# Power Container Module Series

**PCM/DIESEL GENERATOR SET** 

50Hz/60Hz switchable 300kW~2000kW



**July 2019** 

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Contact: info@caigate.com

OV. 01



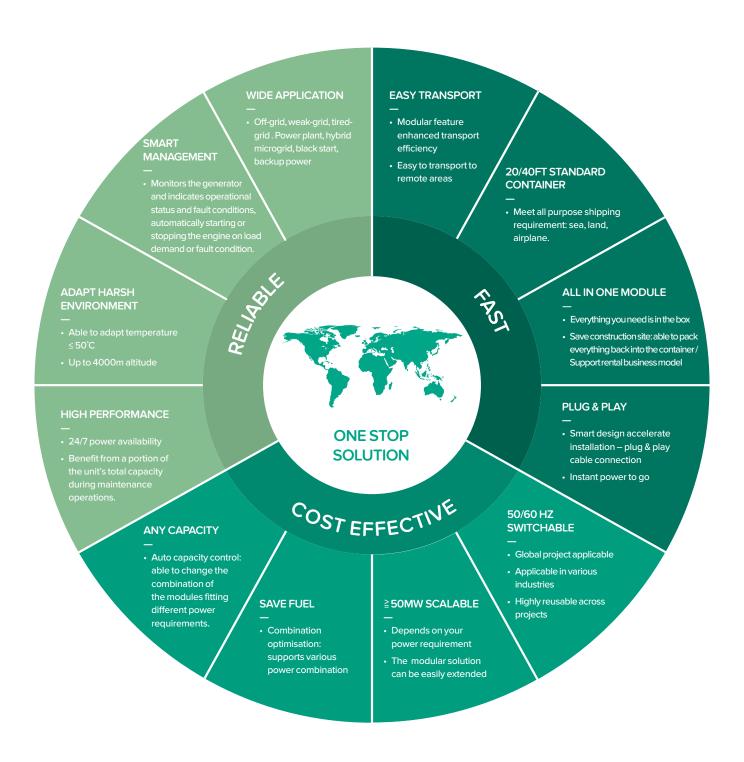
Application: Diesel Power Plant | Hybrid Microgrid | Blackstart | Backup Power





## Fast, Reliable & Cost-Effective

The PCM series has been designed with the customer in mind. The solution provides the flexibility to switch power loads in the most efficient way. It's easy to move, operate and straightforward to maintain.



## All-in-One

### 1. DIESEL ENGINE

- 4-stroke water cooled engine
- Electronic governor or engine management system
- Lube oil drain valve
- Standard air filter & fuel pre-filter

### 2. ALTERNATOR

- Single or twin bearing brushless alternator
- Class H insulation system and class H temperature rise
- IP23 protection
- Automatic Voltage Regulator with 1% Voltage Regulation

### 3. CONTROL PANELS

- DeepSea digital control module with manual and remote control
- ABB MCCB or motorised circuit breaker, power loom supplied
- A dependable and user-friendly operating system
- Full power monitoring and protection facilities are incorporated

### 4. COOLING SYSTEM

- Heary duty high ambient radiator with guards
- Engine drive cooling fan assembly
- Coolant drain valve
- Low coolant level alarm/shutdown sender

## **5. FUEL SYSTEM**

- Integral single skin fuel tank within baseframe
- Flexible fuel feed and return lines
- Automatic fuel transfer system in gravity-fed bulk tank
- Level switch, motorised valve and controls included

## 6. EXHAUST

- Residential noise reduction silencer supplied
- Internal or external exhaust system (of container)
- Include stainless steel bellows
- Set of connect flanges for silencer/bellows

### 7. STARTING SYSTEM

- 24VDC electric starter motor
- Engine starting battery cable and battery tray
- Battery charging alternator by engine drive
- Maintenance free batteries

### 8. ACOUSTIC CONTAINER

- ISO 20ft or 40ft HQ containers are attractive, robust and easy to transport
- ISO CSC plated shipping container
- Soundproof and weatherproof
- Specifically engineered to maximize utilisation and ease of operation

### 9. GENERAL

- Work tested in general compliance with ISO standards
- Built in anti-vibration mountings
- Powder coated fabricated steel base frame
- Products with "CE" certification



# **All-round Application**

## **POWER PLANT**

Scale up to 50MW



BLACKSTART\*

One step load > 200%



## **HYBRID MICROGRID**

100% power availability



**BACKUP POWER** 

Transition time within 10 seconds

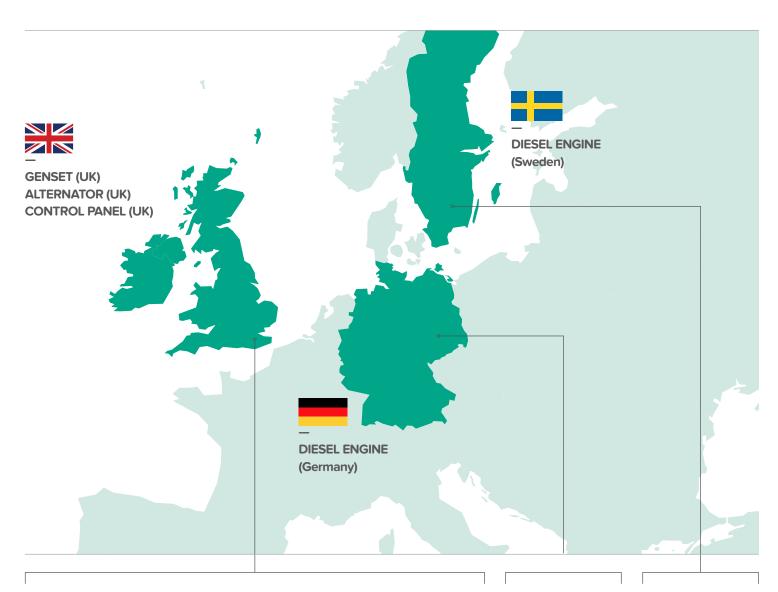


The PCM series has been tested and used in arduous conditions in different temperatures and climates.

<sup>\*</sup> Note: PCM series for Blackstart scenario requires EMS to achieve or exceed 200% step load.

## 100% Made in the UK

This world-class quality genset is designed and assembled in the United Kingdom. All major components are produced in Western Europe.











**UK** Control Panel





**UK**Alternator
Model: A, A<sup>+</sup>, B<sup>+</sup>, C





**UK** Alternator Model: B





**GERMANY**Diesel Engine
Model: C





**SWEDEN**Diesel Engine
Model: A, A<sup>+</sup>, B, B<sup>+</sup>

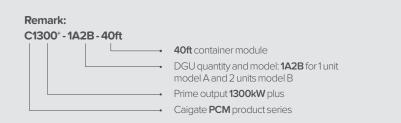


Note: The solution can be tailor made to your requirements, with engine options by Volvo: A,  $A^+$ , B,  $B^+$ 

## **Technical Data**

## POWER CONTAINER MODULAR (PCM) SERIES PRICE

MODEL	50Hz@400/23	50Hz@400/230V		60Hz@480/277V		Container Details					
	Prime kW/kVA	Standby kW/kVA	Prime kW/kVA	Standby kW/kVA	Configuration (Unit/DGU)	Container	85dB(A) Noise Level (m)	Silence Mount	Fuel Base Tank (L)	Weight (t)	Price (£)
C320	320/400	352/440	345/431	400/500	1A	20ft	1	Int	1020	5.9	88,854
C400	400/500	440/550	400/500	440/550	1A <sup>+</sup>	20ft	1	Int	1020	6.1	99,524
C500*	516/645	588/710	528/660	582/728	1B	20ft	1	Int	1200	6.9	116,154
C550 <sup>+</sup>	560/700	616/770	560/700	616/770	1B+	20ft	1	Int	1200	7.0	126,158
C600+	640/800	704/880	690/862	800/1000	2A	20ft	7	Ext	2×1020	9.0	164,516
C800	800/1000	880/1100	800/1000	880/1100	2A+	20ft	7	Ext	2×1020	9.3	183,856
C900°	916/1145	1008/1260	928/1160	1022/1278	1A+ 1B	20ft	7	Ext	1020+1200	10.1	201,486
C1000	1000/1250	1100/1375	1000/1250	1100/1375	1C	20ft	7	Ext	1000	11.2	270,968
C1000+	1032/1290	1136/1420	1056/1320	1164/1456	2B	20ft	15	Ext	2×1200	10.9	217,116
C1100+	1120/1400	1232/1540	1120/1400	1232/1540	2B <sup>+</sup>	20ft	15	Ext	2×1200	11.1	239,124
C1200	1200/1500	1320/1650	1200/1500	1320/1650	3A+	40ft	15	Ext	3×1020	14.5	281,766
C1300+	1352/1690	1488/1860	1401/1751	1564/1956	1A2B	40ft	15	Ext	1020+2×1200	16.0	303,356
C1500 <sup>+</sup>	1548/1935	1704/2130	1584/1980	1746/2184	3B	40ft	15	Ext	3×1200	16.9	338,656
C1600 <sup>+</sup>	1636/2045	1800/2250	1648/2060	1814/2268	1B2B⁺	40ft	15	Ext	3×1200	17.1	360,664
C1650+	1680/2100	1848/2310	1680/2100	1848/2310	3B+	40ft	15	Ext	3×1200	17.2	369,668
C1800	1800/2250	1980/2475	1800/2250	1980/2475	2A+ 1C	2×20ft	15	Ext	2×1020+1000	20.5	454,824
C1800+	1832/2400	2016/2520	1856/2320	2044/2556	2A+ 2B	2×20ft	15	Ext	2×1020+2×1200	20.2	400,972
C2000	2000/2500	2200/2750	2000/2500	2200/2750	2C	40ft	15	Ext	2×1000	21.6	554,736
C2000+	2064/2580	2272/2840	2112/2640	2328/2912	4B	2×20ft	15	Ext	4×1200	21.8	434,232



- $1. \hspace{0.5cm} 20 \text{ft ISO standard container: } 6.06 \times 2.44 \times 2.59 \text{m}, 40 \text{ft ISO high cube container: } 12.19 \times 2.44 \times 2.90 \text{m}.$
- 50Hz/60Hz switchable, 3 phases 4wires, 0.8pf.
   50Hz @1500rpm 400V/230V, 380V/220V, 415V/240V;
   60Hz @1800rpm 480V/223V, 380V/220V, reconnectable.
- 3. Applicable ambient temperature:  $-20^{\circ}\text{C} < T < 50^{\circ}\text{C}$ .
- 4. All gensets come with DSE panel and stainless steel bellows.
- 5. FT2-Automatic fuel transfer system incl. gravity feed from bulk tank (level switch, motorised valve, controls incl.).
- 6. DSE 8610/20 Control panel (sync with mains) for single unit.
- DSE 8610 + DSE 8660 + DSE 8003 MKII (sync with each genset and mains plus centre control panel) for multi-units.
- 8. Int-internal exhaust system, suitable for C320, C400, C500°, C550°; Ext-external exhaust system, suitable for the remaining models.
- 9. Fuel Base Tank (L): A/A+: 1020L, B/B+: 1200L, C: 1000L.
- Any specific noise level requirement, can be tailor-made on request, please contact sales@ caigate.com; for detailed technical and pricing info, please download via www.caigate.com
- \* All above price are in Pound Sterling (GBP), for ex-work in the UK.
- \* Please contact us to confirm the latest price before purchasing.







## **Product options**

## DIESEL GENERATOR UNIT (DGU) PRICE

GENSET MODEL		Diesel Ge	nerator Set		Engine	Dimension (LxWxH) mm		Price (£)	
	50Hz		60Hz						
	Prime KW/KVA	Standby KW/KVA	Prime KW/KVA	Standby KW/KVA	Brand/Model	Open	Canopy	Open	Canopy
Α	320/400	352/440	345/431	400/500	Scania/DC13.72A	3831×1194×2131	5000×1600×2100	50,474	63,658
$\mathbf{A}^{+}$	400/500	440/550	400/500	440/550	Scalla/DCIS-72A			60,144	73,656
В	516/645	588/710	525/656	582/728	Scania / DC16-93 A	3869×1316×2212	5400×1750×2100	75,772	91,000
B <sup>+</sup>	560/700	616/770	560/700	616/770	Scania / DC16-78A	3003 1510-2212		84,776	100,004
С	1000/1250	1100/1375	1000/1250	1100/1375	MTU / 18V2000 B76	5814×1889×2198	N/A	214,778	N/A

- Original country: DGU is designed and assembled in UK; Engine: Scania, made in Sweden; MTU, made in Germany; Alternator: A, A', B' and C in MeccAte, made in UK; B in Stamford, made in UK or EU; Controller: Deepsea made in UK
- 50 Hz/60 Hz switchable, 3 phases 4 wire, 0.8 pf. 50Hz @1500rpm, 400V/230V, 380V/220V, 415V/240V; 60Hz @1800rpm, 480V/223V, 380V/220V, reconnectable.
- 3. The standard DGU range of generating sets meet European "CE" requirements.
- 4. Weight of genset: Openset: A/A<sup>+</sup> is 3.25t, B/B<sup>+</sup> is 4.15t, C is 8.4t; Canopy: A/A<sup>+</sup> is 4.85t, B/B<sup>+</sup> is 6.05t.
- DSF 7420 control panel for standard single unit.
- \* All above price are in Pound Sterling (GBP), for ex-work in the UK. Please contact us to confirm the latest price before purchasing.

## DGU STANDARD SCOPE OF SUPPLY AND OPTION PRICE (£)

PARTS	FEATURES	Α	A <sup>+</sup>	В	B <sup>+</sup>	С
1 Engine	1.1 4 stroke water cooled engine	•	•	•	•	<b>②</b>
1. Engine	1.2 Coolant Heater	578	578	1,016	1,016	1,836
	2.1 Single or twin bearing Alternator	<b>②</b>	<b>Ø</b>	•	<b>②</b>	•
2. Alternator	2.2 Anti - condensation Heater	210	210	210	210	210
	2.3 Quadrature Droop Kit	214	214	214	214	214
	3.1 DSE Panel	<b>Ø</b>	0	•	•	<b>②</b>
3. Controller	3.2 Single - Mains synch	4,218	4,218	4,218	4,218	4,218
	3.3 Multiset - Mains synch	6,254	6,254	6,254	6,254	6,254
	3.4 Central control panel	2,036	2,036	2,036	2,036	2,036
4. Circuit Breaker	4.1 Three-Pole Circuit Breaker	•	•	•	•	9,562
	4.2 Four-Pole Circuit Breaker	396	396	766	766	1,828
	4.3 Motorised Kit for Circuit Breaker	1,554	1,554	1,554	1,554	1,800
5.5.1	5.1 Canopy	13,184	13,512	15,228	15,228	$\otimes$
5. Enclosure	5.2 Container (20ft)	32,000	33,000	34,000	35,000	40,000
	6.1 Ambient Temperature to 50°C	•		•	•	•
6. Radiator	6.2 Low coolant Temperature Alarm	82	82	82	82	82
	6.3 Low coolant level Alarm	150	150	150	150	150
	7.1 Base Fuel Tank	•	<b>Ø</b>	•	•	3,276
7. Fuel Tank	7.2 Low Fuel level Alarm	316	316	316	316	316
	7.3 Automatic Fuel Transfer system	1,512	1,512	1,512	1,512	1,512
8. Exhaust	8.1 Industrial Silencer Mounting Kit (loose)	•	•	•	•	<b>②</b>
	8.2 Residential silencer (loose)	1,152	1,188	1,188	1,188	6,282
	8.3 Stainless Steel Bellows (loose)	144	144	262	262	1,202
9. Battery	9.1 Lead Acide Battery Cable & Tray	<b>Ø</b>	0	0	•	<b>Ø</b>
a. Dattery	9.2 Static Battery Charger	234	234	234	234	234
	10.1 Powder coated fabricated steel baseframe	0	0	0	0	<b>Ø</b>
10. Baseframe	10.2 Single point lift	802	802	802	802	$\otimes$
	10.3 Fork pockets (canopy set only)	334	334	504	504	$\otimes$



OPEN



CANOPY



<sup>Standard equipment; 

Availabe on request; 

Not available

Not available

Standard equipment; 

Output

Description

Output

Description

Standard equipment; 

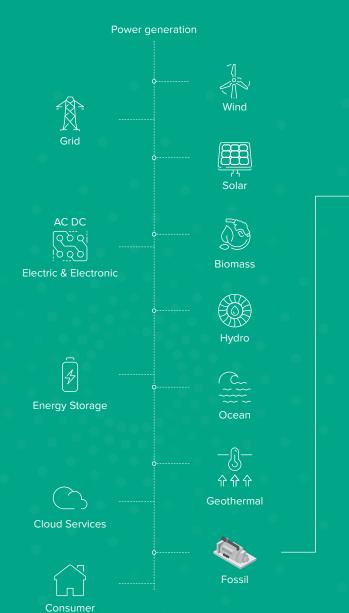
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Description</sup> 

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# Integrated solution provider for Hybrid Microgrid Solution:



## **PCM GENSET SERIES**



## **POWERED BY**







Caigate is all about providing innovative technology into actual lifechanging projects – people cannot live without power! It's about getting the most power out of your system with the least amount of work and cost.

Our mission is simply to "create a cleaner and smarter power solution".

Caigate Hybrid Microgrid Limited

John Eccles House Robert Robinson Avenue Oxford Science Park Oxford, OX4 4GP, United Kingdom info@caigate.com www.caigate.com +44 (0)1865-338-200 We reserve the right to update product component parameters at any time.

