GUARANTEED SAFETY AND PEACE OF MIND, THE SIMPLE WAY!
Local Back-Up Energy: what is it there for?

Advice for making the right choice?

What power for which applications?

Fuel petrol and mobile installation

Two diesel lines

A Gas line

Contents:


10 Local Back-Up Energy: what is it there for?

12 Advice for making the right choice?

14 What power for which applications?

15 Fuel petrol and mobile installation

16 Two diesel lines

17 A Gas line

18 Advice for making the right choice?

19 What power for which applications?


SDMO Industries

- Head office and production site – France
- Production site – Brazil
- Subsidiaries
- KOHLER® Power Systems

In order for KOHLER-SDMO to continue to grow and meet the needs of new markets, it relies on:

- In France: 8 sales offices and 3 regional divisions
- Globally: a distribution network present in over 150 countries, 6 subsidiaries, 7 offices.

The responsiveness of the company is based on its development of a storage platforms which, in co-operation with the subsidiaries, constitutes an efficient commercial network.

Now that KOHLER and SDMO have joined forces, you are guaranteed to benefit from this fruitful partnership thanks to the increased presence of KOHLER-SDMO locations in your area.

- SDMO Energy LTD in the United Kingdom
- SDMO Industries France in Lympne
- SDMO Maquigeral in Belgium
- SDMO Maquigeral in Brazil
- SDMO Generating Sets in the USA
- SDMO GmbH in Germany

SDMO Industries was created in 1966, setting up its head office and three factories in Brest, along with another plant in Brazil. Backed by an international group structure, KOHLER-SDMO continues to reinforce its leading position on the European market. Today, the company focuses exclusively on generating sets, and offers the widest range on the market.

Actively promoting constant progress and permanently in tune with its customers’ most stringent requirements, the Research & Development and Engineering teams work in harmony to develop innovative solutions or bespoke solutions.

A Gas line

Kohler ® power systems

Head office and production site - Kohler®, Wisconsin, USA

Portable Power

Efficiency and ease of handling are the key features of this range, which meets the diverse needs of the professional market, whilst ensuring safety remains paramount.

Power Products

Performance meets power in this standard range dedicated to the most exacting professional applications. Combined with highly responsive services, such as the X-PRESS lead time solution, this range means we can supply a generating set anywhere in the world, with a very quick turnaround.

Rental Power

Versatile, robust and very quiet, essential criteria for this range specially designed for the rental market, with performance levels which enable it to meet specific, high intensity operating conditions.

Power Solutions

Specific and adaptable, the generating sets in this range create innovative solutions able to meet highly exacting requirements. These generating sets and power plants use tried and tested technologies covering a broad spectrum of applications.

Number 1 generating set manufacturer in France and number 3 in the world

From offshore drilling platforms to harsh desert conditions, from building sites to the most exacting industries, the reliability and performance of KOHLER-SDMO generating sets has firmly established the company as one of the leading global manufacturers.

SDMO Industries was created in 1966, setting up its head office and three factories in Brest, along with another plant in Brazil. Backed by an international group structure, KOHLER-SDMO continues to reinforce its leading position on the European market. Today, the company focuses exclusively on generating sets, and offers the widest range on the market.

Actively promoting constant progress and permanently in tune with its customers’ most stringent requirements, the Research & Development and Engineering teams work in harmony to develop innovative solutions or bespoke solutions.

A Gas line

Kohler ® power systems

Head office and production site - Kohler®, Wisconsin, USA

Portable Power

Efficiency and ease of handling are the key features of this range, which meets the diverse needs of the professional market, whilst ensuring safety remains paramount.

Power Products

Performance meets power in this standard range dedicated to the most exacting professional applications. Combined with highly responsive services, such as the X-PRESS lead time solution, this range means we can supply a generating set anywhere in the world, with a very quick turnaround.

Rental Power

Versatile, robust and very quiet, essential criteria for this range specially designed for the rental market, with performance levels which enable it to meet specific, high intensity operating conditions.

Power Solutions

Specific and adaptable, the generating sets in this range create innovative solutions able to meet highly exacting requirements. These generating sets and power plants use tried and tested technologies covering a broad spectrum of applications.

For sound emissions analysis, KOHLER-SDMO test engineers are able to obtain particularly fine results through use of the state-of-the-art technique of sound intensity measurement, associated with modal analysis to determine the vibration frequencies.

A Range dedicated to all uses

Power Solutions

Specific and adaptable, the generating sets in this range create innovative solutions able to meet highly exacting requirements. These generating sets and power plants use tried and tested technologies covering a broad spectrum of applications.

Portable Power

Efficiency and ease of handling are the key features of this range, which meets the diverse needs of the professional market, whilst ensuring safety remains paramount.

Power Products

Performance meets power in this standard range dedicated to the most exacting professional applications. Combined with highly responsive services, such as the X-PRESS lead time solution, this range means we can supply a generating set anywhere in the world, with a very quick turnaround.

Rental Power

Versatile, robust and very quiet, essential criteria for this range specially designed for the rental market, with performance levels which enable it to meet specific, high intensity operating conditions.

Power Solutions

Specific and adaptable, the generating sets in this range create innovative solutions able to meet highly exacting requirements. These generating sets and power plants use tried and tested technologies covering a broad spectrum of applications.
**WHAT IS IT THERE FOR?**

**REASON 1**
**COPE WITH GRID SATURATION**

Energy requirements, especially electrical, are increasing: water, heating, electrodomestic appliances, TV, Hi-Fi, personal and professional computers, security systems, etc.

Demand is seeing such growth that the electrical grid will naturally become saturated, which will have consequences on the quality and continuity of the electrical power supply. Weather phenomena, primarily storms, increase the risks of power cuts.

**REASON 2**
**ENSURE THE SAFETY AND PEACE OF MIND OF 3 VULNERABLE USER GROUPS**

We have identified 3 user groups for whom SDMO® local generating sets are an essential solution in terms of safety, comfort and convenience.

**LOCAL SHOPS**

For the majority of shops, a power cut can lead to forced closure. Pharmacies, increasingly equipped with automated systems, can see their drugs service lift stuck, fresh remedies go off, etc. Small traders have to cope with the loss of frozen merchandise, i.e. of profit! For them, it can also compromise their establishment's image and safety.

Any temperature rise accelerates microbe growth, and reduces the product shelf life: a sound product can become a risky product, and the appearance and taste can deteriorate. So a power failure can create a break in the cold chain, damaging for food preparation professionals, for example.

**HOMECARE AND TREATMENT HOMES**

Homecare is a form of full-time hospitalisation, in which the patient receives major medical and paramedical treatment at home.

Vulnerable people, due to disease or old age, need suitable equipment: a medical bed with its accessories, breathing aspirator, infusion pump, electrical syringe, flow regulator (enteral nutrition), etc.

This non-exhaustive list clearly shows that having an uninterruptible supply is vital, and that the slightest power cut can have serious consequences. Patient safety is at stake.

**INDIVIDUALS**

Though accustomed to constant availability of electricity, few individuals truly realise that power cuts can compromise their safety, comfort and convenience, or even paralyse their home automation, causing damage to:

- food in the refrigerator and freezer,
- air conditioning, heating and alarm systems,
- all equipment running on the mains (office appliances),
- sewage pumps, frost protection systems, etc.

Using a local back-up energy source ensures smooth running of your day-to-day life, free from disruption.

**REASON 3**
**PROVIDE A QUALITY GENERATING SET**

The choice of generating set depends on several parameters, such as: its use (occasional or intensive), its power, the fuel type, the installation (fixed or mobile), the starting, etc. The quality criteria are compactness, reliability and soundproofing.

**COMPACT AND RELIABLE**

SDMO® local generating sets are compact units, with highly discreet outside installation, and are able to restore the electrical supply automatically. They ensure an electricity supply meeting the quality standards necessary for domestic and professional use (SMEs, independent professions).

**SILENCER**

SDMO® generating sets have moderate sound levels, sometimes equivalent to centralised air conditioning.

**FUELS TO CHOOSE FROM**

SDMO® generating sets run on petrol, liquid propane gas, natural gas or diesel.

Gas generating sets reduce the pollutant emissions level, the sound level and extend the maintenance operation frequency. Others operate on diesel or unleaded petrol.
The recommendations below are for supporting the various target users in their choice of local generating set model. This guide is a useful means of supporting the pitch and improving efficiency.

**Step 1:** Specifications of the Installation

Identify the voltage in force in the country concerned by the installation, and determine the power needed to ensure the power supply to electronic equipment.

Think about defining the capacity too: is the whole installation or only a part to be supplied?

**Step 2:** Criteria for Choosing the Right Generating Set

### Choosing the Right Backup Generating Set

#### Installation Type

**Fixed Installation**

The generating set can be installed either outside or inside, but in the latter case you need to provide a ventilated space with an exhaust gas evacuation nozzle.

**Mobile Installation**

The generating set is stored inside, but remains mobile. Hence it can be used as an energy source where necessary (in the garden, on holiday, etc.), as well as in case of loss of domestic mains power.

**Caution:** when using due to mains power outage, always take the genset outside to ensure exhaust gas evacuation.

### Starting Mode

**Manual:**

Starting up the generating set and manually switching the source. This provides some degree of flexibility: the genset is not exclusively used for back-up energy.

**Automatic:**

In case of a failure, the generating set will start up automatically.

**Operating principle:**

- The ATS* detects and monitors the power supply source.
- In case of a power cut, the ATS* sends the genset the starting order, changes power supply source and restores the electricity in a few seconds.
- When the mains power is fully restored, the ATS* switches power supply source, shuts down the generating set and continues to monitor the status of the installation electrical power supply.

### Frequency of Use

The frequency of use is a crucial factor.

It is used to define the most suitable fuel and coolant types.

**Intensive Use**

- Fuel recommended: gas or diesel.
- Coolant system: air or water (longer term).

**Occasional Use** (for back-up)

- Fuel recommended: petrol.
- Coolant system: air.

### Sound Level

The noise disturbances produced by the generating set engine can be limited.

- Either the generator is low-power, in which case the noise is somewhat muted.
- Or the engine and exhaust assembly is insulated under a sound hood.

**FREQUENCY OF USE**

### Advantages of using electronic equipment

This component electronically regulates the voltage by approximately +/- 2%, depending on the model. It has considerable advantages: it eliminates the risk of damage to high-tech appliances such as heating programmers, welding stations or certain electrical tools with electronic control devices.

### Standard alternator

- ***Variation in voltage***

- **230V power grid - 10%**

- **Automatic Voltage Regulation.**

- **AVR* technology - Variation de tension 2%**

- **INVERTER technology - 1% variation in voltage**

### Larger alternator

- **Variation in voltage**

- **Standard alternator - 10% variation in voltage**

* Automatic Voltage Regulator.
The Minimum Power Requirement (MPR)

Some appliances require higher power at startup than their actual running power requirement. To calculate the generating set power (single-phase) required at start-up, apply the multiplier to the continuous power of your equipment, in the table opposite. For three-phase gensets, please consult your usual SDMO® contact.

To determine the minimum power for the appliances, refer to the manufacturer’s technical documentation, or ask your usual KOHLER-SDMO® contact for advice.

Once the usage type has been defined, and the power requirement determined, you can make a fully informed generating set selection.

### BASED ON THE APPLIANCES YOU USE:

To help you select the right generating set for your needs, the guide opposite, provided for illustrative purposes, lists the appliances most often used with a generating set.

### BASED ON THE MINIMUM POWER REQUIRED (MPR):

Some appliances require higher power at start-up than their actual running power requirement. You should take this into account when making your choice.

- To calculate the generating set power (single phase) you need at start-up, apply the coefficient given as a guide in the table below. For three phase generating sets, please consult your usual contact.
- For the minimum power requirement of your appliances, refer to the technical documentation supplied by the manufacturer or ask your KOHLER-SDMO agent for advice. Find the right type of equipment in the table opposite.
- Once you have defined the type of use and determined the power required, you then have all the information you need to select your generating set.

### Calculation of MPR

You need to power a 500 W Mini-cold shelf. You require a 2000 W generating set.

This is calculated as follows:

\[ \text{MPR} \times \text{MPR coefficient} \times \text{Multiplier} \]

Which gives:

- 500 W x 3 = 1500 W
- 500 W x 3.5 = 1750 W

(see table of coefficients opposite)

### RESISTIVE TOOLING

<table>
<thead>
<tr>
<th>APPLIANCE</th>
<th>Appliance output* in Watts</th>
<th>MPR in Watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pancake griddle</td>
<td>3600</td>
<td>3600 to 4320</td>
</tr>
<tr>
<td>Mobile oven</td>
<td>2000</td>
<td>2000 to 2400</td>
</tr>
<tr>
<td>Electrical hob</td>
<td>2000</td>
<td>2500 to 3000</td>
</tr>
<tr>
<td>Kettle</td>
<td>2000</td>
<td>6000</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>Boiler</td>
<td>500</td>
<td>2000</td>
</tr>
<tr>
<td>Low-consumption lighting</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>Electric oven</td>
<td>2500</td>
<td>2500 to 3000</td>
</tr>
<tr>
<td>Fryer</td>
<td>1600</td>
<td>1600</td>
</tr>
<tr>
<td>Toaster</td>
<td>900</td>
<td>900</td>
</tr>
<tr>
<td>Radiator</td>
<td>2000</td>
<td>2000 to 2400</td>
</tr>
<tr>
<td>Television (LCD)</td>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>

### LOW IMPACT TOOLING

<table>
<thead>
<tr>
<th>APPLIANCE</th>
<th>Appliance output* in Watts</th>
<th>MPR in Watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neon light</td>
<td>60</td>
<td>90 to 120</td>
</tr>
<tr>
<td>Coffee maker</td>
<td>1200</td>
<td>2400</td>
</tr>
<tr>
<td>Microwave oven</td>
<td>800</td>
<td>2000</td>
</tr>
<tr>
<td>Hairdryer</td>
<td>1800</td>
<td>1800</td>
</tr>
<tr>
<td>Tumble dryer</td>
<td>2000</td>
<td>3000</td>
</tr>
<tr>
<td>Electrical lawn mower</td>
<td>1500</td>
<td>2000</td>
</tr>
</tbody>
</table>

### HIGH IMPACT TOOLING

<table>
<thead>
<tr>
<th>APPLIANCE</th>
<th>Appliance output* in Watts</th>
<th>MPR in Watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candy floss machine</td>
<td>1700</td>
<td>5100 to 5950</td>
</tr>
<tr>
<td>Air conditioning</td>
<td>3000</td>
<td>9000 to 10500</td>
</tr>
<tr>
<td>Freezer</td>
<td>350</td>
<td>250</td>
</tr>
<tr>
<td>Mincer</td>
<td>1500</td>
<td>4500 to 5250</td>
</tr>
<tr>
<td>Mini-cold shelf</td>
<td>500</td>
<td>6000</td>
</tr>
<tr>
<td>Dough mixer</td>
<td>1000</td>
<td>3000 to 3500</td>
</tr>
<tr>
<td>Meat slicer</td>
<td>200</td>
<td>600 to 700</td>
</tr>
<tr>
<td>Vacuum cleaner</td>
<td>1400</td>
<td>4900</td>
</tr>
<tr>
<td>Freezer</td>
<td>300</td>
<td>2400</td>
</tr>
<tr>
<td>Washing machine</td>
<td>1000</td>
<td>2500</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>300</td>
<td>2700</td>
</tr>
</tbody>
</table>

*Data provided as a guide.

Since electrical appliances in the workplace or at home never all have to operate at the same time, the load on the KOHLER-SDMO® generating sets does not need to be equivalent to supplying all the installation’s appliances simultaneously. Contact an KOHLER-SDMO® consultant technician to find out the exact electrical consumption of the installation. The fixed installation of the genset must be carried out by professionals.
• Simpler to use, easy to set up
• Versatile
• Fuel tank built into the generating set, i.e. compact and ergonomic

**Perform XL**

- Large fuel tank
- Top box on the alternator
- Open frame

**Perform**

- Small fuel tank
- Manual starting

**Kohler® engine**

**Technic 6500**

- Top box on the alternator
- Open frame

**Technic**

- Large fuel tank
- Socket control panel

**Prestige**

- Enclosed
- Socket control panel

**Single Phase Generating Sets**

<table>
<thead>
<tr>
<th>TYPES</th>
<th>Max LTP (kW)</th>
<th>Voltage regulation</th>
<th>Fuel tank (L)</th>
<th>Autonomy (Hours)</th>
<th>Guaranteed limit of sound power (Lwa) at 50 Hz</th>
<th>Acoustic pressure at 1 m (Lpa)</th>
<th>Brand</th>
<th>Type</th>
<th>HP at 3600 rpm</th>
<th>Weight in kg</th>
<th>Socket Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERFORM 3000 TB UK</td>
<td>3.0 Compound</td>
<td>4.1</td>
<td>3.2</td>
<td>95</td>
<td>KOHLER®</td>
<td>CH 270</td>
<td>6</td>
<td>45</td>
<td>P2P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERFORM 4500 TB UK</td>
<td>4.2 Compound</td>
<td>7.3</td>
<td>3.5</td>
<td>96</td>
<td>KOHLER®</td>
<td>CH 395</td>
<td>8.5</td>
<td>61.5</td>
<td>P2E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERFORM 4500 GAZ TB UK</td>
<td>3.9 (1)</td>
<td>-</td>
<td>-</td>
<td>96</td>
<td>KOHLER®</td>
<td>CH 395</td>
<td>8.5</td>
<td>63</td>
<td>P2E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERFORM 6500 GAZ TB UK</td>
<td>5.8 (2)</td>
<td>Oversized</td>
<td>-</td>
<td>-</td>
<td>KOHLER®</td>
<td>CH 440</td>
<td>11.9</td>
<td>87</td>
<td>P3H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERFORM 3000 XL TB UK</td>
<td>3.0 Compound</td>
<td>13</td>
<td>10</td>
<td>95</td>
<td>KOHLER®</td>
<td>CH 270</td>
<td>6</td>
<td>46.5</td>
<td>P2D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sockets**

**Code Specification**

<table>
<thead>
<tr>
<th>Code</th>
<th>Capacity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2B</td>
<td>1 115V 16A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td>Ref. MTS</td>
</tr>
<tr>
<td>P2C</td>
<td>1 115V 16A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2D</td>
<td>2 sockets 230V 16A - circuit breaker + 1 socket 230V 16A - circuit breaker + hour meter + indicator + APM202</td>
<td></td>
</tr>
<tr>
<td>P2E</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker + 1 230V 32A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2H</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker + 1 230V 32A socket - circuit breaker + hour meter + indicator</td>
<td></td>
</tr>
<tr>
<td>P2I</td>
<td>1 115V 16A socket - circuit breaker + 1 230V 16A socket - circuit breaker + 1 400V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2J</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2K</td>
<td>1 115V 32A socket - circuit breaker + 1 230V 32A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2L</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2M</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2N</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2O</td>
<td>1 115V 16A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2P</td>
<td>1 115V 16A socket - circuit breaker + 1 230V 16A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2Q</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 2 230V 16A sockets - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2R</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker + 3 230V 16A sockets - circuit breaker + hour meter + indicator + APM202</td>
<td></td>
</tr>
<tr>
<td>P2S</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2T</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2U</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2V</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2W</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
<tr>
<td>P2X</td>
<td>1 115V 16A socket - circuit breaker + 1 115V 32A socket - circuit breaker + 1 230V 16A socket - circuit breaker</td>
<td></td>
</tr>
</tbody>
</table>

**Manual transfer switch**

**Perin**

This enables you to connect a generator to a dwelling and manually control, in total safety, the source of current in the event of insufficient power or mains supply return. In the “mains” position, the dwelling is powered normally from the mains supply. In the event of a power cut, you simply start the generator so that it supplies power to the house. In the “mains” position, the dwelling is powered normally from the mains supply. In the event of a power cut, you simply start the generator so that it supplies power to the house. In the “mains” position, the dwelling is powered normally from the mains supply. In the event of a power cut, you simply start the generator so that it supplies power to the house. In the “mains” position, the dwelling is powered normally from the mains supply. In the event of a power cut, you simply start the generator so that it supplies power to the house. In the “mains” position, the dwelling is powered normally from the mains supply. In the event of a power cut, you simply start the generator so that it supplies power to the house. In the “mains” position, the dwelling is powered normally from the mains supply. In the event of a power cut, you simply start the generator so that it supplies power to the house. In the “mains” position, the dwelling is powered normally from the mains supply. In the event of a power cut, you simply start the generator so that it supplies power to the house.
**TWO DIESEL LINES IDEALLY SUITED TO INTENSIVE USE (FIXED)**

**ADVANTAGES**
- Easy to install
- More powerful, designed for intensive and frequent use
- Compact
- Better safety
- Fuel tank included within the dimensions

**SOME GENERATORS ARE ALSO AVAILABLE IN THREE PHASE VERSION:**
- DIESEL 6000 TE SILENCE - DIESEL 6000 TE SILENCE AVR
- DIESEL 6500 TE SILENCE - DIESEL 6500 TE SILENCE AVR

**OPTIONS**

**Automatic start panel**
- REF. VERSO 5M 40A*
  - 40A single phase mains failure automatic source transfer switch.
- REF. VERSO 5M 100A*
  - 100A single phase mains failure automatic source transfer switch.
- REF. VERSO 5M 25A*
  - 25A three phase mains failure automatic source transfer switch.

**OPTION**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the main power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

**SOCKETS**

<table>
<thead>
<tr>
<th>Code</th>
<th>Type of connection</th>
<th>Attachment</th>
<th>Circuit breaker</th>
<th>Panel breaker</th>
<th>Circuit breaker</th>
<th>Panel breaker</th>
<th>Circuit breaker</th>
<th>Panel breaker</th>
<th>Circuit breaker</th>
<th>Panel breaker</th>
<th>Circuit breaker</th>
<th>Panel breaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1C</td>
<td>115V 16A socket</td>
<td>125V 16A</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>hour meter</td>
<td>indicator</td>
<td>circuit breaker</td>
<td>hour meter</td>
<td>circuit breaker</td>
<td>indicator</td>
</tr>
<tr>
<td>P1D</td>
<td>115V 16A socket</td>
<td>125V 16A</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>hour meter</td>
<td>indicator</td>
<td>circuit breaker</td>
<td>hour meter</td>
<td>circuit breaker</td>
<td>indicator</td>
</tr>
<tr>
<td>P2S</td>
<td>115V 16A socket</td>
<td>125V 16A</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>hour meter</td>
<td>indicator</td>
<td>circuit breaker</td>
<td>hour meter</td>
<td>circuit breaker</td>
<td>indicator</td>
</tr>
<tr>
<td>P2Q</td>
<td>115V 16A socket</td>
<td>125V 16A</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>circuit breaker</td>
<td>hour meter</td>
<td>indicator</td>
<td>circuit breaker</td>
<td>hour meter</td>
<td>circuit breaker</td>
<td>indicator</td>
</tr>
</tbody>
</table>

**Some Generators Are Also Available in Three Phase Version:**

---

**Code Specification**

**AS STANDARD:***
- Fuel tank included
- Compact
- More powerful, designed for intensive and frequent use
- Easy to install within the dimensions

---

**Some Generators Are Also Available in Three Phase Version:**

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

**OPTION**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

**OPTION**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.

---

**OPTIONS**

**Automatic start panel**
- REF. VERSO M*/VERSIO 1*
  - Control unit for automatic start-up upon mains failure. In the event of a mains power cut, the automatic control unit sends a starting order to the generating set. As soon as the generating set is producing power, the control unit switches the power source using its source transfer switch. Similarly, when the control unit detects the mains power has returned, it switches back to this primary source and orders the generating set to stop. The differential protection option is required for EEC countries.

---

*Includes battery charger - Requires a MODYS-equipped generating set.
### ADVANTAGES
- Economic and eco-friendly solution
- Low sound level

### SINGLE PHASE GENERATING SETS

<table>
<thead>
<tr>
<th>Types</th>
<th>Max ESP (kW)</th>
<th>Max ESP (kVA)</th>
<th>Consumption at 75% load (m³/h)</th>
<th>KOHLER®</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESA 14 EC</td>
<td>10</td>
<td>10</td>
<td>11</td>
<td>3.55</td>
<td>64 KOHLER®</td>
</tr>
<tr>
<td>RESA 20 EC</td>
<td>14</td>
<td>14</td>
<td>9.9</td>
<td>4.48</td>
<td>69 KOHLER®</td>
</tr>
</tbody>
</table>

### SOME GENERATORS ARE ALSO AVAILABLE IN THREE PHASE VERSION:
- RESA 14 TEC - RESA 20 TEC

### ACCESSORIES & OPTIONS

#### GENERATING SET START MODE

**Manual**
Starting up the generating set and manually switching the source. This provides some degree of flexibility: the genset is not exclusively used for back-up energy.

**Manual transfer switch**

**Ref. MTS**
This enables you to connect a generator to a dwelling and manually control, in total safety, the source of current in the event of insufficient power or mains supply return. In the “mains” position, the dwelling is powered normally from the mains supply. In the event of a power cut, you simply start the generator so that it supplies power to the house wiring and turn the switch to the backup power position.
Accessory delivered separately

**Automatic**
In case of a failure, the generating set will start up automatically.

**Automatic start panel**

**Ref. VERSO 50M 40A**
40A single phase mains failure automatic source transfer switch.

**Ref. VERSO 50M 100A**
100A single phase mains failure automatic source transfer switch.

**Ref. VERSO 50T 25A**
25A three phase mains failure automatic source transfer switch.

**Ref. VERSO 50T 40A**
40A three phase mains failure automatic source transfer switch.

* Includes battery charger - Requires a MODYS-equipped generating set. The differential protection option is required for EEC countries.
Accessory delivered separately

**Manual transfer switch**

**Ref. RESINS AND RESIN-T (FOR RESIDENTIELLE RANGE)**
Automatic Transfer Switch upon 63A or 100A mains failure.

### DIFFERENTIAL PROTECTION

**Ref. R03**
Control unit including differential and working hours counter. Earth connection diagram with earthed neutral. The R01 is installed as a fixed replacement for the RKD1 (excluding the Technic range). Factory-fitted only. The R03 includes a thermal circuit breaker.

**Ref. RESDIFF (FOR RESIDENTIELLE RANGE)**
A device for protecting personnel and detecting leakage currents to earth from the electrical installation. It is fixed, and must be defined depending on the electrical installation, as 30 or 300 mA.

**Ref. R02B/R03B**
Control unit including the tetrapolar differential switch in three phase (R03B), and bipolar differential switch in single phase (R02B). Control unit fitted as a fixed replacement for the RKDI on the Technic range.

### INSTRUMENTATION & CONTROL

**Ref. APM202**
The APM202 instrumentation & control unit makes the equipment easy to operate, as well as performing an essential safety function. The 4-point connector enables easy connection of remote controls, such as VERSO 50 automatic control units.