

## Explanation of the term "duty cycle"

Duty cycle (ED) is the proportion of time in a 10-minute cycle at which the device may be operated at its rated output without overheating.

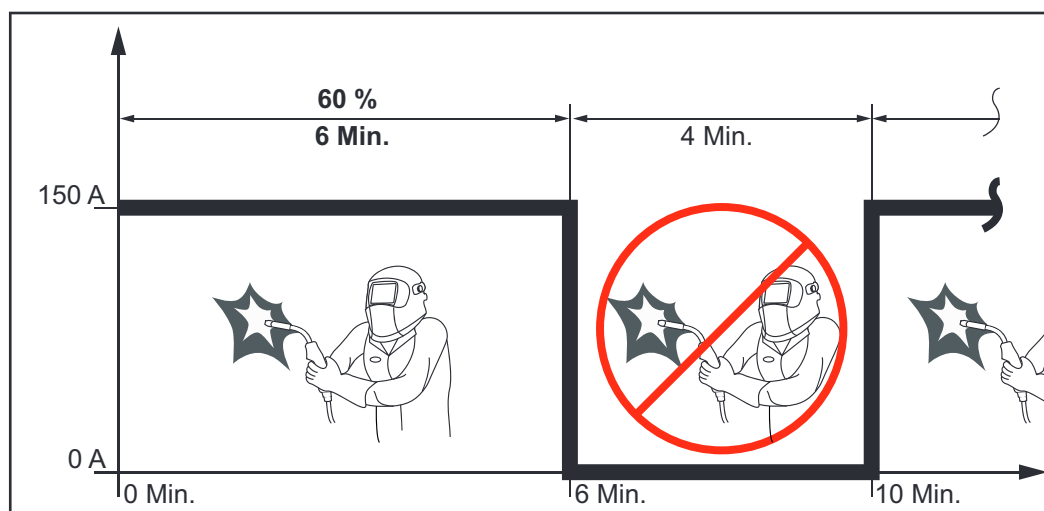
### NOTE!

**The ED values specified on the rating plate are based on an ambient temperature of 40 °C.**

If the ambient temperature is higher, either the ED or output must be reduced accordingly.

Example: Welding at 150 A at 60% ED

- Welding phase = 60% of 10 minutes = 6 minutes
- Cooling phase = remaining time = 4 minutes
- After the cooling phase, the cycle begins again.



If the device is to be continuously operated without stopping:

- 1** Look in the technical data for a ED value of 100% for the current ambient temperature.
- 2** Reduce the output or amperage in line with this value so that the device can remain in use without observing a cooling phase.

## Ignis 150

|                                               |                |
|-----------------------------------------------|----------------|
| Mains voltage ( $U_1$ )                       | 1 x 230 V      |
| Max. effective primary current ( $I_{1eff}$ ) | 15 A           |
| Max. primary current ( $I_{1max}$ )           | 24 A           |
| Max. apparent power ( $S_{1max}$ )            | 5.52 kVA       |
| Mains fuse                                    | 16 A slow-blow |
| Mains voltage tolerance                       | -20% / +15%    |
| Grid frequency                                | 50/60 Hz       |

|                                                                                   |                                             |               |               |
|-----------------------------------------------------------------------------------|---------------------------------------------|---------------|---------------|
| Cos phi                                                                           | 0.99                                        |               |               |
| Max. permitted mains impedance $Z_{\max}$ at PCC <sup>1)</sup>                    | 32 mOhm                                     |               |               |
| Recommended residual current circuit breaker                                      | Type B                                      |               |               |
| Welding current range ( $I_2$ ) rod electrode                                     | 10-150 A                                    |               |               |
| Welding current range ( $I_2$ ) TIG                                               | 10-150 A                                    |               |               |
| Welding current for MMA welding 10 min / 40 °C (104 °F)                           | 35 %<br>150 A                               | 60 %<br>110 A | 100 %<br>90 A |
| Welding current for TIG welding 10 min / 40°C (104°F)                             | 35 %<br>150 A                               | 60 %<br>110 A | 100 %<br>90 A |
| Output voltage range according to standard characteristic ( $U_2$ ) rod electrode | 20.4-26.0 V                                 |               |               |
| Output voltage range according to standard characteristic ( $U_2$ ) TIG           | 10.4-16.0 V                                 |               |               |
| Open circuit voltage ( $U_o$ peak)                                                | 96 V                                        |               |               |
| Protection class                                                                  | IP 23                                       |               |               |
| Type of cooling                                                                   | AF                                          |               |               |
| Overvoltage category                                                              | III                                         |               |               |
| Pollution degree according to IEC60664                                            | 3                                           |               |               |
| EMC emission class                                                                | A                                           |               |               |
| Safety symbols                                                                    | S, CE                                       |               |               |
| Dimensions (length x width x height)                                              | 365 x 130 x 285 mm<br>14.4 x 5.1 x 11.2 in. |               |               |
| Weight                                                                            | 6.3 kg<br>13.9 lb.                          |               |               |
| Idle state power consumption at 230 V                                             | 15 W                                        |               |               |
| Energy efficiency of the welding system at 150 A / 26 V                           | 87%                                         |               |               |

1) Interface to a 230/400 V and 50 Hz public grid

## Ignis 180

|                                                      |                |
|------------------------------------------------------|----------------|
| Mains voltage ( $U_1$ )                              | 1 x 230 V      |
| Max. effective primary current ( $I_{1\text{eff}}$ ) | 16 A           |
| Max. primary current ( $I_{1\text{max}}$ )           | 25 A           |
| Max. apparent power ( $S_{1\text{max}}$ )            | 5.75 kVA       |
| Mains fuse                                           | 16 A slow-blow |

|                                                                                   |                                             |               |                |
|-----------------------------------------------------------------------------------|---------------------------------------------|---------------|----------------|
| Mains voltage tolerance                                                           | -20% / +15%                                 |               |                |
| Grid frequency                                                                    | 50/60 Hz                                    |               |                |
| Cos phi                                                                           | 0.99                                        |               |                |
| Max. permitted mains impedance $Z_{\max}$ at PCC <sup>1)</sup>                    | 285 mOhm                                    |               |                |
| Recommended residual current circuit breaker                                      | Type B                                      |               |                |
| Welding current range ( $I_2$ ) rod electrode                                     | 10-180 A                                    |               |                |
| Welding current range ( $I_2$ ) TIG                                               | 10-220 A                                    |               |                |
| Welding current for MMA welding 10 min / 40 °C (104 °F)                           | 40 %<br>180 A                               | 60 %<br>150 A | 100 %<br>120 A |
| Welding current for TIG welding 10 min / 40 °C (104 °F)                           | 40 %<br>220 A                               | 60 %<br>150 A | 100 %<br>120 A |
| Output voltage range according to standard characteristic ( $U_2$ ) rod electrode | 20.4-27.2 V                                 |               |                |
| Output voltage range according to standard characteristic ( $U_2$ ) TIG           | 10.4-18.8 V                                 |               |                |
| Open circuit voltage ( $U_0$ peak)                                                | 101 V                                       |               |                |
| Protection class                                                                  | IP 23                                       |               |                |
| Type of cooling                                                                   | AF                                          |               |                |
| Overvoltage category                                                              | III                                         |               |                |
| Pollution degree according to IEC60664                                            | 3                                           |               |                |
| EMC emission class                                                                | A                                           |               |                |
| Safety symbols                                                                    | S, CE                                       |               |                |
| Dimensions (length x width x height)                                              | 435 x 160 x 310 mm<br>17.1 x 6.3 x 12.2 in. |               |                |
| Weight                                                                            | 8.7 kg<br>19.3 lb.                          |               |                |
| Idle state power consumption at 230 V                                             | 15 W                                        |               |                |
| Welding system energy efficiency at 180 A/27.2 V                                  | 88%                                         |               |                |

1) Interface to a 230/400 V and 50 Hz public grid

### Ignis 180 MV

|                                                      |           |           |           |
|------------------------------------------------------|-----------|-----------|-----------|
| Mains voltage ( $U_1$ )                              | 1 x 230 V | 1 x 120 V | 1 x 120 V |
| Max. effective primary current ( $I_{1\text{eff}}$ ) | 16 A      | 20 A      | 15 A      |
| Max. primary current ( $I_{1\text{max}}$ )           | 25 A      | 28 A      | 19 A      |
| Max. apparent power ( $S_{1\text{max}}$ )            | 5.75 kVA  | 3.48 kVA  | 2.28 kVA  |

|                                                                        |                                             |                                      |                                      |
|------------------------------------------------------------------------|---------------------------------------------|--------------------------------------|--------------------------------------|
| Mains fuse                                                             | 16 A slow-blow                              | 20 A slow-blow                       | 15 A slow-blow                       |
| Mains voltage tolerance                                                | -20% /+15%                                  |                                      |                                      |
| Grid frequency                                                         | 50/60 Hz                                    |                                      |                                      |
| Cos phi                                                                | 0.99                                        |                                      |                                      |
| Max. permitted mains impedance<br>$Z_{\max}$ at PCC <sup>1)</sup>      | 285 mOhm                                    |                                      |                                      |
| Recommended residual current circuit breaker                           | Type B                                      |                                      |                                      |
| Welding current range ( $I_2$ )                                        |                                             |                                      |                                      |
| Rod electrode                                                          | 10 - 180 A                                  | 10 - 120 A                           | 10 - 85 A                            |
| TIG                                                                    | 10 - 220 A                                  | 10 - 170 A                           | 10 - 140 A                           |
| Welding current for MMA welding,<br>10 min / 40°C (104°F)              | 40%/180 A<br>60%/150 A<br>100%/120 A        | 40%/120 A<br>60%/100 A<br>100%/90 A  | 40%/85 A<br>60%/70 A<br>100%/65 A    |
| Welding current for TIG welding,<br>10 min / 40 °C (104 °F)            | 40%/220 A<br>60%/160 A<br>100%/130 A        | 40%/170 A<br>60%/130 A<br>100%/100 A | 40%/140 A<br>60%/110 A<br>100%/100 A |
| Output voltage range according to<br>standard characteristic ( $U_2$ ) |                                             |                                      |                                      |
| Rod electrode                                                          | 20.4 - 27.2 V                               |                                      |                                      |
| TIG                                                                    | 10.4 - 18.8 V                               |                                      |                                      |
| Open circuit voltage ( $U_0$ peak)                                     | 101 V                                       |                                      |                                      |
| Protection class                                                       | IP 23                                       |                                      |                                      |
| Type of cooling                                                        | AF                                          |                                      |                                      |
| Overvoltage category                                                   | III                                         |                                      |                                      |
| Pollution degree according to<br>IEC60664                              | 3                                           |                                      |                                      |
| EMC emission class                                                     | A                                           |                                      |                                      |
| Safety symbols                                                         | S, CE                                       |                                      |                                      |
| Dimensions (length x width x<br>height)                                | 435 x 160 x 310 mm<br>17.1 x 6.3 x 12.2 in. |                                      |                                      |
| Weight excluding mains cable                                           | 8.3 kg<br>18.4 lb.                          |                                      |                                      |
| Weight including mains cable                                           | 8.9 kg<br>19.6 lb.                          |                                      |                                      |
| Idle state power consumption at<br>230 V                               | 15 W                                        |                                      |                                      |
| Welding system energy efficiency<br>at 180 A/27.2 V                    | 88%                                         |                                      |                                      |

1) Interface to a 230/400 V and 50 Hz public grid