

ROBOT SYSTEMS

W60 FlexWasher

Cleaning, Washing & Deburring



W60 FlexWasher™ is unparalleled cleanliness with robotic precision. FlexWasher™ technology combines the durability of a single ABB Foundry Prime2 robot and the industry proven part cleaning methods integrated into a complete system.

ABB Deburr/Wash Process

The FlexWasher™ technology is based on a common platform capable of handling unique part types with varying sizes and complexity in geometry, which are processed using precise movements to achieve the optimal level of cleanliness via a workpieces specific program.

Workpieces are deposited into the pre-rinse chamber where they are processed with low pressure flood type washing. The Foundry Prime2 robot then removes the part from the pre-rinse chamber via an opening provided by a vertical door. While the robot process the part, another part is place in the pre-rinse chamber and is flood washed. When the robot completes the process the dry chamber door opens and the part is place in the dry chamber. The robot then returns to the pre-rinse chamber to retrieve another pre-washed part. This allows parts to be processed in each stage to help reduce cycle time. The FlexWasher™ is capable of replacing traditional single-path equipment with historically lower reliability. It's flexibility offers a greater potential to retool and or reuse for futures programs, with increased investment efficiency.

Main Features

- Flexible system'
- Energy efficient
- Robust life cycle performance
- High level cleanliness

Additional Features/Benefits

- Programmable to multiple part versions/styles
- Systemically allows parallel path production
- Compact floor plan
- Low utility use
- Self contained system
- Quiet versions 77dBa

Applications

(Automotive/Aerospace)

- Engine blocks
- Cylinder heads
- Crankshafts
- Transmission cases
- Valve bodies
- Axle housing
- Axle tubes
- Stator

EQUIPMENT SPECIFICATIONS

Outside Dimensions of the system approx:

- W60G (LxWxH): 9500mm x 4800mm x 4000mm
- Gantry clearance travel height from floor: 2500 mm
- W60C (LxWxH): 8500 mm x 4800 mm (not including ext. conv.) x 4000 mm
- W60M (LxWxH): 11000mm x 5500mm x 4000mm
- W60R (LxWxH): 8500mm x 4800mm x 4000mm
- Machine Dry Weight: approx. 16,000 kg
- Connected electrical load: approx. 90 kVA
- 200A Bus Drop Fused at 175A recommended

BASIC CELL

Pre-Rinse Chamber

- General rinse
- Static part specific fixturing

Deburr Chamber

Robot—ABB IRB6640

Foundry Prime2 Industrial Robot

- Robot capacity—235kg
- Robt reach —2.55m

High pressure pump Assembly

- System pressure
- Deburr operating range—300-600 bar
- Wash operating range—135-200 bar
- Intermediate operation range—15-25 bar

Dry Chamber

Static part specific fixturing

Regenerative air dry

Filtration System

Vacuum filtration local mode operation

Mist Collection System

External to plant

load/unload

Gantry

OPTIONS

Pre-Rinse Chamber

Part specific Dedicated rinse

Deburr Chamber

High Pressure Wash/Deburr

- Rotor nozzles | general/external
- Straight jet/Lance | internal/blind product features
- Probe | Long bored holes/capillaries
- Stationary nozzle manifold

Blind Hole Water Evacuation Push nozzles

Push/pull nozzles

Dry Chamber

- High volume air
- Vacuum Dry
- Part rotating fixture

Mist Collection System

- Central
- Internal to Plant

Load/unload

- Conveyor
- Robot
- Manual

Contact us

ABB Inc.

1250 Brown Road.

Auburn Hills, MI, 48326 USA

Phone: +1 248-391-9000

Fax: +1 248-391-7290

E-Mail: larry.blanchard@us.abb.com