



BRAHMADEVI ENGINEERING PRODUCTS

www.diespares.com

On the Machine Measuring System

We present you the measuring system which can be mounted on the tool holder of the machine. We are giving the mounting fixtures either or any EROWA, 3R, HIRSCHMANN, UNIVERSAL for mounting the measuring system in the tool holder and measure the work piece on the machine where the job is being made.



ABOUT OURSELVES



Brahmadevi Engineering Products, which was started in 2001 has made progress with your continuous patronage to a very respectable level now. We hereby take pleasure to introduce another new product - **BEP TTC Micro Measurement System**. This product is a system by which we can measure the workpiece on the machine while making only. We have been appointed as distributor for this product for South East Asian Countries, the Middle East Countries and Russia.

We show our gratitude to all our customers, suppliers and our team members for supporting in our growth and always standing beside us to progress.

We are also giving the introduction of our supplier for this product below.



In 1989, **TOLTEC** founded by Peng Brothers in Taiwan, started making moulds for consumer electronic product in Taiwan. Their clients included mobile phone factories.

In the early years, they made the moulds according to their experienced skill and checked in the measurement laboratory. However after years, the development of mobile phone required higher standard and more precise, therefore as a mould maker needed to find an efficient solution to simplify the work, meanwhile, cut the cost.

During the process of making the moulds, they realized that the unfinished workpiece could not be removed from the machine, or the error of moving might cause failure and waste. Therefore they have tried different equipment for checking the workpiece directly on the working machine, but none was fulfilled.

Based on their requirements, they made the prototype of **TOLTEC** Measurement system, and it was only used in their factory. The measuring results were very satisfactory more friends in the industry asked for the product. Therefore they modified the prototype and produced the first **TOLTEC** 50ST Measurement system in 2002, and renamed the company as **TOLTEC** Engineering Co., Ltd in the next year. In 2005, **TOLTEC** launched more models, including 30ST/LS, 50ST/LS, 120LS and 250LS. In 2008, started the development of measuring software, in order to enhance the Measurement System to a more powerful measuring function.

USES OF THE SYSTEM

Innovative concept of TOLTEC micro measurement system Avoids the need to move your workpiece for measurement from the machine and it can be easily mounted on the tool holder of the machine

- Accuracy** - Directly measures workpiece on the machine without removing the piece thus reducing chances of errors.
- Increase Productivity** - Defective products are greatly reduced, as well as reducing production time.
- Easy to operate** -
- Reduce cost** - Upgrades your current machines eliminating the need to purchase new expensive machines.
- Multiple applications** - Can apply to different type of machines and the camera allows different applications depending on needs.
- Quick** - Worker acquires measuring results and can adjust the machine immediately.
- Durable** - Stable product quality
- Technical support** - Provides good service and problem solving for clients

A solution to decrease Inefficiency and waste

Environmentally friendly product

At TOLTEC, we take seriously our responsibility to protect and preserve the environment and its beauty for future generations.

TTC equipments passes EU's RoHS test and helps reduce harmful waste.

TOLTEC has obtained the following patents :

US. 6,876,504 B2 (US)
US. 7,292,352,B2
ZL. 032651821 (China)
NO. 219876 (Taiwan)
Nr. 203 10 629.6 (Germany)
3098638 (Japan)
Applied in India.

**TOLTEC meets CE (EU), FCC (US)
and VCCI (Japan) standards.**

APPLICATION

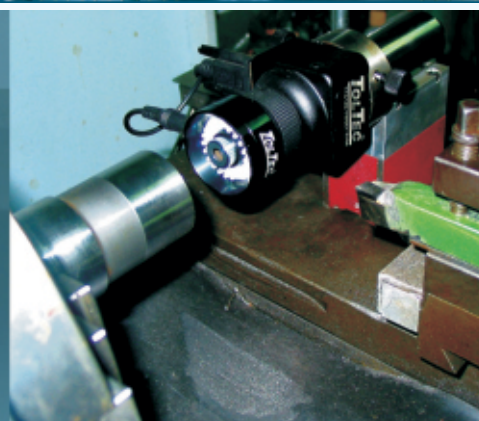
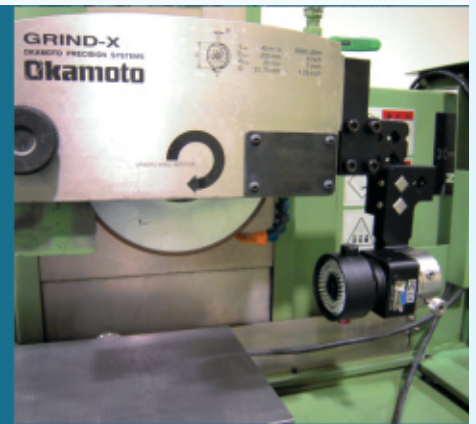
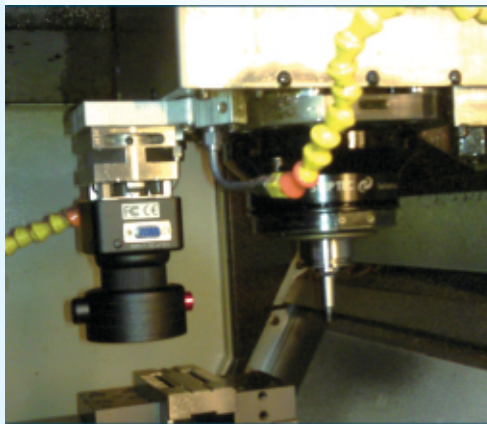
Precision machines should not only work with precision clamping fixtures but in order to reach maximum efficiency and precision also needs skilful staff and the TTC Micro Measurement System.

Can be applied to the following machines :

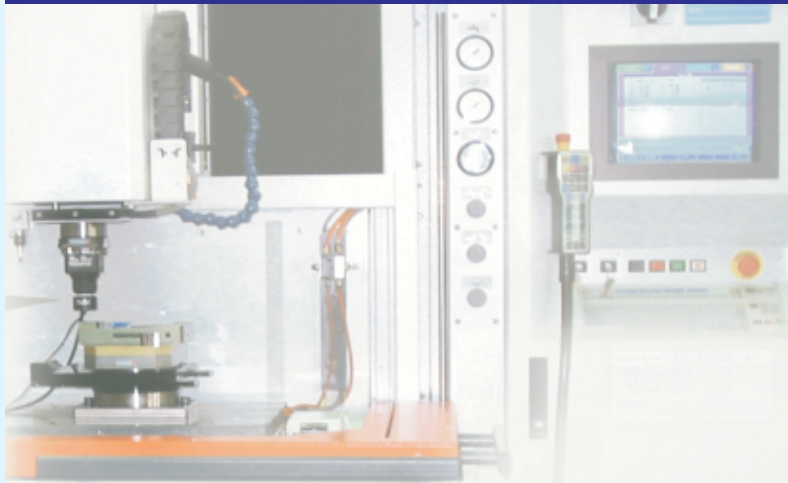
- (CNC) Electric Discharge Machine
- (CNC) High-Speed Machining Centre
- Wire Cutting Machine
- (CNC) Lathe
- Milling Machine
- Grinding Machine
- Applicable Equipment
- Machines equipped with DRO facility



Camera arrangement for machines which do not have the four standard fixtures. The above fixture can be used on conventional machines with DRO facility.

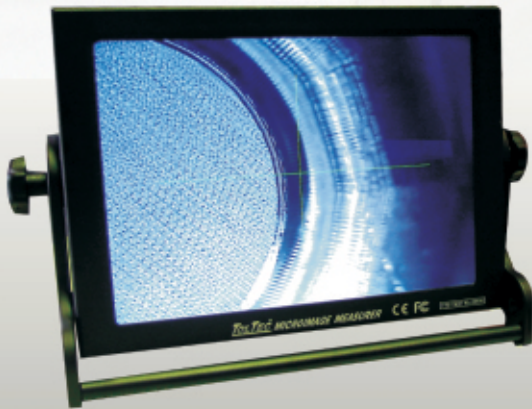


DETAILS OF THE SYSTEM



TOLTEC PORTABLE MONITOR TTC-LCD-15

- Resolution: 1024*768
- 15" Monitor displays clear image for measuring
- Portable design allows you to move the monitor freely. The foundation steadily supports the monitor and avoids the risk of falling over.
- The control panel allows you to adjust the Camera's light and select the crosshair's colours and types.



BEP TTC Camera comes with any of four suitable fixtures which can be directly fixed on the machine.



HIRSCHMANN



3R

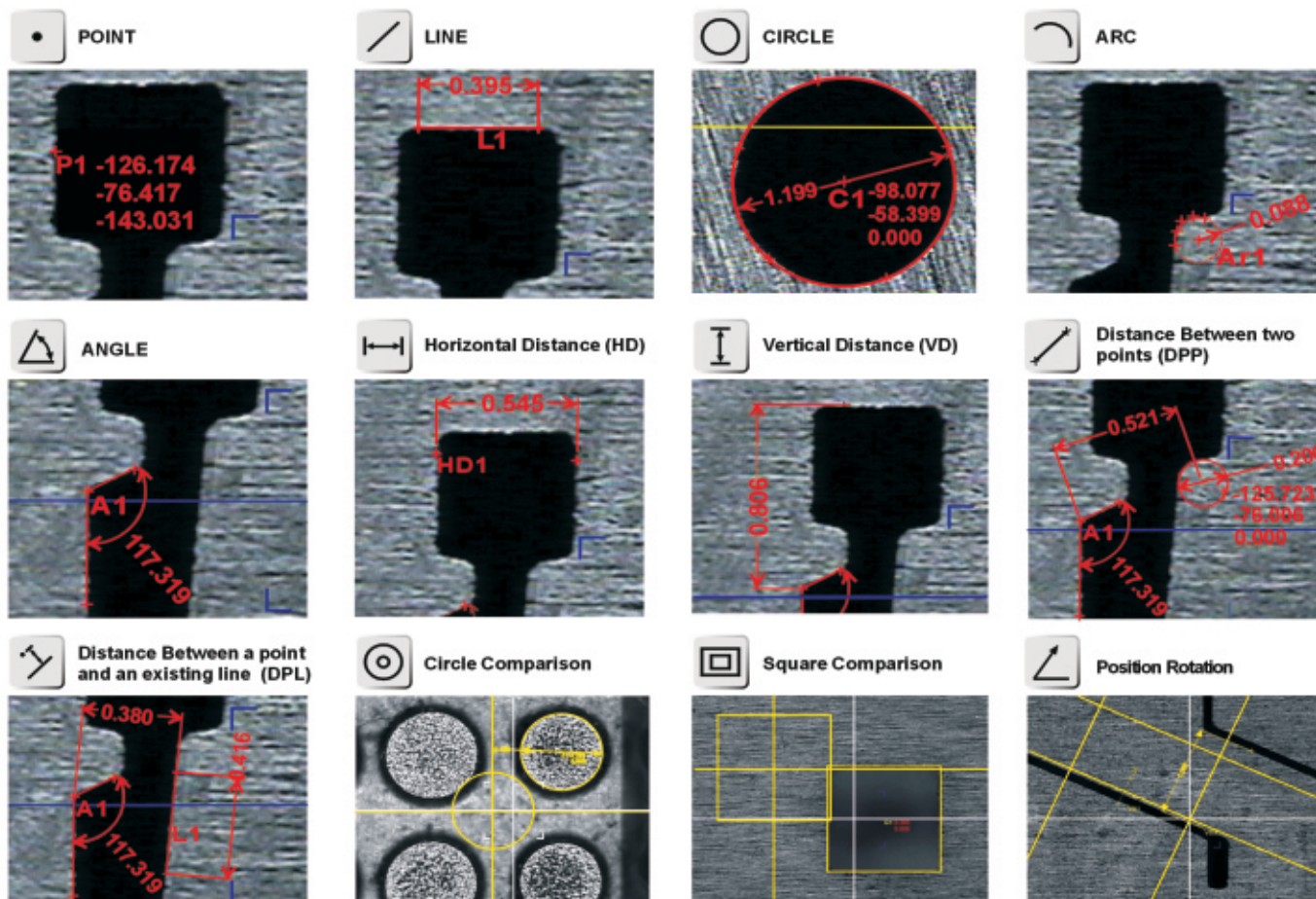
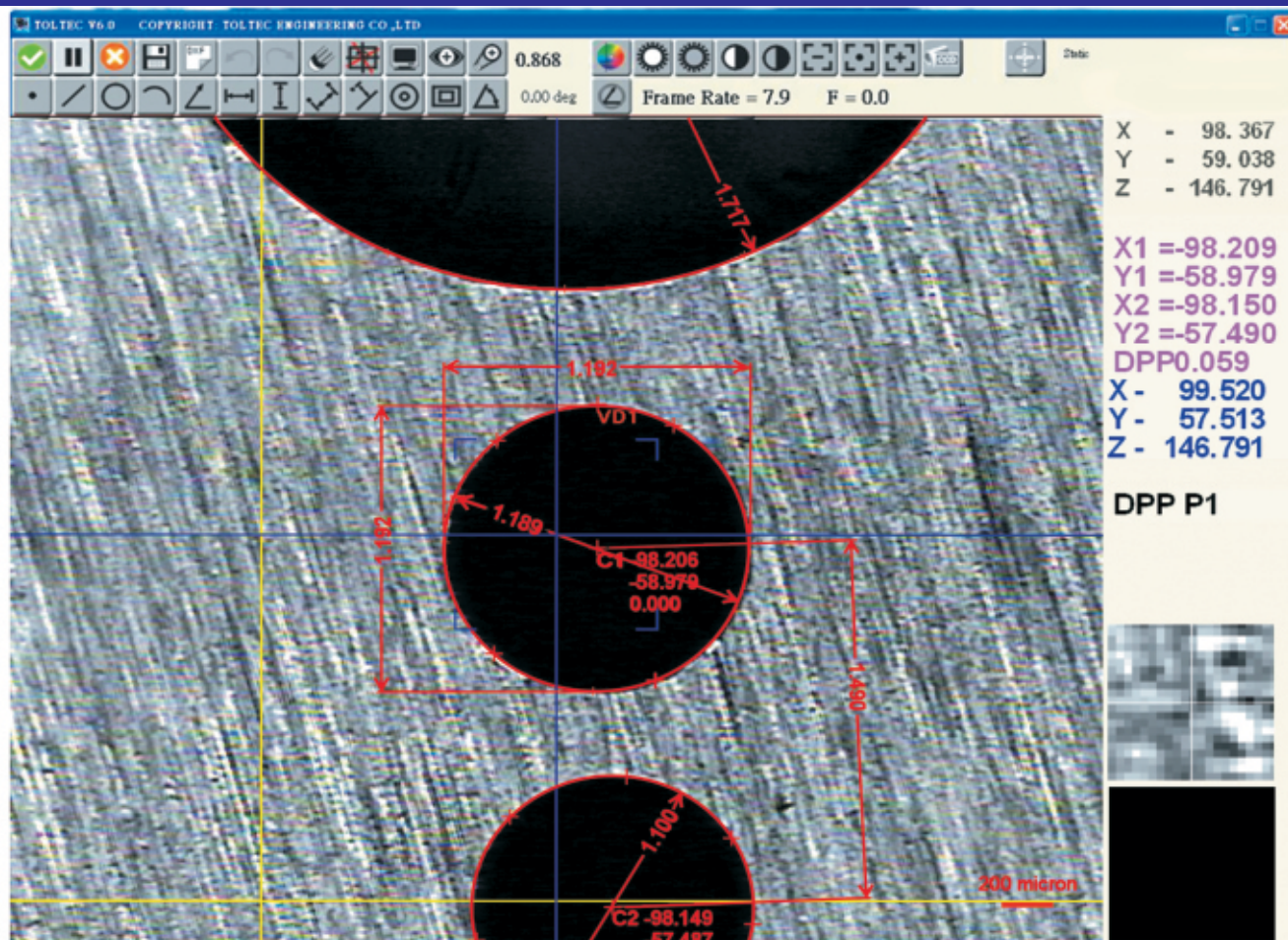


EROWA



UNIVERSAL

PROFILE MEASURED WITH BEP TOLTEC V 6.0 SOFTWARE



FEATURES OF THE SYSTEM

1 Basic Measurements:

Point (Position), Lines (Vertical and Horizontal Distances of two selected point, a straight line length between two points), Angle (degree), Arc (radian and radius) and Circle (diameter).

2. Defining the axes of a point, a line (two terminals), the centres of a circle, an arc and an angle.
3. Measuring the distances between circles, arcs, angles, points or lines.
4. Circle and Square comparisons.
5. Comparing the workpiece with its CAD file.
6. **Extended measurement** : Measuring the target beyond the Measuring Operation Area.
7. Rotating the crosshair in order to make it parallel with the target.
8. Using the Arrow keys on the keyboard to make a fine movement for the cursor crosshair. And press Enter to confirm the selection.
9. The measuring results can be saved as the formats of .dxf (CAD file), .bmp and .xls (Excel).
10. Synchronizing the target axes from the machine controller or network(Optional).
11. TOLTEC V 6.0 Measurement Software is designed for on-machine measuring to enhance the TTC Cameras; the measuring results can be saved and printed out. Very convenient for recording and analysing.

Magnification

- Choose proper camera for you measurement in order to obtain maximum efficiency.
 - 50 LS for efficiency upto 0.01mm
 - 120 LS for efficiency upto 0.005mm
 - 250 LS for efficiency upto 0.003 mm

Auxiliary Lights

TTC Micro-Image Camera consists of two types of Auxiliary Lights; one is Coaxial Light, and the other is Perimeter Light. Coaxial Light Red light, positioned in the centre of the Camera. It has two features; one simplifies target searching by indicating the position of the target. The other cooperates with the perimeter light to make the target clear for measuring thus obtaining accurate result. Perimeter Light white light, located around the lens, it provides sufficient light for measuring the target.

SPECIFICATIONS

Camera Models		BEP TTC30LS	BEP TTC30ST	BEP TTC50LS	BEP TTC50ST	BEP TTC120LS		BEP TTC250LS	
						40D	60D	40D	60D
Dimension ¹ mm		60*60*102	60*60*102	60*60*88	60*60*88	60*60*86	60*60*110	60*60*94	60*60*113
Weight (g)	EROWA	800	800	850	800	850	850	850	850
	3R	1000	1000	1000	1000	1000	1000	1000	1000
	HIRSCHMANN	120M	1100	1200	1100	1200	1200	1200	1200
	UNIVERSAL	1600	1500	1600	1500	1600	1600	1600	1600
Tolerance		0.02 mm	0.02 mm	0.01 mm	0.01 mm	0.005 mm	0.005 mm	0.003 mm	0.003 mm
WD ²		90 ±2	83 ±2	46 ±2	39 ±2	38 ±2	62 ±2	38 ±2	62 ±2
Magnification ³		36+3l	44 ±3	53 ±3	60 ±3	136 ±5	136 ±5	295 ±10	295 ±10
Coaxial light		Yes	No	Yes	No	Yes	Yes	Yes	Yes
Perimeter light		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power supply		+5V +12V							

1. Dimension = length X width X height, excluding the clamping fixture
2. WD: working distance, distance from camera to workpiece
3. Magnification: observe through 15 Monitor with different magnification cameras

CCD	TV System	EIA	INCCIR
	Total Pixels	~410K	AM- 470K
	Image Sensor	1/3 inch CCD Image Sensor	
	Power Supply	DC 12V+/-1V 120mA	
Light	Emitted Colours	White / Red	
	Viewing Angle	20o	
Monitor	Display	15 colour TFT LCD	
	Resolution	1024*768	
	Contrast Ratio	500:1 (Typ)	
	Power Supply	AC100-240V 50/60Hz	
Operating Temperature		-20 ~ 60°C	
Storage Temperature		0 ~ 50°C	

Distributor for South East Asia & Middle East



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