KEMPPI
PRO EVOLUTION

Digital Control for the Welding Professional
Kemppi Pro Evolution – the professional’s intelligent tool

Benefits

- **Kemppi Pro Evolution is a modular product family** consisting of mutually compatible multi-process welding machines that can be combined to form an optimal configuration for several applications and sets of conditions.

  You don’t need to purchase separate machines for different welding purposes, as it is possible to assemble more than 100 different welding set variations for MIG/MAG, TIG, and MMA welding. From this variety of choices you can find just the right components even for conditions where material types, welding processes, and welding needs vary greatly.

- **Wide selection of equipment**

  **The basis of the product family** is its three power source units: the Pro3200, Pro4200, and Pro5200. In addition, the Pro Evolution product family includes MIG/MAG wire feeders, a TIG HF unit, water coolers, control panels, remote control devices, and carriage systems.

  **New digital convenience**

  **Pro Evolution products have a digital control system** that uses a lightweight communication cable between the power source and the wire feed unit. The lightweight cables make the wire feed unit easy to move around, which allows accurate arc control at the hot end, even when long distances are involved.

  **Welding efficiency in a compact package**

  **Even the smaller power sources** in the Pro Evolution family are amazingly efficient, allowing full welding power to be achieved also with long interconnection cables. This improves the extendibility and usability of the devices, especially in shipyards and on-site work.
Flexibility

The productivity of welding should be judged with all phases of the welding process in mind. Such things as moving the equipment from one work location to another, the overall smoothness of the work, safety issues, and the maintenance needs accompany the quality of the weld itself in affecting productivity.

Kemppi’s Research and Development Department set for itself the target of finding an overall solution in which all aspects of productivity are considered. The result was a new product family for the 21st century: Kemppi Pro Evolution, the most versatile welding system ever seen.

Adaptability

The strength of the Kemppi Pro Evolution product family rests on the outstanding options created by the modular flexibility of this unique welding system. The flawless controllability of this welding power system is made possible by a wide choice and range of hardware, control function panels and remote control devices allowing our customers the optimum choice to build a welding set for every environment and application.

This unparalleled flexibility and adaptability combine with great welding power to make Kemppi Pro Evolution a remarkably productive welding system for many types of applications.

The product family includes a solution for workshop use next to a welding table as well as for heavy-duty shipyard conditions, fitted with a 50-metre-long extension cable.

Easy controllability and data monitoring

A versatile selection of control panels makes for great controllability of the Kemppi Pro Evolution welding system. Control panels include many time-saving features for speeding up welding work. Also welding data monitoring and analysis is available for increasing the productivity of the work.

Accurate control allows quality welds also, which reduces the need for grinding and other finishing work. This makes the welding work more productive as well as more rewarding.
Cooling the welding guns and torches can be accomplished with a Procool 10 or Procool 30. These microprocessor-controlled cooling units for MIG/MAG welding guns and TIG torches are designed for demanding professional use. The Procool 30 fits into transport unit P40 and Procool 10 fits into transport unit P30W.

Control units

- Control panels represent the central memory and control unit of the Kemppi Pro Evolution welding system. Their versatile and accurate control features allow hassle-free work and quality welds.

  Data monitoring: The welding set can be connected to a PC for observing and analysing welding parameters such as wire feed, heat input, and welding energy during the welding process, with the aid of the Kemppi Pro Weld Data software. The values can be transmitted over a wireless connection for centralised analysis of the welding values and productivity.

Wire feed units

- Kemppi Pro Evolution wire feeders are reliable devices that include various useful features to speed up the welding work and increase the productivity.

  The four-wheel wire drive ensures undisturbed wire run with all wire types. The automatic wire threading speeds up changing of the reel. Time saving additional features are easy to enable, and in many cases are enabled by the wide choice of control panels options that fit many of the wire feed units available.

  Special features of the various panels ensure that the correct wire feeder solution can be found for every need.

Power source units

- Digitally controlled, effective power sources are the foundation of the Kemppi Pro Evolution product family. These multi-process power sources based on inverter technology are suitable for MIG/MAG, TIG and MMA welding. The power sources can be used in manual as well as robotic welding.

  All Kemppi Pro Evolution power sources are small and lightweight devices with exceptional welding efficiency and loadability. Versatile operation functions and digital control enable first-class welds.

Cooling units
### Technical Data

#### ProMig wire feeders

<table>
<thead>
<tr>
<th>Model</th>
<th>100</th>
<th>200</th>
<th>300</th>
<th>501, 501L</th>
<th>511</th>
<th>530</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>50 V DC</td>
<td>50 V DC</td>
<td>50 V DC</td>
<td>50 V DC</td>
<td>50 V DC</td>
<td>50 V DC</td>
</tr>
<tr>
<td>Rated power</td>
<td>100 W</td>
<td>100 W</td>
<td>100 W</td>
<td>100 W</td>
<td>100 W</td>
<td>100 W</td>
</tr>
<tr>
<td>Filler wires</td>
<td>Fe, SS 0.6…1.6 mm</td>
<td>0.6…1.6 mm</td>
<td>0.6…1.6 mm</td>
<td>0.6…1.6 mm</td>
<td>0.6…1.6 mm</td>
<td>0.6…1.6 mm</td>
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<tr>
<td>Cored wire</td>
<td>0.8…2.0 mm</td>
<td>0.8…2.0 mm</td>
<td>0.8…2.0 mm</td>
<td>0.8…2.0 mm</td>
<td>0.8…2.0 mm</td>
<td>0.8…2.0 mm</td>
</tr>
<tr>
<td>AI</td>
<td>1.0…2.4 mm</td>
<td>1.0…2.4 mm</td>
<td>1.0…2.4 mm</td>
<td>1.0…2.4 mm</td>
<td>1.0…2.4 mm</td>
<td>1.0…2.4 mm</td>
</tr>
<tr>
<td>External dimensions</td>
<td>575 x 185 x 200 mm</td>
<td>500 x 230 x 315 mm</td>
<td>600 x 225 x 415 mm</td>
<td>620 x 230 x 480 mm</td>
<td>620 x 230 x 670 mm</td>
<td>640 x 230 x 430 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>8.9 kg</td>
<td>13 kg</td>
<td>17 kg</td>
<td>22 kg</td>
<td>25 kg</td>
<td>21 kg</td>
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</table>

#### Kemppi Pro Evolution power sources

<table>
<thead>
<tr>
<th></th>
<th>3200 / 3200 MVU</th>
<th>4200 / 4200 MVU</th>
<th>5200 / 5200 MVU</th>
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</thead>
<tbody>
<tr>
<td>Mains voltage</td>
<td>3~50/60 Hz 400 V-15%…+20%</td>
<td>400 V-15%…+20%</td>
<td>400 V-15%…+20%</td>
</tr>
<tr>
<td>Mains voltage, MVU</td>
<td>3~50/60 Hz 400 V-15%…+20%</td>
<td>400 V-15%…+20%</td>
<td>400 V-15%…+20%</td>
</tr>
<tr>
<td>Connection cable, fuse delayed</td>
<td>4 x 65-5 m / 25 A 230 V-10%…+10%</td>
<td>4 x 65-5 m / 35 A 230 V-10%…+10%</td>
<td>4 x 65-5 m / 35 A 230 V-10%…+10%</td>
</tr>
<tr>
<td>Connection cable, fuse delayed, MVU</td>
<td>4 x 65-5 m / 35 A 230 V-10%…+10%</td>
<td>4 x 105-5 m / 50 A 230 V-10%…+10%</td>
<td>4 x 165-5 m / 63 A 230 V-10%…+10%</td>
</tr>
<tr>
<td>Load capacity 40 °C</td>
<td>- 70% ED 420 A / 19.7 kVA</td>
<td>- 100% ED 420 A / 19.7 kVA</td>
<td>440 A / 20 kVA</td>
</tr>
<tr>
<td>Power ratio at maximum current</td>
<td>0.93</td>
<td>0.93</td>
<td>0.93</td>
</tr>
<tr>
<td>Welding voltage range</td>
<td>MMA 10 A…320 A</td>
<td>10 A…420 A</td>
<td>10 A…520 A</td>
</tr>
<tr>
<td>TIG</td>
<td>5 A…320 A</td>
<td>5 A…420 A</td>
<td>5 A…520 A</td>
</tr>
<tr>
<td>MIG</td>
<td>12 V…37 V</td>
<td>12 V…39 V</td>
<td>12 V…42 V</td>
</tr>
<tr>
<td>External dimensions</td>
<td>L x W x H 530 x 230 x 520 mm</td>
<td>530 x 230 x 520 mm</td>
<td>530 x 230 x 520 mm</td>
</tr>
<tr>
<td>External dimensions, MVU</td>
<td>L x W x H 530 x 230 x 630 mm</td>
<td>530 x 230 x 630 mm</td>
<td>530 x 230 x 630 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>37 kg / MVU 45 kg</td>
<td>41 kg / MVU 49 kg</td>
<td>48 kg / MVU 56 kg</td>
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</table>

### Cooling units

<table>
<thead>
<tr>
<th></th>
<th>ProCool 10</th>
<th>ProCool 30</th>
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<tbody>
<tr>
<td>Operating voltage</td>
<td>50 V DC</td>
<td>50 V DC</td>
</tr>
<tr>
<td>Connection capacity</td>
<td>100% ED 120 W</td>
<td>120 W</td>
</tr>
<tr>
<td>Maximum pressure</td>
<td>400 kPa</td>
<td>400 kPa</td>
</tr>
<tr>
<td>Recommended cooling liquid</td>
<td>20% – 40% ethanol/water</td>
<td>20% – 40% ethanol/water</td>
</tr>
<tr>
<td>Tank volume</td>
<td>3 l</td>
<td>3 l</td>
</tr>
<tr>
<td>External dimensions</td>
<td>L x W x H 450 x 190 x 420 mm</td>
<td>610 x 230 x 290 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>16 kg</td>
<td>12.5 kg</td>
</tr>
</tbody>
</table>
The Kemppi Pro Evolution Protig 410 is an HF ignition unit that ensures excellent, stable arc ignition in TIG welding. The versatile control panels let you select exactly the functions you need, including storing of welding parameters. The unit can be attached to the top of the power source and it can be moved to the work area in its standard frame.

**ProTig 410 Technical Data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Operating voltage</td>
<td>50 V DC</td>
</tr>
<tr>
<td>Load capacity at 40 °C</td>
<td>60% ED 400 A</td>
</tr>
<tr>
<td></td>
<td>100% ED 310 A</td>
</tr>
<tr>
<td>Dimensions</td>
<td>L x W x H</td>
</tr>
<tr>
<td></td>
<td>615 x 260 x 400 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>17 kg</td>
</tr>
</tbody>
</table>

For power source technical data, see previous page

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**MMA Welding**

The Kemppi Pro Evolution power sources are multi-process DC devices suitable for diverse MMA welding applications. Kemppi Pro Evolution lets you use all MMA electrodes, including cellulosic ones.

During normal MMA welding the constant current (CC) feature of the power source ensures that the welding current remains stable, regardless of changes in the arc length.

The Kemppi Pro Evolution control panels for MMA welding include many useful features, such as automatic hot start, automatic arc dynamics, and anti-freeze features.

**PL control panel**

- Control of welding current
- Control of MMA dynamics
- Display of welding parameters

**PX control panel**

- Control of welding current
- Tack welding / MMA / carbon arc gouging selector
- Adjustment of start pulse / MMA dynamics
- Display of welding parameters

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**Easy TIG welding with the Protig 410**

The Kemppi Pro Evolution Protig 410 is an HF ignition unit that ensures excellent, stable arc ignition in TIG welding. The versatile control panels let you select exactly the functions you need, including storing of welding parameters. The unit can be attached to the top of the power source and it can be moved to the work area in its standard frame.
### Order Information

#### ProMig Series

**Wire feeders**
- ProMig 501  
- ProMig 501L (left)  
- ProMig 511 with swing-arm  
- ProMig 530  
- ProMig 100 tandem feeder  
- ProMig 100B special version  
- ProMig 200  
- ProMig 300

**Control panels**
- MC  
- ML  
- MXE

**Synchronising unit**
- Prosync 50/ProMig 100, push-pull gun

**Remote control units**
- R 20 (2-knob)  
- RMT 10, MIG gun control  
- C 100 T, wireless

**External metering device**
- PMU 10

**Cables**
- Earth and welding cables: by an enquiry

#### TIG Welding

**TIG ignition unit Protig 410**

**Control panels**
- TL control panel  
- TX control panel

**Remote control units**
- R 10 (1-knob)  
- R 10F, foot pedal  
- R 10F, extension cable 10 m

**Transport units**
- P 30 W  
- P40  
- P40L

**Intermediate cables**
- S0-1-G  
- S0-1-W  
- S0-10-GH  
- S0-10-WH

**Cables**
- Earth and welding cables: by an enquiry

#### MMA Welding

**Control panels**
- PL control panel  
- PX control panel

**Remote control unit**
- R 10 (1-knob)

**Transport unit**
- T 10

**Cables**
- PRO remote control extension cable, 10 m  
- Earth and welding cables: by an enquiry

#### Power Sources

**Water Cooling Units**
- Procool 10  
- Procool 30

For information about ProMig solutions for welding automation, see [http://www.kemppi.com](http://www.kemppi.com).
The Joy of Welding…

Around the World.

Kemppi Oy – a pioneer in welding equipment technology

Ever since it was founded in 1949, the family-owned company Kemppi has been at the cutting edge of arc welding equipment. Good quality, technological expertise, and entrepreneurial spirit have led Kemppi into global markets. Today this international company operates globally while still having its head office in Lahti, Finland.

From the very beginning, Kemppi has been a pioneer in developing and manufacturing arc welding machines. This continues today: Kemppi leads the way to the welding technology of the future and innovative welding services.