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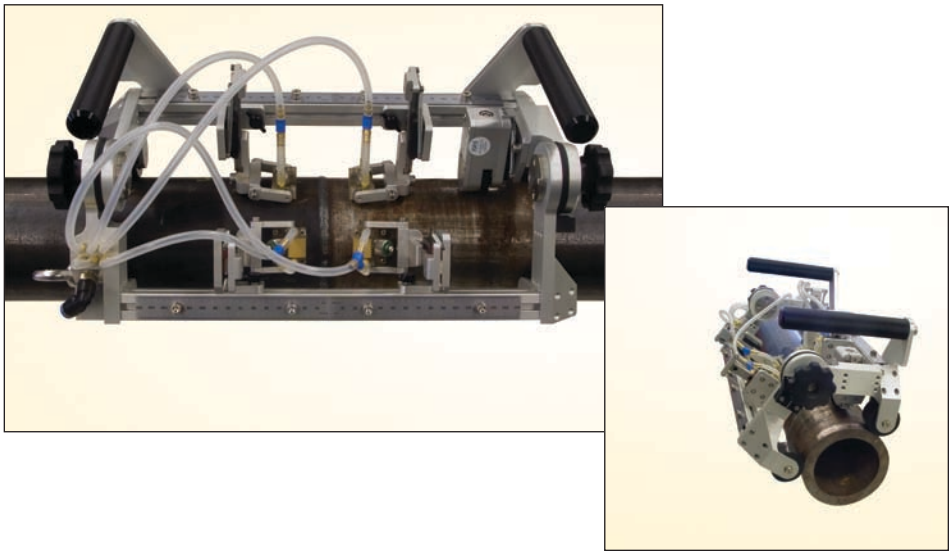
Innovation in NDT™

Pre-Service Weld Inspection Manual Scanner

The R/D Tech HSMT-Flex is intended for the inspection of circumferential welds on pipes 4 in OD and up using four probes. It can also be used on plates with up to eight probes.

The scanner offers an efficient way to make a complete manual weld inspection. It can perform TOFD, pulse-echo, and phased-array inspection separately or all at once.

The basic configuation is intended for contruction welding inspection. In order to be used in more restricted areas, the scanner can also be reconfigured with the provided short frame bars.



HSMT-Flex
Manual Scanner

Features

- Folding frame to optimize probe contact on pipes
- Compact and versatile. The provided frame bars allow size customization.
- Full range of pulse-echo and TOFD probes and wedges, including the composite CentraScan series
- Can support up to 4 conventional or phased-array probes on pipes
- Can support up to 8 conventional or phased-array probes on flat surfaces.
- Light aluminum frame
- Fully adjustable probes positions
- Metric/English rulers on the scanner frame for easy probe separation measurement
- Probe holders are independently spring-loaded
- Splashproof spring-loaded wheel encoder
- Removable handles
- Eyelet for umbilical attachment
- The water manifold is integrated to the scanner frame

HSMT-Flex Kit Includes:

- Scanner frame
- Two additional 200-mm (8 in.) frame bars
- Four magnetic wheels
- Splashproof spring-loaded wheel encoder
- 5-m encoder cable for OmniScan
- Four metric/English rulers
- Four 90º probe holder brackets
- Four spring-loaded arms (SLA)
- Four TOFD/PE 40 mm yokes
- Two PA 40 mm yokes
- Irrigation tubing and accessories
- Hard carrying case

Note:
Umbilical cable, probes, and wedges are not included in the basic kit.

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Options

Probes, Wedges, and Umbilical

Refer to tables on pages 2 and 3

Remote P/R Kit

Four-channel 40dB Remote Pulser/Receiver with LEMO connectors to amplify probe signal. The use of the Remote P/R and composite probes will enhance the S/N ratio in TOFD inspections.
Kit includes a Remote P/R, a bracket compatible with HSMT scanners, 4 2-in. LEMO to Microdot 90º cable.

Manual Water Pump Kit

Water pump is compatible with scanner umbilical cables. It can also be used with provided tubing. Includes tank, tubing, on-off and flow valves.

Laser Guide Kit

Battery-operated laser guiding device for easier weld tracking.

Spring-Loaded Arm Kit

Set of two spring-loaded arms (SLA) with 90º brackets. SLA optional kit is required for simultaneous 8-probe scan.

TOFD/PE Yoke Kit

Set of two yoke to hold a pair of TOFD or conventional UT wedges (ST, SP and SCW series)

PA Yoke Kit

One yoke to hold phased array 40 mm wedge.

Umbilical Cables for HSMT-Flex Scanner

Part Number	Cable Length (m)	Probe Cable Type	Remote P/R Cable
UMB1-UT-5-R	5	UT only	Included
UMB1-UT-10-R	10	UT only	Included
UMB1-UT-20-R	20	UT only	Included
UMB1-UT-30-R	30	UT only	Included
UMB1-UTPA-5-R	5	UT + phased array 128 coax	Included
UMB1-UTPA-10-R	10	UT + phased array 128 coax	Included
UMB1-UTPA-20-R	20	UT + phased array 128 coax	Included
UMB1-UTPA-30-R	30	UT + phased array 128 coax	Included

All UMB1 umbilical extension cables include the following:

- 8 UT probe connecting cables
- 2 spare UT cable
- Encoder cable with integrated amplifiers
- Irrigation tube
- Safety hook on both ends

Phased Array Probes and Wedges Ordering Information

A1 phased-array probes to fit SA1 wedges				
Part number	**Frequency (MHz)**	**Number of elements**	**Cable length (m)**	**Connector type**
2L16-A1	2.25	16	2.5	OmniScan
5L16-A1	5.0	16	2.5	OmniScan
10L32-A1	10.0	32	2.5	OmniScan
A2 phased-array probes to fit SA2 wedges				
5L64-A2	5.0	64	2.5	OmniScan
PWZ1 phased-array probes to fit SPWZ1 wedge				
5L60-PWZ1	5.0	60	2.5	OmniScan
7.5L60-PWZ1	7.5	60	2.5	OmniScan

SA1 phased-array wedge to fit 40 mm PA yoke				
Part number	**Type of beam**	**Refracted angle (º)**	**Wave type**	**Wedge option group**
SA1-N55S-IHC	Normal	55	Shear	IHC
SA2 phased-array wedge to fit 40 mm PA yoke				
SA2-N55S-IHC	Normal	55	Shear	IHC
SPWZ1 phased-array wedge to fit 40 mm PA yoke				
SPWZ1-N55S-IHC	Normal	55	Shear	IHC

See R/D Tech® *Phased Array Ultrasound Probe Catalog 2005-2006* for further choice and information.

TOFD Probes and Wedges Ordering Information

High-sensitivity composite probes to fit ST1 wedge type			
Part number	**Frequency (MHz)**	**Element diameter (mm)**	**Connector type**
C542-SM	2.25	6.0	Microdot®
C543-SM	5.0	6.0	Microdot
C544-SM	10.0	6.0	Microdot
C563-SM	10.0	3.0	Microdot
High-sensitivity composite probes to fit ST2 wedge type			
C540-SM	2.25	12.5	Microdot
C541-SM	5.0	12.5	Microdot

ST1 TOFD wedges to fit TOFD/PE yoke		
Part number	**Refracted angle (º)**	**Wedge option group**
ST1-45L-IHC	45	IHC
ST1-60L-IHC	60	IHC
ST1-70L-IHC	70	IHC
ST2 TOFD wedges to fit TOFD/PE yoke		
Part number	**Refracted angle (º)**	**Wedge option group**
ST2-45L-IHC	45	IHC
ST2-60L-IHC	60	IHC
ST2-70L-IHC	70	IHC

UT Probes and Wedges Ordering Information

High-sensitivity composite probes for pulse-echo to fit SPE2 wedges			
Part number	**Frequency (MHz)**	**Element diameter (mm)**	**Connector type**
C549-SM	2.25	9.5	Microdot®
C550-SM	3.5	9.5	Microdot
C551-SM	5.0	9.5	Microdot

SPE2 wedges to fit TOFD/PE yoke			
Part number	**Refracted angle (º)**	**Wave type**	**Wedge option group**
SPE2-45S-IHC	45	Shear	IHC
SPE2-60S-IHC	60	Shear	IHC
SPE2-70S-IHC	70	Shear	IHC

IHC: irrigation holes and carbides wear pins

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