

LinearWave

Inverter Type Capacitor Discharge Welder NICP Series

LinearWave gives precise control of
weld current, weld time and waveform



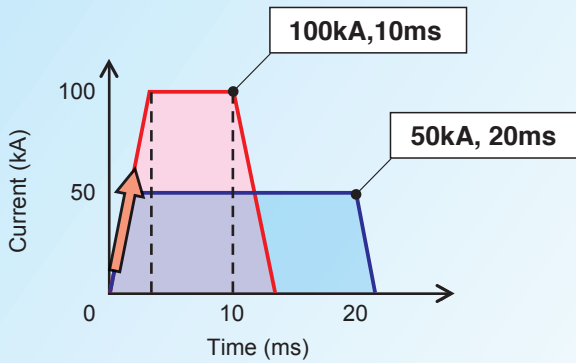
DENGENSHA TOA CO., LTD.

Features

Comparison with conventional capacitor discharge welder

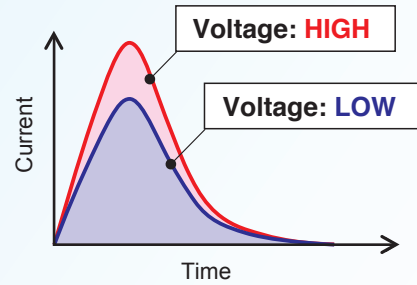
Setting of weld conditions

LinearWave



The weld settings are programmed in Amps and Time.

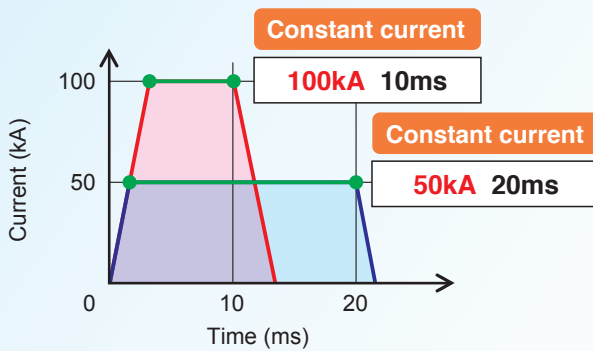
Conventional CDW



Weld current needs to be setup by charging voltage alternatively.

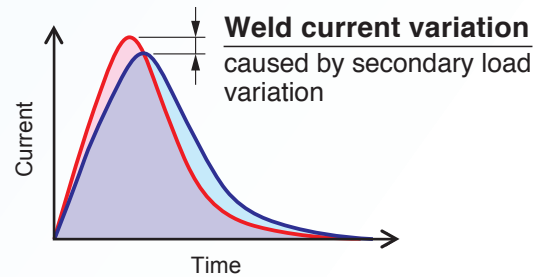
Weld current control

LinearWave



LinearWave gives precise constant current control.

Conventional CDW

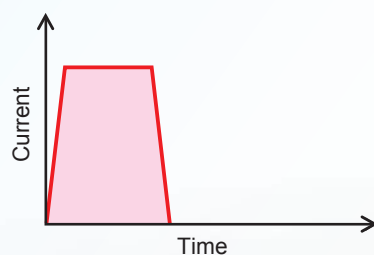
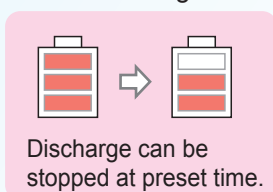


Constant current control is not provided.

Efficiency

LinearWave

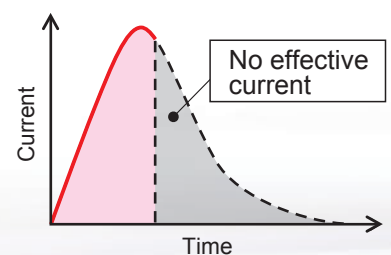
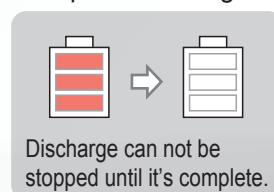
Partial discharge



High efficiency : LinearWave discharges only needed energy.

Conventional CDW

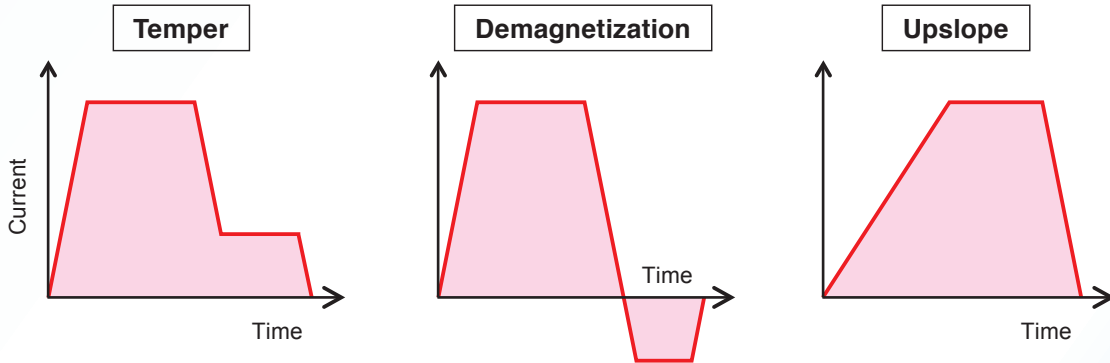
Complete discharge



Whole energy is discharged on each welding.

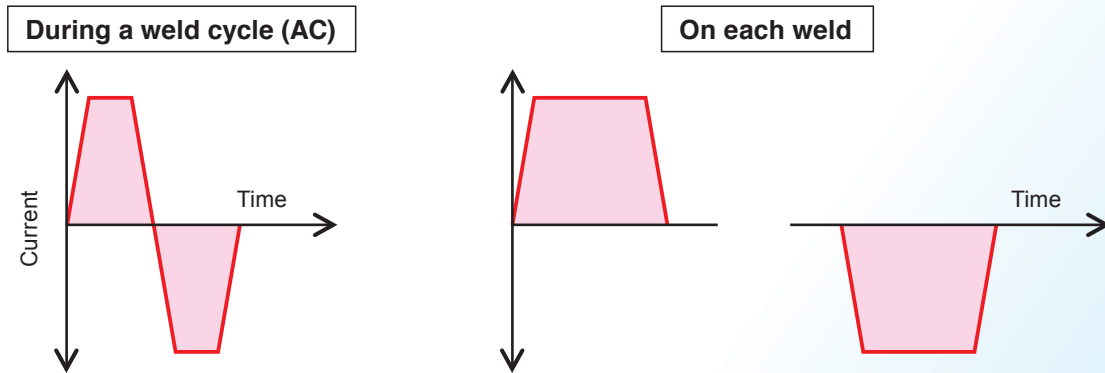
Flexible waveform

LinearWave allows “flexible waveform” setting to achieve tempering, demagnetizing, upslope.



Bipolar polarity

Capable of changing output polarity.



➤➤➤ This prevents nugget position gap and provides demagnetizing weldment, fixture and jig.

Low Input

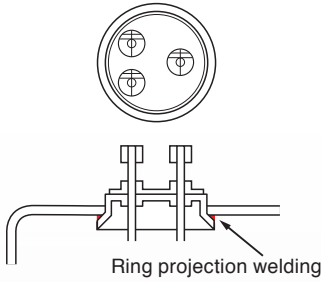
Low operation Input : Similar to a 12kVA arc welding machine

Inverter Capacitor Welder LinearWave Lineup

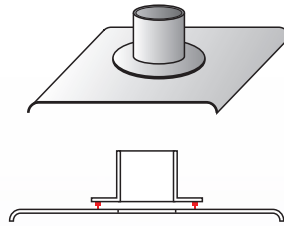
Model		NICD-050	NICP-050	NICP-075	NICP-100	NICP-150
Power supply		3 phase 200-220V / 380-480V			50Hz / 60Hz	
Average input power	kVA	5	5	5	12	12
Maximum output current	A	50,000	50,000	75,000	100,000	150,000
Maximum time per pulse (at Maximum current)	msec	20	20	30	30	20
Nominal energy	kJ (kW _s)	5.0	4.0	16.0	29.4	29.4
Reference welding speed	times/min	15	15	12	12	12
Maximum electrode force	kN	10	15	20	30	30
Stroke	mm	Full 75 / Work 20	100	100	100	100
Throat gap × depth	mm	200×400	200×350	200×350	200×350	200×350
Electrode Tip/Platen size	mm	φ20 Taper 1/10	180×180	180×180	230×230	230×230
Rated cooling liquid flow	ℓ/min.	12	18	18	18	18
Outer dimension W×H×D	mm	850×1630×1227	1280×2111×1300	1680×2100×1565	1680×2100×1970	1680×2100×1970
Mass	kg	1,016(840+176)	1,300	2,700	3,600	3,600
Machine type		Bolt / Nut Spot	Projection	Projection	Projection	Projection
Control device model		ICWC-050-*1	ICWC-050-*	ICWC-075-*	ICWC-100-*	ICWC-150-*

※15inch screen HMI is available

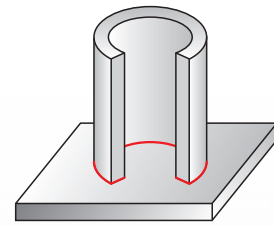
Welding samples



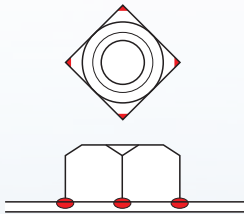
Electricity terminal of the compressor



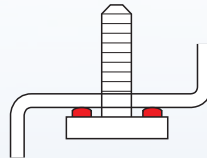
Ring projection welding (Fuel port)



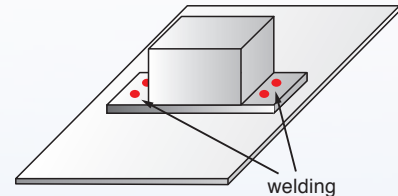
Ring projection welding (Plate and tube)



Weld-nut on high-tensile steel



Weld-bolt on high-tensile steel



Projection

Application examples

Automobile	<ul style="list-style-type: none"> • Body component part • Engine component part • Motor component
Home electronics	<ul style="list-style-type: none"> • Compressor • Elevator cage outside panel • Battery electrode pillar
Furniture and fixtures	<ul style="list-style-type: none"> • Locker • Partition
Metal fittings and various metal parts	<ul style="list-style-type: none"> • Drum can • Parts for shovel

Mild steel High-tensile steel Stainless steel Aluminum alloy Dissimilar metal	Steel sheet Plated steel sheet
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