

## EXAPTplus Turning

EXAPTplus Turning covers the requirements relating to the automatic calculation of technological data in NC programming for turning operations. This module is an expansion to the EXAPTplus Basic system.

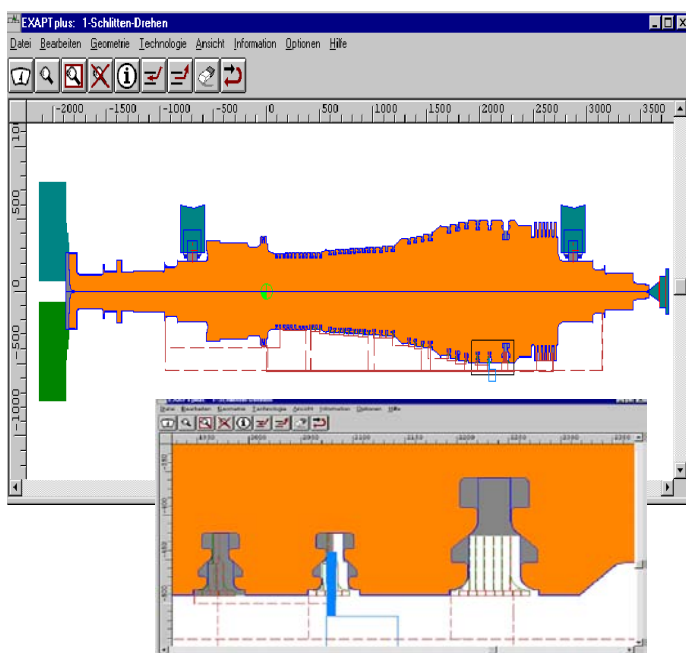
The advantages with regard to utility value cover:

- fast, application-oriented and efficient production of NC programs with the EXAPT turning technology, requiring a minimum of input information
- results in accordance with production requirements, even for complex turning centres featuring integrated processes and multi-axes configurations
- time-saving via the automatic incorporation of defined tolerances on the workpiece
- organisational support for NC production through automatic generation of additional shopfloor information
- effective simulation to guarantee reliable results

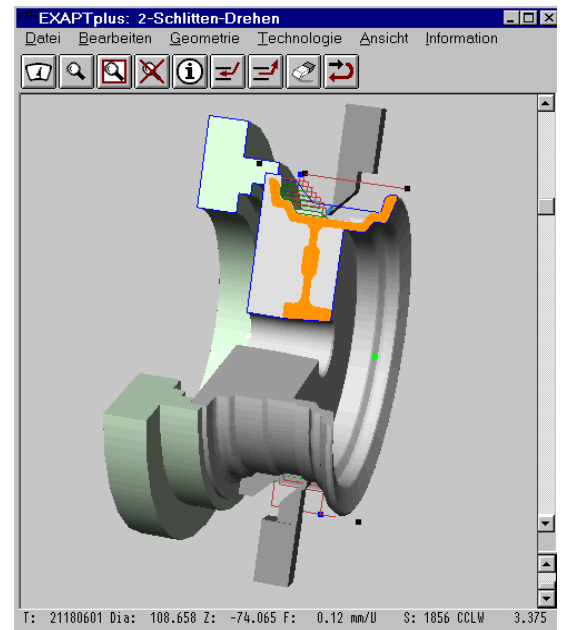
### Performance features

- the facilities of the basic system can be used in conjunction with all options
- graphic-interactive mode of operation with multi-window technology
- processing of any rotational-symmetric geometries for the unmachined and finished part (size, complexity, machining status)
- from preset unmachined and finished part geometry as well as from machining-technical additional information automatic determination of:
  - \* removal volumes (machining feature)
  - \* allowances for following machinings
  - \* cutting areas (turning feature), collision-free kinematically machinable and tool-oriented
  - \* material rest areas

- \* cut distribution and tool path generation after optimization rules
- \* material-/cutting material-specific process parameter
- display of the material removal
- automatic determination of technological attributes, such as surface quality
- incorporation of the clamping device geometry and clamping position
- graphic simulation of the machining process and the results of the process (progress monitoring)
- user-definable degree of automation for technological processing
- automatic determination of technological data also for centric drilling operations
- optional output of CNC cycles
- expandable for complete machining (turning, drilling, milling, grinding...)



*EXAPT turning technology used for the production of large parts with coincident cut simulation*



*Two turret turning with simultaneous machining at the same cutting segment*

## Turning

(Art.-no. 11069)

### Supplementary modules

#### EXAPTplus two-turret turning

(Art.-no. 11073)

- user-controlled automatic simultaneous machining for the following applications:
  - \* simultaneous machining at the same cutting segment
  - \* simultaneous machining at different cutting segments
  - \* one tool cutting, one tool in the resetting process
- active simulation of the simultaneous machining processes also with tipped turret
- synchronisation markers and dwell times in graphic-interactive mode
- precise time calculation for leading and following turret
- interactive time bar display for the simultaneous process

#### EXAPTplus two-spindle turning

(Art.-no. 11083)

- graphic-interactive, user-controlled programming of simultaneous machining operations on machines with two spindles, also in combination with two-turret-turning
- graphic operating window and integrated time bar display for graphic-interactive programming/synchronisation/simulation

#### EXAPTplus on turning centres/ drilling-milling centres

(Art.-no. 11088)

- programming for B-, C- and Y-axis, also swivelling B-axis
- programming of drilling operations for rotating tools
- programming of milling operations on end faces and lateral surfaces

#### Tolerance processing

(Art.-no. 11090)

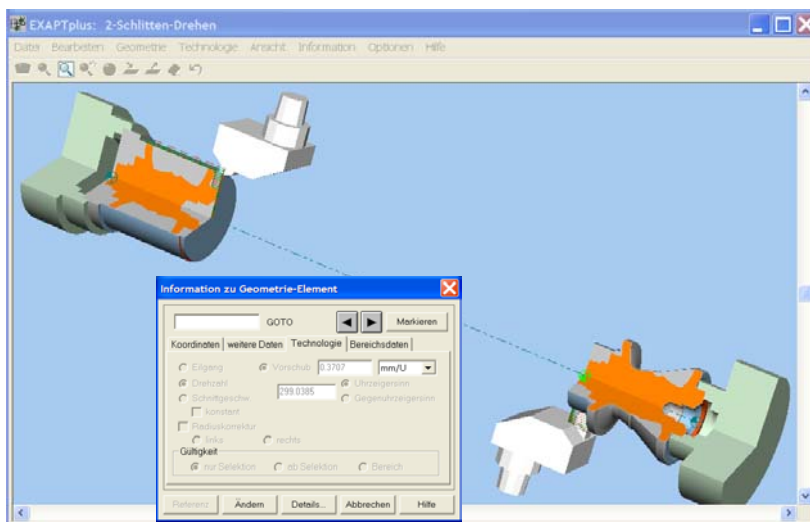
- automatic conversion of ISO tolerance specifications to middle measure
- automatic conversion of length tolerances

#### System requirements

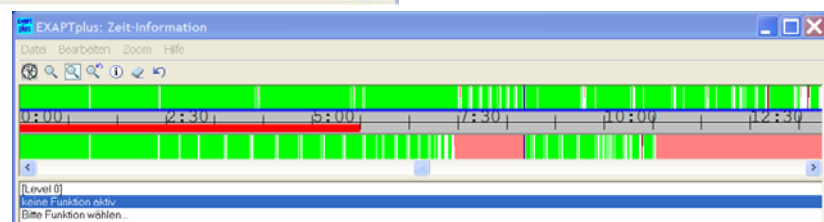
EXAPTplus Basic system

#### Installation requirements

EXAPT systems are based on Windows for the use on single PCs or servers in the network compound. Required hardware configurations depend on the software constellation and the user-related quantity of data. More details follow in the current EXAPT-recommendation for hardware configuration.



Two-turret/two-spindle machining  
Simulation with technological additional  
information



Time bar with  
coupled time curve for both turrets  
green tool in use  
pink tool in dwell state  
Synchro marks interactively usable  
Progress cycle with course display, red center line  
Zoom function