

# POWERTEC®-iS RANGE

i350S · i420S · i500S

**TPS**  
WeldTech



**LINCOLN**  
ELECTRIC

# COMPLETE SOLUTION FOR INDUSTRY

## POWERTEC®-i S RANGE

Reliable workhorses are coming. They are as solid as always, more convenient than ever, and superbly productive. These products will help you get more things done. Based on modern inverter technology, they continue the well-established **POWERTEC®-i series**, which now offers separate wire feeders. This is another, decisive step into the future of professional welding. With a specially designed, rugged construction, which is subjected to a large variety of tests (Lincoln Electric TRUE HD), they are ready to work in even the most demanding environmental and production conditions. The devices are dedicated especially for heavy-fabrication, structural, transportation, shipbuilding and off-shore industries.

The design of **POWERTEC®-i S RANGE** series is the one that truly stands out. It is ergonomic and efficient in every detail. Various configuration systems, separated wire-feeding units, intuitive display interface (7 color TFT), dedicated accessories, and many other features will meet all your industrial welding needs while enhancing your capabilities.



# POWERTEC®-iS RANGE



POWERTEC® i350S  
350A@50%



POWERTEC® i420S  
420A@100%



POWERTEC® i500S  
500A@60%



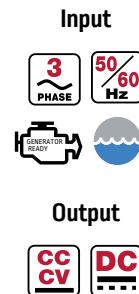
COOLARC® 26



LF 52D



LF 56D



**POWERTEC®-iS RANGE** is a brand new range of Lincoln Electric products based on the latest inverter platform, combining modularity, ease of use and optimal **MIG/MAG** or **MMA** welding performance with excellent power cost efficiency.

Three power sources: **i350S**, **i420S** and **i500S** with a choice of separate wire feeders, standard **LF 52D** for basic use, or the advanced **LF 56D** for more demanding applications, helps customer to fulfill every possible welding needs.

All **POWERTEC®-iS** have the option of water cooling by simply adding the new **COOLARC® 26**.



**CHOOSE LINCOLN ELECTRIC  
FOR COMPLETE SOLUTION  
FOR INDUSTRIAL USERS WITH  
NEW HEAVY DUTY DESIGN**

# NEW ERGONOMIC DESIGN



**Simple navigation**  
also when using  
welding gloves

**Practical handle** for effortless gripping  
even with gloves and safe movement  
of the machine



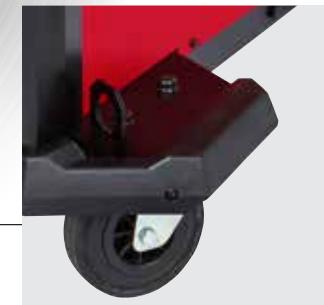
**Cable Management System** (option)  
For easy transportation of the  
whole welding system even with  
very long connection cable



**Power Source water  
cooled ready**  
(cooler COOLARC® 26  
as option)



**Rotatable wire feeder**  
Swivel on the power source enabling  
rotation of the wire feeder and  
setting it in any position



## Heavy duty undercarriage

- Extremely reliable and stable, passed incline stability tests on 15°
- Low gas cylinder entree makes loading very easy
- Quick and easy securing of the shielding gas cylinder

**Rubber bumpers** protecting feet  
and **4 lifting eyes** for easy hook-in  
and safe transportation

# LINCOLN RELIABILITY



**Cable connections on front** (in standard) and **back rear side** (in option)  
All cable connections can easily be made without tools



## Intermediate hose packages

Heavy-duty protective hose and military-quality plugs  
Strain reliefs on both ends to keep connections well protected  
A wide range of lengths to choose (up to 30m), water or air



**Practical, big storage locker inside the power source**  
with key lock, internal lights, for accessories like gun, gloves, rolls, contact tips, etc.

**Large wheels** for easily effortlessly overcome obstacles such as cables or thresholds

Very solid, stable, metal made construction

# RELIABLE WORKHORSES

## High duty cycle 420A/100% [i420S & i500S]

- High production efficiency
- Digital welding current control
- True HD tested – made for the harsh environmental conditions

## Inverter engine technology – ECO Friendly

- Lower power consumption thanks to high efficiency – energy cost saving
- Automatic power-saving modes [standby/shutdown function]
- Generator ready

## Lincoln Electric Industrial design – ready to use anywhere

- Safety class IP23, potted PCBs and no structural plastics
- 3 Year full parts and labor warranty



### Easy maintenance and servicing

Easy access to all components inside  
Software update via laptop or USB [LF 56D]

### Intelligent F.A.N. [Fan As Needed] in the inverter

Variable speed controlled fan [energy-saving]  
Low pollution and quiet fan noise



### Cooling tunnel design

– components arranged to protect against dust and dirt

## OPTIMIZED ERGONOMICS



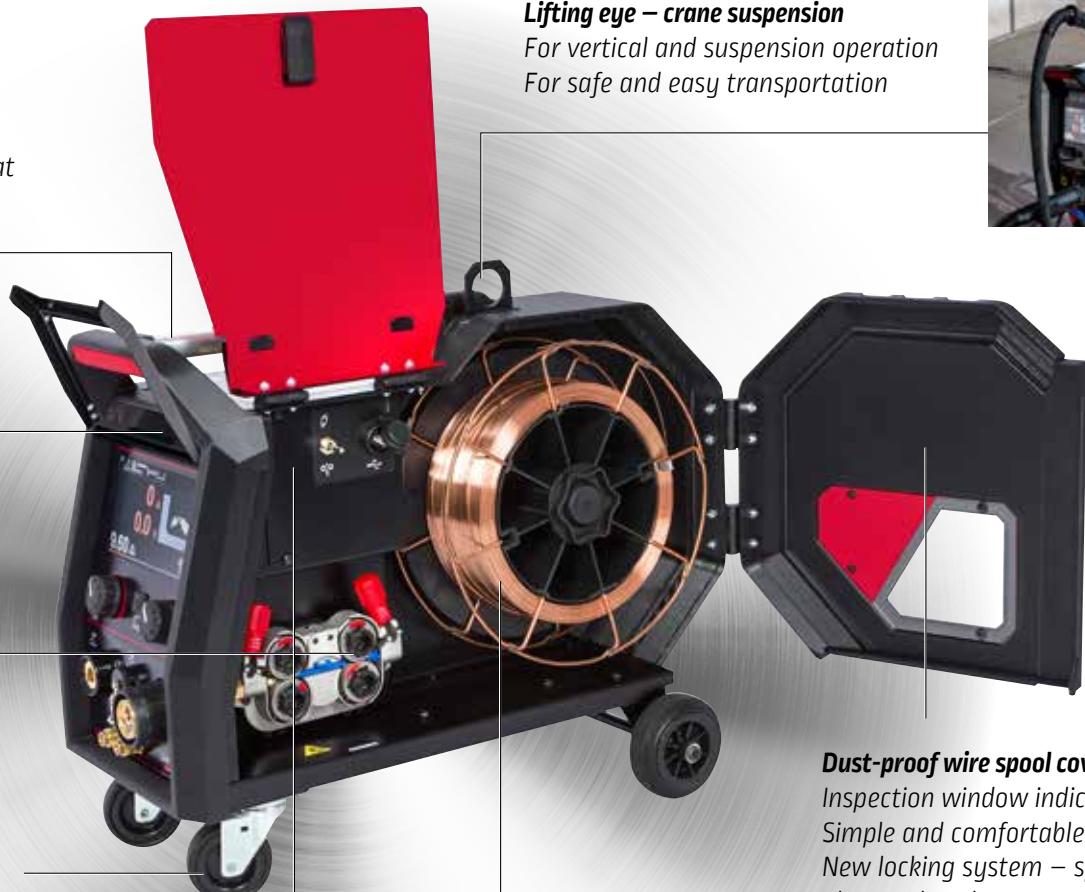
**Gun Holder:** always at hand, ready to work



**Professional wire feeding system**  
Four driven wire feed rolls  
Excellent wire feeding on every material  
Permanent internal lights  
Wire inching gas test toggle switch



**Flowmeter for shielding gas flow setting (option)**  
Precise adjustment directly on site  
Practical especially with long hose packages



**Full access for wire spool installation**



**Lifting eye – crane suspension**  
For vertical and suspension operation  
For safe and easy transportation

# STATE OF THE ART TECHNOLOGY IN WIRE FEEDING

## Professional wire feeding system – robust and precise

- 4 individually driven rolls for extremely stable wire feeding for various wire types
- Aluminum housing for a long service life
- Big roll diameter (37mm) for optimal wire feeding
- Simple, tool-free roll change
- Factory-fitted with rolls for 1,0 mm and 1,2 mm steel and stainless steel



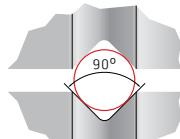
**Connection for drum feed** [optional adapter].  
Less need to change wire spools saves time

Steel	3 ÷ 5
Stainless steel	
Braze	
Flux cored	2,5 ÷ 3,5
Aluminium	1,5 ÷ 2,5

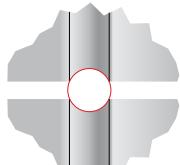
Wire feeder pressure set-up

3 ÷ 5	Steel
	Stainless steel
	Braze
2,5 ÷ 3,5	Flux cored
1,5 ÷ 2,5	Aluminium

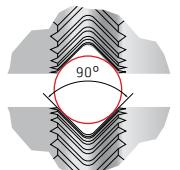
Individually adjustable contact pressure for the front and rear roll pair  
Differently set-up for aluminium, steel, stainless steel, braze, flux cored wire



V-groove for stainless steel, steel



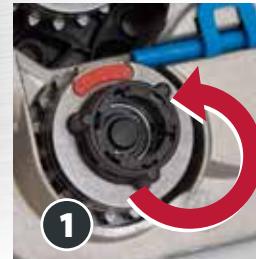
U-groove for aluminium



V-groove, knurled for flux cored wire



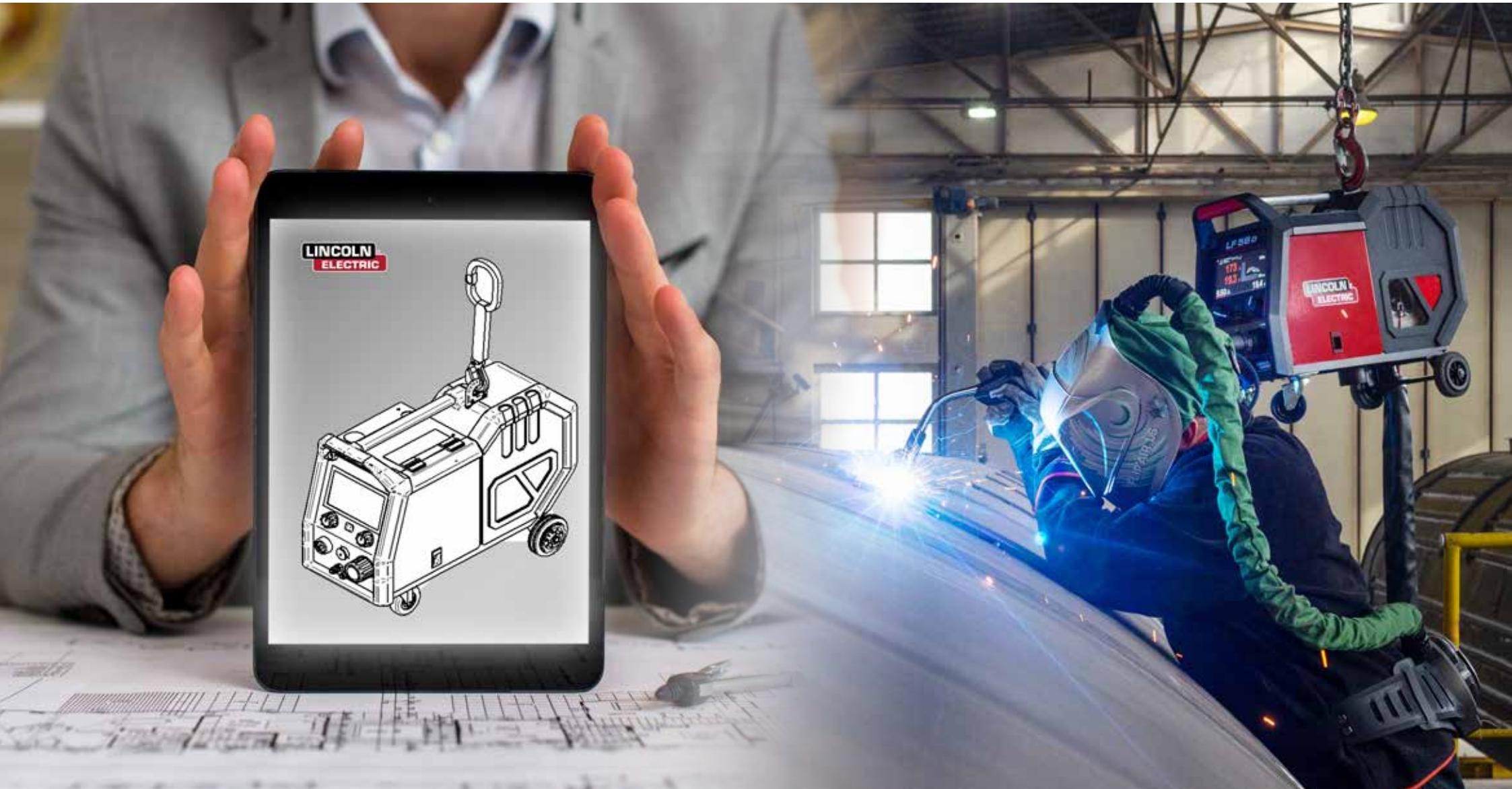
Color-coded for wire diameter differentiation



New locking system, quick exchange of roll and wire guides  
Simple, tool-free roll change – just few steps

- 1 Unlock the roll fastener
- 2 Unlock pressure arm
- 3 Exchange the roll

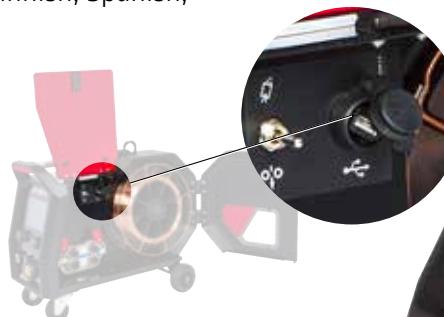
DESIGNED TO ENHANCE YOUR WELDING CAPABILITY



## INNOVATIVE INTUITIVE INTERFACE

- Two controls, one button for easy navigation
- Icon language for key commands
- Easy process and settings selection
- ARCFX™ – joint visualization
- Work point in material thickness (mm) / WFS / A
- Locking function / Limits / Memories / Jobs
- Interface available in languages: English, German, French, Polish, Finnish, Spanish, Italian, Russian, Dutch, Romanian, Slovakian, Hungarian, Czech, Turkish, Portuguese

# EASY COMMUNICATION



Auto

### AUTO-SETTINGS

Preset parameters to increase productivity



### USB CONNECTIVITY

Easy software update & diagnostics, weld log for quality monitoring

## MORE FUNCTIONS & FEATURES

NEW



### SPEAKER

Product operation (adjusting the encoders or pressing the button) and errors signaled by a sound.

NEW



### CLOCK & CALENDAR

Simple welding quality monitoring as weld log data recording on USB.

NEW



### NEW ENCODERS

for more precise adjustment

7" COLOR  
DISPLAY!



Simple navigation also when using welding gloves

## STANDARD USER INTERFACE

### User memory programs & welding process change:

- Simple and quick selection by pressing the button of 4 welding programs stored in user memory or 3 welding processes (GMAW, FCAW, SMAW)
- LEDs showing the selected process



### Quick and easy access to the most commonly used welding parameters:

- **Arc Controls** (depend on the welding program)
- Torch trigger mode **2-step / 4-step**
- Wire Feed Speed **Run-in** function
- **Burn-back** time



Sticker with description of all welding program numbers available.

# LF 56D vs LF52 D

Different feeders for different needs



## WELDING PROCESSES

	GMAW / FCAW	SYNERGIC	SMAW	CAG
LF 56D	✓	✓	✓	✓
LF 52D	✓	✓	✓	✓

LF 56D	Functions and features	LF 52D
7" Color TFT	UI type	LED's
✓	Speaker	—
✓	Clock and calendar	—
✓	ARC™FX (work point in A/mm)	—
✓	Display view configuration	—
✓	Auto settings	—
49	Memory / Jobs	[3+4]
✓	Limits	—
✓	Locking function	—
✓	Languages selection	—
✓	USB connectivity	—
✓	Media files (Support)	—
✓	Weld logs / History	—
✓	Cross-switch gun	—
✓	Push-Pull gun	—
✓	A/B procedure	—
✓	Quick trigger	—
✓	Software version	✓
✓	Factory reset	✓
✓	Arc Control	✓
✓	2T/4T Gun mode	✓
✓	Spot welding	✓
✓	Gas purge test	✓
✓	Cold Inch test	✓
✓	Preflow /Postflow time	✓
✓	Run-in WFS	✓
✓	Start procedure	—
✓	Crater procedure	✓
✓	Burnback time	✓
✓	Hot Start [SMAW]	✓
✓	Arc Force [SMAW]	✓

# COOLARC® 26

## More functions and features



(Back side view)

**Built-in handle**  
for easy transportation

**Cooler fully controlled by power source:**  
AUTO/ON/OFF for better energy savings and extended service life



**Coolant filter**  
keep coolant clean

**LED lights inside reservoir**  
for better visibility of the coolant level

**Flow sensor inside**  
for gun protection



**Simple Connection and Easy Installation**

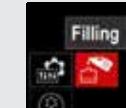
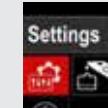


**New COOLARC® 26**  
cooler fully controlled by power source

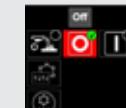


Cooler Menu is available when cooler is connected

**Settings: 3 Modes of operation available:**



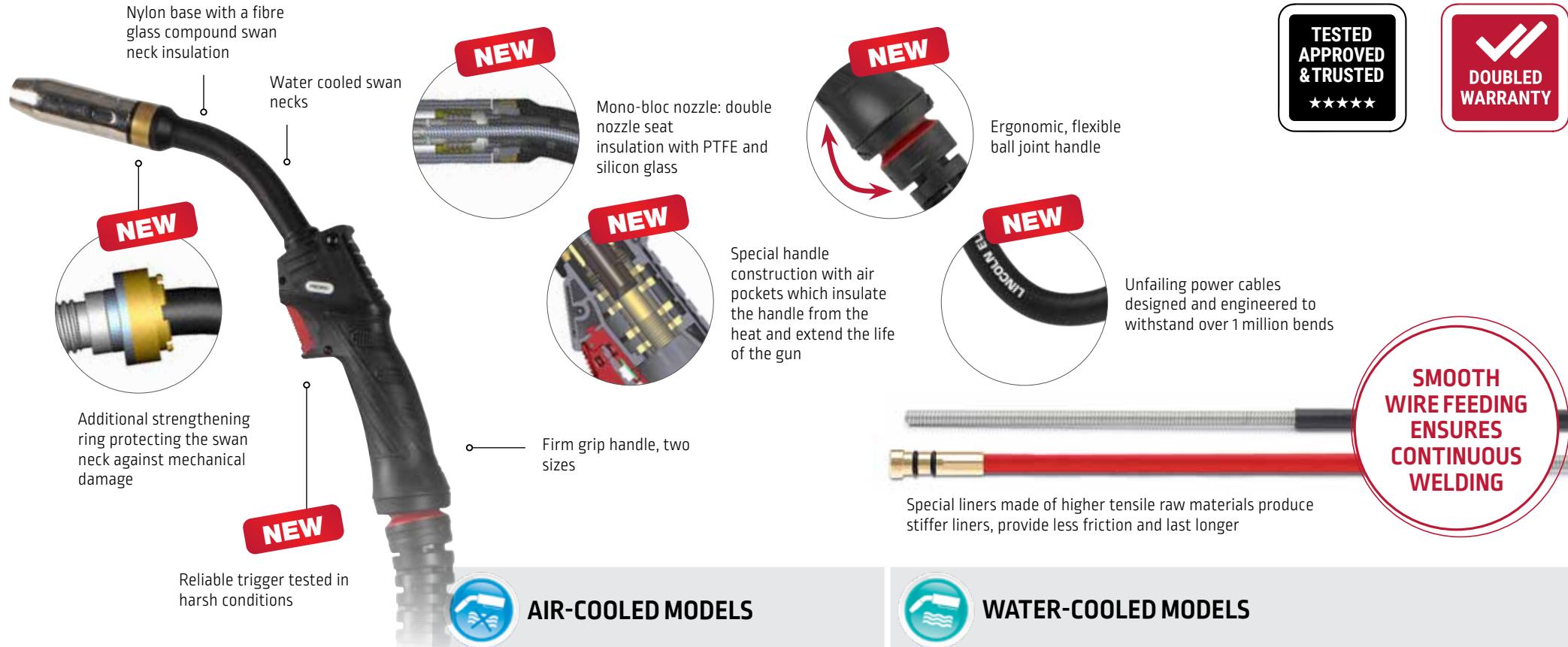
1. AUTO
2. OFF
3. ON



**Filling Procedure**  
step by step detail filling instruction



# PREMIUM MIG WELDING GUNS – LINCGUN® PROMIG™



## AIR-COOLED MODELS



## WATER-COOLED MODELS

	LG PROMIG 300	LG PROMIG 400	LG PROMIG 330W	LG PROMIG 400W	LG PROMIG 500W
Duty cycle	CO <sub>2</sub> M21	300 A @ 60% 270 A @ 60%	400 A @ 60% 370 A @ 60%	330 A @ 100% 300 A @ 100%	400 A @ 100% 370 A @ 100%
Wire diameter options		1.0-1.2 mm	1.0-1.6 mm	0.8-1.0 mm	1.0-1.2 mm
Original equipment	Contact tip Nozzle	1.2 mm steel Ø 16 mm	1.2 mm steel Ø 16 mm	1.0 mm steel Ø 14 mm	1.2 mm steel Ø 16 mm
Handle size, other feature		Large	Large	Small	Small
Typical application	Vessel, manufacture, steel structures, boiler making, structural steelwork	Thick plates, heavy duty welding when water cooling is not possible	Precision and high-intensity applications	Intensive applications such as boiler making, structural steelwork, mechanical welding	Thick plates, heavy duty welding
	Reference				
3 m	<b>W000345066-2</b>	<b>W000345072-2</b>	<b>W000345063-2</b>	<b>W000345069-2</b>	<b>W000345075-2</b>
4 m	<b>W000345067-2</b>	<b>W000345073-2</b>	<b>W000345064-2</b>	<b>W000345070-2</b>	<b>W000345076-2</b>
5 m	<b>W000345068-2</b>	<b>W000345074-2</b>	<b>W000345065-2</b>	<b>W000345071-2</b>	<b>W000345077-2</b>

# LGS2 MIG GUNS

Simple and reliable, this range is adapted to the most common applications.



EN 60974-7

Is the European norm requirement for MIG guns.

## Choose your gun

Rating calculated using CO<sub>2</sub>

- Air cooled
- Water cooled
- Dedicated guns

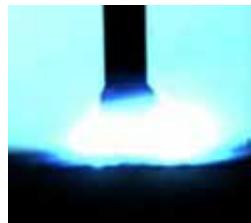
Series	Size	Rate	200A	230A	250A	270A	330A	350A	420A	500A
LGS2	250G	60%								
	240G									
	360G									
	505W		100%							

TO ORDER		
3 m	4 m	5 m
W10429-25-3M	W10429-25-4M	W10429-25-5M
W10429-24-3M	W10429-24-4M	W10429-24-5M
W10429-36-3M	W10429-36-4M	W10429-36-5M
W10429-505-3M	W10429-505-4M	W10429-505-5M

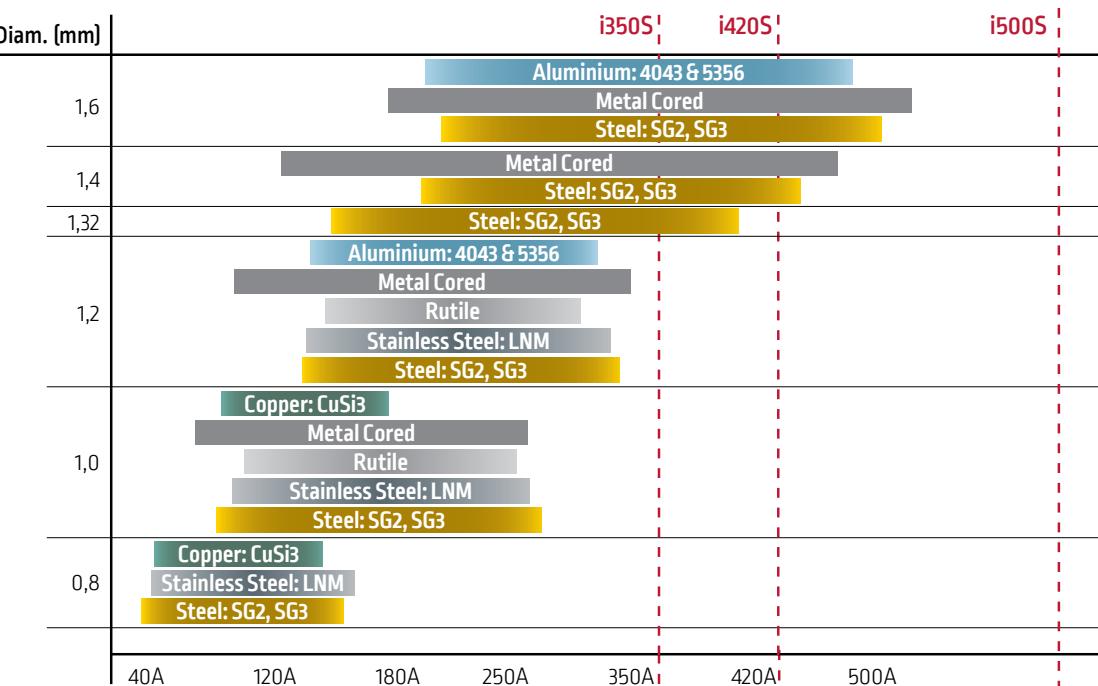
MODEL		AIR COOLING			WATER COOLING	
		LGS2-250G		LGS2-240G	LGS2-360G	
Duty cycle (CO <sub>2</sub> shielding gas)		230 A @ 60%		250 A @ 60%	330 A @ 60%	
Applications		Thin plates, light fabrication		Thin plates, light fabrication	Vessel manufacture, steel structures	
Wire diameter		Up to 1,2 mm		Up to 1,2 mm	Up to 1,6 mm	Up to 2,4 mm
Original equipment	Contact tip	1,0 mm		1,0 mm	1,2 mm	1,2 mm
	Conical nozzle	15 mm		12,5 mm	16 mm	16 mm

# PREMIUM ARC PERFORMANCE

- **ARC INITIATION** – Repeatable arc ignition with outstanding arc characteristics.
- **ARC STABILITY** – Excellent arc stability, ensuring a smooth droplet transfer, with reduced spatter.
- **ARC DYNAMICS** – Rapid parameter adjustment allowing variability under welding conditions.



## MIG/MAG Wire



## Stick Electrodes



## Gouging Electrodes



## Processes

GMAW

FCAW-G

FCAW-S

SMAW

CAG

## Welding of:

Steel

Stainless Steel

Low Alloy Steel

Aluminium

MIG Brazing

# CONNECTIONS CONFIGURATION

## STANDARD

Connection of the intermediate hose package in **front** of the power source



## OPTIONAL

Connection of the intermediate hose package on the **back** of the power source



	Item type	Item description	Item # (Air)	Item # (Water)	
1	Machine	POWERTEC® i350S	K14183-1		
		POWERTEC® i420S	K14184-1		
		POWERTEC® i500S	K14185-1		
2	Hose package	Air 1 m	K14198-PG <sup>(1)</sup>	—	
		Air 3 m	K14198-PG-3M	—	
		Air 5 m	K14198-PG-5M	—	
		Air 10 m	K14198-PG-10M	—	
		Air 15 m	K14198-PG-15M	—	
		Air 20 m	K14198-PG-20M	—	
		Air 25 m	K14198-PG-25M	—	
		Air 30 m	K14198-PG-30M	—	
		Water 1 m	—	K14199-PGW <sup>(1)</sup>	
		Water 3 m	—	K14199-PGW-3M	
		Water 5 m	—	K14199-PGW-5M	
		Water 10 m	—	K14199-PGW-10M	
		Water 15 m	—	K14199-PGW-15M	
		Water 20 m	—	K14199-PGW-20M	
		Water 25 m	—	K14199-PGW-25M	
		Water 30 m	—	K14199-PGW-30M	
3	Feeder	LF 52D	K14335-1		
		LF 56D	K14336-1		
4	Cooler	Coolarc® 26	—	K14182-1	
		LG PROMIG	see accessories		
5	MIG gun				
	LGS2				
6	Option	Cable Management KIT	K14201-1		
		Gas flow meter KIT	K14175-1		
7	Option				
	Output connection KIT (i350S)	K14196-1			
8	Option	Output connection KIT (i420S / i500S)	K14202-1		
9	Option	Water connection KIT	—	K14208-1 <sup>(2)</sup>	

<sup>(1)</sup> only for connection on the back and requires the installation of the option 8

<sup>(2)</sup> option requires only for water hose package longer than 1 m

# ACCESSORIES

		<b>Powertec®</b>	<b>i350S</b> K14183-1	<b>i420S</b> K14184-1	<b>i500S</b> K14185-1
LF 52D	<b>K14335-1</b>	•	•	•	
LF 56D	<b>K14336-1</b>	•	•	•	
Coolarc® 26	<b>K14182-1</b>	•	•	•	
Freezcool 9,6l	<b>W000010167</b>	•	•	•	
Output socket connection kit [PT i350S]	<b>K14196-1</b>	•	—	—	
Output socket connection kit [PT i420S / i500S]	<b>K14202-1</b>	—	•	•	
Cable management kit	<b>K14201-1</b>	•	•	•	
Gas supply heater kit [Powertec-i]	<b>K14176-1</b>	•	•	•	
Ground cable 400A – 70 mm <sup>2</sup> – 5 / 10 / 15 m	<b>GRD-400A-70-xM*</b>	•	—	—	
Ground cable 600A – 95 mm <sup>2</sup> – 5/10 m	<b>GRD-600A-95-xM*</b>	•	•	•	
Remote control RC-7 Advanced	<b>K14203-1</b>	•	•	•	
<b>Intermediate hose package AIR</b>					
Cable pack 5-pin G – 70 mm <sup>2</sup> – 1 m	<b>K14198-PG</b>	•	•	•	
Cable pack 5-pin G – 70 mm <sup>2</sup> – 3 / 5 / 10 m	<b>K14198-PG-xM*</b>	•	•	•	
Cable pack 5-pin G – 95 mm <sup>2</sup> 15 / 20 / 25 / 30 m	<b>K14198-PG-xM*</b>	•	•	•	
<b>Intermediate hose package WATER</b>					
Cable pack 5-pin W – 95 mm <sup>2</sup> – 1 m	<b>K14199-PGW<sup>[1]</sup></b>	•	•	•	
Cable pack 5-pin W – 95 mm <sup>2</sup> – 3 / 5 / 10 / 15 / 20 / 25 / 30 m	<b>K14199-PGW-xM*</b>	•	•	•	
Water connection kit	<b>K14208-1<sup>[2]</sup></b>	•	•	•	

<sup>[1]</sup> only for connection on the back and requires the installation of the K14196-1 or K14202-1

<sup>[2]</sup> option requires only for water hose package longer than 1 m

## LINC GUN®

LG PROMIG 300 – MIG gun air cooled – 3 / 4 / 5 m	<b>W000345066-2 / W000345067-2 / W000345068-2</b>	•	•
LG PROMIG 400 – MIG gun air cooled – 3 / 4 / 5 m	<b>W000345072-2 / W000345073-2 / W000345074-2</b>	•	•
LG PROMIG 330W – MIG gun water cooled – 3 / 4 / 5 m	<b>W000345063-2 / W000345064-2 / W000345065-2</b>	•	•
LG PROMIG 400W – MIG gun water cooled – 3 / 4 / 5 m	<b>W000345069-2 / W000345070-2 / W000345071-2</b>	•	•
LG PROMIG 500W – MIG gun water cooled – 3 / 4 / 5 m	<b>W000345075-2 / W000345076-2 / W000345077-2</b>	•	•
LGS2 360 G – MIG gun air cooled – 3 / 4 / 5 m	<b>W10429-36-xM*</b>	•	•
LGS2 505 W – MIG gun water cooled – 3 / 4 / 5 m	<b>W10429-505-xM*</b>	•	•

## Options

Gas flow meter kit [Powertec-i]	<b>K14175-1</b>	•	•
Wire feeder DRUM quick adapter	<b>K14204-1</b>	•	•
Cart HD for feeders	<b>K14350-1</b>	•	•
Remote control RC-7 Advanced	<b>K14203-1</b>	•	•
Sling with hook	<b>K14378-1</b>	•	•

\*x = length [m]



**COOLARC® 26**  
K14182-1



**REMOTE CONTROL**  
**RC-7 ADVANCED**  
K14203-1



**CABLE**  
**MANAGEMENT KIT**  
K14201-1



**WATER**  
**CONNECTION KIT**  
K14208-1<sup>[2]</sup>



## INTERMEDIATE HOSE PACKAGE

**AIR**  
K14198-PG [1m]  
K14198-PG-xM\*

**WATER**  
K14199-PGW [1m]  
K14199-PGW-xM\*

# ACCESSORIES

## Wire Guides

Wire Guide Set Blue 0,6-1,6	<b>0744-000-318R</b>
Wire Guide Set Red 1,8-2,8	<b>0744-000-319R</b>
Euro Wire Guide 0,6-1,6	<b>D-1829-066-4R</b>
Euro Wire Guide 1,8-2,8	<b>D-1829-066-5R</b>

## Roll Kit for solid wires

Roll Kit 0,6 / 0,8VT Fl37 4 rolls (green/blue)	<b>KP14150-V06/08</b>
Roll Kit 0,8 / 1,0VT Fl37 4 rolls (blue/red)	<b>KP14150-V08/10</b>
Roll Kit 1,2 / 1,6VT Fl37 4 rolls (orange/yellow)	<b>KP14150-V12/16</b>
Roll Kit 1,6 / 2,4VT Fl37 4 rolls (yellow/grey)	<b>KP14150-V16/24</b>
Roll Kit 0,9 / 1,1VT Fl37 4 rolls	<b>KP14150-V09/11</b>
Roll Kit 1,4 / 2,0VT Fl37 4 rolls	<b>KP14150-V14/20</b>

## Roll Kit for aluminium wires

Roll Kit 0,6 / 0,8AT Fl37 4 rolls (green/blue)	<b>KP14150-U06/08A</b>
Roll Kit 0,8 / 1,0AT Fl37 4 rolls (blue/red)	<b>KP14150-U08/10A</b>
Roll Kit 1,0 / 1,2AT Fl37 4 rolls (red/orange)	<b>KP14150-U10/12A</b>
Roll Kit 1,2 / 1,6AT Fl37 4 rolls (orange/yellow)	<b>KP14150-U12/16A</b>
Roll Kit 1,6 / 2,4AT Fl37 4 rolls (yellow/grey)	<b>KP14150-U16/24A</b>



## Each item # contains:

- metal wire guide for Euro socket
- 4 rolls
- plastic wire guide set

# SPECIFICATIONS

Product	Item Number	Primary Voltage	Max Input Power (kVA)	Input I <sub>1max</sub> (A)	Fuse size (A)	Rated Output	Efficiency	Idle Power	Weight (kg)	Dimensions HxWxL (mm)	Protection Class	Item contains
POWERTEC® i350S	K14183-1	400V/3Ph 50/60Hz ± 15%	15	21	25	350A@50% 300A@100%	> 85%	< 35W	68	932 x 560 x 925	IP23	USB with operator's manual Ground cable with clamp (3m) Gas hose (2m) Chain (for gas cylinder protection) Slow-blow fuse 2A (2pcs)
POWERTEC® i420S	K14184-1		19	27	32	420A@100%			78			
POWERTEC® i500S	K14185-1		23	34	32	500A@60% 420A@100%			79			
Product	Item Number	Rated Output	Feeding System	WFS Range (m/min)	Solid Wires (mm)	Aluminum Wires (mm)	Cored Wires (mm)	Weight (kg)	Dimensions HxWxD (mm)	Protection Class	Item contains	
LF 52D (Standard)	K14335-1	500A@60% 420A@100%	4 Rolls Ø37mm	1,5 ÷ 22	0,8 ÷ 1,6	1,0 ÷ 1,6	0,9 ÷ 1,6	17	516 x 302 x 642	IP23	USB with operator's manual Rolls 1,0/1,2 for solid wire	
LF 56D (Advanced)	K14336-1							17,7				
Product	Item Number	Input (V)	Cooling power @1L/min (kW)	Reservoir capacity (l)	Maximum Pressure (MPa)	Weight (kg)	Dimensions W x L x D (mm)	Protection Class	Item contains			
COOLARC® 26	K14182-1	230/400V ± 15% 50/60 Hz	0,84	4	0,47	18	260 x 150 x 680	IP23	USB with operator's manual Blue and Red water hoses Black hose for filling procedure			