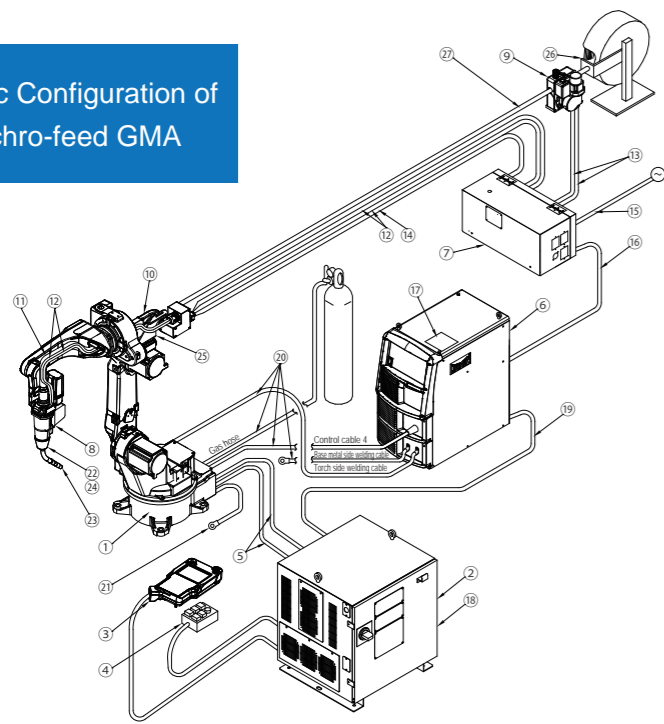


Basic Configuration of Synchro-feed GMA



Application Range of Synchro-feed GMA Welding System

Item	Specification
Shielding gas	CO ₂ /MAG
Applicable wire diameter/material	YGW-12 1.2-mm dia. mild steel solid wire
Wire stock method	Wire reel/pack wire
Applicable tips	Welding current 50-200 A: E tip 50-300 A: CW tip
Mean wire feed speed	1.2-18.0 m/min.
Welding current	CO ₂ : 300 A 30% MAG: 250 A 30%
Rated use	CO ₂ : 50-300 A MAG: 50-250 A
Applicable sheet thickness	0.6-4.5 mm (Varies with welding speed.)
Max. cable length in conduit	5 m

Basic Configuration of Friendly Series

Diagram Reference & Part Name	Model	Specification
① Manipulator	NB42-□□□□ NB4 NB4S1-□□□□ NB4S NV62-□□□□ NV6 NV6S1-□□□□ NV6S	
② Control Unit	FD11-J□□□□□□ FD11 Control Unit	
③ Teach Pendant	FDTPTSJN-4L□□	Standard: 8 m
④ WTP Wireless Teach Pendant (optional)	FDWTPSJDJN-4	Wireless
⑤ Operation Box	FDOP-00□□	Standard: 5 m
⑥ Control Cable 1, 2 (Wire harness)	FDRB-10□□	Standard: 5 m

Basic Configuration of Synchro-feed GMA Welding System

Diagram Reference & Part Name	Model	Specification
⑥ Welding Power Supply	WB-P500L	
⑦ Wire Feed Control Unit	AFCA-S1W04	
⑧ Pull Feed Unit (Note 1)	AFPSB-2501	Use for NB42/NB4S1
	AFPS-2501	Use for NV62/NV6S1
⑨ Push Feeder	AFS-2301	
⑩ Wire Buffer	L-11610	Use for NV62/NV6S1
	L-11621	Use for NB42/NB4S1
	L-11622	Use for NB42/NB4S1
⑪ Single-Wire Power Cable		
⑫ Pull Feeder Control Cable	AFRB-PL10□□	□□: 08 8 m (Standard) : 13 13 m : 18 18 m
⑬ Push Feeder Control Cable	AFRB-PS10□□	□□: 05 5 m (Standard) : 10 10 m : 15 15 m
⑭ Wire Buffer Control Cable	AFRB-BF10□□	□□: 08 8 m (Standard) : 13 13 m : 15 15 m
⑮ Power Supply Cable	AFRB-AC10□□	□□: 05 5 m (Standard) : 10 10 m : 15 15 m
⑯ CAN cable	AFRB-CN10□□	□□: 05 5 m (Standard) : 10 10 m : 15 15 m
⑰ CAN Interface Assembly	L22789C	
⑱ Software Options	L22153F	
⑲ Control Cable 5	FDRB-51□□	□□: 05 5 m (Standard) : 10 10 m : 15 15 m
⑳ Cable Hose (Note 2)	A2RB-4D□□	□□: 05 5 m (Standard) : 10 10 m : 15 15 m
㉑ Voltage Detection Line (negative side)	L9509□	□ : B 5 m (Standard) : C 10 m : D 15 m
㉒ CO ₂ /MAG Welding Torch	RT3500H	Air-cooled 350 A 45° curved torch (350-A rated output welder: Standard)
㉓ Tip Gauge Assembly	L317X	350-A rated output welder (For RT3500* torch, 15-mm wire protrusion)
㉔ Robot Gauge (optional)	L11608H	Use for NB42/NB4S1
㉕ Bracket for Wire Buffer	L11610C L11610D	Use for NB42/NB4S1
㉖ Bracket for Push Feeder	L11623A L11624A	For wire reel For back wire
㉗ Conduit	L10597D	3 m



Welding & Handling Robot **Friendly series**

Gas Metal Arc

Synchro-feed GMA Welding Robot Package



With minimum spatter!



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.

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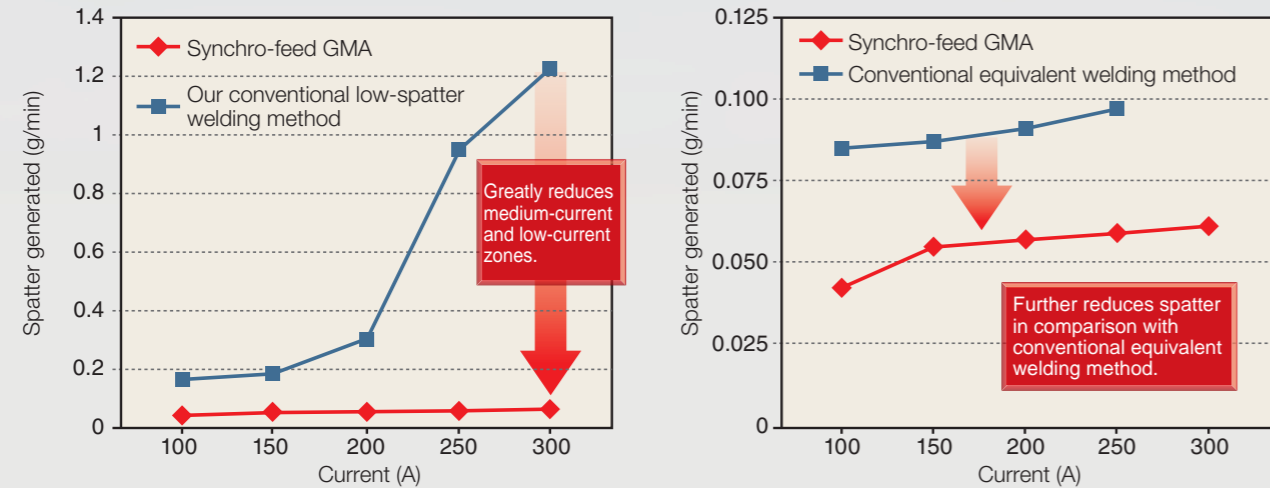


OTC's new welding process achieves the lowest possible spatter.

Synchro-feed GMA Welding Robot Package

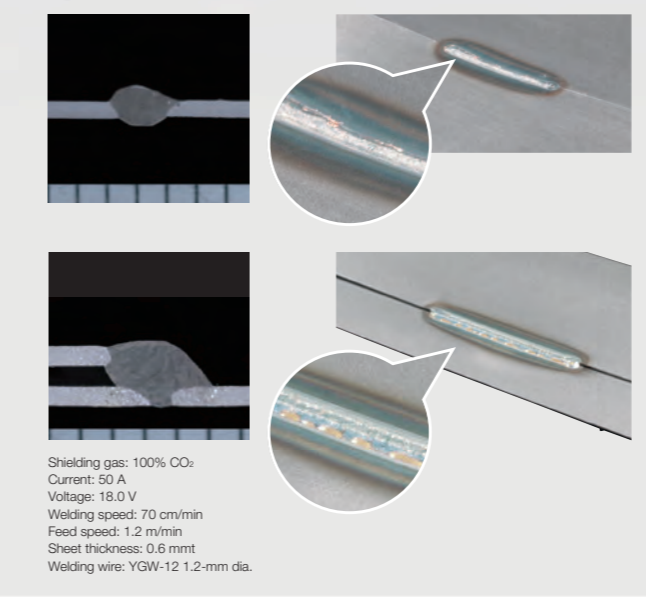
Ultra-low-spatter welding across a wide current zone (50 A–300 A)

Comparison of spatter quantity with CO₂ shielding gas



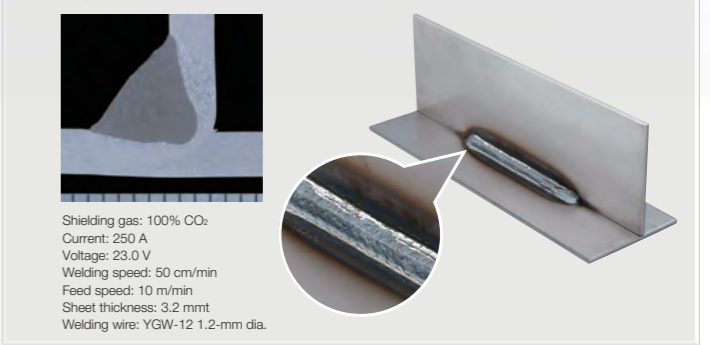
Ensures low heat input into super-thin sheet.

Achieves low-spatter welding of super-thin sheet with 1.2-mm dia. wire for low running cost. Low heat input prevents burn-through.

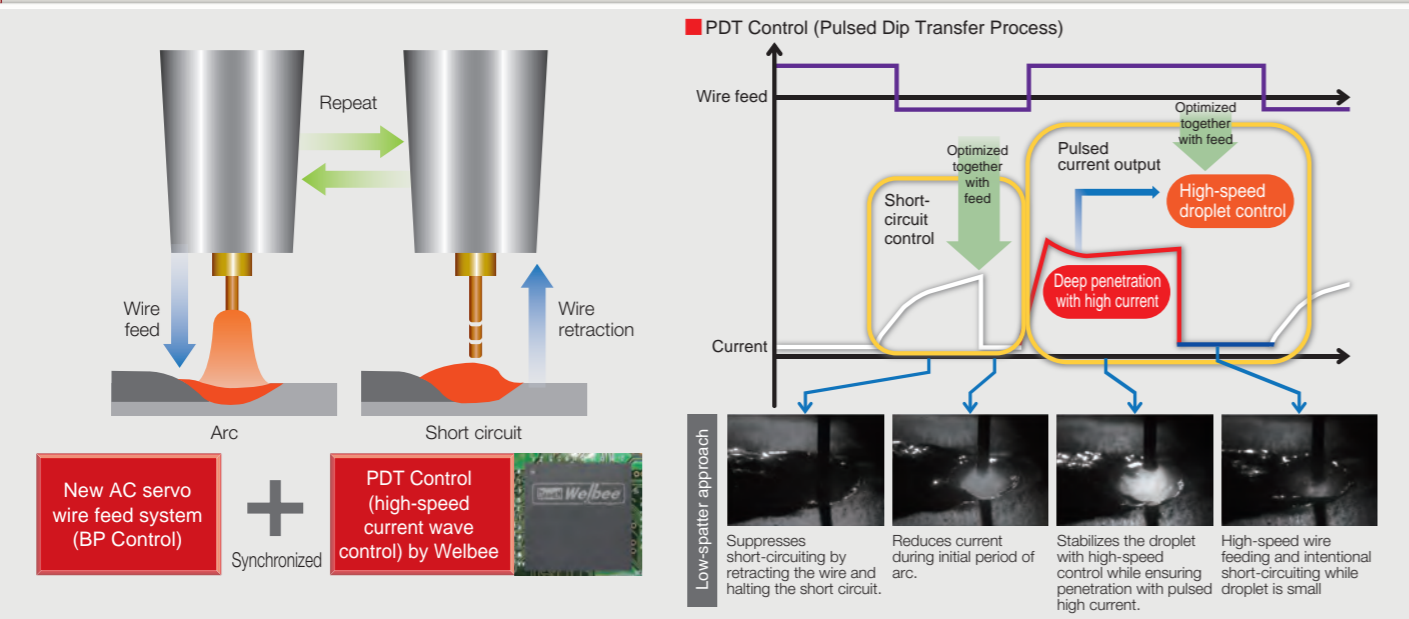


Achieves ultra-low-spatter welding that ensures deep penetration.

The combination of PDT Control (pulsed high-current control) and BP Control (high-speed wire feed control) overcomes the limitations of CO₂ shielding gas to achieve sufficiently deep penetration and a flat bead shape.

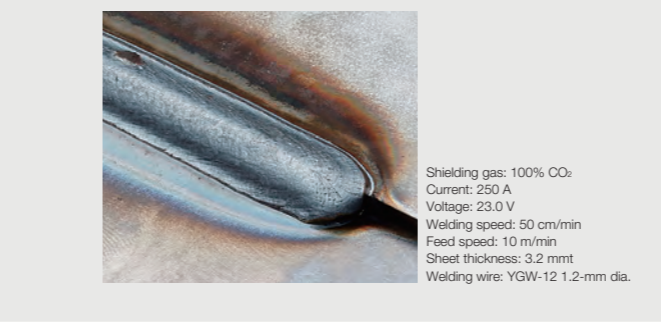


Features of the Synchro-feed GMA Welding System



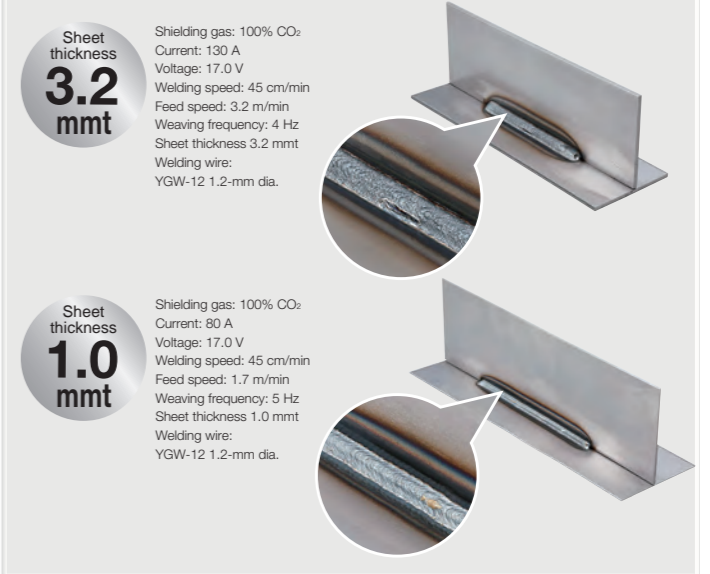
Improved starts

Current waveform control and dedicated wire feed start control contribute to a beautifully wide bead and greatly reduced spatter during starts.

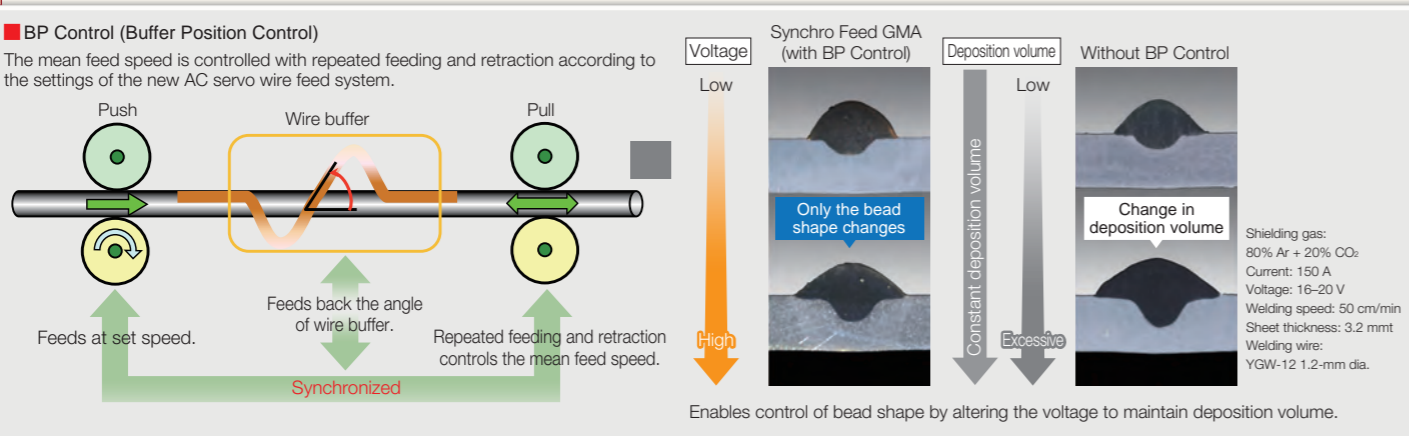


Optimized for weaving

Good beads are guaranteed because rapid wire-feed control has an excellent tracking capability with the wire extension, ensuring low spatter even during weaving.



Synchro-feed GMA Wire Feed Control



Main Components

