

XEAMOS

Reducing emissions together

Clean air engineering



Zero Soot EHS

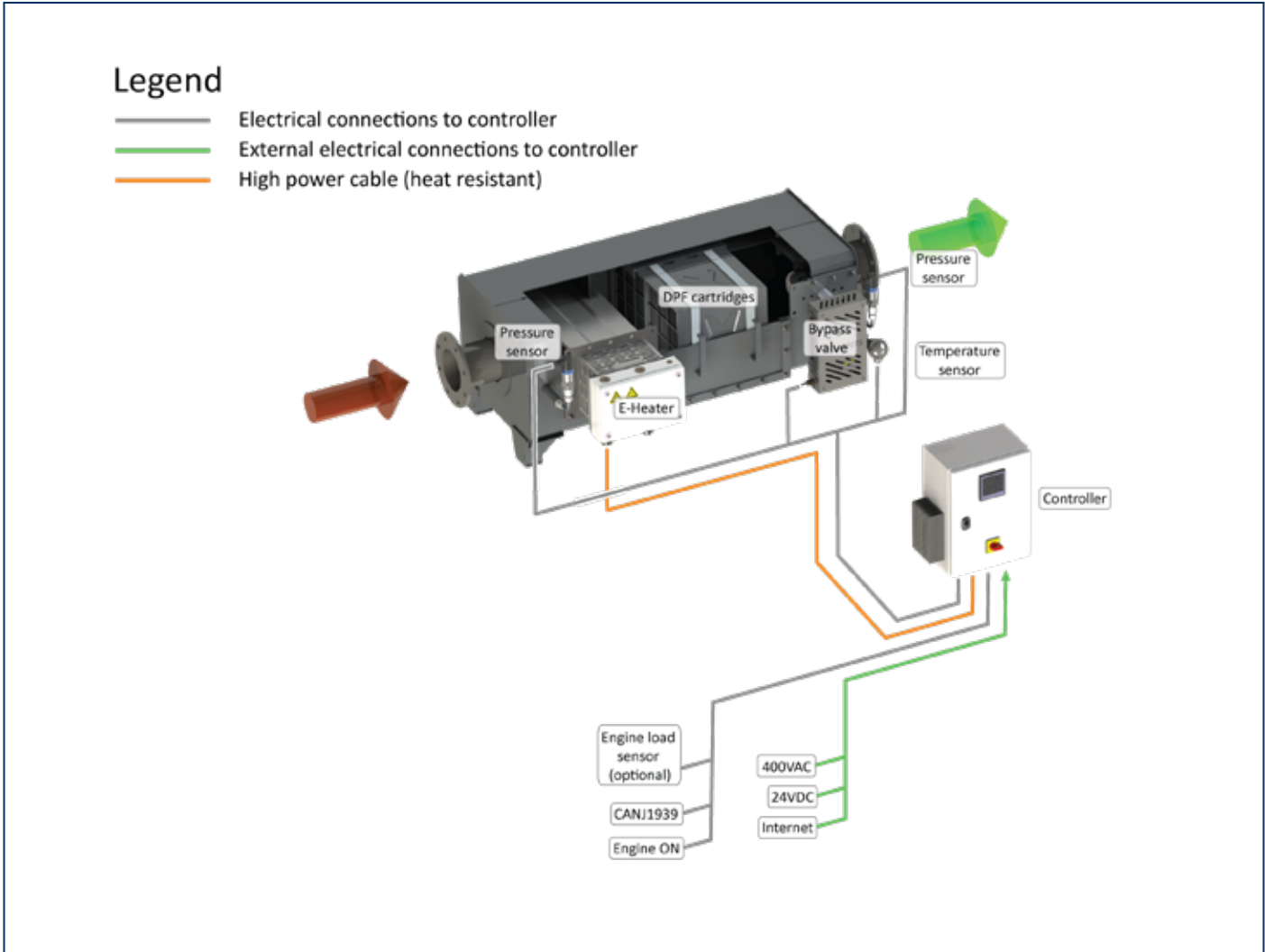
Our Zero Soot EHS (Electrical Heater) offers reliable reduction of harmful emissions of your auxiliary diesel engine under all circumstances. Your generators will be clean, without soot!

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.

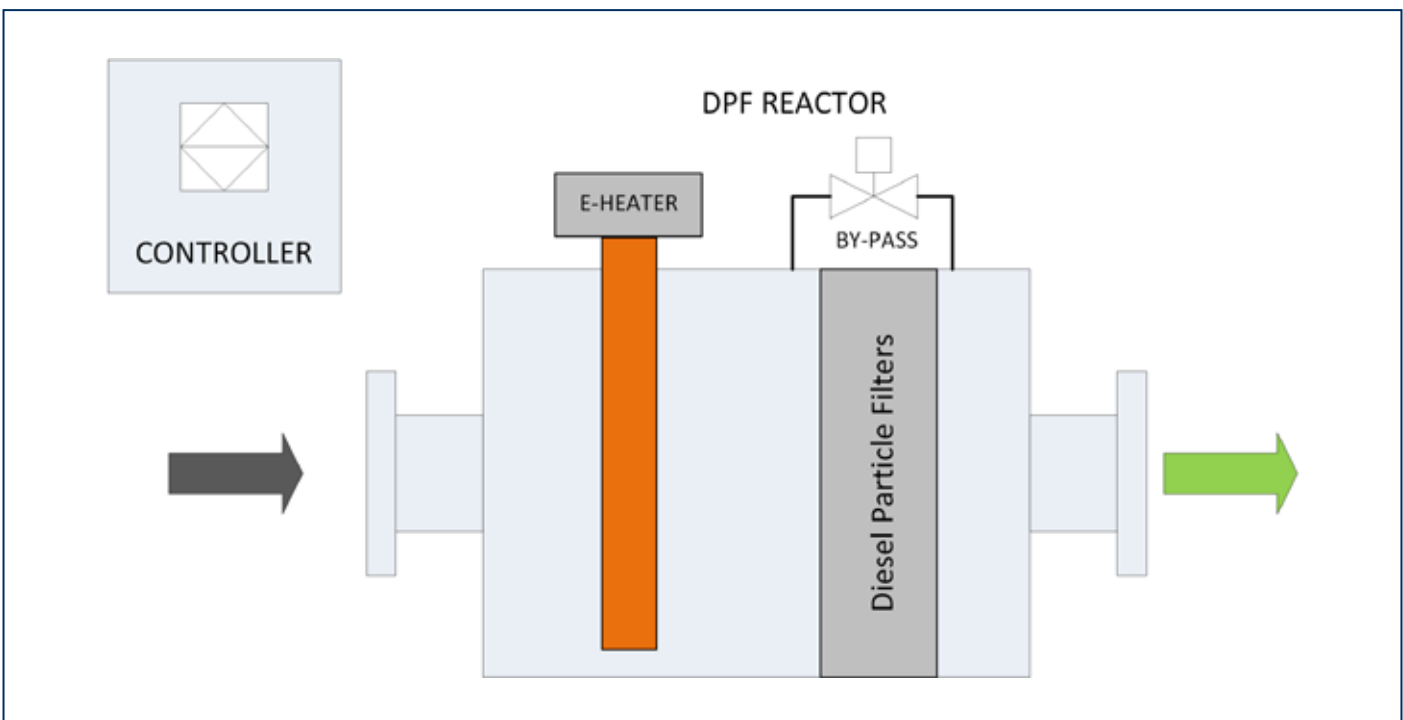
- A unique internal bypass electrical operated allows 100% engine availability.
- In practice VIP guests will not experience particulates on deck, common diesel fuel in swimming water and the smell of diesel fuel.
- Our system range has been designed especially to form a perfect match with generators 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.

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% |
| DC Power supply | Heater power depending on model 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

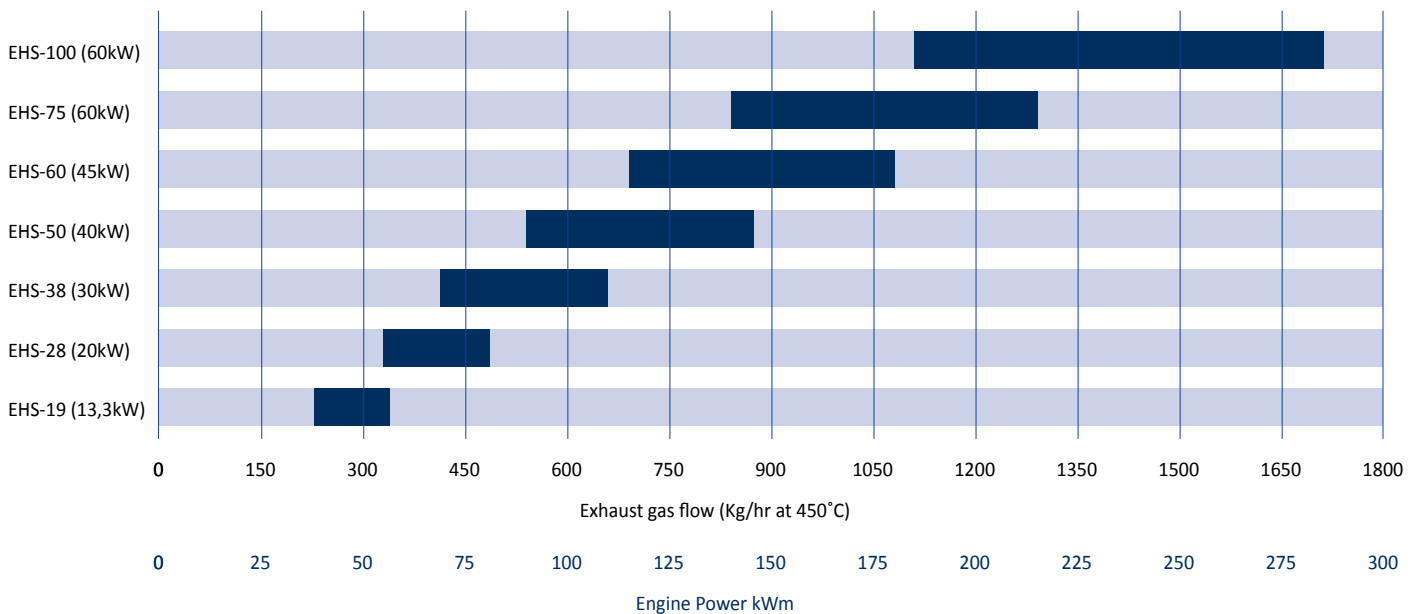
| | |
|-----------------------|----------------|
| PM (measured as PM10) | >97% reduction |
| Sound attenuation | ca. 25 dB(A) |

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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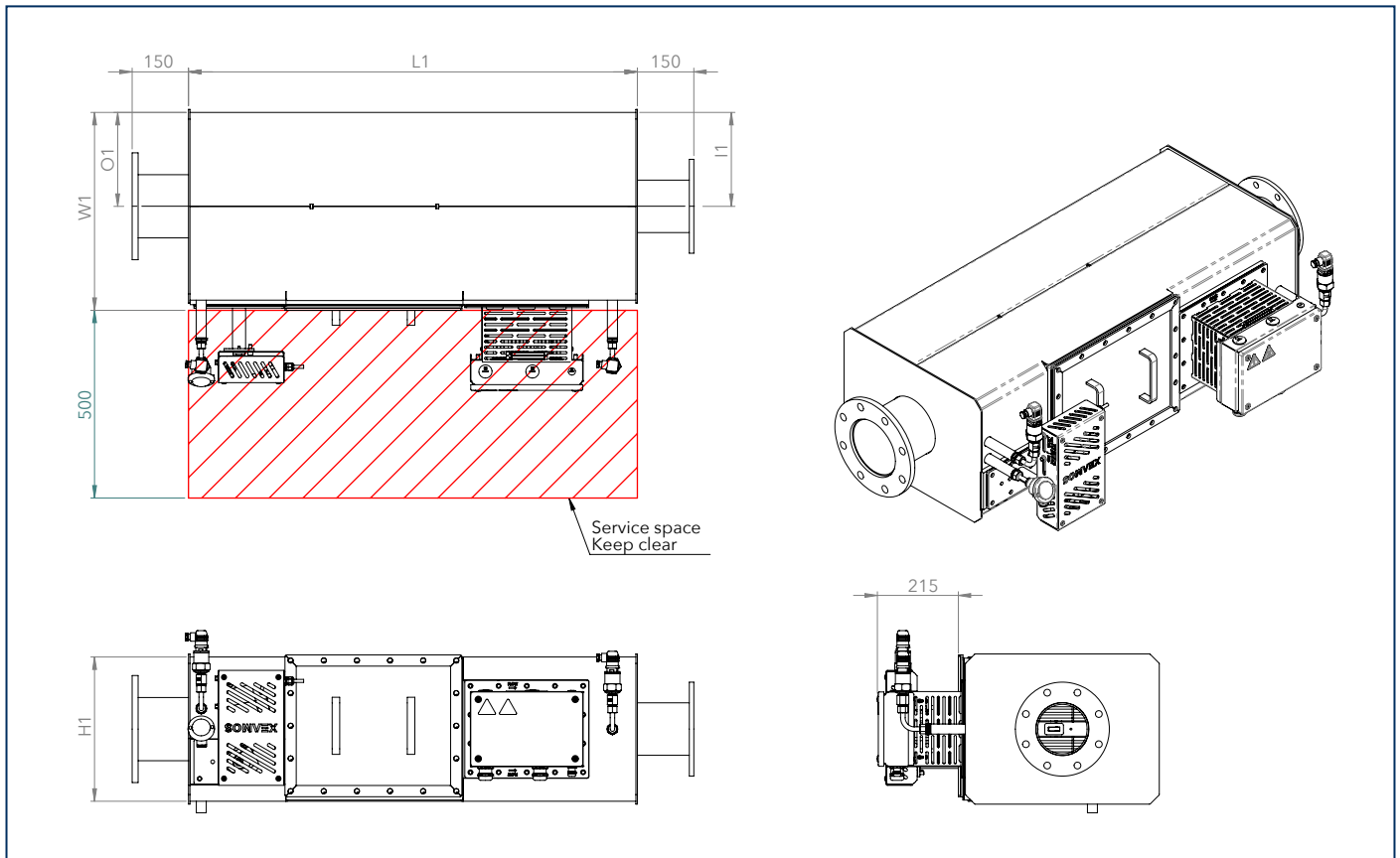


For indication only, please contact us for exact unit selection or custom solutions. Bar in graph corresponds with 15 -25 mbar pressure drop.

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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