

CNC Turret Style, Open Air and Submerged, Ultra High Pressure System

The JCC 421 UT is a full specification wash and deburring system, that illustrates the capabilities of Sugino.

The system can wash/deburr at up to 500 bar in its standard form and over 1000 for special applications.

The system is able to blast contamination, burrs and casting flashing away with its powerful open air jetting. The system also jets complex shapes when submerged which sets up rapidly pulsing cavitation from the renowned piston pump, flushing out complex galleries.

The robust and durable CNC style XYZ column, coupled with a turntable, allows full access to the component surface.



◀ Check out our video



Improved cleanliness

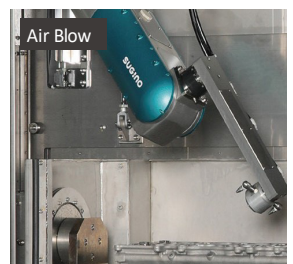


Ultra high pressure up to 1,000 bar with sub 100 micron accuracy, gives unbeatable cleaning power.

Increased flow rate at low-pressure washing has improved the ability to remove contaminants on the surface of the workpiece.

Improve productivity by integrating processes

This washing machine simultaneously achieves both submerged cavitation washing and target air blowing using a column robot. Contributes to process integration and space saving.



Significant reduction in cycle times



The performance of the XYZ column and NC rotary table has been improved, and thus greatly reduces the cycle time.

- Rapid Feed Rate: 25%UP
- Acceleration: 70%UP

▼
Cycle time reduced by 30%

*Compared to conventional machines

RECOMMENDED USE

Washing and deburring of motor covers, stator housings and inverter cases for electric or hybrid vehicles.

Washing and deburring of cylinder heads and cylinder blocks. Removal of chips in the water jacket.

Washing and deburring of large aluminium cases such as transmission cases.

Multiple simultaneous washing and deburring of small parts such as valve bodies and ABS control units.

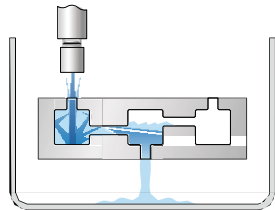
Open air and submerged washing thoroughly cleans complex components

The “U-JET” submerged washing sprays high-pressure water jet in submerged conditions. This can clean the entire inside of a workpiece with a complicated shape. By immersing the workpiece in water, swirling currents are generated even in intricately shaped areas, so there are no blind spots. It is ideal for removing chips from workpieces with complicated shapes, such as water jackets and oil galleries.

Open-air Washing

High cleaning effect in and around the point of impact of high-pressure water.

Ideal for parts with many taps, deburring of crossed holes and deep oil channel holes.

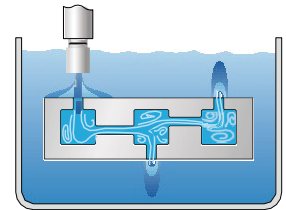


E.g. transmission case, gear box case

Submerged Washing

Vortex flow cleans the entire inside of the workpiece.

Ideal for removing chips and sand from parts with complex shapes.

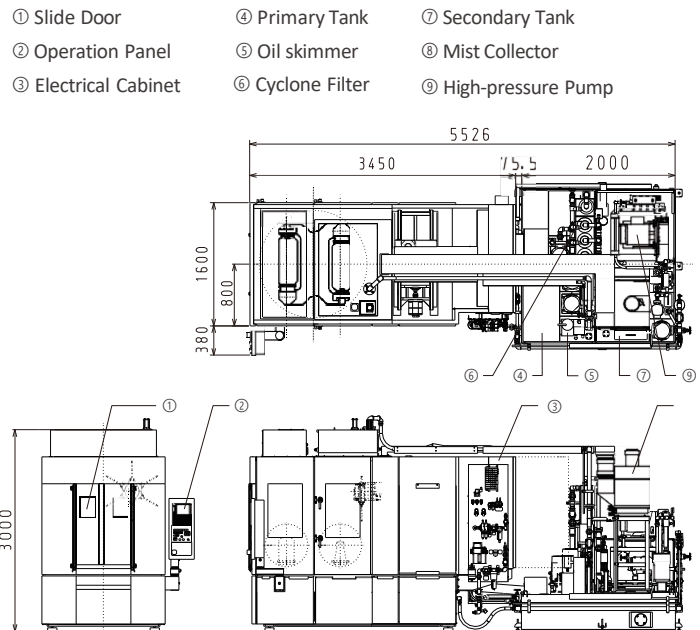


E.g. machinery, hydraulic parts, cylinder heads and blocks

Main Specifications

Washing Pressure	Max. 50MPa
Flow Rate	Max. 29L/min
Stroke	X 750mm, Y 500mm, Z 500mm
Applicable parts size	W 650mm×D 450mm×H 450mm
Rapid Feed Rate	60m/min (X, Y, Z-axis)
Main Spindle Speed	Max. 1,000min ⁻¹
Positioning Accuracy	X, Y, Z : 0.08mm
Repeatability	±0.05mm
Number of tools	6
Indexing Time	0.5sec. (Random Shortest Approach by CNC Control)
Machine Dimensions	W 1,600mm×D 3,450mm×H 3,000mm
Machine Weight	5,800kg
Controller	FANUC Oi-MF
Drying system	Air blow by column robot (Standard) Vacuum drying (Option)

Machine Dimensions



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- THE POWER OF WATER -