



KAZANCI HOLDİNG

AKSA



AKSA
DATA CENTER
SOLUTIONS



KAZANCI HOLDING

aksa ENERGY

- Largest IPP in Turkey
- 1.946 MW operational capacity in 2 continent, 6 countries
- Recently signed a 740 MW contract in Uzbekistan
- Listed in Istanbul Stock Exchange

aksa ELECTRICITY

- Electricity supply services to 9 provinces and 101 districts
- Electricity supply to 4 million population in license regions
- Electricity sales service in 81 provinces
- 11.2 TWh sales volume
- 2.4 million subscribers

aksa NATURAL GAS

- 7.9 bcm of gas distribution and transportation volume
- Largest private natural gas distribution company in Turkey with 21 Licenses Dist. 27 city center and 135 district
- Over 3.3 million customers

aksa POWER GENERATION

- Market leader in Turkey and top 5 company in global generator sector
- Production sites in Turkey and China, Assembly Lines & Trade Centers in the USA and the Netherlands
- World's largest genset manufacturing capacity in China factory
- Selling to 173 countries

aksa AGRICULTURE

aksa TOURISM

Kazancı Holding is a global key player in energy, electricity, natural gas, power generation, agriculture and tourism industries.

Revenue : \$ 3.22 billion and 8.000+ employees globally



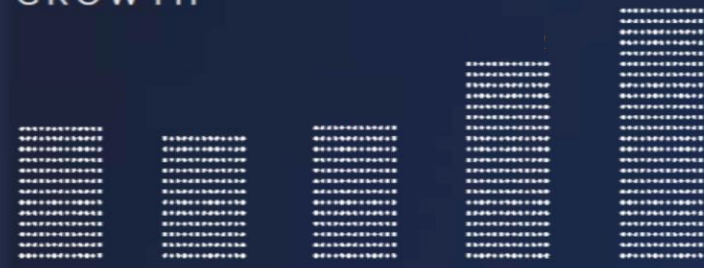
KAZANCI HOLDING

Financial Snapshot

REVENUES (\$ MILLION)

28%
GROWTH

3,227



2015 2016 2017 2018 **2019**

EARNINGS BEFORE INTEREST, TAXES, DEPRECIATION AND AMORTIZATION (EBITDA) (\$ MILLION)

30%
GROWTH

610



2015 2016 2017 2018 **2019**

ASSETS (\$ MILLION)

25%
GROWTH

2,921



2015 2016 2017 2018 **2019**

GROSS PROFIT (\$ MILLION)

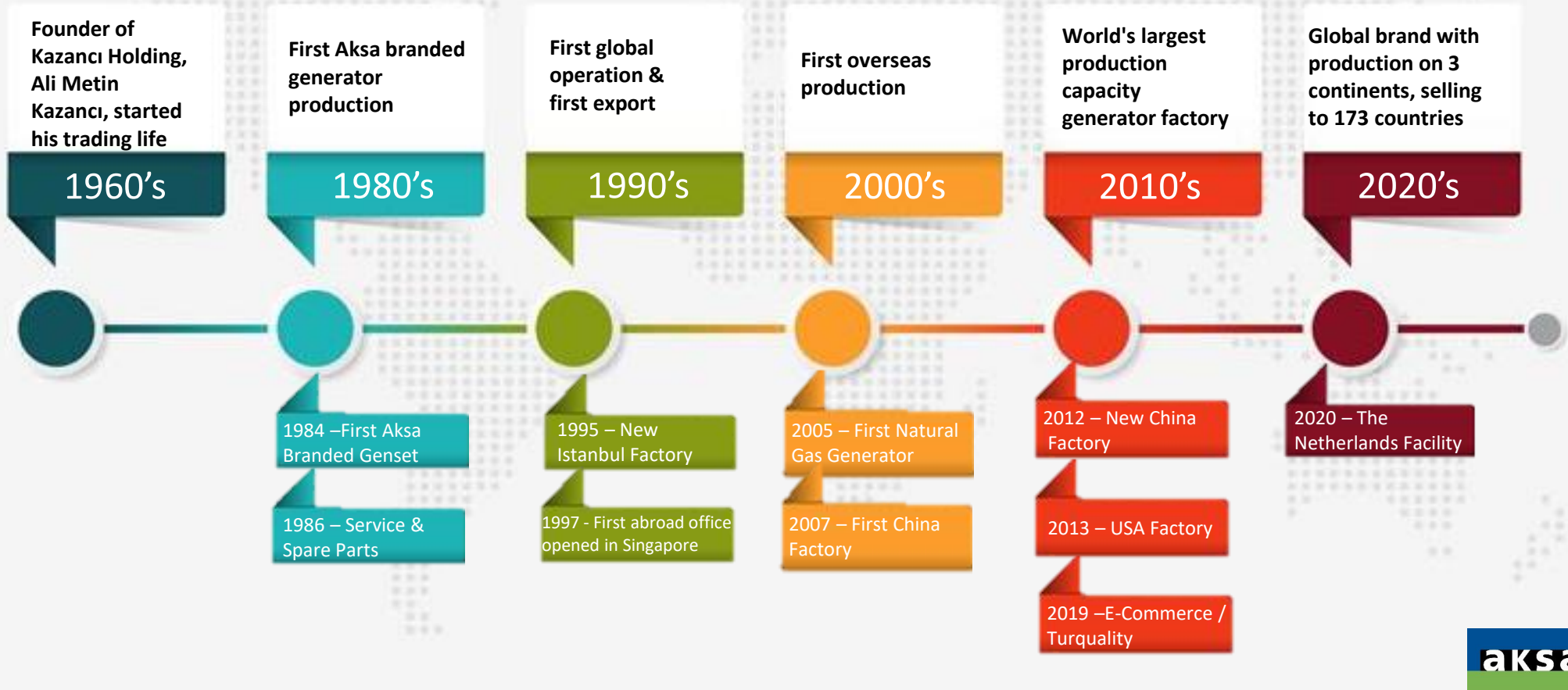
28%
GROWTH

535



2015 2016 2017 2018 **2019**

Milestone



Aksa Global



- 23 Locations in Turkey & 24 Locations Abroad
- 4 Production Facilities on 3 Continents
- Selling to 173 Countries
- \$ 300 M Yearly Total Turnover

Turkey (23)	China (3)	South Africa (1)	Vietnam (1)
USA (3)	Singapore (1)	Uzbekistan (1)	Kenya (1)
Netherlands (1)	Ghana (2)	Sudan (1)	Dubai (2)
UK (1)	Algeria (1)	Kazakhstan (2)	Iraq (1)
Russia (2)	Indonesia (1)		




Total: 120.000 m² 
World's Largest
Production Capacity in
Changzhou, China

16 Test Rooms

Range of 4 - 3.125 kVA



21.000 m² 
Closed Production Area in
Istanbul, Turkey

3x Capacity Increase
with New Factory
(Q2 2021)

Range of 11-3.500 kVA




3.000 m² 
Closed Production Area in
Louisiana, USA

**Production for
North America
with Tailor-Made
Production Capability**

**Range of 10-2.500 kW
with 60 Hz**






4.200 m² 
Closed Production Area in
Rotterdam, the Netherlands

European Origin
Products

Range of 11-3.125 kVA



2.000 m² 
Trade Center in
Leicester, UK

Established in 1998

Special projects
development
capability w/ strategic
partners





27.000 m² 
Closed Production Area in
Cerkezkoy-Tekirdag, Turkey

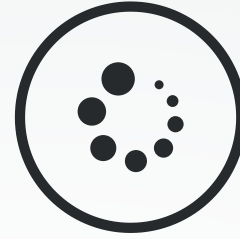
Opening in
April 2021



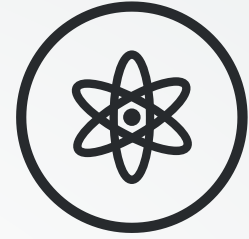
Competitive Advantages



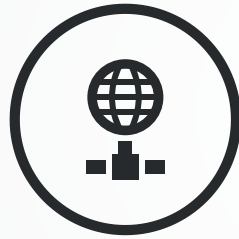
Price Accessibility



Large Variety of Engine Brands



Deep Know-How of Synchronized Gensets



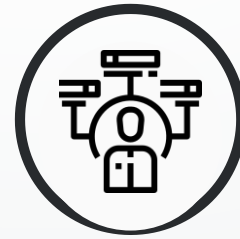
Widespread Rental & After Sales Services



Short Lead Time



Globally 19 Offices
100+ Distributors



Enriched Global Product Portfolio
Tailor-Made Solutions

Suppliers



(15-2500 kVA)



(55-3.125 kVA)



(220-825 kVA)

Cummins **Onan**

(4-85 kW)



(275-700 kVA)



JOHN DEERE
(33-275 kVA)



MITSUBISHI
MOTORS
(825-2500 kVA)



(28-62 kVA)



(40-200 kVA)





Diesel Generating Sets

Portable Generating Sets

Natural Gas Generating Sets

Marin Generating Sets

Lighting Towers

Accesorries & More

Mobile Products

Industry - Specific Solutions

Hybrid



Hybrid Solutions



Cogeneration Solutions



Solar & Energy Storage Solutions



SPECIAL PRODUCTS



Natural Gas Gensets

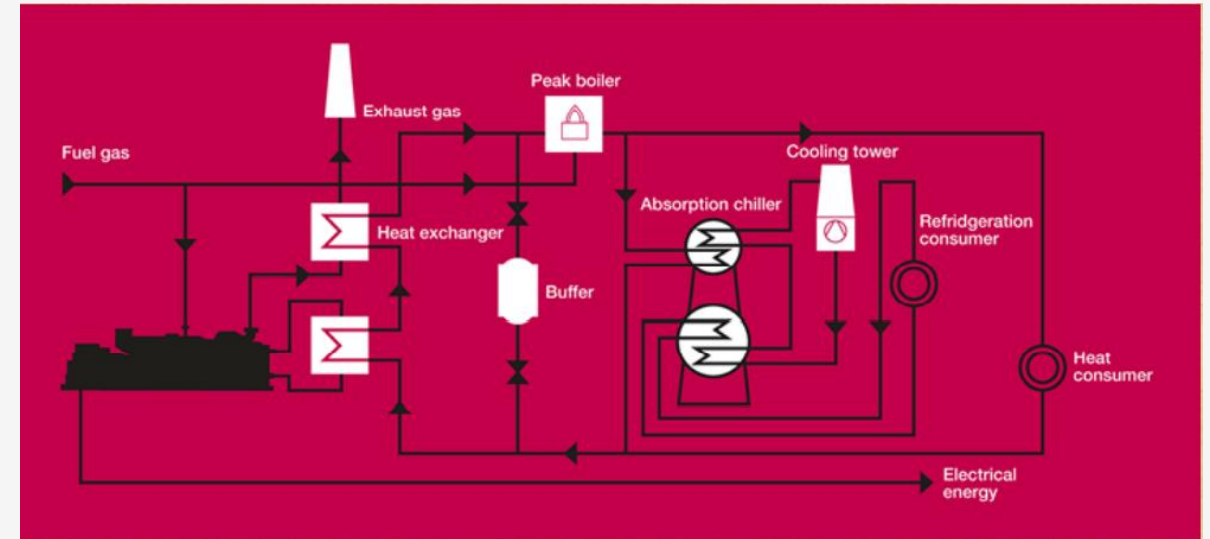


Rental Pack



Twin Power

AKSA Cogeneration (CHP) & Trigeneration (CCHP) Solutions



- Onsite, high efficiency production of electricity and heat (**40% to 60% total savings**)
- Reduced fuel and energy costs
- Lower electricity usage during peak summer demand
- Engine heat can be used to produce steam or hot water for onsite use
- Reduction in emissions compared to conventional electrical generators and onsite boilers, supporting sustainable transformation in the industry
- No harmful chemical pollutants since water is used as the refrigerant

AKSA Cogeneration (CHP) & Trigeneration (CCHP) Solutions



ACG 2000



Model: ACG 2000
 Frequency: 50 Hz
 Fuel Type: Pipeline Natural Gas
 Emissions Performance NOx: 500 mg/Nm³
 LT Water Inlet Temperature: 50°C (122°F)
 HT Water Outlet Temp: 90°C (194°F)
 Ambient Temperature Capability: ≤ 40 °C (104 °F)



Fuel Consumption (ISO3046/1)

	See Note	100% of Rated Load	90% of Rated Load	75% of Rated Load	50% of Rated Load
Fuel Consumption (LHV) ISO3046/1, kW (MMBTU/hr)	2,3,5,8	4530 (15.47)	4106 (14.02)	3492 (11.93)	2458 (8.39)
Electrical Efficiency ISO3046/1, percent	2,5,8,10	44.2%	43.8%	43.0%	40.7%
Thermal Efficiency ISO3046/1, percent	2,5,8,17	45.9%	46.0%	46.7%	48.5%

Aksa Power Generation – Data Center Solutions



[Please click for the Aksa Data Center Solutions Video:](https://youtu.be/E_qgmlaHxgo)
https://youtu.be/E_qgmlaHxgo

Case Study – The Bunker - Cyberforth Group Data Center – Kent / UK, 2020



Akxa Power Generation Europe

734 followers

2w • Edited •

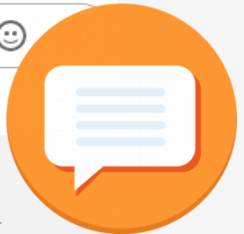
One more signature #datacenter project from Akxa Europe! ⚡🌍
One of the most important datacenters of England preferred Akxa Power Generation solutions for their new investment of 2,1 MW capacity. Project has been ...see more



67 · 9 comments



Add a comment...



Most relevant ▾



Michael Watts · 1st

HV SAP, MIET, Director of Group Infrastructure (Cyberfort) at The Bunker

These units are taking pride of place, as a key part of our power infrastructure assisting in securing the continuity of our services, adding layers of resilience to the power infrastructure at our Ash (Kent) facility of **The Bunker** (part of **Cyberfort Group**). These units were built to a custom specification and design that meets our needs and exceeds our expectations.

Massive thanks to the team **Akxa Power Generation Europe** and the specialists from **Power Control and Automation Solutions Limited (PCAS)** for an awesome package and end to end solution.

Like · 3 | Reply · 1 Reply



Akxa Power Generation Europe **Author**

734 followers

1w ...

Great to hear, We are always at your services :)

Like · 1 | Reply



UMAIR ARSHAD · 3rd+

Bank Alfalah Limited

4d ...

Skid type sound proof canopy. May be around
Sound level 65 dB(A) at x 1m.

Like | Reply · 1 Reply



Michael Watts · 1st

HV SAP, MIET, Director of Group Infrastructure (Cyberfort) at The ...

4d ...

With additional bund underneath.
I think you might correct with the sound can't remember spec, but was customised to suit.

Like · 1 | Reply

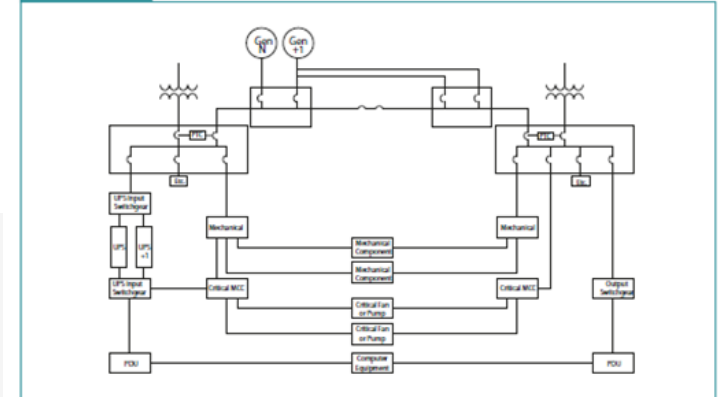


Case Study – The Bunker - Cyberforth Group Data Center – Kent / UK, 2020



- 3 x AC700- 50 Hz
- 638 kVA DCC power
- Engine: Cummins VTA28G5 Engine
- Alternator: Stamford HCI544F (UK)
- Coupled Radiator Cooling System
- Synchronized ComAp Intelligen NT controller system

Tier III



Capacity	N+1
Distribution Paths	1 Active, 1 Alternate
Concurrently Maintainable	Yes
Fault Tolerant	No



Cummins DCC



Gen-Set Models	Power		Model	Alternator Model
	Standby (kVA)	DCC (kVA)		
AC 550	550	500	QSX15-G8	HCI544C
AC 700	700	638	VTA28-G5	HCI544F
AC 880	880	800	QSK23G3	HCI634G
AC 1100 K	1100	1000	KTA38-G5	HCI634J
AC 1410	1410	1280	KTA50-G3	PI734B1
AC1650	1650	1400	KTA50-G8	PI734C
AC1675	1675	1500	KTA50-G88	PI734C1
AC1700	1700	1540	QSK50-G4	PI734C1
AC1815	1815	1650	QSK50-G7	PI734D
AC2000	2000	1875	QSK60-G3	PI734E
AC 2250	2250	2045	QSK60-G4	PI734F1
AC 2500	2500	2250	QSK60-G8	PI734H
AC 2750	2750	2500	QSK60-G22	LVS1804S
AC 3000	3000	2750	QSK78-G9	LVS1804S

Case Study – Istanbul Grand Airport Data Center, 2019



Istanbul Airport 

- A total package of 46 x AP2500 including 2 x AP2500 DCC 1800 kVA for Data Center
- Uptime Tier III design and facility certified Hot Redundant system
- Dead Bus Synchronization in 9 seconds ready for first step load
- Engine: Perkins 4016-61TRG3 Engine (UK)
- Alternator: Mecc Alte ECO46–1,5L/4 series (Italy)
- Remote Radiator Cooling Systems (50 degrees ATB)
- Synchronization module Woodward 3500 controller

Case Study – Saudi Electricity Data Center Project, Riyadh / Saudi Arabia, 2018



- 4 x AC3150-6 (1800 rpm, 60 Hz, 400/230V) for Data Center only
- 3438 kVA Standby, 3125 kVA Prime power
- Engine: Cummins QSK78G8 Engine, (UK)
- Alternator: Stamford LVS1804S WDG 13 (UK) double bearing alternator
- Remote Radiator Cooling Systems (50 degrees ATB)
- Synchronized, Redundant Woodward 3500 controller system

Other Data Center Projects in 2020: Kazakhstan Army Data Center Project

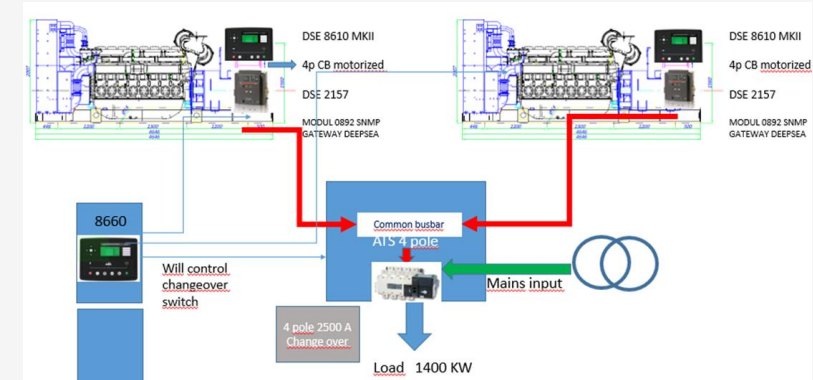


- 2 x AD580, 3 x AD630, 6 X AD825, 2 x AP880
- Engine: Doosan & Perkins engines
- Alternator: Meccalte 50 Hz
- Special design Radiator Cooling Systems
- Woodward controller system
- Certified by Kazakhstan quality standards

Other Data Center Projects in 2020: A1 Telekom Austria Group Data Center, North Macedonia



- 2 x AP1250
- Engine: Perkins (UK) engines
- Alternator: Meccalte 50 Hz
- Standard Radiator Cooling Systems
- Synchronization w/ Deep Sea 8610 controller modules



Uptime Institute



Aksa is committed to providing the most effective solutions to the Data Center industry with its engineering, manufacturing, distribution and customer-oriented experience and knowledge. We are constantly improving designs, products and infrastructure to provide the highest level of reliability for Emergency Power Systems. While serving the industry in hundreds of countries globally, we design our products and systems in line with the needs of Data Center at the core of our focus.

Aksa provides reliability and ideal performance for Data Centers. **All manufactured products are tested according to Uptime Institute's Tier Standards and factory manufacturing tests are carried out.**



Global Certificates



ISO 14001:2015



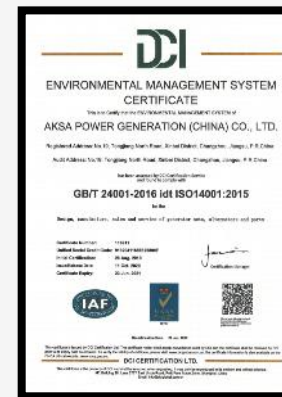
ISO 45001:2018



ISO 9001 : 2015



TSE ISO 8528-8



ISO 14001

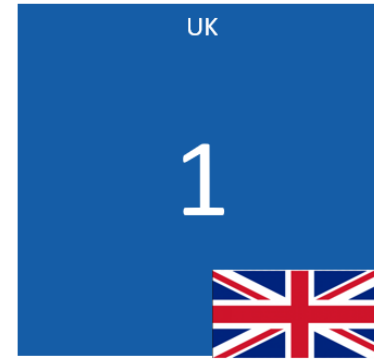


ISO/IEC 27001:2013

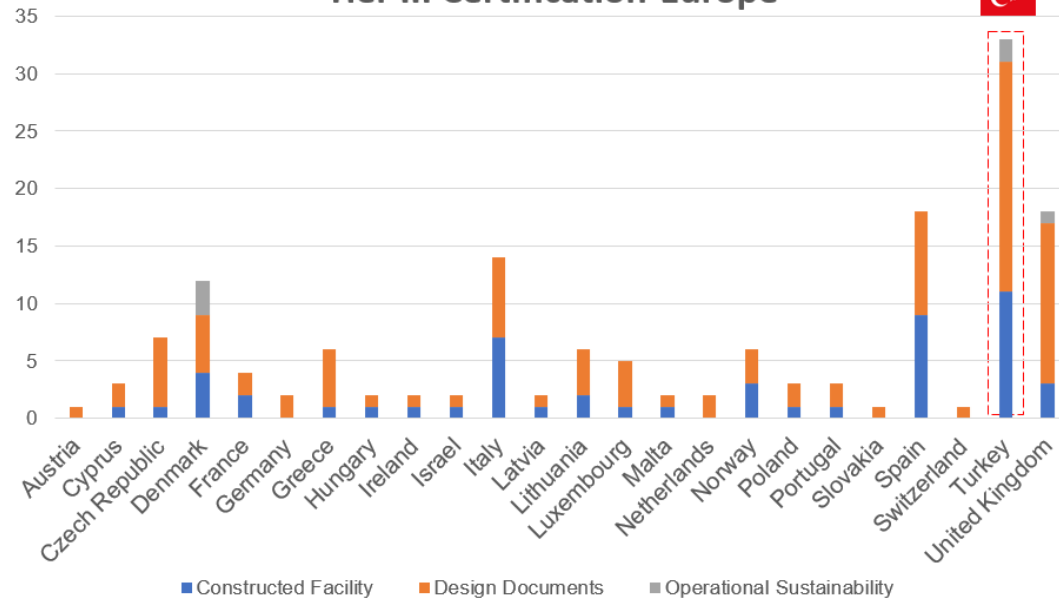


ISO/IEC Standards

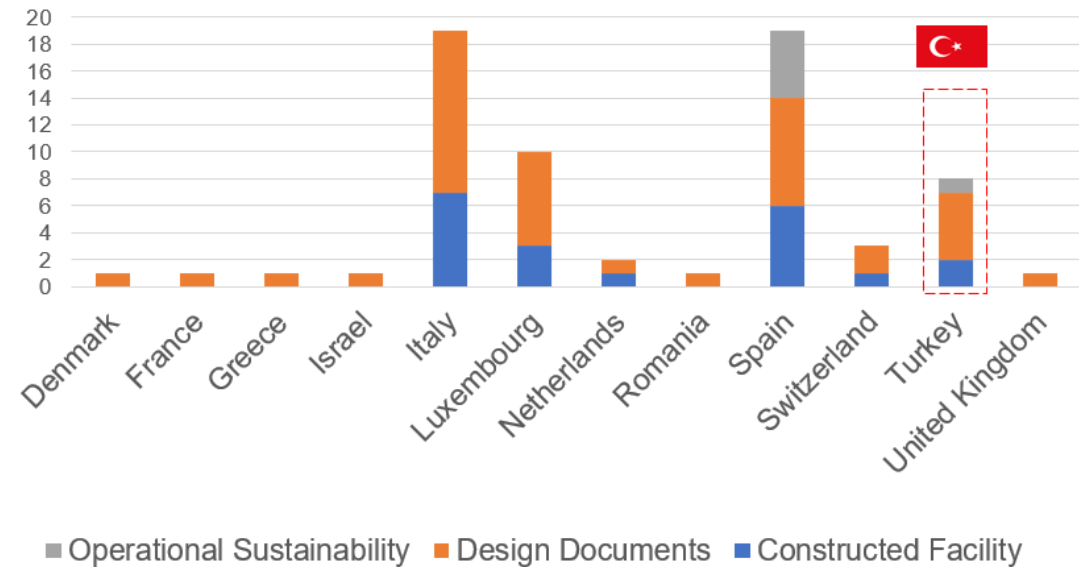
Uptime Projects in Turkey



Tier III Certification-Europe



Tier IV Certification - Europe



Aksa Power Generation – Data Center Solutions



Uptime Tier III and Tier IV
Compliance for Tailor Made
Solutions



7/24 Service



Radiator and Cooling Solutions Suitable for
Working at High Ambient Temperature (i.e.
Remote Radiator & Heat Exchangers)



Remote Monitoring System



Synchronization



Super Silent



High Capacity Fuel Tanks



Fire Detection and
Extinguishing System



Advantages of Aksa Power Generation

- Aksa Remote Monitoring solutions
- Project specific solutions and options
- Long-term cooperation with professional service and periodic maintenance
- Strong R&D team that can produce alternative energy solutions in special projects
- 7/24 service to emergency situations
- On-site maintenance service
- Well trained engineers who can speak local languages

Data Center Specific Solutions offer Robustness and Easy Maintenance

aksa POWER GENERATION

AC2250



INTRODUCTION

Aksa is committed to providing the most effective solution to the Data Center industry with the power it takes from engineering, production, distribution, and customer-oriented experience and knowledge. We are constantly improving designs, products and infrastructure to offer the highest level of reliability for Emergency Power Systems. While serving the industry in hundreds of countries Globally, we design our products and systems in line with the needs of Data Center practitioners at the center of our focus. Aksa generator group provides continuity, reliability and ideal performance for Data Centers.

General Characteristics

Model Name	AC2250
Frequency (Hz)	50
Fuel Type	Diesel
Engine Made and Model	CUMMINS QSK60-G4
Alternator Made and Model	PI734F
Control Panel Model	InteliGen NT

ENGINE SPECIFICATIONS

Engine	CUMMINS
Engine Model	QSK60-G4
Number of Cylinder (L)	16 cylinders - V type
Bore (mm.)	159
Stroke (mm.)	190

Power (kVA)

3 Phase, 50 Hz, PF 0.8

VOLTAGE	STANDBY RATING (ESP)		DCC RATING		DCC Amper
	kW	kVA	kW	kVA	
400/231	1800,00	2250,00	1600,00	2000,00	2886,83

Data Center Continuous (DCC) The maximum power which a generating set is capable of delivering while supplying a variable or continuous electrical load and during unlimited run hours. Depending on the sites to supply and the availability of utility.

DCC: Data Center Continuous Power ratings, as defined, meet the Uptime Institute Tier III and IV requirements as detailed in the Uptime Institute Tier Standards: Topology. The power ratings of Standby and DCC data, given above have been identified according to conditions of 100kPa barometric pressure (110m. altitude), 25 C ambient temperature.

*Data tolerance %± 5.

Data Center Power Generator Models



Cummins



Gen.Set Model 50 Hz	Power		Engine Model	Alternator Model
	Standby Power (kVA)	DCC Power (kVA)		
AC 550	550	500	QSX15-G8	ECO403S4B
AC 700	700	638	VTA28-G5	ECO40-2L4B
AC 880	880	800	QSK23-G3	HCI634G
AC 1100	1100	1000	QST30-G4	ECO43 1M4
AC 1101	1100	1000	QST30-G4	HCI634J
AC 1100K	1100	1000	KTA38-G5	HCI634J
AC 1410	1410	1270	KTA50-G3	ECO43 2L4
AC 1411	1410	1260	KTA50-G3	PI734B
AC 1650	1650	1400	KTA50-G8	PI734C
AC 1700	1700	1540	QSK50-G4	PI734C
AC 1815	1815	1650	QSK50-G7	PI734D
AC 2000	2000	1875	QSK60-G3	PI734E
AC 2250	2250	2000	QSK60-G4	PI734F1
AC 2500	2500	2250	QSK60-G8	PI734H
AC 2750	2750	2500	QSK60-G22	S7L1D-J
AC 3000	2900	2625	QSK78-G9	LVS1804S

Data Center Power Generator Models



Cummins



Gen.Set Model 60 Hz	Power		Engine Model	Alternator Model
	Standby Power (kVA)	DCC Power (kVA)		
AC 500-6	500	450	QSX15-G6	HCI544C
AC 626-6	626	560	QSX15-G9	HCI544E
AC 750-6	750	680	VTA28-G5	HCI544F
AC 1013-6	1013	915	QSK23-G3	HCI634G
AC 1149-6	1149	1035	QST30-G3	HCI634J
AC 1269-6	1269	1145	QST30-G4	HCI634J
AC 1575-6	1575	1385	KTA50-G3	PI734B1
AC 1894-6	1894	1580	KTA50-G9	PI734C
AC 2500-6	2500	2250	QSK60-G6	PI734F
AC 3438-6	3438	3125	QSK78-G8	LVSI804S

Data Center Power Generator Models



Perkins



Gen.Set Model 50 Hz	Power		Engine Model	Alternator Model
	Standby Power (kVA)	DCC Power (kVA)		
AP 1400	1400	1265	4012-46TWG2A	ECO43 2L4
AP 1380	1380	1255	4012-46TWG2A	PI734A
AP 1650	1650	1500	4012-46TAG2A	ECO46 1S4
AP 1651	1650	1500	4012-46TAG2A	PI734C
AP 1875	1875	1705	4012-46TAG3A	ECO46 2S4
AP 1876	1875	1705	4012-46TAG3A	PI734E
AP 2000	2000	1850	4016-61TRG1	ECO46 1L4
AP 2001	2000	1850	4016-61TRG1	PI734E
AP 2250	2250	2000	4016-61TRG2	ECO46 1L4
AP 2251	2250	2000	4016-61TRG2	PI734F
AP 2500	2500	2250	4016-61TRG3	ECO46 1.5L4
AP 2501	2500	2250	4016-61TRG3	PI734H

Data Center Power Generator Models

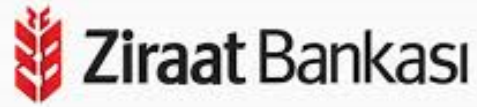


Perkins



Gen.Set Model 60 Hz	Power		Engine Model	Alternator Model
	Standby Power (kVA)	DCC Power (kVA)		
AP 1400-6	1400	1270	4012-46TWG2A	PI734A
AP 1380-6	1380	1250	4012-46TWG2A	ECO43 2L4A
AP 1670-6	1670	1520	4012-46TAG2A	PI734C
AP 1680-6	1680	1530	4012-46TAG2A	ECO46 1S4A
AP 1904-6	1904	1735	4012-46TAG3A	PI734E
AP 1913-6	1913	1740	4012-46TAG3A	ECO46 2S4A

AKSA Data Center Solutions Global References





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GENERATION

THANK YOU

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