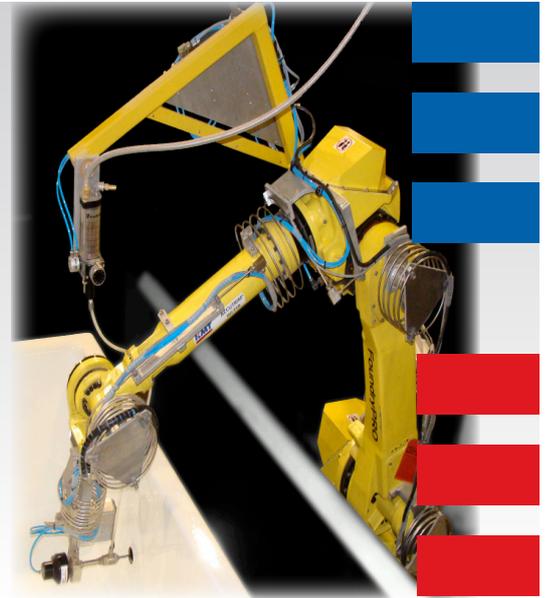# KMT Robotic Solutions
AccuTrim® AWJ-110
ABRASIVE WATERJET
TRIMMING ROBOT

Today's demanding, path-intensive trimming applications require a new approach to optimizing path repeatability, minimizing cycle time and reducing programming time.

KMT Robotic Solutions, the exclusive waterjet cutting partner of FANUC Robotics America, has addressed the challenge for abrasive waterjet applications with the introduction of revolutionary AccuTrim¨ AWJ-110 robot. The AWJ-110 robot is configured specifically for path-intensive abrasive waterjet cutting and is available exclusively through KMT Robotic Solutions.

This AccuTrim model is beneficial whether programming is done manually or using a CAD model of the part. In manual mode, KMT-RS JetWare interface streamlines the teaching of standard features like circles, rectangles and slots. Many other proprietary software features optimize the robot's performance in trimming continuous paths and small features. In the offline programming mode, the CAD-to-path programming interface provided by KMT-RS TrimPro¨ package enables the near automatic path generation of complex cuts simultaneously optimized for path accuracy and cycle time. Additional specially developed FANUC motion analysis tools running on a PC connected to the robot controller allow for further path, small feature and cycle time optimization.

KMT-RS research reveals that AccuTrim robots reduce programming time up to 30 percent in manual teach mode and up to 70 percent in offline programming mode. Cycle time can also be reduced by up to 20 percent while still maintaining satisfactory part quality. The AccuTrim AWJ-110 robot is configured to provide the highest motion performance possible for small shapes such as circles, rectangles and slots as well as repeatable perimeter path trimming capabilities.

Equipment provided with the AccuTrim AWJ-110 robot
The AWJ-110 robot comes equipped with a high pressure plumbing package designed to efficiently deliver water to the abrasive waterjet nozzle located at the end of the robot arm. The garnet hopper, metering value, and mixing equipment are also included.

KMT ROBOTIC SOLUTIONS

KMT Robotic Solutions JetWare®

The AccuTrim AWJ-110 configuration includes proprietary, user-friendly software packages that provide many utilities for creating and adjusting cut paths for trimming applications. These programming interfaces allow users to dramatically reduce the time required to develop and adjust programs when teaching a part. Each package includes online, menu-driven development of geometric shapes by teaching one-to-three points versus the six-to-fifteen normally required. The shapes are generated mathematically, saving time and robot memory.

TrimPro® Software

TrimPro® software provides offline simulation for FANUC robots in waterjet applications. TrimPro offers several benefits, including work cell monitoring tools, CAD mode import, path teaching, reach check, cycle time estimation, collision detection and AVI file generation. TrimPro enables robotic waterjet systems to be validated in a virtual environment, saving valuable production time.

When running on a PC interfaced to the robot controller, TrimPro automatically detects small shape programs on the AccuTrim robot, and the PC automatically collects the data and analyzes the motion performance. The user can study the differences between actual vs. expected shape and use automatic or manual parameter adjustments to make the necessary modifications.

KMT Robotic Solutions
Creating Value through Automation

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