

The S SpeedPulse XT series
Industry 4.0 Ready with Lorch Connect

MASTER OF THE PULSE ARC.



True Lorch.



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LORCH
smart welding

The S SpeedPulse XT series at a glance

MADE IN GERMANY



UNIQUE S SpeedPulse XT Series Advanced Pulse Welding Systems for HIGH PRODUCTIVITY manual and automated welding. Unparalleled best in class performance THROUGH THICK AND THIN.

Now standard with Industry 4.0 connectivity and big data management with Lorch Connect.



- **Industry 4.0 Connectivity** via a **Lorch Connect Gateway** to a cloud server unleashing a host of new digital management tools to optimise your welding processes, driving productivity, costing accuracy, quality and production efficiency.
- **Pulse at its Best.** Highly developed microprocessor technology providing seamless control of the entire welding process resulting in superior weld quality, duty cycles and productivity.
- **Advanced High-Speed Welding.** Intelligent - digital microprocess control to a new level optimizing the arc characteristics and delivering superior quality at faster welding speeds, achieving real productivity gains.
- **Latest Generation III technology** providing new advanced "Speed" processes as standard (SpeedPulse XT, SpeedArc XT). Additionally there are optional upgrades SpeedUp, SpeedCold and SpeedRoot for specialty applications.
- **Energy-efficient.** Marries power with efficient inverter technology and on-demand functionality reducing power costs.
- **Fully Customisable.** Every machine is fully customisable, allowing you to optimize a complete welding system that truly matches your welding requirements perfectly.



Advanced Features

- **Tiptronic Job Memory.** Use the Tiptronic function to save your optimum welding parameters for 100 jobs then effortlessly retrieve at the machine or with a Smart Powermaster control MIG gun.
- **Job Tool.** Windows, PC software for saving and editing welding procedures and communicating between machine and PC.
- **Remote Control.** Every system can be operated by remote control. Remote control can be exercised either using the Lorch Powermaster gun or an external operating panel.
- **PushPull.** Analogue or digital PushPull capability allows you to expand your working distance and deliver consistent trouble free wire feeding of softer aluminium wires.
- **Ultra Length PushPull.** The slim, in line Nano Feeder solution to extend the machine to MIG gun length up to 50 metres.

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

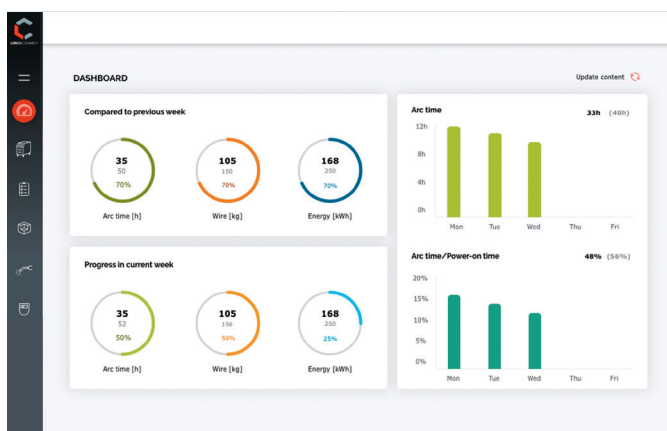
Everyone talks about Industry 4.0 and digitisation. Production becoming smarter. Processes monitored, documented and visualised in real time. The reason is simple: Embedded in this data is untapped potential for process optimisation to drive cost and efficiency improvements. Lorch is now taking the next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

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

How it works:



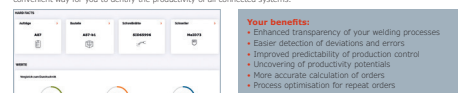
The simple high-level summary dashboard of all connected systems.



The drill down capability into detailed individual system data.

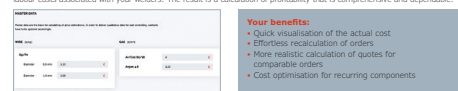
Online monitoring: Performance in numbers.

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



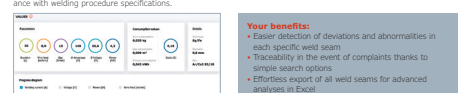
Cost controlling: Paying off in the end.

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



Documentation: all essential data in one location.

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



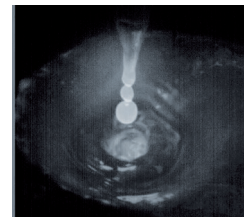
Advanced High Speed Welding with S Series

Lorch Speed Processes at a glance

SpeedPulse XT

- Extremely fast, Speed... up to 48% faster than standard pulse
- Patented, triple droplet pulsed liquid flow
- Lower heat input with reduced distortion
- Superior, deeper penetration
- Metallurgically superior weld deposit
- 10DB quieter arc

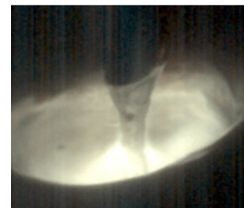
The New Perfect Pulse



SpeedArc XT

- Fast, Speed... up to 30% faster than conventional MIG
- Extreme highly focused Arc, higher energy density
- Higher arc pressure into the weld pool
- Deep penetration
- Metallurgically superior weld deposit

Deeply Impressive



TwinPuls XT

- TIG Like appearance on Aluminium and Stainless Steels
- Speed, up to 7 times faster than TIG process
- Low heat input to minimize distortion

TIG Like Appearance



SpeedUp

- Fast, Speed... over 50% faster than manual vertical
- Superior throat thickness and edge wetting
- Superior root penetration
- Simplified user operation

Vertical Up Perfectly



SpeedRoot

- Calm, very well controlled process
- Open gap root pass and thin material applications
- Replacement for TIG in selected applications

Root Pass Perfectly



SpeedCold

- Fast welding of sheet metal
- Typically, automated applications
- Modified arc to minimize heat input and reduce distortion

High Speed Sheet Metal Welding



Systems

S3 Mobile

- Unique portable, Integrated system
- Standard with Advanced high-speed processes Speed Arc XT, Speed Pulse XT
- 320 Amp Output
- The proven Pulse Solution for light to medium fabrication of steel, stainless steel and aluminium



S5

- Compact or Remote systems
- Air or water cooled
- Standard with Advanced high-speed processes Speed Arc XT and Speed Pulse XT
- 400 Amp Output
- The proven Pulse Solution for medium fabrication of steel, stainless steel and aluminium



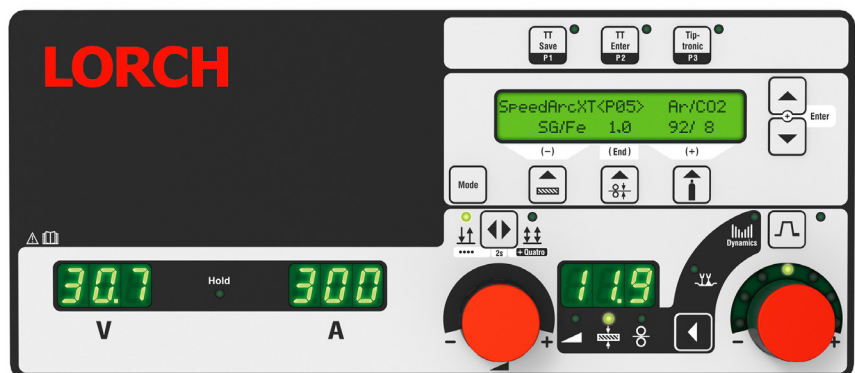
S8

- Compact or Remote systems
- Air or water cooled
- Standard with Advanced high-speed processes Speed Arc XT and Speed Pulse XT
- 500 Amp Output
- The proven Pulse Solution for medium to heavy fabrication of steel, stainless steel and aluminium



Operating System

- Software loaded with South Pacific optimised wire gas combinations to deliver perfect welding performance
- Simple user interface, three steps to welding
- Smart, synergic one knob control
- Three ways to operate:
By output, by wire feed speed or simply dial up the material thickness you intend to weld and the system will pre-select the optimum welding parameters for you.
- Arc length and Arc Dynamic adjustments
- Tiptronic Job memory for up to 100 Jobs
- Remote control possible via Lorch PowerMaster guns



Customise your perfect system solution

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

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 25m 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
- also suitable for use with Powermaster torches



How far would you like to go – with your MIG-MAG torch?



Power Source

up to
20m



Feeder

up to
25m



NanoFeeder

up to
5m



Torch

Technical data

		NanoFeeder	NanoFeeder
Cooling		Water	Gas
Load 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

Versions

		S3 mobile	S3	S5	S8
Welding range	A	25-320	25 – 320	25 – 400	25 – 500
Voltage adjustment		infinitely variable	infinitely variable	infinitely variable	infinitely variable
Mains connection 3~400 V		●	●	●	●
Operating concept					
XT		●	●	●	●
XT-Full process		●	●	●	●
Welding process variants					
S-SpeedPulse XT		●	●	●	●
Cooling variants					
Gas		●	●	●	●
Water		●*	●	●	●
Machine variants					
Mobile system with trolley wheelset		●	–	–	–
Compact system		–	●	●	●
Wire feeder system		–	●	●	●

* with Mobile-Car transport trolley and separate water cooling unit ● Configuration options ● Standard equipment ○ Optionally available

Specifications

		S3 mobile	S3	S5	S8
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 [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 1m inter-connection hose package; additional lengths and options upon request.

The MIG-MAG gun series at a glance

- Full line of MIG Gun options, air or water cooled up to 550A.
- “Binzel” style front end consumables.
- Standard operation or Smart, Powermaster control.
- Heavy duty construction, which includes bolted, impact-resistant handle recesses, a hard-wearing torch push button and an elastic rubber cable support at the ball joint, provides for a long service life of the torch.
- Ergonomically shaped handle recess provides for first-rate handling and balance in any position. The soft-grip insert guarantees operating comfort at the highest level to ensure that you will not tire when welding for extended periods.
- Using the Tiptronic function, you simply save the optimum welding parameters to job memory then retrieve as needed with the Powermaster control gun.

Standard Guns

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



Smart Powermaster Guns

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



Push Pull Standard & Smart

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



Versions

		ML 1500	ML 2500	ML 2400	ML 3600	ML 3800	ML 4500
Welding range up to	A	180	230	250	300	320	370
Operating concepts							
Standard		●	●	●	●	●	●
Powermaster		●	–	●	●	●	●
Cooling							
Gas		●	●	●	●	●	●

		ML 5300	ML 5400	ML 5500	ML 5900	ML 7300	ML 7500
Welding range up to	A	300	400	500	550	300	500
Interchangeable torch neck rotates 360°, allowing for a quick and easy exchange without tools		–	–	–	–	●	●
Operating concepts							
Standard		●	●	●	●	–	–
Powermaster		●	–	●	●	●	●
Cooling							
Water		●	●	●	●	●	●

● Standard equipment

Technical data

		ML 1500	ML 2500	ML 2400	ML 3600	ML 3800	ML 4500
Type of cooling		Gas	Gas	Gas	Gas	Gas	Gas
Load CO ₂ mixed gas	A	180 150	230 200	250 220	300 270	320 270	370 300
Duty cycle	%	60	60	60	60	60	60
Wire Ø	mm	0.6-1.0	0.8-1.2	0.8-1.2	0.8-1.2	0.8-1.6	1.0-1.6
Handle recesses		1 2 (PM)	1	1 2 (PM)	1 2 (PM)	1 2 (PM)	1 2 (PM)
Hose package lengths	m	3 4	3 4 5	3 4 5	3 4 5	3 4 5	3 4

		ML 5300	ML 5400	ML 5500	ML 5900	ML 7300	ML 7500
Type of cooling		Water	Water	Water	Water	Water	Water
Load CO ₂ mixed gas	A	300 270	400 350	500 450	550 500	300 270	500 450
Duty cycle	%	100	100	100	100	100	100
Wire Ø	mm	0.8-1.2	0.8-1.2	0.8-1.6	0.8-2.4	0.8-1.2	0.8-1.6
Handle recesses		1 2 (PM)	1 2 (PM)	1 2 (PM)	2	WH	WH
Hose package lengths	m	3 4 5	3 4 5	3 4 5	3 4 5	4	4

● Standard equipment

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 CO2 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	08-1.6	0.8-1.6
Version						
Powermaster		● / ○	● / ○	● / ○	● / ○	● / ○
Gun handle		● *	●	● *	● *	●
Standard motor		–	●	–	–	●
Maxon motor		●	–	●	●	●
Hose package lengths	m	8**	8**	8**	8**	8**
*Gun handle can be removed ** additional hose package lengths available on request ● Standard equipment ○ Optionally available						

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