GQW1400V
Twingen Stage 2
(New design)

Genset Overview

PRAMAC

High density power generation up to 1,3 MVA Prime Power with two generating sets inside a 20ft HC container. This solution guarantees greater performance, low noise, lower fuel consumption and high-power density.
It offers load profile variations during the gensets' running time, ensuring greatest efficiency and optimum run time.



- LONG LASTING
- EASY AND FAST SERVICE & MAINTENANCE
- EASY AND FAST INSTALLATION AND COMISSIONING

1 KEY FEATURES

GENSETS

- Two gensets placed inside the container assembled on a skid base without radiator.

MAINTENANCE

- Easy maintenance with accessible doors and roof.

LOW NOISE

- Complete with 4 electric fun in two radiators (one for each genset) placed in a special and separated compartment to keep noise pollution at an all-time low.

FUEL SYSTEM

- Complete with single large metal fuel tank with double wall (for both gensets).

COMMAND AND CONTROL PANEL

- Synchronizing control panel DSE able to run one or both gensets according to power demand.

20' HIGH CUBE SOUNDPROOF CONTAINER

- Soundproof and weatherproof 20 ft HC container with proper insulation and wide doors for easy service and maintenance.

2 Range and dimensions

High Cube (HC) 20 feet container

Dimensions

- Length: 6058 mm, Width: 2438 mm, Height: 2896 mm

Weight

- Estimated Dry weight 17400 kg
- Estimated Wet weight (inclusive fuel, oil and radiator liquid) 19110 kg

2.1 Power Rating Standard

GPW- GQW Power declared																
genset model	380V 60Hz cosf 0,8								415V 50Hz cosf 0,8							
	Standby		Prime		Prime @ 52°C		Prime @ 50°C		Standby		Prime		Prime @ 52°C		Prime @ 50°C	
	kVA	kWe	kVA	kWe	kVA	kWe	kVA	kWe	kVA	kWe	kVA	kWe	kVA	kWe	kVA	kWe
GQW1400V	1388	1110	1348	1078	*1255,8*	*1004,6*	*1269,6*	*1015,7*	1368	1094	1328	1062	*1237,6*	*990,1*	*1251,2*	*1001,0*

2.2 Engines and alternators

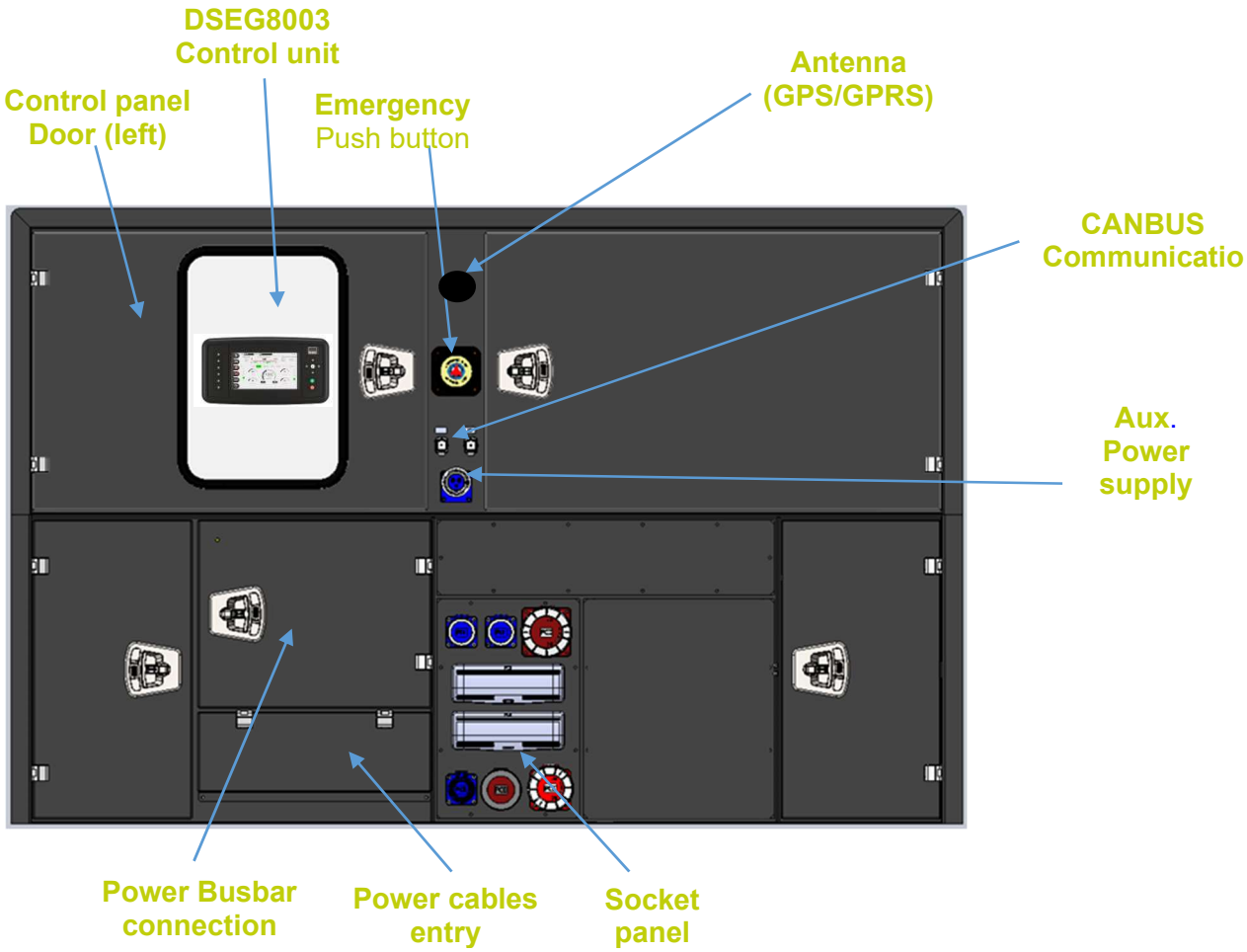
2.2.1 DOUBLE ENGINE

- Engine manufacturer: Volvo
- Model: TWD1644GE (NO RADIATOR)
- Version: 50/60 Hz
- Exhaust emission level: Stage 2
- Engine cooling system: Water
- Nr. of cylinder and disposition: 6 in line
- Displacement: 16120 cm³
- Speed governor: Electronic
- Oil capacity 48l
- Fuel: Diesel
- Starting system: Electric
- Electric circuit 24V
- Easy Maintenance of oil filters for both engines

2.2.2 DOUBLE ALTERNATOR

- Alternator manufacturer: Mecc Alte
- Model: ECO40-3L 4C
- Voltage: 400/230V
- Frequency: 50/60Hz
- Power factor: cos ϕ 0.8
- Type: Brushless
- Poles: 4
- Voltage regulation system: Digital
- AVR Type: Double DER1
- Winding leads: 12
- Voltage tolerance: 0,5%
- Insulation Class: H
- IP protection: 23

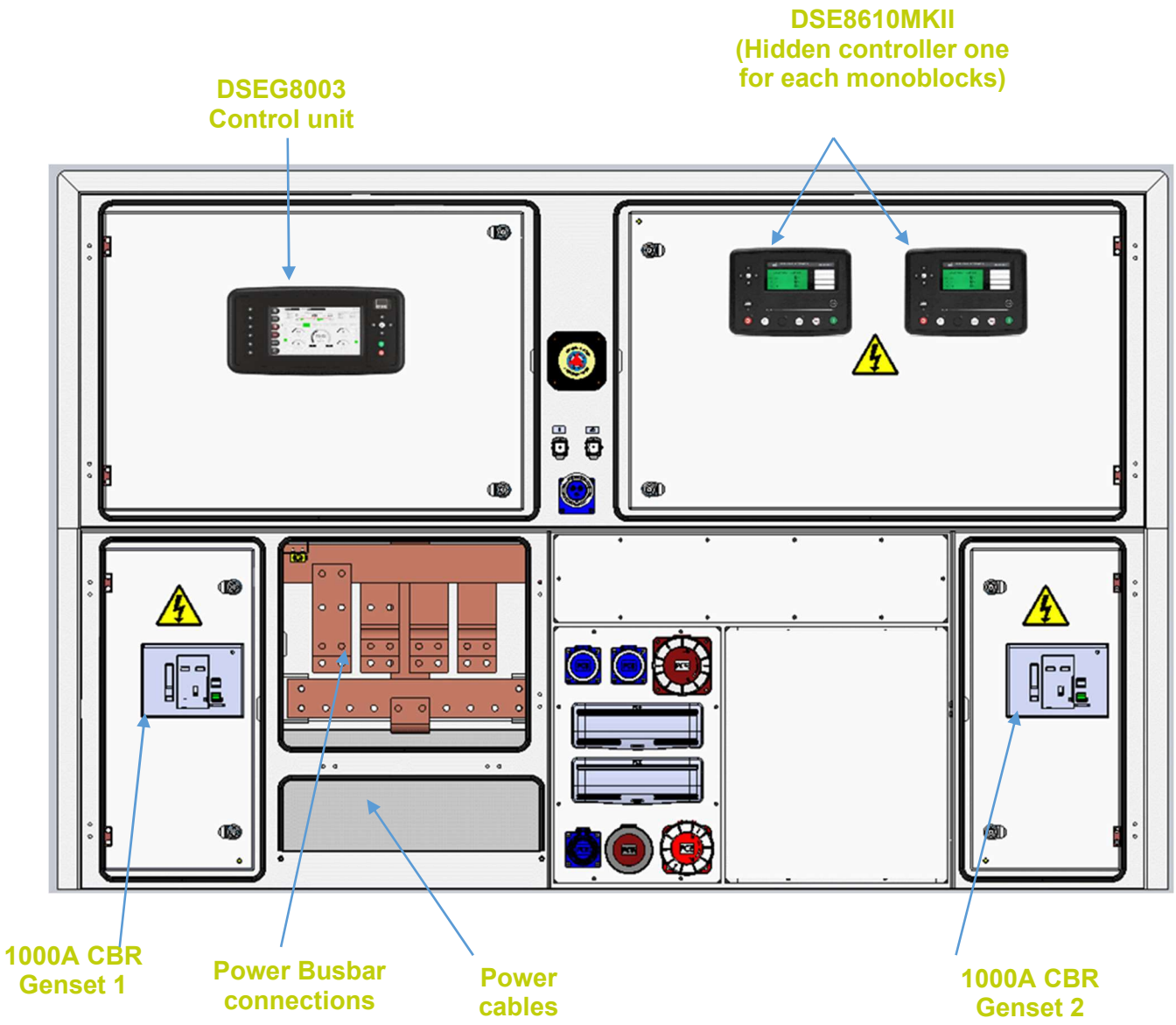
3 CONTROL AND POWER PANELS



Control Section

- ON/OFF selector switch
- Main interface with full colour 7” graphical display DSE8003
- Two hidden DSE8610 MKII (one for each genset) to control load sharing & synchronizing
- Master genset selector switch (G1 – G2)
- 5A Battery charger
- Emergency push-button
- Earth fault current with selector switch

Possible to synchronize up to n°16 twingen units



Power Section

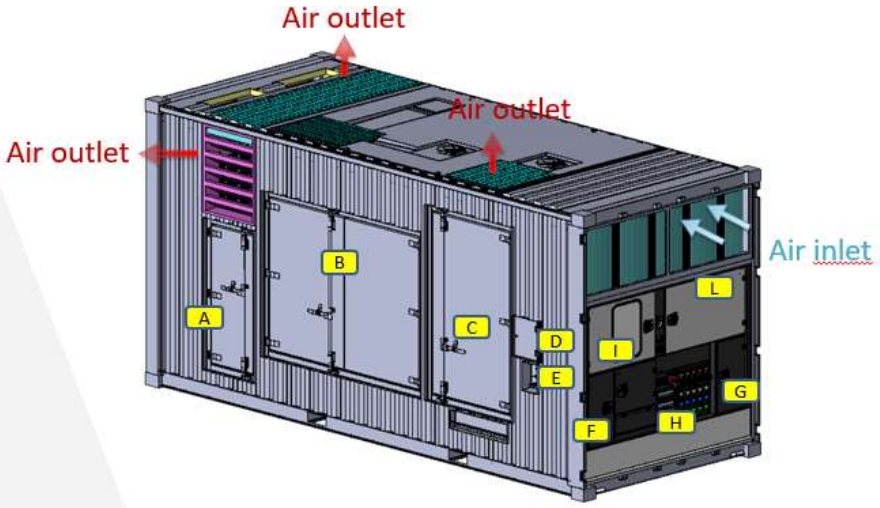
- N°2 four pole - motorized molded case circuit breaker thermal and magnetic overloads (1000A one for each generator) for the parallel on a single BUS sized for a total of 2000A

OUTPUT POWER SECTION:

- Copper bars could connect up to a maximum of 8 conductors
- Sockets kit with standard plugs and dedicated protections
- Multi-pin connector IN and OUT for parallel with other gensets
- Plug for auxiliary power supply

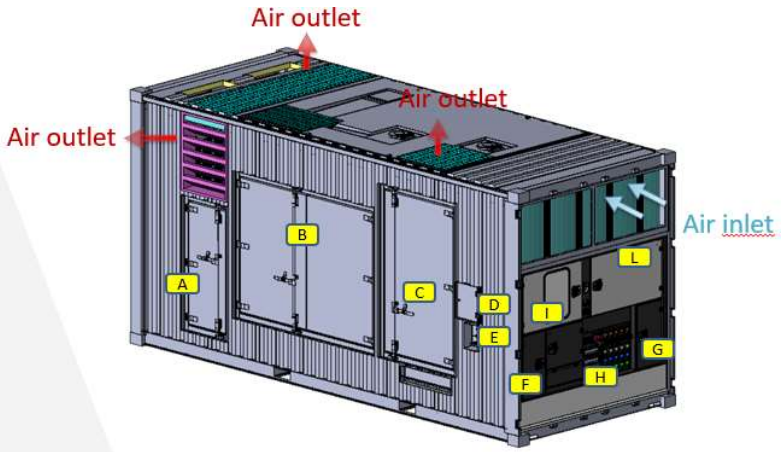
4 INTERNAL LAYOUT

Below an example of Internal layout, take in consideration that pictures below are toke from Stage V Twingen. (After Treatment System and DEF tank not included in Twingen Stage 2).



A – Radiator maintenance door
B - Engine and alternator maintenance door
C – Maintenance door (access to alternator internal inverter)
D - Door with key for manual filling of fuel
E – Quick Fuel Connectors
F – Main Motorized 4 Poles Circuit Breaker GE1
G – Main Motorized 4 Poles Circuit Breaker GE2
H – Socket Kit
I – Main interface Control Unit DSE8003
L - Double hidden control unit DSE8610, for the management of GE1 and GE2

5 EXTERNAL LOYOUT AND AIR FLOW



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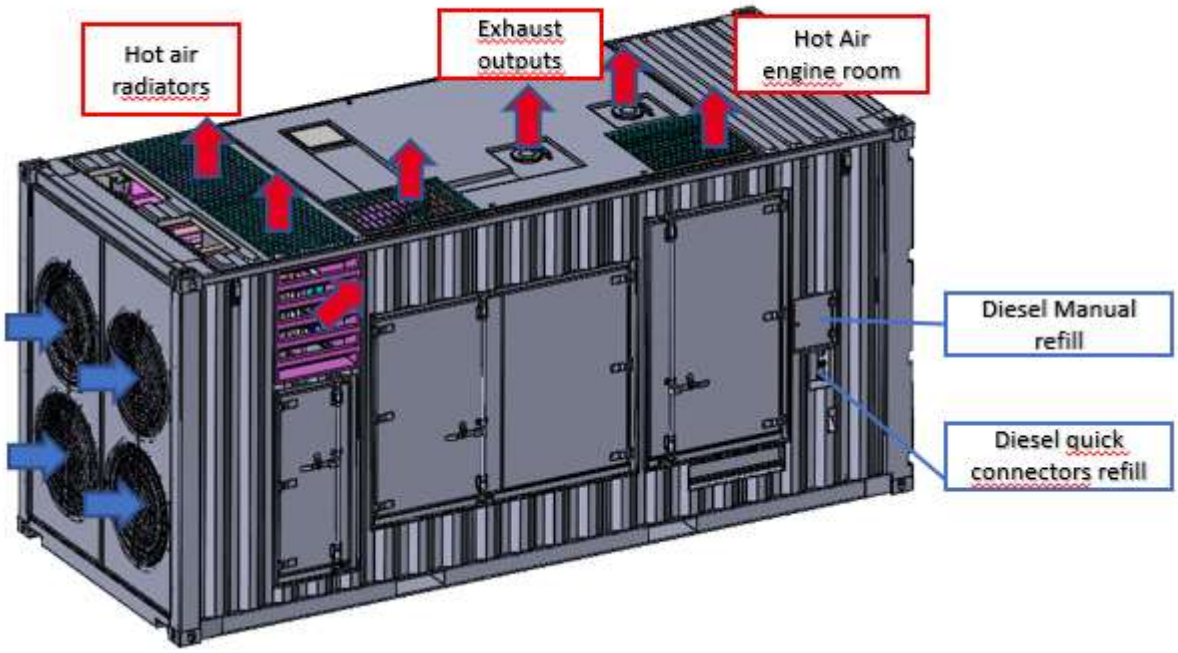

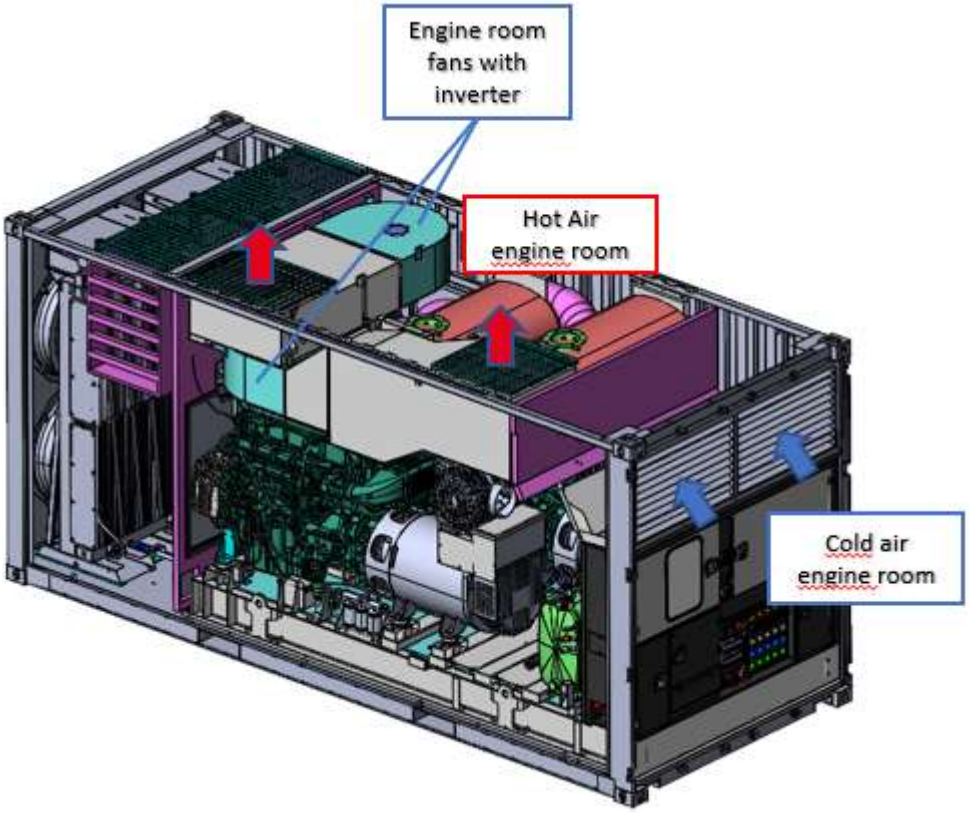

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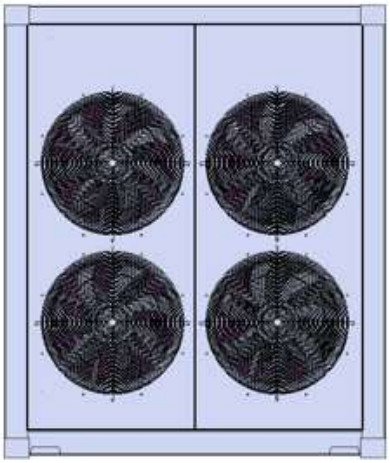
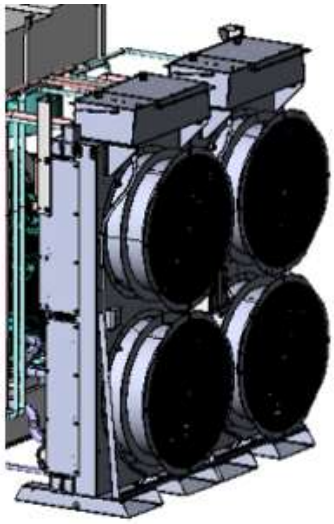
6 COOLING SYSTEM





The cooling system includes n°4 electro-fans mounted on two monoblock support, main features of the system:

- N°4 Electrical Motors with wather temperature regulation (4x2,5kW 50Hz)
- Double water circuit (LT and HT)
- Fan profile optimized for greater efficiency
- Metal water piping with draining valves
- The temperature is detected by the system through a temperature sensor.
- Easy control and refiling from the top.
- Integrated Inverter