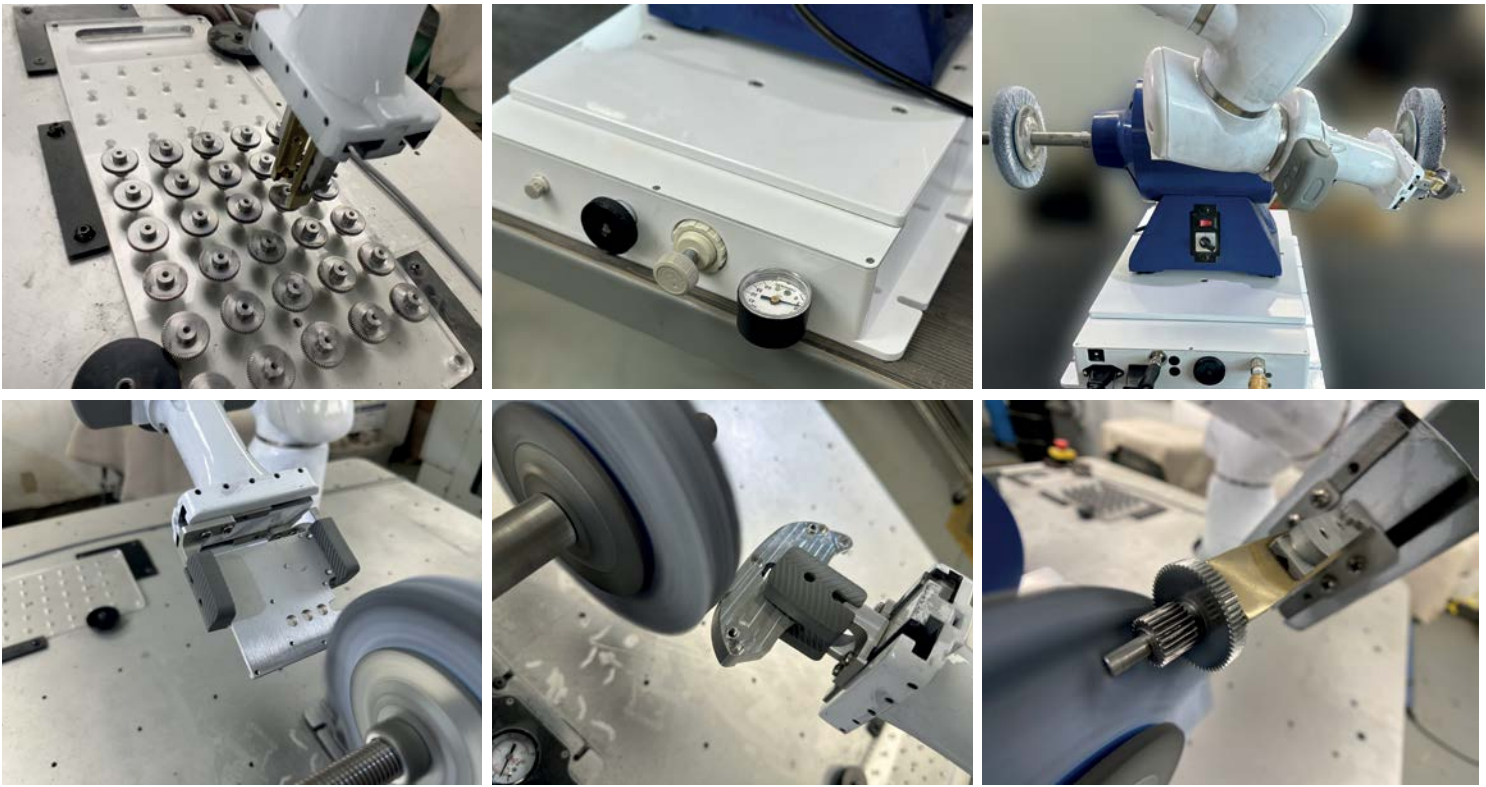
OB7 picks unprocessed parts from grid stages and returns deburred parts to the grid when complete.

As the deburring wheels wear, the Deburring Stage adjusts automatically while continuing to apply a constant force as parts are processed.

Multiple density deburring media can be installed for multi step deburring or doing different areas of a part with different media.



- **Mounts Most Common Bench Top Grinder Motors**
- **Automatic Adjustment as Media Wears**
- **Any Standard Deburring Media (Wheels) Can Be Used**



From simple to complex parts, OB7 robotic deburring removes inconsistency and drudgery.

Speed, number of passes, and over 360 degrees of rotation can all be applied with ease, and with 7 axis, OB7 can maneuver to suit more complex shapes.

Tight spots, gears and more are all quick to teach OB7. Simply show OB7 the number of passes through it's learning mode.

Technical Specifications

Specifications subject to change without notice.



	OB7	OB7 Stretch	OB7 Max 16	OB7 Max 12	OB7 Max 8
Payload	5 kg (11 lbs)	4 kg (8.8 lbs)	16Kg (35.2 lbs)	12 kg (26 lbs)	8 kg (17 lbs)
Reach	1000 mm (39.3")	1250 mm (49.2")	1000 mm (39")	1300 mm (51.1")	1700 mm (66.9")
Weight	22 kg (58 lbs)	22 kg (58 lbs)	58 kg (128 lbs)	58 kg (127 lbs)	58 kg (128 lbs)
Robot Mounting Flange	220 mm (8.6")	220 mm (8.6")	250 mm (9.8")	250 mm (9.8")	250mm (9.8")
Power Consumption speed/payload dependent)	90—650 W	90—650 W	90—1,000 W	90—1,000 W	90—1,000 W

All OB7 Robots

Maneuverability	Unmatched 7-Axis flexibility
Programming	No programming. All OB7 robots learn by demonstration.
Repeatability	+/- 0.1 mm (.004")
Speed	0-2+ m/sec
IP Class	IP 61
Joint Ranges	+/- 360° (all)
Gripper Mounting Flange	ISO 9409-1-5 0-4-M6
Working Temperature	0—37C (32—100F)
Power Source	100—240 VAC 50—60 Hz
Safety	Speed and Force Limited
Linear Speed	2 m/sec Max (dependent on position)
Noise Level	Quiet (dependent on speed and payload)
Mounting Orientation	Vertical (table/ceiling). Horizontal (wall).
Cable Length	1 meter, 5 meters (3 ft, 16 ft)

Control Computer

IP Rating	IP 30
Dimensions	123 mm x 396 mm x 373 mm (4.8" x 15.5" x 14.6")
Communication (Hardware)	Ethernet 100 MB
Protocols	Ethernet IP, TCP/IP, Modbus
Power	100-240 VAC 50-60 Hz

Control Tablet

IP Rating	IP 41
Dimensions	292 mm x 213 mm (11.5" x 8.4")
Connection	Ethernet 100 MB
Cable	5 meters (15 ft)

Robot Stand

Base Dimensions	780 mm x 597 mm (30.7" x 23.5")
Robot Base Mounting	882 mm (32.7") Height
Weight	73.5 kg (162 lbs)
Casters	4
Leveling Feet	4
Mounting	Included for Control Computer

Assembly Table

Dimensions	702 mm x 902 mm (27.6" x 35.5")
Table Height	914 mm (36")
Work Fixture Registration Holes	6 mm on 100 mm centers (metric model) 1/4" on 4" centers
Work Fixture Hold Down Holes	M6 on 100 mm centers (metric model) 1/4-20 on 4" centers
Table Surface Material	6061-T6 Anodized Aluminum
Weight	23 kg (51 lbs)

General Equipment Interface

Robot Connection	Ethercat RJ45
Power Supply	24V 2A
Digital Input Ports	8 Optically Isolated
Digital Output Ports	8 Relay isolated, NC & NO
Analog Input Ports	8
Dimensions	253 mm x 125 mm x 37 mm (10" x 5" x 1.5")

PG2 Gripper/Dual Gripper

Tool Plate	Standard ISO Mount
Travel	92 mm
Gripping Force	25—140 N
Full Travel Close/Open Time	1 Second
Force Control	Set by the robot
Open/Close Positions	Set by the robot
Grip Range	92 mm Extendable to 175 mm
PG2 Gripper Weight	1 kg (2.31 lbs)
DUAL PG2 Gripper Weight	2.1 kg (4.62 lbs)

Deburring Stage

Force Range	0-14.9 lb
Air Pressure	0-60 psi
Max Supply Pressure	145 psi
Air Consumption (at max supply pressure)	4.4 L/min
Adjustment Range	50 mm (2")
Weight Capacity of Deburring Motor	22.6 kg (50 lbs)
Dimensions	332 mm x 594 mm x 73 mm
Parts Weight Capacity (dependent on gripper)	4 kg
Deburring Force Adjustable From;	1.5 lb to 14.9 lb

Direct Factory Support

Our Robotics Experts are here to help with all your questions.

Call Us: 1-805-244-9300

+1 (805) 244-9300
sales@productiverobotics.com
1035 Cindy Lane
Carpinteria, CA 93013 USA
productiverobotics.com

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www.productiverobotics.com

Productive Robotics

sales@productiverobotics.com

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