



More Measurement Stability & Efficiency

APOLLO SOFTWARE

Intelligent Condition Monitoring for Metrology.
In-Cloud or On-Premise. Made Simple.

Compatibility with HEXAGON, LEITZ, ZEISS, OGP, WENZEL + OPC-UA & MQTT.



WHICH BENEFITS DOES APOLLO PROVIDE FOR MEASUREMENT MACHINES?

25% MORE

Machine Utilization
& Operator Efficiency



50% LESS
Calibrations
& Maintenance Effort



0% RISK

Through Collisions,
Temperatures & Wear



100% REAL-TIME
Measurement Stability
& Quality Monitoring



ARE ALL MACHINES IN A GOOD OPERATION STATUS?



PROBLEM

Machine downtimes or faulty operating conditions are often detected too late and lead to production losses or incorrect measurements.



SOLUTION

Real-time display of machine status and critical operating conditions via APOLLO with remaining runtime display and notification alerts.



ADDED VALUE

Higher utilization and quality of measurements with less operator effort and less susceptibility to errors.

Machine Overview with Machine Statuses and Event Log.

The screenshot displays the APOLLO software interface. At the top, there are navigation tabs: "Device Overview", "Service Overview", "Program Overview", and "Tool Overview". Below these is a grid of machine status cards. Each card shows a machine icon, name, location, and a progress bar with a time remaining. The machines include:

- 0-Fact | Leitz CMM1 (Leitz Reference, Metrology Lab, 00:06:10)
- 0-Fact | Leitz CMM2 (PMMC, Metrology Lab, 00:14:34)
- 0-Fact | Wenzel C... (Wenzel GT450, Metrology Lab, 00:14:35)
- 0-Fact | Zeiss CMM1 (Zeiss CenterMax, Metrology Lab)
- A-Fact | Hexagon ... (PMMC, Metrology Lab)
- A-Fact | Hexagon ... (Global SHTA, Metrology Lab)
- A-Fact | Hexagon ... (Global 555, Metrology Lab, 00:05:29)
- A-Fact | Hexagon ... (Global 555, Metrology Lab, 286:45:04)
- B-Fact | DMG MT1 (CTX BETA 800, Metrology Lab)
- B-Fact | Linrob Ro... (H-Arm, Metrology Lab)

 To the right of the grid is an "Events" panel showing a list of program events with status icons (checkmarks, play buttons, etc.):

- Program Completed: ProcessDataIn2.PRG (0-Fact | Wenzel CMM1, 02/05/2025 09:22:37)
- Program Started: ProcessDataIn2.PRG (0-Fact | Leitz CMM2, 02/05/2025 09:22:24)
- Program Completed: Mazak1_N5984_B (0-Fact | Zeiss CMM1, 02/05/2025 09:22:22)
- Program Started: ProcessDataIn2.PRG (0-Fact | Leitz CMM1, 02/05/2025 09:19:12)
- Program Started: ProcessDataIn2.PRG (A-Fact | Hexagon CMM3, 02/05/2025 09:18:31)
- Program Completed: ProcessDataIn2.PRG (0-Fact | Leitz CMM2, 02/05/2025 09:17:24)
- Program Continued: ProcessDataIn2.PRG

 At the bottom, there are pagination controls: "10 Results per page", "1 of 3", "22 Results", "50 Results per page", and "252 Results".

WHEN IS A TOUCH PROBE OR SENSOR WORN OUT?



PROBLEM

Wear or contamination of styluses or sensors can lead to unreliable measurements if they are not changed or cleaned in time.



SOLUTION

Regular stylus measurements and evaluation of limit value exceedances or critical forecasts. Alternatively, switch stylus based on uptime.



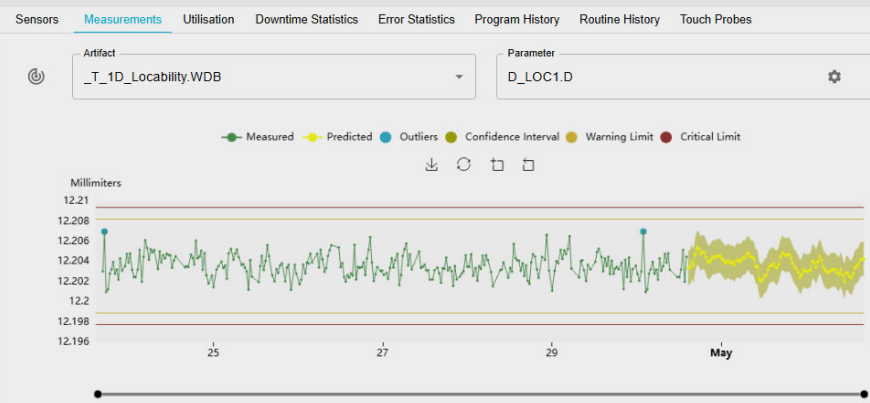
ADDED VALUE

Less unreliable measurements. Timely, cost-effective stylus or sensor change.

Visualization of Regular Stylus or Sensor Measurements over Time. Display of Uptime.

Solution A

Solution B



A-Fact | HxGn CM...
Maestro 091508
Metrology Lab
00:18:25

Probe Name	Probe ID	Number Touches	Total Runtime	Distance travelled
RTP20	75	87.755	521 h	7128 m
MH20i	74	3.870	17 h	1480 m

WHEN DOES A MEASURING DEVICE NEED TO BE CALIBRATED?



PROBLEM

Wear, environmental influences, and collisions can affect measurement stability between calibrations. Calibrations are time-consuming and costly.



SOLUTION

Regular reference part measurement with limit exceedance or forecast evaluation. Alternatively, calibration by operating time.



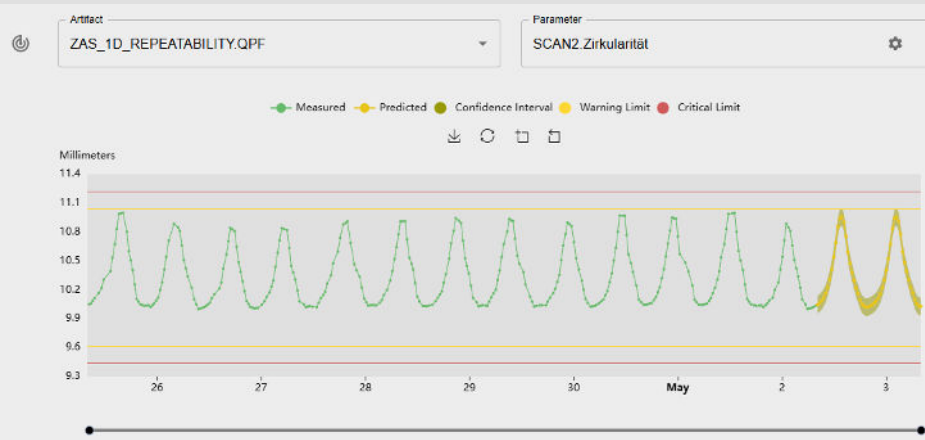
ADDED VALUE

Stable measurement accuracy while maintaining timely and cost-effective calibrations and maintenance.

Visualization of Regular Machine Measurements over Time. Display of Uptime.

Solution A

Solution B



Hexagon Maestro

Total Runtime

332 days 12:44:59

Overall Distance travelled in m

x-Axis	y-Axis	z-Axis
69289.3	38970.4	20618.1

WERE THERE ANY CRITICAL COLLISIONS?



PROBLEM

Collisions may go unnoticed, or their severity may be unclear, leading to unsafe maintenance decisions.



SOLUTION

Regularly measure a reference part to monitor measurement stability and detect changes. Automatically get collision messages with criticality info.



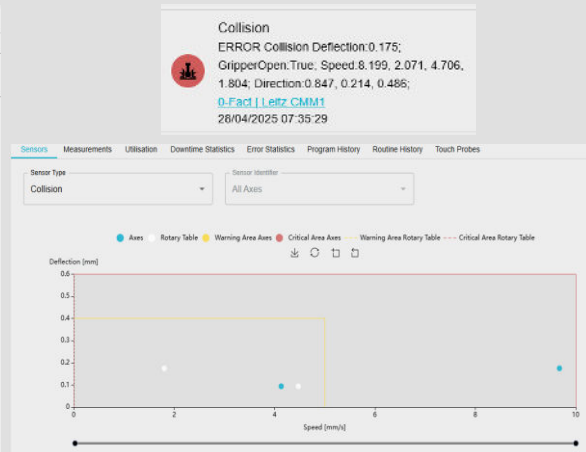
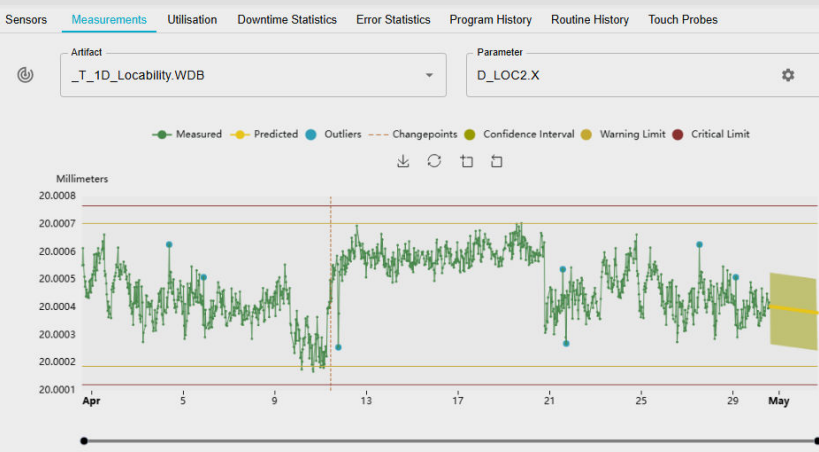
ADDED VALUE

Avoidance of incorrect measurements due to undetected collisions.
Reduction of unnecessary maintenance due to overestimated collisions.

Visualization of Regular Reference Part Measurements over Time. Display of Collision Events.

Solution A

Solution B



CAN MACHINES BE BETTER UTILIZED?



PROBLEM

Machine effectiveness is almost always unclear. Potential improvements in error times, idle times, waiting and set-up times remain hidden.



SOLUTION

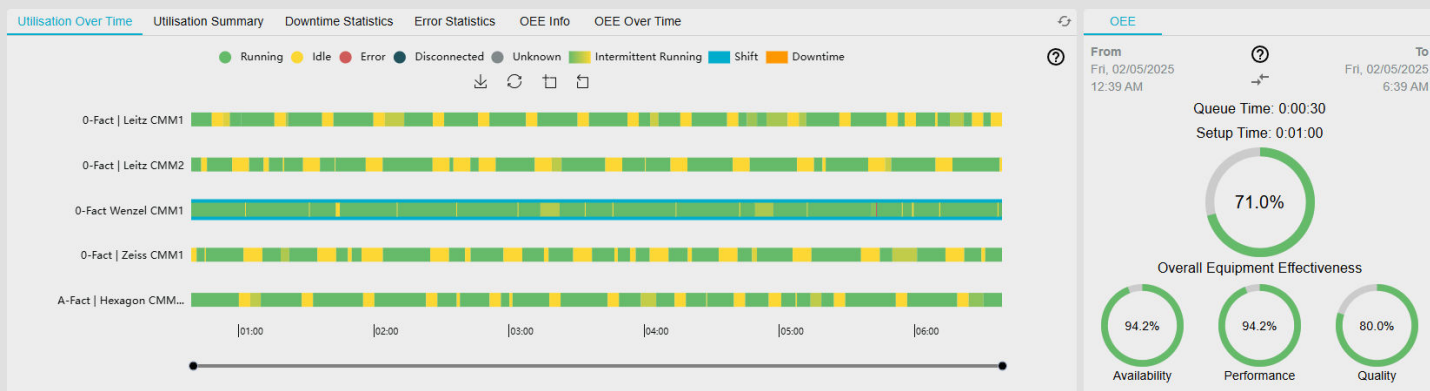
Condition monitoring and automatic evaluation of OEE key figures. Automatic evaluation of errors, queue and set-up times for improvement analysis.



ADDED VALUE

Continuous insights into overall effectiveness to identify optimization potential and increase machine profitability.

Operating Statuses of Machine over Time. Display of Detailed OEE Metrics.



FOR WHICH MEASUREMENTS WERE THERE ANY QUALITY PROBLEMS?



PROBLEM

Measurement results are often stored in individual files or folders, making it time-consuming to find issues or evaluate rejects.



SOLUTION

Central, automatic storage of all measurement results with easy access to individual programs and continuous evaluation of the yield rate.



ADDED VALUE

Simpler, more efficient quality assurance through automated, continuous evaluation. Traceability of historical measurement results and conditions.

Measurement Program Executed on Various Machines Including Metrics and Results.

ProcessDataIn2.PRГ

Version: Not set
Software: PC-DMIS
Runtime

- Ideal: 0:20:00
- Avg. Runtime: 0:20:03 ±0:04:35
- Avg. Downtime: 0:01:17 ±0:02:04

Efficiency Metrics

Program Queue Time: 0:05:01

99.8%

Performance

90.4%

Quality

100.0%

Yield

Machine	Started on	Runtime
A-Fact Hexagon CMM1	25/04/2025 19:42:10	00:11:59
0-Fact Romer Arm	25/04/2025 19:46:23	00:16:12
0-Fact Wenzel CMM1	Last Run on: 25/04/2025 19:25:04	
A-Fact Hexagon CMM2	25/04/2025 19:41:57	00:12:59
A-Fact Hexagon CMM3	25/04/2025 19:31:23	00:03:14
0-Fact Leitz CMM1	25/04/2025 19:28:39	00:04:54
A-Fact Global	Last Run on: 20/04/2025 09:38:46	

Events

- Program Completed
Program Completed on ProcessDataIn2.PRГ
0-Fact | Wenzel CMM1
25/04/2025 19:49:41
- Program Continued
Program Continued on ProcessDataIn2.PRГ
0-Fact | Leitz CMM1
25/04/2025 19:49:14
- Program Paused
Program Paused on ProcessDataIn2.PRГ
0-Fact | Leitz CMM1
25/04/2025 19:47:37
- Program Started
Program Started on ProcessDataIn2.PRГ
0-Fact | Romer Arm
25/04/2025 19:46:23
- Program Continued
Program Continued on ProcessDataIn2.PRГ
A-Fact | Hexagon CMM2
25/04/2025 19:46:14

Routine History | Process Capability

Device Name	Start	End	Downtime	Throttle	Runtime	Status	Performance	Actions
A-Fact Hexagon ...	25/04/2025 19:30:35	25/04/2025 19:36:57	0:00:00	N/A	0:06:21	N/A	> 105%	
0-Fact Wenzel C...	25/04/2025 19:25:04	25/04/2025 19:49:41	0:02:59	N/A	0:21:38	Pass	92%	
0-Fact Romer Arm	25/04/2025 19:18:37	25/04/2025 19:41:23	0:02:35	N/A	0:20:11	Pass	99%	
A-Fact Hexagon ...	25/04/2025 19:14:18	25/04/2025 19:37:10	0:00:00	N/A	0:22:52	Pass	87%	
A-Fact Hexagon ...	25/04/2025 19:05:06	25/04/2025 19:26:22	0:00:00	N/A	0:21:16	Pass	94%	
0-Fact Leitz CMM1	25/04/2025 19:03:16	25/04/2025 19:23:39	0:00:00	N/A	0:20:23	Pass	98%	
A-Fact Hexagon ...	25/04/2025 19:01:21	25/04/2025 19:25:35	0:02:14	N/A	0:22:00	Pass	91%	
0-Fact Wenzel C...	25/04/2025 18:55:30	25/04/2025 19:20:04	0:02:46	N/A	0:21:47	Pass	92%	

Run Detail | Process Capability Details

Started: 25/04/2025 19:25:04

Out	In
0	1

Show Duplicates

Dimension: DMP-InTol x2 | Deviation: 0.0000

WHICH MACHINES NEED WHICH SERVICE?



PROBLEM

It's time-consuming to keep track of necessary service activities. Systematically compiling system, service, and calibration data is effortful.



SOLUTION

Create service plans and get reminders in APOLLO. Get structured access to all relevant machine and service data – for all machines from anywhere.



ADDED VALUE

Less effort for service preparation and follow-ups. Less administration through efficient management of the measuring equipment inventory.

Overview of Structured Machine Meta Data. Historical and Upcoming Activities.

SYSTEM
CONTROLLER

SYSTEM
CONTROLLER
SOFTWARE
SENSORS
ACTIVITIES
LICENSE

Maestro Machine
Maestro 091508
Aachen

[REQUEST SERVICE](#)
[EDIT DEVICE PARAMETERS](#)
[DOWNLOAD REPORT](#)
[DOWNLOAD LOGS](#)

System	
Construction Year	01/01/2025
Group	CMS
Location	Aachen
Model	Maestro 091508
Schedule	General Shift
Local Services Version	7.4.0
SFX Connector Version	14.4.34
Metrology Software Version	14.4.34
Serial Number	SKL2502617
UUID	d33bac1e-5572-4770-a801-a13a03ca55e8
Axes	
X	68740.43982537035
Y	38649.14333221665
Z	20442.33947069684

Service Activity History				
Service Activity	Execution Date	Reminder Date	Comment	Report
Hexagon Mainten...	29/04/2025	N/A		
Certification	28/04/2025	N/A		
Certification	26/03/2025	26/03/2026		
General Calibration	22/10/2024	N/A		
Reset Out-of-Spe...	19/08/2024	09/12/2024		
General Calibration	01/04/2024	01/07/2024	Device calibrated	
Reset Out-of-Spe...	27/03/2024	N/A	Reset OOS	
Maintenance	02/03/2024	02/05/2024	General mainten...	
General Calibration	01/01/2024	01/04/2024	Device calibrated	
Certification	31/12/2023	31/12/2024	Device certified	

ARE MY PRODUCTION PROCESSES CAPABLE?



PROBLEM

Determining measurement, machine, or process capability is complex and usually requires specialized SPC software.



SOLUTION

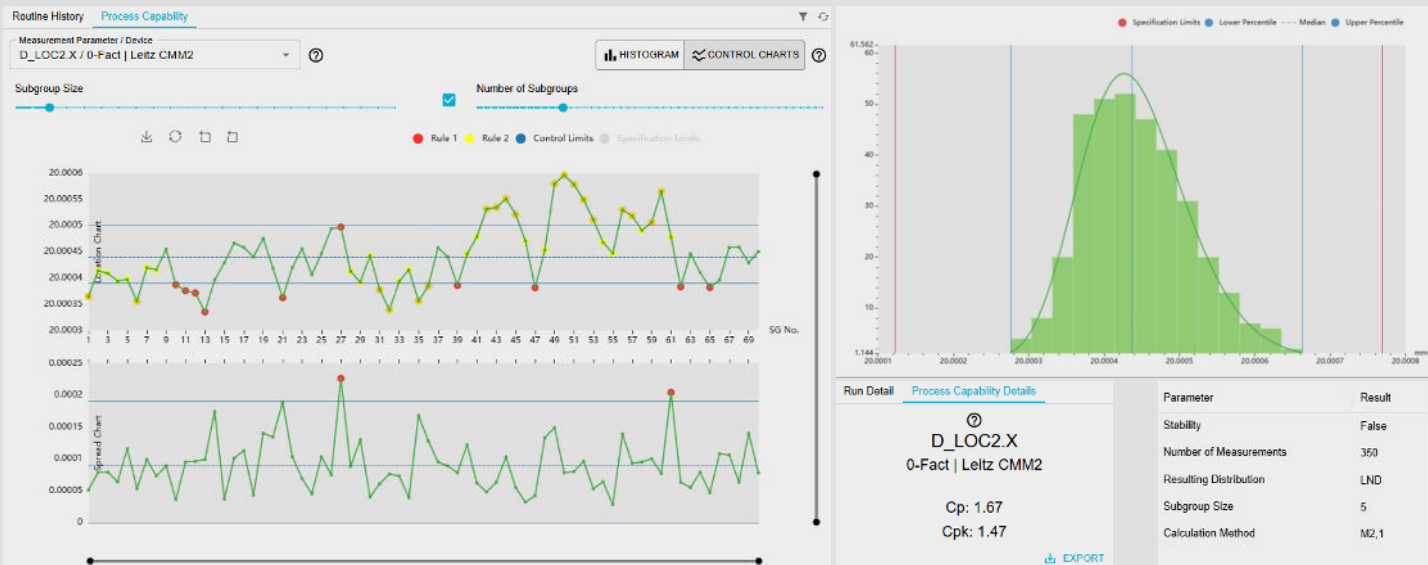
Benefit from automatic calculation of parameters such as process capability. Get intuitive and ISO-compliant evaluations in APOLLO.



ADDED VALUE

Simple and cost-effective determination of statistical parameters for reports, audits, or customers – without expensive training, additional staff or software.

Quality Control Chart Including Stability Evaluation. Display of Histogram and Process Capability.



WHICH MACHINES CAN BE CONNECTED TO APOLLO?

We Offer a Variety of Existing Interfaces with Standard Protocols or Common Manufacturers.

Machines / Controllers	FANUC Fanuc Oi FOCAS Fanuc 30i / 31 / 32 Fanuc 15 / 16 / 18 / 21	DMG Classic / Next Gen	HEIDENHAIN 530 / 640 w/DNC option OPC-UA (640)	SIEMENS 840/828 (OPC-UA)	Mazak ...
Generic Protocols	MTConnect	OPC	MQTT		
Metrology Devices	HEXAGON	Leitz	logp	WENZEL RENISHAW	ZEISS Mahr
Industrial Robots	linxrob				





Since 1992 Hi-Tech Metrology has been a leading provider of high-precision measurement and metrology services with a reputation for accuracy, reliability, and innovation. We offer a wide range of solutions designed to meet the needs of our clients across a broad range of industries including defence, automotive, aerospace, mining, medical, and general manufacturing to name just a few.

Hi-Tech Metrology's head office operations are certified ISO 9001:2015 compliant, underscoring our commitment to delivering high-quality services, continuous improvement, and customer satisfaction.

Today Hi-Tech Metrology consists of three integrated business units to help and support clients with all of their measurement needs - Products, Services and Projects. All these business units form part of a unique Australian company, one that strives to provide the best possible outcomes to our existing and future customers.

