

DIFFSYS introduces v.5.0

DIFFSYS has long been recognized as the industry leader for generating tool paths for ultra-precision machining. With v.5.0, it is taking the next step in its evolution. DIFFSYS now has full CAM system capabilities for generating complete part programs for ultra-precision machine tools. **The new functionality is an integral part of all DIFFSYS options.** Users can choose to use the CAM functions or continue to use DIFFSYS as they have in the past.

what's NEW

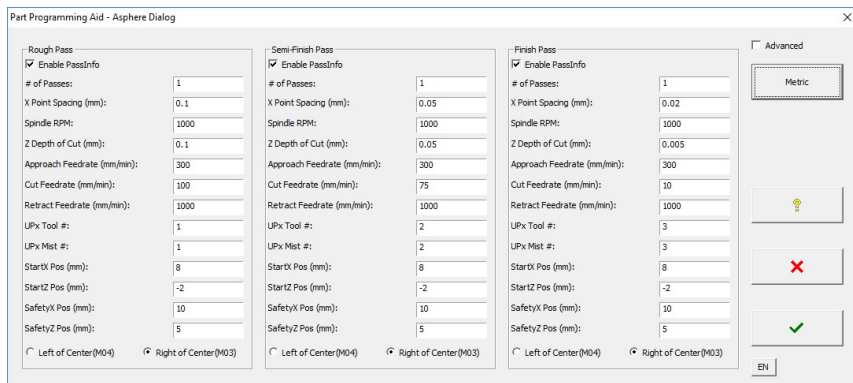
DIFFSYS 5.0 is a step change in functionality

In addition to the advanced capabilities of the CAM system to create multi-path, multi-tool part programs v.5.0 is going multi-lingual. We've added support on the training and main programming screens for German, French, Spanish, Italian, Simplified and Traditional Chinese, Japanese, and Korean. Please contact precitech.diffsysales@ametek.com or your local sales representative for details on how to update your current license. Visit www.precitech.com to download a demo.

EXCLUSIVE DIFFSYS FEATURES

► **CAM 2D, Part Programming Aid (XZ turning) gives users the capability to create complete job files including header, footer, and multi-pass options with a simple to use graphical user interface. CAM 2D is a perfect training tool for new adopters and also a valuable time saving tool for advanced users.**

Prerequisite: any DIFFSYS version



Part Programming Aid - Asphere Dialog

| Rough Pass | Semi-Finish Pass | Finish Pass |
|---|---|---|
| <input checked="" type="checkbox"/> Enable PassInfo | <input checked="" type="checkbox"/> Enable PassInfo | <input checked="" type="checkbox"/> Enable PassInfo |
| # of Passes: 1 | # of Passes: 1 | # of Passes: 1 |
| X Point Spacing (mm): 0.1 | X Point Spacing (mm): 0.05 | X Point Spacing (mm): 0.02 |
| Spindle RPM: 1000 | Spindle RPM: 1000 | Spindle RPM: 1000 |
| Z Depth of Cut (mm): 0.1 | Z Depth of Cut (mm): 0.05 | Z Depth of Cut (mm): 0.005 |
| Approach Feedrate (mm/min): 300 | Approach Feedrate (mm/min): 300 | Approach Feedrate (mm/min): 300 |
| Cut Feedrate (mm/min): 100 | Cut Feedrate (mm/min): 75 | Cut Feedrate (mm/min): 10 |
| Retract Feedrate (mm/min): 1000 | Retract Feedrate (mm/min): 1000 | Retract Feedrate (mm/min): 1000 |
| UPx Tool #: 1 | UPx Tool #: 2 | UPx Tool #: 3 |
| UPx Mist #: 1 | UPx Mist #: 2 | UPx Mist #: 3 |
| StartX Pos (mm): 8 | StartX Pos (mm): 8 | StartX Pos (mm): 8 |
| StartZ Pos (mm): -2 | StartZ Pos (mm): -2 | StartZ Pos (mm): -2 |
| SafetyX Pos (mm): 10 | SafetyX Pos (mm): 10 | SafetyX Pos (mm): 10 |
| SafetyZ Pos (mm): 5 | SafetyZ Pos (mm): 5 | SafetyZ Pos (mm): 5 |
| <input type="radio"/> Left of Center(M04) <input checked="" type="radio"/> Right of Center(M03) | <input type="radio"/> Left of Center(M04) <input checked="" type="radio"/> Right of Center(M03) | <input type="radio"/> Left of Center(M04) <input checked="" type="radio"/> Right of Center(M03) |

Advanced: Metric, ? (Help), X (Cancel), ✓ (OK), EN



Part Programming Aid - Asphere Dialog

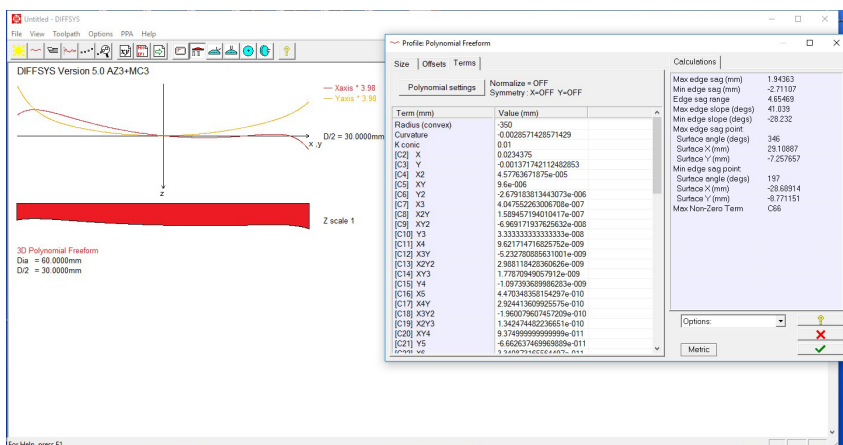
| 粗加工 | 半精加工 | 精加工 |
|--|--|--|
| <input checked="" type="checkbox"/> 启用 PassInfo | <input checked="" type="checkbox"/> 启用 PassInfo | <input checked="" type="checkbox"/> 启用 PassInfo |
| #的加工次数: 1 | #的加工次数: 1 | #的加工次数: 1 |
| X 点间距 (mm): 0.1 | X 点间距 (mm): 0.05 | X 点间距 (mm): 0.02 |
| 主轴转速: 1000 | 主轴转速: 1000 | 主轴转速: 1000 |
| Z 切削深度 (mm): 0.1 | Z 切削深度 (mm): 0.05 | Z 切削深度 (mm): 0.005 |
| 切入 Feedrate (mm/min): 300 | 切入 Feedrate (mm/min): 300 | 切入 Feedrate (mm/min): 300 |
| 加工 Feedrate (mm/min): 100 | 加工 Feedrate (mm/min): 75 | 加工 Feedrate (mm/min): 10 |
| 回退 Feedrate (mm/min): 1000 | 回退 Feedrate (mm/min): 1000 | 回退 Feedrate (mm/min): 1000 |
| UPx 刀具 #: 1 | UPx 刀具 #: 2 | UPx 刀具 #: 3 |
| UPx 喷雾 #: 1 | UPx 喷雾 #: 2 | UPx 喷雾 #: 3 |
| 开始X Pos (mm): 8 | 开始X Pos (mm): 8 | 开始X Pos (mm): 8 |
| 开始Z Pos (mm): -2 | 开始Z Pos (mm): -2 | 开始Z Pos (mm): -2 |
| 安全X Pos (mm): 10 | 安全X Pos (mm): 10 | 安全X Pos (mm): 10 |
| 安全Z Pos (mm): 5 | 安全Z Pos (mm): 5 | 安全Z Pos (mm): 5 |
| <input type="radio"/> 中心的左边(M04) <input checked="" type="radio"/> 中心的右边(M03) | <input type="radio"/> 中心的左边(M04) <input checked="" type="radio"/> 中心的右边(M03) | <input type="radio"/> 中心的左边(M04) <input checked="" type="radio"/> 中心的右边(M03) |

Advanced: Metric, ? (Help), X (Cancel), ✓ (OK), 语言

Multi-language support of the main CAM 2D Basic screen
English (top) and Simplified Chinese (bottom) shown

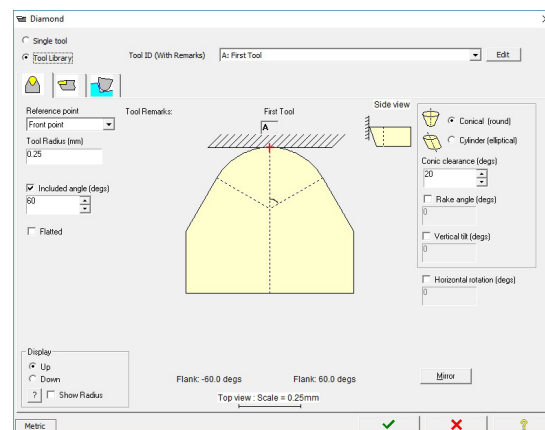
▶ **CAM 3D (XZC turning) is an integral function of DIFFSYS. The optional packages of DIFFSYS include multi-pass, multi-tool support for creating full programs for all the part types listed below.**

Prerequisite: See table below



▶ **Multi-Tool Library: Create 2D and 3D part programs using up to three tools. Accommodates different configurations for roughing, semi-finishing, and finishing tools.**

Prerequisite: DIFFSYS A for 2D, see table below for 3D



| CAM Supported Parts* | Optional DIFFSYS Modules | | | | | | |
|---|--------------------------|-------------|-----------|--------|------------------------|--------------|---------------------|
| | Basic | A (Asphere) | Z (Zones) | 3 (3D) | MC2/MC3 (Point Clouds) | DS (D-Shape) | LU / LU+ (Lenslets) |
| Flats, spheres, basic aspheres (with a single tool) | • | • | | | | | |
| Multi-segment aspheres | | • | | | | | |
| Fresnels, diffractives | | | • | | | | |
| 3D flat | | | | • | | | |
| 3D off-axis asphere | | | | • | | | |
| 3D toric/biconic/cylinder | | | | • | | | |
| 3D polynomial freeforms | | | | • | | | |
| 3D using 2D multi-segments | | | | • | | | |
| 3D bifocal | | | | • | | | |
| 3D global spiral milling | | | | • | | | |
| Using 2D or 3D point clouds from file | | | | | • | | |
| D-Shape | | | | | | • | |
| Lenslets (global spiral milling or XZC turning) | | | | | | | • |

* Support for B axis, Y axis, and local spiral milling will be available in upcoming releases

DIFFSYS v.5.0 also includes the following new features:

- Improved accuracy with all equation coefficients up to 14 decimal places
- Enhanced manuals
- Enhanced help files
- Numerous bug fixes



forum.diffsys.com