



**Reduces dependence on
human skill for torch operations
to enable anyone to achieve
high-quality TIG welding**

RAKURAKU TIG FILLER

Advantages of and Challenges Facing TIG Welding



TIG welding produces an attractive, high-quality finish.

But the process is difficult and **requires mastery skill**.

Advantages



High-quality
welds



Attractive
beads



Minimal
spatter

► **Ideal for thin plate /
premium-quality applications**

Challenges

● Key required skills

- 1) Torch height
adjustment
- 2) Filler insertion
- 3) Torch movement

● Common cosmetic defects



**Solution reduces dependence on
human skill.**

Dedicated attachment helps **maintain constant torch height**.

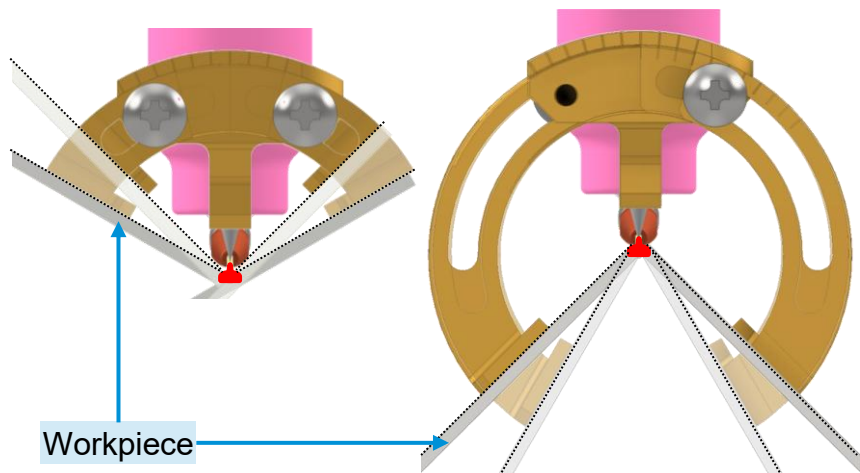
1) Torch height adjustments

For fillet welding

Joint angle: 90 to 120°

For corner welding

Joint angle: 140 to 300°



Weld with attachment in contact with workpiece



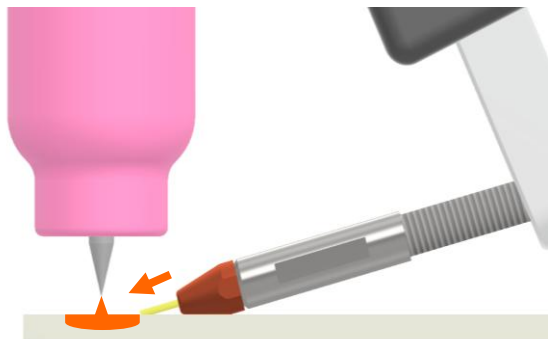
Ensures constant arc length.

Reduces dependence on individual-specific skills for torch height adjustments.

Reducing Dependence on Individual Skill for Torch Movement and Filler Operation

Dedicated wire guide ensures **consistent filler feed and assists torch movement**.
Allows anyone to perform welding simply by holding the torch.

2) Filler insertion operation



Automatically
inserts filler into
the weld pool.

**Reduces dependence on
individual-specific skills
for filler operation.**

3) Torch movement operation



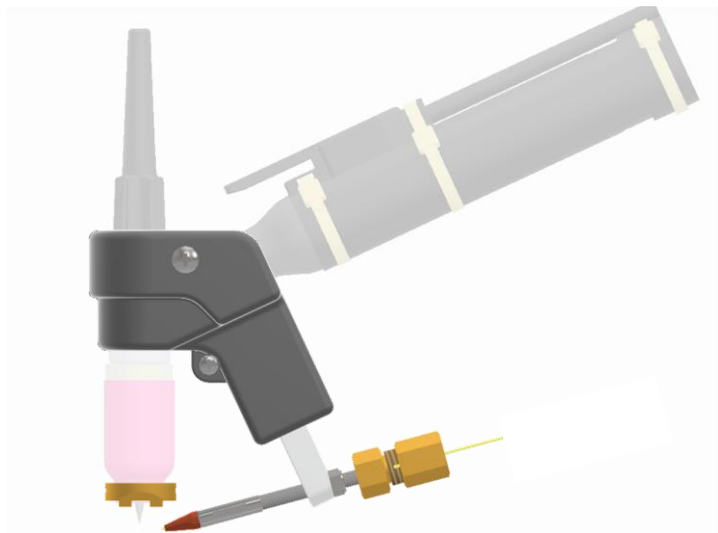
Torch moves
forward by filler feed
force.

**Reduces dependence on
individual-specific skills
for torch operation.**

RAKURAKU TIG FILLER Configuration

Configuration allows existing welding equipment to be used!

Strongly promotes reduced dependence on skill in TIG welding



TIG torch

**Dedicated wire guide
Dedicated attachment**



Existing equipment



New equipment



Filler control unit



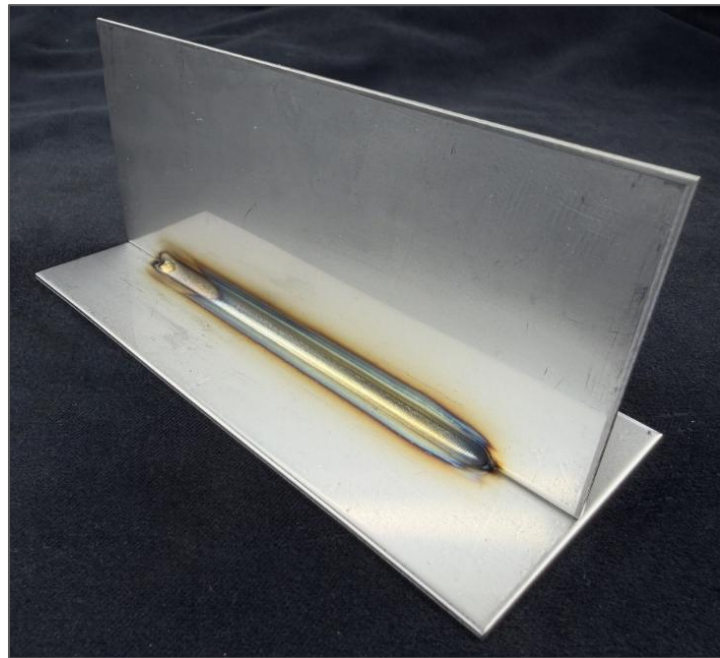
Feeder



TIG welding
power supply

Demonstration conditions

Material	SUS304
Plate thickness	2 mm
Joint	T shaped fillet
Welding method	DC pulse
Current setting	Average 90 A
Welding speed	30 cm/min
Gas/wire diameter	Ar, $\Phi 1.6$



**The RAKURAKU TIG FILLER enables
anyone to perform high-quality TIG welding,
thereby helping to resolve industry labor
shortages.**

DAIHEN