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**WELD CRAWLER™** HIGHLY FLEXIBLE & ADAPTABLE SCANNER FOR WELD INSPECTIONS

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# TRANSFORMING WELD INSPECTIONS



# VERSATILE: EASY TRANSFORMATION TO ADAPT TO CIRCUMFERENTIAL AND AXIAL WELDS



**FLEXIBLE DESIGN.** THE BASE KIT IS THE CIRCUMFERENTIAL SCANNER THAT CAN ACCOMMODATE SCANS ON PIPES FROM NPS 2.5 TO FLAT AND THICKNESSES UP TO 2 INCHES.

## **FROM NPS 2.5 TO FLAT**

WELD CRAWLER base kit can accommodate pipes for NPS 2.5 to flat, and thicknesses up to 2 inches.

## **WELDS UP TO 6 INCHES THICK**

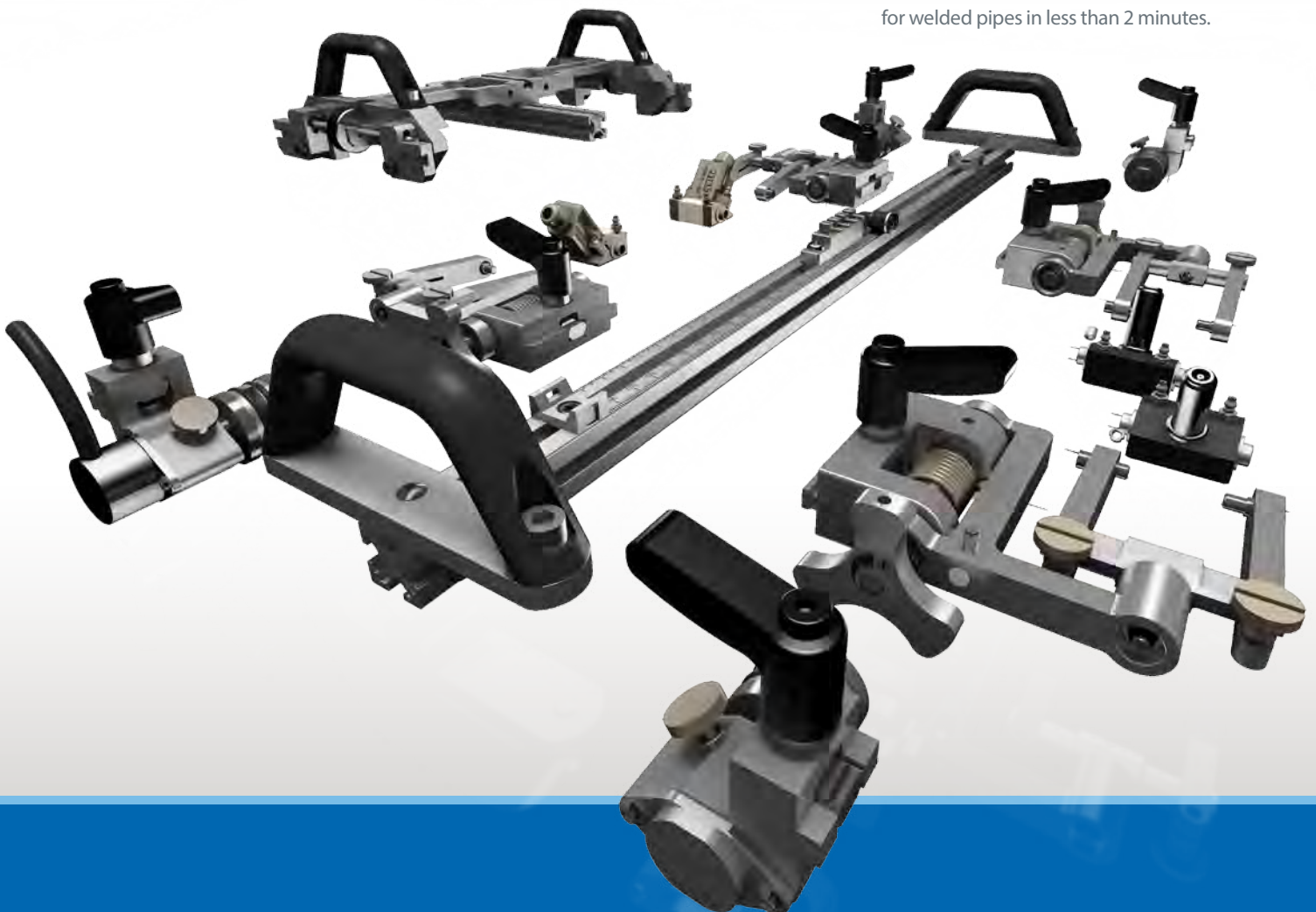
Available frame options to accommodate 6 or 8 probes and cover higher thicknesses.

## **PHASED ARRAY ONLY – TOFD ONLY – TOFD AND PHASED ARRAY**

WELD CRAWLER base kit can accommodate up to 4 TOFD or phased array probes.

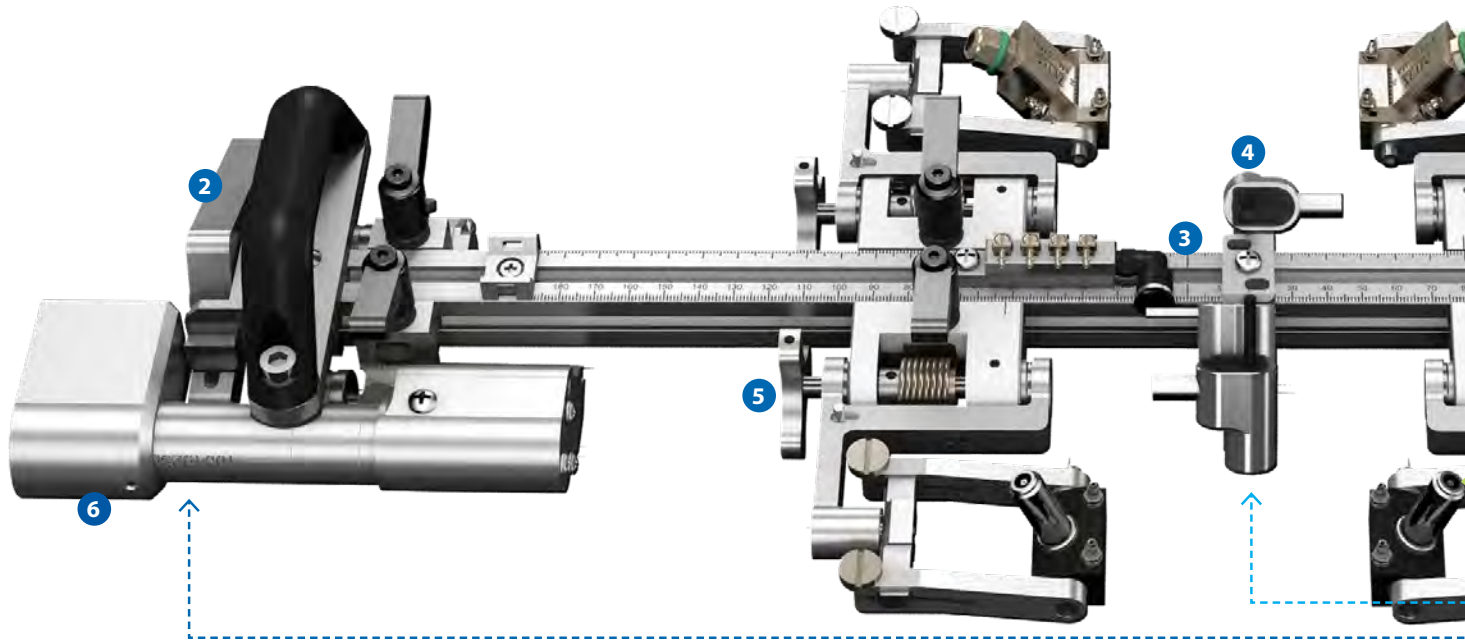
## **FROM CIRCUMFERENTIAL WELD TO AXIAL WELD IN 90 SECONDS**

The addition of the axial kit will allow the user to transform the circumferential weld scanner into an axial weld scanner for welded pipes in less than 2 minutes.



# WELD CRAWLER™.

## A world of possibilities.



### 1 MAGNETIC WHEELS

The wheels provide a strong magnetic field to maintain the scanner in position. They are easy to clean and can be doubled when a stronger hold is needed. The wheels have an embedded breaking system and are easy to position.



### 2 BREAK SYSTEM AND LEVER

The lever facilitates liftoff and compensates for the strong adhesion provided by the scanner's magnetic wheels.



### 3 EASY PROBE POSITIONING WITH EMBEDDED RULER

The ruler on the main arm enables quick and easy probe positioning for optimum data acquisition. Probe positions are directly provided by UltraVision Touch software.



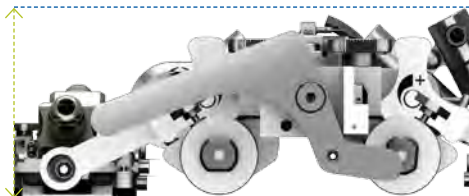
### 4 ONBOARD CAMERA AND LASER POINTER

The two onboard micro cameras stream a live image on the TOPAZ instrument display. The live stream is recorded in the same data file as UT data. This data can be reviewed during post processing to monitor probe positions in relation with the weld providing valuable help for cases with limited access or direct visibility.



### 5 ADJUSTABLE TENSION SUSPENSION

Each probe suspension has an individual tensioning system for adapting the suspension to the application. Probes can be locked in the upper position and then released to apply the pre-adjusted tension.



### LOW CLEARANCE

The scanner's low clearance enables use in confined spaces where only 57 mm or 2 1/4" are needed.

ZETEC WELD CRAWLER IS A HIGHLY FLEXIBLE SOLUTION DELIVERING SCANNING CONTROL DURING THE INSPECTION OF MULTIPLE WELD TYPES, ACROSS VARIOUS FORM FACTORS AND OPERATING CONDITIONS. THIS SOLUTION CAN OPERATE IN THE HARSHTEST OF CONDITIONS AND IN APPLICATIONS OFFERING A VERY LOW CLEARANCE. THE MODULAR CONSTRUCTION CAN REDUCE TOTAL COSTS OF OWNERSHIP BY ENABLING RAPID CHANGEOVER FROM CIRCUMFERENTIAL TO AXIAL SCANNING.



**THE IRRIGATION PUMP CAN BE USED IN CONJUNCTION WITH THE WELD SOLUTION.**

**AUTONOMUS.** The irrigation pump features two TOPAZ<sup>32</sup> type batteries.

**BUFFER TANK.** The irrigation pump also features a buffer tank and a filter. Suction nozzle can be connected to another coupling supply.

**BATTERIES**

Only one type of battery is needed to operate the entire WELD solution with TOPAZ<sup>32</sup>. Batteries are hot-swappable making it possible to exchange them between TOPAZ<sup>32</sup>, the Irrigation Pump and the ZMC<sup>4</sup> independent motor controller, maximizing battery life.

**6 MOTORS**

WELD can be motorized using two optional motors. This solution uses two powerful micro motors with embedded gearbox and includes the correction of the scanner drift in the pipe.

**REMOTELY OPERATED**

The ZMC<sup>4</sup> is remotely operated from TOPAZ<sup>16</sup> or TOPAZ<sup>32</sup>.

**DIALOG SCANNER**

WELD CRAWLER recognizes any TOPAZ instrument. The scanner's encoder parameters will be automatically programmed and the mechanical sequence preconfigured.



## Splitter box



### FAST ATTACHMENT WITH SOLID LATCH

Super easy, fast and solid attachment on the back of the TOPAZ. Just slide it in the rail. Press the latch to release it.

### ROBUST METAL HOUSING

In the field, robustness is the key to success.



### MULTI-DIALOG PROBE COMPATIBLE

The splitter box is capable of reading probe identification data from the two phased array probes and push them to the TOPAZ instrument.

### ADDITIONAL CV CHANNELS FOR TOFD WITH INDIVIDUAL SWITCHES

Can redirect up to 4 conventional channels from phased array channels.



## ULTRAVISION DEDICATED SOFTWARE FEATURES

OPTIONAL DEDICATED SOFTWARE IS AVAILABLE TO ENHANCE SCANNING PREPARATION, TO SUPPORT THE OPTIONAL ADD-ON FEATURES, TO REFINE ANALYSIS AND TO TRACK PROBE USAGE TO CONFIRM THE VALIDITY OF THE SCAN.

### PREPARATION

Preparation software accepts geometric data of the specimen and produces relevant views of the HAZ. It can set the inspection rules and intuitively guide the operator through the inspection.

### ACQUISITION

Data acquisition is a standard feature of the WELD solution. This software supports the scanner's optional hardware, including the splitter box, the cameras and the motorized version.

### ANALYSIS

Analysis software tools like TOFD lateral wave removal, SAFT and drop sizing are available to meet varied and specific user requirements.

### REPORTING

Advanced reporting tools facilitate advanced UT inspection understanding and inspection chain traceability.

## Ordering Information

PART NUMBER	SHORT DESCRIPTION	DESCRIPTION
10048744	ZGN-SCN-WELD CRAWLER	WELD CRAWLER is a Manual Weld scanner for pipes from NPS 2 1/2 up to flat. ZETEC's WELD CRAWLER is a low clearance design (2 1/4") embedding four magnetic wheels with individual break systems. The WELD CRAWLER also features an integrated lever for easy lift off from pipe or plate. Its dialog encoder provides automatic encoder information programming within Ultra Vision Touch. The WELD CRAWLER features 4 individual probe suspensions with individual tensioning adjustment that allows covering welds up to 2 inches thick.
10049247	ZGN-SCN-WELD CRAWLER-OPT-THK 2 TO 4	The 2 to 4 inch option combined to the WELD CRAWLER (ZGN-SCN-WELD CRAWLER) covers thicknesses up to 4 inches. The kit features 2 additional probe suspensions to accommodate 2 more probes. The kit supports up to 6 probes.
10049248	ZGN-SCN-WELD CRAWLER-OPT-THK 4 TO 6	The 4 to 6 inch option combined to the WELD CRAWLER (ZGN-SCN-WELD CRAWLER) and combined the 2 to 4 inch option (ZGN-SCN-WELD CRAWLER-OPT-THK 2 TO 4) covers thicknesses up to 4 inches. The kit features 2 additional probe suspensions to accommodate 2 more probes and 2 additional wheels. The kit supports up to 8 probes and has 6 wheels.
10049251	ZGN-SCN-WELD CRAWLER-OPT-CHAIN	The optional chain can be adapted to the WELD CRAWLER (ZGN-SCN-WELD CRAWLER). The chain can be used on a pipe that is up to 48" in diameter.
10048079	ZGN-SCN-WELD CRAWLER-OPT-AXIAL	The axial weld solution option allows axial weld inspection using the WELD CRAWLER base (ZGN-SCN-WELD CRAWLER). The design covers longitudinal welds down to NPS 6.
10049253	ZGN-SCN-WELD CRAWLER-OPT-VISION	The Vision kit featuring 2 micro cameras and a laser is designed to be mounted on the WELD CRAWLER base (ZGN-SCN-WELD CRAWLER) without any interference. The 2 1/4" clearance is maintained (2 1/2" with the laser). The live images from the 2 cameras are streamed to the UltraVision Touch and are displayed on the TOPAZ screen allowing remote visualization of the probes and of the Weld. Moreover, these live streamed images are recorded within the UltraVision data file and are available for review during post processing. In case of use in direct sunlight it is possible to load software overlays to emulate the laser beam. The Vision Kit is also fully compatible with the axial Weld option (ZGN-SCN-WELD CRAWLER-OPT-AXIAL).
10049607	ZGN-SCN-WELD CRAWLER-OPT-MOTOR	The motorization option features 2 powerful micro motors (ZGN-SCN-WELD CRAWLER-MOTOR), the ZMC <sup>4</sup> (ZGN-CTR-ZMC <sup>4</sup> ) our new battery operated motion controller and the required accessories to motorize the ZETEC's WELD CRAWLER (ZGN-SCN-WELD CRAWLER), its Axial weld option (ZGN-SCN-WELD CRAWLER-OPT-AXIAL) or the 2 different frames. The motorized solution is directly controlled from the TOPAZ front panel. Its unique design featuring 2 motors and 4 encoders automatically correct deviation due to obstacles. It is also possible to actively compensate drift using the 2 motors.
10049608	ZPA-SCN-WELD CRAWLER-KIT	This WELD CRAWLER KIT features the WELD CRAWLER, the Axial Weld Kit, the 2 to 4 inch Kit, the 4 to 6 inch Kit, the chain, the Vision Kit, the Motorization Kit, the ZPAC Splitter, the UltraVision Touch Weld Option and the Irrigation pump.
10052962	ZUT-SCN-WELD CRAWLER-SPARE PART-KIT	The kit includes WELD CRAWLER left & right Fork Assembly, left & right Wheel Assembly, Encoder & Irrigation collector.

FOR MORE INFORMATION ON WELD CRAWLER OR OTHER ZETEC PRODUCTS  
CONTACT US AT [info@zetec.com](mailto:info@zetec.com) OR VISIT [www.zetec.com](http://www.zetec.com).



Zetec holds ISO 9001  
and ISO/IEC 17025  
certifications

