XEAMOS

Zero Soot EHS

Reducing emissions together

Yachting

Inland Navigation

Industry & Offshore

Zero Soot EHS

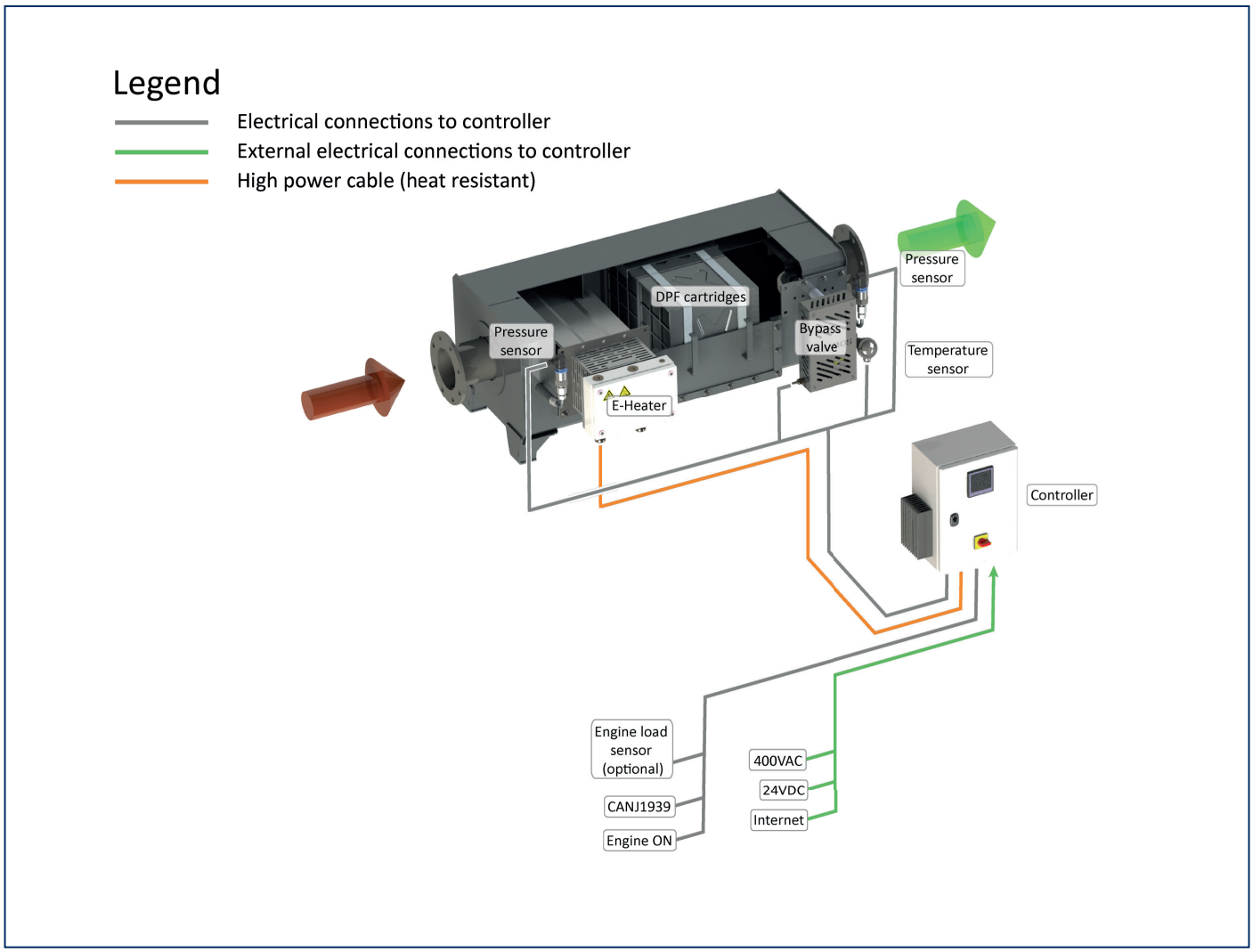
Our Zero Soot EHS (Electrical Heater) offers reliable reduction of harmful emissions of your auxiliary diesel engine under all circumstances. Your generators will be clean, without soot!

The particle filters of the Electrical Zero Soot System collect the soot particles from the exhaust stream. An extra powerful catalytic coating minimizes the regeneration temperature and reduces Hydro Carbons and Carbon Monoxide.

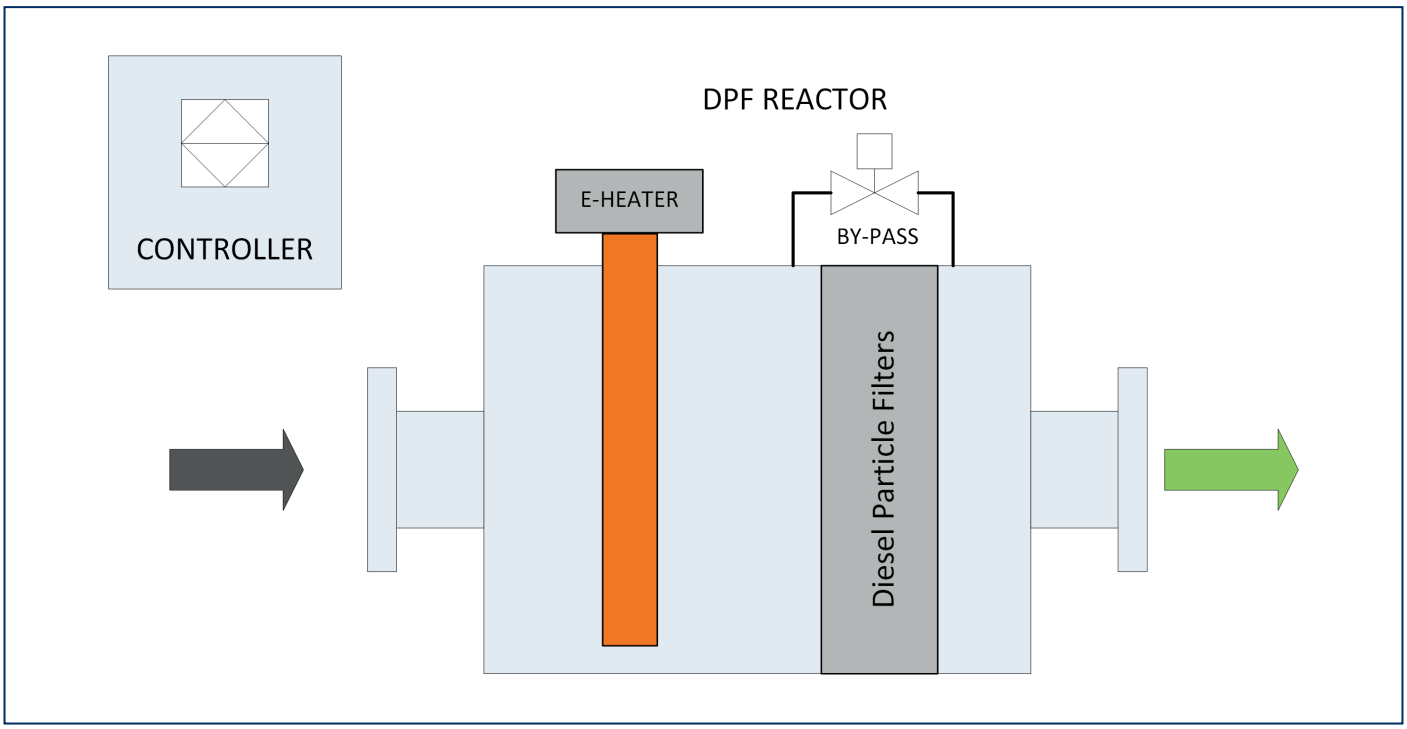
- A unique internal bypass electrical operated allows 100% engine availability.
- In practice VIP guests will not experience particulates on deck, common diesel fuel in swimming water and the smell of diesel fuel.
- Our system range has been designed especially to form a perfect match with generators up to 300 kWm engine power, for either dry or wet exhaust configurations. The Electrical Zero Soot System allows diesel with low sulphur content.
- The intelligent PLC controlled regeneration system ensures a trouble-free operation of your filter system.
- The electrical heater element allows integrated load bank functionality, and keeps your engine clean by utilizing higher loads.

Main Features

- Compact design.
- Active regeneration by electric heater.
- Integrated bypass.
- Load bank and 'harbour' mode function.
- Maximum flexibility by different in/outlet positions.
- Rectangular housing to reduce overall volume.



Lay-out of a Zero Soot EHS.



Process schematic of a Zero Soot EHS.

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Operational conditions

Application	Superyachts and Inland navigation
Exhaust system	Suitable for dry or wet systems
Environment	Engine room, clean
Ambient temperature	-10°C / +55°C
Degree of protection	IP55
Relative humidity	5 to 95% non-condensing
Inspection & service interval	Approximately 1x per year (normal conditions)

Supplies

Fuel	Max. 1000 ppm Sulphur
AC Power supply	400 VAC +10% / -15% Heater power depending on model
DC Power supply	24VDC, 5A

Design data

Material housing	Stainless steel
Temperature	Regeneration temperature up to 520°C
Pressure drop (ΔP)	Approximately 15-25 mbar, clean without soot and ash
DPF type	SiSiC
Coating	SX, ZX (ULSF only)
Regeneration strategy	Based on actual Soot Load To prevent over-powering of the generator the electrical regeneration is limited by engine load signal
Supports	Top or bottom
Thermal insulation	Blankets or cladding (optional)

Legal requirements and standards

Standards	EMC directive 2014/30/EU Machinery directive 2006/42/EC Low voltage directive 2014/35/EU
Classification	Lloyds Register

System parts

Controller	PLC with full colour HMI, super yacht standard (acc. to LR requirements) - Inputs: engine load, engine on - Outputs: System ON, Alarm, MOD bus - Datalogging - Remote access prepared
Heater	Electric heater with modulating control
Housing	Flat rectangular shape to reduce overall volume
Bypass	Internal, electrically operated
Sensors	Temperature & pressure transmitter

Performance

PM (measured as PM10)	>97% reduction
Sound attenuation	ca. 25 dB(A)

Optional

- Various catalytic coating for increased HC reduction at low exhaust temperatures
- Remote access via LAN accessible for diagnostics/remote Services
- Alternative power supplies
- Alternative in- and outlet positions and flanges

** Ask Xeamos for advice regarding available catalytic DPF coatings*

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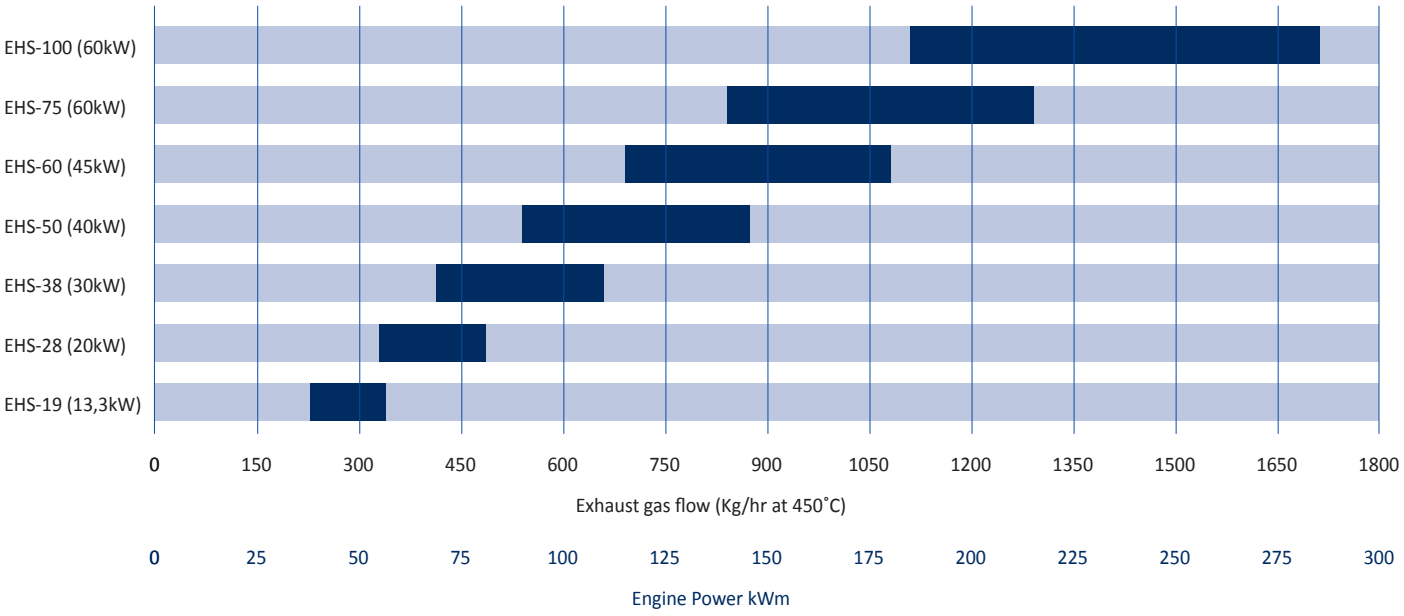

For indication only, please contact us for exact unit selection or custom solutions. Bar in graph corresponds with 15 -25 mbar pressure drop.

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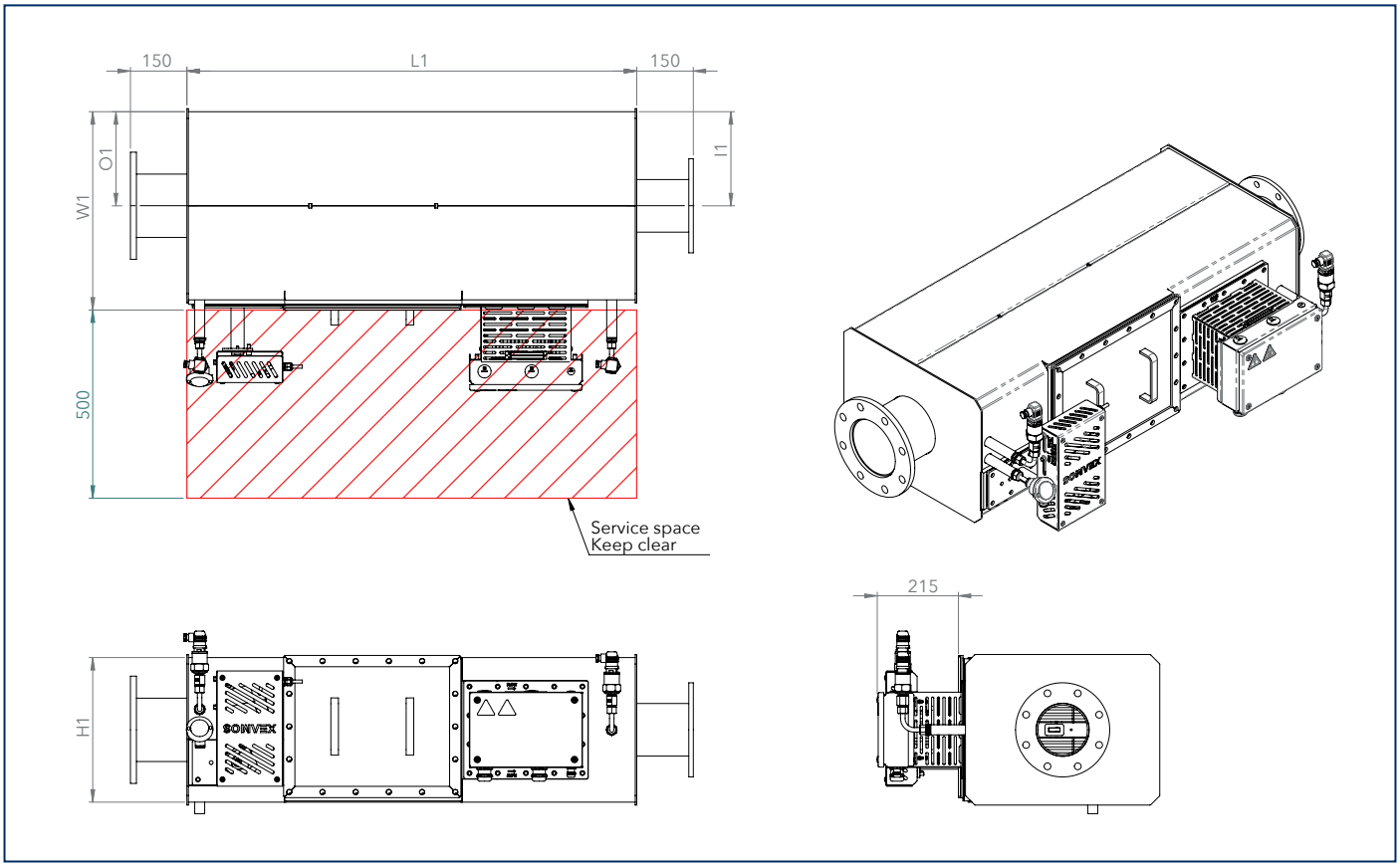
Dimensions & options Zero Soot EHS

Type	DPF volume liter	E-heater kw	Flanges EN1092 PN10		Hot surface m2	L1 mm	W1 mm	H1 mm	I1 mm	O1 mm	Weight kg
			in	out							
EHS-19	19	13,3	100	100	1,7	1125	335	310	160	160	121
EHS-28	28	20	100	100	2,3	1195	505	310	245	245	174
EHS-38	38	30	125	125	2,6	1195	530	385	258	258	214
EHS-50	50	40	150	150	3,2	1300	655	385	320	320	274
EHS-60	60	45	150	150	3,4	1250	745	385	365	365	292
EHS-75	75	60	200	200	4,4	1330	995	385	490	490	400
EHS-100	100	60	200	250	5,0	1370	900	555	443	443	522

Notes: All values are preliminary. Custom dimensions available on request.



System selection

To configure your system we ask you to submit the following information.

Engine model and power	kW
Engine certification	IMO I / II / other
Exhaust	System wet / dry
Available pressure budget	mbar
Running hours per year	hours
Average engine load	%
Lube oil consumption	l/h
Fuel type	

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