

STABILIZZATORI ELETTRONICI ED
ELETTROMECCANICI



The range of ELIT voltage stabilizers includes:

SERIES STE

Single-phase electronic stabilizer from 500VA to 4kVA;

SERIES STAB E

Electromechanical stabilizer from 5kVA to 30kVA single phase;

SERIES STAB T

Electromechanical stabilizer from 5kVA to 170kVA three-phase;

SERIES STAB S

Electromechanical stabilizer with independent phase adjustments from 5kVA to 400kVA three phase;

SERIES STAB TPH

Electronic stabilizer with independent phase adjustments and recovery time 20msec from 0V to 400V, from 10kVA to 800kVA, three phase.

**ELECTRONIC STABILIZER SINGLE PHASE
STE SERIES**

The electronic voltage stabilizers electronic voltage, STE series, guarantees an high efficiency and perfect output voltage stability. Made entirely with solid-state components and characterized by a very high speed of adjustment, the STE stabilizers are provided with a modern design, highly reliable, silent and they don't have magnetic dispersion, therefore they can be installed in any working environment and in proximity to any equipment. The adjustment of the output voltage is performed by a series of static switches controlled by an electronic circuit. The STE series is provided with an autotransformer which, together with a screen between input and output, allows the total elimination of any disturbance of the mains.

MODEL	STE 500	STE 1000	STE 2000	STE 4000
RATED POWER VA	500	1000	2000	4000
INPUT VOLTAGE Vac	230V -20% +15%			
OUTPUT VOLTAGE Vac	230 ±3%			
TOTAL SPEED REGULATION msec.	10			
LOAD VARIATION PERMITTED	from 0 to 100%			
POWER FACTOR	any			
HARMONIC DISTORTION	<0.5%			
EFFICIENCY	98%			
ENVIRONMENTAL TEMPERATURE	-10/+40°C			
DIMENSION mm	160x130x335		220x200x500	
WEIGHT kgs	8	10	20	30
SAFE STANDARD	EN 50091-1 & directive 73/23/CEE			
EMC STANDARD	Directive 89/336/CEE			

ELECTROMECHANICAL STABILIZER

The ELIT electromechanical stabilizers don't introduce alterations to the waveform and they are able to supply loads with deformed current waveforms, without affecting the output voltage. Not being affected by the power factor the ELIT electromechanical stabilizers can feed any load, and their performance does not change with the variation of the load from 0 to 100%. The booster transformer allows you to exploit the full range of the voltage regulator and to circulate in the brushes only a fraction of the rated current.

The speed variator is driven by a dc motor which, in turn, it is controlled by an electronic control circuit completely static with two thresholds. The first is proportional to the error and the second is ON-OFF depending on the amount of correction needed. Also the brush position of the speed variator is electronically controlled.

The features shown here can be modified to meet the needs of the customer. The electromechanical regulators, described herein, exploiting the capacity of the system booster transformer + autotransformer with variable ratio to add or subtract voltage to the line on which the booster is connected in series. In fact, the speed variator is capable of feeding the primary of the booster transformer with a variable voltage, both in width and in polarity and consequently of transferring at the secondary in series with the line, a voltage that will be added vectorially to the voltage at the ends of the booster transformer.

A control board, fully static, acting on the ratio-motor mechanically connected to the brushes of the speed variator, allows to compensate for voltage variations in line.

In the case of three-phase stabilizers with independent phase adjustments, the system is realized with a star connection of 3 single phase stabilizers. Each single phase stabilizer can adjust the voltage between its own phase and neutral, that must be present in input for a correct operation of the equipment. In this way it is able to supply loads with unbalanced input voltages up to 100% while maintaining the accuracy of the voltage to the load.

In this way the system appears to be with reduced dimensions and with an high

efficiency. Because of the low impedance in series with the mains, the electromechanical stabilizer turns out to be insensitive to the power factor of the load, not introducing appreciable harmonic distortions too.

	STAB E	STAB T	STAB S
INPUT VOLTAGE	230V 1PH+N	400V 3PH+N	400V 3PH+N
INPUT WINDOW VOLTAGE	±15% (upper variations on request)		
SPEED REGULATION	18msec/V		
OUTPUT VOLTAGE ACCURACY	±1%	±1%	±1%
MAX UNBALANCE LOAD	--	Up to 50%	from 0 to 100%
HARMONIC DISTORTION	< 0.2%		
OVERLOAD	200% for 2 minutes		
IP PROTECTION	IP 21 (upper on request)		
ENVIROMENTAL TEMPERATURE	-15°C ÷ +45°C		

ELECTRONIC STABILIZER THREE PHASE TPH SERIES

The load is always powered by the inverter with sinusoidal voltage and frequency stabilized, using the energy from the input mains.

	STAB TPH
INPUT VOLTAGE	400V 3PH+N
INPUT WINDOW VOLTAGE	±20%
TOTAL SPEED REGULATION	20msec
OUTPUT VOLTAGE ACCURACY	Static stability ±1% Dynamic stability ± 5%
MAX UNBALANCED LOAD	from 0 to 100%
HARMONIC DISTORTION	< 2%
OVERLOAD	125% for 10 minutes 150% for 1 minute
IP PROTECTION	IP 21
ENVIROMENTAL TEMPERATURE	-15°C ÷ +45°C

PRODUCT CODE	RATED POWER kVA (V \pm 15%/ \pm 20%)	INPUT VOLTAGE V	SPEED REGULATION	STABILIZER DIMENSIONS WxDxH mm	WEIGHT kgs
ELECTRONIC STABILIZER SINGLE PHASE STE SERIES					
STE500	0.5/0.4	1PH+N	10msec	160x130x335	8
STE1000	1/0.8	1PH+N	10msec	160x130x335	10
STE2000	2/1.6	1PH+N	10msec	220x200x500	20
STE4000	4/3.2	1PH+N	10msec	220x200x500	30
ELECTROMECHANICAL STABILIZER SINGLE PHASE STAB E SERIES					
STAB E4	4/3	1PH+N	18msec/V	300x250x300	22
STAB E6	6/4.5	1PH+N	18msec/V	300x250x300	26
STAB E10	10/7.5	1PH+N	18msec/V	300x250x600	36
STAB E15	15/12	1PH+N	18msec/V	300x250x600	45
STAB E20	20/15	1PH+N	20msec/V	300x250x600	85
STAB E30	30/25	1PH+N	20msec/V	600x300x250	120
ELECTROMECHANICAL STABILIZER THREE PHASE WITH UNIQUE REGULATION STAB T SERIES					
STAB T6	6/4.5	3PH+N	18msec/V	230x500x500	70
STAB T12	12/9	3PH+N	18msec/V	230x500x500	80
STAB T18	18/13.5	3PH+N	18msec/V	600x300x900	105
STAB T24	24/18	3PH+N	18msec/V	600x300x900	140
STAB T30	30/24	3PH+N	18msec/V	600x300x900	160
STAB T50	50/34	3PH+N	18msec/V	700x400x1100	180
STAB T60	60/48	3PH+N	18msec/V	700x400x1100	300
STAB T75	75/60	3PH+N	18msec/V	700x400x1100	380
STAB T100	100/75	3PH+N	18msec/V	700x400x1100	450
STAB T135	135/105	3PH+N	18msec/V	900x500x1200	500
STAB T150	150/120	3PH+N	18msec/V	900x500x1200	600
STAB T175	175/130	3PH+N	18msec/V	900x500x1200	780
STAB T230	230/175	3PH+N	18msec/V	600x850x1650	1100
STAB T300	300/230	3PH+N	18msec/V	1200x850x1700	1200
STAB T450	450/300	3PH+N	18msec/V	1800x850x1700	1500
ELECTROMECHANICAL STABILIZER THREE PHASE WITH INDEPENDENT REGULATION STAB S SERIES					
STAB S6	6/4.5	3PH+N	18msec/V	230x500x500	77
STAB S12	12/9	3PH+N	18msec/V	230x500x500	90
STAB S18	18/13.5	3PH+N	18msec/V	600x300x900	115
STAB S24	24/18	3PH+N	18msec/V	600x300x900	155
STAB S30	30/24	3PH+N	18msec/V	600x300x900	175
STAB S50	50/34	3PH+N	18msec/V	400x700x1200	195
STAB S60	60/48	3PH+N	18msec/V	700x400x1100	320
STAB S75	75/60	3PH+N	18msec/V	700x400x1100	400
STAB S100	100/75	3PH+N	18msec/V	700x400x1100	495
STAB S135	135/105	3PH+N	18msec/V	900x500x1200	530
STAB S150	150/120	3PH+N	18msec/V	900x500x1200	635
STAB S175	175/30	3PH+N	18msec/V	900x500x1200	820
STAB S230	230/175	3PH+N	18msec/V	600x850x1650	1200
STAB S300	300/230	3PH+N	18msec/V	1800x850x1700	1300
STAB S450	450/300	3PH+N	18msec/V	1800x850x1700	1600
ELECTRONIC STABILIZER THREE PHASE STAB TPH SERIES					
STAB TPH10	10/8	3PH+N	20msec	500x800x1200	95
STAB TPH15	15/12	3PH+N	20msec	500x800x1200	100
STAB TPH20	20/16	3PH+N	20msec	500x800x1200	125
STAB TPH30	30/24	3PH+N	20msec	500x800x1200	140
STAB TPH40	40/32	3PH+N	20msec	500x800x1200	160
STAB TPH60	60/48	3PH+N	20msec	500x800x1200	180

PRODUCT CODE	RATED POWER kVA (V \pm 15%/ \pm 20%)	INPUT VOLTAGE V	SPEED REGULATION	STABILIZER DIMENSIONS WxDxH mm	WEIGHT kgs
ELECTRONIC STABILIZER THREE PHASE STAB TPH SERIES					
STAB TPH80	80/64	3PH+N	20msec	500x800x1200	200
STAB TPH100	100/80	3PH+N	20msec	800x800x1900	600
STAB TPH120	120/96	3PH+N	20msec	800x800x1900	650
STAB TPH160	160/128	3PH+N	20msec	800x800x1900	750
STAB TPH200	200/160	3PH+N	20msec	800x800x1900	800