


The S SpeedPulse XT series

# MASTER OF THE PULSE ARC.



## 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.**

**3** YEARS INDUSTRIAL WARRANTY  
LORCH  
Conditions apply

LORCH  
**MICORBOOST**  
TECHNOLOGY

- **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.

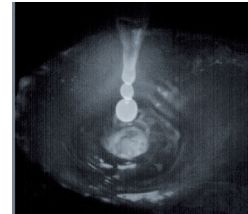
## Advanced High Speed Welding with S Series

### 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

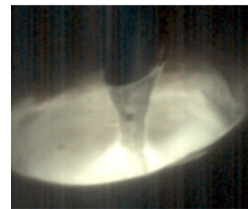
#### The New Perfect Pulse



#### 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

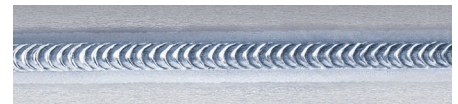
#### Deeply Impressive



#### 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



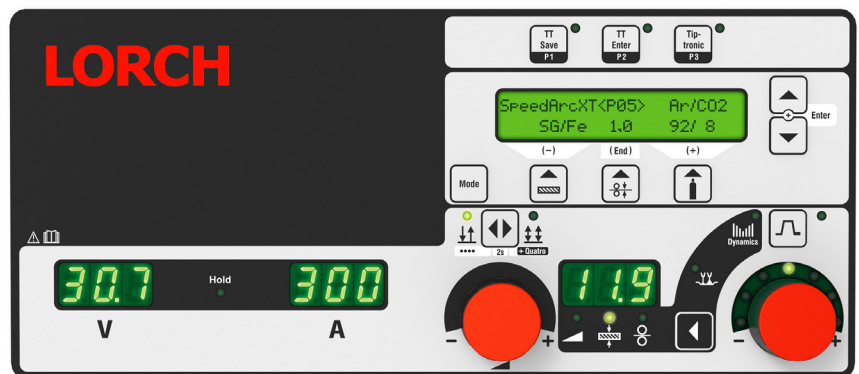
### S8

- 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?



## Technical data

		NanoFeeder	NanoFeeder
Cooling		Water	Gas
Load CO <sub>2</sub>   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		●	●	●	●
<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 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
<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 and 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

## 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 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	08-1.6	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						



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