



**Power Wave® C300 CE**  
**Power Wave® S350 CE**

*Více-metodové  
Prémiové svařování  
Zdarma update  
Robustnost*



**Power Wave<sup>®</sup> C300 CE**  
**Power Wave<sup>®</sup> S350 CE**

**Všeobecně**

*Hlavní údaje*

*Základní funkce*

*Instalované metody*

## Power Wave® C300 CE

C - Kompact

- 230/400V 3Ph, 50/60 Hz \* (ne 1 fáze)
  - 300A @40% (výstup)
  - 11,1 kVA@40% (vstup)
  - 0,95 (účíník)
  - 200W max (bez výstupu, větrák zapnut)
  - MAXTRAC pohon 2kladky (vestavěno)
  - 50,4 kg (hmotnost)
- Pulse MIG, Pulse-on-Pulse®, CV, elektroda a TIG DC (Pulse)
  - Ocel, Nerez, Hliník, FCW, slitiny Niklu a CuSi
  - RapidArc®, PowerMode®, S2F®
  - Job řízení
  - Zabezpečeno heslem PW Managerem
  - Dostupný hořák s dálkovým ovládním
  - Vzduchem & Vodou chlazená verze (COOL ARC® 50)

\* Rozsah napětí: 208-575V3Ph, vodou chlazená sestava dostupná pouze pro 230/400V3Ph napájení

PW C300 CE

K2865-1



**61 různých módů svařování instalováno jako standard**

## Power Wave® S350 CE

S – Svařovací zdroj

PW S350 CE

- 230/400V 3Ph, 50/60 Hz \* (ne 1Ph)
  - 350A @40% (výstup)
  - 14 kVA@40% (vstup)
  - 200W max (bez výstupu, větrák zapnut)
  - 0,95 (účinnost)
  - 46,6 kg (hmotnost)
- 
- Pulse MIG, Pulse-on-Pulse®, CV, elektroda a TIG DC (Pulse)
  - Ocel, Nerez, Hliník, FCW, slitiny Niklu a CuSi
  - RapidArc®, PowerMode®, S2F®
  - Doporučená sestava: LF45, COOL ARC® 50, PW podvozek  
Na LF45/45S: Job řízení, zabezpečení heslem, hořák s DO
- 
- STT® možné využít STT modul

\* Rozsah napětí: 208-575V3Ph, vodou chlazená sestava dostupná pouze pro 230/400V3Ph napájení

K2823-2



**61 různých módů svařování instalováno jako standard**

**Power Wave<sup>®</sup> C300 CE**  
**Power Wave<sup>®</sup> S350 CE**

## **Bližší pohled**

*Konfigurace*

*Všeobecný pohled*

*Základní řízení*

*Hlavní připojení*

*Podavače a chladič*

# MODULÁRNÍ SESTAVA

Konfigurace

- Svařovací zdroje, podvozky a volitelně chladič

IP23

PW  
Konfigurace



POWER WAVE C300  
AIRCOOLED

POWER WAVE C300  
+ COOLARC 50

POWER WAVE S350  
AIRCOOLED + LF45

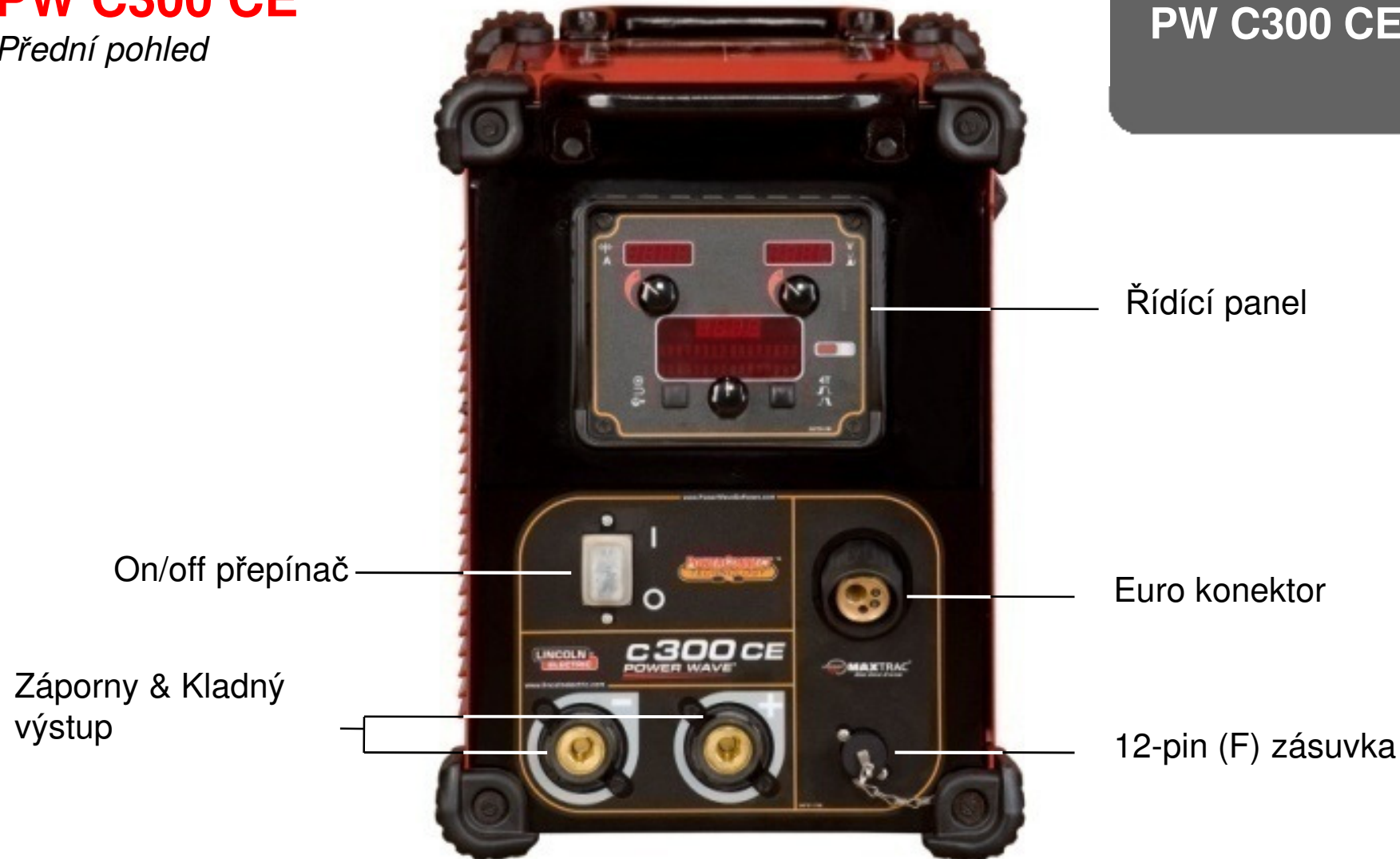
POWER WAVE S350  
+ LF45 + COOLARC 50



## PW C300 CE

Přední pohled

PW C300 CE







## PW C300

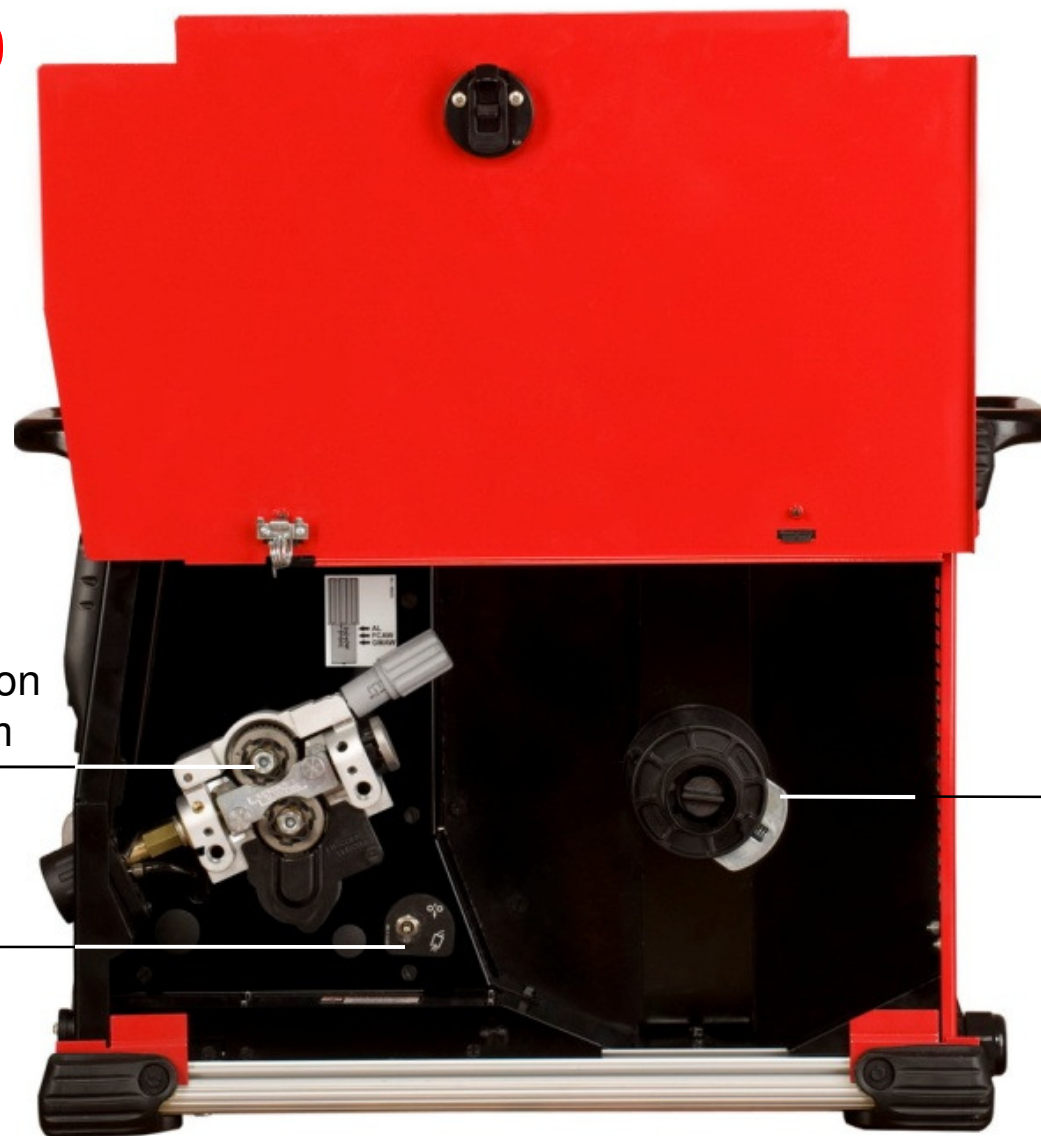
Podavač

PW C300 CE

MAXTRAC™ Pohon  
2 kladky  $\phi$  44,5mm

St. posuv  
Test plynu

Držák cívky  
- Pro 15kg nebo  
5kg cívky



## PW S350 CE

Přední pohled

PW S350 CE

Volitelné uživatelské rozhraní  
pro elektrodu, TIG a CV MIG

Záporný & Kladný  
výstup



On/off přepínač

Zásuvka pracovního  
snímače

Zásuvka dálkového  
ovládání – 6 pin



# LINC FEED 45/45S



## K14072-1 LF-45

17 kg  
500A@60%  
Motor 90W  
4 rolls  $\phi$ 37mm



## K14083-1 LF-45S

12,3 kg  
500A@60%  
Motor 90W  
4 rolls  $\phi$ 37mm  
Skid available



- The same UI
- Connections:  
MIG, Stick, TIG,  
water, remote

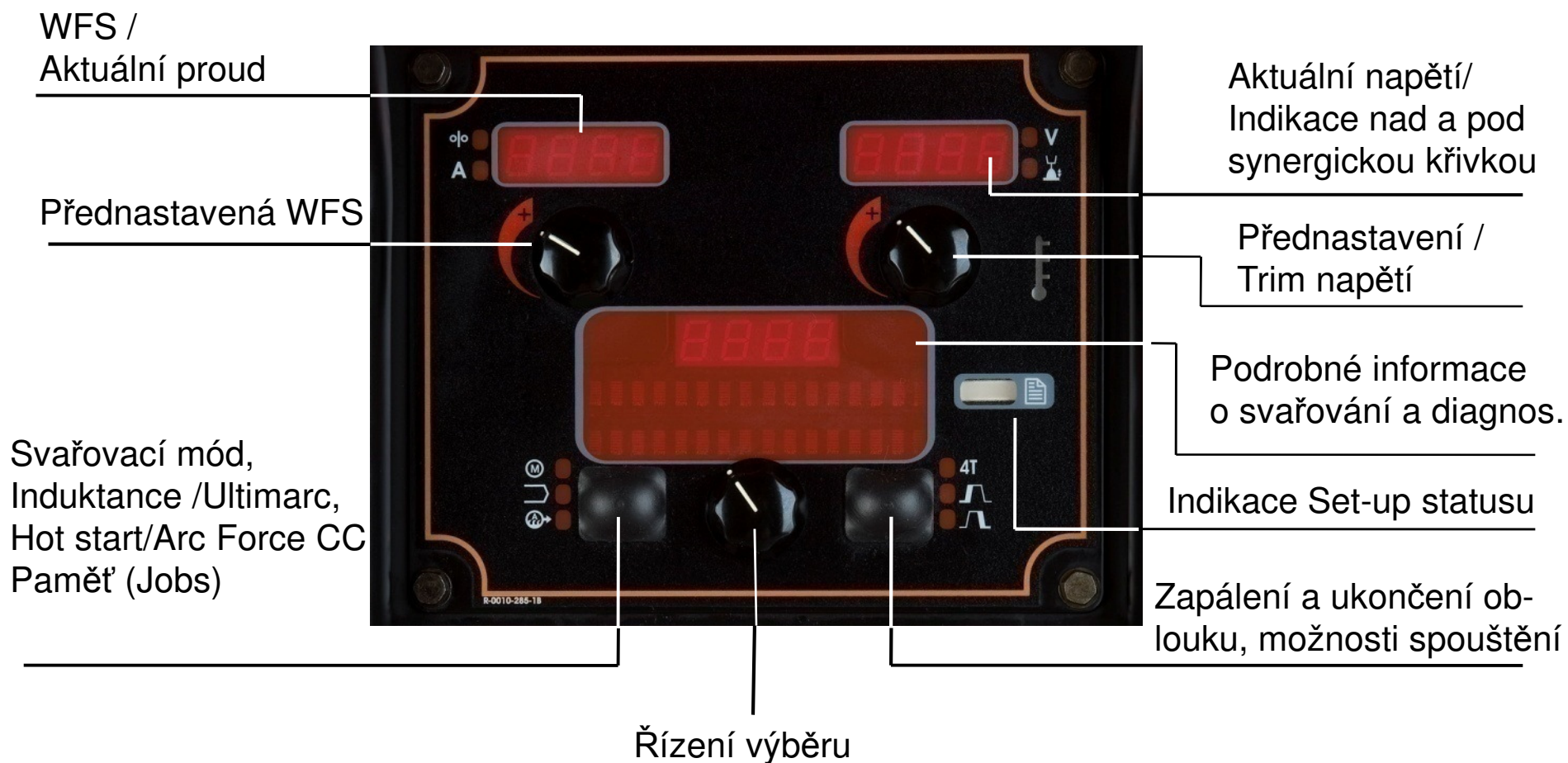
Optionally:  
PF 10M  
PF 10M Dual



## Výhoda: Uživatelsky snadný INTERFACE

*Komunikace je intuitivní a velmi snadná*

PW C300 &  
LF45





## Power Wave CARTS

CARTS

### CART PW S CE K14085-1

- Very stable construction
- Pulling bar
- Low cylinder entree



### CART PW C CE K14087-1

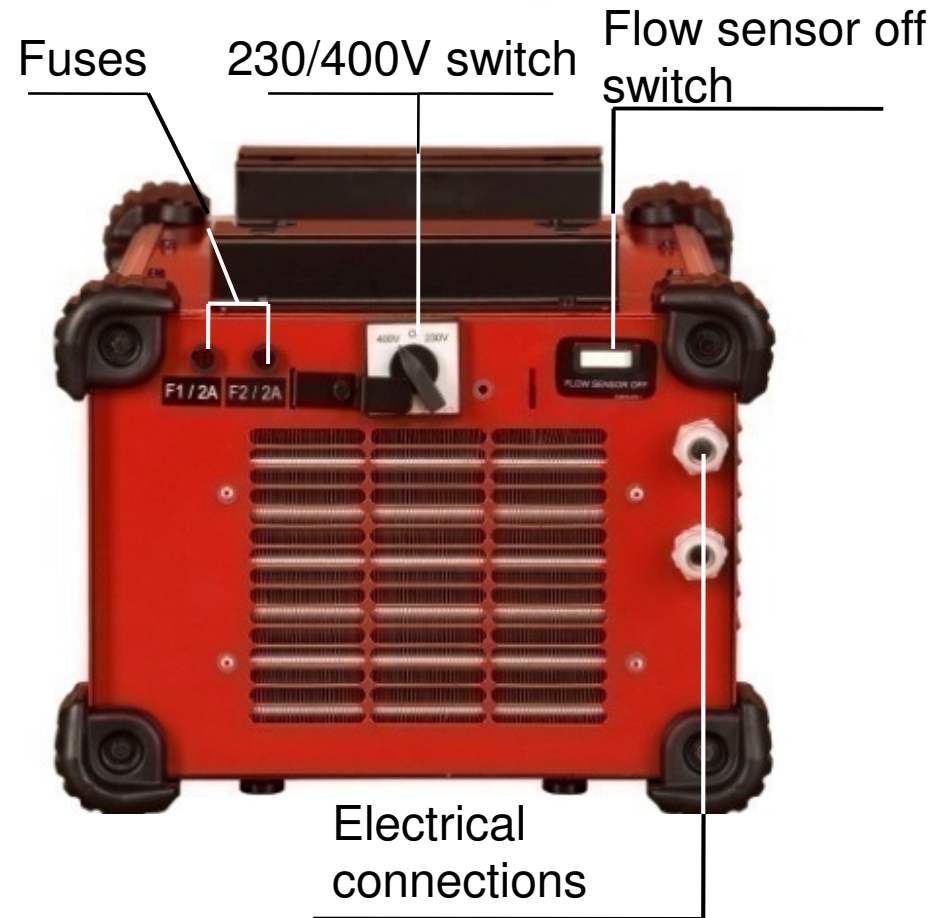
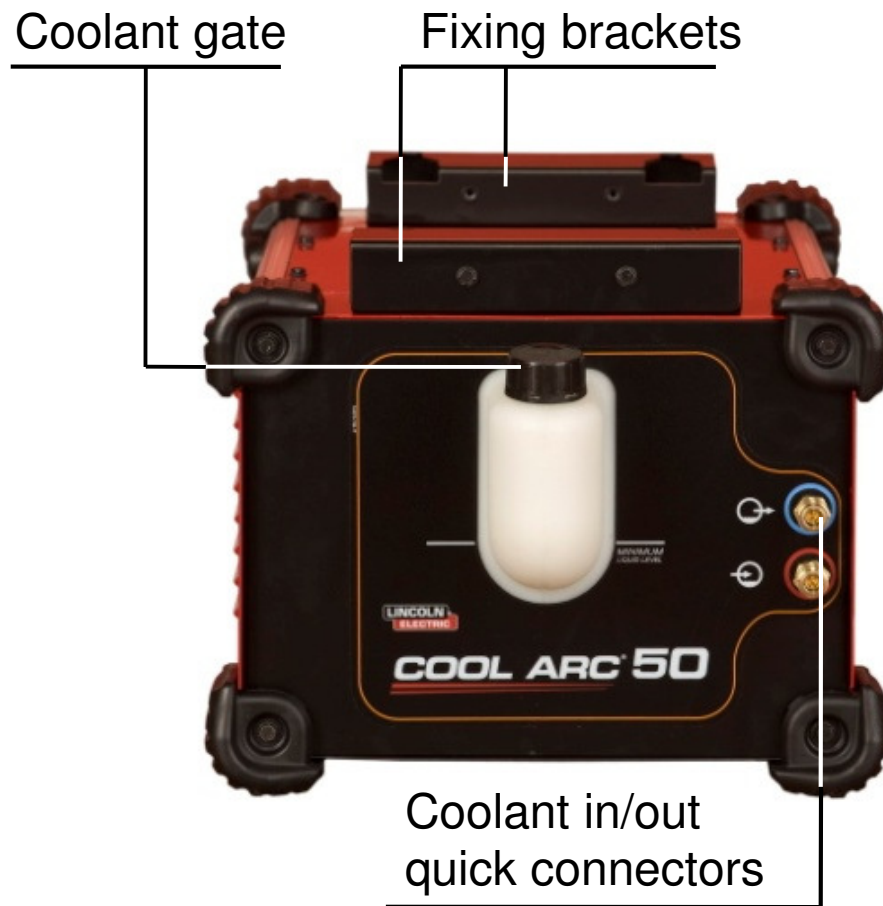
- Very stable construction
- Easy access to feeder area
- Tool box on the top
- Pulling bar
- Low cylinder entree



**Coolarc 50**  
K14050-1

230/400V  
21kg  
9,2 l

**COOLER**



**Power Wave<sup>®</sup> C300 CE**  
**Power Wave<sup>®</sup> S350 CE**

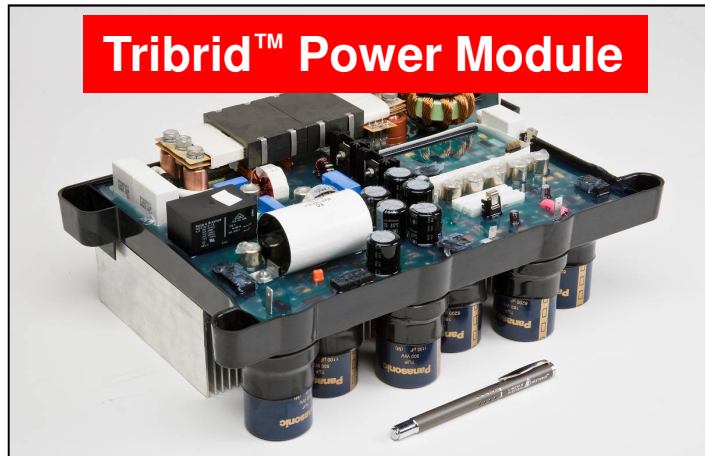
**Closer look**

*Innovations*

*Design features*

# Power Wave® C300 CE & S350 CE

Innovations



**Innovations delivered with new Power Waves**

## ADVANTAGE

- **PowerConnect™ Technology** → Wide range of input voltage
- **Tribrid™ Power Module** } → Exceptional welding performance
- **Planar Transformer™** }
- **iARC™ Digital Controls** → High Speed Digital Controls  
(Over 90 times faster, 128 times more RAM ,8 times more Flash memory, 100 MHz full duplex Ethernet)
- **Production Monitoring™ 2** → Available as Server Package
- **True Energy™ Feature** → Precise amount of energy is known now

## DESIGN FEATURES

### Loaded with Standard Features

- Line Voltage Compensation holds the output constant over wide input voltage fluctuations
- New generation of microprocessor control ( ArcLink®)
- Electronic over current & voltage protection
- F.A.N. (fan as needed)
- Thermostatically protected for safety and reliability
- Potted PC boards for enhanced ruggedness & reliability
- Waveform Control Technology™ for good weld appearance and low spatter
- IP23 Rated for Outdoor and Indoor Use

#### On PW C300 CE

- Remote control/Foot amptrol ready.
- 8 memories for easily selecting procedures.
- Patented MAXTRAC™ 2 roll drive system. (Patent pending drive rolls improve traction on solid wire by up to 20%)
- Recessed connection panel for protection against accidental impact
- No tools required to change the drive rolls and wire guides.





**Power Wave<sup>®</sup> C300 CE**  
**Power Wave<sup>®</sup> S350 CE**

**Accessories**

*Interconnection cables*

*Guns & torches*

*Remote control*

*Adapters*

# INTERCONNECTING CABLES

*Advantage: Easy installation*

*LF45  
back side*



Gas – quick connection

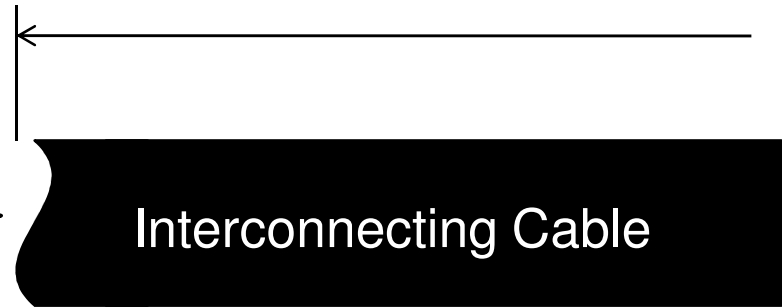


Control Cable connection



Water quick connection

X=3, 5, 10, 15 m



Interconnecting Cable

**K10349-PG-X AIR**

**K10349-PGW-X WATER**

# INTERCONNECTING CABLES

*Advantage: Easy installation*

*Package  
Front side*



**Installation of interconnecting cable is natural and easy on both sides**

# GUNS, TORCHES & Remote controls

## LINC GUNS



LG GAS/  
WATER



LG Cross  
Switch



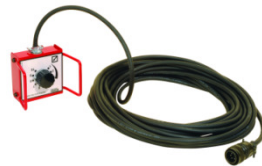
*LG Push-Pull  
Panther  
Cougar –  
coming soon*

## LINC TORCHES



LT range

## REMOTE CONTROLS



STICK, TIG



STICK, TIG



MIG

**NEW**

## Výhoda: funkce řízeny z hořáku

### CROSS SWITCH

#### # Dálk.ovl. WFS

Nastavení WFS během svařování.  
Parametr je zobrazen na displeji.  
Napětí bude následovat z důvodu Synergické křivky.

#### # Dálk.ovl. napětí

Posunutí stranou zvýší/sníží vaše napětí na oblouku.

#### # Rolování Jobů

Posunutím stranou můžete rolovat mezi jednotlivými JOBy

#### # Multi procedure

Přepínání mezi dvěma procedurama svařování posunutím stranou.

#### # Odpojení Cross switch

Jestli tuto funkci nevyužíváte – jednoduše ji vypněte. Nikdo nebude zmaten.

#### Funkce cross switch (P25)

a: WFS nahoru/dolů

a: WFS nahoru/dolů

a: WFS nahoru/dolů  
procedure

a: VYPNUTO

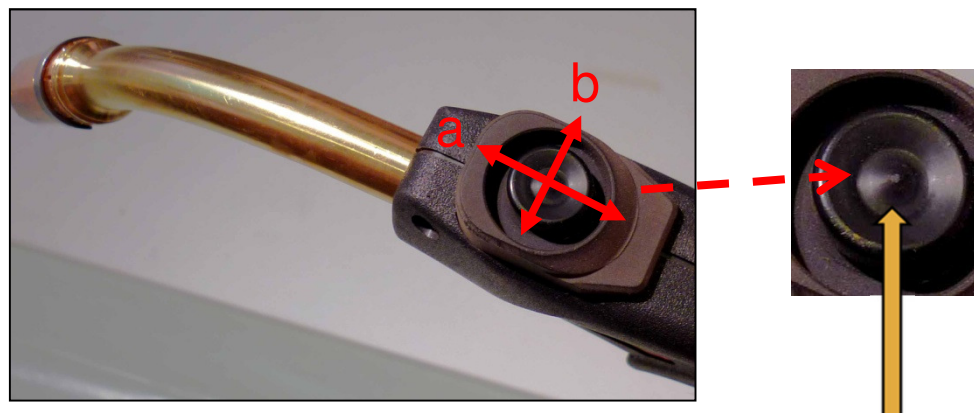
b: Napětí

b: Job rolování

b: Multi

b: VYPNUTO

Tyto funkce mohou být vybrány v SET-UP



Lepší uchopení s rukavicemi

WFS = rychlost podávání drátu



**Power Wave<sup>®</sup> C300 CE**  
**Power Wave<sup>®</sup> S350 CE**

## **Welding functions**

*Weld modes*

*Welding processes*

*Arc control*

## FEATURES / BENEFITS

### Feature

- **Run-In**
- **Hot/Soft Start**
- **Inductance (Pinch)**
- **Ultim Arc™**
- **Crater**
- **Memory lock**
- **Limits**
- **Dual procedure**
- **True Energy™**

### Customer benefit

smooth starting  
pre-heating (ALU)  
soft or stiff arc (CV)  
soft or stiff arc (Pulse)  
preventing crater cracks  
stores customized settings  
precise range of welding parameters  
easy switching between two procedures  
real heat input is known

and others: Gas Pre- & Post flow, 2/4 stroke, Arc Force

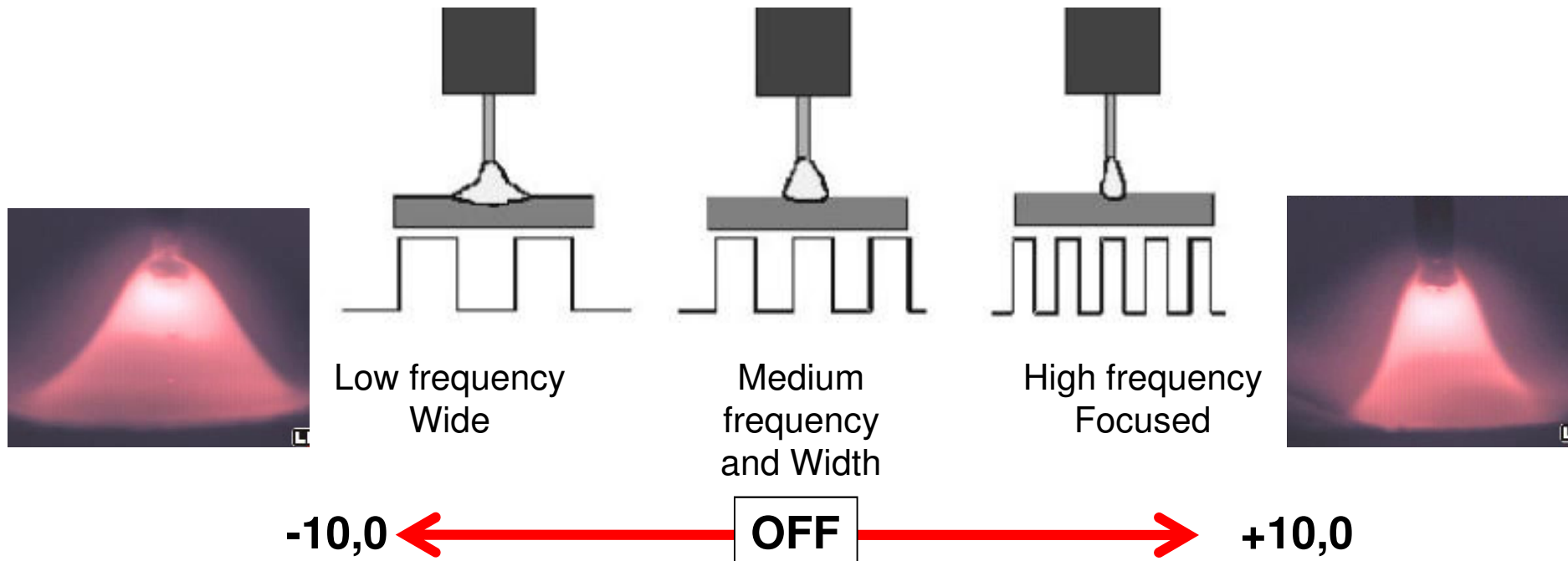
**The Welding Arc can be precisely controlled**

# UltimArc™ Control

*How does it work?*

UltimArc™

**UltimArc™ Control** *adjusts focus or shape of the arc and is used on Pulse welding modes*



**SOFT ARC**  
(good for out of position welding)

**STIFF ARC**  
(good for high speed welding)

# TRUE ENERGY™

# TRUE ENERGY™

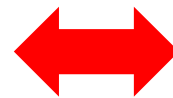
## True Energy™ Heat Input Calculation

## Traditional Heat Input Calculation

- Instantaneous value of welding output is used
- Sampling rate 10kHz (10k times/sec)
- The total Power is multiplied by time of welding and gives True Energy [J]
- We know length of weld then heat input can be easily calculated

- Measurement of average voltage and current
- Relatively consistent results for high energy processes
- Less consistent and accurate for short arc and puls mode (due to rapidly changing output)

$$\text{Heat Input} = \frac{\text{True Energy}^{\text{TM}} \text{ Value (J or kJ)}}{\text{Distance Traveled (in. or mm)}}$$



$$\text{Heat Input} = \frac{V_{\text{AVG}} * A_{\text{AVG}} * 60 \text{ (J or kJ)}}{\text{Travel Speed (in. or mm)}}$$

**Heat input value can be easily calculated**

# TRUE ENERGY™

## TRUE ENERGY™

### *Example*

All welding tests conducted with the same process parameters	Power (kW)			
	Short Arc	Axial Spray	Pulse	RapidArc®
Traditional 'Average' Power Measurement	2,96	5,25	3,5	2,89
Power Measurement from True Energy™	2,69	5,27	4,05	3,34
% Diff. compared to True Energy™ Results	-10%	0,4%	14%	13%

- Traditional measurement gives relatively consistent results for high energy processes like axial spray but is less consistent and accurate for short arc and puls mode (due to rapidly changing output)

**True Energy™ provides Instantaneous Energy Values for the Weld**

# WELDING MODES

*Installed on PW C300 & S350*

## Standard Processes



CV MIG

Pulse MIG Stainless

Pulse MIG Aluminum

Pulse MIG Steel

STICK Soft / Crisp

TIG (Pulse)

## Special Processes



Pulse-on-Pulse<sup>®</sup>(ALU)

Power Mode<sup>®</sup>

RapidArc<sup>®</sup>

Coming soon  
with separated module

STT<sup>®</sup>



## WELDING MODES

*Installed on PW C300 & S350*

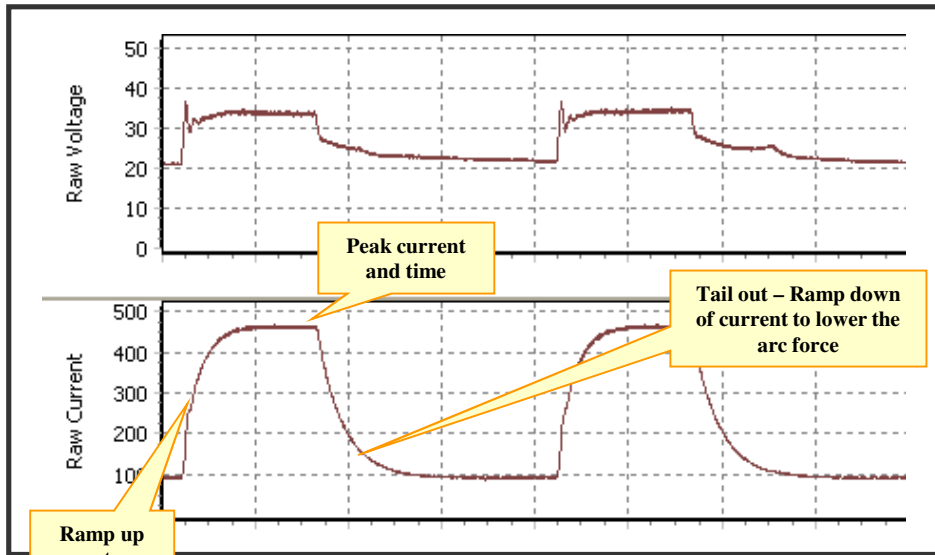
Welding method		Q-ty of programs installed for free	Material	General range of wire [mm]
MIG	GMAW-CV	21	Steel, Stainless, MetalCore, AlMg, AlSi	0,8-1,6
	GMAW-P	22	Steel, Stainless, MetalCore, AlMg, AlSi, NiCrome, Si Bronze, Copper	0,8-1,6
	Power Mode	1		
	FCAW-G	3		(1,2)
	FCAW-S	1		
	GMAW-P Rapid Arc	3	Steel	0,9-1,2
	GMAW-PP Pulse on Pulse	5	AlMg, AlSi	1,0-1,6
TIG	GTAW (P)	2	Touch & Pulse	-
STICK	SMAW	3	Soft, Crisp, Pipe	-
		61		

**More than 60 different weld modes installed as standard FOR FREE!**

# Standard Processes

## Constant Voltage (CV)

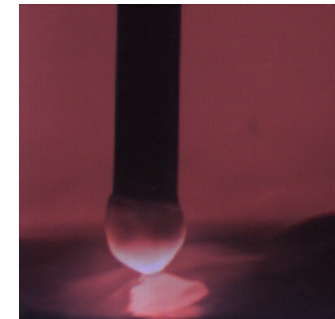
### Standard Processes



**What is Constant Voltage?**  
Traditional GMAW welding

**Features:**  
Synergic or non-synergic

**Benefits:**  
Widely known and accepted process



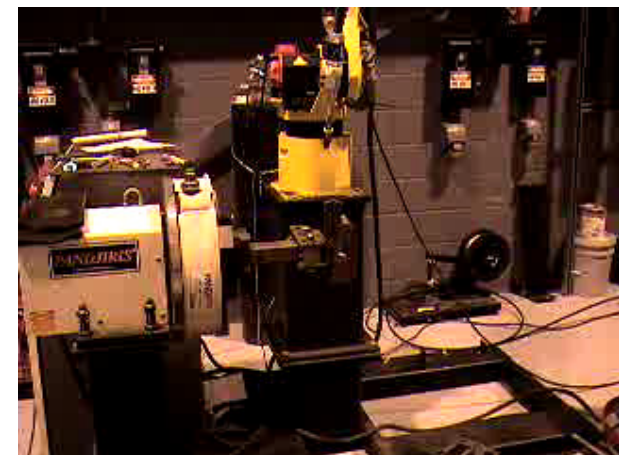
### Proven Results:



Sheet Metal



Trailer Hitch

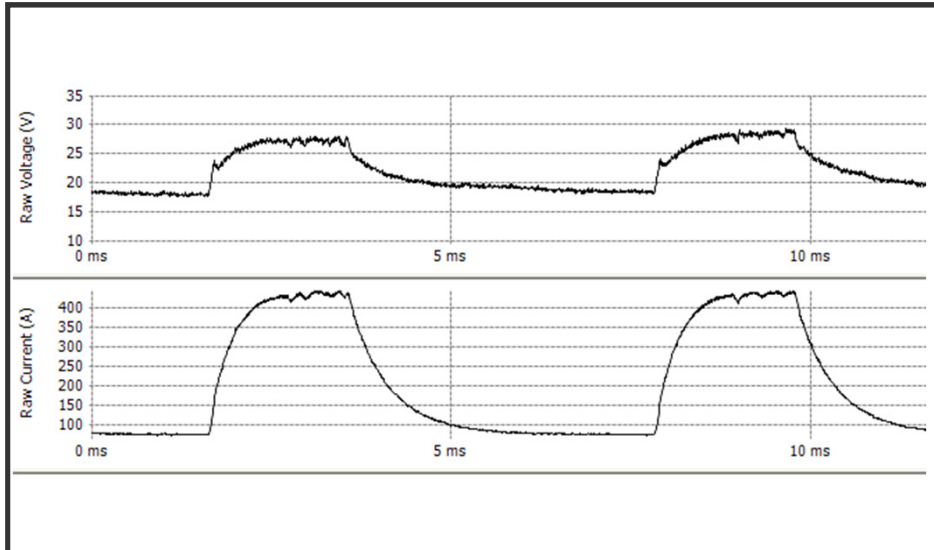


Trailer Hitch Application Video

# Pulse Welding

*Multi-purpose waveform for multiple applications*

Standard Processes



## What is Pulse?

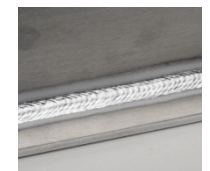
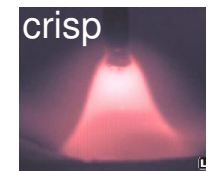
Manipulation of an background and a peak to achieve consistent transfer for a wide range of wire feed speeds.

### Features:

- Single transfer mode
- Waveforms are application based
- Soft, crisp, Rapid-Arc, Vertical Up
- Synergic

### Benefits:

Simple, multi purpose GMAW operation



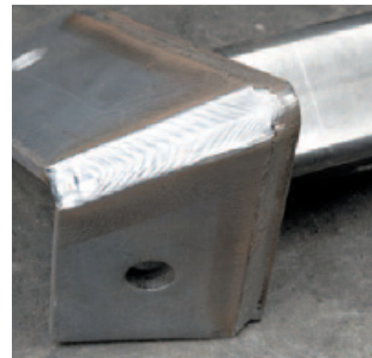
## Proven Results:



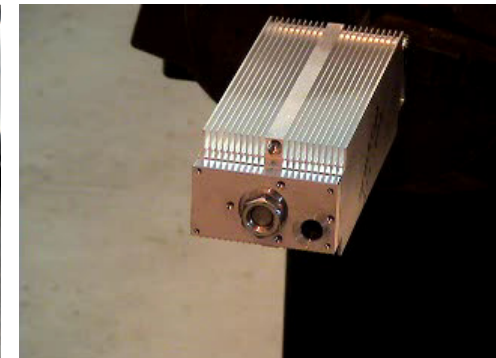
Muffler



Agricultural part



Furniture

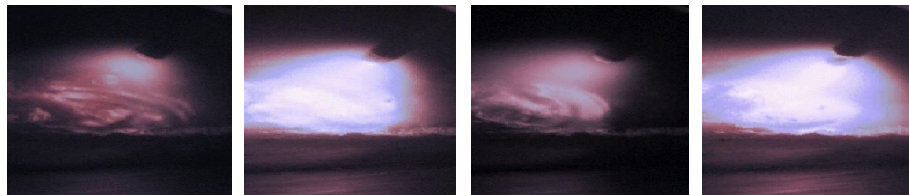
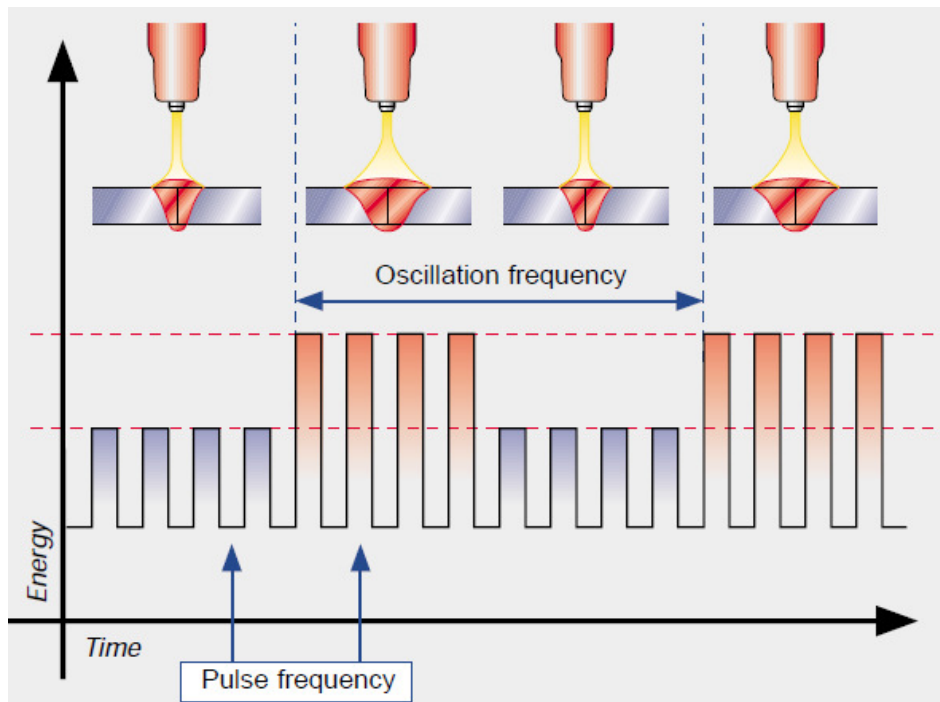


Heat Sink

# Pulse on Pulse™



## Special Processes



### What is Pulse-on-Pulse?

Pulse-on-Pulse is a patented solution from Lincoln Electric that uses a sequence of pulse wave shapes to tightly control the arc length and the heat input while welding aluminum. The pulse sequences also result in a GTAW-like bead appearance

### Advantage

- Easy control of the Arc at low Amperage levels
- Nice bead appearance (ripples)
- Possible replacement of TIG on certain applications
- Increased cleaning action

### Application

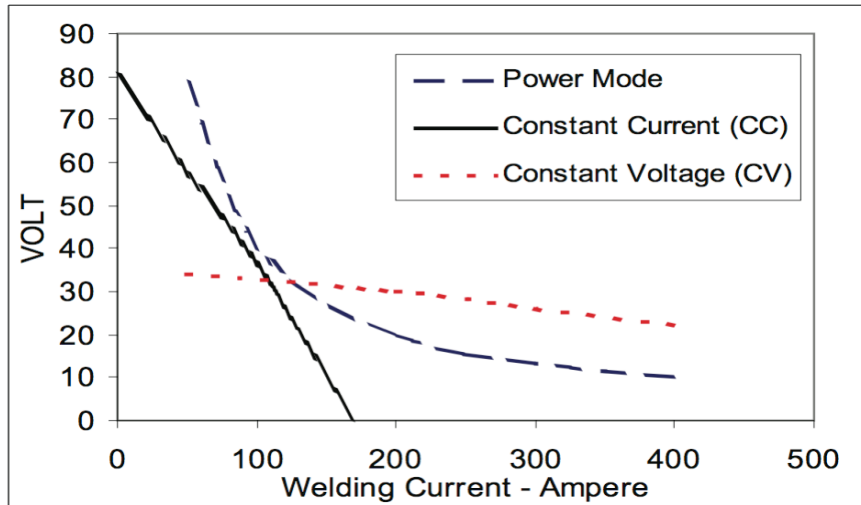
- Thin Aluminium applications
- Alu application where a nice bead appearance is needed.
- Boats, semitrailers, caravans, ladders



## Power Mode®

*Great Starts, Low Spatter*

Special  
Processes



### What is Power Mode?

A new GMAW process that combines the benefits of Waveform Control Technology™ with the output characteristics of traditional constant current equipment.

#### ADVANTAGE

- Excellent starting characteristics
- A stable Arc despite stick-out fluctuations even at very low current levels
- Consistency of weld penetration in axial spray transfer

- Low spatter

#### APPLICATION

- Thin material Steel and Stainless (even below 1.0 mm)
- Root Pass welding
- ALU Spray Arc
- Metal case corner welds

### Proven Results:



Stainless  
Corner Weld



Stainless  
Fillet Weld

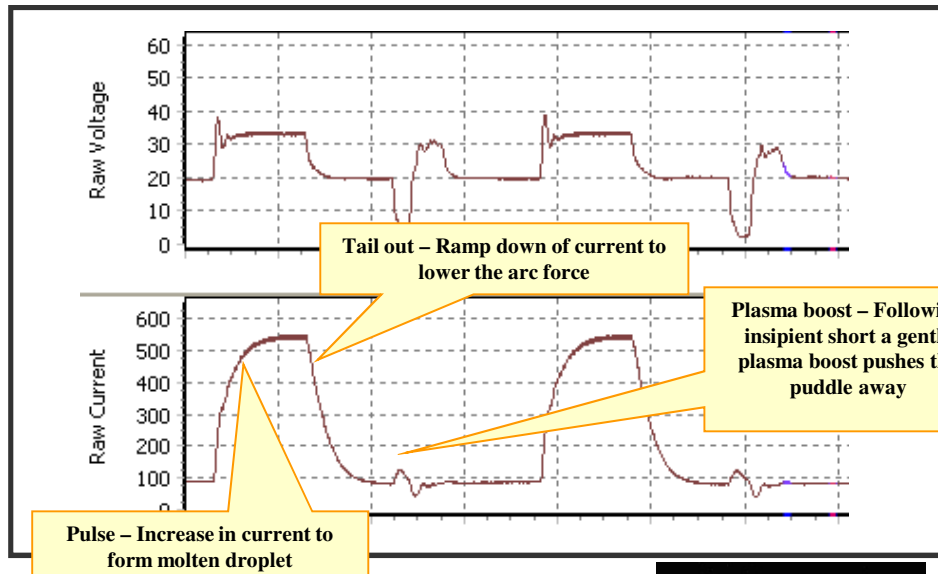




# RapidArc®

High productivity with the fastest travel speeds

## Special Processes



### What is RapidArc®?

A pulsed GMAW process solution designed to increase productivity by reducing cycle time.

### ADVANTAGE

- High Travel Speed compared to CV spray and Pulse
- High penetration
- Low heat input, less distortion

### APPLICATIONS

- Position welding possible
- Fillet welds
- Lap welds
- Wheels
- Tanks

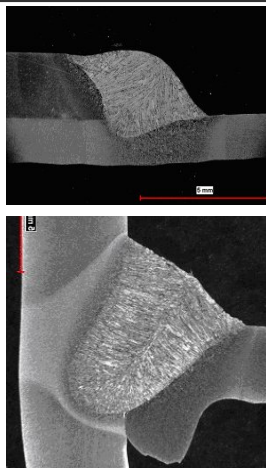
### Proven Results:



Small Tanks



ATV Wheels



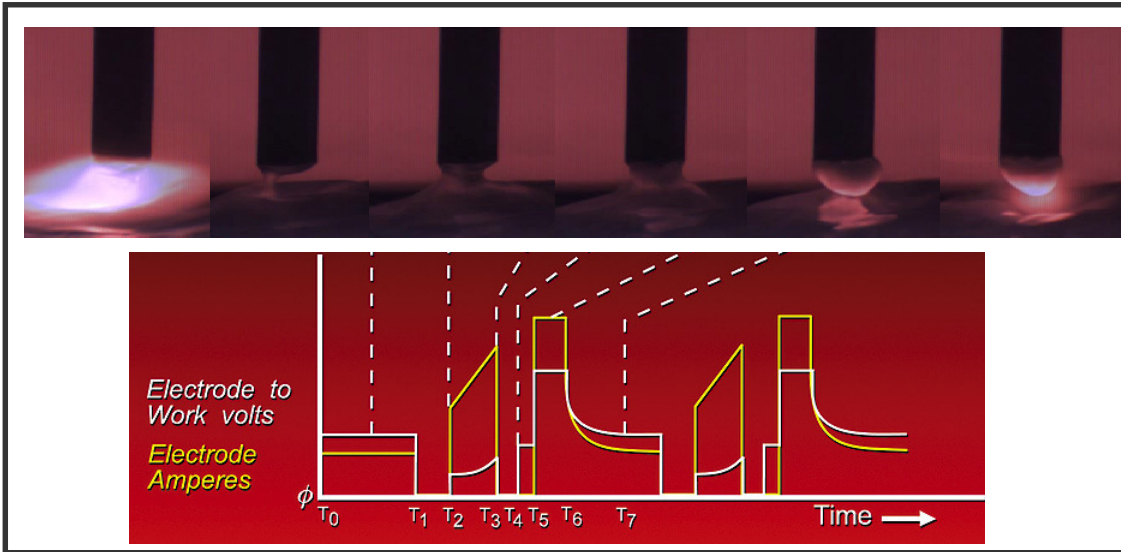
Truck Rims



# STT®

## Surface Tension Transfer®

### Special Processes



### What is STT®?

STT® is a GMAW, controlled short circuit transfer process.

### Features:

Good penetration and low heat input control, reduced spatter and fume, adjust heat independent of wire feed speed

### Benefits:

Multi-purpose use: thin sheet metal, pipe, stainless steel, nickel, silicon bronze, galvanized steel.

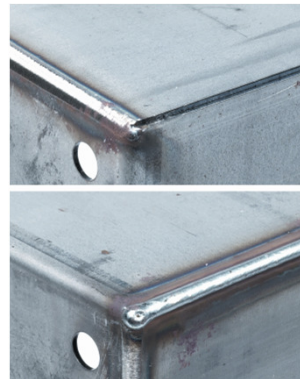
### Proven Results:



Motorcycle tanks



Low heat input applications



Corner edges

**Power Wave<sup>®</sup> C300 CE**  
**Power Wave<sup>®</sup> S350 CE**

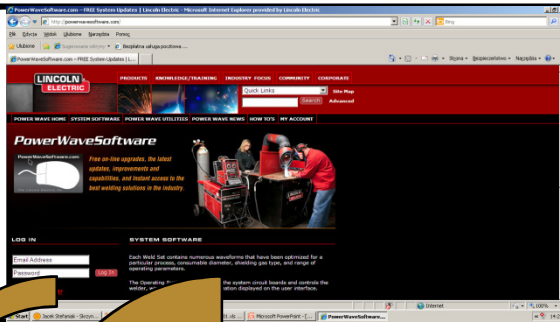
**PW Software**

*Software update*

*PW Manager*

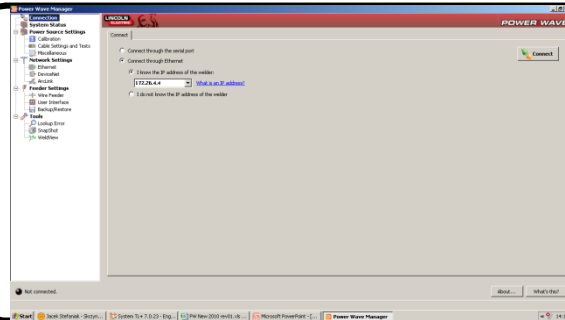
*Production Monitoring 2*

# POWER WAVE® SOFTWARE



<http://powerwavesoftware.com/>

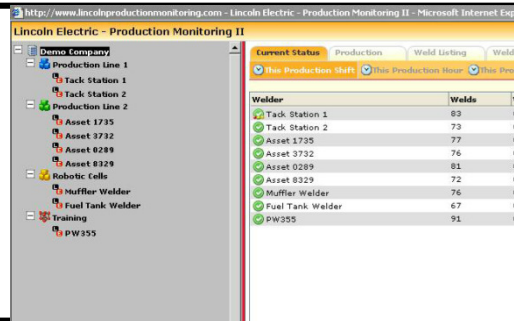
- Free on-line updates
- The latest updates
- Improvements & capabilities
- Instant access to the best welding solution



**PowerWaveManager.exe**



- Monitor System Status.
- View and adjust Power Source Settings, Network Settings, and Feeder Settings.
- Use Diagnostic Tools.



**Production Monitoring™ 2**

- Current status, production, weld listing & Weld details, traceability

*As Server Package needs IT support*

# Power Wave® Range

*Summary*

## ADVANTAGE

Multi Process

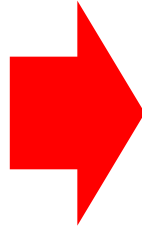
Premium Welding

Free Process Update

Robustness

Modular Configuration

Outstanding Operation



## APPLICATIONS

Construction

Aerospace

Fabrication

Automotive

Production

Welding Training



## Item numbers

Item number	Product description	PW C300	PW S350
K14087-1	CART PW C CE	✓	-
K14085-1	Cart PW S CE	-	✓
K14050-1	Coolarc-50	✓	✓
K14072-1	LF-45	-	✓
K14083-1	LF-45S	-	✓
K10349-PGW-XM	Cable IC Water Cooled 3,5,10,15M	-	✓
K10349-PG-3M	Cable IC Air Cooled 3,5,10,15M	-	✓
K14091-1	REMOTE MIG LF45PWC300-7M	✓	✓
K10420-1	COOLANT ACOROX (2X5L)	✓	✓
K10095-1-15M	Remote control 6-pins, 15m	✓	✓
K870	FOOT AMPTROL	✓	✓
K2909-1	Adapter 6/12-Pins for Remote Applications - 0,5m	✓	✓
KP10519-8	Adapter TIG EURO	-	✓
K10413-360GC-4M	LG360GC 4meter with cross switch	✓	✓
K10413-420GC-4M	LG420GC 4meter with cross switch	-	✓
K10413-505WC-4M	LG505WC 4meter with cross switch	✓	✓
K10514-P-8	Push Pull gun Panther CE 8 meter	✓	✓
K10514-C-8	Push Pull gun Cougar CE 8 meter	✓	✓
K2921-1	STT module CE (coming soon)	-	✓