

The MicorMIG & MicorMIG Pulse series
Industry 4.0 Ready with Lorch Connect

SETTING THE NEW STANDARD.



True Lorch.



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LORCH
smart welding

The MicorMIG & MicorMIG Pulse series at a glance

MADE IN GERMANY



MicorMIG, the next generation, setting the new standard. One of the most technologically advanced MIG-MAG(GMAW) and FCAW systems on the planet with Speed Processes for both solid and flux cored wires. Additionally, Industry 4.0 connectivity and big data management now with Lorch Connect.



Cutting edge, resonance inverter technology with digital control, advanced high-speed welding processes designed to drive productivity combined with leading Near Field Communication (NFC) technology; the most effective way of managing shop floor welding quality.



Reliable, robust, simple to operate yet highly engineered examples of German quality and performance. At a superior price/performance point where switching to a modern, highly efficient welding system is simple, easy and makes good commercial sense.

MicorMIG a future proof platform, a simply better all-rounder for every application . . .

- **Industry 4.0 Connectivity** via a Lorch Connect Gateway to a cloud server unleashing a host of new digital management tools to optimize your welding processes, driving productivity, costing accuracy, quality and production efficiency.
- **Leading performance thanks to MicorBoost.**
Like a turbo charger, MicorBoost technology stores and delivers extra power and voltage to deliver exceptional welding performance. Six micro-controllers monitoring 1.5 million times per second deliver a very smooth and stable welding characteristic across the entire operating range.
- **Upgradability.** A “Future Proof” platform. Never before has it been this easy to upgrade a welding machine to the ever-increasing challenges posed by today’s industrial demands. It is now a breeze to upload welding processes, welding programs and functions with near field communication (NFC) technology.
- **Versatility.** Lorch’s MicorMIG sets the new standard with its exceptional MIG-MAG welding performance, MicorMIG is also capable of Stick with VRD, Lift TIG and Arc Gouging processes.
- **Dynamic control.** Select the arc characteristic you prefer. Depending on the operating panel you have selected, you can opt for dynamic levels that change the welding arc from “soft” to “hard”.
- **Synergic 1-knob control.** MicorMIG versions BasicPlus and ControlPro offer a large number of South Pacific optimised welding programs for various material, wire and gas combinations.
- **Ready for Speed.** Upgrade to the advanced wave form control processes to increase welding speeds and drive productivity with optional Lorch SpeedArc and SpeedUp processes.
- **Job management.** The ControlPro display with Tiptronic function makes it a snap to store welding procedures 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 up to 50 metres.

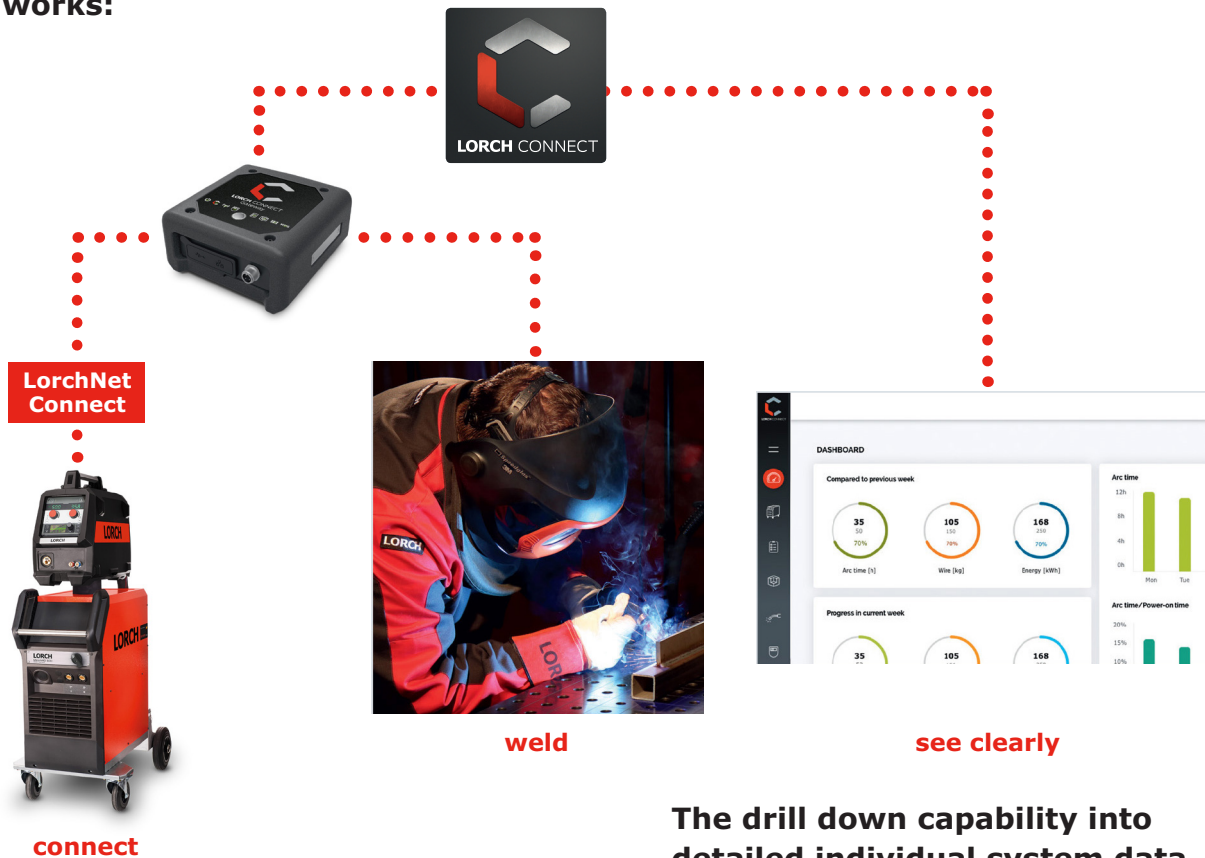


LORCH Connect – Industry 4.0 – Digital Connectivity & Big Data Management

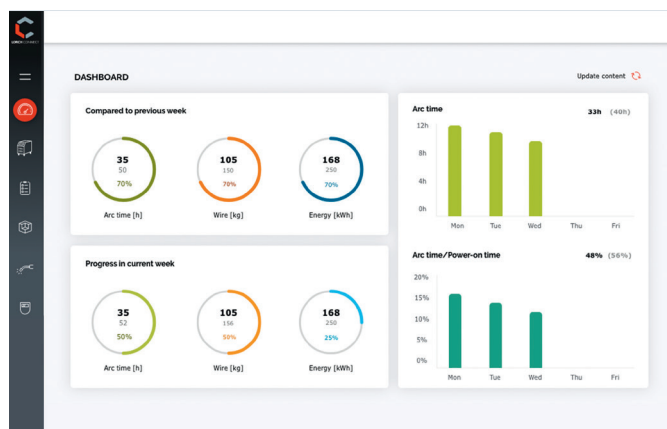
Everyone talks about Industry 4.0 and digitisation. Production becoming smarter. Processes monitored, documented and visualised in real time. The reason is simple: Embedded in this data is untapped potential for process optimisation to drive cost and efficiency improvements. Lorch is now taking the next step to connect our already digitalised welding systems in a simple and cost-effective way and create an immediate user benefit.

Lorch Connect – your easy – and risk-free – entry into a future Industry 4.0 digitally connected world of welding!

How it works:



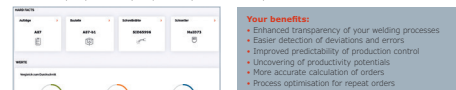
The simple high-level summary dashboard of all connected systems.



The drill down capability into detailed individual system data.

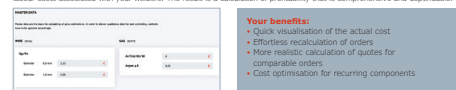
Online monitoring: Performance in numbers.

The dashboard represents the central feature / app of the Lorch Connect platform. It shows all key production indicators such as duty cycles, arc times or parameters in a quick and easy-to-understand manner. This offers a straightforward and convenient way for you to identify the productivity of all connected systems.



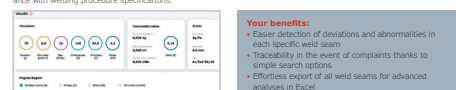
Cost controlling: Paying off in the end.

How profitable was an order or specific components? The answer to this question is held by the cost controlling tool. This tool automatically adds up all consumption figures and monetises them. The basis for the calculation is formed by your individual master data and includes such information as the prices of different welding wires and gases, the cost of energy and the labour costs associated with your welders. The result is a calculation of profitability that is comprehensive and dependable.



Documentation: all essential data in one location.

The Lorch Connect Gateway records each individual weld seam along with all data that may be relevant to production and passes this information automatically to the Lorch Connect Portal. At this portal, all weld seams are documented with their associated parameter values. The real-world advantage: You can now draw important conclusions from such individual, process-defining parameters as current and voltage and apply them to the quality of the seam or the compliance with welding procedure specifications.



Highlights

Unlimited upgradability comes standard



Conventional transformer and basic inverter systems will stay the way they were designed and manufactured. Their expandability and functional scope are limited by their hardware. Not so with the MicorMIG. When you opt for this system, you will remain perfectly flexible thanks to the upgradability 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



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		●	●	●	●
Operating concepts					
Basic		●	●	●	●
BasicPlus		●	●	●	●
ControlPro		●	●	●	●
Cooling variants					
Gas		●	●	●	●
Water		●	●	●	●
Machine variants					
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



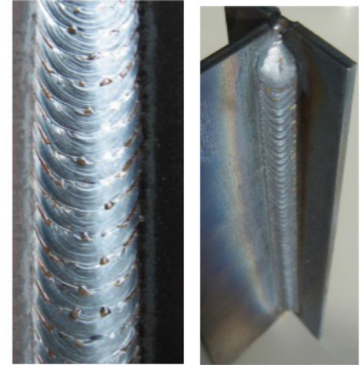
ControlPro

- "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

Advanced high speed process capability

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

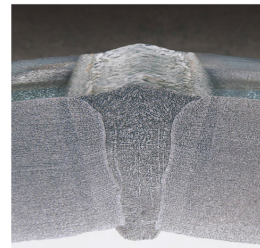
Up to now, vertical up welding required a tremendous amount of experience, skill and a steady hand to weld in the conventional 'Christmas tree' style. The SpeedUp option on the MicorMIG series of machines turns vertical up welding into just that - a simple, straight up weld, with no weaving required.



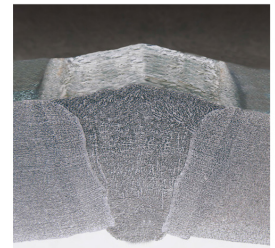
A sample of the ingeniously simple SpeedUp.

SpeedArc turns welding into a streamlined process

The 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 15mm 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.



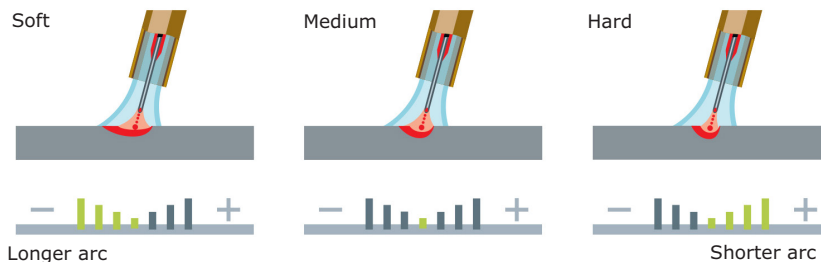
SpeedArc



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.



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 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.

Highlights

Clever details for improved everyday welding



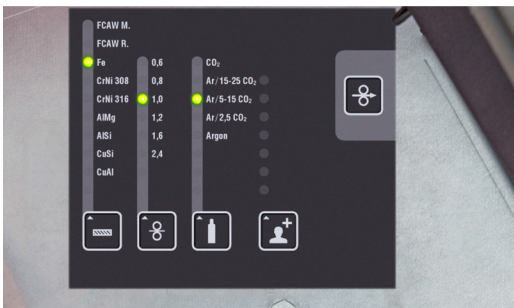
Quick-change system

Even the easily accessible wire feeder of the MicorMIG reflects 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.



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.

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 were 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.



Specifications

		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 (LxWxH)	mm	880 x 400 x 755	880 x 490 x 855	880 x 490 x 855	880 x 490 x 855
Dimensions wire feeder system (LxWxH)	mm	880 x 490 x 890	880 x 490 x 955	880 x 490 x 955	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

Equipment

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

● Standard equipment

○ Optionally available

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 60cm.
- **Illuminated wire feeder compartment.** This makes changing the wire a breeze even in poor light conditions.
- **A genuine lightweight in its class.** Only 10.6kg 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 skids



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. If 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 MicorMIG Pulse series at a glance

MADE IN GERMANY



- **Pulse arc.** All the features of the MicorMIG plus the addition of a Pulse Arc transfer with the MicorMIG Pulse range.
- **Minimum rework.** Easy to set up and robust, next to no spatter. This cuts down the need for extensive post weld rework.

Equipment

MicorMIG	
Welding process	
Standard synergy MIG-MAG welding programs	●
Pulse Steel	●
Pulse Multi-Material	○
SpeedArc	○
SpeedUp	○
Electrode Plus	○
TIG (with ContacTIG)	○
● Standard equipment ○ Optionally available	



Versions

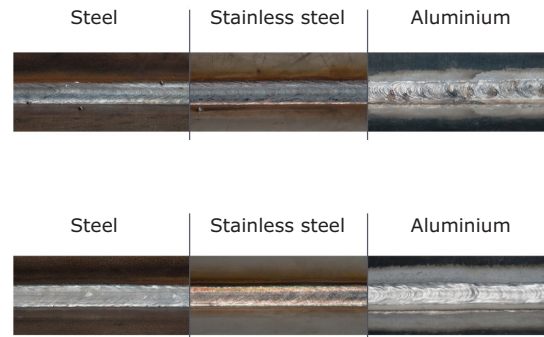
		MicorMIG 300	MicorMIG 350	MicorMIG 400	MicorMIG 500
Welding range	A	25 - 300	25 - 350	30 - 400	30 - 500
Voltage adjustment		infinitely variable	infinitely variable	infinitely variable	infinitely variable
Mains connection 3~400 V		●	●	●	●
Mains connection 3~400 V		○	○	○	○
Operating concepts					
BasicPlus		●	●	●	●
ControlPro		●	●	●	●
Cooling variants					
Gas		●	●	●	●
Water		●	●	●	●
Machine variants					
Compact system		●	●	●	●
Wire feeder system		●	●	●	●
● Configuration options ● Standard equipment ○ Optionally available					

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.

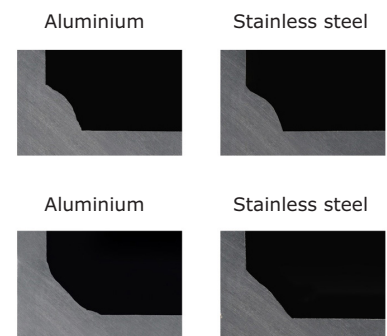
Smart solution by Lorch: No matter if you weld steel, stainless steel or aluminium. Tried and tested in the real world, the MicorMIG Pulse arc combined with quick-action control technology delivers welding performance with next to no spatter – even in the transition arc range, saving you a great amount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

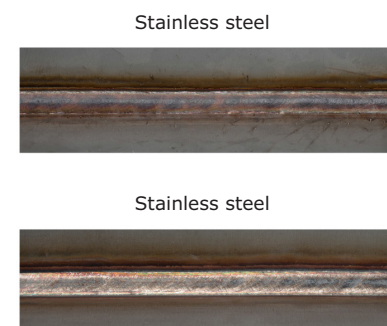
Smart solution by Lorch: A spatter-free weld seam, smooth seam transitions and improved sidewall fusion. From now on, you will master this challenge with ease as well thanks to the MicorMIG Pulse arc and exceptional ease of use.



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.



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 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

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 (LxWxH)	mm	880 x 400 x 755	880 x 490 x 855	880 x 490 x 855	880 x 490 x 855
Dimensions wire feeder system (LxWxH)	mm	880 x 490 x 890	880 x 490 x 955	880 x 490 x 955	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 50m
- 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
20m



Feeder

up to
25m



NanoFeeder

up to
5m



Torch

Technical data		NanoFeeder	NanoFeeder
Cooling		Water	Gas
Load CO2 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

The MIG-MAG gun series at a glance

- Full line of MIG Gun options, air or water cooled up to 550A.
- “Binzel” style front end consumables.
- Standard operation or Smart, Powermaster control.
- Heavy duty 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.
- 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.
- Using the Tiptronic function, you simply save the optimum welding parameters to job memory then retrieve as needed with the Powermaster control gun.

Standard Guns

- Heavy duty construction
- Ergonomic shape
- Air & Water cooled
- Up to 5 metre length



Smart Powermaster Guns

- Heavy duty construction
- Ergonomic shape
- Smart remote control
- Air & Water cooled
- Up to 5 metre length



Push Pull Standard & Smart

- Heavy duty construction
- Ergonomic shape
- Standard & Smart remote control
- Air & Water cooled
- Up to 8 metre length



Versions		ML 1500	ML 2500	ML 2400	ML 3600	ML 3800	ML 4500
Welding range up to	A	180	230	250	300	320	370
Operating concepts							
Standard		●	●	●	●	●	●
Powermaster		●	–	●	●	●	●
Cooling							
Gas		●	●	●	●	●	●
		ML 5300	ML 5400	ML 5500	ML 5900	ML 7300	ML 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		–	–	–	–	●	●
Operating concepts							
Standard		●	●	●	●	–	–
Powermaster		●	–	●	●	●	●
Cooling							
Water		●	●	●	●	●	●

● Standard equipment

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 ₂ 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
		ML 5300	ML 5400	ML 5500	ML 5900	ML 7300	ML 7500
Type of cooling		Water	Water	Water	Water	Water	Water
Load CO ₂ 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

● Standard equipment

		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 ₂ 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
Version						
Powermaster		● / ○	● / ○	● / ○	● / ○	● / ○
Gun handle		● *	●	● *	● *	●
Standard motor		–	●	–	–	●
Maxon motor		●	–	●	●	●
Hose package lengths	m	8**	8**	8**	8**	8**
*Gun handle can be removed ** additional hose package lengths available on request						
● Standard equipment ○ Optionally available						

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smart welding