



**Piping stainless pipes up to 50A now becomes simpler without welding.**



*IHARA SCIENCE CORPORATION*



# No need for welding!!

Starting today, use **e fit** for SUS piping.  
This is the start of weld-less SUS piping.

Proposal

## Change your traditional piping method?

### Until now

You must weld pipes, flanges and clamp joint fittings for piping. Therefore Prepare welding worker, Prepare welding equipments, Check welding conditions, check cutting, Cool down after welding, Remove welding scale, Clean, purge, wrap and arrange work site... They prevent immediate piping since you need to follow the same procedures even for just a simple piping change.

1. Need cost reduction!
2. Wish shorter work time!
3. Need simpler piping work!
4. Wish piping without welding!
5. Wish less human involvement (man power)!
6. Need simpler piping change and adjustment!

### From now

- 1 **Reduce piping cost to 1/3.**  
You can drastically reduce work time and work man power.
- 2 **Shorten work process and time to 1/3 of traditional length.**  
You can drastically shorten work process and time thank to elimination of any work associating welding. Also there is no need for tightening a number of bolts paying attention to balance.
- 3 **Simplify piping works.**  
You can complete piping works simply by inserting pipes and tightening nuts.
- 4 **Complete piping works without welding.**  
You do not need to prepare any welding technician and any arrangement (welding machine, tool, or material).
- 5 **Enable easy piping changes or additions.**  
You can change easily simply by switching joint fittings.
- 6 **Ideal for piping site of fire ban.**



**"e fit" joint fittings are products to assist total cost reduction of piping works!**

### ● Securely grip pipe.

Sleeve firmly bites pipes. The  
for slipping out of pipes.

### ● Seal completely.

O-ring seal enables complete

### ● Quite small flow pat

Flow path is so flat to enable  
of fluid.

### ● Support pipes sold

They are compatible with you  
(S5, S10).



## Good design Ecology design award

(Minister of International Trade and Industry award)

The “e-fit piping system” has received the first good design award in the industry, the Ministry of International Trade and Industry award as a piping system which enables energy saving.



### Pipe specification

Applicable pipes: SUS304TP-SC or SUS304TP-A of JIS G3459, and Seamless Pipe SUS304 TP-SC-BA

Outer diameter tolerance: 15A, 20A:  $\pm 0.3\text{mm}$

* The maximum diameter in the case of oval shape shall not exceed the permissible tolerance described in the left.	25A: $\pm 0.35\text{mm}$
	32A: $\pm 0.43\text{mm}$
	40A: $\pm 0.49\text{mm}$
	50A: $\pm 0.5\text{mm}$

olerance described in the left.

Thickness: 1.2mm to Sch10

Hardness: HRB90 or less

Surface: No harmful defect such as roughness, striation (especially at bead portion).

Thin wall SUS304 pipes are available. Please contact us for detail.

### Major features

- ① Assist total cost reduction.
- ② Easy and quick piping work for anybody.
- ③ Enable piping work without welding technician.
- ④ Enable piping with thin wall pipes.
- ⑤ No deterioration of corrosion resistance due to welding.
- ⑥ Enable simple piping change and maintenance.
- ⑦ Reduce electrical power consumption of pumps thank to less fluid resistance to contribute energy saving. In addition, make difference in running cost.
- ⑧ **Ideal for piping at sites of fire ban.**

### Product specification

Pressure: VAC to 1Mpa (10kgf/cm<sup>2</sup>)

Temperature: -30 degree-C to 120 degree-C

Size: 15A, 20A, 25A, 32A, 40A, 50A

Material: Joint fitting body; SUS304

Nut; SUS304

Back ferrule; USU304

Retainer; SUS304

O-ring; Cold temperature fluoro-rubber

He leakage:  $1 \times 10^{-7}\text{Pam}^3/\text{S}$  or less

\* Other specifications are available upon request

ere is no concern

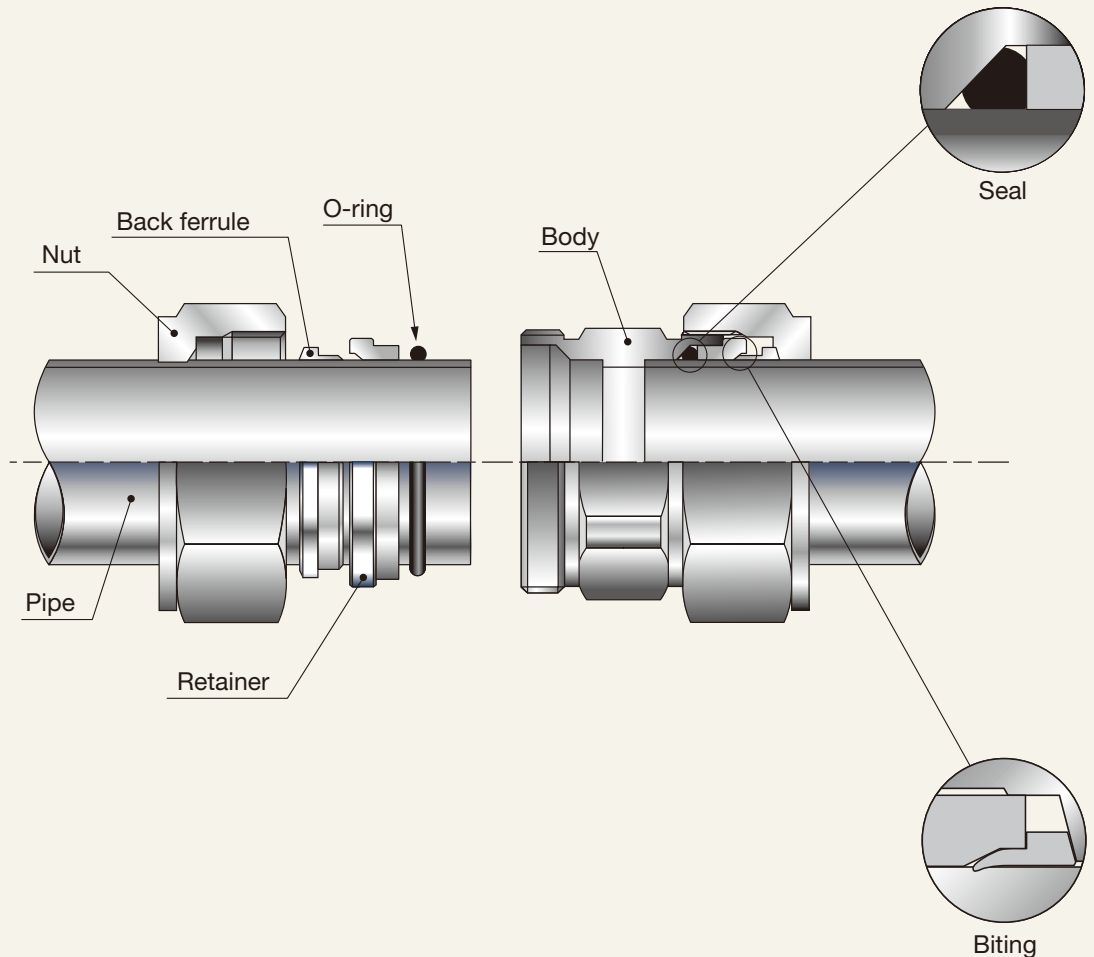
sealing.

th resistance.

quite smooth flow

on shelves.

ur pipes on hand



## ■ Tightening procedures

(Photo 1)



(Photo 2)



(Photo 3)



(Photo 4)



(Photo 5)



## ■ Preparation

Check that the edge of cut pipe is free of burrs or chips.

(They may damage O-rings which work as sealing members.)

## ■ Tightening work

1. Pre-tight with tightening device.  
(Photo 1)
2. Verify that ferrule is tightened.  
(Photo 2)
3. Check direction of the ferrule.  
(Photo 3, Photo 4)
4. Attach retainer and O-ring to pre-tightened pipe, and then insert them to body of joint fitting.
5. Use wrenches for body and nut to tighten them. Tightening torque may increase drastically at a point (sharp torque rise point).
6. Mark this point, and then further tighten 60 degrees more (1/6 turn).
7. This is the completion of tightening work.  
(Photo 5)

## ■ Re-tightening

1. Draw a match-mark on the nut and body, and then disassemble them.
2. Re-tighten them to the match-mark or slightly passing it.  
They can be repeatedly jointed as desired.

### ⚠ Caution

Improper selection or handling of joint fittings, valves and related accessories may cause human injuries or system damages.

Joint fittings, valves and related accessories need to be selected with compatibility with the system in use and with operation conditions taken into consideration. And they need to be attached, operated and maintained under judgment with responsibility and authority of the system designer and user.

Please thoroughly read the operation manual and fully understand it before start operation. Please contact your nearest sales office in the case of absence of the operation manual or for any question.



ISO9001 Certified facility  
High pressure gas system test / manufacturing certified facility

## IHARA SCIENCE CORPORATION

- East Japan Sales Office/11-3 Takanawa 3-chome Minato-ku, Tokyo 108-0074 Japan  
TEL: 03-6721-6981 FAX: 03-6721-6991
- Tohoku Sales Office/5600-3, Higashineko, Oaza, Higashine city, Yamagata prefecture 999-3701  
TEL: 0237-43-7802 FAX: 0237-43-7803
- Shizuoka Sales Office/Shimoshiraiwa, Izu city, Shizuoka prefecture 410-2501  
TEL: 0558-83-2811 FAX: 0558-83-2802

- Head Office/11-3 Takanawa 3-chome Minato-ku, Tokyo 108-0074 Japan  
Telephone. 03-6721-6981 FAX. 03-6721-6991

- Chubu Sales Office/Tsukasa Building, 3-14-19, Chiyoda, Naka ward, Nagoya city, Aichi prefecture 460-0012  
TEL: 052-323-2627 FAX: 052-323-2630
- Kansai Sales Office/7F, GL Osaka Building, 4-1-18, Tenma, Kita ward Osaka city, Osaka prefecture 530-0043  
TEL: 06-6358-9255 FAX: 06-6358-9260
- Kyushu Sales Office/103, Maison de Sophie, 1-1-8, Onoue, Kumamoto city, Kumamoto prefecture 862-0913  
TEL: 096-386-5353 FAX: 096-386-5354

■ URL: <http://www.ihara-sc.co.jp>

■ Please be aware that the contents of this catalog are subject to change without notice for improvement of products.

CAT No.0102 ■