



VOLTAGE SAGS ARE THE MOST COMMON CAUSE OF  
EQUIPMENT MALFUNCTIONS IN AUTOMATED INDUSTRY

# OXYGEN SAG COMPENSATOR



# TECHNICAL FEATURES

## INPUT

Available nominal voltage*	380-400-415V (440-460-480V 60Hz only)
Maximum supply voltage	Max continuous voltage +10%
Frequency	50Hz ±5% or 60Hz ±5%
Power system	3 phases + N (no neutral wire on request)

## OUTPUT

Voltage	The same of input nominal voltage (output voltage can be adjusted)
Admitted load variation	Up to 100%
Admitted load imbalance	50%
Admitted overload	150% for 1 minute (at nominal input voltage)

## PERFORMANCE

Efficiency	>98%
SAG correction response	<3 milliseccs
Output voltage accuracy	±0,5%
SAG correction accuracy	±4%
Continuous regulation range	Oxygen 10-40: ±10%, Oxygen 15-50: ±15%

SAG correction capability	Input	Output	Time
Oxygen 10-40	-40%	100%	1 minuto
	-50%	90%	45 secondi
	-60%	80%	36 secondi
Oxygen 15-50	-50%	100%	1 minuto
	-60%	90%	45 secondi

## PROTECTION

Internal automatic by-pass	Thyristor switch with capacity of 150% of model rating
Overvoltage protection	Class I input surge arrester / Class II output surge arrester

## BUCK/BOOST TRANSFORMER

Type	Dry transformer
Frequency	50Hz or 60Hz

## ENVIRONMENT

Operating temperature range	0°C to 40°C (32°F to 104°F)
Operating altitude	< 1000m without derating (for higher altitudes contact us)
Inverter cooling	Forced Ventilation
Transformer cooling	Natural convection
Max relative humidity	<95% (non-condensing)
Pollution degree rating	2

\* 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.

## ENCLOSURE

Protection degree	IP2X (other on request)
Material	Electro-galvanized steel
Finish	Standard epoxy-polyester powder coating textured finish
Colour	RAL 9005
Enclosure access	Hinged doors with key lock

## SERVICE

Diagnostics	Non-volatile event & log
-------------	--------------------------

## USER INTERFACE

HMI	10" colour touch panel, multilingual
Touch panel	Full parameters control, system & voltage event log
Remote duplication	On request by dedicated software connected to the same network (Ethernet)
Communication	Modbus TCP/IP

## POWER QUALITY EVENT MONITOR

Events recorded	Voltage SAG
Events detection	Input voltage
SAG threshold	Continuous (under minimum voltage)

## STANDARDS & CERTIFICATIONS

Quality	ISO9001
Environmental	ISO14001
Health & Safety	OHSAS18001
Marking	CE
Performance	IEC 61439-1/2



All ORTEA equipments 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 Standards. The commitment towards environmental issues and safety at work issues is guaranteed by the certification of the Management System according to the ISO14001 and OHSAS18001 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 therefore do not hold any contractual value.

# OXYGEN RANGE

Type	Rated power	Input voltage range	Max input current (peak)	Output voltage	Rated output current	Eff.	Correction time	Cabinet dimensions*	Weight*
	[kVA]	[V]	[A]	[V]	[A]	[%]	[ms]	WxDxH [mm]	[kg]

Oxygen 10-40   input voltage compensation: $\pm 10\%$ continuous / $-40\%$ for 1 minute (100% nominal output voltage)									
<b>200-10-40</b>	200	360-440	321 (481)	400	289	>98	<3	1200x800x2000	800
<b>250-10-40</b>	250	360-440	401 (601)	400	361	>98	<3	1200x800x2000	900
<b>320-10-40</b>	320	360-440	513 (770)	400	462	>98	<3	1200x800x2000	1150
<b>400-10-40</b>	400	360-440	642 (962)	400	577	>98	<3	1200x1000x2200	1200
<b>500-10-40</b>	500	360-440	802 (1203)	400	722	>98	<3	1200x1000x2200	1400
<b>630-10-40</b>	630	360-440	1010 (1516)	400	909	>98	<3	2600x1400x2200	1600
<b>800-10-40</b>	800	360-440	1283 (1925)	400	1155	>98	<3	2600x1400x2200	1800
<b>1000-10-40</b>	1000	360-440	1604 (2406)	400	1443	>98	<3	4200x1000x2200	2100
<b>1250-10-40</b>	1250	360-440	2005 (3007)	400	1804	>98	<3	4200x1000x2200	2300
<b>1600-10-40</b>	1600	360-440	2566 (3849)	400	2309	>98	<3	4800x1400x2400	3200
<b>2000-10-40</b>	2000	360-440	3208 (4811)	400	2887	>98	<3	4800x1400x2400	3600
<b>2500-10-40</b>	2500	360-440	4009 (6014)	400	3609	>98	<3	4800x1400x2400	4000
<b>3200-10-40**</b>	3200	360-440	5132 (7698)	400	4619	>98	<3	4800x1400x2400	5000

Oxygen 15-50   input voltage compensation: $\pm 15\%$ continuous / $-50\%$ for 1 minute (100% nominal output voltage)									
<b>200-15-50</b>	200	340-460	340 (577)	400	289	>98	<3	1200x800x2000	1150
<b>250-15-50</b>	250	340-460	425 (722)	400	361	>98	<3	1200x1000x2200	1200
<b>320-15-50</b>	320	340-460	543 (924)	400	462	>98	<3	1200x1000x2200	1400
<b>400-15-50</b>	400	340-460	679 (1155)	400	577	>98	<3	2600x1400x2200	1600
<b>500-15-50</b>	500	340-460	849 (1443)	400	722	>98	<3	2600x1400x2200	1800
<b>630-15-50</b>	630	340-460	1070 (1819)	400	909	>98	<3	2600x1400x2200	1900
<b>800-15-50</b>	800	340-460	1359 (2309)	400	1155	>98	<3	4200x1000x2200	2300
<b>1000-15-50</b>	1000	340-460	1698 (2887)	400	1443	>98	<3	4800x1400x2400	3200
<b>1250-15-50</b>	1250	340-460	2123 (3609)	400	1804	>98	<3	4800x1400x2400	3600
<b>1600-15-50</b>	1600	340-460	2717 (4619)	400	2309	>98	<3	4800x1400x2400	4000
<b>2000-15-50**</b>	2000	340-460	3396 (5774)	400	2887	>98	<3	4800x1400x2400	5000

The values listed in the tables are referred to 400V nominal voltage

\* Size and Weight may change

\*\* Available only for 480V / 60Hz

## Optional accessories

Input automatic circuit breaker

Short circuit output protection

Manual maintenance by-pass

Input isolating transformer

EMI/RFI filters

# OXYGEN K RANGE

Type	Rated power	Input voltage range	Max input current (peak)	Output voltage	Rated output current	Eff.	Correction time	Cabinet dimensions*	Weight*
	[kVA]	[V]	[A]	[V]	[A]	[%]	[ms]	LxPxH [mm]	[kg]

Oxygen 10-40   input voltage compensation: $\pm 10\%$ continuous / $-40\%$ for 1 minute (100% nominal output voltage)									
200-10-40K	200	360-440	321 (481)	400	289	>98	<3	1600x800x2000	925
250-10-40K	250	360-440	401 (601)	400	361	>98	<3	1600x800x2000	1025
320-10-40K	320	360-440	513 (770)	400	462	>98	<3	1600x800x2000	1275
400-10-40K	400	360-440	642 (962)	400	577	>98	<3	1800x1000x2200	1370
500-10-40K	500	360-440	802 (1203)	400	722	>98	<3	1800x1000x2200	1570
630-10-40K	630	360-440	1010 (1516)	400	909	>98	<3	3200x1400x2200	1800
800-10-40K	800	360-440	1283 (1925)	400	1155	>98	<3	3200x1400x2200	2000
1000-10-40K	1000	360-440	1604 (2406)	400	1443	>98	<3	4800x1000x2200	2300
1250-10-40K	1250	360-440	2005 (3007)	400	1804	>98	<3	5400x1000x2200	2930
1600-10-40K	1600	360-440	2566 (3849)	400	2309	>98	<3	6000x1400x2400	3840
2000-10-40K	2000	360-440	3208 (4811)	400	2887	>98	<3	6000x1400x2400	4300
2500-10-40K	2500	360-440	4009 (6014)	400	3609	>98	<3	6000x1400x2400	5000
3200-10-40K**	3200	360-440	5132 (7698)	400	4619	>98	<3	6800x1400x2400	6200

Oxygen 15-50   input voltage compensation: $\pm 15\%$ continuous / $-50\%$ for 1 minute (100% nominal output voltage)									
200-15-50K	200	340-460	340 (577)	400	289	>98	<3	1600x800x2000	1275
250-15-50K	250	340-460	425 (722)	400	361	>98	<3	1800x1000x2200	1325
320-15-50K	320	340-460	543 (924)	400	462	>98	<3	1800x1000x2200	1525
400-15-50K	400	340-460	679 (1155)	400	577	>98	<3	3200x1400x2200	1770
500-15-50K	500	340-460	849 (1443)	400	722	>98	<3	3200x1400x2200	2000
630-15-50K	630	340-460	1070 (1819)	400	909	>98	<3	3200x1400x2200	2100
800-15-50K	800	340-460	1359 (2309)	400	1155	>98	<3	4800x1000x2200	2500
1000-15-50K	1000	340-460	1698 (2887)	400	1443	>98	<3	6000x1400x2400	3830
1250-15-50K	1250	340-460	2123 (3609)	400	1804	>98	<3	6000x1400x2400	4240
1600-15-50K	1600	340-460	2717 (4619)	400	2309	>98	<3	6000x1400x2400	4650
2000-15-50K**	2000	340-460	3396 (5774)	400	2887	>98	<3	6000x1400x2400	5730

The values listed in the tables are referred to 400V nominal voltage

\* Size and Weight may change

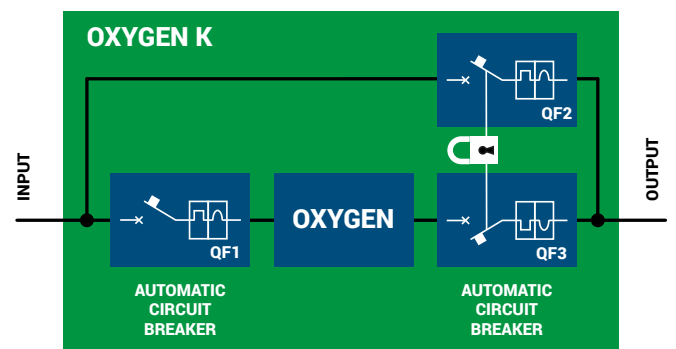
\*\* Available only for 480V / 60Hz

Compared to the standard model, the K model is equipped with:

- Input automatic circuit breaker
- Output automatic circuit breaker
- Manual by-pass line with interlocked automatic circuit breaker

## Optional accessories

- Input isolating transformer
- EMI/RFI filters



# WARRANTY TERMS

## 1.1 Warranty

The purchased equipment is under warranty against any material or workmanship defects that might occur within the terms indicated in the following starting from the date of purchase and for all mechanical, electrical and electronic parts.

During the warranty period, the Manufacturer will repair or replace any defective parts, unless said defects are due to:

- improper handling, storage and/or use;
- wear & tear resulting from normal usage;
- incompetence or negligence on the Buyer's side when installing, running and maintaining the unit;
- interventions performed by or on behalf of the Buyer without written authorization;
- failure to comply with instructions given by the Manufacturer;
- removal, alteration or forgery of the nameplate and the data indicated thereof; and fortuitous or force majeure events such as (but not limited to) fire, earthquake, flood, riot and revolution, war, political instability, terroristic act, strike, etc.).

Moreover, the provided warranty will immediately become null and void in case of:

- failure to comply with the payment terms;
- failure to carry out routine and / or extraordinary maintenance;
- improper use of the equipment; and external phenomena beyond the unit's scope and control.

In case of failure, the Buyer shall contact the Head Office where the Manufacturer will decide whether the repair can be performed on location, or if the equipment has to be shipped to the Manufacturer's facilities or to an after-sale Service Centre authorised by the Manufacturer.

If the repairing intervention can be performed at the Buyer's facility, all the expenses relevant to travelling, boarding and lodging of the Seller personnel shall be at the Buyer's charge, whilst spare parts and labour costs shall be at the Manufacturer's charge. However, the Buyer shall produce copy of the purchasing document (invoice) and report the detected anomaly prior to the intervention.

If the intervention is performed at the Manufacturer's facility, the equipment shall be duly packed and shipped back at the Buyer's expense and risk. The shipment after the repairing operations shall be under the Manufacturer's responsibility. Unless otherwise agreed upon in writing, this warranty does not cover the replacement of the entire equipment under no circumstances whatsoever. Nothing shall be due to the Buyer for the time in which the equipment is left idle. The Buyer may not claim any compensations and/or reimbursements for expenses or indirect damages caused by the equipment failure.

Parts provided as spare parts and/or replacements are subject to the same warranty terms. Repair or replacement of a defective part does not extend the original warranty period on the product as a whole.

The competent place of jurisdiction for any disputes is in Monza (Italy).

## 1.2 Proper use

While the unit is functioning, the operator must be protected from any risks associated with the functioning mode.

The proper / correct use of the equipment allows for full exploitation of its characteristics in complete safety.

For such purpose:

- follow the instructions in the user manual;
- check the integrity of equipment and components;
- comply with instructions and warnings provided;
- check status of preservation and keep maintenance on the equipment under control;
- check the status of cables and electrical connections;
- comply with the nameplate data such as (but not limited to) power, voltage and amperage;
- use the equipment for the purpose intended by the Manufacturer;
- operate the equipment in the environmental conditions for which it was designed;
- cut off the power supply in case of inspection, repair and maintenance;
- use suitable work clothing and personal protective equipment (PPE);
- immediately report any malfunction (bad behaviour, suspicion of rupture, incorrect movement and noise beyond the standard level) to the department manager and switch off the equipment;
- comply with the recommended maintenance frequency, recording every control and comment related to the performed intervention.

## 1.3 Misuse / Improper use

The Manufacturer defines as «misuse / improper use» of the equipment any other than what described in the previous paragraph and in addition to that:

- modification of the operating parameters. Should it be necessary to make any modification to the equipment, the Buyer shall contact the Manufacturer;
- use of unsuitable or inadequate energy sources;
- employment of not adequately trained/skilled personnel to run the unit;
- failure to comply with the maintenance instructions or maintenance incorrectly carried out;
- use of non-original spare parts or unsuitable ones;
- modification and / or tapering with the equipment safety devices;
- performance of control operations, maintenance, or repairs without having first disconnected the energy supply;
- performance of temporary repairs or remedial measures not complying with the instructions.

WARNING. The Manufacturer declines all responsibility for damage to persons or belongings due to improper use as defined above.

## 1.4 Warranty terms

24 months from invoice date.



Companies are more and more sensitive to Power Quality issues because they can cause troubles and damages to equipments.

Our Power Quality solutions:

**VOLTAGE STABILISERS**  
**SAG COMPENSATOR**  
**LV TRANSFORMERS**  
**PFC SYSTEMS**  
**ACTIVE HARMONIC FILTERS**  
**ENERGY EFFICIENCY SMART DEVICES**



### ORTEA SpA

Via dei Chiosi, 21  
 20873 Cavenago di Brianza MB | ITALY  
 tel. +39 02 95 917 800

[www.next.ortea.com](http://www.next.ortea.com)  
[sales@ortea.com](mailto:sales@ortea.com)

**The present document is reserved property of ORTEA SpA:**

it is compulsory to inform head office and ask for authorisation before proceeding with any release or reproduction. ORTEA SpA will not be held liable or responsible in any way for unauthorised copies, alterations or additions to the next or to the illustrated parts of this document. Any modification involving company logo, certification symbols, names and official data is strictly forbidden. In order to obtain better performance, ORTEA SpA reserves also the right to alter the products described in this document at any date and without prior notice. Technical data and descriptions do not therefore have any contractual value.