

Itaca srl, founded 1996, has been continuously developing the technique of CMM SW and HW. The field of activity has constantly evolved since the start in CMM SW. Probing, controllers, specialized HW and SW, always on the mainstream of metrology, have been designed and produced directly for the market or for our OEMs.

Worldwide cooperations and recent development of a specialized line of CMMs is projecting Itaca to the front-line, international market where it belongs.

The main facilities are located in Turin industrial suburbs (Italy). Here highly our team of mechanical, electronic and software engineers commit to develop advanced metrology solutions for our customers.



FLEXCAL

FlexCal-2D Series

The ultimate Profile Coordinate Measuring Machine. Combining profile measurement with the flexibility of CMM approach and the most advanced electronics, sensors, materials and SW, FlexCal™ is a perfect tool for all needs of in-production measurement of inner and outer profiles.



FlexCal-T



FlexCal-C

Agent/Reseller



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Enter the FlexCal™

FlexCal™ 2D Series an innovating alternative to profilometers for production inspection

FlexCal™ is a rugged and accurate bidimensional CMM designed for a very flexible inspection of 2D forms/profiles. Its **new approach** to the measure of profiles combines a 2D CMM with full use of touch-trigger or scanning probes, allowing the measuring of hardly reachable features. Its unprecedented speed, together with the CMM-like measurement method overcomes the limits of **conventional needle profilometers**.

Forget the limit angle of profilometers! No need of part tilting during the measurement.

FlexCal™ can measure **at 90°** and even at **negative angle of contact** with same accuracy in any direction! Moreover FlexCal™ is designed for high accuracy, repeatability and speed in **production environment**.

Its structure is based on all-airbearing moving table and vertical stage.

FlexCal™ is ideal for the measurement of internal and external profiles of turned or ground revolution parts in production environment for controlling the manufacturing process. The inspection cycle can be easily programmed by self teaching as you are measuring the first part.

An Absolute XY Gauging System

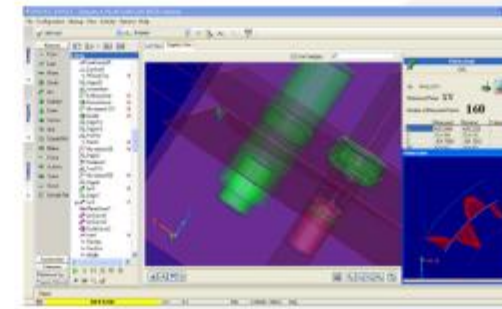
FlexCal™ is a cost effective alternative to slow profilometers or traditional dedicated gauging solutions. Coordinate Measuring Machines have long been used as flexible production gauges however their size and costs have made them prohibitive for most gauging applications.

A new CMM configuration utilizing proven CMM principles and addressing the current market vacuum. It is more than just a flexible gauging system; FlexCal™ is a Mini 2D CMM with an absolute dimensional accuracy. Thus the need of a painful process of making masters and matching the results is no more needed. The absolute accuracy and advanced thermal compensation will avoid all this, giving an absolute answer to the simple question: **"is the part good or bad?"**



-T Series

TANGRAM



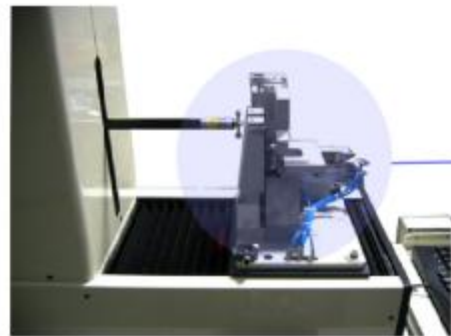
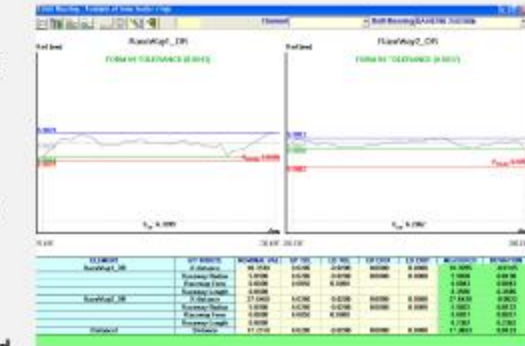
The Final Piece in the Flexible Gauging Puzzle

The mathematical genius behind FlexCal™ is **TANGRAM**; a very capable, flexible and yet intuitive metrology software. **TANGRAM** offers a totally graphical approach with no need to learn any complex programming language. **TANGRAM** is developed for users who like simple, economic, easy to use metrology software that does only what they need. Most metrology softwares on the market today are overly complex with way too many features for the average application and

user. **TANGRAM** offers the correct balance of functionality, usability and performance and is the final piece of the FlexCal™ solution.

A wide application palette allows flexible programming with touch-part recognition, advanced temperature compensation of part, environment and machine.

Integration with automation front-ends and with data collection systems complete the match of FlexCal application with any need from the very simple to the most demanding.



Two sizes for all tasks

FlexCal™'s granite guides, 100% airbearing and generous guidance ratios, together with included thermal compensation ensure the demanding accuracy. FlexCal™ comes in two sizes:

-T Series

A very small footprint, moving table structure. It fits well for all small parts with section 160x160 like bearing rings, small pipes, synch gears. Compact and easily moveable wherever you need it.

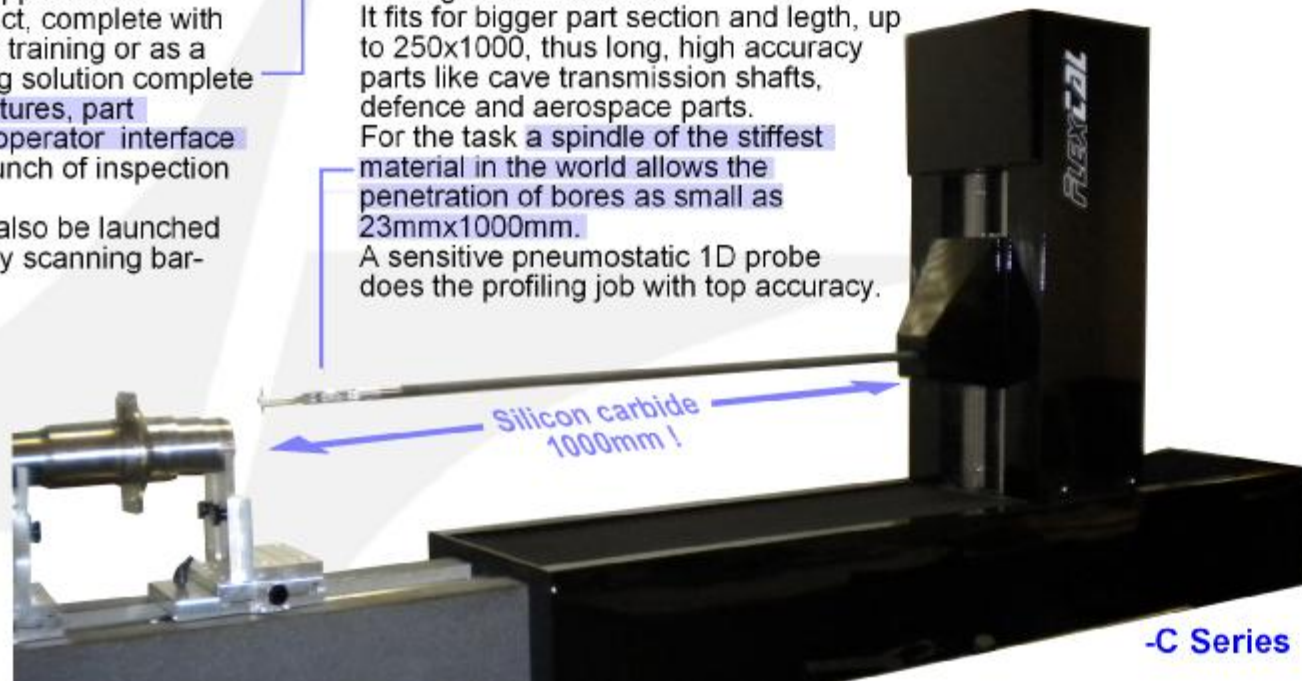
-C Series

Moving column structure. It fits for bigger part section and length, up to 250x1000, thus long, high accuracy parts like cave transmission shafts, defence and aerospace parts. For the task a spindle of the stiffest material in the world allows the penetration of bores as small as 23mmx1000mm.

A sensitive pneumostatic 1D probe does the profiling job with top accuracy.

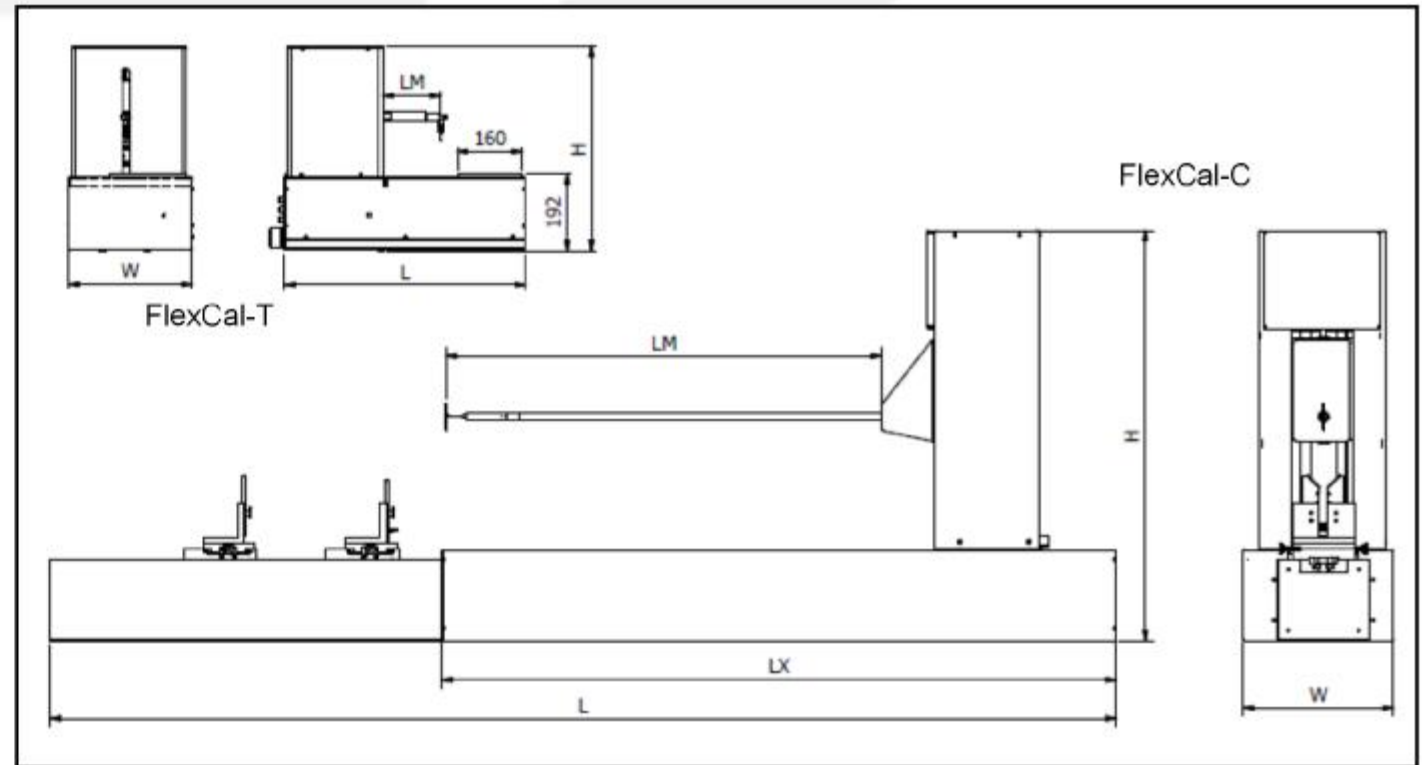
Flexible for You

FlexCal™ is supplied as a standard product, complete with installation and training or as a turnkey gauging solution complete with support fixtures, part programs and operator interface allowing the launch of inspection programs. Programs can also be launched automatically by scanning bar-codes.



-C Series

FlexCal-2D series....the right way to measure profiles in the production line



Family	Model	Strokes		Resol µm	Accuracy			Dynamics		Dimensions and weight						
		X mm	Y mm		MPE _p [*] µm	Max µm	MPE _D [*] µm	2D Acc mm/sec ²	2D Speed mm/sec	L mm	W mm	H mm	LX mm	LM mm	Weight kg	Part kg
T	FlexCal-T16	160	160	0.1	1+L/300	1.5	1.2	1,400	550	594	305	506	-	150	506	7
C	FlexCal-C30	300	250	0.1	1+L/300	2	1.2	1,400	700	850	370	1,011	760	300	130	25
	FlexCal-C50	500	250	0.1	1+L/300	3	1.2	1,400	700	1,250	370	1,011	960	500	180	25
	FlexCal-C105	1,050	250	0.1	1+L/300	4	1.2	1,400	700	2,628	370	1,011	1,660	1,075	370	25

* Based on standard ISO 10360 with simplifications due to the 2D structure