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General

**Machine Tending PowerPac**

This is a PowerPac to program robotic material handling applications which use RobotWare Machine Tending Additional option.

**Release Information**

The information should be considered as last minutes information and most up-to-date.

**Release Name**

The release name is Machine Tending PowerPac 5.61

The release contains following:

- Machine Tending PowerPac 5.61 build 218

**Release Data**

Release date 2014-06-18

**Language Support**

Machine Tending PowerPac 5.61 is available in English language

**Documentation**

The following documents are available in English language

- Operating Manual
  - 3HAC044397-001 - OM- Machine Tending PowerPac 5.61

**System Specification**

**Recommended Hardware**

High-performance desktop or laptop workstation:
CPU: 2.0 GHz or faster processor. Recommended is multicore processor

Memory: 1 GB RAM or more (More is recommended)

Available disk space: 5+ GB on the system disk

Graphics card: High performance OpenGL-compatible graphics card with the corresponding up-to-date drivers installed

Screen resolution: 1280 x 1024 pixels (Recommended)

Colors: 256 or higher

DPI: Normal size (96 dpi)

Mouse: Three-button mouse

**Supported Operating Systems**

- Microsoft Windows 7 32-bit & 64-bit edition

**Installation**

**Prerequisites**

The following software must be installed:

- RobotStudio 5.61
- RobotWare 5.61
- RobotWare Machine Tending 5.61

**Installation Steps**

Execute the setup.exe file and follow through the installation steps.

- Machine Tending PowerPac 5.xx should be installed under the ‘\Robotics IT\’ folder present at the same level as the Base application i.e. RobotStudio 5.XX.

  The default installation path for the Machine Tending PowerPac 5.61 is “… \ABBIndustrial IT\Robotics IT\”.

- Pre-requisite softwares AccessDatabaseEngine and AccessDatabaseEngine_x64 should be installed under ‘\Program Files (x86)\Common Files\microsoft shared\’ or ‘\Program Files\Common Files\’ respectively.

**New Functionality of MTPP 5.61**

- New Tools
  - Three KN series knee level grippers are integrated.
Fig: New KN series knee level grippers

- Configuring Custom Stations:
  - The Configure Stations function has been extended to enable selection of custom stations. Custom stations can be configured by selecting the station model and its corresponding templates for RAPID (*.lib), EIO (*.cfg) and Smart component (*.xls).

- Creating station smart component
  - The station smart component defines the working of the station. An excel approach is introduced to define the behavior of new stations.
  - The excel (*.xls) file defines the machine response (output signals / joint movements / both) to input signals from robot controller.
  - If user has the mechanism model and knows the behavior of the machine, this approach will help to easily extend the mechanism to a smart component.
More details about how to modify or create an excel file can be found in the MachineTendingPowerPac Operating Manual.

Changes in MTPP 5.61

- Configure Parts
  - The configure parts function has been modified such that the part will not have a physical model as it is not used in the powerpac.

- Path View
  - The PathView dialog is updated to reflect all the instructions of the routines configured in the Test Move function in a single sequence. This enables to easily verify the reachability and assign configurations for the targets.

- Synchronize to VC
  - The Synchronize to VC dialog has been extended allowing selection of individual station signals to be loaded to controller.
Handling Stations from earlier version of MTPP

- To be able to execute Production simulation on stations created with earlier versions of MTPP
  - Delete all the existing connections in the Station Logic section from RobotStudio Simulation tab.
  - Synchronize to VC the stations. This creates the Smart components based on the new default excel templates and prepares for execution.

**Known limitations in MTPP 5.61**

- It is possible to configure a Project for single Robot Task.
- If a station template has more than 10 targets then the numbering of the subsequent stations numbers must be manually adjusted to avoid conflicts.
- Limited support for Undo and Redo operations when using MTPP.
- Selecting custom stations
  - Pre-configured Smart components cannot be used for configuring custom stations. The station Smart components are created based on the station mechanism model and its corresponding Excel template.
  - Only station models with a single mechanism can be imported.

**Known issues in MTPP 5.61**

- In the Define cycles function, when selecting station routines with arguments it is not possible to configure the arguments within the dialog e.g. PROC Lathe_SelectProgram(num ProgNo).
  **Workaround:** This has to be done outside, e.g. in the RAPID tab after loading the cycle module to controller.
- If a part name or station properties (name, template etc.) are modified, then the references in other dialogs (cycles routines) are to be updated manually and the changes are to be synchronized to the controller.
- During Synchronize to VC from MTPP, if the corresponding module is open in the RAPID tab in RobotStudio, then the module is sometimes not updated.
  **Workaround:** Close the module and sync again.
- While executing Production simulation, the Confirm button is not enabled for a highlighted cycle.
  **Workaround:** Re-select the cycle to enable the button.
- While Configuring HomeRun sequence when there are multiple movement modules, strategy for configured positions which are unique to a module will be deleted when shifting between the modules.
  **Workaround:** Ensure that the HomeRun is configured for the module with the most number of movement routines and avoid changing the views.
Corrections in MTPP 5.60

<table>
<thead>
<tr>
<th>PDD 2976</th>
<th>RS Machine Tending PP - Documentation needs to be updated</th>
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<tr>
<td>PDD 2977</td>
<td>RS Machine tending PP - A working station example needed</td>
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