

Willrich Precision 866-945-5742 /
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FUSION

COORDINATE MEASURING MACHINES



MARK 2 - Manual

THE COMPLETE INSPECTION SYSTEM

Fast, accurate and reliable, the MARK 2 CMM comes in four different sizes with Y axis travel up to 1500mm. Available as either a manual machine

The all aluminium bridge structure not only ensures that the Mark 2 has low inertia and hence high acceleration to get the job done quickly, but also that the temperature of the machine rapidly follows the temperature of the room, ideal when the CMM is not housed in a controlled environment. Temperature compensation in the software reports results as if they had been measured at 20°C/68°F.

The standard high-tech granite and aluminium table, originally developed for the optics industry, provides fantastic natural damping of high frequency vibration and the granite Y rail allows pre-loading of the bridge air bearings in both directions for superior accuracy.

Another unique feature of the MARK 2 is that manual machines can be easily upgraded to CNC at any point in the future, which is great if you are not sure of your requirement or perhaps can't initially justify the additional cost of a CNC machine.

Because of Fowler FUSION'S fully integrated manufacturing processes, the MARK 2 offers unbelievable value, but above all it is easy to use.

Key Features

- Shortest learning curve of any equivalent system
- Smallest overall footprint of any comparable size CMM
- Choice of Y axis sizes ranging from 600mm to 1500mm
- Suitable for the workshop environment
- Protection from environmental vibrations as standard
- Optimised friction free air bearings, aluminium bridge and granite table
- Free software upgrades - no maintenance fees or contracts

Machines Options

- Auto Temperature Compensation
- Touch Screen Joystick
- Industrial Joystick
- CCD Camera System
- Collimated Back Light Option
- Dual Monitor
- Fixture Kit



MARK 2 - Manual

Common Probe Options: MARK 2 Manual

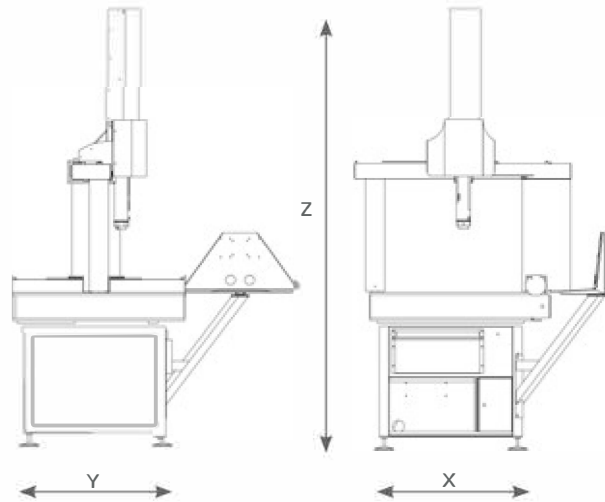
- TP8
- MH20i

MARK 2 Manual CMM



Technical Specifications

Axis Travel (mm)	X 640 Y 600, 900, 1200, 1500 Z 500
Overall Size (mm)	X 1130 Y 900, 1200, 1500, 1800 Z 2320
*Volumetric Accuracy:	TP20 (2.4 + 0.4L/100) μm TP200 (2.3 + 0.4L/100) μm SP25M (2.1 + 0.4L/100) μm
Scale Resolution:	0.5 μm
**Optimum Temp Range:	18 - 22°C
Operational Temp Range:	0 - 45°C
Table:	Honeycomb aluminium & granite or solid granite
Table Load Capacity:	300kg (Honeycomb) or 500kg (Solid)
Max. Velocity Vector:	600mm/sec - CNC Units Only
Max. Acceleration Vector:	600mm/sec ² - CNC Units Only
Air Consumption:	50 l/min (1.8 cfm)
Required Air Pressure:	4 bar (60 psi)



*Maximum Permissible Error MPE_E according to 10360-2, 2009 within the thermal limits defined for optimum temperature range.

**Installation environment thermal limits:
Rate of change <1°C/hr and <2°C/24hr | Temperature gradient <1°C/m

MARK 2 - Manual / CNC

Part Number	Description	Table
Manual		
MK2-6-M-HG-PCM	MARK 2 Manual CMM - (X) 640mm x (Y) 600mm x (Z) 500mm	Honeycomb Aluminum and Granite
MK2-9-M-HG-PCM	MARK 2 Manual CMM - (X) 640mm x (Y) 900mm x (Z) 500mm	Honeycomb Aluminum and Granite
MK2-6-M-SG-PCM	MARK 2 Manual CMM - (X) 640mm x (Y) 600mm x (Z) 500mm	Solid Granite
MK2-9-M-SG-PCM	MARK 2 Manual CMM - (X) 640mm x (Y) 900mm x (Z) 500mm	Solid Granite
MK2-12-M-SG-PCM	MARK 2 Manual CMM - (X) 640mm x (Y) 1200mm x (Z) 500mm	Solid Granite

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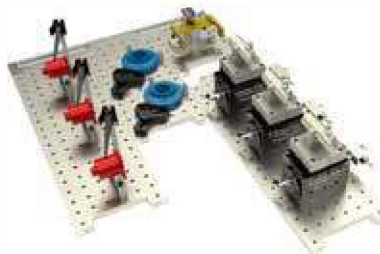
Probe Comparison

	Integral Probe	Index Motion	Maximum Length	Index Resolution	Index Positions	Repeatable Indexing	Repeatable Stylus Charging
TP8	Yes	Manual	105mm	Infinite	Infinite	No	No
MH20i	Yes	Manual	150mm	15°	168	Yes	Yes

MARK CMM - Loc-N-Load™ Fixture Systems

Choose Loc-N-Load™ for traditional CMMs, Optical Comparators and Gage Arms

Loc-N-Load™ Fixture Systems



Inch 1/4-20

Clear Anodized Aluminum
1x1" hole pattern, 1/2" thick

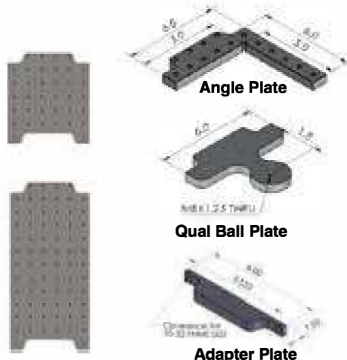
Part Number	Description
SYS05_DK12TR03	CMM 12" Dock, Plates + 58 pc Starter Kit
SYS05_DK12TR02	CMM 12" Dock, Plates + 70 pc Complete Kit
SYS05_DK12TR01	CMM 12" Dock, Plates + 146 pc Works Kit
SYS10_DK18TR03	CMM 18" Dock, Plates + 58 pc Starter Kit
SYS10_DK18TR02	CMM 18" Dock, Plates + 70 pc Complete Kit
SYS10_DK18TR01	CMM 18" Dock, Plates + 146 pc Works Kit
SYS20_DK30TR03	CMM 30" Dock, Plates + 58 pc Starter Kit
SYS20_DK30TR02	CMM 30" Dock, Plates + 70 pc Complete Kit
SYS20_DK30TR01	CMM 30" Dock, Plates + 146 pc Works Kit
SYS60_OC6TR03	Optical Comparator 6" Dock/Plates+ 58 pc Starter
SYS60_DK24TR02	Gage Arm 24" Dock/Plates +70 pc Complete Kit

Metric M6

Clear Anodized Aluminum
20x20mm hole pattern, 12.7mm

Part Number	Description
SYSM1 DK360TR03	CMM 360mm Dock, Plates + 58 pc Starter Kit
SYSM1 DK360TR02	CMM 360mm Dock, Plates + 70 pc Complete Kit
SYSM1 DK360TR01	CMM 360mm Dock, Plates + 139 pc Works Kit
SYSM2 DK540TR03	CMM 540mm Dock, Plates + 58 pc Starter Kit
SYSM2 DK540TR02	CMM 540mm Dock, Plates + 70 pc Complete Kit
SYSM2 DK540TR01	CMM 540mm Dock, Plates + 139 pc Works Kit
SYSM3 DK720TR03	CMM 720mm Dock, Plates + 58 pc Starter Kit
SYSM3 DK720TR02	CMM 720mm Dock, Plates + 70 pc Complete Kit
SYSM3 DK720TR01	CMM 720mm Dock, Plates + 139 pc Works Kit
SYS60M_OC180TR03	Optical Comparator 180mm Dock/Plates+ 58 pc Starter
SYS60M_DK540TR02	Gage Arm 540mm Dock/Plates +70 pc Complete Kit

Loc-N-Load™ ALUMINUM - Individual Rails, Plates and Speciality Plates



Loc-N-Load™ ALUMINUM

Speciality Plates

Part Number	Description
Inch - 1/4-20	
LNL-ADPT-06	Adapter Plate
LNL-ANGL-0603	Angle Plate
LNL-QUAL-PLT	Qualifying Ball Plate
LNL-0606-4X	Indexable Plate
LNL-RND-0608	Radial Plate
Metric - M6	
LNL-ADPT-M6	Adapter Plate
LNL-ANGL-M6	Angle Plate
LNL-QUAL-PLT-M	Qualifying Ball Plate

Radial/Indexable Plates

Part Number	Description		
Inch - 1/4-20		Metric - M6	
LNL-DOCK-12	12" Dock	LNL-DOCK-M360	360 Dock
LNL-DOCK-18	18" Dock	LNL-DOCK-M540	540 Dock
LNL-DOCK-30	30" Dock	LNL-DOCK-M720	720 Dock
LNL-PLT-0606	6x6" Plate	LNL-M180180	180x180 Plate
LNL-PLT-0612	6x12" Plate	LNL-M180360	180x360 Plate
LNL-PLT-0618	6x18" Plate	LNL-M360360	160x360 Plate
LNL-PLT-1212	12x12" Plate	LNL-M360540	360x540 Plate
LNL-PLT-1218	12x18" Plate		
LNL-PLT-1818	18x18" Plate		
LNL-PLT-1824	18x24" Plate		

Vises and Speciality Work Holding

Rapid-Loc™ & Modular Tower

Part Number	Description
Inch - 1/4-20	
RL-VISE-SYS02	Rapid-Loc™ Vise System
MT2-SYS-01	Modular Tower System
Metric - M6	
RLM-ADAPT-02	Base Plate Adapter for METRIC Rapid-Loc™



Rapid-Loc™ & Riser-Grip™

Part Number	Description
Inch - 1/4-20	
SC-06-03	3 Leg 6" Spider Clamp
SC-06-01	1 Leg 3" Spider Clamp
SP-VISE-2.50	Spanner Vise, 2pc.
CC-ER11	ER Collet Chuck
CC-ER16	ER Collet Chuck, flanged
RG-2.75	Riser-Grip™, adjustable
Metric - M6	
SC-06-03-M	3 Leg 6" Spider Clamp
SC-06-01-M	1 Leg 3" Spider Clamp
RG-2.75	Riser-Grip™, adjustable

Work Holding Kits and Sets



Work Holding Kits & Sets

Part Number	Description
Inch - 1/4-20	
TR-KIT-03	Starter Kit - 58pcs.
TR-KIT-02	Complete Kit - 70pcs.
TR-KIT-01	Works Kit - 146pcs.
MAGN-SET-30	Magnetic Riser Set - 23pcs.
STOF-SET-30	Stand-Off & Rest Pad - 37pcs.
STOFE-SET-30	Enhanced Stand-Off - 16pcs.
Metric - M6	
TR-KIT-03M	Starter Kit - 58pcs.
TR-KIT-02M	Complete Kit - 70pcs.
TR-KIT-01M	Works Kit - 146pcs.
MAGN-SET-30M	Magnetic Riser Set - 23pcs.
STOF-SET-30M	Stand-Off & Rest Pad - 37pcs.
STOFE-SET-30M	Enhanced Stand-Off - 16pcs.

Speciality Work Holding and Featured Products

Radial Plate

Perfect for holding round parts. Laser marked rings make aligning easy.

Part Number: LNL-RND-0608



Indexable Plate

Great for inspecting complex parts. Turn and lock plate to access hard to reach features.

Part Number: LNL-0606-4x



Spider-Clamp™ 3-Legged

Hold round parts from 1.18" to 6" in dia. Delicate parts held without distortion. great vision inspection.

Part Number: SC-06-03



Spider-Clamp™ 1-Legged

Use several of these 3" clamps to hold parts of infinite size and shape.

Part Number: SC-06-01



Spanner-Vise™

2-piece vise can infinitely adjust to accommodate workpiece - lock down securely.

Part Number: SP-VISE-2.5



ER11 & ER16 Collet Chucks

Hold small dia. parts and create multi-part fixtures. Opening from 0.012"-0.312" and from 0.012"-0.416". ER16 is flanged for greater stability

Part Numbers: CC-ER11

CC-ER16



Sturdy Lever Clamp

2.5" length provides up to 30lbs. of force for larger parts.

Part Number: LC-2.50



Vision Corner Block

Allows complete view of the part on a vision stage.

Part Number: VCB-150M

