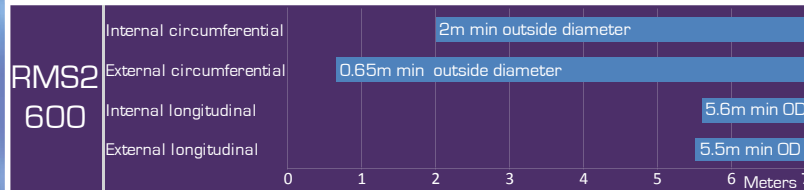


Technology Driven  
Not Operator  
Dependent



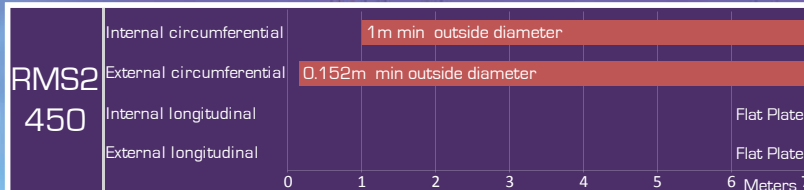
Technology Driven  
Not Operator  
Dependent

**Capability Comparison**

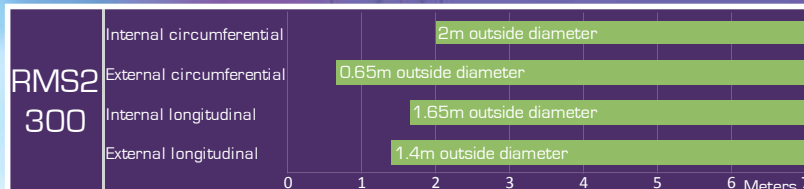


**Typical Scanning Speeds**

	Area	Resolution	Time	Coverage Per Hour
RMS2 600	1000 x 600mm	10 x 10mm	2.35 min	13.94 m <sup>2</sup>
	1000 x 600mm	5 x 5mm	5.09 min	6.99 m <sup>2</sup>
	1000 x 600mm	2 x 2mm	13 min	2.77 m <sup>2</sup>

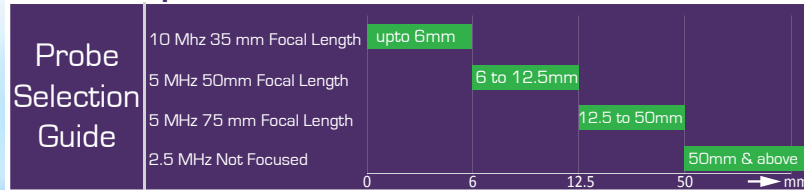


	Area	Resolution	Time	Coverage Per Hour
RMS2 450	1000 x 450mm	10 x 10mm	2.12 min	12.27 m <sup>2</sup>
	1000 x 450mm	5 x 5mm	4.30 min	6.00 m <sup>2</sup>
	1000 x 450mm	2 x 2mm	11 min	2.45 m <sup>2</sup>

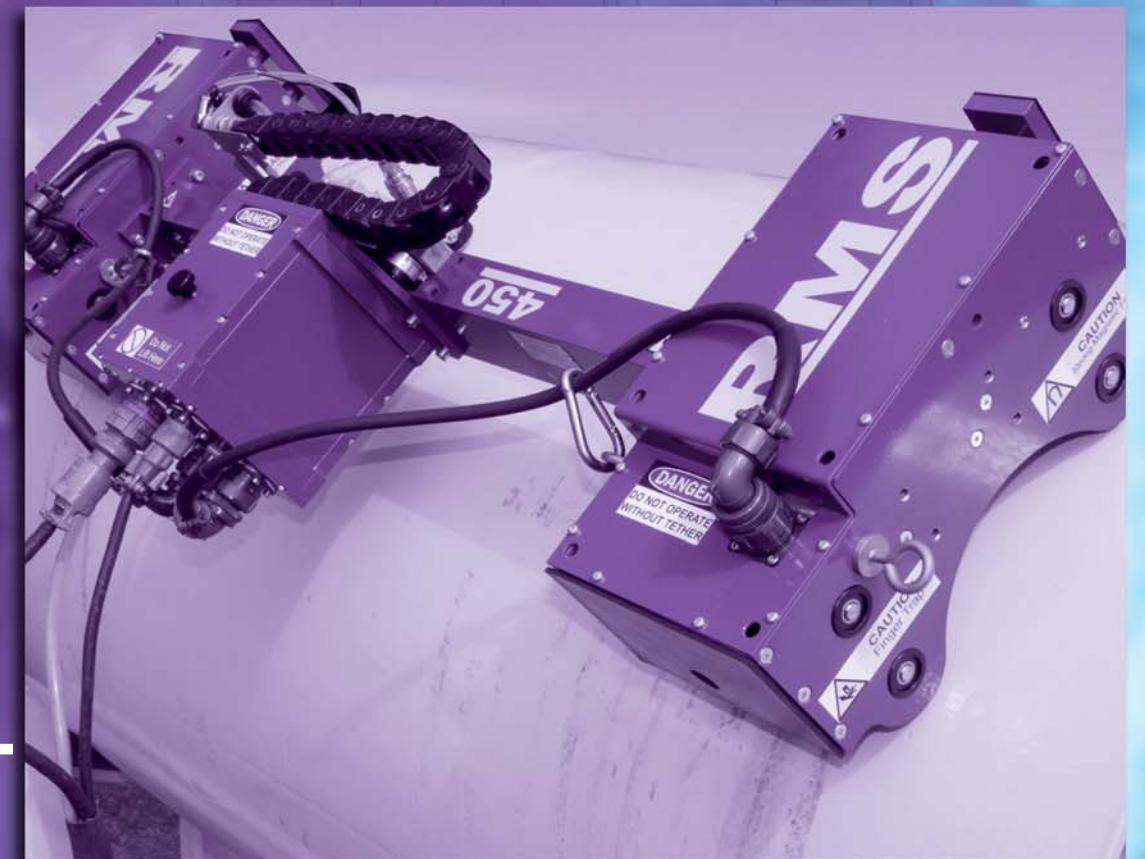


	Area	Resolution	Time	Coverage Per Hour
RMS2 300	1000 x 300mm	10 x 10mm	1.50 min	9.82 m <sup>2</sup>
	1000 x 300mm	5 x 5mm	3.39 min	4.93 m <sup>2</sup>
	1000 x 300mm	2 x 2mm	9.08 min	1.97 m <sup>2</sup>

**Probe Option Recommended Thickness Range (Steel)**



**RMS2 Rapid Motion Scanner**



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# RMS2

## Rapid Motion Scanner

# RMS2

## Rapid Motion Scanner

### High Speed Remote Access C-Scan Imaging System

The RMS2 is an enhanced version of the successful RMS (Rapid Motion Scanner) system, providing in service high speed remote access ultrasonic corrosion and defect mapping. The improved design can now inspect critical pipework down to a minimum of 6 inches (152mm).

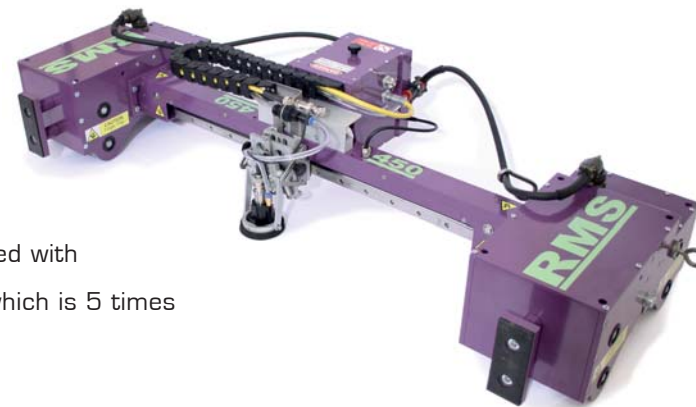


The RMS2 has improved reliability and functionality and is capable of operating at a scanning speed of 730mm per second. The RMS2 is designed for rapid, large scale inspection of ferrous structures such as storage tanks, pipe-work, pressure vessels, risers and other critical equipment.

The RMS2 is extremely flexible with a range of 3 optional crawler types allowing the customer to optimise the system to suit their specific inspection requirements. The RMS2-600 is designed to maximise scanning rates on large surface areas such as tank shells, pressure vessels and other structures, the RMS2-450 is designed for the inspection of smaller diameter pipe work from 152mm (6 inches) up to flat plate, RMS2-300 is designed as a general purpose scanner for inspecting areas with obstacles such as nozzles that would prevent coverage using the wider scanning heads.

Ultrasonic data is captured via a single crystal transducer, water immersion technique which utilises a stainless steel wear plate to prevent damage when scanning over rough surfaces. The transducer is mounted in a gimbaled probe holder, ensuring it remains perpendicular to the surface when transversing uneven surfaces.

The low profile tractor units utilise high torque stepper motors combined with magnetic drive wheels that have a combined magnetic pull of 100Kg, which is 5 times the unit weight of 20Kg.



#### Mechanical features

- 730mm / second scanning speed
- RMS2 600 - Large Area Scanner
- RMS2 450 - Pipework & Pressure Vessels
- RMS2 300 - General Purpose
- Manual joystick control as well as computer programmable control
- Scans 6" pipework to flat plate

#### Technical Specification

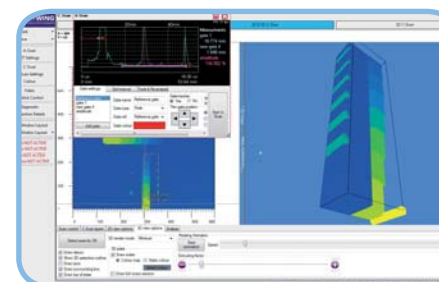
Dimensions 600	Length 440 mm x Width 826mm x Height 185 mm
Dimensions 450	Length 405 mm x Width 990mm x Height 197 mm
Dimensions 300	Length 440 mm x Width 565mm x Height 185 mm
Weight without cables	20Kg
Adhesion	Magnetic wheels
Pull off force	100Kg
Drive	1 stepper motor per tractor unit
Scan Width	600mm / 450mm / 300mm
Umbilical Cable	15 metre or 30 metres
Transducer	Single short pulse - 2.5, 5 or 10MHz
Power supply	220/110 vac input
Water Pump	220 or 110 vac input

#### Data Acquisition Software

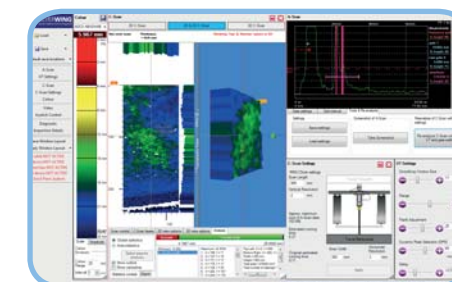
The RMS2 data acquisition software seamlessly integrates scanner control, data capture and data analysis into one user friendly package. The intuitive data acquisition and analysis software shows a real-time display of the A-scan, C-scan, and positional data during a scan, all of which are recorded when a scan is saved for post inspection analysis.

#### Software features

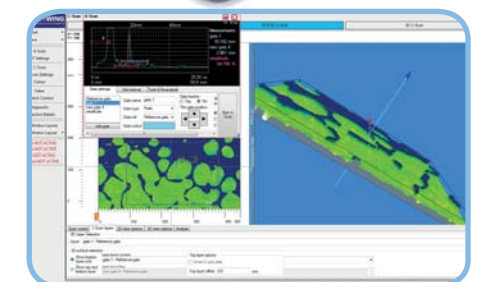
- Adjustable Scanning resolution in both X & Y axis from 1 x 1mm
- View A-scan and C-scan images in real time whilst scanning
- Interface triggering or Echo to Echo measurement options
- Multiple gate functions (Flank, peak, amplitude & fixed)
- 3D C-Scan presentation to illustrate both top and bottom side corrosion



Test Plate with 3D Image



Post Analysis Function



Hydrogen Blistering

#### Measurement Tools

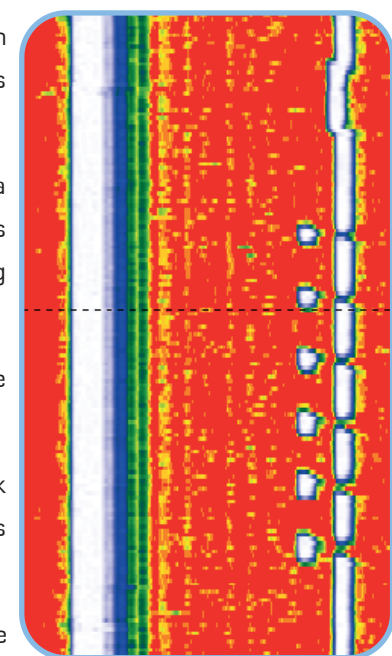
The RMS2 has extensive gating capability and an advanced Dynamic Peak Selection mode which enhances detection of low amplitude reflectors near back wall signals, making detection of small pits and corrosion easier.

With full A-scan capture, all gating can be adjusted in post processing, reducing the need to have a perfect set up on site. This saves time and simplifies the scanning process, while skilled inspectors can examine the data off line. Statistical measurements on selected areas are useful for identifying minimum and maximum thickness on large scans.

The RMS can display amplitude as well as depth based C-scans and B-scans, which enhance the detection of pitting, porosity and other defects reducing the back wall echo amplitude.

As a result of the immersion type probe arrangement the RMS2 can map both top surface and back wall corrosion, which is easily visualised using the 3D C-scan presentation, something unachievable is contact probe solutions.

With a Production rate of 4.62 sq metres per hour whilst scanning at a 2mm x 2mm resolution, the RMS2 is one of the fastest high resolution C-scan imaging system on the market today.



B-Scan Image