Key components for Synchro-Feed welding

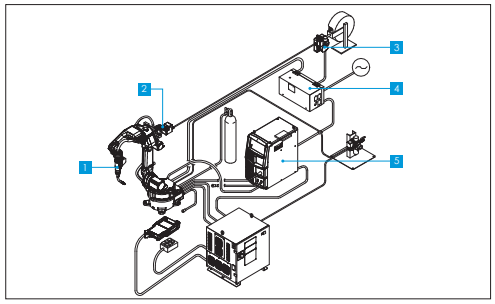
1 Pull Feeding Unit
(Model AFPS-2503 for steel with RT3500H Torch shown)

2 Wire Buffer
(Model L-11610 for steel shown)

3 Push Feeder
(Model AFS-2301 for steel with Wire Reel Stand shown)

4 Wire Feed Control Device
AFCA-S1W04

5 Welding Power Supply
WB-P500L



■Range of applications for the Synchro-Feed welding system

Item	Specification					
Material	Mild steel			Galvanized steel plate	Stainless steel (Ferrite, Austenite)	Aluminum
Shielding gas	CO2/MAG			CO2/MAG	MIG (98%Ar+2%O2)	MIG (100%Ar)
Applicable wire diameter	ø0.9	ø1.0	ø1.2	ø1.2	ø1.2	ø1.2
Wire stock method	Wire reel/pack wire					
Welding current	CO2: 50–200A	CO2: 50–250A	CO2: 50–300A	CO2: 50–300A	MIG (98%Ar+2%O2): 50–300A	MIG (100%Ar): 40–150A
	MAG: 50–180A	MAG: 50–250A	MAG: 50–330A			
Rated duty cycle*1	100%*2, *4		100%*3, *4	100%*2, *4	100%*2, *4	100%*2, *4
Applicable tips	Welding current: 50–200A: FA tip, 200–400A: E tip					Tip for aluminum
Max. cable length in conduit	5m					

*1 Ambient temperature 45°C (113°F)
*2 When used at 100% rated duty cycle, cooling air supplied at 0.30MPa is required.
*3 When CO2 welding at 300A or higher, the RT5000H torch and cooling air supplied at 0.35MPa are required.
When MAG welding at 250A or higher, the RT5500H torch and cooling air supplied at 0.45MPa are required.
*4 When no cooling air is supplied, the rated duty cycle is limited to 30%.

In accordance with DAIHEN's policy to make continuing improvements, design and/or specifications are subject to change without notice and without any obligation on the part of manufacturer.

OTC DAIHEN Website
www.DAIHEN-USA.com

DAIHEN ROBOT Website
www.DAIHEN-robot.com/en

NORTH AMERICA CORPORATE HEADQUARTERS
1400 Blauser Dr, Tipp City OH 45371
Phone: (937) 667-0800
Fax: (937) 667-0885

ATLANTA TECHNICAL CENTER
3135 Medlock Bridge Road
Norcross, GA 30071
Phone: 888-OTC-ROBO
Fax: (937) 667-0885

DETROIT TECHNICAL CENTER
750 Welch Road
Commerce Township, MI 48390
Phone: 888-OTC-ROBO
Fax: (937) 667-0885

Member of DAIHEN Group

Note

●The information contained in this catalog is current as of April 2020 and is subject to revision without notice.
●This catalog was printed with environmentally-friendly vegetable oil ink.

OTC-14 REV 6/21

OTC DAIHEN Inc.

Almega Friendly series

Ultra-Low-Spatter Technology

Synchro-Feed Welding System

Synchro-Feed welding has evolved considerably with our newly developed current waveform control.

Ultra-low spatter performance at a maximum current of 330A (14% improvement)

Voltage adjustment range doubled from previous version

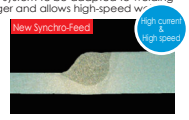
NEW Next generation Synchro-Feed

Wire feeding with our new Current Waveform Control is more accurate. This ensures a more stable arc.

Feature 1 More applicable plate thicknesses and increased welding speed

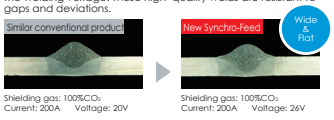
Welding current has been increased to 400A. Deeper penetration can be obtained compared to similar products. This allows the system to be adapted to welding thick sheets one size larger and allows high-speed w

Shielding gas : 100% CO_2
Current : 330A
Voltage : 27.0V
Welding speed : 59 in/min
Plate thickness : 3.2mmt
Joint : Overlap



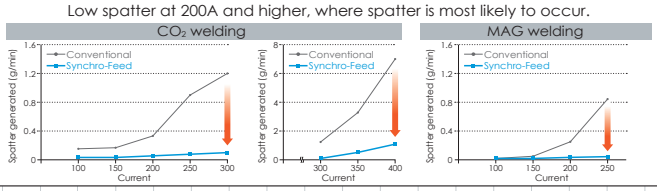
Feature 2 Wide, flat beads possible

The new control method doubles the voltage adjustment range. Wide, flat beads can be easily obtained by increasing the welding voltage. These high- quality welds are resistant to gaps and deviations.

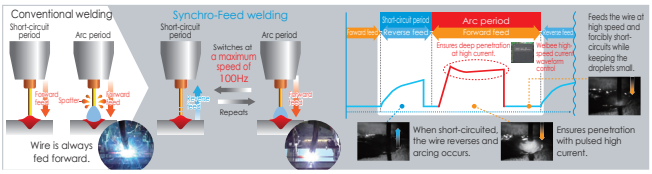


Synchro-Feed solves the problem of spatter

Low spatter at 200A and higher, where spatter is most likely to occur.



Principle of Synchro-Feed



Sheet metal

High-quality welding and no burn-through on very thin plates even with ø1.2mm wire (helps reduce cost).

Plate thickness 0.6 mm

Shielding gas : 100% CO_2
Current : 50A
Voltage : 18.0V
Welding speed : 70cm/min
Plate thickness : 0.6mm
Plate thickness : ø1.2mm
Welding wire

Thick steel plate

Low-spatter welding that ensures sufficient penetration even at high current. Torch weaving also achieves a beautiful bead with low spatter.

Improved!
Duty cycle
330A
100%

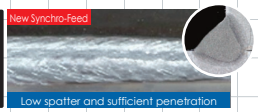


Plate thickness 12.0 mm

Shielding gas : 100% CO_2
Current : 300A
Voltage : 23.0V
Welding speed : 40cm/min
Plate thickness : 12.0mm
Welding wire : ø1.2mm
Weaving frequency : 1.5Hz

Stainless steel | Galvanized steel plate

High-quality welding with low spatter even on stainless and galvanized steel plates. Adaptable to various manufacturing processes.

Stainless steel

Shielding gas : 98%Ar + 2%O_2
Current : 180A
Voltage : 15.0V
Welding speed : 39.4 in/min
Plate thickness : 1.0mm
Welding wire : ø1.2mm

Galvanized steel plate

Shielding gas : 100% CO_2
Current : 240A
Voltage : 21.5V
Welding speed : 31.5in /min
Plate thickness : 2.0mm
Welding wire : ø1.2mm

Aluminum

High-quality welding with low spatter achieves low smut with low heat input.

Improved!
Hard aluminum
150A
Plate thickness 2.0 mm

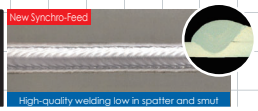


Plate thickness 2.0 mm

Shielding gas : 100% Ar
Current : 130A
Voltage : 12.3V
Welding speed : 31.5in/min
Plate thickness : 2.0mm (A5052)
Welding wire : ø1.2mm
Weaving : Yes