GMQ-1420V/S2 TWINGEN [3P 50/60Hz 400/480V]

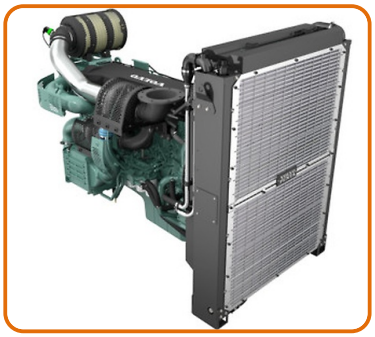
Power Rating		
Frequency	Hz	50
Voltage	V	400
Phases	№	3
Emergency Standby Power ESP	kVA	1409
Emergency Standby Power ESP	kW	1127
Prime Power PRP	kVA	1299
Prime power PRP	kW	1039
[50Hz] Exhaust emission level		Stage II
Dual Frequency Switch	50/60Hz	√
Frequency	Hz	60
Voltage	V	480
Phases	№	3
Emergency Standby Power ESP	kVA	1563
Emergency Standby Power ESP	kW	1250
Prime Power PRP	kVA	1423
Prime power PRP	kW	1138
[60Hz] Exhaust emission optimized for EPA tier (EPA)		Tier 2

Ratings definition (ISO-8528)

ESP - Emergency Standby Power:
It is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP.

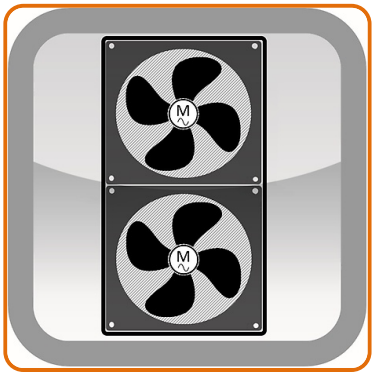
PRP - Prime Power:
It is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output over 24 h of operation shall not exceed 70 % of the prime power.

Engine specifications		
Engine Brand		Volvo
Model		TWD1644GE
Engine cooling system		Water
Nr. of cylinder and disposition		6 in line
Displacement	cm^3	16120
Aspiration		Turbocharged intercooled
Cooling fan		Mechanical
Speed governor		Electronic
Coolant capacity	l	59
Electric circuit	V	24
VERSION SWITCHABLE [50/60Hz]		Yes
ENGINE DATA	Hz	50
[50Hz] Operating Speed-Nominal	rpm	1500
[50Hz] Exhaust emission level		Stage II
[50Hz] Specific fuel consumption 75% PRP	g/kWh	194
[50Hz] Specific fuel consumption 100% PRP	g/kWh	194
ENGINE DATA	Hz	60
[60Hz] Operating Speed-Nominal	rpm	1800
[60Hz] Exhaust emission optimized for EPA tier (EPA)		Tier 2
[60Hz] Specific fuel consumption 75% PRP	g/kWh	199
[60Hz] Specific fuel consumption 100% PRP	g/kWh	199



Radiator

Electrical motor power	kW	12
Coolant capacity	l	328
Max. air on temperature	°C	50



Alternator Specifications		
Alternator		Mecc Alte
Model		ECO40 3L4 C
Type		Brushless
Class		H
IP protection		23
Poles		4
Winding leads		12
Voltage regulation system		Electronic
Standard AVR		DER1
Voltage tolerance	%	0.5

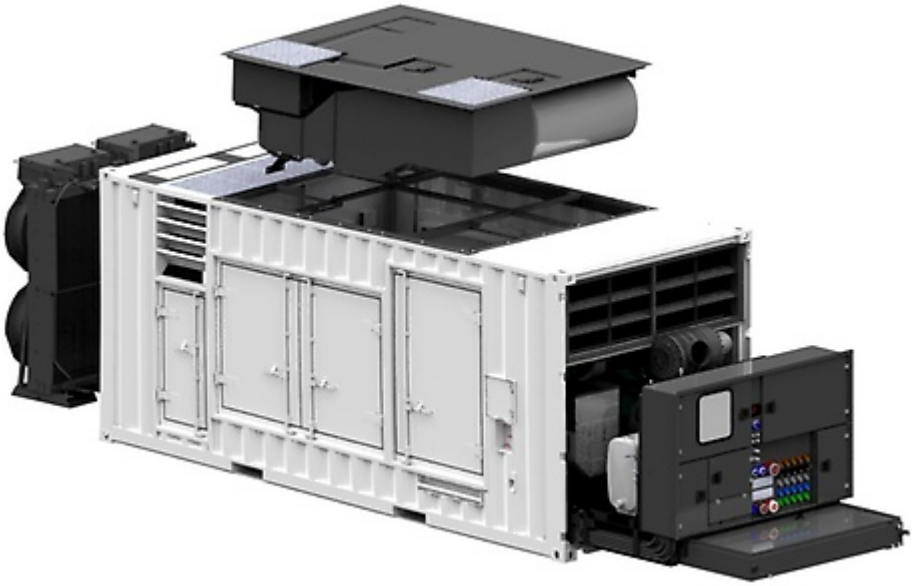
Genset Equipment

LOW NOISE
Two gensets in parallel placed inside the container, equipped with four electric fan with two radiators placed in a separated compartment to keep noise pollution low at all time.

MAINTENANCE and SERVICE
Designed for easy access for any service and maintenance activities through many large inspection doors:

- Engines, alternators and starting batteries maintenance doors on both side. Engines fuel and air filters remotized for access from the doors.
- Radiator maintenance doors on both side
- Fuel maintenance door

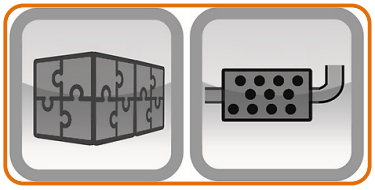
Easy access to the roof by ladder for coolant refiling, cleaning and maintenance of engine air outlet.
Maintenance and service of fans motor through dedicated door.



Each macro element can be easily disassembled to allow any extraordinary maintenance:

- Fuel tank for cleaning and replacement
- Sled with engines, alternators, control and power panels
- Cooling system
- Mufflers (on the roof)

EXHAUST SYSTEM



- Exhaust thermal insulation of exhaust manifolds and exhaust mufflers
- Flexible exhaust compensators for each engines
- Rain flaps on the roof to avoid water ingress on the exhaust pipes

COOLING SYSTEM

- N°4 electrical motors with integrated inverter and water temperature regulator
- Double water circuit (LT and HT)
- Special Fans profile optimized for greater efficiency and to reduce noise level
- Metal water piping with draining valves
- Thermal sensors on engines hot water outlet
- Low coolant sensors with lecture from control unit and visual coolant level on radiators expansion tanks
- Easy Coolant refiling from the roof by container ladder

FUEL TANK

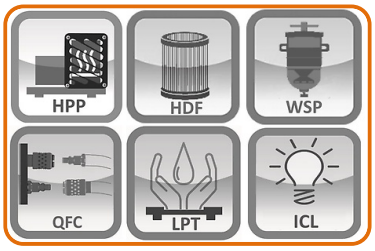
- A single large metal fuel tank with double wall and leak detection sensor with quick fit connectors that supply both genset

HIGH CUBE 20' SOUNDPROOF CONTAINER

- ISO lifting hooks on the roof
- ISO lifting hooks on the baseframe
- Forklift pockets facility on the baseframe
- CSC safety approval (available on request)
- Roof access by ladder
- Metal antisliding floor
- Possibility to stack in whereahouse two containers

STANDARD INCLUDED EQUIPMENT

Hot Parts Protection	HPP
Heavy-Duty Air Filter	HDF
Water Separator Filter	WSP
Quick Fit Fuel connectors	QFC
Leak proof tray	LPT
Dual Battery Switch	DBS
Internal Container Lighting system with manual switch	ICL
Three Way Fuel Valve	TWF



MPP - MODULAR PARALLEL PANEL

CONTROL SECTION

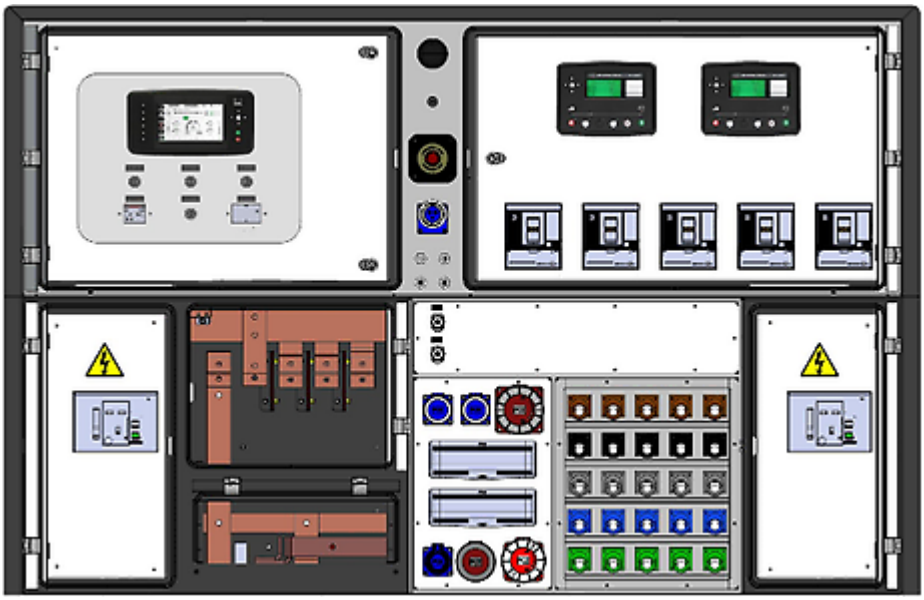
Cutting edge control panel for complete monitoring and control of the entire gensets and components.

- Single main user interface with 7” DSE8003 color graphic display
- Each Genset equipped with load sharing and synchronization controller DSE8610 MKII
- ON/OFF selector
- Possibility to synchronize up to 16 Twingen units
- Emergency button
- Adjustable differntial protection
- Insulation Monitoring device

POWER SECTION

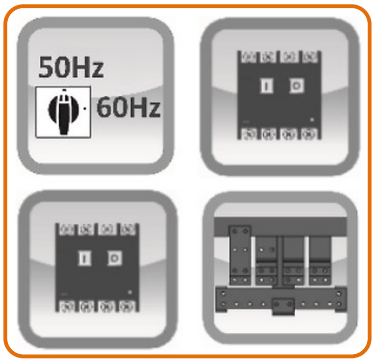
- N°2 four poles motorized circuit breakers
- Robust Copper bars for load cable connection
- Easy conversion earthing systems from TN-S to TN-C and IT
- Dual frequency switch 50/60Hz
- Multi-pin connector IN and OUT for parallel with other gensets
- Plug for auxiliary power supply

- Sockets kit with plugs and dedicated protections (available as option)
- Up to 5 Powerlock lines with individual magneto-thermal protections (available as option)



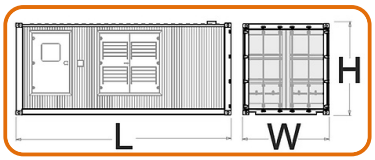
Electrical data

Dual Frequency Switch (50/60Hz)	Y400/230V 50HzY480/277V 60Hz	√
[50Hz] Max current (for single genset)	A	1040
[60Hz] Max current (for single genset)	A	959
Circuit Breaker 4-pole motorized (N°2 - One for genset)	A	1000
[50Hz] Max current (total N°2 genset)	A	2079
[60Hz] Max current (total N°2 genset)	A	1918
Differential Protection		√
Insulation Monitoring Device		√
External Terminal Board		√



Dimensional data Container Version

Length	(L) mm	6058
Width	(W) mm	2438
Height	(H) mm	2896
Fuel tank capacity	l	1800



Weight	kg	17100

Autonomy

[50Hz] Fuel consumption 75% PRP	l/h	199.14
[50Hz] Fuel consumption 100% PRP	l/h	264.21
[50hz] Running time 75% PRP	h	9.04
[50Hz] Running time 100% PRP	h	6.81
[60Hz] Fuel consumption 75% PRP	l/h	219.72
[60Hz] Fuel consumption 100% PRP	l/h	291.65
[60hz] Running time 75% PRP	h	8.19
[60Hz] Running time 100% PRP	h	6.17

Noise level 50Hz

Guaranteed noise level (LWA)	dB(A)	101
Noise pressure level @ 7 m	dB(A)	71
Noise pressure level @ 1 m	dB(A)	80

GENSET EQUIPMENT - Options Available:	
Kit with n.3 Water Separator Filter (Racor)	RWS
Automatic Fuel Pump	AFP
Pre-heating system	PHS
Convention for Safe Container	CSC
Alternator Winding Total Protection	WTP
Different Canopy Color	DCC

OUTPUT POWER SECTION - Options Available:	
Power lock 5x400A with four pole magneto-thermal protection	PWL
Socket kit	SKT
Remote monitoring 4G+GPS with Antenna	RGW