

# Static digital voltage stabilisers

The **static stabiliser** is used when the **correction speed** represents the critical issue (for example, computers, laboratory equipment, measuring benches and medical instrumentation).

The stabilisers are designed and built in compliance with the European Directives concerning CE marking (Low Voltage Directive and Electromagnetic Compatibility Directive).

The voltage stabiliser can operate with **input and output voltage different** (380V/415V) from the rated voltage (400V). Such setting can be performed at the factory or at the Customer's premises according to the instructions given in the handbook. The stabiliser operates with a **load variation range** for each phase **from 0 to 100%** and **is not affected by the power factor of the load**.

The standard cabinet is an IP21 metal enclosure with RAL7035 finish for indoor installation.

The operating principle is similar to the one described for the electro-mechanical stabilisers. The difference lies in the fact that the **voltage compensation** on the buck/boost primary winding is performed by an electronic board through **IGBT static switches** instead of the autotransformer with variable transformer ratio.

The **microprocessor**-based system monitors the output voltage and determines the opening/closing of the IGBT switch ensuring the best regulation.

The **Gemini** series is provided with a display (run by the control system microprocessor) showing output voltage and alarm signals. The **Aquarius** series is provided with an output digital multimeter.

## Main standard components:

- Multi-tap autotransformer.
- Input automatic circuit breaker.
- Manual maintenance bypass.
- Automatic protection bypass (in the control board).
- Microprocessor-based control and command system.
- IGBT-based power regulation circuit.
- Input EMI/RFI filter.
- Output Class II surge arrestors.
- Digital display or multimeter.

## Accessories

- Isolating transformer.
- IP54 cabinet for outdoor installation.

<b>Gemini</b>	Single-phase	<b>4-40kVA</b>
<b>Aquarius</b>	Three-phase	<b>10-120kVA</b>



## Aquarius

three-phase  
**10-120kVA**



### Standard features

<b>Voltage regulation</b>	IGBT control
<b>Voltage stabilisation</b>	Independent phase control
<b>Selectable output voltage*</b>	220-230-240V (L-N) / 380-400-415V (L-L)
<b>Frequency</b>	50-60Hz ±5%
<b>Admitted load variation</b>	Up to 100%
<b>Cooling</b>	Forced ventilation
<b>Ambient temperature</b>	-25/+45°C
<b>Storage temperature</b>	-25/+60°C
<b>Max relative humidity</b>	95%
<b>Admitted overload</b>	150% 2 sec.
<b>Harmonic distortion</b>	None introduced
<b>Colour</b>	RAL 7035
<b>Protection degree</b>	IP21
<b>Instrumentation</b>	Output digital multimeter
<b>Installation</b>	Indoor
<b>Overvoltage protection</b>	Output class II surge arrestor
<b>Protection</b>	<ul style="list-style-type: none"> <li>- Input automatic circuit breaker</li> <li>- Automatic by-pass protection</li> <li>- Manual maintenance by-pass</li> </ul>

\* The output voltage can be adjusted by choosing **one** of the indicated values. Such choice sets the new nominal value as a reference for all the stabiliser parameters.



All ORTEA stabilisers are designed and built in compliance with the Low Voltage and Electromagnetic Compatibility European Directives with regard to the CE marking requirements. ORTEA products are built with suitable quality components and that the manufacturing process is constantly verified in accordance with the Quality Control Plans which the Company applies in compliance with the ISO 9001:2008 Standards. The commitment towards environmental issues and safety at work matters is guaranteed by the certification of the Management System according to the ISO14001:2004 and OHSAS18001:2007 Standards. In order to obtain better performance, the products described in the present document can be altered by the Company at any date and without prior notice. Technical data and descriptions do hold therefore any contractual value.

# Aquarius

three-phase  
10-120kVA

Type	Input voltage variation range	Rating	Input voltage range	Maximum input current	Output voltage $\pm 0.5\%$	Output current	Efficiency	Correction time	Cabinet	Weight
	[%]	[kVA]	[V]	[A]	[V]	[A]	[%]	[ms/V]	Type	[kg]

Input voltage variation range  $\pm 20\%/\pm 15\%$  (the values listed in the table are referred to 400V nominal voltage)

<b>ET20-20</b>	$\pm 20$	20	320-480	36	400	29	>98	mezzo ciclo	23	130
<b>ET30-15</b>	$\pm 15$	30	340-460	51	400	43	>98	mezzo ciclo	23	170
<b>ET30-20</b>	$\pm 20$	30	320-480	54	400	43	>98	mezzo ciclo	23	170
<b>ET45-15</b>	$\pm 15$	45	340-460	76	400	65	>98	mezzo ciclo	31	200
<b>ET45-20</b>	$\pm 20$	45	320-480	81	400	65	>98	mezzo ciclo	31	200
<b>ET60-15</b>	$\pm 15$	60	340-460	102	400	87	>98	mezzo ciclo	35	250
<b>ET60-20</b>	$\pm 20$	60	320-480	109	400	87	>98	mezzo ciclo	35	250
<b>ET90-15</b>	$\pm 15$	90	340-460	153	400	130	>98	mezzo ciclo	35	300
<b>ET90-20</b>	$\pm 20$	90	320-480	162	400	130	>98	mezzo ciclo	35	300
<b>ET120-15</b>	$\pm 15$	120	340-460	204	400	173	>98	mezzo ciclo	35	300

Input voltage variation range  $\pm 30\%/\pm 25\%$  (the values listed in the table are referred to 400V nominal voltage)

<b>ET10-30</b>	$\pm 30$	10	280-520	20	400	14	>98	mezzo ciclo	23	130
<b>ET15-25</b>	$\pm 25$	15	300-500	29	400	22	>98	mezzo ciclo	23	170
<b>ET15-30</b>	$\pm 30$	15	280-520	31	400	22	>98	mezzo ciclo	23	170
<b>ET20-25</b>	$\pm 25$	20	300-500	39	400	29	>98	mezzo ciclo	31	200
<b>ET20-30</b>	$\pm 30$	20	280-520	41	400	29	>98	mezzo ciclo	31	200
<b>ET30-25</b>	$\pm 25$	30	300-500	57	400	43	>98	mezzo ciclo	35	250
<b>ET30-30</b>	$\pm 30$	30	280-520	61	400	43	>98	mezzo ciclo	35	250
<b>ET45-25</b>	$\pm 25$	45	300-500	86	400	65	>98	mezzo ciclo	35	300
<b>ET45-30</b>	$\pm 30$	45	280-520	93	400	65	>98	mezzo ciclo	35	300
<b>ET60-25</b>	$\pm 25$	60	300-500	116	400	87	>98	mezzo ciclo	35	300