

High-efficiency pipe cleaning and straightening machine

TP-R type

Taiyu Pipe Straightener



- The TP-R's processing capacity is approximately five times that of conventional pipe cleaning machines (40 m/min.), and it restores straightens pipes at the same time.
- The TP-R is the only pipe cleaning and straightening machine that cleans pipes and straightens base plates at the same time. Pipe straightening is implemented by a proprietary mechanism that takes advantage of the principle of metal plasticity.

Specifications

Type		TP-R type
Specified pipes	Diameter×thickness	φ48.6×2.4mm
	Length	Cleaning:1m or more:straightening:2m or more
Motor	For straightening	2.2KW-200/220V
	For cleaning	2.2KW-200/220V
	For feeding	5.5KW-200/220V
Processing speed		Standard:40m/mm
Outer dimensions(L×W×H)(mm)		3,740×880×1,305(with cover)
Gross weight		2,500kg
Pass line		870(height of pipe center)
Notes		Includes functionality for converting force to straighten passing rivet-processed products.



After processing

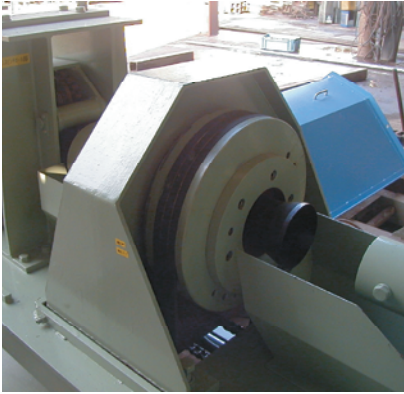
Before processing

※Specifications are subject to change without notice.

※Machine processing capacity figures indicate the capacity of the machine itself. Handling and other process times are not included.



Machine components

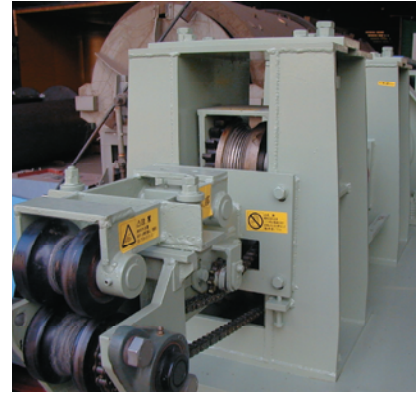


Feed rollers

Four sets of feed rollers are provided for cleaning and holding the pipe straightening pass line as well as for feeding purposes.

Straightening mechanism

The front and rear rollers provide support against reaction force and keep pipes moving in a straight line while the straightening device swings the axis of each pipe while applying a certain amount of eccentricity, thus straightening the pipe over their entire length. Moreover, the amount of eccentricity can be changed with the touch of a button to cancel, enhance, or weaken the rectification function.

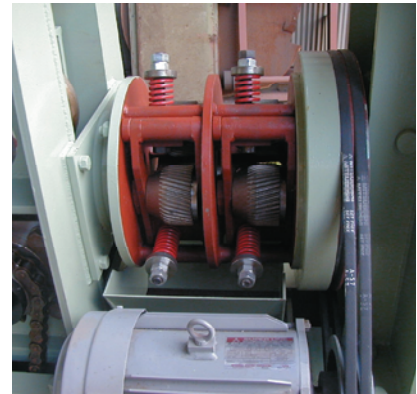


Cleaning rotating drum

The feed roller section crushes concrete deposits, and the deposits are removed when they pass through the center of the rotating drum, which has a crushing roller section and special scraper (a rubber scraper incorporating wire). The feed roller section crushes concrete deposits, while the rotary drum and crushing gear removes the concrete deposits.

Control panel

The control panel incorporates buttons that have been laid out for ease of use and an interlock for safety control.



Straightening method

The stress and strain of mild steel have a proportional relationship when tensile force is applied to the metal, provided that the tensile force is within the steel's elastic limits. The strain will become zero when the load is eliminated. When the load is further increased, the strain will move from the elastic region to the plastic region, and the strain will remain permanently even after the load is eliminated.

Cleaning method

The feed roller section crushes concrete deposits, and the deposits are removed when they pass through the center of the rotating drum, which has a crushing gear.

The feed roller and crushing gear can eliminate resin-based stains (resin and thick spray-on coatings) as well as concrete deposits.

