



# WT 900

## Ultrasonic Weld Test System

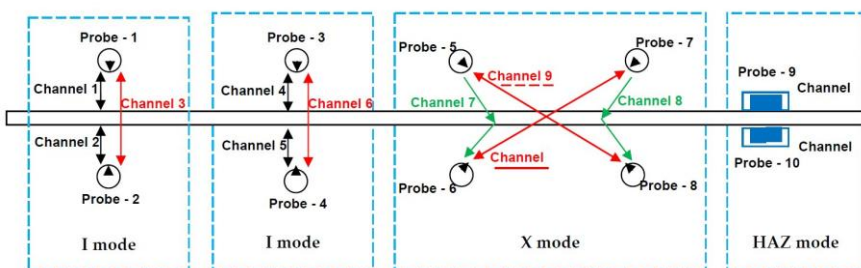
WT-900 is an integrated ultrasonic station for in line weld inspection. Especially of interest for tube and pipe manufacturers requiring UT testing immediately after the welding process.

The system is built around 4 channel pulser receiver modules, each individually capable to sequentially test in puls-echo for direct flaw detection and through transmission for coupling check. The same modules can also be set up for wall thickness testing and delamination testing (HAZ).

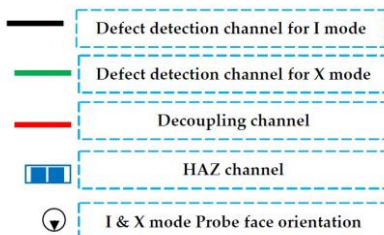


Up to 4 modules can be placed in the system, resulting in a 16 channel weld tester. A typical configuration for detection longitudinal defects, transverse defects and wall thickness can be as follows:

**Configuration diagram**



Where :

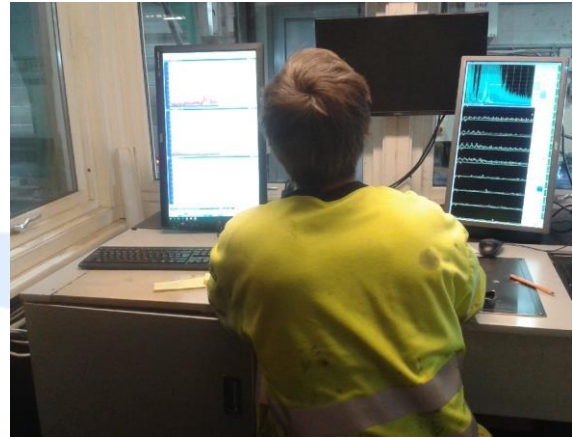




**WT-900 :**

The multiplexer system is based on the proven high performance MFD900 technology.

Supplied in a 19" frame and up to 5 multiplexer modules can be inserted, each driving 4 transducers in PE or TR mode in a flexible way.



**KEY FEATURES:**

The instrument features up to 999 program locations to store inspection settings .

- Easy operation by PC mouse control
- Each channel equipped with 2 flaw gates with analog peak detectors, alarm logic and gated amplifier
- Selective attenuation and gain on each gate
- One water path meter and one universal thickness meter available on each channel
- Segmented TCG on each channel
- PRF per channel = 20 kHz/number of scan table entries
- 2 encoder inputs for in line production testing and displaying real time graphics
- Industrial I/O and PLC interface
- High speed real time analog and alarm output option
- Position programmable paint marker output
- Ethernet and RS232 interface
- Standard interface for external hardware, such as sorters/alarm/ PLC /data processing equipment
- 4 user levels. Each user level can be set to allow certain features to be operated

➤ Powerful recording and reporting software

➤ On-line /Real-time support by the internet with Team Viewer !



-User Define charts and graphs

Item ID	Date / Time	Result	Max/Val	Min/Val	Length	Dim
1	22/09/2014 / 11:12:30	OK	9999.99mm	0.00mm	0.00mm	11.152 mm TC
2	22/09/2014 / 11:13:31	OK	9999.99mm	0.00mm	0.00mm	13.302 mm TC
3	22/09/2014 / 11:15:41	OK	9999.99mm	0.00mm	0.00mm	16.139 mm TC
4	22/09/2014 / 11:15:51	F	9999.99mm	0.00mm	0.00mm	5.313 mm TC
5	22/09/2014 / 11:16:50	OK	9999.99mm	0.00mm	0.00mm	4.844 mm TC
6	22/09/2014 / 11:16:55	OK	9999.99mm	0.00mm	0.00mm	13.426 mm TC
7	22/09/2014 / 11:17:15	F	9999.99mm	0.00mm	0.00mm	10.741 mm TC
8	22/09/2014 / 11:17:30	OK	9999.99mm	0.00mm	0.00mm	25.084 mm TC
9	22/09/2014 / 11:18:23	OK	9999.99mm	0.00mm	0.00mm	11.912 mm TC
10	22/09/2014 / 11:18:41	OK	9999.99mm	0.00mm	0.00mm	13.197 mm TC
11	22/09/2014 / 11:20:18	OK	9999.99mm	0.00mm	0.00mm	11.296 mm TC
12	22/09/2014 / 11:20:20	OK	9999.99mm	0.00mm	0.00mm	13.683 mm TC
13	22/09/2014 / 11:20:20	OK	9999.99mm	0.00mm	0.00mm	13.962 mm TC
14	22/09/2014 / 11:20:42	OK	9999.99mm	0.00mm	0.00mm	10.316 mm TC
15	22/09/2014 / 11:22:21	OK	9999.99mm	0.00mm	0.00mm	10.202 mm TC
16	22/09/2014 / 11:22:39	OK	9999.99mm	0.00mm	0.00mm	18.499 mm TC
17	22/09/2014 / 11:22:50	OK	9999.99mm	0.00mm	0.00mm	10.362 mm TC
18	22/09/2014 / 11:23:41	F	9999.99mm	0.00mm	0.00mm	13.950 mm TC
19	22/09/2014 / 11:23:57	OK	9999.99mm	0.00mm	0.00mm	6.463 mm TC
20	22/09/2014 / 11:24:02	OK	9999.99mm	0.00mm	0.00mm	5.268 mm TC
21	22/09/2014 / 11:24:10	OK	9999.99mm	0.00mm	0.00mm	3.819 mm TC
22	22/09/2014 / 11:24:31	OK	9999.99mm	0.00mm	0.00mm	10.142 mm TC

-User defined reporting documents



### Technical Specification:

Supply voltage	: 90.. 240V (internally selectable)
Supply voltage tolerance	: 190..240V / 80..120V AC 50/60Hz
Power consumption	: max. 250W (10 channels installed)
Dimensions	: 450 x 570 mm (WXHxD) 19 inch 3U
Weight	: 6 kg
Construction	: Plug in modules
PC Interface	: Gigabit Ethernet UDP/IP Protocol with error correction
System interface	: 16 bits bus for data, 16 bits bus for settings
External	: 16 Inputs, 16 Outputs (1=dedicated fast alarm output)
Encoders	: 2, quadrature or clock / direction 4 x resolution in quadrature mode
Encoder freq.	: 2 MHz maximum
Remote I/O	: RS485 / High Speed Output
Options	: Real Time Output unit
Trigger	: Input / output via BNC with frequency limit, TTL level

### Pulser Receiver PRU924 Specifications:

TOF	: 2, measuring between IP and IF echo (water path) Measuring between 2 echoes in the gate, Noise blanking and zero crossing detection (Thickness gauge)
TOF Clock	: 50 MHz (TOF1) / 160 MHz (TOF2)
Detector	: 2 Digital peak detectors @ 100 MHz (150 MHz optional)
Flaw gates	: 2, each with peak detector, alarm logic and gated amplifier
Alarm	: OFF, POS, NEG
Alarm filter	: 1..200 (consecutive alarms)
Interface	: Via dedicated interface gate
Gate Trigger	: OFF, IP/IF/ARTIF
Connectors	: BNC
Gain control	: -10 .. +90 dB
Bandwidth	: 100 KHz .. 30MHz (-6/-6 dB)
Filters	: HPF (Off, 1MHz, 2.5MHz, 5MHz) @ 12dB/oct BPF (Off, 1MHz, 2.25MHz, 5MHz, 7.5MHz, 10MHz 15MHz, 25MHz) 100% bandwidth LPF (Off, 5MHz, 10MHz, 20MHz) 24dB/oct
Output	: RF, HW-, HW+, FW, FW+F1, FW+F2, Fw+ F3
Input impedance	: 50 Ohm / 1 kOhm selectable in through transmission modes
Linearity	: Better than 1% of full scale
Eq. Input Noise	: 50uV RMS (10KHz .. 50MHz)
Gated Gain	: -20 .. +20dB
TCG Type	: Segmented with 16 segments Control Range : -20 .. +50 dB

### Pulser Specifications (A/B Pulser)

Output	: Negative Square wave
Connector	: BNC
Width	: 25 .. 500 ns adjustable in 1 ns steps
Voltage	: -50 .. -350 V
Fall time	: < 10 ns (-200V pulse)
Rise time	: <15 ns (Damping 50 Ohm, no load, -200V pulse)
Impedance	: <10 Ohm
Repetition Rate	: max 10 kHz, adjustable per pulser
Damping Range	: 25 .. 315 Ohm in 5 Ohm steps