

uponor

# Weholite Technology

Structured-Wall Pipe Systems



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## Light weight, high strength and excellent ring-stiffness for multiple applications



Uponor Infra Technology is delighted to offer the complete range of production equipment for Weholite pipe products.

Weholite is a patented structured-wall pipe construction, with smooth inner and outer surfaces, manufactured by the spiral winding of extruded rectangular PE/PP profiles.

Under license, Uponor Infra Technology provides the complete Weholite production line, including pipe production, profiles, panels, fittings, manufacturing, joint fabrication, field joint equipment and quality control systems.

### The Weholite Production Line

We offer the full range of equipment required for end-to-end manufacture of every component in the Weholite system, so you can be sure of high-performance output of quality Weholite products for every application.

A typical Weholite production line includes an extrusion line for the production of rectangular profiles, a winder, welding extruder, roller conveyors and cutting unit.

Weholite production equipment is available in the following sizes (internal diameters) depending on winder type:

**WHW 2200 (ID 400 - 2200 mm)**

**WHWA 3000 (ID 800 - 3000 mm)**

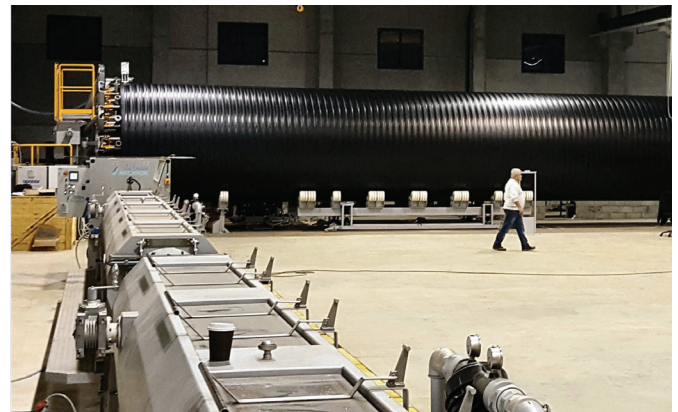
**WHWA 3500 (ID 1200 - 3500 mm)**



WHWA 3500

The WHWA 3000 and WHWA 3500 adjustable Weholite winders feature motorized adjustment of vertical and horizontal rollers and are also equipped with an inner surface smoothing system.

Adjustment of the rollers on the WHW 2200 winder is manual and inner surface smoothers are available as an optional extra.



### WPW 16: Wehopanel welding machine

The WPW16 Wehopanel welding machine is designed to weld straight extruded Weholite profiles together to form Wehopanels.

Wehopanels are flexible and versatile enough for a huge range of applications like the prefabrication of structures and components, modular tanks etc.



WPW 16

The WPW 16 management system includes a programmable logic controller and operation panel.

Weholite profiles are fixed together at a loading table. The bundle of profiles is then fed on a conveyor table through the welding unit. The welding unit is also motorised, for easy adjustment to different seam welding heights.

Hot air blower heaters preheat the profiles before welding, and they are manipulated during the welding process by pressure and side support rollers.

#### Key features:

- Profiles are welded simultaneously from both sides, in order to avoid bending.
- Flexible handling means two maximum panel sizes: 4x4m and 8x2m.
- A safety light curtain protects users during adjustment of the loading table.

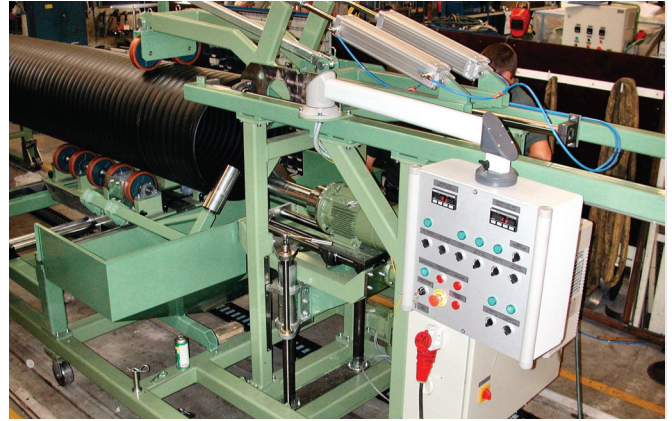
## WTM 2200: Threading machine

The WTM 2200 threading machine creates both male and female threads in Weholite pipes.

The machine is steplessly adjustable for any pipe size between 400mm ID and 2200mm ID and supports pipes of 3-12m in length.

The threading machine consists of two identical units; one fixed and one movable. A guide chain routes cable from the fixed unit to the movable unit.

Each unit has a control panel (on a support arm for comfort) attached to a milling machine. The milling machines can be operated simultaneously (for example, to create male and female threads at each end of a pipe).



WTM 2200

## Quality Control

### WRS 2600 and WRS 4000: Ring stiffness testing

Ring stiffness is one of the key quality criteria in gravity pipes with a circular cross section. Expressed in kN/m<sup>2</sup>, ring stiffness expresses the resistance of a pipe to external load, typically ground pressure.

Ring stiffness is defined in accordance with the SFS-EN ISO 9969:2016 standard; and tensile strength in accordance with ISO 6259:1997.

In testing, a length of pipe (the length used is dependent on the pipe's diameter) is supported horizontally between two parallel flat plates. The plates compress the pipe on the vertical axis, increasing the force on the pipe at a constant rate.

By plotting known force against the deflection of the pipe, the ring stiffness (the force necessary to produce a standardised degree of deflection) can be calculated.

The WRS 2600 and WRS 4000 are designed for ring stiffness and tensile strength testing of Weholite pipes with an internal diameter of up to 2200mm (WRS 2600) or 3500mm (WRS 4000).

The WRS consists of a robust steel construction featuring a pair of parallel steel load plates, worm gear screw jacks, electric motors and frequency converters plus a remote control panel and PLC-based measurement and reporting system.



WRS 2600 and WRS 4000

## Extrusion site welding equipment

### WLE 1200

Fed with a 3.8–4.2mm PE-welding rod, the WLE 1200 Weholite external extrusion welder is designed for on-site welding of joints between Weholite pipes of 400-1200mm ID.

The welding speed and capacity of both units are adjustable for different pipe sizes and weld gaps, and both produce a solid, full penetration weld that's as strong as the pipe itself.

The WLI 3500 also includes an operation control system.

### WLI 3500

The WLI 3500 Weholite internal welding machine is designed for on-site joining of Weholite pipes of 1800-3500mm from the inside, by means of the extrusion welding method.



WLI 3500

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