

WELDCONN

— WELD WITH CONFIDENCE. EVERY TIME —

DPS-500i Series

Intelligent Advanced Pulse MIG Welding System

Maximum Deposition Superior Performance. Consistent Results



Mild Steel



Aluminum



Stainless Steel

DPS-500i

VERSIONS



DPS 500i Series	DPS360	DPS360i	DPS500i	DPS650i
Cooling variants				
Gas	●	●	○	○
Water	○	○	●	●
Wire feeder system				
Built-in wire feeder system	●	/	/	/
Separately wire feeder system	/	●	●	●
Operation method				
At the main power source	●	●	●	●
At the wire feeder	/	●	●	●
At the remote control	/	○	○	○
At the torch	○	○	○	○
● Standard options ○ Optionally available / Not available				

Quick Specs

Item No.	360	360i	500i	650i
Input voltage	3PH ~ 400V±15%	3PH ~ 400V±15%	3PH ~ 400V±15%	3PH ~ 400V±15%
Output range	20A/15V~360A/32V	20A/15V~360A/32V	20A/15V~500A/39V	20A/15V~650A/44V
Rated output(40℃) 60%	360A/32V	360A/32V	500A/39V	650A/44V
Net weight	56kg	70kg	86.5kg	96kg

Processes

- GMAW
 - GMAW-P
 - FCAW
- GTAW
 - SMAW

Applications

- Boat, ship and yacht building
 - General fabrication
 - Transportation
- Light-gauge tube and sheet
 - Structural steel fabrication
 - Sheet metal fabrication

Advanced Processes Package

Process	360	360i	500i	650i
Short Arc (refined dip transfer)	●	●	●	●
Pulse Arc	●	●	●	●
HSP (high speed pulse)	●	●	●	●
HSA (high speed spray arc)	/	○	○	○
UCA (ultra concentrated arc)	/	○	○	○
HPC (hybrid pulse control)	○	○	●	●
MDP (micro double process)	/	○	○	○
ULS (ultra low spatter)	/	○	○	○
● Standard options ○ Optionally available / Not available				

Advantages of the processes	HSP	UCA	HSA	Short Arc	Pulse Arc
Less weld reinforcement	★★★★☆	★★★★☆	★★★★★	★★☆☆☆	★★★★☆☆
Higher wire deposition rate	★★★★☆	★★★★☆	★★★★★	★★☆☆☆	★★★★☆☆
Deeper penetration (depth)	★★★★☆	★★★★☆	★★★★★	★★☆☆☆	★★★★☆☆
Lower heat input	★★★★☆	★★★★☆	★★★★★	★★☆☆☆	★★★★★☆☆
Arc force	★★★★☆	★★★★☆	★★★★★	★★☆☆☆	★★★★★☆☆
Arc rigidity	★★★★☆	★★★★☆	★★★★★	★★☆☆☆	★★★★★☆☆
Reduced spatters	★★★★★	★★★★★	★★★★★	★★☆☆☆	★★★★★★
Reduced undercut	★★★★☆	★★★★☆	★★★★★	★★☆☆☆	★★★★★☆☆
Suitable for thin plates < 3mm	YES	NO	NO	YES	REGULAR
Applications					
Unalloyed and low alloy steels	YES	YES	YES	YES	YES
High alloy steels	YES	YES	YES	NO	YES
Fine grained high strength steels	YES	YES	YES	NO	YES
Aluminum	YES	YES	YES	NO	YES
Copper	YES	YES	NO	NO	YES

Easy To Use

Simple Operation



3 steps To Achieve Weld Perfection

1. Select Processes-list No.
 2. Adjust welding current.
 3. Save it into JOBs.
- (Always the perfect setting by the synergic function using the material thickness)

Feature

Processes-list							
				Wire			
				0.8	1.0	1.2	1.6
				Process NO.			
M.S.	Flux Cored	Short Arc	100%CO ₂	/	/	103	104
	Solid wires	Short Arc	100%CO ₂	201	202	203	204
			82%Ar 18%CO ₂	211	212	213	214
		HSP	82%Ar 18%CO ₂	/	302	303	/
		HSA		/	312	313	/
		UCA		/	322	323	/
		HPC		/	332	333	/
S.S.	ER308L (X2CrNi189)	HSP	98%Ar 2%CO ₂	/	402	403	/
		UCA		/	412	413	/
AL.	ER4043 (AlSi)	Pulse Arc	100%Ar	/	502	503	504
	ER5356 (AlMg)			/	512	513	514
	Al99			/	522	523	524
	Aluminum alloy	Short Arc		/	/	533	/

Process-list

To start welding, users can simply and quickly select a process No. according to any particular welding needs (based on material, process, gas, wire). A wide range of welding processes with perfect waves have been embedded into the well-displayed DPS Model process-list.

Synergy Control

With the default synergy control, Weldconn’s system can automatically synchronise the corresponding parameters based on the selected welding process and the adjusted current, which is easy and convenient for use. Users also can set the parameters manually when synergy is off.

Memory Storage Function

With the powerful storage with great capacity, up to 999 processes/JOBs can be saved in the system for later use. Users can easily re-save or recall previous processes with just one click. Working efficiency is greatly improved with Weldconn’s memory function.



Flexible control methods

You can regulate the machine everywhere ----- at the power source, at ...



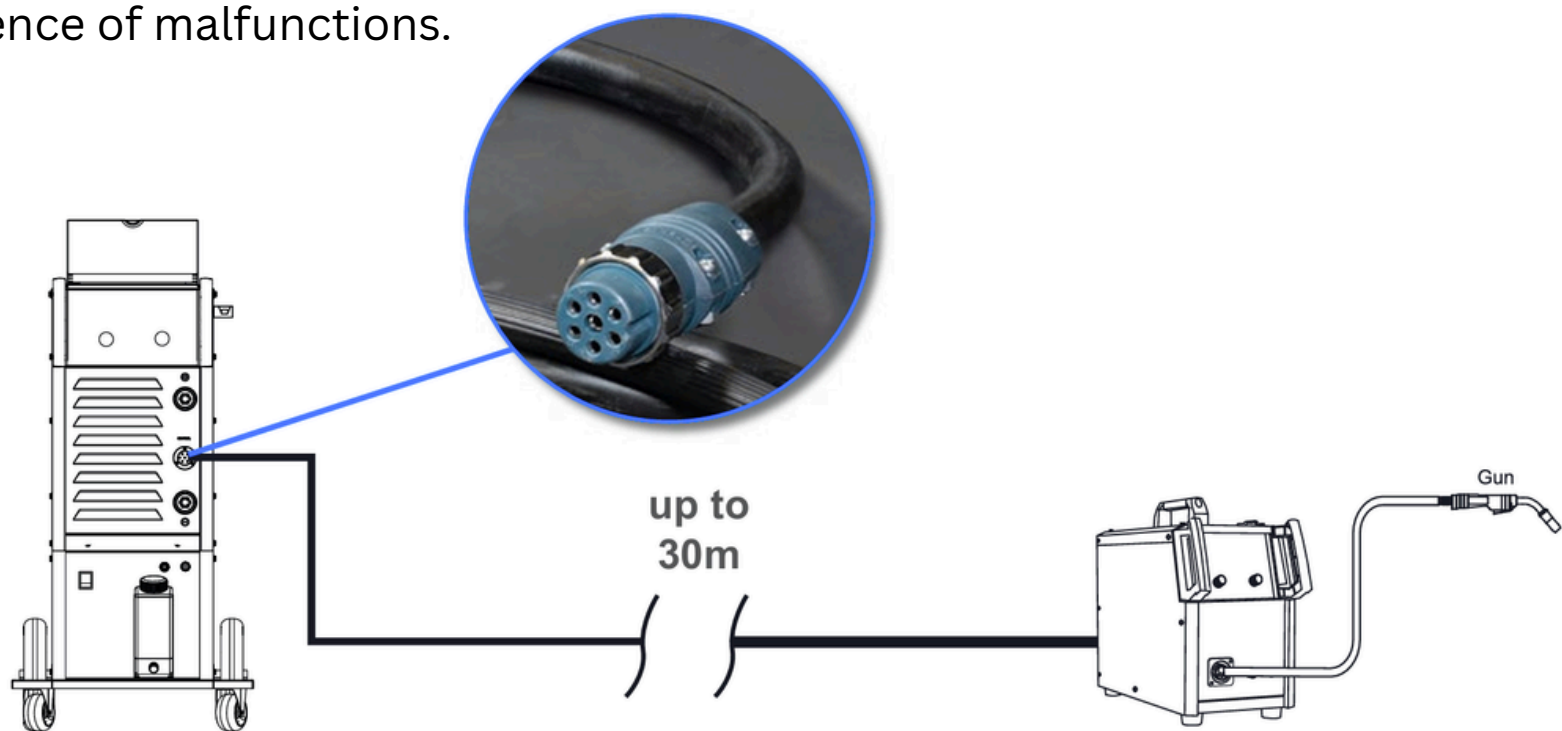
Ultra-long Distance Welding with Precise and Stable Arc Control

Reliable and Durable Intermediate Cable Kit

The Intermediate cable kit (7 Pins only) connecting the main machine and the wire feeder is wrapped in thick rubber, which not only meets the needs for efficient communication, allowing for more precise control, but also helps reduce the occurrence of malfunctions.

Ultra-long Cable Loop Compensation

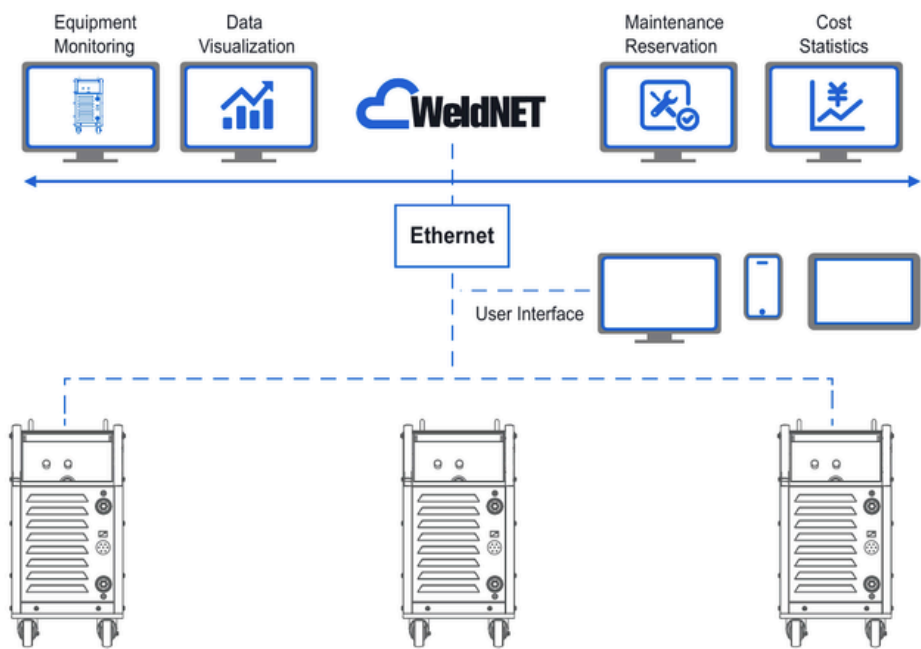
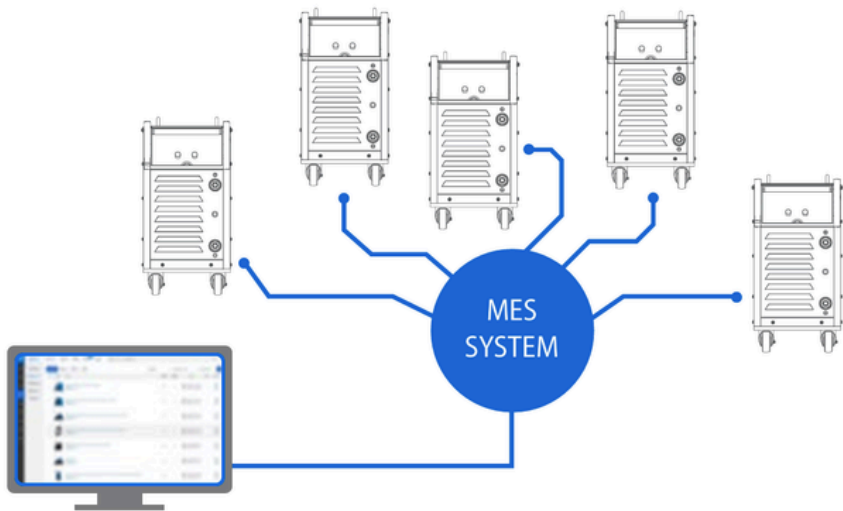
Regardless of working distance and long cable loop (up to 30 meters), the DPS-500i Series Series maintains its high stability and performance thanks to the intelligent compensation function.



Ready For intelligent Fabrication

MES and WeldNET Accessible

TransMig-500i series is equipped with active user management and assigned NFC keys to set protection and permissions for parameter adjustment. It can also choose to connect to the MES system, which is more suitable for modern production data management



By connecting to **Weldconn WeldNET**, you can pre-control the parameters, monitoring the process at real time, and trace the quality, thanks to the equipment, production, and process management modules. Meanwhile, your productivity and quality are boosted with analytic and statistical tools. It unleashes the potential of your future welding production.

Robot Welding Accessible

Robot interfaces are inserted via digital port (EtherNet/IP, DeviceNet, CAN, CANOPEN, RJ485,etc.) with built-in communication protocols. No additional external communication modules are needed



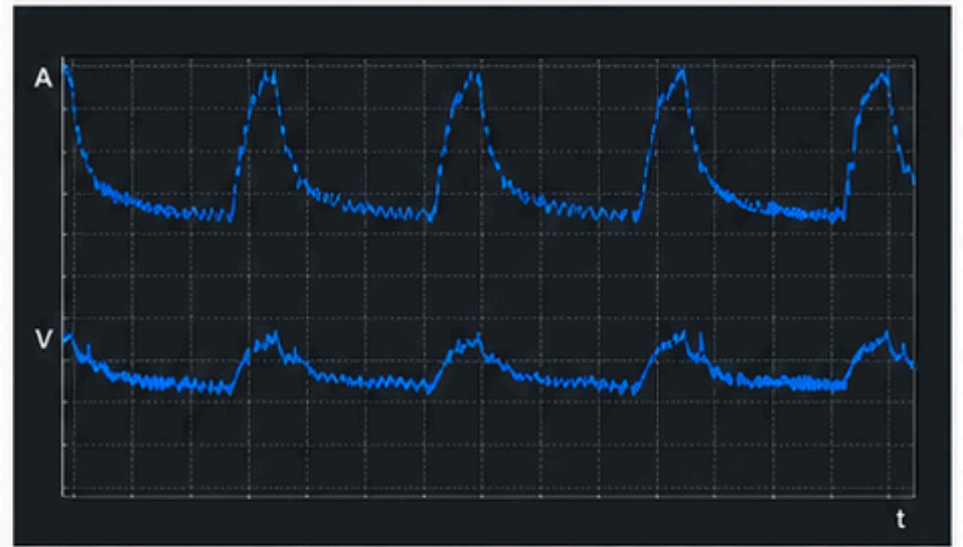
Better Aluminum Welding Process

The Improved Pulse Arc

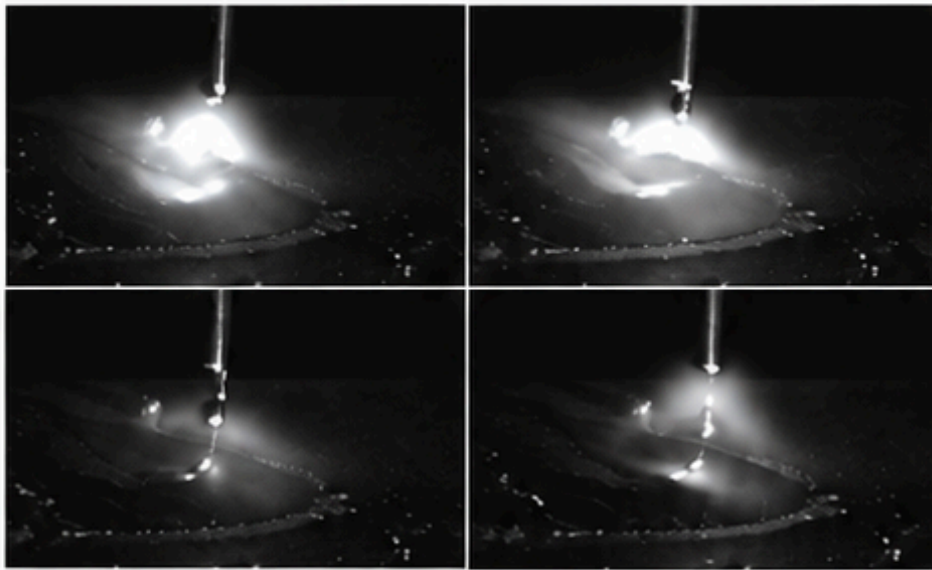
Benefited by the full-digital controller of the Pulse Arc process, it delivers:

- Stable process by the controllable, fast & high-intensity pulse energy;
- Precise droplet detachment due to the soonest and powerful electromagnetic pinch effect;

Besides, by the refined and extensive expert database continually, always the Pulse Arc waveforms also updated accordingly.



As a result, it achieved deeper, focused penetration with minimal thermal stress, making it the ideal solutions for less-distortion, spatters-free welding applications especially the Aluminum welding jobs.



Premium Push-pull Gun

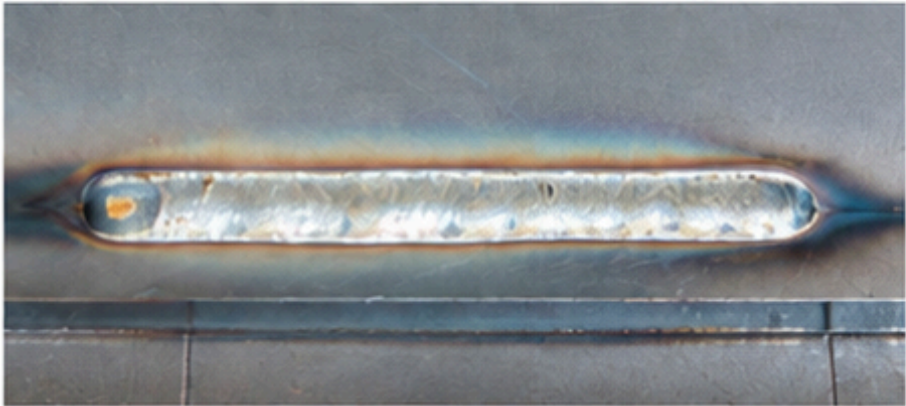
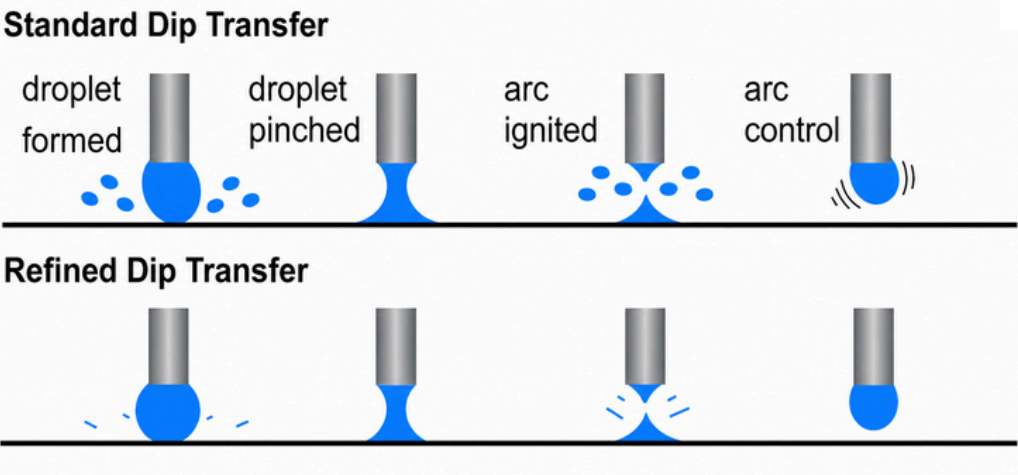
Using the most durable motor and drive design, and installing the wire drawing motor close to the welding position, the wire feeding is smoother and less likely to get blocked, especially in aluminum welding conditions, which improves wire feeding performance and arc stability. Equipped with LCD screen display and function keys, it can communicate with the power machine to adjust welding procedures and parameters. Communication between the digital welding torch and machine enables enhanced the synergy welding, as the wire speed increases/decreases, the MIG parameters increase/decrease to match the appropriate power required



Refined Steel Welding Process

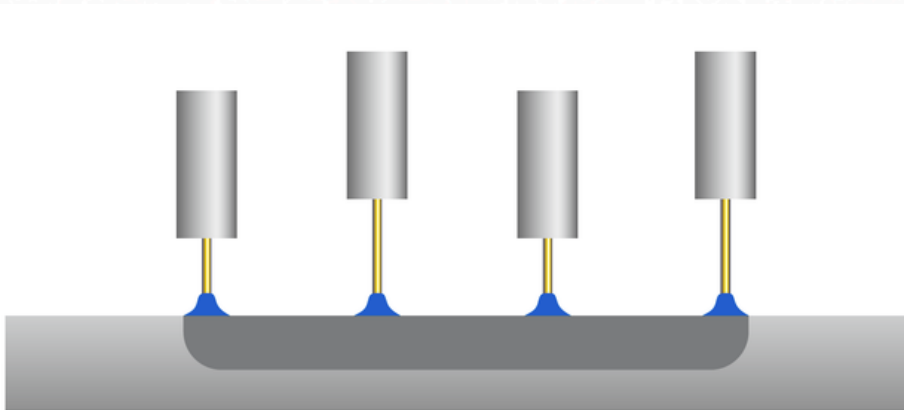
Refined Dip Transfer

- Highly efficient dip transfer arc with refined waveform;
- Suppress the spatter during short-circuit transition;
- Create high-quality seams with increased deposition rate;
- Spatter can be reduced by 20% when welding with CO2;



Improved Arc Length Controls

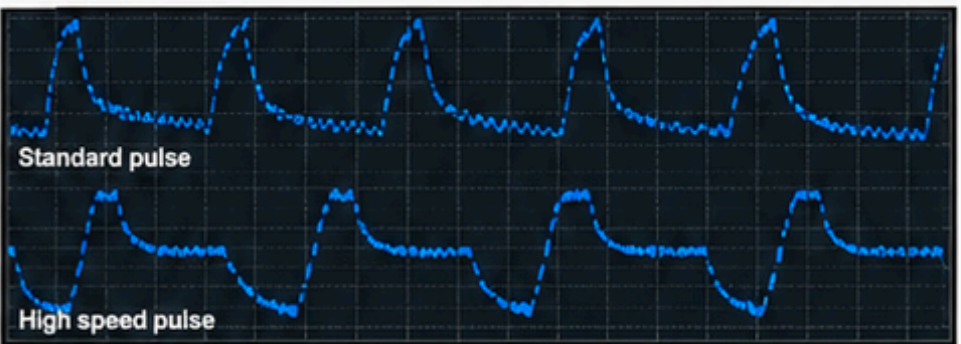
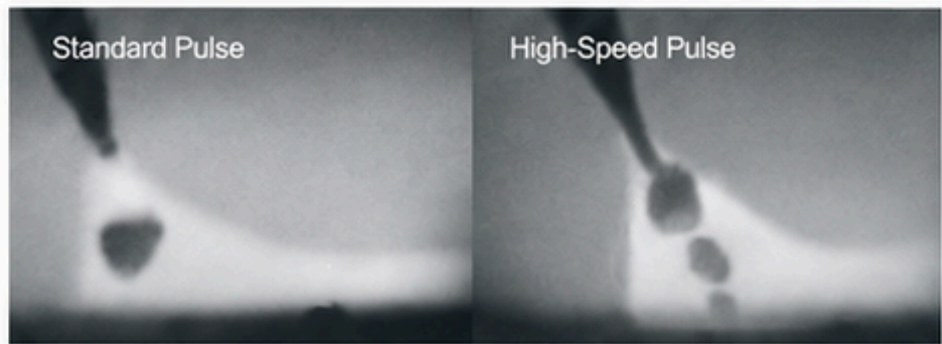
The extension self-adjusting function maintains the stability of the **same short arc length**, enabling constant and regular short circuits, despite the change in the welding torch position, changing sheet thicknesses, or material misalignment. Benefiting from the wire feed control, the **penetration stays stable** and constant even in spite of the extension fluctuations.



Advanced Technologies for Higher Efficiency

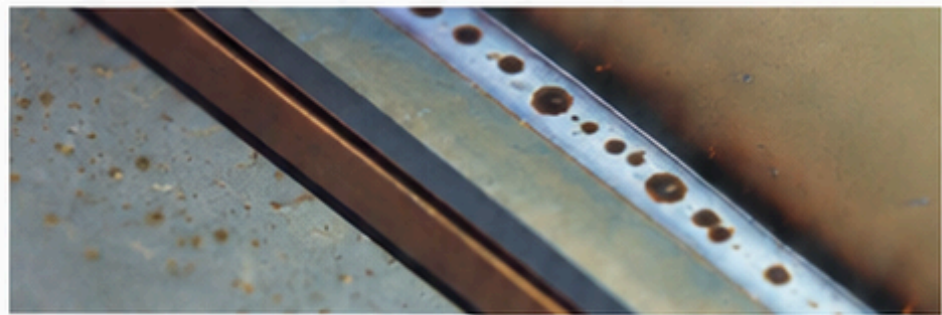
• HSP (High Speed Pulse) - Ultra High Deposition Rate

Compared to a standard pulse process, the HSP extends its transition to a virtually flowing material transition to the work pieces, which **boosts deposition rates by 35%** while ensuring smooth, spatter-free seams. It helps users to save time, money, and resource as no reworks are required.



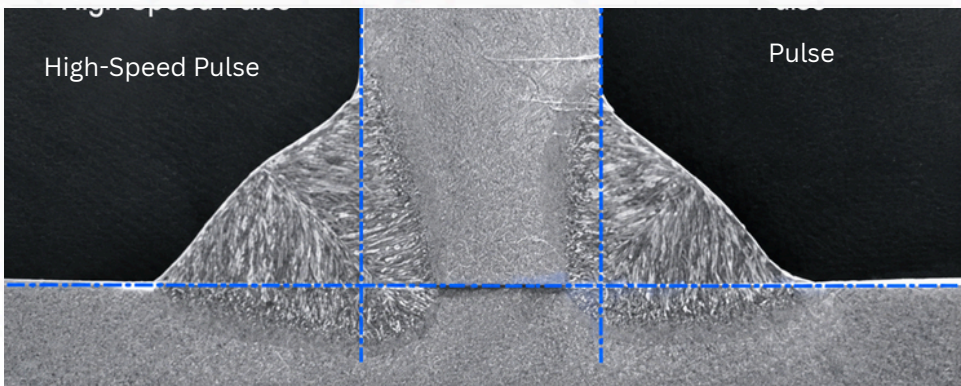
Get better welding seam

Less heat input, less spatters, less rework.



Get higher welding strength

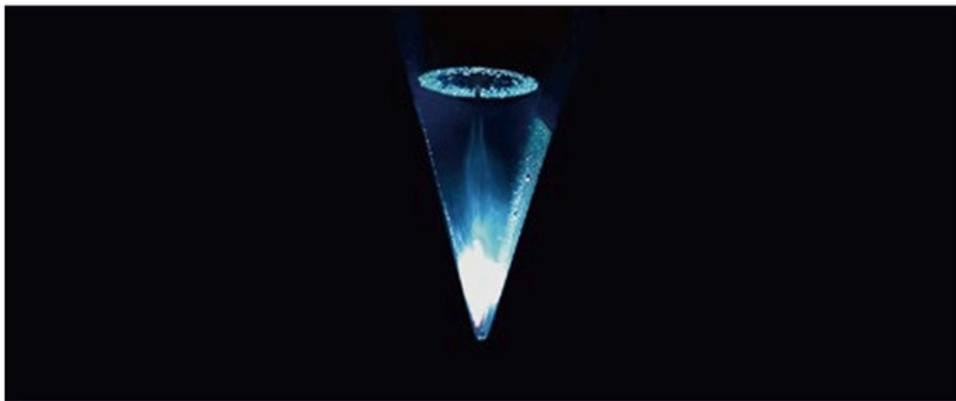
Deeper penetration, no undercut defects, higher strength.



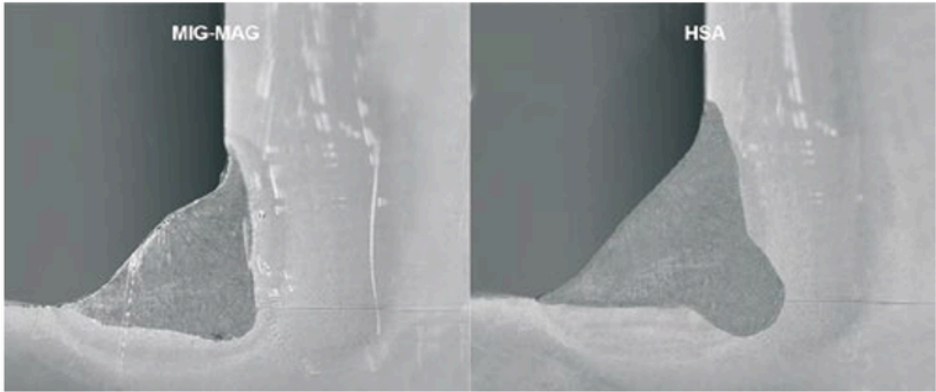
HSA (High Speed Spray Arc) - Superior Directional Property

With a highly concentrated and extremely stable arc in high density, the HSA process delivers spatter-free weld seems, deeper penetration and **narrower heating affected zones**. It is also possible to **weld at small opening angles** with the high **directional property**. Its welding speed is more than 30% faster than conventional MIG or MAG welding

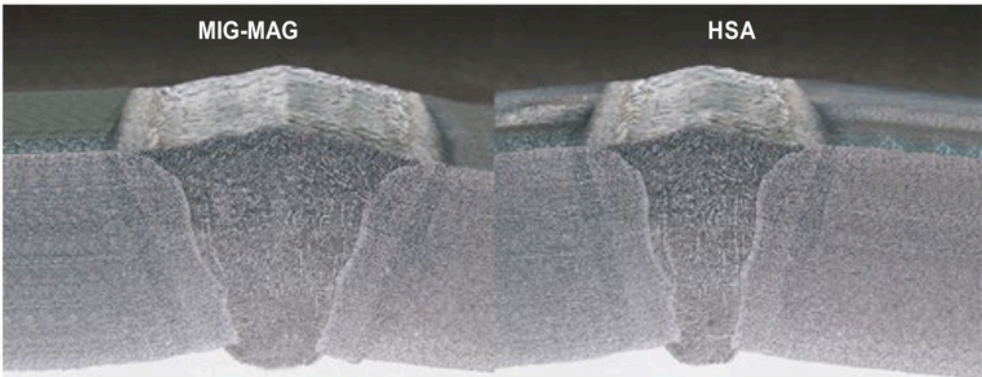
Smaller opening angle



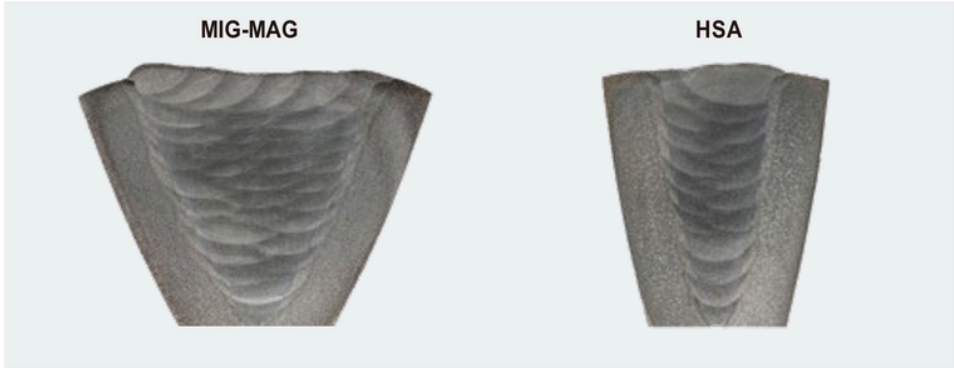
Deeper penetration



More material saving

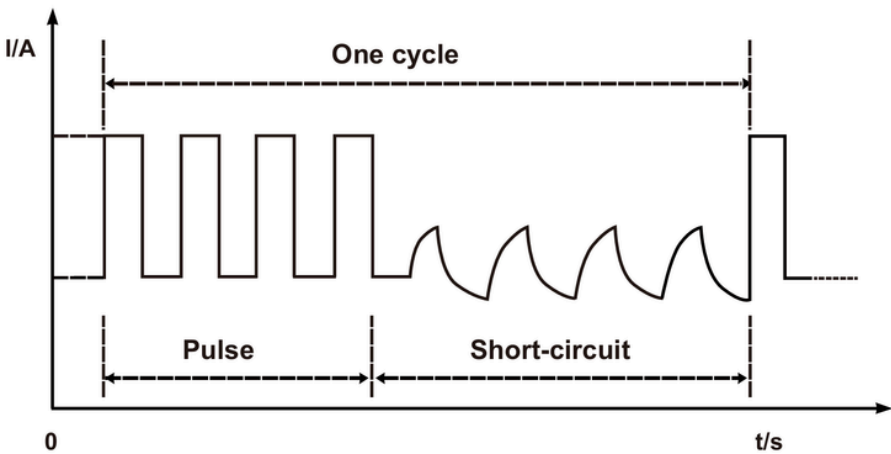


Higher welding efficiency



HPC (Hybrid Pulse Control) - Excellent in All-position Welding

HPC--Hybrid Pulse Control is an advanced hybrid process that integrates Pulse and Short-Circuit transfer methods. By alternating between these two modes, the molten pool is heated and cooled periodically, creating a distinct "fish-scale" ripple pattern. The frequency and duty cycle can be precisely fine-tuned to shape the bead appearance as required. This exceptional puddle control makes HPC ideal for all-position welding, particularly for challenging vertical-up applications



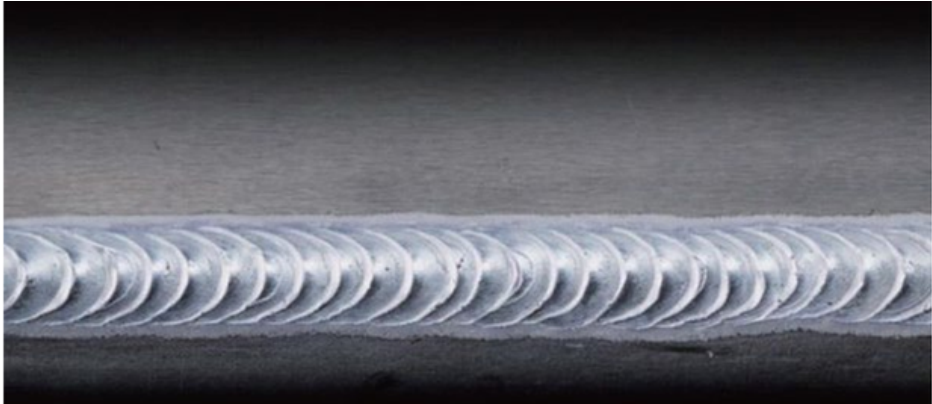
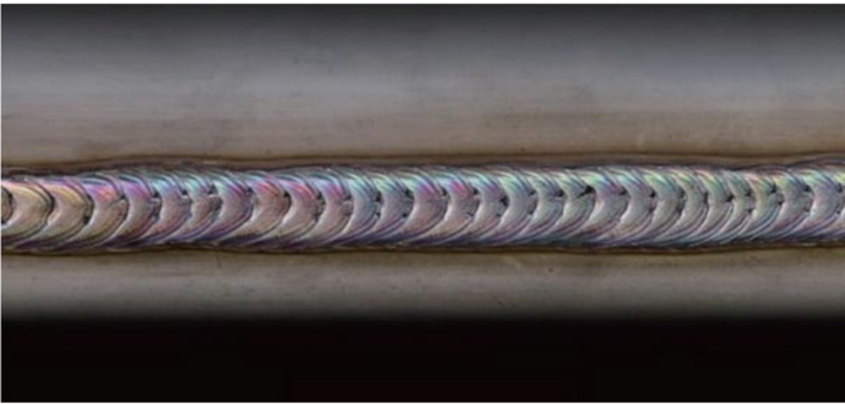
The specialty of HPC-Vertical Up lies in two processes: one is to heat up the material with high energy, and another is to steeply lower the heat to contribute to the well-formation of seams within a short time.

It ensures a reliable penetration, precisely sized weld fillings, and a near-optimal throat thickness and is faster and easier than the conventional "X-Mas tree".



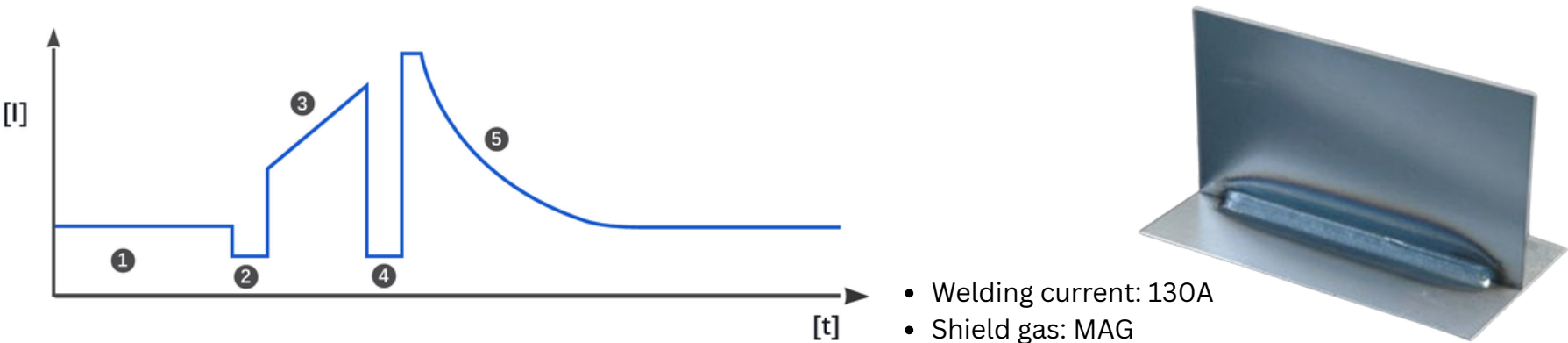
MDP (Micro Double Process) - TIG alike Results and Faster

With MDP, weld seam can be improved from coarse to fine. The key is that there is no droplet formation in the low pulse phase when the high and low pulses switches. Thanks to the precise energy input, MDP can deliver perfect TIG-like welding appearance but is twice faster than TIG. MDP is particularly suitable for thin to medium-walled (1-8mm) Aluminum, Steel, and Cr-Ni applications, like frames, tables, beds, and furniture structures



ULS (Ultra Low Spatters) - Stable and High Efficiency

The ULS is a modified short-arc transfer arc with perfect waveform setting that greatly reduces spatter generation. In the short-circuit phrase, the energy is cut off at the pinch time so as to avoid the explosion caused by the large current. Therefore droplets can smoothly and gently transfer under the help of the surface tension without spatters. Even in CO2 and MAG welding, it can minimize the spatters, which means less rework, fewer rejects, less cleaning required and savings on wearing parts



- | | | | | |
|----------------------|--|-------------------------|--|---|
| 1. Droplet formation | 2. Component contact
current is reduced
lower droplet load | 3. Droplet is “pinched” | 4. Droplet detachment
current is reduced
spattering is minimised | 5. Deeper penetration is
achieved by
increasing the current |
|----------------------|--|-------------------------|--|---|

Specifications

Item No.	DPS360	DPS360i	DPS500i	DPS650i
Mains voltage (V)	3PH~400V±15%	3PH~400V±15%	3PH~400V±15%	3PH~400V±15%
Max. load power capacity	14.88KVA	14.88KVA	25.18KVA	30.1KVA
Output range	20A/15V~360A/32V	20A/15V~360A/32V	20A/15V~500A/39V	20A/15V~650A/44V
Rated duty cycle at 40°C (105°F):	60% 360A/32V	360A/32V	500A/39V	650A/44V
	100% 250A/26.5V	250A/26.5V	400A/31.5V	500A/39V
Open circuit voltage	70V~80V	70V~80V	70V~80V	70V~80V
Power factor	0.87	0.87	0.87	0.87
Efficiency	89%	89%	89%	89%
Wire feed unit	4 rollers	4 rollers	4 rollers	4 rollers
Wire feed speed range	0~25m/min	0~25m/min	0~25m/min	0~25m/min
Wire spool capacity	300mm (15kg)	300mm (15kg)	300mm (15kg)	300mm (15kg)
Wires φ (mm): Fe	0.8~1.2mm	0.8~1.2mm	0.8~1.6mm	0.8~1.6mm
Alu	0.8~1.2mm	0.8~1.2mm	1.0~1.6mm	1.0~1.6mm
Flux-cored	0.8~1.2mm	0.8~1.2mm	0.8~1.6mm	0.8~2.0mm
Dimension (L x W x H): Machine	890x440x820mm	950x460x690mm	950x460x940mm	950x460x940mm
Wire feeder	/	710x340x490mm	710x340x490mm	710x340x490mm
Net weight : Machine	63kg	50kg	66.5kg	76kg
Wire feeder	/	22kg	22kg	22kg

Water-cooling unit: WC-150	
Operating voltage	230V 50/60Hz
Rated power	260W
Cooling power	1.5KW (1L/MIN)
Maximum pressure	0.3MPA/60Hz
Recommended cooling liquid	20%~40% ethanol/water
Tank volume	6.5L

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