Ⅰ【EM-series manual coordinate measuring machine】

◆ All core components and software are originally imported;

◆ Guideways are made of high-precision natural granite, which have the same temperature characteristics and rigidity;

◆ Guideway X, Y and Z are surrounded by air floating blocks to ensure the linearity of motion;

◆ High-precision self-cleaning air bearing is used for the permanently wear-resistant guideways of all the three axes for more steady operation;

◆ Open metallic optical scale with coefficient of thermal expansion closer to granite matrix improves the stability of the machine;

◆ With three-axis pneumatic locking, all the three axes are provided with a micro-feed structure that combines the convenience of manual operation with the accuracy of automatic operation;

◆ Guideway X and Y are vertically installed rectangular guideways that provide the maximum bending strength;

Model	EM-565	EM-785	EM-7105	EM-7125	EM-7155
X,Y,Z traveral (mm)	500x600x500	700x800x500	700x1000x500	700x1200x500	700x1500x500
Useable table size (mm)	1020x690	1220x890	1420x90	1620x890	2120x890
Weight (kg)	580	800	910	1100	1400
Worktable max load (Kg)	300	500	500	500	500
Scale resolution	1um				
Probe uncertainty (MPEE) um	3.5	3.8			
Measuring Sysytem	3.2 + L/250	3.5+ L/250			
Working temperature	15- 30℃				
Air supply	pressure 4-10 bar, 120Nl/min				

II【**ENC**-series CNC coordinate measuring machine】

◆ Single-side driven movable bridge structure, kinetic performance is significantly improved, and ensure measuring accuracy and stability;

◆ Guideways are made of high-precision natural granite, which have the same temperature characteristics and rigidity;

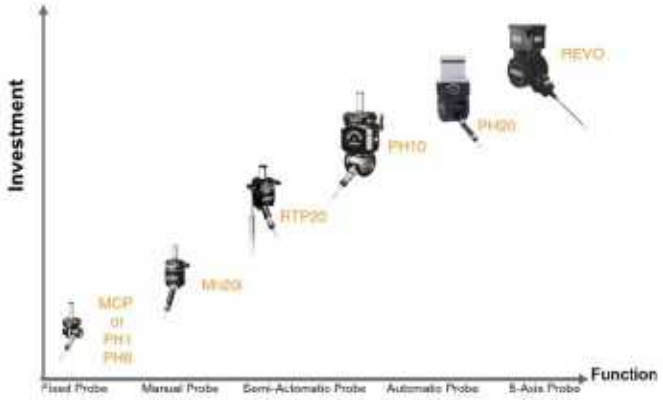
◆ High-precision self-cleaning air bearing is used for the permanently wear-resistant guideways of all the three axes for more steady operation;

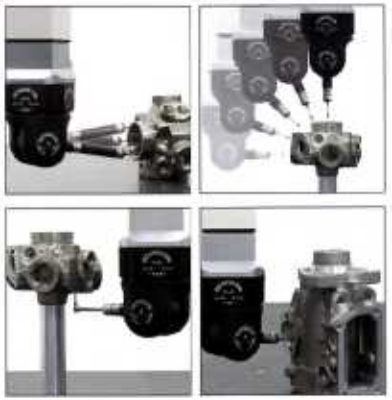
◆ Open metallic optical scale with coefficient of thermal expansion closer to granite matrix improves the stability of the machine;

◆ Integral dovetail guideways is used in Axis Y, eliminating motional swings effectively, ensuring measuring accuracy and stability;

◆ UCC high-speed, high-precision automatic control system from RENISHAW of Britain is used, which embedded with 32-bit microprocessor that enables truly real-time control;

◆ High-power drive and motor, and a two-stage speed reducer are used for all axes to ensure rapid and accuracy driving.





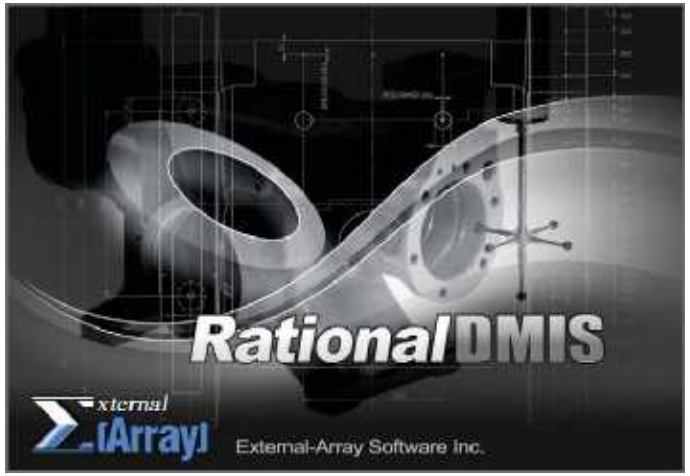
The machine & software can work with many kinds probe and changer

5 axis probe: PH20, Revo
Non contact: CCD,OTP6M,LD50-Laser, LD60-Laser....
Scanning probe:SP80, SP600M,SP25 ...
3 axis automatic probe: PH9,PH10T, PH10M...
Trigger: MCP, MH8, MH20i, RTP20, TP20, TP200...
Changer: MCR20, SCR200, FCR25-L3, FCR25-L6...
Other: MCG calibartion gague, rotary table, temperature sensor

Universal control

Combined with a Renishaw servo power amplifier, it enables precise motion control of up to 5 axes of simultaneous motion on machines of all sizes and also supports rotarytables. It also provides a single-box interface to all Renishaw sensors and can gather surface data at up to 4,000 points per second Sophisticated machine error mapping is provided in an open format, allowing users to perform their own recalibration, whilst temperature compensation is also available. Crucially, the UCC also complies with the I++ DME protocol, giving users the freedom to use any metrology software that features an I++ DME client.

Model		ENC-565	ENC-585	ENC-8106	ENC-8156	ENC-10128	ENC-10158	ENC-10208	ENC-121510	ENC-122010	ENC-122510	ENC-123010
X,Y,Z traveral (mm)		500x600x500	500x800x500	800x1000x600	800x1500x600	1000x1200x800	1000x1500x800	1000x2000x800	1200x1500x1000	1200x2000x1000	1200x2500x1000	2000x3000x1000
Useable table size (mm)		1100x800	1300x800	1710x1030	2210x1030	2000x1250	2300x1250	2800x1250	2350x1500	2850x1500	3350x1500	3850x1500
Weight (kg)		1200	1400	1800	2260	2800	3500	4200	4500	5000	6000	7000
Worktable max load (kg)		500	500	1000	1000	1500	1500	1800	2000	2000	2500	2500
Scale resolution		0.5 μm （0.1μm for option)										
Probe uncertainty (MPEE) um	TP20	2.6		2.8		3.2		3.2	3.6			
	TP200	2.2		2.4		2.8		2.8	3.2			
Space uncertainty (MPEP) um	TP20	2.4+L/300		2.6+L/300		3.0+L/300		3.0+L/300	3.4+L/300			
	TP200	2.2+L/300		2.4+L/300		2.8+L/300		2.8+L/300	3.2+L/300			
Joystick mode Vmax		0-20mm/s (slow speed mode), 0-100mm/s (normal mode)										
CNC Mode Vmax		Single axis 300mm/s, Space 520 mm/s										
CNC Mode Amax		Single axis 900mm/s2, Space 1500 mm/s2										
Working temperature		15- 30℃										
Air supply		Pressure 4-10 bar, 160Nl/min										



Software instruction

As a new generation of CMM software, RationalDmis is developed under total independency. Featured with its straight forward, powerful and highly efficient functionality, it not only has been highly praised by experts in CMM industry since released into the market, but also gains the trust of customers.

RationalDMIS has passed the authentication of Physikalisch-Technische Bundesanstalt (PTB), a world well-known Deutsch metrology institute, and its reliability, effectiveness in methodology has been recognized by authorities. RationalDMIS fully complies with DMIS standards and ISO22093:2003 international standards.

One RationalDmis package provides a full solution! It supports I++ protocol system and other various control devices. With its user-friendly interface, unique "Drag n Drop" operation, seamless CAD datalinking, 100% graphical on measurement output and object oriented quick programming capability it becomes very powerful but only requires 3 day basic training to master it without extensive professional knowledge requirement on users.

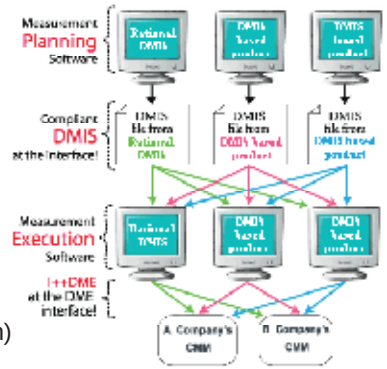
RationalDMIS is a new breakthrough in CMM software trade with respect to practicability, intelligence, convenience and so on, and therefore is the most ideal option for manufacturing and metrology industry.

Our goal is to constantly develop and improve RationalDMIS measuring software to adapt to global market, meeting the requirements of CMM manufacturers and end users with quick speed and best quality, and meanwhile we also provide full technical service and supports.

RationalDMIS is always in step with world advanced standards, design concepts!

ISO 22093: 2003—(DMIS)

DMIS2.1 ANSI/CAM-I 101-1990
DMIS3.0 ANSI/CAM-I 101-1995
DMIS4.0 ANSI/CAM-I 104.0-2001
DMIS5.0 ANSI/CAM-I 105.0-2004



DMIS (Dimensional Measuring Interface Specification) provides a common standard for 2-way measurement data transfer between computer and measuring equipments. DMIS standard has been recognized in industries internationally and become a global trade standard for CMM.

More and more major manufacturers like BMW, TemPress, NASA, GE has recognized and adopted DMIS. It has become a common view in coordinate measuring industry to know and use DMIS, to integrate with international metrology standards. DMIS will show its advantages further in the fierce competitions in the future!

DMIS really stands out being time-saving and money-saving ! DMIS ensures the inter-changeability between programs that are DMIS compliant. There is no need to make any conversion or revision, and there will be no time wasted on re-programming, which can guarantee the value of all measuring programs!

At the very beginning of design, RationalDMIS is completely developed based on DMIS and is one of the software in the world which highly supports DMIS Standard!

II++ Protocol is created by the joint effort of seven largest auto makers in Europe. It establishes and defines the common interfaces between different testing devices, and thus quickens the connection between different hardware control devices and measuring software. While saving time, it also reduces the cost on developing new interfaces. DMIS and I++ represent the advanced design concepts and future development trends of coordinate measuring industry! It is honourable for RationalDMIS to be a pioneer supporting DMIS, I++! Only the software developed strictly based on industrial standards can make sure the universal property of programs and the inter-changeability of hardware control systems, and can truly lower cost, improve efficiency for the users!

PTB Authentication

Physikalisch-Technische Bundesanstalt (PTB) is a world well-known Deutsch metrology institute of CMM software authentication. RationalDMIS has successfully passed the authentication of PTB, which proves that its accuracy, compatibility and reliability are recognized by the authority.

Physikalisch-Technische Bundesanstalt

RationalDMIS supports Windows XP and Windows 7!

RationalDMIS supports various hardware control system:

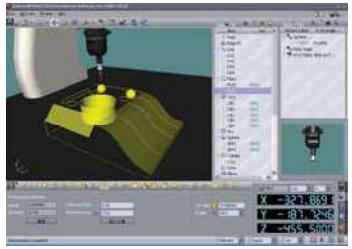
UCC1, UCC2, UCClite: WPC: DEVA: TUTOR-P:

MicroScribe hinged arm; Baces3D hinged arm; HEADER line laser

RationalDMIS supports various sensors/changers, etc.

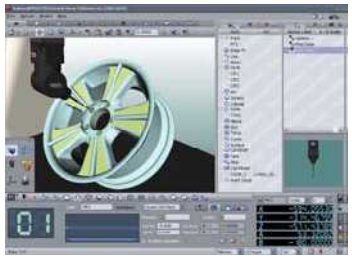
High-speed five-axis: latest Renishaw high-speed five-axis triggered PH20!
High-speed five-axis scanning REVO!
Non-contact: CCD, OTP6M, LD50-Laser, LD60-Laser...
Continuous scanning: SP80, SP600M, SP25...
Auto-rotation sensor: PH9, PH10T, PH10M...
Triggered sensor: MCP, MH8, MH20i, RTP20, TP20, TP200...
Sensor changer: MCR20, SCR200, FCR25-L3, FCR25-L6...
Others: MCG calibration gauge, rotary table, temperature sensor…

Versions & Functions of RationalDMIS software



Lite Version

*Applicable to the measurement of parts without CAD
*DMIS 5.0 programming
*Displays the features, machine model, and sensor model under graphics viewer
*Displays the measurement process, measuring path preview /real time simulation in graphics
*Graphical output report
*Creates and constructs complete coordinate systems, evaluate various tolerances
*Supports the shape of curves, surfaces
*Supports point cloud, e.g. point cloud import/export
*Supports 21 error compensation/temperature compensation/real time temperature compensation



Standard Version

*Including all the functions in the Lite Version of RationalDMIS
*Supports CAD import/export, seamless connection with CAD
*Auto identifying CAD features, quick CAD-based programming, real-time comparison
*Anti-collision measuring, intelligent planning measuring
*Supports auto-rotating sensor: PH9, PH10, five-axis triggered PH20...
*Supports continuous scanning sensor: SP25, SP80, five-axis scanning REVO...
*Supports various Renishaw sensor changers
*Supports 4th rotating table, MCG calibration gauge
*Equip with Proe, UG, CATIA, ParaSolid direct interface
*Optional modules: SPC/CCD/Laser/blade/cam/gear/pipeline

Offline Version

*Same interface with the Standard Version of RationalDMIS
*Data can also be used in other versions
*DMIS 5.0 programming
*Quick graphical measuring program editing
*Preview measuring path of work piece
*Anti-collision measuring, intelligent planning measuring

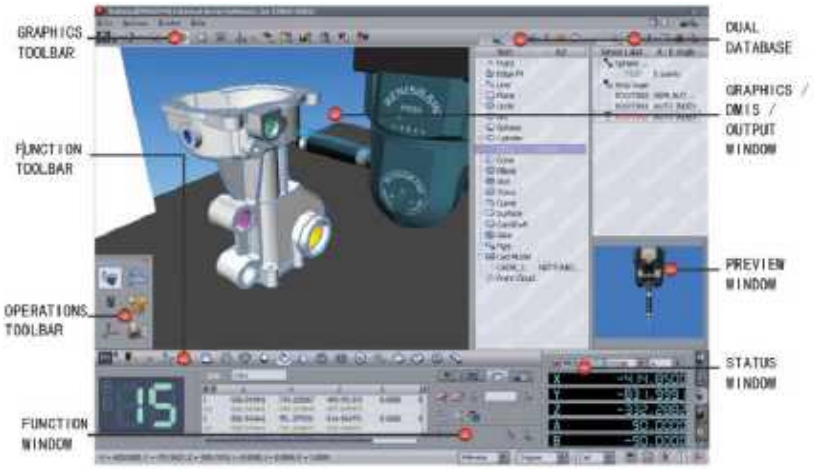
Simulation Version for Teaching

*Realize low-cost, high-efficient measuring teaching
*Based on RatinalDMIS 2.65, same operation as Version V2.65
*Supports all kinds of simple handle linking
*Satifies single or multiple people tutoring
*Fail to connect CMM hardware
*The evaluated data have errors after processing, and it can test the data with simulated online

Main Features of RationalDMIS

Intuitive, brief user interface

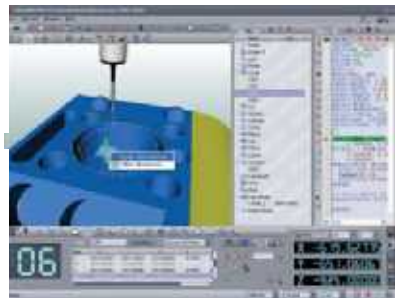
◆Unique, intuitive, brief user interface
◆No pop-up window
◆No complicated input, verification process
◆Avoid interface redundancy caused by more than one pop-up window



Simple, high efficient operations

Click with mouse + drag & drop with mouse = powerful functions

◆Real-time connection between graphic area, data area and operating area, simply “click with mouse” can identify all the features on CAD model, complete the quick editing of program, etc.



◆Drag & drop maximized the simplicity of the operating process. Whether it is calibrating sensor, measuring feature, creating coordinate system, constructing feature, evaluating tolerance, or outputting reports, it can be completed by the drag & drop of mouse, which makes the operation much easier.

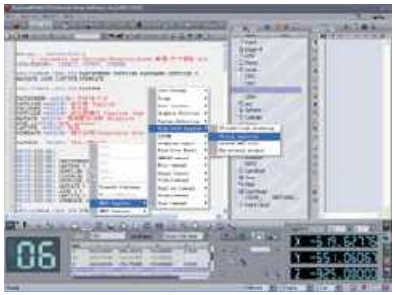
100% graphical display

All the operating processes can be 100% displayed in graphics.

From creating machine models —creating sensors—calibrating sensors—creating coordinate systems —measuring —changing sensors —constructing features—evaluating tolerances —outputting reports….
It is intuitive and clear!

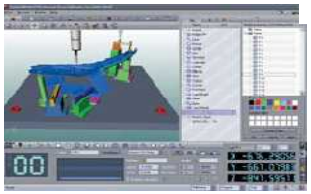
Being such a intuitive, convenient, intelligent CMM software, it only requires a few day's training and even users with little industrial experience can mast it easily!

Powerfur Functions



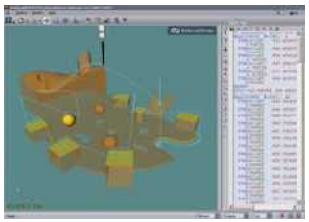
100% DMIS cored

- ■DMIS 5.0 programming
- ■DMIS self-learning program
- ■DMIS format import/export
- ■Quick programming on graphical objects
- ■Support both online and offline programming



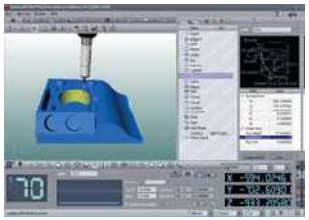
Seamless connecting with CAD data

*Supports IGES, STEP, DXF
*Supports Proe, UG, CATIA, ParaSolid direct interface
*Reads, edits CAD colors and layers
*Automatically identifying nominal CAD features, point/line/plane features
*Automatically finding out nominal features and perform realtime comparison with nominal features
*Quick CAD grid point measuring, CAD mirror image and CAD cutaway view



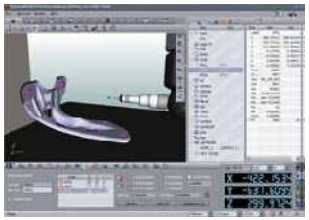
Intelligent measuring

*Anti-collision measuring, path preview and real-time simulation
*Intelligent measuring: automatically identifying the feature type based on the measuring point and location
*Intelligent path planning: automatically create optimal measuring path
*Dependence testing: identify whether the coordinate system and sensor are correct under current status
*Rational shortcut panel: provide one shortcut window to quickly create coordinate system / construction / tolerance, etc.



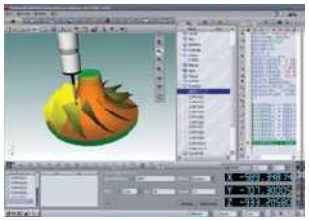
Continuous Scanning

*Supports SP25, SP600, SP80...
*Supports WPC triggered continuous scanning
*Supports REVO high-speed five-axis linkage scanning
*Filtering function: filtering the burr and disturbance during scanning
*Supports the non-contact quick scanning of line laser
*Supports Renishaw sensor changer



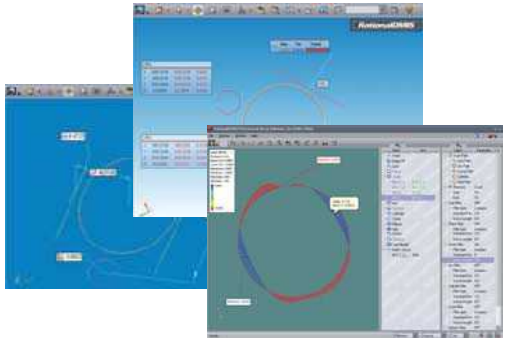
Various methods to establish coordinated system

*Coordinate system alignment of various complicated work piece
*Quick 3-2-1 alignment
*Quick CAD aligning work piece
*RPS alignment
*Multi-point fitting, BestFit fitting
*Iterative alignment (align work piece of free-form surfaces)



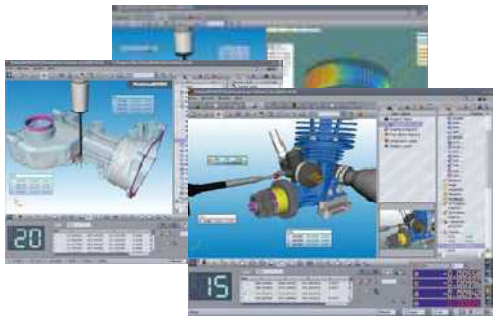
Powerful feature construction functions

*Satisfies various construction demands
*CAD mirroring, various geometrical features mirror
*Intelligent and quick fitting on new features
*Quick constructing for feature extreme
*Feature array copy, rotation copy
*Work piece offset, material compensation



Complete, quick tolerance evaluation

- ◆In accordance with various standards: GB /ISO / ANSI / DIN / AGMA
- ◆Evaluates various tolerances: Distance/Angle/Angularity/Perpendicularity/Parallelism/Position/Cylindricity/Concentricity/CircularRunout/TotalRunout/Circularity/ConeAngle/Diametar/Radius/Flatness/Straightness/PointProfile/CurveProfile/SurfaceProfile/Symmetry/Width
- ◆Labels the error of feature dimensions graphically
- ◆Support max entity MMC, min entity LMC, RFS
- ◆Quickly evaluates the tolerances of single feature, quickly copies and evaluates features of the same type



Diversified output reports

- ◆Traditional text output
- ◆Graphic output
- ◆SPC data statistics and analytical report
- ◆All kinds of form error report
- ◆Output of various forms, including HTML, EXCEL, PDF,etc
- ◆Import, edits user-defined output templates

RationalDMIS supports Open Office, so creates Excel outputs without needing to purchase Excel license!

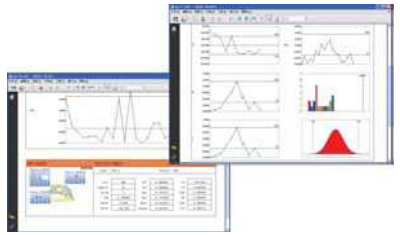
- ◆From user point of view, Open Office is successfully built into the software to save money for users from buying Excel license! A big saving especially for those corporations that utilize multiple CMMs

Note: Open Office software is provided by Oracle and can be free downloaded at http://www.openoffice.org

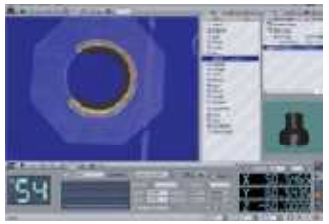
Xecute — Software interface designed for shop floor CMM

- ◆Simplified operation, no experience required for operators, only a few minutes of training needed.
- ◆Very user-friendly interface, one button control on all measuring plans, management option on user privilege, security ensures safety and reliability for programs.
- ◆Quick calling on compiled measuring programs improves shop floor inspection efficiency and CMM usage, reduces possibility of operator error, resulting in clear duty distribution!
- ◆Works best for high volume work piece inspection, measurement control and management on various products, also allows real time graphical, text reporting, printout, fast and easy.

SPC Module: used for the statistic analysis on product quality control.



CCD Module: used for graphical analysis and complex measurement.



CCD calibration and complex calibration

CCD calibration

Complex calibration

Complex calibration: ensures integration of CCD data and triggered sensor data into the same coordinate system

Laser Scanning Module: commonly used in high-speed, high-precision reverse engineering.

Automatic stitching, trimming on scanning data from multiple sensors of various angle.

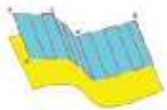


Diagram of contour path

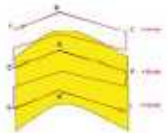
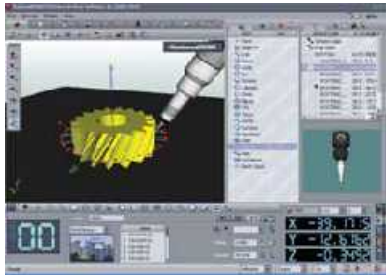


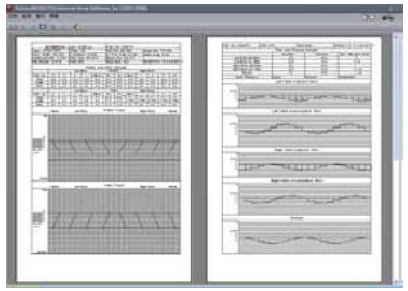
Diagram of non-contour path

Gear Module: used to measure the involute gear of cylinder, including internal straight gear, external straight gear and helical gear.



Automatically construct gear CAD model based on the design parameters

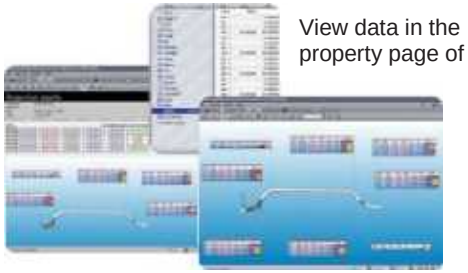
Gear Path/Lead/Profile Measure



Report of gear

Text/graphics report

Pipe Module: used to test and analyze the automobile pipe, oil pipe.



View data in the property page of pipe

View and save the graphic pipe data in output report

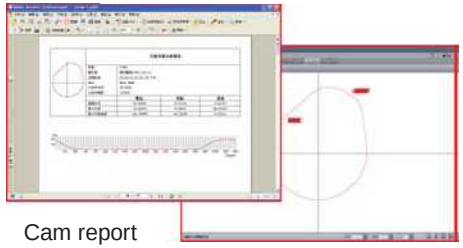
Intuitively, visually view and save the graphic pipe data in output report

Cam Module: used to analyze cam/camshaft

Cam

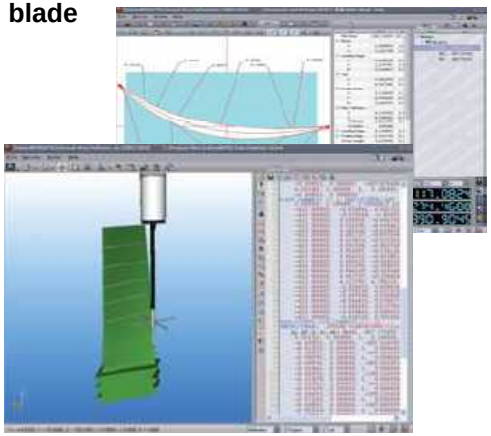
Camshaft

Proble angle change

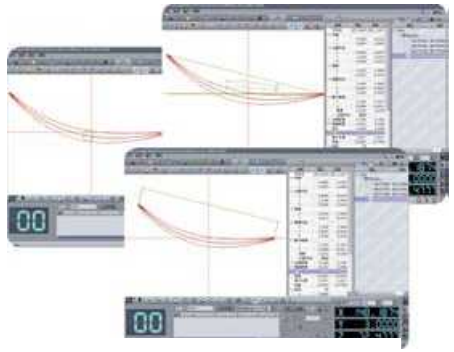


Cam report

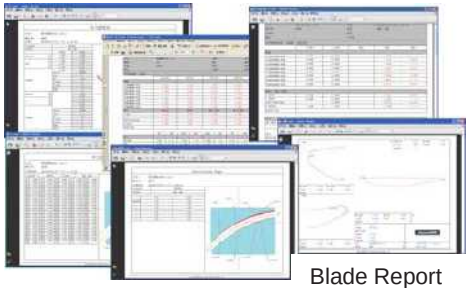
Blade Module: used to measure and analyze aviation blade, nuclear power blade



Measuring Blade



Evaluation Blade Parameters



Blade Report

Touch Screen: the operations can accomplish most of the testing at measuring machine terminal with touch screen.

l Dual-screen, data sharing, to improve the work efficiency!

The main screen RationalDMIS and Xmeas show different interfaces, which realizes dual screen and data sharing, improving over 30% work efficiency.

l Comprehensive and practical functions!

Xmeas can complete regular functions easily, including machine homing, sensor calibration, construct/switch coordinate system, tolerance evaluation, unit conversion, report output and printing, etc, which can greatly reduce the cycle time of operators and improve testing efficiency.

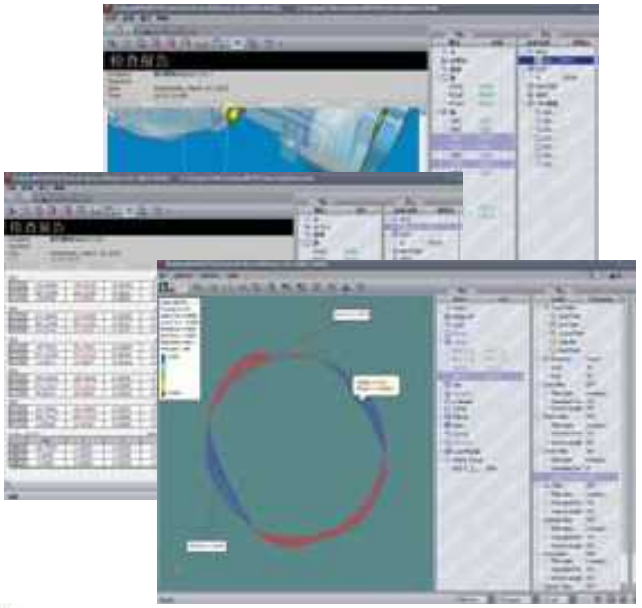
l Simple operation, easy to learn!

Complete touch operation, supporting virtual soft keyboard input, brief interface, intelligently identify the type of feature under measuring, automatically listing the tolerance/construction available for calculation.

Xmeas Chart

CMM

Net report: it allows the user to view the real-time measuring data, edit the output report from other computers with the help of LAN.



Free the coordinate measuring machine! Improve the utilization of measuring machine! Enhance the testing efficiency!

The coordinate measuring machine can carry out measuring task without interruption, and the report maker can compile data report at real time!

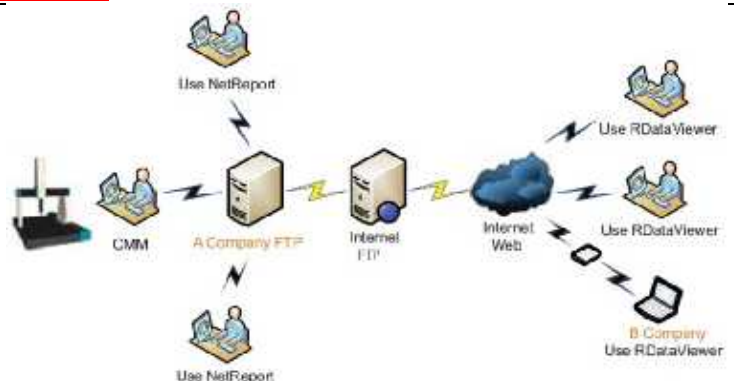
Quality monitoring! Coordinating the performances of multi departments! Coordinating the testing of multi products!

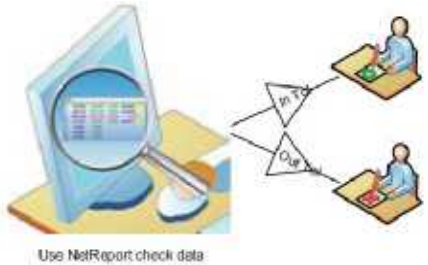
The quality inspection department can call the data, check the data and status of products under inspecting at any time. The design department, the production department and the quality inspection department can check the percentage of pass at real time, and thus adjust/coordinate the work.

Data sharing! Paperless/Network! High-efficiency and Timesaving!

It allows the users realizing real-time sharing of report or data between the client (Company A) and its supplier (Company B). Complete network operation, and it avoids a series of complicated acceptance procedures, including report printing, data transfer, testing submitting/waiting, application/acceptance, etc.

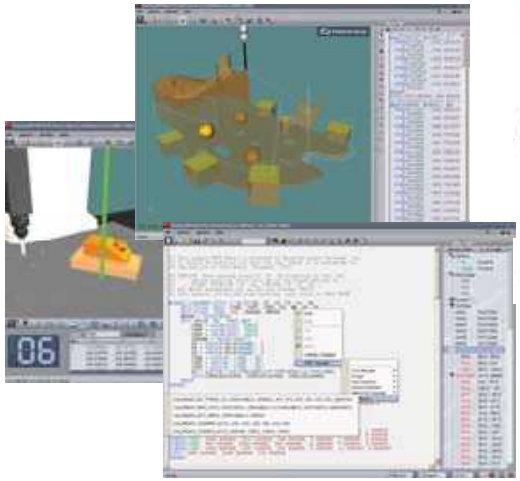
RationalDMIS NetReport Solution:





RDataViewer is a free software allowing the user to quickly view RationalDMIS testing report, and it is available at http://www.external-array.com.cn

NetOffline: it allows the programmer performing DMIS offline programming for the components from other computer through LAN(TCP/IP).



Standardized process! Clear labor division!

The design department is in charge of designing the CAD model of components, the programmers write measurement program, CMM operators are in charge of running DMIS program online and complete the report

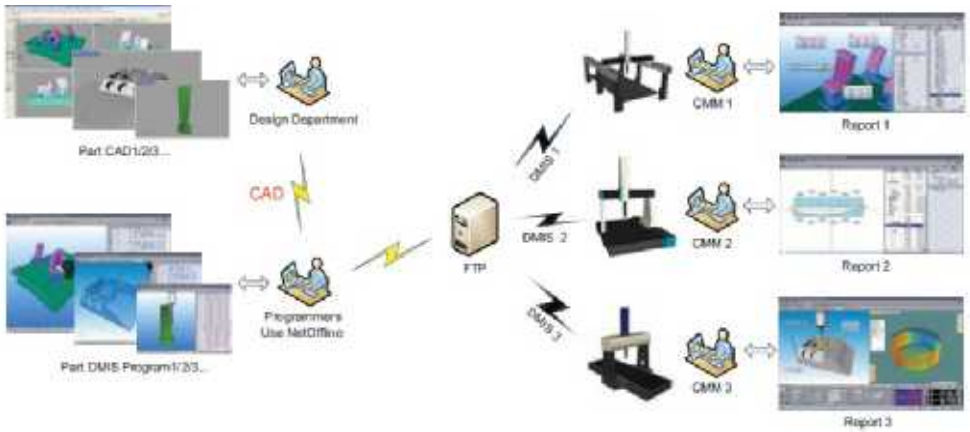
Improve efficiency! Improve the utilization of CMM!

CMM operators directly open the program created by programmers for testing, which not only avoids a lots of preparation for the operators, such as analyze the drawings of each component one by one, find out the testing method, and study the path planning, but also saves lots of time!

Improve efficiency! Improve the utilization of CMM!

The CAD object-based programming, visualization of measuring machine/sensor/CAD, path simulation, anti-collision testing, powerful offline programming function can ensure the programmers to compile reasonable, safe testing program. It also avoids the machine collisions caused by mistake of operators, reduces the false parts caused by the misunderstanding of design/testing requirements of the operators, or by improper testing methods, which greatly reduces the loss!

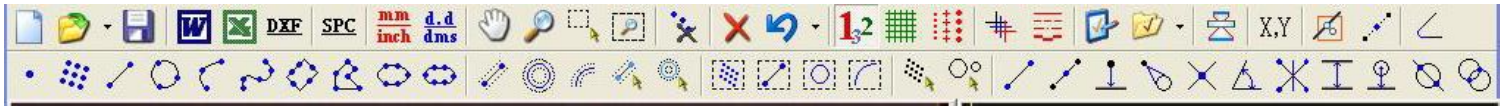
RationalDMIS Netoffline chart:



VISION MEASUREMENT MACHINE

Ⅰ【C-series 2D VISION MEASUREMENT MACHINE】

C series allow customers get high performance 2D vision measurement machine at a low price. With powerful software the C series can replace profile projector in most case.

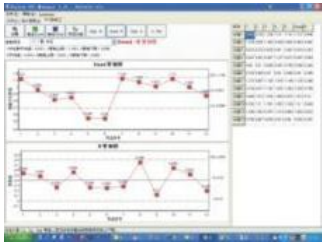


High precision marble base and high precision worktable have good stability, make sure long life accuracy. All results can also output to WORD, Excel, or output to DXF, SPC for further processor.

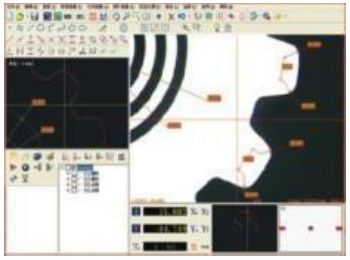
Model	C-2010	C-3020	C-4030
X,Y,Z measurement travel	200x100x150 (mm)	300x200x150 (mm)	400x300x150 (mm)
Machine weight	150 kg	250 kg	350 kg
Repeatability	2 micron		
Max table load	25kg		
Operation mode	Manual		
Resolution	0.001 mm		
X,Y measurement precision	(4+ L/150) micron		
Light source system	LED surface & contour light system, brightness adjust by buttons		
Structure	granite base and mast		
Lens	Ultra-low distortion, can zoom in and zoom out		
Magnification	Optical enlarging rate 0.7-4.5x, image enlarging rate 30-200x		
Vision system	1/3" CCD video camera		

Ⅱ【L-series 2D VISION MEASUREMENT MACHINE】

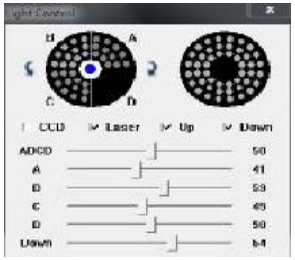
Easson L-series vision measurement machine has a user-friendly operation interface and a powerful software. The instrument is with a high quality camera and high precision optical lens, in addition the high precision working table and optical scales, can ensure a precision and clear image for measuring and inspection. The magnification can be 25X- 145x, together with the powerful software, the measuring efficiency will be much higher than a normal profile projector. The high quality camera ensures a clearing image for different color and different material work piece, so you can get an outstanding outcome even in the curve and tiny work piece measuring.



SPC software



Full function measuring software



light control

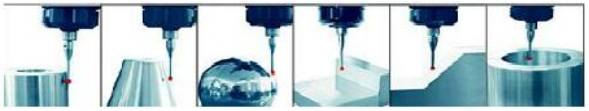
Model	L-2515	L-3020	L-4030
X,Y,Z measurement travel	250x150x150 (mm)	300x200x200 (mm)	400x300x250 (mm)
Overall dimensions	100x60x140 (cm)	120x72x160 (cm)	120x72x160 (cm)
Machine weight	170 kg	280 kg	410 kg
Repeatability	2 micron		
Max table load	25kg		
Operation mode	Manual		
Resolution	0.001 mm		
X,Y measurement precision	(4+ L/200) micron		
Light Source system	software controlled adjustable 4-way surface light and straight adjustable contour light		
Structure	00 grade granite base and mast		
Lens	Ultra-low distortion, can zoom in and zoom out		
Magnification	Optical enlarging rate 0.75-4.5x, image enlarging rate 25-125x		
Vision system	1/3" High resolution CCD lens		

Ⅲ【EV series 3D high performance manual VISION MEASUREMENT MACHINE】

EV series has a high capability / price ratio. **Auto focus** function as standard configures in this series. It uses high precision marbles as the machine base stand. High precision working table and 0.001mm resolution optical scales installed in the X,Y,Z axis increase the measuring accuracy to **(3+L/200)um**.

The powerful software developed by Easson allows users to output the measuring results to general CAD software such as AUTOCAD, MASTERCAM and etc... or users can directly input the DXF file to the software for comparing. The electronic system of the EV series is advanced, it uses the new multi-axial PCI counter card and light motor controlling card developed by Easson, in this way the controlling system very succinct. For more scientific application, an SPC statistical and analysis software is also included in the software package. Users can use the software to analysis the measuring result, in order to control the error range and result of the manufacturing. All measuring results can be output to general office software such as WORD or EXCEL. This allows users to have measurement reports export directly.

All the EV series can install the Renishaw touch probe and 3D software for 3D measurement.



Model	EV-2515	EV-3020	EV-4030
X,Y,Z measurement travel	250x150x150 (mm)	300x200x200 (mm)	400x300x250 (mm)
Overall dimensions	135x72x155 (cm)	135x72x165 (cm)	146x89x175 (cm)
Machine weight	170 kg	280 kg	410 kg
Repeatability	2 micron		
Max table load	25kg		
Operation mode	X Y Manual, Z motorized (control by mouse, keyboard or joystick)		
Resolution	0.001 mm		
X,Y,Z measurement precision	(3+ L/200) micron		
Light source system	software controlled adjustable 4-way surface light and straight adjustable contour light		
Structure	00 grade granite base and mast		
Lens	High precision Tele-centric lens		
Precision measuring head	English RENISHAW precision touch probe		
Magnification	Optical enlarging rate 0.75-4.5x, image enlarging rate 25-145x		
Vision system	High resolution CCD lens (1/2" SONY CCD sensor & special SPC)		

Ⅳ【SPARTAN series 3D super-high performance automatic VISION MEASUREMENT MACHINE】

SPARTAN series is designed specially for large quantity repeated measuring. It with high speed, high efficiency and powerful functions. SPARTAN series especially suits for large-amount section which requires high speed, high efficiency and high precision. It is a necessary and important equipment for a busy QC line. SPARTAN series uses high precision 00 class granite structure for the bracket, along with high precision work-table, which ensure the stability and precision of the machine body and the high precision of the measuring. For SP-4030H & SP-6050H three axis adopt the Panasonic AC servo motor & drivers, recognized by the whole industry as the most reliable system.

All the moving is controlled by a high speed 32bit DSP controller in order to ensure a reliable high-speed measurement.

The software of SPARTAN series has learning function, users just need measure the work piece manually one time, the software will record all the measuring process, this can be used for the later repeated measuring. User do not have to write any program and this largely simplify the operation.

All the SP series can install the Renishaw touch probe and 3D software for 3D measurement .

SPARTAN 4030

SPARTAN-4030

SPARTAN-6050H

AC servomotor system

The 3 axis of SPARTAN H series adopt the Panasonic AC servo motor system, recognized by the whole industry as the most reliable system, to make sure high speed and reliable measuring.

Motorized auto-zoom lens

Needn't make image correction any more after change the magnification rate, Can improve the measuring efficiency clearly

0.5x, 1.5x, 2x lens

After install them the enlarging rate can extension to 12-290x, convenient to measure small & big workpieces.

2D/3Dcomplex measuring

RENISHAW high precision touch probes combine the vision measuring in SPARTAN series, they use the same Coordinates system, so it Can have the 2D/3D measuring match Perfectly.

Model	SPARTAN-3020	SPARTAN-4030	SPARTAN-4030H	SPARTAN-6050H
X,Y,Z measurement travel	300x200x200 (mm)	400x300x250 (mm)	400x300x250 (mm)	600x500x300 (mm)
Overall dimensions	135x72x165 (cm)	146x89x175 (cm)		170x136x185 (cm)
Machine weight	280 kg	410 kg		1700 kg
Repeatability	2 micron			
Max table load	30kg			50kg
Operation mode	Automatic CNC control, by mouse, keyboard or joystick			
Resolution	0.001 mm			
X,Y,Z measurement precision	(3+ L/200) micron	(3+ L/150) micron		(4+ L/150) micron
Light source system	software controlled adjustable 4-way surface light and straight adjustable contour light			
Structure	00 grade granite base and mast			
Lens	High precision motorized Tele-centric auto-zoom lens & 0.5x,1.5x,2x attached lens			
Probe system	English RENISHAW precision touch probe			
Magnification	Optical enlarging rate 0.75-4.5x, image enlarging rate 12-290x after install attached lens			
Moving system	100mm/s, X/Y/Z step motor drive system		150mm/s, Japanese Panasonics AC servo motor & driver	
Vision system	High resolution CCD lens (1/2" SONY CCD sensor & special SPC)			

PRODUCT GMI (Profile Projector)

Profile Projector

Profile Projector

Category: **Profile Projector**

DESCRIPTION

EP-1 high precision optical profile projector Provides accurate 2D measurement for all common geometric features such as circle, lines, angles and etc, All measured results can be printed or transferred to computer for futher processing.

EP-1 optical profile projector is designed for all circital dimensions measurement in mould & die making, form tools making, screw manfactring, gear manufacturing and etc.

Constructed with top class components and under high standard of workmanship, EP-1 achieves very high measurement accuracy, the axial measurement accuracy is (3+L/100)um, where L is the measured length in mm: the total contour distortion is less than 0.08%.

High quality lighting & optical system provides brilliant images of expectional quality.

EP-1 equipped with ES-12 1um resolution high accuracy measuring system which provides comprehensive & easy to use geometric measurement functions.