intergen
imlgroup

THE ENERGY GENERATION

generating sets & power plants

Intergen, a long history

Intergen has been operating in the energy market for almost 70 years. In this period Intergen has designed and manufactured generating sets, power and cogeneration plants for prestigious customers. A team of skilled engineers looks after the entire process, from the analysis of customer requirements to the preliminary design, construction, testing and final commissioning of the plant, providing a “turn-key solution”. The quality of all the assembled components is ensured by commercial agreements with important partners worldwide. Intergen also provides expert after-sales service, technical support and full-time maintenance aimed at minimizing plant lifecycle costs.

installed power
1100 MWe

years of history
70 years

diesel gensets products range
from 650 to 6750 kVA

gas gensets products range
from 500 to 6000 kVA

partners
official distributor of

MWM
Energy. Efficiency. Environment.

GE Transportation

certifications

ISO 9001:2008

ISO 14001:2004

Since 2004, Intergen is certified for ISO 9001 and ISO 14001 quality standards.

mission vision and values

Intergen is a major player at the cutting edge in the construction of power plants. Constant updates to the technical skills of our people and the attention devoted to the needs of the customer ensure quality and reliability in the product.
Intergen combines expertise, tradition, forward thinking and innovation.
It is the application of the principle that companies are, above all, about men, women and ideas. People with long experience, young people with creativity and enthusiasm, top-level specialists, all share a passion for their work and a vision of a more liveable, advanced and aware world. The ongoing commitment of each person is geared towards achieving excellence as a key to maintaining and increasing our market. Intergen works in respect of the person, the area, the environment and safety in the workplace.

Generating sets & industrial applications

sectors of application

oil&gas

Generating sets are customized for each project and for severe environmental conditions. They guarantee high performance, complying with the most stringent international standards.
They are available for onshore and offshore applications including ATEX classified areas. Complete and certified testing is carried out at our factory.

industrial applications

The same quality, strength, reliability and safety that set us apart in the Oil & Gas industry are also guaranteed for the diesel generating sets that we offer for other industrial applications – food, pharmaceuticals, textiles, iron and steel, data centers, telecommunications, healthcare – or any situation where immediate energy which is stable over time is needed.

type of product

standby

Emergency generating sets – energy always immediately available in case of power outage or failure of the main network, high performance and precision control systems delivering stable power to the users.

black-start

These generating sets are specifically designed to supply power in the process of restoring a power plant to operation in absence of an external electric power grid.

continuous power production

Low and medium speed generating sets guarantee reliability, long operating life, low operational costs and constant performance over time, fundamental features for an electricity production plant.

engine driven pumps

Engine driven-pumps packaged for special high-capacity industrial applications such as fire-fighting systems (fire pumps), large water systems and wherever a main electric grid is not available.

Oil & Gas approvals & registrations

Intergen has the know-how and experience to build its generating sets in accordance with the highest quality and construction standards required by the major players in the Oil & Gas market. Thanks to a constant update of the product, selection and monitoring of suppliers and excellent references worldwide, we are now present in the Vendor List of the EPC contractors in this industry.

ADNOC أدنوك شركة بترول أبوظبي الوطنية
ADCO أدكو
ADGAS أدجاز
ONGC ओएनजीसी
Borouge بروج
GASCO جاسكو
ADMA أدما
TAKREER تكرير شركة أبوظبي لتكرير النفط We Refine Right
ZADCO زادكو
Petroleum Development Oman شركة تنمية نفط عمان
KNPC البترول الوطنية إحدى شركات مؤسسة البترول الكويتية A Subsidiary of Kuwait Petroleum Corporation
PETRONAS
Saudi Aramco أرامكو السعودية

Your needs
Our solutions

We offer a range of solutions with unit power up to 5000 kWe to guarantee the supply of electrical energy where there is no electricity grid available, or when it is essential to guarantee the continuity of power supply in the event of a black-out of the main power system. Our customizable generating sets are designed for special conditions in terms of temperature, altitude of installation site, air (dusty, humid and salty environments) and are able to meet all requirements, including installations on platforms. Intergen has the technical expertise and competence for handling the entire process in-house, from preliminary study to design, production, start-up, operation and after sales service and we maintain a wide stock of spare parts for immediate delivery. Every stage of production is monitored on the basis of a documented control system.

Our whole process

CUSTOMER NEEDS › ANALISYS › SPECIFIC APPROACH › DESIGN › CONSTRUCTION › PERFORMANCE TEST

› Exhaust system
Special design
with spark arrestor

› Tie-in point
for external connections

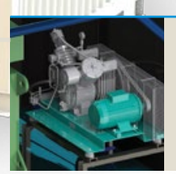
› Compact accessory rack
for cooling, lubrication
and fuel circuits

› Special coupling to withstand
high torsional stresses

› Customized alternator
IP23/IP55 - LV-MV

› Ventilation and cooling system
designed for extreme
environmental conditions

› Dedicated control panels
to suite onshore and offshore
standards



› Redundant starting systems /
electrical / hydraulic / pneumatic
for onshore and offshore
applications

Diesel engine generating sets range

PPR: PRIME POWER RATING

The maximum power continuously delivered to a variable electrical load for an unlimited number of hours per year, average power output over the 24 hours not exceeding 70% of the PRP, typical peak demand 100% of prime-rated kWe with 10% overload capability for emergency use for a maximum of 1 hour in 12.

ESP: EMERGENCY STANDBY POWER

The maximum power available during a variable electrical power sequence for up to 500 hours of operation per year. The permissible average power output over 24 hours of operation shall not exceed 85% of ESP power. Overload = not available.

Power definition according to ISO 8528.01

MTU

Genset model	Model	50 Hz - 1500 rpm kVA PRP	50 Hz - 1500 rpm kVA ESP	50 Hz - 1500 rpm kWe PRP	50 Hz - 1500 rpm kWe ESP	60 Hz - 1800 rpm kVA PRP	60 Hz - 1800 rpm kVA ESP	60 Hz - 1800 rpm kWe PRP	60 Hz - 1800 rpm kWe ESP
MT 650	12 - 16 - 18 V2000	650	715	520	572	790	869	632	695
MT 780		780	858	624	686	910	1000	728	800
MT 900		900	1000	720	800	1030	1130	824	904
MT 1000		1000	1100	800	880	1075	1290	860	1032
MT 1100		1100	1210	880	968	1250	1430	1000	1144
MT 1400	12 - 16 - 20 V4000	1400	1540	1120	1232	n.a.	n.a.	n.a.	n.a.
MT 1600		1680	1840	1344	1472	1805	1986	1444	1589
MT 1800		1860	2040	1488	1632	2080	2268	1664	1814
MT 2100		2120	2340	1696	1872	2400	2639	1920	2111
MT 2300		2320	2560	1856	2048	2720	2978	2176	2382
MT 2600		2600	2860	2080	2288	2980	3253	2384	2602
MT 2800		2860	3160	2288	2528	3280	3579	2624	2863
MT 3000		3060	3380	2448	2704	3600	3932	2880	3146
OFFSHORE AND OIL RIG APPLICATION									
MT 1250	12 - 16 -20 V4000	n.a.	n.a.	n.a.	n.a.	1250	1375	1000	1100
MT 1600	P63 - 83	n.a.	n.a.	n.a.	n.a.	1600	1760	1280	1408
MT 1800		1800	1980	1440	1584	1950	2145	1560	1716
MT 2400		2400	2640	1920	2112	2600	2860	2080	1188
MT 3000		3000	3300	2400	2640	3300	3630	2640	2904

GENERAL ELECTRIC TRANSPORTATION

GE Transportation

Genset model	Model	50 Hz - 1000 rpm kVA PRP	50 Hz - 1000 rpm kVA ESP	50 Hz - 1000 rpm kWe PRP	50 Hz - 1000 rpm kWe ESP	60 Hz - 900 rpm kVA PRP	60 Hz - 900 rpm kVA ESP	60 Hz - 900 rpm kWe PRP	60 Hz - 900 rpm kWe ESP
GE 1900	8/12/16V228	1918	2263	1534	1810	1725	2038	1380	1630
GE 2600		2876	3399	2301	2719	2589	3056	2071	2445
GE 3500		3855	4555	3084	3644	3469	4099	2775	3279
GE 3650	12/16V250	4016	4748	3213	3798	3616	4274	2893	3419
GE 4850		5359	6331	4287	5065	4819	5695	3855	4556

CUMMINS

Genset model	Model	50 Hz - 1500 rpm kVA PRP	50 Hz - 1500 rpm kVA ESP	50 Hz - 1500 rpm kWe PRP	50 Hz - 1500 rpm kWe ESP	60 Hz - 1800 rpm kVA PRP	60 Hz - 1800 rpm kVA ESP	60 Hz - 1800 rpm kWe PRP	60 Hz - 1800 rpm kWe ESP
CW 800	QSK 23G3	810	891	648	713	909	1000	727	800
CW 900	QST30 / KTA38	910	1001	728	801	1029	1132	823	906
CW 1000		1000	1100	800	880	1138	1252	910	1001
CW 1260	KTA50	1275	1403	1020	1122	1418	1560	1134	1248
CW 1400		1400	1540	1120	1232	1619	1781	1295	1425
CW 1875	QSK60	1875	2063	1500	1650	n.a.	n.a.	n.a.	n.a.
CW 2030		2034	2237	1627	1790	2281	2509	1825	2007
CW 2750	QSK 78G8 / G9	2750	3025	2200	2420	3125	3438	2500	2750

PERKINS

Genset model	Model	50 Hz - 1500 rpm kVA PRP	50 Hz - 1500 rpm kVA ESP	50 Hz - 1500 rpm kWe PRP	50 Hz - 1500 rpm kWe ESP	60 Hz - 1800 rpm kVA PRP	60 Hz - 1800 rpm kVA ESP	60 Hz - 1800 rpm kWe PRP	60 Hz - 1800 rpm kWe ESP
PW 750	4006	750	825	600	660	750	825	600	660
PW 800		800	900	640	720	845	940	676	752
PW 850	4008	850	935	680	748	845	930	676	744
PW 900		900	1000	720	800	885	975	708	780
PW 1000		1000	1100	800	880	995	1095	796	876
PW 1250	4012	1250	1385	1000	1108	1250	1375	1000	1100
PW 1350		1350	1500	1080	1200	1365	1500	1092	1200
PW 1500		1500	1650	1200	1320	1510	1665	1208	1332
PW 1700		1710	1875	1368	1500	1710	1875	1368	1500
PW 1850	4016	1850	2000	1480	1600	n.a.			
PW 2000		2000	2250	1600	1800				
PW 2250		2250	2500	1800	2000				

Ratings according to power factor Cos φ 0.8.

Gas engine generating sets range

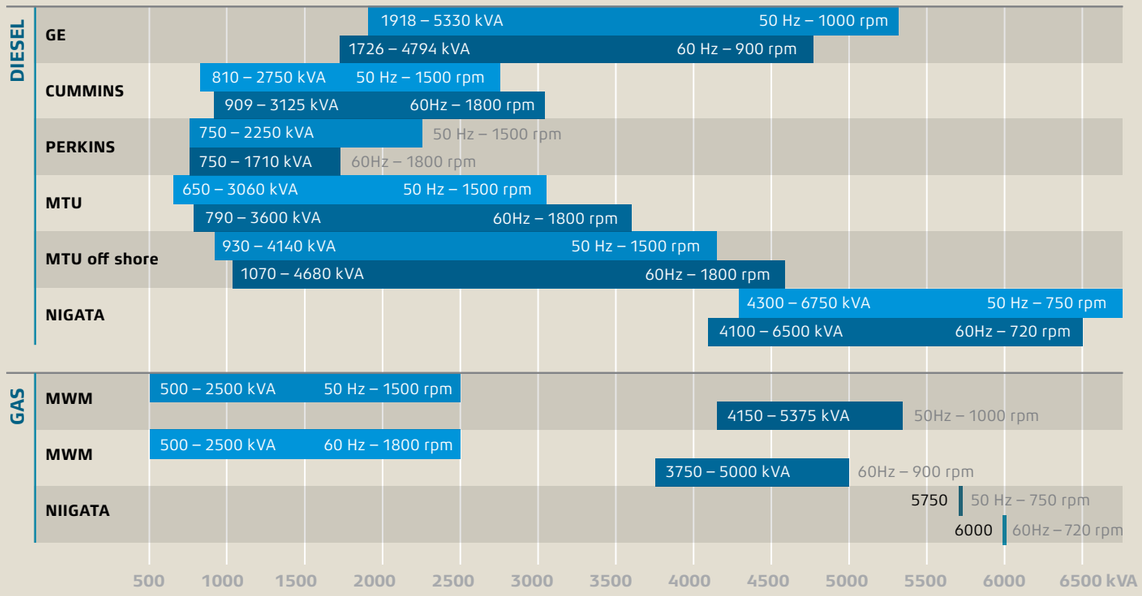
MWM

Genset model	50 Hz kVA COP	50 Hz kWe COP	50 Hz rpm	60 Hz kVA COP	60 Hz kWe COP	60 Hz rpm
TCG 2016 V8C	500	400	1500	500	400	1800
TCG 2016 V12C	750	600	1500	750	600	1800
TCG 2016 V16C	1000	800	1500	1000	800	1800
TCG 2020 V12K	1400	1120	1500	1400	1120	1800
TCG 2020 V12	1500	1200	1500	1500	1200	1800
TCG 2020 V16K	1875	1500	1500	1875	1500	1800
TCG 2020 V16	1950	1560	1500	1950	1560	1800
TCG 2020 V20	2500	2000	1500	2500	2000	1800
TCG 2032 V12	4150	3320	1000	3750	3000	900
TCG 2032 V16	5375	4300	1000	5000	4000	900

COP: CONTINUOUS POWER
The maximum power continuously delivered to a constant electrical load when operated for an unlimited number of hours per year.

Power definition according to ISO 8528.01
Ratings according to power factor Cos φ 0.8.

Power range overview



Integrated control system

Application area: production plants, industrial plants, offshore plants, refineries. Scada system composed by one or more PLCs for control and PC Scada and/or HMI for operator interface. There is a communication network between the PLC and the PC-Scada. The system supports and manages different kinds of networks and protocols, such as: Ethernet / TCP-IP / Profibus / Modbus / Control Net.

- Ethernet
- TCP-IP
- Profibus
- Modbus
- Control Net

Other options include:
- redundant (hot back-up) or single CPU
- redundant (hot back-up) or single data network
- field network for local device (remote in-out / sensors /inverters/field device)

The complete system can be controlled from remote through web access.

- redundant (hot back-up) or single CPU
- redundant (hot back-up) or single data network
- field network for local device

High performance test benches

› 2 sound attenuated test rooms, up to 5,000 kWe each

› 1 test room with 3 test benches of 2,000 kWe (total)

› 1 mobile resistive load bank, power up to 5,000 kWe with load steps of 1 kWe

› 1 mobile resistive load bank power up to 5,000 kWe with 30% of reactive power

› 1 fixed resistive load bank power up to 2,000 kWe

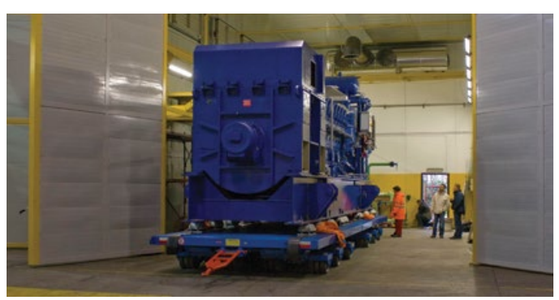
› 2 x 6 m3 mobile fuel tanks, with facility to test fuel consumption

› 3 x 80 Ton low bed trailers with six steering axis

› 1 x 40 Ton low bed trailer with six steering axis

› 2 overhead travelling cranes of 30 Ton each; maximum combined lifting capacity 60 Ton

› Capability to test generating sets at different voltage from 400 to 15000 V



Service & maintenance

a qualified service team

competence

Thanks to our highly-specialised technicians we can assist efficiently and competently our customers throughout the world.

commissioning & start-up

supervision

We can provide supervision during installation of the gensets, as well as commissioning, start-up and on-site tests.

training on-site

know-how

We provide our customers with dedicated training courses, so as to give them all the know-how required for the safe and autonomous use of the generating set.

preventive maintenance and overhaul

reliability

We offer customized maintenance plans with OEM parts to maintain the efficiency and reliability of the generating set throughout its operational life.

Technical support and reliable assistance
Intergen can rely on a worldwide assistance network that provides for technical assistance and routine tests and inspections. All the systems are inspected in-house, and Intergen can assure installation and commissioning of complete systems by its own specialised technicians. The customer service is staffed by highly-qualified specialists and offers training courses for the personnel operating on the sites. It also offers flexible maintenance contracts tailored on customer's needs, thus ensuring the reliability of the installed systems.

The experience accrued over the years, the customer centrality and the service-oriented approach make Intergen the ideal partner for achieving the best technical and economic results in designing and realising power production systems. Intergen can also offer a wide range of immediately available spare parts, managed through a software system that ensures the dispatch of most orders within 24 hours.

- worldwide network
- immediate delivery

Major references

1 **Blackstart Power Station**
2 x 4850 kVA
Koniambo, New Caledonia

2 **Blackstart Power Station**
2 x 4850 kVA
El Merk, Algeria

3 **Gas Base Load Power Station**
3 x 1675 kVA
KivuWatt Kigali, Rwanda

4 **Black Start Power Station**
3 x 6250 kVA
Luanda power plant, Angola

5 **Gas & Diesel Gensets**
1 x 1625 kVA
Bokor Kuala Lumpur, Malaysia

6 **Emergency Diesel Gensets**
2 x 3125 kVA
Saudi Aramco, Wasit, Saudi Arabia

7 **Blackstart Power Station**
3 x 2500 kVA
Badra, Iraq

8 **Blackstart Power Station**
2 x 4450 kVA
Yoloten, Turkmenistan

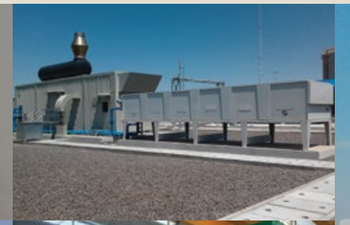
9 **Base Load Power Station**
2 x 5000 kVA
Transnet, South Africa

10 **Blackstart Power Station**
2 x 3000 kVA
UTE Termocentro, Venezuela







our products in figures

54 countries

260+ installed plants

1100+ generating sets

1400+ MVA installed power

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THE ENERGY GENERATION

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