

2017

MADE IN GERMANY



SMART WELDING

For Industry, Production, and Assembly.

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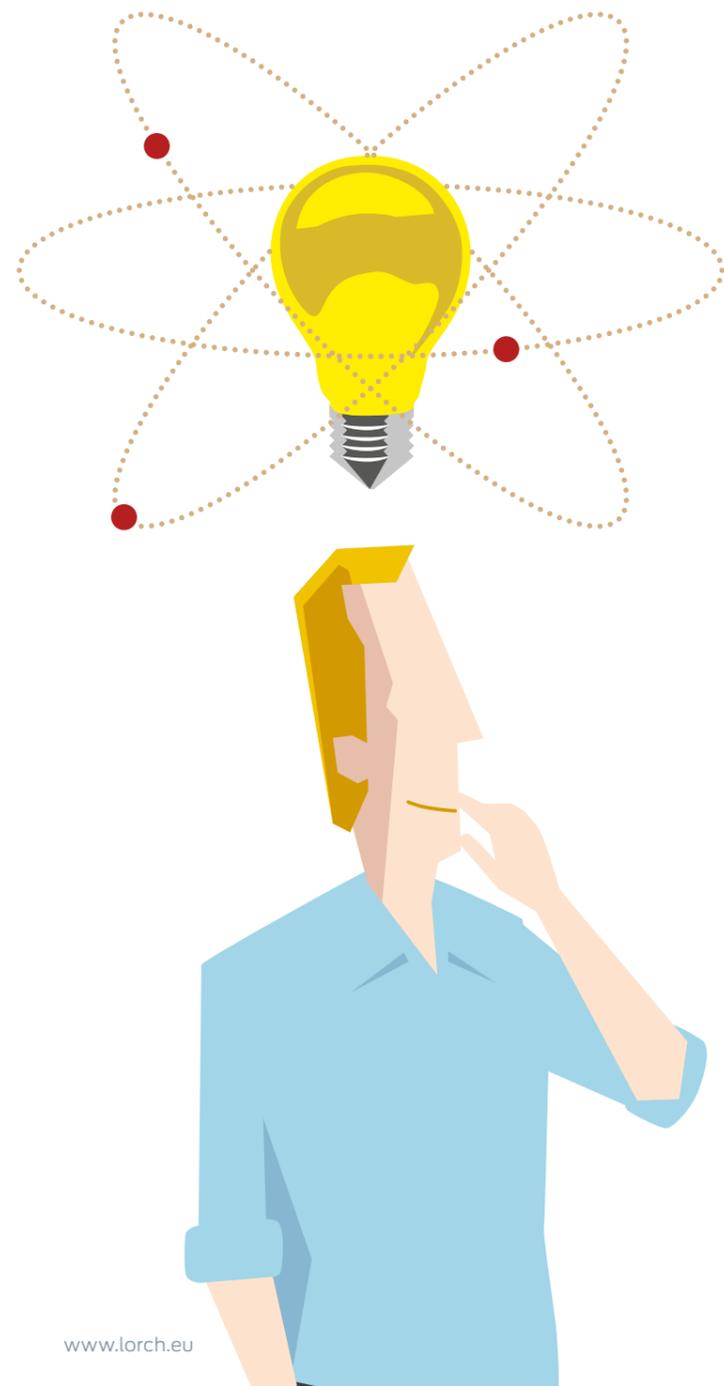
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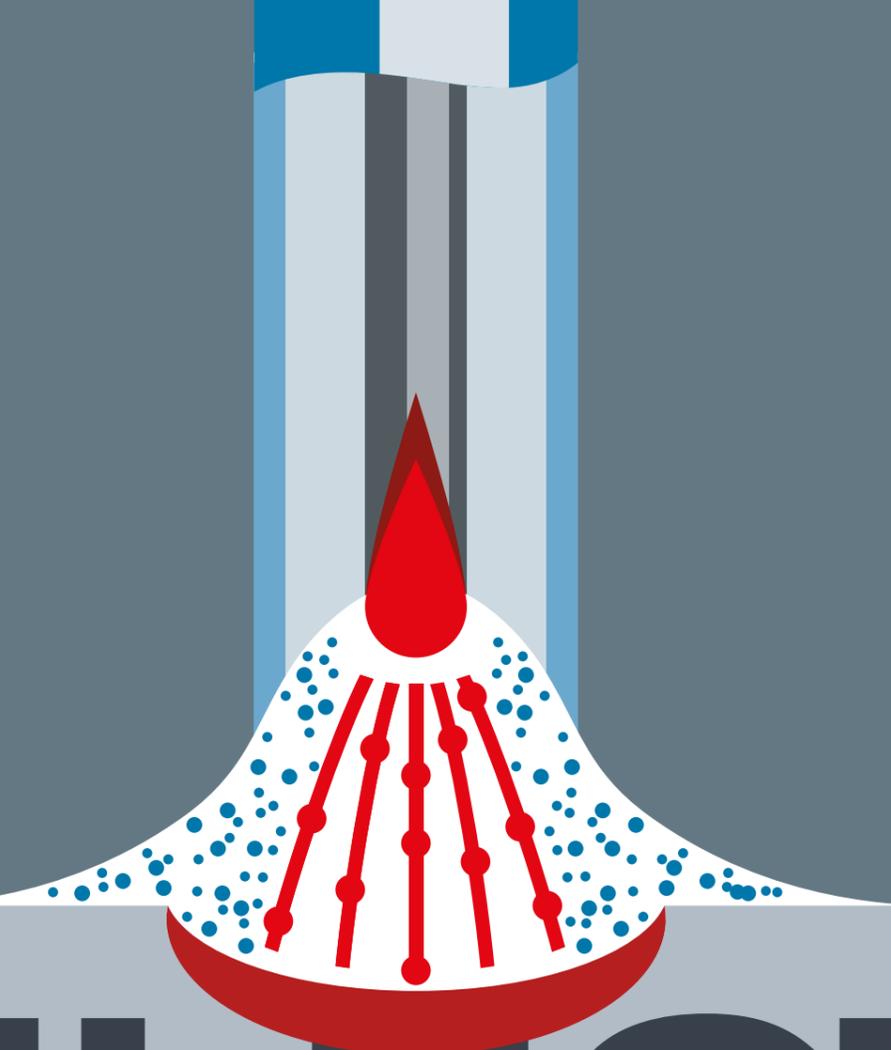


THE “KÄPSELE”

In the part of Germany where Lorch welding equipment is from, extremely clever and extraordinarily bright people are referred to as “Käpsele”. A Käpsele is someone who not only thinks ahead, but is really good at thinking outside the box. Someone who knows how to solve a problem when other people haven’t even noticed that they have one. Everywhere else in the world, these kinds of people are simply called smart.

A whole bunch of Käpsele are involved in designing Lorch welding systems – people who know how to develop and produce first-rate processor technology, intelligent software, and only the highest-quality components to create first-class, professional-grade equipment. Equipment that impresses everyone that wants to work productively with a welding system and earn money with it long-term. And that brings together what belongs together: Lorch welding equipment for all of the world’s Käpsele. Or to put it in a nutshell: Welding solutions for the world’s smartest companies.

Discover Lorch’s new industrial-grade products and get in touch with us to discuss your own individual challenge. What makes a Lorch even smarter for you is the personalized support from people that know just how much brainpower goes into a really good seam.



The arc for unparalleled outdoor welding

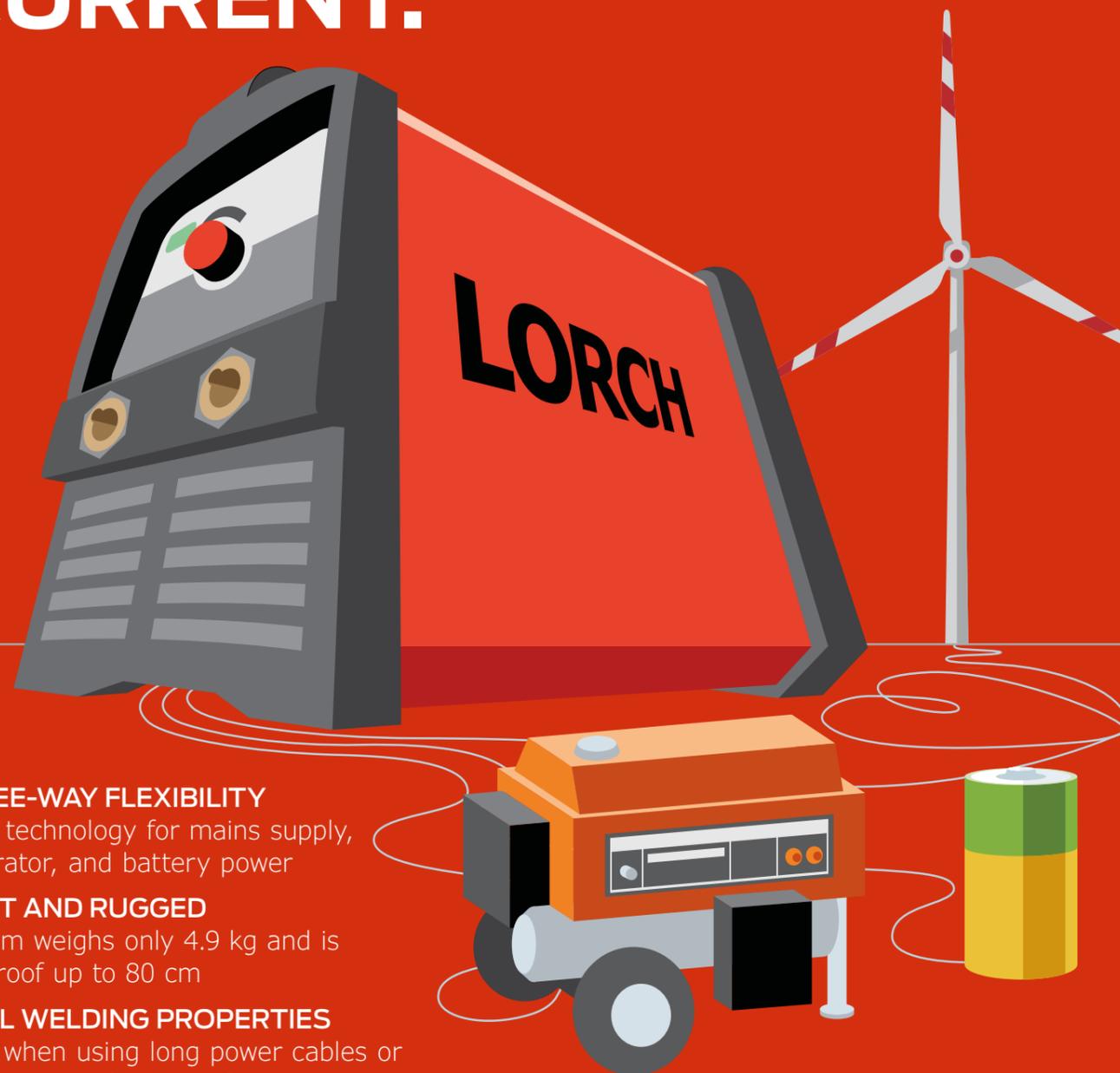
ELECTRODE WELDING



Our solutions for every electrode welding challenge:
MicorStick series: page 8, X series: page 14

The MicorStick series

A SYSTEM THAT FLOWS WITH EVERY CURRENT.



THREE-WAY FLEXIBILITY

All-in technology for mains supply, generator, and battery power

LIGHT AND RUGGED

System weighs only 4.9 kg and is fall-proof 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 the 230 V mains supply on 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.** Arc-Force regulation 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.** Loaded with cutting-edge regulation technology, the inverter produces stellar welding results with minimal spatter formation thanks to its superior ease of use.
- **Mobile.** Boasting a remarkably low weight and compact external dimensions, Lorch MicorStick will go anywhere, making it the perfect companion for any welder on the go. It comes with a handy protective tool case that keeps everything you need, safe and neat in one place.
- **Safety.** Bearing the IP23 and S-symbol, the series is ideal for applications in the field.

Versions



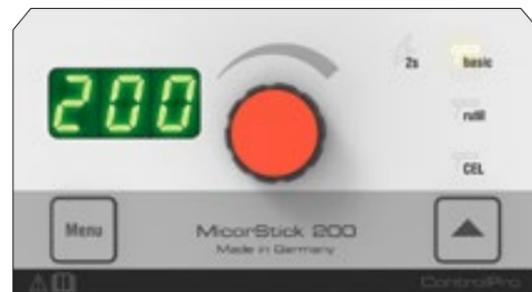
MicorStick 160	MicorStick 160 Accu-ready	MobilePower 1 battery pack	MicorStick 200
Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro 	Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro 		Operating concepts <ul style="list-style-type: none"> ControlPro ControlPro RC
<ul style="list-style-type: none"> Welding range up to 160 A Mains connection 230 V weldable electrodes with up to Ø 4mm thanks to MicorBoost technology 	<ul style="list-style-type: none"> Welding range up to 160 A Mains connection 230 V weldable electrodes with up to Ø 4mm thanks to MicorBoost technology Accu-ready: connection option for MobilePower 1 battery pack to allow for welding away from the mains power supply 	<ul style="list-style-type: none"> Battery pack MobilePower 1 with lithium-ion technology can be connected to the MicorStick 160 Accu-ready 	<ul style="list-style-type: none"> Welding range up to 200 A Mains connection 400 V weldable electrodes with up to Ø 5mm thanks to MicorBoost technology RC version with remote control connection

Operating concepts



BasicPlus

- "3 steps to weld" operating concept
- simplest one-button operation
- infinitely variable current setting
- with electrode pre-selection for Standard and CEL for optimum welding parameters
- With TIG-DC welding function (with ContacTIG)



ControlPro

- "3 steps to weld" operating concept
- 7-segment display, exact to the amp
- simplest one-button operation
- infinitely variable current setting
- with electrode pre-selection for Standard (basic and rutile) and CEL for optimum welding parameters
- With TIG-DC welding function (with ContacTIG)
- 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.

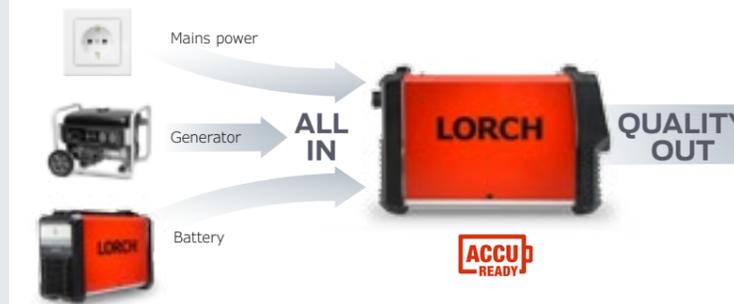


Assembly pack for applications on the go

Every set includes: 3 m electrode and 25 mm² ground cable, chipping hammer, wire brush, welding shield EN 166, and welding glasses DIN 4646-47. Complete with sturdy case including interior dividers.



Even greater flexibility thanks to AccuReady



- MicorStick 160 also available as an "Accu-ready" version.
- This means for you: Additional battery-supplied welding in combination with Lorch's high-capacity battery pack MobilePower 1.
- First-rate welding performance where you need it.

Technical data

		MicorStick 160 MicorStick 160 Accu-ready		MicorStick 200 MicorStick 200 RC	
Welding process		Electrode	TIG with ContacTIG	Electrode	TIG with ContacTIG
Electrode 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	Steel, stainless steel/copper
Welding range	A	10-150	15-160	10-200	10-200
Duty cycle I max. (40 °C)	%		30		30
Current at 60% duty cycle (40 °C)	A		120		150
Mains voltage	V		230		400
Dimensions (L x W x H)	mm		340 x 131 x 215		340 x 131 x 215
Weight	kg		4.9		6.3

MICORSTICK 160 ACCU-READY AND BATTERY PACK MOBILEPOWER 1.

MicorStick 160 Accu-ready and battery pack MobilePower 1

The dream team for welding applications on the go.

Mains-independent, exceptionally versatile, and powerful. MicorStick plus MobilePower 1. 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 1 battery pack to the MicorStick 160 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.



Technical data

		MobilePower 1
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	28	21	23	17
2.5 mm	90 A	23	17	21	15
2.5 mm	110 A	21	15	20	14
3.2 mm	90 A	–	12	–	10
3.2 mm	120 A	–	10	–	9
3.2 mm	150 A	–	9	–	8

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.

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
Operating concept • BasicPlus • CEL-capable electrode welding inverter with electrode pre-selection • can also be used with semi-automatic MIG-MAG wire feeder cases	Operating concept • ControlPro • CEL-capable electrode welding inverter, electrode pre-selection and TIG function • with special vertical seam and pulse welding function • can also be used with semi-automatic MIG-MAG wire feeder cases	Operating concept ControlPro • CEL-capable electrode welding inverter, electrode pre-selection and TIG function • with special vertical seam and pulse welding function • can also be used with semi-automatic MIG-MAG wire feeder cases • with integrated polarity reversal technology (PST)

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**



All-around protection against water ingress

Protected penetration depth for placing in accumulated water

Electrode vertical seam welding with MicorUp

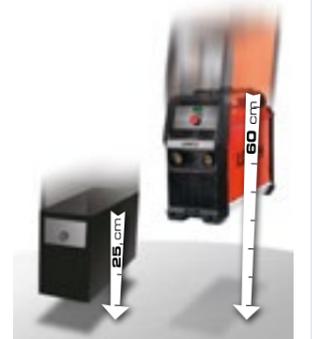


When combined with the ControlPro operating concept, the Lorch X 350 model applies MicorUp technology to produce flawless vertical seams with basic electrodes. You no longer have to swing back and forth, but can simply guide the electrode straight up. Thanks to patented control technology the MicorBoost technology always provides sufficient power to keep the arc ignited and stable. What is more, MicorUp 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.

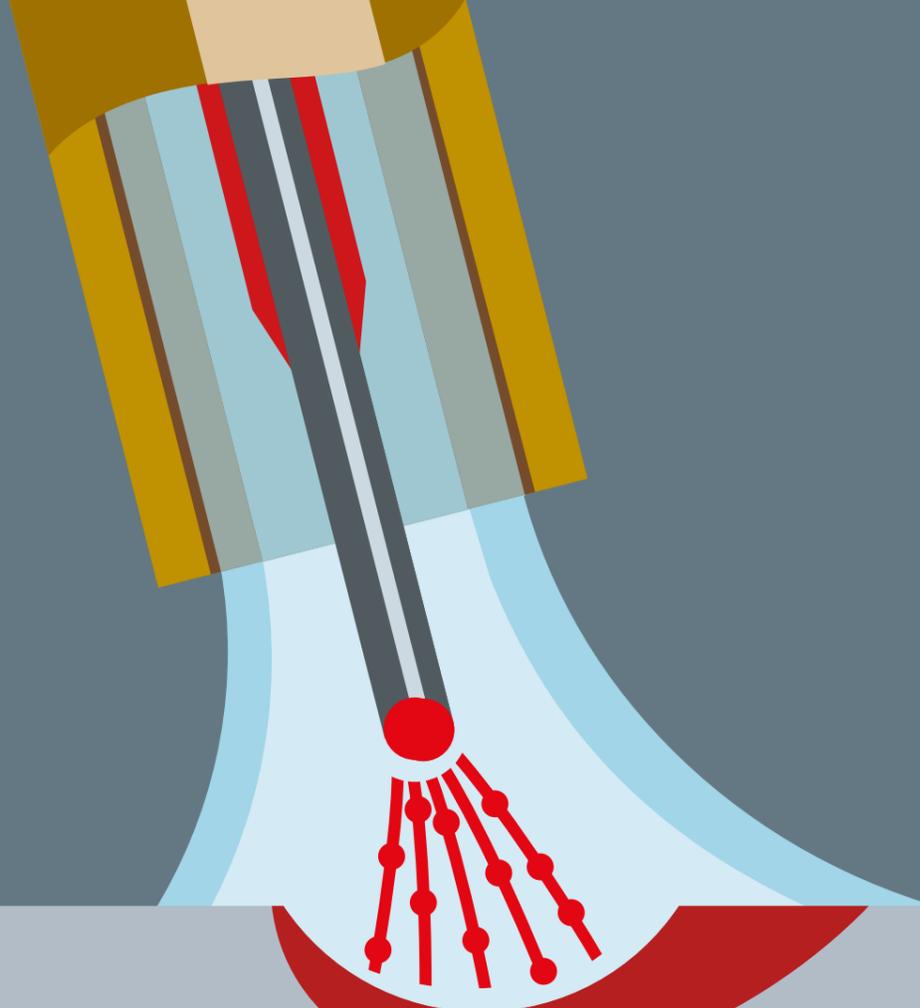
The standard requires: Unit must be capable of surviving a free fall from a height of 25 cm. Falls from a greater height usually render the unit broken and unusable. Not so with our products. We have designed a special crash protection for the X. The result is impressive: with a fall protection from 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 400	400
Dimensions (L x W x H)	mm 515 x 185 x 385	515 x 185 x 385
Weight	kg 18.6	20.2



The arc for maximum profitability

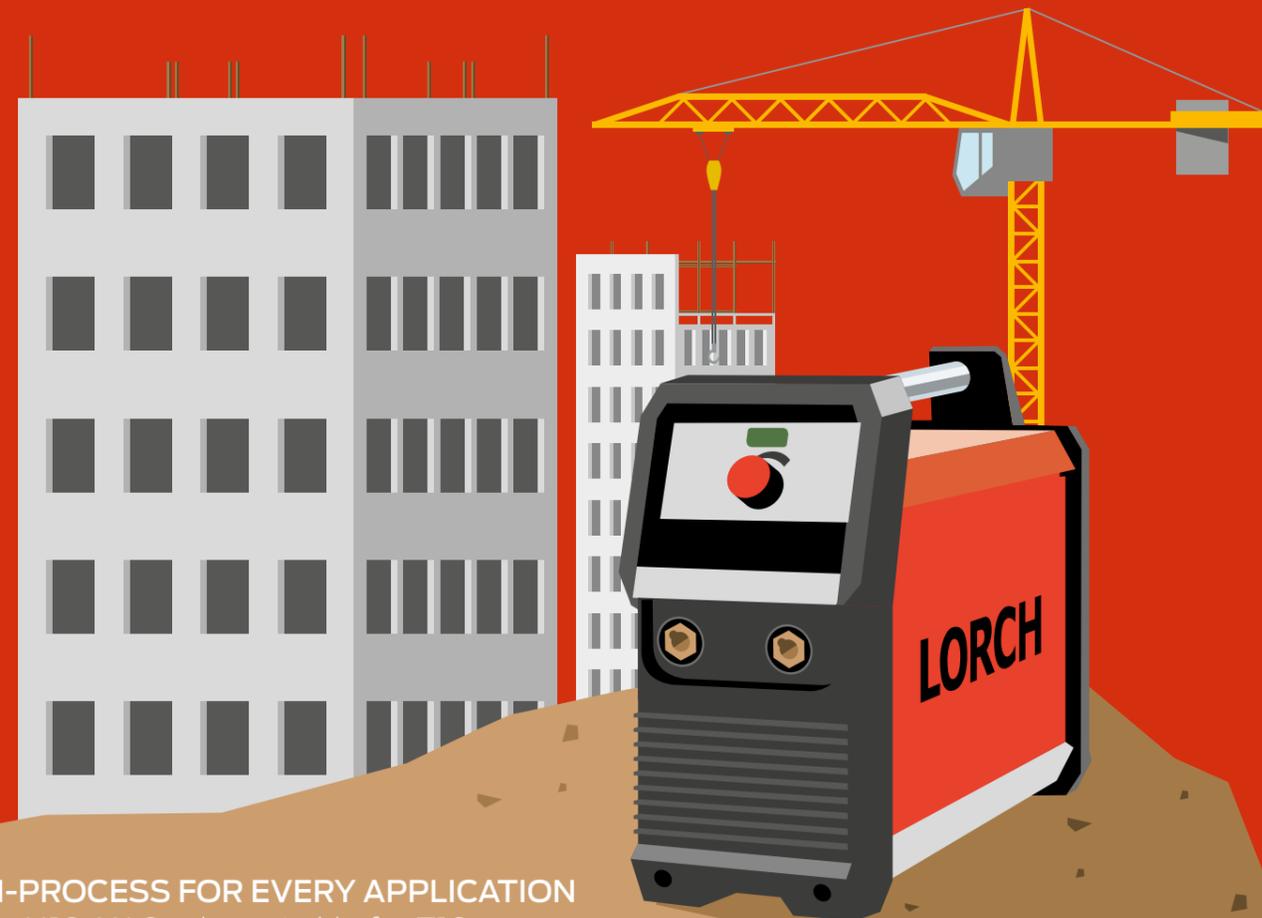
MIG-MAG WELDING



Our rapid MIG-MAG welding solutions for maximum efficiency:

MX350: page 20, M series: page 24, M-Pro series: page 28, MicorMIG series: page 34, P series: page 42, S series: page 48, speed welding processes: page 56, MIG/MAG torches series: page 60, PushPull torches series: page 64

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 CO₂.
- **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

Operating concept

- BasicPlus
- MIG-MAG Synergic
- DC-TIG (with ContactTIG)
- Electrode welding (including CEL)
- Wire feeder case MF-07 with 4-roll drive
- Inter-connection hose package with different lengths
- Welding range up to 350 A

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



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

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 up to 210 A	Welding range up to 230 A	Welding range up to 290 A
<ul style="list-style-type: none"> Perfect for thin sheet metal welding and light-duty steel work Mains supply 230 V and 400 V integrated 2-roll wire feeder 	<ul style="list-style-type: none"> All-round machine for sheet metal processing and light-duty to medium-duty steel work Mains connection 400 V integrated 2-roll wire feeder 	<ul style="list-style-type: none"> All-round machine for sheet metal processing and heavy-duty steel work Mains connection 400 V integrated 4-roll wire feeder

Operating concept

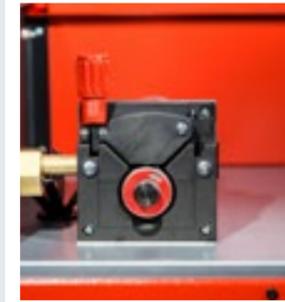


- “3 steps to weld” operating concept
- with automatic setting control
- 2-cycle, 4-cycle and spot welding

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 mm², 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	0.8 - 8.0	0.8 - 10.0	0.8 - 12.0
Recommended material thickness, aluminium	mm	2.0 - 5.0	2.0 - 6.0	2.0 - 8.0
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 CHAMPION IN THE WORKSHOP.



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

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.



- **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.

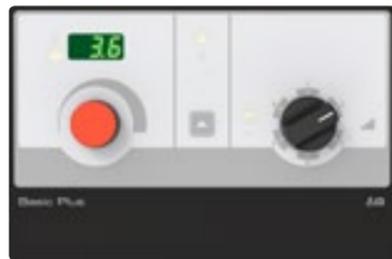
- **Colour-coded feed rolls.** Lorch's colour-coded feed rolls of the Lorch M-Pro series represent different wire diameters and make replacing the rolls a walk in the park.
- **Compartment lighting.** The powerful LEDs integrated into the compartment of the wire feeder make it much easier for you to 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



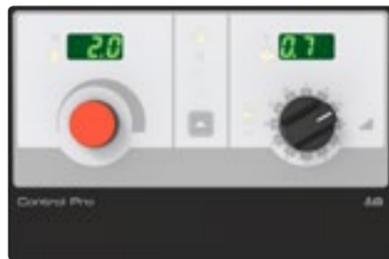
M-Pro 170	M-Pro 210	M-Pro 250	M-Pro 300	M-Pro 150 CuSi	M-Pro 200 CuSi
Operating concept <ul style="list-style-type: none"> BasicPlus 	Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro 	Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro Performance 	Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro Performance 	Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro 	Operating concepts <ul style="list-style-type: none"> ControlPro Performance
<ul style="list-style-type: none"> Welding range up to 170 A Mains supply 230 and 400 V MIG-MAG welding Thin sheet metal 	<ul style="list-style-type: none"> Welding range up to 210 A Mains supply 230 and 400 V MIG-MAG welding Thin sheet metal, profile work 	<ul style="list-style-type: none"> Welding range up to 250 A Mains connection 400 V MIG-MAG welding Thin sheet metal, light-duty steel work 	<ul style="list-style-type: none"> Welding range up to 300 A Mains connection 400 V MIG-MAG welding All-round to medium-duty steel work 	<ul style="list-style-type: none"> Welding range up to 150 A Mains connection 400 V MIG brazing and MIG-MAG welding Vehicle construction 	<ul style="list-style-type: none"> Welding range up to 200 A Mains connection 400 V MIG brazing and MIG-MAG welding Vehicle construction

Operating concepts



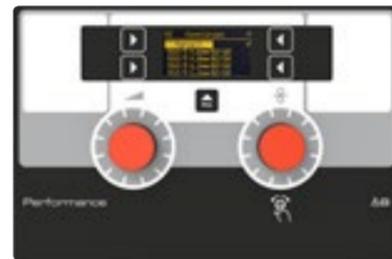
BasicPlus

- "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
Variant <ul style="list-style-type: none"> ControlPro 	Variant <ul style="list-style-type: none"> ControlPro
<ul style="list-style-type: none"> Welding range up to 250 A Mains connection 400 V MIG-MAG welding Thin sheet metal, light-duty steel work 	<ul style="list-style-type: none"> Welding range up to 300 A Mains connection 400 V MIG-MAG welding All-round to medium-duty steel work

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.



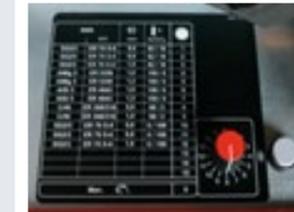
2-roll wire feeder



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

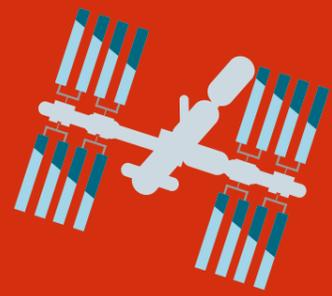
Failure to weld a vehicle exactly as required in the specifications or resorting to a MIG brazing machine in situations where its use is least desirable may result in the airbag being deployed with a delay or the sheet metal structure or corrosion protection being destroyed. Tailored blanks, higher-strength 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.



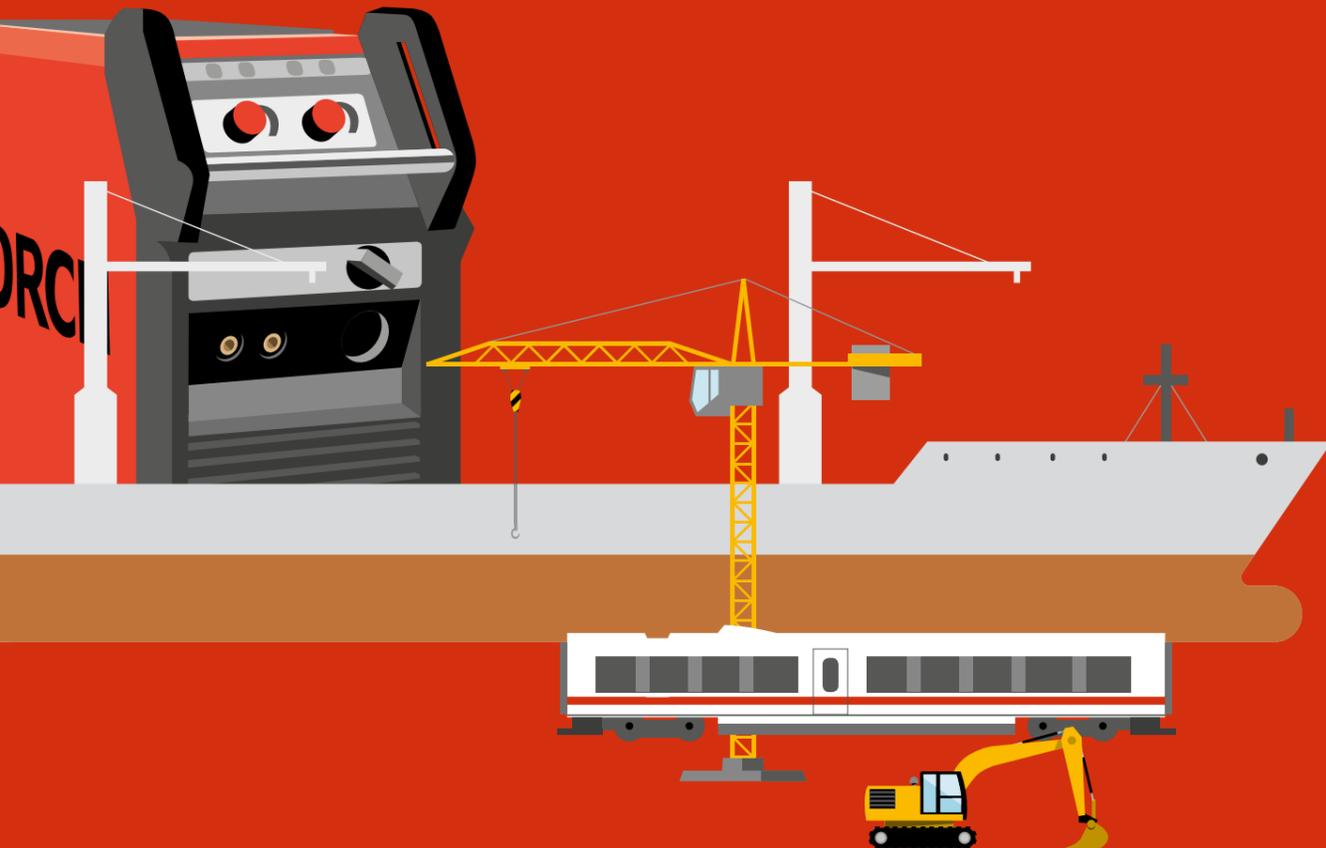
Technical Data M-Pro series

		M-Pro 170	M-Pro 210	M-Pro 250	M-Pro 300	M-Pro 150 CuSi	M-Pro 200 CuSi
Welding range							
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
Welding wires							
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
Weldable material thickness							
Steel	mm	0.8 - 6.0	0.8 - 8.0	0.8 - 10.0	0.8 - 12.0	0.5 - 6.0	0.5 - 8.0
Aluminium	mm	2.0 - 4.0	2.0 - 5.0	2.0 - 6.0	2.0 - 8.0	2.0 - 5.0	2.0 - 6.0
Machine							
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							



The MicorMIG series

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 CO₂.
- **Dynamic control.** The dynamic control feature lets you choose the arc characteristics 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.** 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.
- **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.** As synergic control and automatic setting control are built in, Lorch MicorMIG is guaranteed to produce welding results that are in conformity with the EN 1090. 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.** Thanks to Lorch's optional “SpeedArc” speed process you will be able to weld with a focused arc that delivers even deeper penetration and greater welding speeds.
- **Job management.** Our ControlPro display makes using the Tiptronic function a cinch, allowing you to easily store your most common welding jobs. Another welcome feature the MicorMIG includes is the ability to transfer welding jobs to other machines.

- **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.
- **NFC. Welder identification made easy.** The user levels at the core of the MicorMIG and the effortless way the welder can use an NFC card to identify himself makes managing “user” rights for adjusting the parameters a breeze.
- **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
Operating concepts <ul style="list-style-type: none"> Basic BasicPlus ControlPro 	Operating concepts <ul style="list-style-type: none"> Basic BasicPlus ControlPro 	Operating concepts <ul style="list-style-type: none"> Basic BasicPlus ControlPro 	Operating concepts <ul style="list-style-type: none"> Basic BasicPlus ControlPro
Variants <ul style="list-style-type: none"> available as gas or water cooled available as a compact or wire feeder system 	Variants <ul style="list-style-type: none"> available as gas or water cooled available as a compact or wire feeder system 	Variants <ul style="list-style-type: none"> available as gas or water cooled available as a compact or wire feeder system 	Variants <ul style="list-style-type: none"> available as gas or water cooled available as a compact or wire feeder system
<ul style="list-style-type: none"> infinitely variable welding inverter for MIG-MAG welding Welding range up to 300 A Mains connection 400 V 	<ul style="list-style-type: none"> infinitely variable welding inverter for MIG-MAG welding Welding range up to 350 A Mains connection 400 V 	<ul style="list-style-type: none"> infinitely variable welding inverter for MIG-MAG welding Welding range up to 400 A Mains connection 400 V 	<ul style="list-style-type: none"> infinitely variable welding inverter for MIG-MAG welding Welding range up to 500 A Mains connection 400 V

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
- Convenient, intuitive menu guidance
- 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
- Fully upgradeable

Highlights

For demanding applications



50 l - cylinder trolley
Cylinder trolley with double chain locks and a low loading edge.



Protection in every detail
Large handles allows you to move the system with greater ease and protect switches and connections at the same time.



Enhanced stability (starting at 350 A)
Its extra wide track provides for enhanced stability and additional collision protection.

End crater filling



Transformer-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.



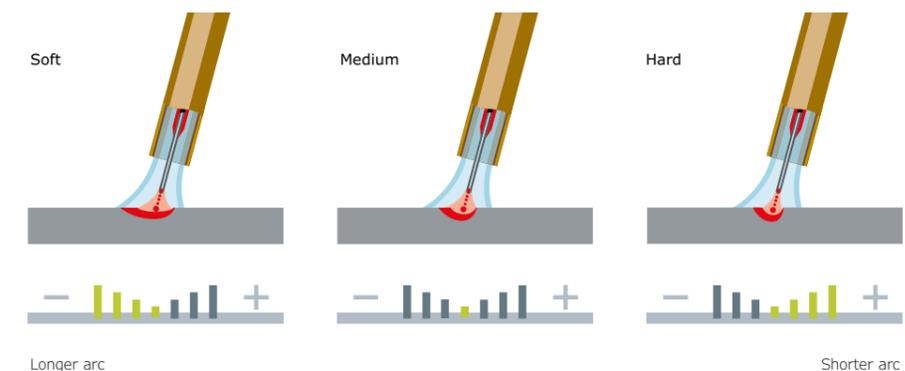
Without crater filling.



With crater filling - perfect end of weld seam.

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

Upgradability built in

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, 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.



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.



Clever details for improved everyday welding



Wire compartment lighting

High-power LEDs illuminate the compartment effectively, making it much easier for you to change the reel and thread in the wire even in complete darkness or low light conditions.



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.



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.



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.

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 400 x 755	880 x 490 x 855	880 x 490 x 855	880 x 490 x 855
Dimensions wire feeder system (L x W x H)	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	51	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 full-protection wire feeder MF-08

Robust, exceptionally stable and fully insulated.

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 & protected against falls.** Even if experiencing a fall from a height of 60 cm.
- **We are bringing light into darkness.** Thanks to the illuminated wire feed compartment.
- **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 – both side accessibility

Paramount to a wire feeder case's aptitude to handle real-world applications is the ease with which the wire reel can be inserted – at the same time, this key aspect presents a true challenge as it threatens to go beyond the scope of a case that is so compact and suitable for use in manholes. There are a number of details and special features in the design of the MF-08 that guarantee exceptional ease of use when you need to change wire reels. These include, for instance, a slightly slanted wire reel and side covers that swing open and lock into place, thereby allowing 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 are designed in such a way that the hose package can be replaced by the welder himself or, if necessary, be transported separately from the case without the need to enter a technically sensitive area or an area that may only be opened by trained personnel.



Equipped to handle all types of applications



Heavy-duty undercarriage kit



Protection cage with tube frame



Heat protection skirts



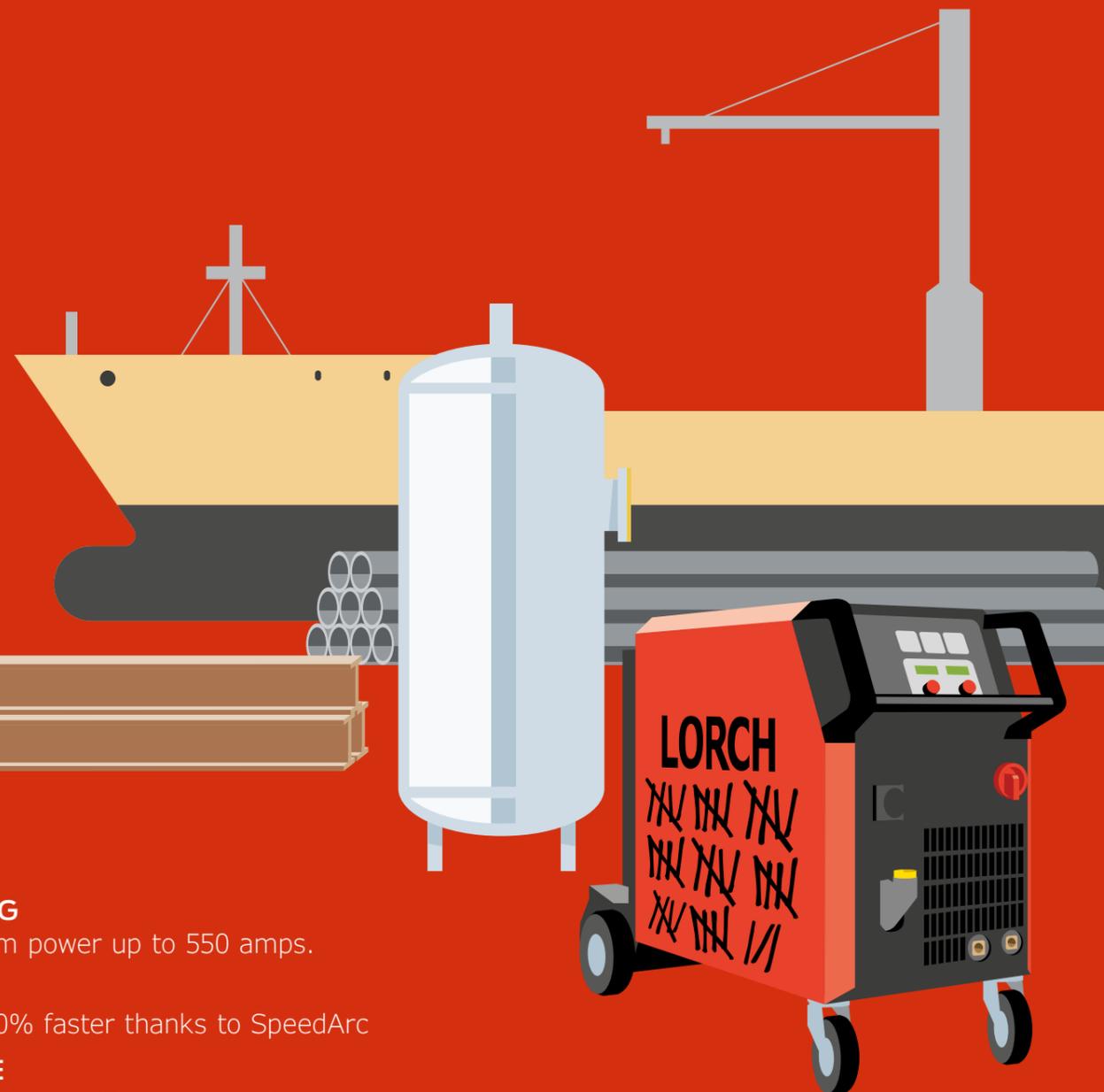
Boom suspension

Whether upright or horizontal – easy to control in every position

Every real-world 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".



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 CO₂.
- **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.

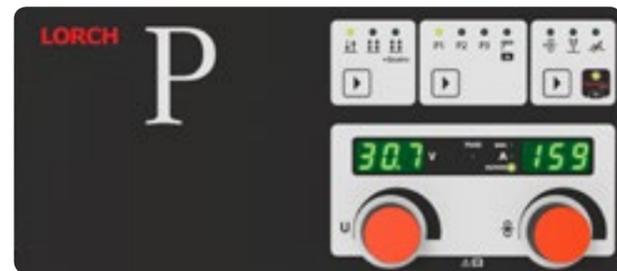
- **Remote control.** Every Lorch P series system can be operated by remote control. Remote control can be exercised either using the Lorch Powermaster torch or an external operating panel. You can also connect a remote control if you want to operate the machine in electrode mode.
- **PushPull.** As 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
Operating concepts <ul style="list-style-type: none"> Basic XT 	Operating concepts <ul style="list-style-type: none"> Basic XT 	Operating concepts <ul style="list-style-type: none"> Basic XT 	Operating concepts <ul style="list-style-type: none"> Basic XT
Variants <ul style="list-style-type: none"> available as gas or water-cooled option (separate cooling unit) also available with Mobile-Car transport trolley and water cooling unit 	Variants <ul style="list-style-type: none"> available as gas or water cooled available as a compact system or with separate wire feeder case 	Variants <ul style="list-style-type: none"> available as gas or water cooled available as a compact system or with separate wire feeder case 	Variants <ul style="list-style-type: none"> available as gas or water cooled available as a compact system or with separate wire feeder case
<ul style="list-style-type: none"> Mobile system with trolley wheelset infinitely variable MIG-MAG welding inverter Welding range up to 300 A Mains connection 400 V 	<ul style="list-style-type: none"> infinitely variable MIG-MAG welding inverter Welding range up to 350 A Mains connection 400 V 	<ul style="list-style-type: none"> infinitely variable MIG-MAG welding inverter Welding range up to 450 A Mains connection 400 V 	<ul style="list-style-type: none"> infinitely variable MIG-MAG welding inverter Welding range up to 550 A Mains connection 400 V

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
- Display-controlled user prompting
- 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

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.

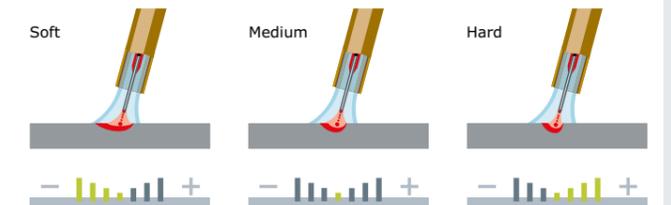


Quatromatic

- 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
- designed for continuous use
- 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 ₂ 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 S series

MASTER OF THE PULSE ARC.



PATENTED 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

MIG-MAG

S SERIES

The S series at a glance

- **Ready for Pulse.** 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 SpeedArc, SpeedArc XT, Pulse and TwinPuls or the optional upgrades SpeedUp, SpeedCold, SpeedPulse, SpeedPulse XT, TwinPuls XT 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 CO₂.
- **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.** 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.

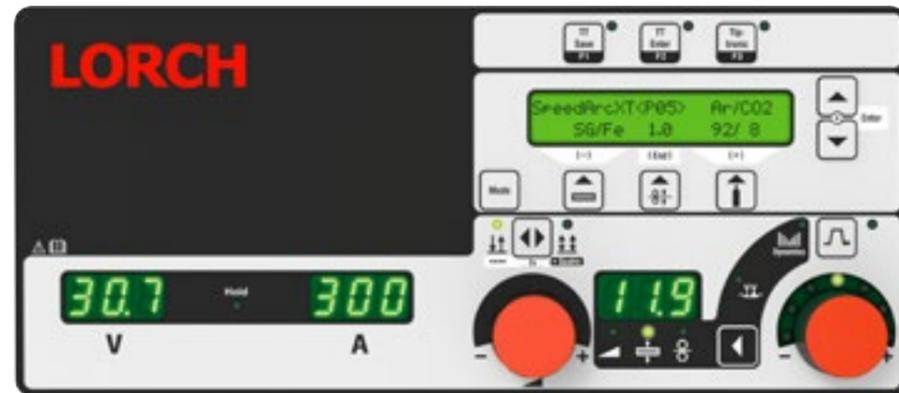
- **Energy-efficient.** Lorch's S series marries power with efficient inverter technology and on-demand functionality. Slash your costs and produce exceptional welding results at the same time.
- **EN 1090-certified.** The EN 1090 WPS package accompanying the Lorch S series helps you save time and money 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
Operating concept • XT	Operating concept • XT	Operating concept • XT	Operating concept • XT
Variants • S-Pulse XT • S-SpeedPulse XT • also available with Mobile-Car transport trolley and water cooling unit	Variants • S-Pulse XT • S-SpeedPulse XT • available as gas or water cooled • available as a compact system or with separate wire feeder case	Variants • S-Pulse XT • S-SpeedPulse XT • available as gas or water cooled • available as a compact system or with separate wire feeder case	Variants • S-Pulse XT • S-SpeedPulse XT • available as gas or water cooled • available as a compact system or with separate wire feeder case
• Mobile system with trolley wheelset • infinitely variable MIG-MAG welding inverter • Welding range up to 320 A • Mains connection 400 V	• infinitely variable MIG-MAG welding inverter • Welding range up to 320 A • Mains connection 400 V	• infinitely variable MIG-MAG welding inverter • Welding range up to 400 A • Mains connection 400 V	• infinitely variable MIG-MAG welding inverter • Welding range up to 500 A • Mains connection 400 V

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)
- 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-Pulse XT	S-SpeedPulse XT
“Welding process” equipment		
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 ContacTIG)	○	○
“Cooling system variant” equipment		
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		

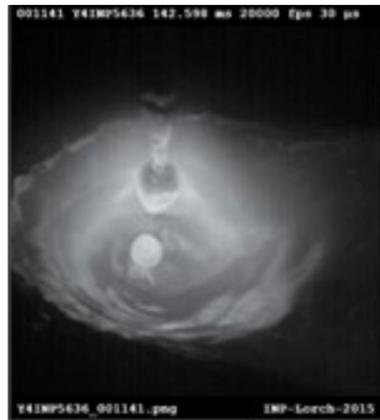
Technical data

	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

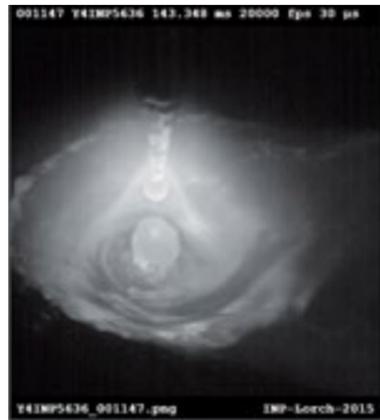
All wire feeder systems come with a 1 m inter-connection hose package; additional lengths and options upon request.

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.

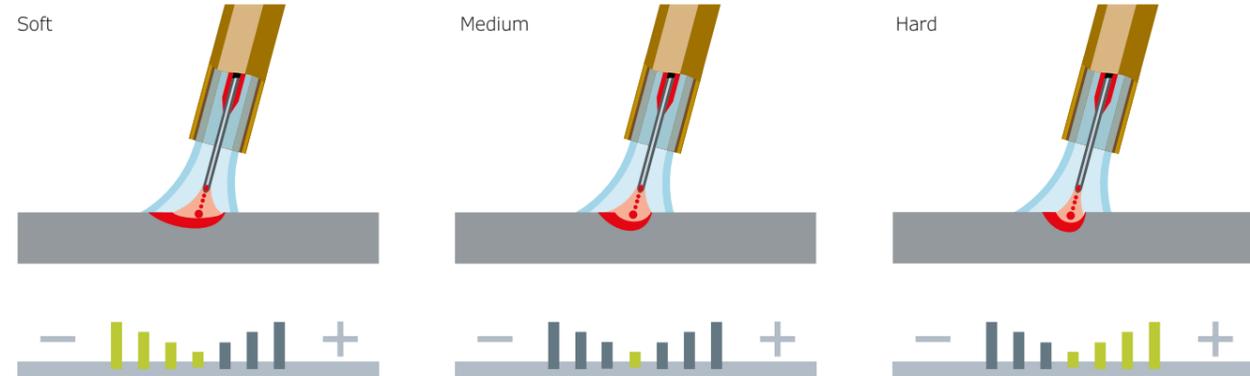


The primary droplet has detached, allowing the secondary droplets to form.



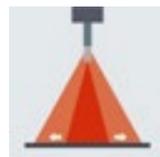
The primary droplet enters the weld pool, and the secondary droplets detach.

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.



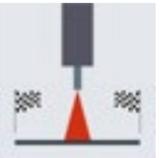
Effortless welding over tack welds

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

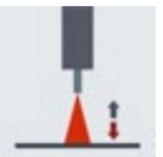
Allowing you to choose specific arc length settings that are separate for the starting, welding and end phases, the new S-series gives you the means necessary to systematically influence the energy input. It is a simple and smart solution that helps you reduce or even eliminate initial fusion defects 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 new 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.



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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

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- various hose package lengths
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- 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 ₂ 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 SPEED WELDING PROCESSES DESIGNED BY LORCH. SPEED TRANSLATES TO PRODUCTIVITY.

Speed processes for the P series and the S series.

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. Better still, the new 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 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.



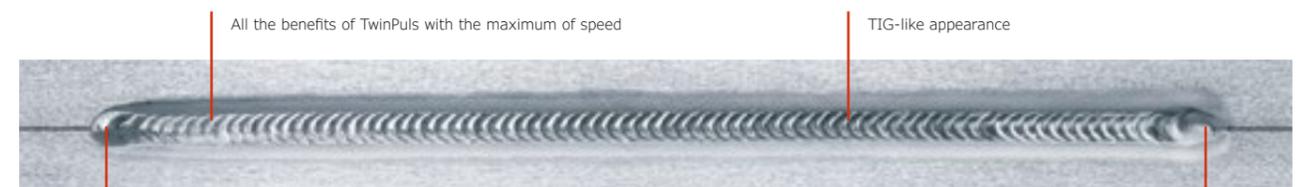
SpeedArc XT – deeply impressive.

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.



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.

All the benefits of TwinPuls with the maximum of speed

TIG-like appearance

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 MIG-MAG root welding quality that is noticeably better.

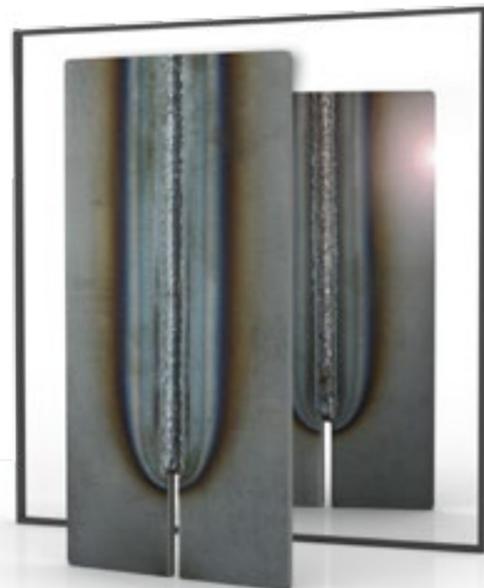
Previously, the main requirement for joining both edges of the material perfectly and with as little defects as possible was to apply this simple formula: Root welding = TIG.

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.

	P series	S-Pulse XT	S-SpeedPulse XT
Welding process			
SpeedPulse XT	–	○	●
SpeedArc XT (incl. SpeedArc)	●	●	●
TwinPuls XT	–	○	●
SpeedPulse (incl. TwinPuls)	–	●	●
SpeedUp	○	○	○
SpeedRoot	○	○	●
SpeedCold	○	○	○
Standard MIG-MAG welding programs	●	●	●

● Standard equipment ○ Optionally available

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



Gas-cooled					
ML 1500	ML 2500	ML 2400	ML 3600	ML 3800	ML 4500
Operating concepts <ul style="list-style-type: none"> Standard Powermaster 	Operating concepts <ul style="list-style-type: none"> Standard 	Operating concept <ul style="list-style-type: none"> Standard Powermaster 	Operating concepts <ul style="list-style-type: none"> Standard Powermaster 	Operating concepts <ul style="list-style-type: none"> Standard Powermaster 	Operating concepts <ul style="list-style-type: none"> Standard Powermaster
Welding range up to 180 A	Welding range up to 230 A	Welding range up to 250 A	Welding range up to 300 A	Welding range up to 320 A	Welding range up to 370 A

Water-cooled					
MW 5300	MW 5400	MW 5500	MW 5900	MW 7300	MW 7500
Operating concepts <ul style="list-style-type: none"> Standard Powermaster 	Operating concepts <ul style="list-style-type: none"> Standard Powermaster 	Operating concepts <ul style="list-style-type: none"> Standard Powermaster 	Operating concepts <ul style="list-style-type: none"> Standard Powermaster 	Operating concept <ul style="list-style-type: none"> Powermaster 	Operating concept <ul style="list-style-type: none"> Powermaster
Welding range up to 300 A	Welding range up to 400 A	Welding range up to 500 A	Welding range up to 550 A	Welding range up to 300 A Interchangeable torch neck rotates 360°, allowing for a quick and easy exchange without tools	Welding range up to 500 A Interchangeable torch neck rotates 360°, allowing for a quick and easy exchange without tools

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 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

		MW 5300	MW 5400	MW 5500	MW 5900	MW 7300	MW 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

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



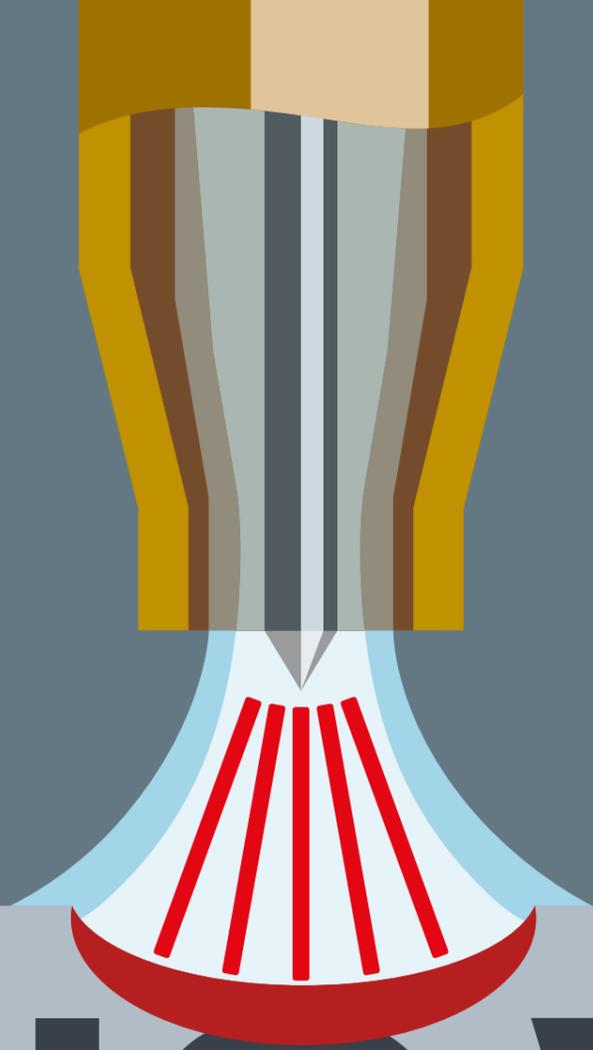
How far would you like to go – with your PushPull torch?



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 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 length	m	8**	8**	8**	8**	8**

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



The arc for
the perfect appearance

TIG WELDING



Our TIG welding solutions for clean, fine seams:

Handy-TIG series: page 68, T series: page 72, T-Pro and TF-Pro series:
page 76, V series: page 80, Feed-TIG cold wire feeder: page 84,
TIG torches series: page 86

The HandyTIG series

AC/DC ON TOUR.



MOBILE TIG TALENT

For aluminum (AC) and steel / stainless steel (DC)

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, the Lorch HandyTIG series 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, the Lorch HandyTIG 180 AC/DC and the HandyTIG 200 AC/DC allow you to also weld on aluminium.
- **Pulse and fast pulse.** The integrated pulse function with up to 2 kHz and up to 500 Hz, which comes standard, respectively, in the AC/DC and DC variants of the Lorch HandyTIG, 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 Lorch HandyTIG 180 AC/DC and HandyTIG 200 AC/DC machines 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 memory (ControlPro) 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



Handy 180	HandyTIG 180 DC	HandyTIG 180 AC/DC	HandyTIG 200 AC/DC
Operating concept <ul style="list-style-type: none"> BasicPlus 	Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro 	Operating concept <ul style="list-style-type: none"> ControlPro 	Operating concept <ul style="list-style-type: none"> ControlPro
<ul style="list-style-type: none"> portable electrode welding inverter with extended TIG function Including gas management and ContacTIG ignition for steel and stainless steel applications Welding range up to 180 A 	<ul style="list-style-type: none"> portable TIG-DC welding inverter With high-frequency or ContacTIG ignition, gas management and electrode welding function for steel and stainless steel applications Welding range up to 180 A 	<ul style="list-style-type: none"> portable TIG-AC/DC welding inverter With high-frequency or ContacTIG ignition, gas management and electrode welding function for steel and stainless steel applications with up to 10 mm and aluminium with up to 5 mm Welding range up to 180 A 	<ul style="list-style-type: none"> portable TIG-AC/DC welding inverter With high-frequency or ContacTIG ignition, gas management and electrode welding function for steel and stainless steel applications with up to 10 mm and aluminium with up to 8 mm Welding range up to 200 A

Operating concepts



BasicPlus

- "3 steps to weld" operating concept
- infinitely variable current setting
- Switch 2-stroke/4-stroke
- Remote control connection



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

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.



ContacTIG

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

Can also be used with remote control torch

Versions ControlPro or higher 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

	Handy 180	HandyTIG 180 DC	HandyTIG 180 AC/DC	HandyTIG 200AC/DC
Welding process	TIG Electrode	TIG Electrode	TIG Electrode	TIG Electrode
Electrode Ø	mm 1.0 - 2.4 1.5 - 4.0	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	Steel, stainless steel, copper, aluminium	Steel, stainless steel, copper, aluminium
Weldable material Electrode	Steel, stainless steel	Steel, stainless steel	Steel, stainless steel	Steel, stainless steel
Welding range	A 5 - 180 10 - 150	5 - 180 10 - 150	3 - 180 10 - 150	3 - 200 10 - 170
Duty cycle I max. (40 °C)	% 30 40	30 40	35 35	45 45
Current at 60% duty cycle (40 °C)	A 150 135	150 135	150 110	180 120
HF ignition	-	●	●	●
Mains voltage	V 1~230	1~230	1~230	1~230
Dimensions (L x W x H)	mm 337 x 130 x 211	337 x 130 x 211	480 x 185 x 326	480 x 185 x 326
Weight	kg 5.7	6.5	13.3	13.4

● Standard equipment

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
Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro 	Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro 	Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro 	Operating concepts <ul style="list-style-type: none"> BasicPlus ControlPro
Variant <ul style="list-style-type: none"> available as a DC- or AC/DC system 	Variant <ul style="list-style-type: none"> available as a DC- or AC/DC system 	Variant <ul style="list-style-type: none"> available as a DC- or AC/DC system 	Variant <ul style="list-style-type: none"> available as a DC- or AC/DC system
<ul style="list-style-type: none"> Welding range up to 180 A Mains connection 230 V 	<ul style="list-style-type: none"> Welding range up to 220 A Mains connection 230 V 	<ul style="list-style-type: none"> Welding range up to 250 A Mains connection 400 V 	<ul style="list-style-type: none"> Welding range up to 300 A Mains connection 400 V

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.



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.



Technical data

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

The T-Pro series

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.



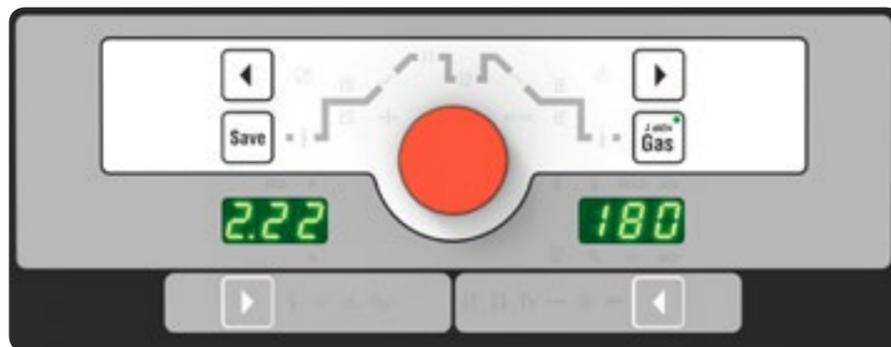
- **Remote control.** Welders often experience that the conditions on site do not allow them to place their welding machine right beside them. When faced with this type of situation, they find the use of a remote control helpful as it allows them to intervene and adjust the welding current if necessary. 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 ContactTIG (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
Operating concept <ul style="list-style-type: none"> ControlPro 	Operating concept <ul style="list-style-type: none"> ControlPro 	Operating concept <ul style="list-style-type: none"> ControlPro
Variant <ul style="list-style-type: none"> available as a DC- or AC/DC system available as gas or water cooled 	Variant <ul style="list-style-type: none"> available as a DC- or AC/DC system available as gas or water cooled 	Variant <ul style="list-style-type: none"> available as a DC- or AC/DC system available as gas or water cooled
<ul style="list-style-type: none"> TIG welding inverter Welding range up to 250 A Mains connection 400 V 	<ul style="list-style-type: none"> TIG welding inverter Welding range up to 300 A Mains connection 400 V 	<ul style="list-style-type: none"> TIG welding inverter integrated 4-roll wire feeder for TIG cold wire feed removable operating panel for setting the wire feed Welding range up to 300 A Mains connection 400 V

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

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.
- **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.

3 YEARS INDUSTRIAL WARRANTY
LORCH



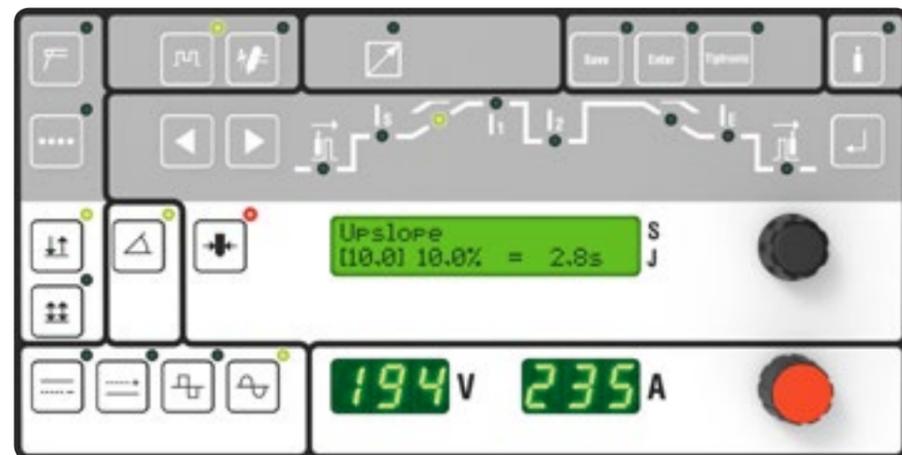
- **In a robust, completely transportable industrial housing.** The tough metal housing safely protects the high-end technological innards of your system. Completely transportable at the handles, the machine is also suitable for crane transport.
- **Remote control.** Welders often experience that the 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

V 24 mobile	V 30 mobile	V 24	V 27	V 30	V 40	V 50
Operating concept • Standard	Operating concept • Standard	Operating concept • Standard	Operating concept • Standard	Operating concept • Standard	Operating concept • Standard	Operating concept • Standard
Variant • available as a DC- or AC/DC system • also available with Mobile-Car transport trolley and water cooling unit • also available with a Lorch Feed cold wire feeder	Variant • available as a DC- or AC/DC system • also available with Mobile-Car transport trolley and water cooling unit • also available with a Lorch Feed cold wire feeder	Variant • available as a DC- or AC/DC system • available as gas or water cooled • also available with a Lorch Feed cold wire feeder	Variant • available as a DC- or AC/DC system • available as gas or water cooled • also available with a Lorch Feed cold wire feeder	Variant • available as a DC- or AC/DC system • available as gas or water cooled • also available with a Lorch Feed cold wire feeder	Variant • available as a DC- or AC/DC system • available as gas or water cooled • also available with a Lorch Feed cold wire feeder	Variant • available as a DC- or AC/DC system • available as gas or water cooled • also available with a Lorch Feed cold wire feeder
• TIG welding inverter • Welding range up to 240 A • Mains connection 400 V	• TIG welding inverter • Welding range up to 300 A • Mains connection 400 V	• TIG welding inverter • Welding range up to 240 A • Mains connection 400 V	• TIG welding inverter • Welding range up to 270 A • Mains connection 400 V	• TIG welding inverter • Welding range up to 300 A • Mains connection 400 V	• TIG welding inverter • Welding range up to 400 A • Mains connection 400 V	• TIG welding inverter • Welding range up to 500 A • Mains connection 400 V

Operating concept



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

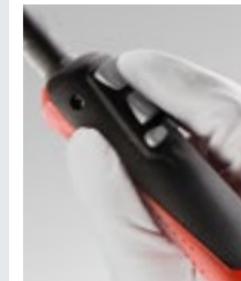
With Mobile Car and water-cooling unit – you are ready to roll. The V mobile sits at an ideal working height, the gas cylinder is fixed in its support and the torch is water-cooled for optimum performance. The V remains "mobile" and at the same time has the functionality of a large compact system.



Water cooling unit WUK 5: High performance cooling unit for water-cooled TIG torch

Mobile Car: Carriage for supporting the V mobile and the water re-circulation cooling unit WUK 5

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.

Technical data

		V 24 mobile	V 30 mobile	V 24	V 27	V 30	V 40	V 50
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

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.



3 YEARS
INDUSTRIAL
WARRANTY
LORCH



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	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. (i-version)
- **Powermaster control.** The Powermaster variant lets you control all essential parameters of your welding jobs directly at the torch. (i-version)

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



Gas-cooled					
a-LTG/i-LTG 900	a-LTG/i-LTG 1700	a-LTG/i-LTG 2600	a-LTG/i-LTG 2800	LTV 1700	LTV 2600
Operating concepts <ul style="list-style-type: none"> Double push button (DD) UpDown (UD) Powermaster (PM) 	Operating concepts <ul style="list-style-type: none"> Double push button (DD) UpDown (UD) Powermaster (PM) 	Operating concepts <ul style="list-style-type: none"> Double push button (DD) UpDown (UD) Powermaster (PM) 	Operating concepts <ul style="list-style-type: none"> Double push button (DD) UpDown (UD) Powermaster (PM) 	Operating concept <ul style="list-style-type: none"> Valve setting dial 	Operating concept <ul style="list-style-type: none"> Valve setting dial
Welding range up to 110 A	Welding range up to 140 A	Welding range up to 180 A	Welding range up to 300 A	Welding range up to 150 A	Welding range up to 200 A

Water-cooled				
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
Operating concepts <ul style="list-style-type: none"> Double push button (DD) UpDown (UD) Powermaster (PM) 	Operating concepts <ul style="list-style-type: none"> Double push button (DD) UpDown (UD) Powermaster (PM) 	Operating concepts <ul style="list-style-type: none"> Double push button (DD) UpDown (UD) Powermaster (PM) 	Operating concepts <ul style="list-style-type: none"> Double push button (DD) UpDown (UD) Powermaster (PM) 	Operating concepts <ul style="list-style-type: none"> Double push button (DD) UpDown (UD) Powermaster (PM)
Welding range up to 220 A	Welding range up to 320 A	Welding range up to 320 A	Welding range up to 400 A	Welding range up to 450 A

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. (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	-	-	o	o	-	-

	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	-	o	o	-	-

o Optionally available



Professional welding data
management for every company

QUALITY MANAGEMENT



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

Q-Data: page 92, Q-Sys: page 96

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

for separately enabled/prepared Lorch welding machines equipped with LorchNET connection

- 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

Q-Data Multi-Use

for all Lorch systems equipped with a LorchNET interface

- 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

Operating concept

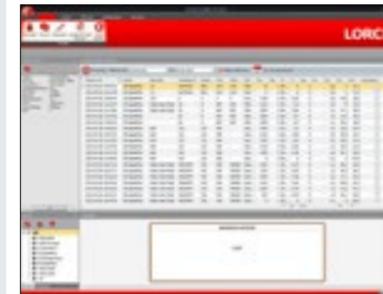


- generous LCD display including context-sensitive buttons for direct operation
- Real-time display of the recorded welding parameters (welding current, welding voltage, wire feed, and gas flow)
- effortless menu navigation
- RFID detection for easy welder identification
- Numeric keypad for entering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

Highlights

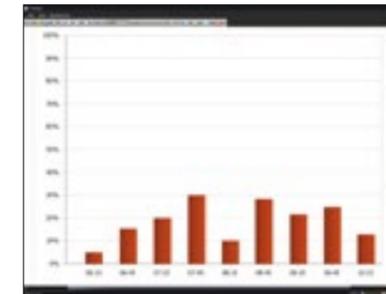


Monitor every aspect of your welding process: thanks to our Q-Data software



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

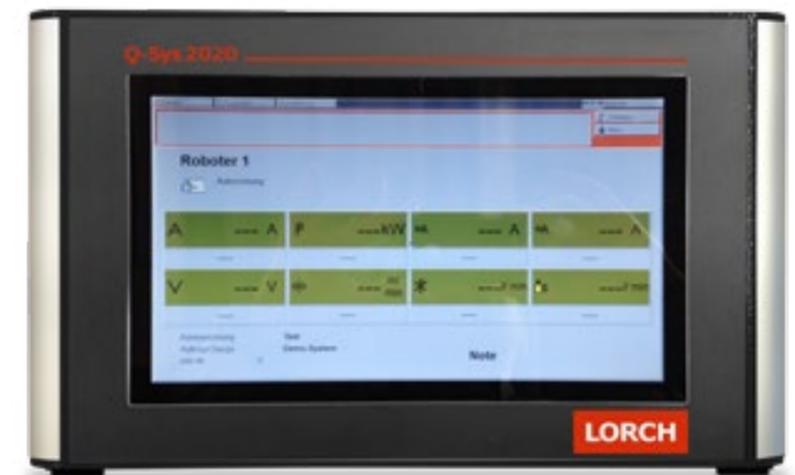
		Q-Data
Weight	kg	2.05
Dimensions in mm (L x W x H)	mm	277.5 x 202 x 78.6
Storage capacity	MB	800
Compatibility		LorchNET connection
Data transfer		
USB		●
Ethernet		●

● Standard equipment

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-Sys2020 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)

High-end quality management system for 1 power source

- 1 x LorchNET
- 1 x DIG inputs/outputs (24 units)
- available parameters (standard): Current, voltage, wire feed, power and gas flow
- optional parameters: Motor currents, water flow, and, if applicable, additional parameters measured by external sensors
- other available hardware/software options: ProfiNET/Profibus interface, HDMI port, network software (automatic data management + archiving)

Q-Sys 2020 (for 2 power sources)

High-end quality management system for 2 power sources

- 2 x LorchNET
- 2 x DIG inputs/outputs (24 units)
- available parameters (standard): Current, voltage, wire feed, power and gas flow
- optional parameters: Motor currents, water flow, and, if applicable, additional parameters measured by external sensors
- other available hardware/software options: ProfiNET/Profibus interface, HDMI port, network software (automatic data management + archiving)

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.

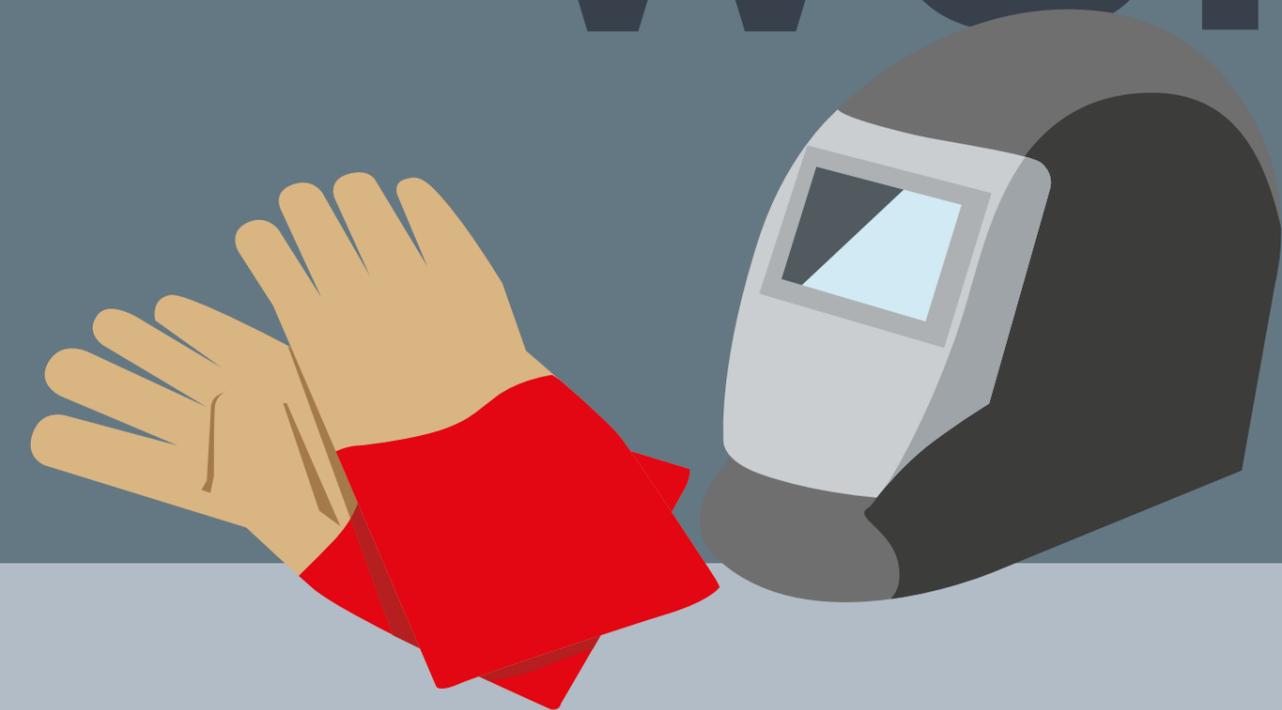
Technical data

	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, T series, T-Pro/TF-Pro series	S series, P series, MicorMIG, T series, T-Pro/TF-Pro series
Interface		
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 ○ Optional

Protective equipment
for all welding processes

WORKWEAR



Our solutions for your safety:

Lorch welding workwear: page 102, Automatic welding helmets: page 103

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/m²
- 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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smart welding

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