

MADE IN GERMANY



**LORCH**  
smart welding

**IQS**

The new reference in industrial welding.

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



# What makes your future safe?



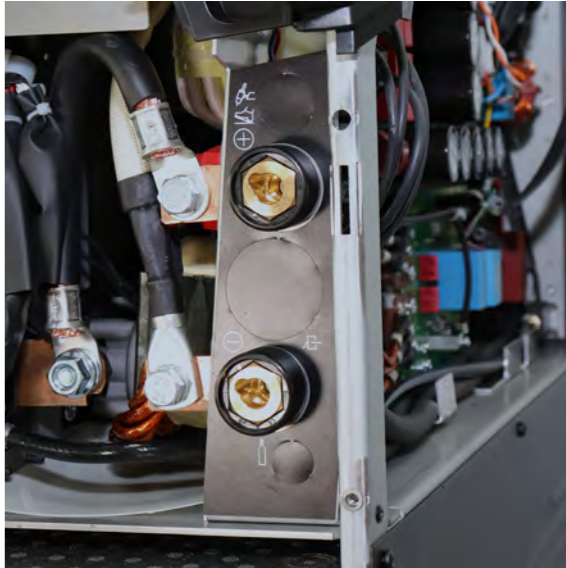
Precise welding with excellent performance levels.



An intuitive operating concept in perfection.



Always remain up to date.



Longest service life for long-term reliability.

# Are you ready for the future?

The welding system you can rely on.

Soaring costs, increasing competitive pressure, ever more complex customer requirements – we understand the challenges you are facing in order to combine investment security and solution competence.

Our solution is using the best technology available in a smart manner. Further digital development that keeps coming, combined with greatest efficiency and performance, makes a decisive difference in Industrial welding production.

We have put all we have into delivering on this value proposition with the iQS. A completely new inverter ensures control stability and the best arc available from within the Lorch portfolio. Our highest priority is giving our customers greatest availability in their production with the iQS. Every part has been tested for tough industrial use and adapted accordingly. This, combined with the intuitive operation, makes the technology accessible to every welder.

Is this just what you are looking for? Then keep reading and convince yourself of a secure future for welding.

**NOW:** Discover the improvements that are possible for your everyday work!

# Challenges in everyday life.

## Welding production

# 1

Welding data is not transparent  
4-eye principle for quality deviations  
Complicated and expensive updates or upgrades

## Operation of the welding unit

# 2

Hidden settings  
Complex and scattered operating menus  
Touch displays that are not operable whilst wearing gloves

## Water cooling

# 3

Possible leakage due to poor clamping with jubilee clips  
Time consuming coolant replacement  
Complicated fuse change

## Welding inverters

# 4

Circuit board damage caused by dust ingress during normal use  
Complicated and expensive dust filters  
Difficult access to control boards



# Get started in practical use with the iQS!



### Intuitive control panel. 3-2-1 welding.

The Smart-Cockpit with 7" display. Can be used with push-button or touch operation. Even when wearing welding gloves.

### Over-the-air. Remote service.

Simply secure updates conveniently via Wi-Fi and stay up to date at all times.

### Wi-Fi on board. By default.

Over-the-air upgrades or features via subscription model. Lorch Connect ex works.

9 out of 10 maintenance engineers confirm:

**"The iQS proves that you have listened to us."**



### Extremely simple service.

The entire power module can be easily exchanged without fuss. Access to fuses and possibility to drain coolant without removal of cooling unit.

### Exceptional dust protection.

Encapsulated air duct and separate dust-free electronics area.

### Leak-safety.

No jubilee clips. Only industry standard QuickConnect water hoses.

**READY FOR THE FUTURE!**



# Absolute High-end Welding Performance.

Our high-end welding unit series guarantees optimum results through advanced development and experience – for greater efficiency, cost savings and satisfaction.



## New Smart Process Control Engine (SPC Engine).

Faster to new processes.

Time equals money – it certainly does in production. A new SPC engine allows us to develop welding processes and suitable synergic lines and to transfer them to your iQS even more quickly. We are also happy to incorporate our customers' ideas in this. This makes it easy to create new innovations – in record times. In any case, you will always get cutting-edge equipment – no matter the market developments.

## Clean weld seams, barely any spatter.

Brought to you by the reverse voltage source (RCS).

A newly developed RCS module (Rapid Current Shutdown) has enabled us to further improve our short arc processes. The result is a particularly clean process with less spatter and even higher weld seam quality. This saves your welders the need for elaborate rework and thus plenty of time and money.

Another advantage for the user: The weld pool can be better controlled and manipulated. This improves welding greatly, in particular thin sheets <3mm.

## A calm process.

Thanks to the new inverter.

A new, robust inverter was developed for the iQS. It makes processes run even more stably and smoothly. Users can steplessly adjust parameters and select the perfect working point for them. This improves the weld seam quality and minimises rework.

Its high performance also makes the iQS ideally suited for robot connections – offering an opportunity for companies to further optimise operator comfort, cost efficiency, and welding results. Experience welding 4.0.

## Optimal welding behaviour saves time.

Three times over.

From the moment of its market launch, the iQS has come with a vast range of processes and synergic lines, which Lorch is also continuously expanding. For you, this means three times more efficiency in your work processes:

**Faster to get started:** The iQS offers the right synergic lines for virtually any application – rendering major corrections unnecessary.

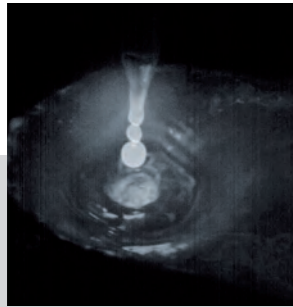
**Faster in the process:** Our speed synergic lines enable faster welding for the user.

**Faster to finish:** Our processes are particularly low-spatter, saving elaborate rework.

# The Masters of Speed.

Always the right answer.

Speed, quality, penetration, and weld appearance pose high demands to the welding process to produce a perfect weld seam in a vast variety of welding positions.



SpeedPulse XT

Extra fast.  
Extra low spatter.  
Particularly forgiving for the welder.



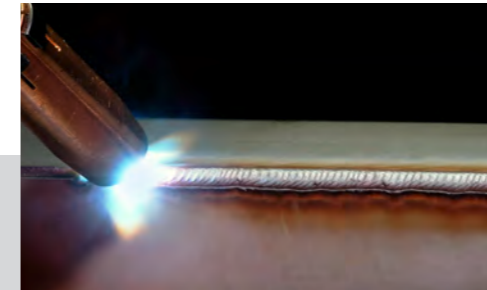
SpeedArc XT

Stands out with a particularly focused arc and a significantly higher power density and increased arc pressure.



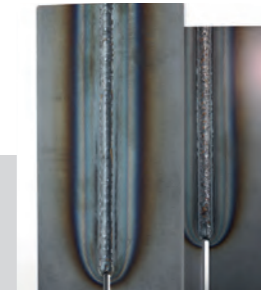
TwinPuls XT

The most beautiful MIG-MAG weld seams at maximum speed.



SpeedTwin

Greater focus on what is truly important: Perfect weld appearance, quick and customisable.



SpeedRoot

For visibly better quality in MIG-MAG root welding.

## The innovative welding processes from Lorch.

Our engineers have developed outstanding MIG-MAG-process innovations for you based on experience from industry practice as well as the wishes of many users.

This has led to Lorch Speed processes that significantly increase your welding speed, noticeably simplify the process, and allow unparalleled productivity.



SpeedUp

A high in vertical seam welding.



SpeedCold

Icy efficiency in thin-sheet welding.

### Overview of the advantages:

- Higher speed
- Better weld seam quality
- Increased penetration
- More beautiful appearance of the weld seams
- Reduced welding fumes
- Less noise pollution
- More reliable results due to better process control

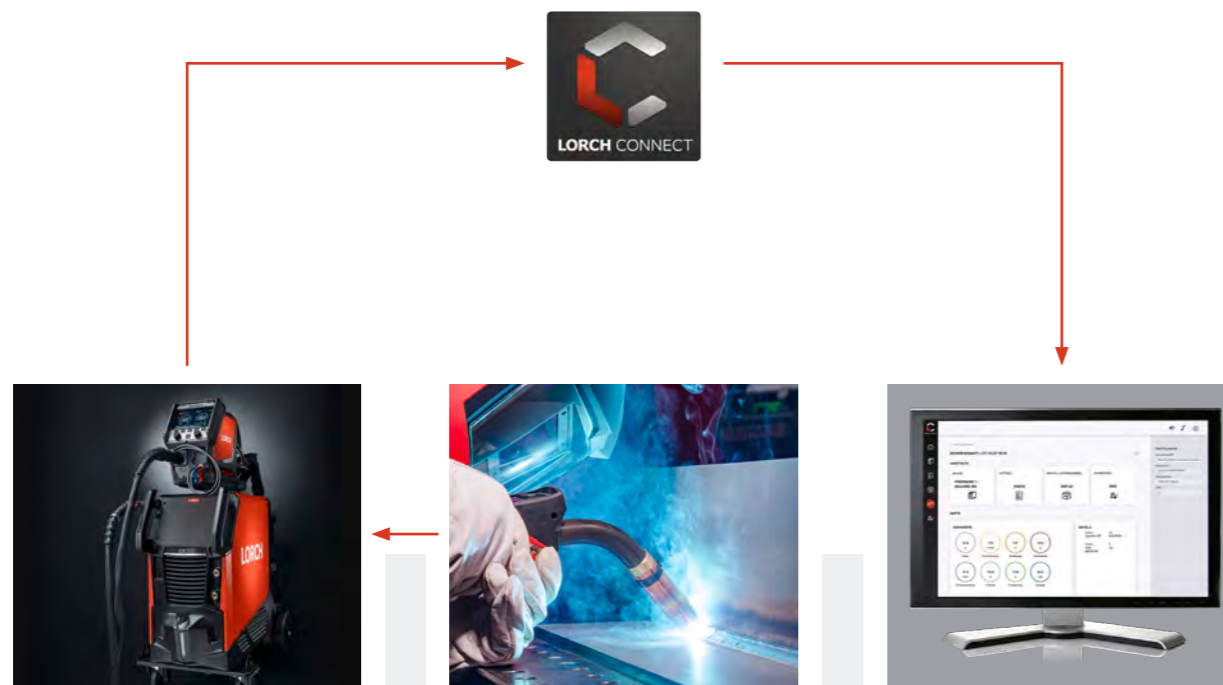
The Lorch Speed processes in detail: [www.lorch.eu](http://www.lorch.eu)



# Digitise, analyse, and reliably optimise your **welding processes.**

Use the enormous potential in the data recorded by you.

Lorch Connect will let you easily and comfortably recognise productivity of all connected systems. Keep the costs of all orders fully in view and track the quality of all recorded weld seams at any time. Lorch Connect is ideal for small and medium-sized enterprises: The smart **Lorch Connect Cloud** will let you use all advantages without any great investments or time-consuming adjustments of your IT infrastructure.



### Connect.

The iQS lets you connect directly to the Lorch Connect portal by Wi-Fi. Get going.

### Weld.

Welding data and other production-relevant details are recorded directly by iQS and transferred to the Lorch Connect portal in the cloud.

### See clearly.

The indicative dashboards give you a perfect overview of everything in the Lorch Connect portal – anywhere and anytime in your web browser.

# Lorch Connect: Your perfect gateway into the digital era. Get going.



Because it is so very **simple.**

The iQS makes it easier than ever to get a welding solution that is fully integrated into the cloud. The cloud lets you comfortably access the portal from any internet-enabled device anywhere in the world.



Because it is **cost-efficient.**

Lorch Connect is entirely cloud-based and does not require additional investment in new IT systems. Start with the free functions of iQS and take out a subscription with more advanced functions as and when required.



Because it is **safe.**

Data processing within Lorch Connect takes place based on all required safety standards. Lorch welding technology and the data centres used within the EU meet the highest European data protection directives. The offline memory in the iQS keeps your data connection stable at all times. Interruption of the connection can be bridged for up to 30 days.



Because it is **flexible.**

Lorch Connect always stays up to date with the iQS and is subject to constant further development. This keeps you flexible. Functions such as remote service and flexible upgrades can thus be used as soon as they become available.



Because it is **smart.**

Processes are monitored, documented and visualised. The Lorch Connect Portal gives you a perfect overview of all data from your connected systems in your personal account, enabling you to make processes comprehensible in detail and optimising your welding production in quality, productivity, and profitability.



## The MF-09.

The multifunctional, powerful, and intuitively operable wire feeder.

The equipment and accessories for the iQS are just as diverse as your areas of application. This also includes a completely new MF-09 wire feeder.

That is the part that must fit perfectly with the intended use in everyday production. Long weld seams, large parts, and difficult welding positions require precisely the right feeder case configuration.

The MF-09 offers an all-round carefree package for your production. The long and short of it is that your welder must love the feeder case and be able to work with it. That is why we focus on user-friendliness in everyday use in combination with maximum robustness. The result leaves nothing to be desired.

## 3 points for practice.

1

**Modular design, also available as bulk pack version.**

The MF-09 has a modular design. The spool housing can be disassembled to obtain the most compact wire feeder possible for a bulk pack.

2

**MF-09. Water or gas version?**

The feeder can be used both as a gas or water version. This is determined by whichever interconnection hose package is connected. Easy to attach and installed with a single click. This makes the conversion between water and gas particularly uncomplicated.

3

**The right undercarriage for maximum range with the MF-09.**

Suitable suspension kits are available for the MF-09. The wire feeder is supplied with slide rails ex works. However, a 65 mm roll or 125 mm heavy-duty trolley kit can also be fitted at need.



**Simple and robust feeder case fixture.**

A robust and stable mandrel helps in placing the feeder case intuitively on the system for transport. The bottom of the MF-09 is designed to make it particularly easy to find the right place for latching it. Truly Smart.

**Robust 4x4 feed system with quick exchange system.**

The easily accessible wire feeder of the iQS offers sophistication in every detail. The perfectly coordinated exchange system makes sure that nothing is standing in the way of a quick change of the robust and durable Lorch feed rolls. Screws and tools are not required at all.

**Maximum control thanks to the wire space window.**

How much wire is left on the reel? The MF-09 will tell you at a glance, without interrupting your workday.



# The Smart-Cockpit.

3-2-1 welding. The next level.



**Intuitive. Fast. Precise.** Get started with the Smart-Cockpit.

### Robust 7-inch display.

High-quality TFT display for welding unit and feeder case. Large, in brilliant colour, and easy to read from any distance and any viewing angle. The display can even be operated with welding gloves. This increases both comfort and safety for the welder.

### Optimal display protection.

A robust film protects the display from flying sparks, welding spatter, and dirt. It is also easy to replace, and the matt surface prevents annoying reflections.



### Clear display cleverly presented.

The Smart-Cockpit always provides a clear overview of the current settings and additional information.



### Incorrect settings are prevented.

The software will only display suitable wire/gas/material combinations and settings that are relevant for the process and task at hand.



### Different complexities to suit the user.

From easy to comprehensive, all modes are clearly structured. The JobMode remains perfectly for fast saving of personalized-preferred welding values.



### Configurable QuickAccess menu.

The QuickAccess menu, accessible via a central button, provides quick and easy access to important settings at any time.



### Simple and self-explanatory menu navigation.

Whether by touch or completely via the rotary-push controllers – intuitive operation is guaranteed.



### All important parameters always in view.

The graphic display visualises the secondary parameters of the welding process during welding. The hold function shows whether the parameters have been complied with after welding.

# Built for one purpose: A long life.

## User-friendly on the outside ...

### Safety for the user:

- No sharp edges
- Sufficient ground clearance for any kind of obstacle
- Lockable wheels prevent rolling away
- Comfortable handles for transport in the production hall

### Protection against damage:

- Robust side panels and self-supporting construction
- Transparent protective panel protects the touch display from flying sparks and welding spatter

### Functional details:

- Large rolls at the rear for easy maneuvering and passing over obstacles
- Rubber mat on the housing cover of the compact power source as a stowage surface
- Sophisticated water drainage system



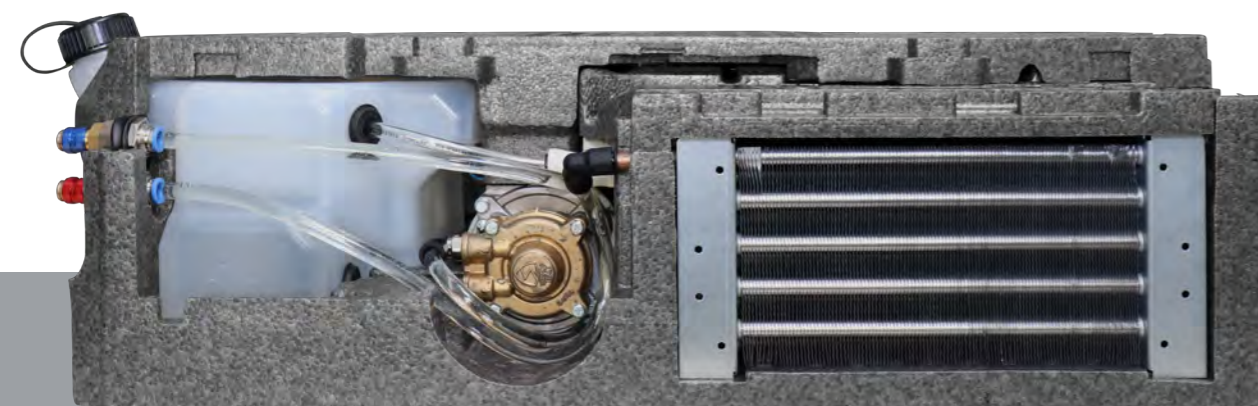
## ... service-friendly on the inside.

### Low-maintenance design:

- Enclosed air duct
- Enclosed control
- Vibration-optimised mounting of the control boards
- All control boards are installed in an encapsulated and dust-free area

### Cost-saving construction if service is required:

- Modular design for simple replacement of parts if service is required
- Reuse of the same assemblies



### New water-cooling concept.

Developed for smooth operation and service.

The iQS has a modular water-cooling concept with a new water circulation cooling unit (WUK). This makes filling, draining, and reading the fill level even easier. If service is required, the WUK module can be removed and replaced in a few simple steps. The larger tank volume also permits use of feeder case systems with longer intermediate hose packages. This reduces your costs and increases your return on investment.

### Wide mains voltage input range from 380 V – 480 V.

The versatility of iQS also extends beyond national borders: The wide-range mains voltage input allows the system to be used internationally. It is also robust against mains voltage fluctuations.

# Ready for the future!

The iQ LMS Performance torch, optimised for the iQS.

# Smart operation concept.

Best performance for maximum control and comfort.



Patented CTC technology.

The special designs of the contact tip and its fixture dramatically improve the current transfer while reducing formation of micro arcs, adding additional cooling, and lowering wear by reducing thermal stress.

### Overview of the advantages:

- Optimised design for pulse welding
- Extremely stable and controllable arc
- Innovative contact tip cooling
- Perfect gas coverage
- Minimised temper colours in stainless steel welds
- Clean weld seams (little fume and soot) in aluminum
- Optimal current transfer from the contact tip to the wire

### Everything at your fingertips:

- Main parameters
- Secondary parameters
- Dynamics
- Change operating mode
- QuickAccess menu
- Process change

### Flexibility.

The innovative multiball joint ensures maximum mobility and allows the welder to work effortlessly even in difficult positions.



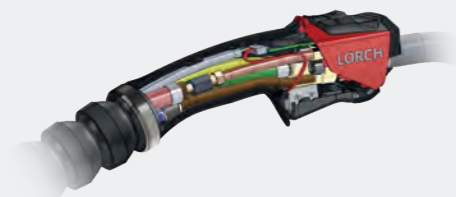
### Centring of the wire.

The special design of the contact tips creates a wire-drawing effect. It has a recognisably positive effect on the welding result since the arc is much more stable and the wire delivery more precise.



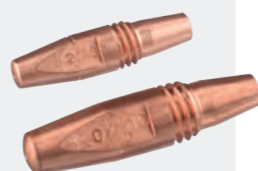
### Compact build.

Everything optimised to enable the slim torch handle. Every professional welder knows from their daily work how important perfect handling is for an optimal, fatigue-free welding process.



### Perfect current transmission.

In contrast to conventionally designed torches, the current is not transmitted via the tip adapter or the thread here, but primarily via the rear conical area of the contact tip. This fits snugly and over a large area in the torch neck, ensuring perfect, reliable current transfer via the direct copper-to-copper connection.



# Innovative HMI control.

The four operation concepts of the iQ LMS Performance torch.

Powermaster-Pro  
with OLED display



- Total control of the remote power source control
- Display of the parameters (current, voltage, etc.)
- Use of the QuickAccess menu
- Suitable for job operation
- No need for a direct view of the operating interface of the welding system
- Workplace LED as standard

Up-Down



- Up-Down function for remote power source control
- Ideal for workplaces with machine operation in view
- Suitable for job operation
- Key design prevents accidental operation of the buttons
- Workplace LED as standard

Top-Button



- Large additional control button for start/stop functions
- Can be optionally used on top and/or below
- The matching button for each welder
- Easy to swap operation concept
- Workplace LED as standard

Standard



- Balanced handling
- Perfect grip by ergonomic grip shell
- Workplace LED as standard

Our new operation concept with innovative quick exchange system offers a customised torch control adjusted to the welder's individual requirements and preferences. For even greater efficiency at the workplace.



**Workplace LED.**  
The ideal solution for dark working environments and limited view at the workpiece.

Our workplace LED lights up the torch tip and the weld seam in the best quality possible. This allows the welder to see clearly what they are doing, warranting precise and safe welding.

The workplace LED ensures a clear view in most demanding working environments such as tank construction.



# The Lorch central connection.

Faster. Better. Easier.

## Smart detail no. 1

Robust wire feed switch: Programmable for forward wire feeding, wire retraction, or gas testing.

## Smart detail no. 2

Direct transition between feed unit and torch: No liner adjustments necessary when changing torches and materials.

## Smart detail no. 3

Electronic locking detection for maximum safety. The machine only welds when safely locked.

## Smart detail no. 4

Full CanBus communication between the torch and welding system. Robust BUS protocol for precise torch operation.

## Smart detail no. 6

One 'click' - ready for use immediately. Easy torch change like a walk in the park, with automatic latching and simple unlatching at the push of a button.

## Smart detail no. 5

Efficient current transfer up to 600 A via large lamella contact for a long service life and reduced energy loss.

# CanBus communication.

Seamless process change in the spotlight.



## PowerMaster-Pro. Ground-breaking torch operation.

Comfortably control all relevant processes and functions of the iQS and adjust them while welding, without any breaks and without putting down the torch. This will result in the best torch operation any Lorch welding system has ever seen.

## Smart torch identification.

Our system allows custom assignment of the torch to each welder via a personal BKC chip. The system will automatically recognise the torch and load the specific settings and programmes. It also records operating and arc times. Maintenance intervals secure the quality of your welding results.

## Bus protocol transfer.

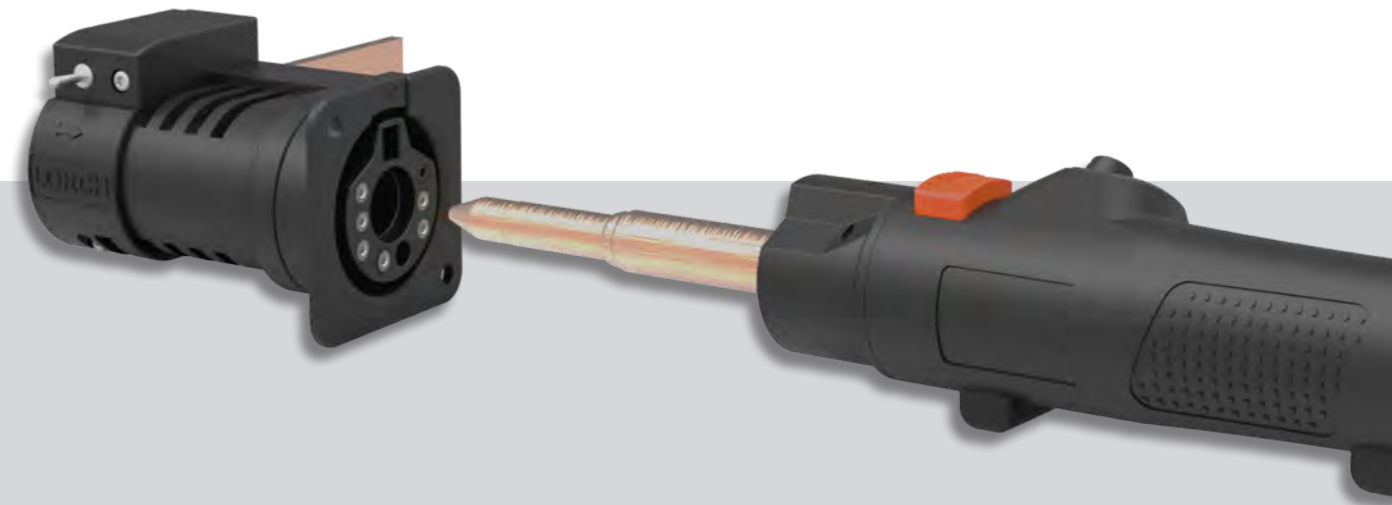
The Lorch central connection allows full CanBus communication to ensure communication without any issues. Coordinated communication between all components results in outstanding welding results.

## QuickAccess menu.

We enable control of the QuickAccess menu directly via the torch. This function is unique for Lorch. This provides unique user friendliness and efficiency for your work processes.

# Power-Pin connection.

Warranting perfect welding results at full power.



## Efficient current transfer.

The Lorch central connection efficiently transfers current with minimal resistance, ensuring constant performance and quality.

## Simple torch change.

Easy torch change thanks to quick-release fastener. Simply plug it in. The torch will latch automatically. Unlatching simply by the push of a button.

## Maximum integration.

Direct transfer between the feed unit and the torch ensures even welding results and always the correct liner distance.

## Customised for your iQS.

The iQ LMS Performance torch is perfectly adjusted to your system and the available welding programmes to achieve optimal results.

## Technical data

Welding range MIG-MAG		iQS 3*	iQS 5*	iQS 8*
Weldable materials		Steel, stainless steel, aluminium		
Welding area	A	25 – 320	25 – 400	25 - 500
Welding area	V	15,2 – 30	15,2 – 34	15,2 - 39
Open circuit voltage	V DC	80	80	80
Current at 60% ED (40 °C)	A	320	400	500
Current at 100 % ED (40 °C)	A	320	320	400
Unit		iQS 3*	iQS 5*	iQS 8*
Mains voltage	V	3~380 - 480	3~380 - 480	3~380 - 480
Mains fuse	A slow-blow	32	32	32
Mains plug		CEE 32	CEE 32	CEE 32
Protection class (EN 60529)		IP23S	IP23S	IP23S
Feed unit	Rolls	4x4	4x4	4x4
Dimensions (L × W × H)	mm	1100 × 508 × 892	1100 × 508 × 892	1100 × 508 × 892

\* Preliminary technical data.

EXCELLENT PERFORMANCE CAN BE SO SIMPLE!  
**START YOUR FUTURE NOW.**

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**LORCH**  
 smart welding