MADE IN GERMANY



LORCH
smart welding

iQS

The new standard in industrial welding.

www.lorch.eu



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 the highest 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 the highest level of performance 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.

What makes your future safe?



Precise welding with
excellent performance levels.



An intuitive operating
concept in perfection.



Wi-Fi on board:
Always remain up to date.



Longest service life for
long-term reliability.

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

Challenges in everyday life.

1

Welding production

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

2

Operation of the welding unit

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

3

Water cooling

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

4

Welding inverters

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



We turn real requirements into real welding performance.

Discover the capabilities of the iQS right on your production line.
Simply scan the QR code and request a free trial now!

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.

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, due to it's immense flexibility and future upgradability, 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.

SpeedWave XT.

The new wave in welding performance.

SpeedWave XT is a waveform-controlled pulsed process for MIG-MAG welding. The weld pool is specifically influenced by oscillating heat inputs whilst the wire feed rate remains constant.
The adjustable wave frequency excites the natural frequencies of the molten metal, improves its degassing and can thus reduce porosity. At the same time, it promotes grain refinement in the solidifying material, thereby reducing the weld's susceptibility to cracking.

The result is high-quality joints with a particularly fine weld scale.

SpeedWave XT has been specially developed for medium- to thick-walled aluminium applications and chromium-nickel steels, and is equally suitable for manual welding tasks and automated manufacturing processes.

Further information on automated cobot welding with iQS.

The advantages of SpeedWave XT.

- **Activated weld pool for reduced porosity:**
  Improved degassing helps to ensure consistently high seam quality.
- **Fine weld appearance and reduced susceptibility to cracking:**
  Targeted frequency modulation promotes grain refinement and high-quality visible welds.
- **Maximum process stability with constant wire feed:**
  Gentle operation, high reproducibility and Optimum control over the weld pool.

Maximum control over the weld pool and significantly improved welding results for demanding aluminium and stainless steel applications under challenging conditions.



This is where SpeedWave XT really comes into its own.

Tank & equipment manufacturing:

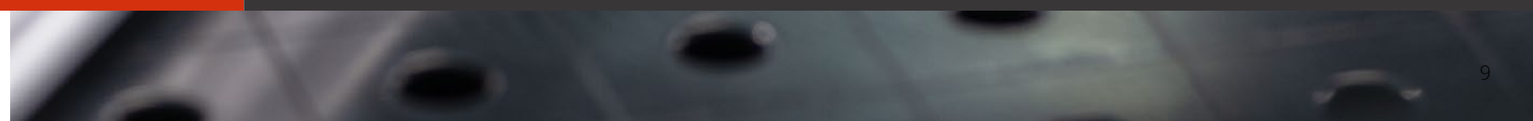
High-quality aluminium and stainless steel joints with stringent requirements regarding seam quality, leak-tightness and appearance

Car & Heavy Vehicle Manufacturing:

Medium- to thick-walled components where strength, process reliability and reproducible results are crucial.

Mechanical & plant engineering:

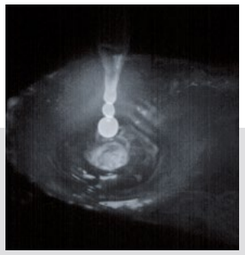
Complex structures where low porosity and reduced susceptibility to cracking are required.



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.



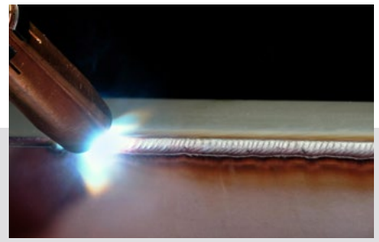
SpeedArc

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



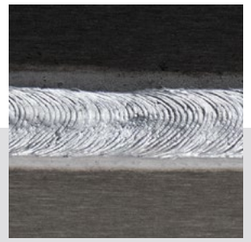
Twin function

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



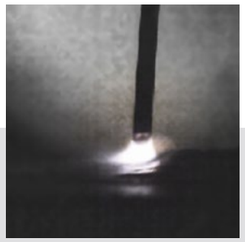
SpeedTwin

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



SpeedWave XT

Specially developed for perfect aluminium seams.



RCS Synergic

Clean weld seams, barely any spatter thanks to the reverse voltage source..

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.

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



SpeedUp

A high in vertical seam welding.



SpeedCold

Icy efficiency in thin-sheet welding.



SpeedRoot

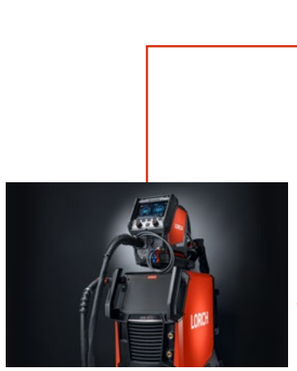
For visibly better quality in MIG-MAG root welding.

The Lorch Speed processes in detail: 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.



Remote display with scanner

Total ease of use, regardless of where the system is located: Whether the case is suspended from the workshop ceiling or the welding machine is out of reach, the mobile input terminal ensures that all Lorch Connect functions remain within easy reach.

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?

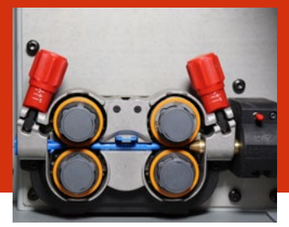
The feeder can be used both as a gas or water version. This is determined by whichever interconnection hose package is connected. Easy to attach and installed with a single click. This makes the conversion between water and gas particularly uncomplicated.

3

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.

Integrated lighting in the wire feed housing.

Changing the wire, carrying out checks in poor lighting conditions costs time and causes frustration. With the lighting in the wire feed housing, everything is immediately visible. This saves time, simplifies the work and keeps the welding process running smoothly. Lights on. Problem solved.

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.

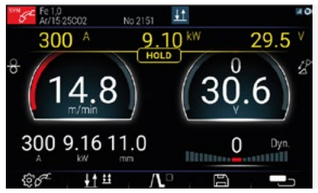
Intuitive. Fast. Precise. Get started with the Smart-Cockpit.

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.



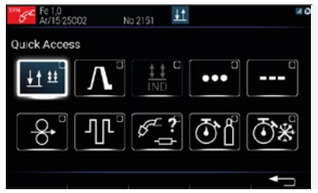
Incorrect settings are prevented.

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-prefered welding values.



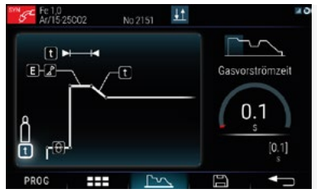
Configurable QuickAccess menu.

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 ist 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 wheels 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.

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 complicated changing of guiding or supporting tubes necessary.

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. 5
Efficient current transfer up to 600 A via large lamella contact for a long service life and reduced energy loss.

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.

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.

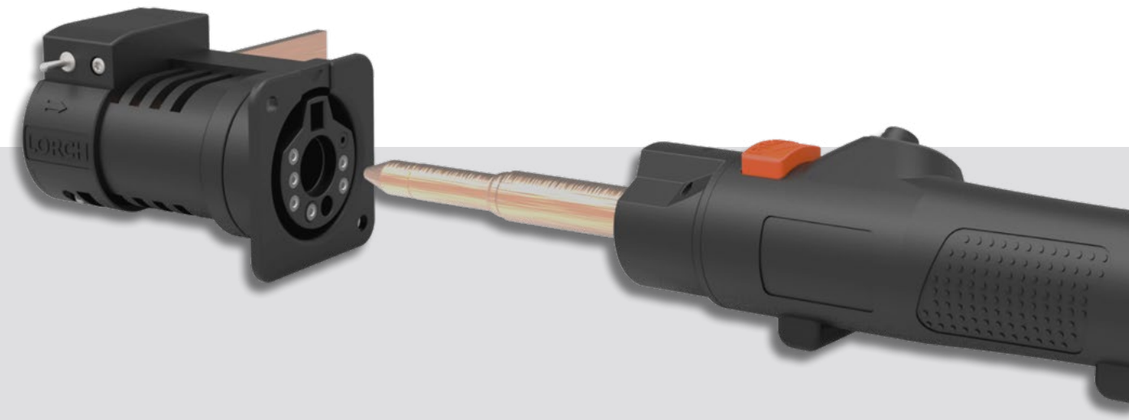
The Lorch central connection allows full CanBus communication to ensure communication without any issues. Coordinated communication between all components results in outstanding welding results.

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.

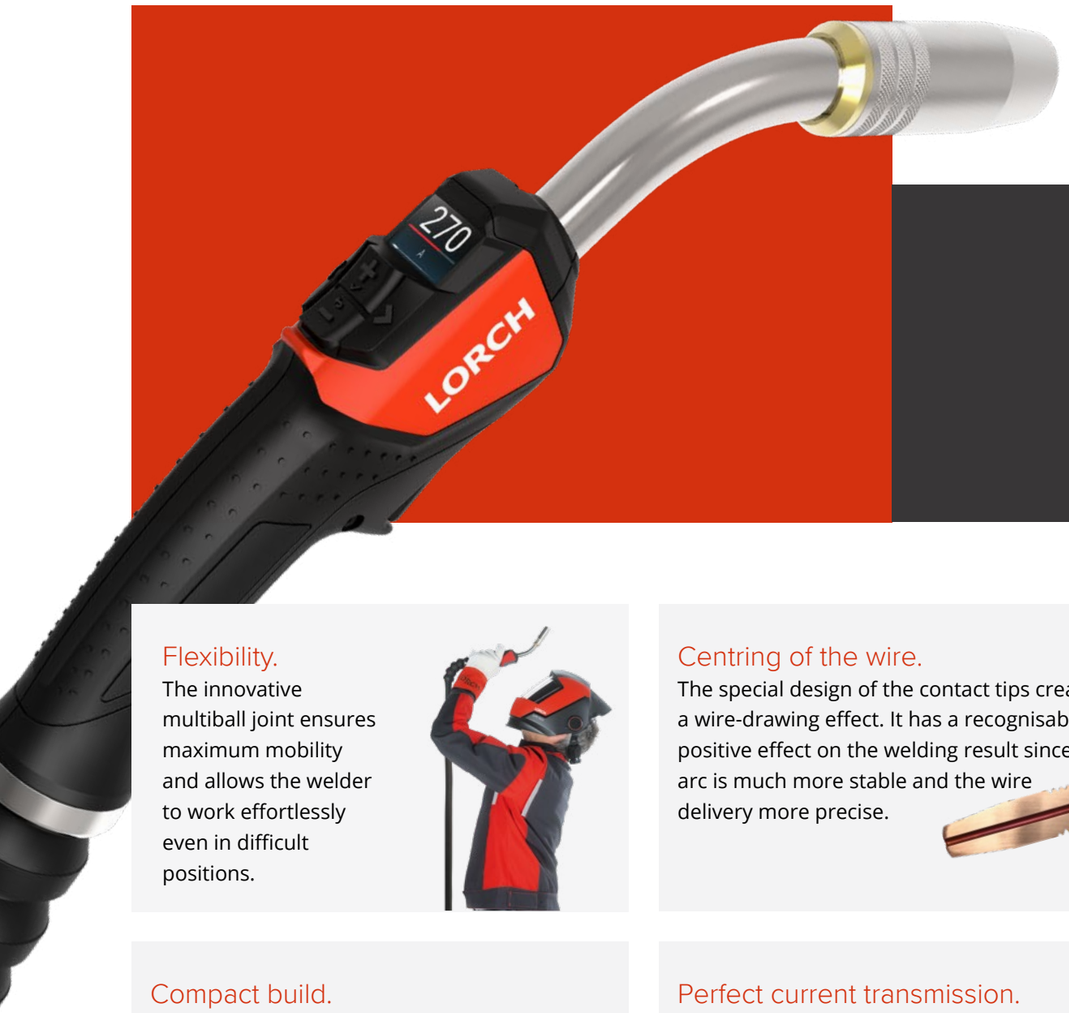
Direct transfer between the feed unit and the torch ensures even welding results and always the correct liner distance.

Customised for your iQS.

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

Ready for the future!

The iQ LMS Performance torch, optimised for the iQS.



Flexibility.

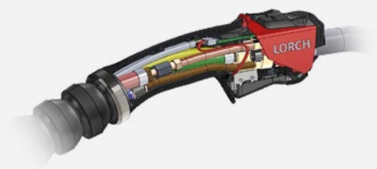
The innovative multiball joint ensures maximum mobility and allows the welder to work effortlessly even in difficult positions.

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.



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
- Dynamics
- Change operating mode
- QuickAccess menu
- Process change

Innovative HMI control.

The four operation concepts of the iQ LMS Performance torch.

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.

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
- Torch button can be used at the top and bottom
- 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



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.

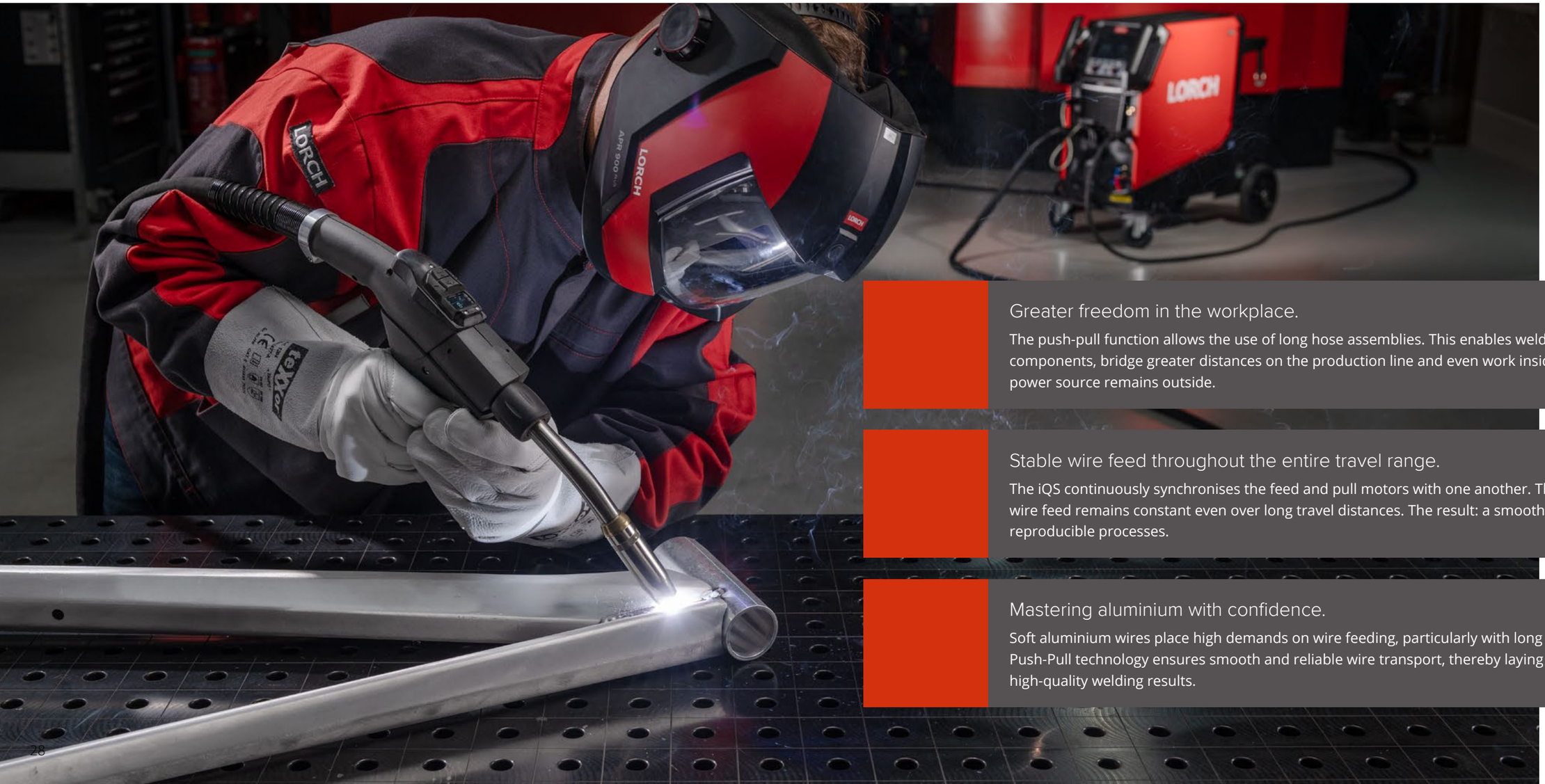


Greater freedom of movement.
The same iQS precision.

The **Push-Pull function** significantly extends the iQS's operating range and combines maximum process stability with maximum reach.

Whether in vehicle, container, rail vehicle or shipbuilding: when large components, extensive production areas or hard-to-reach work sites demand maximum flexibility, the iQS's push-pull function really comes into its own.
Thanks to welding torches with their own pull motor and hose packages up to eight metres in length, the welder gains considerably greater freedom of movement without having to constantly reposition the power source.

On large structures, over long distances or when working inside tanks:
the intelligent synchronisation of the feed and pull motors ensures stable wire feed and a smooth arc at all times. Even demanding applications involving soft materials such as aluminium can be welded reliably and with process consistency over long feed distances.



Greater freedom in the workplace.

The push-pull function allows the use of long hose assemblies. This enables welders to reach large components, bridge greater distances on the production line and even work inside tanks, whilst the power source remains outside.

Stable wire feed throughout the entire travel range.

The iQS continuously synchronises the feed and pull motors with one another. This ensures that wire feed remains constant even over long travel distances. The result: a smooth arc and stable, reproducible processes.

Mastering aluminium with confidence.

Soft aluminium wires place high demands on wire feeding, particularly with long hose bundles. Push-Pull technology ensures smooth and reliable wire transport, thereby laying the foundation for high-quality welding results.

Strong in action. Well organised.

Heavy-duty accessories and helpful extras.

The right chassis for maximum range with the MF-09.

The wire feed case is supplied ex-works with slide rails. If required, a 65 mm wheels or 125 mm heavy-duty chassis kit can be fitted.
Thanks to the sturdy crane sling, the case can be easily manoeuvred to hard-to-reach work areas. The robust tubular frame ensures optimum protection in the demanding day-to-day environment of workshops and building sites.



Heavy-duty chassis kit on 125 mm wheels with tubular frame and crane suspension



Heavy-duty chassis kit on 125 mm wheels



Chassis set on 65 mm wheels



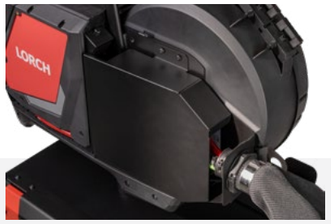
Dust filter and hose cover

A reliable performance for long-lasting, trouble-free use. Dust filters reduce the ingress of dirt, whilst the hose cover prevents damage to the connections caused by knocks or snagging during transport.

Dust filters at the rear and sides of the welding system.



Hose cover for MF-09.





Hose bracket

Hose safely stowed away yet still within easy reach: The bracket keeps things tidy, protects the hose from damage, reduces the risk of tripping and ensures a tidy working environment.

More cooling power. Less maintenance.

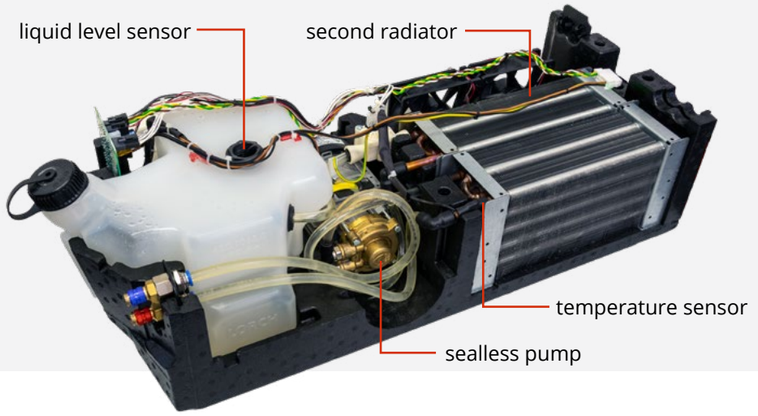
When maximum performance is key: Premium water circulation cooling unit (WUK).

With a cooling capacity of 1.5 kW, low-maintenance pump technology and temperature and liquid level monitoring, the Premium WUK delivers full cooling power even under heavy loads and during long periods of operation.

50% more cooling capacity.



All relevant data relating to the cooling circuit is displayed directly on the iQS screen.



Coolant filter

Traps dirt particles, metal swarf, rust and deposits before they reach sensitive components. It thus ensures clean coolant, consistent cooling performance and significantly extends the service life of your welding system.



Technical data

Welding range MIG-MAG		iQS 3	iQS 5
Weldable materials		Steel, stainless steel, aluminium	
Welding area	A	25 – 320	25 – 400
Welding area	V	15 – 30	15 – 34
Open circuit voltage	V DC	80	80
Current at 60% ED (40 °C)	A	320	400
Current at 100 % ED (40 °C)	A	220	300
Unit		**iQS 3**	**iQS 5**
Mains voltage	V	3~380 - 480	3~380 - 480
Mains fuse	A slow-blow	32	32
Mains plug		CEE 32	CEE 32
Protection class (EN 60529)		IP23S	IP23S
Feed unit	Rolls	4x4	4x4
Dimensions (L × W × H)	mm	1090 × 508 × 892	1090 × 508 × 892

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

Your contact:

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