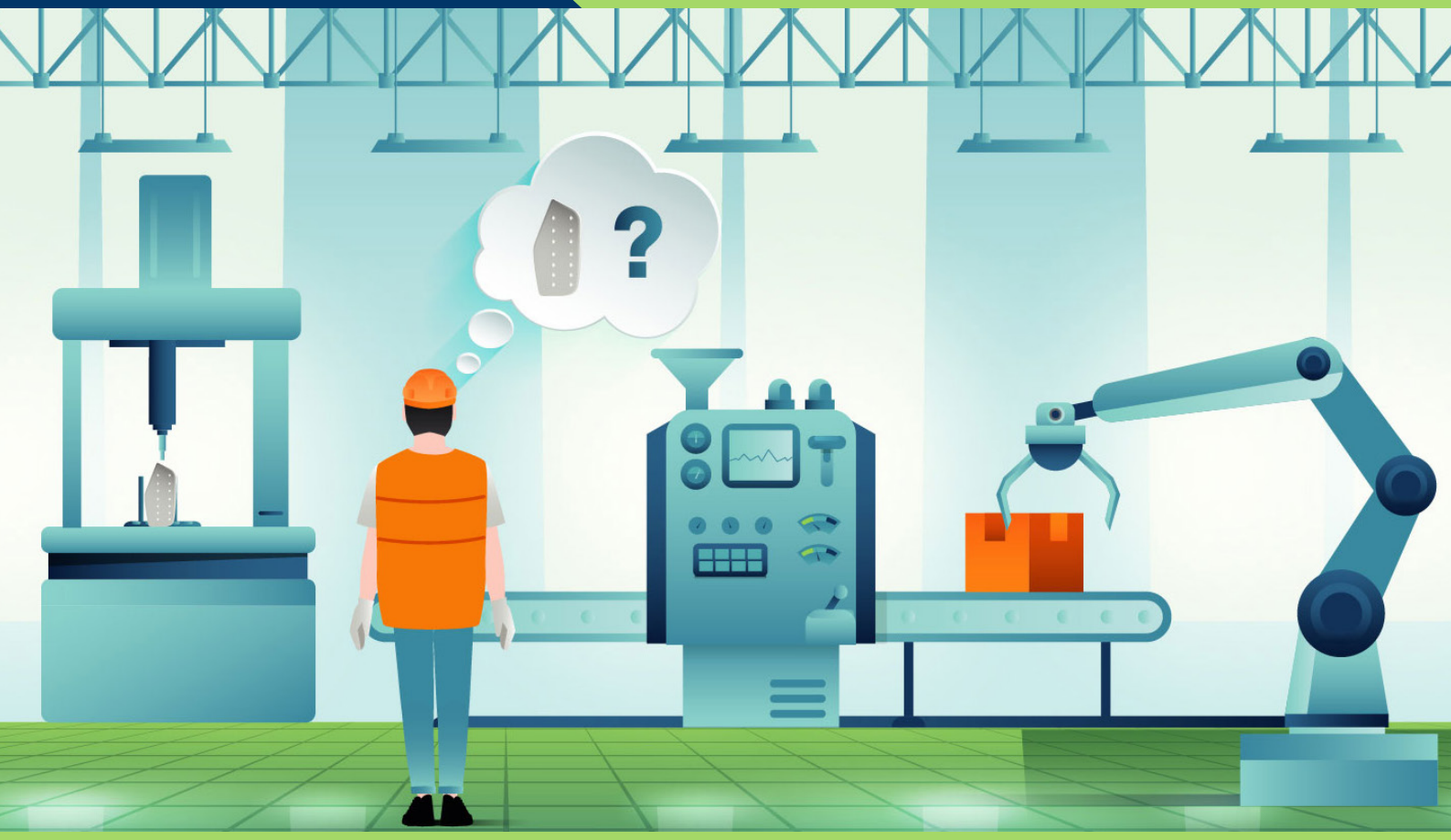
ASIATIC ENGINEERS

QUALITY DRIVES PRODUCTIVITY

INTRODUCING INTELLIGENT SOLUTIONS FOR MANUFACTURING



CATALOGUE

Authorized Channel Partner Of

HEXAGON

MANUFACTURING INTELLIGENCE

VISION MEASURING MACHINE VMM

Optiv Lite DCC
Measurement Efficiency

In manufacturing both efficiency and product quality are essential. Hexagon Metrology Optiv Lite DCC is the answer. The system comes with a fully automated 3 axis stage, coupled with the world famous PC-DMIS software, ensuring a quality process using optimum efficiency and reliability.

Models	DCC 3020	DCC 4030
Effective measuring size	300x200x200 mm	400x300x200 mm
Overall dimension	716x753x1015 mm	766x803x1015mm
Camera	1/3" high resolutio n colour CCD camera	
Accuracy Exy	3.0 + L/150 µm	
Accuracy Ez	4.5+L/150 µm	
Working distance	60mm	
Illumination	LED stage light and 4 quadrants LED ring light	
Magnification	Auto Zoom 0.7x to 4.5x (40x – 240x)	
Resolution	0.05 µm	
Load bearing capacity	20kg	
Software	PC-DMIS Vision	
Option	Tactile Option	
Working environment	20°C ± 2K	
Humidity	40% - 70% RL	

Optiv Lite OLM
Accurate, Reliable, User-Friendly

Optiv Lite Manual series is one of the most intuitive and user friendly, manually operated, vision measuring system. The system design takes into consideration the accuracy, repeatability and reliability of measurement results. Therefore granite was used for the XY stage and the Z axis column.
OLM is suitable for shop floor operation. It provides fast, accurate measurement for both routine and complex parts. The system can be completed with multi sensor capability (tactile option).

Software VMS 3.1 - Standard Software supplied with OLM systems.

- One click operation. Easy and user friendly.
- Auto Edge detection ensures repeatable results.
- Complete GD&T function.
- Support CAD import and export (IGS, DXF and STEP files).
- Convenient Data reporting output format (Word, Excel or PDF).
- Built-in SPC module.

Models	OLM 2515	OLM 3020	OLM 4030
Effective measuring size	250x150x200 mm	300x200x200 mm	400x300x200mm
Overall dimension	716x753x1015 mm	766x803x1015mm	866x903x1015mm
Camera	1/3" high resolution colour CCD camera		
Accuracy Exy	3.0 + L/150 µm		
Accuracy Ez	5.0 + L/150 µm		
Working distance	90mm		
Illumination	LED stage light and LED ring light		
Magnification	Manual zoom (30x to 180x)		
Resolution	1.0 µm		
Load bearing capacity	10kg		
Software	VMS 3.1		
Option	Tactile		
Working environment	20°C ± 2K		
Humidity	40% - 70% RL		

CAPTURA

DCC Vision Measuring Machine

FEATURES

- High-precision granite construction to ensure longterm stability
- Three-axis full servo closed loop control system
- Grinding grade screw drive, accurate positioning, high motion accuracy
- High resolution 1/1.8-inch CCD colour camera (H 1920 x V 1440 pixels) with Gigabit Ethernet interface
- Customised CNC zoom with 6.5x magnification and 10 steps
- Magnification: 35x - 205x (24-inch screen)
- Navigator system
- Resolution of the scales: 0.4 µm
- Illumination for vision sensor
- Parallel LED backlight
- Six-ring and eight-segment LED ring light (white LEDs)
- Coaxial LED top light (optional)
- Joystick

Options

- Laser point and laser line sensors
- Chromatic confocal sensors

Model		3.2.2	4.3.2	5.4.2
Range (mm	X	300	400	500
	Y	200	300	400
	Z	200	200	200
Dimension (L*W*H)		860×639×1650	1000×767×1650	1140×818×1670
Exy Accuracy (µm)		2.5+L/200	2.5+L/200	3.0+L/200
Ez Accuracy (µm) [1)]		3.5+L/200	3.5+L/200	3.5+L/200
Working distance (mm)		92	92	92
Plate load (kg		20	20	20
Machine weight (kg)		350	400	450

CROMA

MAIN FEATURES

- All aluminium structure combined with hardanodized aerometal for cross beam and Z axisensures temperature consistency, reduces mass of moving parts and force of inertia, hence ensures high accuracy during high speed movement
- Europe-imported high-precision optical scalesfor all the three axes, system resolution up to0.078um; Installation method with one end fixed and the other end freely extensible ensures linear expansion and contraction at temperature change and reduces the deformation of the optical scale
- The patented precision triangular beam, featuring gravity center, better stiffness, and more reliable motion compared to rectangular and cross beams
- Integral dovetail guideway is Y axis, reduces machine weight as well as twistings during movement, ensures measuring accuracy and stability
- The IDC-I control system specially designed by Hexagon Metrology for CROMA improves the dynamic performance and measuring accuracy
- Powerful, easy-to-learn and efficient PC DMIS BASIC (/PC-DMIS PREMIUM) software

Machine Type		Croma564	Croma686	Croma8106	Croma8126
Strokes (mm)	x	500	600	800	800
	y	600	800	1000	1200
	z	400	600	600	600
Measuring Range (mm)	Dx	634	734	934	934
	Dz	144	144	144	144
	Dz1	594	794	794	794
Working plate (mm)	Ph	783	783	805	805
	Py	1155	1355	1555	1755
Support (mm)	Sy	824	978	1178	1378
	Sy1	356	379	379	379
Overall Size (mm)	Lx	1050	1150	1350	1350
	Ly	1535	1735	1935	2135
	Lz	2247	2647	2729	2729
Max. part weight (kg)		300	300	500	500
Machine weight (kg)		590	730	1074	1196
MPEe (µm)		2.4 + L / 300	2.4 + L / 300	2.6 + L / 300	2.6 + L / 300
MPEp (µm)		2.4	2.4	2.6	2.6
Probe / Sensor		Manual or Motorized			
Scales resolution (µm)		0.078	0.078	0.078	0.078
Max. 3D Speed (mm/s)		520	520	520	520
Max. 3D Acceleration (mm/s2)		1730	1730	1730	1730
Air Pressure		120 Nl / min, 0.45 Mpa	120 Nl / min, 0.45 Mpa	120 Nl / min, 0.45 Mpa	120 Nl / min, 0.45 Mpa
Operating Temperature		20±2°C	20±2°C	20±2°C	20±2°C
Temperature Gradients:					
Air Temperature Variation		1°C / h – 2°C / 24h	1°C / h – 2°C / 24h	1°C / h – 2°C / 24h	1°C / h – 2°C / 24h
Air Temperature Gradient		1°C / m	1°C / m	1°C / m	1°C / m
Humidity		45% – 75%	45% – 75%	45% – 75%	45% – 75%

GLOBAL Lite

Quality performance at the right price

GLOBAL Lite is a coordinate measuring machine (CMM) that combines reliable, accurate dimensional inspection with cost reduction throughout the quality process. Readily adaptable with a range of Hexagon solutions, this future-ready CMM is designed to grow with your organisation, helping you meet new challenges and capitalise on emerging opportunities. Offering certified quality free from human error, GLOBAL Lite cuts the risk of rejected parts and reduces scrap. Cycle times are enhanced and labour costs are reduced as operators can complete work away from the CMM while routines run automatically. Although designed for smaller budgets, GLOBAL Lite goes beyond the essentials of quality assurance to push your inspection productivity further, with optimised accuracy, dynamics, and robustness.

Scanning probe heads HP-S- X1 CE, HP-S-X3 Articulating head with HP-S-X1 SE scanning probe or HP-TM trigger probe	07.07.05 07.10.07	09.YY.08	12.YY.10
MPE(E0/E150) 1)- (18 °C - 22 °C)	1.9 + L/300	2.1 + L/300	2.7 + L/300
MPE(E0/E150) 1) - (16 °C - 26 °C)	2.2 + L/250	2.4 + L/250	3.1 + L/200
MPL(R0)	1.9	2.1	2.7
MPE(PFTU)	2.0	2.0	2.7
MPE(THP)/MPT(τ) 2)	3.5/45	3.5/45	4.5/45

Mechanical frame	X: Micromachined anodized light alloy extrusion Y: Integral dovetail guideways, machined into the table Z: Micromachined anodized light alloy extrusion
Surface plate	Material: Granite Flatness: according to DIN 876/III Part Locking: threaded inserts M8 x 1.25 Diagonally staggered hole pattern: GLOBAL Lite 07.07.05 - 07.10.07 X = 300 mm ; Y= 300 mm GLOBAL Lite 09.YY.08 - 12.YY.10 X = 350 mm ; Y= 350 mm
Sliding system	Air bearings on all axes
Measuring system	METALLUR® linear scales. System Resolution: 0.039 µm
Temperature compensation	Extended temperature 16 - 26 °C: Multi-sensor technology (optional)
Ram counterbalance	Pneumatic, adjustable
Controller	DC241, IP54
Supply Requirements	Power. 100/120/220/240 V ± 10% - 50/60 Hz - 1.6 KVA Air. 0.5 MPa minimum - Class 4 according to ISO 8573/1
Consumption	Power. 0.35KVAh Air. 90 Nl/min
Operating Specifications	Ambient temperature: 10 - 40 °C
	Relative humidity: 20% - 90 % non-condensing

StereoScan neo

The benchmark in structured light

As Hexagon's flagship structured light scanner, the StereoScan neo combines superior resolution and accuracy with an arsenal of innovative features that fundamentally improve the scanning experience. The StereoScan neo is an incredibly versatile optical 3D scanning system. Innovative Smart Data Capture technology allows the system to acquire data at extremely high speed without compromising data quality while also allowing for variable resolution as required by the application at hand. Equipped with an advanced digital projector that utilises ground-breaking projection patterning and full-colour back projection, the StereoScan neo is one of the most advanced structured light scanners ever produced. With data acquisition powered by twin 16.8-megapixel digital cameras, and measurement fields ranging from 75 to 1000 millimetres that can be quickly and easily changed by the user as necessary, the StereoScan neo is simply the most versatile and powerful structured light scanner on the market.

Key Advantages

- Ideal introduction to high-end 3D metrology
- Smart Data Capture technology allows for fast acquisition and variable resolution
- Fast and easy change of measuring fields
- Upgradeable modular system configuration
- Scanning of glossy and dark surfaces without pre-treatment
- Mechanical and thermal stability
- Compact and low-weight design
- Handheld probe option
- Combinable with photogrammetry systems
- Accessories such as turntable and turn-tilt units allow for semi-automated scanning

SmartScan

Powerful and compact 3D scanning

Discover high-speed data acquisition at extremely high levels of detail with the non-contact 3D optical scanning technology of the SmartScan. Objects are digitised within seconds, irrespective of their size and complexity, and are directly available as high-precision 3D data in numerous standard formats for further processing. With a compact design and low weight it's a fully mobile system, ready to go to work in the most challenging workshop conditions. Thanks to a high-tech carbon-fibre structural design, the SmartScan maintains extremely stable and reliable performance even under the pressure of temperature fluctuations. Available in a variety of system configurations, and fully upgradeable thanks to its modular architecture, the SmartScan is the ideal choice for effective and affordable measurement performance across a range of applications and industries. Choose between the standard twin 5-megapixel camera version and the high-end twin 12-megapixel camera arrangement.

Key Advantages

- Ideal introduction to 3D metrology
- Smart Data Capture technology allows for fast acquisition and variable resolution
- Compact and low-weight design
- Short working distance ideal for applications in narrow environments
- Various fixed configurations for diverse range of measuring tasks
- High-resolution sensor technology for maximum detail
- Scanning of glossy and dark surfaces without pre-treatment
- Handheld probe option
- Combinable with photogrammetry systems
- Accessories such as turntable and turn-tilt units allow for semi-automated scanning

PrimeScan

Scanning made simple

An attractive entry-level solution for the precise 3D digitisation of industrial components, the PrimeScan stands on a foundation of innovative fringe projection technology that allows it to deliver high luminous power and excellent projection quality. Thanks to a compactly designed unit with a base area the size of an A4 sheet of paper and a total system weight of less than four kilograms, the PrimeScan is ready to go anywhere that high-resolution measurement is needed. Combined with a short working distance, its small form factor makes the PrimeScan perfect for scanning in special application areas, such as on a desktop or in difficult to access parts of the shop floor. The scanning of glossy and dark surfaces without pre-treatment is aided by the PrimeScan's powerful projector, while the initial positioning of the measurement object is simplified by the scanner's integrated laser pointers. Selected robots and accessories enable both automated measurement and easy data acquisition within both smaller and larger volumes.

Blue Light Scanners/ Structured Light Scanners

Key Advantages

- Specialised 'one button' interface for simple execution of prepared measurement programs
- User guidance through robot pose and scan path planning using smart process automation
- In-process planning significantly reduces downtime – create scan plans up to 16 times faster than fully manually programmed systems
- Interactive mode allows positions to be added or edited into existing programs
- Inspection macro functionality allows integration of surface and feature measurement within a single program
- Manual Teaching module for advanced users
- Direct shop-floor review of inspection reports
- Upload of measurements and reports over LAN to shared directory for easy access
- HiRes based on StereoScan neo R16.2 and Efficient based on PrimeScan R5

	StereoScan neo R16.2	SmartScan R5	SmartScan R12	PrimeScan R5	PrimeScan R8
Camera sensor	Monochrome, CMOS, 4/3"	Monochrome CMOS, 2/3"	Monochrome CMOS, 1.1"	Monochrome, CMOS 2/3"	Monochrome, CCD 1"
Camera resolution	16.8 MP 5472 x 3084	5.1 MP 2464 x 2056	12.4 MP 4112 x 3008	5.0 MP 2448 x 2048	8.0 MP 3264 x 2448
Projection unit	Digital projector	Miniaturised projection technique			
Light source	3 x 100 W high-power LEDs (red + green + blue)	100 W high-power LED (blue)			
Min. measuring time	1 s				
Operating temperature	0 to 50 °C ambient (without condensation)				
Sensor weight	12 kg*	4 kg		3.8 kg	
Power supply	Internal, AC 110/230 V, 50-60 Hz, 600 W		External, AC 110/230 V, 50-60 Hz, 150 W		
Control unit	Integrated, USB 3.0	External, USB 2.0		Integrated, USB 3.0	
Operating system	Windows 10, 64 Bit				
Probing	Compatible with MI.Probe mini				

*Weight may vary depending on the measuring fields.

Absolute Arm / Portable Measuring Arm

Portable measuring arms

Portable measuring arms allow you to take measurements directly in the manufacturing environment, where process improvements are the most beneficial.

Absolute Arm 7-Axis

The all-in-one solution for portable 3D measurement

The all-in-one solution for portable 3D measurement
The flagship of the Absolute Arm range, the Absolute Arm 7-Axis delivers tactile probing and non-contact scanning in a uniquely ergonomic package. It's the clear choice for high-end portable measurement applications. With usability central to its design, this is an articulating measuring arm that can't be beaten when it comes to ease of movement and ease of measurement. All this adds up to a far more productive and versatile arm that delivers high-accuracy measurement results more quickly and more easily than ever before.

Absolute Arm 6-Axis

The portable measuring arm optimised for probing

The portable measuring arm optimised for probing
A specialised touch measurement tool that also boasts the option for entry-level 3D scanning – the Absolute Arm 6-Axis is one of a kind. Based on patented technology with Absolute Encoders located at every articulation point and designed with ease-of-movement and usage as a focus, this is a portable measuring arm like no other.

Absolute Arm Compact

The world's most accurate portable measuring arm

The world's most accurate portable measuring arm
The Absolute Arm Compact is the ultimate solution for ultra-high-accuracy touch probe measurement of small-to-medium sized parts. Fitting easily on a workshop table or under a CNC machine, the Absolute Arm Compact is the height of portability and usability. It boasts the same definitive features as the flagship Absolute Arm, from Absolute Encoders in every articulation joint that eliminate warm-up and referencing to WiFi and battery operation options that allow easy repositioning and no messy cables across the workshop floor.
Built on an integrated base and innovative counterweight balance system, the Absolute Arm Compact is ready to go right out of the box – no warm-up, no waiting, no need to fix it to a work surface – just place it where you need it and start measuring. For quality control that demands fast and extremely accurate measurement, there is simply no better portable measuring arm on the market.

Absolute Scanner AS1

The market-leading 3D laser scanner for arm and tracker, manual and automated

- High-quality scan data collected at full speed, whatever the part.
- Scan 99 percent of surface types with default exposure settings thanks to Systematic High-Intelligence Noise Elimination (SHINE) technology.
- Extra-wide scan line for faster part coverage.
- High-quantity data collection without sacrificing data quality.
- Effortlessly removed from the arm for easier probing of hidden areas.
- Remountable in seconds with no time-wasting realignment.
- Horizontally oriented scan line for more comfortable measurement.
- Projected laser range finder makes correct scanner positioning simple.
- Full-speed scanning performance over WiFi or a single cable.
- IP54 protection rating for measurement in harsh environments.
- Complete System Scanning Certification defined according to ISO 10360-8 Annex D.
- Cross-platform compatibility makes the AS1 the first scanner that can be used with both a portable measuring arm and a laser tracker.

RS5 Laser Scanner

Reliable high-quality 3D laser Scanning

- High-quality scan data without high-end investment.
- Wide scan line covers parts quickly.
- Easily removed from the arm for better usability while probing.
- Remountable in seconds with no time-wasting realignment.
- Horizontally oriented scan line for more comfortable measurement.
- Full-speed scanning performance over WiFi or a single cable.
- Complete System Scanning Certification defined according to ISO 10360-8 Annex D

HP-L-8.9 Laser Scanner

Entry-level 3D scanning for 6-axis systems

The Absolute Arm is also available in a range of dedicated 6-axis models. These probing systems are built on well-established measurement technology and intended for applications where laser scanning is less important. The Absolute Arm 6-Axis offers the same probing functionality as the full 7-axis models while delivering improved probing accuracy to within just 8 microns. It's also fully upgradeable to entry-level laser scanning with the addition of the HP-L-8.9 Laser Scanner from the Absolute Arm accessories range, and is fully IP54 protected just like the 7-axis models.

Machine Tool Measurement

With our machine tool measurement systems your business can rapidly analyse the right measurement data and use the results to improve production processes. Through a combination of automated data acquisition, feedback loops and job automation, our systems help you achieve a new level of production efficiency and quality in your production.

Probing systems with infrared transmission

m&h IRP40.02

Infrared probing system m&h IRP40.02

Extreme accelerations, high positioning speeds, constant vibrations, hard tool changes, increased temperatures and aggressive coolants are no obstacle for Hexagon touch probes. A compact and robust design means the touch probe can be used for applications within extremely limited spaces.

The IRP40.02-LF has a repeatability of 2 Sigma 0,3µm. Even at higher probing speeds and greater stylus overtravel, the trigger forces of the IRP40.02-LF remain low, protecting highly sensitive workpieces from damage.

- Z-Crash detection guarantees process reliability
- Shorter measurement times without loss of process reliability
- Precise measurements with only one probing
- Up to 800 hours battery lifetime in continuous operation.

Probing systems with radio-wave transmission

m&h TP-R-400-PP and RWP20.50-PP

m&h R-400 – for workpiece and tool measurement Series production places the highest demands on the production process. The radio system base m&h R-400 fulfils these requirements in the machine tool. The R-400 radio system base can be used as a (m&h TP-R-400) as well as a tool measuring system (m&h TS-R-400).

m&h TP-R-400 The TP-R-400 is characterised by its modular design. Different measuring units, diverse extensions
as well as styli crosses can be used. This allows the TP-R-400 to be optimally adapted to future requirements and applications in the machine tool.

- Modular design
- Transmission free of interference signals - thanks to AFS technology
- Cost-effective for different requirements The PP version is equipped with the PP41.00 measuring unit, with tripod system. The safe standard for universal use is ideally suited for the majority of measuring tasks. It can be used with cross-probes and has an adjustable trigger force

RWP20.50-HPP

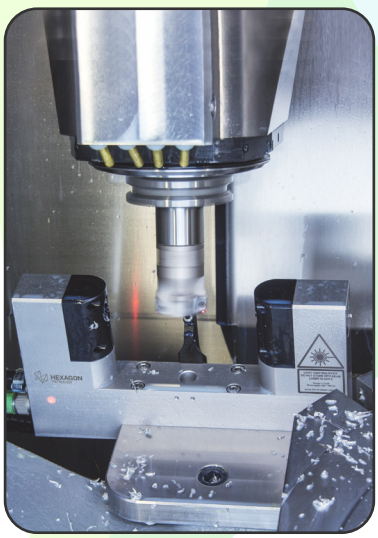
The HPP is a high precision measuring unit that deploys a patent-pending laser-triangulation technique, also used
on coordinate measuring machines. It ensures the greatest levels of precision when capturing data measurement points.The HPP measuring unit is Hexagons's most accurate on-machine touch sensor. It can be used with m&h RWP20.50-G and m&h TP-R-400 probes and deploys laser-triangulation to achieve extremely high repeatability, low pre-travel variation and low 3D form error. Many applications, for example the measurement of freeform shapes or checking of machine kinematics, need extremely precise measurement results in 2D and 3D.
These are best achieved by deploying Hexagon's patent-pending laser-triangulation technology in the HPP measuring unit. Specifications form brochureto be inserted

Tactile and non-contact tool setting systems

Laser tool setters

Non-contact tool measurement allows automatic checks for tool wear or breakage. Constant production quality requires the use of reliable accurate tooling. One vital requirement is precise tool data. The data is automatically transferred to the tool table of the control.

m&h Laser Tool Setter LTS35.65



The laser tool setter Standard is a cost-effective system for the majority of measuring tasks on tools from Ø 0.030 mm and comes with tool breakage detection and an air curtain to prevent soiling of the optics during the measuring process. The shutter units seal completely when the device is not in use. No additional interfaces or peripheral supply units are needed. The economical solution for most measuring tasks.

- TCS technology (True Cutting Scan) for the highest precision
- Tool cleaning through Laval nozzle with supersonic speed
- Optimal protection of the optics by means of pneumatic shutter unit

Tool setters

Constant production quality requires the use of reliable accurate tooling. One vital requirement is precise tool data. m&h Tool Setters for tool measurement detect tool length and tool radius directly on the machine. The data is automatically transferred to the tool table of the control.

m&h RWT35.50

The radio tool setter m&h RWT35.50 has adjustable positions for vertical turning machines, large milling machines and machining centres. Through use of a magnetic mount, the tool setter can be placed in a wide range of table positions. Our patent pending system delivers highly accurate and repeatable repositioning of the tool setter. With wireless operation and no permanently fixed hardware, use of the m&h RWT35.50 does not restrict or interfere with the machining area in any way.

- Can be shared between machines
- A single receiver for tool setters and touch probes
- Quickly mounted on pre-mounted base plate

m&h TS35.20

The tool setter m&h TS35.20 is designed for use on milling and machining centres and is used to determine tool geometries. The precision measuring mechanism reliably measures tool lengths and tool radii, as well as individual cutting edges and detects tool breakage. The measurement can be both static and dynamic.

- Measurements in X-,Y- and Z-direction
- Compact design
- Sturdy and absolutely waterproof
- Simple alignment of the measuring surface

ASIATIC ENGINEERS

Authorized Channel Partner Of

HEXAGON

MANUFACTURING INTELLIGENCE

LET'S CONNECT...

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STRIP CHART RECORDES / 120mm / 180mm

ASIATIC ENGINEERS

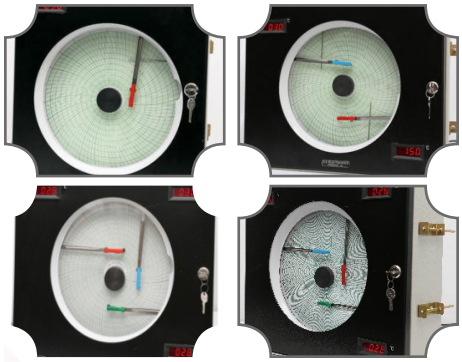
STRIP CHART RECORDERS / 120MM / 180MM					
No of Inputs	Single Pen 6000-1	Two Point 6000-2	Three Point 6000-3	Six Point 6000-6	Twelve Point 6000-12
Type of Inputs	Thermocouple (K,J,R,S,), RTD(Pt-100), mV, V, mA				
Digital Indication	Only for 6000/DI series (120mm) / Only for 1800/DI series (180mm)				
Writing Mechanism	Disposable Fibre Tip pen Colour : Red		Six Color Inked Ribbon	Six Color Inked Ribbon (Six Color Repeats For 12 Point)	
Chart	Strip chart				
Chart Width	140mm/Calibrated width 120mm / 200mm/Calibrated width 180mm				
Scale Width	130mm (For 120mm Strip chart) / 190mm (For 180mm Strip chart)				
Chart Speed	Minimum 20mm to Maximum 600mm per Hr. (for single pen only)				
Temperature	Storage : 0 to 70^0 C / Operating : 10 to 55^{0}C				
Humidity	Upto 90% RH non Condensing				
Power Supply	230± V at 50Hz				
Principle	Potentiometric null balance system				
Response Time	Better than 6 seconds				
Accuracy	For Analog : Better than ±1% FSD .For Digital : ± (0.5%FS +1digit) – mV, V, mA, Thermocouples, ± (0.3%FS +1digit) – RTD				
Dimension	208(W) x 266(H) x 317 (D) mm (120mm) / 268(W) x 266(H) x 377 (D) mm (180mm)				
Panel Cutout	188(W) x 234 (H) mm (120mm) / 248(W) x 234 (H) mm (180mm)				
Weight (120mm)	10Kg Approx			12Kg Approx	
Weight (180mm)	15Kg Approx		17Kg Approx	18Kg Approx	
Optional	1. 12/24V supply for Transmitter 2. Thermocouples & RTD – Dimension to be specified 3. Transmitter – Temperature/Pressure/Humidity				

PAPER RECORDER ACCESSORIES	
Charts, Pens and Ribbons	
Chart Roll / Fan Fold Chart 100 mm, 120 mm, 180 mm	RR / Sietex / Ohkura / Chino / Yokogawa / Fuji / Eurotherm
Circular Chart Paper - 6" / 12 "	RR / Sietex / ABB / Honeywell / Eurotherm
Disposable Fibre Tip Pens	RR / Sietex / Honeywell / ABB / Eurotherm / Chino
Inked Ribbon / Pad / Cassette 100 mm, 120 mm, 180 mm	RR / Sietex / Ohkura / Chino / Yokogawa / Fuji / Eurotherm

HEXAGON– METROLOGY | RR– PROCESS INSTRUMENT

CIRCULAR CHART RECORDER / 300mm

ASIATIC ENGINEERS



Working Principle : Potentiometric Null Balance System

Input : Thermocouple (K,J,R,S), RTD, V, mV, mA

Response Time : Better than 6 seconds

Accuracy : Better than 1 % FSD. For Digital ± 0.3% ± 1 digit

CIRCULAR CHART RECORDER – 3000 SERIES			
	Single Pen – 3000 – S	Dual Pen – 3000 – D	Triple Pen – 3000 – T
No of inputs	Single	Double	Triple
Writing Mechanism	Disposable Fibre tip Pen Colour – Red	Disposable Fibre tip Pen Colour – Red & Blue	Disposable Fibre tip pen Colour – Red, Blue & Black
Chart	Circular Chart		
Chart Width	300 mm/ Calibrated Width 105 mm		
Chart Speed	24 Hrs standard Other speeds : 8 Hrs, 12 Hrs, 168 Hrs		
Temperature	Storage : 0˚C to 70˚C / Operating : 0 to 55 ˚C		
Humidity	Upto 90% RH non Condensing		
Power Supply	230 VAC ± 10 % at 50Hz		
Dimension	372(W) x 417(H) mm	425(W) x 380(H) mm	425(W) x 420(H) mm
Panel Cutout	332(W) x 372(H) x 115(D) mm	425(W) x 330(H) x 115(D) mm	425(W) x 380(H) x 150(D) mm
Weight	10Kg Approx	18Kg Approx	20Kg Approx

CIRCULAR CHART RECORDER / 150mm

TINY CIRCULAR CHART RECORDER		
	Single Pen -1500 - S	Dual Pen - 1500 - D
No of inputs	One	Two
Writing Mechanism	Disposable Fibre tip Pen Red	Disposable Fibre tip pen Red & Blue
Chart	Circular Chart	
Chart Width	150 mm/calibrated width 55 mm	
Chart Speed	24 hrs – daily chart / 168 hrs – weekly chart standard	
Temperature	Storage : 0 ˚C to 70 ˚C / Operating : 0 to 55 ˚C	
Humidity	Upto 95% RH non Condensing	
Power Supply	110 / 230 VAC ± 10 % at 50Hz	
Dimension	225(W) x 225(H) mm	245(W) x 245(H) mm
Panel Cutout	204(W) x 204(H) x 160(d) mm	224(W) x 224(H) x 240(D) mm
Weight	5 kgs.Aprox	7 kgs.Aprox

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PAPERLESS RECORDER/ RRE-PR-3500

ASIATIC ENGINEERS

Display	3.5 inch TFT LCD
Panel Size	96(W) X 96(H) x 101(D) mm
Channels	1 to 18 Channels (Universal Input)
Scan Interval	1sec to 60mins
Memory	48MB (Internal)
Port	USB2.0
Power Distribution	24V DC Output
Relay Out	1 to 4 Channels (Optional)*
Power Supply	176-264VAC, 24V DC (Optional)*
Communication	RS485 MODBUS

HYBRID RECORDER / RM10C

Display	7 segment LED Display (6 digits)
Panel Size	144Wx144Hx150D mm
Weight	1.5 Kg
Input Signals	Universal
Channel No	6 Channels
Scan Interval	10s/Ch
Recording Method	Wire Dot 6 Colour Ribbon
Chart Length	100 mm
Relay Out	6 point
DI	6 points (optional)*
Power Supply	100 – 240 V AC 25 VA
Communication	RS 232C (RS 485 optional)*
Ingress Protection	IP65 (Front Panel)

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DATA LOGGER

ASIATIC ENGINEERS

SINGLE- USE DATA LOGGER/ TEMP U02

Temperature range	-30 ˚C ~ +60 ˚C
Measurement accuracy	±0.5°C (–20°C~+40°C); ±1.0°C (other range)
Temperature units	˚C, ˚F
Protection	Ip67
Memory	10,000
Resolution	Temperature 0.1˚C
Recording interval	10 mins (Default)
Data interface	Micro-USB interface

SINGLE- USE DATA LOGGER/ TEMP U08

Temperature range	-30 ˚C ~ +60 ˚C
Measurement accuracy	±0.5°C (–20°C~+40°C); ±1.0°C (other range)
Temperature units	˚C, ˚F
Protection	Ip67
Memory	32,000
Resolution	Temperature 0.1˚C
Recording interval	Programmable
Data interface	Micro-USB interface

MULTI- USE DATA LOGGER/ TEMP U04

Temperature range	-30°C ~ 60°C
Measurement accuracy	±0.5°C (-20°C ~ +40°C), ±1.0°C (other range)
Temperature units	˚C, ˚F
Measuring range	0.1%RH typically 0.1°C
Dimensions	89mm x 36mmx 14mm
Resolution	Temperature 0.1˚C
Recording interval	10 seconds to 18 hours adjustable [Default:10 mins]
Data interface	Micro-USB interface
Power supply	USB interface power supply
Memory	32,000

MULTI- USE DATA LOGGER/ TEMP U03

Temperature range	Humidity 0%~100%RH, Temp -30°C ~ 60 °C
Measurement accuracy	±3%RH; ±0.5°C (-20°C ~ +40°C), ±1.0°C(other range)
Temperature units	˚C, ˚F
Measuring range	0.1%RH typically 0.1°C
Dimensions	89mm x 36mmx 16mm
Resolution	Temperature 0.1˚C
Recording interval	10 seconds to 18 hours adjustable [Default:10 mins]
Data interface	Micro-USB interface
Power supply	USB interface power supply
Memory	32,000

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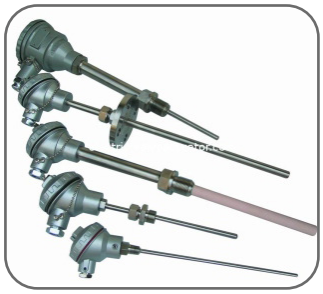
SENSORS / ACCESSORIES

ASIATIC ENGINEERS

RTD & THERMOCOUPLES

Temperature Range	(-) 200 to 1800 °C
Type	RTD - Pt -100 - 2, 3 & 4 wire T/c - K, J, N, R, S, B
Construction	Mineral Insulated (MgO filled), Non - MI
Element	Simplex, Duplex
Length	25 mm ~ 10 m
Dia	MI - 1.5, 3, 4.5, 6, 8 mm Non MI - 3 ~ 25 mm
Wire Gauge	36 ~ 10 SWG
Protection Sheathing	SS 304, SS 316, SS 310, Inconnel 600, Ceramic - 610
End Connection	Die Cast Aluminium Head with IP 65 protection - Weather Proof Flame Proof Head available on request High Temp. Ceramic Terminal, Handle Type M/F Thermocouple Connectors - Standard/Miniature - Omega/Taiwan
Accuracy	RTD - Class A, Class B T/c - Special Tolerance, Standard Tolerance
Accessories	SS/Ceramic Thermowell - Flanged/Non Flanged SS/MS/Aluminium Flange with Single/Multi holes Weilded/Adjustable Connectors - (1/4 " , 3/8 " , 1/2 ") BSP & NPT

ORIGINAL / EXTENSION & COMPENSATING CA-

RTD / Thermocouple - (Pt -100), K, J, N, R, S, B, E, T

Teflon /Teflon, Teflon / Teflon / SS, Teflon / Teflon / FG, Teflon / FG / SS, Teflon / Si
PVC / PVC, PVC / PVC / SS, PVC / PVC / Asbestos
FG / FG / SS, FG / FG / Asbestos
K & N Type Ultra High Temperature Thermocouple Wire with Mica / TVA, Alumina / TVA, Alumina
Wire Gauge (SWG) : 1/22, 1/24, 1/26, 1/30, 3/22, 3/24, 3/26, 7/22, 7/28, 7/30, 7/32, 7/36, 14/30, 14/36

ORIGINAL / EXTENSION & COMPENSATING CABLES

RTD / Thermocouple - (Pt -100), K, J, N, R, S, B, E, T

Standard & Miniature M/F Thermocouple Connector
Panel Mountable Standard & Miniature Female Thermocouple Connectors
Protection Boot for Thermocouple Connectors - Rubber / Silicon

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PRESSURE TRANSMITTERS

ASIATIC ENGINEERS

PRESSURE TRANSMITTER

Measuring Range	0-0.1-40Mpa
Measuring Medium	Liquid, Gas, Oil
Signal Output	4-20mA, 1-5V, 0-5V, 0-10mA, 0-20mA, RS485 (Customized)
Accuracy	0.1%, 0.3%, 0.5%
Power Supply	24V DC
Pressure Type	Absolute, Gauge, Vacuum Pressure
Media Temperature	-20-80˚C
Protection Grade	IP65

DIGITAL PRESSURE GAUGE

Measuring Range	0-0.1-40Mpa
Measuring Medium	Liquid, Gas, Oil
Signal Output	4-20mA, 1-5V, 0-5V, 0-10mA, 0-20mA, RS485 (Customized)
Accuracy	0.1%, 0.3%, 0.5%
Power Supply	24V DC
Pressure Type	Absolute, Gauge, Vacuum Pressure
Media Temperature	-20-80˚C
Protection Grade	IP65

PRECISION PRESSURE TRANSMITTER

Isolating Diaphragm	316L stainless steel / Hastelloy C (Customized)
Process Connector	316 stainless steel
Fill fluid	Silicone oil/Fluorinated oil
Amplifier Housing	Aluminium with epoxy resin coat
Process Connector Gasket	Perbunan(NBR)
Name plate and tag	304 stainless steel
Weight	1.6 kg
Degrees of Protection	IP67
Output	4-20mA with HART FSK Protocol
Power Supply	24V DC

DIFFERENTIAL PRESSURE TRANSMITTER

Sensor Body	316L stainless steel
Isolating Diaphragm	316L stainless steel/Hastelloy, C/Gold plated on 316L/FEP, plated on 316L/Tantalum
Cover Flange	316 stainless steel
Nuts and Bolts	304 stainless steel
Process Connector	316 stainless steel
Fill fluid	Silicone oil/Fluorinated oil
Process Connector Gasket	Perbunan (NBR)/Viton (FKM/Teflon(PTFE)
Amplifier Housing	Aluminium with epoxy resin coat
Housing Gasket	Perbunan (NBR)
Name plate and tag	304 stainless steel
Weight	3.3kg
Degrees of Protection	IP67
Output	4-20mA with HART FSK Protocol

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