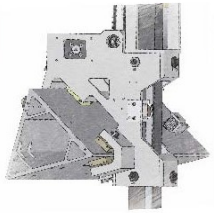
Tornado Series CMM

THE HIGH EFFICIENT SOLUTION
FOR WORKPIECE INSPECTION



Tornado series CMM is made of aviation grade aluminum alloy, which could be able to locate and measure workpiece at an extremely fast speed, meets customer requirements for high measurement efficiency.

Performance Characteristics

- Four-sided air-floating structure used in Y axis, eliminating the movement of torsion pendulum to ensure that the machine's high rigidity, and high stability.
- Y-axis drive near the movement center, the main support lighter, thereby reducing the weight of moving parts to ensure that the machine's high-speed and high stability.
- Precision triangular beam technology is applied to Axis X, with aviation grade aluminum alloy, featuring lower center of gravity, better mass-rigidity ratio and more reliable motion relative to rectangular and cross beams.
- Z-axis and carriage are all adopted to the aviation grade aluminum alloy material, ensuring the same expansion technology, working in more harsh temperature environment.

MODEL	STROKES			MEASURING ACCURACY ISO10360 2:2009/GB/T16857.2 2006		OVERALL SIZE			WORK ENVELOPE			WEIGHT	PART WEIGHT
	X	Y	Z	S		Lx	Ly	Lz	Wx	Wy	Wz		
	mm	mm	mm	MPEE(um)	MPEP(um)	mm	mm	mm	mm	mm	mm	kg	kg
NCA454	400	500	400	2.1+3.3L/1000	2.2	1000	1240	2240	525	995	600	690	500
NCA564	500	600	400	2.1+3.3L/1000	2.2	1100	1340	2240	625	1095	600	720	500
NCA686	600	800	600	2.2+3.3L/1000	2.3	1200	1650	2660	730	1400	800	973	700
NCA8106	800	1000	600	2.2+3.3L/1000	2.3	1400	1850	2660	930	1600	800	1290	1000
NCA8156	800	1500	600	2.2+3.3L/1000	2.3	1400	2350	2660	930	2100	800	1620	1000
NCA10128	1000	1200	800	2.5+3.3L/1000	2.7	1700	2370	3150	1190	1814	1040	2520	1800
NCA10158	1000	1500	800	2.5+3.3L/1000	2.7	1700	2670	3150	1190	2114	1040	2950	1800
NCA10208	1000	2000	800	2.5+3.3L/1000	2.7	1700	3270	3150	1190	2614	1040	3650	1800
NCA121510	1200	1500	1000	3.0+3.3L/1000	3.0	1884	2750	3400	1390	2200	1200	4060	2000
NCA122010	1200	2000	1000	3.0+3.3L/1000	3.0	1884	3350	3330	1390	2700	1200	4700	2000
NCA152010	1500	2000	1000	3.3+3.3L/1000	3.3	2210	3350	3370	1690	2700	1200	5280	3000
NCA152510	1500	2500	1000	3.3+3.3L/1000	3.2	2210	3850	3400	1690	3200	1200	5950	3000
NCA153010	1500	3000	1000	3.2+4L/1000	3.2	2255	3910	3420	1690	3700	1200	6890	3000
NCA152512	1500	2500	1200	3.8+4L/1000	3.8	2210	3850	3870	1690	3200	1400	5950	3000
NCA153512	1500	3500	1200	3.8+4L/1000	3.8	2255	4410	3890	1690	4200	1400	7890	3000
NCA15**12	1500	XX	1200	3.8+4L/1000	3.8	2200	XX	3370	1690	XX	1400	XX	XX
NCA163515	1600	3500	1500	4.0+4L/1000	4.0	2360	4540	4520	1780	4330	1700	8640	3000
NCA16**15	1600	XX	1500	4.0+4L/1000	3.9	2200	XX	3370	1600	XX	1700	XX	XX
NCA203015	2000	3000	1500	5.0+4L/1000	5.0	2360	4240	4520	1780	3930	1700	9460	3000

- Power Voltage: 220V
- Air Pressure: 0.5-1.0Mpa
- Filter Accuracy: 0.3μm
- Air Supply: 0.3-0.45m³/min
- Temperature Range: 18-22℃
- Hourly Temperature Cycle: 1℃/h
- Thermal Gradient: 1℃/m
- Relative Humidity: 45%-75%

Cruiser Series CMM

THE HIGH ACCURACY SOLUTION
FOR BIG WORKPIECE INSPECTION

leader METROLOGY 雷顿

Cruiser series CMM offers maximum measurement volume for large work-pieces. Advanced means and methods which are designed by professional software, analyzed by finite element and dynamic property etc ensure measuring high stability and accuracy.

Fixed L shape bridge structure of the movable work table has a spacious measurement space, furthermore, Cruiser series CMM changes in pitch and yaw are minimized during operation, which greatly improves the measurement accuracy and precision stability.

MODEL	STROKES			MEASURING ACCURACY ISO10360-2:2009/GB/T16857.2-2006				OVERALL SIZE			WORK ENVELOPE			WEIGHT	PART WEIGHT
	X	Y	Z	S		P		Lx	Ly	Lz	Wx	Wy	Wz		
	mm	mm	mm	MPEE(um)	MPEP(um)	MPEE(um)	MPEP(um)	mm	mm	mm	mm	mm	mm	kg	kg
NCL152010	1500	2000	1000	3.0+3L/1000	3.5	2.5+3L/1000	2.5	2700	3800	3700	1700	2200	1200	9300	4000
NCL152510	1500	2500	1000	3.0+3L/1000	3.5	2.5+3L/1000	2.5	2700	4300	3700	1700	2700	1200	10500	4000
NCL153010	1500	3000	1000	3.0+3L/1000	3.5	2.5+3L/1000	2.5	2700	4800	3700	1700	3200	1200	11400	4000
NCL15XX10	1500	XX	1000	from 3.0+3L/1000	from 3.5	from 2.5+3L/1000	from 2.5	2700	XX	3700	1700	XX	1200	XX	XX
NCL152012	1500	2000	1200	3.3+4L/1000	3.5	2.9+3L/1000	3.0	2700	3800	4100	1700	2200	1400	9800	4000
NCL152512	1500	2500	1200	3.3+4L/1000	3.5	2.9+3L/1000	3.0	2700	4300	4100	1700	2700	1400	10900	4000
NCL153012	1500	3000	1200	3.3+4L/1000	3.5	2.9+3L/1000	3.0	2700	4800	4100	1700	3200	1400	11500	4000
NCL15XX12	1500	XX	1200	from 3.3+4L/1000	from 3.5	from 2.9+3L/1000	from 3.0	2700	XX	4100	1700	XX	1400	XX	XX
NCL152015	1500	2000	1500	3.8+4L/1000	4.0	3.2+3L/1000	3.5	2700	3800	4650	1700	2200	1700	10000	4000
NCL152515	1500	2500	1500	3.8+4L/1000	4.0	3.2+3L/1000	3.5	2700	4300	4650	1700	2700	1700	11300	4000
NCL153015	1500	3000	1500	3.8+4L/1000	4.0	3.2+3L/1000	3.5	2700	4800	4650	1700	3200	1700	12200	4000
NCL15XX15	1500	XX	1500	from 3.8+4L/1000	from 4.0	from 3.8+3L/1000	from 3.5	2700	XX	4650	1700	XX	1700	XX	XX
NCL163015	1600	3000	1500	4+4L/1000	4.2	3.5+3L/1000	3.8	2800	4800	4650	1800	3200	1700	13200	4000
NCL16XX15	1600	XX	1500	from 4+4L/1000	from 4.2	from 3.5+3L/1000	from 3.8	2800	XX	4650	1800	XX	1700	XX	XX

- Power Voltage: 220V
- Air Pressure: 0.5-1.0Mpa
- Filter Accuracy: 0.3μm
- Air Supply: 0.3-0.45m³/min
- Temperature Range: 18-22℃
- Hourly Temperature Cycle: 1℃/h
- Thermal Gradient: 1℃/m
- Relative Humidity: 55%-65%

Navigator Series CMM

THE HIGH VERACITY SOLVENT FOR ENORMOUS PARTS INSPECTION

leader METROLOGY 雷顿

Navigator Series Gantry type CMM has feature of high accuracy, high strength, high rigidity and good stability. It suits for accuracy inspection of enormous parts, such as automobile, aviation, vessels and big molds.

Navigator series CMM have many safety facilities, high safety in operating. It has high power transmission system. The double scales and driving system and multi axis coordinated scanning technology assure of the measurement accuracy of enormous and complicated workpiece.

MODEL	STROKES			MEASURING ACCURACY ISO10360-2:2009/GB/T16857.2-2006				OVERALL SIZE			WEIGHT	PART SIZE		
	X	Y	Z	S		P		Lx	Ly	Lz		Lx	Ly	Lz
	mm	mm	mm	MPEE(um)	MPEP(um)	MPEE(um)	MPEP(um)	mm	mm	mm	kg	mm	mm	mm
NCG203015	2000	3000	1500	5.0+5L/1000	5.0	3.5+4L/1000	4.0	3490	4770	4370	9800	2350	3500	1690
NCG204015	2000	4000	1500	5.0+5L/1000	5.0	3.5+4L/1000	4.0	3490	5770	4370	10700	2350	4500	1690
NCG205015	2000	5000	1500	5.0+5L/1000	5.0	3.5+4L/1000	4.0	3490	6770	4370	13490	2350	5500	1690
NCG20XX15	2000	XX	1500	from 5.0+5L/1000	from 5.0	from 3.5+4L/1000	from 4.0	3490	XX	4370	XX	2350	xx	1690
NCG253015	2500	3000	1500	8.0+8L/1000	8.0	5.0+5L/1000	6.0	3990	4770	4370	9870	2850	3500	1690
NCG254015	2500	4000	1500	8.0+8L/1000	8.0	5.0+5L/1000	6.0	3990	5770	4370	10800	2850	4500	1690
NCG255015	2500	5000	1500	8.0+8L/1000	8.0	5.0+5L/1000	6.0	3990	6770	4370	13560	2850	5500	1690
NCG25XX15	2500	XX	1500	from 8.0+9L/1000	from 8.0	from 5.0+5L/1000	from 6.0	3990	XX	4370	XX	2850	xx	1690
NCG203020	2000	3000	2000	6.0+6L/1000	7.0	5.0+5L/1000	6.0	3490	4770	5370	9810	2350	3500	2100
NCG20XX20	2000	XX	2000	from 6.0+7L/1000	from 7.0	from 5.0+5L/1000	from 6.0	3490	XX	5370	XX	2350	xx	2100
NCG255018	2500	5000	1800	10.0+10L/1000	10.0	6.0+6L/1000	7.0	3990	6770	4970	14200	2850	5500	1950
NCG256018	2500	6000	1800	10.0+10L/1000	10.0	6.0+6L/1000	7.0	3990	7770	4970	15400	2850	6500	1950
NCG253020	2500	3000	2000	10.0+10L/1000	10.0	6.0+6L/1000	7.0	3990	4770	5370	10600	2850	3500	2100
NCG25XX20	2500	XX	2000	from 10.0+12L/1000	from 12.0	from 6.0+6L/1000	from 7.0	3990	XX	5370	XX	2850	xx	2100
NCG306020	3000	6000	2000	12.0+12L/1000	12.0	8.0+8L/1000	8.0	4990	7770	5370	16200	3350	6500	2100
NCG30XX20	3000	XX	2000	from 12.0+12L/1000	from 12.0	from 8.0+8L/1000	from 8.0	4990	XX	5370	XX	3350	xx	2100

- Power Voltage:220V
- Air Pressure:0.5-1.0Mpa
- Filter Accuracy:0.3μm
- Air Supply:0.3-0.45m³/min
- Temperature Range:18-22℃
- Hourly Temperature Cycle:1℃/h
- Thermal Gradient:1℃/m
- Relative Humidity:55%-65%

ExcellentSeries CMM

REPRESENTIVE OF HIGH ACCURACY
COORDINATE MEASURING MACHINE

Tornado-P Series CMM is specially used for measuring ultra-precision and ultra complicated parts, such as medical device, satellite, aero-engine, blade, automobile precision parts etc.

Tornado-P Series CMM adopts high precision scale, control system and temperate compensation system. It can deploy not only scanning probe and Revo probe but also deploy automatic mechanical arm and automatic loading system. The most accurate measurement results will make the production of such parts easier and more precise.

MODEL	STROKES			MEASURING ACCURACY ISO10360-2:2001/GB/T16857.2-2006				OVERALL SIZE			WORK ENVELOPE			WEIGHT	PART WEIGHT
	X	Y	Z	P		PH		Lx	Ly	Lz	Wx	Wy	Wz		
	mm	mm	mm	MPEE(μm)	MPEP(μm)	MPEE(um)	MPEP(um)	mm	mm	mm	mm	mm	mm	kg	kg
NCE454	400	500	400	1.3+3L/1000	1.3	1.2+3L/1000	1.2	1000	1240	2240	525	995	600	690	500
NCE564	500	600	400	1.3+3L/1000	1.3	1.2+3L/1000	1.2	1100	1340	2240	625	1095	600	720	500
NCE686	600	800	600	1.5+3L/1000	1.5	1.3+3L/1000	1.3	1200	1650	2660	730	1400	800	973	700
NCE8106	800	1000	600	1.7+3L/1000	1.7	1.4+3L/1000	1.4	1400	1850	2660	930	1600	800	1290	1000
NCE8156	800	1500	600	1.7+3L/1000	1.7	1.4+3L/1000	1.4	1400	2350	2660	930	2100	800	1620	1000
NCE10128	1000	1200	800	1.9+3L/1000	1.9	1.5+3L/1000	1.5	1700	2370	3150	1190	1814	1040	2520	1800
NCE10158	1000	1500	800	1.9+3L/1000	1.9	1.5+3L/1000	1.5	1700	2670	3150	1190	2114	1040	2950	1800
NCE10208	1000	2000	800	1.9+3L/1000	1.9	1.5+3L/1000	1.5	1700	3270	3150	1190	2614	1040	3650	1800
NCE121510	1200	1500	1000	2.2+3L/1000	2.2	1.9+3L/1000	1.9	1884	2750	3400	1390	2200	1200	4060	2000
NCE122010	1200	2000	1000	2.2+3L/1000	2.2	1.9+3L/1000	1.9	1884	3350	3330	1390	2700	1200	4700	2000
NCE152010	1500	2000	1000	2.8+3L/1000	2.8	2.5+3L/1000	2.5	2210	3350	3370	1690	2700	1200	5280	3000
NCE152512	1500	2500	1200	3.2+3L/1000	3.2	2.9+3L/1000	2.8	2210	3850	3870	1690	3200	1400	5890	3000
NCE153010	1500	3000	1000	3.2+3L/1000	3.2	2.5+3L/1000	2.5	2255	3910	3420	1690	3700	1200	6890	3000
NCE153512	1500	3500	1200	3.5+3L/1000	3.5	2.9+3L/1000	2.8	2255	4410	3890	1690	4200	1400	7890	3000
NCE163515	1600	3500	1500	3.5+3L/1000	3.5	3.2+3L/1000	3.0	2360	4540	4520	1780	4330	1700	8640	3000
NCE203015	2000	3000	1500	4.0+4L/1000	4.0	3.2+3L/1000	3.0	2760	4240	4520	2180	3930	1700	9460	3000

- Power Voltage:220V
- Air Pressure:0.5-1.0Mpa
- Filter Accuracy:0.3μm
- Air Supply:0.12-0.45m³/min
- Temperature Range:19-21°C
- Hourly Temperature Cycle:0.5°C/h
- Thermal Gradient:0.5°C/m
- Relative Humidity:55%-65%

Metroking Series CMM

MOST ACCURATE CMM
DESIGN AVAILABLE

leader METROLOGY 雷顿

Best matching Abbe Metrology Principle, Metroking series CMM is regarded as a pattern of high-precision measuring machine. With unparalleled accuracy and stability, it can meet the needs of scanning and measuring arbitrates in the precision parts and high-precision surface.

MODEL	STROKES			MEASURING ACCURACY ISO10360-2:2001/GB/T16857.2-2006		OVERALL SIZE			WORK ENVELOPE			WEIGHT	PART WEIGHT
	X	Y	Z	S		Lx	Ly	Lz	Wx	Wy	Wz		
	mm	mm	mm	MPEE(um)	MPEP(um)	mm	mm	mm	mm	mm	mm	kg	kg
NCF553	500	500	300	0.8+L/400	1.0	1600	1400	2550	600	600	400	6000	300
NCF564	500	600	400	1.0+L/400	1.2	1600	1600	2750	600	700	500	6200	350
NCF686	600	800	600	1.0+L/400	1.2	1700	2000	3150	700	900	700	7200	600
NCF8106	800	1000	600	1.0+L/400	1.2	1900	2400	3150	900	1100	700	7800	700

- Power Voltage: 220V
- Air Pressure: 0.5-1.0Mpa
- Filter Accuracy: 0.3μm
- Air Supply: 0.12-0.45m³/min
- Temperature Range: 19-21℃
- Hourly Temperature Cycle: 0.5℃/h
- Thermal Gradient: 0.5℃/m
- Relative Humidity: 55%-65%

Miracle Series CMM

REPRESENTATIVE OF COORDINATE MEASURING MACHIINE

Miracle series CMM is newly designed by Leader Company which has proprietary intellectual property rights, it has best cost performance, satisfy inspecting of small or middle parts, it has advantages of simple, rapid, efficiency and powerful function.

Miracle series CMM can be equipped with contact and non-contact probe system. All three axes are made of high performance granite; our CMM have same characteristic in temperature and rigidity and using world famous controller system. probe system, pneumatic system and transmission system, which achieve professional, mature and leading quality of Leader CMM.

MODEL	STROKES			MEASURING ACCURACY ISO10360-2:2009/GB/T16857.2-2006		OVERALL SIZE			WORK ENVELOPE			WEIGHT	PART WEIGHT
	X	Y	Z	S		Lx	Ly	Lz	Wx	Wy	Wz		
	mm	mm	mm	MPEE(um)	MPEP(um)	mm	mm	mm	mm	mm	mm	kg	kg
NC564	500	600	400	2.1+3.3L/1000	2.2	1350	1475	2300	600	700	500	1140	500
NC685	600	800	500	2.3+3.3L/1000	2.3	1450	1750	2500	700	900	600	1400	700
NC6105	600	1000	500	2.3+3.3L/1000	2.3	1450	1950	2500	700	1100	600	1530	1000
NC787	700	800	700	2.4+3.3L/1000	2.4	1450	1850	3000	800	900	800	1780	1000
NC8107	800	1000	700	2.5+3.3L/1000	2.5	1550	2050	3000	900	1100	800	2100	1000
NC8157	800	1500	700	2.7+3.3L/1000	2.7	1550	2550	3000	900	1600	800	2580	1000
NC10128	1000	1200	800	2.9+3.3L/1000	2.9	1750	2550	3200	1100	1300	900	2750	1500
NC10158	1000	1500	800	2.9+3.3L/1000	2.9	1750	2800	3200	1100	1600	900	3100	1800
NC10208	1000	2000	800	2.9+3.3L/1000	2.9	1750	3300	3200	1100	2100	900	3450	1800
NC121510	1200	1500	1000	3.0+3.3L/1000	3.2	1950	2800	3450	1300	1600	1100	3900	1800
NC122010	1200	2000	1000	3.0+3.3L/1000	3.2	1950	3300	3450	1300	2100	1100	5060	2000
NC12XX10	1200	XX	1000	from 3.0+3.3L/1000	from 3.2	1950	XX	3450	1300	XX	1100	XX	XX
NC152010	1500	2000	1000	3.5+3.3L/1000	3.8	2250	3300	3450	1600	2100	1100	5800	2000
NC15XX10	1500	XX	1000	3.5+3.3L/1000	3.8	2250	3300	3450	1600	2100	1100	5800	2000

- Power Voltage:220V
- Air Pressure:0.5-1.0Mpa
- Filter Accuracy:0.3μm
- Air Supply:0.12-0.45m³/min
- Temperature Range:18-22°C
- Hourly Temperature Cycle:1°C/h
- Thermal Gradient:1°C/m
- Relative Humidity:55%-65%

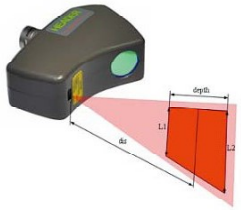
3D LASER SCANNING FOR HIGH SPEED AND PRECISION

3D LASER SCANNING FOR HIGH SPEED AND PRECISION

3D Image Measuring Machine

Compared with traditional 2D image measure, 3D image measurement machine can measure the 3D edge and features of space objects, this is a revolutionary breakthrough in the field of contour measurement.

Technical Specification



depth of focus=80mm
min width of optical strip L1=60mm
max width of optical strip L2=80mm
standard work dis=150mm

HEADER激光扫描测头的景深范围达到80mm，配合60-80mm的视场构成的测量范围可应用于绝大部分工件的测量。

全铝合金结构，在保证使用方便性的前提下可防止电磁噪声干扰、意外环境的干扰。

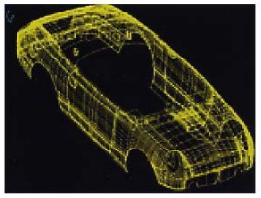
Probe Model	LPS60+	measuring depth	80mm
weight	350g	standard work distance	150mm
size	150x100x45mm	measuring accuracy	40um
interface	PAA1 or M8	measuring velocity	25000 points/sec
min measuring width	60mm	max	80mm
laser grade	11级（visible red light）	measuring width	10-40℃
laser wave length	650mm	work temperature	

注：3D影像测量对被测表面的颜色要求较高，对颜色较浅的哑光类物体可直接测量，如石膏，木材等。其他色泽的物体一般都需要进行表面处理。

Reverse engineering field

3D影像测量功能可获得工件上清晰、准确的边缘轮廓数据和特征轮廓数据，为逆向工程数据处理提供完整可靠的依据。将3D影像测量功能和激光扫描测量功能相结合可获得工件上完整的曲面数据、边缘轮廓数据和孔位特征数据。

扫描完成后的点云



根据作图的方便，
全方位地截取物体的抛面线

利用PRO/E、UG等
三维CAD软件绘制产品图

REVO
A measurement revolution

REVO™ is a revolutionary measuring head and probe system from Renishaw, a dynamic head which incorporates Renishaw' s innovative Renscan5™ technology.
Every process and feature in a REVO™ system has been designed to enable users to achieve previously unobtainable levels of inspection throughput;

- 5-axis scanning of complex forms, REVO™' s ability to gather very large quantities of accurate inspection data at ultra-high scanning speeds is invaluable.
- Very high speed gathering of touch points using the servo head' s infinitely variable 2-axis motion.
- Innovative, patented tip-sensing probe technology allowing the sensing to be very close to the surface measured, yielding better accuracy.
- Novel calibration, Renscan5™ tip-sensing probe heads only require a single tip calibration to be accurate at all angles of rotation, typically saving several hours in the set-up routine.
- Infinite positioning and 5-axis synchronised motion, which facilitates access to features.

REVO™ 5-axis high speed, high accuracy measurement offers a wide range of benefits resulting in significant throughput improvements.

Two current applications have been selected, comparing actual cycle times of existing 3-axis measurement methods versus the REVO™ system.

Automotive cylinder head

690% improvement in throughput

The inspection sequence comprised 12 valve seats and three circular scans on each of the 12 valve guide bores.

Conditions		Measurement time
3 axes scan speed:	15 mm/s	29 minutes, 13 seconds
REVO™ scan speed:	400 mm/s for valve seats 50 mm/s for valve guide scans	3 minutes, 42 seconds

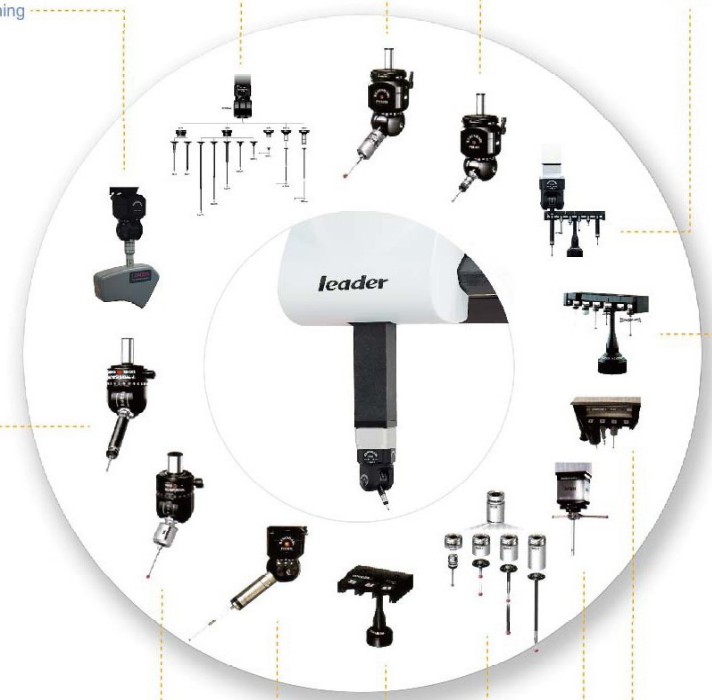
Aero engine blisk

922% improvement in throughput

The inspection sequence comprised nine sectional scans of the airfoil profile, eight longitudinal scans on the blade, two scans of the root profile and a single scan on the annulus profile.

Conditions		Measurement time 1 blade	Measurement time All 29 blades
3 axes scan speed:	10 mm/s	46 minutes	22 hours, 14 minutes
REVO™ scan speed:	200 mm/s	4 minutes 30 seconds	2 hours, 10 minutes, 30 seconds

Probe Hard System



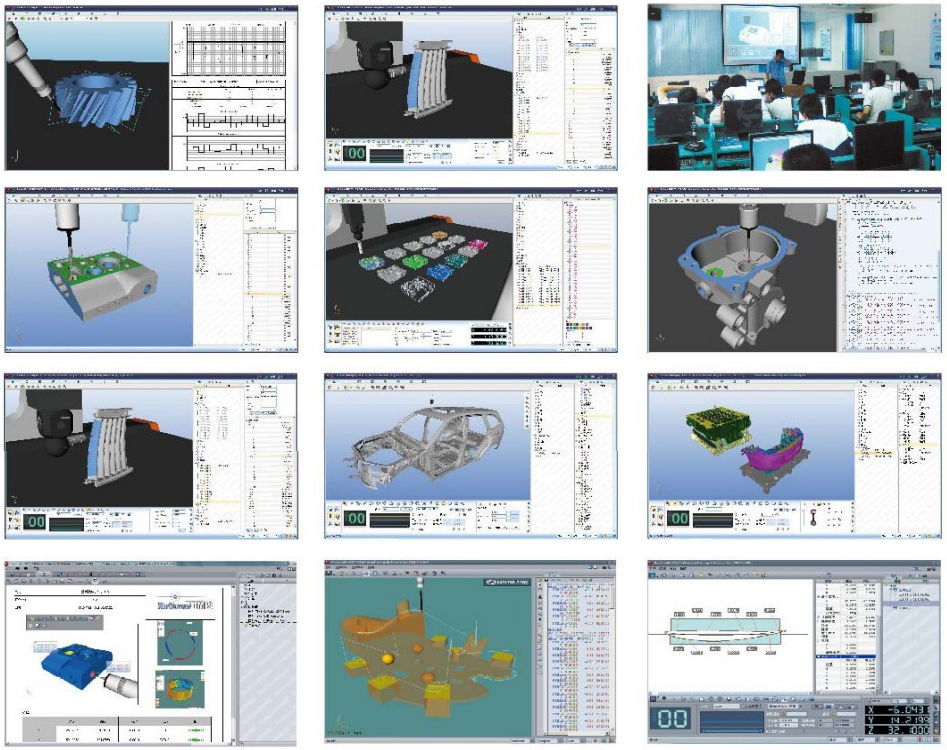
PH10M+TP7M
REVO
Laser Scanning
MH20i
MH8+TP6
PH10M+SP25M
PH10T+TP20
PH20/PH20MT
MCR20
ACR3
SP80
SP25M
FCR

AMERICA RATIONAL-DMIS FOR WINDOWS SOFTWARE

RATIONAL-DMIS

Rational DMIS is one of most professional CMM software created by America Company External-Array Software,Inc.Rational DMIS passed DMIS standard ISO22093:2003 and PTB certificated, it can support I++. It can work with Renishaw UCC controller and other famous controllers. Now Rational DMIS become one of most popular CMM software in China and world.

leader METROLOGY 雷顿

Rational-DMIS provides advanced capabilities which include:

-32/64bit
-User-friendly Windows(tm) operating system
-Unique interactive 3D graphics engine
-Computer-simulated CMM environment for off-line programming
-Powerful, built-in analytical reporting capabilities
-Built-in intelligence that automatically names features as They are measured
-Sophisticated probe & part alignment management system
-Straight forward tools for bi-directional linking of CMMs with any CAD system using either IGES or DMIS
-Handling of 2D, 3D, wire-frame, and surfaced CAD files
-Self learning programming, easy to operate
-Measurement of point, line, plane, circle, sphere, cylinder ,cone, ellipse, ,curve, slot, surface etc.
-Construction: project, bisect, intersect ,angle between mirror ,bestfit ,move, parallel to ,perpendicular to ,offset
- Tolerance: straightness, flatness, circularity cylindricity,、 iconicity , Perpendicularity, parallelism, angularity, 2D and 3D position, Capillarity, run out etc.
-Measuring for sheet and metal, the thickness compensation
-Integrated TP-Scan point-point scanning and more ways scanning
-Optional: blade, gear, cam, pipe, SPC, CCD, laser scanning modules