

## AQUARIUS / AQUARIUS PLUS

three-phase  
10-120 kVA

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

The voltage stabilizer can operate with input and output voltage different (single-phase 220V/240V - three-phase 380V/415V) from the rated voltage (single-phase 230V - three-phase 400V). Such setting can be performed at the factory or at the Customer's premises according to the instructions given in the handbook. The stabilizer 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 RAL 9005 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 Aquarius series is provided with a display (run by the control system microprocessor) showing output voltage and alarm signals. The Aquarius series is also provided with a digital multimeter.



Main standard components:

- «Buck/boost» transformer.
- 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 and multimeter.

All the stabilizers are designed and built in compliance with the Low Voltage and Electromagnetic Compatibility European Directives with regard to the CE marking requirements. The products are built with suitable quality components and that the manufacturing process is constantly verified in accordance with the Quality Control Plans which the manufacturer 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 manufacturer at any date and without prior notice. Technical data and descriptions do hold therefore any contractual value.

<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 9005
<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>- EMI/RFI filters</li> <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 stabilizer parameters.

### Accessories - available on request

The characteristics described so far are relevant to the standard voltage stabilisers. Accessories to perform specific tasks are available on request.  
Combinations or one or more of the accessories listed in the following might result in an increase of the stabilizer overall dimensions and weight.

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Interrupting devices

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Load protection against over/undervoltage

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Manual by-pass line

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Total protection kit

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Input isolating transformer

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Integrated automatic power factor correction system

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SPD surge arrestor

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EMI/RFI filters

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Neutral point reactor

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IP54 protection degree for indoor and outdoor installation

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### Input voltage variation $\pm 20\%$ or $\pm 15\%$ , Rated power 10 to 120 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V  $\pm 0,5\%$ )

Type	Input Variation	Rated Power	Input Current	Output Current	Dimension WxDxH	Weight
[kVA]		[kVA]	[A]	[A]	[mm]	[kg]
ET 20-20	$\pm 20\%$	20	36	29	410x680x1200	130
ET 30-15	$\pm 15\%$	30	51	43		
ET 30-20	$\pm 20\%$	30	54	43	410x680x1200	170
ET 45-15	$\pm 15\%$	45	76	65		
ET 45-20	$\pm 20\%$	45	81	65	600x600x1600	200
ET 60-15	$\pm 15\%$	60	102	87		
ET 60-20	$\pm 20\%$	60	109	87	800x600x1800	250
ET 90-15	$\pm 15\%$	90	153	130		
ET 90-20	$\pm 20\%$	90	162	130	800x600x1800	300
ET 120-15	$\pm 15\%$	120	204	173		

### Input voltage variation $\pm 30\%$ or $\pm 25\%$ , Rated power 10 to 60 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V  $\pm 0,5\%$ )

Type	Input Variation	Rated Power	Input Current	Output Current	Dimension WxDxH	Weight
[kVA]		[kVA]	[A]	[A]	[mm]	[kg]
ET 10-30	$\pm 30\%$	10	20	14	410x680x1200	130
ET 15-25	$\pm 25\%$	15	29	22		
ET 15-30	$\pm 30\%$	15	31	22	410x680x1200	170
ET 20-25	$\pm 25\%$	20	39	29		
ET 20-30	$\pm 30\%$	20	41	29	600x600x1600	200
ET 30-25	$\pm 25\%$	30	57	43		
ET 30-30	$\pm 30\%$	30	61	43	800x600x1800	250
ET 45-25	$\pm 25\%$	45	86	65		
ET 45-30	$\pm 30\%$	45	93	65	800x600x1800	300
ET 60-15	$\pm 25\%$	60	116	87		