



# MASTER OF THE PULSE ARC.

The S SpeedPulse XT Series  
Industry 4.0 Ready with Lorch Connect



MADE IN GERMANY

**LORCH**  
smart welding

# The S SpeedPulse XT series at a glance

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.



MADE IN GERMANY

**3** YEARS INDUSTRIAL WARRANTY  
LORCH  
Conditions apply

LORCH  
MICROBOOST  
TECHNOLOGY

LORCH CONNECT

# 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.

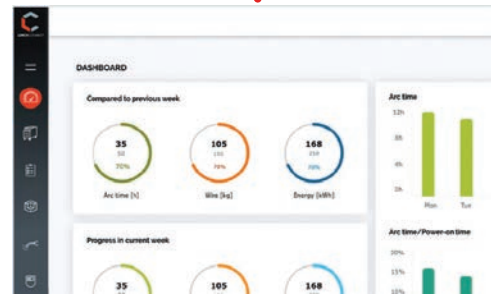
Lorch is now taking the next step to connect our already digitalised welding systems in a simple and cost-effective way and create an immediate user benefit.

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

## How it works:



weld



see clearly

connect

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.



- Your benefits:**
- Enhanced transparency of your welding processes
  - Easier detection of deviations and errors
  - Improved predictability of production control
  - Uncovering of productivity potentials
  - More accurate calculation of orders
  - Process optimisation for repeat orders

### 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.



- Your benefits:**
- Quick visualisation of the actual cost
  - Effortless recalculation of orders
  - More realistic calculation of quotes for comparable orders
  - Cost optimisation for recurring components

### 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 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.



- Your benefits:**
- Easier detection of deviations and abnormalities in each specific weld seam
  - Traceability in the event of complaints thanks to simple search options
  - Effortless export of all weld seams for advanced analyses in Excel

Lorch Connect Gateway is fully Australia and New Zealand compliant and meets all relevant National and State level regulations: AS/NZS 3820:2020; AS/NZS 2772.2:2016 AMD 1:2018(\*3); AS/NZS 62368.1:2018.

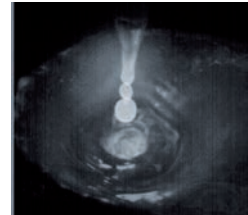
# Advanced High Speed Welding with S Series

## 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

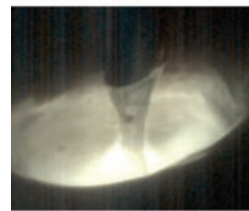


---

### 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



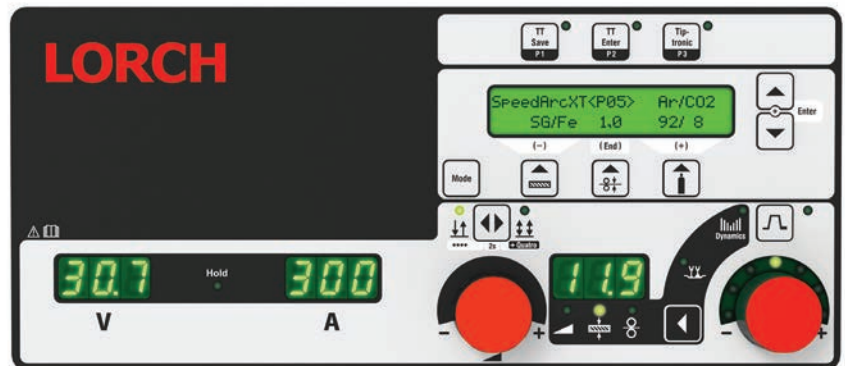
## S8

- 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



MF-10 wire feeder

## 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 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 MF-10.

The full-protection, ultra-compact wire feeder. Light and highly portable.

### Light and compact pays off.

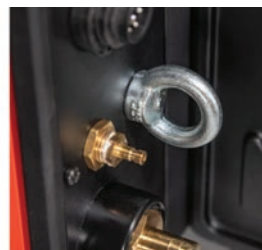
- **Compact design.** Ideally suited for tight places and access through small manholes.
- **Ultra light.** Highly portable with its low weight of only 10.3 kilograms.
- **Fully insulated.** Designed to work sitting directly on conductible materials.
- **Quick disconnect fittings.** Heavy-duty cable harness assembly and strain relief on rear to lower feeders by the cable.
- **Easy to move.** Large carry handle with optimum centre of gravity for easy handling.
- **4 roll drive system.** Heavy duty 4 roll drive system with 200mm diameter wire spools inside LED illuminated case.



### Highlights



MF-10 rear view: Quick disconnect design.



Quick disconnect fittings and heavy-duty cable harness assembly with strain relief built in.



Heavy duty 4 roll drive system plus LED lighting.



Light weight and easy to carry.

## 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		●	●	●	●
<b>Operating concept</b>					
XT		●	●	●	●
XT-Full process		●	●	●	●
<b>Welding process variants</b>					
S-SpeedPulse XT		●	●	●	●
<b>Cooling variants</b>					
Gas		●	●	●	●
Water		●*	●	●	●
<b>Machine variants</b>					
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 & 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
<b>Operating concepts</b>							
Standard		●	●	●	●	●	●
Powermaster		●	–	●	●	●	●
<b>Cooling</b>							
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 & easy exchange without tools		–	–	–	–	●	●
<b>Operating concepts</b>							
Standard		●	●	●	●	–	–
Powermaster		●	–	●	●	●	●
<b>Cooling</b>							
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 <sub>2</sub>   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 <sub>2</sub>   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

		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 <sub>2</sub>   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
<b>Version</b>						
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



**Lorch South Pacific Pty Ltd**

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

A subsidiary of  
Lorch Schweißtechnik GmbH  
Im Anwänder 24-26 • 71549 Auenwald • Germany  
T +49 7191 503-0 • F +49 7191 503-199  
[info@lorch.eu](mailto:info@lorch.eu) • [www.lorch.eu](http://www.lorch.eu)

**LORCH**  
smart welding