

PerfectEdge 20-10

Robotic Accuracy ■ Industrial Strength



Isn't it time you had the perfect edge? PerfectEdge™ robotic finishing solutions meet the challenges of your tight tolerance chamfering and deburring requirements with a complete, full function system, while offering a non-touch teach method of programming. That's right! Off-line programming driven by your part data. What could be more perfect?

PerfectEdge was designed in collaboration with Arrow Gear, one of the leading high precision gear manufacturers worldwide. With 75 years experience in manufacturing high tolerance gears for the aerospace and commercial aircraft industry, Arrow Gear has developed patented finishing tools and finishing methodologies that are incorporated into the PerfectEdge platform.

HIGHLIGHTS

Easy Setup

- Designed on a common base with fork pockets for easy deployment or relocation.
- Sized to fit in a standard sea-freight shipping container.
- Fume and particle extraction system.
- Full safety enclosure.

Easy Programming

- Industrial PC for HMI and off-line programming functions.
- Menu-driven material removal software.
- Motoman Robotics' powerful G-Code/Points Importer off-line programming software, drives the robot from your part data.

System Features

- Capacity to 20 in. diameter by 10 in. high cylindrical parts.
- Eight-slot protected tool holder.
- Motoman® DX1350D, six-axis industrial deburring robot.
- MP2310iec machine controllers; Yaskawa Sigma-5 servos; EtherNet I/P, Modbus/TCP and web server diagnostics.
- Yaskawa servo-controlled precision indexer with 16-in. hollow chuck for fixturing shafted gears.
- Alfred Jaeger S80-K450.42S5 spindle provides the muscle, speed control and holding torque to perform the most demanding deburring and finishing tasks.

Safety Features

- Enhanced dual-channel E-Stop functionality, integrated speed monitoring, manual brake release for the robot arm. Full safety enclosure with electrically interlocked access doors.
- Meets all ANSI safety standards.

Customer Satisfaction

- Long life, chatter-free deburring and chamfering tools patented by Arrow Gear.
- 24/7/365 technical and field service support, industry-leading warranties and maintenance protection plans.
- Fully warranted worldwide by Yaskawa's extensive direct service network.



YASKAWA MACHINE CONTROLLER and SIGMA-5 SERVO INDEXER DRIVE



MOTOMAN DX1350D ROBOT PROVIDES INDUSTRY-LEADING PART FINISHING

TOP 3 REASONS TO BUY!

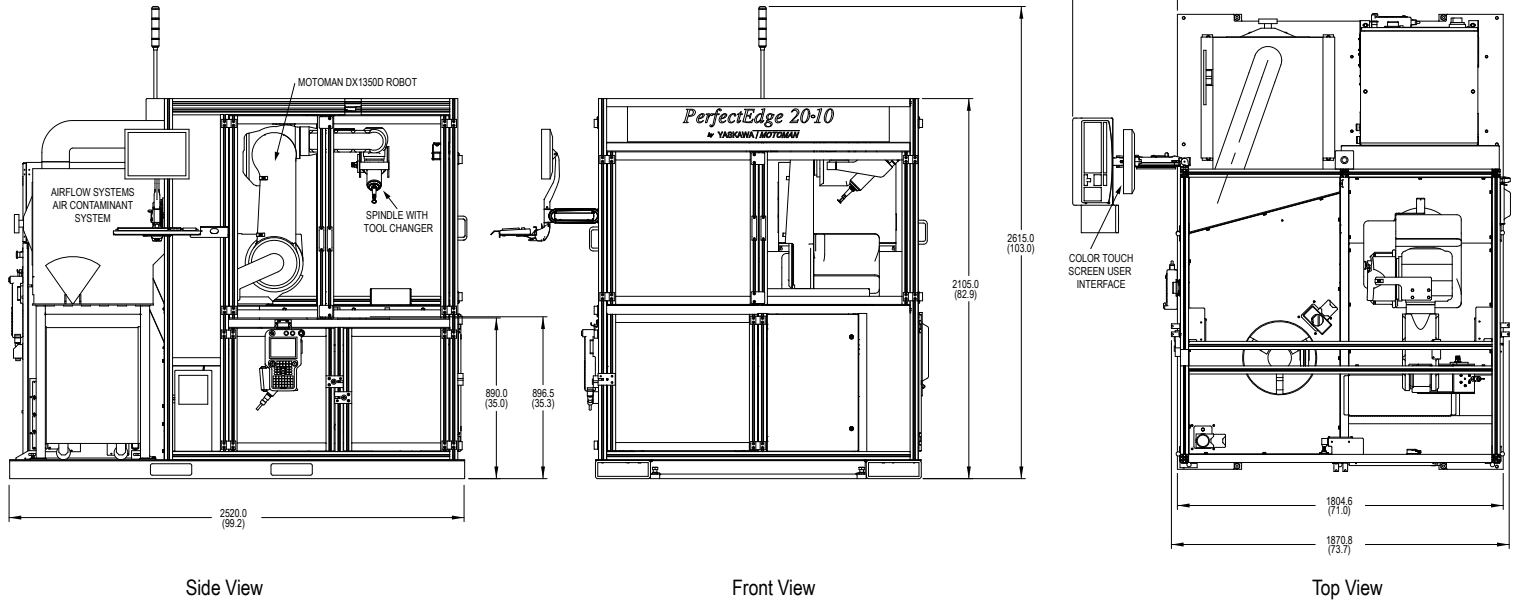
- Consistent predictable results, part after part
- Environmentally safe – particle and fume extraction included
- Reduced scrap rates due to elimination of operator fatigue

FINISH STRONG

with PerfectEdge

A cost-effective, efficient solution for finishing, chamfering and deburring your critical parts. In a complete, low risk package from the industry leaders in finishing solutions.

DRAWINGS



SPECIFICATIONS

DX1350D Robot	35 kg (77.2 lb) payload In-line, 6-axis, articulated design 1,355 mm (53.3") reach at P-point ±0.06 (±0.002") repeatability	PerfectEdge Deburring Package	Liquid cooled Alfred Jaeger S80-K450.42S5 spindle with pneumatic tool changer Koolant Kooler JT250 chiller Airflow Systems DCH-1 dust collector
DX100 Robot Controller	Programming pendant w/single point of control Graphic input of parameters Large 5.7" color touch screen Menu-driven application software Memory: 200,000 steps, 10,000 instructions Password protection: 4 levels, 100 users Built-in PLC capability Ladder logic editing/monitoring displays Compact flash or USB backup Built-in Ethernet port	Collet	10D (10 mm max. tool shank diameter)
		Cell Control	Yaskawa MP2310iec machine controller Yaskawa Sigma-5 servo motor
		Indexer	Yuasa DMNC-400 rotary table 500 kg (1,102.5 lb) maximum load 400 mm (15.7") turning diameter 15-second position accuracy ±2-second position repeatability 11.1 rpm maximum speed Center through-hole for tooling utilities 350 kg·m ² maximum machining force
Machine Interface	3.1 GHz processor 19" Planar touch screen monitor Windows® XP Pro (SP3)	Software	G-Code Converter EG Points Importer EG Touch screen user interface
Weight	2,560 kg (5,644.8 lb)	Total Safety Environment (in compliance with ANSI/RIA R15.06-1999 and Canadian safety standards.)	Pilz safety controller Safety-rated, tamper-resistant interlocks Single point of operator control Barrier guarding Cycle start button interlocked w/safeguards Interlocked doors on each side

DEBURRING OPTIONS

- Tool expansion up to eight tools
- Cutting wheels
- Wire brushes
- Chamfering tools
- Deburring tools