

## VARIAXIS j-600 AM Hybrid Multi-tasking Machine with "Metal Deposition by Wire Arc Technology"

Yamazaki Mazak Corporation has announced the start of sales at JIMTOF 2016 of a new hybrid multi-tasking machine, the VARIAXIS j-600AM (Additive Manufacturing) equipped with Metal Deposition by Wire Arc Technology. This new machine tool integrates additive manufacturing technology with Mazak's extensive multi-tasking expertise.

The new hybrid multi-tasking machine "VARIAXIS j-600AM" performs Additive Manufacturing by utilizing a standard Wire Arc welding head. Since this is mounted on the headstock of a 5-axis vertical machining center, the automatic metal deposition process is integrated with machining processes on a single machine tool.

This machine is an effective way to ensure timely delivery, cost control and good quality in today's environment of continuously declining skill levels of machine operators. By utilizing metal deposition by a wire arc head, not only will the overall investment for production equipment be reduced, the operation cost will be lowered as well. Additionally, since the wire arc head is supplied by metal wire instead of metal powder, material is deposited in a shorter period of time than additive manufacturing using metal powder. Parts can be produced by this new hybrid machine with an excellent surface finish and high-precision since machining can be performed by the same machine immediately after the completion of the additive manufacturing .

The advantage for this hybrid machine is a new manufacturing concept. Not only the number of machines in a facility as well as floor space can be reduced, but also cast parts produced by molds can be eliminated by metal deposition by the wire-arc head. After completion of material deposition, parts can be finished machined in the same machine setup. It is also expected to be used for production of a wide variety of components such as aerospace parts machining, repair of dies, and arch metal cladding for oil drilling valves to retain excellent durability and wear resistance.

The VARIAXIS j-600 AM Hybrid Multi-tasking machine will be exhibited during JIMTOF 2016 at Tokyo Big Sight. Yamazaki Mazak will continue to provide the manufacturing industry solutions to meet today's requirements as well as tomorrow's



VARIAXIS j-600 AM equipped with Wire Arc metal deposition

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