

**ORION**  
three-phase  
2-250kVA

Orion stabilizers are available for different ranges of input voltage fluctuation. Standard models offer a double input connection so that with the same unit two different input variations ( $\pm 15\%/\pm 20\%$  or  $\pm 25\%/\pm 30\%$ ) can be dealt with. The output voltage regulation is performed independently on each phase (stabilization of each phase- to-neutral voltage). Orion stabilisers are used with three-phase loads and single-phase loads with 100% current imbalance across the phases and asymmetrical mains voltage. For the correct operation, Orion voltage stabilisers require the neutral wire presence. Operation without neutral wire connection is achievable by adding a device able to generate it (D/Yn isolating transformer or neutral point reactor).



An automatic circuit breaker is mounted on the regulation circuit to protect against overload and short circuit on the voltage regulator, whilst the auxiliary circuit is protected by fuses.

The instrumentation consists of a multi-task digital line analyzer. Such instrument is able to provide with information regarding the voltage stabilizer output parameters, such as phase and linked voltage, current, power factor, active power, apparent power, reactive power, etc..

The alarms (min/max output voltage, gear motor lock, internal overheating, regulator overload) are recognizable by means of LEDs on the control card.

Voltage control and stabilization, performed on the true RMS value, are managed by the digital microprocessor.

Each phase of every stabilizer belonging to this range is controlled by the same control board used on Vega and Antares models, thus simplifying maintenance operations and spare parts storage.

**Accessories - available on request**

Interrupting devices
Load protection against over/undervoltage
Manual by-pass line
Input isolating transformer
SPD surge arrester
EMI/RFI filters
Neutral point reactor
IP54 protection degree for indoor and outdoor installation

<b>Voltage stabilisation</b>	Independent phase control
<b>Selectable output voltage (dip-switch)*</b>	220-230-240V (L-N) / 380-400-415V (L-L)
<b>Frequency</b>	50/60Hz $\pm$ 5%
<b>Admitted load variation</b>	Up to 100%
<b>Admitted load imbalance</b>	100%
<b>Cooling</b>	Natural air ventilation up to 45kVA $\pm$ 15% Aided with fans from 60kVA $\pm$ 15%
<b>Ambient temperature</b>	-25/+45°C
<b>Storage temperature</b>	-25/+60°C
<b>Max relative humidity</b>	95%
<b>Admitted overload</b>	200% 2 min.
<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>	Class II output surge arrester (from 60kVA $\pm$ 15%)

\* 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.

All the stabilisers 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.

## Input voltage variation $\pm 20\%$ or $\pm 15\%$ , Rated power 4 to 250 kVA

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

Rated Power [kVA]	Type	Input Variation	Max. Input Current [A]	Output Current [A]	Adjust. Speed [ms/V]	Dimension WxDxH [mm]	Weight [kg]
4	4-20	$\pm 20\%$	7.3	5.8	12	410x530x1200	90
5	5-15	$\pm 15\%$	8.5	7.2	16		
7	7-20	$\pm 20\%$	13	10	12	410x530x1200	96
10	10-15	$\pm 15\%$	16	14	16		
10	10-20	$\pm 20\%$	17	14	12	410x530x1200	110
15	15-15	$\pm 15\%$	25	21	16		
15	15-20	$\pm 20\%$	26	21	12	410x680x1200	155
20	20-15	$\pm 15\%$	34	29	16		
20	20-20	$\pm 20\%$	36	29	12	410x680x1200	180
30	30-15	$\pm 15\%$	51	43	16		
30	30-20	$\pm 20\%$	54	43	12	410x680x1200	200
45	45-15	$\pm 15\%$	76	65	16		
45	45-20	$\pm 20\%$	81	65	12	600x600x1600	310
60	60-15	$\pm 15\%$	102	87	16		
60	60-20	$\pm 20\%$	109	86	12	600x800x1600	430
80	80-15	$\pm 15\%$	136	116	16		
80	80-20	$\pm 20\%$	145	116	12	600x800x1800	490
105	105-15	$\pm 15\%$	179	152	16		
105	105-20	$\pm 20\%$	190	152	12	600x800x1800	580
135	135-15	$\pm 15\%$	230	195	16		
120	120-20	$\pm 20\%$	217	174	12	1200x800x1800	710
150	150-15	$\pm 15\%$	255	217	16		
135	135-20	$\pm 20\%$	244	195	12	1200x800x1800	850
175	175-15	$\pm 15\%$	298	253	16		
150	150-20	$\pm 20\%$	271	217	12	1200x800x1800	910
200	200-15	$\pm 15\%$	340	289	16		
175	175-20	$\pm 20\%$	316	253	12	1200x800x1800	950
250	250-15	$\pm 15\%$	425	361	16		

## Input voltage variation $\pm 30\%$ or $\pm 25\%$ , Rated power 2 to 135 kVA

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

Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
2	2-30	$\pm 30\%$	4.1	2.9	8	410x530x1200	90
3	3-25	$\pm 25\%$	5.7	4.3	10		
3	3-30	$\pm 30\%$	6.1	4.3	8	410x530x1200	96
4	4-25	$\pm 25\%$	7.7	5.8	10		
4	4-30	$\pm 30\%$	8.3	5.8	8	410x530x1200	110
7	7-25	$\pm 25\%$	13	10	10		
7	7-30	$\pm 30\%$	14	10	8	410x680x1200	155
10	10-25	$\pm 25\%$	19	14	10		
10	10-30	$\pm 30\%$	20	14	8	410x680x1200	180
15	15-25	$\pm 25\%$	29	22	10		
15	15-30	$\pm 30\%$	31	22	8	410x680x1200	200
20	20-25	$\pm 25\%$	39	29	10		
20	20-30	$\pm 30\%$	41	29	8	600x600x1600	310
30	30-25	$\pm 25\%$	57	43	10		
30	30-30	$\pm 30\%$	61	43	8	600x800x1600	430
45	45-25	$\pm 25\%$	86	65	10		
45	45-30	$\pm 30\%$	93	65	8	600x800x1800	490
60	60-25	$\pm 25\%$	116	87	10		
60	60-30	$\pm 30\%$	124	87	8	600x800x1800	580
80	80-25	$\pm 25\%$	155	116	10		
80	80-30	$\pm 30\%$	165	116	8	1200x800x1800	710
90	90-25	$\pm 25\%$	173	130	10		
90	90-30	$\pm 30\%$	185	130	8	1200x800x1800	850
105	105-25	$\pm 25\%$	203	152	10		
105	105-30	$\pm 30\%$	217	152	8	1200x800x1800	910
120	120-25	$\pm 25\%$	231	173	10		
120	120-30	$\pm 30\%$	247	173	8	1200x800x1800	950
135	135-25	$\pm 25\%$	260	195	10		

### Input voltage variation +15% to -25%, Rated power 4 to 105 kVA

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

Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
4	4-15/25	+15% -25%	7.7	5.8	14	410x530x1200	100
7	7-15/25	+15% -25%	13	10	14	410x530x1200	110
10	10-15/25	+15% -25%	19	14	14	410x530x1200	120
15	15-15/25	+15% -25%	29	22	14	410x680x1200	165
20	20-15/25	+15% -25%	39	29	14	410x680x1200	190
30	30-15/25	+15% -25%	57	43	14	410x680x1200	220
45	45-15/25	+15% -25%	87	65	14	600x600x1600	330
60	60-15/25	+15% -25%	116	87	14	600x800x1600	450
80	80-15/25	+15% -25%	155	116	14	600x800x1800	510
105	105-15/25	+15% -25%	203	152	14	600x800x1800	600

### Input voltage variation +15% to -35%, Rated power 3 to 80 kVA

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

Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
3	3-15/35	+15% -35%	6.6	4.3	10	410x530x1200	100
4	4-15/35	+15% -35%	8.9	5.8	10	410x530x1200	110
7	7-15/35	+15% -35%	15	10	10	410x530x1200	120
10	10-15/35	+15% -35%	22	14	10	410x680x1200	165
15	15-15/35	+15% -35%	34	22	10	410x680x1200	190
20	20-15/35	+15% -35%	45	29	10	410x680x1200	220
30	30-15/35	+15% -35%	66	43	10	600x600x1600	330
45	45-15/35	+15% -35%	100	65	10	600x800x1600	450
60	60-15/35	+15% -35%	134	87	10	600x800x1800	510
80	80-15/35	+15% -35%	178	116	10	600x800x1800	600

## Input voltage variation +15% to -45%, Rated power 2 to 60 kVA

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

Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
2	2-15/45	+15% -45%	5.3	2.9	8	410x530x1200	100
3	3-15/45	+15% -45%	7.8	4.3	8	410x530x1200	110
4	4-15/45	+15% -45%	11	5.8	8	410x530x1200	120
7	7-15/45	+15% -45%	18	10	8	410x680x1200	165
10	10-15/45	+15% -45%	25	14	8	410x680x1200	190
15	15-15/45	+15% -45%	39	22	8	410x680x1200	220
20	20-15/45	+15% -45%	53	29	8	600x600x1600	330
30	30-15/45	+15% -45%	78	43	8	600x800x1600	450
45	45-15/45	+15% -45%	118	65	8	600x800x1800	510
60	60-15/45	+15% -45%	158	87	8	600x800x1800	600