

POWERTEC®-iS RANGE

i350S · i420S · i500S



www.lincolnelectric.eu

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®-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 LF52D for basic use, or the advanced LF56D for more demanding applications, helps customer to fulfill every possible welding needs.

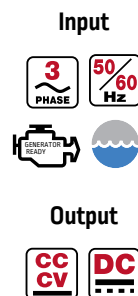
All **POWERTEC®-iS** have the option of water cooling by simply adding the new **COOLARC® 26**.



POWERTEC® i350S
350A@50%

POWERTEC® i500S
500A@60%

POWERTEC® i420S
420A@100%



COOLARC® 26



LF 52D

LF 56D



**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

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



**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



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 (LF56D)

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

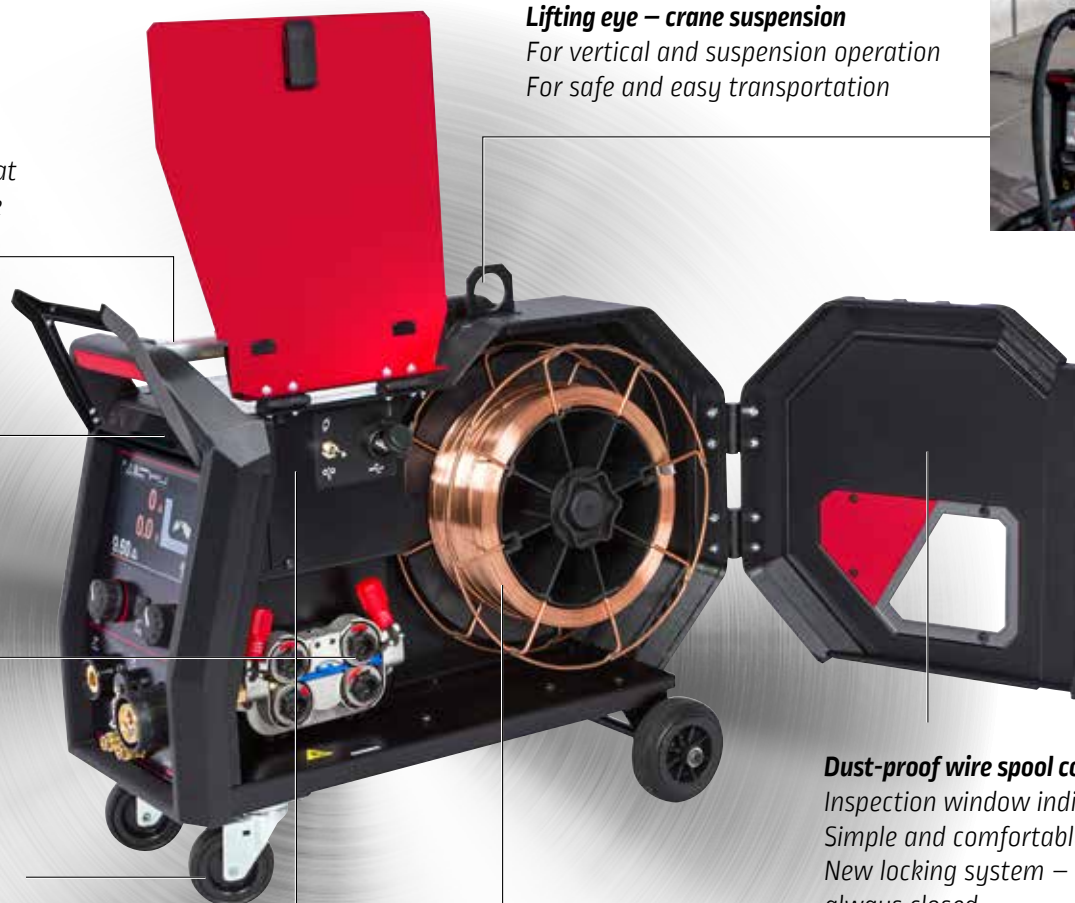


Professional wire feeding system

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



Lifting eye – crane suspension

For vertical and suspension operation
For safe and easy transportation



Front UI protection cover
keep your UI safe

Dust-proof wire spool cover

Inspection window indicates level of wire spool
Simple and comfortable spool change
New locking system – spool cover stays always closed



Full access for wire spool installation

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 1,0mm and 1,2mm steel and stainless steel



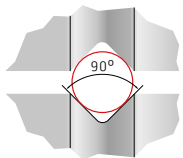
Connection for drum feed (optional adapter).
Less need to change wire spools saves time

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

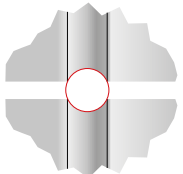
Wire feeder pressure set-up

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

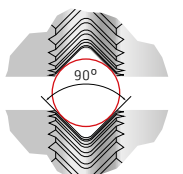
Individually adjustable contact pressure for the front and rear roll pair
Differently set-up for aluminium, steel, stainless steel, braze, flux cored wire



V-groove
for stainless steel, steel

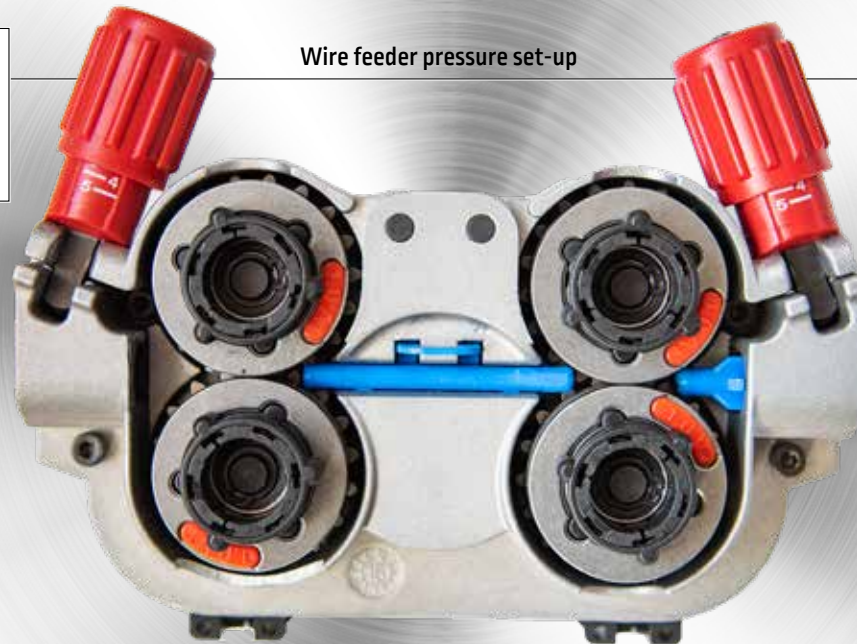


U-groove for
aluminium



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

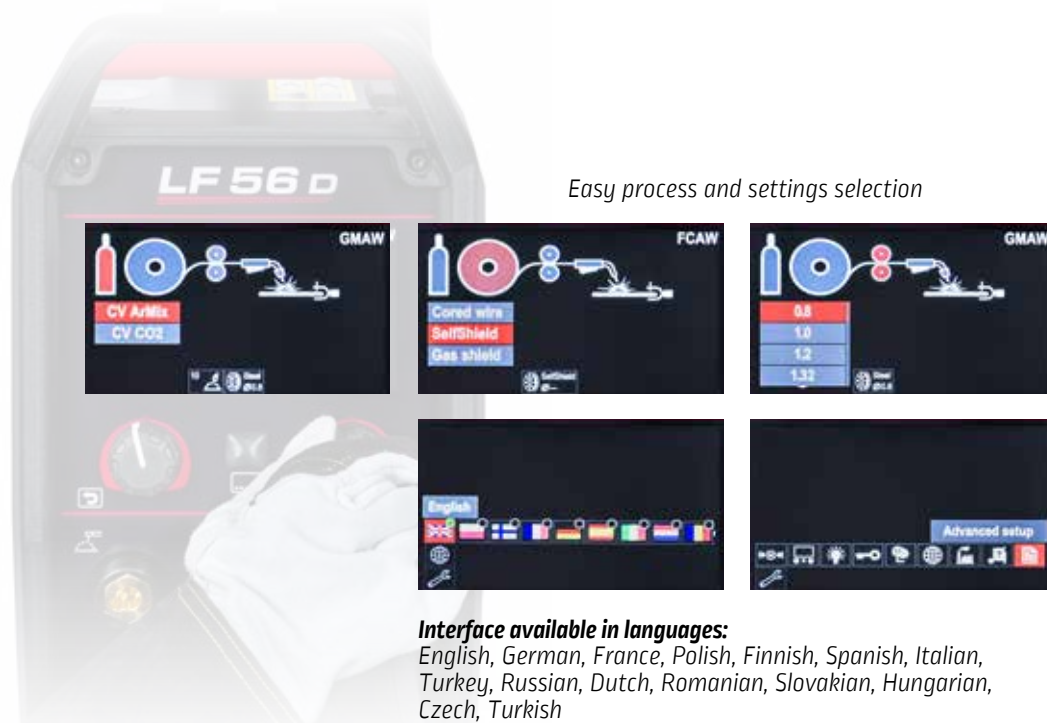


DESIGNED TO ENHANCED YOUR WELDING CAPABILITY



INNOVATIVE INTUITIVE INTERFACES

Simple navigation also when using welding gloves



LF56D

Innovative and easy communication

- Two controls, one button for easy navigation
- Icon language for key commands
- ARCFX™ – joint visualization
- Work point in material thickness [mm] / WFS / A
- Locking function / Limits / Memories / Jobs
- Languages (tailor-made language version possible to add)

7" COLOR DISPLAY!



More functions & features

Auto

AUTO-SETTINGS

Preset parameters to increase productivity



USB CONNECTIVITY

Easy software update & diagnostics, weld log for quality monitoring

LF 52D

Intuitive and simple in use – reduced time for training

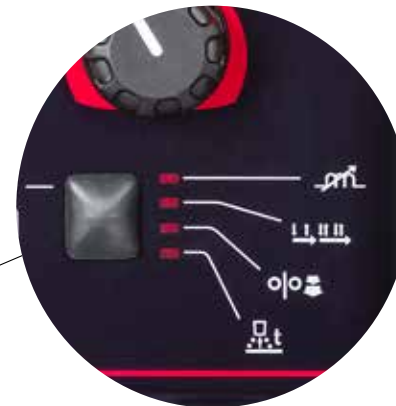
Welding Process & Shielding Gas Selection

- Welding characteristics optimized in terms of welding process (GMAW/FCAW or SMAW) selection and shielding gas type for the best dynamics and minimal spatter
- Simple and quick selection by pressing the button
- LEDs showing the selected process



Direct access to the most commonly used welding parameters:

- **Arc dynamics** [choke effect] from soft to hard
- Torch trigger mode **2-step / 4-step**
- **Run-in WFS** – sets the wire feed speed from the time the torch trigger is pressed until an arc is established
- **Burn-back time** – prevents the wire from sticking in the puddle and prepares the end of the wire for the next arc start



Welding flowchart for easiest setting of all welding parameters



STANDARD VS ADVANCED

Comparison of functions and features



LF 52D		LF 56D
LED's	UI type	7" Color TFT
–	Display view configuration	✓
–	Auto settings	✓
–	Memory Jobs	✓ [50]
–	Limits	✓
–	Locking function	✓
–	Languages	✓
–	USB connectivity	✓
–	Media files (Support)	✓
–	Weld Logs / History	✓
–	Quick Triger	✓
–	Push-Pull gun	✓
–	Cross-switch gun	✓
–	A/B procedure	✓
✓	Software version	✓
✓	Factory Reset	✓
✓	Inductance	✓
✓	2T/4T Gun mode	✓
✓	Spot welding	✓
✓	Gas purge test	✓
✓	Cold Inch test	✓
✓	Preflow time	✓
✓	Run-in WFS	✓
–	Start procedure	✓
✓	Crater procedure	✓
✓	Burnback time	✓
✓	Postflow time	✓
✓	Hot Start (SMAW)	✓
✓	Arc Force (SMAW)	✓
STANDARD	Welding Processes	ADVANCED
✓	GMAW / FCAW	✓
✓	Stick mode	✓
–	Synergic	✓
–	CAG	✓



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

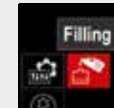
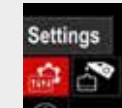


New COOLARC® 26 cooler fully controlled by power source

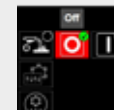


Cooler Menu is available when cooler is connected

Settings: 3 Modes of operation available:



1. AUTO
2. OFF
3. ON



Filling Procedure

step by step detail filling instruction



LGS2 MIG GUNS

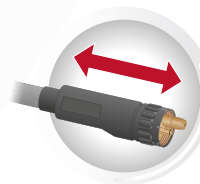
Simple and reliable, this range is adapted to the most common applications.



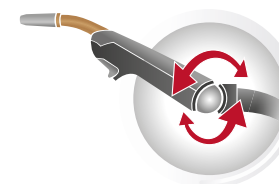
Wear parts compatible with the most common standard in Europe.



Extra-flexible cable.



Extra length rear cable support ensures smooth and consistent wire feeding.



Easy pivoting handle.



Is the European norm requirement for MIG guns.

Choose your gun

Rating calculated using CO₂

- Air cooled
- Water cooled
- Dedicated guns

Series	Size	Rate	200A	230A	250A	270A	330A	350A	420A	500A
LGS2	250G									
	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	LGS2-505W
Duty cycle [CO ₂ shielding gas]		230 A @ 60%	250 A @ 60%	330 A @ 60%	500 A @ 100%
Applications		Thin plates, light fabrication	Thin plates, light fabrication	Vessel manufacture, steel structures	Heavy duty, high production
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

WATER COOLED PUSH PULL GUN

PP 405 WC (PREMIUM GUN)

LGPPW 405 8M K10413-PPW405-8M

350A-400A



LGPPW 405 8M

Water cooled
100% (10 min.)
Mix 350A
CO₂ 400A
Ø 0,8-1,6
Poti 1x10kΩ
Plug 12 pins

TIP HOLDER

KP10456-6 (L=25) (HD)

KP10456-2 (L=25)

GAS DIFFUSER

KP10408-WT

KP10408-BR

KP10408-CR
(ceramic)

CONTACT TIP KP10445-size (M8x30)

	Ø	Part.n.
ECu	1,0 mm	KP10445-10
	1,2 mm	KP10445-12
CuCrZr	1,0 mm	KP10445-10C
	1,2 mm	KP10445-12C
Al (Ecu)	1,0 mm	KP10445-10A
	1,2 mm	KP10445-12A

NOZZLE

KP10461-5
(Ø=16mm)

KP10461-10
(Ø=14mm)

KP10460-5
(Ø=20mm)

		0,8 mm	0,9 mm	1,0 mm	1,2 mm	1,4 mm	1,6 mm
	ECu, M8 x 30 mm	—	—	KP10445-10	KP10445-12	—	0,8-1,6
	CuCrZr, M8 x 30 mm	—	—	KP10445-10C	KP10445-12C	—	—
	Al (ECu), M8 x 30 mm	—	—	KP10445-10A	KP10445-12A	—	—
	Feed rolls	S53131-1	S53131-6	S53131-2	KP10445-12A	S53131-5	S53131-4
	Feed rolls, for soft wire	—	—	S53131-7	S53131-8	—	S53131-9

Wire guide sets for torch neck

		0,8 - 1,0 mm	1,2 mm	1,6 mm	—	—
	PA Liner with outlet guide for PP-LG	KP10417-8	KP10417-9	KP10417-10	—	—
	Bronze liner for PP-LG, L= 300 mm	KP10417-11	KP10417-12	KP10417-13	—	—
	Liner for PP-LG, L= 300 mm	KP10417-14	KP10417-15	KP10417-16	—	—

Wire guides for cable assemblies

		—	—	—	0,8 - 1,6 mm	1,0 - 1,6 mm
	Liner w/o insulation 8m	—	—	—	KP10411-8M	—
	PA-liner 8m	—	—	—	—	KP10430-8M

Liner collet
KP10436-4

O-Ring
KP10470-2

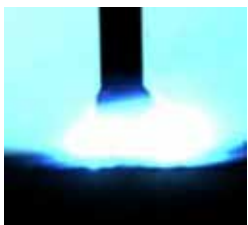
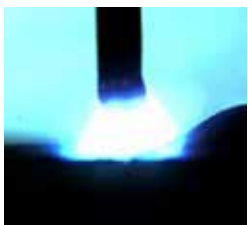
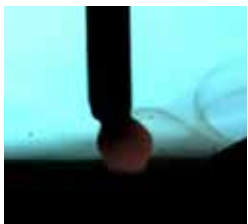
Top Features

High quality rugged linc welding gun
built to Lincoln Electric standards

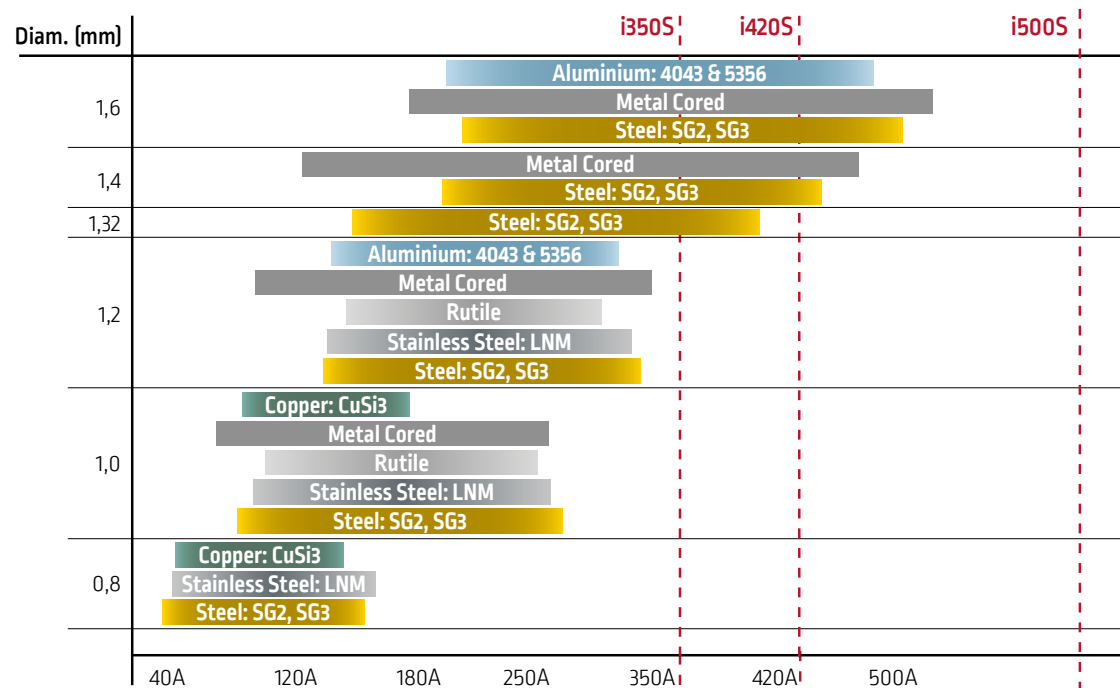


PREMIUM ARC PERFORMANCE

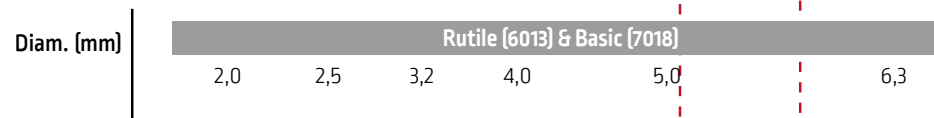
- **ARC INITIATION** – Repeatable arc ignition with outstanding arc characteristics.
- **ARC STABILITY** – Excellent arc stability, ensuring a smooth droplet transfer, with reduced spatter.
- **ARC DYNAMICS** – Rapid parameter adjustment allowing variability under welding conditions.



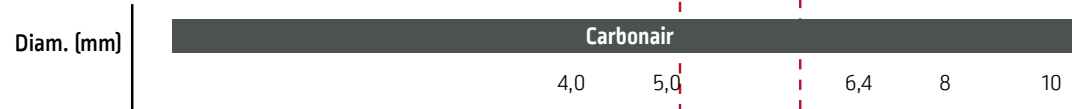
MIG/MAG Wire



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 1m	K14198-PG	—
		Air 5m	K14198-PG-5M	—
		Air 10m	K14198-PG-10M	—
		Air 15m	K14198-PG-15M	—
		Air 20m	K14198-PG-20M	—
		Air 25m	K14198-PG-25M	—
		Air 30m	K14198-PG-30M	—
		Water 1m	—	K14199-PGW
		Water 5m	—	K14199-PGW-5M
		Water 10m	—	K14199-PGW-10M
		Water 15m	—	K14199-PGW-15M
		Water 20m	—	K14199-PGW-20M
		Water 25 m	—	K14199-PGW-25M
		Water 30m	—	K14199-PGW-30M
3	Feeder	LF-52D	K14186-1	
		LF-56D	K14187-1	
4	Cooler	Coolarc-26	—	K14182-1
5	MIG gun	LGS2	see accessories	
6	Option	Cable Management KIT	K14201-1	
7	Option	Gas flow meter KIT	K14175-1	
		Output connection KIT (i350S)	K14196-1	
8	Option	Output connection KIT (i420S/i500S)	K14202-1	
9	Option	Water connection KIT	—	K14208-1

ACCESSORIES

		Powertec®		
		i350S	i420S	i500S
		K14183-1	K14184-1	K14185-1
LF 52D	K14186-1	•	•	•
LF 56D	K14187-1	•	•	•
Coolarc® 26	K14182-1	•	•	•
Freezcool 9,6l	W000010167	•	•	•
Output socket connection kit (PT i350S)	K14196-1	•	—	—
Output socket connection kit (PT i420/500S)	K14202-1	—	•	•
Cable management kit	K14201-1	•	•	•
Water connection kit	K14208-1	•	•	•
Gas supply heater kit (Powertec-i)	K14176-1	•	•	•
Ground cable 400 A – 70 mm ² – 5 / 10 / 15 m	GRD-400A-70-xM*	•	—	—
Ground cable 600A – 95mm ² – 5/10 m	GRD-600A-95-xM*	•	•	•

Intermediate hose package AIR

Cable pack 5-pin G – 70 mm ² – 1 m	K14198-PG	•	•	•
Cable pack 5-pin G – 70 mm ² – 5 / 10 m	K14198-PG-xM*	•	•	•
Cable pack 5-pin G – 95 mm ² 15 / 20 / 25 / 30 m	K14198-PG-xM*	•	•	•

Intermediate hose package WATER

Cable pack 5-pin W – 95 mm ² – 1 m	K14199-PGW	•	•	•
Cable pack 5-pin W – 95 mm ² – 5 / 10 / 15 / 20 / 25 / 30 m	K14199-PGW-xM*	•	•	•

		Linc Feed	
		STANDARD	ADVANCED
		LF52D	LF56D
LINC GUN™		K14186-1	K14187-1
LGS2 360 G – MIG gun air cooled – 3 / 4 / 5 m	W10429-36-xM*	•	•
LGS2 505 W – MIG gun water cooled – 3 / 4 / 5 m	W10429-505-xM*	•	•
Gas flow meter kit (Powertec-i)	K14175-1	•	•

*x = length (m)



COOLARC® 26
K14182-1



FREEZCOOL
W000010167



CABLE MANAGEMENT KIT
K14201-1



WATER CONNECTION KIT
K14208-1



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

Roll Kit for solid wires	
Roll Kit 0,6 / 0,8VT FI37 4 rolls (green/blue)	KP14150-V06/08
Roll Kit 0,8 / 1,0VT FI37 4 rolls (blue/red)	KP14150-V08/10
Roll Kit 1,2 / 1,6VT FI37 4 rolls (orange/yellow)	KP14150-V12/16
Roll Kit 1,6 / 2,4VT FI37 4 rolls (yellow/grey)	KP14150-V16/24
Roll Kit 0,9 / 1,1VT FI37 4 rolls	KP14150-V09/11
Roll Kit 1,4 / 2,0VT FI37 4 rolls	KP14150-V14/20

Roll Kit for aluminium wires	
Roll Kit 0,6 / 0,8AT FI37 4 rolls (green/blue)	KP14150-U06/08A
Roll Kit 0,8 / 1,0AT FI37 4 rolls (blue/red)	KP14150-U08/10A
Roll Kit 1,0 / 1,2AT FI37 4 rolls (red/orange)	KP14150-U10/12A
Roll Kit 1,2 / 1,6AT FI37 4 rolls (orange/yellow)	KP14150-U12/16A
Roll Kit 1,6 / 2,4AT FI37 4 rolls (yellow/grey)	KP14150-U16/24A

Roll Kit for cored wires	
Roll Kit 1,2 / 1,6RT FI37 4 rolls (orange/yellow)	KP14150-V12/16R
Roll Kit 1,4 / 2,0RT FI37 4 rolls	KP14150-V14/20R
Roll Kit 1,6 / 2,4RT FI37 4 rolls (yellow/grey)	KP14150-V16/24R
Roll Kit 0,9 / 1,1RT FI37 4 rolls	KP14150-V09/11R
Roll Kit 1,0 / 1,2RT FI37 4 rolls (– /orange)	KP14150-V10/12R



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 _{max} (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
LF52D (Standard)	K14186-1	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
LF56D (Advanced)	K14187-1							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

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company® is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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