MESAS MQMD Software

INNOVATION and TRADITION

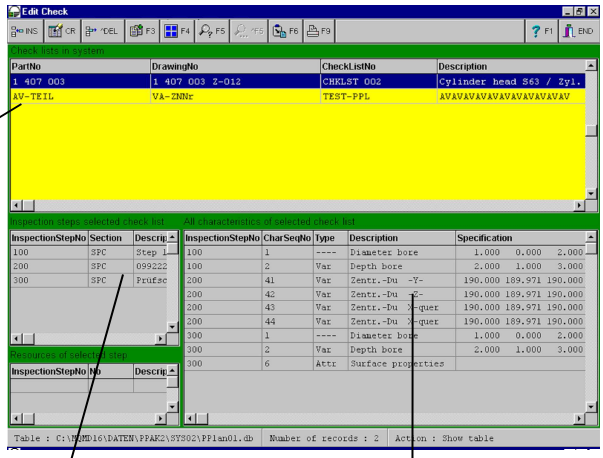
MESAS Quality management systems do not only provide a variety of Vers.ard functions capable to solve most problems of quality management, but also a number of flexible tools enabling you to create special solutions by yourself. And if this is even not enough, our team of highly qualified programming and application engineers will elaborate your individual solution. Take the chance to profit by our expertise as a hard- and software system provider.

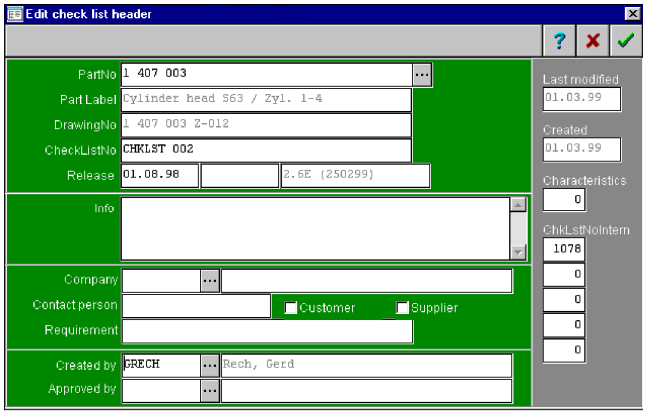
- MESAS MQMD Software for Microsoft **Windows** is the innovative consecution of MESAS Software operating successfully on DOS systems for over 10 years.
- Traditionally **easy handling** due to
  - transparent menu structure
  - online assistance
  - catalogue functions
- **Centralized or decentralized data management**
- interfaces to existing MESAS SPC systems operating under DOS
- **Data export to external software** like Q-DAS qs-STAT or Microsoft Excel
- Open **Client/Server** architecture
- **Static and dynamic** measuring routines
- **Easy programming editor** for assignment of measuring inputs to their respective characteristics, for definition of mathematical or logical relations between measuring inputs, for measurement control and operator instruction
- **Tool correction programming**
- **Drivers for various types of measuring equipment** (transducers digital measuring equipment, incremental probes, pneumatic probes, digital measuring equipment etc.)
- **Comprehensive reporting system** for quality documentation - adoptable to your requirements
- Planning and realization of your **Quality Management Network**

Check list specification and management

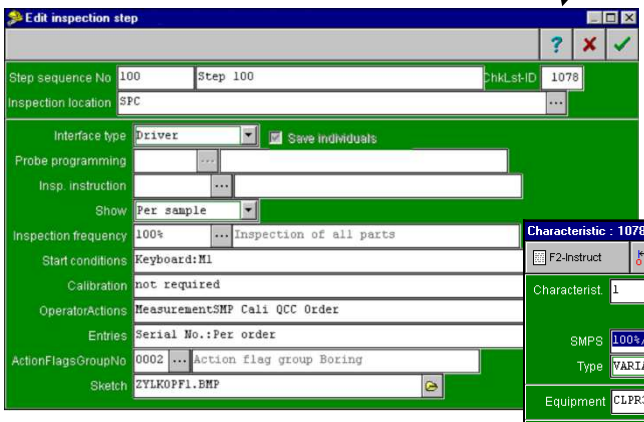
- For simple check lists or complex applications
- Flexible programming of measuring control for static and dynamic measuring tasks

Header:
Part related data like part no. or part name etc.

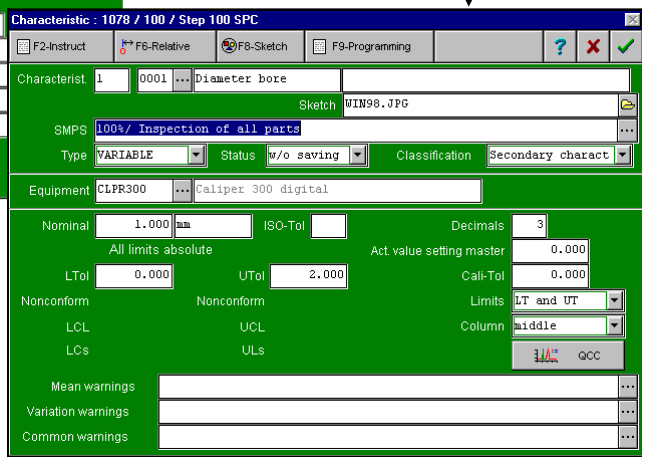




Inspection steps:
Parameters for inspection and calibration, inspection intervals and frequency, conditions for operator intervenience, etc.



Characteristics:
Specification of nominals, tolerances, warning- and control limits etc.

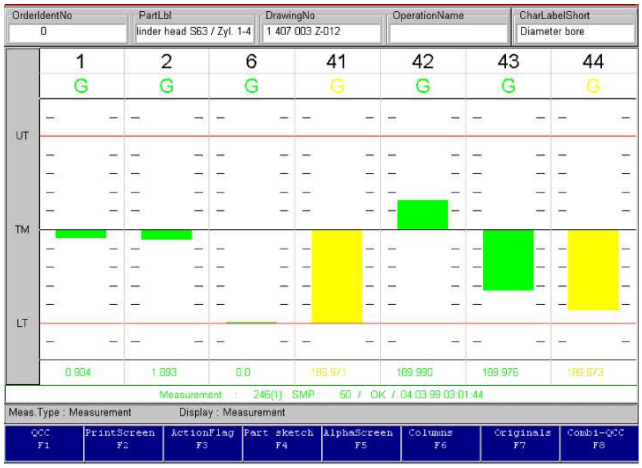


MQMD Measuring

The software can be operated by means of a Vers.ard ASCII-keyboard or by the industrial MESAS operator panel.

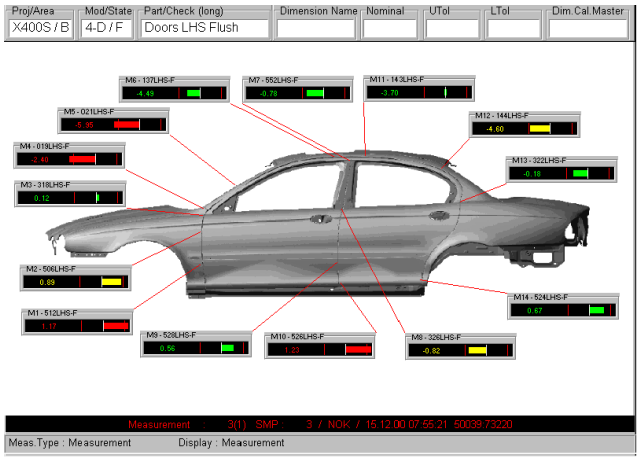
Measurement displays

- Column display
- Part picture
- Alpha-numerical listing
- chronol. listing of individual measurements
- Quality Control Charts
- Multiple Quality Control Charts
- or combinations of the above displays



Measurement results are coloured differently depending on their quality:

G : OK
N : Rework
A : Scrap
W : Violation of warning limits



The sample result shows up automatically at the end of a sample.

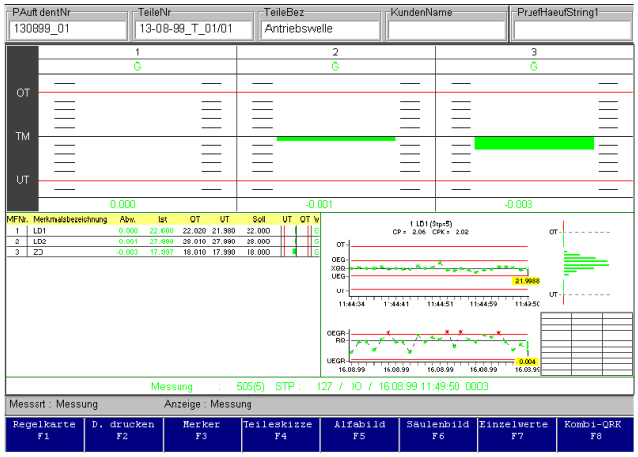
Online messages indicate special events like Run, Trend, Middle Third

Ongoing calculation of control limits and capability indices (cp, cpk)

The display on the right shows a combination of alphanumeric listing with column display and zoomed value of the selected characteristic.

MESAS MQMD Software

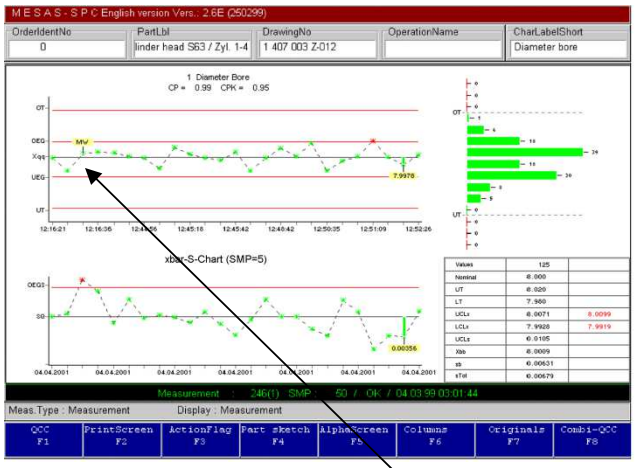
The displays can be combined individually.
The display on the right shows a combination of columns, alphanumeric listing and quality control chart.



Quality control charts for online evaluation of the production process

- Vers.ard Xbar-/ S-chart with histogram based on the last 25 samples
- Xbar-/ S-chart based on alternating groups of samples
- Xbar-/ R-chart over the last 25 samples
- Xbar-/ Rr-chart (moving range) over the last 100 measurements
- C-chart for attribute characteristics
- Individuals chart over the last 100 measurements

Action flags can be added to the quality control chart to mark special events like tool change, faulty measurement etc.

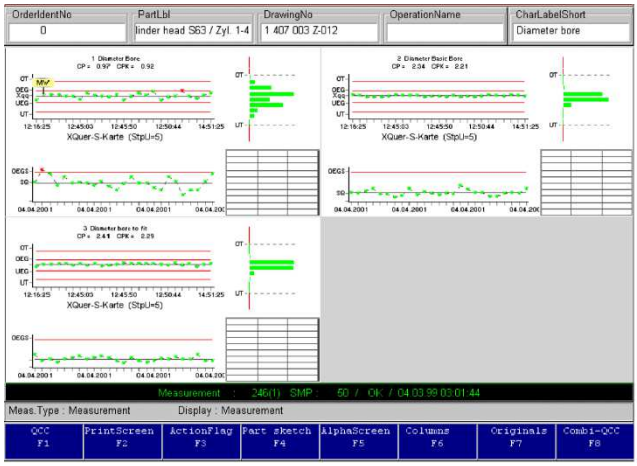


X-bar/s-chart with action flag (sample 3)

Multi-QCC:

- up to 4 quality control charts or
- up to 9 x-bar charts

Displayed on the screen at the same time.



MQMD Long Term Evaluation

MQMD Long Term Evaluation is a program for statistical evaluation, visualisation and reporting of measuring data gathered by MESAS MQMD for Windows and MESAS SPC for DOS.

Evaluation based on IATF 16949 or customer request:

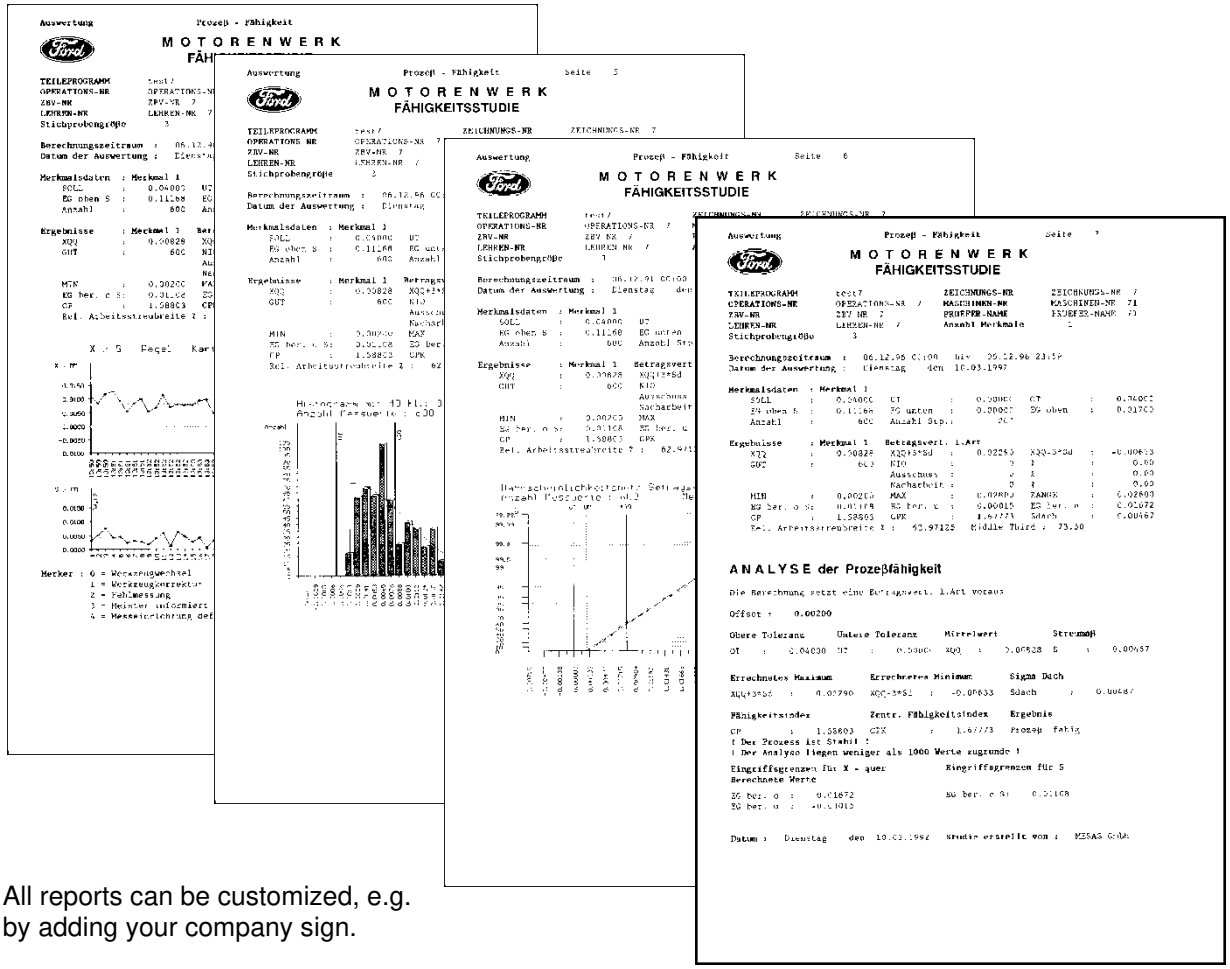
- Preliminary process capability
- Process capability
- Measurement evaluation

Automatic or manual selection of distribution check method:
e.g. Normal-, Log-Normal-, Weibull, Rayleigh-, Folded distribution etc.

- Filter criteria for selection of measurements:
  parts, characteristics, evaluation period, serial numbers, operators, machines etc.
- Choice of indices for variation and position
- Choice of quality control charts
- Calculation of control limits and process capability indices
- Automatic elimination of outliers
- Facility to highlight and/or exclude individual samples from evaluation

Diagrams on screen and printer

Pareto Analysis	Share of faulty characteristics
Histogram	Variable number of classes
Attribute chart	Fault index p/np or cu for attribute characteristics
Sample chart	Alphanumeric listing of samples
Multi-individuals-chart	Individuals chart for several characteristics in one diagram
Vers.ard quality control chart	Xbar- / s-chart or X-bar- / R-chart
Multi- quality control chart	4-12 quality control charts on the screen at the same time
Moving quality control chart	Calculations are not based on fixed samples but on alternating groups of samples
Serial numbers	Simple individuals chart with serial number and operator
Overview	Up to 15 characteristics with alphanumeric information and histogram



All reports can be customized, e.g.
by adding your company sign.

MQMD Master Data

Master data are global, program wide data, which are not subject to many changes, once they have been entered (e.g. parts- and characteristics data, suppliers, machines etc.). Master data are the base for catalogue assisted working with check lists and inspection orders.

Defining master data is useful, if you intend to centralize and evaluate your quality data within a superior or company-wide system (e.g. quality network).

The cataloguing and uniqueness of the master data allows an unambiguous assignment of the collected inspection data.
The master data management software provides a variety of catalogue criteria. Which ones you actually use, is depending on your company requirements.

Special Solutions

- On screen visualisation for operator guidance
- Classification
- Dynamic gear checks
- Fast Fourrier (FFT)
- Roundness check (MZC)
- Camber and ovality check (BOP)