



AUTOMATED CASTING FINISHING CELLS



Foundry-duty construction for durability in rugged environments
Standard models and additional custom options are available



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FOXALL®

Automated Casting Finishing Cells

Our experience and expertise in providing robotic solutions for casting cut-off and finishing enables the **Foxall®** Automated Casting Finishing Cells to provide fast, reliable, consistent product finishing.

The cell system HMI interface can log and store useful production data, e.g. part numbers, quantities produced, and wheel changes. These can be accessed via the company network system if required.

Vulcan Control

Vulcan has engineered rock solid reliability and operator friendly functionality into a simple touch screen display. The Human Machine Interface (HMI) ease of use enables an operator to be trained from novice to production line ready in a matter of hours. The HMI controls job selection by loading on the correct program for each casting using a simple bar-code; it also monitors the **Foxall®** and operator performance recording production

numbers and cycle time. The **Foxall®** can be interlinked into the Factory LAN network enabling production staff to monitor the machine without leaving their desk.

Foundry-Duty Robot & Spindle

The success of the **Foxall®** design is due to the adaptable robust design using only proven technology. The core component of the **Foxall®** is a Foundry Protection package Robot. The robot gives maximum accessibility to the casting, with precise control giving a consistent quality finished product. Process consistency provides significant reduction in scrap rates.

The robot is equipped with the latest in spindle technology with HSK tool change giving total control over cutting tool speeds and feeds and enabling the user to accurately monitor cutting tool life and performance. The **Foxall®** is not, as with other finishing machinery, limited to one or two tools. The unit can be equipped with a tool rack and active tool change.

These tools are then selected within the robot program giving the **Foxall®** the ability to multi-process. The rack can be fitted out with super abrasive wheels and burrs, standard abrasives and cut-off blades in any combination.

Dual Fixture Table

Another successful feature of the **Foxall®** is the main rotary table, which has two fixture indexers mounted on each side. The operator may remove, inspect, stack and load another casting onto the fixture on one side, while on the other side of the table the robot is processing a casting. The Rotary table provides an efficient operating system by allowing the robot to continually process product.



Standard Features



Grinding Tools

Super abrasive (standard) or bonded abrasive media



Cutting Tools

Super abrasive, reinforced abrasive, carbide blades/cutters



Part Fixturing

Flexible fixture plate on +/- 90 degree rotary indexer with center clamping



Part Material

Ferrous & Non-ferrous



Degree of Protection

Robot - Foundry IP67 Panel - IP54



Rotary Load/Unload

Two-position turntable with dual rotary part fixtures



In many applications an operator is able to keep two or more machines operating. Another advantage of dual fixturing is the ability to run off two parts if required simultaneously, Side A and Side B may be set-up to finish two different parts. The HMI interface enables the operator to load different fixturing then scan in the corresponding barcode, as the operator tables indexes in and out the HMI loads the relevant procedure to finish the appropriate part automatically.

TRU-TEACH®

To complement the **Foxall®** development Vulcan has also produced an off-line programming suite **Tru-Teach®**. This off-line package is used to “teach” robot coordinates in the comfort of your office while the **Foxall®** is in production, eliminating labor consuming programming and production down time. The program produced on

the **Tru-Teach®** package is then simply uploaded into the **Foxall®** and any minor adjustments can be made in a fraction of the time required to teach using the robot teach pendant. Programs are generally added during planned maintenance and when uploaded are recallable via the HMI at any time.

Optional Tool Change

The **Foxall®** can be equipped with automatic tool change. Automatic tool change enables the **Foxall®** to change tools as required to utilize grinding wheels, burrs and cut-off wheels to complete a process. The ability of the **Foxall®** to complete many process in one operation removes multiple handling of a product reducing labor costs and work in process inventories. This is very important when running a “just in time” operation and maintaining lower stock levels.



| Model No. | Part Capacity | Work Cell Dimensions | Working Envelope | Spindle |
|-----------|---------------------|--|----------------------------|---------------|
| 424FS | 100 lbs (45 kg) | 176 x 82 x 100 in (4470 x 2085 x 2540 mm) | 24in x 15in (610 x 380mm) | 20 HP (15 kW) |
| 436FS | 250 lbs (115 kg) | 225 x 100 x 116 in (5715 x 2450 x 2950 mm) | 36in x 25in (915 x 635mm) | 20 HP (15 kW) |
| 636FS | 250 lbs (115 kg) | 225 x 100 x 116 in (5715 x 2450 x 2950 mm) | 36in x 25in (915 x 635mm) | 32 HP (25 kW) |
| 652FS | 2,200 lbs (1000 kg) | 288 x 154 x 160 in (7315 x 3912 x 4064 mm) | 52in x 36in (1320 x 910mm) | 32 HP (25 kW) |
| 752FS | 2,200 lbs (1000 kg) | 288 x 154 x 160 in (7315 x 3912 x 4064 mm) | 52in x 36in (1320 x 910mm) | 40 HP (30 kW) |

*Features and options subject to change without notice



Use your smart phone and scan this QR code to get more info and video of Foxall® Casting Cells!

AUTOMATED CASTING FINISHING CELLS

The Complete solution to all your ferrous and non-ferrous finishing needs.

Features Include:

- Repeatability
- Accuracy
- Flexibility
- Rapid Material Removal Rates
- Minimal Waste
- Small or Large Runs
- Quick-change Part Fixtures
- Fixtures Recognition
- Maximized Media Usage
- Reduced Work in Progress
- Two-position rotary turntable



Options:

Off-line Programming

- Digitizer with Tru-Teach® software
- Off line programming using 3D models

Tru-Path™

- Quick adjustment of grinding paths on HMI

