

**The digital TIG inverter welding system.**

- TipTronic
- Powerful
- pulse and fast pulse up to 20 kHz
- LorchNet connection
- Low energy consumption



## At a glance

**Outstanding TIG welding characteristics thanks to inverter technology**

Distinguished by their high efficiency and superb welding characteristics, inverters utilise digital software control technology that has a significant influence on the outcome of the welding process.

**In a robust, completely transportable industrial housing**

The tough metal housing safely protects the high-end technological innards of your system. Completely transportable at the handles, the machine is also suitable for crane transport.

**Remote control**

Welders often experience that the conditions on site do not allow them to place their welding machine right beside them. When faced with this type of situation, they find the use of a remote control helpful as it allows them to intervene and adjust the welding current if necessary. This is why Lorch has included a large variety of different hand and foot remote controls in their V series, which are ready for use right away thanks to their plug&play support.

**LorchNET connection**

All machines of Lorch's V series come with a LorchNet connection. This digital data interface provides standardised communication and ensures that all components located in a Lorch automation system understand each other perfectly thanks to Plug&Weld technology.

**Aluminium welding (AC/DC variant)**

Positive polarity ignition and automatic cap shape produce a perfectly shaped arc during aluminium welding. The special amplitude of the alternating current combined with an optimised current balance yields an excellent cleaning effect and a manageable weld pool.

**Powerful**

Working in the background, cutting-edge processor technology ensures that the gas pre-flow, the shaping of the arc and

the control of the welding current work together seamlessly during welding. The result of this smooth interaction are superior duty cycle levels and increased productivity.

## Benefits

### **The SmartBase expert database provides for optimum arc conditions**

SmartBase is the name of the expert database devised by Lorch to control the arc. This database lets you adjust the parameter settings yourself, giving you the freedom you need to tweak and correct even the finest details of the process you are applying.

### **Low energy consumption**

The included on-demand function automatically turns the components of your Lorch V 27 on and off as needed, while the thermal control sensors monitor the temperature of the components and regulate the speed of the fan accordingly. This smart technology reduces fan noise and dust levels in the machine compartment and helps conserve energy.

### **Pulse and fast pulse up to 20 kHz**

The standard pulse function with up to 20 kHz that is built into every machine offers you additional benefits when welding thin plates.

### **Plain text display with language selection and TipTronic**

Thanks to the clearly structured user interface and the slanted operating panel, the device control remains well visible throughout operation and affords the user an ergonomic operating position. You select the AC or DC function, the electrode diameter and the welding current based on the machine you are using. When working in TipTronic mode, you can then save your ideal setting for each weld.

### **Automatic final current reduction**

Lorch's automatic final current reduction produces perfectly clean weld ends by filling the end crater.

## Controlconcept

### **V-Serie Standard**

- "3 steps to weld" operating concept
- Infinitely variable current setting
- Can be operated by remote control
- TipTronic



**Technical Data: V series**

|  | <b>V 24</b>         | <b>V 24 mobile</b>  | <b>V 27</b>         | <b>V 30</b>         | <b>V 30 mobile</b>  | <b>V 40</b>         | <b>V 50</b>         |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <b>TIG</b>                                 |                     |                     |                     |                     |                     |                     |                     |
| welding range (in Amps)                    | 3-240               | 3-240               | 3-270               | 3-300               | 3-300               | 3-400               | 3-500               |
| current setting                            | infinitely variable | infinitely variable | infinitely variable | infinitely variable | infinitely variable | infinitely variable | infinitely variable |
| <b>Electrode</b>                           |                     |                     |                     |                     |                     |                     |                     |
| weldable electrodes (mm)                   | 1,5-4,0             | 1,5-4,0             | 1,5-4,0             | 1,5-6,0             | 1,5-6,0             | 1,5-6,0             | 1,5-6,0             |
| <b>Duty cycle TIG DC</b>                   |                     |                     |                     |                     |                     |                     |                     |
| duty cycle 100% (in Amps) - DC             | 220                 | 220                 | 250                 | 250                 | 270                 | 360                 | 380                 |
| duty cycle 60% (in Amps) - DC              | 240                 | 240                 | 270                 | 300                 | 300                 | 400                 | 500                 |
| duty cycle at max. current (in %) - DC     | 60%                 | 60%                 | 60%                 | 60%                 | 60%                 | 60%                 | 60%                 |
| <b>Duty cycle TIG AC (only AC systems)</b> |                     |                     |                     |                     |                     |                     |                     |
| duty cycle 100% (in Amps) - AC             | 210                 | 190                 | 250                 | 250                 | 240                 | 360                 | 380                 |
| duty cycle 60% (in Amps) - AC              | 230                 | 220                 | 270                 | 300                 | 280                 | 400                 | 500                 |
| duty cycle at max. current (in %) - AC     | 50%                 | 50%                 | 60%                 | 60%                 | 50%                 | 60%                 | 60%                 |
| <b>Mains</b>                               |                     |                     |                     |                     |                     |                     |                     |
| mains voltage (in V)                       | 400                 | 400                 | 400                 | 400                 | 400                 | 400                 | 400                 |
| phases (50/60 Hz)                          | 3~                  | 3~                  | 3~                  | 3~                  | 3~                  | 3~                  | 3~                  |
| positive mains tolerance (in %)            | 15%                 | 15%                 | 15%                 | 15%                 | 15%                 | 15%                 | 15%                 |
| negative mains tolerance (in %)            | 15%                 | 15%                 | 15%                 | 15%                 | 15%                 | 15%                 | 15%                 |

|                      |        |        |        |        |        |        |        |
|----------------------|--------|--------|--------|--------|--------|--------|--------|
| mains fuse (in Amps) | 16     | 16     | 16     | 32     | 16     | 32     | 32     |
| mains plug           | CEE 16 | CEE 16 | CEE 16 | CEE 32 | CEE 16 | CEE 32 | CEE 32 |

Dimensions and weights

|  |              |             |              |              |             |              |              |
|--|--------------|-------------|--------------|--------------|-------------|--------------|--------------|
| dimensions (LxWxH) (in mm)             | 1130x450x815 | 812x283x518 | 1130x450x815 | 1130x450x815 | 812x283x518 | 1130x450x860 | 1130x450x860 |
| weight (in kg)                         | 84,6/90,5    | 29,4/35,1   | 85,0/92,0    | 86,4/93,6    | 31,0/37,0   | 107,6/121,5  | 108,7/123,2  |
| weight, water cooling (filled) (in kg) | 14,7         | ---         | 14,7         | 14,7         | ---         | 14,7         | 14,7         |

Standards and approvals

|                             |             |             |             |             |             |             |             |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| standard                    | EN 60974-01 | EN 60974-01 | EN 60974-01 | EN 60974-01 | EN 60974-01 | EN 60974-01 | EN 60974-01 |
| protection class (EN 60529) | IP23S       | IP23S       | IP23S       | IP23S       | IP23S       | IP23S       | IP23S       |
| insulation class            | F           | F           | F           | F           | F           | F           | F           |
| designation                 | CE, S       | CE, S       | CE, S       | CE, S       | CE, S       | CE, S       | CE, S       |