shentongroup

power with responsibility

CONTENTS

We supply, install and maintain all aspects of Standby Power, Uninterruptible Power Supplies and Combined Heat & Power Systems.

Our extensive technical knowledge and experience is second to none which ensures you get the right solution for your needs.

From feasibility and design advice, through to integration and commissioning, we provide peace of mind with a turnkey solution.

OUR PRODUCTS & SERVICES

- GENERATORS & UPS
- COMBINED HEAT & POWER
- GENERATOR RENTAL
- POWER CALL
- MAINTENANCE & MONITORING

ACCREDITATIONS

Constructionline – A UK GOVERNMENT CERTIFICATION SERVICE
CIBSE CPD
Gas Safe Register
SafeContractor Approved
Achilles
CHAS – Contractors Health & Safety Assessment Scheme – Accredited Contractor – www.chas.co.uk

ABOUT SHENTON GROUP

ESTABLISHED 1982

FAMILY OWNED

OVER 70 STAFF STRONG

HEADQUARTERS
ANDOVER

SATELLITE OFFICES
LONDON
FALKIRK
LEAMINGTON SPA
NORWICH

OUR HISTORY

1982
OUTBACK ENERGY ESTABLISHED
Richard Meek (Founder) started out as a man in his van supplying gas bottles.

1987
SCORPION POWER SYSTEMS
Scorpion Power Systems was established building quality generators and providing UPS systems.

1989
WORKING WITH THE MOD
We signed our first contract with the Ministry of Defence: to supply the British Army during the Gulf conflict.

1997
MERLIN POWER MANAGEMENT
Merlin Power Management was established to meet the maintenance and support demand. This provided a nationwide network of power supply engineers providing 24/7 emergency response and service.

2003
BROADENING OUR CAPABILITIES
We acquired a national HV and LV switchgear company broadening our power failure management capability and offering our customers a complete service.

2004
POWER CALL LAUNCHED
Power Call was established becoming the UK's first and only emergency generator call-out system - providing power within the hour wherever you are in the UK.

2008
CHP DEPARTMENT LAUNCHED
We launched our CHP systems offering into the UK market. We're now the sole authorised distributor for TEDOM, the leading European CHP system manufacturer.

2010
SHENTON GROUP
With the country in recession our customers were required to reduce their supply chain. This lead us to merge Scorpion Power Systems, Merlin Power Management and Power Call to become Shenton Global LLP, trading as Shenton Group.

2017
FROM LLP TO LTD
After rapid growth we changed our trading status to LTD still trading as Shenton Group.

2019
PRESENT DAY
Today we have the reputation of being the UK's leading technical experts in standby power, uninterruptible power supplies and combined heat and power systems. And we are continuing to make history...

FOUNDER

Richard Meek, Founder

Richard made the dream a reality when he set out as a man in a van in 1982 under the name of Outback Energy. Whilst not now actively involved in the day-to-day running of the business, he gets great joy from knowing he has created a legacy that will serve many for years to come. Richard never thought his start-up would become a multi-million pound company - Mighty oaks from little acorns grow.

THE BOARD

Jody Meek, Managing Director

Jody has an utter dislike of failure and only 100% success comes anywhere near to achievement in his book. Focusing on the operational and finance side of the business he ensures the whole team strives for excellence.

Darren Meek, Sales Director - Service Products

Darren - Mr Cool, Calm and Collected - began his career in the workshop and refuelling generators. More than two decades on, he is driving the growth of our service departments by ensuring we keep to our service level agreements, so we are ready when you need us.

Curtis Meek, Sales and Marketing Director

Having worked at Shenton Group as a Project Manager for four years, Curtis has a clear understanding of what is important to the customer, even down to how they like their tea or coffee!

Now responsible for Sales and Marketing, Curtis works hard to ensure the Company's growth plans are achieved and customer service is at an all time high.

Derek Barry, Technical Director

Since he left college, the Technical Director is the heartbeat of each design and solution produced in Shenton House. Derek's technical ability and innovative designs outwit many of the industry's stalwarts. Who said people with glasses aren't intelligent?

CORPORATE FOUNDATION

The UK's leading Technical Experts in **Standby Power, Uninterruptible Power Supplies** and **Combined Heat & Power Systems**

VISION

To provide the most trusted energy solutions, in an unpredictable world.

CORE VALUES

SUSTAINABILITY

Providing reliable continuous power solutions since 1982.

TECHNICAL

Continual development of products, services and knowledge, enabling us to provide better solutions.

COMMITMENT

The willingness to devote our time and energy towards something we all deem as important. Where there is commitment, there is passion.

FAMILY

A strong family promotes a level of integrity. To be honest and have strong moral principles and moral uprightness.

GENERATORS AND UPS

At Shenton Group we manufacture diesel and gas HV & LV generators from 10kVA to 3200kVA, and UPS Systems up to 500kVA.

How do we deliver value for money?

We are system integrators. From design to final commissioning, we will look after the complete project.

From design, manufacture, project management and civils to mechanical and electrical install, site integration, testing and final commissioning - we look after the complete project.

ENGINE, ALTERNATORS AND CONTROL SYSTEMS

Some engines have better load acceptance or ventilation requirement than others, some alternators have better efficiencies and some control systems are just that little bit more sophisticated than others. Rest assured we will ensure your complete solution is the right choice for your application.

POWER RATING DEFINITIONS

Emergency Standby Power (ESP): Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Prime Power (unlimited running time): Prime Power is the maximum power available at a variable load for an unlimited number of hours. A 100% overload capability is available for a limited time. (Equivalent to Prime Power in accordance with AS 2789, DIN 6271 and BS 5514). This rating is not applicable to all generator set models.

Base Load (Continuous) Power: Applicable for supplying power continuously to a constant load up to the full output rating for unlimited hours. No sustained overload capability is available for this rating. Consult authorised distributor for rating. (Equivalent to Continuous power in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514). This rating is not applicable to all generator set models.

APPLICATION

Diesel generators can be used for many applications. Here are the most common:

Standby – the most common use of a generator. This is to start up in the event of a mains failure and provides back-up power. It can also be set up to not only start up when the mains fails but to also carry on running when the mains returns. This involves synchronising with the mains and slowly ramping off ensuring there is no break in the supply again.

Prime – When the generator is used as the main power source and is running continually or for extended periods of time.

Peak lopping – very often more power is needed in locations than what is being provided by the mains supply. Upgrading the mains supply can be very costly and this is when you can install a generator to provide the extra power that you need. The generator will sense when the mains supply is near capacity and start the generator enabling it to provide extra power.

ACOUSTICS

Acoustics are a major part of any generator project and need careful consideration when cost and space planning. From carrying out initial acoustic surveys through to the final installation we will ensure your requirements are met.

Acoustic ranges from 85dBA to 50dBA@1m. We offer generators within attenuated plant rooms, drop over, bespoke, or standard close fit canopies and containerised solutions. We can also look after any necessary louvres that maybe required and can supply and install secondary silencers within the flue to reduce the noise further.

Shenton Group has access to all the major **engine**, **alternator** and **control system** brands enabling us to pick the right equipment for the application.

SCRs

Shenton Group can supply SCR catalyst systems to our generators. SCRs (Selective Catalyst Reduction) may be required if the client is concerned about the exhaust emission produced or is considering to use the generator plant for anything other than standby emergency power. If this is the case then all equipment over a certain size must comply with the new MCPD directive (Medium Combustion Plant Directive). SCR systems reduce NOx emission by the injection of Urea (AD Blue) into the exhaust catalyst system.

VENTILATION & FLUE DILUTION

Ventilation is key to any generator installation to ensure that the generator doesn't overheat. Getting the correct cooling/ combustion air to your generator and discharging air away can be achieved with the use of ductwork ventilation systems and, if required, inline fans can be incorporated into the system.

Flue dilution is when the generator exhaust gases and hot air from the generator engine and radiator are discharged together through one common duct/ louvre. This can negate the need to install a separate exhaust flue, and often provides value engineering and can simplify the install.

FLUE SYSTEMS

In many generator installations exhaust flues need to exit away from the generator or building location. Shenton Group can supply and install bespoke flue systems including stainless steel, twin-wall insulated, and coloured to blend in with architectural surroundings.

Shenton Group can supply and install **bespoke flue dilution kits,** made from heat-resistant, galvanised material, designed to carry away the exhaust and hot air from the generator.

FUEL TANKS & PIPEWORK

Most generators will come with a standard base fuel tank typically offering 10 hours run time at 75% load. However in instances where longer run times are required, space is an issue or where legislation comes into play, you may require a bespoke bulk fuel system.

We offer extended base tanks or bulk fuel tanks with a generator day tank local to the generator. This then gives you the option of going for a fuel transfer system or standard flow and return.

Types of fuel transfer pipework that we specialise in: Powerpipe, welded steel pipe in pipe, Brugg® and underground plastic pipe in pipe.

ACCESSORIES

- Lift off or bi-fold doors for generators in tight locations
- Additional outputs for further monitoring
- Fire shut down safety device
- Remote annunciator panel to display alarms and status
- Diesel spill kit in the event of any leakages
- Security pack to increase the security of the generator
- Lightening surge protection
- Weekly auto test
- Remote monitoring software

SWITCHGEAR

Shenton Group manufacture and supply a range of Automatic Mains Failure (AMF)/ Automatic Transfer Switch (ATS) panels and dual mains panels designed for covering life safety equipment that must be backed up from two supplies.

For larger switchgear applications our engineers work closely with all major manufacturers, ensuring that complex control, synchronisation and switching arrangements are fully integrated.

UNINTERRUPTIBLE POWER SUPPLY (UPS)

An uninterruptible power supply (UPS) system is your bridge between mains power and your backup generators. AMF panels will react to power failure and activate your generators seamlessly with no drop in power. Without a UPS system there's a handful of seconds before the generator starts and takes the full electrical load. In that brief gap you will not have access to power, which in some scenarios could have serious consequences.

There are further benefits to installing a UPS power supply system. They provide a quality power supply by filtering and stabilising the power source which may be affected by disturbances such as transients, spikes, surges etc.

Shenton Group's extensive range of high-efficiency UPS solutions are used in conjunction with most standby generator backup power supply applications. We offer both modular and stand-alone UPS systems, ensuring it's the correct piece of equipment for the application.

Shenton Group is the distributor for most major brands of UPSs offering both modular and standard systems

TEST CELL

Providing our clients with reliable solutions from the word go, every generator goes through a detailed pre-dispatch inspection before it reaches its final destination.

For further peace of mind, clients can request a factory acceptance test in our state-of-the-art Test Cell at our head quarters in Andover UK.

Our testing in a "real life" environment includes:

- Full monitoring of all critical parameters
- Recording of generator performance and load steps
- Demonstration of the remote start and control system
- Variable speed airflow fans to simulate real life conditions
- Integrated fuel system providing test fuel and fuel consumption monitoring
- Electrical supply and connection panel for testing switchgear and UPS systems
- WEB CAM and remote live streaming capability
- Demonstration of set-to-set synchronisation

> “Just to say many thanks for your prompt service and good response to call-outs yet again; it has proved fast, reliable and very cost effective. Well done!”
> **Leading Healthcare Organisation**

DESIGN WORK

Shenton Group can carry out mechanical and electrical design work. We use Amtech for electrical calculations, and electrical drawings are done in AutoCAD Electrical or Inventor. Mechanical designs are done in AutoCAD mechanical or Draftsight for 2D work, or AutoCAD Inventer and Revit for 3D work.

SOFTWARE CODING

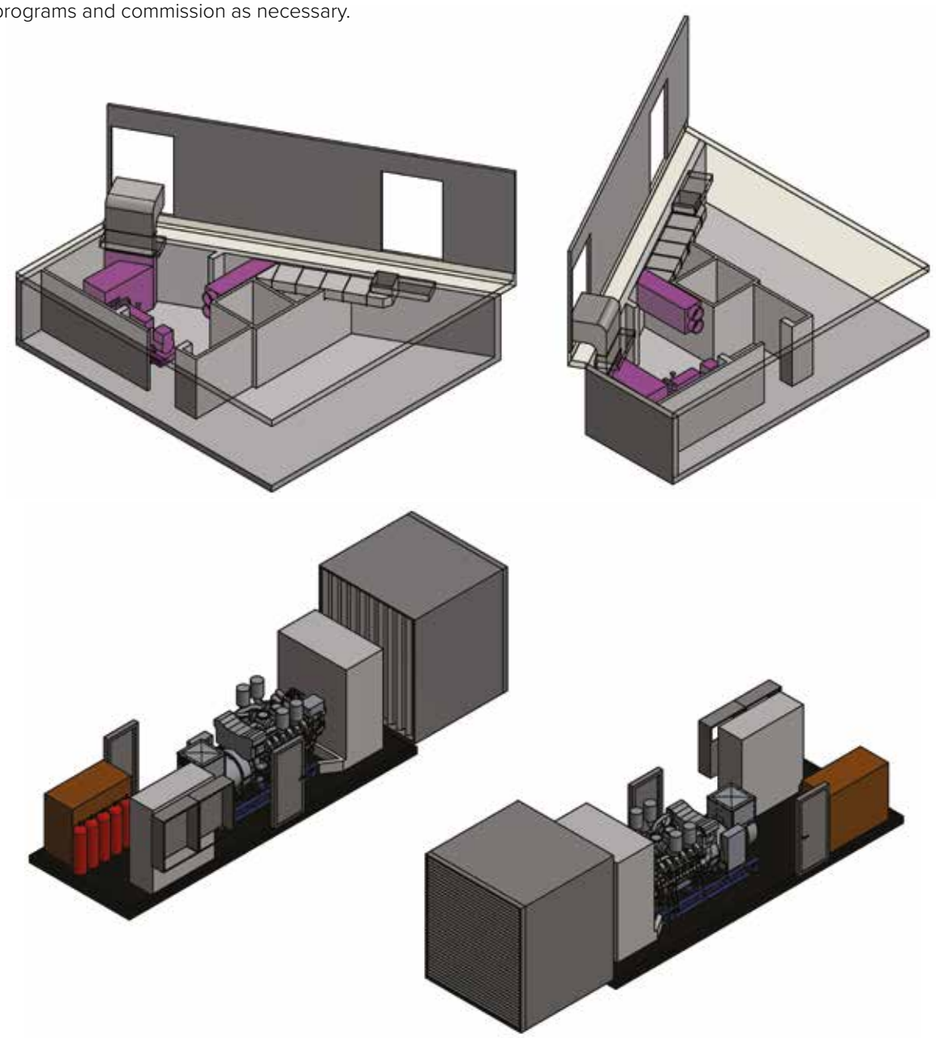
We have in-house engineers familiar with all the major controller manufactures' systems enabling us to write control programs and commission as necessary.

BIM

We are BIM Level 2 compliant and you can download our standard generators to incorporate into your designs.

PROJECT MANAGEMENT

Shenton Group will always provide a dedicated, single point of contact, office-based project manager to oversee any project including all RAMS, site visits and administration - thus ensuring a smooth delivery.



G99

The connection of any form of generator device to run ‘in parallel’ or ‘synchronised’ with the mains electrical utility grid has certain regulations that must be complied with. These regulations are commonly known as the ‘G99’ requirements and apply to Combined Heat & Power units, and generators being used for peak-lopping, or grid parallel use.

The electricity grid operators (known as DNOs - District Network Operators), refer to these units as ‘embedded’ generators, because they are embedded within the electricity grid, as opposed to being at the source of the national grid such as at a power station.

At Shenton Group our team of trained and experienced engineers can arrange this service for you, giving you peace of mind and certified approval. Shenton Group can manage the G99 application process, booking in with the DNO to witness the testing and the actual G99 tests itself.

DELIVERY LIFT AND SHIFT

We specialise in getting generators and UPSs into the most difficult locations. From a standard HIAB delivery right through to contract crane lifts, skating or full break down and re-assembly of the unit, our experience means you can be assured that we will get your generator or UPS wherever you want it, in the safest and most practical way.

GENERATOR RANGE

General Data				Engine Data		Alternator	Weight & Dimensions - Open Generator		
Shenton Group Model Number	Standby Rating (kVA)	Prime Rating (kVA)	Prime Rating (kW)	Manufacturer	Model	Meccalte Model	Length (mm)	Width (mm)	Height (mm)
PHG10Pe	10	9	7	Perkins	403A-11G1	On Request	1330	700	1070
PHG14Pe	14	12	10	Perkins	403A-15G1	On Request	1500	700	1180
PHG16Pe	16.5	15	12	Perkins	403A-15G2	On Request	1500	700	1180
PHG22Pe	22	20	16	Perkins	404A-22G1	ECP 28-M/4	1500	700	1180
PHG33Iv	33	30	24	Iveco	F32AM1A	ECP 28-VL/4	1750	700	1400
PHG33Pe	33	30	24	Perkins	1103A-33G	ECP 28-VL/4	1750	700	1400
PHG44Iv	44	40	32	Iveco	N45AM1A	ECP 32-3S/4	1780	700	1450
PHG47Pe	47	43	34	Perkins	1103A-33TG1	ECP 32-3S/4	1750	700	1450
PHG50Pe	50	45	36	Perkins	1103A-33TG1	ECP 32-1L/4	1750	700	1450
PHG55iv	55	50	40	Iveco	N45AM2	ECP 32-1L/4	1750	700	1450
PHG66Pe	66	60	48	Perkins	1103A-33TG2	ECP 32-2L/4	2100	900	1450
PHG66Iv	66	60	48	Iveco	N45SM1A	ECP 32-2L/4	2100	900	1600
PHG83Iv	83	75	60	Iveco	N45SM3	ECO 32-3L/4	2100	900	1600
PHG88Iv	88	80	64	Iveco	N45SM3	ECP 34-1S/4	2100	900	1600
PHG88Pe	88	80	64	Perkins	1104A-44TG2	ECP 34-1S/4	2100	900	1450
PHG110Pe	110	100	80	Perkins	1104C-44TAG2	ECP 34-2S/4	2100	900	1600
PHG110Iv	110	100	80	Iveco	N45TM2A	ECP 34-2S/4	2100	900	1600
PHG110Vo	110	100	80	Volvo	TAD531GE	ECP 34-2S/4	2100	900	1700
PHG138Iv	138	125	100	Iveco	N67SM1	ECP 34-1L/4	2500	1000	1600
PHG143Iv	143	130	104	Iveco	N67TM2A	ECP 34-1L/4	2500	1000	1650
PHG143Vo	143	130	104	Volvo	TAD532GE	ECP 34-1L/4	2500	1000	1700
PHG150Pe	150	135	108	Perkins	1106A-70TG1	ECP 34-1L/4	2500	1000	1400
PHG165Iv	165	150	120	Iveco	N67TM4A	ECP 34-2L/4	2500	1000	1350
PHG165Vo	165	150	120	Volvo	TAD731GE	ECP 34-2L/4	2500	1000	1750
PHG165Pe	165	150	120	Perkins	1106A-70TAG2	ECP 34-2L/4	2500	1000	1650
PHG176Iv	176	160	128	Iveco	N67TM4A	ECP 34-3L/4	2500	1000	1650
PHG187Iv	187	170	136	Iveco	N67TM4A	ECP 34-3L/4	2500	1000	1650
PHG198Pe	198	180	144	Perkins	1106A-70TAG3	ECO 38-1SN/4	2850	1000	1650
PHG198Vo	198	180	144	Volvo	TAD732GE	ECO 38-1SN/4	2850	1000	1650
PHG220Pe	220	200	160	Perkins	1106A-70TAG4	ECO 38-1SN/4	2850	1000	1650
PHG220Iv	220	200	160	Iveco	N67TM7	ECO 38-2SN/4	2850	1000	1750
PHG220Vo	220	200	160	Volvo	TAD733GE	ECO 38-2SN/4	2850	1000	1800
PHG275Vo	275	250	200	Volvo	TAD734GE	ECO 38-1LN/4	3000	1100	1850
PHG275Iv	275	250	200	Iveco	NEF67TE8W	ECO 38-1LN/4	3000	1100	1850
PHG330Vo	330	300	240	Volvo	TAD1341GE	ECO 38-2LN/4	3200	1100	2050
PHG330Iv	330	300	240	Iveco	CURSOR87TE4	ECO 38-2LN/4	3000	1100	1900
PHG346Vo	346	315	252	Volvo	TAD1341GE	ECO 38-3LN/4	3200	1100	2050
PHG385Iv	385	350	280	Iveco	CURSOR13TE2A	ECO 38-3LN/4	3200	1300	2000
PHG385Vo	385	350	280	Volvo	TAD1342GE	ECO 38-3LN/4	3200	1100	2050
PHG410Vo	410	375	300	Volvo	TAD1343GE	ECO40-1S/4	3200	1100	2050
PHG440Iv	440	400	320	Iveco	CURSOR13TE3A	ECO 40-1S/4	3400	1400	2050
PHG440Vo	440	400	320	Volvo	TAD1344GE	ECO 40-1S/4	3200	1300	2050
PHG495Iv	495	450	360	Iveco	CURSOR13TE6	ECO 40-2S/4	3400	1400	2050
PHG500Vo	500	450	360	Volvo	TAD1345GE	ECO 40-2S/4	3200	1100	2100
PHG550Cu	550	500	400	Cummins	QSX15G8	ECO 40-3S/4	3200	1400	1900
PHG550Pe	550	500	400	Perkins	2506C-E15TAG2	ECO 40-3S/4	3200	1300	2250
PHG550Vo	550	500	400	Volvo	TAD1641GE	ECO 40-3S/4	3200	1300	2350

Weight & Dimensions - Open Generator			Weight & Dimensions - Canopied Generator					
Dry Weight (Kg)	Base Frame Fuel Tank Capacity (L)	Autonomy (hours) @100% Load	Length (mm)	Width (mm)	Height (mm)	Dry Weight (Kg)	Base Frame Fuel Tank Capacity (L)	Autonomy (hours) @100% Load
410	30	11	1950	700	1223	560	70	26
510	40	10	1950	700	1223	560	70	18.5
510	40	9	1950	700	1223	560	70	16.5
520	60	11	1950	700	1223	640	70	13
760	80	7	2300	900	1357	1000	170	20
780	80	11	2300	900	1357	1000	170	23
840	110	9	2300	900	1357	1070	170	14.5
850	110	10	2300	900	1357	1120	260	24
950	110	10	2300	900	1357	1120	260	24
900	120	10	2300	900	1357	1070	170	14
990	140	10	2300	900	1357	1340	260	18
1030	140	10	2460	1000	1560	1340	260	18.5
1160	200	10	2460	1000	1560	1400	260	13
1180	200	10	2460	1000	1560	1500	260	13
1135	200	10	2460	1000	1560	1440	340	18
1210	270	11.5	2700	1000	1565	1500	490	21.5
1350	270	12	3050	1000	1400	1585	300	13
1240	270	11	3050	1000	1415	1650	300	12
1500	300	10	3200	1100	1660	1950	490	16
1520	300	10	3200	1100	1660	1950	490	16.5
1400	300	9.5	3200	1100	1660	1860	490	15.5
1400	370	12	3500	1100	1805	1930	490	16
1600	370	10	3500	1100	1805	2040	490	13
1650	370	10	3500	1100	1710	2120	490	14
1600	370	11	3500	1100	1710	2050	490	14
1650	370	10	3500	1100	1710	2040	490	13
1520	370	10	3500	1100	1710	2060	490	13
1790	420	10	3500	1100	1710	2200	490	11
1740	420	10	3500	1100	1710	2170	490	11.5
1900	460	10	3800	1200	2075	2290	490	10.5
1700	460	10.5	3800	1200	2075	2100	490	11.5
1690	460	9.5	3800	1200	2075	2230	490	10
2000	550	9.5	3800	1200	2077	2850	600	10.5
2200	550	10.5	3800	1200	1984	3150	600	11.5
2720	670	10.5	4300	1300	2200	3700	800	13
2550	670	10	3800	1200	1984	3550	600	9
2940	670	10	4300	1300	2200	4320	800	12
2850	700	10	4300	1300	2110	3750	800	11
3000	700	9.5	4300	1300	2200	3750	800	11
3040	800	10.5	4300	1300	2200	4500	800	10.5
2900	800	9	4300	1300	2110	3900	800	9
3045	900	10.5	4300	1300	2200	4320	800	9.5
3130	900	9	4800	1450	2432	5000	800	8
3250	1000	9	4300	1300	2200	4950	1000	9
3900	800	7.6	4300	1600	2190	5500	1200	11
3490	1000	9	4800	1450	2432	5600	1000	9
3300	1000	9.5	4800	1450	2432	5600	800	7.5

Notes: Standard Specification - 70 dBA@7m Canopy, DSE 7310 Controller, Output Breaker, Oil Pump, Engine Heater, Battery Charger

Available On Request: 24 Hour Base Tank, 80 dBA@1m Canopy, Alternative Engines & Alternators, Bespoke Enclosures, Lower Noise Ratings

GENERATOR RANGE

General Data				Engine Data		Alternator	Weight & Dimensions - Open Generator		
Shenton Group Model Number	Standby Rating (kVA)	Prime Rating (kVA)	Prime Rating (kW)	Manufacturer	Model	Meccalte Model	Length (mm)	Width (mm)	Height (mm)
PHG605Pe	605	550	440	Perkins	2806C-E18TAG1A	ECO 40-1L/4	3200	1300	2350
PHG605Vo	605	550	440	Volvo	TAD1642GE	ECO 40-1L/4	3200	1300	2400
PHG650Vo	650	590	472	Volvo	TAD1642GE	ECO 40-1,5L/4	3400	1400	2350
PHG660Pe	660	600	480	Perkins	2806A-E18TAG1A	ECO 40-1,5L/4	3400	1400	2350
PHG700Cu	700	636	508	Cummins	VTA28G5	ECO 40-2L/4	3500	1600	2100
PHG700Vo	700	630	504	Volvo	TWD1643GE	ECO 40-2L/4	3500	1600	2400
PHG714Mt	714	649	519	MTU	12V 1600 G20F	ECO 40-2L/4	3500	1500	2200
PHG715Pe	715	650	520	Perkins	2806A-E18TAG2	ECO 40-2L/4	3400	1400	2450
PHG720Vo	720	655	524	Volvo	TWD1644GE	ECO 40-2L/4	3400	1400	2200
PHG775Vo	775	705	564	Volvo	TWD1645GE	ECO 40-VL/4	3400	1400	2200
PHG825Pe	825	750	600	Perkins	4006-23TAG2A	ECO 40-VL/4	3800	1700	2300
PHG880Mt	880	800	640	MTU	12V 2000 G26F	ECO 43-1S/4	4000	1500	2100
PHG880Cu	880	800	640	Cummins	QSK 23G3	ECO 43-1S/4	4000	1700	2100
PHG880Pe	880	800	640	Perkins	4006-23TAG3A	ECO 43-1SN/4	4000	1800	2660
PHG900Pe	900	800	640	Perkins	4006-23TAG3A	ECO 43-2S/4	4000	1800	2660
PHG1000Cu	1000	910	728	Cummins	KTA 38G3	ECO 43-2S/4	4000	1700	2060
PHG1005Mt	1005	910	728	MTU	16V 2000 G16F	ECO 43-2S/4	4450	1910	2250
PHG1005Pe	1005	915	732	Perkins	4008TAG1A	ECO 43-2SN/4	4500	2050	2660
PHG1100Cu	1100	1000	800	Cummins	KTA 38G5	ECO 43-1M/4	4500	2050	2350
PHG1106Mt	1106	1005	804	MTU	16V2000G26F	ECO43-1M/4	4450	1910	2570
PHG1125Pe	1125	1022	818	Perkins	4008TAG2A	ECO 43-1LN/4	4800	2050	2300
PHG1250Mt	1250	1135	908	MTU	16V 2000 G36F	ECO 43-2M/4	4700	1910	2350
PHG1250Pe	1250	1125	900	Perkins	4008-30TAG3	ECO 43-2M/4	4900	2000	2300
PHG1380Mt	1380	1250	1000	MTU	18V 2000 G26F	ECO 43-2L/4	4700	1910	2350
PHG1385Pe	1385	1253	1002	Perkins	4012-46TWG2A	ECO 43-2LN/4	4900	2000	2400
PHG1400Cu	1400	1275	1020	Cummins	KTA 50G3	ECO 43-2L/4	5050	2000	2250
PHG1408Mi	1408	1280	1024	Mitsubishi	S12R-PTA	ECO 43-2L/4	4500	2050	2350
PHG1500Pe	1500	1360	1088	Perkins	4012-46TWG3A	ECO 43-VL/4	4800	2000	2400
PHG1520Mi	1520	1380	1104	Mitsubishi	S12R-PTA2	ECO 43-VL/4	4500	2100	2350
PHG1650Cu	1650	1400	1120	Cummins	KTA 50G8	ECO 43-VL/4	5550	2050	2350
PHG1650Pe	1650	1500	1200	Perkins	4012-46TAG2A	ECO 46-1S/4	5200	2200	2500
PHG1650Mi	1650	1500	1200	Mitsubishi	S12R-PTAA2	ECO 46-1S/4	5150	2200	2570
PHG1815Mt	1815	1650	1320	MTU	12V 4000 G23	ECO 46-1.5S/4	5000	2000	2500
PHG1875Pe	1875	1705	1364	Perkins	4012-46TAG3A	ECO46-2S/4	5200	2220	2700
PHG1920Mi	1920	1740	1392	Mitsubishi	S16R-PTA	ECO46-2S/4	5150	2200	2570
PHG2035Mt	2035	1850	1480	MTU	12V 4000 G63	ECO 46-1L/4	5000	2000	2500
PHG2035Pe	2035	1850	1480	Perkins	4016-61TRG1	ECO46-1L/4	6100	2220	2500
PHG2060Cu	2060	1875	1500	Cummins	QSK60G3	ECO46-1L/4	5900	2550	3150
PHG2090Mi	2090	1900	1520	Mitsubishi	S16R-PTA2	ECO46-1L/4	5500	2200	2570
PHG2200Pe	2200	2000	1600	Perkins	4016-61TRG2	ECO46-1L/4	6150	2220	2500
PHG2222Mi	2222	2020	1616	Mitsubishi	S16R-PTAA2	ECO46-1L/4	5500	2300	2570
PHG2233Cu	2233	2034	1627	Cummins	QSK60G4	ECO46-1L/4	5900	2550	3150
PHG2310Mt	2310	2100	1680	MTU	16V 4000 G23	ECO 46-1L/4	6100	2300	3000
PHG2500Pe	2500	2250	1800	Perkins	4016-61TRG3	ECO46-1.5L/4	6200	2350	2500
PHG2508Mi	2508	2280	1824	Mitsubishi	S16R2-PTAW	ECO46-1.5L/4	6000	2200	2600
PHG2530Mt	2530	2300	1840	MTU	16V 4000 G63	ECO 46-1.5L/4	6100	2300	3000

Weight & Dimensions - Open Generator			Weight & Dimensions - Canopied Generator					
Dry Weight (Kg)	Base Frame Fuel Tank Capacity (L)	Autonomy (hours) @100% Load	Length (mm)	Width (mm)	Height (mm)	Dry Weight (Kg)	Base Frame Fuel Tank Capacity (L)	Autonomy (hours) @100% Load
4000	1200	9	5000	1900	2495	6030	1450	11
4000	1200	10.5	4800	1450	2432	6000	800	7
4100	1200	10.5	4800	1450	2432	6030	800	7
4600	1200	9.5	5000	1900	2495	6500	1450	11.5
5150	1265	9	5000	1900	2400	7300	1450	10
5100	1300	9.5	5000	1900	2400	7550	1450	11
5050	1265	9.5	5000	1900	2400	7200	1450	11
4900	1300	4.5	5000	1900	2400	6800	1450	5.5
4400	1265	9.5	5000	1900	2400	6900	1450	10.5
4550	1265	9	5000	1900	2400	7000	1450	10
6000	1600	9.5	5850	1900	2495	9200	1600	9.5
5350	1600	10	5850	1900	2495	8500	1600	10
5350	1600	9.5	5850	1900	2495	8500	1600	9.5
6250	1600	9	5850	1900	2495	9200	1600	9
6500	1600	9	5850	1900	2495	9450	1600	9
7300	1600	8	6500	2273	2601	9200	2500	12.5
6250	1600	8.5	6500	2273	2601	9900	2500	14
7700	1600	8	6500	2273	2601	11100	2500	12.5
7700	1600	7.5	6500	2273	2600	11100	2500	11.5
7200	1600	7.5	6500	2273	2600	10200	2500	12
7800	1600	7	6500	2273	2600	11400	2500	11.5
7650	2650	11.5	7000	2270	2550	10850	2500	11
9550	2500	10	7000	2270	2550	13250	2500	10
9700	2650	11	7000	2270	2600	12600	2500	10
11600	1600	6	7000	2270	2600	14500	2500	9.5
10000	2650	10	7000	2270	2600	14000	2500	9.5
10000	2650	9.5	7000	2270	2600	14000	2500	9
11800	2500	8.5	7000	2270	2600	14500	2500	8.5
10500	2650	9	7000	2270	2600	14500	2500	8.5
12000	2650	9	7000	2273	2601	16000	2500	8.5
12000	2500	8	7000	2273	2601	15500	2500	8
11500	2650	8	7000	2270	2600	15500	2500	7
12000	2650	8	*	*	*	*	*	*
12400	2500	6.5	*	*	*	*	*	*
12500	2650	7.5	*	*	*	*	*	*
12000	2650	7	*	*	*	*	*	*
13000	2500	6	*	*	*	*	*	*
13000	2650	7	*	*	*	*	*	*
12500	2650	6.5	*	*	*	*	*	*
14000	2500	6	*	*	*	*	*	*
14000	2650	6.5	*	*	*	*	*	*
13000	2650	6.5	*	*	*	*	*	*
12500	2650	6.5	*	*	*	*	*	*
16000	2500	5	*	*	*	*	*	*
15000	2650	5.5	*	*	*	*	*	*
12500	2650	6	*	*	*	*	*	*

Notes: Standard Specification - 70 dBA@7m canopy, DSE 7310 controller, Output breaker, Oil Pump, Engine Heater, Battery Charger

Available On Request: 24 hour base tank, 80 dBA@1m canopy, Alternative Engines & Alternators, Bespoke Enclosures, Lower Noise Ratings

SECTOR
DATA CENTRE

LOCATION
KNOWSLEY

BACKGROUND
Virgin Media's original backup power supply became extremely expensive to maintain and failures became regular. They needed a more reliable and cost-effective solution in place.

SCOPE OF WORK
The removal of the existing DRUPS units and replacing them with three 2000kVA standby generators (1800kVA prime) and necessary bespoke fuel tanks.

PROJECT OVERVIEW
For a large period of time throughout the project, we supplied 5MW of rental generators in an N+1 configuration whilst we completed the major infrastructure modifications. We also needed to remove an underground 78000-litre fuel tank. We replaced all existing Schneider breakers within each LV room, as well as several auto transfer switches and a new LV switchboard in one of the electrical rooms. Throughout the project, extensive builder's works were required. Several underground trenches for cabling roots and new concrete plinths were required to support the three new standby generators and accompanying bespoke fuel tanks.

CLIENT FEEDBACK
"Shenton are a very competent and focused company who deliver to a high standard. Our experience over a 2 year period of highly intensive and complex re-working of this site with Shenton was extremely positive evidenced by the successful delivery of this project."

VIRGIN MEDIA

SECTOR
DATA CENTRE

LOCATION
IPSWICH AND REIGATE

BACKGROUND
The job was to install a new generator system at two sites, one in Ipswich and the other in Reigate. The new tenant populating the buildings needed to upgrade and upsize the backup generators already on site to support their new infrastructure and data centre.

This project came through a data centre specialist organisation that ensures business continuity for their clients across the globe. Having built up a great relationship on previous projects, we were entrusted once again to provide this power solution.

SCOPE OF WORK
The project at Ipswich involved stripping out two existing 650kVA Rolls Royce generators installed within a rooftop building and installing two new 1385kVA generators within the same building and upgrading the acoustic attenuation and fuel system. The Reigate project involved the installation of two new 1385kVA generators housed within a single bespoke enclosure.

PROJECT OVERVIEW
At Ipswich, the key concern was how the existing generators were to be removed from the roof and the new units installed with a very tight weight restriction. The acoustics also needed to be accurate to achieve a definite level to the nearest building. The Reigate Project had a space restriction which meant the two generators needed to be housed within the same enclosure with the fuel system incorporated within the same footprint.

The two sites required two 1385kVA generators synchronised together to provide an N+1 redundancy to the client's data centre. They were also synchronised to the mains to provide a no-break transfer back to mains.

For the Ipswich site, a temporary platform was built outside the room on which to land the new generators. This would then enable them to be skated into the building. Before landing the generator onto the temporary platform, the roof structure needed to be temporarily propped and supported.

The project was a success and the client was very happy with the end result.

COMBINED HEAT & POWER

Shenton Group is the sole UK distributor of the TEDOM Combined Heat and Power range. We offer CHP units from 20kWe to 10mWe in both LV, and HV (HV start from 600kWe).

We not only deliver premium products but also work with you to review your facility's power usage, personally engineer cost reductions and fully integrate the ideal solution into your premises.

WHAT IS CHP?

Combined Heat & Power is a gas fuelled reciprocating piston engine. Our available fuel types are natural gas, biogas, and LPG. The engine drives an alternator to generate electricity. The heat from the engine is then recovered and made available as hot water or steam. This gives the best efficiency from the use of the fuel consumed, and provides very low cost power and heat energy to the client. On certain models we can even recover waste heat from the alternator, further increasing efficiency. The many benefits of this include energy saving, carbon reduction, and greater electrical resilience.

FULL TURNKEY PROJECTS

From an initial feasibility study, detailed design, installation, commissioning, to user training and on-going lifetime maintenance, Shenton Group will look after every phase of your Project leaving your organisation free to concentrate on what you do best.

Our ability to deeply understand the technical needs of your installation provides added value, as we take a 'whole project' holistic approach and are known to have significant attention to detail. We don't just think about a CHP, we think about optimising your energy usage as a whole, providing increased cost reductions all round.

INDUSTRIES

M & E Contractors

For the Building Services Engineer we offer significant support. From detailed design review, through assistance with sizing calculations, to control philosophy - Shenton Group is able to provide professional advice at all stages of your project. For the installing contractor we offer great support and many units are held in stock to shorten lead times. We can assist with things such as BMS integration and hands-on advice on site when needed.

ESCo

Energy Services Companies can enjoy the class-leading performance from our range of CHP units. With high efficiencies and exceptional return on capital cost, these CHPs are perfect for your energy solution clients. Whether you are delivering a Discounted Energy Purchase (DEP) contract, an On-Site Utility or an Energy Performance Contract (EPC), you can be sure that CHP from Shenton Group is backed up by a unique maintenance service that will deliver outstanding efficiency to your client and long-life low operating costs for your bottom line.

With several hundred units deployed in the UK market, many of our ESCo clients are now also using our CHP units to participate in balancing services and other grid-related revenue streams.

Biogas

Shenton Group has significant experience in supplying high-performance CHP units to biogas applications. Some special features of our units include high tolerance to H_2S, high electrical efficiency, and exceptional service life. We also provide a unique maintenance package with 24/7 remote monitoring and a choice of response levels, including some of the fastest in the industry.

This all combines to provide outstanding performance and very high availability time. This ensures that you can maximise the revenue from your biogas plant year after year.

ACOUSTICS

Acoustics are a major part of any CHP installation and need careful consideration when carrying out financial and spatial planning. From initial acoustic surveys through to the final installation, we will look after your requirements.

Our range includes open-frame CHPs, indoor acoustic enclosures, and external containerised units. We can also offer bespoke acoustic solutions.

We can also look after any necessary louvres that may be required and can supply and install secondary silencers within the flue to reduce the noise further.

VENTILATION

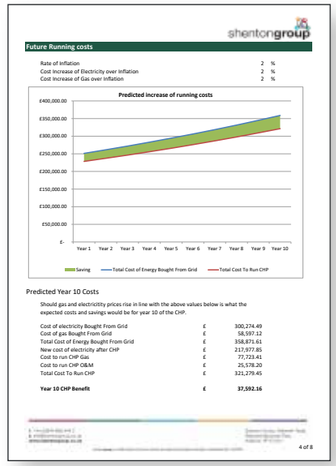
Ventilation is key to any CHP installation to ensure that the CHP doesn't overheat. Getting the correct cooling/ combustion air to your CHP and discharge air can be achieved with the use of ductwork ventilation systems, and, if required, the use of extra fans.

FLUE SYSTEMS

In all CHP installations, some form of flue is required to conduct the exhaust gases outside. Shenton Group can supply and install bespoke flue systems including stainless steel, twin-wall insulated, metal-sprayed mild steel versions, coloured to blend in with architectural surroundings.

DESIGN WORK

Not only is it important to get the size of the CHP correct, it is also equally important to install the CHP correctly to maximise run time. Based on years of practical experience, learning what type of installations work best and where, we can comment on your design and suggest changes that may enable the CHP to run for more hours per day.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Future Running costs

Rate of Inflation	2	%
Cost increase of Electricity over inflation	2	%
Cost increase of Gas over inflation	2	%

Predicted increase of running costs

£400,000.00
£350,000.00
£300,000.00
£250,000.00
£200,000.00
£150,000.00
£100,000.00
£50,000.00
£-

Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10

Saving — Total Cost of Energy Bought From Grid — Total Cost To Run CHP

Predicted Year 10 Costs

Should gas and electricity prices rise in line with the above values below is what the expected costs and savings would be for year 10 of the CHP.

Cost of electricity Bought From Grid	£	300,274.49
Cost of gas Bought From Grid	£	58,597.12
Total Cost of Energy Bought From Grid	£	358,871.61
New cost of electricity after CHP	£	217,977.85
Cost to run CHP Gas	£	77,723.41
Cost to run CHP O&M	£	25,578.20
Total Cost To Run CHP	£	321,279.45
Year 10 CHP Benefit	**£**	**37,592.16**

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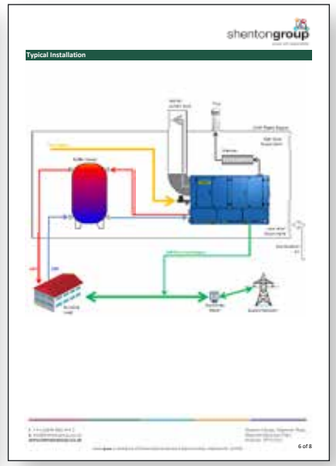
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Typical Installation

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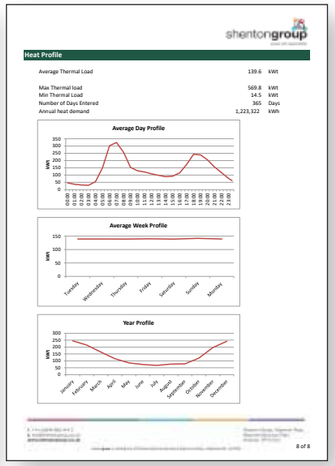
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Heat Profile

Average Thermal Load	139.6	kWt
Max Thermal load	569.8	kWt
Min Thermal Load	14.5	kWt
Number of Days Entered	365	Days
Annual heat demand	1,223,322	kWh

Average Day Profile

kWt
350
300
250
200
150
100
50
0
00:00 01:00 02:00 03:00 04:00 05:00 06:00 07:00 08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

Average Week Profile

kWt
150
100
50
0
Tuesday Wednesday Thursday Friday Saturday Sunday Monday

Year Profile

kWt
300
250
200
150
100
50
0
January February March April May June July August September October November December

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DESKTOP STUDY

We have developed a comprehensive desktop CHP sizing calculator for assisting design engineers in selecting the correct CHP and buffer vessel size. You can establish the correct sizing needed for your application by inputting a number of different data sources.

G99

The connection of any form of generator device to run 'in parallel' or 'synchronised' with the mains electrical utility grid has certain regulations that must be complied with. These regulations are commonly known as the 'G99' requirements, and apply to Combined Heat & Power units, and Generators being used for peak-lopping, or grid parallel use.

The electricity grid operators (known as DNO - District Network Operators), refer to these units as 'embedded' generators, because they are embedded within the electricity grid, as opposed to being at the source of the national grid such as at a power station.

At Shenton Group, we have significant experience in this discipline, and can provide a turnkey service to take care of all G99 aspects for you. We can manage the entire formal application process to the DNO. We can supply the necessary G99 compliant devices and provide trained operators with certified equipment to carry out the final G99 witness test.

The **design** of the **hydraulic arrangement** should ensure that the **maximum return water temperature** to the **CHP** is **never exceeded**

PROJECT MANAGEMENT

Shenton Group will always provide a dedicated, single point of contact, office-based Project Manager to oversee any project including all RAMS, site visits and administration.

DELIVERY LIFT & SHIFT

We specialise in getting CHPs into the most difficult locations. From a standard HIAB delivery right through to crane contract lifts, skating or full break down and re-assembly of the unit. Regardless of the location, we have the expertise and experience to get it there.

BLACK START & ISLAND OPERATION

Most CHPs only operate ‘in parallel’ with a grid power supply. However many units in our range can be configured to run in island mode, in the absence of the grid. Additionally, some units can even self-start without any grid power being present. This provides significant flexibility for integration with client electrical infrastructure, including facilities for stand-by power etc.

THERMAL STORES

In many instances, a thermal store is required to smooth out peaks and troughs in heat demand, and thus enable the CHP to keep running for as long as possible. We offer a comprehensive range of vessels for this, which can be installed along with the CHP. We are also able to comment on the sizing of these, as part of assisting you with design.

METERS

We offer a range of meters to be installed within the CHP system for measuring gas input and heat and electrical output. This information is important for many reasons, in particular, it is needed if CHPQA is being applied for.

Shenton Group have the option of **many different systems** and **many years’ experience** in deciding the best fit for the application.

To **maximise running hours**, in many cases CHP units should be **conservatively sized**, to match the base electrical and thermal demand.

BENEFITS OF MICRO MODELS

The Micro section of our range offers several unique features. The alternators are water cooled, which has several benefits:

- Very high thermal efficiency
- Unit is sealed, so no ventilation ductwork is needed for cooling purposes, only combustion air is required
- Sealed unit gives very low noise output as standard
- Many alternators are asynchronous so no starter motor or batteries are required.
- Compact design means the spatial footprint is reduced

WHAT IS NOX?

NOx is the chemical abbreviation for the most common oxides of nitrogen, and other compounds most commonly associated with air pollution. When any fossil fuels are burned in an internal combustion engine, NOx is one of the by-products of combustion. The only way to filter out NOx from exhaust gases is by means of a catalytic converter, or a catalyst as they're more commonly known. If using a standard catalyst, for NOx reduction to be effective, the exhaust gases passing through it from the engine need to result from perfect (or near perfect) combustion.

Perfect combustion is called stoichiometric combustion and this is when the exact amount of air required is mixed with the fuel during the combustion process. Often a combination of a stoichiometric engine and catalyst can result in NOx emissions as low as 20mg/Nm^3.

Not all engines are able to be configured for stoichiometric combustion, due to the very high temperatures this produces. Under heavy loading an unsuitable engine would overheat. In CHP terms, this generally means stoichiometric methods for NOx reduction can only be used on smaller size units. In the Shenton Group range, these go up to 260 kWe.

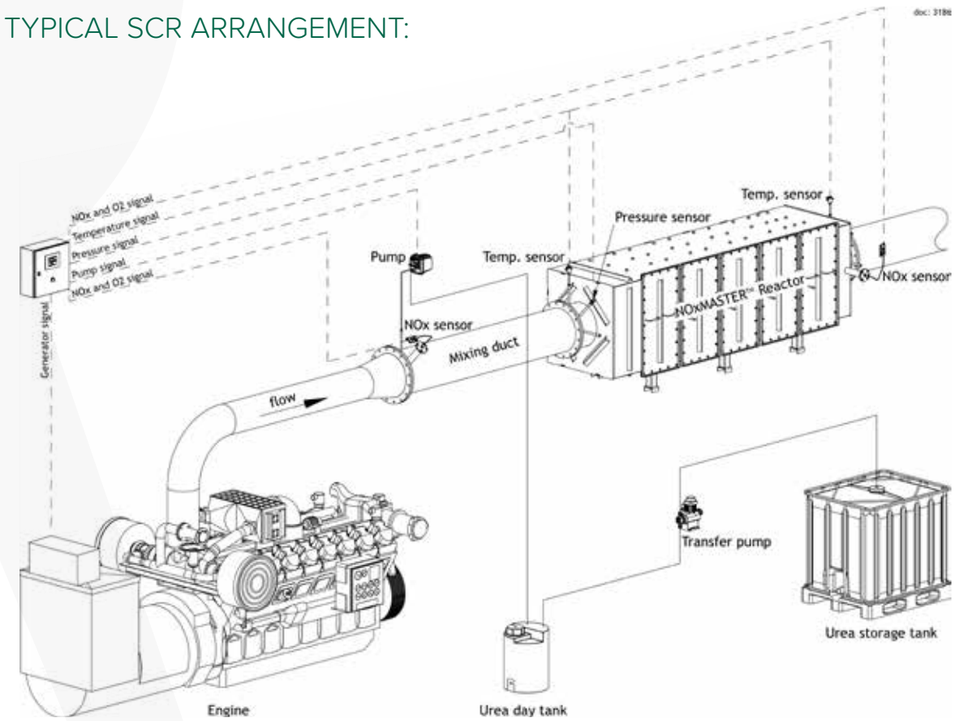
For larger CHP systems, an engine with lean burn combustion must be used. This runs a lot cooler and can therefore be put under much heavier loads. The challenge with lean burn combustion is that the air to fuel ratio is much higher, resulting in non-stoichiometric combustion. This means a conventional catalyst as described earlier will not be effective in removing the toxic NOx gases.

SELECTIVE CATALYTIC REDUCTION

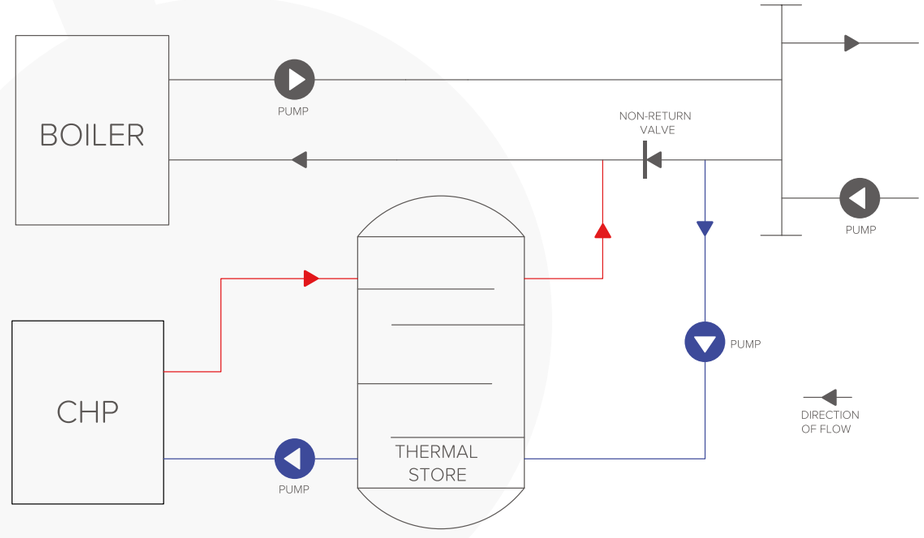
(SCR) uses urea as a reductant by injecting it into the exhaust pipeline where the aqueous urea vaporises to form ammonia. Within the SCR catalyst, the NOx gases are catalytically reduced by the ammonia into water and nitrogen, both of which are harmless.

Put simply, the injection of urea treats the exhaust gases to make them effective when passed through a catalyst. In the context of a CHP project, designers should take account of the considerable amount of space, and added complexity that an SCR installation requires.

TYPICAL SCR ARRANGEMENT:



TYPICAL HYDRAULIC ARRANGEMENT:



CRANFORD ESTATE

SECTOR
AD Plant

LOCATION
Northamptonshire

BACKGROUND
The Anaerobic Digestion facility was constructed to make use of locally grown maize as a feedstock to create green energy from a zero-carbon source.

Cranford AD needed to convert biogas into electricity and heat. The electricity created revenue by off-setting power that would otherwise have to be purchased from the grid and also qualifying for a government financial incentive under the Feed-In-Tariff (FIT) scheme. The heat is used in the Anaerobic Digester process, which offsets heat that would otherwise have to be produced by conventional sources.

SCOPE OF WORK
We installed a Cento T120 (120kWe) acoustic containerised Biogas Combined Heat & Power unit and a 2nd CHP unit as an external containerised package.

PROJECT OVERVIEW
To allow the client to vary the feedstock, we created a special modulation facility for the CHP. Varying feedstock results in varying levels of biogas production, which influences how long the CHP engine can run. As no revenue is created if the CHP is not running, we devised a bespoke method of tracking the level of biogas in the gas holder and modulating the generation level of the CHP in real-time in response to the amount of biogas available. This significantly increased the run-time per year, and thus maximised the client's revenue.

The first CHP unit was very successful and operates over 8220 hours per year. Through careful development of the plant, Cranford was able to increase biogas production to the point where the site purchased an additional Cento T120 CHP unit from Shenton Group. To counter the need for an additional process building, we supplied the 2nd CHP unit as an external containerised package. The second unit is also operating 7650 hours per year.

CLIENT FEEDBACK
"I have found Shenton Group to be a thoroughly professional organisation. Running an AD plant is a 24/7 operation, with constant oversight required. However, even though the CHPs are one of the most critical parts of the AD plant, I have no concerns about their operation, due to the efficiency of the support service provided."

ALEX ROBINSON PLANT MANAGER

LONDON GRADE II* LISTED BUILDING

SECTOR
Hotel/ Residential

LOCATION
London

BACKGROUND
This Grade II* listed building in London, overlooking the River Thames at Tower Hill was acquired by a global high-end hotel brand to be converted into a development comprising an exclusive hotel, members-only club and serviced apartments. Ardmore was the Developer & Building Contractor enlisted on the job. Having worked with Ardmore on a number of projects in the past, once again they approached us to provide the power solution. Our task was to reduce the energy cost of running the building and improve its sustainability credentials.

SCOPE OF WORK
Installation of a Cento T160 164 kW indoor acoustic canopy CHP unit. To be located in the basement, 2 floors below street level, and without any visible changes to the external fabric of the building.

PROJECT OVERVIEW
To meet the spatial challenge we surveyed the ingress route in great detail. The route was then lined with protective measures to ensure no damage occurred to the historic fabric of the building during install.

A turbo-charged CHP of this size normally needs a dry-air cooler radiator, to cool the gas and air mixture going in to the engine. This is known as intercooling. Such a radiator needs to be placed outdoors to shed the heat energy. It couldn't be placed on the roof and the building was land-locked – meaning the footprint of the building occupies the entire site; immediately outside the building walls is public space. We overcame this by designing a special version of the unit called TA-70, which achieves the intercooling by utilising the secondary circuit water going into the building.

Exhaust gases could only leave the building through a flue discharge in a concealed location on the top storey. This made the flue run very long and increased back-pressure issues. To tackle this we designed a bespoke fan-assisted flue system.

CHP - **Natural gas** and **Biogas** Specifications

CHP Engine	Elec output	Heat output	Fuel Input (Net)	Fuel Input (Gross)	Gas consumption	Elec Efficiency (Net)	Elec Efficiency (Gross)	Heat Efficiency (Net)	Heat Efficiency (Gross)	Nitrous Oxide (Nox) at 5% O_2
	kWe	kWt	kW	kW	m3/hour	100%	100%	100%	100%	mg/Nm3
Micro 7 AP	6.5	16	24.1	26.70	2.55	27	24.34	66.3	59.92	250
Micro 20 AP	20	42	65.5	72.57	6.9	30.5	27.56	64.1	57.87	50
Micro 22 SP	22	45.2	70.5	78.11	7.5	31.2	28.16	64.1	57.86	50
Micro 25 SP	25	49.5	78.1	86.53	8.3	32.0	28.89	63.3	57.20	50
Micro 30 AP	30	59.4	93.8	103.93	9.9	32.0	28.87	63.3	57.15	50
Micro 33 SP	33	66.2	104.7	116.01	11.1	31.5	28.45	63.3	57.07	50
Micro 50 SP	50	88.5	146	161.77	15.5	34.2	30.91	60.6	54.71	50
Cento 70 ST	70	109	204	226.03	21.6	34.3	30.97	53.4	48.22	50
Cento 80 ST	85	141	252	279.22	26.7	33.7	30.44	56.0	50.50	50
Cento 80	81	120	231	255.95	24.4	35.1	31.65	51.9	46.88	500
Cento 100 ST	104	166	300	332.40	31.7	34.7	31.29	55.3	49.94	50
Cento 100	104	142	282	312.46	29.8	36.9	33.28	50.4	45.45	500
Cento 120 ST	120	199	357	395.56	37.8	33.6	30.34	55.7	50.31	50
Cento 120	125	177	343	380.04	36.3	36.4	32.89	51.6	46.57	500
Cento 130 ST	133	191	352	390.02	37	37.8	34.10	54.2	48.97	50
Cento 160	164	209	424	469.79	45.9	38.7	34.91	49.3	44.49	500
Cento 180	184	218	469	519.65	49.7	39.2	35.41	46.5	41.95	500
Cento 200	200	237	510	565.08	54	39.2	35.39	46.5	41.94	500
Cento 210	210	248	529	586.13	56	39.7	35.83	46.8	42.31	500
Cento 260 ST	260	372	688	762.30	72.9	37.8	34.11	54.0	48.80	50
Cento 350	355	425	887	982.80	93.3	40.0	36.12	47.9	43.24	500
Cento 430	430	577	1160	1285.28	123	37.0	33.46	49.7	44.89	250
Cento 530	528	627	1344	1489.15	142	39.3	35.46	46.7	42.10	250
Quanto 600	600	658	1418	1571.14	152	42.3	38.19	46.4	41.88	250
Quanto 800	800	862	1882	2085.26	201	42.5	38.36	45.8	41.34	250
Quanto 1000	999	1041	1102	1221.02	246	43.0	81.82	44.8	85.26	250
Quanto 1200	1200	1189	2815	3119.02	291	42.6	38.47	42.2	38.12	250
Quanto 1600	1560	1576	3696	4095.17	381	42.2	38.09	42.6	38.48	250
Quanto 2000	2000	1977	4613	5111.20	485	43.4	39.13	38.7	38.68	250
Micro 30 LB	25	47.5	79.1	87.64	12.3	31.6	28.52	60.0	54.20	500
Cento 80	83	121	237	262.60	36.5	35.0	31.61	50.9	46.08	500
Cento 100	106	143	291	322.43	44.7	36.4	32.88	49.2	44.35	500
Cento 120	124	165	336	372.29	51.7	36.9	33.31	49.2	44.32	500
Cento 160	166	206	439	486.41	67.5	37.8	34.13	46.9	42.35	500
Cento 180	182	211	465	515.22	71.5	39.1	35.32	45.3	40.95	500
Cento 200	200	230	510	565.08	78.4	39.2	35.39	45.2	40.70	500
Cento 210	210	222	519	575.05	80	40.4	36.52	42.8	38.61	500
Cento 350	355	397	885	980.58	147	40.1	36.20	44.9	40.49	500
Cento 430	430	497	1087	1204.40	181	39.5	35.70	45.7	41.27	500
Cento 530	528	577	1315	1457.02	219	40.2	36.24	43.9	39.60	500
Quanto 600	600	600	1400	1551.2	215	42.9	38.68	42.9	38.68	500
Quanto 800	800	792	1856	2056.45	286	43.1	38.90	42.7	38.51	500
Quanto 1000	999	1037	2345	2598.26	361	42.6	38.45	44.2	39.91	500
Quanto 1200	1200	1195	2790	3091.32	429	43	38.82	42.8	38.66	500
Quanto 1600	1560	1577	3654	4048.63	562	42.7	38.53	43.2	38.95	500
Quanto 2000	2000	2015	4651	5153.31	716	43	38.81	43.3	39.10	500

Natural Gas Biogas

TEDOM

Shenton Group range of CHP engines,
The sole UK distributor for Tedom

Standard Noise Rating (dBA) (Based on Indoor Canopy)			Dimensions (mm) L x W x H			Flange Connection Sizes			Buffer Vessel Size @ 1 hour
Enclosure	Ventilation	Exhaust	Open Unit	Indoor Canopy	Containerised	F&R	Gas	Exhaust	Litres
58	N/A	55	N/A	1315 x 1350 x 1480	N/A	1" BSP	½" BSP	1" BSP	700
60	N/A	57	N/A	1680 x 1500 x 1780	N/A	1¼ " BSP	¾ " BSP	D50	2000
60	N/A	57	N/A	1680 x 1500 x 1780	N/A	1¼ " BSP	¾ " BSP	D50	2000
60	N/A	57	N/A	1680 x 1500 x 1780	N/A	1¼ " BSP	¾ " BSP	D50	2000
60	N/A	57	N/A	1680 x 1500 x 1780	N/A	1¼ " BSP	¾ " BSP	D50	2500
62	N/A	60	N/A	1680 x 1500 x 1780	N/A	1¼ " BSP	¾ " BSP	D50	3000
65	N/A	62	N/A	2400 x 1780 x 1730	N/A	DN40 PN6	¾ " BSP	DN65	4000
67	78	85	N/A	3650 x 1100 x 1900	N/A	DN40 PN16	¾ " BSP	DN80 PN16	5000
76	83	65	3140 x 1105 x 2090	3840 x 1050 x 2100	5400 x 2500 x 6800	DN50 PN6	DN50 PN16	DN100 PN16	6000
76	83	65	3140 x 1105 x 2090	3840 x 1050 x 2100	5400 x 2500 x 6800	DN50 PN6	DN50 PN16	DN100 PN16	5000
76	84	65	3140 x 1105 x 2090	3840 x 1050 x 2100	5400 x 2500 x 6800	DN50 PN6	DN50 PN16	DN100 PN16	7000
76	84	65	3140 x 1105 x 2090	3840 x 1050 x 2100	5400 x 2500 x 6800	DN50 PN6	DN50 PN16	DN100 PN16	6000
77	84	65	3140 x 1105 x 2090	3840 x 1050 x 2100	5400 x 2500 x 6800	DN50 PN6	DN50 PN16	DN100 PN16	8500
77	84	65	3140 x 1105 x 2090	3840 x 1050 x 2100	5400 x 2500 x 6800	DN50 PN6	DN50 PN16	DN100 PN16	7500
77	86	65	4100 x 1280 x 2285	4450 x 1250 x 2205	5300 x 3550 x 6200	DN50 PN6	DN50 PN16	DN125 PN16	8000
77	86	65	3750 x 1250 x 2300	4395 x 1250 x 2225	5550 x 3000 x 6500	DN50 PN6	DN50 PN16	DN125 PN16	9000
78	88	65	3750 x 1250 x 2300	4395 x 1250 x 2225	5550 x 3000 x 6500	DN50 PN6	DN50 PN16	DN125 PN16	9500
78	89	65	3750 x 1250 x 2300	4395 x 1250 x 2225	5550 x 3000 x 6500	DN50 PN6	DN50 PN16	DN125 PN16	10000
78	89	65	4090 x 1280 x 2225	3535 x 1250 x 2155	5550 x 3000 x 6500	DN50 PN6	DN50 PN16	DN125 PN6	10500
76	92	65	4800 x 1700 x 2200	4950 x 1800 x 2350	6400 x 4500 x 6500	DN65 PN6	DN80 PN16	DN200 PN16	16000
76	92	65	4800 x 1700 x 2200	4950 x 1800 x 2350	6400 x 4500 x 6500	DN65 PN6	DN80 PN16	DN200 PN16	18500
78	94	65	4800 x 1750 x 2200	4950 x 1800 x 2350	6400 x 4500 x 6500	DN65 PN6	DN80 PN16	DN200 PN16	25000
78	94	65	4800 x 1750 x 2200	4950 x 1800 x 2350	6400 x 4500 x 6500	DN65 PN6	DN80 PN16	DN200 PN16	27000
79	80	80	5990 x 4456 x 2124★	6250 x 2500 x 3300★★	13000 x 3000 x 8000	DN80	DN50	DN300	28500
80	80	80	6437 x 4910 x 2169★	7200 x 2500 x 3300★★	13500 x 3000 x 8000	DN100	DN65	DN350	37000
80	80	80	8200 x 5436 x 2535★	7000 x 2500 x 4010★★	13500 x 6000 x 10000	DN100	DN65	DN400	45000
80	80	80	8200 x 5436 x 2535★	7000 x 2500 x 4010★★	13500 x 6000 x 10000	DN100	DN65	DN400	50000
84	80	80	8570 x 5436 x 2610★	8100 x 2650 x 4010★★	14800 x 6200 x 10000	DN125	DN65	DN500	70000
86	80	80	11010 x 6000 x 2530★	10000 x 2400 x 4250★★	20000 x 5500 x 10000	DN100	DN80	DN400	85000
60	N/A	57	N/A	1662 x 1492 x 1771	N/A	1¼ " BSP	1" BSP	D50	2000
76	83	65	3140 x 1105 x 2090	3840 x 1050 x 2100	5400 x 2500 x 6800	DN50 PN6	DN80 PN16	DN100 PN16	5000
76	84	65	3140 x 1105 x 2090	3840 x 1050 x 2100	5400 x 2500 x 6800	DN50 PN6	DN80 PN16	DN100 PN16	6000
77	84	65	3140 x 1105 x 2090	3840 x 1050 x 2100	5400 x 2500 x 6800	DN50 PN6	DN80 PN16	DN100 PN16	7500
77	86	65	3750 x 1250 x 2300	4395 x 1250 x 2225	5550 x 3000 x 6500	DN50 PN6	DN80 PN16	DN125 PN16	9500
78	88	65	3750 x 1250 x 2300	4395 x 1250 x 2225	5550 x 3000 x 6500	DN50 PN6	DN80 PN16	DN125 PN16	9500
78	89	65	3750 x 1250 x 2300	4395 x 1250 x 2225	5550 x 3000 x 6500	DN50 PN6	DN80 PN16	DN125 PN16	10000
78	89	65	4090 x 1280 x 2225	3535 x 1250 x 2155	5550 x 3000 x 6500	DN50 PN6	DN80 PN16	DN125 PN6	9500
76	92	65	4800 x 1700 x 2200	4950 x 1800 x 2350	6400 x 4500 x 6500	DN65 PN6	DN80 PN16	DN200 PN16	17000
78	94	65	4800 x 1750 x 2200	4950 x 1800 x 2350	6400 x 4500 x 6500	DN65 PN6	DN80 PN16	DN200 PN16	22000
78	94	65	4800 x 1750 x 2200★	4950 x 1800 x 2350	6400 x 4500 x 6500	DN65 PN6	DN80 PN16	DN200 PN16	25000
79	80	80	5990 x 4456 x 2124★	6250 x 2500 x 3300★★	13000 x 3000 x 8000	DN80	DN50	DN300	25000
80	80	80	6437 x 4910 x 2169★	7200 x 2500 x 3300★★	13500 x 3000 x 8000	DN100	DN65	DN350	34000
80	80	80	8200 x 5436 x 2535★	7000 x 2500 x 4010★★	13500 x 6000 x 10000	DN100	DN65	DN400	45000
80	80	80	8200 x 5436 x 2535★	7000 x 2500 x 4010★★	13500 x 6000 x 10000	DN100	DN65	DN400	50000
84	80	80	8570 x 5436 x 2610★	8100 x 2650 x 4010★★	14800 x 6200 x 10000	DN125	DN65	DN500	70000
86	80	80	11010 x 6000 x 2530★	10000 x 2400 x 4250★★	20000 x 5500 x 10000	DN100	DN80	DN400	90000

- ★ Open Unit - Allow extra space for 5no switchboards.
- ★★ Indoor Canopy - Allow extra space for exhaust gas heat exchanger module and 5no switchboards
- Technical data based on operating conditions of 100kPa air pressure, 25°C air temperature and at 30% relative humidity
- Gas consumption based on standard conditions of 15°C, 101.325kPa
- Calorific value of gas used in fuel input/consumption figures is 34MJ/m^3
- Conversion factor used to calculate from Net to Gross is 1.108

Updated V3 version 25.7.19

GENERATOR RENTAL

A nationwide rental division specialising in generators, fuel tanks, cable, changeover panels and load banks. Our solutions are ready to meet your needs 24/7/365.

From 10kVA up to 1250kVA we provide the rental of standby or prime power generators, and are able to synchronise multiple generators for larger power requirements.

Our nationwide coverage enables us to respond quickly to requirements and provide delivery and installation of the rental equipment. Scheduled servicing is included within any rental contract and each rental is covered by our 24/7 support service. The rental can be a small part of the overall solution with cable, fuel tanks, AMF panels, distribution panels, security locks and refuelling all available as part of the package.

DIFFICULT ACCESS

Many of our rental fleet up to 200kVA are road towable meaning deliveries to difficult locations with our fleet of 4x4s is possible. Any generators larger than this, our skilled HIAB teams can lift and skate your rental generator to exactly where you want it.

BABY SITTING

For critical applications or shut-downs Shenton Group offer the complete ‘Baby Sitting’ service for your rental generator. This means we can have one of our engineers on site whilst you have a rental to ensure should anything go wrong, help is on hand.

FUEL MANAGEMENT

Whether your rental generator is installed as a backup in case of a mains failure, for an event or to power machinery, be sure that you have considered fuel management. Shenton Group can provide fuel level monitoring to ensure that your fuel is replenished and power continuity maintained.

PROJECT MANAGEMENT

From carrying out an initial site survey right through delivery, install, monitoring, baby sitting of your generator and fuel management, we will look after your complete rental project. Whether its for a pre-planned shut-down, long or short-term rental or 50/60Hz, we can provide the solution to meet your needs 24/7/365.

CABLE MANAGEMENT AND DISTRIBUTION

Shenton Group can offer the rental of all cables and necessary distribution. Using our own equipment our team can either just deliver or carry out the full installation ensuring everything is left neat and tidy

ACCESSORIES

We understand it's the small details that matter so ask our team if they think there are any accessories you should have with your rental. Shenton Group can supply the necessary protective barriers, fuel spill kits or cable covers.

PROVIDING A HOSPITAL WITH PEACE OF MIND

This UK hospital has four on-site generators, two of which are running 24/7, with two on standby.

When our client's four generators are taken off-line to be tested and serviced, we provide the site with four rental generators, with no break in continuous power. Having guaranteed reliable power throughout blackout testing for their generators for the last six years, Shenton Group continues to be a trusted provider that our client turns to time and time again.

Our rental generators provide our clients with dependable power protection at an affordable, competitive price. As is the case with all Shenton Group Power Rental contracts, with regular on-site service and maintenance, plus 24/7 technical support, this hospital can confidently go about its day-to-day business without the concerns surrounding mains power failures.

"I would just like to thank you and the lads on site this morning for a great job, all on time and no dramas."

HOSPITAL FACILITY MANAGER

SERVICED WITH MILITARY PRECISION

From supplying diesel generators to the British army in the 1980s, to delivering continuous power solutions to Ministry of Defence clients thereafter, we understand exactly what's required to provide defence clients and their contractors with reliable and trusted continuous power services.

We were approached by an air and naval contractor, whose highly secure site was undergoing electrical cabling work and required rental generators to guarantee continuous power.

Due to the nature of the operation, site security was particularly high. We were entrusted to provide three large rental generators to guarantee 24/7 prime power.

With a number of important defence-critical systems on site demanding flawless power, our engineers visited the highly secure site twice per week to refuel the generators and every three weeks to provide them with a service, ensuring their optimal performance.

POWER CALL

NATIONAL AVERAGE
100 MINUTES
RESPONSE TIME

Power Call is a nationwide **emergency call-out** generator network with **guaranteed response** to contracted sites **24/7/365**.

The most cost-effective 24/7/365 guaranteed solution to prolonged power cuts nationwide. A reliable back-up power solution without the large outlay for a permanent on-site generator.

Our 24/7/365 network control room is always on hand to take your emergency call.

Strategically placed depots around the UK ensure the fastest response times.

A weatherproof plug and socket provide fast and safe connection to your building.

A manual changeover switch allows selection between mains power and generator.

HOW DOES IT WORK?

- Site Registration involves installation of a 'plug-and-play' manual generator connection and changeover system.
- Power Call contract is issued for a fixed monthly fee. Emergency call-outs to unscheduled power-cuts are unlimited and included free of charge.
- 24/7/365 network control room manages all call-outs, co-ordinating the operation from start to finish, including delivery, connection, refuelling, and collection of the generator.

SERVICE LEVEL COMMITMENT

Whether you are responsible for a care home or mobile network, SME or a private property, this concept has been priced to ensure that budget doesn't stop you having the power security you require.

Power Call is the result of intensive research and modelling utilising bespoke mathematical software developed specifically for the product. Statistical analysis and practical experience over 10 years show a successful deployment rate in excess of 98%.

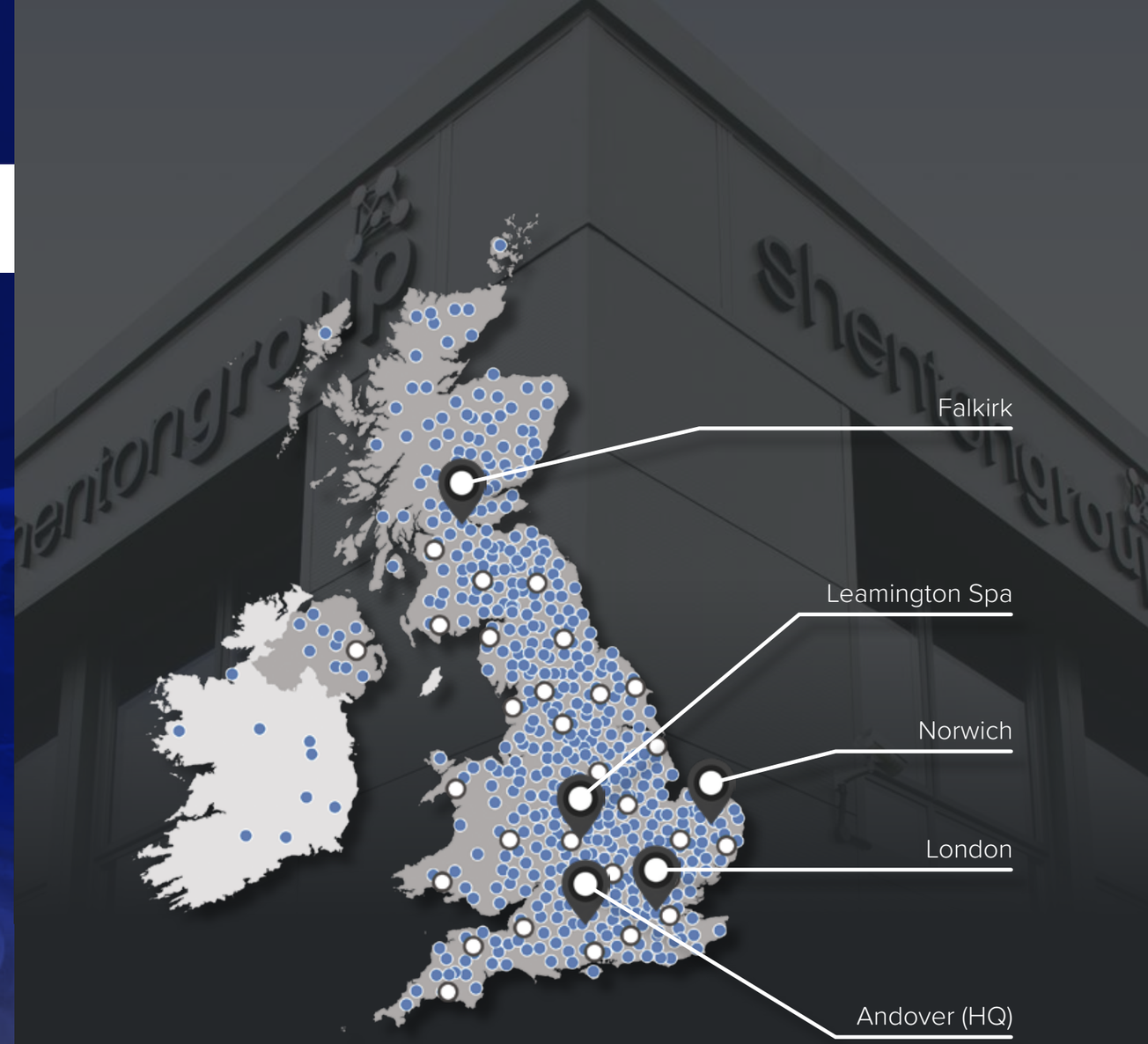
We are so confident of fulfilling our contractual commitment to you, that should we fail to have a generator available, your total Retainer Fee for that site for that year will be refunded.

It is a truly unique offering - a dedicated and national fleet of generators committed only to Power Call contract holders.

"With Power Call, we are now confident that the Council is able to fulfil its requirements under the Civil Contingencies Act 2004 with an effective power security plan."
District Council

MAINTENANCE & MONITORING

Planned maintenance and emergency call-out contracts are critical to the ongoing operation and health of any generator, UPS or CHP - 24/7/365



5
OFFICES

30+
SERVICE LOCATIONS

2000+
CONTRACTS

MAINTENANCE CONTRACTS

GENERATOR	Maxicare Plus	Power Care Premier	Power Care 24	Power Care	Power Care Lite
Standard Service	✓	✓	✓	✓	✓
Major Service	✓	✓	✓	✓	✓
Parts Included	✓	X	X	X	X
Consumables Included	✓	X	X	X	X
24/7 Emergency Response Included	4 hr★	4 hr Response★	4 hr Response★	8am – 5pm★	X
24/7 Technical Support Included	✓	✓	✓	8am – 5pm	8am – 5pm
Hawkeye Remote Monitoring	✓	✓	X	X	X
Bolt Ons					
Refuelling	✓	✓	Optional	Optional	Optional
Load Bank Testing	Optional	Optional	Optional	Optional	Optional
Fuel Polishing	Optional	Optional	Optional	Optional	Optional

★To 'Red Alert' Situations. A 'Red Alert' is defined as – A failure of the generator to start following a genuine and extended mains power supply failure (except running out of fuel).

UPS	Maxicare Plus	Power Care Premier	Power Care 24	Power Care	Power Care Lite
Preventative Maintenance Visit (8am-5pm)★★	✓	✓	✓	✓	✓
24/7 Emergency Response	4 hr★	4 hr★	4 hr★	8am – 5pm★	X
24/7 Technical Support	✓	✓	✓	8am – 5pm	8am – 5pm
Remote Monitoring (On Selected Models)	✓	✓	X	X	X
Free Firmware (On Selected Models)	✓	✓	X	X	X
Parts Included★★★	✓	X	X	X	X

★To 'Red Alert' Situations. A 'Red Alert' is defined as – A failure of the UPS system following a genuine and extended mains power supply failure

★★Visit in normal working hours. Out of hours chargeable as extra (additional service visits charged as extra)

★★★Excludes batteries and capacitors.

CHP	Infinium24	Infinium Premier
Scheduled Visits	✓	✓
All Call Outs Included	✓	✓
All Service Visits	✓	✓
Extended Warranty	✓	✓
Parts Included	✓	✓
Consumables Included	✓	✓
Next Working Day Preliminary Response To Mission Critical Issues	✓	X
4 Hour Preliminary Response To Mission Critical Issues	X	✓
Next Day Site Attendance	X	✓
Best Endeavour Site Attendance	✓	X
24/7 Machine Data Collection	✓	✓
Permanently Live Remote Monitoring	✓	✓
Web-Based Client Interface	✓	✓

With national engineer coverage, a 24/7 help desk and state-of-the-art monitoring equipment, Shenton Group are well equipped to look after any make and model of generator, UPS or CHP.

Our CHP contracts are charged based on run hours which provides an incentive to ensure that maximum run hours are achieved to ensure fastest ROI.

We also specialise in an array of remedial and upgrade works on any of your existing assets.

For more information get in contact today!

BESPOKE MAINTENANCE CONTRACTS

We can offer fixed cost contracts that use a more all-inclusive approach, or lower cost contracts where extras are chargeable. Whatever your standard and budget, we have a solution to suit.

REMOTE MONITORING

Available for all generators, CHPs and UPSs, remote monitoring allows you to ensure that your power systems are running as they should be, monitored by our specialists. The real benefit is that it enables us to predict and rectify issues before they occur keeping your power up and running with minimal distribution - if any at all! You can also have access to be able to remote monitor yourself. You can receive SMS or email alerts, start or stop your generator or CHP remotely. We offer advanced monitoring systems that can even change set-points and parameters - currently available for CHP only.

As well as being able to retrofit these features to older generators, CHPs or UPSs, Shenton Group can look after the remote monitoring for you by including it within one of our Power Care or Infinium contracts, giving you true peace of mind that your assets are monitored 24/7.

UPGRADES & REMEDIALS

Shenton Group understands that budgets can be tight and legislation changes. Therefore, we offer full renovation, remedial and upgrade works ranging from canopy changes to new batteries. It may be that your generator requires a new bunded fuel tank and upgraded double skin pipework plus a retrofit SCR catalyst to meet local authority emission requirements. Or perhaps your CHP control system needs upgrading, or the inverters in your UPSs need changing. Shenton Group is the Company you need!

With closed protocol controllers being fitted to many manufacturers' equipment to restrict other service providers supporting you, we offer a panel upgrade package for any CHP or generator. This removes this restriction and allows you to go to market to ensure you secure the service levels needed - within your budget.

Shenton Group offer full renovation and remedial works ranging from canopy changes to new batteries.

Receive SMS or email alerts to start or stop your generator or CHP remotely.

Contracts can include: **Advanced remote monitoring** allowing ability to carry out **set-point changes** and engine **control parameters**.

HOT TIP:
We recommend load bank testing for generators at least once a year to ensure reliable performance during your power outages.

BABYSITTING

For critical applications, Shenton Group offer the complete 'babysitting' service for your generator, UPS or CHP. This means we can have one of our engineers on site should anything go wrong. Take confidence in knowing that help is always on hand.

EXTENDED WARRANTY

We can offer extended warranties on all of our products, taking full responsibility for ensuring your asset always functions in a planned and cost-effective way. Our extended warranty contracts include standard and major service visits and also provide cover for replacement parts and consumables. These are bespoke packages and are costed on an individual basis.

COMPLETE LOAD BANK TESTING SERVICE

Load bank testing is a controlled on-load test of your full backup power protection system. Extended and regular full load testing of standby diesel generators and other power systems using a variable load bank is essential to ensure reliable and consistent performance during mains failure.

Shenton Group provides the complete package:

- Site Survey, delivery and positioning of the load bank
- Site logistics
- Testing of the generator/ power source
- Disconnection and removal of the load bank
- Reconnection to the normal load
- Detailed results with full written report

Shenton Group provides a nationwide service meaning you are covered wherever you are, no matter how remote.

OIL, FUEL OR COOLANT SAMPLING

A simple but critical task that can increase the lifetime of your asset. Let Shenton Group take samples of your oil, coolant and fuel to give you a detailed report on its condition and advise if any further action is required.

Routine sampling of oil, coolant and fuel helps to ensure that any deterioration is picked up at an early stage.

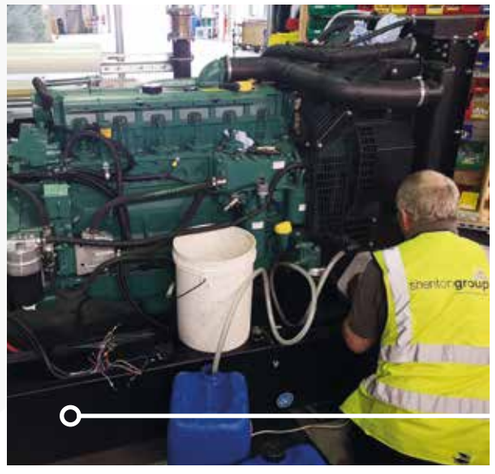
FUEL SERVICES/POLISHING

Diesel fuel that is stored in bulk fuel tanks for long periods of time will deteriorate and become contaminated by water, solids and bacterial growth.

Contaminated fuel will reduce the output power of diesel engines and generators and, in some cases, will cause system failures which means extensive and costly repairs to the fuel systems. Under extreme circumstances contaminated fuel can be rendered unusable and need replacing entirely.

Benefits

- Prevents build up of sludge in the generator, fuel filters and pistons and removes all traces of contamination present in the fuel, re-optimising it
- Prevents water entering the generator
- Ensures a more reliable standby power system
- Secondary process (no effect on operation of the Generator)
- Simple, safe and cost effective



Regular **maintenance** and **servicing** of Air Circuit Breakers (ACB) and LV Switchgear is **essential** for **reliable** and **trouble-free** operation.

HEALTH CHECKS

Shenton Group provide detailed health checks for generators, UPSs and CHPs that have failed to be maintained regularly to determine the condition of the asset. This may consist of:

- Fuel, oil and coolant samples
- Load bank testing to establish any developing faults and to ensure that the generator is able to sustain full load output
- Routine load tests to starter battery(s) to ensure that they are fit for continued operation
- Check the condition of alternator/flywheel couplings
- Check the condition of AV Mountings
- Ensure the radiator matrix is sound and remove any dust/oil vapour residue to ensure optimum performance
- Pressure test the engine cooling system at routine intervals to check for any developing coolant leaks
- Carry out borescope inspections
- Ensure all electrical connections are tight and clean
- Carry out routine checks to ensure that all cable connections are tight and free from corrosion
- Ensure all signals, alarms and communications are working correctly
- Carry out routine battery full load and discharge tests to ensure that batteries are maintained in optimum condition (applies to UPSs)

PARTS AND SPARES

Shenton Group's parts department offers our clients a huge range of generator, UPS and CHP parts from filters, spark plugs, breakers, cable and all other consumable items right through to oil, fuel and spill kits. If you are struggling to find items for older assets, then utilise our in-house expertise and allow us to source the parts for you.

G99

The connection of any form of generator device to run 'in parallel' or 'synchronised' with the mains electrical utility grid has certain regulations that must be complied with. These regulations are commonly known as the 'G99' requirements, and apply to Combined Heat & Power units, and Generators being used for peak-lopping, or grid parallel use.

The electricity grid operators (known as DNO - District Network Operators), refer to these units as 'embedded' generators, because they are embedded within the electricity grid, as opposed to being at the source of the national grid such as a power station.

At Shenton Group our team of trained and experienced engineers can perform this service for you, giving you peace of mind and certified approval. Shenton Group can manage the G99 application process, booking in of the DNO to witness the testing and perform the G99 tests.

SWITCHGEAR SERVICING (LV/HV)

Regular maintenance and servicing of Air Circuit Breakers (ACB) and LV Switchgear is essential for reliable and trouble-free operation.

Our nationwide team of Shenton Group service engineers provide ongoing and scheduled maintenance through annual or one-off servicing of all makes and sizes of ACBs and Low Voltage Switchgear.

Service Features

- Visual Inspection
- Cleaning
- Lubrication
- Busbar Integrity
- Insulation Safety Inspections
- Full 'Current Injection' testing and calibration