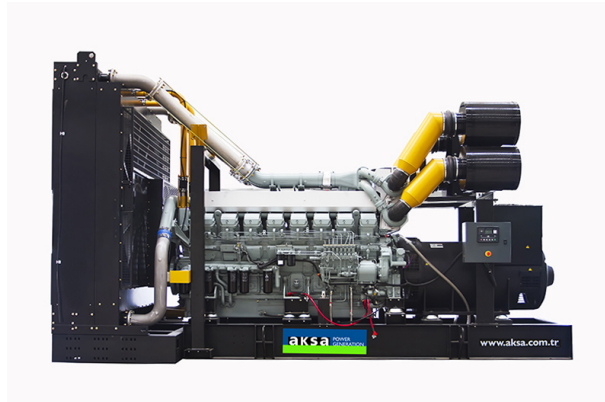




## مقدمة

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.

## القوة

3 Phase, 50 Hz, PF 0.8

| الجهد (فولت) | الطاقة الاحتياطية (ESP) |      | تصنيف DCC (DCP) |      | DCC تيار (أ) |
|--------------|-------------------------|------|-----------------|------|--------------|
|              | kW                      | kVA  | kW              | kVA  |              |
| 400 / 231    | 1800,0                  | 2250 | 1600.00         | 2000 | 3248         |

مركز البيانات المستمر (DCC) أقصى قدرة يمكن لمجموعة توليد توفيرها أثناء توفير تيار كهربائي متغير أو مستمر وخلال ساعات تشغيل غير محدودة. يعتمد ذلك على المواقع التي يتعين تزويدها وتوفر الخدمات العامة.

الواردة DCC، كما هو مفصل في معايير معهد الوقت التشغيل: الهيكل. تم التعرف على تصنيفات الطاقة للبيانات الاحتياطية و IV و III تلي تصنيفات الطاقة لمركز البيانات المستمر، كما هو محدد، متطلبات معهد الوقت التشغيل المستوى: DCC "أعلاه، وفقاً لطروف الضغط الجوي بمعدل 100 كيلوباسكال (ارتفاع 110 متراً) ودرجة حرارة الجو بمعدل 25 درجة مئوية. \* نسبة التسامح للبيانات -5 %

## الخصائص العامة

|                     |                         |
|---------------------|-------------------------|
| اسم الموديل         | APD 2250 M              |
| التردد (هرتز)       | 50                      |
| نوع الوقود          | Diesel                  |
| نوع المحرك وطرازه   | Mitsubishi S16R-PTAA2   |
| نوع المولد والموديل | Mecc Alte ECO 46-1L/4 A |
| نموذج لوحة التحكم   | InteliGen NT            |
| هيكل                | OpenGenset              |

## مواصفات المحرك

### بيانات عامة

|                |                       |
|----------------|-----------------------|
| المصنع         | Mitsubishi            |
| نوع المحرك     | S16R-PTAA2            |
| عدد الاسطوانات | 16 cylinders - V type |



|                                  |                                |
|----------------------------------|--------------------------------|
| تتحمل (مم)                       | 170                            |
| السكتة الدماغية (مم)             | 180                            |
| النزوح (لتر)                     | 65.37                          |
| نسبة الضغط                       | 14.0:1                         |
| سرعة المحرك (دورة في الدقيقة)    | 1500                           |
| الطاقة الاحتياطية (كيلوواط/حصان) | 1939/2599                      |
| DCC (PRP) تصنيف                  | 1728/2316                      |
| كتلة سخان الكمية                 | 2                              |
| قوة سخان الكتلة (وات)            | 3000                           |
| نظام التحكم                      | Electronic                     |
| مرشح الهواء                      | Dry Type                       |
| طموح                             | Turbo Charged and After Cooled |

#### نظام تشحيم

|                                            |     |
|--------------------------------------------|-----|
| سعة الزيت (لتر)                            | 230 |
| الحد الأعلى لدرجة حرارة الزيت (درجة مئوية) | 110 |

#### نظام الوقود

|                 |                            |
|-----------------|----------------------------|
| نوع الوقود      | Diesel                     |
| نوع ونظام الحقن | Direct                     |
| نوع مضخة الوقود | Mitsubishi PS8x2 (In-Line) |

#### النظام الكهربائي

|                             |         |
|-----------------------------|---------|
| جهد التشغيل                 | UNKNOWN |
| البطارية والسعة (الكمية/أه) | 4x143   |
| مولد الشحن (أمبير)          | 30      |

#### نظام التبريد

|               |              |
|---------------|--------------|
| طريقة التبريد | Water Cooled |
|               | 170          |

#### نظام العادم

|  |  |
|--|--|
|  |  |
|--|--|

#### المبرد

|                                            |      |
|--------------------------------------------|------|
| إجمالي سعة سائل التبريد (لتر)              | 413  |
| تدفق هواء مروحة التبريد (م³/دقيقة)         | 2500 |
| (Pa) الفيود الخارجية على تدفق هواء التبريد | 125  |

#### استهلاك الوقود



|                                            |       |
|--------------------------------------------|-------|
| كجم/س (ل/س) DCC استهلاك الوقود @100% حمولة | 403.8 |
| كجم/س (ل/س) DCC استهلاك الوقود @75% حمولة  | 313.1 |
| كجم/س (ل/س) DCC استهلاك الوقود @50% حمولة  | 216.8 |

### خصائص المولد

|                                      |               |
|--------------------------------------|---------------|
| المصنع                               | Mecc Alte     |
| موديل المولد                         | ECO 46-1L/4 A |
| التردد (هرتز)                        | 50            |
| القوة (كيلوفولت أمبير)               | 2100          |
| الجهد (فولت)                         | 400           |
| المرحلة                              | 3             |
| منظم                                 | DER1          |
| تنظيم الجهد                          | 0.5           |
| نظام العزل                           | H             |
| الحماية                              | IP23          |
| معامل القوة المقدرة                  | 0.8           |
| وزن المولد الكامل (كيلوغرام)         | 3810          |
| هواء التبريد (م <sup>3</sup> /دقيقة) | 135           |

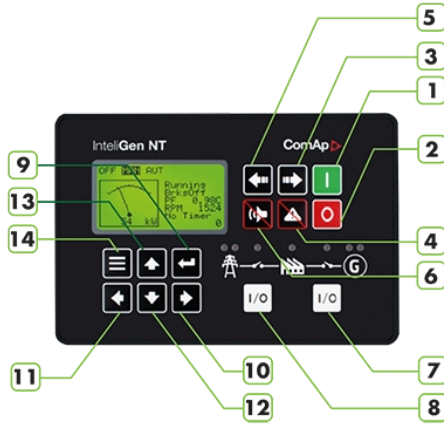
### أبعاد المولد (مفتوح)

|                  |       |
|------------------|-------|
| الطول (مم)       | 5700  |
| العرض (مم)       | 2192  |
| الارتفاع (مم)    | 3390  |
|                  | 14200 |
| سعة الخزان (لتر) | 2000  |

### لوحة التحكم

|                   |              |
|-------------------|--------------|
| المصنع            | Comap        |
| نموذج وحدة التحكم | InteliGen NT |
| منافذ الاتصال     | MODBUS       |

1. Start
2. Stop
3. Mode > OFF > MAN > AUT > TEST
4. Fault Reset
5. Mode < OFF < MAN < AUT < TEST
6. Horn Reset
7. GCB control (Open/Close)
8. MCB control (Open/Close)



9. Enter
10. 5% Increase of edited setpoint's value.
11. 5% decrease of edited setpoint's value.
12. Decrease setpoint value.
13. Increase setpoint value.
14. Escape.

### الأجهزة القياسية

IntelliGen NT Auto Mains Failure control module.  
Static battery charger.  
Emergency stop push button and fuses for control circuits.

### وحدة التحكم

195Vac to 264Vac input voltage range  
45Hz to 440Hz input supply frequency range  
Capability to work direct from 240Vdc to 365Vdc supply voltage  
27.6Vdc factory set DC out-put terminal voltage (option up to 29.4Vdc)  
5.0A dc continuous output current into load  
Capability to work continuously into short-circuit  
Parallel connection for higher output current rating and redundant operation  
Series connection capability for higher output voltage requirements  
No cooling fans are used for high operational reliability  
Aluminum alloy case for robust handling and easy mounting

### البناء والتشطيب

Components installed in a sheet steel enclosure.  
Phosphate chemical, pre-coating of steel provides corrosion resistant surface.  
Polyester composite powder topcoat forms high gloss and an extremely durable finish.  
Lockable hinged panel door provides for easy component access.

### تركيب

Control panel is mounted generating set baseframe on robust steel stand or power module. Located at the side of generating set with proper panel visibility.

### خيارات

- High oil temperature - Shutdown

### قائمة الامتثال للوحة التحكم



- Low fuel level - Shutdown
- Low fuel level - Alarm
- High fuel level - Alarm
- Customizable load control in parallel with the network
- Wide range of ECU support
- Highly configurable
- Timers, Internal PLC, Force values and more are compatible with ComAp's IntelliVision displays
- Active e-mail messaging and SMS with communication module

EN 60068-2-6 ed.2:2008  
EN 60068-2-27 ed.2:2010  
EN 60068-2-30:2005  
25/55°C, RH 95%, 48hours  
EN 60068-2-64  
EN 61010-1:2003

### شاحن بطارية ثابت

EBC 2405M is designed and optimized for charging all types of Lead Acid batteries (including jell type sealed Lead Acid batteries), protecting the battery and extending its useful lifetime. EBC 2405M can deliver a continuous charging current of 5A into 24V battery system (voltage is set to 27.6Vdc, with an option of up to 29.4Vdc). These battery chargers are designed with performance in mind and special care is taken for protecting and extending the lifetime of the battery.

EBC 2405M is designed with "Switched Mode" technology, where the switching transistor has only two states, ON or OFF, which increases the overall efficiency, hence reducing the excess heat dissipation and in return, increasing the device lifetime and reliability.

The control system is also designed in such a way that; battery is charged in three stages:

Constant current mode (protecting battery cells)

Constant voltage mode (reducing the charge current)

Float charge (compensation of internal self-discharge)

Constant current mode makes sure that; when the battery is drained down below its rated capacity, the high charge current flow into the battery is limited in order to protect the cells and reduce damage to the plates.

As the battery capacity is recovered, each cell voltage reaches up to 2.30Vdc to 2.45Vdc level, which means that the required charging current starts to reduce.

When the required battery terminal voltage is fully reached, the charger keeps supplying just enough current in order to compensate for the internal self-discharge (float charge). This ensures that the battery can maintain its high charge state and deliver its rated output current whenever required.

### المعدات القياسية

- Water cooled diesel engine
- Radiator and electrical motor driven fan
- Protective cage to prevent rotating and touching hot parts
- Output breaker



- Electric starter and charge alternator
- Battery (lead acid), cables and stand
- Automatic synchronization and power control system (multiple parallel generator)
- Circulation pump (for engine block heater)
- Engine block water heater
- Steel chassis and anti-vibration wedges
- Fuel tank separate from the group
- Flexible fuel connection hoses
- Alternator with single bearing and H insulation class
- Industrial capacity muffler and flexible steel compensator
- Electronic battery charger
- Operating and installation instructions

## معدات اختيارية

### محرك

- Fuel-Water Separator Filter
- Oil heater

### المولد

- Anti-Condensation Heater
- Over sized alternator
- PMG excitation + AVR
- Main line circuit breaker

### لوحة التحكم

- Automatic synchronising and power control system (Multi gen-set Parallel)
- Parallel system with mains
- Transition synchronization with mains
- Alarm output relays
- Earth fault, single set
- Parallel system with mains
- Remote relay output
- Remote communication with modem
- Charge Ammeter

### لوحة النقل

- Three or four pole contactor
- Three or four pole motor operated circuit breaker

### المعدات المساعدة

- Main Fuel Tank
- Automatic or manual fuel filling system
- Electrical oil drain pump
- Low and high fuel level alarm
- Inlet and outlet motorized louvers
- Inlet and outlet acoustic baffles
- Tool kit for maintenance
- 1500/3000 hours maintenance kit
- Supplied with oil and coolant (-30°C)

### عام

- Residential Silencer
- Silencer Spark Arrester
- Critical Silencer
- Catalytic Convertor

### غطاء المولد

- Galvanized Coating
- ISO Container
- Marine Grade Paint

### لوحة التحكم البديلة للمولد

Please contact to your reseller for additional Alternator, Control Panel and Breaker Switch options.

## شهادات الشركة

التوجيه



2006/42/EC : Machinery Safety Directive -  
2014/30/EU : Electromagnetic Compatibility Directive -  
2014/35/EU : Low Voltage Directive -

#### المعايير

TS ISO 8528-5:2022 / TS EN ISO 8528-13:2018 : Reciprocating internal combustion engine-driven alternating -  
current generating sets- Part:13: Safety

#### Quality Management Systems

ISO 9001:2015  
ISO 14001:2015  
ISO 45001:2018  
ISO 50001:2018  
ISO 27001:2013  
ISO 10002:2018