

# THE NEXT TIG GENERATION

INVERTEC® 275TP • INVERTEC® 300TP

# TPS

WeldTech



**LINCOLN**  
ELECTRIC

# THE NEXT TIG GENERATION

## Processes

- GTAW
- SMAW
- Gouging (only Invertec 300TP)

## Materials

- Steel
- Stainless steel
- Low alloy steel

## Applications

- General fabrication
- Heavy fabrication
- Structural
- Transportation
- Chemical processing
- Maintenance and repair
- Shipbuilding
- Offshore
- Pipeline

**INVERTEC 275TP** and **300TP** is a new generation TIG inverter range which is the next step in professional welding, offering excellent welding processes and high performance, to increase productivity. The new INVERTEC® is designed with the latest energy-saving technology and is ready to work in the most difficult environments, due to its unique design. To achieve excellent welding results, INVERTEC® utilises both digital and built-in communication systems and devices such as the USB port, making it easy to monitor and track welding operations.

Modular system offering superior mobility to facilitate the most demanding welding applications, within a variety of industry segments.

- Power Sources with a 40% high duty cycle
- New compact, light **COOLARC® 27** offering greater cooling efficiency
- 2-wheeled, solid metal **CART 24**



# RUGGED RELIABILITY

## High duty cycle at 40 %

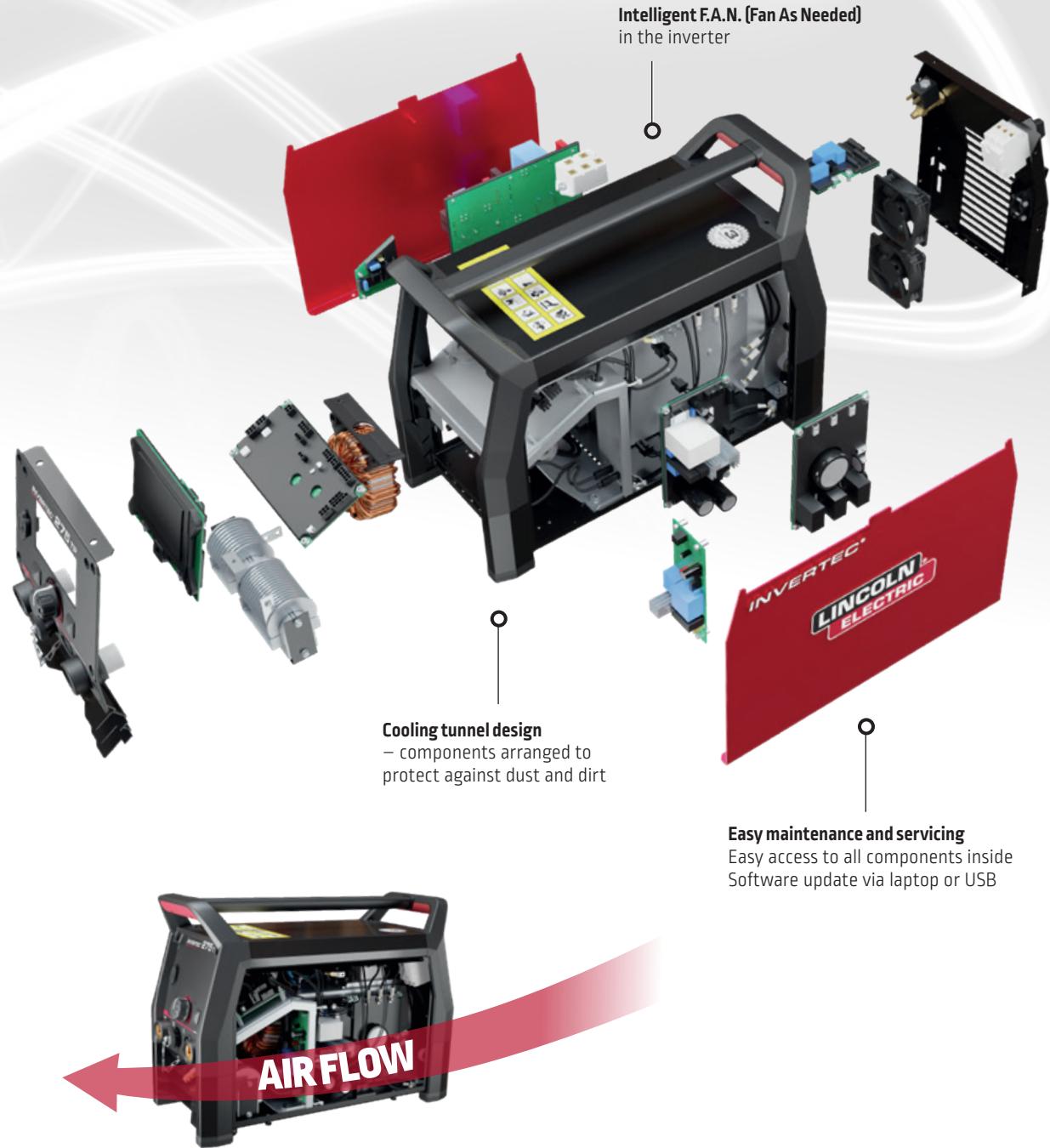
- High production efficiency
- Digital welding current control
- True HD tested – made for harsh environmental conditions

## Inverter engine technology – ECO Friendly

- Lower power consumption due to high efficiency – energy cost saving
- Automatic power-saving modes (standby/shut-down function)
- Generator ready

## Lincoln Electric Industrial design – ready to use anywhere

- **Double-sided fully potted PCB**
- Metal construction
- Protection class IP23
- **3 year full parts and labour warranty**



# INVERTEC® 275TP & 300TP

## Key technical data

- 400V ±15%, 3Ph 50/60Hz, generator ready
- Light weight – approx. 16kg
- **Invertec 275 TP: 270A@40% / 230A@60% / 200A@100%**
- **Invertec 300 TP: 300A@40% / 260A@60% / 230A@100%**
- Inverter platform product
- Idle power 19W and efficiency > 85%
- GTAW & STICK
- **GTAW manual and Synergic**
- **SMAW manual and Synergic Pulse**
- Intelligent F.A.N. (Fan As Needed)
- Customer Support
- USB Connectivity
- Voltage Reduce Device (VRD)
- Cellulosic 6010 stick capability
- **Industrial grade:** IP23, 3 Years Warranty, no limitation
- Gouging capability (only Invertec 300TP)



## Included as standard

- Input cable 3 m (no plug)
- Gas hose 2 m
- Ground cable with clamp 3 m
- Metallic clips to fix the hose
- USB key with user manual
- Quick Start papers
- Front cover (only Invertec 300TP)



LIGHT AND  
PORTABLE

# HIGH PERFORMANCE

Front cover (standard for 300TP, optional for 275TP)

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



USB connectivity

New encoder for more precise adjustment.

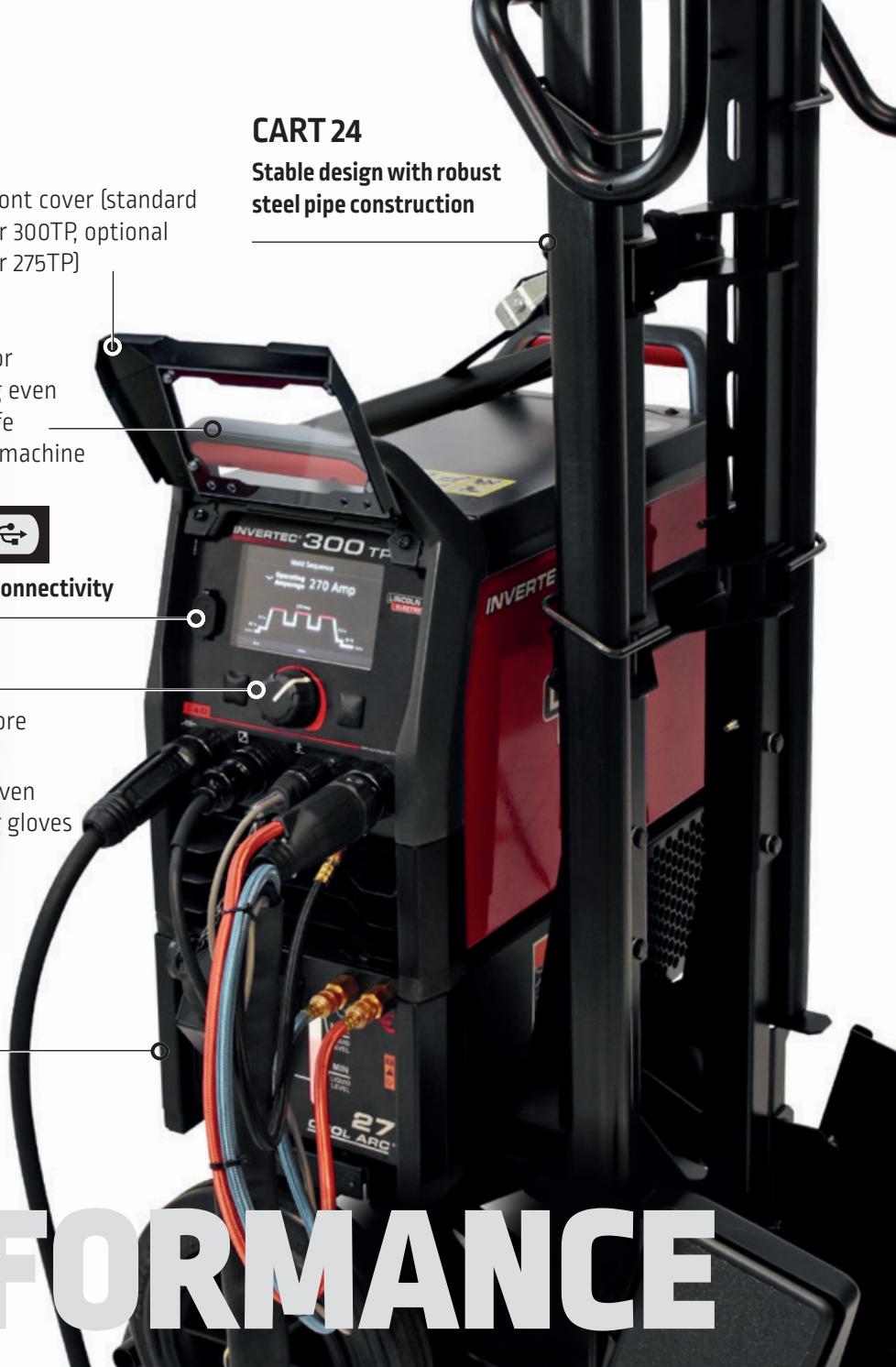
Simple navigation even when using welding gloves

COOL ARC® 27

New stronger cooler

CART 24

Stable design with robust steel pipe construction



# MODULAR DESIGN, FLEXIBLE CONFIGURATION



# MODULAR CONCEPT MAKES EVERYDAY WELDERS WORK EASIER

Cart 24 – developed to store all accessories and makes everyday welding work easier.



Helmet rack



Torch holder

Practical storage



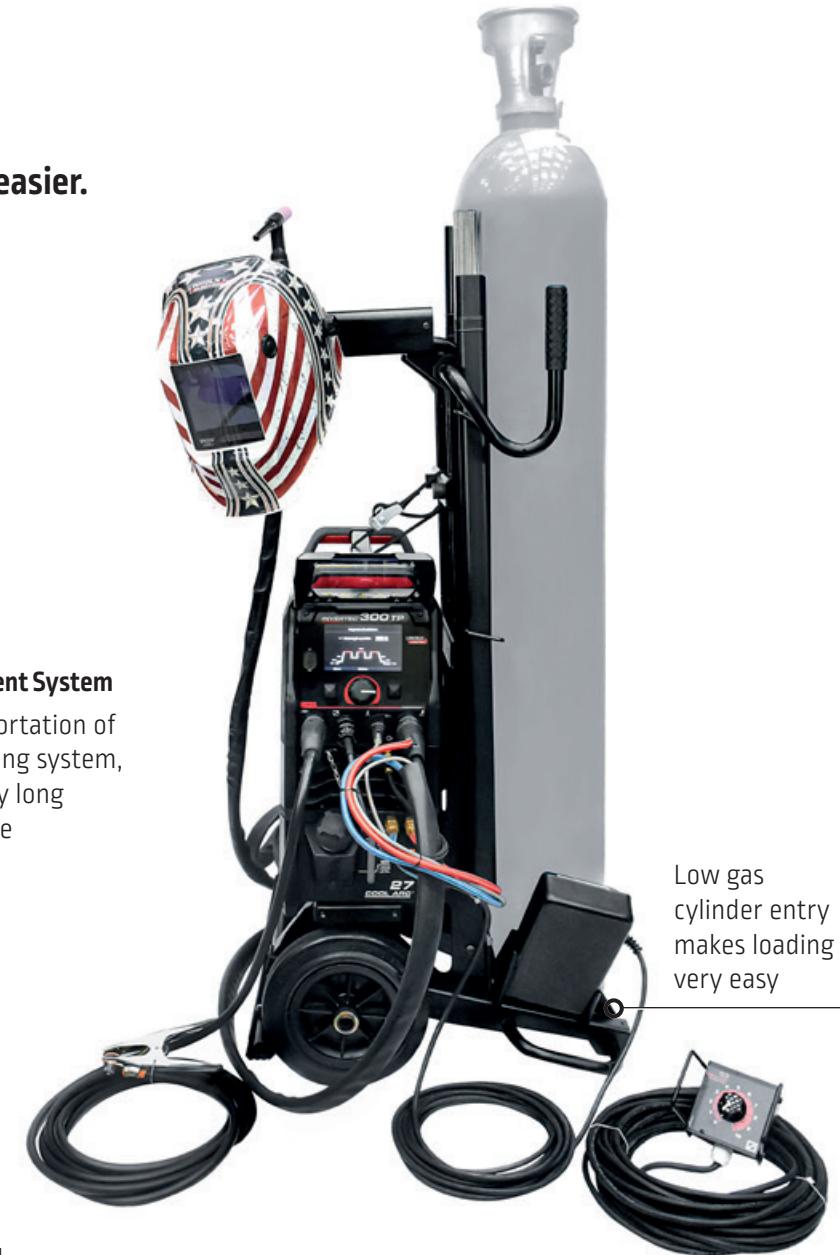
Storage for electrodes

## Cable Management System

For easy transportation of the whole welding system, even with a very long connection cable



Holder for foot control pedal



Low gas cylinder entry makes loading very easy



## COOL ARC® 27

NEW

- High cooling power 850W
- Reservoir capacity 2.2 l
- Strong pump to support proper cooling (max. pressure 7 bar)
- Protection class IP23

## USB CONNECTIVITY

Analysis and quick decision making

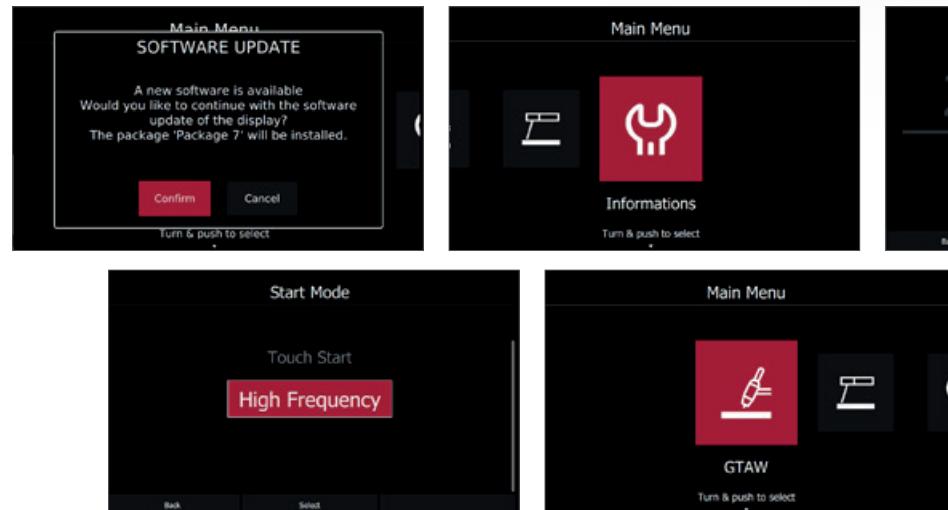
- Full system update & diagnostics
- Transfer settings between machines.
- Simple welding data collection on USB (start time, average current, average voltage, arc time, welding mode/job number, job name).
- Weld quality data monitoring (data on TFT user interface screen or CSV file transfer)
- Software updating

Simple  
Connection and  
Easy Installation



# INNOVATIVE & INTUITIVE INTERFACE

- Two buttons, one control knob for easy navigation
- Icon language for key commands
- Easy process and settings selection
- Locking function / Limits / Memories / Jobs
- Interface available in languages: English, German, French, Polish, Finnish, Spanish, Italian, Russian, Dutch, Romanian, Norwegian, Swedish, Czech, Turkish, Portuguese



200 Amp

New encoders for more precise adjustment

Colour display

1.5 s

10 %



# EASY COMMUNICATION

© 275TP, INVERTEC® 300TP – THE NEXT TIG GENERATION



# THE NEXT TIG PROCESSES MOVE TO THE NEXT LEVEL OF TIG WELDING

## Tack for thin

- Fast and accurate tacking with minimal heat input avoiding any weld deformation
- **Ideal for spot welding activities, multiple and repetitive where a uniform, controlled look is essential**
- Uses heat to melt and fuse the surfaces of metal work pieces, which tends to make them more durable
- Greater corrosion resistance for materials

UNIFORM  
AND  
CONTROLLED  
LOOK

# EASY AND QUALITATIVE WELDING

## GUIDED SETUP

helps non-expert TIG welders to:

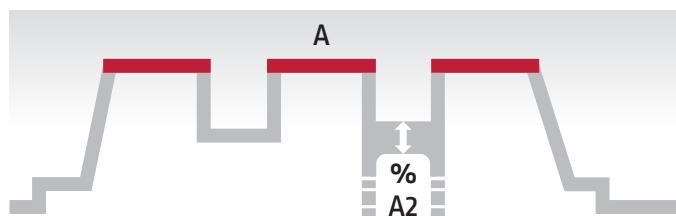
- Stabilise the arc
- Reduce the heat input
- Optimise the pulse
- Speed up the welding process
- Control the overall operation of the machine
- Save on current, filler material and gas
- Limit distortion on thin sheet metal

Following the indications on the screen, selecting the material type, thickness and type of joint the **Guide Setup** will set all correct parameters for an easy and qualitative weld



## BI-LEVEL TIG FUNCTION

The possibility to use higher amps to add preheat and then weld with lower amps, moving between the two pre-set current values as many times as you like, simply pressing the torch button trigger.



With this sequence the arc is started in the 4S sequence, this means that steps 1 and 2 are the same. Quickly press and release the TIG torch trigger. The equipment will switch the current level from Set to A2 (background current). Each time this trigger action is

repeated, the current level will switch between the two levels. Press and hold the TIG torch trigger when the main part of the weld is complete. The machine will now decrease the output current at a controlled rate, or downslope time, until the Crater current is reached. This Crater current can be maintained as long as necessary.



Move quickly between 2 pre-set current values as many times as you like, simply pressing the torch button trigger

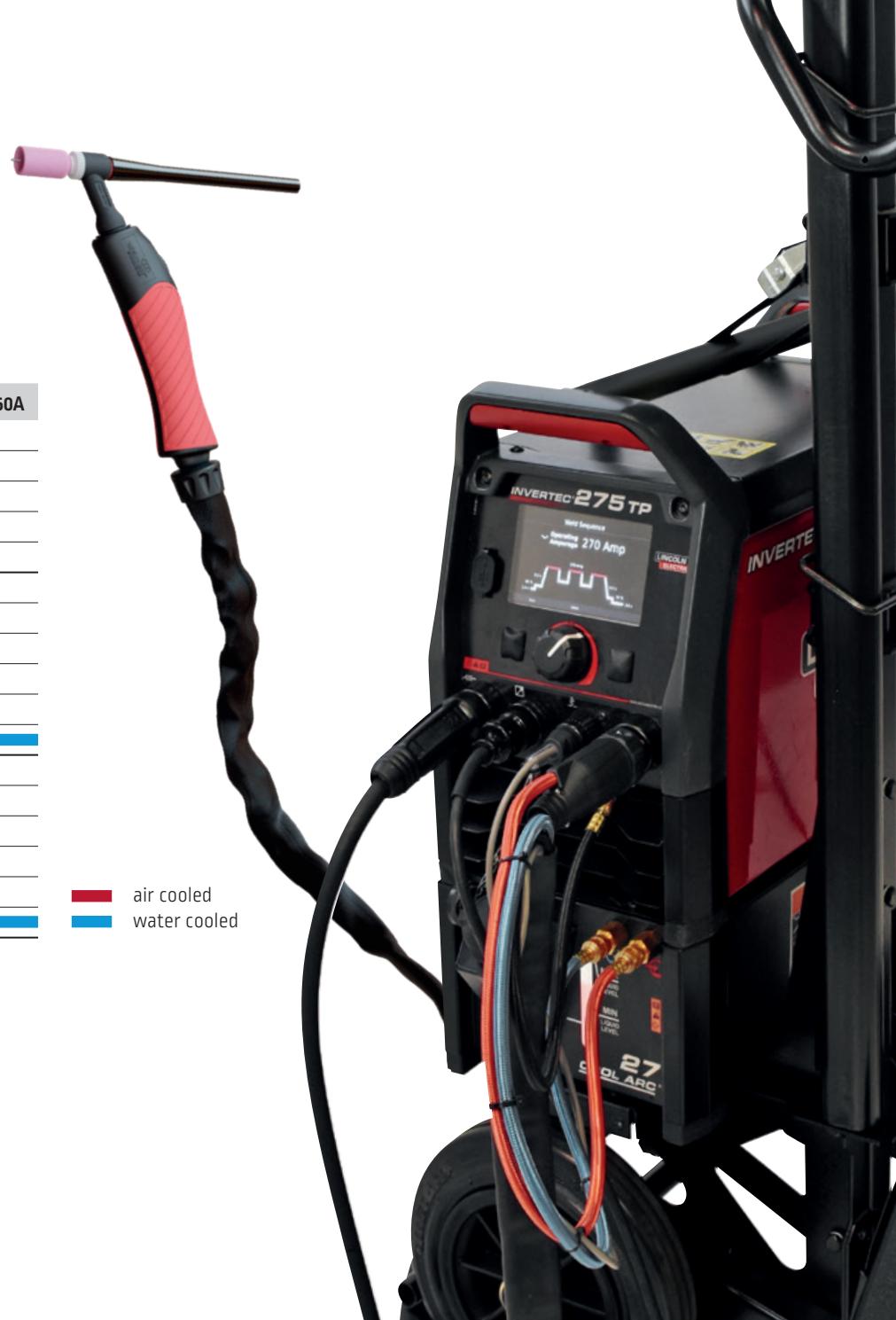
# TIG AND MMA

One machine, two processes

## TIG torches

Series	Type	Rate	Application	110A	125A	135A	150A	180A	200A	220A	250A	350A	450A	
WTT2	9	35%	Professional											
	17													
	26	100%												
	18													
	20													
PROTIG IIIS	10	60%	Industrial											
	20													
	30													
	40													
	35W	100%												
	40W													
PROTIG NGS	10													
	20	60%												
	30													
	40													
	35W	100%												
	40W													

— air cooled  
— water cooled



Product	Item number	Rated output (A)		Welding current range (A)	Open circuit voltage [V]
		GTAW	SMAW		
• <b>Weld quality data monitoring</b> Invertec® 275 TP	K14242-1	270A@40%	250A@35%		
		230A@60%	220A@60%		
		200A@100%	180A@100%	1-270	72
• <b>Software updating</b> Invertec® 300TP	K14387-1	300A@40%	300A@25%		[11V VRD]
		260A@60%	250A@60%		
		230A@100%	210A@100%	5-300	

# OPTIONS ON PROTIG NGS

The choice of the most demanding customers



## Adjustable heads

Optional, adjustable torch bodies are available. Designed to make welding in limited access locations easier and comes with small and large heads mounted on air or water cooled bodies.



## Customise your PROTIG NG torch with the following body bends and heads:

Air cooled body bent [10/20]	W000279381
Water cooled body bent [10W]	W000279382
Head PROTIG NG 10/10W	W000279383
Head PROTIG NG 20	W000279384

## Modular system

All EB torches come with a single button module as standard. Additional control modules can be ordered.

### Single button



### Other buttons



Horizontal potentiometer	Vertical potentiometer	3 buttons module	Blade
W000279370 [4.7 Kohm]	W000279246 [4.7 Kohm]	WP10529-2	W000279245
WP10529-3 [10 Kohm]	WP10529-4 [10 Kohm]		

# TIG RODS

## MILD STEEL TIG RODS

### LNT 26

AWS A5.18: ER70S-6  
ISO 636-A: W 42 5 W3Si

Shielding gas  
I1: Inert gas Ar (100%)

- Solid rod for welding general construction in mild steel.
- Smooth bead appearance.

Product Name	Ø (mm)	Length (mm)	Weight per tube (kg)	Item Number
LNT 26	1.6	1000	5	T16T005R6S00
	2.0			T20T005R6S00
	2.4			T24T005R6S00
	3.0			T32T005R6S00

## STAINLESS STEEL TIG RODS

### LNT 304LSi

AWS A5.9: ER308LSi  
ISO 14343-A: W 19 9 LSi

Shielding gas  
I1: Inert gas Ar (100%)

- Used for welding of 304 and 304L stainless steel grades. The weld metal provides good corrosion resistance to intergranular attack from a range of liquid media. It is used for a wide range of applications including pipework and plate fabrication, vessel production etc.

Product Name	Ø (mm)	Length (mm)	Weight per tube (kg)	Item Number
LNT 304LSi	1.2	1000	5	580198
	1.6			582512
	2.0			582796
	2.4			582802
	3.2			583045

### LNT 316LSi

AWS A5.9: ER316LSi  
ISO 14343-A: W 19 12 3 LSi

Shielding gas  
I1: Inert gas Ar (100%)

- Used for welding 316 and 316L stainless steel grades, in a wide range of applications including pipes and plates fabrication. The increased silicon content results in increased weld pool fluidity to give a smooth deposit appearance. The low carbon content increases the resistance to intergranular corrosion.

Product Name	Ø (mm)	Length (mm)	Weight per tube (kg)	Item Number
LNT 316LSi	1.0	1000	5	580259
	1.2			580235
	1.6			583915
	2.0			583922
	2.4			582819
	3.2			583571

# TUNGSTEN ELECTRODES

A complete range of tungsten electrodes:

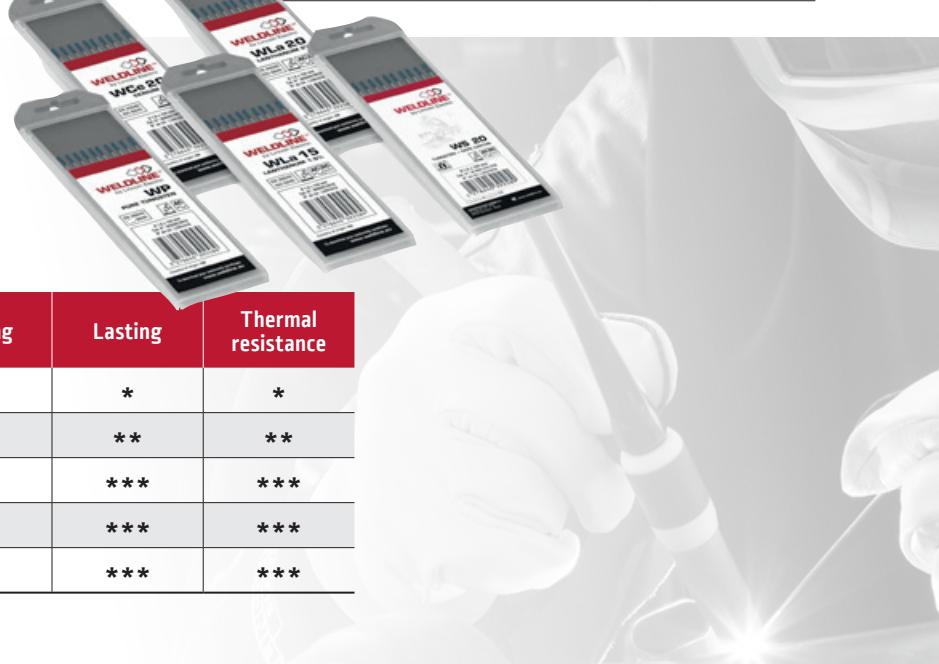
### Product advantages:

- Very high life cycle
- Perfect arc ignition
- Very stable arc
- Tip longevity

- Pure tungsten
- Tungsten + cerium
- Tungsten + lanthanum
- Tungsten + rare earths

Type	Metal		Arc stability	Striking	Lasting	Thermal resistance
	Aluminium	Steel & Stainless steel				
WP – pure tungsten	*		**	*	*	*
WC20 – Cerium 2%		*	**	*	**	**
WL 15 – Lanthanum 1.5%	**	***	**	***	***	***
WL 20 – Lanthanum 2%	*	***	**	***	***	***
WS 20 – Rare earths 2%	*	*	**	***	***	***

\*\*\* Excellent    \*\* Good    \* Average



# ACCESSORIES

## OPTIONS

Cool Arc® 27  
Freezcool (9.6 l cooling liquid)

Cart 24  
Extension Cord 15 m \*

Front cover  
Cart's interface for power source

## TIG PREMIUM TORCHES AIR

	5 m	8 m
PROTIG IIIS 10 RL	W000382715-2	W000382716-2
PROTIG IIIS 20 RL	W000382717-2	W000382718-2
PROTIG IIIS 30 RL	W000382719-2	W000382720-2
PROTIG IIIS 40 RL	W000382721-2	W000382722-2
PROTIG NGS 10 EB	W000278394-2	W000278395-2
PROTIG NGS 20 EB	W000278396-2	W000278397-2
PROTIG NGS 30 EB	W000278398-2	W000278399-2
PROTIG NGS 40 EB	W000278400-2	W000278401-2

## TIG PREMIUM TORCHES WATER

	5 m	8 m
PROTIG IIIS 35W RL	W000382725-2	W000382726-2
PROTIG IIIS 40W RL	W000382727-2	—
PROTIG NGS 35W EB	W000278404-2	W000278405-2
PROTIG NGS 40W EB	W000278406-2	W000278407-2

## TIG TORCHES AIR

	4 m	8 m
WTT2 9 RL	W000278879	W000278922
WTT2 9 EB	W000278875	—
WTT2 17 RL	W000278884	W000278917
WTT2 17 EB	W000278882	W000278919
WTT2 26 RL	W000278890	W000278913
WTT2 26 EB	W000278887	W000278915

## TIG TORCHES WATER

	4 m	8 m
WTT2 18W RL	W000278898	W000278899
WTT2 18W EB	W000278896	W000278901
WTT2 20W RL	W000278894	W000278905
WTT2 20W EB	W000278892	W000278909

## TORCHES ACCESSORIES

Horizontal potentiometer	WP10529-3
Vertical potentiometer	WP10529-4
Up and Down buttons	WP10529-2

## REMOTE CONTROLS

Remote control	K10095-1-15M
Foot Amptrol™	K870

\* Only 2 Extension Cord for a maximum total length of 45 m can be used



TIG RODS



COOL ARC® 27  
K14334-1



FREEZCOOL  
W000010167



CART 24  
K14191-1



CART'S INTERFACE  
FOR POWER SOURCE  
K14384-1



FRONT COVER  
K14383-1



FOOT AMPTROL™  
K870

REMOTE CONTROL  
K10095-1-15M



PROTIG IIIS      PROTIG NGS      WTT2

# TECHNICAL SPECIFICATION

## POWER SOURCE

Product	Item number	Primary voltage	Fuse size (A)	I1eff (A)	I1max (A)	Max. input power (kW-kVA)	Rated output (A)		Welding current range (A)	Open circuit voltage (V)	Temperature range		EMC class	Weight (kg)	Dimensions H x W x D (mm)	Protection class
							GTAW	SMAW			Operating	Storage				
Invertec® 275TP	K14243-1	400V +/- 15% 3Ph	16	11.5	17.2	8.6 kW-9.8 kVA	270A@40% 230A@60% 200A@100%	250A@35% 230A@60% 180A@100%	5-270	72 [11V VRD]	-10°C to +40°C	-25°C to +55°C	A	16	360 x 230 x 498	IP23
Invertec® 300TP	K14387-1					11,1kW 12,2 kVA	300A@40% 260A@60% 230A@100%	300A@25% 250A@60% 210A@100%	5-300					16,4		

## COOLER

Product	Item number	Primary voltage	Cooling power @1l/min	Recommended coolant	Reservoir capacity (l)	Maximum pressure (MPa)	Temperature range		EMC class	Weight (kg)	Dimensions H x W x D (mm)	Protection class
							Operating	Storage				
Cool Arc® 27	K14334-1	565Vdc	850W	FREEZCOOL	2.2	7	-10°C to +40°C	-25°C to +55°C	A	8	160 x 230 x 498	IP23

## CART

Product	Item number	Max. gas cylinder diameter (mm)	Max. gas cylinder height (mm)	Wheels diameter (mm)	Weight (kg)	Dimensions H x W x D (mm)	Other features
Cart 24	K14191-1	240	1700	250	33.8	1180 x 540 x 600	Low gas cylinder entry Drawer for storage of consumables Integrated cable management allowing for a neat work area Remote control and TIG rod housings Vertical design to save space in shop environments