TECHNICAL DATA

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eST Static Voltage Stabilisation Unit

The eST Static voltage stabiliser system uses the latest generation, high speed, microprocessor controlled thyristors to provide plant and equipment with stabilised voltage and is designed for use in areas where the electrical supply grid is prone to sudden changes such as spikes or sags. Eliminating these sudden changes in supply voltage reduces the

Risk of premature failure consistently operating electrical loads within their design voltage range.

The eST Stabiliser benefits from industry leading voltage detection and response times of <300 mS to maintain voltage and protect equipment from an ever more increasingly unstable electrical supply system.

- Product Range 2kVA to 3000kVA
- Single Phase and Three Phase output versions

- Worldwide range of single and three phase voltages. (208-380-400-415-480-600V) & 50/60 HZ supplies
- Latest generation power management technology using thyristor based control, with no moving parts, suitable for all supply environments
- Flexible design and software allowing easy orientation to local grid conditions
- Microprocessor based control system
- Fast reaction to changing voltage profiles (<300mS)
- Optional remote management system allowing remote viewing and management of all values
- Manual bypass for statutory inspections
- Static modular structure with thyristor technology used in power control and SMPS

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TECHNICAL DATA

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Technical Specifications for eST 1 & 3 phase

Model Range	eST stabiliser 1 phase & 3 phase
kVA Range	1 phase 2 – 50 kVA, 3 phase 10-3200 kVA
Power Factor	0.9

Input

Voltage	220 V 1 phase & 380V 3 phase + neutral
Voltage Tolerance	-25 + 15%
Frequency	50Hz ±5%
Input Connection	Copper busbar terminal

Output

Voltage	220 V 1 phase & 380V 3 phase + neutral
Voltage Tolerance	±2%
Frequency	50Hz ±5%
Voltage Adjustment Range	± 10% in 1V increments
Current	Rating dependent
Overload Capability	101% - 125% 3 Min, 126% - 150% 10 Sec higher loadings auto shut off
Response Time	20 m/sec
Correction Speed	500V/sec
Efficiency	>97% Typical
Output Connection	Copper busbar terminal
LCD Display	Input Voltage (L-N), Output voltage (L-N), Output load %, output frequency, stabilise condition and fault history, warnings (overload, over temp, input failure)
Communication	Optional network connectivity and remote management kit

Protection

Input Voltage Protection	Automatic over/under voltage shutdown to mains supply
Output Voltage Protection	Automatic over/under voltage shutdown to mains supply
Input Current Protection	MCB/MCCB rating dependent
Output Current Protection	MCB/MCCB rating dependent
Output Overload Protection	101% - 125% 3 Min, 126% - 150% 10 Sec higher loadings auto shut off
Over Temperature Protection	Automatic bypass for unit over temperature
Bypass Switch	Manual 1-0-11 position bypass
Surge Arrestor	Suitable surge arrestor for lighting and voltage surges

Environmental Protection

Operational Temperature	-10 deg C to +40 deg C
Maximum Altitude	<3000m
Maximum Humidity	<90% Non condensing
Acoustic Noise	<65 db (rating dependent)

Enclosure Specification

Type	Indoor (External option available)
IP Rating	IP21
Standard Colour	RAL 7035
Base	Plinth
Cooling	Temperature controlled fans

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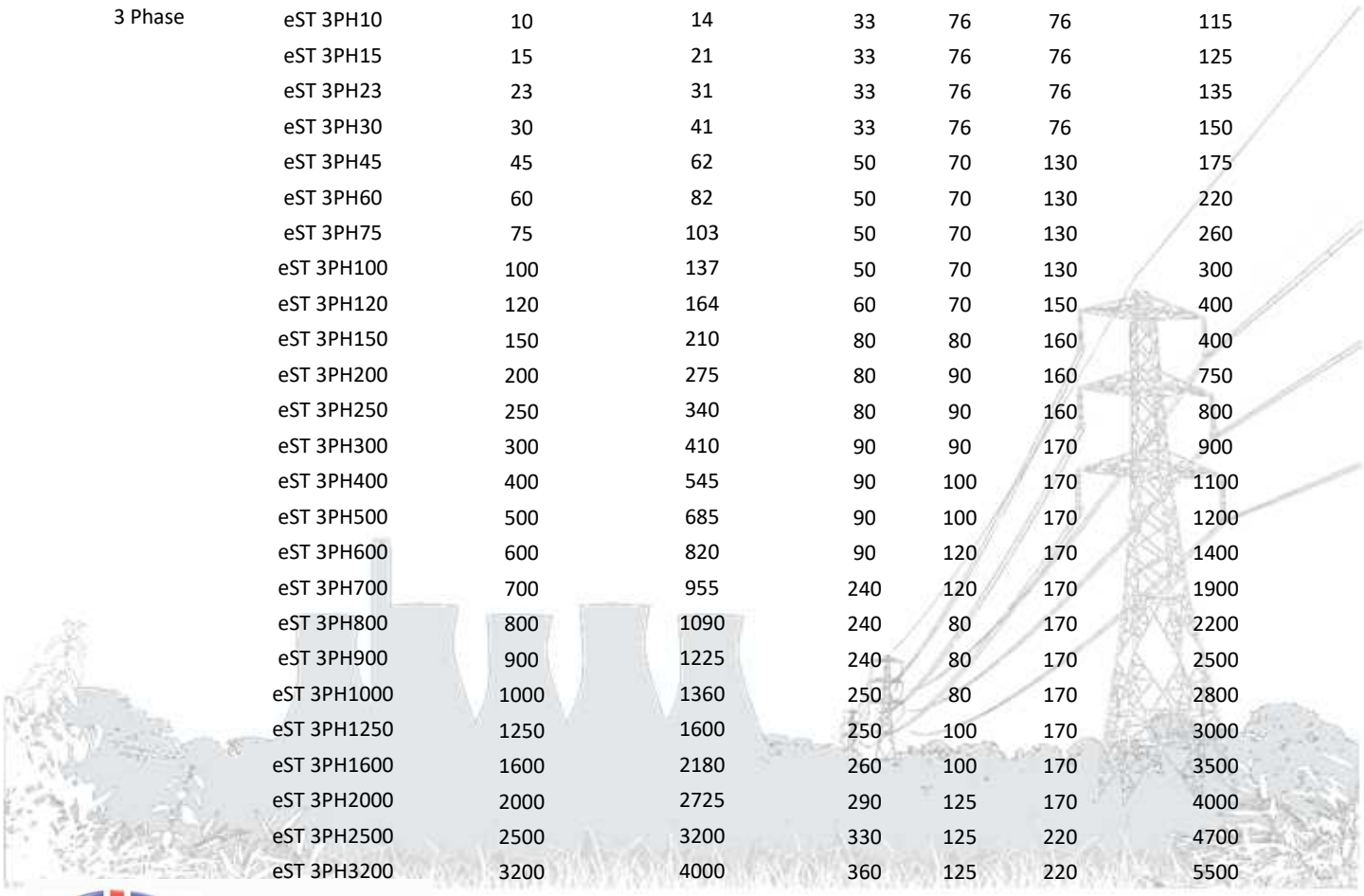
eST Ratings – Dimensions and Weights

Input	Model	Electrical Rating (kVA)	Electrical Current (Amps)	Dimensions (CM) Width	Depth	Height	Weight KG
1 Phase	eST 1PH02	2	8	20	41	37	28
	eST 1PH03	3	12	20	41	37	33
	eST 1PH05	5	20	20	41	37	40
	eST 1PH7.5	7.5	31	27	45	46	45
	eST 1PH10	10	41	27	45	46	52
	eST 1PH15	15	61	27	45	46	65
	eST 1PH20	20	82	31	52	52	85
	eST 1PH30	30	123	31	52	52	100
	eST 1PH40	40	164	31	52	52	140
	eST 1PH50	50	210	33	76	76	160
3 Phase	eST 3PH10	10	14	33	76	76	115
	eST 3PH15	15	21	33	76	76	125
	eST 3PH23	23	31	33	76	76	135
	eST 3PH30	30	41	33	76	76	150
	eST 3PH45	45	62	50	70	130	175
	eST 3PH60	60	82	50	70	130	220
	eST 3PH75	75	103	50	70	130	260
	eST 3PH100	100	137	50	70	130	300
	eST 3PH120	120	164	60	70	150	400
	eST 3PH150	150	210	80	80	160	400
	eST 3PH200	200	275	80	90	160	750
	eST 3PH250	250	340	80	90	160	800
	eST 3PH300	300	410	90	90	170	900
	eST 3PH400	400	545	90	100	170	1100
	eST 3PH500	500	685	90	100	170	1200
	eST 3PH600	600	820	90	120	170	1400
	eST 3PH700	700	955	240	120	170	1900
	eST 3PH800	800	1090	240	80	170	2200
	eST 3PH900	900	1225	240	80	170	2500
	eST 3PH1000	1000	1360	250	80	170	2800
	eST 3PH1250	1250	1600	250	100	170	3000
	eST 3PH1600	1600	2180	260	100	170	3500
	eST 3PH2000	2000	2725	290	125	170	4000
	eST 3PH2500	2500	3200	330	125	220	4700
	eST 3PH3200	3200	4000	360	125	220	5500



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eST Options

Non-standard input voltage value	xxxV	eST voltage stabiliser units can be produced for any required input voltage value
Non-standard input voltage range	XS,M,L,XL	eST voltage stabiliser units can be produced different input voltage ranges. Maximum input rang -60% +40%
Maximum input range Non-standard output voltage value	xxxV	eST voltage stabiliser units can be produced for any required output voltage value
Non-standard output voltage tolerance	R	Output voltage tolerances of eST units can be +/-1%, +/-2%, +/-3%, +/-5% (3% standard value)
Adjustable output voltage	ADJ	Output voltage of the eST unit can be adjusted by the LCD panel. Maximum adjusting range is +/-15%
Non-standard frequency	FRQ	eST voltage stabiliser units can be produced for 60Hz networks
Output protection CB	OCB	Optional Circuit Breaker may be added to the output of the voltage stabiliser to provide additional protection
Special enclosure	K	eST voltage stabiliser units can be produced for both indoor and outdoor applications in special cabinets having different IPXX protection classes
Input/output EMC filter	EMC	Specially designed EMC-Filters can be added optionally to both the input and output of eST. Filter specifications must be stated by offer/order
Input/output surge protector	ESD	High voltage protection and surge arrester can be added to both the input and output of the eST (CLASS-I, CLASS-II, CLASS III) must be given with the order
Auxiliary contacts	C	NO-NC auxiliary contactor terminals can be installed for ON-OFF
Non-standard input/output terminal	T	According to site specification installation requirements, input & output terminals can be designed and located as required on the cabinet
Special design and accessories	SPM	The eST can be designed and constructed to meet specific customer requirements and technical specifications
Parallel connection management units	PCM	Up to 4 systems can be connected in parallel for special high power applications. A PCM unit is used for management and synchronisation when units are connected in parallel

The above are not included in the standard unit price. Details of any options required must be confirmed at the time of order. All options may not be suitable for a particular model or application. Please keep in touch with your sales representative for suitable options. The technical specifications given in this brochure are to be used as a guide. Efficient Power reserve the right to change without giving prior notice. The technical specifications in this brochure are for the eST model. Please ask your sales representative for details and technical specifications for our extensive power management range.

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