

MADE IN GERMANY



# SMART WELDING

For Industry, Production, and Assembly.

[www.lorch.eu](http://www.lorch.eu)

**LORCH**  
smart welding

## SMART WELDING

Innovative welding technology for more than 60 years.  
More than 400 sales partners and specialist dealers in  
60 countries. Quality made in Germany.

True Lorch.



## THE SMARTEST SOLUTION IS THE ONE THAT GETS YOU THE FARTHEST.

The growing importance of welding as a quality and economic factor in production drives demands to the welding systems. Not only do they have to be fast, precise, and efficient but they should be intuitive and easy to operate as well. And, of course, the result must live up to your high demands.

This is why innovative solutions that lead us onto new paths for optimally mastering your daily challenges are in high demand. In other words: What you need are solutions that help you weld better.

That is exactly the kind of welding systems that we at Lorch put all of our experience, our knowledge, and our passion into developing to live up to our demand to "quality made in Germany".

This catalogue contains everything you will need for successful welding, from mobile battery-powered solutions to high-end industrial systems with the Lorch Speed processes. Start bringing the future of welding to your company today by using our perfect introduction into digitalisation and robotics.

As you can see, there are many facets to smart welding. This catalogue introduces them all.

Truly smart. True Lorch.

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The arc for maximum profitability

# MIG-MAG WELDING

## Our solutions for maximum efficiency during MIG-MAG welding:

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## THE SPEED WELDING PROCESSES DESIGNED BY LORCH. SPEED TRANSLATES TO PRODUCTIVITY.

### The Lorch speed processes.

#### SpeedPulse XT – Extra fast. Extra low-spatter. Extra proficient handling.

SpeedPulse XT turns you into the undisputed Master of the Arc. This is assured by the patented control technology of the Lorch S series. It combines the new process and all of the benefits of the earlier SpeedPulse welding process.

Instead of making him break out in a sweat during pulse welding, the SpeedPulse XT afford the welder such extra freedoms as the ability to influence the arc by changing the distance between torch and workpiece. And, it delivers this type of speed and accuracy in every pulse phase.

These properties allow the welder to guide the arc more safely and intuitively and to transfer even the slightest correction into the welding process without any delay. The S series, thereby, produces results that you can see as well as feel.

When combined with the exceptionally robust and stable properties of the arc, this means: improved handling, higher quality, and very low to insignificant levels of spatter, reducing the amount of necessary rework to an absolute minimum. This is what we call welding at the pulse of time.



#### SpeedArc XT – deeply impressive.

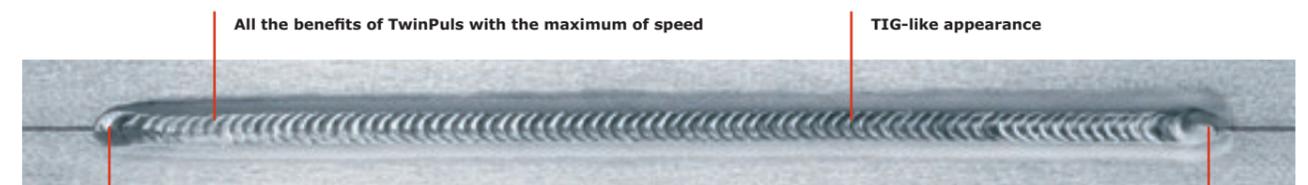
SpeedArc XT sets itself apart by its highly focused and incredibly stable arc combined with an high energy density that stands head and shoulders above any other comparable process. Delivering much deeper penetration into the base material across the entire power range, this process delivers a level of penetration for the P and S series to which ordinary MIG-MAG machines simply cannot measure up. The greater arc pressure that flows into the weld pool SpeedArc XT adds a significant speed boost to MIG-MAG welding across the entire power range, making it noticeably faster, much easier to control and, consequently, much more economical.

#### TwinPuls XT – really looks fantastic.

TwinPuls XT specifically controls and separates the heating and cooling phases. What does that mean to you? You benefit from a cosmetically pleasing weld seam, with significantly lower and more controlled heat input into the workpiece. The better heat control, can result in much lower distortion, resulting in notably less rework. What is more, the isolation of the different phases makes positional welding much easier. Real-world applications that commonly used to be completed by TIG welding can now be welded with MIG-MAG

processes thanks to the ground-breaking capabilities of the new and improved TwinPuls XT. Welding is now simply faster and more efficient. Producing no cold starts or end craters whatsoever, TwinPuls XT achieves perfect results that even stand up to TIG seams.

There is one end to everything, except when you talk about weld seams. They have not one but two ends and both look astounding thanks to TwinPuls XT.



All the benefits of TwinPuls with the maximum of speed

TIG-like appearance

#### No cold places

The danger of cold places at the start of the weld is a thing of the past. Increased energy transfer ensures a completely fused start.

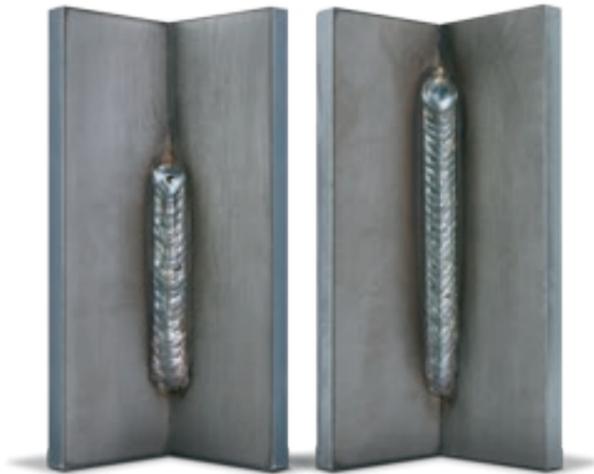
#### Without end craters

The welding current is automatically reduced at the end of the weld. So, end craters are now a thing of the past. And the automatic end pulse ensures that the wire end finished without ball at the end – so the next ignition is performed perfectly.

### SpeedUp – experience an entirely new high during vertical seam welding.

Up to now, vertical seam welding required a tremendous amount of experience, skill and a steady hand. Now, professionals in industry have a simple-to-use tool at their disposal – Lorch’s P and S series – which treat them to a perfectly coordinated welding process that is powerful enough to even substitute the supreme discipline of the trade – “Christmas tree welding”. SpeedUp combines the hot high-current phase with the cold phase to effect an overall reduced heat input – thereby, offering great penetration, exactly dimensioned and well-proportioned weld seams with a near perfect a-measurement dimensions. Unparalleled arc regulation delivers outstanding speed and produces results that is seamless and with virtually no spatter.

On the left, the challenging Christmas tree, and, on the right, the ingenious SpeedUp.



### SpeedRoot – for visibly enhanced MIG-MAG root welding quality.

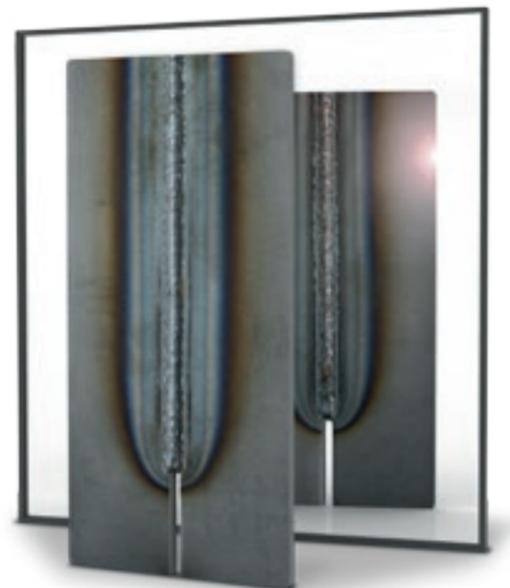
Previously, the main requirement for joining both edges of the material perfectly and with as little defects as possible was to apply this simple formula: Root welding = TIG.

Whilst enabling clean results, the application of this process was also exceedingly slow. SpeedRoot delivers dramatic speed benefits as well weld seams whose quality is on par with TIG welds. This superior performance is made possible by the high-end control technology that is built into every machine of the P and S series! This technology controls the level of current and voltage with utmost precision, thereby guaranteeing high speed process reliability and flawless weld appearance. Anyone who has ever bridged a 4 mm gap on 3 mm sheets without weaving using the S series and SpeedRoot will never want to go back to the solution they used before. Especially when they discover that the perfect weld seam they are looking at took them much less time than it would have if they had resorted to TIG welding.

The weld front side and, as a mirror image, the weld rear side showing under bead.



Optimum, slightly rounded weld appearance without fusion defects – for maximum gap tolerance and gap bridging.



### SpeedCold – for cold hard efficiency whilst thin sheet welding.

SpeedCold keeps the arc stable during thin sheet welding and puts an end to pesky sticky spatter. The Lorch P and S series with SpeedCold will even weld sheets as thin as 0.5 mm and eliminates the need for rework almost entirely. Any spatter that does occur is so “cold” that it will usually not stick to the material. SpeedCold truly shines when used for welding butt, lap and corner welds on thin sheet metal. Responding in milliseconds to any changes in the arc, the SpeedCold control is distinguished by its exceptional weld seam control as well as the outstanding seam shaping and gap bridging properties, especially on CrNi and Steel. Lower heat input means less rework thanks to less distortion, less spatter and reduced use of energy. And, we have not even talked about the speed advantages this process has to offer. You cannot ask for much more.

A welded corner seam as a comparison. Standard arc (left): Rapidly falling weld pool that is about to drop off. SpeedCold (right): Welded in full with utmost speed and reliability (35 cm/min).



### The standard MIG-MAG welding programs.

Last, but not least, Lorch also gave the synergy welding programs included with the P and S series a complete overhaul, taking them to an entirely new level. This means for you: exceptional arc behaviour that is fully customisable to your preferences thanks to the new dynamic control.

### Lorch welding process at a glance

	S-SpeedPulse XT	P series	MicorMIG Pulse series	MicorMIG series
<b>Welding process</b>				
SpeedPulse XT	●	–	–	–
SpeedArc XT	●	●	–	–
TwinPuls XT	●	–	–	–
SpeedPulse	●	–	–	–
Pulse	●	–	●	○
SpeedArc	●	●	○	○
TwinPuls	●	–	–	–
SpeedUp	○	○	○	○
SpeedRoot	○	○	–	–
SpeedCold	○	○	–	–
Standard MIG-MAG welding programs	●	●	●	●

● Configuration options ● Standard equipment ○ Optionally available

# MASTER OF THE PULSE ARC.

## UNIQUE S-XT ARC

Extra sensitivity for manual welding

## HIGHLY PRODUCTIVE

Maximum arc stability for every automated welding solution

## THROUGH THICK AND THIN

Maximum dynamic response for unparalleled arc control

## The S series at a glance

- **Pulse at its best.** Highly developed processor technology provides for the seamless interaction of all parameters and components involved in the welding process. The result of this smooth interaction are superior duty cycle levels and maximum productivity.
- **Digital-intelligent process technology.** Whether you opt for the standard Lorch processes SpeedPulse XT, TwinPuls XT, SpeedArc, SpeedArc XT, Pulse and TwinPuls or the optional upgrades SpeedUp, SpeedCold, SpeedPulse and SpeedRoot: you will weld faster and produce results of premium quality with little spatter.
- **Intuitive operation.** The easy-to-read operating panel and the clearly structured user interface ensure that you are ready to start welding without having to make any additional preparations.
- **Versatility.** The machines included in Lorch's S series operate equally well with mixed gas and CO<sub>2</sub>.
- **Adaptable.** Every welding machine included in Lorch's S series is fully customisable, allowing you to find the machine that matches your welding requirements perfectly. This also holds true for the selection of the wire feeder systems. When ordering your machine, you can choose between a compact or wire feeder system and a dual wire feeder variant.



- **Tiptronic job memory.** Use the Tiptronic facility to save your ideal setting for each weld so that you can effortlessly retrieve your settings at the machine or the Powermaster torch when performing recurring welding tasks.
- **Job tool.** PC software for saving and editing welding tasks (jobs) stored in the welding machine along with their parameter settings and for transferring them to additional power sources.
- **Remote control.** Every Lorch S series system can be operated by remote control. Remote control can be exercised either using the Lorch Powermaster torch or an external operating panel. A remote control can also be incorporated if you want to operate the machine in electrode mode.
- **PushPull.** The PushPull principle entails the combination of the wire feeder unit built into the MIG-MAG welding power source with an automatic pull system in the torch. This allows you to expand your working radius in combination with a PushPull torch or the NanoFeeder.

- **Energy-efficient.** Lorch's S series marries power with efficient inverter technology and on-demand functionality. Slash your costs and produce exceptional welding results at the same time.
- **EN 1090-certified.** The EN 1090 WPS package accompanying the Lorch S series helps you save time and money as it eliminates the need for individual tests of your welding results. The package is comprised of welding instructions that apply to all relevant standard welding processes and have been certified by an approved and independent authority.
- **Mobility.** Our mobile version of the S series with trolley wheelset will meet all your mobility needs as it allows you to both carry the unit and move it on its wheels.

Versions

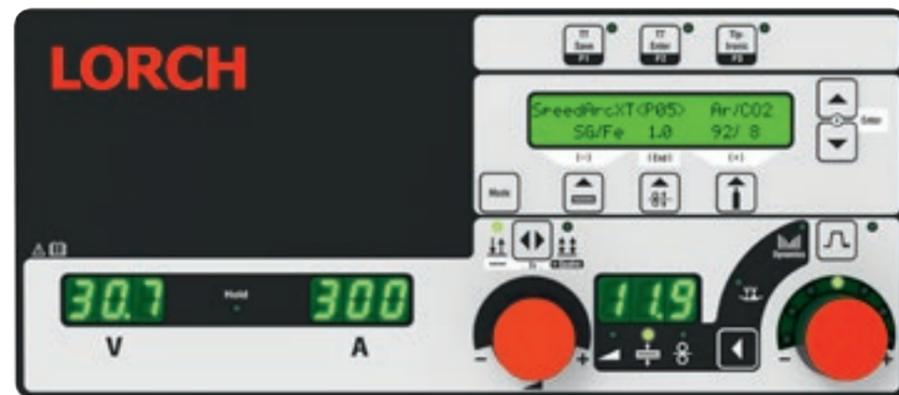


	S 3 mobile	S 3	S 5	S 8
Welding range	A 25 – 320	25 – 320	25 – 400	25 – 500
Voltage adjustment	infinitely variable	infinitely variable	infinitely variable	infinitely variable
Mains connection 3~400 V	●	●	●	●
<b>Operating concept</b>				
XT	●	●	●	●
<b>Cooling variants</b>				
Gas	●	●	●	●
Water	●*	●	●	●
<b>Machine variants</b>				
Mobile system with trolley wheelset	●	–	–	–
Compact system	–	●	●	●
Wire feeder system	–	●	●	●

\* with Mobile-Car transport trolley and separate water cooling unit

● Configuration options ● Standard equipment ○ Optionally available

Operating concept



- XT**
- “3 steps to weld” operating concept
  - Synergy control
  - Display-controlled user prompting
  - straightforward process and program selection
  - Infinitely adjustable welding current setting
  - Quatromatic mode (program sequence control at a push of the torch button)
  - Arc dynamic control (for Synergic, SpeedArc XT, SpeedPulse XT, TwinPuls XT)
  - arc length can be adjusted specifically for starting, welding and end phases
  - Tiptronic job memory for 100 welding tasks
  - digital volt-ampere display
  - Possibility for connection of the Lorch Powermaster remote control torch

Equipment

	S-SpeedPulse XT
<b>“Welding process” equipment</b>	
Synergic MIG-MAG standard welding programs *	●
SpeedArc XT * (incl. SpeedArc)	●
Pulse (incl. TwinPuls)	●
SpeedPulse XT * (incl. SpeedPulse, Speed-TwinPuls, Twinpuls XT)	●
SpeedRoot	○
SpeedCold	○
SpeedUp	○
TIG (with ContactTIG)	○
<b>“Cooling system variant” equipment</b>	
Cooling system (1.1 kW)	●
Boosted cooling (1.5 kW)**	○
Cooling system with large pump (for long Interpass hoses 20m and for working at heights) **	○

All systems are also provided with the arc welding function as standard equipment. ● Standard equipment  
 \* With innovative dynamic control. \*\* Only available in combination with the single wire feeder systems (B version). ○ Optionally available

Technical data

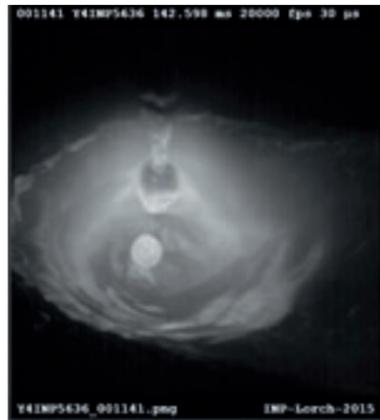
		S 3 mobile	S 3	S 5	S 8
Welding current MIG-MAG	A	25 – 320	25 – 320	25 – 400	25 – 500
Current at 100 % duty cycle	A	250	250	320	400
Current at 60 % duty cycle	A	280	280	350	500
Duty cycle I max.	%	40	40	50	60
Mains voltage	V	3~400	3~400	3~400	3~400
Permitted mains tolerance	%	± 15	± 15	± 15	± 15
Mains fuse, delayed action	A	16	16	32	32
Dimensions compact system (L x W x H)	mm	812 x 340 x 518	1116 x 463 x 812	1116 x 463 x 812	1116 x 463 x 812
Dimensions wire feeder system (L x W x H)	mm	–	1116 x 445 x 855	1116 x 445 x 855	1116 x 445 x 855
Weight – compact system, gas-cooled	kg	34	92.8	97.3	107.3
Weight – wire feeder	kg	–	20.2	20.2	20.2
Weight – water cooling (filled)	kg	–	14.7	14.7	14.7

All wire feeder systems come with a 1 m inter-connection hose package; additional lengths and options upon request.

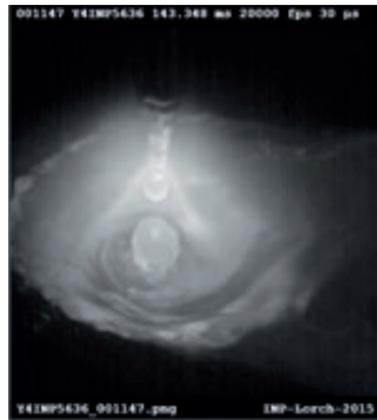
## Highlights

### SpeedPulse XT – Recordings with a high-speed camera

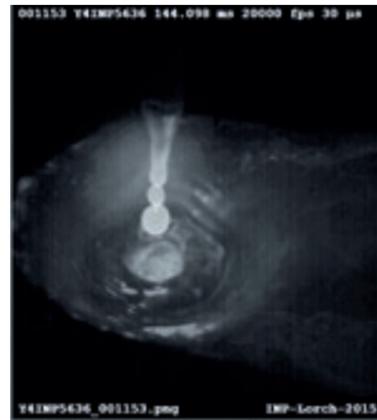
SpeedPulse XT turns you into the undisputed Master of the Arc. This is assured by the patented control technology of the Lorch S series. It combines the powerful process and all of the benefits of the SpeedPulse welding process. Instead of making him break out in a sweat during pulse welding, the SpeedPulse XT afford the welder such extra freedoms as the ability to influence the arc by changing the distance between torch and workpiece. Better still, the S series responds with unprecedented speed and accuracy. And, it delivers this type of speed and accuracy in every pulse phase. These properties allow the welder to guide the arc more safely and intuitively and to transfer even the slightest correction into the welding process without any delay. The S series, thereby, produces results that you can see as well as feel. When combined with the exceptionally robust and stable properties of the arc, this means: improved handling, higher quality, and low to insignificant spatter, reducing the amount of necessary rework to a minimum.



The primary droplet forms at the end of the wire.

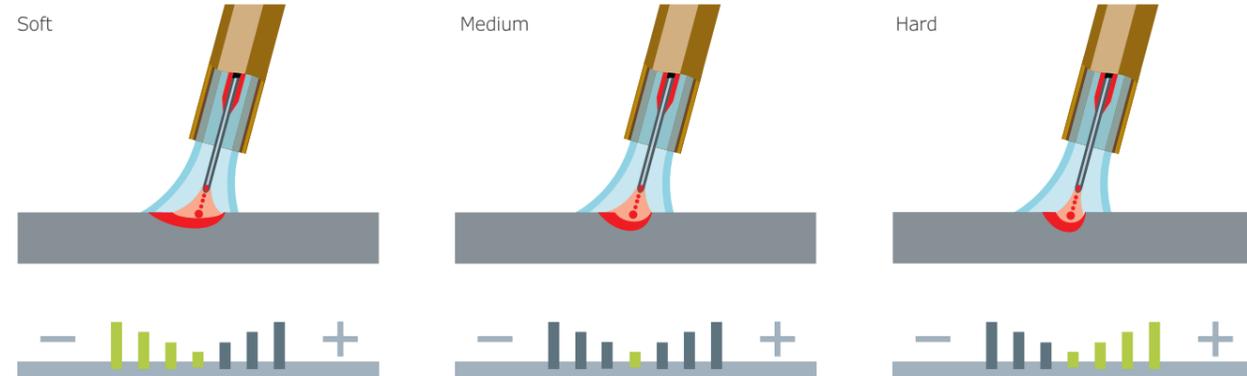


The primary droplet has detached, allowing the secondary droplets to form.



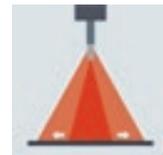
The primary droplet enters the weld pool, and the secondary droplets detach.

### Innovative dynamic control



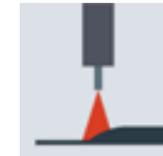
The dynamic control allows the welder to set the arc to any width he requires or prefers.

The S series comes with innovative dynamic control, allowing you to fine-tune the arc characteristics for all welding programs (Synergic, SpeedArc XT, SpeedPulse XT and TwinPuls XT) until they perfectly match the workpiece and the welding task at hand. A turn of the control knob is all it takes to set the arc to soft or hard or anywhere in between. For an even better seam and an extremely good feel whilst welding.



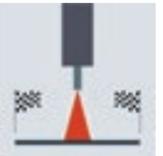
### Effortless welding over tack welds

Where other pulse arcs experience the occasional stutter during tack welding, our S series machines with SpeedPulse XT will never skip a beat and complete any task without a hitch. This is a difference you can actually hear. Aside from ensuring that spatter is kept at a minimum, the control technology can also completely eliminate the otherwise typical and sometimes abrupt and annoying changes to the frequency. The result is a pleasant sound with a constant frequency combined with a first-class seam and a flawless welding result.



### “Smart Start – Smart End” technology

Allowing you to choose specific arc length settings that are separate for the starting, welding and end phases, the new S series gives you the means necessary to systematically influence the energy input. It is a simple and smart solution that helps you reduce or even eliminate initial fusion defects in the weld seam. The welder can, furthermore, use this solution to end with a clean finish by filling the end crater in an aesthetically pleasing way.



### Variable arc length control

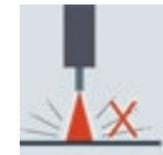


The S series affords the welder intuitive ease of use that is combined with a clearly improved control over the pulse arc and allows him to react much more easily to arising conditions by adjusting the distance of the torch while welding. Whether you are dealing with varying gap dimensions or unevenness in the workpiece – even cumbersome welding positions, e.g. in corners, will be much easier to master.



### Extra low-spatter

Efficiency in an industrial welding context mainly translates to the ability of reducing to the minimum the need for expensive rework after the actual welding work is finished. This is why Lorch has been attaching great importance to reducing the tendency to produce spatter in all machines of the S series. And, our engineers have come through for us yet again by implementing a host of improvements such as even faster, yet moderate, correction interventions of the control during pulse welding with SpeedPulse XT. These improvements have led to a reduction of spatter that “practically” equals zero.



### Additional cooling options

Along with the standard cooling with 1.1 kW, there are two additional cooling options available within the new S series for wire feeder systems. In plain language, this means: up to 35 % more cooling output – making it optimal for highly intensive industrial applications. More cooling also means less stress on the torch system, which can have a positive effect on the service life of torches and wear parts. There is an additional version available with a larger pump for welders who have to work with long interpass hoses of 20 metres or more. This model ensures that the full power is delivered exactly where the welder requires it.



## Tailor-made to your application

Your “S”: optimally tuned for your field of work.

### Case variants



Workshop wire feeder



Assembly pack



Dockyard wire feeder



NanoFeeder

### Operating options



... at the power source



... at the feeder unit



... or at both



... at the remote control operation panel



... directly at the torch operation panel

## Where do you want the wire feed unit?



**In the compact unit.**  
Drivable compact unit with integrated wire feed.



**In the Separate feeder unit.**  
In this way, you can work up to 25 m away from the unit. The hose package connects you.



**Two feed units.**  
Above with a separate unit and below inside the main unit. Ideal, if you often weld using different wires. You save yourself the trouble of constant changeover.



**Two feed units as a double separate feeder case unit.**  
Perfect for different wires, and when maximum mobility is required.

## The NanoFeeder

The wire feeder unit of the MIG-MAG welding power source is combined with other, separate wire-feed systems for the push-pull principle. The NanoFeeder takes over the role of an intermediate drive. It is a full wire feeder – but in a revolutionary Nano format. The Lorch welding power source takes over the matching of the wire feed systems automatically, using the optional, digital Push-Pull controller. In this way the complex and also costly, additional external controller is completely unnecessary.

- range up to a maximum of 50 m
- available as gas or water cooled
- various hose package lengths
- compact and sturdy construction
- also suitable for use with Powermaster torches



## How far would you like to go – with your MIG-MAG torch?



Power source

up to  
20 m



Feeder

up to  
25 m



NanoFeeder

up to  
5 m



Torch

## Technical data

		NanoFeeder	NanoFeeder
Cooling		Water	Gas
Load CO <sub>2</sub>   mixed gas	A	500	400
Duty cycle	%	60	60
Wire Ø	mm	0.8 - 1.6 (AL 1.2)	0.8 - 1.6 (AL 1.2)
Hose package lengths	m	10   15   20   25	10   15   20   25

# SIMPLY WELDS EVERYTHING.

## STRONG

Maximum power up to 550 amps

## FAST

Welds 30% faster thanks to SpeedArc

## STABLE

Impressively stable arc over the entire current range

## The P series at a glance

- **Digital-intelligent process technology.** Whether you opt for the standard SpeedArc XT (P Basic with SpeedArc Basic) or the optional Lorch Speed upgrades SpeedRoot, SpeedUp and SpeedCold: you will weld faster and produce results of premium quality with little spatter.
- **Intuitive operation.** The easy-to-read operating panel and the clearly structured user interface afford you maximum ease of use and ensure that you are ready to start welding without having to make any additional preparations.
- **Versatility.** The machines included in Lorch's P-series operate equally well with mixed gas and CO<sub>2</sub>.
- **Adaptable.** Every welding machine included in Lorch's P-series is fully customisable, allowing you to find the machine that matches your welding requirements perfectly. This also holds true for the selection of the wire feeder systems.
- **EN 1090-certified.** As synergic control and automatic setting control are built in, Lorch's P series is guaranteed to produce welding results that are in conformity with the EN 1090. Combine your machine with Lorch's special offer EN 1090 WPS package, and you are ready to handle any welding task they can throw at you.



- **Tiptronic job memory.** Use the Tiptronic facility to save your ideal setting for each weld so that you can effortlessly retrieve your settings at the machine or the Powermaster torch when performing recurring welding tasks.
- **Job tool.** PC software for saving and editing welding tasks (jobs) stored in the welding machine along with their parameter settings and for transferring them to additional power sources.
- **Compact.** All machines of the Lorch P series with a power output of up to 550 amperes are also available with a compact housing. This variant comes with a feeder that is built into the machine. This space-saving design allows you to stow your unit under the workbench or use it as a storage surface for equipment that you can place on its top.

- **Remote control.** Every Lorch P series system can be operated by remote control. Remote control can be exercised either using the Lorch Powermaster torch or an external operating panel. You can also connect a remote control if you want to operate the machine in electrode mode.
- **PushPull.** As PushPull capability can easily be added, your working radius is significantly expanded when used in combination with a PushPull torch or a Lorch NanoFeeder.
- **Mobility.** Our mobile version of the P series with trolley wheel set will meet all your mobility needs as it allows you to both carry the unit and move it on its wheels.
- **Energy-efficient.** Lorch's P series marries power with efficient inverter technology and on-demand functionality. Slash your costs and produce exceptional welding results at the same time.

Versions

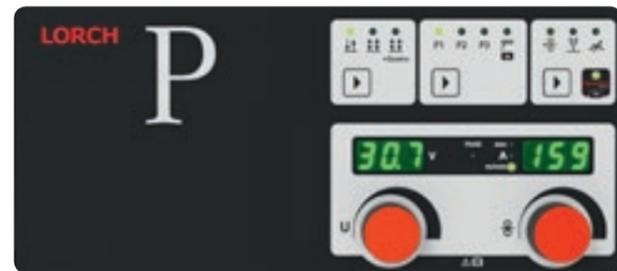


	P 3000 mobile	P 3500	P 4500	P 5500
Welding range	A 25 - 300	25 - 350	25 - 450	25 - 550
Voltage adjustment	infinitely variable	infinitely variable	infinitely variable	infinitely variable
Mains connection 3~400 V	●	●	●	●
<b>Operating concepts</b>				
Basic	●	●	●	●
XT	●	●	●	●
<b>Cooling variants</b>				
Gas	●	●	●	●
Water	●*	●	●	●
<b>Construction variants</b>				
Mobile system with trolley wheelset	●	-	-	-
Compact system	-	●	●	●
Wire feeder system	-	●	●	●

\* with Mobile-Car transport trolley and separate water cooling unit

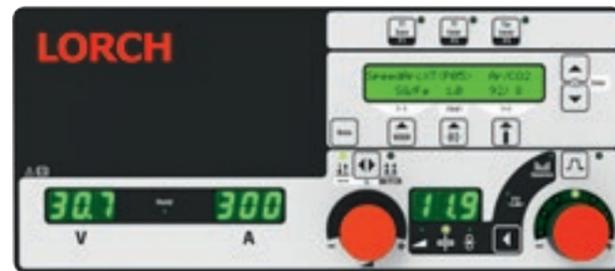
● Configuration options ● Standard equipment ○ Optionally available

Operating concepts



Basic

- "3 steps to weld" operating concept
- with SpeedArc
- Easy power and feed speed regulation
- Quatromatic mode (program sequence control at a push of the torch button)
- digital volt-ampere display
- Possibility for connection of the Lorch Powermaster remote control torch



XT

- "3 steps to weld" operating concept
- Synergy control with SpeedArc XT
- Intuitive operation
- straightforward process and program selection
- Infinitely adjustable welding current setting
- Arc dynamic control (for Synergic, SpeedArc XT)
- Quatromatic mode (program sequence control at a push of the torch button)
- arc length can be adjusted specifically for starting, welding and end phases
- Tiptronic job memory for 100 welding tasks
- digital volt-ampere display
- Possibility for connection of the Lorch Powermaster remote control torch
- Welding circuit measurement and welding circuit compensation

Highlights

SpeedArc XT – deeply impressive

SpeedArc XT sets itself apart by its highly focused and incredibly stable arc combined with an high energy density that stands head and shoulders above any other comparable process. The increased arc pressure that flows into the SpeedArc XT weld pool adds a significant speed boost to MIG-MAG welding across the entire power range, making it faster, much easier to control and, consequently, much more economical. A weld prep angle of 40 degrees is entirely sufficient to weld a proper seam. This helps conserve both valuable time and precious material.

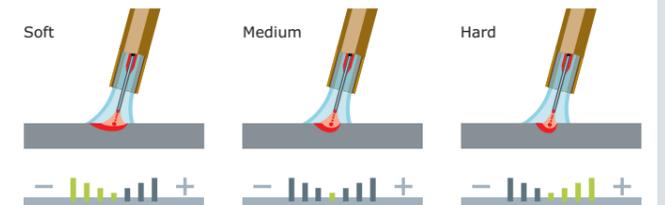


Quatromatic

- Quatromatic lets you save three individual parameter settings and select these in 4-step mode using the torch trigger.
- Quatromatic prevents cold lap at the start of the weld and provides optimum end crater filling. Because you can save three individual parameter settings (P1 - P2 - P3) with it and select these in 4-step mode using the torch trigger.

Innovative dynamic control

The P-series comes with innovative dynamic control, which makes it possible for the welder to fine-tune the arc characteristics for all welding programs (Synergic, SpeedArc XT) until they perfectly match the workpiece and the welding task at hand. A turn of the control knob is all it takes to set the arc to soft or hard or anywhere in between. For an even better seam and an extremely good feel whilst welding.



The dynamic control allows the welder to set the arc to any width he requires or prefers.

Technical data

	P 3000 mobile	P 3500	P 4500	P 5500
Welding current MIG-MAG	A 25 - 300	25 - 350	25 - 450	25 - 550
Current at 100 % duty cycle	A 250	260	360	400
Current at 60 % duty cycle	A 280	300	400	500
Duty cycle I max.	% 50	30	30	30
Mains voltage	V 3~400	3~400	3~400	3~400
Permitted mains tolerance	% ± 15	± 15	± 15	± 15
Mains fuse, delayed action	A 16	16	32	35
Dimensions compact system (L x W x H)	mm 812 x 340 x 518	1116 x 463 x 812	1116 x 463 x 812	1116 x 463 x 812
Dimensions wire feeder system (L x W x H)	mm -	1116 x 445 x 855	1116 x 445 x 855	1116 x 445 x 855
Weight - compact system, gas-cooled	kg 34	92.8	97.3	107.3
Weight - wire feeder	kg -	20.2	20.2	20.2
Weight - water cooling (filled)	kg -	14.7	14.7	14.7

All wire feeder systems come with a 1 m inter-connection hose package; additional lengths and options upon request.

## Tailor-made to your application

Your “P”: optimally tuned for your field of work.

### Case variants



Workshop wire feeder



Assembly pack



Dockyard wire feeder



NanoFeeder

### Operating options



... at the power source



... at the feeder unit



... or at both



... at the remote control operation panel



... directly at the torch operation panel

## Where do you want the wire feed unit?



**In the compact unit.**  
Drivable compact unit with integrated wire feed.



**In the Separate feeder unit.**  
In this way, you can work up to 25 m away from the unit. The hose package connects you.



**Two feed units.**  
Above with a separate unit and below inside the main unit. Ideal, if you often weld using different wires. You save yourself the trouble of constant changeover.



**Two feed units as a double separate feeder case unit.**  
Perfect for different wires, and when maximum mobility is required.

## The NanoFeeder

The wire feeder unit of the MIG-MAG welding power source is combined with other, separate wire-feed systems for the push-pull principle. The NanoFeeder takes over the role of an intermediate drive. It is a full wire feeder – but in a revolutionary Nano format. The Lorch welding power source takes over the matching of the wire feed systems automatically, using the optional, digital Push-Pull controller. In this way the complex and also costly, additional external controller is completely unnecessary.

- range up to a maximum of 50 m
- available as gas or water cooled
- various hose package lengths
- compact and sturdy construction
- also suitable for use with Powermaster torches



## How far would you like to go – with your MIG-MAG torch?



Power source

up to  
20 m



Feeder

up to  
25 m



NanoFeeder

up to  
5 m



Torch

## Technical data

		NanoFeeder	NanoFeeder
Cooling		Water	Gas
Load CO <sub>2</sub>   mixed gas	A	500	400
Duty cycle	%	60	60
Wire Ø	mm	0.8 - 1.6 (AL 1.2)	0.8 - 1.6 (AL 1.2)
Hose package lengths	m	10   15   20   25	10   15   20   25

## BIG ADVANTAGE ON THIN SHEETS.

### GOOD-BYE, TRANSITION ARC

Weld without spatter thanks to a stable and easy-to-control pulse arc

### EXCEPTIONALLY VERSATILE

The right short arc, pulsed arc or spray arc for any job

### EFFORTLESS HANDLING

Intuitive set-up, easy operation and minimum rework distinguish the MicorMIG Pulse as a favourite among welders

## The MicorMIG Pulse series at a glance

- **Pulse arc.** Easy to set up and robust, the pulse process integrated into the MicorMIG Pulse now lets you weld with no transition arc. This improvement guarantees welding with no spatter, saving you valuable time and eliminating the hassle of extensive rework and the need to change the welding wire.
- **Enhanced performance thanks to MicorBoost.** Our MicorBoost technology affords you even greater effectiveness at a higher degree of efficiency when completing MIG-MAG welding tasks. Moreover, fast-action control technology provides for a perfect droplet transition of the pulse arc.
- **Upgradability.** It has never been easier to adjust a welding system to the constantly changing requirements in the welding industry and to add on welding processes, welding programs and features that will streamline your workflows.
- **Ready for Speed.** Take your productivity to the next level by adding the optional Lorch Speed processes "SpeedUp" and "SpeedArc" to your MicorMIG Pulse.

» Including all functions of the MicorMIG series  
Page 32 – 41



- **EN 1090-certified.** Effortlessly weld in conformity with EN 1090 specifications thanks to the synergic function and automatic setting control. Combine your machine with Lorch's special offer EN 1090 package as well as parameter setting control by NFC cards, and you are ready to handle any welding task they can throw at you.
- **Job management.** You can use the ControlPro operating panel to write any welding job you have set up to a blank NFC card and retrieve the stored information at any Lorch MicorMIG power source (BasicPlus or greater) whenever you need it.

- **PushPull.** Increase your working radius significantly by combining the system with a combination of PushPull torch and Lorch NanoFeeder.
- **Welder identification made easy.** This feature makes the assignment of set-up and operating rights completely painless. The contact-less data transfer option available for Lorch's MicorMIG Pulse series makes it possible to identify the welder at any time.

**+** Including all functions of the MicorMIG series  
Page 32 – 41



**Versions**

	MicorMIG Pulse 300	MicorMIG Pulse 350	MicorMIG Pulse 400	MicorMIG Pulse 500
Welding range	A 25 – 300	25 – 350	30 – 400	30 – 500
Voltage adjustment	infinitely variable	infinitely variable	infinitely variable	infinitely variable
Mains connection 3~400 V	●	●	●	●
Mains connection 3~230 V	-	-	○	○
<b>Operating concepts</b>				
BasicPlus	●	●	●	●
ControlPro	●	●	●	●
<b>Cooling variants</b>				
Gas	●	●	●	●
Water	●	●	●	●
<b>Machine variants</b>				
Compact system	●	●	●	●
Wire feeder system	●	●	●	●

● Configuration options   ● Standard equipment   ○ Optionally available

**Operating concepts**



**BasicPlus**

- “3 steps to weld” operating concept
- Infinitely adjustable welding current setting
- Digital volt-ampere display
- Activation of end crater filling as necessary
- 7-stage arc dynamic control
- Automatic setting control (synergy control)
- Welding program selection in the feed compartment
- Upgradability



**ControlPro**

- “3 steps to weld” operating concept
- Infinitely adjustable welding current setting
- Digital volt-ampere display
- High-luminosity graphic display (OLED) for display of the 3<sup>rd</sup> main parameter
- Activation of end crater filling as necessary
- 21-stage arc dynamic control
- Automatic setting control (synergy control)
- Welding program selection in the feed compartment
- Tiptronic job memory for 100 welding tasks
- Upgradability

**Highlights**

**Weld with next to no spatter – steel, stainless steel or aluminium**

All in a day's work of every welder: Welding in the transition arc range routinely results in ungainly weld appearance including plenty of spatter. The poor outcome, in turn, requires rework that costs both time and money. Until now, the sole solution to this problem involved frequent wire changes or the use of special gases.

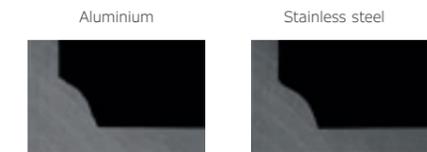


**Smart solution by Lorch:** No matter if you weld steel, stainless steel or aluminium. Tried and tested in the real world, the MicorMIG Pulse arc combined with quick-action control technology delivers welding performance with next to no spatter – even in the transition arc range, saving you a great amount of tedious rework.

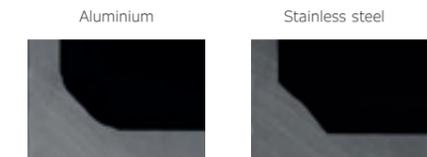


**Flawless seam appearance – even on aluminium and stainless steel**

All in a day's work of every welder: The quality of the sidewall fusion and of the seams welded on aluminium and stainless steel in the short arc range almost never conform to in-house standards. The consequence: Substandard quality along with time-consuming and costly rework.



**Smart solution by Lorch:** A spatter-free weld seam, smooth seam transitions and improved sidewall fusion. From now on, you will master this challenge with ease as well thanks to the MicorMIG Pulse arc and exceptional ease of use.



**Reduced temper colours on stainless steel welds**

All in a day's work of every welder: A great many welders striving for root coverage of the greatest possible accuracy during welding on stainless steel resort to a current intensity level that is much higher than actually necessary. The consequence are temper colours on stainless steel welds.



**Smart solution by Lorch:** Introducing a lower amount of energy into the workpiece, the MicorMIG Pulse arc reliably prevents any unnecessary temper colours. The MicorMIG Pulse arc, furthermore, reduces time-consuming and cost-intensive rework such as for the removal of temper colours to a minimum. To top it all off, the process delivers all that plus clean root coverage.



**+** Including all functions of the MicorMIG series  
Page 32 – 41

**Equipment**

	MicorMIG Pulse
<b>Welding process</b>	
Standard synergy MIG-MAG welding programs	●
Pulse Steel	●
Pulse Multi-Material	○
SpeedArc	○
SpeedUp	○
Electrode Plus	○
TIG (with ContacTIG)	○

● Standard equipment ○ Optionally available

**Technical data**

		MicorMIG Pulse 300	MicorMIG Pulse 350	MicorMIG Pulse 400	MicorMIG Pulse 500
Welding current MIG-MAG	A	25 – 300	25 – 350	30 – 400	30 – 500
Current at 100% duty cycle	A	200	250	300	370
Current at 60% duty cycle	A	250	300	370	430
Duty cycle I max.	%	45	45	45	45
Mains voltage	V	3~400	3~400	3~400	3~400
Permitted mains tolerance	%	± 15	± 15	± 15	± 15
Mains fuse, delayed action	A	32	32	32	32
Dimensions compact system (L x W x H)	mm	880 x 490 x 855			
Dimensions wire feeder system (L x W x H)	mm	880 x 490 x 955			
Weight – compact system, gas-cooled	kg	58	58	61	66
Weight – wire feeder	kg	10.6	10.6	10.6	10.6
Weight – water cooling (filled)	kg	13.0	13.0	13.0	13.0

**The NanoFeeder**

The wire feeder unit of the MIG-MAG welding power source is combined with other, separate wire-feed systems for the push-pull principle. The NanoFeeder takes over the role of an intermediate drive. It is a full wire feeder – but in a revolutionary Nano format. The Lorch welding power source takes over the matching of the wire feed systems automatically, using the optional, digital Push-Pull controller. In this way the complex and also costly, additional external controller is completely unnecessary.

- range up to a maximum of 50 m
- available as gas or water cooled
- various hose package lengths
- compact and sturdy construction
- also suitable for use with Powermaster torches



**How far would you like to go – with your MIG-MAG torch?**



**Technical data**

		NanoFeeder	NanoFeeder
Cooling		Water	Gas
Load CO <sub>2</sub>   mixed gas	A	500	400
Duty cycle	%	60	60
Wire Ø	mm	1.0 – 1.6 (AL 1.2)	1.0 – 1.6 (AL 1.2)
Hose package lengths	m	10   15   20   25	10   15   20   25

## GROWS WITH YOUR CHALLENGES.

### FUTURE-PROOF

Built-in ability to be upgraded with future welding processes and features

### HIGHLY CUSTOMIZABLE

Maximum flexibility for every situation

### CONTINUOUS INTELLIGENCE

Perfect arc with adjustable dynamic range

### The MicorMIG series at a glance

- **Versatility.** Lorch's MicorMIG is set apart by the exceptional MIG-MAG welding characteristics it delivers – regardless of whether the welder uses mixed gas or CO<sub>2</sub>.
- **Dynamic control.** Select the arc characteristic you prefer. Depending on the operating panel you have selected, you can opt for dynamic levels that range from “soft” to “hard”.
- **Synergic pre-selection.** MicorMIG versions BasicPlus and greater offer a large number of welding programs for various material, wire and gas combinations. Depending on the design of your machine, you can set the programs in the wire feed compartment of the case or in the wire feed compartment of the compact system.
- **Upgradability.** Never before has it been easier to adjust a welding machine to the ever increasing challenges posed by today's welding tasks. It is now a breeze to upload welding processes, welding programs and functions to the MicorMIG that both boost performance and streamline the workflow.
- **Enhanced performance thanks to MicorBoost.** Our MicorBoost technology affords you even greater effectiveness at a higher degree of efficiency when completing MIG-MAG welding tasks. Better still, you will also be able to draw on higher voltage reserves when you need to produce perfect electrode welding results – even if using CEL and special electrodes.



- **EN 1090-certified.** Effortlessly weld in conformity with EN 1090 specifications thanks to the synergy function and automatic setting control. Combine your machine with Lorch's special offer EN 1090 package as well as parameter setting control by NFC cards, and you are ready to handle any welding task they can throw at you.
- **Ready for Speed.** Complete your welding jobs with even greater ease and speed by implementing optional Lorch Speed upgrades into your MicorMIG machine.
- **Job management.** The ControlPro display with Tiptronic function makes it a snap to store welding tasks and retrieve and transfer them to other machines as necessary.

- **PushPull.** When combining the system with a PushPull torch or Lorch's NanoFeeder, you will expand your working radius significantly.
- **Welder identification made easy.** This feature makes the assignment of set-up and operating rights completely painless. The no-contact data transfer option available for Lorch's MicorMIG series makes it possible to identify the welder at any time.
- **Gouging.** The MicorMIG stands out from the rest by its ability to weld electrodes including special electrodes, which it can gouge (starting at 400 A) and weld when combined with the optional Electrode Plus upgrade.

Versions



	MicorMIG 300	MicorMIG 350	MicorMIG 400	MicorMIG 500
Welding range	A 25 – 300	25 – 350	30 – 400	30 – 500
Voltage adjustment	infinitely variable	infinitely variable	infinitely variable	infinitely variable
Mains connection 3~400 V	●	●	●	●
Mains connection 3~230 V	-	-	○	○
<b>Operating concepts</b>				
Basic	●	●	●	●
BasicPlus	●	●	●	●
ControlPro	●	●	●	●
<b>Cooling variants</b>				
Gas	●	●	●	●
Water	●	●	●	●
<b>Machine variants</b>				
Compact system	●	●	●	●
Wire feeder system	●	●	●	●

● Configuration options ● Standard equipment ○ Optionally available

Operating concepts



Basic

- "3 steps to weld" operating concept
- Infinitely adjustable welding current setting
- Digital volt-ampere display
- Activation of end crater filling as necessary
- 3-stage arc dynamic control



BasicPlus

- "3 steps to weld" operating concept
- Infinitely adjustable welding current setting
- Digital volt-ampere display
- Activation of end crater filling as necessary
- 7-stage arc dynamic control
- Automatic setting control (synergy control)
- Welding program selection in the feed compartment
- Upgradability



ControlPro

- "3 steps to weld" operating concept
- Infinitely adjustable welding current setting
- Digital volt-ampere display
- High-luminosity graphic display (OLED) for display of the 3rd main parameter
- Activation of end crater filling as necessary
- 21-stage arc dynamic control
- Automatic setting control (synergy control)
- Welding program selection in the feed compartment
- Tiptronic job memory for 100 welding tasks
- Upgradability

Highlights

SpeedUp – Vertical-up welding has never been so easy or fast

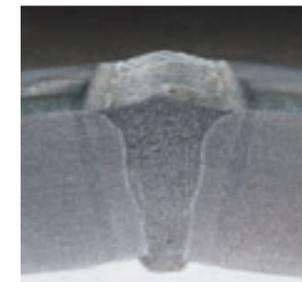


If you hammer an oversize hole in a wall just in order to lay a thin cable, you will need a lot of time to plaster it up again. This was also the case for vertical welding. Until now! SpeedUp by Lorch works in a much more precise way: Like a small, exact hole in the wall which is then re-plastered fast as the wind, you will apply exactly the "a"-measurement you need. It sounds simple, and it really is. Because even semi-skilled welders master the SpeedUp process in a very short time. With excellent root penetration, they also now weld vertically up in an easy and skilful manner.

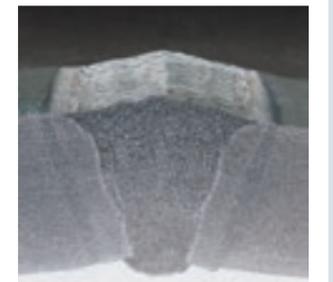
On the left, the challenging Christmas tree, on the right, the ingeniously simple SpeedUp.

SpeedArc turns welding into a streamlined process

SpeedArc sets itself apart by its highly focused and stable arc combined with an energy density that stands head and shoulders above any other comparable process. Delivering much deeper penetration into the base material across the entire power range, this process delivers a level of penetration to which ordinary MIG-MAG machines simply cannot measure up. The increased arc pressure that flows into the SpeedArc weld pool adds a significant speed boost to MIG-MAG welding across the entire power range, which makes the process much easier to control and, consequently, much more economical.



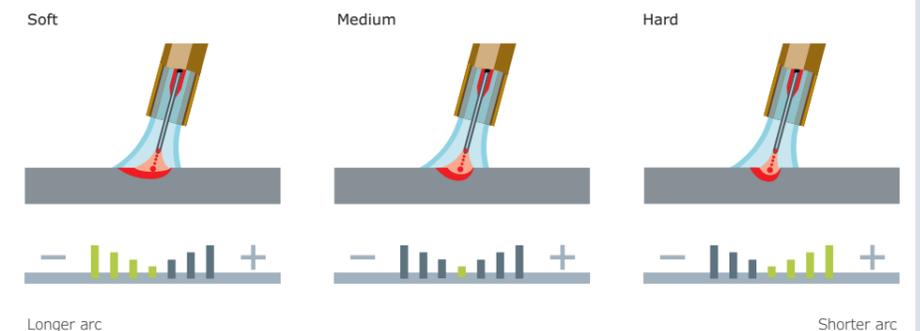
SpeedArc



MIG-MAG

Multi-stage dynamic control

The MicorMIG allows you to individually adjust the dynamics of the arc to suit the work and welding position at hand and will find the simplest and fastest arc setting which is most suitable for each specific case. The rest of the job is carried out by the intelligent arc control technology incorporated into the MicorMIG series. All essential parameters are controlled automatically in the background.



## Highlights

### Unlimited upgradeability comes standard

A transformer system will stay the way it was built. Its expandability and functional scope are limited on account of its hardware. Not so with the MicorMIG. When you opt for this system, you will remain perfectly flexible thanks to the upgradeability and modular design of its fully digital control inverter technology and feedback control systems. The level of flexibility lets you enjoy both customised solutions that are tailored to accomplish your company's welding tasks and the assurance that you will keep benefiting from any future advances in technology. It has never been easier to adjust a welding system to the constantly changing requirements in

the welding industry using NFC technology and to add on welding processes such as pulsed arc welding (BasicPlus and greater), welding programs and features that will streamline your workflows. It is even possible to upgrade and retrofit the operating panels of the MicorMIG series. The purchase of a MicorMIG system translates to progress. Both at the time of purchase and the time thereafter. You add the functionality you need precisely when you need it. The MicorMIG allows you to be and remain on the safe side and to look forward to what the future holds in store.



### 3 steps to achieve weld perfection

1. Select process / operating mode
2. Adjust welding current
3. Fine-tune arc characteristics



### Clever details for improved everyday welding



#### Quick-change system

Even the easily accessible wire feeder of the MicroMIG reflects painstaking attention to the tiniest detail. The perfectly matched change system makes changing the sturdy and durable Lorch feed rolls a cinch. No need for even a single screw.



#### Colour-coded feed rolls

Never pick up the wrong rolls again. Lorch's colour-coded feed rolls of the MicorMIG series represent different wire diameters and make every welder's life much easier.

### End crater filling

Step-controlled systems commonly create a sink mark at the end of the weld seam, the so-called end crater. The MicorMIG provides you with an easy and reliable solution to the problem of maintaining the same quality along the entire weld seam – especially at the end. The operating panel offers a quick and easy way to enable the quality feature "crater filling". Instead of being terminated abruptly, the welding current is reduced in a well-controlled manner. The MicorMIG, thereby, allows you to achieve a seam appearance that will leave nothing to be desired.



Without crater filling.



With crater filling – perfect end of weld seam.



#### Synergic pre-selection – where it should be

MicorMIG versions BasicPlus and greater offer a large number of welding programs for various material, wire and gas combinations. Depending on the design of your machine, you can set the programs at the wire reel in the wire feed compartment of the compact system or the wire feeder case.



#### Top-tier electrode welding

A MIG-MAG system that can also handle electrodes. Simply remove the torch, connect the additional electrode holder to the electrode socket, and select electrode welding on the operating panel.

## Highlights

### Heavy-duty undercarriages

Wherever the manufacturing process calls for crane transport of heavy components or the machine itself to the workstation, a robust and dependable welding system is of paramount importance. The long-lasting industrial housing of the Lorch MicorMIG and its optional heavy-duty undercarriages was designed specifically for applications of this nature. The outcome is a system that delivers perfect dependability even under the most trying conditions. Customise your Lorch heavy-duty undercarriage and tailor it to your heavy-duty needs. Even when required to handle inter-connection hose packages with a length of 20m, the Lorch heavy-duty undercarriage plus MicorMIG and the optional large inter-connection hose package holder remains perfectly tilt-proof and stable.



Optionally available:  
inter-connection hose package holder

### EN 1090-certified

All welding tasks will then have to be completed based on an approved welding process. When using a Lorch MicorMIG, you will not have to worry about whether your welding operations comply with the EN 1090 standard. This is because we had all processes and synergic characteristics officially certified by an approved inspection agency. Our EN 1090 WPS booklet provides a quick, efficient and cost-effective way for any business – regardless of its size – to provide their customers with the required proof that their welding operations is in compliance with the standard. Lorch's EN 1090 special offer package is made complete by Lorch's calibration service which ensures that your welding operations will continue to satisfy WPS requirements.



### Equipment

	MicorMIG
<b>Welding process</b>	
Standard synergy MIG-MAG welding programs	●
Pulse Steel	○
Pulse Multi-Material	○
SpeedArc	○
SpeedUp	○
Elektrode Plus	○
TIG (with ContacTIG)	○

● Standard equipment ○ Optionally available

## Technical data

		MicorMIG 300	MicorMIG 350	MicorMIG 400	MicorMIG 500
Welding current MIG-MAG	A	25 – 300	25 – 350	30 – 400	30 – 500
Current at 100% duty cycle	A	200	250	300	370
Current at 60% duty cycle	A	250	300	370	430
Duty cycle I max.	%	45	45	45	45
Mains voltage	V	3~400	3~400	3~400	3~400
Permitted mains tolerance	%	± 15	± 15	± 15	± 15
Mains fuse, delayed action	A	32	32	32	32
Dimensions compact system (L x W x H)	mm	880 x 490 x 855			
Dimensions wire feeder system (L x W x H)	mm	880 x 490 x 955			
Weight – compact system, gas-cooled	kg	58	58	61	66
Weight – wire feeder	kg	10.6	10.6	10.6	10.6
Weight – water cooling (filled)	kg	13.0	13.0	13.0	13.0

## The NanoFeeder

The wire feeder unit of the MIG-MAG welding power source is combined with other, separate wire-feed systems for the push-pull principle. The NanoFeeder takes over the role of an intermediate drive. It is a full wire feeder – but in a revolutionary Nano format. The Lorch welding power source takes over the matching of the wire feed systems automatically, using the optional, digital Push-Pull controller. In this way the complex and also costly, additional external controller is completely unnecessary.

- range up to a maximum of 50 m
- available as gas or water cooled
- various hose package lengths
- compact and sturdy construction
- also suitable for use with Powermaster torches



## Technical data

		NanoFeeder	NanoFeeder
Cooling		Water	Gas
Load CO <sub>2</sub>   mixed gas	A	500	400
Duty cycle	%	60	60
Wire Ø	mm	1.0 – 1.6 (AL 1.2)	1.0 – 1.6 (AL 1.2)
Hose package lengths	m	10   15   20   25	10   15   20   25

## The full-protection wire feeder MF-08

Robust and exceptionally stable.

The MF-08 provides every welder with exactly the wire feeder case he can expect – and much more. Made of high-performance plastic, the housing of this fully protected feeder case offers one thing first and foremost apart from stability and robustness: Safety. In contrast to conventional cases made of metal, the MF-08 is fully insulated and, thus, uniquely capable of handling applications that rank among the trickiest and most challenging from a technical standpoint. The MF-08 – a genuine safety advantage for every business.



### At a glance

- **Exceptional flexibility.** For extended range and a maximum of comfort and mobility.
- **Stable.** The wire feeder case is solidly mounted on the power source and can be swivelled.
- **Extremely robust and protected against falls.** Even if experiencing a fall from a height of 60 cm.
- **Illuminated wire feeder compartment.** This makes changing the wire a breeze even in poor light conditions.
- **A genuine lightweight in its class.** Only 10.6 kg net weight.
- **A perfect grip.** Several convenient handle options.
- **Suitable for use in manholes.** Can be handed in and out of manholes with no effort at all.
- **Versatile.** Fixture for hanging it from a boom or position it overhead.



### Technical data

		MF-08
Feeder speed	m/min	2.0 – 25.0
Drive / feeder		4-roll / tacho-regulated motor / digital speed feedback
Suitable for use in manholes	cm	> 42*
Fully insulated		●
Flowmeter gas		○
Dimensions (L x W x H)	mm	575 x 245 x 434 (380**)
Weight (net)	kg	10.6

\* Oval manhole with handle removed    \*\* Height with handle removed    ● Standard equipment    ○ Optionally available

### Highlights

#### Surprisingly simple – and accessible from both sides

One important aspect as to how well a compact wire feeder case with manhole suitability will fare during everyday use is the ease with which you can insert the wire reel. The slightly slanted wire reel and side covers that swing open and lock into place allow for easy access to the compartment, especially in the top portion of the unit. As an added benefit, the other side of the feeder case can be opened as well. The electronic system and the motor are protected and covered in such a way that you are afforded convenient access to all connections of the hose package.

The locking mechanism and the strain relief device of the inter-connection hose package can be replaced by the welder themselves or, if necessary, be transported separately from the case. Better still, this step is completely straightforward and safe and does not require any contact with the sensitive area.



#### Equipped to handle all types of applications

Optionally available:



Heavy-duty undercarriage kit



Protection cage with tube frame



Heat protection skirts



Boom suspension

#### Whether upright or horizontal – easy to control in every position

Every range of application poses its own challenges. Sometimes you wish for a horizontal case while some tasks require a vertical case. MF-08 offers you both options: it can be used upright or in a vertical position. This is thanks to the sturdy and distinctive support feet found on the side. In case you need the case to be permanently horizontal. You can have the operating panel built in rotated by 90°. You will always carry the fully protected case with ease in the upright position. This is what we call flexibility or plain "convenience".



## THE CHAMPION IN THE WORKSHOP.

### The M-Pro series at a glance

- **MIG-MAG logic.** Electronic MIG-MAG logic with 2-/4-step function and adjustable spot and interval control.
- **Automatic setting control.** The automatic setting control lets you find the welding parameter setting that works best for you.
- **Intuitive operation.** Thanks to the clearly structured user interface and the slanted operating panel, the device control remains well visible throughout operation and affords the user an ergonomic operating position.
- **Energy-efficient.** Energy management is a standard feature built into every model of the Lorch M-Pro series. The energy saving features include a fan that starts only when necessary in order to cut down on unnecessary energy consumption during stand-by.



### THREE STEPS TO THE PERFECT SEAM

Intelligent parameters at the touch of a button

### THREE OPERATING CONCEPTS AVAILABLE

From Nice & Easy to High Performance

### SIX POWER VARIANTS

Including MIG brazing machines

- **Robust case.** The housing of Lorch's M-Pro series has been designed specifically to meet the requirements of any workshop environment. This compact and rugged housing allows you to easily stow your power source under the workbench or use its top side as a storage surface for your equipment.
- **Inclined torch connection.** The inclined torch connection allows for minimal wire resistance and optimum wire guidance.
- **Wire feeder.** Lorch's 2-roll or 4-roll precision feeder guarantees fine pressure adjustment, minimal wire deformation and exact wire alignment.

- **Colour-coded feed rolls.** Lorch's colour-coded feed rolls of the Lorch M-Pro series represent different wire diameters and make replacing the rolls a walk in the park.
- **Compartment lighting.** The powerful LEDs integrated into the compartment of the wire feeder make it much easier for you to change the reel and thread in the wire even in complete darkness or low light conditions.
- **Cylinder trolley.** Thanks to the low receiving surface of Lorch's cylinder trolley, changing cylinders with a capacity of 50 litres is completely effortless.

Compact system versions



	M-Pro 170	M-Pro 210	M-Pro 250	M-Pro 300	M-Pro 150 CuSi	M-Pro 200 CuSi
Welding range	A 25 - 170	25 - 210	30 - 250	30 - 300	15 - 150	15 - 200
Mains connection 1~230 V	●	●	-	-	-	-
Mains connection 2~400 V	●	●	-	-	-	-
Mains connection 3~400 V	-	-	●	●	●	●
<b>Operating concepts</b>						
Basic	●	●	●	●	●	-
BasicPlus	-	●	●	●	●	●
ControlPro	-	-	●	●	-	●
<b>Welding process</b>						
MIG-MAG welding	●	●	●	●	●	●
MIG brazing	-	-	-	-	●	●
<b>Application</b>						
Area	Thin sheet metal	Thin sheet metal, profile work	Thin sheet metal, light-duty steel work	All-round to medium-duty steel work	Vehicle construction	Vehicle construction

● Configuration options ● Standard equipment ○ Optionally available

Operating concepts



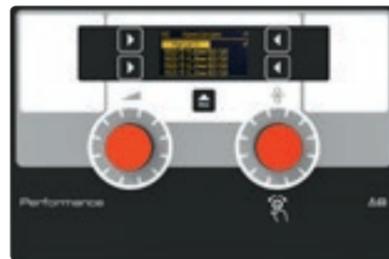
BasicPlus

- "3 steps to weld" operating concept
- Automatic setting control (synergy function)
- including 2-roll wire feeder
- user-oriented guidance using illuminated symbols
- Switch-over 2-cycle/4-cycle/spot welding/interval welding



ControlPro

- "3 steps to weld" operating concept
- Automatic setting control (synergy function)
- including 4-roll wire feeder
- volt and ampere display
- user-oriented guidance using illuminated symbols
- Switch-over 2-cycle/4-cycle/spot welding/interval welding



Performance

- "3 steps to weld" operating concept
- Automatic setting control (synergy function)
- including 4-roll wire feeder
- volt and ampere display
- Digastep electronics with 21 voltage levels
- cutting-edge operating concept including graphical display (OLED)
- Switch-over 2-cycle/4-cycle/spot welding/interval welding
- Tiptronic job memory for 10 welding tasks
- Possibility for connection of the Lorch Powermaster remote control torch

Wire feeder system versions



	M-Pro 250 wire feeder system	M-Pro 300 wire feeder system
Welding range	A 30 - 250	30 - 300
Mains connection 3~400 V	●	●
<b>Operating concept</b>		
ControlPro	●	●
<b>Welding process</b>		
MIG-MAG welding	●	●
<b>Application</b>		
Area	Thin sheet metal, light-duty steel work	All-round to medium-duty steel work

● Standard equipment

Highlights

Wire feed with perfect precision

Only a genuine precision feeder guarantees fine pressure adjustment, minimal wire deformation and exact wire alignment. This is made possible by the high quality 2-roll or 4-roll feeder from Lorch. The wire feeder is inclined for absolutely minimal wire resistance. The wire feeding is performed easily and tension-free by pressing a button. The operating button is located exactly where it is needed - at the wire feeder inside the machine.



2-roll wire feeder



4-roll wire feeder

Pure synergic thanks to automatic setting control

Select the desired material, wire and gas combination from the synergic line-program table. Set the number corresponding to the welding program using the selector switch in the wire feeder housing. For the Performance versions the selection is made via the OLED display.



Synergic pre-selection in the BasicPlus and ControlPro models



Synergic pre-selection in the Performance models

Separate, removable wire feeder

For wire feeder systems: The wire feeder, which is mounted on the power source, can easily be swivelled and positioned and it can also be removed and carried using the handle. Also housed in the high quality 4-roll feeder is the automatic setting control for the correct material, wire, and gas combination. The fine correction of the wire, its performed using the ergonomic control panel installed inclined in the feeder case.

Simply keep working. Up to 20 m range.



Inter-connection hose packages with up to 15 metres



Up to 5 metres, depending on the length of the torch



## Lorch M-Pro 150 CuSi and M-Pro 200 CuSi

Failure to weld a vehicle exactly as required in the specifications or resorting to a MIG brazing machine in situations where its use is least desirable may result in the airbag being deployed with a delay or the sheet metal structure or corrosion protection being destroyed. Tailored blanks, higher-strength steel sheets or the zinc layer quickly bring ordinary MIG-MAG machines to their knees. The temperature is too high, causing the material to warp. Higher-strength steel sheets have become increasingly common in body construction, making the use of exceptional MIG brazing machines (operating with a CuSi – copper – silicon wire) an absolute necessity.

Our Lorch M-Pro 150 CuSi and M-Pro 200 CuSi fulfil the dreams of every car body professional in this area. Sheets with a thickness of 0.5 mm are joined at a heat input of as low as 15 amperes, allowing the welder to satisfy the standard that is necessary to guarantee safety.



### Technical Data M-Pro series

		M-Pro 170	M-Pro 210	M-Pro 250	M-Pro 300	M-Pro 150 CuSi	M-Pro 200 CuSi
<b>Welding range</b>							
Weldable materials		Steel, stainless steel, aluminium				Steel, stainless steel, aluminium, galvanised and high-alloyed sheets	
MIG-MAG	A	25 - 170	25 - 210	30 - 250	30 - 300	15 - 150	15 - 200
Voltage adjustment		6 levels	12 levels	12/21* levels	12/21* levels	7 levels	12/21* levels
Duty cycle I max. (25°C   40°C)	%	25   15	25   15	35   25	35   25	60   40	30   20
Current at 100% duty cycle (25°C   40°C)	A	90   70	90   75	185   150	205   170	120   100	125   100
<b>Welding wires</b>							
Steel Ø	mm	0.6 - 0.8	0.6 - 1.0	0.6 - 1.0	0.6 - 1.2	0.6 - 0.8	0.6 - 1.0
Aluminium Ø	mm	1.0	1.0 - 1.2	1.0 - 1.2	1.0 - 1.2	0.8 - 1.0	0.8 - 1.2
CuSi Ø	mm	–	–	–	–	0.8 - 1.0	0.8 - 1.0
<b>Weldable material thickness</b>							
Steel	mm	0.6 - 6.0	0.6 - 8.0	0.6 - 10.0	0.6 - 15.0	0.5 - 4.0	0.5 - 8.0
Aluminium	mm	1.5 - 6.0	1.0 - 8.0	1.2 - 10.0	1.2 - 18.0	0.8 - 5.0	0.8 - 8.0
<b>Machine</b>							
Mains voltage	V	1~230/2~400	1~230/2~400	3~400	3~400	3~400	3~400
Mains fuse		16 A, delayed action	16 A, delayed action	16 A, delayed action	16 A, delayed action	16 A, delayed action	16 A, delayed action
Mains plug		Schuko + CEE16	Schuko + CEE16	CEE16	CEE16	CEE16	CEE16
Dimensions (L x W x H)	mm	880 x 400 x 755	880 x 400 x 755	880 x 400 x 755	880 x 400 x 755	880 x 400 x 755	880 x 400 x 755
Weight	kg	65	69	71	80	66	68
* With Performance version							

## WELDS TOGETHER WHAT BELONGS TOGETHER.

### DURABLE AND RUGGED

Your reliable partner for decades to come

### AFFORDABLE AND VERSATILE

The all-round system for steel, stainless steel, and aluminum

### SIMPLE AND EFFECTIVE

Reliable welding workmanship in a maximum of three steps

### The M Series at a glance

- **Durable, robust, and simply exceptional.** The welding machines included in the M Series afford MIG-MAG welders superior ease of use at an affordable cost.
- **Automatic setting control.** Allowing you to automatically adjust the wire feed speed to the selected voltage level, the Lorch M series makes it a cinch to find the perfect operating point.
- **Quality wire feeder.** The Lorch M 222 and M 242 ship with a 2-roll wire feeder, while the M 304 comes standard with a 4-roll wire feeder.
- **Robust case.** Boasting a compact and rugged housing supported on four stable wheels, the Lorch M can easily be stowed under the workbench or used as a storage surface as it allows you to place your equipment on its top.
- **Double chain gas cylinder lock.** Designed to offer maximum safety, the Lorch M series is furnished with a double chain gas cylinder lock. These features allow you to safely move your power source including gas cylinder (holding up to 20 litres).



- **Welding characteristics.** Excellent welding performance on steel, stainless steel and aluminium.
- **Operating modes.** Setting options for 2-cycle tack welding and 4-cycle continuous welding or spots for spot welding with freely adjustable spot time.

Versions



	M 222	M 242	M 304
Welding range	A 25 – 210	30 – 230	30 – 290
Mains connection 1~230 V	●	-	-
Mains connection 2~400 V	●	-	-
Mains connection 3~400 V	-	●	●
<b>Equipment</b>			
Integrated 2-roll wire feeder	●	●	-
Integrated 4-roll wire feeder	-	-	●
<b>Application</b>			
Area	Perfect for thin sheet metal welding and light-duty steel work	All-round machine for sheet metal processing and light-duty to medium-duty steel work	All-round machine for sheet metal processing and heavy-duty steel work

● Configuration options ● Standard equipment

Operating concept



- “3 steps to weld” operating concept
- with automatic setting control
- 2-cycle, 4-cycle and spot welding

Highlights

Quality wire feeder

Premium-quality wire feeder with tension-free wire feeding at the press of a button that is housed in the wire feed compartment.



2-roll wire feeder



4-roll wire feeder

Complete set of accessories for MIG-MAG welding

Every set includes: Torch ML, workpiece cable 25 mm<sup>2</sup>, pressure reducer with contents and flow rate gauge, gas hose, basket spool adapter K300, power cable with connector.



Technical data

	M 222	M 242	M 304
Weldable materials	Steel/stainless steel/ aluminium	Steel/stainless steel/ aluminium	Steel/stainless steel/ aluminium
Welding range	A 25 – 210	30 – 230	30 – 290
Voltage adjustments	Levels 6	7	12
Duty cycle I max. (40°C)	% 15	20	20
Current at 60% duty cycle (40°C)	A 125	155	175
Wire feed rolls	2	2	4
Weldable wires, steel Ø	mm 0.6 – 1.0	0.6 – 1.0	0.8 – 1.2
Weldable wires, aluminium Ø	mm 1.0 – 1.2	1.0 – 1.2	1.0 – 1.2
Recommended material thickness, steel	mm 0.6 – 8.0	0.6 – 10.0	0.6 – 15.0
Recommended material thickness, aluminium	mm 1.0 – 8.0	1.2 – 10.0	1.2 – 18.0
Mains voltage	V 1~230/2~400	3~400	3~400
Mains fuse, delayed action	A 16	16	16
Mains plug	Schuko + CEE16	CEE16	CEE16
Dimensions (L x W x H)	mm 870 x 390 x 610	870 x 390 x 610	870 x 390 x 610
Weight	kg 55	57	67

# THE WORKHORSE FOR CONSTRUCTION SITES AND MAINTENANCE.

## MULTI-PROCESS FOR EVERY APPLICATION

Besides MIG-MAG, also suitable for TIG, electrode, and CEL welding

## 15 METER RADIUS AROUND THE POWER SOURCE

Separable wire feeder case and power source

## FOR TOUGH DAILY CONSTRUCTION SITE OPERATIONS

Light, splash-proof, and fall-proof up to 60 cm

## The MX 350 at a glance

- **MIG-MAG welding function.** Including option to activate MIG-MAG synergic mode separately to guarantee outstanding MIG-MAG welding characteristics for both mixed gas and CO<sub>2</sub>.
- **Multi-processing.** When combined with a separate wire feeder case MF-07, the Lorch MX 350 is an ideal choice as a MIG-MAG welding system for use on the go. Better yet, it is also suitable for TIG, electrode and CEL welding and can be adapted to a wide range of applications.
- **Enhanced performance thanks to MicorBoost.** As soon as the current is reduced due to external disruptions, significantly higher voltage reserves are then activated. The result is electrode welding that leaves nothing to be desired.
- **Wear-resistant.** Its robust housing that offers all-around protection against water ingress and falls from a height of up to 60 cm make the Lorch MX 350 the best machine you can choose for your mobile applications in the field. As an added bonus, the circuit boards are shielded from dust by InsideCoating.



- **Gouging.** Apart from electrode welding, the Lorch MX 350 also handles gouging applications without a hitch.
- **Dependable.** When applying MICOR technology, you can rest assured that your machine will ignite in reliable fashion and produce a stable arc even when operated on power mains cables with a length of up to 200 metres or when hooked up to a generator.

- **Electrode welding function.** Electrode welding with Hotstart, Anti-Stick and Arc-Force regulation. The automatic Hotstart feature guarantees perfect ignition every time, while the Anti-Stick system reliably prevents the electrode from sticking, and Arc-Force regulation supports the welding process by providing for increased arc stability and optimised metal transfer. Moreover, the Lorch MX 350 allows you to complete vertical down-welding operations using cellulose electrodes with perfect reliability.

Versions



MX 350

Welding range	A	10 - 350
Mains connection 3~400 V		●
<b>Operating concepts</b>		
BasicPlus		●
<b>Equipment</b>		
MIG-MAG Synergic		●
DC-TIG (with ContacTIG)		●
Electrode welding (including CEL)		●
Wire feeder case MF-07 with 4-roll drive		●
Inter-connection hose package with different lengths		●

● Configuration options   ● Standard equipment

Operating concept



BasicPlus

- "3 steps to weld" operating concept
- exact-ampere digital display
- MIG-MAG: Option to select synergic-controlled characteristic curves; operating mode: 2-stroke/4-stroke
- Advance selection of electrode for optimum results
- Hotstart can be set in submenu
- Can switch to TIG function
- Remote control connection
- Electrode pulse function

Everything you need, perfectly stowed



Wire feeder case, custom fit above the MX350.

Maxi-Trolley XL, the ultimate transport trolley.

The MF-07 – simple, convenient, and robust

When combined with the separate wire feeder case MF-07, this product is also an excellent MIG-MAG welding system suitable for use on the go. The MF-07 is designed in such a way that you can handle any task ranging from sheet metal welding to medium and heavy steel work. And, to ensure that you stay "wired" while completing your welding job, your feeder is equipped for the use of K 300 wire reels.



3 steps to weld

1. Select process/characteristic curve (e.g. MIG-MAG synergic)
2. Operating mode: 2-stroke, 4-stroke, crater filling on/off
3. Fine adjustment wire feed



Technical data

		MX 350
Welding process		MIG-MAG   Electrode   TIG
Welding range	A	10 - 350
Weldable wires, steel Ø	mm	0.8 - 1.2
Weldable wires, aluminium Ø	mm	1.0 - 1.2
Weldable wires, CuSi Ø	mm	0.8 - 1.2
Current at 100% duty cycle (40 °C)	A	230
Current at 60% duty cycle (40 °C)	A	280
Duty cycle I max. (40 °C)	%	35
Mains voltage	V	3~400
Mains tolerance	%	+25/-40
Mains fuse	A	25
Dimensions (L x W x H)	mm	515 x 185 x 400
Weight	kg	18.6

		MF-07
Feeder speed	m/min	2.0 - 15.0
Drive/feeder		4-roll/ tacho-regulated motor/ digital speed feedback
Lengths of inter-connection hoses	m	5   10   15
Dimensions (L x W x H)	mm	480 x 200 x 270
Weight	kg	10

## LORCH MIG-MAG TORCHES. GAS AND WATER COOLED FROM 150 A TO 550 A.

### The MIG-MAG torch series at a glance

- **Robust.** The sturdy construction, which includes bolted, impact-resistant handle recesses, a hard-wearing torch push button and an elastic rubber cable support at the ball joint, provides for a long service life of the torch.
- **User-friendly.** The easy to change gas nozzle makes replacing wear parts quick and easy and ensures that your torch is always in proper condition and ready for use. The durable and cost-saving wear parts of the unit make its operation highly cost-effective.
- **Dependable.** The insulated wire liner ensures a reliable wire feed.
- **Versatile.** The included hose package is available as a 3m, 4m and 5m option.
- **Flexibility.** Its high-quality ball joint fitted at the handle combined with the elastic rubber cable support afford you superior freedom of movement when using the torch. Lightweight and flexible, the internal coaxial cable provides you with the freedom you need to complete your work in various different positions.
- **Ergonomics.** The ergonomically shaped handle recess provides for first-rate handling and balance in any position. The soft-grip insert guarantees operating comfort at the highest level to ensure that you will not tire when welding for extended periods.
- **Powermaster control.** The Powermaster variant lets you control all essential parameters of your welding jobs directly at the torch.
- **Tiptronic.** Using the Tiptronic facility, you simply save the ideal setting for each weld in the required sequence. The job memory makes it quick and easy to load up to 100 work values one after the other when you need them. (Powermaster version)



Versions



		ML 1500	ML 2500	ML 2400	ML 3600	ML 3800	ML 4500
Welding range up to	A	180	230	250	300	320	370
<b>Operating concepts</b>							
Standard		●	●	●	●	●	●
Powermaster		●	—	●	●	●	●
<b>Cooling</b>							
Gas		●	●	●	●	●	●

		MW 5300	MW 5400	MW 5500	MW 5900	MW 7300	MW 7500
Welding range up to	A	300	400	500	550	300	500
Interchangeable torch neck rotates 360°, allowing for a quick and easy exchange without tools		—	—	—	—	●	●
<b>Operating concepts</b>							
Standard		●	●	●	●	—	—
Powermaster		●	—	●	●	●	●
<b>Cooling</b>							
Water		●	●	●	●	●	●

● Standard equipment

Operating concepts



**Standard**

- large trigger button for switching the machine on and off
- suitable for 2-cycle/4-cycle operation



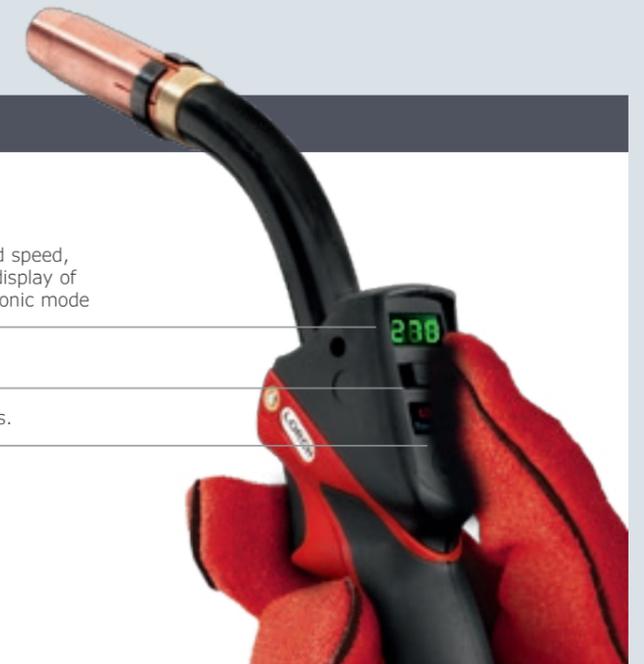
**Powermaster (PM)**

- large trigger button for switching the machine on and off
- suitable for 2-cycle/4-cycle operation
- with UpDown function for remote power source control
- Digital display for indication of welding current, material thickness, wire feed speed or arc length correction
- Mode button for toggling between the different welding parameters and selecting the welding job in Tiptronic-job mode

Highlights

**Powermaster remote control panel**

- **Display:** Display of the welding current, material thickness, wire feed speed, dynamics or arc length correction (identical to the 7-segment digital display of the power source). The current job numbers are displayed when Tiptronic mode is activated.
- **Rocker switch:** For changing the various welding parameters. And for changing the jobs in Tiptronic mode.
- **Mode button:** For changing between the various welding parameters. For selecting the job set in Tiptronic mode.



Technical data

		ML 1500	ML 2500	ML 2400	ML 3600	ML 3800	ML 4500
Type of cooling		Gas	Gas	Gas	Gas	Gas	Gas
Load CO <sub>2</sub>   mixed gas	A	180   150	230   200	250   220	300   270	320   270	370   300
Duty cycle	%	60	60	60	60	60	60
Wire Ø	mm	0.6 - 1.0	0.8 - 1.2	0.8 - 1.2	0.8 - 1.2	0.8 - 1.6	1.0 - 1.6
Handle recesses		1   2 (PM)	1	1   2 (PM)	1   2 (PM)	1   2 (PM)	1   2 (PM)
Hose package lengths	m	3   4	3   4   5	3   4   5	3   4   5	3   4   5	3   4

		MW 5300	MW 5400	MW 5500	MW 5900	MW 7300	MW 7500
Type of cooling		Water	Water	Water	Water	Water	Water
Load CO <sub>2</sub>   mixed gas	A	300   270	400   350	500   450	550   500	300   270	500   450
Duty cycle	%	100	100	100	100	100	100
Wire Ø	mm	0.8 - 1.2	0.8 - 1.2	0.8 - 1.6	0.8 - 2.4	0.8 - 1.2	0.8 - 1.6
Handle recesses		1   2 (PM)	1   2 (PM)	1   2 (PM)	2	WH	WH
Hose package lengths	m	3   4   5	3   4   5	3   4   5	3   4   5	4	4

# PUSH-PULL SOLUTIONS. FOR A SIMPLY GREATER RANGE.

## The PushPull torch series

The PushPull principle entails the combination of the wire feeder unit built into the MIG-MAG welding power source with an automatic pull system in the torch. In this way, feeding ranges of 8 m are possible even for soft aluminium wires. When using a separate wire feeder even more than 20 m is achievable. With an additional separate intermediate drive, up to 43 m overall distance between power source and welder can be bridged – with absolutely reliable and precise wire feeding.

- Range up to a maximum of 43 m
- Torch necks can be rotated and replaced
- Universal wire rolls for steel and aluminium
- Universal PA liner for 0.8 to 1.6 mm steel and aluminium wires
- available as a Powermaster version with remote control operating panel on the torch: for setting the most important welding parameters directly at the torch



## How far would you like to go – with your PushPull torch?



## Technical data

		LMG 300	LMG 3600	LMW 400	LMW 450	LMW 5400
Type of cooling		Gas	Gas	Water	Water	Water
Cooling system		–	–	Single	Double	Double
Load CO <sub>2</sub>   mixed gas	A	300   250	310   260	400   350	450   360	500   450
Duty cycle	%	100	60	100	60	100
Wire Ø	mm	0.8 – 1.2	0.8 – 1.2	0.8 – 1.6	0.8 – 1.6	0.8 – 1.6
<b>Version</b>						
Powermaster		●/○	●/○	●/○	●/○	●/○
Gun handle		●*	●	●*	●*	●
Standard motor		–	●	–	–	●
Maxon motor		●	–	●	●	●
Hose package length	m	8**	8**	8**	8**	8**

\* Gun handle can be removed \*\* additional hose package lengths available on request ● Standard equipment ○ Optionally available

## FUME EXTRACTOR TORCH: EFFECTIVE HEALTH PROTECTION FOR WELDERS.

### Lorch fume extractor torch Extraction exactly where you need it.

Do you face the challenging of having to meet increasingly strict statutory limit values for A-dust\* in your production? Are you also concerned about protecting the health of your welders?

When measures for welding fume extraction, such as hall extraction systems, or mobile extractor arms no longer suffice, it is time to address the problem directly where it develops. That's where the Lorch fume extractor torches come in. It is efficient, flexible and always makes an important contribution to compliance with statutory limit values where it is used.

- **Effective health protection.** In order to minimise harmful substances arising during welding, it is important to extract the fume before it can be inhaled. The most efficient method is to extract the welding fume directly where it develops so that it cannot come near the respiratory tracts.
- **Simply practical.** The extraction itself is no problem at all, even on difficult-to-access welds, e.g. inside a structure or on especially large components with long seams. The welder carries it automatically. The working radius is no longer limited by other parameters, such as the reach of the extraction arm.
- **Dependable.** The high-quality coated wire spiral of the torch reliably ensures an exact wire feed to the arc without damaging it.



- **Flexible in use.** The hose package lengths of 3 m, 4 m or 5 m enable use in a host of different working conditions.
- **Comfortable.** The ball joint between handle and hose package provides an optimal movement radius, with improved handling to ensure outstanding comfort for the welder.
- **Efficient operation.** With the Powermaster operation, you control all essential parameters of your welding jobs directly at the torch. Consequently, the welder does not have to go back to the unit and can work more efficiently.

\* A-dust particles are so small that they can penetrate the air sacs in the lungs when inhaled via the respiratory passages.

Versions



		ML 2800 RAB	ML 3000 RAB	MW 5000 RAB
Welding range	A	up to 280	up to 320	up to 550
<b>Operating concepts</b>				
Standard		●	●	●
Powermaster		●	●	●
<b>Cooling</b>				
Gas		●	●	-
Water		-	-	●

Operating concepts



Standard

- Large control button for switching the machine on and off
- Suitable for 2-cycle/4-cycle operation

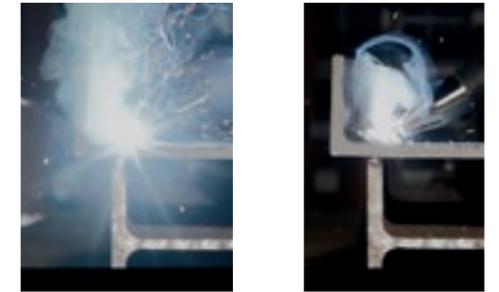
Powermaster

- Large control button for switching the machine on and off
- Suitable for 2-cycle/4-cycle operation
- With UpDown function for remote power source control
- Digital display for indication of welding current, material thickness, wire feed speed or arc length correction
- Mode button for toggling between the different welding parameters and selecting the welding job in Tiptronic job mode

Highlights

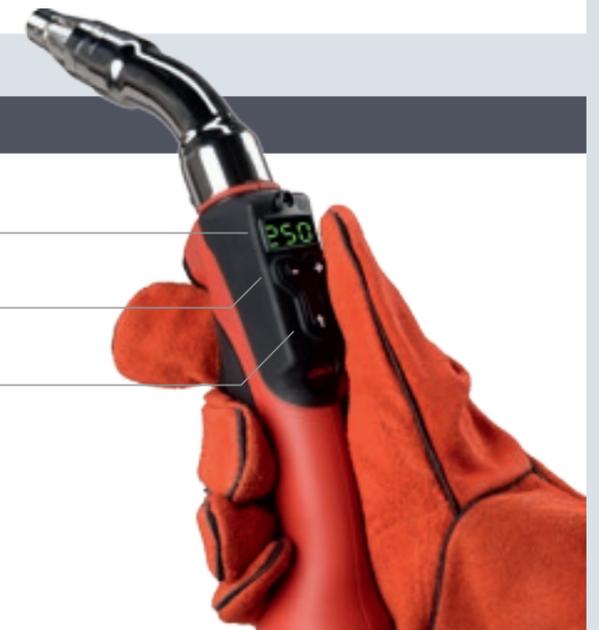
Fume extraction

- **Compliance with statutorily prescribed dust limit value for A-dust:** Hall extraction systems and mobile extraction arms are often not enough to comply with the statutorily prescribed limit value. The fume extraction in the torch plays an important role in compliance. It protects not only the welder, but everyone who is in the vicinity.
- **Extraction where welding fume develops:** 90-95% of welding fume can be extracted directly at the source. As a result, the greatest share of fume does not even come near the respiratory tracts.
- **Robust:** A long service life in difficult conditions is essential for a tool. The robust metal neck makes the torch resistant to the hot welding fume that is extracted. The metal neck also protects the torch from the heat radiated from preheated components.



Powermaster remote control panel

- **Display:** Display of the welding current, material thickness, wire feed speed, dynamics or arc length correction (identical to the digital display of the power source).
- **Plus/minus buttons:** For changing the various welding parameters. And for changing the jobs in Tiptronic mode. The simple operation is easy and intuitive.
- **Mode button:** For changing between the various welding parameters. For selecting the job set in Tiptronic mode. The welder can easily navigate the welding parameters with only one button.
- **Tiptronic mode:** Using the Tiptronic function, you simply save the ideal setting for each weld in the required sequence. The job memory makes it quick and easy to load up to 100 work values one after the other when you need them. Work processes and reproducibility of the seams can be optimised as a result.



Technical data

		ML 2800 RAB	ML 3000 RAB	MW 5000 RAB
Type of cooling		Gas	Gas	Water
Load CO <sub>2</sub>   mixed gas	A	280   250	320   300	550   500
Duty cycle	%	100	100	100
Wire Ø	mm	0.8 - 1.2	1.0 - 1.6	1.0 - 1.6
Handle recesses		1   2 (PM)	1   2 (PM)	1   2 (PM)
Hose package lengths	m	3   4   5	3   4   5	3   4   5
Required extraction power (effectively measured at the torch)	m <sup>3</sup> /h	55 - 65	55 - 65	55 - 65

# EXTRACTION SYSTEM RECOMMENDED USE FOR LORCH FUME EXTRACTOR TORCH.

## Extraction system recommended use

### Versions

Kemper	MiniFIL	VacuFIL 125
Application <sup>1)</sup> - Welding fume intensity of the application	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Use <sup>2)</sup> - Sporadic to continuous operation	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Vacuum generation	Two suction turbines	Side channel compressor
Mobility	Portable	Mobile
Disposable saturation filter without cleaning	●	—
Multi-use filter with surface filtration and automatic cleaning	—	●
Use	Single-location solution	Single-location solution

Fumator	Minivac 200 D	Minivac 300 D	Minivac 400 D
Application <sup>1)</sup> - Welding fume intensity of the application	■ ■ ■ ■ ■	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Use <sup>2)</sup> - Sporadic to continuous operation	■ ■ ■ ■ ■	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Vacuum generation	Side channel compressor	Side channel compressor	Side channel compressor
Mobility	Mobile	Mobile	Mobile
Multi-use filter with surface filtration and automatic cleaning	●	●	●
Use	Single-location solution	Dual-location solution	Multi-location solution (up to four torches)

<sup>1)</sup> the filter area, type, operating pressure and cleaning are weighted for this purpose.

<sup>2)</sup> the extraction flow (manufacturer specification), effective extraction flow at the torch, motor output and the type of vacuum generation are weighted.

■ □ Performance in combination with Lorch fume extraction torches

### Technical data

		Kemper MiniFIL	Kemper VacuFIL 125	Fumator Minivac 200 D	Fumator Minivac 300 D	Fumator Minivac 400 D
Filter area	m <sup>2</sup>	12	4	5	5	2 x 5
Max. extraction flow, without torch	m <sup>3</sup> /h	150	125	180	250	500
Max. operating pressure	Pa	22,000	27,000	36,000	45,000	45,000
Output	kW	2	1.5	1.5	3	6
Certification		W3	W3	W3	W3	W3
Filter cleaning		—	●	●	●	●
Mains voltage	V	230	230	230	400	400
Dimensions (L x W x H)	mm	365 x 425 x 790	885 x 635 x 1160	700 x 440 x 690	700 x 530 x 630	700 x 520 x 880



The arc for  
the perfect appearance

# TIG WELDING

**Our TIG welding solutions for clean,  
fine seams:**

V series	70 – 73
T-Pro and TF-Pro series	74 – 77
T series	78 – 81
MicorTIG series and MobilePower	82 – 87
HandyTIG series	88 – 91
Feed-TIG cold wire feeder	92 – 93
TIG torches series	94 – 97

## FOR EVERYONE WITH BIG THINGS IN MIND.

### UNPARALLELED TIG TECHNOLOGY

Packaged in a groundbreaking industrial design

### SUPERIOR TIG PRODUCTIVITY

Thanks to remote control, cold wire feeding, and perfect automation

### INCREDIBLY EASY TO USE

With plain text display and ergonomically designed control panel

### The V series at a glance

- **Powerful TIG.** Unrivalled TIG technology squeezed into a robust industrial housing and combined with tried-and-tested inverter technology guarantees unsurpassed real-world performance and maximum productivity.
- **Plain text display with language selection and Tiptronic.** Thanks to the clearly structured user interface and the slanted operating panel, the device control remains well visible throughout operation and affords the user an ergonomic operating position. You select the AC or DC function, the electrode diameter and the welding current based on the machine you are using. When working in Tiptronic mode, you can then save your ideal setting for each weld.
- **Aluminium welding (AC/DC variant).** Positive polarity ignition and automatic cap shape produce a perfectly shaped arc during aluminium welding. The special amplitude of the alternating current combined with an optimised current balance yields an excellent cleaning effect and a manageable weld pool.
- **Pulsing and fast pulsing up to 20 kHz.** The standard pulse function with up to 20 kHz that is built into every machine offers you additional benefits when welding thin sheets and delivers greater welding speeds during automated applications.



- **In a robust, completely transportable industrial housing.** The tough metal housing safely protects the high-end technological innards of your system. Completely transportable at the handles, the machine is also suitable for crane transport.
- **Remote control.** Welders often experience that the conditions on site do not allow them to place their welding machine right beside them. When faced with this type of situation, they find the use of a remote control helpful as it allows them to intervene and adjust the welding current if necessary. This is why Lorch has included a large variety of different hand and foot remote controls in their V series, which are ready for use right away thanks to their plug & play support.

- **Automatic final current reduction.** Lorch's automatic final current reduction produces perfectly clean weld ends by filling the end crater.
- **Low energy consumption.** The included on-demand function automatically turns the components of the unit on and off as needed. Thermal control sensors monitor the temperature of the components and regulate the speed of the fan accordingly. This smart technology reduces fan noise and dust levels in the machine compartment and helps conserve energy.
- **Mobility.** The mobile version of the V series comes with a trolley wheelset, allowing you to carry the unit or to move it on its wheels. It will, thus, meet all your mobility needs.

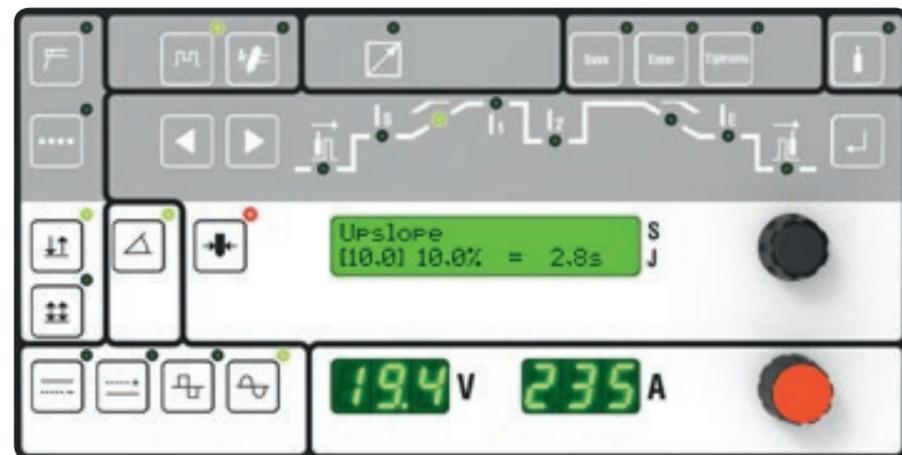
Versions

	V24 mobile	V30 mobile	V24	V27	V30	V40	V50
Welding range	A 3 - 240	3 - 300	3 - 240	3 - 270	3 - 300	3 - 400	3 - 500
Mains connection 3~400 V	●	●	●	●	●	●	●
<b>Operating concept</b>							
V standard	●	●	●	●	●	●	●
<b>Variants</b>							
DC system	●	●	●	●	●	●	●
AC/DC system	●	●	●	●	●	●	●
with a Lorch Feed cold wire feeder	○	○	○	○	○	○	○
<b>Cooling variants</b>							
Gas	●	●	●	●	●	●	●
Water	●*	●*	●	●	●	●	●
<b>Machine variants</b>							
Mobile system with trolley wheelset	●	●	-	-	-	-	-
Compact system	-	-	●	●	●	●	●
Feeder system	-	-	●	●	●	●	●

\* with Mobile-Car transport trolley and separate water cooling unit

● Configuration options ● Standard equipment ○ Optionally available

Operating concept



V standard

- "3 steps to weld" operating concept
- User-oriented guidance using illuminated symbols and detailed welding sequence control
- Infinitely variable current setting
- Digital display for welding current and welding voltage
- Plain text display with language selection
- Switch 2-stroke/4-stroke
- Remote control connection
- LorchNet, e.g. for controlling the optional Feed wire feeder and connecting Lorch automation components
- Pulse function
- Tiptronic job memory for 100 welding tasks

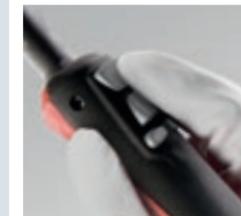
Highlights

The V mobile as a complete system

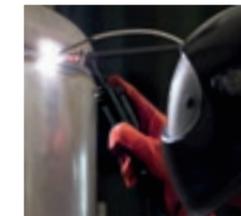
With Mobile Car and water-cooling unit - you are ready to roll. The V mobile sits at an ideal working height, the gas cylinder is fixed in its support and the torch is water-cooled for optimum performance. The V remains "mobile" and at the same time has the functionality of a large compact system.



Everything to benefit your TIG productivity



Using the UpDown remote control torch, you are at the place where things happen - directly at your workpiece. You have the torch in your hand, control the welding process from there and also regulate the welding current with it.



The automatic cold wire feeder Lorch Feed automates the manual feeding of filler material.

Pulsing and fast pulsing with up to 20 kHz

Every Lorch V-series offers a pulse function for high-frequency pulses with up to 20 kHz. The result is a focused arc with exceptional stability. The unit makes it possible to attain higher welding speeds at reduced heat input - especially for automated applications. The speed increase is particularly beneficial on thin metal sheets as it reduces warpage. The higher the pulse frequency, the more pleasant the welding noise. Depending on the base material, the unit may also help reduce temper colours during TIG welding with high-frequency pulses.

Technical data

	V24 mobile	V30 mobile	V24	V27	V30	V40	V50
Welding current - TIG	A 3 - 240	3 - 300	3 - 240	3 - 270	3 - 300	3 - 400	3 - 500
Welding current - electrode	A 20 - 200	20 - 250	20 - 200	20 - 220	20 - 250	20 - 300	20 - 400
Current at 100% duty cycle (DC   AC/DC)	A 220   190	270   240	220   210	250	250	360	380
Current at 60% duty cycle (DC   AC/DC)	A 240   220	300   280	240   230	270	300	400	500
Duty cycle I max. (DC   AC/DC)	% 60   50	60   50	60   50	60	60	50	60
Mains voltage	V 3~400	3~400	3~400	3~400	3~400	3~400	3~400
Permitted mains tolerance	% ±15	±15	±15	±15	±15	±15	±15
Mains fuse, delayed action	A 16	16	16	16	32	32	32
Dimensions (L x W x H)	mm 812 x 283 x 518	812 x 283 x 518	1130 x 450 x 815	1130 x 450 x 815	1130 x 450 x 815	1130 x 450 x 860	1130 x 450 x 860
Weight (DC   AC/DC)	kg 29.4   35.1	31   37	84.6   90.5	85   92	86.4   93.6	107.6   121.5	108.7   123.2
Weight - water cooling (filled)	kg 24.1	24.1	14.7	14.7	14.7	14.7	14.7

## PROVES ITS CHOPS IN THE SHOP.

### DESIGNED FOR THE WORKSHOP

Industrial standard in a compact design

### HIGH-PERFORMANCE

Pulse and fast pulse up to 2 kHz – with integrated cold wire feeder, if desired

### ECONOMIC MIRACLE

Energy-efficient with outstanding TIG weld characteristics

### The T-Pro / TF-Pro series at a glance

- **Unrivalled TIG welding characteristics thanks to inverter technology.** Distinguished by their high efficiency and superb welding characteristics, inverters utilise digital software control technology that has a significant influence on the outcome of the welding process.
- **Pulse and fast pulse up to 2 kHz.** The standard pulse function with up to 2 kHz that is built into every machine offers you additional benefits when welding thin plates.
- **Also available with integrated water cooling.** The water-cooled variants of the Lorch T-Pro series come with a water cooling system that is housed in a compact mobile case, making it perfectly suited for use at workshops on site.
- **Changeover DC to AC.** Available as DC and AC/DC versions in all power variants, Lorch's T series provides you with maximum flexibility even during aluminium welding.
- **TF-Pro.** The wire feeder integrated into the TF-Pro 300 reliably feeds the filler metal to the weld pool. A 4-roll feed motor with a specially tuned gearbox combination is in charge of guiding the wire along. The cold wire feed is controlled using the removable operating panel.



- **Remote control.** Welders often experience that the conditions on site do not allow them to place their welding machine right beside them. When faced with this type of situation, they find the use of a remote control helpful as it allows them to intervene and adjust the welding current if necessary. This is why Lorch offers a large variety of different hand and foot remote controls that are ready for use right away thanks to their plug & play support.
- **Low energy consumption.** The included on-demand function automatically turns the components of your Lorch T-Pro 250 on and off as needed. Thermal control sensors monitor the temperature of the machine and regulate the speed of the fan accordingly. This smart technology reduces fan noise and dust levels in the machine compartment and helps conserve energy.
- **Interval-spot function.** Lorch's interval-spot function reduces distortion during thin sheet metal welding.

- **Non-contacting HF ignition.** The TIG arc is ignited without direct contact by high-voltage pulses. Ignition is triggered with the press of a button to ensure that the tungsten electrode does not come into contact with the workpiece. Putting an end to welds with tungsten inclusions, this technology reduces the strain on the electrode. When working in HF-sensitive environments or on tools, the operator has the additional option of switching to ContacTIG (contact ignition).
- **Intelligent Torch Control.** Intelligent Torch Control enables each machine to automatically detect whether the welder uses a standard torch or one of the latest, fully digital Lorch i-Torches including Powermaster remote control.

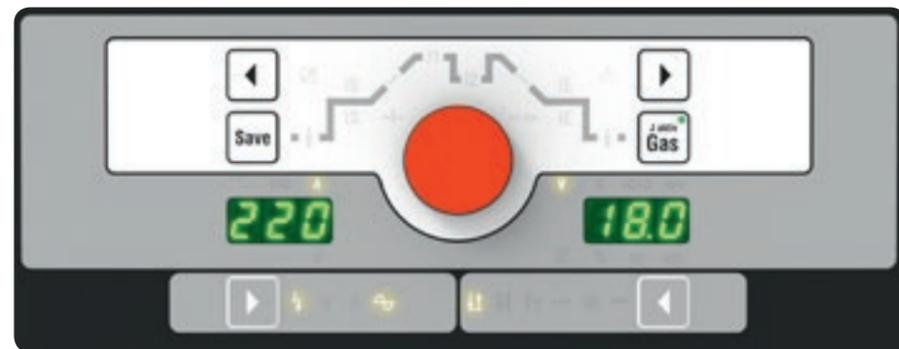
Versions



		T-Pro 250	T-Pro 300	TF-Pro 300
Welding range	A	5 - 250	5 - 300	5 - 300
Mains connection 3~400 V		●	●	●
<b>Operating concept</b>				
ControlPro		●	●	●
<b>Variants</b>				
DC system		●	●	●
AC/DC system		●	●	●
<b>Cooling variants</b>				
Gas		●	●	●
Water		●	●	●
<b>Equipment</b>				
integrated 4-roll wire feeder for TIG cold wire feed		-	-	●
removable operating panel for setting the wire feed		-	-	●

● Configuration options ● Standard equipment

Operating concept



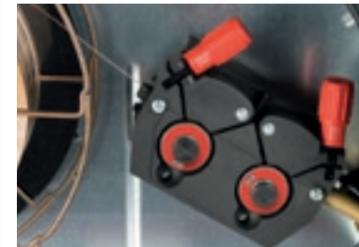
ControlPro

- "3 steps to weld" operating concept
- user-oriented guidance using illuminated symbols and detailed welding sequence control
- Infinitely adjustable welding current setting
- Switch 2-stroke/4-stroke
- Remote control connection
- Tiptronic job memory for 100 welding tasks
- TF-Pro also comes with a removable manual operating panel that controls the TIG cold wire feed

Highlights

Maximum TIG productivity thanks to integrated cold wire feed

The fully integrated wire feeder of the TF-Pro with its separate, removable operating panel and special cold wire controller reliably feeds the filler metal to the weld pool. The high-quality 4-roll feed motor with its specially tuned gearbox combination is in charge of feeding the wire in a reliable manner. The wire outlet, which is pointing down diagonally, combined with the Fast Connect System (FCS) of Lorch's TIG cold wire torch ensures that the wires are threaded in easily and unwind in a reliable manner even when made of aluminium.



Quality wire feeder with 4 rollers



Resistance-optimised wire guide thanks to angled torch connection



Removable control panel for controlling the cold wire feed

Water cooling including fill level indicator



Well thought out in every detail. The level gauge built into systems that are cooled by water recirculation makes it a breeze to check the fill level of the coolant. Coolant can be refilled through the filler plug installed at the rear.

TOP performance with SmartBase

SmartBase, the Lorch expert database, perfectly controls the arc. The user-oriented guidance uses an array of illuminated symbols to allow for detailed welding sequence control. The Tiptronic facility allows you to store an additional 100 welding jobs.

Technical data

		T-Pro 250	T-Pro 300	TF-Pro 300
Welding current - TIG	A	5 - 250	5 - 300	5 - 300
Welding current - electrode	A	10 - 200	10 - 200	10 - 200
Current at 100% duty cycle (DC   AC/DC)	A	180   200	230   200	230   200
Current at 60% duty cycle (DC   AC/DC)	A	250   230	270   230	270   230
Duty cycle I max. (DC   AC/DC)	%	60   45	45   30	45   30
Mains voltage	V	3~400	3~400	3~400
Permitted mains tolerance	%	± 15	± 15	± 15
Mains fuse, delayed action	A	16	16	16
Dimensions (L x W x H)	mm	880 x 400 x 755	880 x 400 x 755	880 x 400 x 755
Weight, gas-cooled (DC   AC/DC)	kg	43.4   45.5	43.6   45.5	52   53.5
Weight of the water cooling unit	kg	15.2	15.2	15.2

## TIG FOR HERE AND THERE AND EVERY-WHERE.

### PERFECT MOBILITY

Compact, extremely rugged design – also available with well-engineered optional trolley

### TOP WELDING PERFORMANCE

High-end technology and SmartBase parameter database control the arc for outstanding results

### PROFESSIONAL TIG FEATURES

Includes everything that professionals need

### The T series at a glance

- **Mobile TIG welding inverter.** Jobs that used to require enormous welding machines are mastered with ease today by our T-series machines, which take up only minimal space and boast superior technology as well as extraordinary TIG welding characteristics. Good ergonomics and easy to carry from only 12 kg. Ideal for applications on the go.
- **Pulse and fast pulse up to 2 kHz.** The standard pulse function with up to 2 kHz that is built into every machine offers you additional benefits when welding thin plates.
- **Low energy consumption.** The included on-demand function automatically turns the components of the unit on and off as needed. Thermal control sensors monitor the temperature of the machine and regulate the speed of the fan accordingly. This smart technology reduces fan noise and dust levels in the machine compartment and helps conserve energy.
- **First-rate welding performance.** High-end technology and the SmartBase parameter database control the arc to produce flawless results.
- **Changeover from DC to AC (AC/DC only).** Available as DC and AC/DC versions in all power variants, Lorch's T series provides you with maximum flexibility even during aluminium welding.
- **Non-contacting HF ignition.** The TIG arc is ignited without direct contact by high-voltage pulses. Ignition is triggered with the press of a button to ensure that the tungsten electrode does not come into contact with the workpiece. Putting an end to welds with tungsten inclusions, this technology reduces the strain on the electrode. When working in HF-sensitive environments or on tools, the operator has the additional option of switching to ContacTIG (contact ignition).



• **Tiptronic.** Using the Tiptronic facility in the ControlPro version, you save your ideal setting for each weld so that you can effortlessly retrieve the settings one at a time using the Up-Down or Powermaster torch when performing recurring welding tasks.

• **Optional equipment.** While designed for mobile applications, the Lorch T series can be converted into a handy, yet fully capable machine suitable for use in the workshop by upgrading it with an optional water cooling system. When mounted on an optional Maxi Trolley, it fully retains its mobile capabilities even with the water cooling system fitted.

• **Intelligent Torch Control.** Thanks to Intelligent Torch Control (ITC), Lorch's smart torch control system, the machines included in the T series are capable of detecting whether the inserted torch is a standard torch or one of Lorch's i-Torch torches. These systems offer an extensive range of protective features for the torch and afford the welder a significant amount of added convenience.

• **Protected against falls from a height of up to 60 cm.** Thanks to its exceptionally low weight the Lorch T series is easy to carry, yet fully protected against falls from a height of up to 60 cm.

Versions



	T 180	T 220	T 250	T 300
Welding range	A 3 - 180	3 - 220	5 - 250	5 - 300
Mains connection 1~230 V	●	●	-	-
Mains connection 3~400 V	-	-	●	●
<b>Operating concepts</b>				
BasicPlus	●	●	●	●
ControlPro	●	●	●	●
<b>Variants</b>				
DC system	●	●	●	●
AC/DC system	●	●	●	●

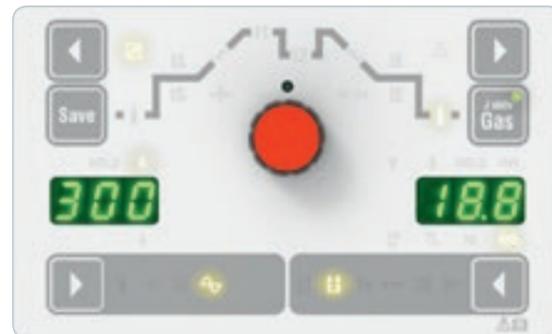
● Configuration options ● Standard equipment

Operating concepts



BasicPlus

- "3 steps to weld" operating concept
- user-oriented guidance using illuminated symbols and welding sequence control
- infinitely variable current setting
- exact-ampere digital display
- Switch 2-stroke/4-stroke
- Remote control connection
- LorchNet, e.g. for controlling the optional water cooling unit
- Pulse function
- Possibility for connection of the Lorch Powermaster remote control torch



ControlPro

- "3 steps to weld" operating concept
- user-oriented guidance using illuminated symbols and detailed welding sequence control
- infinitely variable current setting
- Digital display for welding current and welding voltage
- Switch 2-stroke/4-stroke
- Remote control connection
- LorchNet, e.g. for controlling the optional water cooling unit or the Feed cold wire feeder
- Pulse function
- Tiptronic job memory for 100 welding tasks
- Possibility for connection of the Lorch Powermaster remote control torch

Everything you need, perfectly stowed

It is "the" complete TIG system for your business. You also overcome the most demanding continuous use with the water-cooling unit, the WUK. The system is quickly fixed and the accessories perfectly stowed on the Maxi Trolley, the stable transport carriage.



The water re-circulation cooling unit, designed to be placed under the T.

The Maxi-Trolley, the ultimate transport trolley.

ITC makes it possible: 2 torches for selection

ITC, intelligent torch control, allows the T series to detect whether a standard torch is connected or you wish to work with a Lorch i-Torch such as a Powermaster with digital display, consequently causing the machine to automatically provide the corresponding functionality.



i-Torch

Technical data

	T 180	T 220	T 250	T 300
Welding current - TIG	A 3 - 180	3 - 220	5 - 250	5 - 300
Welding current - electrode	A 10 - 150	10 - 180	10 - 200	10 - 200
Current at 100% duty cycle (DC   AC/DC)	A 130	160	175	200   180
Current at 60% duty cycle (DC   AC/DC)	A 150	180	200	250   220
Duty cycle I max. (DC   AC/DC)	% 35	40	35	35   30
Mains voltage	V 1~230	1~230	3~400	3~400
Permitted mains tolerance	% ± 15	± 15	± 15	± 15
Mains fuse, delayed action	A 16	16	16	16
Dimensions (L x W x H) (DC   AC/DC)	mm 430   483 x 185 x 325	430   483 x 185 x 325	430   483 x 185 x 325	430   483 x 185 x 325
Weight (DC   AC/DC)	kg 12.2   13.3	12.3   13.4	14.3   16.3	14.5   16.3

## THE PEAK OF MOBILE TIG WELDING.

### THREE-WAY FLEXIBILITY

Completely independent thanks to All-In technology for mains supply, generator and battery

### INTUITIVE CONTROL

ControlPro control panel with graphic display, push-and-turn controller and job memory function

### REMOTE CONTROL AT THE TORCH

The Powermaster torch puts all welding parameters right at your fingertips

### The MicorTIG series at a glance

- **Portable TIG welding inverter.** Mobile and compact 200 DC TIG welding machine with MicorBoost technology, non-contact high-frequency ignition and electrode welding function.
- **Total flexibility.** Completely independent thanks to All-in technology for mains supply, generator and battery.
- **Powerful.** The built-in Power Factor Correction Module (PFC) provides for an optimum mains load as well as full capacity during mains operation.
- **Graphical display with language selection and job memory.** The MicorTIG 200 ControlPro offers a clearly structured user interface that makes controlling the machine fully intuitive.
- **Pulse and fast pulse.** The integrated pulse function with up to 5 kHz is exceptionally well-suited for welding thin sheets.



- **Safety.** Bearing the IP23S, the series is ideal for applications in the field.
- **Robust and protected against falls from a height of up to 80 cm.** Thanks to its specially designed crash protection the MicorTIG 200 DC is sure to survive a fall from heights of up to 80 cm completely unscathed. Should you accidentally drop your welding machine or allow it fall off the workbench, you can simply power through and keep working.

- **Remote control at the torch.** No more need to switch back and forth between workpiece and machine. The optional Powermaster torch puts all key welding parameters right at your fingertips, i.e. on the handle.
- **Energy efficient.** The MicorTIG series utilises cutting-edge industrial electronics and on-demand technology to achieve a superior level of efficiency and exceptionally low power consumption.

Versions



MicorTIG 200 DC Accu-ready	
Welding range	A 5 - 200
Mains connection 1~230 V	●
<b>Operating concepts</b>	
BasicPlus	●
ControlPro	●
<b>Equipment</b>	
Accu-ready: All-in technology for mains supply, generator and battery	●
PFC module for optimum mains load	●
High-frequency ignition (HF), gas management and electrode welding function	●
● Configuration options ● Standard equipment	

**MobilePower battery pack**  
Battery pack with lithium-ion technology can be connected to MicorTIG 200 DC

Operating concepts



**BasicPlus**

- HF ignition
- Pulse function with up to 5 kHz
- 7-segment display, exact to the amp
- Infinitely variable current setting
- Welding sequence control can be set via auxiliary parameters
- Electrode pre-selection for Standard and CEL
- Switch 2-stroke/4-stroke
- Remote control connection
- Possibility for connection of the Lorch Powermaster remote control torch

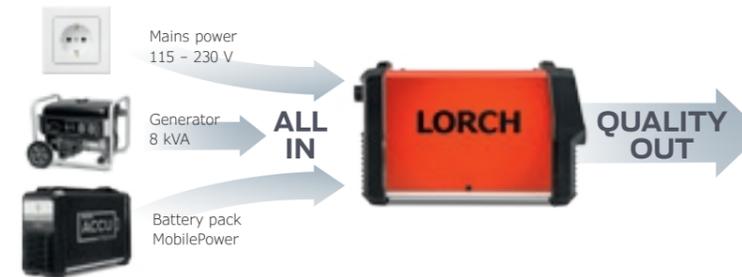


**ControlPro**

- HF ignition
- Pulse function with up to 5 kHz
- Exact-ampere digital display
- Infinitely variable current setting
- Welding sequence control can be set up with the help of the graphical user interface
- Electrode pre-selection for Standard and CEL
- Switch 2-stroke/4-stroke
- Remote control connection
- Possibility for connection of the Lorch Powermaster remote control torch
- Job memory for 10 welding tasks
- symbol-controlled operation
- Detailed full-text menu

Highlights

Unique flexibility thanks to All-In technology



- This means for you: Additional battery-supplied welding in combination with Lorch's high-capacity battery pack MobilePower.
- First-rate welding performance where you need it.

Stainless steel welding with DC



No tungsten inclusions thanks to HF ignition

- HF ignition**  
The TIG Ignition is triggered contactless with high-voltage pulses and with the press of a button to ensure that the tungsten electrode does not come into contact with the workpiece. Putting an end to welds with tungsten inclusions, this technology reduces the strain on the electrode.
- ContactTIG**  
When working in HF-sensitive environments or on tools, the operator has the additional option of switching to ContactTIG (contact ignition).

Can also be used with remote control torch



Technical data

	MicorTIG 200 DC (230 V mains)		MicorTIG 200 DC (115 V mains)	
		Electrode		Electrode
Welding process	TIG	Electrode	TIG	Electrode
Electrode Ø	mm 1.0-4.0	1.5-4.0	1.0-3.2	1.5-3.2
Weldable material	Steel, stainless steel, copper	Steel, stainless steel	Steel, stainless steel, copper	Steel, stainless steel
Welding range	A 5-200	10-180	5-180	10-140
Duty cycle I max. (40 °C)	% 25	25	25	25
Current at 60% duty cycle (40 °C)	A 160	140	150	110
Mains voltage	V 230	230	115	115
Dimensions (L x W x H)	mm	360 x 130 x 215		
Weight	kg	6.8		

## MICORTIG ACCU-READY AND BATTERY PACK MOBILEPOWER.

### MicorTIG200 and MobilePower battery pack

The dream team for welding applications  
on the go.

#### Mains-independent, exceptionally versatile, and powerful.

MicorTIG plus MobilePower. This is the formula for short distances. No more scrambling for a mains connection or lugging around extension cables. Simply connect the MobilePower battery pack to the MicorTIG. No more tiresome preparations just start welding right away. Exactly where you need to and where you want to. Perfect for repair welding on stainless steel, reworking weld seams and work on staircases, banisters and railings as well as the final installation of assemblies and use in pipeline construction. First-class welding performance exactly where you need it.

#### Full flexibility thanks to changeable batteries.

Battery pack 1 = +/- 23 min (at 100 A)  
 Battery pack 2 = +/- 46 min (at 100 A)  
 Battery pack 3 = +/- 69 min (at 100 A)  
 Battery pack 4 = +/- 92 min (at 100 A)



#### Technical data

		MobilePower
Power	Wh	604,8
Charging cycles		approx. 1,000
Weight	kg	7
Dimensions (L x W x H)	mm	323 x 131 x 215
Charging time	min	150
Welding times TIG	min	± 51 (at 50 A)* ± 23 (at 100 A)*

\* Values vary with arc length and ambient temperature

## AC/DC ON TOUR.

### MOBILE TIG TALENT

For aluminum and steel / stainless steel

### INTUITIVE OPERATION

For excellent results even without daily practice

### PERFECT ARC

Automatically optimized no matter where you're working

## The HandyTIG series at a glance

- **Mobile TIG welding inverter.** Since HandyTIG machines boast similar performance characteristics as large industrial TIG systems – both when connected to the 230 V mains and used at the construction site, your workshop will always be afforded the performance necessary to complete all TIG welding jobs.
- **Automatic gas management.** Automatic gas management is applied to automatically regulate the gas pre-flow and post-flow, thereby protecting tungsten electrode and weld pool against oxidation.
- **Intuitive operation.** Offering exceptional ease of use and intuitive operation, allows you to produce outstanding welding results in no time thanks to its automatic setting control.
- **Changeover DC to AC.** Offering you an effortless way to toggle between DC and AC, allow you to also weld on aluminium.
- **Pulse and fast pulse.** The integrated pulse function with up to 2 kHz offers you additional benefits when welding thin sheets.
- **Connection for hand or foot remote control.** We offer a variety of hand or foot remote controls for the Lorch HandyTIG series that allow you to adjust the welding current.



- **Electrode welding function.** Electrode welding with Hotstart, Anti-Stick and Arc-Force regulation: The automatic Hotstart feature guarantees perfect ignition every time, while the Anti-Stick system reliably prevents the electrode from sticking, and Arc-Force regulation supports the welding process by providing for increased arc stability and optimised metal transfer.
- **Energy-efficient.** The Lorch HandyTIG utilises cutting-edge industrial electronics and fan-on-demand technology to achieve a superior level of efficiency and exceptionally low power consumption.
- **Intelligent Torch Control.** Intelligent Torch Control enables to automatically detect whether the welder uses a standard torch or one of the fully digital Lorch i-Torch torches with Powermaster remote control.
- **Job memory.** You can use the job memor to store 2 welding jobs each for electrode and TIG welding.
- **Safety.** Bearing the IP23 and S-symbol, the series is ideal for applications in the field.

Versions



	HandyTIG 180 DC	HandyTIG 180 AC/DC	HandyTIG 200 AC/DC
Welding range	A 5 - 180	3 - 180	3 - 200
Mains connection 1~230 V	●	●	●
<b>Operating concept</b>			
ControlPro	●	●	●
<b>Equipment</b>			
High-frequency ignition	●	●	●
ContactTIG ignition	●	●	●
Gas management	●	●	●
Electrode welding function	●	●	●
<b>Application</b>			
Area	steel and stainless steel with up to 8 mm	steel and stainless steel with up to 10 mm and aluminium with up to 5 mm	steel and stainless steel with up to 10 mm and aluminium with up to 8 mm

● Configuration options ● Standard equipment

Operating concept



ControlPro

- "3 steps to weld" operating concept
- infinitely variable current setting
- exact-ampere digital display
- Switch 2-stroke/4-stroke
- Remote control connection
- Pulse function
- Job memory for 2 TIG and 2 electrode welding tasks each
- suitable for use with Lorch's UpDown remote control torch



ControlPro

- "3 steps to weld" operating concept
- infinitely variable current setting
- exact-ampere digital display
- Switch 2-stroke/4-stroke
- Remote control connection
- Pulse function
- Job memory for 2 TIG and 2 electrode welding tasks each
- Possibility for connection of the Lorch Powermaster remote control torch

Highlights

Aluminium welding with AC/DC

TIG-AC welding



Stainless steel welding with DC

TIG-DC welding



TIG-DC pulse welding



Non-contact HF ignition



HF ignition

The TIG arc is ignited without direct contact by high-voltage pulses. Ignition is triggered with the press of a button to ensure that the tungsten electrode does not come into contact with the workpiece. Putting an end to welds with tungsten inclusions, this technology reduces the strain on the electrode.



ContactTIG

When working in HF-sensitive environments or on tools, the operator has the additional option of switching to ContactTIG (contact ignition).

Can also be used with remote control torch

Versions allow you to use the UpDown remote control torch as well as the classic double push button torch. Moving between workpiece and welding machine is in the past. You control the welding current skilfully and easily from the torch.



Technical data

	HandyTIG 180 DC	HandyTIG 180 AC/DC	HandyTIG 200AC/DC
Welding process	TIG   Electrode	TIG   Electrode	TIG   Electrode
Electrode Ø	mm 1.0 - 3.2   1.5 - 4.0	1.0 - 3.2   1.5 - 4.0	1.0 - 4.0   1.5 - 4.0
Weldable material TIG	Steel, stainless steel, copper	Steel, stainless steel, copper, aluminium	Steel, stainless steel, copper, aluminium
Weldable material Electrode	Steel, stainless steel	Steel, stainless steel	Steel, stainless steel
Welding range	A 5 - 180   10 - 150	3 - 180   10 - 150	3 - 200   10 - 170
Duty cycle I max. (40 °C)	% 30   40	35   35	45   45
Current at 60% duty cycle (40 °C)	A 150   135	150   110	180   120
HF ignition	●	●	●
Mains voltage	V 1~230	1~230	1~230
Dimensions (L x W x H)	mm 337 x 130 x 211	480 x 185 x 326	480 x 185 x 326
Weight	kg 6.5	13.3	13.4

● Standard equipment

# FEED. TIG COLD WIRE FEEDER FOR AUTOMATION AND MANUAL WELDING.

## The Feed

Maximum TIG productivity.  
The TIG cold-wire feeder automates  
the manual feeding operation.

The Lorch Feed delivers superior TIG quality and high speed with absolute precision. The Feed has a completely digital controller, a tachometer-regulated feed motor and a 4-roll precision feeder for the exact wire delivery for this.

### The Feed at a glance

- **Wire feeder.** The 4-roll precision feeder with tachometer-regulated feed motor provides for exact wire delivery.
- **Digital speed feedback.** For perfectly accurate wire delivery.
- **Plain text display with language selection and Tiptronic.** Thanks to the clearly structured user interface and the slanted operating panel, the device control remains well visible throughout operation and affords the user an ergonomic operating position. When working in Tiptronic mode, you can then save your ideal setting for each weld.
- **Plug&Weld: LorchNet.** The one cable that connects everything: both during manual and automated welding.
- **Feed 2.** Cold wire feed with separate, removable power supply unit for work in electrically sensitive areas.



Feed application area: To perform manual welding tasks, simply adapt it to your Lorch V-series using the LorchNet interface.



Range of Feed applications: as a fully integrated part of Lorch's automation solutions.

### Technical data

		Feed 1	Feed 2
Feeder speed	m/min	0.1 – 6.0 or 0.5 – 20.0	0.1 – 6.0 or 0.5 – 20.0
Drive/feeder		4-roll/tacho-regulated motor/ digital speed feedback	4-roll/tacho-regulated motor/ digital speed feedback
Mains voltage	V	230	42/230
Mains plug		Schuko	detachable power supply unit / Schuko
Dimensions (L x W x H)	mm	670 x 270 x 500	670 x 270 x 500
Weight	kg	21.5	21.5*

\* excluding power supply unit

## LORCH TIG TORCHES. PERFECT CONTROL MADE SIMPLE.

### The TIG torch series at a glance

- **Ergonomics.** The unique design of the torch made it possible to reduce the distance between control button and arc. The elevated secondary current button is sure to avoid any unintended adjustments of the welding current and other parameters. Available in 2 sizes.
- **HeatProtect.** A heat sensor provides thermal protection and safeguards the high-quality electronic control system against overheating. (i-version)
- **TorchProtect.** When activated in the welding machine, the optional TorchProtect automatically detects the connected TIG torch and prevents the torch from being subjected to a current that exceeds the maximum rating of that particular torch. This feature protects the torch against overload. (i-version)
- **Equally comfortable for lefties.** A simple press and hold of the Mode button for seven seconds in the Powermaster variant will switch the display to a view that is appropriate for left-handed users.
- **Powermaster control.** The Powermaster variant lets you control all essential parameters of your welding jobs directly at the torch.

i-Torch



- **Cold wire torch.** Integrated, automatic cold wire feed.
- **Tiptronic.** Using the Tiptronic facility, you simply save the ideal setting for each weld in the required sequence. The job memory makes it quick and easy to load up to 100 work values one after the other when you need them.
- **Flexibility.** The ball joint found at the handle and the resilient leather flex hose package guarantee superior freedom of movement and ease of use.

- **Stability.** The decreased distance between the controls of the torch, which optimises the torch's centre of gravity, allows the operator to control the torch in a safe and reliable manner and to keep the arc steady whilst manipulating the torch.
- **Safety.** The elevated secondary current button reliably prevents any inadvertent operation of the UpDown button.
- **Versatile.** The hose package included with the TIG torch is available as a 4 m and an 8 m option.

Versions

		a-LTG/i-LTG 900	a-LTG/i-LTG 1700	a-LTG/i-LTG 2600	a-LTG/i-LTG 2800	LTV 1700	LTV 2600
Welding range up to	A	110	140	180	300	150	200
<b>Operating concepts</b>							
Double push button (DD)		●	●	●	●	–	–
UpDown (UD)		●	●	●	●	–	–
Powermaster (PM)		●	●	●	●	–	–
Valve setting dial		–	–	–	–	●	●
<b>Cooling</b>							
Gas		●	●	●	●	●	●

		a-LTW/i-LTW 2000	a-LTW/i-LTW 3000	a-LTW/i-LTW 1800	a-LTW/i-LTW 1800 SC	a-LTW/i-LTW 4500
Welding range up to	A	220	320	320	400	450
<b>Operating concepts</b>						
Doppeldruck (DD)		●	●	●	●	●
UpDown (UD)		●	●	●	●	●
Powermaster (PM)		●	●	●	●	●
<b>Cooling</b>						
Water		●	●	●	●	●

● Configuration options ● Standard equipment

Operating concepts



Double push button (DD)

- two ergonomically shaped push buttons
- Button 1: Switch current On/Off
- Button 2: Trigger secondary current
- available as a-version and i-version

UpDown (UD)

- two ergonomically shaped push buttons
- Button 1: Switch current On/Off
- Button 2: Trigger secondary current
- now including remote power source control
- available as a-version and i-version

Powermaster (PM)

- two ergonomically shaped push buttons
- Button 1: Switch current On/Off
- Button 2: Trigger secondary current
- now including remote power source control
- with integrated digital display of various welding parameters
- including toggle feature for left and right-handed operators
- Mode button: Toggle between amperage control and Tiptronic job mode
- option to freely select two additional features (can be anything is able to be adjusted at the machine)
- available as i-version

Highlights

Powermaster

When used in combination with UpDown torch functionality, the digital display shows you everything you need at a glance and lets you control the welding current with one-amp accuracy.

What is more, the job memory allows you to load the settings you used during your best welding jobs in a flash. You can also adjust any two parameters you previously set for your system and customise them on the control panel of the torch (AC Bal, AC Freq, Pulse Freq etc).

You can enjoy Powermaster functionality on all Lorch machines that are equipped with ITC-Inside. (MicorTIG series, HandyTIG AC/DC, T series and T-Pro-/TF-Pro series)



Cold wire torch

- integrated, automatic cold wire feed
- available as UD, DD and PM i-Torch torches
- wide-ranging cold wire feed adjustment and setting options
- for TIG DC and AC cold wire welding
- adapter ring rotates and can be locked into place

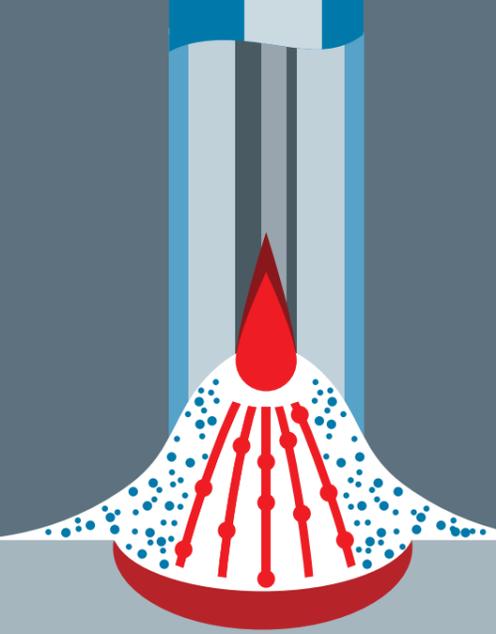


Technical data

		a-LTG 900 i-LTG 900	a-LTG 1700 i-LTG 1700	a-LTG 2600 i-LTG 2600	a-LTG 2800 i-LTG 2800	LTV 1700	LTV2600
Type of cooling		Gas	Gas	Gas	Gas	Gas	Gas
Load DC   AC	A	110   80	140   100	180   130	300   250	150   120	200   160
Duty cycle	%	35	35	35	35	60	60
Electrode Ø	mm	1.0 – 1.6	1.0 – 2.4	1.0 – 4.0	1.0 – 4.0	1.0 – 2.4	1.0 – 4.0
Hose package lengths	m	4   8	4   8	4   8	4   8	4   8	4   8
Handle recess size		1	1	2	2	–	–
as a cold wire torch		–	–	○	○	–	–

		a-LTW 2000 i-LTW 2000	a-LTW 3000 i-LTW 3000	a-LTW 1800 i-LTW 1800	a-LTW 1800 SC i-LTW 1800 SC	a-LTW 4500 i-LTW 4500
Type of cooling		Water	Water	Water	Water	Water
Load DC   AC	A	220   165	320   230	320   230	400   280	450   360
Duty cycle	%	100	100	100	100	100
Electrode Ø	mm	1.0 – 3.2	1.0 – 3.2	1.0 – 4.0	0.5 – 4.0	1.6 – 6.4
Hose package lengths	m	4   8	4   8	4   8	4   8	4   8
Handle recess size		1	1	2	2	2
as a cold wire torch		–	○	○	–	–

○ Optionally available



The arc for  
unparalleled outdoor welding

# ELECTRODE WELDING

Our solutions for every electrode welding  
challenge:

X series

96 – 99

MicorStick series and MobilePower

100 – 105

# WELD EVERYWHERE. IN ANY CONDITIONS. WITHOUT COMPROMISE.

## EXTREMELY POWERFUL

Perfect electrode welding with a diameter of up to 8 mm

## EXTREMELY RUGGED

Splash-proof and fall-proof up to 60 cm

## EXTREMELY VERSATILE

Welds with basic to rutile to CEL electrodes

## The X series at a glance

- **Enhanced performance thanks to MicorBoost.** Fully resonant welding inverter. As soon as the current is reduced due to external disruptions, significantly higher voltage reserves are then activated. The result is electrode welding that leaves nothing to be desired.
- **For extreme applications.** Its low weight, compact external dimensions and protection against falls from a height of up to 60 cm make the X series the model that is best suited for welding applications on the go.
- **Multi-talented.** The Lorch X 350 is always the perfect choice when you need to weld with basic, rutile and special electrodes that have a diameter of up to 8 mm or need a tool that can handle vertical down-welding operations with cellulose electrodes (CEL). What is more, ContacTIG allows you to perform TIG welding operations using direct current.
- **Dependable.** When applying MicorBoost technology, you can rest assured that your machine will ignite in reliable fashion and produce a stable arc even when operated on long mains cables with a length of up to 200 m or when hooked up to a generator.
- **Gouging.** Apart from electrode welding, the Lorch X 350 also handles gouging applications without a hitch.
- **CC and CV curve for MIG-MAG welding.** The Lorch X 350 can also be used with semi-automatic MIG-MAG wire feeder cases.



- **Hotstart.** Thanks to the adaptive automatic Hotstart feature you can always count on perfect ignition.
- **Anti-Stick System.** The Anti-Stick system prevents the electrode from sticking, especially useful for positional welding.
- **Arc-Force regulation.** Arc-Force regulation supports the welding process with increased arc stability and optimised metal transfer.
- **Mobile.** Thanks to its low weight the Lorch X 350 preserves your mobility and flexibility no matter where your work takes you.
- **Remote control.** The Lorch X 350 can now also be controlled using an optional hand or foot remote control.
- **Polarity change function.** The PST variant of the Lorch X 350 includes a helpful polarity change function. This feature eliminates the need for exchanging the electrode and welding return cable in at a different socket as both the machine and the remote control let you effortlessly reverse the polarity (DCEN-DCEP).

## Versions



	X 350 BasicPlus	X 350 ControlPro	X 350 ControlPro PST
Welding range	A 10 - 350	10 - 350	10 - 350
Mains connection 3~400 V	●	●	●
<b>Operating concepts</b>			
BasicPlus	●	-	-
ControlPro	-	●	●
<b>Equipment</b>			
CEL-capable electrode welding inverter, electrode pre-selection and TIG function	●	●	●
Special vertical seam and pulse welding function	-	●	●
Used with semi-automatic MIG-MAG wire feeder cases	●	●	●
Integrated polarity reversal technology (PST)	-	-	●

● Standard equipment

## Operating concepts



## BasicPlus

- "3 steps to weld" operating concept
- infinitely variable current setting
- exact-ampere digital display
- Electrode pre-selection (basic, rutile and CEL) for optimum welding parameters
- Hotstart can be set in submenu
- TIG-DC welding function (with ContacTIG)
- can also be used with semi-automatic MIG-MAG wire feed cases (CV curve)



## ControlPro

- "3 steps to weld" operating concept
- infinitely variable current setting
- exact-ampere digital display
- Electrode pre-selection (basic, rutile and CEL) for optimum welding parameters
- Quick access to Hotstart
- TIG-DC welding function (with ContacTIG)
- Special function for electrode vertical seam welding
- Pulse function
- can also be used with semi-automatic MIG-MAG wire feed cases (CC and CV curve)
- also available as PST variant with polarity reversal/change function

## Highlights

## Protected all-around against water ingress – protection category IP 34

The X is equipped with everything you might need for operation outside of the warm workshop: compact dimensions, protection against falls from a height of up to 60 cm, all around protection against water splashes, excellent shielding against dust and foreign particle infiltration.

In addition a special base construction, enabling a sufficient ground clearance as well as a stable platform. The robust base plate guarantees a long service life.

Robust **base plate**Replaceable **dust filter**

## Electrode vertical seam welding



You no longer have to swing back and forth, but can simply guide the electrode straight up. Thanks to patented control technology the MicorBoost technology always provides sufficient power to keep the arc ignited and stable. What is more, now does away with the need to weld in two passes, as one pass with a large electrode will often suffice.



## Protection against falls

The statistics state: Every machine is dropped at least 4 times during its life time and this is under normal operating conditions. In extreme use, the danger increases and also the probability of a drop.

The standard requires: Unit must be capable of surviving a free fall from a height of 25 cm. Falls from a greater height usually render the unit broken and unusable. Not so with our products. We have designed a special crash protection for the X. The result is impressive: with a fall protection from up to 60 cm height.



Norm X 350

## Technical data

	X 350	X 350 PST
Welding process	Electrode   TIG	Electrode   TIG
Electrode Ø	mm 1.6 - 8.0   CEL up to 6.0	1.6 - 8.0   CEL up to 6.0
Weldable material	Steel, stainless steel	Steel, stainless steel
Welding range	A 10 - 350	10 - 350
Duty cycle I max. (40 °C)	% 35	35
Current at 60% duty cycle (40 °C)	A 280	280
Mains voltage	V 3~400	3~400
Dimensions (L x W x H)	mm 515 x 185 x 385	515 x 185 x 385
Weight	kg 18.6	20.2

## A SYSTEM THAT FLOWS WITH EVERY CURRENT.

### THREE-WAY FLEXIBILITY

All-in technology for mains supply, generator and battery

### LIGHT AND RUGGED

Lightweight with as little as 4.9 kg and crash protection up to 80 cm

### IDEAL WELDING PROPERTIES

Even when using long power cables or in the event of voltage fluctuations

## The MicorStick series at a glance

- **Electrode welding inverter.** CEL-capable, fully resonant welding inverter with MicorBoost technology, electrode pre-selection and TIG function. Suitable for connection to cables with a length of up to 200 m and for generator operation.
- **Compact.** The low weight and compact dimensions of the Lorch MicorStick series make it easy to work with just the way you want especially in the most confined spaces.
- **Multifunctional.** The Lorch MicorStick series always offers you the right tool whether you need to weld with basic, rutile or even special electrodes. Better still, it provides long duty cycles, high power reserves and the possibility of TIG welding with ContactTIG ignition of even the most difficult electrodes.
- **Hotstart.** Thanks to the adaptive automatic Hotstart feature you can always count on perfect ignition.
- **Anti-Stick System.** The Anti-Stick system prevents the electrode from sticking, especially useful for positional welding.



- **Arc-Force regulation.** It supports the welding process with increased arc stability and optimised metal transfer.
- **Dependable.** Even when powered by a generator and hooked up to primary cables with a maximum length of 200 m, the Lorch MicorStick strikes up reliably and remains incredibly stable.
- **Robust and protected against falls from a height of up to 80 cm.** Thanks to its specially designed crash protection the Lorch MicorStick is sure to survive a fall from heights of up to 80 cm completely unscathed. Should you accidentally drop your welding machine or allow it fall off the workbench, you can simply power through and keep working.
- **Energy-efficient.** The Lorch MicorStick series truly shines when it comes to high efficiency and low energy consumption thanks to its integrated state-of-the-art industrial electronics and fan-on-demand technology.
- **Cutting-edge inverter technology.** This regulation technology allows the inverter to combine stellar welding results at minimal spatter formation with superior ease of use.
- **Mobile.** Boasting a remarkably low weight and compact external dimensions, our Lorch MicorStick is one of the most mobile welding machines money can buy. It comes with a handy protective tool case that keeps everything you need, safe and neat in one place.
- **Safety.** Bearing the IP23S, the series is ideal for applications in the field.

Versions



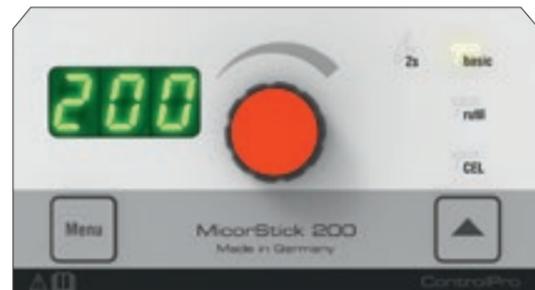
	MicorStick 160	MicorStick 180	MicorStick 200	MobilePower battery pack
Welding range	A 160	180	200	
Weldable electrodes up to Ø	mm 4	4	5	
Mains connection 1~230 V	●	●	-	
Mains connection 3~400 V	-	-	●	
<b>Operating concepts</b>				
BasicPlus	●	-	-	
ControlPro	●	●	●	
ControlPro RC	-	●	●	
<b>Equipment</b>				
Accu-ready: All-in technology for mains supply, generator and battery	●*	●	-	
Version with remote control connection	-	●	●	
PFC module for optimum mains load	-	●	-	
Pulse function	-	●	-	
* in combination with operating concept ControlPro				
● Configuration options ● Standard equipment				

Operating concepts



BasicPlus

- "3 steps to weld" operating concept
- Simplest one-button operation
- Infinitely variable current setting
- Electrode pre-selection for Standard and CEL for optimum welding parameters
- TIG-DC welding function (with ContactTIG)



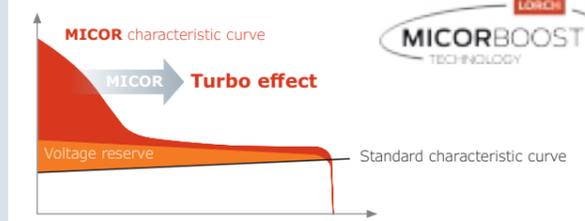
ControlPro

- "3 steps to weld" operating concept
- 7-segment display, exact to the amp
- Simplest one-button operation
- Infinitely variable current setting
- Electrode pre-selection for Standard (basic and rutile) and CEL for optimum welding parameters
- TIG-DC welding function (with ContactTIG)
- Submenu for custom adjustments of the system settings

Highlights

MicorBoost technology

- Innovative and patented MicorBoost technology delivers maximum power and exceptional welding characteristics.
- Full power even in case of voltage fluctuations and when using long primary cables (up to 200 m).
- High efficiency and low energy consumption thanks to state-of-the-art MicorBoost power electronics and automatic power savings mode.



Assembly pack for applications on the go

- Set with sturdy case including interior dividers:
- 3 m electrode and ground cable 25mm<sup>2</sup>
  - Chipping hammer
  - Wire brush
  - Welding shield EN 166
  - Welding glasses DIN 4646-47



Unique flexibility thanks to All-In technology



- This means: battery-supplied welding in combination with Lorch's high-capacity battery pack MobilePower.
- First-rate welding performance where you need it.

Technical data

	MicorStick 160 MicorStick 160 Accu-ready	MicorStick 180 Accu-ready	MicorStick 200 MicorStick 200 RC
Welding process	Electrode TIG with ContactTIG	Electrode TIG with ContactTIG	Electrode TIG with ContactTIG
Elektroden-Ø	mm 1.5 - 4,0	1.0 - 2.4	1.5 - 5.0 1.0 - 3.2
Weldable material	Steel Stainless steel	Steel Stainless steel Copper	Steel Stainless steel Copper
Welding range	A 10 - 150	15 - 160	10 - 180 3 - 200 10 - 200
Duty cycle I max. (40 °C)	% 30	25	30
Current at 60 % duty cycle (40 °C)	A 120	150	150
Mains voltage	V 230	115 / 230	400
Dimensions (L x W x H)	mm 360 x 130 x 215	360 x 130 x 215	360 x 130 x 215
Weight	kg 4.9	6.2	6.3

# MICORSTICK ACCU-READY AND BATTERY PACK MOBILEPOWER.

## MicorStick 160/180 Accu-ready and battery pack MobilePower

The dream team for welding applications on the go.

**Mains-independent, exceptionally versatile, and powerful.** MicorStick plus MobilePower. This is the formula for short distances. The need to look around for a mains connection – eliminated. The need to carry along extension cables – eliminated. Simply connect the Mobile-Power battery pack to the MicorStick Accu-ready. No more cumbersome preparations, just start welding right away. Exactly where you need to and where you want to. An excellent choice for installation work on construction sites and in the area of forestry. Ideal for quick repairs on conveyor systems, construction equipment and agricultural machinery. First-class welding performance exactly where you need it.

### Full flexibility thanks to changeable batteries.

Battery pack 1 = Up to 25 electrodes  
 Battery pack 2 = Up to 50 electrodes  
 Battery pack 3 = Up to 75 electrodes  
 Battery pack 4 = Up to 100 electrodes



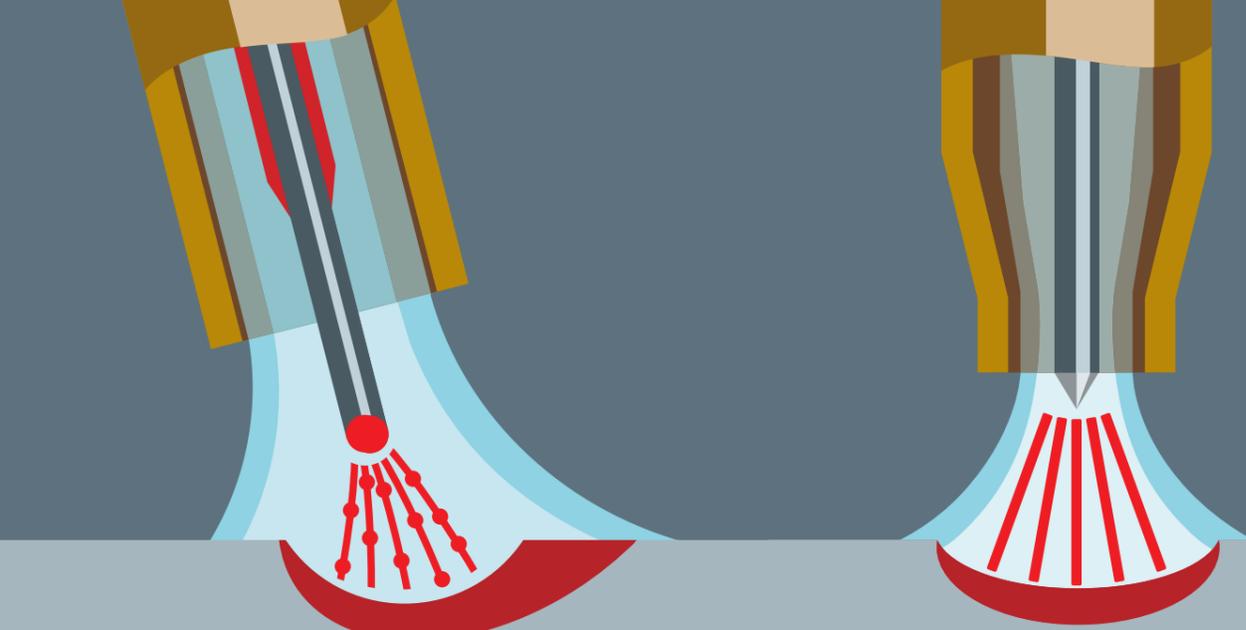
### Technical data

		MobilePower
Power	Wh	604.8
Charging cycles		approx. 1,000
Weight	kg	7
Dimensions (L x W x H)	mm	323 x 131 x 215
Charge time	min	150

### Maximum electrode capacity in units per battery charge

Electrode Ø	Welding current	Electrode type RC11		Electrode type RR12	
		Length 250 mm	Length 350 mm	Length 250 mm	Length 350 mm
2,5 mm	60 A	25	19	21	15
2,5 mm	90 A	20	15	18	13
2,5 mm	110 A	18	13	17	12
3,2 mm	90 A	–	11	–	9
3,2 mm	120 A	–	9	–	8
3,2 mm	150 A	–	8	–	7

All specifications represent maximum values gathered from real weld testing's. The actual range that can be achieved in a specific application varies with the manufacturer's brand of the electrode, the way the welder works and the local environmental conditions.



Simply more productive  
from batch size 1

# AUTOMATED WELDING

Our powerful robotics components  
and automation solutions for economical  
MIG-MAG and TIG welding:

Trac series	112 - 121
Modular system	122 - 125
S-RoboMIG XT	128 - 135
Robo-MicorMIG	136 - 141
V-RoboTIG	142 - 145

## SOMEBODY TO DO THE TOUGH JOB.

### EFFICIENT JOB SHARING

The welder sets the parameters, and TRAC takes on the task of finishing the welding job

### REPRODUCIBLE QUALITY

Consistently high quality of the weld seams thanks to active drive control and a stable feed

### UNEQUALLED VERSATILITY

A genuine jack of all trades thanks to a wide selection of welding tractors and accessories

### The Trac series at a glance

- **The right solution for any application.** Welding tractors represent a convenient tool to support the welding of long, longitudinal and curved seams. While the basic requirement of precise torch guidance is the same for all disciplines of welding, each individual application comes with its own specific set of requirements. Lorch's comprehensive product portfolio includes an extensive selection of accessories, leaving nothing to be desired.
- **Everything from a single source.** Aside from heightening productivity, the one central aspect that welding automation focuses on is and always has been to assure the required weld seam quality. Attaining both objectives requires equal expertise in both areas. Following their motto of "Everything from a single source", Lorch is offering a direct and safe way to automated welding.
- **Reproducible weld seam quality.** The constant speed with active control guarantees weld seams with consistently high quality.
- **User friendliness.** The desired parameters can be set with just a few steps thanks to the simple and intuitive operation.
- **Versatility.** Travel via wheels, rails or ringed rails – depending on the welding application required.

Automating with Lorch:  
**Everything from a single source**



## Trac welding tractors

Enhance the efficiency of your welding production and marry your Lorch power source with a new Lorch welding tractor. The welding tractor guides the torch continuously, allowing the welder to focus on setting the necessary parameters. It also improves the control over the heat input and causes less distortion. Repeatability and reproducibility translate to less stress. Better still, the increased distance to the hot end of the torch improves the welder's daily working environment.



### TRAC WL

Ultra compact and portable, the Lorch Trac WL are wheel-mounted and programmable welding tractors that deliver reproducible longitudinal and curved seams of superior quality – both in horizontal and vertical direction. The battery-powered version streamlines welding on the inside of containers.



### TRAC RL

Lorch Trac RL are rail-mounted welding tractors capable of welding long and continuous butt and fillet welds with exceptional precision. This versatile rail system allows for the implementation of applications without the need for guiding edges. This capability makes the machines especially ideal for applications involving stainless steel.



### TRAC RL Performance

Boasting integrated seam tracking, the Lorch Trac RL Performance is a high-end welding tractor that produces welds that live up to the highest standards. The track-guided Trac ensures steady speed and, thus, reproducible welding results even under the toughest operating conditions.

The machine evens out any product tolerances automatically thanks to its built-in "seam tracking" function – both during MIG-MAG and TIG applications. This feature allows the welder to weld even warped workpieces without a hitch. Another feature that lessens the welder's load is the removable control panel. Finally, the integrated orbital function makes it a breeze to weld pipes – even in fixed positions.

Typical areas of application include welding operations on pipelines and stainless steel enclosures as well as on support structures with a high workpiece tolerance.

### Technical data

		Trac WL	Trac RL	Trac RL Performance
Power supply	V	42/115/230 18 V battery*	42/115/230	115/230
Feeder		Wheels	Track	Track or annular rail
Welding position		PA, PB, PC, PF	PA, PB, PC, PF, PG	PA, PB, PC, PD, PE
Curved seam radius Convex	mm	> 1000	> 5000	> 5000 (Hi-Flex > 750 mm)
Curved seam radius Concave	mm	> 1250	> 5000	> 5000 (Hi-Flex > 750 mm)
Minimum wall thickness	mm	4	5	5 (steel with 5 magnets)
Minimum diameter	mm	–	–	200
Oscillator		○ ** (Radial)	○ (Linear)	● (Linear)
Segment welding		○ **	–	●
Program memory		○	–	●
Tactile seam tracking		–	–	○
Orbital function		–	–	○
TIG arc length control		–	–	○

\* Battery only available for Trac WL Batt \*\* only for TRAC WL Pro

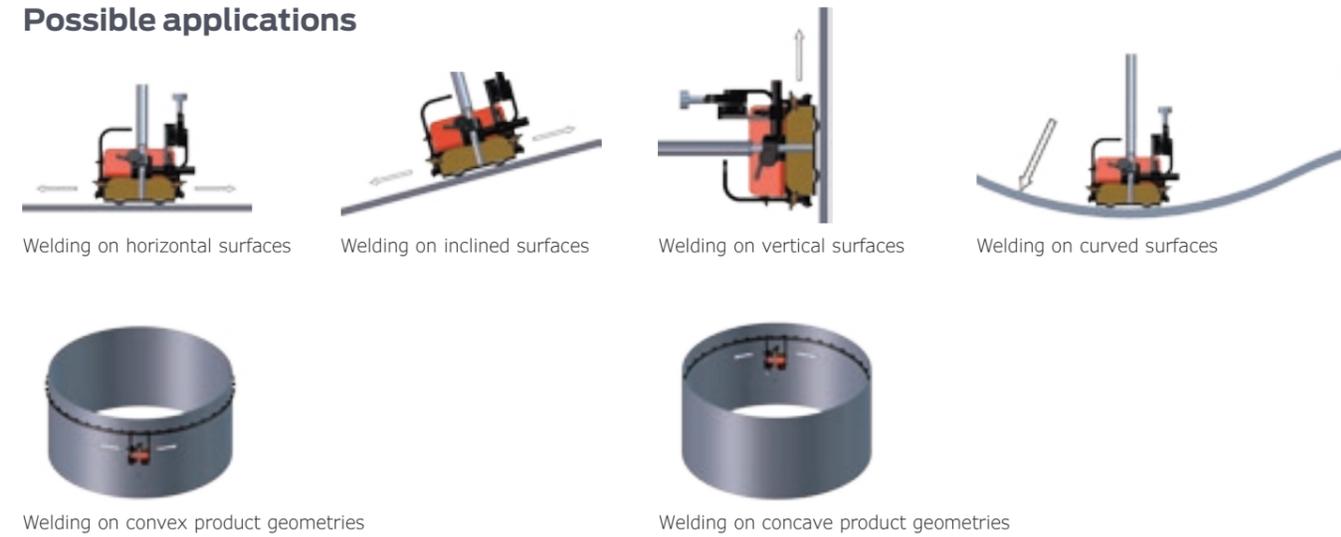
● Standard equipment ○ Optionally available

## The Trac WL at a glance

- **Simple and versatile.** Completely painless torch set-up thanks to 3D torch fine tuning.
- **Light and robust.** Effortless handling thanks to its sturdy, yet lightweight housing.
- **Flexible in any position.** Expert welding on horizontal, vertical and curved surfaces and to create convex and concave curved seams.
- **Oscillator unit.** The optional oscillator unit is perfect for producing weave welds and seams with larger dimensions, as well as compensating for positioning deviations.
- **Plug&Weld.** Plug&Weld and the LorchNet connection ensure that all components making up a Lorch automation system communicate perfectly with one another.
- **Programming made easy.** Programming and storing up to 40 oscillating and welding programs is a snap with the Trac WL PRO.

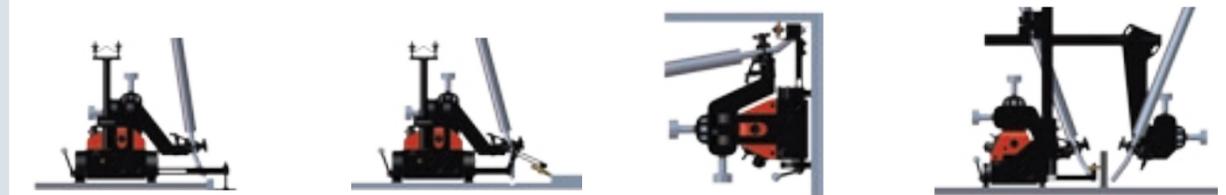


## Possible applications



## Highlights

### Accessories



The extensive range of Trac accessories makes it possible to ideally adapt the welding tractor to any special seam geometries.

### Battery

The battery-powered version Trac WL adds even more flexibility to the welding process.



### Oscillator

The optional oscillator unit available for the Trac WL Pro is perfect for producing weave welds and seams with larger dimensions.



### Segment welding

The control built into the Trac WL Pro offers an effortless way to weld segments.



## The Trac RL at a glance

- **On track to achieve the perfect seam.** Stellar welding results thanks to a slip-free feed ensured by a rack and pinion drive.
- **Wide range of possible applications.** Rails can be equipped with magnetic or vacuum holders, making them adaptable to various operating conditions and materials.
- **Straightforward operation.** Parameter set-up via buttons or a plain text display.
- **Welding in perfection.** The flexible set-up of the oscillator pattern allows for a perfect adaptation to the corresponding seam geometry.
- **Oscillator unit.** The oscillator unit is perfect for producing weave welds and seams with larger dimensions, as well as compensating for positioning deviations.
- **The perfect weld seam.** Exact weld seam reproduction eliminates expensive oversize seams and cuts down the consumption of un-necessary filler material.
- **Plug&Weld.** Plug&Weld and the LorchNet connection ensure that all components making up a Lorch automation system communicate perfectly with one another.



## Possible applications



Welding in the horizontal position with guide rails (laterally with magnetic holders)



Welding in the vertical position with guide rail



Welding on a concave plane with Flex guide rail

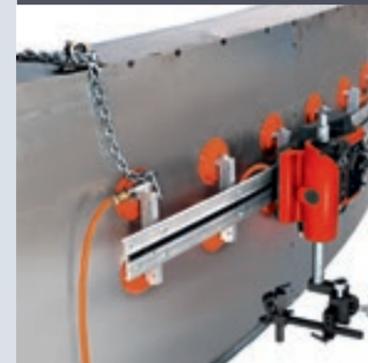
## Highlights

### Oscillator

The integrated oscillator unit of the Trac RL Pro is an exceptional choice for welding larger weld seam volumes.



### Vacuum fixation for stainless steel



Thanks to the Lorch vacuum fixing device, welding work-pieces made of aluminium and stainless steel is a cinch even if the workpiece has poor ferromagnetic properties.

## The Trac RL Performance at a glance

- **Allows for fully customised configurations.** Individual configuration of the welding tractor depending on the application at hand.
- **Tactile seam tracking.** Tolerance compensation in vertical and horizontal direction thanks to tactile seam tracking.
- **Integrated arc length control.** Reproducible welding results on concave planes and warped work-pieces thanks to integrated arc length control (AVC).
- **Simple and reproducible welding of pipes.** Reproducible welding of pipes in forced positions is guaranteed by a programmable orbital welding sequence including automated job change.
- **100 % data recording according to WPS.** Documentation of the welding speed using Lorch Q-Data to ensure 100% data recording of the welding parameters according to WPS.
- **Plug&Weld.** Plug&Weld and the LorchNet connection ensure that all components making up a Lorch automation system communicate perfectly with one another.
- **Oscillator unit.** The oscillator unit built into the Trac RL Performance allows for weld seams with a larger volume and facilitates compensation of positioning deviations.
- **Ergonomics with a capital E.** The removable Trac control panel makes it a breeze to set the necessary parameters and provides a convenient way to correct the welding parameters during operation.



## Possible applications



Welding in horizontal position with guide rail (upside down with vacuum holders)



Welding in horizontal position with guide rail (laterally with vacuum holders)



Welding in vertical position with guide rail (with magnetic holders)



Welding on prefabricated ring rails (pipes/tanks  $\varnothing$  200 mm – 10 m)

Welding on a concave plane with Flex guide rail (tank  $\varnothing$  10 m or greater)

## Highlights

### Integrated AVC arc control during TIG welding

The integrated arc length control guarantees outstanding weld seam quality on both concave and non-concave applications. This value sets the motorised height adjustment higher or lower as needed, ensuring that the distance between workpiece and electrode remains reproducible.

The arc length control feature only works with machines of the Lorch V-series.



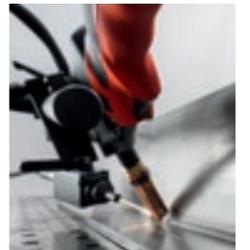
### Orbital welding

Thanks to the built-in orbital function, welding pipes in fixed positions is completely effortless.



### Tactile seam tracking

The tactile seam tracking evens out any workpiece tolerances in vertical and horizontal direction.



### Segment welding

The built-in control makes the welding of segments a walk in the park.



## WE COMPOSE YOUR ROUNDSEAM WELDING SOLUTION TO YOUR NEEDS.

### SUPERIOR FLEXIBILITY

Well-balanced and intelligent modular system

### MASTERFULLY MATCHED

All components are part of a finely tuned system and benefit from a uniform operating concept

### TOP-NOTCH QUALITY AT THE PRESS OF A BUTTON

Effortlessly and conveniently store welding jobs and retrieve them at any time

### The modular system at a glance

- **Three steps to the perfect seam.** Workpiece diameter, welding speed and welding parameters: That's it!
- **Everything from a single source.** Aside from heightening productivity, the one central aspect that welding automation focuses on is and always has been to assure the required weld seam quality. Attaining both objectives requires equal expertise in both areas. Following their motto of "Everything from a single source", Lorch is offering a direct and safe way to automated welding.
- **Very short changeover times.** Quick and precise set-up thanks to an optimum arrangement of the individual components.
- **Uniform operating concept.** Painless handling and preparation of the system thanks to a uniform operating concept of power source and automation system.
- **A marriage made in heaven.** Simple and convenient connection with the Lorch power source thanks to Lorch Plug&Weld.

Automating with Lorch:  
**Everything from a single source**



- **Always brought into position correctly.** Whether mechanically or pneumatically - reaching the exact welding position is a breeze with Lorch's torch stands.
- **For heavy loads.** The large modular turntables truly shine when handling loads up to 500 kg.
- **The appropriate process.** Whether MIG-MAG, MIG-MAG Pulse, TIG or TIG with cold wire: our processes put perfection front and centre.

- **Tiptronic job memory.** Set up your welding tasks in no time at all.
- **Input data the easy way.** The optionally available Q-Sys2020 provides end-to-end documentation of the welding data, allowing you to keep track of all welded components.

## Highlights

### LorchControl

The Lorch control takes charge of all process including the handling of errors and diagnostics. The heart of the system is the automatic parameter handling, which regulates the process in a fully automatic way. The control makes it a snap to operate the turntables - no matter if during MIG-MAG or TIG welding.



### Fix&Pos

Use the Lorch Fix&Pos to set the perfect welding position with perfect ease and flexibility.



### Plug&Weld

To establish the connection, hook up the LorchNet cable to the corresponding component, and you are all set.



### LorchFollow

Our LorchFollow weld tracking system ensures that the distance between torch and workpiece remains unchanged.



### Feed cold wire feeder

The LorchFeed cold wire feeder is equipped with a fully digital control and delivers superior TIG quality thanks to its flawless precision.



## Technical data

		Turn 50	Turn 100	Turn 300	Turn 500
Load	kg	50	100	300	500
Turntable	mm	300	300	500	740
Speed range	RPM	0.8 - 10.0	0.4 - 5.0	0.08 - 1.0	0.08 - 1.0
Tilt adjustment		Manual	Swivel gear	Swivel gear*	Swivel gear*
Hollow shaft	mm	30	30	150	295
Torch positioning		Manual / pneumatic	Manual / pneumatic	Manual / pneumatic	Manual / pneumatic
* also as motorised option					

# WORKING TOGETHER PERFECTLY:

## **SIMPLE TO INTEGRATE**

Sophisticated interface technology and a host of different mechanical add-on parts allow for a combination with nearly all major robot systems

## **IMPROVED PRODUCTIVITY**

Use Lorch's Speed processes to squeeze even more out of every seam even when hooked up to a robot

## **COMPLETE CONTROL**

If requested, now with welding data monitoring in real time for automatic quality assurance of your welding results



## S-ROBOMIG XT. FOR MAXIMUM PERFORMANCE WITH YOUR ROBOT.

### The S-RoboMIG XT at a glance

- **High-end welding performance.** Lorch Speed processes always deliver – also in combination with robotic systems. Especially the SpeedPulse XT. Extra fast and extra robust with extra low spatter.
- **Digital-intelligent process technology.** The computing power and measuring sensors integrated into the S-RoboMIG XT boost your welding performance with exact process control and such special features as seam tracking.
- **Comprehensive interface technology.** Highly advanced interface connectivity supports all common fieldbus and industrial Ethernet systems along with analogue-digital interfaces.
- **Customised configurations.** You can tailor every welding machine to your specific requirements, ensuring that the machine is a perfect fit for the automatic execution of your welding jobs.
- **Innovative upgrade concept.** If the need arises to upgrade your system later on, you can retrofit your system with additional welding processes and functions at any time to boost your productivity. No matter which machine design you pick, your investment is future-proof and will remain up to par with tomorrow's standards.



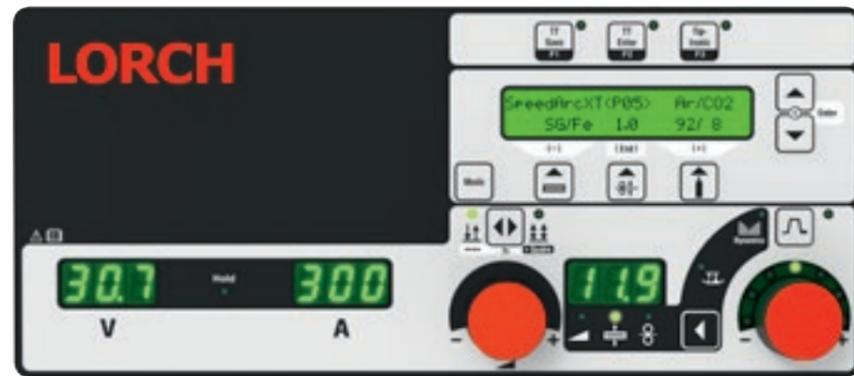
- **Tiptronic job management.** Lorch Tiptronic lets you save your ideal settings for every seam, allowing you to retrieve them one by one on the robot's control when completing recurring welding tasks (standard memory for 100 jobs, optional memory for 1000 jobs).
- **Back-up function for welding jobs.** The JobTool PC software is designed to save and edit welding tasks (jobs) stored in the welding machine along with their parameter settings. Also suitable for transferring jobs to additional power sources.
- **Arc dynamic control.** This type of control offers an easy way to adjust the arc characteristic from soft to hard and from hotter to colder. The characteristics are stored in the welding job or controlled directly by the robot via the interface.
- **Robo wire feeder.** The robot wire feeder RF-06 is compact, weight-optimised, powerful and perfectly insulated. While it is designed for standard and hollow wrist robots, you can also opt for a version that supports PushPull torch systems.
- **Extended range of sensors.** Optional seam tracking function, wire end detection, gas pressure detection or gas flow measurement allow for advanced control over your automated application.
- **Wide variety of accessories.** Mechanical add-ons for the most common robot versions and wire feeder configurations provide for easier integration.

Versions

	S3 RoboMIG XT	S5 RoboMIG XT	S8 RoboMIG XT
Welding range	25 - 320	25 - 400	25 - 500
Voltage adjustment	infinitely variable	infinitely variable	infinitely variable
Mains connection 3~400 V	●	●	●
<b>Operating concept</b>			
XT	●	●	●
<b>Welding process variants</b>			
Synergic	●	●	●
Pulse	●	●	●
SpeedPulse	●	●	●
Full process	●	●	●
<b>Cooling variants</b>			
Gas	●	●	●
Water	●	●	●
Water with boosted cooling capacity	○	○	○
Water with more powerful pump	○	○	○
<b>Feeder</b>			
RF-06	●	●	●

● Configuration options ● Standard equipment ○ Optionally available

Operating concept



XT

- "3 steps to weld" operating concept
- Synergic control
- Intuitive operation
- Straightforward process and program selection
- Infinitely adjustable welding current setting
- Arc dynamic control (for Synergic, SpeedArc XT, SpeedPulse XT, TwinPulse XT)
- Arc length can be adjusted specifically for starting, welding and end phases
- Tiptronic job memory for 100 welding tasks (optionally 1000)
- Digital volt-ampere display
- Welding circuit measurement and welding circuit compensation



Also available as a remote control version.

Individual selection of the operating option. In the power source, as a remote control operating panel or both if needed.

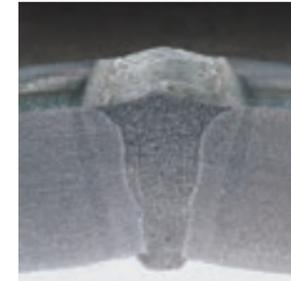
Highlights

Speed processes for maximum productivity



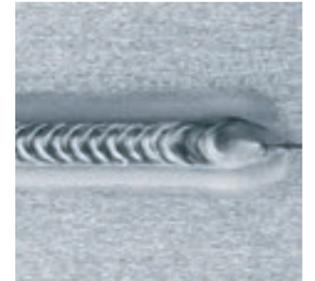
SpeedPulse XT

Extra fast.  
Extra robust.  
Extra low-spatter.



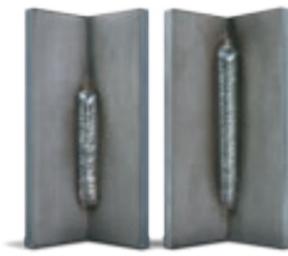
SpeedArc XT

High arc pressure.  
Deep penetration.  
Saves time and money.



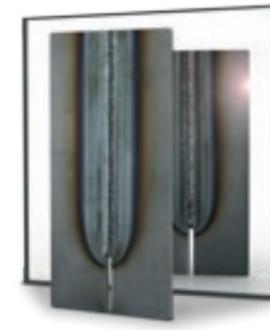
TwinPulse XT

Picture-perfect seams  
at maximum speed.



SpeedUp

360° operation. Weld vertical seams and other fixed positions fast and with perfect ease and process reliability.



SpeedRoot

Top-tier gap bridging.  
Challenging root welding made easy.



SpeedCold

Reduced heat input.  
Ideal for thin metal sheets.

Equipment

Equipment version	Welding process									
	Standard MIG-MAG	SpeedArc XT	Standard Pulse	TwinPuls	Speed-Pulse	Speed-Pulse XT	TwinPulse XT	Speed-Up	Speed-Root	Speed-Cold
Full process	●	●	●	●	●	●	●	●	●	●
SpeedPulse	●	●	●	●	●	●	●	○	○	○
Pulse	●	●	●	●	-	-	-	○	○	○
Synergic	●	●	-	-	-	-	-	○	○	○

● Standard equipment ○ Optionally available

## Highlights

### Innovative upgrade concept

The S-RoboMIG XT affords you the integrated upgradability you need to stay perfectly flexible. Aside from allowing you to customise your welding system to the production needs you face today, this upgradability leaves you assured that you will be able to adapt your welding system to constantly changing welding requirements and add productivity-boosting welding processes and functions at any time in the future. The S-RoboMIG XT allows you to be and remain on the safe side and to look forward to what the future holds in store.



### Real-time welding data monitoring

#### Lorch power source measuring sensors

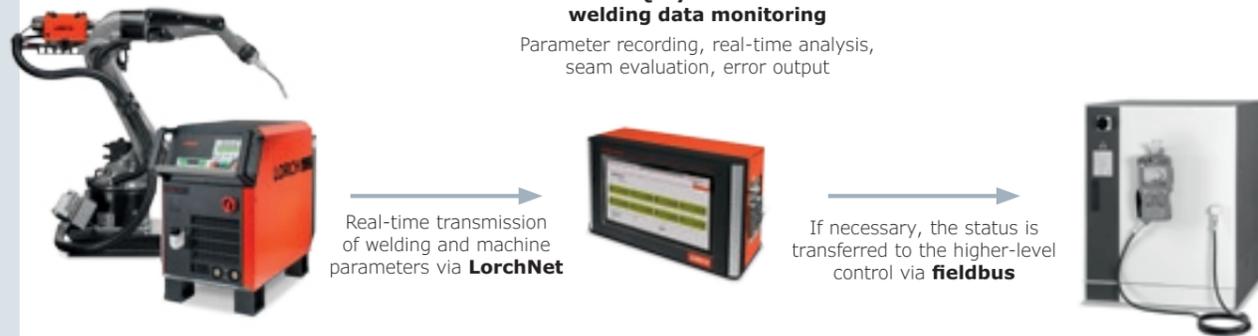
Direct welding parameter measurements

#### Higher-level control

Decision on the process intervention

#### Q-Sys 2020 welding data monitoring

Parameter recording, real-time analysis, seam evaluation, error output



### Additional cooling options

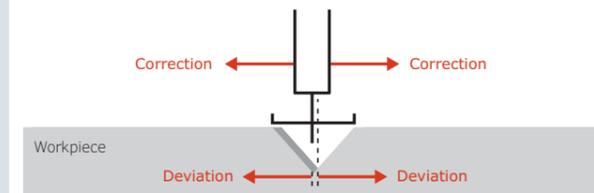
In addition to the standard cooling system, the S-RoboMIG XT is also available with two additional cooling options. In plain language, this means: up to 35 % more cooling output - making it optimal for highly intensive industrial applications. More cooling also means less stress on the torch system, which can have a positive effect on the service life of torches and wear parts. There is an additional version available with a larger pump for welders who have to work with long interpass hoses of 20 metres or more. This model ensures that the full cooling power is delivered exactly where it is needed.



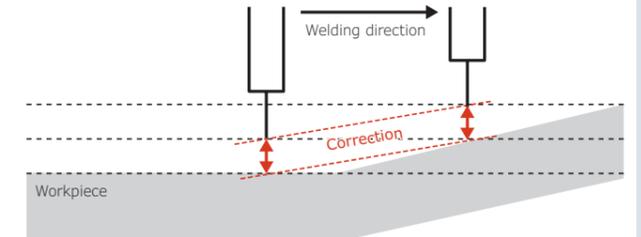
### Seam tracking function

The high-end control technology built into Lorch's S-RoboMIG XT performs real-time calculations based on a large volume of information and uses the results to generate a signal that the robot control can understand. This applies to both standard and pulsed arc processes. This seam detection and tracking function essentially allows the robot to continuously and automatically adjust the position of the torch guidance to the actual conditions of the workpiece. The signal that generated is suitable both for a vertical and horizontal adjustment of the torch guidance.

#### Horizontal seam tracking



#### Vertical seam tracking



### BUS coupling system for all common protocols

The LorchNet Connector is responsible for the optimum connection between the S-RoboMIG XT power source and the robot control. It essentially acts as an interpreter translating all signals and information of the internal LorchNet bus system into a language the robot can understand. In other words: it converts the signals into one of the most commonly used fieldbus and industrial Ethernet protocols.

It is also capable of communicating all signals relevant to the torch control, e.g. purging function, anti-collision function, and contact sensor, entirely over the bus system.

Available as an alternative: Analogue-digital interface INT-06 for switch cabinet installation or built into the power source with 42-pin Harting connector.



### Technical data

		S3 RoboMIG XT	S5 RoboMIG XT	S8 RoboMIG XT
Welding current MIG-MAG	A	25 - 320	25 - 400	25 - 500
Current at 100% duty cycle	A	250	320	400
Current at 60% duty cycle	A	280	350	500
Duty cycle I max.	%	40	50	60
Mains voltage	V	3~400	3~400	3~400
Permitted mains tolerance	%	± 15	± 15	± 15
Mains fuse, delayed action	A	16	32	32
Dimensions (L x W x H)	mm	1116 x 463 x 812	1116 x 463 x 812	1116 x 463 x 812
Weight (gas-cooled)	kg	92.8	97.3	107.3
Weight wire feeder case (standard)	kg	7.2	7.2	7.2
Weight - water cooling (filled)	kg	14.7	14.7	14.7

## RF-06 at a glance

Powerful, yet compact robot wire feeder for standard and hollow wrist robots.

The requirements on a wire feeder case for robot applications are clear-cut: compact and weight-optimised, yet powerful and, naturally, perfectly insulated to permanently safeguard the electronics built into the robot. The RF-06 satisfies these requirements to the full extent and is optimised for robot applications in many respects. The entire development process of the robot wire feeder revolved around versatility. The result is a robot wire feeder that is suitable for both hollow wrist robots and standard robots (with exterior torch hose package) and for both gas-cooled and water-cooled operation. The water hoses of the inter-connection hose package used with Lorch's robot power source are designed for simple adaptation at the base of the RF-06. Design and function have been perfected to the last detail. One testimonial to this perfection is the sliding system of the RF-06, which simplifies torch maintenance on the hollow robots significantly by creating more space for a liner change. This new design makes the need to remove the feeder for maintenance purposes a thing of the past.



4-roll precision wire feeder with robust, weight-optimised feed plate made of plastic reinforced with fibreglass and with a change of rolls without tools.



Functionally optimised connectivity for control cable, gas, compressed air, wire delivery and welding current (secure cable lug connection).



Intricate base construction including insulated bottom plate, installation duct for water lines and fastening option for various robot adapter plates.

Versions for hollow wrist and conventional robots



Innovative sliding system



Operating position of the RF-06



Maintenance position of the RF-06

### Technical data

		RF-06	RF-06 PushPull
Output	W	100	100
Feeder speed	m/min	0.1 - 25	0.1 - 25
Drive 4/2 (4 rolls, 2 driven)		●	○
Drive 4/4 (4 rolls, 4 driven)		○	●
Rolls	∅	30	30
Fully insulated		●	●
Blow-off valve for compressed air		●	●
Wire feed at the torch *		●	●
Dimensions (L x W x H)	mm	310 x 200 x 160	310 x 200 x 160
Weight	kg	7.2	7.6

\* if supported by the torch system

● Standard equipment ○ Optionally available

## ROBO-MICORMIG. THE AFFORDABLE START INTO ROBOT WELDING.

### The Robo-MicorMIG at a glance

- **MicorBoost technology.** The unparalleled MIG-MAG all-rounder capabilities offered by MicorBoost technology are just as impressive during robot welding. They deliver exceptional arc stability and outstanding mixed gas and CO<sub>2</sub> welding characteristics.
- **From exceptionally simple to ... whatever you need.** Sporting a no-frills design (feeder, interfaces and operation), the Robo-MicorMIG offers an affordable start into the world of robot welding, while letting you opt for a great number of functions and equipment options if you need them.
- **Comprehensive interface technology.** Highly advanced interface connectivity supports all common fieldbus and industrial Ethernet systems along with analogue-digital interfaces.
- **Innovative upgrade concept.** The Robo-MicorMIG can easily be adapted to ever increasing welding requirements by means of NFC technology. It is now possible at any time to upload welding processes, welding programs and functions that boost performance in addition to streamlining your workflow. Thanks to the Robo-MicorMIG you can rest assured that you are always up to date: now and for challenges yet to come.
- **Ready for more.** The Robo-MicorMIG can be expanded by both the two Speed processes SpeedArc and SpeedUp and by a standard pulse process in order to avoid transition arcs.



- **Tiptronic job management.** The ControlPro display makes using the Tiptronic function a cinch, allowing you to easily store the welding jobs you utilise most frequently. Another welcome feature the Robo-MicorMIG includes is the SystemManager, which lets you save welding jobs and transfer them to other machines.
- **Robo wire feeder.** The robot wire feeder RF-06 is compact, weight-optimised, powerful and perfectly insulated. While it is designed for standard and hollow wrist robots, you can also opt for a version that supports PushPull torch systems.
- **Extended range of sensors.** Optional seam tracking function, gas pressure detection or gas flow measurement allow for advanced control over your automated application.
- **Wide variety of accessories.** Mechanical add-ons for the most common robot versions and wire feeder configurations provide for easier integration.

Versions

	Robo-MicorMIG 300	Robo-MicorMIG 350	Robo-MicorMIG 400	Robo-MicorMIG 500
Welding range	A 25 - 300	25 - 350	30 - 400	30 - 500
Voltage adjustment	infinitely variable	infinitely variable	infinitely variable	infinitely variable
Machine system	stationary	stationary	stationary	stationary
Mains connection 3~400 V	●	●	●	●
<b>Operating concepts</b>				
BasicPlus	●	●	●	●
ControlPro	●	●	●	●
<b>Cooling variants</b>				
Gas	●	●	●	●
Water	●	●	●	●
<b>Feeder variants</b>				
RF-02	●	●	●	●
RF-06	●	●	●	●

● Configuration options ● Standard equipment

Operating concepts



BasicPlus

- "3 steps to weld" operating concept
- Infinitely adjustable welding current setting
- Digital volt-ampere display
- Activation of end crater filling as necessary
- Variable arc dynamic control
- Automatic setting control (Synergic control)
- Upgradability



ControlPro

- "3 steps to weld" operating concept
- Infinitely adjustable welding current setting
- Digital volt-ampere display
- High-luminosity graphic display (OLED) for display of the 3rd main parameter
- Activation of end crater filling as necessary
- Variable arc dynamic control
- Automatic setting control (Synergic control)
- Tiptronic job memory for 100 welding tasks
- Upgradability



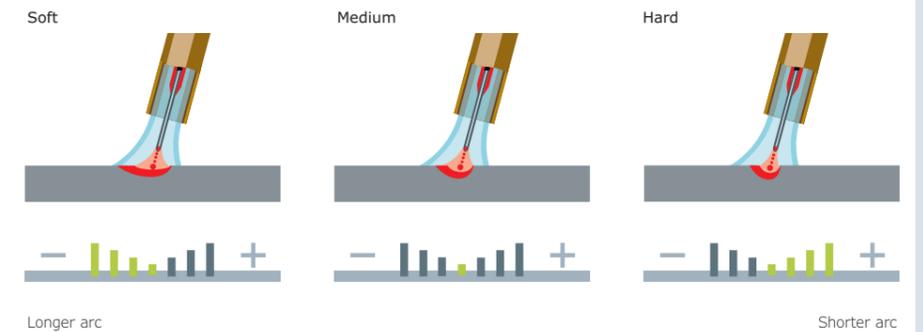
**Control Pro** also available as a remote control version.

Individual selection of the operating option. In the power source, as a remote control operating panel or both if needed.

Highlights

Arc dynamic control

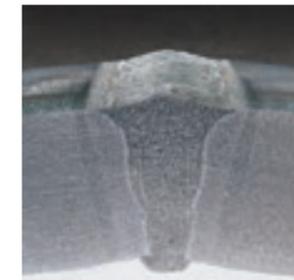
Robo-MicorMIG allows you to individually adjust the dynamics of the arc to suit the work and welding position at hand and will find the simplest and fastest arc setting that is most appropriate for each specific case. The rest of the job is carried out by the intelligent arc control technology. All essential parameters are controlled automatically in the background.



SpeedArc

SpeedArc developed by Lorch delivers an enormous energy density and, consequently, generates a greater arc pressure that flows into the weld pool. The result is impressive as it speeds up MIG-MAG welding tremendously. But, speed is not the only factor that takes productivity to unprecedented levels. There is also the fact that components which had to be welded in several passes before, can now - due to the Lorch SpeedArc - be joined in one single pass, up to 15 mm thick. This is productivity that pays off; this is value added welding.

Better yet, the highly concentrated, stable arc of the SpeedArc can also be used with long stick out for welding into narrow joints.



SpeedUp

The SpeedUp makes welding vertical seams exceedingly easy and excels especially as a 360 degree process. This capacity eliminates the need for complex positioning technology.

It combines the hot high-current phase - during which a great amount of energy is introduced to melt the material - with the cold phase to effect a reduced heat input - thereby, offering good penetration, exactly dimensioned weld seams and nearly perfect a-measurement dimensions. Unparalleled arc regulation delivers outstanding speed and produces results that show no transitions and virtually no spatter.



Pulse

Weld with next to no spatter - steel, stainless steel or aluminium

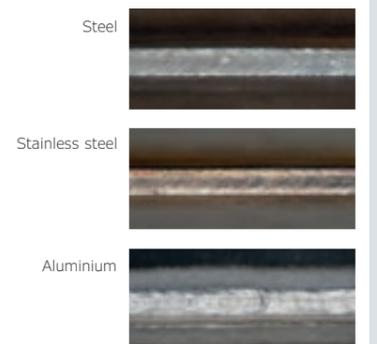
The rapid-action control technology of the Robo-MicorMIG in combination with the Pulse upgrade provides for virtually spatter-free welding across the entire material thickness range. The transition arc range during pulse welding is completely avoided. This technology saves you a great amount of tedious rework and unsightly spatter.

Flawless seam appearance - even on aluminium and stainless steel

A spatter-free weld seam, smooth seam transitions and improved sidewall fusion. From now on, you will master this challenge with ease thanks to the pulsed Robo-MicorMIG arc.

Reduced temper colours on stainless steel welds

Introducing a lower amount of energy into the workpiece, the pulsed Robo-MicorMIG arc reliably prevents any unnecessary temper colours. To top it all off, the process delivers all that plus excellent root penetration.



## Highlights

### Innovative upgrade concept

The Robo-MicroMIG keeps you perfectly flexible thanks to the built-in upgradability and modular design of its digital operating panel, control and inverter technology. This level of flexibility lets you enjoy both customised solutions that are tailored to accomplish your company's welding tasks and the assurance that you will keep benefiting from any future advances in technology. It has never been easier to adjust a welding system to the constantly changing requirements in the welding industry using NFC technology and to add on welding processes such as pulsed arc welding, welding programs and features that will streamline your workflows. It is even possible to upgrade and retrofit the operating panels of the Robo-MicorMIG series.

The purchase of a Robo-MicorMIG system translates to progress. Both at the time of purchase and the time thereafter. You add the functionality you need precisely when you need it. The Robo-MicorMIG allows you to be and remain on the safe side and to look forward to what the future holds in store.



### Access management made easy



User identification and authorisation is possible at any time thanks to no-contact data transfers based on NFC technology.

The machine comes standard with two user management cards: "Administrator" and "Robot control only".

The feature **"Robot control only"** prevents unauthorised access to the power source during production. Rotary encoders and buttons (except menu button) are without function. Parameter settings and default values can only be transmitted from the robot control. The menu items Auxiliary parameters, User management and Machine data are read-only, while Language and Display brightness can be changed and adjusted, respectively.

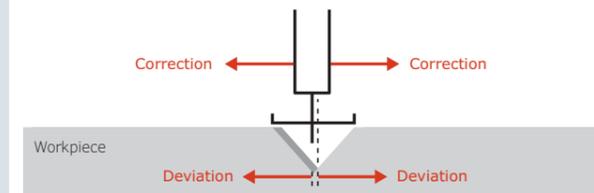
The "Administrator" has access to all menu items and parameters of the system. This ensures that only the welding supervisor and other authorised personnel have access to the system settings.



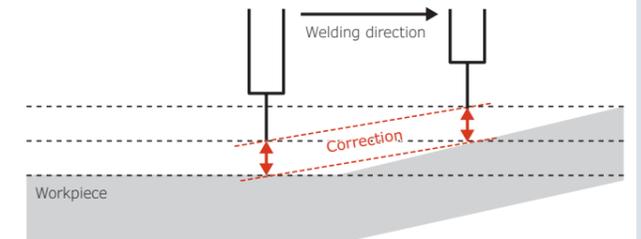
### Seam tracking function

The control technology built into the Robo-MicorMIG performs real-time calculations based on a large number of information and uses the results to generate a signal that the robot control can understand. This seam detection and tracking function essentially allows the robot to continuously and automatically adjust the position of the torch guidance to the actual conditions of the workpiece. The signal that generated is suitable both for a vertical and horizontal adjustment of the torch guidance.

#### Horizontal seam tracking



#### Vertical seam tracking



### BUS coupling system for all common protocols

The LorchNet Connector is responsible for the optimum connection between the Robo-MicorMIG power source and the robot control. It essentially acts as an interpreter translating all signals and information of the internal LorchNet bus system into a language the robot can understand. In other words: it converts the signals into one of the most commonly used fieldbus and industrial Ethernet protocols.

It is also capable of communicating all signals relevant to the torch control, e.g. purging function, anti-collision function, and contact sensor, entirely over the bus system.

Available as an alternative: Analogue-digital interfaces INT-06 and INT-02 for switch cabinet installation or built into the power source.



### Technical data

		Robo-MicorMIG 300	Robo-MicorMIG 350	Robo-MicorMIG 400	Robo-MicorMIG 500
Welding current MIG-MAG	A	25 - 300	25 - 350	30 - 400	30 - 500
Current at 100% duty cycle	A	200	250	300	370
Current at 60% duty cycle	A	250	300	370	430
Duty cycle I max.	%	45	45	45	45
Mains voltage	V	3~400	3~400	3~400	3~400
Permitted mains tolerance	%	± 15	± 15	± 15	± 15
Mains fuse, delayed action	A	32	32	32	32
Dimensions (L x W x H)	mm	880 x 400 x 800			
Weight (gas-cooled)	kg	58	58	61	66
Weight wire feeder case RF-06	kg	7.2	7.2	7.2	7.2
Weight - water cooling (filled)	kg	13.0	13.0	13.0	13.0

## V-ROBOTIG. FOR TIG AND TIG COLD WIRE.

### The V-RoboTIG at a glance

- **Powerful TIG.** Unrivalled TIG technology squeezed into a robust industrial housing and combined with tried-and-tested inverter technology guarantees unsurpassed real-world performance and maximum productivity during automated welding applications.
- **Aluminium welding (AC/DC variant).** Positive polarity ignition and automatic cap shape produce a perfectly shaped arc during aluminium welding. The special amplitude of the alternating current combined with an optimised current balance yields an excellent cleaning effect and a stable weld pool.
- **Comprehensive interface technology.** Highly advanced interface connectivity supports all common fieldbus and industrial Ethernet systems along with analogue-digital interfaces.
- **Pulsing and fast pulsing up to 20 kHz.** The standard pulse function with up to 20 kHz that is built into every machine offers you additional benefits when welding thin sheets and delivers greater welding speeds during automated applications.



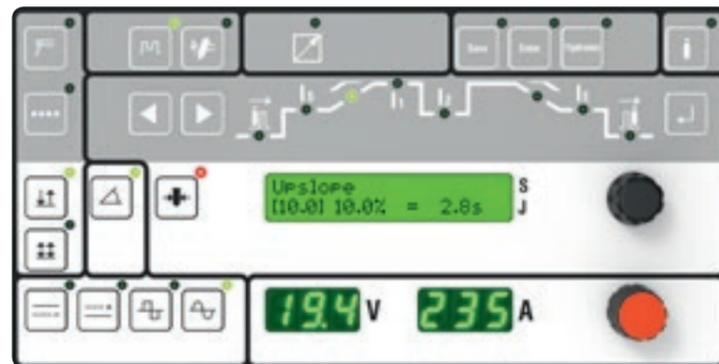
- **Tiptronic job management.** Lorch Tiptronic lets you save your ideal settings for every seam, allowing you to retrieve them one by one on the robot's control when completing recurring welding tasks.
- **Automatic final current reduction.** Lorch's automatic final current reduction produces perfectly clean weld ends by filling the end crater.
- **Also for TIG cold wire welding.** The optional robot wire feeder RF-05 CWT is compact, weight-optimised, powerful and perfectly insulated.
- **Extended range of sensors.** Optional AVC control, gas pressure detection or gas flow measurement allow for advanced control over your automated application.
- **Wide variety of accessories.** Mechanical add-ons for the most common robot versions and wire feeder configurations provide for easier integration.

## Versions

	V 30 RoboTIG	V 40 RoboTIG	V 50 RoboTIG
Welding range	A 3 - 300	3 - 400	3 - 500
Mains connection 3~400 V	●	●	●
<b>Operating concept</b>			
V standard in the power source	●	●	●
V standard as a remote control operating panel	●	●	●
<b>Variants</b>			
DC	●	●	●
AC/DC	●	●	●
<b>Cooling variants</b>			
Gas	●	●	●
Water	●	●	●
<b>Feeder</b>			
RF-05 CWT	●	●	●

● Configuration options ● Standard equipment

## Operating concept



### V standard

- "3 steps to weld" operating concept
- User-oriented guidance using illuminated symbols and detailed welding sequence control
- infinitely variable current setting
- Digital display for welding current and welding voltage
- Plain text display with language selection
- Pulse and fast pulse
- Tiptronic job memory for 100 welding tasks

## Highlights

### Powerful, yet compact robot wire feeder

The requirements on a wire feeder case for robot applications are clear-cut: compact and weight-optimised, yet powerful and, naturally, perfectly insulated to permanently safeguard the electronics built into the robot. The RF-05 CWT satisfies these requirements to the full extent and is optimised for robot applications in many respects. The entire development process of the robot wire feeder revolved around versatility. The unit comes in two versions, delivering feed speeds that ensure, on the one hand, absolute precision for superior TIG quality during cold wire welding and, on the other hand, increased speed of work. Better still, the RF-05 CWT is equipped with a completely digital controller, a tachometer-regulated drive and a 4-roll precision feeder for exact wire delivery.



### Pulsing and fast pulsing with up to 20 kHz

Every Lorch V-RoboTIG offers a pulse function for high-frequency pulses with up to 20 kHz. The result is a focused arc with exceptional stability. The unit makes it possible to attain higher welding speeds at reduced heat input – especially for automated applications. The speed increase is particularly beneficial on thin metal sheets as it reduces warpage. The higher the pulse frequency, the more pleasant the welding noise. Depending on the base material, the unit may also help reduce temper colours during TIG welding with high-frequency pulses.

### AVC control

The use of the TIG arc as a sensor for gathering clearance information is now the accepted state of the art. In practice, it is common to merely measure the arc voltage in an attempt to keep the torch height above the weld pool constant. This is done by adjusting the height mechanically in an effort to even out deviations of the arc voltage relative to a reference value. Hence, the acronym AVC = Automatic Voltage Control.

However, modifications of the welding current also effect changes in the arc voltage, causing undesired effects on the mechanical height control.

To counteract this unwelcome impact, the high-end control technology built into the V-RoboTIG calculates a specially prepared signal in real time to ensure AVC control. This signal offsets the undesired impact for seam tracking applied during TIG welding applications.

## Technical data

	V 30 RoboTIG	V 40 RoboTIG	V 50 RoboTIG
Welding current - TIG	A 3 - 300	3 - 400	3 - 500
Current at 100% duty cycle (DC   AC/DC)	A 250	360	380
Current at 60% duty cycle (DC   AC/DC)	A 300	400	500
Duty cycle I max. (DC   AC/DC)	% 60	50	60
Mains voltage	V 3~400	3~400	3~400
Permitted mains tolerance	% ± 15	± 15	± 15
Mains fuse, delayed action	A 32	32	32
Dimensions (L x W x H)	mm 1130 x 450 x 815	1130 x 450 x 860	1130 x 450 x 860
Weight (DC   AC/DC)	kg 86.4   93.6	107.6   121.5	108.7   123.2
Weight - water cooling (filled)	kg 14.7	14.7	14.7

Professional welding data  
management for every company

# QUALITY MANAGEMENT

Our solutions for welding data documentation,  
monitoring, evaluation, and analysis:

Q-Sys	148 – 151
Q-Data	152 – 155

# Q-SYS 2020. HIGH-END MONITORING AND DOCUMENTATION OF WELDING DATA.

## The Q-Sys 2020 at a glance

- Automated high-end quality monitoring and documentation.** Designed as a stand-alone solution, the Q-Sys 2020 serves as a welding process monitor that delivers monitoring and assessment of the seam quality with 100 % efficiency.
- Quality control.** The monitoring of the welding parameters puts you in a position to intervene immediately if experiencing a fault, thus effectively preventing any consequential damage.
- Welding data documentation.** The documentation database built into the Q-Sys 2020 provides end-to-end documentation of the welding data, allowing you to keep track of all welded components.
- Evaluation.** Analyse and optimise all of your welding jobs with no effort at all thanks to a battery of well-thought-out evaluation functions.
- Transparency.** Delivering highly accurate information about the welding production process, Q-Sys 2020 lets you optimise your production, thereby making it more cost-effective.
- Calibration.** Thanks to the measurement equipment housed in the Lorch power source, the Q-Sys 2020 does not require any external measuring sensors, cutting down your annual calibration costs significantly.



- Adaptiveness.** Every Q-Sys 2020 gives you the option of freely configuring both the hardware and the software settings, allowing you to perfectly adapt your system to the welding application at hand. Even expanding the parameters to be monitored, e.g.: flow rate or motor currents, is a cinch for the Q-Sys and can be done in no time at all.

- Safety.** Maximum reliability thanks to a passive cooling system and industrial-strength flash memory.
- Intuitive operation.** Operating the Lorch Q-Sys 2020 is as easy as can be thanks to its 10.1 inch multi-touch display and the clearly structured and intuitive user interface.

Versions



	Q-Sys 2020 (for 1 power source)	Q-Sys 2020 (for 2 power sources)
High-end quality management system for 1 power source	●	-
High-end quality management system for 2 power sources	-	●
<b>Equipment</b>		
LorchNet connection	1	2
DIG inputs/outputs (24 units)	1	2
Parameters: Current, voltage, wire feed, power and gas flow	●	●
Parameters: Motor currents, water flow, and, if applicable, additional parameters measured by external sensors	○	○
Hardware/software options: ProfiNET/Profibus interface, HDMI port, network software (automatic data management + archiving)	○	○

● Standard equipment ○ Optionally available

Operating concept



- large 10.1 inch multi-touch display
- intuitive menu control and well-structured user interface
- straightforward and customised setting of the welding parameters to be verified
- detailed and professional analysis of the recorded weld seam
- flexible definition of weld seam limits and tolerances

Highlights

“Plug&Weld”

Fully integrated measurement equipment



LorchNet  
“Plug&Weld”  
plug in and start recording



Documentation  
Monitoring



Evaluation

Compatibility & external sensors

You will not have to invest in expensive, external sensors when employing Lorch’s industrial welding systems equipped with LorchNet. The intelligent process technology along with the fully integrated measuring equipment delivers all set welding data directly to the Q-Sys 2020 recorder via LorchNet.

What is more, no additional maintenance and calibration are required thanks to the perfect compatibility between the Lorch welding machine and the Q-Sys 2020. This compatibility will yield you tremendous savings in cost along with a calibrated overall system thanks to the annual maintenance intervals of your Lorch power source.



Quality control

Aside from monitoring fixed operating points (Tiptronic jobs), the monitoring functions of the system enable you to keep tabs on more complex welding tasks whose main parameters fluctuate. To enable this functionality, you can store tolerance characteristics for the welding job that will evaluate 100 % (starting current to end crater) of the seam quality. The system offers an automated feature that lets you actively step in if experiencing an error.

Technical data

	Q-Sys 2020 (1 power source)	Q-Sys 2020 (2 power sources)
Supply voltage	V 1~230	1~230
Weight	kg 6.2	6.2
Dimensions in mm (L x W x H)	mm 330 x 200 x 135 mm	330 x 200 x 135 mm
Compatibility	S series, P series, MicorMIG series, T series, T-Pro/TF-Pro series	S series, P series, MicorMIG series, T series, T-Pro/TF-Pro series
<b>Interface</b>		
2 x USB	●	●
Ethernet	●	●
available ports (DIG/IO outputs and inputs)	1 x (24 inputs/outputs)	2 x (24 inputs/outputs)
available LorchNet interfaces	1 (1 power source)	2 (2 power sources)
HDMI port	○	○
ProfiNET or Profibus interface	○	○
Network software (automated data management + archiving)	○	○

● Standard equipment ○ Optionally available

# Q-DATA. RECORDING WELDING DATA IS NOW FINALLY EASY.

## The Q-Data at a glance

- **Welding data documentation.** You entry into the professional world of documenting, evaluating and analysing welding data.
- **Intuitive operation.** Simple operation thanks to clearly arranged content on the LCD display.
- **Quality assurance.** Monitor such welding parameters as current, voltage, wire feed speed and gas flow in real time while recording is in progress.
- **Quality verification.** The fully integrated measurement equipment reliably delivers correct information about all essential welding parameters captured by the recorder.
- **Innovative user management.** Optional identification of the welder using RFID.
- **Input data the easy way.** Support for USB barcode scanners and other USB recording devices.
- **Storage capacity.** Welding data produced within a period of one month during three shifts a day.
- **Q-Data software.** The simple, yet highly advanced user interface allows you to effortlessly document, analyse and evaluate welding data at any time, making it possible to stay in full control of all aspects of your welding process.



Versions



	Q-Data standard	Q-Data Multi-Use
for separately enabled/prepared Lorch welding machines equipped with LorchNet connection	●	-
for all Lorch systems equipped with a LorchNet interface	-	●
<b>Equipment</b>		
Recording of the welding parameters current, voltage, wire feed speed and gas flow	●	●
USB/Ethernet connection	●	●
Q-Data software for documenting, evaluating and analysing welding data	●	●

● Standard equipment

Operating concept



- generous LCD display including context-sensitive buttons for direct operation
- Real-time display of the recorded welding parameters (welding current, welding voltage, wire feed, and gas flow)
- effortless menu navigation
- RFID detection for easy welder identification
- Numeric keypad for entering order numbers, component numbers, weld seam or WPS numbers

Highlights

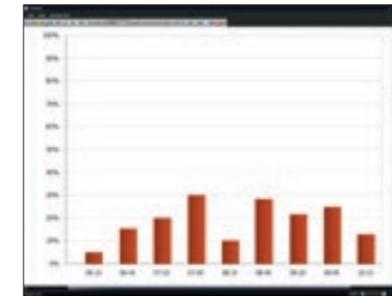
“Plug&Weld”



Monitor every aspect of your welding process: thanks to our Q-Data software



**Documentation**  
The captured welding data is displayed in clearly arranged tables and can easily be identified thanks to various filter and search options.



**Evaluation**  
You can aggregate the output of the welding data and evaluate such parameters as the utilization of each machine or workstation. Even individual reports can be optionally provided on demand.



**Analysis**  
Each individual weld can be analysed using easy-to-understand diagrams of the current and voltage characteristics and the measured wire feed speed and the gas flow.

Technical data

	Q-Data
Weight	kg 2.05
Dimensions in mm (L x W x H)	mm 277.5 x 202 x 78.6
Storage capacity	MB 800
Compatibility	LorchNet connection
<b>Data transfer</b>	
USB	●
Ethernet	●

● Standard equipment

Protective equipment  
for all welding processes

# WORKWEAR

Our solutions for your safety:

Lorch welding workwear

158 – 159

## Lorch welder's clothing

Modern design, great protection.  
Professional workwear in true Lorch quality.

- outstanding protection against heat and flame thanks to Proban FR finish
- exceptional comfort thanks to special fabric made of 75 % cotton and 25 % polyester
- rugged thanks to a material thickness of approx. 360 g/m<sup>2</sup>
- extremely hard-wearing special seams
- perfect UV protection
- superior shape retention
- brilliant colours
- contemporary cut
- many clever and useful details

### DIN Certified quality with a system



**DIN EN ISO 11611**  
Protective clothing for use in welding and allied processes



**DIN EN ISO 11612**  
Protective clothing to protect against heat and flame



**DIN EN 61482-1-2 Class 1**  
Protective clothing against the thermal hazards of an electric arc



**DIN EN ISO 15797**  
Industrial washing and finishing procedures for testing of workwear

#### Welder's coat

In anthracite/red.  
Extra deep pockets on the left and the right provide ample space, e.g. for your wire pliers.



#### 5-pocket welder jeans

In anthracite.  
Combines the cut of a real pair of jeans with the protective properties of professional welder's clothing.

Experience welder workwear that was developed for welders by welders that guarantees a professional appearance. Contemporary cuts, convenient details and premium workmanship allow any modern welder to perform his work professionally and look stylish and attractive in the process. Take advantage of a special mix of fibres that comes with a Proban-FR finish and a portion of 75 % cotton, which joins superior safety with exceptional shape retention plus a maximum amount of wearing comfort.



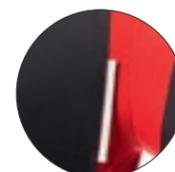
The combination of stand-up collar and welder's cap prevents weld spatter from penetrating the neck area.



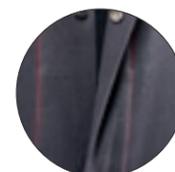
Integrated breast pocket with concealed opening for protection against penetrating weld spatter. Large enough to even hold a smartphone.



A handy pen pocket on the left sleeve keeps your pen or any tool with a retaining clip readily available.



Safety reflectors on both sides at the front and rear improve visibility, e.g. during factory traffic in the evening.



Continuously concealed strip of durable press studs.



As they represent the spots subjected to the most wear and tear during welding, the sleeves have been given twice the padding with a double layer of fabric.



Width-adjustable sleeve cuffs for added heat and splash protection. The width of welder's jacket can also be adjusted by press studs located on the waistband.

#### Automatic welding helmet RED by Lorch Flex 9-13

- Protection grades DIN 9 - 13
- Field of vision 40 x 96 mm
- with grinding mode
- with solar panel

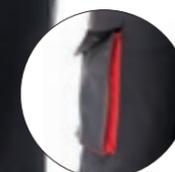


#### Welder's jacket

In anthracite/red.  
Including stand-up collar with front closure.

#### Welder's trousers

In anthracite/red.  
Large pocket on the right leg with side crease, can be closed with press studs. The left leg comes with a convenient ruler pocket.



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**LORCH**  
smart welding