

Ready-to-Robot

The MIG-MAG robot power sources
from Lorch



LORCH

Boost your welding productivity.

The **Ready-to-Robot systems** by Lorch ensure maximum flexibility for robot welding.

Your Choice, Best Solution.

Welding robots deliver valuable services in various industries and across a large variety of applications – especially during large-scale production. However, they also open new avenues for small and medium-size businesses. A robot operates precisely and, if correctly integrated, can also be used in a particularly flexible manner when production conditions change. What is more, its operation does not require a large amount of manpower. This allows you to improve the competitiveness of your own business. Lorch came up with the Ready-to-Robot approach in order to make it a cinch to get started.

Robots from well-known manufacturers such as **ABB, Fanuc, Kuka or Motoman** can easily be used with Lorch welding machines as well as **with any other robot system**, in principle. Small and medium-sized businesses, in particular, have the flexibility to choose from a variety of standard products. The philosophy: The sum of the products and services of the specialists for robotics, power source and torch, results in optimum welding results. Provided they are optimally integrated and highly compatible. That is the objective of Ready-to-Robot. The outcome is flexibility of the highest degree. This is because the Ready-to-Robot technology bundle provides for a seamless cooperation between top-notch components from torch to wire supply as well as their swift integration into a robotic solution.

**Robotic automation made easy,
thanks to welding technology
made by Lorch.**



KUKA



FANUC



ABB



YASKAWA
MOTOMAN



Further robot systems on request.

RF-06

Compact feeder case for hollow wrist robots and standard robots with external hose package.



LorchNet Connector

Bus coupling system supporting all common protocols – from CANopen via DeviceNet to ProfiNet.

S-RoboMIG

High-performance robot power sources driven by SaproM inverter technology.



S-RoboMIG – guaranteed future-proof.

Our innovative **upgrade concept** keeps the systems up to date and **upgradeable at any time.**



Operating option

Customised selection of the operating option. At the power source, as a remote control operating panel or both if necessary.

Lorch's robot power sources offer a decisive advantage over other products: they grow with "your" challenges. You pick the system you currently require to perform your welding tasks in an automated fashion. Each Lorch S-RoboMig is tailored to fit your requirements before it leaves our plant in Auenwald. No matter if you decide to

purchase the most basic version, the synergic, or the pulse version, you can rest assured that you will be able to upgrade your system at a later point in time should the need arise, e.g. because a specific welding operation requires the application of the pulse process or you want to increase the productivity of your system by adding Lorch Speed processes. Our innovative S-RoboMIG upgrade concept makes it possible.



3. SpeedPulse upgrade

When utilising Lorch SpeedPulse, you are combining the speed advantages offered by MIG-MAG spray arc welding with the seam quality guaranteed by pulse technology.

2. Pulse upgrade

Flawless seams and splatter-free welding are the benefits when the pulse technology is applied during MIG-MAG welding.

1. Synergic upgrade

Operating based on the MIG-MAG welding programs for different material/wires/gas combinations, the synergic machine makes set-up a breeze as a large number of parameters are set automatically.

Technical data

S3 RoboMIG

Welding range	25 - 320 A
Duty cycle 100 % (40 °C)	250 A
Duty cycle 60 % (40 °C)	280 A
Duty cycle I _{max} (40 °C)	40 %

S5 RoboMIG

Welding range	25 - 400 A
Duty cycle 100 % (40 °C)	320 A
Duty cycle 60 % (40 °C)	350 A
Duty cycle I _{max} (40 °C)	50 %

S8 RoboMIG

Welding range	25 - 500 A
Duty cycle 100 % (40 °C)	400 A
Duty cycle 60 % (40 °C)	500 A
Duty cycle I _{max} (40 °C)	60 %



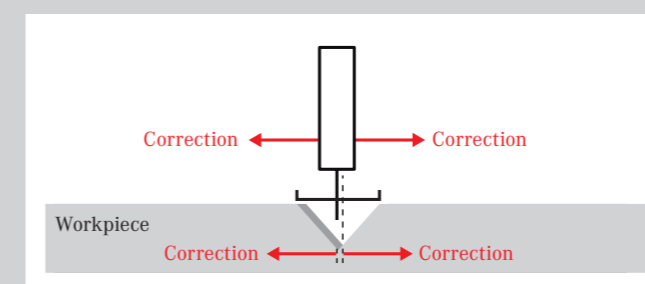
Lorch S-RoboMIG

SeamTracking

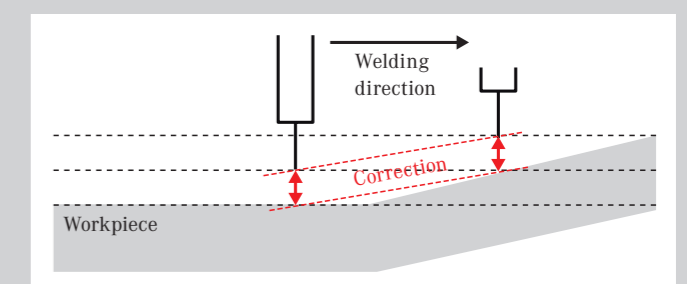
Workpiece tolerances, shape imperfections and varying fixtures are obstacles to achieve a satisfying weld as they make maintaining a uniform seam quality and reproducibility during automatic welding extra difficult. The larger the workpiece and the longer the weld seam, the more often problems occur. You will then find that a fully programmed welding line will not produce the intended results in this case. The problem calls for corrections while the welding process is ongoing: seam tracking comes to mind. However, where will the robot obtain the information telling it how to change course. Costly, visual control systems are one way to effect the necessary

corrections, the other is evaluating the welding parameters. And, no component knows the parameters better than the power source. The high-end control technology built into Lorch's S-RoboMIG uses a vast number of information to calculate in real time a signal that can be evaluated by the robot control. The procedure applies both to standard and pulsed arc processes. This seam detection and tracking function enables the robot to constantly adjust the guidance of the torch and adapt it automatically to the actual condition of the workpiece. The generated signal can be used to adjust the guidance of the torch both in the vertical and the horizontal direction.

Horizontal tracking



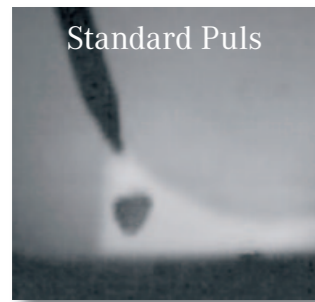
Vertical tracking



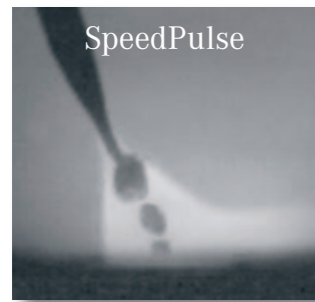
Higher Speed and Return on Investment.

Lorch's innovative **MIG-MAG processes** will speed up your production.

Steel is now pulsed -
up to 48% faster.



Standard Puls

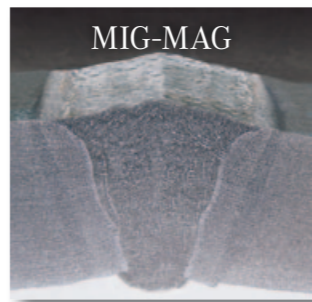


SpeedPulse

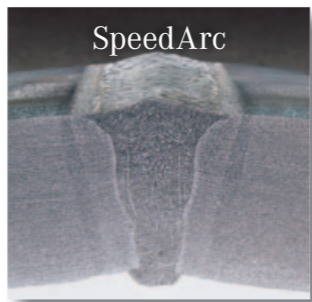
LORCH SpeedPulse®

Up to 48% faster.

For many more metres
of weld seam every day.



MIG-MAG



SpeedArc

LORCH SpeedArc®

Up to 30% faster.

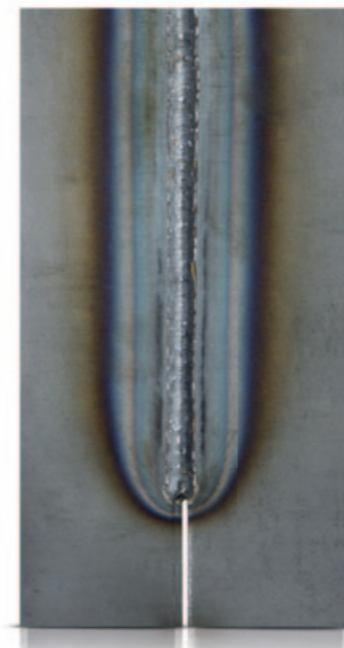
Vertical-up arc welding?
Was difficult in the past.



LORCH SpeedUp®

Also suitable for 360°
welding operations.

MIG instead of TIG
for root welds.



LORCH SpeedRoot®

3 times faster than TIG.

Standard
short arc.



LORCH SpeedCold®

For highly productive
thin sheet welding.

SpeedCold.



Additional information:
www.masters-of-speed.de

Retrofittable at any time!

SpeedPulse® with Master upgrade SpeedArc® for Synergic version or greater SpeedUp® SpeedCold® SpeedRoot®

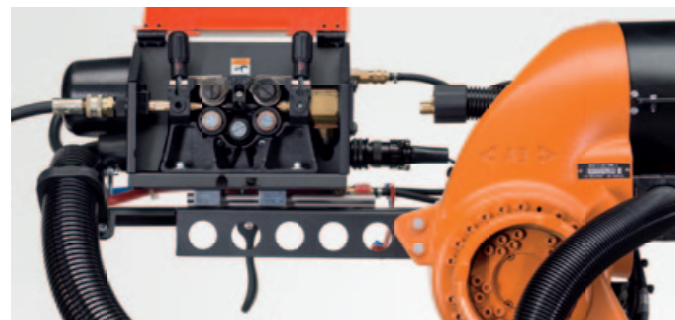




Design meets functionality.

Really powerful. Compact wire feeder for standard and hollow wrist robots.

The requirements on a wire feeder case used in combination with robots are clearly defined: it needs to be compact, lightweight, yet powerful and, of course, perfectly insulated to reliably protect the electronic system of the robot. The RF-06 satisfies all of these requirements and is optimised for robotic applications in more than one regard. When developing this feeder case, we, once again, attached great importance to the aspect of versatility. Our efforts produced a feeder case that is suitable both for hollow wrist robots and standard robots (with an external torch hose package) as well as for gas-cooled and water-cooled operation. The water hoses of the intermediate hose package used by the S-RoboMIG are designed in such a way that they can easily be adapted at the underbody of the RF-06. Design and functionality that show well-thought-out engineering in every detail. Take, for instance, the sliding system of the RF-06, which makes servicing the torch on hollow wrist robots much more convenient as it creates more space for you to change the liner. This innovation makes the time-consuming need to dismantle the case for maintenance purposes a thing of the past.



Innovative sliding system in action: Work and maintenance position of the RF-06

Technical data

RF-06	
Engine power	100 W
Feeder speed	0,1 - 25 m/min
Rolls ø	30 mm
Weight	7,2 kg
PushPull	optional



Optional **tension lever cover**, can be retracted at any time, for use as adjustment lock or dust cover (e.g. while welding oily sheets that develop a great deal of smoke).



Elaborate **bottom design** including **isolating bottom plate**, duct for water lines and attachment option for the various robot adapter plates.



Optimised connection functionality for torch control cable, central torch connection, and compressed air as well as switches for testing the gas and threading the wire (forward and reverse).



RF-06



4-roll precision wire feeder including sturdy, weight-optimised feed plate made of glass-fibre reinforced plastic.



Optimised connection functionality for control line, gas, compressed air, wire feeder and welding current (secure eyelet connection).



Lorch RoboFeeder

Interfaces – that make things work.

The **bus coupling system** that supports all common protocols – from CANopen to ProfiNET.



The LorchNet Connector is responsible for establishing a perfect connection between the S-RoboMIG power source and the robot control. Effectively acting as an interpreter, the connector translates all signals and information of the internal LorchNet bus system into a language the robot can understand. This means that it converts the signals into one of the common field bus or industrial Ethernet protocols – from CANopen to DeviceNet and Ethernet/IP to ProfiNet. The bus system also allows for the communication of all signals relevant to the control of the torch – blow-out function, anti-collision device and contact sensor. Its design makes it possible for you to integrate the S-RoboMIG into various different automation environments in a straightforward and flexible manner. What is more, the purely digital interface technology incorporated into LorchNet lets you connect the welding documentation system Lorch Q-Data or the welding data monitoring system Lorch Q-Sys by “plug and play”. You can use the operating panel of the power source, which also supplies the bus coupler with power, to control and configure the LorchNet Connector. Arranged externally at the rear of the power source housing, the LorchNet Connector can be switched to a different protocol swiftly and without big effort whenever the need arises. Another area in which Ready-to-Robot offers performance that is second to none is versatility as it allows companies, for instance, to use Lorch’s high-performance welding systems of the S-RoboMIG series across all of their systems and, thereby, employ welding processes that increase their productivity despite the fact that they rely on different robotic systems for their production needs.



Protected installation of the LorchNet Connector at the rear of the power source housing found of the S-RoboMIG or other industrial welding systems made by Lorch.



Available as an alternative: Analogue-digital interface INT-06 for integration into a switch cabinet or use inside the power source via a 42-pin Harting connector.



LorchNet Connector

Lorch Ready-to-Robot.
Boost your welding productivity.

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