

**ENDRESS**   
**Power Generators**



**Product Program for 2014/2015**

Since 1914 ENDRESS has specialised in the development, manufacture and sale of first-class generators. Thanks to innovation and new products that are technically refined and pioneering, ENDRESS will also secure its leading role in the future.

Our company principles are:

- Performance and reliability thanks to the selection of outstanding components and standardised quality
- Environmental compatibility and future-orientated technology thanks to our in-house development and production
- ENDRESS know-how on sites worldwide

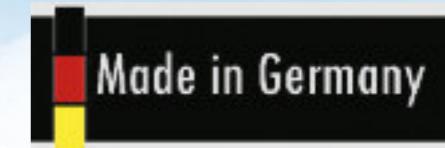
Innovation and customer-specific product development as well as technical application advice are the parameters for action of a service-orientated company philosophy. ENDRESS will continue to meet the growing demands and internationalisation of commercial business in the future.



### **Leading technology through in-house development and production**

Endress is one of Europe's market leaders in generators. Decades of experience in generator development and production guarantee the highest quality and absolute reliability. With output up to 2000 kVA, Endress has every need covered. Innovative special machines for fire fighting, disaster relief and emergency services, and meeting special requirements for contracting businesses, are also part of the program, as are floodlight systems and generators for emergency power supply.

**Excellent Engineering by ENDRESS**



**DUPLEX**

**DUPLEX** <sup>plus</sup>

**ECOtronic**

**maxdrive**

**E-RMA System**



**17**

**Petrol and Diesel generators**

1-15 kVA



**43**

**Welding generators**

30-300 A



**49**

**Power supply systems**

10-730 kVA



**68**

**Mobile floodlight towers**



**46**

**PTO generators**

22-90 kVA



**70**

**Engine pumps**



**Technology and innovation**

**Interesting and worth knowing**

**Information on emergency power supply**

**Silent Line**

**Classic Power Line**

**Professional Line**

**Professional GT Line**

**DUPLEXplus Line**

**DUPLEXSilent Line**

**DUPLEXSilent Line Diesel**

**Diesel Line**

**Generator selection assistant**

**Gas generator - stationary**

**Welding Line**

**Original equipment**

**PTO generators**

**Power supply systems**

**Construction site generators**

**Power Line**

**Basic Line**

**Mobile floodlight towers**

**Engine pumps**

6

10

14

17

19

21

23

27

31

33

35

40

42

43

45

46

46

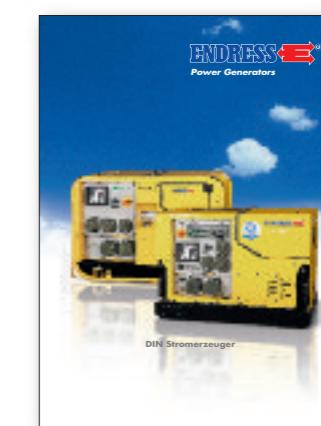
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52

66

68

70



Extensive information about the ENDRESS fire&rescue power generators range can be found in our special catalogue. Please order your free copy now or download from our website

[www.endress-generator.com](http://www.endress-generator.com)

## DUPLEX

### DUPLEX in a nutshell

#### Yesterday:

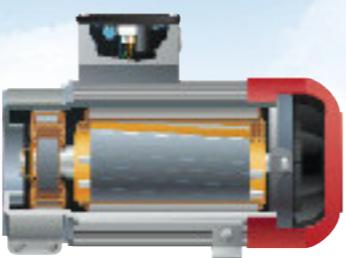
When no electronics were used, asynchronous generators were needed to produce so-called "clean" current, and synchronous generators to tackle the "hard starts".

#### Today:

With Duplex technology, the electronic controller units are installed individually into each drive engine and react appropriately before the engine is overstrained. In this way, reserve output can be mobilized and the Duplex alternator powers even the heaviest inductive appliances and protects sensitive appliances from damage. This is how the Duplex system combines all the advantages of asynchronous and synchronous alternators, thereby ending the discussion as to which technology is best.

#### The fine difference:

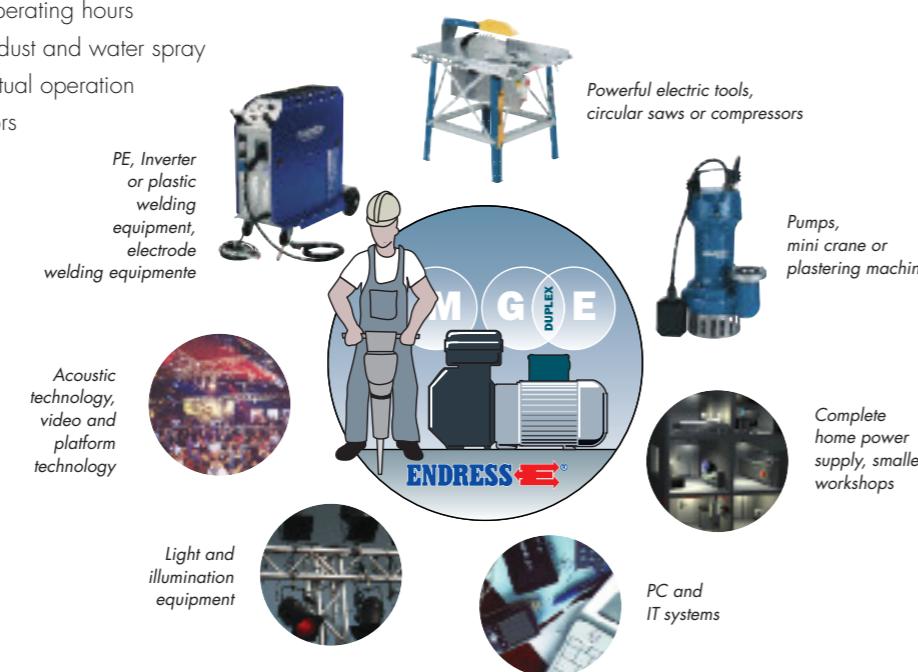
Where conventional wear-prone carbon brushes were once used, the ENDRESS Duplex system uses an intelligent exciter machine. In connection with power electronics, it represents the pinnacle of new-generation technology.



### Advantages at a glance:

- Combines and strengthens the advantages of asynchronous and synchronous alternators
- WCT technology: W = wear-free C = contact-free T = trouble-free
- Simultaneous use by electronic and inductive appliances
- Brushless, electronically regulated synchronous alternator
- Brushless technology provides 20,000 operating hours
- Protection class IP 54 — protected from dust and water spray
- 200% suitable for unbalanced load in actual operation
- Voltage stability +/- 1% with 3~ alternators
- Up to 4 times the starting current
- 100% short-circuit-proof
- Distortion factor ≤ 5%

### A generator for every use!



All DUPLEX generators are built to IP 54 – for your safety



Big and bulky was yesterday – small and light are now



Only DUPLEX generators give you the guarantee that no asymmetric loads can occur

#### Greater safety with IP 54.

#### Why is IP 54 so important?

Generators of protection class IP 54 are protected from the smallest dust particles and water spray. This not only lengthens your generator's life, but most of all protects the people who work with it.

#### Size: tiny!

#### Output: huge!

#### The same pure power as a large unit!

Where heavy stationary units up to 15 kVA were once needed, now a 13 kVA Duplex generator does the job. A brushless Duplex alternator can withstand up to four times nominal current. First in its class – for better mobility.

#### Clean current for sensitive appliances. What is a clean current?

Electronic appliances, such as welding equipment, computers, TVs, stereos, heating systems or various electronic controls require constant power and a stable frequency. Our Duplex technology allows a voltage constant of up to +/- 1 % of nominal voltage (230 V), to protect your appliances.

## ECOtronic

### What is ECOtronic?

With a conventional petrol generator, power is created at the high speed of 3000 RPM. However, experience shows that a generator often runs without any load. From today's point of view, this leads to wasteful use, such as during work with electric tools on construction sites or in repair or emergency use. To meet the requirements, Endress has developed its own ECOtronic that is now standard in the DUPLEXplus line.

### Here's how it works:

ECOtronic is an environmentally friendly alternative to conventional power generation. During use, the ECOtronic system recognizes whether output is being used or not. If no power is drawn, it significantly lowers the RPM. This happens automatically and the generator runs quietly, saving fuel, but is always in readiness. Once power is needed again, such as when an electric tool is used, the ECOtronic makes the necessary power available – with no hesitation.

### Advantages at a glance:

- Lower operating cost
- Fuel savings up to 30%
- Reduced pollutant emissions
- Longer engine life
- Significantly reduced noise emission

## maxdrive

Endress new maxdrive power management module allows combustion engines to be used without performance loss.

### Here's how it works:

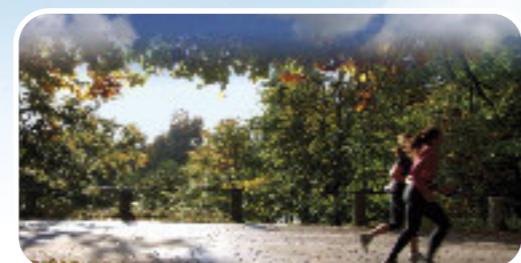
During heavy loads, such as starting current or impact loads, the drive engine's centrifugal governor quickly reaches its limit. Before power drops, the maxdrive power management module supports the engine regulator. The throttle opens all the way and makes sure that the engine's entire output is available.



*Quiet, at last!*



*Another fill-up already?*



*Take a deep breath...*

## The new multifunctional E-MCS 4.0 control display

A system for optimum security and operator-friendliness in day-to-day use

The completely revised E-MCS 4.0 now provides even more information and the status of the unit than its predecessor model E-MCS 3.0. Thanks to its redesigned display, reading off data has become significantly easier since only information relevant to operation is visible. All other information such as warnings and

connected systems remain hidden and are not displayed until they are activated. The new EMCS 4.0 is already designed for the new FireCAN standard so this system meets all the requirements of pioneering technology in the generator and vehicle sectors.



A light sensor controls the LEDs on the basis of light incidence so that good visibility is guaranteed even in direct sunlight.

### Displays in the relevant mode

- Voltage indicator of the individual phases 1-3
- Load of the individual phases 1-3
- Total load on the unit **new**
- Fuel indicator – with warning when into reserve **new**
- Frequency indicator
- Operating hours counter

### Displays for warnings and connected systems

- Earth wire checking device
- Battery charge check/charging function (W)

Insulation fault (W)	
Insulation fault - optional (A)	
ECOtronic active - optional	<b>new</b>
Oil pressure (A)	
Motor temperature (W)	<b>new</b>
Fuel temperature (W)	<b>new</b>
Generator temperature (W)	<b>new</b>
Ambient temperature (W)	<b>new</b>
Emergency Off has been pressed	

A = Shut-off, W = Warning

## connected power with E-RMA

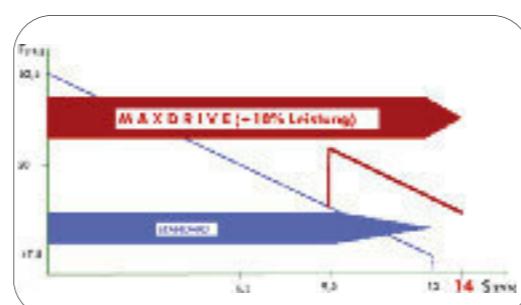
### ENDRESS Remote Monitoring Application

The E-RMA system has been developed to secure your emergency electricity supply even over great distances. Wherever you are in the world, with the ENDRESS E-RMA system you always have sight of the most important data.



### E-RMA LAN

With the ENDRESS E-RMA LAN system you can integrate your permanently installed emergency electricity supply units into your building's computer network. After a few setup steps, you can access your unit from anywhere, including of course from your smartphone.



### The advantages to you:

- Power increase of about 10%
- RPM remains stable under heavy load
- Constant frequency even in the upper RPM range

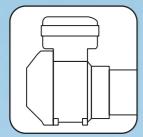
need otherwise is a GSM card with a data tariff (not supplied). After a brief setup process you can check and control your emergency electricity supply from any location.

### E-RMA web application

With the E-RMA system's web interface you can inspect the live data of your units at any time and take over control of them. It doesn't matter whether it's from your PC or your smartphone. The main components of the web application are:

- Control unit with remote start option
- List of alerts
- Detailed generator information
- Location

## The generator drive engine



### Types of drive

**Petrol engines** are used if the generator must be compact for mobile use and only average run times and variable operation are expected.



### When high speed and when low speed?

#### High speed:

##### 3000 RPM petrol or diesel engines

Engines for daily operation: approx. 4 - 10 hours.

Life = service time: approx. 3,000 - 5,000 hours.

Applications: Construction sites, skilled trades, road-works.

**Diesel engines** are heavier and more robust and are therefore better suited to long run times. The specific fuel consumption is lower with diesel engines.

#### Low speed:

##### 1500 RPM diesel engines

Engines for constant operation: 24 hours.

Life = service time: 10,000 - 20,000 hours.

Applications: Current and emergency power supply.



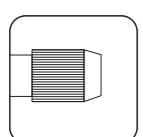
### Starting systems

#### There are two basic types of starting systems:

1. **Recoil starter** for manual engine start with an automatic retracting cable.

#### 2. Electric start with an ignition switch

(a battery must be available).



## Synchronous or asynchronous: a system comparison

### Synchronous

### Asynchronous

**Application** All ohmic and inductive appliances

Only ohmic appliances without limitation  
Inductive appliances with significant limitations

**Starting behaviour** Trouble-free starting, regardless of the appliance  
Compound-regulated generators with three times the starting current  
DUPLEX generators with four times the starting current

Problematic starting behaviour with hard-starting appliances; just for generators without start amplification. For alternators with start amplification a large generator dimensioning is needed

**Load capacity** The alternator can handle a 100% load even with inductive appliances and can therefore be designed smaller

With inductive appliances, the alternator can only be loaded up to 1/3 (without start amplification), 2/3 (with start amplification)

**Regulation** Mechanical regulation IP 23. Electronic regulation IP 54

Usually unregulated, condenser

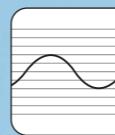
**Protection class** Design-dependent internal cooling IP 23  
Design-dependent cooling external IP 54

Design-dependent IP 54, external cooling

**Protection measures** Safety-separated circuit for personal protection  
FI protection switch not necessary

Safety-separated circuit for personal protection  
FI protection switch not necessary

## The proper current quality



### 230/400 V asynchronous alternator with condenser regulation

For appliances with low starting current, can't be overloaded

### 230 V synchronous alternator with condenser regulation

For appliances with starting current, not suitable for electronic appliances

### 230 V synchronous alternator with AVR regulation\*

Stable output voltage for simple electronic power-consuming devices and power-consuming devices with low input current.  
Not suitable for power-consuming devices with very high input current!

### 400 V synchronous alternator with compound regulation\*\*

For appliances with high starting current. Not suitable for electronic appliance. Never suitable for an unbalanced load\*\*\*

### 230 V synchronous alternator with inverter regulation

Precise output voltage and frequency for sensitive appliances as well as for appliances with starting current for universal use

### 230/400 V DUPLEX alternator - electronic regulation

Precise output voltage and frequency for sensitive appliances as well as for appliances with high starting current for universal use/suitable for unbalanced load\*\*\*

\* AVR (Automatic Voltage Regulation) electronic voltage regulation

\*\* Generator voltage is regulated by an additional magnetic field (compound transformer built into the stator).

\*\*\* An unbalanced load is understood as a non-uniform load in the individual phases of a three-phase alternator.

### Current types



#### DC, AC, three-phase current

#### 12 V DC

used for charging batteries.

#### 230 V AC

Nearly all electric tools, lights and garden and construction machines can be run with it.

#### 400 V three-phase

used at home for appliances like washing machines or cookers, and on construction sites for powerful devices like cranes, circular construction or table saws.

### Key to abbreviations

**V** = volts **Voltage** (12/230/400)

**Hz** = hertz **Frequency** (50/60)

**A** = amperes **amperage**

**W** = watts ( $\times 1000 = \text{kW}$ ) **Active power**

**VA** = Volt Ampere ( $\times 1000 = \text{kVA}$ ) **Apparent output**

**Cos φ** = normatively specified **Power factor**

(0,8-1)

#### Apparent output - data in VA or kVA

- is the output that the generator can produce.

#### Active power - data in W or kW

- the output that can be drawn from the alternator, depending on the alternator's power factor.

#### Reactive power

- the geometric difference between active and apparent power. This is important for covering the starting current.

## Electrical safety

### All mobile generators conform to safety-separated circuit VDE 0100 part 410

No earthing is needed for this protection class. No dangerous touch current can occur if there is a fault to frame (connection between active lines and the appliance housing).

### The RCD protection switch

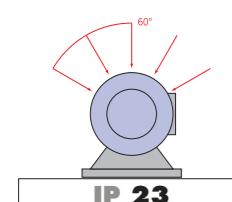
The RCD protection switch provides further protection against dangerous shock current. It shuts off the power supply if there is fault current. This protection measure requires appropriate earthing in which the earthing spike is connected with an earthing cable to the generator's earthing screw for potential equalization.

### Safety-separated circuit - Insulation monitoring with shut-off

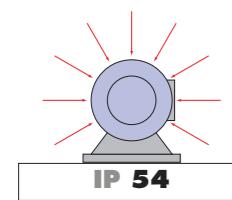
The appliances turn themselves off automatically if the insulation resistance reaches a critical level. The insulation monitoring function is controlled from a test button. Costly earthing with an earthing spike and earthing cable are no longer necessary. This equipment provides a high level of safety, especially in underground construction such as work on gas and water mains (moist environments). It is even obligatory for pipeline construction according to DVGW GW 308.

### IP = International Protection according to DIN 40050

The IP code consists of two digits that indicate the specific degree of protection. The first digit indicates the protection class for touch and foreign object protection, and the second indicates water and moisture protection.



- 0 unprotected
- 1 Foreign objects > 50 mm
- 2 Foreign objects > 12 mm**
- 3 Foreign objects > 2.5 mm
- 4 Foreign objects > 1,0 mm
- 5 dust protected**

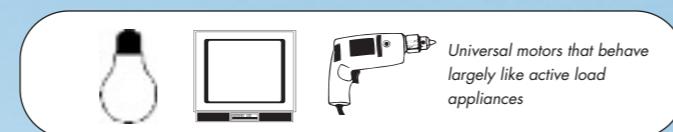


- 0 unprotected
- 1 Dripping water, vertical
- 2 Dripping water, diagonal to 15° from vertical
- 3 Sprayed water, diagonal to 60° from vertical**
- 4 Splashed water, from all directions**
- 5 Water jet, from all directions

## Appliances in a nutshell

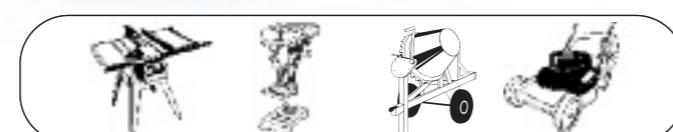
### Ohmic appliances (active load appliances)

These are appliances that convert their power input completely into heat and light and therefore are unproblematic for any generator. The listed output power (watts) is always also the input power that is taken from the alternator. Such appliances include heating devices and hot plates.



### Inductive appliances

These are appliances that are driven by an electric motor. With these devices, friction losses and winding losses result in only about 70 % of the input power being available as output power. Additionally, when the motor is turned on, more power is needed. Depending on the type of device and the motor's quality, this can be 3 to 6 times the input power. Such appliances include compressors, table saws and high-pressure cleaners.



### Capacitive appliances

These include critical appliances that, due to their charging function, can be powered safely by specially equipped Duplex or synchronous generators. They include flashers or discharge lamps.

### The right generator for your application

For determining the right generator for your use, you will find the applications in each model's chart. On pages 38 and 39, you will find detailed selection assistance on appliances and the generators that go with them. The starting power of the Endress generators (3 to 4 times the continuous power value) and the corresponding appliance's starting current are already figured in.

### That can be helpful!

To find out the appliance power, see the model plate or user manual. Consider reserve power in order to be equipped for future applications.

**Recommendation:** Stay 10% below continuous power. That preserves the environment and the generator.

## Two important guidelines for generators

### EU noise guideline 2000/14/EC



#### Purpose:

**Standardization of existing noise protection regulations and limit values in the EU member states**

Guideline 2000/14/EC specifies that the manufacturer is obligated to indicate the power unit's guaranteed noise value. The indication obligation includes the guaranteed value in dB, the LWA mark and a corresponding pictogram.



#### Measurement method and calculation

Sound values are measured according to a precisely specified testing procedure that must be followed by every manufacturer. There is only **one** obligatory, precise designation for the sound level: LWA sound power level. Always pay attention to the LWA value; all other values are chosen freely by the manufacturer.

#### Attention:

Many manufacturers advertise the so-called sound pressure level (LP), which is not represent data that conforms to the relevant standard. The LP value is freely determined by the manufacturer and is therefore not comparable! The LP value is calculated according to a formula that depends on a freely chosen distance from the power unit (see example).

#### Data in catalogue

ENDRESS provides two values.

#### 1. Sound power level (LWA)

confirmed on the device next to an obligatory designation per 2000/14/EC.

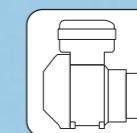
#### 2. Sound pressure level (LPA)

at a distance of 7 metres, this value is calculated as follows: LWA 95 dB(A) - 25 = Lp 70 dB(A).

**ENDRESS: 95 dB(A) - 25 = 70 dB(A) (distance 7m)**

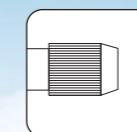
**Competition: 95 dB(A) - 28 = 67 dB(A) (distance 10m)**

### Alternator output data



**Motor:** Engine output data are often given with the maximum output **without load**, normally at 3600 RPM. However, in generators, only 3000 RPM are necessary. For the comparison to work, the output data must therefore always be taken at 3000 RPM.  
All other comparisons are false!!

**Therefore:** Trust only output data based on 3000 RPM.



**How much does an alternator really put out?**  
The total output depends on the efficiency level of the engine (max. 75% to 80%) and the alternator. To be on the safe side, you can use the following rule of thumb to estimate the output yourself:

- 1 HP engine output  
Alternator output max. 0.65 kVA (65%)
- 1 kW engine output  
Alternator output max. 0.85 kVA (85%)

**Attention:** Many competitors often give only the engine output. This is not the data for the generator output!



ENDRESS provides its output according to the European and national standards. We guarantee that our tested and approved measurement methods provide reliable and correct data on the output of our generators!

#### You can rely on this:

ENDRESS generators meet all required standards and guidelines.

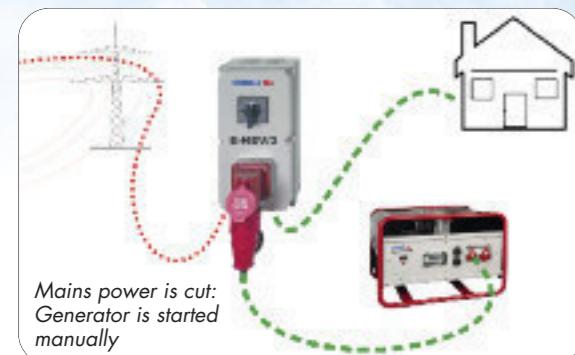
The standards that apply to generators  
Noise guideline 2000/14/EC  
Federal emission protection act (BlmSchG)  
DIN ISO 8528, DIN 6280.

There are several options for generating a simple but efficient emergency power supply.  
We would like to give you some practical advice and show you some ways in which you can safeguard your building against power cuts

## Emergency power supply with manual load switching

In this version, if there is a power cut, a generator is connected to a supply distributor installed on the house and started manually.

- Inexpensive purchase price
- Simple installation by an electrician
- Emergency power mode is only guaranteed if the generator can be started when there is a power cut
- Security of supply not guaranteed



### ENDRESS E-NEV supply distributor

- Manual load switching between public grid and generator
- Installation is done by an electrician between the public grid cable and distributor boxes, in the building (or on a special cable, for consumers entitled to emergency supply)
- Secure load switching is ensured by physical separation of the two networks

Available in two versions:

- **E-NEV/1** for 230 V supply at 16 A or 32 A
- **E-NEV/3** for 400 V supply at 16 A or 32 A

## Emergency electricity supply with automatic load switching device

In this version an installed generator is automatically started and stopped in the event of a power cut. You do not have to be at home to protect your house from a power cut.

- Automatic start-stop operation in the event of a power cut
- Simple installation by an electrician
- Security of supply is guaranteed
- Purchase costs somewhat higher than with manual mode



### ENDRESS E-ATS automatic emergency electricity

- E-MCS 5.0 automatic control panel for monitoring the public grid and for controlling the connected generator
- Load switching contactors built into a robust metal housing, IP54
- Connector blocks for 400 V or 230 V domestic supply
- Charger for battery charging on the generator
- Hard-wired control cable to the generator, 7 m long
- Plug-and-Run connector for ENDRESS generator
- Choke control dependent on temperature



*Double use with ENDRESS Plug-and-Run!  
Emergency electricity mode or portable generator – the choice is yours. The clever ENDRESS Plug-and-Run solution offers you unlimited options*

## Petrol, diesel or gas?

Which is suitable for emergency electricity supply?

### Petrol

#### Advantages:

- Low purchase price
- Small, light and portable generator because of the design of the motor

#### Disadvantages:

- In the event of a power cut, the local petrol station cannot supply any petrol either

### Diesel

#### Advantages:

- Diesel fuel is somewhat cheaper to use

#### Disadvantages:

- Units are big and heavy because of the design of the motor
- Restricted portability
- High purchase price
- In the event of a power cut, the local petrol station cannot supply any diesel either

### Gas

#### Advantages:

- Operation optionally with natural gas or LPG possible
- Combustion without any residues
- Very cheap to use
- No resin deposits in the carburettor with lengthy running times

#### Disadvantages:

- Restricted portability with the use of natural gas

## Installation site of a generator

Even if it sounds tempting – a generator may not be operated within a closed building! The installation site must always be selected in such a way that sufficient cooling air is available and exhaust gases can escape to the outside air unhindered. Installation within buildings is permitted only in areas specially provided for the purpose. Please also ask your local chimney sweep about this. You should give your outdoor generator protection from the weather so as to prevent the penetration of moisture.



## 230 V or 400 V – which version is the right one for me?

If you urgently need a 400 V supply (e.g. stove connection, factory machinery etc.), 400 V supply is an important criterion for you. There are a few points to consider regarding supply. 400 V networks may only be supplied by a generator if they have phase compensation or phase control so as to prevent possible uneven load (overload in one phase). This could damage any connected power consuming devices

e.g. televisions, computers. Our DUPLEX series generators are fitted with electronic phase control as standard, which makes supply to domestic networks possible. All ENDRESS generators may be used for 230 V supply.

You will find the right ENDRESS generator for you on the following pages

### 230 V supply Automatic/Manual

#### Output range 1-10 kVA

- |               |             |
|---------------|-------------|
| <b>Petrol</b> | Pages 17-32 |
| <b>Diesel</b> | Pages 33-39 |

### 400 V supply Automatic/Manual

#### Output range 6-15 kVA

- |               |             |
|---------------|-------------|
| <b>Petrol</b> | Pages 27-32 |
| <b>Diesel</b> | Pages 33-34 |

### Complete GAS system Automatic

#### 230 V supply

Page 42

### Stationary electricity supply units

#### Output range 10-730 kVA

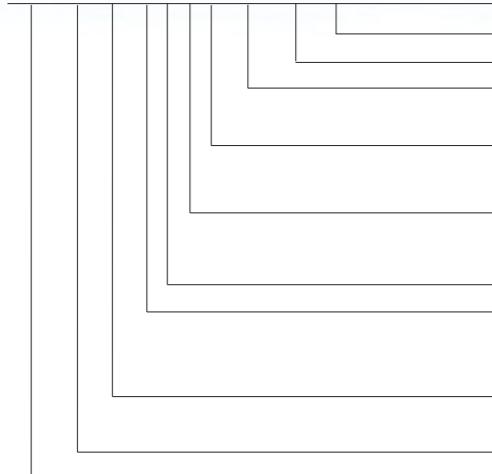
Pages 52- 67

## The latest technology and the best quality – guaranteed

- Handles for easier portability in day-to-day use
- Tank level indicator for safe operation
- Big tank for long running times
  
- 4-in-1 display for a better overview:  
V/Hz/hr/Oil low
- ECOtronic saves operating costs
- maxdrive guarantees full motor performance
  
- Modern, quiet-running 4-stroke OHC and OHV motors can also be operated with E 10 fuel without modification
- Robust diesel motors with 3,000 rpm or 1,500 rpm



ESE 1008 SDHS DC ES DI



## Model designation at ENDRESS generators

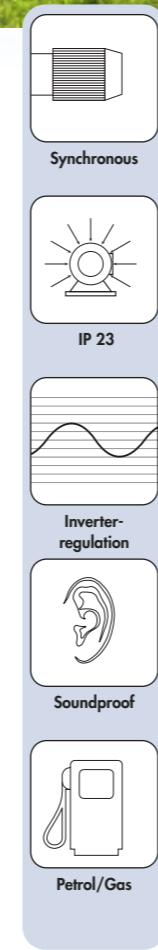
Diesel engine  
Electrical starting  
DC = direct current welding AC = alternating current welding  
  
G = DUPLEX alternator S = Synchronous alternator  
  
B = BRIGGS & STRATTON S = SUBARU L = LOMBARDINI  
H = HONDA R = ROBIN H = HATZ Y = YANMAR  
  
D = Three-phase current 400 V  
S = Welding alternator  
  
04 = Series, frame device without large tank  
06 = Series, frame device with large tank  
08 = Series fully soundproof cover  
10 = Performance class  
ESE = ENDRESS STROMERZEUGER

## Application factor

● ● ● especially well suited

Silent Line Classic Power Line Professional GT Line Duplex<sup>plus</sup> Line Duplex<sup>Silent</sup> Line Duplex<sup>Silent</sup> Line Diesel Diesel Line

	● ● ●	● ●	●	● ● ●	● ● ●	● ● ●	●
Electronic devices	● ● ●						
Electric tools	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	
Gardening/construction equip.	●	● ●	● ● ●	● ● ●	● ● ●	● ● ●	
Inverter welding equipment	●	● ●	● ● ●	● ● ●	● ● ●	● ●	
Emergency power supply	● ● ●	●	●	● ● ●	● ● ●	● ● ●	●



ESE 2000 T

The compact, easy to handle format provides portable, quiet-as-a-whisper power – for all circumstances

Electronic devices	● ● ●
Electric tools	● ● ●
Gardening/construction equip.	●
Inverter welding equipment	
Emergency power supply	● ● ●

## Silent Line 1.3 – 3.8 kVA



ESE 4500 T

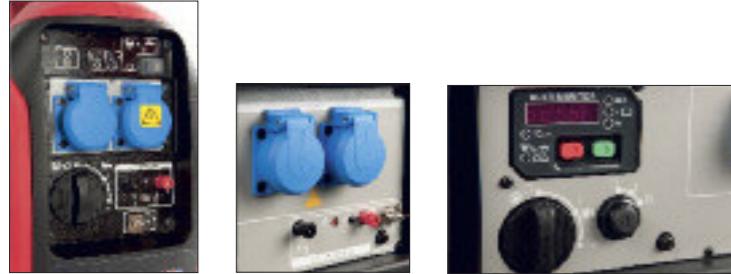
ESE 3500 T

ESE 2000 T

- Inverter technology
- High-quality current
- Compact dimensions
- Easy handling

### Equipment details

Automatic low oil shutoff  
Alternator overload protection  
Load-dependent engine RPM  
Connection for 12 V battery charger



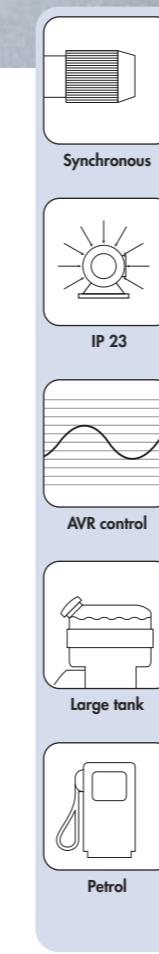
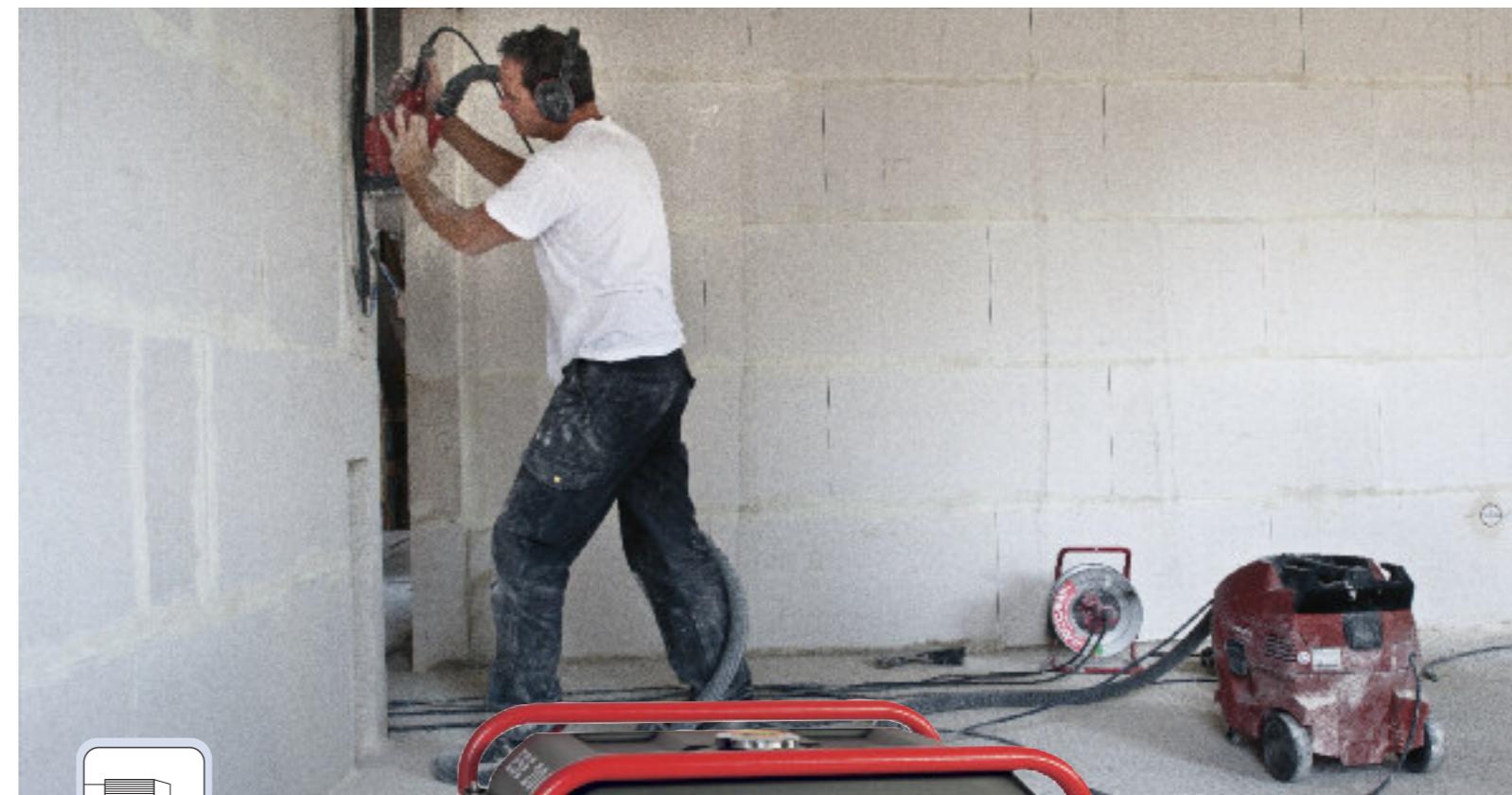
Available accessories	Order No.
Maintenance kit	164 008 ESE 2000 T
Maintenance kit	164 001 ESE 3500 T
Maintenance kit	164 002 ESE 4500 T

Model	ESE 2000 T Silent	ESE 2000 T Silent Gas	ESE 3500 T Silent	ESE 4500 T Silent
Order No.	110 000	110 004	110 001	110 002
Alternator	synchronous	synchronous	synchronous	synchronous
Max. output kVA/kW	1.65 / 1.65	1.65 / 1.65	3.2 / 3.2	4.3 / 4.3
Continuous power kVA/kW	1.35 / 1.35	1.35 / 1.35	2.8 / 2.8	3.8 / 3.8
Nominal voltage	230 V 1~ / 12 V =			
Nominal current	5.8 A 1~ / 8.3 A =	5.8 A 1~ / 8.3 A =	12.1 A 1~ / 8.3 A =	16.5 A 1~ / 8.3 A =
Power factor cos φ	1	1	1	1
Frequency/protection class	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23
Engine type	ROBIN EH 09 / 3 HP	ROBIN EH 09 / 3 HP	ROBIN EX 21 / 7 HP	ROBIN EX 27 / 9 HP
Design	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHC	1-cylinder 4-stroke OHC
Displacement	86 cm <sup>3</sup>	86 cm <sup>3</sup>	211 cm <sup>3</sup>	265 cm <sup>3</sup>
Output 3000 U/rpm	1.6 kW	1.6 kW	3.2 kW	4.4 kW
Fuel/tank capacity (litres)	Petrol / 4	Gas / -	Petrol / 10.8	Petrol / 12.8
Consumption/running time at 75% load*	0.7 l / 6 h	0.6 kg / -	1.4 l / 6.5 h	1.8 l / 7 h
Start-up system	Recoil starter	Recoil starter	E-Start incl. battery	E-Start incl. battery
Sound power level LWA	90 dB(A)	90 dB(A)	91 dB(A)	91 dB(A)
Sound pressure level LPA (7 m)	65 dB(A)	65 dB(A)	66 dB(A)	66 dB(A)
Weight in kg	21	21	59	74
Dimensions L x W x H in mm	490 x 295 x 445	490 x 295 x 445	537 x 482 x 583	580 x 527 x 618
Shockproof sockets	2 x 230 V/16 A			
Possible applications*	230 V	230 V	230 V	230 V
Electronic devices up to	1350 W	1350 W	2800 W	3800 W
Electric tools up to	1200 W	1200 W	2600 W	3600 W
Garden tools up to	1000 W	1000 W	1900 W	2500 W
Construction machines up to			1400 W	1900 W

\*Data is based on average values and are not binding, since individual cases may vary.

## Classic Power Line 2.0 – 6.0 kVA

ENDRESS®



ESE 206 RS-GT

**The compact format ensures easy portability and makes the Classic Power Line an excellent source of electricity for independent and professional work in the private, commercial and industrial sectors**

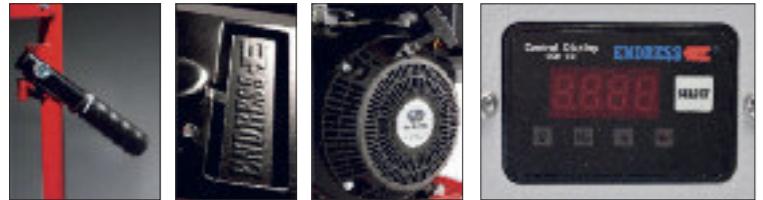
Electronic devices	● ●
Electric tools	● ● ●
Gardening/construction equipment	● ●
Inverter welding equipment	●
Emergency power supply	●

## Classic Power Line 2.0 – 6.0 kVA



### Equipment details

- Automatic low oil shutoff
- Alternator overload protection
- Automatic voltage regulation - AVR
- 4-in-1 Display = V/Hz/h/low oil
- Large tank for long operation
- Tank level indicator - optical
- Folding handles

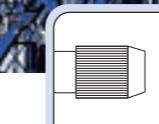


Model	ESE 206 RS-GT	ESE 406 RS-GT	ESE 606 RS-GT	ESE 606 DRS-GT
Order No.	112 200	112 201	112 202	112 203
Alternator	synchronous	synchronous	synchronous	synchronous
Max. output kVA/kW	2.2 / 2.2	3.8 / 3.8	5.5 / 5.5	7.0 / 5.6
Continuous power kVA/kW	2.0 / 2.0	3.5 / 3.5	5.0 / 5.0	6.2 / 5.0
Nominal voltage	230 V 1~	230 V 1~	230 V 1~	400 V 3~
Nominal current	8.7 A 1~	15.2 A 1~	21.7 A 1~	9.0 A 3~
Power factor cos φ	1	1	1	0.8
Frequency/protection class	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23
Engine type	SUBARU EX 17 / 6 HP	SUBARU EX 27 / 9 HP	SUBARU EX 40 / 14 HP	SUBARU EX 40 / 14 HP
Design	1-cylinder 4-stroke OHC	1-cylinder 4-stroke OHC	1-cylinder 4-stroke OHC	1-cylinder 4-stroke OHC
Displacement	169 cm <sup>3</sup>	265 cm <sup>3</sup>	404 cm <sup>3</sup>	404 cm <sup>3</sup>
Output 3000 RPM	2.6 kW	4.4 kW	6.3 kW	6.3 kW
Fuel/tank capacity (litres)	Petrol / 20	Petrol / 30	Petrol / 30	Petrol / 30
Consumption/running time at 75% load*	1.2 l / 16 h	2.1 l / 14 h	2.5 l / 12 h	2.7 l / 11 h
Start-up system	Recoil starter	Recoil starter	Recoil starter	Recoil starter
Sound power level LWA	96 dB(A)	97 dB(A)	97 dB(A)	97 dB(A)
Sound pressure level LPA (7 m)	71 dB(A)	72 dB(A)	72 dB(A)	72 dB(A)
Weight in kg	47	78	88	92
Dimensions L x W x H in mm	640 x 475 x 526	786 x 570 x 600	786 x 570 x 600	786 x 570 x 600
Shockproof sockets	2 x 230 V/16 A	2 x 230 V/16 A 1 x CEE 230 V/32 A	2 x 230 V/16 A 1 x CEE 230 V/32 A	1 x 230 V/16 A 1 x CEE 400 V/16 A
Possible applications*	230 V	230 V	230 V	400 V
Electric tools up to	1900 W	3400 W	4900 W	4900 W
Gardening or construction equip. up to	1300 W	2300 W	3300 W	3300 W
Compressors or pumps up to	1000 W	1700 W	2500 W	2500 W
Inverter welding equipment up to				1600 W
				Ø 2.5 mm

\*Data is based on average values and are not binding, since individual cases may vary.

## Professional Line 2.5 – 7.0 kVA

**ENDRESS** 



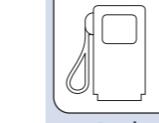
Synchronous



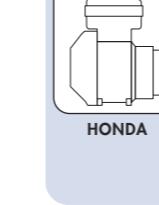
IP 23



Compound-  
regulation



Petrol



Honda

**Professional Line quality power generators  
which are convincing on performance and  
price**

- Electronic devices
- Electric tools
- Gardening/construction equipment
- Inverter welding equipment
- Emergency power supply

## Professional Line 2.5 – 7.0 kVA

- Large side panels protect the engine and the alternator
- Robust and powerful alternator
- Reliable HONDA engines with long service range



ESE 504 DHS

ESE 304 HS

	Available accessories	Order No.
Wheel set	161 000	Series ESE 304, 404, 504, 604
Folding handles	161 002	Series ESE 404, 504, 604
Crane loading device	161 102	Series ESE 504, 604

Model	ESE 304 HS	ESE 404 HS	ESE 504 DHS	ESE 604 HS	ESE 604 DHS
Order No.	230 011	230 012	230 013	230 014	230 015
Alternator	synchronous	synchronous	synchronous	synchronous	synchronous
Max. output kVA/kW <sup>1</sup>	2.9 / 2.6	5.1 / 4.6	6.3 / 5.0	4.2 / 3.7	7.2 / 6.4
Continuous power kVA/kW <sup>1</sup>	2.5 / 2.2	4.2 / 3.9	5.4 / 4.3	3.1 / 2.8	6.0 / 5.5
Nominal voltage	230 V 1~	230 V 1~	400 V 3~	230 V 1~	400 V 3~
Nominal current	10.9 A 1~	18.3 A 1~	7.7 A 3~	13.5 A 1~	26.1 A 1~
Power factor cos φ	0.9	0.9	0.8	0.9	0.8
Frequency/protection class	50 Hz/IP 23				
Engine type	HONDA GX 160 / 5 HP	HONDA GX 270 / 8 HP	HONDA GX 270 / 8 HP	HONDA GX 390 / 11 HP	HONDA GX 390 / 11 HP
Design	1-cylinder 4-stroke OHV				
Displacement	163 cm <sup>3</sup>	270 cm <sup>3</sup>	270 cm <sup>3</sup>	389 cm <sup>3</sup>	389 cm <sup>3</sup>
Output 3000 RPM <sup>1</sup>	2.5 kW	4.6 kW	4.6 kW	6.0 kW	6.0 kW
Fuel/tank capacity (litres)	Petrol / 3.6	Petrol / 6.0	Petrol / 6.0	Petrol / 6.5	Petrol / 6.5
Consumption/running time <sup>2</sup>	0.9 l / 4 h	1.6 l / 3.5 h	1.6 l / 3.5 h	2.1 l / 3 h	2.2 l / 3 h
Start-up system	Recoil starter				
Sound power level LWA <sup>1</sup>	96 dB(A)	99 dB(A)**	99 dB(A)**	99 dB(A)**	99 dB(A)**
Sound pressure level LPA (7 m) <sup>1</sup>	75 dB(A)	74 dB(A)	74 dB(A)	74 dB(A)	74 dB(A)
Weight in kg	38	53	63	72	68
Dimensions L x W x H in mm	640 x 455 x 400	715 x 540 x 490	750 x 578 x 531	750 x 578 x 531	750 x 578 x 531
Shockproof sockets	2 x 230 V/16 A	2 x 230 V/16 A	1 x 230 V/16 A	1 x 230 V/16 A	1 x 230 V/16 A
			1 x CEE 400 V/16 A	1 x CEE 230 V/32 A	1 x CEE 400 V/16 A
Possible applications <sup>2</sup>	230 V	230 V	400 V	230 V	230 V
Electric tools up to	2100 W	3800 W	4200 W	2700 W	5400 W
Gardening or construct. equip.	1500 W	2600 W	2900 W	1900 W	3600 W
Compressors or pumps up to	1100 W	2000 W	2200 W	1400 W	2800 W
Inverter welding equipment up to			Ø 2,5 mm		Ø 3,25 mm

<sup>1</sup> Information about the output, loudness specification as well as the measuring procedure and calculations can be found on page 13.

<sup>2</sup> Consumption/litres in hours, running time in hours. These data are based on approximate values for a 75% load and are therefore not binding.

\*\*Does not conform to EU noise guideline 2000/14/EC

## Professional GT Line 3.0 – 20.0 kVA

ENDRESS 



**Professional power generation with high-performance synchronous generators. The dual voltage system also provides heavy alternating current consuming devices with all the power they need**

Electronic devices	●
Electric tools	● ● ●
Gardening/construction equipment	● ● ●
Inverter welding equipment	● ●
Emergency power supply	●

# Professional GT Line

## 3.0 – 20.0 kVA

**ENDRESS** 

### Equipment details

- Automatic low oil shut-off
- Alternator overload protection
- HONDA OHV engines
- Large tank for long operation
- Folding handles
- All generators have a low distortion device for clean voltage
- Compound regulated 400 V high-performance generators



Model	ESE 306 HS-GT	ESE 406 HS-GT	ESE 506 DHS-GT	ESE 606 HS-GT			
<b>Order No.</b>	112 301	112 302	112 304	112 303			
<b>Alternator</b>	synchronous	synchronous	synchronous	synchronous			
<b>Max. output kVA/kW</b>	3.4 / 3.1	5.1 / 4.6	6.3 / 5.0	4.2 / 3.7			
<b>Continuous power kVA/kW</b>	2.9 / 2.6	4.2 / 3.9	5.4 / 4.3	3.1 / 2.8			
<b>Nominal voltage</b>	230 V 1~	230 V 1~	400 V 3~	230 V 1~			
<b>Nominal current</b>	12.5 A 1~	18.3 A 1~	7.7 A 3~	13.5 A 1~			
<b>Power factor cos φ</b>	0.9	0.9	0.8	0.9			
<b>Frequency/protection class</b>	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23			
<b>Engine type</b>	HONDA GX 200 / 5,5 HP	HONDA GX 270 / 8 HP	HONDA GX 270 / 8 HP	HONDA GX 390 / 11 HP			
<b>Design</b>	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV			
<b>Displacement</b>	196 cm <sup>3</sup>	270 cm <sup>3</sup>	270 cm <sup>3</sup>	389 cm <sup>3</sup>			
<b>Output 3000 RPM</b>	3,3 kW	4.6 kW	4.6 kW	6.0 kW			
<b>Fuel/tank capacity (litres)</b>	Petrol / 20	Petrol / 30	Petrol / 30	Petrol / 30			
<b>Consumption/running time at 75% load*</b>	1.1 l / 18 h	1.6 l / 18 h	1.6 l / 18 h	2.2 l / 13 h			
<b>Start-up system</b>	Recoil starter	Recoil starter	Recoil starter	Recoil starter			
<b>Sound power level LWA</b>	96 dB(A)	97 dB(A)	97 dB(A)	97 dB(A)			
<b>Sound pressure level LPA (7 m)</b>	71 dB(A)	72 dB(A)	72 dB(A)	72 dB(A)			
<b>Weight in kg</b>	43	61	69	73			
<b>Dimensions L x W x H in mm</b>	637 x 473 x 500	800 x 538 x 576	800 x 538 x 576	800 x 538 x 576			
<b>Shockproof sockets</b>	2 x 230 V/16 A	2 x 230 V/16 A	1 x 230 V/16 A 1 x CEE 400 V/16 A	1 x 230 V/16 A 1 x CEE 400 V/16 A			
<b>Models with E-Start incl. battery</b>	ESE 406 HS-GT ES		ESE 606 HS-GT ES				
<b>Order No.</b>	112 306		112 307				
<b>Weight in kg</b>	66		78				
<b>Possible applications*</b>	<b>230 V</b>	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>
<b>Electric tools up to</b>	2500 W	3800 W	4200 W	2700 W	5400 W	5500 W	3100 W
<b>Gardening or construction equip. up to</b>	1700 W	2600 W	2900 W	1900 W	3600 W	3700 W	2100 W
<b>Compressors or pumps up to</b>	1300 W	2000 W	2200 W	1400 W	2800 W	2800 W	1600 W
<b>Inverter welding equipment up to</b>			Ø 2.5 mm			Ø 3.25 mm	Ø 4.5 mm

\*Data is based on average values and are not binding, since individual cases may vary.

Available accessories	Order No.	Special equipment - not retrofit	Order No.
Wheel set	161 000 Series <b>ESE 306-606</b>	RCD protection switch	162 009 all models
Wheel set	161 015 Series <b>ESE 1006</b>	Insulation monitoring	010 043 Model <b>ESE 1006</b>
Wheel set	161 007 Series <b>ESE 1206</b>	Cable remote control (50 m)	162 006 Model <b>ESE 1006</b>
Crane loading device	161 103 Model <b>ESE 1206</b>	Cable remote control (20 m)	162 023 Models <b>ESE 406, 606, 1206</b> (E-Start 230 V)
Exhaust hose (1.5 m)	163 120 Model <b>ESE 1006</b>	Wireless remote control	162 007 Model <b>ESE 1006</b>
90° Adapter	161 130 Model <b>ESE 1006</b>	AMF panel	162 332 Models <b>ESE 406, 606, 1206</b> (E-Start 230 V)
Manual LTS E-NEV/1-32	162 301 Models <b>ESE 606, 1206</b> (only 230V)	3-way fuel cock	163 050 Model <b>ESE 1006</b>
Refueling system	163 110 fits 3-way fuel cock		

Model	ESE 606 DHS-GT	ESE 1006 DBS-GT	ESE 1206 HS-GT ES	ESE 1206 DHS-GT ES
<b>Order No.</b>	112 305	112 023	112 021	112 022 112 308
<b>Alternator</b>	synchronous	synchronous	synchronous	synchronous
<b>Max. output kVA/kW</b>	8.3 / 6.6	4.9 / 4.4	11.0 / 8.8	6.6 / 5.9
<b>Continuous power kVA/kW</b>	7.0 / 5.6	3.5 / 3.2	10.0 / 8.0	6.0 / 5.4
<b>Nominal voltage</b>	400 V 3~	230 V 1~	400 V 3~	230 V 1~
<b>Nominal current</b>	10.1 A 3~	15.2 A 1~	14.4 A 3~	26.1 A 1~
<b>Power factor cos φ</b>	0.8	0.9	0.8	0.9
<b>Frequency/protection class</b>	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23
<b>Engine type</b>	HONDA GX 390 / 11 HP	B & S VANGUARD / 18 HP	HONDA GX 630 / 21 HP	HONDA GX 630 / 21 HP
<b>Design</b>	1-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV
<b>Displacement</b>	389 cm <sup>3</sup>	570 cm <sup>3</sup>	688 cm <sup>3</sup>	614 cm <sup>3</sup>
<b>Output 3000 RPM</b>	6.0 kW	11.9 kW	14.2 kW	14.2 kW
<b>Fuel/tank capacity (litres)</b>	Petrol / 30	Petrol / 16	Petrol / 24	Petrol / 24
<b>Consumption/running time at 75% load*</b>	2.1 l / 14 h	2.9 l / 5 h	3.9 l / 6 h	3.9 l / 6 h
<b>Start-up system</b>	Recoil starter	Recoil starter	E-Start incl. battery	E-Start incl. battery
<b>Sound power level LWA</b>	97 dB(A)	97 dB(A)	96 dB(A)	96 dB(A)
<b>Sound pressure level LPA (7 m)</b>	72 dB(A)	72 dB(A)	71 dB(A)	71 dB(A)
<b>Weight in kg</b>	81	119	162	165
<b>Dimensions L x W x H in mm</b>	800 x 538 x 576	930 x 560 x 630	960 x 641 x 667	960 x 5641 x 667
<b>Shockproof sockets</b>	1 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 400 V/16 A	2 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 400 V/16 A	1 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 400 V/16 A	1 x 230 V/16 A 2 x CEE 230 V/16 A 1 x CEE 400 V/16 A
<b>Models with E-Start incl. battery</b>	ESE 606 DHS-GT ES		ESE 1006 DBS-GT ES	
<b>Order No.</b>	112 308	112 024		
<b>Weight in kg</b>	86	130		
<b>Possible applications*</b>	<b>400 V</b>	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>
<b>Electric tools up to</b>	5500 W	3100 W	7900 W	5300 W
<b>Gardening or construction equip. up to</b>	3700 W	2100 W	5300 W	3600 W
<b>Compressors or pumps up to</b>	2800 W	1600 W	4000 W	2700 W
<b>Inverter welding equipment up to</b>	Ø 3.25 mm	Ø 4.5 mm	Ø 3.25 mm	Ø 3.25 mm

\*Data is based on average values and are not binding, since individual cases may vary.

## Professional GT Line 10.0 – 20.0 kVA



ESE 2006 DBS-GT ES

Available accessories	Order No.
Wheel set	161 015 Models <b>ESE 1306, 1506</b>
Manual LTS E-NEV/1-32	162 301 Model <b>ESE 1306</b> (only 230 V)
Refueling system	163 110 fits <b>3-way fuel cock</b>

Special equipment - not retrofit	Order No.
RCD protection switch	162 009 <b>all models</b>
Cable remote control (50 m)	162 006 Models <b>ESE 1306, 1506, 2006</b>
Wireless remote control	162 007 Models <b>ESE 1306, 1506, 2006</b>
AMF panel	162 330 Model <b>ESE 1306</b> (E-Start 230 V)
3-way fuel cock	163 050 <b>all models</b>



ESE 1306 HS-GT ES  
ESE 1306 DHS-GT ES  
ESE 1506 DHS-GT ES

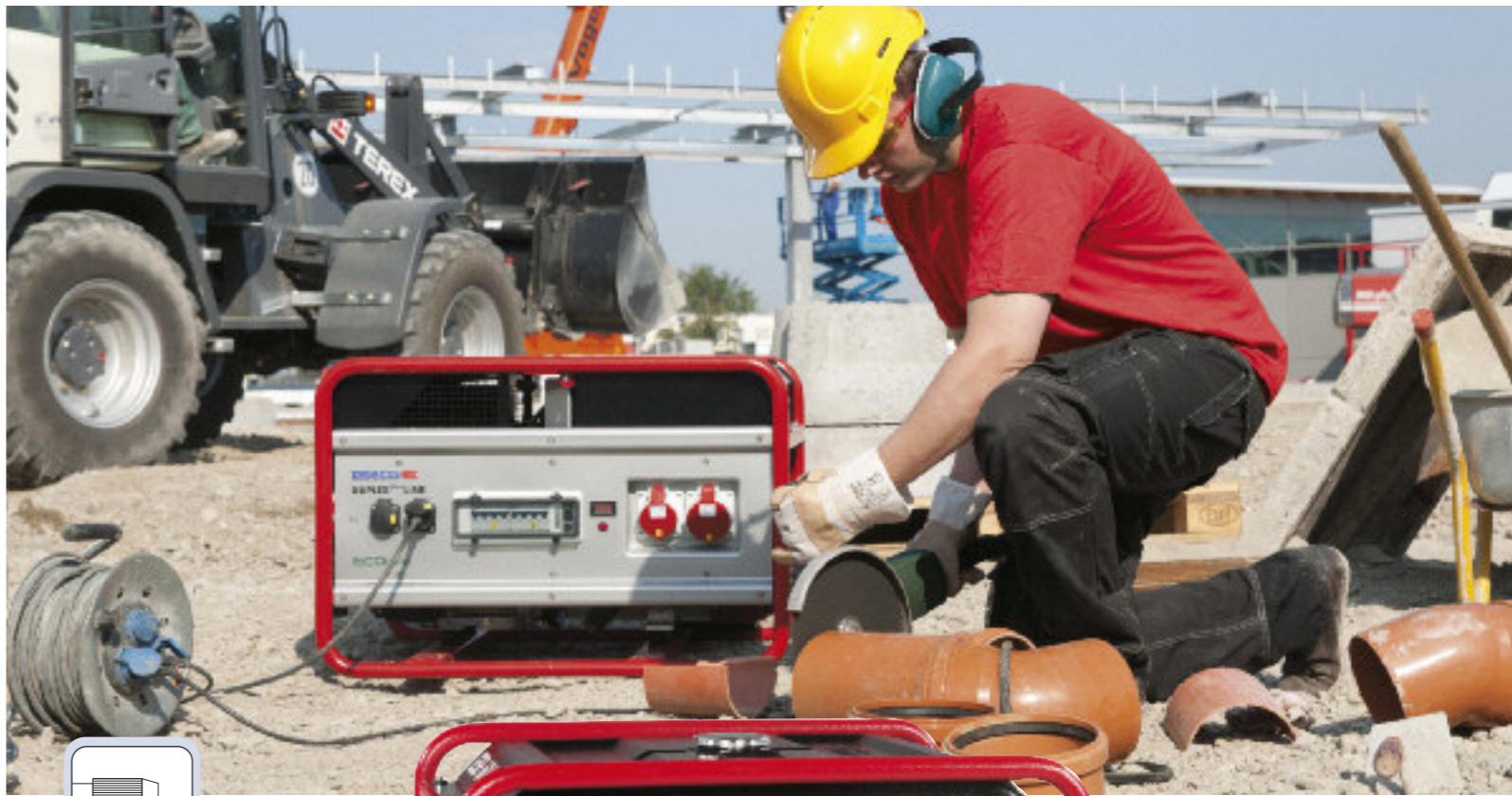
Model	ESE 1306 HS-GT ES	ESE 1306 DHS-GT ES	ESE 1506 DHS-GT ES	ESE 2006 DBS-GT ES
Order No.	230 028	230 029	230 031	230 033
Alternator	synchronous	synchronous	synchronous	synchronous
Max. output kVA/kW	9.9 / 9.9	13.2 / 10.5	7.6 / 6.8	14.5 / 11.7
Continuous power kVA/kW	9.0 / 9.0	12.0 / 9.6	6.9 / 6.2	13.2 / 10.6
Nominal voltage	230 V 1~	400 V 3~	230 V 1~	400 V 3~
Nominal current	39.1 A 1~	17.3 A 3~	16.0 A 1~	19.0 A 3~
Power factor cos φ	0.9	0.8	0.9	0.8
Frequency/protection class	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23
Engine type	HONDA GX 630 / 21 HP	HONDA GX 630 / 21 HP	HONDA GX 690 / 22 HP	BRIGGS & STRATTON / 35 HP
Design	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV
Displacement	688 cm <sup>3</sup>	688 cm <sup>3</sup>	688 cm <sup>3</sup>	993 cm <sup>3</sup>
Output 3000 RPM	14.2 kW	14.2 kW	14.2 kW	21.0 kW
Fuel/tank capacity (litres)	Petrol / 16	Petrol / 16	Petrol / 16	Petrol / 35
Consumption/running time at 75% load*	3.5 l / 4.5 h	3.5 l / 4.5 h	4.2 l / 3.8 h	7.5 l / 4.6 h
Start-up system	E-Start	E-Start	E-Start	E-Start
Sound power level LWA	102 dB(A)**	102 dB(A)**	103 dB(A)**	104 dB(A)**
Sound pressure level LPA (7 m)	77 dB(A)	77 dB(A)	78 dB(A)	79 dB(A)
Weight in kg	137	137	140	230
Dimensions L x W x H in mm	945 x 570 x 645	945 x 570 x 645	945 x 570 x 645	1100 x 700 x 890
Shockproof sockets	1 x 230 V/16 A 1 x CEE 230 V/32 A	1 x CEE 230 V/16 A 1 x CEE 400 V/16 A	1 x CEE 230 V/16 A 1 x CEE 230 V/32 A	1 x CEE 230 V/16 A 1 x CEE 230 V/32 A
Possible applications*	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>	<b>400 V</b>
Electric tools up to	8000 W	9300 W	6100 W	10500 W
Gardening or construction equip. up to	5400 W	6200 W	4100 W	6200 W
Compressors or pumps up to	4000 W	4700 W	3100 W	5200 W
Inverter welding equipment up to	Ø 5.0 mm	Ø 6.0 mm	Ø 6.0 mm	Ø 6.0 mm

\* Data is based on average values and are not binding, since individual cases may vary.

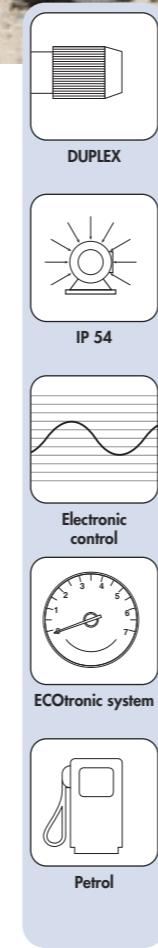
\*\*Does not conform to EU noise guideline 2000/14/EC

## DUPLEX<sup>plus</sup> Line 2.5 – 15.0 kVA

ENDRESS



ESE 606 DHG-GT



**Portable power generation with pioneering technology. The DUPLEX<sup>plus</sup> line combines performance and economy**

- Electronic devices
- Electric tools
- Gardening/construction equipment
- Inverter welding equipment
- Emergency power supply

**DUPLEX<sup>plus</sup> advantages at a glance**

- Lower operating cost
- Reduced pollutant emissions
- Significantly reduced noise emission
- Fuel savings up to 30%
- Protection class IP 54 – protected from dust and spray
- Brushless, electronically regulated synchronous alternator

- Voltage stability +/- 1% with 3~ alternators
- Brushless technology provides 20.000 operating hours
- Suitable for 200% unbalanced load in actual operation
- Combines and strengthens the advantages of asynchronous and synchronous alternators
- Simultaneous use by electronic and inductive appliances



ESE 306 HG-GT



ESE 606 DHG-GT

**Equipment details**

- ECOtronic system
- HONDA OHV engines
- 4-in-1 Display = V/Hz/h/low oil
- Automatic low oil shut-off
- Alternator overload protection
- Tank level indicator - optical
- Folding handles



Model	ESE 306 HG-GT DUPLEX	ESE 406 HG-GT DUPLEX	ESE 406 HG-GT ES DUPLEX	ESE 506 HG-GT DUPLEX
<b>Order No.</b>	113 251	113 252	113 253	113 254
<b>Alternator</b>	DUPLEX	DUPLEX	DUPLEX	DUPLEX
<b>Max. output kVA/kW</b>	2.7 / 2.7	4.4 / 4.4	4.4 / 4.4	5.5 / 5.5
<b>Continuous power kVA/kW</b>	2.5 / 2.5	4.0 / 4.0	4.0 / 4.0	5.5 / 5.0
<b>Nominal voltage</b>	230 V 1~	230 V 1~	230 V 1~	230 V 1~
<b>Nominal current</b>	10.9 A 1~	17.4 A 1~	17.4 A 1~	21.7 A 1~
<b>Power factor cos φ</b>	1	1	1	1
<b>Frequency/protection class</b>	50 Hz/IP54	50 Hz/IP 54	50 Hz/IP 54	50 Hz/IP 54
<b>Engine type</b>	<b>HONDA GX 200 / 5.5 HP</b>	<b>HONDA GX 270 / 8 HP</b>	<b>HONDA GX 270 / 8 HP</b>	<b>HONDA GX 390 / 11 HP</b>
<b>Design</b>	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV
<b>Displacement</b>	196 cm <sup>3</sup>	270 cm <sup>3</sup>	270 cm <sup>3</sup>	389 cm <sup>3</sup>
<b>Output 3000 RPM</b>	3.3 kW	4.6 kW	4.6 kW	6.0 kW
<b>Fuel/tank capacity (litres)</b>	Petrol / 15	Petrol / 25	Petrol / 25	Petrol / 25
<b>Consumption/running time at 75% load*</b>	1.1 l / 13.5 h	1.6 l / 15.5 h	1.6 l / 15.5 h	2.2 l / 11 h
<b>Start-up system</b>	Recoil starter	Recoil starter	E-Start incl. battery	Recoil starter
<b>Sound power level LWA</b>	96 dB(A)	97 dB(A)	97 dB(A)	97 dB(A)
<b>Sound pressure level LPA (7 m)**</b>	63 dB(A)	64 dB(A)	64 dB(A)	60 dB(A)
<b>Weight in kg</b>	60	80	82	91
<b>Dimensions L x W x H in mm</b>	635 x 540 x 490	750 x 610 x 585	750 x 610 x 585	750 x 610 x 585
<b>Shockproof sockets</b>	1 x 230 V/16 A 1 x CEE 230 V/16 A	2 x 230 V/16 A 1 x CEE 230 V/32 A	2 x 230 V/16 A 1 x CEE 230 V/32 A	2 x 230 V/16 A 1 x CEE 230 V/32 A
<b>Possible applications*</b>	<b>230 V</b>	<b>230 V</b>	<b>230 V</b>	<b>230 V</b>
<b>Electronic devices up to</b>	2500 W	4000 W	4000 W	5000 W
<b>Electric tools up to</b>	2400 W	3900 W	3900 W	4900 W
<b>Gardening or construction equip. up to</b>	1700 W	2700 W	2700 W	3300 W
<b>Compressors or pumps up to</b>	1300 W	2000 W	2000 W	2500 W
<b>Inverter welding equipment up to</b>		Ø 2.5 mm	Ø 2.5 mm	Ø 2.5 mm

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\*In ECOtronic mode

Available accessories	Order No.
<b>Wheel set</b>	161 022 Series <b>ESE 406, 506, 606</b>
<b>Crane loading device</b>	161 105 Model <b>ESE 306 HG-GT</b>
<b>Crane loading device</b>	161 106 Series <b>ESE 406, 506, 606</b>
<b>Manual LTS E-NEV/1-16</b>	162 300 Model <b>ESE 306 HG-GT</b>
<b>Manual LTS E-NEV/1-32</b>	162 301 Series <b>ESE 406, 506</b>
<b>Manual LTS E-NEV/3-16</b>	162 303 Series <b>ESE 606</b>

Model	ESE 506 HG-GT ES DUPLEX	ESE 606 DHG-GT DUPLEX	ESE 606 DHG-GT ES DUPLEX
<b>Order No.</b>	113 255	113 256	113 257
<b>Alternator</b>	DUPLEX	DUPLEX	DUPLEX
<b>Max. output kVA/kW</b>	5.5 / 5.5	6.6 / 5.3	4.4 / 4.0
<b>Continuous power kVA/kW</b>	5.0 / 5.0	6.0 / 4.8	4.0 / 3.6
<b>Nominal voltage</b>	230 V 1~	400 V 3~	230 V 1~
<b>Nominal current</b>	21.7 A 1~	8.7 A 3~	17.4 A 1~
<b>Power factor cos φ</b>	1	0.8	0.8
<b>Frequency/protection class</b>	50 Hz/IP 54	50 Hz/IP 54	50 Hz/IP 54
<b>Engine type</b>	<b>HONDA GX 390 / 11 HP</b>	<b>HONDA GX 390 / 11 HP</b>	<b>HONDA GX 390 / 11 HP</b>
<b>Design</b>	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV
<b>Displacement</b>	389 cm <sup>3</sup>	389 cm <sup>3</sup>	389 cm <sup>3</sup>
<b>Output 3000 RPM</b>	6.0 kW	6.0 kW	6.0 kW
<b>Fuel/tank capacity (litres)</b>	Petrol / 25	Petrol / 25	Petrol / 25
<b>Consumption/running time at 75% load*</b>	2.2 l / 11 h	2.1 l / 12 h	2.1 l / 12 h
<b>Start-up system</b>	E-Start incl. battery	Recoil starter	E-Start incl. battery
<b>Sound power level LWA</b>	97 dB(A)	97 dB(A)	97 dB(A)
<b>Sound pressure level LPA (7 m)**</b>	60 dB(A)	60 dB(A)	60 dB(A)
<b>Weight in kg</b>	93	94	96
<b>Dimensions L x W x H in mm</b>	750 x 610 x 585	750 x 610 x 585	750 x 610 x 585
<b>Shockproof sockets</b>	2 x 230 V/16 A 1 x CEE 230 V/32 A	2 x 230 V/16 A 1 x CEE 400 V/16 A	2 x 230 V/16 A 1 x CEE 400 V/16 A
<b>Possible applications*</b>	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>
<b>Electronic devices up to</b>	5000 W	4800 W	3600 W
<b>Electric tools up to</b>	4900 W	4700 W	3500 W
<b>Gardening or construction equip. up to</b>	3300 W	3200 W	2400 W
<b>Compressors or pumps up to</b>	2500 W	2400 W	1800 W
<b>Inverter welding equipment up to</b>	Ø 2.5 mm	Ø 3.25 mm	Ø 3.25 mm

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\* In ECOtronic mode



## DUPLEX<sup>plus</sup> Line 10.0 – 15.0 kVA

### Equipment details

- ECOtronic system
- 2-cylinder OHV engines
- 4-in-1 Display = V/Hz/h/low oil
- Tank level indicator - optical
- Automatic low oil shut-off
- Alternator overload protection
- Crane loading device
- Folding handles



ESE 1306 DSG-GT ES

Available accessories	Order No.
Wheel set	161 023 <b>all models</b>
Exhaust hose (1.5 m)	163 120 <b>all models</b>
90° Adapter	163 130 <b>all models</b>
Manual LTS E-NEV/1-32	162 301 Model <b>ESE 1006 SG-GT ES</b>
Manual LTS E-NEV/3-16	162 303 Model <b>ESE 1006 DSG-GT ES</b>
Manual LTS E-NEV/3-32	162 304 Series <b>ESE 1306, 1506</b>
Maintenance kit	164 007 <b>all models</b>

Model	ESE 1006 SG-GT ES DUPLEX	ESE 1006 DSG-GT ES DUPLEX	ESE 1306 DSG-GT DUPLEX	ESE 1506 DSG-GT ES DUPLEX
Order No.	113 160	113 161	113 158	113 159
Alternator	DUPLEX	DUPLEX	DUPLEX	DUPLEX
Max. output kVA/kW	11.0 / 9.9	11.0 / 8.8	6.6 / 5.9	13.0 / 10.4
Continuous power kVA/kW	10.0 / 9.0	10.0 / 8.0	6.0 / 5.4	12.0 / 9.6
Nominal current	230 V 1~	400 V 3~	230 V 1~	400 V 3~
Nennstrom	43.5 A 1~	14.4 A 3~	26.1 A 1~	17.3 A 3~
Power factor cos φ	0.9	0.8	0.8	0.8
Frequency/protection class	50 Hz/IP 54	50 Hz/IP 54	50 Hz/IP 54	50 Hz/IP 54
Engine type	SUBARU EH 63 / 18 HP	SUBARU EH 63 / 18 HP	SUBARU EH 65 / 22 HP	SUBARU EH 72 / 25 HP
Design	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV
Displacement	653 cm <sup>3</sup>	653 cm <sup>3</sup>	653 cm <sup>3</sup>	720 cm <sup>3</sup>
Output 3000 RPM	12.5 kW	12.5 kW	14.5 kW	16.8 kW
Fuel/tank capacity (litres)	Petrol / 30	Petrol / 30	Petrol / 30	Petrol / 30
Consumption/running time at 3/4 load*	3.2 l / 9 h	2.9 l / 10 h	3.4 l / 8.5 h	4.1 l / 7 h
Start-up system	E-Start incl. battery	E-Start incl. battery	E-Start incl. battery	E-Start incl. battery
Start-up system	97 dB(A)	97 dB(A)	97 dB(A)	97 dB(A)
Sound pressure level LPA (7 m)**	67 dB(A)	67 dB(A)	67 dB(A)	67 dB(A)
Weight in kg	162	155	151	160
Dimensions L x W x H in mm	850 x 650 x 575	850 x 650 x 575	850 x 650 x 575	850 x 650 x 575
Shockproof sockets	2 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 230 V/32 A	2 x 230 V/16 A 2 x CEE 400 V/16 A	2 x 230 V/16 A 1 x CEE 400 V/16 A 1 x CEE 400 V/32 A	2 x 230 V/16 A 1 x CEE 400 V/16 A 1 x CEE 400 V/32 A
Possible applications*	<b>230 V</b>	<b>400 V</b>	<b>230 V</b>	<b>400 V</b>
Electronic devices up to	9000 W	8000 W	5400 W	9600 W
Electric tools up to	8900 W	7900 W	5300 W	9500 W
Gardening or construction equip. up to	6000 W	5300 W	3600 W	6400 W
Compressors or pumps up to	4500 W	3700 W	2700 W	4800 W
Inverter welding equipment up to	Ø 4.5 mm	Ø 4.5 mm	Ø 6.5 mm	Ø 6.5 mm

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\* In ECOtronic mode

## DUPLEX<sup>Silent</sup> Line 8.0 – 14.0 kVA

ENDRESS 



The DUPLEX<sup>Silent</sup> Line guarantees maximum performance and reliability. Designed for professional use, where reduced noise levels are demanded

<b>Electronic devices</b>	● ● ●
<b>Electric tools</b>	● ● ●
<b>Gardening/construction equipment</b>	● ● ●
<b>Inverter welding equipment</b>	● ● ●
<b>Emergency power supply</b>	● ● ●

# DUPLEX<sup>Silent</sup> Line 8.0 – 14.0 kVA



ESE 1408 DBG ES



Available accessories	Order No.
Refuelling system	161 110 all models
Exhaust hose (1.5 m)	163 120 all models
90° Adapter	163 130 all models
Manual LTS E-NEV/3-16	162 303 Model ESE 808 DBG ES
Manual LTS E-NEV/3-32	162 304 Series ESE 1308, 1408



Model	ESE 808 DBG ES DUPLEX Silent	ESE 1308 DBG ES DUPLEX Silent	ESE 1408 DBG ES DUPLEX Silent
Order No.	113 007	113 008	113 022
Alternator	DUPLEX	DUPLEX	DUPLEX
Max. output kVA/kW	8.8 / 7.0	5.5 / 5.0	14.3 / 11.4
Continuous power kVA/kW	8.0 / 6.4	5.0 / 4.5	11.4 / 9.5
Nominal voltage	400 V 3~	230 V 1~	400 V 3~
Nominal current	12.3 A 3~	21.7 A 1~	18.8 A 3~
Power factor cos φ	0.8	0.9	0.9
Frequency/protection class	50 Hz/IP 54	50 Hz/IP 54	50 Hz/IP 54
Engine type	B & S VANGUARD / 16 HP	B & S VANGUARD / 23 HP	B & S VANGUARD / 22 HP
Design	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV
Displacement	480 cm <sup>3</sup>	627 cm <sup>3</sup>	627 cm <sup>3</sup>
Output 3000 RPM <sup>1</sup>	9.5 kW	15.0 kW	15.0 kW
Fuel/tank capacity (litres)	Petrol / 12	Petrol / 12	Petrol / 12
Consumption/running time at 3/4 load*	2.4 l / 5 h	3.4 l / 3.5 h	3.4 l / 3.5 h
Start-up system	E-Start incl. battery	E-Start incl. battery	E-Start incl. battery
Sound power level LWA	89 dB(A)	93 dB(A)	93 dB(A)
Sound pressure level LPA (7 m)	64 dB(A)	68 dB(A)	68 dB(A)
Weight in kg	132	150	150
Dimensions L x W x H in mm	820 x 440 x 580	820 x 440 x 580	820 x 440 x 580
Shockproof sockets	3 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 400 V/16 A	3 x 230 V/16 A 1 x CEE 400 V/16 A 1 x CEE 400 V/32 A	3 x 230 V/16 A 1 x CEE 400 V/16 A 1 x CEE 400 V/32 A
Possible applications*	400 V 230 V	400 V 230 V	400 V 230 V
Electronic devices up to	6400 W	4500 W	10400 W
Electric tools up to	6300 W	4400 W	10300 W
Gardening or construction equip. up to	4300 W	3000 W	6900 W
Compressors or pumps up to	3200 W	2200 W	5200 W
Inverter welding equipment up to	Ø 4.0 mm	Ø 6.5 mm	Ø 6.5 mm

\*Data is based on average values and are not binding, since individual cases may vary.

## ESE 1408 DBG ES advantages at a glance

- Power increase of about 10%
- RPM remains stable under heavy load
- Constant frequency even in the upper RPM range

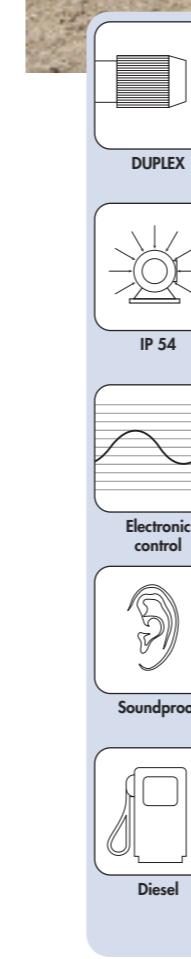
## Equipment details

Premium soundproofing for excellent LWA values, Made completely of aluminium = low weight, Connection for external fuelling, Operating hours display, Tank level indicator, Automatic low oil shut-off, Alternator overload protection, Folding handles

Special equipment - not retrofit	Order No.
ECOtronic system	163 020 all models
Automatic choke	163 030 all models
E-MCS 4.0 Multifunctional control display	162 314 all models
RCD protection switch	162 009 all models
Insulation monitoring	010 043 all models
Cable remote control (50 m)	162 006 all models
Wireless remote control	162 007 all models
AMF panel	162 330 all models
Model with 60 Hz	on request
Only in connection with AMF	
E-RMA SIM	342 220
E-RMA LAN	342 221

# DUPLEX<sup>Silent</sup> Line Diesel 6.0 – 14.0 kVA

ENDRESS<sup>®</sup>



The DUPLEX<sup>Silent</sup> Line with HATZ diesel engines demonstrates its superior and robust quality in daily continuous use, regardless of where, when or how. Compact design with innovative generator technology makes an indispensable combination for professional operation independent of the grid

Electronic devices	● ● ●
Electric tools	● ● ●
Gardening/construction equipment	● ● ●
Inverter welding equipment	● ● ●
Emergency power supply	● ● ●

# DUPLEX Silent Line Diesel 6.0 – 14.0 kVA



ESE 608 DHG ES DI

## ESE 608 DHG ES

- Connection for external fuelling
- 1-click system incl. fuel pump
- Folding handles

## ESE 1008, ESE 1408 DHG ES DI

- Compact dimensions – fits on a Europallet
- Automatic low oil shutoff
- Large 35 l tank



Panel  
ESE 1408 DHG ES DI

Available accessories	Order No.
Refuelling system	163 110
Chassis FG 75 ST Drawbar rigid	341 116
Chassis FG 75 HV height adjustable	341 117
Wheel set	161 034
Exhaust hose (1.5 m)	163 120
90° Adapter	163 130
Manual LTS E-NEV/1-32	162 301
Manual LTS E-NEV/3-16	162 303
Manual LTS E-NEV/3-32	162 304
Model ESE 608 DHG ES	Model ESE 1008 HG ES
Model ESE 608 DHG ES	Model ESE 1408 DHG ES



## Equipment details

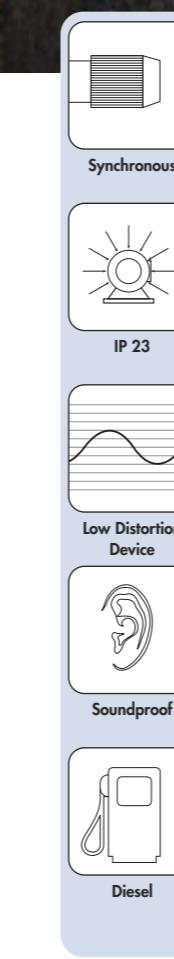
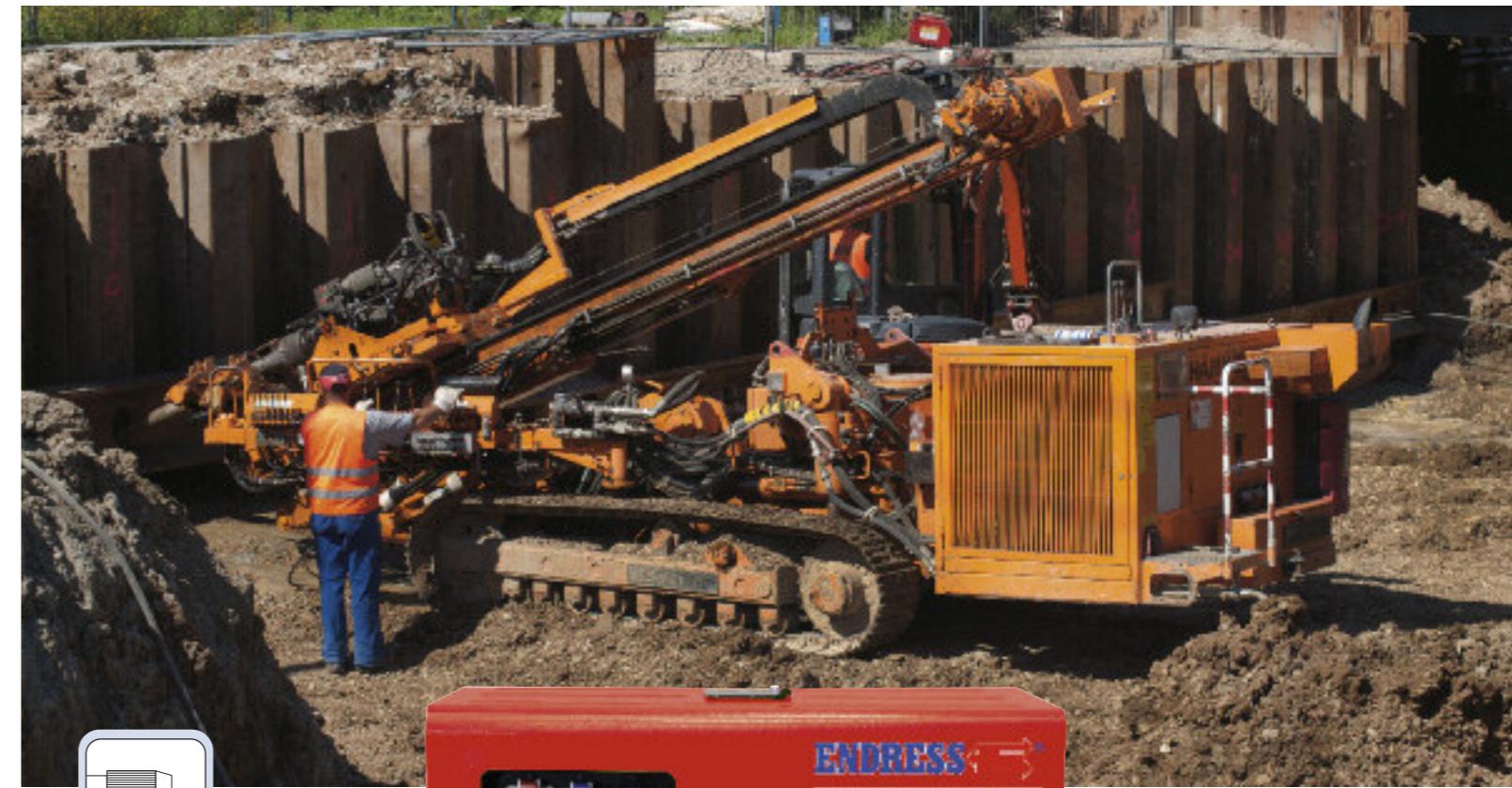
Premium soundproofing for excellent LWA values, HATZ diesel engines, Starter battery 12 V, Alternator overload protection

Model	ESE 608 DHG ES DI DUPLEX Silent	ESE 1008 HG ES DI DUPLEX Silent	ESE 1408 DHG ES DI DUPLEX Silent
Order No.	113 023	113 018	113 019
Alternator	DUPLEX	DUPLEX	DUPLEX
Max. output kVA/kW	6.6 / 5.3	4.4 / 4.0	15.4 / 12.3 7.7 / 6.9
Continuous power kVA/kW	6.0 / 4.8	4.0 / 3.6	14.0 / 11.2 7.0 / 6.3
Nominal voltage	400 V 3~	230 V 1~	400 V 3~ 230 V 1~
Nominal current	8.7 A 3~	17.4 A 1~	20.2 A 3~ 30.4 A 1~
Power factor cos φ	0.8	0.9	0.8 0.9
Frequency/protection class	50 Hz/IP 54	50 Hz/IP 54	50 Hz/IP 54
Engine type	HATZ 1B 50 / 11 HP	HATZ 2G 40 / 23 HP	HATZ 2G 40 / 23 HP
Design	1-cylinder 4-stroke	2-cylinder 4-stroke	2-cylinder 4-stroke
Displacement	517 cm³	997 cm³	997 cm³
Output 3000 RPM	7.6 kW	14.7 kW	14.7 kW
Fuel/tank capacity (litres)	Diesel / 6	Diesel / 35	Diesel / 35
Consumption/running time at 75% load*	1.3 l / 4.5 h	2.4 l / 14.5 h	3.0 l / 11.5 h
Start-up system	E-Start incl. battery	E-Start incl. battery	E-Start incl. battery
Sound power level LWA	94 dB(A)	96 dB(A)	96 dB(A)
Sound pressure level LPA (7 m)	69 dB(A)	71 dB(A)	71 dB(A)
Weight in kg	150	310	320
Dimensions L x W x H in mm	700 x 440 x 580	1100 x 700 x 870	1100 x 700 x 870
Shockproof sockets	3 x 230 V/16 A 1 x CEE 400 V/16 A	3 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 400 V/16 A	3 x 230 V/16 A 1 x CEE 400 V/16 A 1 x CEE 230 V/32 A
Possible applications*	400 V 230 V 230 V	400 V 230 V	400 V 230 V
Electronic devices up to	4800 W	3600 W	9000 W
Electric tools up to	4700 W	3500 W	8900 W
Gardening or construction equip. up to	3200 W	2400 W	6000 W
Compressors or pumps up to	2400 W	1800 W	4500 W
Inverter welding equipment up to	Ø 3.25 mm	Ø 4.5 mm	Ø 6.5 mm

\*Data is based on average values and are not binding, since individual cases may vary.

# Diesel Line 3.0 – 10.0 kVA

ENDRESS



ESE 1208 DHS-GT ES DI

**Quality motors in the Diesel line ensure a reliable drive for the high-performance synchronous generators. Noise and weather protection hoods make sure that the noise regulations of the EU Noise Directive are observed**

Electronic devices	●
Electric tools	● ● ●
Gardening/construction equipment	● ● ●
Inverter welding equipment	● ●
Emergency power supply	●

# Diesel Line

## 3.0 – 10.0 kVA

**ENDRESS** 

### Equipment details for all models

Soundproof housing for low operating noise  
Large tank for long operation  
Alternator overload protection

All generators have a low distortion device – for clean voltage  
Compound regulated high-performance 400 V generators

### Series ESE 406

- Insulation monitoring
- Voltmeter
- Large tank 18 litres



ESE 406 YS-GT ISO DI



ESE 1006 DLS-GT ES ISO DI



ESE 608 DYS-GT ES ISO DI

Model	ESE 406 YS-GT ISO DI	ESE 606 YS-GT ES ISO DI	ESE 608 YS-GT ES ISO DI	ESE 608 DYS-GT ES ISO DI
<b>Order No.</b>	122 001	122 009	131 011	131 010
<b>Alternator</b>	synchronous	synchronous	synchronous	synchronous
<b>Max. output kVA/kW</b>	3.8 / 3.4	6.0 / 5.4	5.9 / 5.4	6.9 / 5.5 4.6 / 4.1
<b>Continuous power kVA/kW</b>	3.2 / 2.9	4.9 / 4.4	4.9 / 4.4	5.6 / 4.5 3.3 / 3.0
<b>Nominal voltage</b>	230 V 1~	230 V 1~	230 V 1~	400 V 3~ 230 V 1~
<b>Nominal current</b>	13.9 A 1~	21.3 A 1~	21.3 A 1~	8.2 A 3~ 14.3 A 1~
<b>Power factor cos φ</b>	0.9	0.9	0.9	0.8 0.9
<b>Frequency/protection class</b>	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23
<b>Engine type</b>	YANMAR L 70 / 6.7 HP	YANMAR L 100 / 10 HP	YANMAR L 100 / 10 HP	YANMAR L 100 / 10 HP
<b>Design</b>	1-cylinder 4-stroke	1-cylinder 4-stroke	1-cylinder 4-stroke	1-cylinder 4-stroke
<b>Displacement</b>	296 cm <sup>3</sup>	435 cm <sup>3</sup>	435 cm <sup>3</sup>	435 cm <sup>3</sup>
<b>Output 3000 RPM</b>	4.1 kW	5.7 kW	6.9 kW	6.9 kW
<b>Fuel/tank capacity (litres)</b>	Diesel / 18	Diesel / 24	Diesel / 19	Diesel / 19
<b>Consumption/running time at 75% load*</b>	1.0 l / 18 h	1.3 l / 18.5 h	1.5 l / 13.1 h	1.5 l / 13.1 h
<b>Start-up system</b>	Recoil starter	E-Start incl. battery	E-Start incl. battery	E-Start incl. battery
<b>Sound power level LWA</b>	96 dB(A)	93 dB(A)	84 dB(A)	84 dB(A)
<b>Sound pressure level LPA (7 m)</b>	71 dB(A)	68 dB(A)	56 dB(A)	56 dB(A)
<b>Weight in kg</b>	99	186	203	203
<b>Dimensions L x W x H in mm</b>	800 x 520 x 660	945 x 595 x 825	970 x 580 x 927	970 x 580 x 927
<b>Shockproof sockets</b>	1 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 230 V/32 A	1 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 230 V/32 A	1 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 230 V/32 A	1 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 230 V/32 A
<b>Possible applications*</b>	<b>230 V</b>	<b>230 V</b>	<b>230 V</b>	<b>400 V</b> <b>230 V</b>
<b>Electric tools up to</b>	2800 W	4200 W	4200 W	4500 W 2900 W
<b>Gardening or construction equip. up to</b>	1900 W	2800 W	2800 W	3100 W 2000 W
<b>Compressors or pumps up to</b>	1500 W	2200 W	2200 W	2100 W 1500 W
<b>Inverter welding equipment up to</b>				Ø 3.5 mm

\*Data is based on average values and are not binding, since individual cases may vary.

### Series ESE 606, 706, 1006

- Insulation monitoring
- Voltmeter
- Large tank 24 litres
- Cran loading device
- Starter battery 12 V

Special equipment - not retrofit	Order No.
Cable remote control (20 m)	162 023 Series ESE 606, 706, 1006
AMF panel	162 332 Series 230 V - ESE 606, 1006

Model	ESE 706 DYS-GT ES ISO DI	ESE 1006 LS-GT ES ISO DI	ESE 1006 DLS-GT ES ISO DI
<b>Order No.</b>	122 010	122 008	122 007
<b>Alternator</b>	synchronous	synchronous	synchronous
<b>Max. output kVA/kW</b>	6.9 / 5.5	4.6 / 4.1	8.3 / 7.5
<b>Continuous power kVA/kW</b>	5.7 / 4.6	3.3 / 3.0	7.1 / 6.4
<b>Nominal voltage</b>	400 V 3~	230 V 1~	230 V 1~
<b>Nominal current</b>	8.2 A 3~	14.3 A 1~	30.9 A 3~
<b>Power factor cos φ</b>	0.8	0.9	0.9
<b>Frequency/protection class</b>	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23
<b>Engine type</b>	YANMAR L 100 / 10 HP	LOMBARDINI 25LD330 / 16 HP	LOMBARDINI 25LD330 / 16 HP
<b>Design</b>	1-cylinder 4-stroke	2-cylinder 4-stroke	2-cylinder 4-stroke
<b>Displacement</b>	435 cm <sup>3</sup>	654 cm <sup>3</sup>	654 cm <sup>3</sup>
<b>Output 3000 RPM</b>	5.7 kW	11.2 kW	11.2 kW
<b>Fuel/tank capacity (litres)</b>	Diesel / 24	Diesel / 24	Diesel / 24
<b>Consumption/running time at 75% load*</b>	1.3 l / 18.5 h	2.0 l / 12h	2.0 l / 12h
<b>Start-up system</b>	E-Start incl. battery	E-Start incl. battery	E-Start incl. battery
<b>Sound power level LWA</b>	93 dB(A)	97 dB(A)	97 dB(A)
<b>Sound pressure level LPA (7 m)</b>	86 dB(A)	72 dB(A)	72 dB(A)
<b>Weight in kg</b>	186	204	207
<b>Dimensions L x W x H in mm</b>	945 x 595 x 825	945 x 595 x 825	945 x 595 x 825
<b>Shockproof sockets</b>	1 x 230 V/16 A 2 x CEE 230 V/16 A 1 x CEE 230 V/16 A	1 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 230 V/16 A	1 x 230 V/16 A 2 x CEE 230 V/16 A 1 x CEE 230 V/16 A
<b>Possible applications*</b>	<b>400 V</b> <b>230 V</b>	<b>230 V</b>	<b>400 V</b> <b>230 V</b>
<b>Electric tools up to</b>	4500 W	2900 W	6300 W
<b>Gardening or construction equip. up to</b>	3100 W	2000 W	4300 W
<b>Compressors or pumps up to</b>	2100 W	1500 W	3200 W
<b>Inverter welding equipment up to</b>	Ø 3.5 mm		Ø 4.0 mm

\*Data is based on average values and are not binding, since individual cases may vary.



**Quality diesel engines in the Diesel Line ensure a reliable drive for high-performance synchronous generators. Because of their open design, these models do not conform to EU Noise Directive 2000/14 EC**



ESE 604 DYS ES DI  
ESE 906 DYS ES DI  
ESE 1506 DYS ES DI



ESE 404 YS DI

Model	ESE 404 YS DI	ESE 604 YS DI	ESE 604 YS ES DI	ESE 604 DYS DI
<b>Order No.</b>	121 000	121 004	121 008	121 001
<b>Alternator</b>	synchronous	synchronous	synchronous	synchronous
<b>Max. output kVA/kW</b>	3.9 / 3.5	5.9 / 5.3	5.9 / 5.3	6.9 / 5.5 4.5 / 4.1
<b>Continuous power kVA/kW</b>	3.3 / 3.0	4.8 / 4.4	4.8 / 4.4	5.6 / 4.5 3.3 / 3.0
<b>Nominal voltage</b>	230 V 1~	230 V 1~	230 V 1~	400 V 3~ 230 V 1~
<b>Nominal current</b>	14.3 A 1~	20.9 A 1~	20.9 A 1~	8.2 A 1~ 14.3 A 1~
<b>Power factor cos φ</b>	0.9	0.9	0.9	0.8 0.9
<b>Frequency/protection class</b>	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23
<b>Engine type</b>	YANMAR L 70 / 6.7 HP	YANMAR L 100 / 10 HP	YANMAR L 100 / 10 HP	YANMAR L 100 / 10 HP
<b>Design</b>	1-cylinder 4-stroke	1-cylinder 4-stroke	1-cylinder 4-stroke	1-cylinder 4-stroke
<b>Displacement</b>	296 cm <sup>3</sup>	435 cm <sup>3</sup>	435 cm <sup>3</sup>	435 cm <sup>3</sup>
<b>Output 3000 RPM</b>	4.1 kW	5.7 kW	5.7 kW	5.7 kW
<b>Fuel/tank capacity (litres)</b>	Diesel / 3.5	Diesel / 5.5	Diesel / 24	Diesel / 5.5
<b>Consumption/running time at 75% load*</b>	1.0 l / 3.5 h	1.4 l / 4 h	1.4 l / 17 h	1.4 l / 4 h
<b>Start-up system</b>	Recoil starter	Recoil starter	E-Start incl. battery	Recoil starter
<b>Sound power level LWA</b>	101 dB(A)**	105 dB(A)**	105 dB(A)**	105 dB(A)**
<b>Sound pressure level LPA (7 m)</b>	76 dB(A)	80 dB(A)	80 dB(A)	80 dB(A)
<b>Weight in kg</b>	54	94	99	96
<b>Dimensions L x W x H in mm</b>	760 x 538 x 560	760 x 538 x 560	830 x 490 x 570	760 x 538 x 560
<b>Shockproof sockets</b>	2 x 230 V/16 A	1 x 230 V/16 A 1 x CEE 230 V/32 A	1 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 400 V/16 A	1 x 230 V/16 A 1 x CEE 400 V/16 A
<b>Possible applications*</b>	<b>230 V</b>	<b>230 V</b>	<b>230 V</b>	<b>400 V</b> <b>230 V</b>
<b>Electric tools up to</b>	8000 W	4300 W	4300 W	4400 W 2900 W
<b>Gardening or construction equip. up to</b>	5400 W	2900 W	2900 W	3000 W 2000 W
<b>Compressors or pumps up to</b>	4000 W	2200 W	2200 W	2300 W 1500 W
<b>Inverter welding equipment up to</b>				Ø 3.25 mm

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\*\* Does not conform to EU noise guideline 2000/14/EC.

ESE 604 DYS ES DI	ESE 906 LS ES DI	ESE 906 DLS ES DI	ESE 1506 LS ES DI	ESE 1506 DLS ES DI
121 002	121 009	121 010	121 011	121 011
synchronous	synchronous	synchronous	synchronous	synchronous
6.9 / 5.5 4.5 / 4.1	8.8 / 7.9	10.3 / 8.2 6.8 / 6.1	13.6 / 12.2	14.3 / 11.4 5.9 / 5.3
5.6 / 4.5 3.3 / 3.0	7.6 / 6.8	5.2 / 7.0 5.2 / 4.7	12.8 / 11.5	13.6 / 10.9 5.4 / 4.9
400 V 3~ 230 V 1~	230 V 1~	400 V 3~ 230 V 1~	230 V 1~	400 V 3~ 230 V 1~
8.2 A 3~ 14.3 A 1~	33.0 A 1~	12.7 A 3~ 22.6 A 1~	52.2 A 1~	19.6 A 3~ 21.7 A 1~
0.8 0.9	0.9	0.8 0.9	0.9	0.8 0.9
50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23
<b>YANMAR L 100 / 10 HP</b>	<b>LOMBARDINI 25LD330 / 16 HP</b>	<b>LOMBARDINI 25LD330 / 16 HP</b>	<b>LOMBARDINI 12LD477 / 23 HP</b>	<b>LOMBARDINI 12LD477 / 23 HP</b>
1-cylinder 4-stroke	2-cylinder 4-stroke	2-cylinder 4-stroke	2-cylinder 4-stroke	2-cylinder 4-stroke
435 cm <sup>3</sup>	654 cm <sup>3</sup>	654 cm <sup>3</sup>	954 cm <sup>3</sup>	954 cm <sup>3</sup>
5.7 kW	11.2 kW	11.2 kW	13.8 kW	13.8 kW
Diesel / 24	Diesel / 24	Diesel / 24	Diesel / 24	Diesel / 24
1.4 l / 17 h	2.0 l / 12 h	2.0 l / 12 h	2.8 l / 8.5 h	2.8 l / 8.5 h
E-Start incl. battery	E-Start incl. battery	E-Start incl. battery	E-Start incl. battery	E-Start incl. battery
105 dB(A)**	105 dB(A)**	105 dB(A)**	107 dB(A)**	107 dB(A)**
80 dB(A)	80 dB(A)	80 dB(A)	80 dB(A)	80 dB(A)
108	157	160	193	200
830 x 490 x 570	960 x 641 x 667			
2 x 230 V/16 A	1 x 230 V/16 A	1 x 230 V/16 A	1 x 230 V/16 A	1 x 230 V/16 A
1 x CEE 230 V/16 A	1 x CEE 230 V/32 A	1 x CEE 400 V/16 A	1 x CEE 230 V/16 A	1 x CEE 400 V/16 A
1 x CEE 400 V/16 A			1 x CEE 230 V/32 A	1 x CEE 400 V/32 A
<b>400 V</b> <b>230 V</b>	<b>230 V</b>	<b>400 V</b> <b>230 V</b>	<b>400 V</b> <b>230 V</b>	<b>400 V</b> <b>230 V</b>
4400 W	2900 W	6700 W	6900 W	10500 W
3000 W	2000 W	4500 W	4700 W	6200 W
2300 W	1500 W	3400 W	3500 W	5200 W
Ø 3.25 mm			Ø 4.0 mm	Ø 6.0 mm

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\* Does not conform to EU noise guideline 2000/14/EC.

# Generator selection assistant

**ENDRESS**  <sup>®</sup>

<1200 shows the appliance's maximum output, in VA, that can be handled by this generator

The appliance can be run with this generator.

The data are based on average values and are not binding, since individual cases may vary.

### Automatic, stationary emergency electricity supply with gas generators

Another alternative for automatic emergency electricity supply with LPG or NG driven gas generators. These devices may optionally be operated with natural gas (NG) or liquefied petroleum gas (LPG). ENDRESS gas generators already come with a built-in automatic emergency electricity device that is controlled via the E-MCS 5.0 onboard computer.

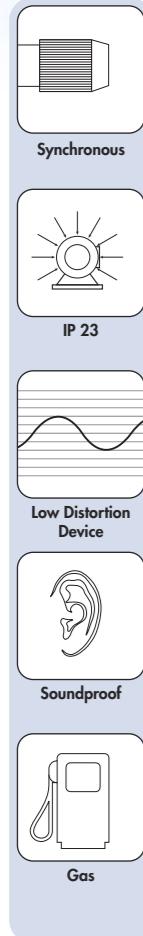
#### Equipment details

- Automatic E-MCS 5.0 control panel
- Load switching contractors built into the housing (no separate installation necessary)
- RCD protection switch
- Generator overload protection
- Low-oil shut-off
- 12 V starter battery
- Standard connector for propane gas bottles or domestic connector for natural gas pipe



#### Control unit E-MCS 5.0

With LCD display for monitoring the engine and generator, frequency, voltage and operating hours. Warning function and emergency stop if the motor develops a fault



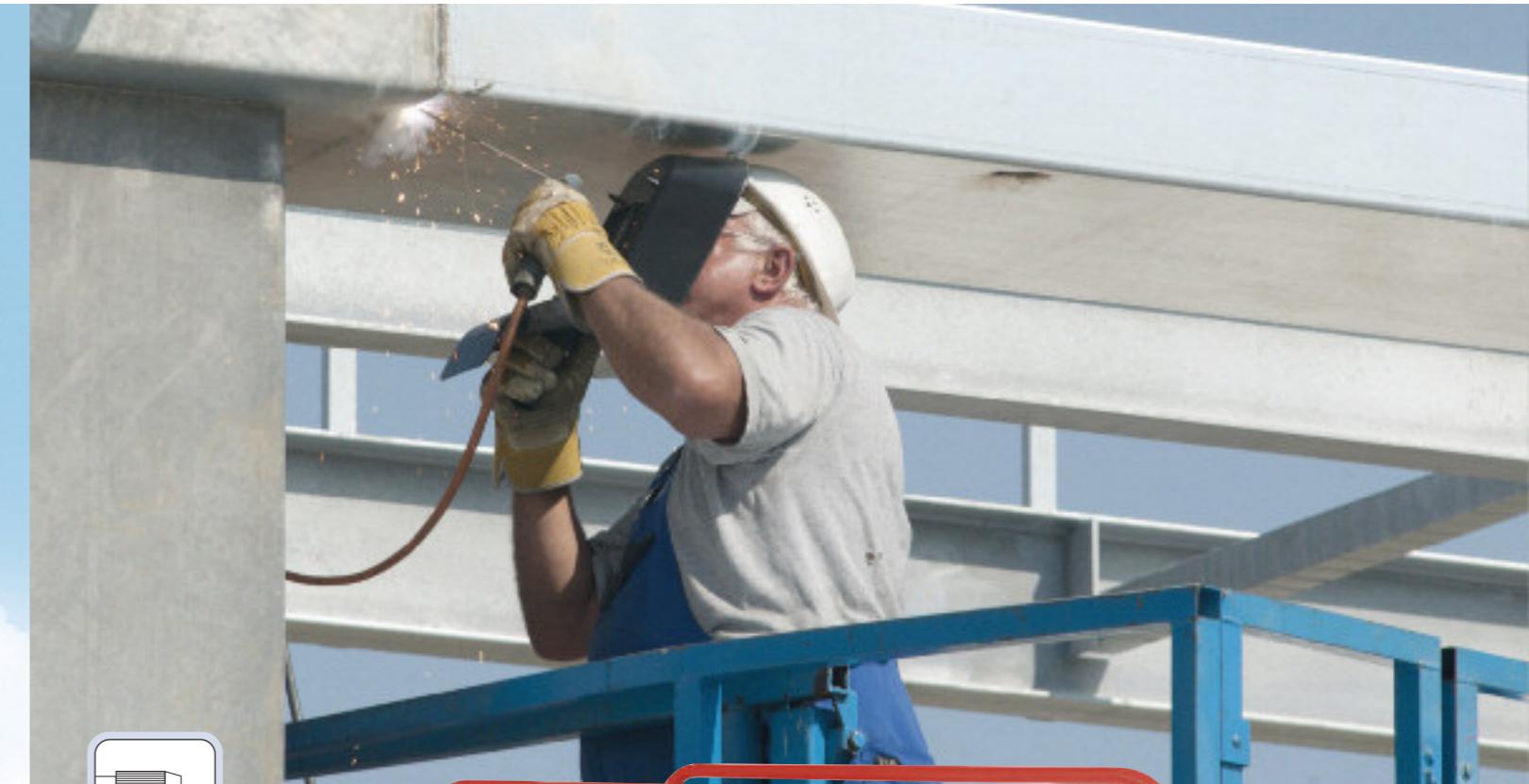
<b>Model</b>	<b>ESE 808 GF</b>
<b>Order No.</b>	8080 103
<b>Alternator</b>	synchronous / IP 23
<b>Continuous power LPG</b>	8.0 kW
<b>Continuous power NG</b>	7.0 kW
<b>Nominal voltage</b>	230 V 1~
<b>Nominal current</b>	35 A 1~
<b>Frequency</b>	50 Hz
<b>Engine type</b>	<b>B &amp; S VANGUARD</b>
<b>Design</b>	2-cylinder 4-stroke OHV
<b>Displacement</b>	570 cm <sup>3</sup>
<b>Start-up system</b>	E-Start
<b>Sound power level LWA</b>	90 dB(A)
<b>Sound pressure level LPA (7 m)</b>	65 dB(A)
<b>Consumption of LPG at 50% load*</b>	1.13 m <sup>3</sup>
<b>Consumption of LPG of 100% load*</b>	1.98 m <sup>3</sup>
<b>Consumption of NG at 50% load*</b>	2.5 m <sup>3</sup>
<b>Consumption of NG at 100% load*</b>	3.25 m <sup>3</sup>
<b>Weight in kg</b>	180
<b>Dimensions L x W x H in mm</b>	1200 x 630 x 700



Integrated AMF

<b>Model</b>	<b>120 V 1 ~</b>	<b>127 V 1 ~ / 220 V 3 ~</b>
<b>Frequency</b>	60 Hz	60 Hz
<b>Nominal current</b>	67 A 1 ~	21 A 3 ~
<b>Order No.</b>	8080 101	8080 102

\* Data is based on average values and are not binding, since individual cases may vary.



ESE 704 SHS AC

Welding generators are indispensable aids for welding work or repair work on building sites without a mains connection. And whenever electricity is needed, they can also be used as power units. ENDRESS welding generators, the flexible energy source



**Equipment details**

- Continous welding control
- Automatic low oil shut-off
- Alternator overload protection
- Folding handles

ESE 1006 SDHS-DC ES

AC = alternating current welding  
for simple work

DC = direct current welding  
for professional work

	Available accessories	Order No.
Wheel set	161 000	Series ESE 404, 704, 804
Wheel set	161 015	Model ESE 1006 SDHS-DC ES
Welding area equipment	162 011	Model ESE 404 SHS-DC
Welding area equipment	162 012	Model ESE 704 SHS-AC
Welding area equipment	162 010	Model ESE 804 SDHS-AC
Welding area equipment	162 013	Model ESE 1006 SDHS-DC ES

Model	ESE 404 SHS-AC	ESE 704 SHS-AC	ESE 804 SDHS-DC	ESE 1006 SDHS-DC ES	t
Order No.	141 008	141 007	141 001	141 018	
<b>Welding alternator</b>					
Welding performance control range	30 - 180 A	60 - 200 A	40 - 220 A	30 - 300 A	
No-load voltage	50 ÷ 62.5 V	45 ÷ 60 V	73 V	75 V	
Min./max. welding voltage	22.4 / 27.2 V	22.4 / 28.0 V	21.5 / 28.8 V	21.2 / 32.0 V	
Welding operation at 60% ED	125 A	180 A	170 A	250 A	
Welding regulation	mechanical	mechanical	mechanical	mechanical	
<b>Alternator</b>					
Max. output kVA/kW	4.4 / 4.0	6.5 / 5.9	6.6 / 5.3	4.4 / 4.0	8.8 / 7.0, 3.3 / 3.0
Continuous power kVA/kW	4.0 / 3.6	5.9 / 5.3	6.0 / 4.8	4.0 / 3.6	8.0 / 6.4, 3.0 / 2.7
Nominal voltage	230 V 1~	230 V 1~	400 V 3~	230 V 1~	400 V 3~
Nominal current	17.4 A 1~	25.7 A 1~	8.7 A 3~	17.4 A 1~	11.5 A 3~
Power factor cos φ	0.9	0.9	0.8	0.9	0.8
Frequency/protection class	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	50 Hz/IP 23	
<b>Engine type</b>					
Design	HONDA GX270 / 8 HP	HONDA GX390 / 13 HP	HONDA GX390 / 11 HP	HONDA GX630 / 22 HP	
Displacement	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV	1-cylinder 4-stroke OHV	2-cylinder 4-stroke OHV	
Output 3000 RPM	270 cm <sup>3</sup>	389 cm <sup>3</sup>	389 cm <sup>3</sup>	627 cm <sup>3</sup>	
Fuel/tank capacity (litres)	Petrol / 6	Petrol / 6.5	Petrol / 6.5	Petrol / 16	
Consumption/running time at 75% load*	1.7 / 4.5 h	2.2 l / 6.5 h	2.1 l / 3 h	3.5 l / 4.5 h	
Start-up system	Recoil starter	Recoil starter	Recoil starter	E-Start incl. battery	
Sound power level LWA	98 dB(A)**	99 dB(A)**	100 dB(A)**	98 dB(A)**	
Sound pressure level LPA (7 m)	73 dB(A)	74 dB(A)	75 dB(A)	73 dB(A)	
Weight in kg	75	95	95	145	
Dimensions L x W x H in mm	890 x 490 x 570	890 x 490 x 570	890 x 490 x 570	945 x 570 x 640	
Shockproof sockets	2 x 230 V/16 A	2 x 230 V/16 A	1 x 230 V/16 A 1 x CEE 400 V/16 A	1 x CEE 230 V/16 A 1 x CEE 400 V/16 A	
<b>Max.Ø of electrodes in mm</b>					
Rutil	4	4	5	6	
Basic	-	-	4	5	
Cellulose	-	-	5	6	

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\*\* Does not conform to EU noise guideline 2000/14/EC.

The ED is achieved within a cycle time of 10 minutes (100%).

So an ED of 60% means that the welding time is 6 minutes (60%) and the cooling down time is 4 minutes (40%).



**Wheel set**

Simple installation without drilling.  
For models with full tubular frames.  
The design may vary with the model.



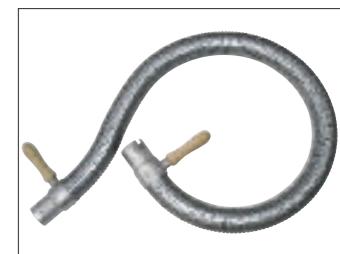
**Crane loading device**

Makes implementation and loading easier – simple installation.  
The design may vary with the model.



**Adapters**

90° angle, fits exhaust hose.



**Exhaust hose**

Flexible metal hose (1.5 m) for diverting fumes.  
Not suitable for enclosed spaces.



**3-way fuel cock**

For direct connection to a fuelling system.



**Refuelling system**

Included in delivery: 20 l petrol canister with fuel drawing device.



**Remote control of power for welding**

Welding performance can easily be adjusted via the remote control.  
Cable length 15 m



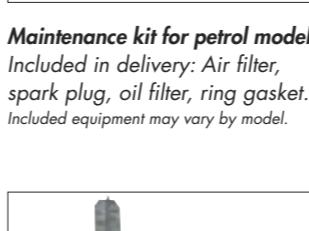
**Welding accessories included:**

Hand shield, wire brush, earthing and electrode cables, chipping hammer, gloves.



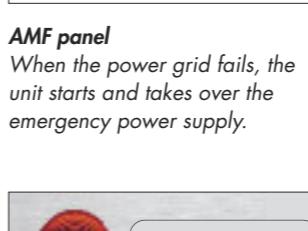
**Multifunction control display**

E-MCS 4.0  
Shows the generator's most important measurement data in real time.



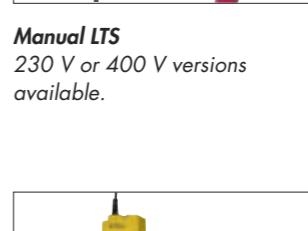
**Maintenance kit for petrol models**

Included in delivery: Air filter, spark plug, oil filter, ring gasket.  
Included equipment may vary by model.



**AMF panel**

When the power grid fails, the unit starts and takes over the emergency power supply.



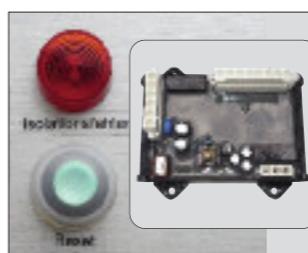
**Manual LTS**

230 V or 400 V versions available.



**RCD incl. earthing kit**

For protection against dangerous body current. Earthing kit includes:  
Earthing spike, earthing cable.  
(35 mm<sup>2</sup>, 3 m long)



**Insulation monitoring**

The appliances turn themselves off automatically if the insulation resistance reaches a critical level.



**Wireless remote control**

A radio impulse reliably starts or stops the generator's engine.  
Range under normal conditions 30-50 m



**Cable remote control**

The START-STOP button reliably turns the unit on and off.  
Cable length 20 or 50 m, depending on model



**ENDRESS power takeoff shaft generators provide an inexpensive electricity supply.**  
These are easily attached to existing agricultural tractors – without the need to invest in an additional drive engine

#### Technical equipment features

- Protection of the alternators over all-pole circuit breakers
- Operating hours counter
- RCD protection switch 30 mA
- Monitoring and display of frequency, voltage, current
- Earthing set consisting of an earth stake, 35 mm<sup>2</sup> earthing cable, 3 m long
- A 3-point suspension (Category 2, incl. adapter of Category 3) for models 40 and 60



EZG in protection type IP 54



Housing with protection type IP 54



Switch cabinets for the optional package Power feed in a building IT/TN

#### Designed for professional outdoor use

Best protected from environmental influences and damage due to the extensive protective functions installed. The switch cabinet complies with the highest Protective Class IP 54 as well as the alternator with Protective Class IP 44. Robust side plates and covers reliably protect the alternator. A torsion-free base frame with a stable 3-point suspension of Category 2 as well as a robust gearbox with a standardised shaft connection are naturally used on the new power take-off shaft alternators.

#### Optional package: Power feed-in into buildings IT/TN (only for Protection Class IP44)

- A 4-pin change-over switch for switching over between IT and TN networks
- Insulation monitoring in the IT network
- Dispensing with the ground fault circuit interrupters since protection is over the building installation in the TN network
- CEE 5-pin/7h mains supply socket designed for the maximum output of the alternator

#### Optional package: certified equipment package (only for Protection Class IP44)

- according to specifications issued by the Bundesverband der landwirtschaftlichen Berufsgenossenschaften e.V.
- fulfillment of all technical specifications issued by the agricultural employers' liability insurance associations regarding unlimited operation in member states of the EC.

Protection class IP 23				
Model	EZG 24/2	EZG 33/4	EZG 46/4	EZG 66/4
<b>Order No.</b>	511 037	511 038	511 039	511 040
<b>Continuous power kVA/kW</b>	22.0 / 17.6	30.0 / 24.0	42.0 / 33.6	60.0 / 48.0
<b>Alternator</b>	synchronous	synchronous	synchronous	synchronous
<b>Regulation</b>	compound	AVR	AVR	AVR
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~
<b>Nominal current</b>	31.8 A 3~	43.3 A 3~	60.7 A 3~	86.7 A 3~
<b>Frequency/protection class</b>	50 Hz / IP 23	50 Hz / IP 23	50 Hz / IP 23	50 Hz / IP 23
<b>Engine power requirement approx.</b>	35 kW / 48 HP	35 kW / 48 HP	60 kW / 81 HP	87 kW / 118 HP
<b>Nominal rotation speed of power takeoff shaft</b>	430 RPM	430 RPM	430 RPM	430 RPM
<b>Weight in kg</b>	160	262	300	362
<b>Dimensions L x W x H in mm</b>	930 x 800 x 900	930 x 800 x 900	1020 x 800 x 900	1020 x 800 x 900
<b>Shockproof sockets</b>	1 x CEE 230 V/16 A 1 x CEE 400 V/32 A	1 x 230 V/32 A 1 x CEE 400 V/63 A	1 x CEE 230 V/32 A 1 x CEE 400 V/63 A	1 x CEE 230 V/32 A 1 x CEE 400 V/63 A
<b>Available accessories</b>		<b>Order No.</b>		
Set of Wheels for all models		161 036		
Power supply connector for option IT/TN Power feed in		162 029		
Connector CEE 400 V/63 A, 7 h		162 030		

Protection class IP 44					
Model	EZG 25/2	EZG 40/4	EZG 60/4	EZG 80/4	EZG 100/4
<b>Order No.</b>	511 102	511 104	511 105	511 106	511 107
<b>Continuous power kVA/kW</b>	24.3 / 19.4	36.5 / 29.2	54.8 / 43.8	76.5 / 54.0	90.0 / 72.0
<b>Alternator</b>	synchronous	synchronous	synchronous	synchronous	synchronous
<b>Regulation</b>	compound	AVR	AVR	AVR	AVR
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~
<b>Nominal current</b>	35.1 A 3~	52.7 A 3~	79.1 A 3~	97.5 A 3~	130.0 A 3~
<b>Frequency/protection class</b>	50 Hz / IP 44	50 Hz / IP 44	50 Hz / IP 44	50 Hz / IP 44	50 Hz / IP 44
<b>Engine power requirement approx.</b>	35 kW / 48 HP	60 kW / 81 HP	87 kW / 118 HP	123 kW / 165 HP	144 kW / 195 HP
<b>Nominal rotation speed of power takeoff shaft</b>	430 RPM	430 RPM	430 RPM	430 RPM	750 RPM
<b>Weight in kg</b>	169	266	392	500	500
<b>Dimensions L x W x H in mm</b>	930 x 800 x 900	1020 x 800 x 900	1020 x 800 x 900	1200 x 800 x 1035	1200 x 800 x 1035
<b>Shockproof sockets</b>	1 x 230 V/16 A 1 x CEE 230 V/16 A 1 x CEE 230 V/63 A 1 x CEE 400 V/63 A	1 x 230 V/16 A 1 x CEE 230 V/32 A 1 x CEE 400 V/125 A	1 x 230 V/16 A 1 x CEE 230 V/32 A 1 x CEE 400 V/125 A	1 x 230 V/16 A 1 x CEE 230 V/32 A 1 x CEE 400 V/125 A	1 x 230 V/16 A 1 x CEE 230 V/32 A 1 x CEE 400 V/125 A
<b>Special equipment</b>		<b>Order No.</b>			
Certified equipment package according to specifications issued by the Bundesverband der landwirtschaftlichen Berufsgenossenschaften e.V.		163 190			
Power feed-in IT/TN to provide power to a building		511 304			
incl. power feed socket		1 x CEE 400 V/63 A, 7 h			
		1 x CEE 400 V/125 A, 7 h			
		1 x CEE 400 V/125 A, 7 h			
		1 x CEE 400 V/125 A, 7 h			

## Construction site generators 10 – 50 kVA

### E-MCS 6.0 control module

**Easy to operate, reliable in use**

The E-MCS 6.0 digital control module is extremely flexible in use and at the same time very operator-friendly thanks to its well-designed menu structure. With its big display screen and operator keys, the focus is on simple and clear operation.



### connected power with E-RMA

#### ENDRESS Remote Monitoring Application – worldwide remote maintenance

Regardless of where your generator is located, with both the **E-RMA SIM** and **E-RMA LAN** options you always have access to the main functions. Remote start and stop are also among the options, as are remote monitoring and proactive messages which warn of an imminent critical condition.

You gain access to your generator via any internet connection on your PC, tablet or smartphone. You will find more details on this subject on Page 9.

#### Meaning of the abbreviations used in the tables

##### PRP – output during continuous operation such as 8528.1:2005.

Defined as the maximum output which the power generator can produce under the agreed operating conditions during continuous operation, while it delivers a variable electrical load, for an unlimited number of hours per year, when the maintenance intervals and procedures stipulated by the manufacturer are observed. The permissible output over a 24 hour period of operation must not go below 70% of the basic performance.

##### LTP - Limited outputs during continuous operation such as 8528.1:2005.

Defined as the maximum available output under the agreed operating conditions which the power generator can produce for up to 500 operating hours per year (for no more than 300 hours in continuous operation), when the maintenance intervals and procedures stipulated by the manufacturer are observed. There is no overloading effect present.

#### The E-MCS 6.0 includes the following functions:

- Manual and automatic control of the generator (start - stop)
- Monitoring of oil pressure in the motor with automatic shut-off if oil pressure is too low
- Monitoring of battery charge and battery voltage
- Monitoring of the public grid and connection or disconnection of the generator in the event of a power cut
- Monitoring the voltage/frequency of the generator
- Built-in operating hours counter
- Fault log for the last 100 faults including operating of the emergency off switch
- Option to retrofit remote monitoring by **E-RMA**



ESE 45 YWB

#### Key to ENDRESS type designation

##### ESE 110 DW / A S

	<b>S</b> = sound enclosure
	<b>A</b> = automatic
	<b>M</b> = manual
	<b>W</b> = water cooled
	<b>D</b> = DEUTZ Dalian
	<b>V</b> = VOLVO
	<b>Y</b> = YANMAR
	<b>P</b> = PERKINS
<b>110</b>	Performance class



**Diesel units in soundproof designs with all-round protection built to take rough handling on building sites are equipped with high-quality generators to VDE 0530 (insulation class H) and are designed for the highest performance under the harshest conditions**

# Construction site generators

## 10 – 50 kVA

**ENDRESS** 

Modern YANMAR water-cooled diesel engines are used in the 10 to 50 YW-B series. These stand out thanks to their long-term reliability, high quality and cleanliness.

### Equipment details

- Cleanly and quietly operating TNV motors
- Electronically regulated high-performance generators from MeccAlte
- Brushless design with highly constant voltage



ESE 20 YW-B



ESE 50 YW-B



Generators with this logo are according to emission regulation Stage 3A



You will find a description of the control box and socket combination on pages 60-61



Option additional tank

Model	ESE 10 YW-B	ESE 15 YW-B	ESE 20 YW-B	ESE 30 YW-B
<b>Order No.</b>	310 014	310 011	310 012	310 012
<b>Max. output [LTP] kVA/kW</b>	9.3 / 7.4	14.3 / 11.4	19.3 / 15.4	19.3 / 26.0
<b>Continuous power [PRP] kVA/kW</b>	8.5 / 6.8	13.0 / 10.4	17.6 / 14.0	30.5 / 24.4
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulation</b>	synchronous / class H			
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~			
<b>Nominal current/cos φ</b>	12.2 A 3~ / 0.8	18.8 A 3~ / 0.8	25.4 A 3~ / 0.8	44.0 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic			
<b>Engine type</b>	<b>YANMAR 3TNV76</b>	<b>YANMAR 3TNV88</b>	<b>YANMAR 4TNV88</b>	<b>YANMAR 4TNV8T</b>
<b>Design</b>	3-cylinder 4-stroke	3-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke
<b>Cooling system</b>	water cooled	water cooled	water cooled	water cooled
<b>Displacement</b>	1116 cm <sup>3</sup>	1642 cm <sup>3</sup>	2190 cm <sup>3</sup>	3319 cm <sup>3</sup>
<b>Engine output [PRP]</b>	8.4 kW	12.7 kW	16.9 kW	31.2 kW
<b>RPM/regulation</b>	1500 / mechanical	1500 / mechanical	1500 / mechanical	1500 / mechanical
<b>Fuel/tank capacity (litres)</b>	Diesel / 51	Diesel / 51	Diesel / 51	Diesel / 68
<b>Consumption/running time at 75% load*</b>	2.0 l / 25 h	2.8 l / 17.9 h	3.7 l / 13.7 h	5.8 l / 11.7 h
<b>Start-up system</b>	E-Start / 12 V			
<b>Sound power level LWA</b>	93 dB(A)	93 dB(A)	93 dB(A)	95 dB(A)
<b>Sound pressure level LPA (7 m)</b>	64 dB(A)	64 dB(A)	64 dB(A)	66 dB(A)
<b>Weight in kg</b>	418	480	560	773
<b>Dimensions L x W x H in mm</b>	1646 x 885 x 1061	1646 x 885 x 1061	1646 x 885 x 1061	2005 x 948 x 1308
<b>Available accessories</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>
<b>Chassis ST</b> Drawbar rigid	341 100 / FG 75	341 100 / FG 75	341 102 / FG 135	341 102 / FG 135
<b>Chassis HV</b> height adjustable	341 101 / FG 75	341 101 / FG 75	341 103 / FG 135	341 103 / FG 135
<b>Load transfer switch</b> for LTP performance**	343 012 / E-US 20	343 000 / E-US 32	343 000 / E-US 32	n.a.
<b>Galvanized baseframe</b>	n.a.	n.a.	n.a.	n.a.
<b>Earthing kit</b>	162 008	162 008	162 008	162 008
<b>Special equipment - not retrofit</b>				
<b>AMF panel</b>	310 014A	310 011A	310 012A	n.a.
<b>RCD protection switch</b> allstrom sensitiv	342 012	342 012	342 012	342 013
<b>Insulation monitoring</b>	163 076	163 076	163 076	163 076
<b>Custom colour</b>	on request	on request	on request	on request
<b>Large tank 48 h at 75% load</b>	n.a.	n.a.	n.a.	343 007
<b>Remote control</b> radio/cable	on request	on request	on request	on request

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\* incl. coolant pre-warming system, 1 x CEE 400 V socket, terminal block

Model	ESE 35 YW-B	ESE 45 YW-B	ESE 50 YW-B
<b>Order No.</b>	310 025	310 017	310 026
<b>Max. output [LTP] kVA/kW</b>	32.5 / 26.0	46.0 / 36.8	46.0 / 36.8
<b>Continuous power [PRP] kVA/kW</b>	30.5 / 24.2	42.0 / 33.6	44.0 / 35.2
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulation</b>	synchronous / class H	synchronous / class H	synchronous / class H
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~
<b>Nominal current/cos φ</b>	44.0 A 3~ / 0.8	60.6 A 3~ / 0.8	63.5 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic
<b>Engine type</b>	<b>YANMAR 4TNV98</b>	<b>YANMAR 4TNV98T</b>	<b>YANMAR 4TNV98T</b>
<b>Design</b>	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke
<b>Cooling system</b>	water cooled	water cooled	water cooled
<b>Displacement</b>	3319 cm <sup>3</sup>	3319 cm <sup>3</sup>	3319 cm <sup>3</sup>
<b>Engine output [PRP]</b>	32.9 kW	38.3 kW	40.2 kW
<b>RPM/regulation</b>	1500 / electronic	1500 / mechanical	1500 / mechanical
<b>Fuel/tank capacity (litres)</b>	Diesel / 68	Diesel / 68	Diesel / 68
<b>Consumption/running time at 75% load*</b>	5.9 l / 11.5 h	7.9 l / 8.6 h	8.3 l / 8 h
<b>Start-up system</b>	E-Start / 12 V	E-Start / 12 V	E-Start / 12 V
<b>Sound power level LWA</b>	95 dB(A)	95 dB(A)	95 dB(A)
<b>Sound pressure level LPA (7 m)</b>	66 dB(A)	66 dB(A)	66 dB(A)
<b>Weight in kg</b>	773	839	839
<b>Dimensions L x W x H in mm</b>	2005 x 948 x 1308	2005 x 948 x 1308	2005 x 948 x 1308
<b>Available accessories</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>
<b>Chassis ST</b> Drawbar rigid	341 102 / FG 135	341 102 / FG 135	341 102 / FG 135
<b>Chassis HV</b> height adjustable	341 103 / FG 135	341 103 / FG 135	341 103 / FG 135
<b>Load transfer switch</b> for LTP performance**	n.a.	n.a.	n.a.
<b>Galvanized baseframe</b>	342 111	342 111	342 111
<b>Earthing kit</b>	162 008	162 008	162 008
<b>Special equipment - not retrofit</b>			
<b>AMF panel</b>	n.a.	n.a.	n.a.
<b>RCD protection switch</b> allstrom sensitiv	342 013	342 013	342 013
<b>Insulation monitoring</b>	163 076	163 076	163 076
<b>Custom colour</b>	on request	on request	on request
<b>Large tank 48 h at 75% load</b>	342 307	342 307	342 307
<b>Remote control</b> radio/cable	on request	on request	on request

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\* incl. coolant pre-warming system, 1 x CEE 400 V socket, terminal block

# Power Line MS/AS

## 15 – 90 kVA

**ENDRESS** 

- Modern, water-cooled industrial engines from YANMAR and PERKINS
- Galvanized and powder-coated soundproofing hood
- Inner, lockable tank
- A self-explanatory and simple to operate digital control system
- Prepared for use of remote monitoring E-RMA
- Brushless, electronically controlled alternators
- Coolant prewarming installed as standard in the AS series
- Liquid collection tray to protect the environment



**MS:** Manual control box, liquid collection tray, crane loading eye  
**AS:** Automatic control box, coolant pre-warming system,  
 liquid collection tray, crane loading eye



ESE 67 PW/MS



You will find a description of the control box and rental kit on pages 60-61

3A					
Model - manual	ESE 15 YW/MS	ESE 20 YW/MS	ESE 30 YW/MS	ESE 35 YW/MS	ESE 45 YW/MS
<b>Order No.</b>	333 221	333 222	333 227	333 248	333 228
Model - automatic	ESE 15 YW/AS	ESE 20 YW/AS	ESE 30 YW/AS	ESE 35 YW/AS	ESE 45 YW/AS
<b>Order No.</b>	331 221	331 222	331 227	331 248	331 228
<b>Max. output [LTP] kVA/kW</b>	14.5 / 11.6	19.6 / 15.6	32.5 / 26.0	32.5 / 26.0	46.0 / 36.8
<b>Continuous power [PRP] kVA/kW</b>	13.2 / 10.5	17.9 / 14.3	30.5 / 24.4	30.5 / 24.4	42.0 / 33.6
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulation</b>	synchronous / class H				
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~				
<b>Nominal current/cos φ</b>	19.0 A 3~ / 0.8	25.8 A 3~ / 0.8	44.0 A 3~ / 0.8	44.0 A 3~ / 0.8	60.6 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic				
Engine type	YANMAR 3TNV88	YANMAR 4TNV88	YANMAR 4TNV98	YANMAR 4TNV98T	YANMAR 4TNV98T
<b>Design</b>	3-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke
<b>Cooling system</b>	water cooled				
<b>Displacement</b>	1642 cm <sup>3</sup>	2190 cm <sup>3</sup>	3319 cm <sup>3</sup>	3119 cm <sup>3</sup>	3119 cm <sup>3</sup>
<b>Engine output [PRP]</b>	12.7 kW	16.9 kW	31.2 kW	32.9 kW	38.3 kW
<b>RPM/regulation</b>	1500 / mechanical	1500 / mechanical	1500 / electronic	1500 / mechanical	1500 / mechanical
<b>Fuel/tank capacity (litres)</b>	Diesel / 68				
<b>Consumption/running time at 75% load*</b>	2.85 l / 23.8 h	3.7 l / 18.3 h	5.8 l / 11.7 h	5.9 l / 11.5 h	7.9 l / 8.6 h
<b>Start-up system/battery</b>	E-Start / 12 V				
<b>Sound power level LWA</b>	94 dB(A)	92 dB(A)	95 dB(A)	95 dB(A)	95 dB(A)
<b>Sound pressure level LPA (7 m)</b>	65 dB(A)	63 dB(A)	66 dB(A)	66 dB(A)	66 dB(A)
<b>Weight in kg</b>	580	670	773	773	839
<b>Dimensions L x W x H in mm</b>	1805 x 884 x 1261	1805 x 884 x 1261	2005 x 948 x 1308	2005 x 948 x 1308	2005 x 948 x 1308
Available accessories	Order No.				
<b>Chassis ST</b> Drawbar rigid	341 102 / FG 135				
<b>Chassis HV</b> height adjustable	341 103 / FG 135				
<b>Load transfer switch** for LTP performance</b>	343 000 / E-US 30	343 000 / E-US 32	343 002 / E-US 60	343 002 / E-US 60	343 003 / E-US 90
<b>Galvanized base frame</b>	342 110	342 110	342 111	342 111	342 111
<b>E-RMA SIM</b>	342 220	342 220	342 220	342 220	342 220
<b>E-RMA LAN</b>	342 221	342 221	342 221	342 221	342 221
Special equipment - not retrofit					
<b>Rental kit</b>	342 200	342 200	342 200	342 200	342 200
<b>Automatic fuel pump**</b>	342 006	342 006	342 006	342 006	342 006
<b>Insulation monitoring</b>	163 076	163 076	163 076	163 076	163 076
<b>RCD protection switch allstrom sensitiv</b>	342 012	342 012	342 013	342 013	342 013
<b>Large tank 48 h at 75% load</b>	343 306 / 210 L	343 306 / 210 L	343 307 / 450 L	343 307 / 450 L	343 307 / 450 L
<b>Socket combinations</b>	n.a.	n.a.	n.a.	n.a.	n.a.

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\*only series AS

3A					
Model - manual	ESE 50 YW/MS	ESE 65 PW/MS	ESE 67 PW/MS	ESE 80 PW/MS	ESE 95 PW/MS
<b>Order No.</b>	333 249	333 250	333 251	333 252	333 253
Model - automatic	ESE 50 YW/AS	ESE 65 PW/AS	ESE 67 PW/AS	ESE 80 PW/AS	ESE 95 PW/AS
<b>Order No.</b>	331 249	331 250	331 251	331 252	331 253
<b>Max. output [LTP] kVA/kW</b>	46.0 / 36.8	66.9 / 53.5	66.6 / 53.3	83.0 / 66.0	92.4 / 73.9
<b>Continuous power [PRP] kVA/kW</b>	44.0 / 35.2	60.7 / 48.6	60.1 / 48.8	78.0 / 62.4	83.7 / 67.0
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulation</b>	synchronous / class H				
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~				
<b>Nominal current/cos φ</b>	19.0 A 3~ / 0.8	25.8 A 3~ / 0.8	44.0 A 3~ / 0.8	88.0 A 3~ / 0.8	112.6 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic				
Engine type	YANMAR 4TNV98T	PERKINS 11034-33TG	PERKINS 1104D-44TG3	PERKINS 1104A-44TG 2	PERKINS 1104D-E44TAG1
<b>Design</b>	4-cylinder 4-stroke	3-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke
<b>Cooling system</b>	water cooled				
<b>Displacement</b>	3319 cm <sup>3</sup>	3110 cm <sup>3</sup>	4400 cm <sup>3</sup>	4400 cm <sup>3</sup>	3119 cm <sup>3</sup>
<b>Engine output [PRP]</b>	40.2 kW	55.0 kW	56.6 kW	73.4 kW	38.3 kW
<b>RPM/regulation</b>	1500 / electronic	1500 / mechanical	1500 / mechanical	1500 / mechanical	1500 / mechanical
<b>Fuel/tank capacity (litres)</b>	Diesel / 68	Diesel / 209	Diesel / 209	Diesel / 68	Diesel / 68
<b>Consumption/running time at 75% load*</b>	8.3 l / 8 h	10.4 l / 20 h	12.0 l / 17 h	13.4 l / 15.5 h	7.9 l / 8.6 h
<b>Start-up system/battery</b>	E-Start / 12 V				
<b>Sound power level LWA</b>	95 dB(A)	96 dB(A)	96 dB(A)	95 dB(A)	95 dB(A)
<b>Sound pressure level LPA (7 m)</b>	66 dB(A)	67 dB(A)	67 dB(A)	66 dB(A)	66 dB(A)
<b>Weight in kg</b>	839	1085	1150	1144	839
<b>Dimensions L x W x H in mm</b>	2005 x 948 x 1308	2294 x 1007 x 1465	2294 x 1007 x 1465	2294 x 1107 x 1465	2005 x 948 x 1308
Available accessories	Order No.				
<b>Chassis ST</b> Drawbar rigid	341 102 / FG 135	341 105 / FG 180	341 105 / FG 180	341 105 / FG 180	341 102 / FG 135
<b>Chassis HV</b> height adjustable	341 103 / FG 135	341 106 / FG 180	341 106 / FG 180	341 106 / FG 180	341 103 / FG 135
<b>Load transfer switch** for LTP performance</b>	343 003 / E-US 90	343 004 / E-US 110	343 004 / E-US 110	343 013 / E-US 140	343 003 / E-US 90
<b>Galvanized base frame</b>	342 111	342 112	342 112	342 112	342 111
<b>E-RMA SIM</b>	342 220	342 220	342 220	342 220	342 220
<b>E-RMA LAN</b>	342 221	342 221	342 221	342 221	342 221
Special equipment - not retrofit					
<b>Rental kit</b>	342 200	342 310	342 310	342 310	342 200
<b>Automatic fuel pump**</b>	342 006	342 006	342 006	342 006	342 006
<b>Insulation monitoring</b>	163 076	163 076	163 076	163 076	163 076
<b>RCD protection switch allstrom sensitiv</b>	342 013	342 014	342 014	342 014	342 013
<b>Large tank 48 h at 75% load</b>	343 307 / 450 L	343 308 / 730 L	343 308 / 730 L	343 308 / 730 L	343 307 / 450 L
<b>Socket combinations</b>	n.a.	342 050	342 050	342 050	n.a.

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\*only series AS

# Power Line MS/AS

## 100 – 220 kVA

**ENDRESS** 

- Modern, water-cooled industrial engines from PERKINS and VOLVO
- Galvanized and powder-coated soundproofing hood
- Inner, lockable tank
- A self-explanatory and simple to operate digital control system
- Prepared for use of remote monitoring E-RMA
- Brushless, electronically controlled alternators
- Coolant prewarming installed as standard in the AS series
- Liquid collection tray to protect the environment



Ready for E-RMA remote monitoring system



You will find a description of the control box and rental kit on pages 60-61

**3A**

**3A**

**3A**

Model - manual	ESE 110 PW/MS	ESE 115 PW/MS	ESE 145 VW/MS	ESE 150 VW/MS	ESE 165 VW/MS
<b>Order No.</b>	333 254	333 255	333 256	333 257	333 258
<b>Model - automatic</b>	<b>ESE 110 PW/AS</b>	<b>ESE 115 PW/AS</b>	<b>ESE 145 VW/AS</b>	<b>ESE 150 VW/AS</b>	<b>ESE 165 VW/AS</b>
<b>Order No.</b>	331 254	331 255	331 256	331 257	331 258
<b>Max. output [LTP] kVA/kW</b>	114.7 / 91.7	116.0 / 92.8	143.0 / 114.4	145.1 / 116.1	164.0 / 131.2
<b>Continuous power [PRP] kVA/kW</b>	103.8 / 93.8	106.2 / 84.9	132.1 / 105.7	130.1 / 104.1	153.8 / 123.0
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulation</b>	synchronous / class H	synchronous / class H	synchronous / class H	synchronous / class H	synchronous / class H
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~
<b>Nominal current/cos φ</b>	149.9 A 3~ / 0.8	153.2 A 3~ / 0.8	190.7 A 3~ / 0.8	187.0 A 3~ / 0.8	222.0 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic
<b>Engine type</b>	<b>PERKINS 1104C-44TAG2</b>	<b>PERKINS 1104D-E4TAG2</b>	<b>VOLVO TAD750GE</b>	<b>VOLVO TAD532GE</b>	<b>VOLVO TAD751GE</b>
<b>Design</b>	4-cylinder 4-stroke	4-cylinder 4-stroke	6-cylinder 4-stroke	4-cylinder 4-stroke	6-cylinder 4-stroke
<b>Cooling system</b>	water cooled	water cooled	water cooled	water cooled	water cooled
<b>Displacement</b>	4410 cm <sup>3</sup>	4400 cm <sup>3</sup>	7150 cm <sup>3</sup>	4760 cm <sup>3</sup>	7150 cm <sup>3</sup>
<b>Engine output [PRP]</b>	93.6 kW	95.5 kW	119.0 kW	116.0 kW	137.0 kW
<b>RPM/regulation</b>	1500 / electronic	1500 / electronic	1500 / electronic	1500 / electronic	1500 / electronic
<b>Fuel/tank capacity (litres)</b>	Diesel / 209	Diesel / 209	Diesel / 350	Diesel / 350	Diesel / 350
<b>Consumption/running time at 75% load*</b>	18.0 l / 11.6 h	17.0 l / 12.3 h	25.5 l / 13.7 h	21.9 l / 12 h	29.1 l / 12.02 h
<b>Start-up system</b>	E-Start / 12 V	E-Start / 12 V	E-Start / 12 V	E-Start / 12 V	E-Start / 12 V
<b>Sound power level LWA</b>	96 dB(A)	96 dB(A)	97 dB(A)	97 dB(A)	97 dB(A)
<b>Sound pressure level LPA (7 m)</b>	67 dB(A)	67 dB(A)	68 dB(A)	68 dB(A)	68 dB(A)
<b>Weight in kg</b>	1400	1500	2224	1811	2224
<b>Dimensions L x W x H in mm</b>	2414 x 1087 x 1529	2414 x 1087 x 1683	3414 x 1338 x 1768	3000 x 1150 x 1680	3414 x 1338 x 1768
<b>Available accessories</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>
<b>Chassis ST</b> Drawbar rigid	341 110 / FG 2500	341 110 / FG 2500	341 112 / FG 3500	341 108 / FG 3000	341 112 / FG 3500
<b>Chassis HV</b> height adjustable	341 111 / FG 2500	341 111 / FG 2500	341 113 / FG 3500	341 109 / FG 3000	341 113 / FG 3500
<b>Load transfer switch</b> for LTP performance	343 014 / E-US 200	343 014 / E-US 200	343 005 / E-US 250	343 005 / E-US 250	343 005 / E-US 250
<b>Galvanized baseframe</b>	342 113	342 113	342 115	342 114	342 115
<b>E-RMA SIM</b>	342 220	342 220	342 220	342 220	342 220
<b>E-RMA LAN</b>	342 221	342 221	342 221	342 221	342 221
<b>Special equipment</b> - not retrofit	342 310	342 310	342 310	342 310	342 310
<b>Rental kit</b>	342 006	342 006	342 006	342 006	342 006
<b>Automatic fuel pump**</b>	163 076	163 076	163 076	163 076	163 076
<b>Insulation monitoring</b>	342 014	342 014	342 014	342 014	342 014
<b>RCD protection switch</b> allstrom sensitiv	343 309 / 890 L	343 309 / 890 L	343 310 / 1.750 L	343 310 / 1.750 L	343 310 / 1.750 L
<b>Large tank 48 h at 75% load</b>	342 050	342 050	342 051	342 051	342 051
<b>Socket combinations</b>					

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\*only series AS

Model - manual	ESE 170 VW/MS	ESE 200 VW/MS	ESE 220 VW/MS	ESE 225 VW/MS
<b>Order No.</b>	333 259	333 260	333 261	333 268
<b>Model - automatic</b>	<b>ESE 170 VW/AS</b>	<b>ESE 200 VW/AS</b>	<b>ESE 220 VW/AS</b>	<b>ESE 225 VW/AS</b>
<b>Order No.</b>	331 259	331 260	331 261	331 268
<b>Max. output [LTP] kVA/kW</b>	164.0 / 131.2	196.0 / 156.8	220.0 / 176.0	220.0 / 176.0
<b>Continuous power [PRP] kVA/kW</b>	154.9 / 124.0	179.0 / 143.2	202.7 / 162.1	200.5 / 160.4
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulation</b>	synchronous / class H			
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~			
<b>Nominal current/cos φ</b>	223.0 A 3~ / 0.8	258.4 A 3~ / 0.8	292.0 A 3~ / 0.8	289.4 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic			
<b>Engine type</b>	<b>VOLVO TAD731GE</b>	<b>VOLVO TAD752GE</b>	<b>VOLVO TAD733GE</b>	<b>VOLVO TAD753GE</b>
<b>Design</b>	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke
<b>Cooling system</b>	water cooled	water cooled	water cooled	water cooled
<b>Displacement</b>	7150 cm <sup>3</sup>	7150 cm <sup>3</sup>	7150 cm <sup>3</sup>	7150 cm <sup>3</sup>
<b>Engine output [PRP]</b>	138.0 kW	166.0 kW	181.0 kW	184.0 kW
<b>RPM/regulation</b>	1500 / mechanical	1500 / electronic	1500 / electronic	1500 / electronic
<b>Fuel/tank capacity (litres)</b>	Diesel / 350	Diesel / 350	Diesel / 350	Diesel / 350
<b>Consumption/running time at 75% load*</b>	26.9 l / 13 h	33.0 l / 10.5 h	35.0 l / 10 h	35.6 l / 9.8 h
<b>Start-up system</b>	E-Start / 24 V			
<b>Sound power level LWA</b>	97 dB(A)	94 dB(A)	94 dB(A)	94 dB(A)
<b>Sound pressure level LPA (7 m)</b>	68 dB(A)	65 dB(A)	65 dB(A)	65 dB(A)
<b>Weight in kg</b>	2224	2224	2540	2540
<b>Dimensions L x W x H in mm</b>	3414 x 1338 x 1768			
<b>Available accessories</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>
<b>Chassis ST</b> Drawbar rigid	341 112 / FG 3500	on request	on request	on request
<b>Chassis HV</b> height adjustable	341 113 / FG 3500	on request	on request	on request
<b>Load transfer switch</b> for LTP performance	343 005 / E-US 250	343 006 / E-US 315	343 007 / E-US 400	343 007 / E-US 400
<b>Galvanized baseframe</b>	342 115	342 115	342 115	342 115
<b>E-RMA SIM</b>	342 220	342 220	342 220	342 220
<b>E-RMA LAN</b>	342 221	342 221	342 221	342 221
<b>Special equipment</b> - not retrofit	342 310	342 310	342 310	342 310
<b>Rental kit</b>	342 006	342 006	342 006	342 006
<b>Automatic fuel pump**</b>	163 076	163 076	163 076	163 076
<b>Insulation monitoring</b>	342 014			
<b>RCD protection switch</b> allstrom sensitiv	343 310 / 1.750 L			
<b>Large tank 48 h at 75% load</b>	342 051	342 051	342 051	342 051
<b>Socket combinations</b>				

\* Data is based on average values and are not binding, since individual cases may vary.  
\*\*only series AS

# Power Line MS/AS

## 275 – 500 kVA

**ENDRESS** 

- Modern, water-cooled industrial engines from VOLVO
- Galvanized and powder-coated soundproofing hood
- Inner, lockable tank
- A self-explanatory and simple to operate digital control system
- Prepared for use of remote monitoring E-RMA
- Brushless, electronically controlled alternators
- Coolant prewarming installed as standard in the AS series



**AS:** Automatic control box, coolant pre-warming system, crane loading eye



You will find a description  
of the control box and  
rental kit on pages 60-61



**3A**

**3A**

Model - automatic	ESE 275 VW/AS	ESE 280 VW/AS	ESE 330 VW/AS	ESE 360 VW/AS	ESE 370 VW/AS
<b>Order No.</b>	331 224	331 238	331 215	331 269	331 263
<b>Max. output [LTP] kVA/kW</b>	275.0 / 220.0	275.0 / 220.0	330.0 / 264.0	357.6 / 286.1	370.0 / 296.0
<b>Continuous power [PRP] kVA/kW</b>	248.7 / 198.9	253.0 / 202.0	315.0 / 252.0	326.1 / 260.9	354.1 / 283.2
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulation</b>	synchronous / class H	synchronous / class H	synchronous / class H	synchronous / class H	synchronous / class H
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~
<b>Nominal current/cos φ</b>	359.0 A 3~ / 0.8	365.1 A 3~ / 0.8	454.7 A 3~ / 0.8	470.7 A 3~ / 0.8	511.0 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic
<b>Engine type</b>	<b>VOLVO TAD734GE</b>	<b>VOLVO TAD754GE</b>	<b>VOLVO TAD1342GE</b>	<b>VOLVO TAD1351GE</b>	<b>VOLVO TAD1342GE</b>
<b>Design</b>	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke
<b>Cooling system</b>	water cooled	water cooled	water cooled	water cooled	water cooled
<b>Displacement</b>	7150 cm <sup>3</sup>	7150 cm <sup>3</sup>	12.780 cm <sup>3</sup>	12.780 cm <sup>3</sup>	12.780 cm <sup>3</sup>
<b>Engine output [PRP]</b>	227.0 kW	228.0 kW	313.0 kW	286.0 kW	313.0 kW
<b>RPM/regulation</b>	1500 / electronic	1500 / electronic	1500 / electronic	1500 / electronic	1500 / electronic
<b>Fuel/tank capacity (litres)</b>	Diesel / 636	Diesel / 636	Diesel / 636	Diesel / 636	Diesel / 636
<b>Consumption/running time at 75% load*</b>	44.6 l / 14.3 h	46.4 l / 13.7 h	48.5 l / 13.1 h	52.4 l / 12.1 h	54.4 l / 11.6 h
<b>Start-up system/battery</b>	E-Start / 24 V	E-Start / 24 V	E-Start / 24 V	E-Start / 24 V	E-Start / 24 V
<b>Sound power level LWA</b>	97 dB(A)	97 dB(A)	97 dB(A)	97 dB(A)	97 dB(A)
<b>Sound pressure level LPA (7 m)</b>	68 dB(A)	68 dB(A)	68 dB(A)	68 dB(A)	68 dB(A)
<b>Weight in kg</b>	2990	2990	3671	3671	3671
<b>Dimensions L x W x H in mm</b>	3951 x 1438 x 2085	3951 x 1438 x 2085	3951 x 1438 x 2085	3951 x 1438 x 2085	3951 x 1438 x 2085
<b>Available accessories</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>
Load transfer switch for LTP performance	343 007 / E-US 400	343 007 / E-US 400	343 008 / E-US 630	343 008 / E-US 630	343 008 / E-US 630
<b>E-RMA SIM</b>	342 220	342 220	342 220	342 220	342 220
<b>E-RMA LAN</b>	342 221	342 221	342 221	342 221	342 221
<b>Special equipment - not retrofit</b>					
<b>Automatic fuel pump</b>	342 006	342 006	342 006	342 006	342 006
<b>Insulation monitoring</b>	163 076	163 076	163 076	163 076	163 076
<b>Socket combinations</b>	342 053	342 053	342 053	342 053	342 053

\*Data is based on average values and are not binding, since individual cases may vary.

Model - automatic	ESE 415 VW/AS	ESE 420 VW/AS	ESE 455 VW/AS	ESE 460 VW/AS	ESE 505 VW/AS
<b>Order No.</b>	331 216	331 270	331 271	331 217	331 272
<b>Max. output [LTP] kVA/kW</b>	416.1 / 332.9	421.9 / 337.5	456.8 / 365.4	455.6 / 364.5	508.2 / 406.6
<b>Continuous power [PRP] kVA/kW</b>	380.0 / 303.9	383.4 / 306.7	415.8 / 332.6	414.6 / 331.7	416.3 / 369.0
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulation</b>	synchronous / class H				
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~				
<b>Nominal current/cos φ</b>	548.3 A 3~ / 0.8	553.4 A 3~ / 0.8	600.2 A 3~ / 0.8	598.4 A 3~ / 0.8	665.8 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic				
<b>Engine type</b>	<b>VOLVO TAD1343GE</b>	<b>VOLVO TAD1354GE</b>	<b>VOLVO TAD1355GE</b>	<b>VOLVO TAD1344GE</b>	<b>VOLVO TAD1650GE</b>
<b>Design</b>	6-cylinder 4-stroke				
<b>Cooling system</b>	water cooled				
<b>Displacement</b>	12.780 cm <sup>3</sup>	12.780 cm <sup>3</sup>	12.780 cm <sup>3</sup>	12.780 cm <sup>3</sup>	16.120 cm <sup>3</sup>
<b>Engine output [PRP]</b>	335.0 kW	339.0 kW	369.0 kW	364.0 kW	402.0 kW
<b>RPM/regulation</b>	1500 / electronic				
<b>Fuel/tank capacity (litres)</b>	Diesel / 636				
<b>Consumption/running time at 75% load*</b>	58.1 l / 10.9 h	62.2 l / 10.2 h	68.2 l / 9.3 h	64.4 l / 9.9 h	73.5 l / 8.6 h
<b>Start-up system/battery</b>	E-Start / 24 V				
<b>Sound power level LWA</b>	97 dB(A)	97 dB(A)	97 dB(A)	98 dB(A)	105 dB(A)
<b>Sound pressure level LPA (7 m)</b>	68 dB(A)	68 dB(A)	68 dB(A)	69 dB(A)	75 dB(A)
<b>Weight in kg</b>	3671	3671	3671	3671	4888
<b>Dimensions L x W x H in mm</b>	3951 x 1438 x 2085	4400 x 1560 x 2250			
<b>Available accessories</b>	<b>Order No.</b>				
Load transfer switch for LTP performance	343 008 / E-US 630	343 008 / E-US 630	343 009 / E-US 800	343 009 / E-US 800	343 009 / E-US 800
<b>E-RMA SIM</b>	342 220	342 220	342 220	342 220	342 220
<b>E-RMA LAN</b>	342 221	342 221	342 221	342 221	342 221
<b>Special equipment - not retrofit</b>					
<b>Automatic fuel pump</b>	342 006	342 006	342 006	342 006	342 006
<b>Insulation monitoring</b>	163 076	163 076	163 076	163 076	163 076
<b>Socket combinations</b>	342 053	342 053	342 053	342 053	342 053

\*Data is based on average values and are not binding, since individual cases may vary.



You will find a description  
of the control box and  
rental kit on pages 60-61



ESE 560 VW/AS with socket combination

**3A**

Model - automatic	ESE 510 VW/AS	ESE 555 VW/AS	ESE 560 VW/AS	ESE 590 VW/AS	ESE 705VW/AS
<b>Order No.</b>	331 218	331 273	331 219	331 220	331 237
<b>Max. output [LTP] kVA/kW</b>	505.9 / 404.7	557.9 / 445.6	556.0 / 436.8	601.0 / 480.8	702.0 / 561.6
<b>Continuous power [PRP] kVA/kW</b>	455.4 / 364.3	506.3 / 405.0	504.7 / 403.8	567.0 / 460.8	631.8 / 505.4
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulation</b>	synchronous / class H				
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~				
<b>Nominal current/cos φ</b>	657.3 A 3~ / 0.8	730.8 A 3~ / 0.8	728.5 A 3~ / 0.8	818.4 A 3~ / 0.8	911.9 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic				
<b>Engine type</b>	<b>VOLVO TAD1345GE</b>	<b>VOLVO TAD1651GE</b>	<b>VOLVO TAD1641GE</b>	<b>VOLVO TAD1642GE</b>	<b>VOLVO TWD1643GE</b>
<b>Design</b>	6-cylinder 4-stroke				
<b>Cooling system</b>	water cooled				
<b>Displacement</b>	12.780 cm <sup>3</sup>	16.120 cm <sup>3</sup>	16.120 cm <sup>3</sup>	16.120 cm <sup>3</sup>	16.120 cm <sup>3</sup>
<b>Engine output [PRP]</b>	398.0 kW	441.0 kW	441.0 kW	514.0 kW	553.0 kW
<b>RPM/regulation</b>	1500 / electronic				
<b>Fuel/tank capacity (litres)</b>	Diesel / 636				
<b>Consumption/running time at 75% load*</b>	70.4 l / 9 h	81.5 l / 7.8 h	77.6 l / 8.2 h	85.5 l / 7.4 h	97.4 l / 6.5 h
<b>Start-up system/battery</b>	E-Start / 24 V				
<b>Sound power level LWA</b>	98 dB(A)	105 dB(A)	105 dB(A)	105 dB(A)	105 dB(A)
<b>Sound pressure level LPA (7 m)</b>	69 dB(A)	75 dB(A)	75 dB(A)	75 dB(A)	75 dB(A)
<b>Weight in kg</b>	4100	4888	4495	4888	5490
<b>Dimensions L x W x H in mm</b>	3951 x 1438 x 2085	4400 x 1560 x 2250	4400 x 1560 x 2250	4400 x 1560 x 2250	4700 x 1757 x 2510
<b>Available accessories</b>	<b>Order No.</b>				
Load transfer switch for LTP performance	343 009 / E-US 800	343 010 / E-US 1000	343 010 / E-US 1000	343 010 / E-US 1000	343 011 / E-US 1250
<b>E-RMA SIM</b>	342 220	342 220	342 220	342 220	342 220
<b>E-RMA LAN</b>	342 221	342 221	342 221	342 221	342 221
<b>Special equipment - not retrofit</b>					
<b>Automatic fuel pump</b>	342 006	342 006	342 006	342 006	342 006
<b>Insulation monitoring</b>	163 076	163 076	163 076	163 076	163 076
<b>Socket combinations</b>	342 053	342 053	342 053	342 053	342 053

\*Data is based on average values and are not binding, since individual cases may vary.

#### Load switching protection

ENDRESS load transfer switch panels can be seen as an option for automatic grid devices. To ensure simple connection to the generator, everything is prewired by the factory on to a terminal block built into the box. The protection type of the steel box is IP 45. Including emergency off button and 5 control cables.



#### Chassis

All chassis including the drawbar are fully galvanised. There are single-axle and tandem trailers with fixed or adjustable towing devices with car/truck towing eyes available.



#### Equipment details ST = Fixed towing drawbar

- Ball coupling for cars
- Rear parking supports (1 pair)
- Support wheel (strengthened), automatic (except FG 75)

#### Equipment details HV = Height-adjustable towing drawbar

- DIN towing eye, 40 mm, for trucks
- Rear parking supports (1 pair)
- Support wheel (strengthened), automatic (except FG 75)

Model	FG 75 ST*	FG 75 HV**	FG 135 ST	FG 135 HV**	FG 160 ST	FG 160 HV**	FG 180 ST	FG 180 HV**
<b>Order No.</b>	341 100	341 101	341 102	341 103	341 104	341 105	341 106	341 107
<b>Total permissible weight in kg</b>	750	750	1350	1350	1600	1600	1800	1800
<b>Single/tandem</b>	single	single	single	single	single	single	single	single
<b>Trailer drawbar</b>	rigid	height adjustable	rigid	height adjustable	rigid	height adjustable	rigid	height adjustable
<b>Overrunning brake</b>	non-braked	non-braked	yes	yes	yes	yes	yes	yes
<b>Length mm</b>	3180	3610	3450	4100	3450	4100	3760	4570
<b>Width mm</b>	1590	1590	1560	1560	1560	1560	1560	1560

Model	FG 2500 ST	FG 2500 HV**	FG 3000 ST	FG 3000 HV**	FG 3500 ST	FG 3500 HV**
<b>Order No.</b>	341 110	341 111	341 108	341 109	341 112	341 113
<b>Total permissible weight in kg</b>	2500	2500	3000	3000	3500	3500
<b>Single/tandem</b>	tandem	tandem	tandem	tandem	tandem	tandem
<b>Trailer drawbar</b>	rigid	height adjustable	rigid	height adjustable	rigid	height adjustable
<b>Overrunning brake</b>	yes	yes	yes	yes	yes	yes
<b>Length in mm</b>	4100	4630	4705	5410	5110	4750
<b>Width in mm</b>	1630	1630	1720	1720	1850	1850

\*Standard front stabilizer wheel with clamp

\*\*DIN towing eye 40 mm included



	Construction site generators	MS	Power Line & Basic Line	open					
Displays	analog	digital	digital	digital					
Operating mode	manual	manual	auto/man	auto/man					
<b>Display operation</b>									
Start/Stop	Keys	Buttons	Auto / Buttons	Auto / Buttons					
Monitoring of grid voltage	—	—	✓	✓					
Generator voltage 3~	—	✓	✓	✓					
Generator voltage 1~	—	✓	✓	✓					
Strength of current 3~	—	✓	✓	✓					
Strength of current 1~	✓	✓	✓	✓					
Frequency meter	✓	✓	✓	✓					
Operating hours counter	✓	✓	✓	✓					
Output	—	✓	✓	✓					
Fuel indicator	—	✓	✓	✓					
Motor temperature	—	✓	✓	✓					
Oil pressure	—	✓	✓	✓					
Motor rotation speed	—	✓	✓	✓					
<b>Warning messages - Shutoff</b>									
Generator too high/low voltage	—	A	A	A					
Generator too high/low frequency	—	A	A	A					
Battery too high/low voltage	—	W	W	W					
Motor temperature too high	A	A	A	A					
Motor rotation speed too high/low	A	A	A	A					
Overload	A	A	A	A					
Battery charging fault	A	W	W	W					
Low fuel level	—	W / A	W / A	W / A					
Low oil pressure	A	A	A	A					
Attempt to start failed	—	W	W	W					
Leak warning	—	A	A	—					
General fault, acoustic	—	W	W	W					
<b>Shutoff</b>									
3-pole wire circuit breaker	✓	✓	✓	✓					
4-pole wire circuit breaker	on request	on request	on request	auf Anfrage					
RCD protection switch	✓	✓	—	—					
Insulation monitoring	on request	on request	on request	auf Anfrage					
Emergency off button	✓	✓	✓	✓					
<b>Other equipment details</b>									
Terminal block	—	off ESE 65	off ESE 65	✓					
Battery master switch	—	—	—	—					
3-way fuel stopcock	—	—	—	—					
E-RMA SIM	—	Option	Option	Option					
E-RMA LAN	—	Option	Option	Option					
External starting option	—	—	—	—					
<b>Sockets</b>	ESE 10 - 20	ESE 30 - 50	ESE 65	ESE 15 - 50	off ESE 65	ESE 15 - 50	off ESE 65	ESE 15 - 50	off ESE 65
CEE 400 V / 63 A	—	1	1	1	Rental Kit Option	—	see page 61	—	—
CEE 400 V / 32 A	1	1	1	1		—		—	—
CEE 400 V / 16 A	1	—	1	1		—		—	—
CEE 230 V / 16 A	2	2	1	1		—		—	—
230 V / 16 A earthed socket	1	1	1	1		—		—	—

✓ Yes      A Shuts off      W Warning



#### Power Line series AS + open version

The control boxes of automatic models ESE 15 – ESE 50 are equipped with a digital control unit for fully automatic grid monitoring. In addition, the functions of the electricity supply unit are securely monitored. A CEE 400 V socket appropriate to the unit's output serves as a connection point to reduce the load.

Socket combination	ESE 15-20	ESE 30-50
CEE 400 V / 63 A	—	1
CEE 400 V / 32 A	1	—

No low fuel level warning or shutdown

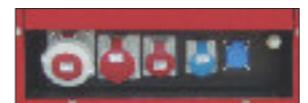
Option:

**Rental Kit** consisting of

- Galvanized base frame
- Battery master switch
- Filter with water separator
- 3-way fuel valve
- Terminal block
- Socket combination off ESE 65



**Galvanized base frame**  
for secure transport on the building site.



Shockproof sockets

- 1 x 230 V/16 A
- 1 x CEE 230 V/16 A
- 1 x CEE 400 V/16 A
- 1 x CEE 400 V/32 A
- 1 x CEE 400 V/63 A



**Battery master switch**  
cuts off the battery from all the components of the generator.



**Large-size diesel filter**  
with water separator and drainage bolt.



**3-way fuel valve**  
for direct connection to an external fuel connector

Option:  
**Socket combination** consisting of

- 1 x 230 V/16 A
- 1 x CEE 230 V/16 A
- 1 x CEE 400 V/16 A
- 1 x CEE 400 V/32 A
- 1 x CEE 400 V/63 A



- 1 x CEE 400 V/63 A fits for
- ESE 65 - 115**
- Order No. 342 050
- ESE 145 - 225**
- Order No. 342 051

- 1 x 230 V/16 A
- 1 x CEE 400 V/16 A
- 1 x CEE 400 V/32 A
- 1 x CEE 400 V/63 A
- 1 x CEE 400 V/125 A

fits for

**ESE 275 - 705**

Order No. 342 052

- 1 x 230 V/16 A
- 1 x CEE 400 V/32 A
- 1 x CEE 400 V/63 A
- 1 x CEE 400 V/125 A

fits for

**ESE 275 - 705**

Order No. 342 053

# Power Line open version

## 15 – 220 kVA

**ENDRESS** 

- Modern water-cooled YANMAR and VOLVO engines
- Automatic control panel for operation as an emergency power generator
- Coolant prewarming installed as standard for all model sizes
- Brushless MeccAlte alternators with electronic control behaviour for sensitive power consumers
- Prepared for use of remote monitoring E-RMA
- Optional: changeover contactors for an emergency power installation



You will find a description  
of the control box and  
rental kit on pages 60-61



Model	ESE 15 YW	ESE 20 YW	ESE 30 YW	ESE 45 YW	ESE 65 PW
<b>Order No.</b>	330 221	330 222	330 213	330 228	330 250
<b>Max. output [LTP] kVA/kW</b>	14.3 / 11.4	19.3 / 15.4	32.5 / 26.0	46.0 / 36.8	66.9 / 53.5
<b>Continuous power [PRP] kVA/kW</b>	13.0 / 11.2	17.6 / 14.0	30.5 / 24.4	42.0 / 33.6	60.7 / 48.6
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulations</b>	synchronous / class H				
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~				
<b>Nominal current/cos φ</b>	18.7 A 3~ / 0.8	25.4 A 3~ / 0.8	44.0 A 3~ / 0.8	60.6 A 3~ / 0.8	87.6 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic				
<b>Engine type</b>	YANMAR 3TNV88	YANMAR 4TNV88	YANMAR 4TNV88	YANMAR 4TNV88	PERKINS 1103A-TG2
<b>Design</b>	3-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke
<b>Cooling system</b>	water cooled				
<b>Displacement</b>	1642 cm <sup>3</sup>	2190 cm <sup>3</sup>	3319 cm <sup>3</sup>	3319 cm <sup>3</sup>	3300 cm <sup>3</sup>
<b>Engine output [PRP]</b>	12.7 kW	16.9 kW	31.2 kW	38.3 kW	55.0 kW
<b>RPM/regulation</b>	1500 / mechanical				
<b>Fuel/tank capacity (litres)</b>	Diesel / 51	Diesel / 51	Diesel / 51	Diesel / 51	Diesel / 209
<b>Consumption/running time at 75% load*</b>	2.8 l / 17.9 h	3.7 l / 13.7 h	5.8 l / 8.7 h	7.9 l / 6.4 h	10.4 l / 20 h
<b>Start-up system/battery</b>	E-Start / 12 V				
<b>Weight in kg</b>	390	507	560	580	909
<b>Dimensions L x W x H in mm</b>	1600 x 870 x 1000	1600 x 870 x 1000	2000 x 920 x 1100	2000 x 920 x 1100	2200 x 1000 x 1743
<b>Available accessories</b>	<b>Order No.</b>				
Load transfer switch for LTP performance	343 000 / E-US 32	343 000 / E-US 32	343 002 / E-US 60	343 003 / E-US 90	343 004 / E-US 110
Exhaust compensator	342 022	342 022	342 022	342 022	342 022
E-RMA SIM	342 220	342 220	342 220	342 220	342 220
E-RMA LAN	342 221	342 221	342 221	342 221	342 221
<b>Special equipment - not retrofit</b>					
Automatic fuel pump	342 006	342 006	342 006	342 006	342 006

\*Data is based on average values and are not binding, since individual cases may vary.

Model	ESE 80 PW	ESE 110 PW	ESE 150 VW	ESE 170 VW	ESE 220 VW
<b>Order No.</b>	330 252	330 254	330 257	330 259	330 261
<b>Max. output [LTP] kVA/kW</b>	83.0 / 66.4	114.7 / 91.7	143.0 / 114.4	164.0 / 131.2	220.0 / 176.0
<b>Continuous power [PRP] kVA/kW</b>	78.0 / 62.4	103.8 / 83.0	129.8 / 103.8	154.9 / 124.0	202.7 / 162.1
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulations</b>	synchronous / class H				
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~				
<b>Nominal current/cos φ</b>	112.6 A 3~ / 0.8	149.8 A 3~ / 0.8	187.3 A 3~ / 0.8	223.6 A 3~ / 0.8	292.5 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic				
<b>Engine type</b>	PERKINS 1104A-44TG2	PERKINS 1104A-44TG2	VOLVO TAD532GE	VOLVO TAD731GE	VOLVO TAD733GE
<b>Design</b>	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke
<b>Cooling system</b>	water cooled				
<b>Displacement</b>	4400 cm <sup>3</sup>	4410 cm <sup>3</sup>	4760 cm <sup>3</sup>	7150 cm <sup>3</sup>	7150 cm <sup>3</sup>
<b>Engine output [PRP]</b>	73.4 kW	93.6 kW	116.0 kW	138.0 kW	181.0 kW
<b>RPM/regulation</b>	1500 / mechanical	1500 / electronic	1500 / electronic	1500 / electronic	1500 / electronic
<b>Fuel/tank capacity (litres)</b>	Diesel / 243	Diesel / 240	Diesel / 340	Diesel / 340	Diesel / 340
<b>Consumption/running time at 75% load*</b>	13.4 l / 18.1 h	18.0 l / 13.3 h	21.9 l / 25.5 h	26.9 l / 12.7 h	35.0 l / 9.7 h
<b>Start-up system/battery</b>	E-Start / 12 V	E-Start / 12 V	E-Start / 12 V	E-Start / 24 V	E-Start / 24 V
<b>Weight in kg</b>	964	1170	1491	1796	2238
<b>Dimensions L x W x H in mm</b>	2200 x 1000 x 1743	2200 x 1000 x 1620	2200 x 1000 x 1743	2650 x 1100 x 1965	2650 x 1100 x 1965
<b>Available accessories</b>	<b>Order No.</b>				
Load transfer switch for LTP performance	343 013 / E-US 140	343 014 / E-US 200	343 005 / E-US 250	343 005 / E-US 250	343 007 / E-US 400
Exhaust compensator	342 022	342 022	342 022	342 022	342 022
E-RMA SIM	342 220	342 220	342 220	342 220	342 220
E-RMA LAN	342 221	342 221	342 221	342 221	342 221
<b>Special equipment - not retrofit</b>					
Automatic fuel pump	342 006	342 006	342 006	342 006	342 006

\*Data is based on average values and are not binding, since individual cases may vary.

# Power Line open version

## 275 – 705 kVA

**ENDRESS** 

Water-cooled VOLVO 4-stroke 6-cylinder in-line engines with turbo-chargers/charge air cooling secure a qualitative drive for this emergency power generator. The industrial engines with direct injection and optimised combustion provide a rapid reaction time in cold weather and are characterised by low exhaust emissions and economic efficiency. To do this we only use brushless MeccAlte alternators with electronic control behaviour for sensitive power consumers. The alternators comply with insulation class H according to VDE 0530. In connection with our E-RMA remote monitoring application you have an overview at all times of your emergency power supply.



Ready for E-RMA remote monitoring system



You will find a description  
of the control box and  
rental kit on pages 60-61



ESE 415 VW

Model	ESE 275 VW	ESE 330 VW	ESE 370 VW	ESE 415 VW	ESE 460 VW
<b>Order No.</b>	330 224	330 215	330 236	330 216	330 217
<b>Max. output [LTP] kVA/kW</b>	275.0 / 220.0	330.0 / 264.0	370.0 / 296.0	416.1 / 332.9	455.6 / 364.5
<b>Continuous power [PRP] kVA/kW</b>	248.7 / 198.9	315.0 / 252.0	354.1 / 283.3	379.8 / 303.9	414.6 / 331.7
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulations</b>	synchronous / class H	synchronous / class H	synchronous / class H	synchronous / class H	synchronous / class H
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~	400 V 3~ / 230 V 1~
<b>Nominal current/cos φ</b>	359.0 A 3~ / 0.8	454.7 A 3~ / 0.8	511.1 A 3~ / 0.8	548.2 A 3~ / 0.8	598.4 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic	50 Hz / electronic
<b>Engine type</b>	<b>VOLVO TAD734GE</b>	<b>VOLVO TAD1342GE</b>	<b>VOLVO TAD1342GE</b>	<b>VOLVO TAD1343GE</b>	<b>VOLVO TAD1344GE</b>
<b>Design</b>	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke
<b>Cooling system</b>	water cooled	water cooled	water cooled	water cooled	water cooled
<b>Displacement</b>	7150 cm <sup>3</sup>	12,780 cm <sup>3</sup>	12,780 cm <sup>3</sup>	12,780 cm <sup>3</sup>	12,780 cm <sup>3</sup>
<b>Engine output [PRP]</b>	227.0 kW	313.0 kW	313.0 kW	335.0 kW	364.0 kW
<b>RPM/regulation</b>	1500 / electronic	1500 / electronic	1500 / electronic	1500 / electronic	1500 / electronic
<b>Fuel/tank capacity (litres)</b>	Diesel / 400	Diesel / 636	Diesel / 636	Diesel / 636	Diesel / 636
<b>Consumption/running time at 75% load*</b>	41.5 l / 19.6 h	48.8 l / 12.1 h	54.4 l / 11.7 h	58.1 l / 10.9 h	64.4 l / 9.9 h
<b>Start-up system/battery</b>	E-Start / 24 V	E-Start / 24 V	E-Start / 24 V	E-Start / 24 V	E-Start / 24 V
<b>Weight in kg</b>	2177	3160	3160	3050	3370
<b>Dimensions L x W x H in mm</b>	2672 x 1181 x 1844	3300 x 1460 x 1965	3300 x 1460 x 1965	3300 x 1460 x 1917	3300 x 1460 x 1965
<b>Available accessories</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>
Load transfer switch for LTP performance	343 007 / E-US 400	343 008 / E-US 630	343 008 / E-US 630	343 008 / E-US 630	343 009 / E-US 800
Exhaust compensator	342 022	342 022	342 022	342 022	342 022
E-RMA SIM	342 220	342 220	342 220	342 220	342 220
E-RMA LAN	342 221	342 221	342 221	342 221	342 221
<b>Special equipment - not retrofit</b>					
Automatic fuel pump	342 006	342 006	342 006	342 006	342 006

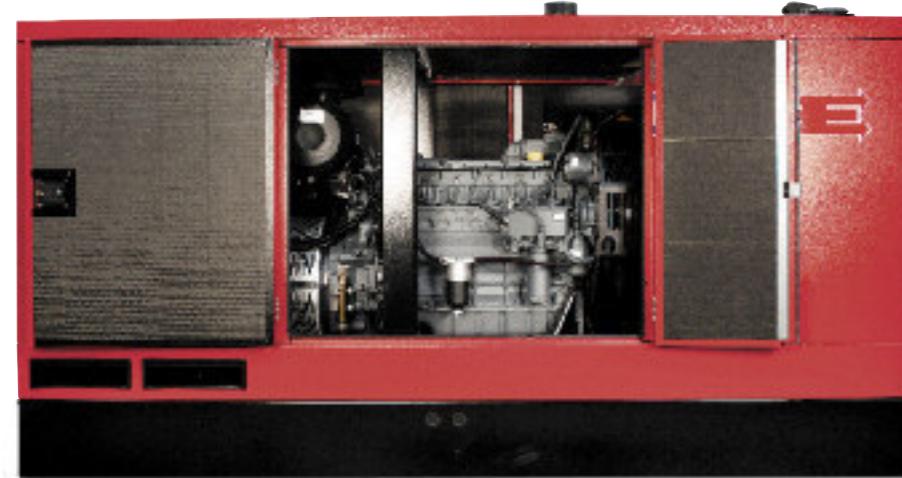
\*Data is based on average values and are not binding, since individual cases may vary.

Model	ESE 510 VW	ESE 560 VW	ESE 590 VW	ESE 705 VW
<b>Order No.</b>	330 218	330 219	330 220	330 237
<b>Max. output [LTP] kVA/kW</b>	505.9 / 404.7	546.0 / 436.8	601.0 / 480.8	702.0 / 561.6
<b>Continuous power [PRP] kVA/kW</b>	455.4 / 364.3	504.7 / 403.8	567.0 / 453.6	631.8 / 505.4
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulations</b>	synchronous / class H			
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~			
<b>Nominal current/cos φ</b>	657.3 A 3~ / 0.8	728.5 A 3~ / 0.8	818.4 A 3~ / 0.8	911.9 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic			
<b>Engine type</b>	<b>VOLVO TAD1345GE</b>	<b>VOLVO TAD1641GE</b>	<b>VOLVO TAD1642GE</b>	<b>VOLVO TWD1643GE</b>
<b>Design</b>	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke
<b>Cooling system</b>	water cooled	water cooled	water cooled	water cooled
<b>Displacement</b>	12,780 cm <sup>3</sup>	16,120 cm <sup>3</sup>	16,120 cm <sup>3</sup>	16,120 cm <sup>3</sup>
<b>Engine output [PRP]</b>	398.0 kW	398.0 kW	514.0 kW	553.0 kW
<b>RPM/regulation</b>	1500 / electronic	1500 / electronic	1500 / electronic	1500 / electronic
<b>Fuel/tank capacity (litres)</b>	Diesel / 636	Diesel / 636	Diesel / 636	Diesel / 636
<b>Consumption/running time at 75% load*</b>	70.4 l / 9 h	72.6 l / 8.8 h	86.0 l / 17.4 h	97.4 l / 6.5 h
<b>Start-up system/battery</b>	E-Start / 24 V			
<b>Weight in kg</b>	3180	3467	3620	4590
<b>Dimensions L x W x H in mm</b>	3300 x 1460 x 1917	3500 x 1500 x 2120	3500 x 1500 x 2120	3800 x 1670 x 2320
<b>Available accessories</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>	<b>Order No.</b>
Load transfer switch for LTP performance	343 009 / E-US 800	343 009 / E-US 800	343 010 / E-US 1000	343 011 / E-US 1250
Exhaust compensator	342 022	342 022	342 022	342 022
E-RMA SIM	342 220	342 220	342 220	342 220
E-RMA LAN	342 221	342 221	342 221	342 221
<b>Special equipment - not retrofit</b>				
Automatic fuel pump	342 006	342 006	342 006	342 006

\*Data is based on average values and are not binding, since individual cases may vary.

## Basic Line AS 65 – 220 kVA

- Modern water-cooled industrial engines from DEUTZ Dalian
- Galvanized and powder-coated soundproofing hood
- Inner, closable tank
- A self-explanatory and simple to operate digital control system



Ready for E-RMA remote monitoring system

ESE 220 DW/AS

ESE 80 DW

## Basic Line open version 65 – 220 kVA

- Prepared for use of remote monitoring E-RMA
- Brushless electronically controlled alternators
- Coolant prewarming installed as standard



You will find  
a description  
of the control box  
on pages 60-61

Model	ESE 65 DW/AS	ESE 80 DW/AS	ESE 110 DW/AS	ESE 150 DW/AS	ESE 170 DW/AS	ESE 220 DW/AS
<b>Order No.</b>	331 262	331 263	331 264	331 265	331 266	331 267
<b>Max. output [LTP] kVA/kW</b>	65.5 / 52.4	79.4 / 63.5	110.8 / 88.6	144.0 / 115.2	164.0 / 131.2	220.0 / 176.0
<b>Continuous power [PRP] kVA/kW</b>	58.7 / 47.0	74.9 / 60.0	105.0 / 84.0	130.1 / 104.1	158.0 / 126.4	203.7 / 163.0
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulations</b>	synchronous / class H					
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~					
<b>Nominal current/cos φ</b>	84.7 A 3~ / 0.8	108.1 A 3~ / 0.8	151.6 A 3~ / 0.8	187.8 A 3~ / 0.8	228.1 A 3~ / 0.8	294.0 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic					
<b>Engine type</b>	DEUTZ BF4M 2012	DEUTZ BF4M 2012 C	DEUTZ BF4M 1013 EC	DEUTZ BF4M 1013 EC	DEUTZ BF6M 1013 EC	DEUTZ BF4M 1013 EC
<b>Design</b>	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke
<b>Cooling system</b>	water cooled					
<b>Displacement</b>	4040 cm <sup>3</sup>	4040 cm <sup>3</sup>	4760 cm <sup>3</sup>	4760 cm <sup>3</sup>	7150 cm <sup>3</sup>	7146 cm <sup>3</sup>
<b>Engine output [PRP]</b>	54.0 kW	71.0 kW	97.0 kW	117.0 kW	146.0 kW	183.0 kW
<b>RPM/regulation</b>	1500 / mechanical	1500 / mechanical	1500 / mechanical	1500 / mechanical	1500 / electronic	1500 / electronic
<b>Fuel/tank capacity (litres)</b>	Diesel / 209	Diesel / 209	Diesel / 350	Diesel / 340	Diesel / 350	Diesel / 350
<b>Consumption/running time at 75% load*</b>	10.4 l / 20.1 h	13.8 l / 15.2 h	18.6 l / 18.8 h	21.4 l / 15.9 h	27.0 l / 12.9 h	36.7 l / 9.5 h
<b>Start-up system/battery</b>	E-Start / 12 V					
<b>Sound power level LWA</b>	96 dB(A)	96 dB(A)	97 dB(A)	97 dB(A)	97 dB(A)	94 dB(A)
<b>Sound pressure level LPA (7 m)</b>	67 dB(A)	67 dB(A)	68 dB(A)	68 dB(A)	68 dB(A)	65 dB(A)
<b>Weight in kg</b>	1205	1460	1710	1775	2154	2470
<b>Dimensions L x W x H in mm</b>	2400 x 1000 x 1436	2400 x 1000 x 1436	3000 x 1150 x 1771	3000 x 1150 x 1680	3400 x 1250 x 1680	3400 x 1250 x 2000
<b>Available accessories</b>	<b>Order No.</b>					
Chassis ST	Drawbar rigid	341 105 / FG 180	341 110 / FG 2500	342 110 / FG 2500	341 008 / FG 3000	341 008 / FG 3000
Chassis HV	height adjustable	341 106 / FG 180	341 111 / FG 2500	342 111 / FG 2500	341 009 / FG 3000	341 009 / FG 3000
Load transfer switch	for LTP performance	343 004 / E-US 110	343 013 / E-US 140	343 014 / E-US 200	343 005 / E-US 250	343 005 / E-US 250
E-RMA SIM		342 220	342 220	342 220	342 220	342 220
E-RMA LAN		342 022	342 022	342 022	342 022	342 022
<b>Special equipment - not retrofit</b>						
Liquid collection tray		342 054	342 054	342 054	342 054	342 054
Automatic fuel pump		342 006	342 006	342 006	342 006	342 006

\*Data is based on average values and are not binding, since individual cases may vary.

\*Data is based on average values and are not binding, since individual cases may vary.

Model	ESE 65 DW	ESE 80 DW	ESE 110 DW	ESE 150 DW	ESE 170 DW	ESE 220 DW
<b>Order No.</b>	330 262	330 263	330 264	330 265	330 266	330 267
<b>Max. output [LTP] kVA/kW</b>	65.5 / 52.4	79.4 / 63.5	110.8 / 88.6	144.0 / 115.2	164.0 / 131.2	220.0 / 176.0
<b>Continuous power [PRP] kVA/kW</b>	58.7 / 47.0	74.9 / 60.0	105.0 / 84.0	130.1 / 104.1	158.0 / 126.4	203.7 / 163.0
<b>Alternator type</b>	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte	MeccAlte
<b>Design/insulations</b>	synchronous / class H					
<b>Nominal voltage</b>	400 V 3~ / 230 V 1~					
<b>Nominal current/cos φ</b>	84.7 A 3~ / 0.8	108.1 A 3~ / 0.8	151.5 A 3~ / 0.8	187.7 A 3~ / 0.8	228.1 A 3~ / 0.8	294.0 A 3~ / 0.8
<b>Frequency/regulation</b>	50 Hz / electronic					
<b>Engine type</b>	DEUTZ BF4M 2012	DEUTZ BF4M 2012 C	DEUTZ BF4M 1013 EC	DEUTZ BF4M 1013 EC	DEUTZ BF6M 1013 EC	DEUTZ BF4M 1013 EC
<b>Design</b>	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	4-cylinder 4-stroke	6-cylinder 4-stroke	6-cylinder 4-stroke
<b>Cooling system</b>	water cooled					
<b>Displacement</b>	4040 cm <sup>3</sup>	4040 cm <sup>3</sup>	4760 cm <sup>3</sup>	4760 cm <sup>3</sup>	7150 cm <sup>3</sup>	7146 cm <sup>3</sup>
<b>Engine output [PRP]</b>	54.0 kW	71.0 kW	97.0 kW	117.0 kW	146.0 kW	183.0 kW
<b>RPM/regulation</b>	1500 / mechanical	1500 / mechanical	1500 / mechanical	1500 / mechanical	1500 / electronic	1500 / electronic
<b>Fuel/tank capacity (litres)</b>	Diesel / 209	Diesel / 240	Diesel / 240	Diesel / 250	Diesel / 250	Diesel / 400
<b>Consumption/running time at 75% load*</b>	10.4 l / 20.1 h	13.8 l / 17.4 h	18.6 l / 12.9 h	21.4 l / 11.7 h	27.0 l / 9.3 h	36.7 l / 10.9 h
<b>Start-up system/battery</b>	E-Start / 12 V					
<b>Sound power level LWA</b>	96 dB(A)	96 dB(A)	97 dB(A)	97 dB(A)	97 dB(A)	94 dB(A)
<b>Sound pressure level LPA (7 m)</b>	67 dB(A)	67 dB(A)	68 dB(A)	68 dB(A)	68 dB(A)	65 dB(A)
<b>Weight in kg</b>	895	895	1306	1540	1579	2026
<b>Dimensions L x W x H in mm</b>	2200 x 1000 x 1620	2200 x 1000 x 1743	2200 x 1000 x 1743	2600 x 1000 x 1743	2650 x 1180 x 1965	
<b>Available accessories</b>	<b>Order No.</b>					
Load transfer switch for LTP performance	343 004	343 013	343 013	343 005	343 005	343 007
E-RMA SIM	342 220	342 220	342 220	342 220	342 220	342 220
E-RMA LAN	342 022	342 022	342 022	342 022	342 022	342 022
<b>Special equipment - not retrofit</b>						
Liquid collection tray		342 054	342 054	342 054	342 054	342 054
Automatic fuel pump		342 006	342 006	342 006	342 006	342 006

\*Data is based on average values and are not binding, since individual cases may vary.

# Mobile floodlight towers

**ENDRESS** 



Model	EFA 830 S4	EFA 830 S6	EFA 900 C S4
Order No.	716 260	716 280	716 266
Light output	6000 W	9000 W	6000 W
Lighting type	Halogen	Halogen	Halogen
Lumens approx.	132.000 lm	198.000 lm	132.000 lm
Lamps	4 x 1500 W	6 x 1500 W	4 x 1500 W
Max. light spot height	8,3 m	8,3 m	9,0 m
Min. transport height	2,7 m	2,7 m	2,4 m
<b>Light masts</b>			
Mast	360° continuous swivel - all models		
Design	Aluminium telescopic mast - all models		
Operation	mechanical/hand crank - all models		
<b>Chassis</b>			
FG 100 LM	FG 160 LM	FG 100 TM HV	
Width in mm	1600	1600	1600
Overall length in mm	4040	4900	2350
Tyres	13"	13"	13"
Trailer drawbar	height adjustable	height adjustable	height adjustable
Overrunning brake	yes	yes	yes
Total permissible weight in kg	1000	1600	1000
Permissible bearing load in kg	75	75	75
Generator recommendation	ESE 15 YW-B	ESE 20 YW-B ESE 30 YW-B ESE 35 YW-B ESE 45 YW-B ESE 50 YW-B	ESE 1408 DHG ES DI

Info on lighting options.	
<b>Halogen lamps</b>	<b>Standard</b>
Start time	immediate
Restart time	immediate
Lifetime	approx. 12.000 hours
Output	1500 W
Lumens	approx. 33.000 lm
<b>HML halogen metal vapour lamps</b>	
Start time	approx. 3 - 4 min.
Restart time	approx. 10 min.
Life time	approx. 6.000 hours
Output	400 W
Lumens	approx. 44.000 lm
<b>HPS high-pressure sodium vapour lamps</b>	
Start time	approx. 1 min.
Restart time	approx. 1 min.
Life time	approx. 10.000 Std.
Output	400 W
Lumens	approx. 55.000 lm

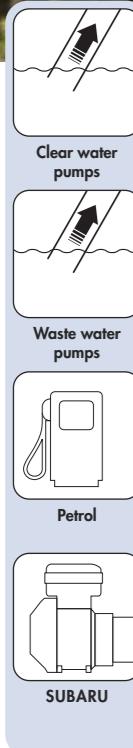


Available accessories	Order No.
HML halogen metal vapour lamp - white light	E 130 589
HPS high-pressure sodium vapour lamp - yellow light	E 131 605

EFA 900C S4  
with ESE 1408 DHG ES Diesel Duplex

# Engine pumps 520 – 1.000 l/min

**ENDRESS** 



**Wherever power is not available,  
ENDRESS engine pumps do their work  
reliably and economically**

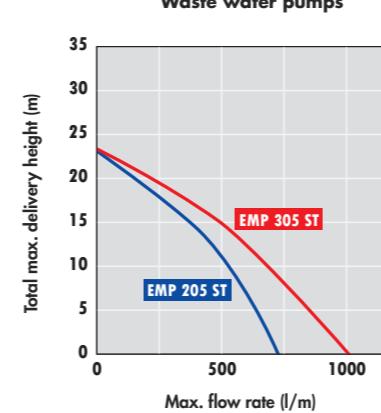
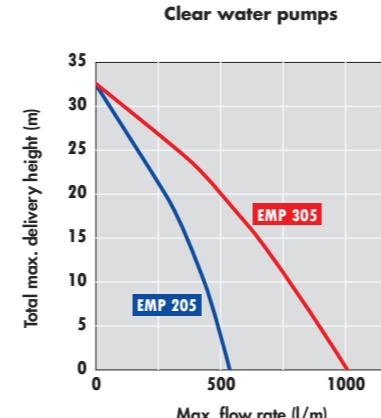


All ENDRESS engine pumps are self-feeding suction pumps based on the centrifugal pump principle.

- High flow rates
- Premium seals
- Automatic low oil shut-off

## Comprehensive equipment:

- 3 x hose clips
- 2 x hose couplings
- 1 x strainer
- 1 x spark plug key



Available accessories	Bestell-Nr.
Suction hose 2" 8 m	38 410 Series EMP 205
Suction hose 3" 8 m	38 407 Series EMP 305
Pressure hose 2" 15 m	38 411 Series EMP 205
Pressure hose 3" 15 m	38 408 Series EMP 305
Pressure hose extension 2" 10 m	38 414 Series EMP 205
Pressure hose extension 3" 10 m	38 409 Series EMP 305
Reducer coupling 3" to 2"	38 483

Suction hose, pressure hose and pressure hose extension are equipped with quick-release couplings.

Clear water pumps		Waste water pumps	
<b>Model</b>	<b>EMP 205</b>	<b>EMP 305</b>	<b>EMP 205 ST</b>
<b>Order No.</b>	411 005	411 006	411 007
<b>Max. flow rate</b>	520 l/min (31,2 m <sup>3</sup> /h)	1000 l/min (60 m <sup>3</sup> /h)	700 l/min (42 m <sup>3</sup> /h)
<b>Max. suction lift</b>	8 m	8 m	7,6 m
<b>Total max. delivery height</b>	32 m	32 m	23 m
<b>Solids Ø</b>	6 mm	7 mm	20 mm
<b>S/D connection</b>	2" / 2"	3" / 3"	2" / 2"
<b>Seal</b>	carbon ceramic	carbon ceramic	silicon carbide
<b>Engine type</b>	<b>SUBARU EX 16</b>	<b>SUBARU EX 17</b>	<b>SUBARU EX 16</b>
<b>Design</b>	1-cylinder 4-stroke OHC	1-cyl. 4-stroke OHC	1-cyl. 4-stroke OHC
<b>Displacement</b>	126 cm <sup>3</sup>	169 cm <sup>3</sup>	126 cm <sup>3</sup>
<b>Output 3600 RPM</b>	2,9 kW	4,0 kW	2,9 kW
<b>Fuel/tank capacity (litres)</b>	Petrol / 2,7	Petrol / 3,6	Petrol / 2,7
<b>Consumption/running time*</b>	1,4 l / 2 h	1,9 l / 2 h	1,4 l / 2 h
<b>Start-up system</b>	Recoil starter	Recoil starter	Recoil starter
<b>Sound power level (LWA)</b>	101 dB(A)	103 dB(A)	101 dB(A)
<b>Sound pressure level (LPA)</b>	76 dB(A)	78 dB(A)	76 dB(A)
<b>Weight in kg</b>	25	26	25
<b>Dimensions LxWxH in mm</b>	527 x 368 x 417	527 x 368 x 417	527 x 368 x 417
<b>Possible applications</b>	Moves clear or moderately contaminated water	Moves waste water and other water	Moves waste water and other water
		Foreign objects up to a Ø of 20 mm	Foreign objects up to a Ø of 20 mm

\*Consumption in litres per hour, running time in hours. These data are based on approximate values at 75% load and are therefore not binding.

All technical data and descriptions correspond to the information available at the time of the pressure regulation and serve only as preliminary information.  
(The company reserves the right to misprints and errors.) Before purchasing, please get your dealer's advice as to the suitability of the device desired.  
ENDRESS generators and accessories are constantly under development. ENDRESS therefore reserve the right to modifications in the interest of technical improvement.  
Technical data and illustrations are not binding. We assume no liability for misprints.



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