



SPEEDTEC® 320CP

Multi-Process Compact Inverter



SPEEDTEC® 320CP

Multi-Process Compact Inverter – key technical data



- ▶ 400V $\pm 20\%$, 3Ph 50/60Hz, generator ready
- ▶ Efficiency=0.86, PF=0.91, $\cos\phi=0.99$
- ▶ Idle power =26W
- ▶ Setting range for welding voltage 10÷50V
- ▶ Setting range for welding current 15÷320A
- ▶ **320A@40%** (220A@100%)
- ▶ **MIG-Manual, MIG-Synergic, PULSE, STICK, TIG lift**
- ▶ 4 Rolls wire drive, WFS range: 0.5÷25m/min
- ▶ Wire diameter usable: 0.6÷1.2mm
- ▶ Spool size: diameter 300mm / max 20kg
- ▶ F.A.N. (Fan As Needed), Green Mode
- ▶ 99 Memories, Easy calibration system
- ▶ **IP23**
- ▶ 743x335x554; 37kg
- ▶ 3 Years Warranty, no limitation



Basic Unit Includes:

- ▶ Primary cable 5m without plug
- ▶ Ground cable with clamp 5m
- ▶ Gas house
- ▶ Wire Spool Adapter D300

K14168-1
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A closer look...front and back panel



User Interface

Simple and Intuitive

Reversible Handles
for ease of lifting and
transportation

Gun Holder

**Remote Control
Socket**

**EURO Connector
Socket**

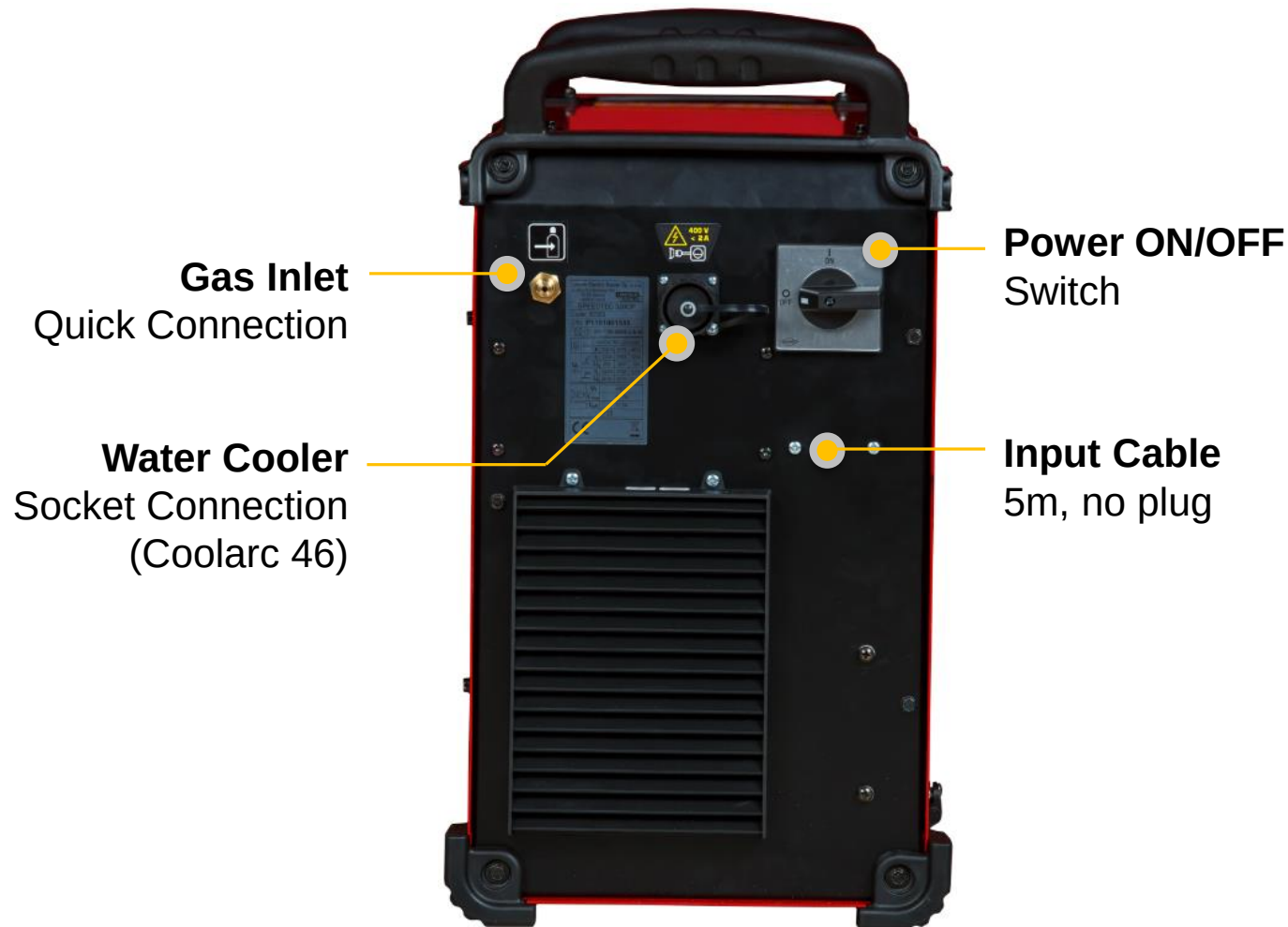
**Quick and Simple
Polarity Change**

Rubber Corners



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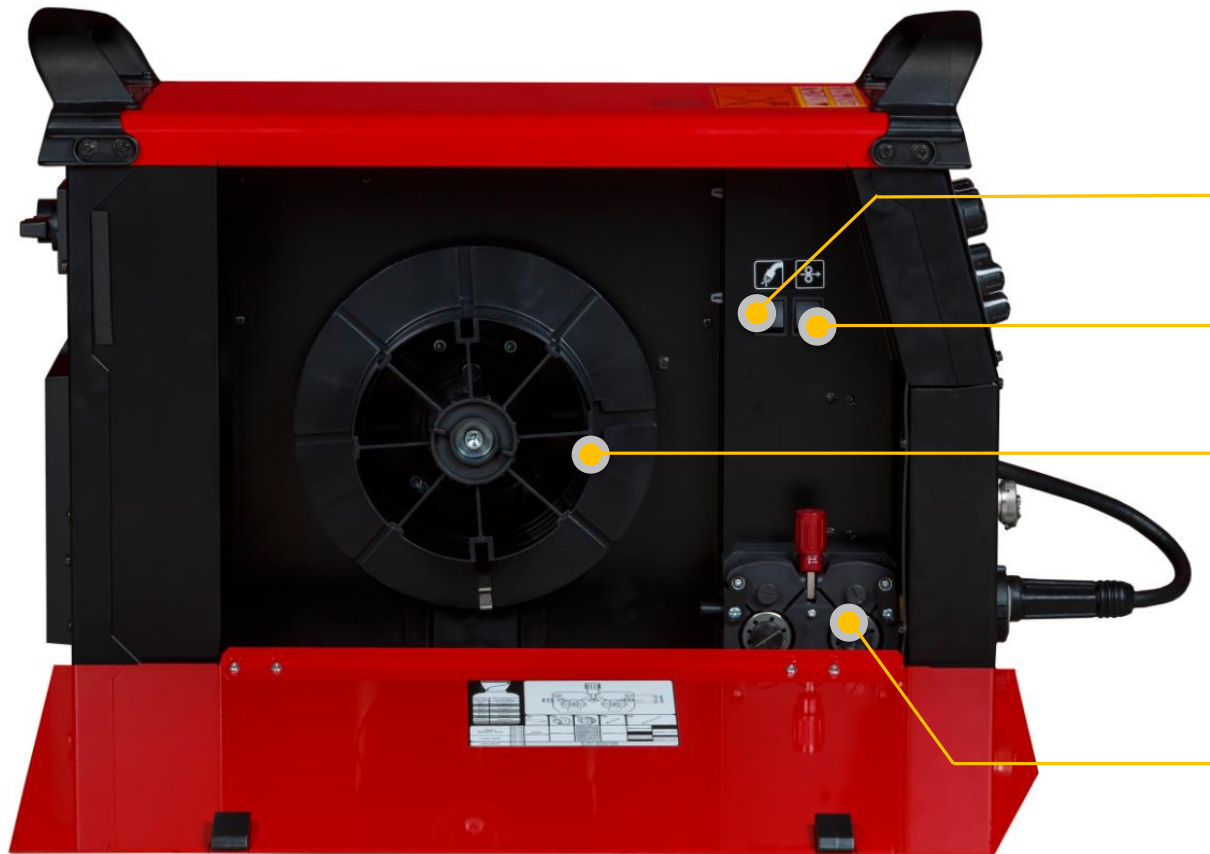
A closer look...front and back panel





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A closer look... behind the door



Gas Test Switch

Cold Wire Switch

Wire Spool
(Spool axle, shaft, axle nut)

4 Rolls Wire Drive
(37mm diameter)



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Simple and Easy to set-up LED's User Interface



Intuitive and simple in use – reduced time for training



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Functions in CONFIG menu

Accessing the CONFIG:

by setting the Wire Diameter selector on the front panel to position 

select CONFIG by pressing the button 

Turn the left-hand encoder to scroll through the available parameters.

Turn the right-hand encoder to set their value.

Left display	Right display	Step	Default	Description
GrE	On OFF Aut		Aut	Configuration of the water cooling unit: On: water cooler is always activated OFF: water cooler is always deactivated Aut: Automatic mode, water cooler works when according need
ScU	nc no OFF		OFF	Security of water cooling: nc: Normally closed no: Normally open OFF: Desactivate
Unit	US CE		CE	Unit displayed for wire speed and thickness: US: inch unit CE: meter unit
Cpt	OFF 0.01 – 1.00	0.01 s	0.3	Trigger holding time in order to call program (Only in 4T welding mode). Can be use only for welding program from 50 to 99.
PGM	no yES		no	Activate / deactivate program management mode
PGA	OFF 000 – 020 %	1%	OFF	Use to setup available adjustment range of the following parameters: - wire speed, - arc voltage, - arc dynamics, - pulse fine-setting. Use only when program management is activated and programs are locked.
Adj	Loc rC		Loc	Select adjustment Wire speed and arc voltage: Loc: Local on the power source rC : remote Control or torch potentiometer
CAL	OFF on		OFF	Calibration of torch & ground harness
L	0 – 50	1 uH	14	Cable choke setting / display
r	0 – 50	1 W	8	Cable resistor setting / display
SoF	no yES		no	Software update mode.
FAC	no yES		no	Factory settings reset. Pressing YeS will cause a reset of the parameters to factory defaults when exit SETUP menu.



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Functions in CYCLE menu

Accessing the CYCLE menu:

by setting the Wire Diameter selector on the front panel to position



select CYCLE by pressing the button



Turn the left-hand encoder to scroll through the available parameters.

Turn the right-hand encoder to set their value.

Left display	Right display	Step	Default	Description
tPt	00.5 ÷ 10.0	0.1 s	0.5	Spot time. In Spot mode and in Manual mode, the Hot Start, Downslope and sequencer settings cannot be changed
PrG	00.0 ÷ 10.0	0.1 s	0.5	Pre-gas time
tHS	OFF 00.1 ÷ 10.0	0.1 s	0.1	Hot start time
IHS	-70 ÷ +70	1 %	30	Hot start current (wire speed). X% ± the welding current
UHS	-70 ÷ +70	1 %	0	Hot start voltage X% ± the arc voltage
dYn	-10 ÷ +10 -20 ÷ + 20			Fine setting in short arc
rFp	-10 ÷ +10 -20 ÷ + 20	0,01	0	Fine setting in pulse
dyA	00 ÷ 100	1	50	Arc striking dynamics at electrode
tSE	OFF 0.01 ÷ 2.50	0,01 s	OFF	Sequencer time (Sequencer, only in synergic mode)
ISE	0	0,01	30	Sequencer current level. X% ± the welding current
dSt	OFF 00.1 ÷ 05.0	0,1 s	OFF	Down-slope time
DdSI	-70 ÷ 00.0	1 %	30	Down-slope current (wire speed). X% ± the welding current
dSU	-70 ÷ +70	1 %	0	Down-slope voltage. X% ± the arc voltage
Pr_	0.00 ÷ 0.20	0.01 s	0.05	Anti-stick time
PrS	no yES		no	Pr-Spray activation
PoG	00.0 ÷ 10.0	0.05 s	0.05	Post-gas time



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Welding modes – in total 102 synergic lines (33 Pulse) + STICK mode

WIRE SIZE	WIRE TYPE	GAS TYPE	SHORT ARC	SPEED SHORT ARC	PULSE
STICK	Electrodes up to 5mm	–	–	–	–
0.6	Steel	Ar(82%) / CO2(18%)	√	√	–
0.6	Steel	Ar / CO2 / O2	√	√	–
0.6	Steel	Ar(92%) / CO2(8%)	√	√	–
0.8	Steel	Ar(82%) / CO2(18%)	√	√	√
0.8	Steel	Ar / CO2 / O2	√	√	√
0.8	Steel	Ar(92%) / CO2(8%)	√	√	√
0.8	Steel	CO2	√	–	–
1.0	Steel	Ar(82%) / CO2(18%)	√	√	√
1.0	Steel	Ar / CO2 / O2	√	√	√
1.0	Steel	Ar(92%) / CO2(8%)	√	√	√
1.0	Steel	CO2	√	–	–
1.2	Steel	Ar(82%) / CO2(18%)	√	√	√
1.2	Steel	Ar / CO2 / O2	√	√	√
1.2	Steel	Ar(92%) / CO2(8%)	√	√	√
1.2	Steel	CO2	√	–	–
0.8	Stainless Steel	Ar / CO2 / H2	√	√	√
0.8	Stainless Steel	Ar(98%) / CO2(2%)	√	√	√
0.8	Stainless Steel	Ar / He / CO2	√	√	√
1.0	Stainless Steel	Ar / CO2 / H2	√	√	√
1.0	Stainless Steel	Ar(98%) / CO2(2%)	√	√	√
1.0	Stainless Steel	Ar / He / CO2	√	√	√
1.2	Stainless Steel	Ar / CO2 / H2	√	√	√
1.2	Stainless Steel	Ar(98%) / CO2(2%)	√	√	√
1.2	Stainless Steel	Ar / He / CO2	√	√	√

WIRE SIZE	WIRE TYPE	GAS TYPE	SHORT ARC	SPEED SHORT ARC	PULSE
1.0	AlSi	Ar	√	–	√
1.2	AlSi	Ar	√	–	√
1.2	Al	Ar	√	–	√
1.0	AlMg3	Ar	√	–	√
1.2	AlMg3	Ar	√	–	√
1.0	AlMg4,5 Mn	Ar	√	–	√
1.2	AlMg4,5 Mn	Ar	√	–	√
1.0	AlMg5	Ar	√	–	√
1.2	AlMg5	Ar	√	–	√
0.8	Cupro Si	Ar	√	–	–
1.0	Cupro Si	Ar	√	–	√
1.2	Cupro Si	Ar	√	–	√
1.0	Cupro Alu	Ar	√	–	√
1.2	Cupro Alu	Ar	√	–	√
1.0	Solid galvanized	Ar(82%) / CO2(18%)	√	–	–
1.2	Solid galvanized	Ar(82%) / CO2(18%)	√	–	–
1.0	Rutil Core Wire	Ar(82%) / CO2(18%)	√	–	–
1.2	Rutil Core Wire	Ar(82%) / CO2(18%)	√	–	–
1.0	Rutil Core Wire	CO2	√	–	–
1.2	Rutil Core Wire	CO2	√	–	–
1.0	Metal Core Wire	Ar(82%) / CO2(18%)	√	–	–
1.2	Metal Core Wire	Ar(82%) / CO2(18%)	√	–	√
1.2	Basic Core Wire	Ar(82%) / CO2(18%)	√	–	√
1.2	Basic Core Wire	CO2	√	–	–

	SHORT ARC	48 Synergic Lines	For standard & universal application with all material.
	SPEED SHORT ARC	21 Synergic Lines	Carbon and stainless steels, perfect for root pass.
	PULSE	33 Synergic Lines	Welding in all position, excellent weld bead appearance, no globular transfer with related disadvantages, for low thickness especially aluminum.



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Speed Short Arc – special semi controlled short arc for root pass & high travel speed



Speed Short Arc:

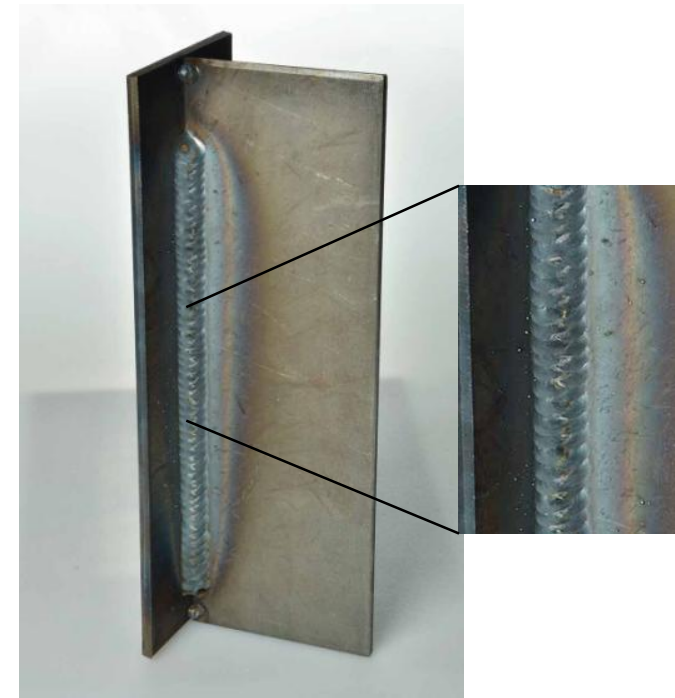
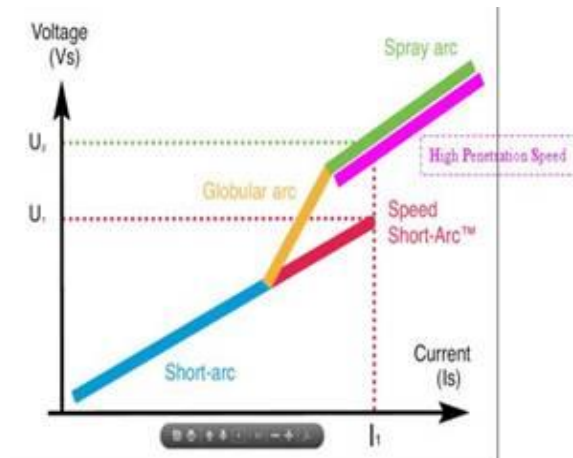
- using appropriate programming through high travel speed, can artificially extend the short arc range to higher currents (higher thicknesses), in the range of the Speed Short Arc
- the dynamic arc optimizes performance in root-pass and absorbs fluctuations in the welder's hand movements, for example when welding in a difficult position
- achieve good weld appearance and penetration in all welding positions



Waveform of SA welding process



Waveform of SSA welding process



CARBON STEEL 5mm
Fillet weld, Vertical position

EASY TO WELD

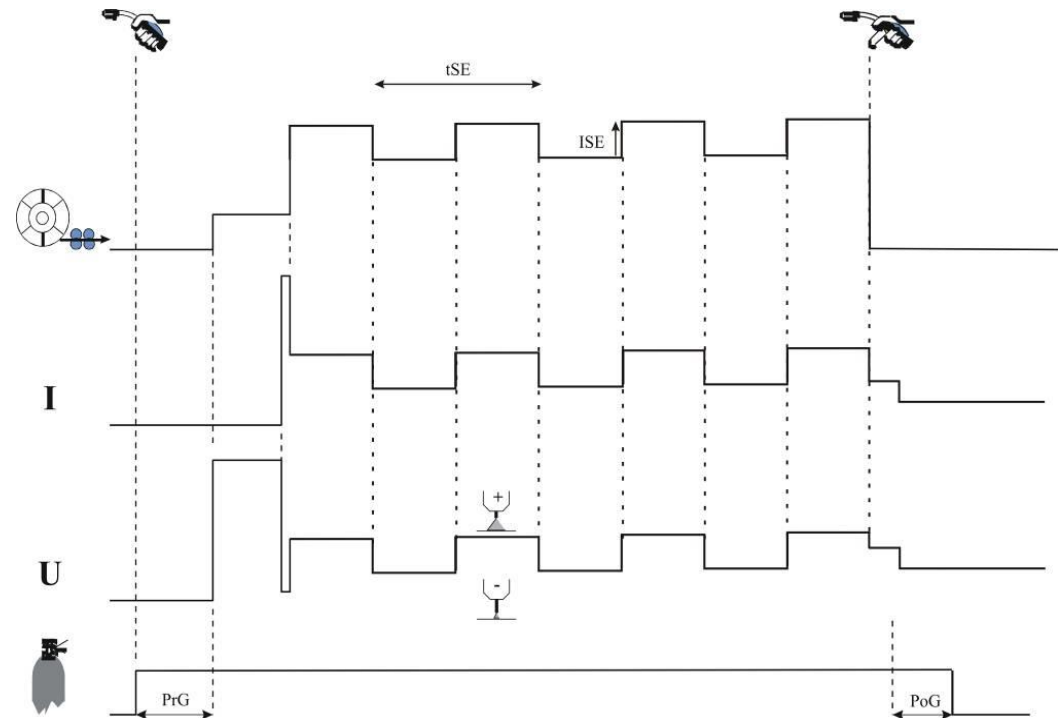


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Sequencer Mode – special welding cycle that swaps two different wire speeds

Advantages:

- Giving perfect bead aspect three times faster than TIG welding
- Less distortion on thin plate
- Low heat input for good mechanical structure and characteristics



Available only in Synergic Mode



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Program Management – JOBS/Memories; Program call with trigger

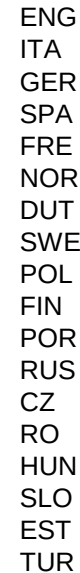
SPEEDTEC® 320CP allows creating, storing and modifying up to 99 welding programs directly on front panel from program 01 to program 99. This function is activated by moving parameter PGM from nO to YES in CONFIG menu.

When power source is working on these programs, the led indicator “JOB” is switched on.



Program call with trigger – This function allows to chain from 2 to 10 programs. This function is available in 4T welding mode only and program management mode has to be activated.

Marketing Tools



Product Presentation and Technical Specification



SPEEDTEC® 320CP

Advantages / Value over competition

➤ Good Welding Performance

MIG, **Pulsed MIG**, FCAW, Stick with possibility to weld steel, stainless steel and aluminum, additionally embedded modified arc (Speed Short Arc™).

➤ Intuitive and Simple in Use

Easy Adjustment – reduced time for training.

➤ Robust and Reliable

Very solid, stable, metal case – no structural plastics, ready for harsh, industrial conditions, IP23 for outdoor use – True HD confirmed by 3 Year full warranty, reversible handles for ease of lifting and transportation.

➤ Ready for Tomorrow

Green Side – inverter technology with about 30% lower energy consumption compared to use conventional machine, Fan As Needed & Green Mode, meets future standard requirements.

➤ Technological Advantages

99 programs, call programs with trigger, welding cycle sequencer, parameters locking and limitations, generator ready.





SPEEDTEC® 320CP

Accessories



K14105-1
Coolarc 46



W000275904
Remote Control
(10m, WFS and V control)



K10158-1
Adapter for spool
type B300



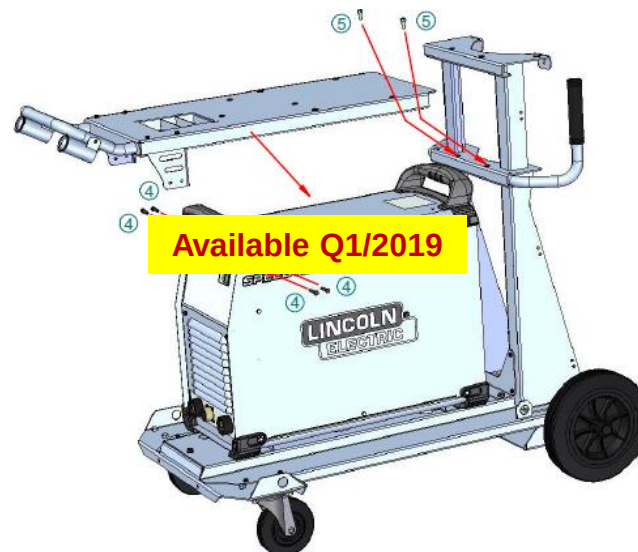
W000375730
Universal trolley



W000373703
Dust Filter

K14096-1
Speedtec Cart

+ new bracket KIT*



K14xxx-1
User Interface
Protection
Cover

Available Q1/2019

LINC GUN™	
W10429-24-3M	LGS2 240 G-3.0M MIG GUN AIR COOLED
W10429-24-4M	LGS2 240 G-4.0M MIG GUN AIR COOLED
W10429-24-5M	LGS2 240 G-5.0M MIG GUN AIR COOLED
W10429-25-3M	LGS2 250 G-3.0M MIG GUN AIR COOLED
W10429-25-4M	LGS2 250 G-4.0M MIG GUN AIR COOLED
W10429-25-5M	LGS2 250 G-5.0M MIG GUN AIR COOLED
W10429-36-3M	LGS2 360 G-3.0M MIG GUN AIR COOLED
W10429-36-4M	LGS2 360 G-4.0M MIG GUN AIR COOLED
W10429-36-5M	LGS2 360 G-5.0M MIG GUN AIR COOLED
W10429-505-3M	LGS2 505 W-3.0M MIG GUN WATER COOLED
W10429-505-4M	LGS2 505 W-4.0M MIG GUN WATER COOLED
W10429-505-5M	LGS2 505 W-5.0M MIG GUN WATER COOLED