

New

Aquasetter Eco

(Super high liquid pressure tube expander)

One step expansion even for thick and long tube thanks to Sugino's original ultra high pressure technology.

Non-rev. expand



Expansion Example
(2 grooves)

1. Expanding for Thick thickness tube

It's possible to expand thick thickness tube - 15 % of Tube O.D.

2. Shortening the expanding time for Long tube

It's possible to expand long length in one time - Step expanding is no need.

3. Efficiency is better by easy operation

Every person can expand easily by one button operation.
Expanding without reaction force reduces operator's load.

4. Reducing damages to Tube and Tube sheet

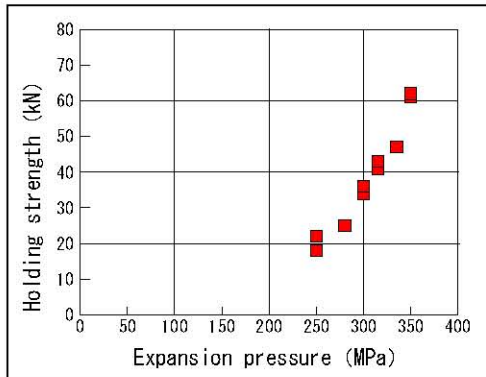
Because expanding is not by rolling, the work hardening for tube inner surface and flaking do not happen.

Expansion time is reduced and it contribute to cost down.

Aquasetter Eco

<Expansion pressure and Holding strength>

Bigger Holding strength can be got by bigger Expansion pressure.



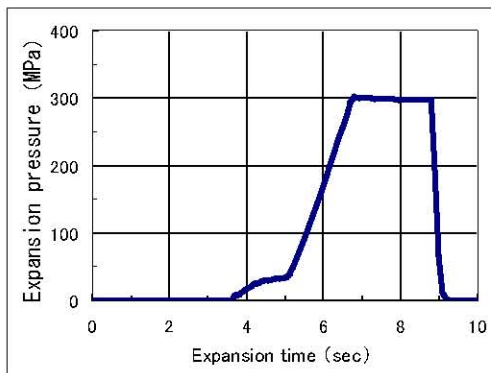
■ Expansion example

Tube size	0. D27. 33×t3. 95
Tube material	STB-340
Tube sheet material	S45C
Clearance	0. 39 mm
Expansion length	36 mm

<Pressure curve>

Expansion pressure is detected by sensor directly.

Therefore, expansion with high repeatability can be done.



■ Expansion example

Tube size	0. D25. 47×t2. 08
Tube material	SUS-304TP
Tube sheet material	S55C
Clearance	0. 17 mm
Expansion length	46 mm

※Setting pressure 300 MPa, Pressure holding time 2 seconds.

<Specification>



◆ Control Unit

Model	ASC-3510
Discharge pressure	350 MPa (MAX. 400 MPa)
Driving unit (Electric Motor)	3phase AC200/220 V 1. 1 kW 50/60 Hz
Weight	200 kg
Dimension	535 × 795 × 955 mm

◆ Gun Unit

Model	ASG-35
Expansion pressure	350 MPa (MAX. 400 MPa)
Weight	5 kg
Dimension	450 × 185 × 260 mm

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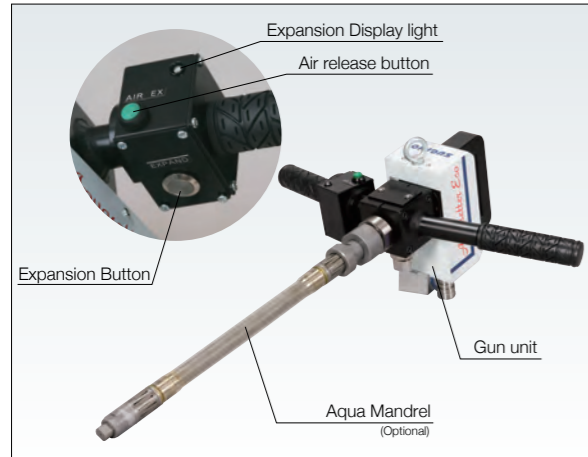
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Aqua setter Eco (Super high Liquid Pressure Tube Expansion machine)

Aqua Setter Eco is a super high-pressure liquid tube expansion machine. It generates super high water pressure inside the tube, causing a deformation to fix the tube into tube sheet.

Gun unit



Can be operated just with buttons, the required ultra high water pressure will be supplied to aqua mandrel.

Specification Chart

Tube Expansion Range (Referential tube I.D.) Steel / Copper	Model No.	Working pressure	Dimensions	Weight
mm		MPa	mm	kg
10~46	ASG-35	100~350 /common	465 W x 225 L x 230 H	5

Note: Tube Expansion Range may change, depending on various expansion conditions. Please provide us detail information of the application tube for further confirmation.

Control unit



The Control Unit is built by latest technology that is able to control the high pressure water more effectively, and is both energy and space saving. Furthermore, Expansion Date Monitor is installed for more details collection of data.

Specification Chart

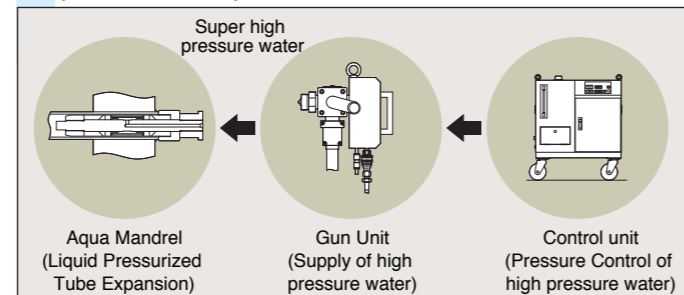
Model No.	Discharge pressure	Flow rate	Electric motor			Dimension	Weight
			output	Number of poles	Voltage		
	MPa	mL/STR.	kW	P	V	mm	kg
ASC-3510	100~350 /common	10	1.1	4	3-phase 200/220V 50/60Hz	535 W x 795 L x 955 H	200

Note: Please only use an input voltage for the controller unit which is within the range of above table. Voltage transformer must be used if the input voltage is different from above table.

Connection and Accesories



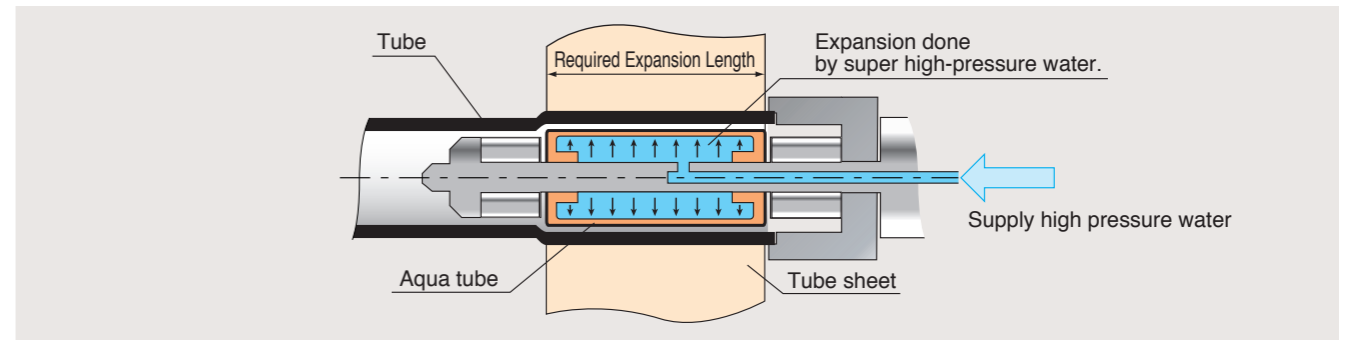
Expansion concept



Standard Attachment

- ① Hose ASS'Y (6m long) 1 pc.
- ② Power cable (10m long) 1 pc.
- ③ Disassembling Tools 1 set
- ④ Expansion Date Record Soft (CD-ROM) 1 disc

Principle of Liquid Pressure Tube Expansion



Feature

- **Environment Friendly** As only water is used, expansion job is done by a more environment friendly method. Compact, light weight, small operation force and space saving design.
- **Economical** With its ability to expand 500mm in a single expansion, Aqua Setter Eco greatly reduce the expansion time and total cost.
- **Easy Operation** Lightweight, space saving & compact design of Gun Unit, and its ability to expand thick tube with only a push of button make operation much easier.
- **Safety** As no resistance force is generating during expansion, it improved safety of operation.
- **Improve Quality** No tube deformation and tube inner diameter hardening/flaking is generated.

Expansion Example

	Tube material: STBA23 Tube size: O.D.50.8×t 4.6 Tube sheet material: S45C Expansion length: 555mm Working pressure: 190MPa Groove size: —
	Tube material: SUS304TP Tube size: O.D.25.4×t 2.0 Tube sheet material: S45C Expansion length: 45mm Working pressure: 300MPa Groove size: Double groove
	Tube material: C6871 Tube size: O.D.25.4×t 1.8 Tube sheet material: SS400 Expansion length: 45mm Working pressure: 200MPa Groove size: Double groove
	Tube material: SUS304 Tube size: O.D.12×t 1.0 Tube sheet material: SUS304 Expansion length: 30mm Working pressure: 200MPa Groove size: —