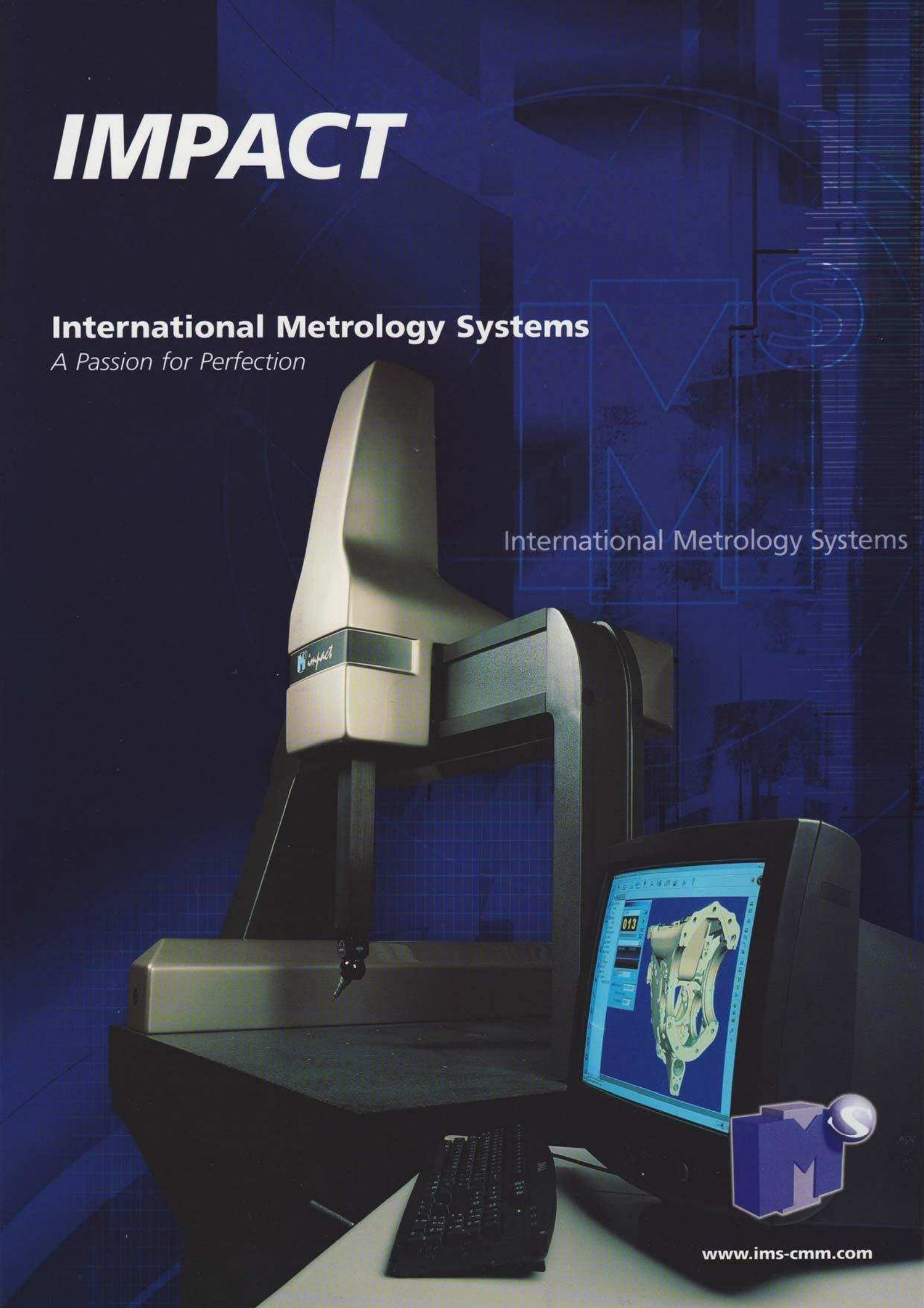
IMPACT

International Metrology Systems

A Passion for Perfection



www.ims-cmm.com

IMPACT – Speed,

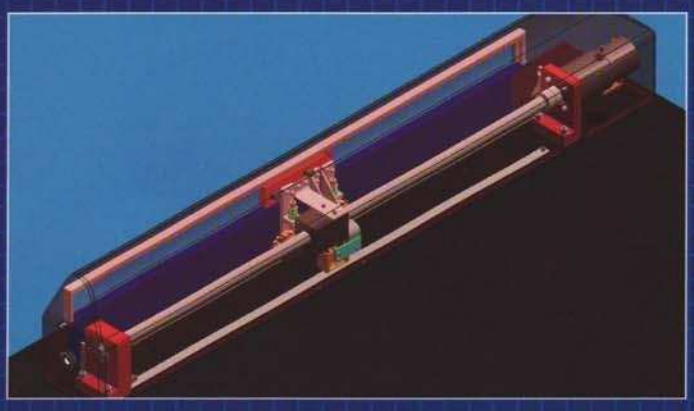
HERITAGE

In 1992 The International Metrology Systems (IMS) Group acquired Ferranti Metrology who were the inventors of CMM technology in 1959. We are justifiably proud of this heritage and, driven by a Passion for Perfection, continue to build on this distinguished reputation through the development of leading edge technologies.

LATEST DESIGN

In line with the latest technologies, IMPACT uses lightweight Carbon Fibre for the construction of the column along with Aluminium Alloy for the bridge section. Both materials offer an excellent stiffness to weight ratio providing a better dynamic performance for the machine. Aluminium also reaches thermal equilibrium much quicker than most other materials, so giving a greater confidence of measurement results over a changing environment.

The wider bearing spread on the Z-axis gives a more rigid structure along with reducing straightness, pitch and yaw errors. The IMPACT also employs a high speed DC shaft driven system on the X and Y axis, which minimises backlash whilst increasing positioning accuracy and speed.



PERFORMANCE

With true 3D moves, the IMPACT maximises the acceleration and velocity of the machine to the full. 3D accelerations of up to 2500 mm/sec^2; velocities up to 860 mm/sec and measuring speeds up to 40 mm/sec make the IMPACT one of the fastest machines on the market. Improved machine dynamics produces a reduction in inspection cycle times, which results in increased component throughput and improved overall payback for the machine.

Increased performance supports the production environment more fully and when combined with the use of multisensor temperature compensation and vibration isolation pads, this means an even more accurate measuring solution.

CONTROLLER

The new On-Motion Controller coupled with the new servo tower incorporates numerous advanced features within its small size (about the proportions of a standard PC tower). "Continuous Motion Control" reduces cycle times by up to 30% by eliminating unnecessary machine moves and smoothing the probe trajectory.

Higher maximum accelerations and velocities are easily controlled and calculated with the use of the latest 32 bit processing power. Advanced service functions combined with remote diagnostic testing reduce downtime and service callouts.

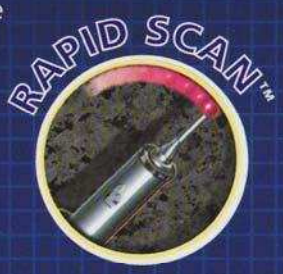
Accuracy & Reliability

IMPACT MATRIX

Touch trigger technology

The IMPACT Matrix has been designed to work hand in hand with the full range of Renishaw touch trigger probes (TP2, TP20, TP200, TP7). These probes offer conventional single event probing but when combined with the new IMS controller they can be used for continuous scanning.

This **Rapid Scan** feature records approximately 8-datapoints per second, which allows a 10-fold increase in data collection over traditional methods. **Rapid Scan** can be utilised for reverse engineering or the comparison of actual scan sections to their nominals and negates the requirement for more expensive scanning probe solutions.



IMPACT MAXXUM

Scanning technology

The IMPACT Maxxum has been designed to utilise the full range of Renishaw continuous analogue scanning probes SP600, SP25, SP80. The IMPACT Maxxum can gather large amounts of data very rapidly for measurement; reverse engineering or digitising purposes. Using **Smart Measure** allows the operator to just select the feature to be scanned and the machine will automatically do the rest.
Simply click and scan!

The IMPACT Maxxum can also be used in point-to-point measurement mode giving a higher measurement accuracy over traditional touch trigger probes. The IMPACT Maxxum is the ultimate all round flexible measurement machine and gives class leading performance at a realistic price.

VIP MILTI-SENSOR PROBE

Breaking the demarcation between contact and non-contact measurement the IMS built VIP Probe (Video Inspection Probe), incorporates its own video camera, programmable light source and tactile probe (TP20). The VIP is fully programmable in automatic mode while being equally usable for semi-automatic or manual sequences.

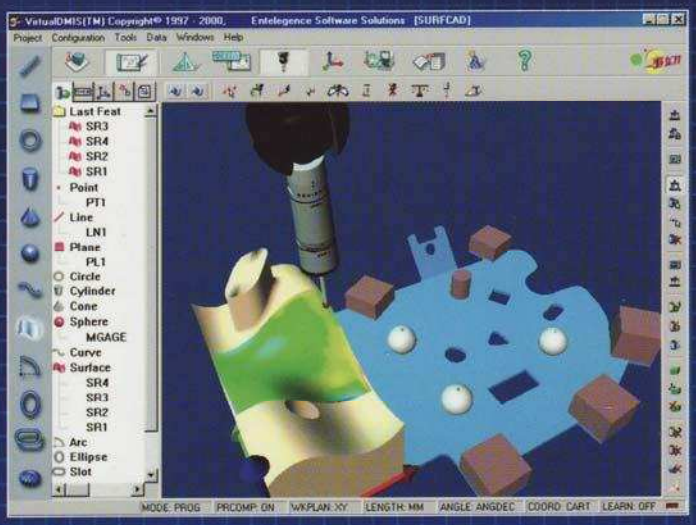
The VIP allows true multi-sensor capability; minimising investment in metrology hardware and maximising equipment utilisation. No need for another metrology software for IMS's own **Virtual DMIS** software will allow easy switching between contact and non-contact modes even within the same part program.

LATEST MEASUREMENT SOFTWARE

Virtual DMIS gives a fully integrated software solution with its 'one software' approach. **Virtual DMIS** award winning software is the same package whether it is being used:

- On-Line or Off-Line
- With or Without CAD
- Contact or Non Contact
- Manual or CNC machine operation.

The software is thoughtfully and easily laid out, with no function more than 3 clicks away, leading to an easy and fast measurement process.



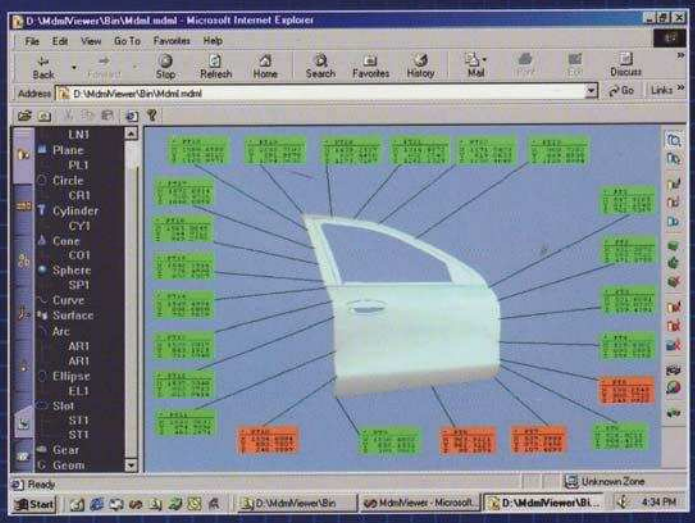
Virtual DMIS maintains its single software concept, any extra functionality required such as CAD, VIP, Gears, SPC or Excel Output are fully integrated into the standard software. This removes the complexity often experienced when interfacing to third party 'bolt on' modules.

Smart Measure algorithms enable the CMM to intuitively determine the feature being measured without operator input. The user simply touches the part with the probe and **Virtual DMIS** does the rest. Programming directly from the CAD model is easy; clicking on the required feature drives the CMM to automatically measure that feature with the correct number of hits – **simply click and measure!**

OUTPUT OF RESULTS

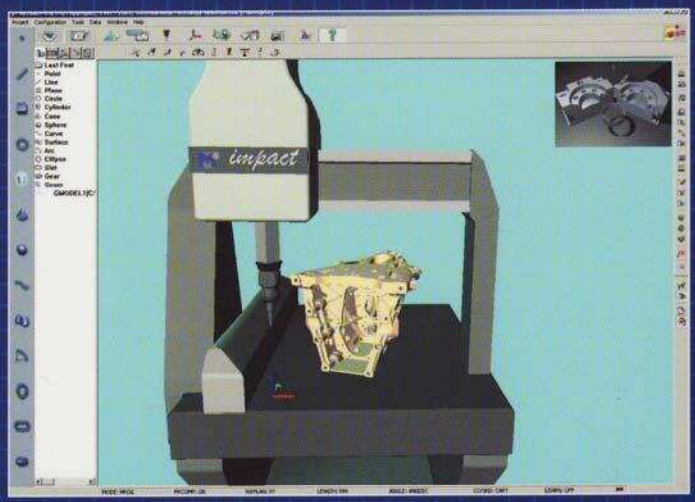
Virtual DMIS has multiple options for the exporting of measured data:

- Text outputs and graphical reporting are standard
- Automatic direct output to an Excel spreadsheet enables the operator to create a myriad of inspection reports
- **Virtual SPC** created by IMS, allows collection of SPC data from within the **Virtual DMIS** package i.e. no complicated external packages are required.

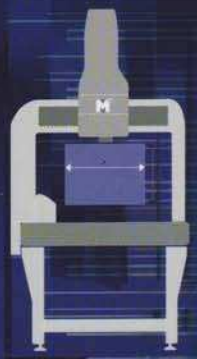


LATEST MULTIMEDIA HELP

Virtual DMIS offers full multimedia help facilities from simple text through to full video and voice help. The range of video help extends from videos on the functionality of individual icons through to tutorials of complete procedures.



Specifications



Model	IMPACT	5.6.5	8.8.6	8.10.7	8.15.7	10.10.7	10.15.7
X axis (Bridge)		500	750	750	750	1000	1000
Y axis (Table)		600	800	1000	1500	1000	1500
Z axis (Vertical)		450	550	650	650	650	650
Maximum Table Loading	kg	500	750	750	750	750	750
Machine Weight	kg	800	1150	1150	1970	1430	TBC
Max. Accel. (3D move)	mm/sec^2	2500	2500	2500	2500	2500	2500
Max. Speed (3D move)	mm/sec	860	860	860	860	860	860
Max. Measuring Speed	mm/sec	40	40	40	40	40	40
Resolution	mm	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Power supply	110 or 240v — 50/60 Hz						
Electrical consumption	750 watts						
Air consumption	15 litres/min at 5.5 bar						
Work surface	Granite with M6 Threaded Inserts						
Tolerable environment	Temperature: 10° to 40° Humidity: 40% to 80% non condensing						
Colour of machine	Pulsar Silver						

Specifications may change without prior notice – see separate technical documentation for more details

IMS' World

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