Industrial Diesel Generator Set – B1400
50 Hz

RATINGS 400 V - 50 Hz		
Standby	kVA	1400
	kWe	1120
Prime	kVA	1273
	kWe	1018

Benefits & features

KOHLER premium quality

- KOHLER provides **one source responsibility** for the generating set and accessories
- The generator set, its components and a wide range of options have been **fully developed, prototype tested, factory built**, and production tested
- The generator sets are designed in accordance to ISO8528
- Approved for use with HVO (Hydrotreated Vegetable Oil) according to EN15940

KOHLER premium performances

Engines

- High reliability enhanced through a simple design for optimal functional performances
- High performances turbochargers providing high engine performances under all loads
- Easy operation and maintenance: accessories requiring daily maintenance are conveniently located on the same side of the engine

Alternator

- Provide industry leading motor starting capability
- Excitation system to permit sustained overcurrent > 300% In, during 10 sec
- Built with a class H insulation and IP23

Cooling

- A compact and complete solution using a mechanical driven fan radiator
- High temperature and altitude product capacity available

Control Panel

- The KOHLER wide controller range provides the reliability and performances you expect from your equipment. You can program, manage and diagnose it easily and in an efficient way

KOHLER worldwide support

- A standard two-year or 1000-hours limited warranty for standby applications.
- A standard one-year or 2500 hours limited warranty for prime power applications.
- A worldwide product support

GENERAL SPECIFICATIONS	
Engine brand	BAUDOUIN
Alternator commercial brand	KOHLER
Voltage (V)	400/230
Standard Control Panel	APM403
Consumption @ 100% load ESP (L/h) *	289
Consumption @ 100% load PRP (L/h) *	259
Emission level	Fuel consumption optimization
Type of Cooling	Mechanical driven fan
Performance class	G2

GENERATOR SETS RATINGS

				Standby Rating			Prime Rating	
	Voltage	PH	Hz	kWe	kVA	Amps	kWe	kVA
B1400	415/240	3	50	1120	1400	1948	1018	1273
	400/230	3	50	1120	1400	2021	1018	1273
	380/220	3	50	1120	1400	2127	1018	1273

DIMENSIONS COMPACT VERSION	
Length (mm)	4765
Width (mm)	2250
Height (mm)	2465
Tank capacity (L)	500
Dry weight (kg)	9150

DIMENSIONS SOUNDPROOFED VERSION	
Type soundproofing	NOT AVAILABLE
Length (mm)	6060
Width (mm)	2440
Height (mm)	2896
Tank capacity (L)	500
Dry weight (kg)	14940
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	91
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	82

* Volumetric Fuel consumption is up to 4% higher when using HVO than Diesel Fuel

Reference Conditions: 25°C Air Inlet Temperature, 40°C Fuel Inlet Temperature, 100 kPa Barometric Pressure; 10.7 g/kg of dry air Humidity. Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit; Fuel density at 0.85 kg/L.
Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subjected to instrumentation and engine-to-engine variability. Test conducted with alternate test methods, instrumentation, fuel or reference conditions can yield different results. Data and specifications subject to change without notice.

KOHLER

Industrial Diesel Generator Set – B1400
50 Hz

Engine

General	
Engine brand	BAUDOUIN
Engine ref.	12M33G1400_V2_5 *
Air inlet system	Turbo
Fuel	Diesel Fuel/HVO
Emission level	Fuel consumption optimization
Cylinder configuration	V
Number of cylinders	12
Displacement (l)	39,23
Bore (mm) * Stroke (mm)	150 * 185
Compression ratio	15 : 1
Speed 50Hz (RPM)	1500
Maximum stand-by power at rated RPM (kW)	1210
Charge Air coolant	Air/Air
Injection Type	Direct
Governor type	Electronic
Air cleaner type, models	Dry

Fuel system	
Maximum fuel pump flow (l/h)	1070
Fuel Inlet Minimum recommended size (mm)	14
Fuel Outlet Minimum recommended size (mm)	14
Max head on fuel return line (m fuel)	5,90
Maximum allowed inlet fuel temperature (°C)	70

Consumption with cooling system	
Specific consumption @ ESP Max Power (g/kW.h)	200,50
Specific consumption @ PRP Max Power (g/kW.h)	197,50
Specific consumption @ 75% of PRP Power (g/kW.h)	194,20
Specific consumption @ 50% of PRP Power (g/kW.h)	197,30

Emissions

Lubrication System	
Oil system capacity including filters (l)	160
Min. oil pressure (bar)	2
Max. oil pressure (bar)	7
Oil sump capacity (l)	155
Oil consumption 100% ESP 50Hz (l/h)	0,80

Air Intake system	
Max. intake restriction (mm H2O)	663
Combustion air flow (l/s)	1392

Exhaust system

	PRP	ESP
Exhaust gas flow (L/s)	3633	3950
Exhaust gas temperature @ ESP (°C)	550	
Max. exhaust back pressure (mm H2O)	765	

Cooling system	
Radiator & Engine capacity (l)	240
Fan power 50Hz (kW)	55
Fan air flow w/o restriction (m3/s)	27,50
Available restriction on air flow (mm H2O)	20
Type of coolant	Gencool
Coolant capacity HT, engine only (l)	240
Max coolant temperature, Shutdown (°C)	103
Thermostat begin of opening HT (°C)	77
Thermostat end of opening HT (°C)	87

Cooling system and charge air cooler	
Radiator & Engine capacity (l)	240
Fan power 50Hz (kW)	55
Fan air flow w/o restriction (m3/s)	27,50
Available restriction on air flow (mm H2O)	20
Type of coolant	Gencool
Coolant capacity HT, engine only (l)	240
Outlet coolant temperature (°C)	
Max coolant temperature, Shutdown (°C)	103
Max. pressure at inlet of HT water pump (mbar)	
Thermostat begin of opening HT (°C)	77
Thermostat end of opening HT (°C)	87
CAC Heat Rejection (kW)	278,50

Cooling system (HT/LT)	
Radiator & Engine capacity (l)	240
Fan power 50Hz (kW)	55
Fan air flow w/o restriction (m3/s)	27,50
Available restriction on air flow (mm H2O)	20
Type of coolant	Gencool
Coolant capacity HT, engine only (l)	240
Outlet coolant temperature (°C)	
Max coolant temperature, Shutdown (°C)	103

Reference Conditions: 25°C Air Inlet Temperature, 40°C Fuel Inlet Temperature, 100 kPa Barometric Pressure; 10.7 g/kg of dry air Humidity. Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit; Fuel density at 0.85 kg/L.
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Max. pressure at inlet of HT water pump (mbar)	
Thermostat begin of opening HT (°C)	77
Thermostat end of opening HT (°C)	87
Heat rejection to coolant LT (kW)	
LT circuit flow rate (l/min)	
Coolant capacity LT, engine only (l)	0

* Engine reference may be partially modified depending on genset application, options selected by the customer and lead time required.

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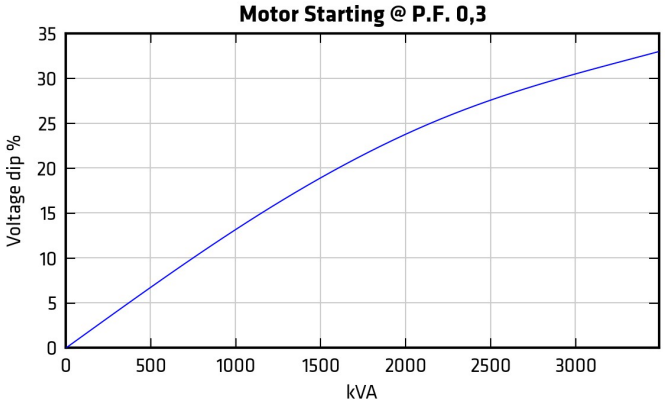
Alternator Specifications	
Alternator commercial brand	KOHLER
Kohler Alternator description	KH04830T
Number of pole	4
Number of bearing	Single Bearing
Technology	Brushless
Indication of protection	IP23
Insulation class	H
Number of wires	12
AVR Regulation	Yes
Coupling	Direct
Capacity for maintaining short circuit at 3 In for 10 s	Yes
Application data	
Overspeed (rpm)	2250
Power factor (Cos Phi)	0,80
Voltage regulation at established rating (+/- %)	0,50
Wave form : NEMA=TIF	<40
Wave form : CEI=FHT	<2
Total Harmonic Distortion in no-load DHT (%)	2,4
Total Harmonic Distortion, on linear load DHT (%)	1,5
Recovery time (Delta U = 20% transcient) (ms)	200
Performance datas	
Continuous Nominal Rating 40°C (kVA)	1300
Unbalanced load acceptance ratio (%)	8

Peak motor starting (kVA) based on x% voltage dip power factor at 0.3



Alternator Standard Features

- All models are brushless, rotating-field alternators
- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting
- The AVR voltage regulator provides superior short circuit capability
- Self-ventilated and dip proof construction
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds
- Superior voltage waveform

Note: See Alternator Data Sheets for alternator application data and ratings, efficiency curves, voltage dip with motor starting curves, and short circuit decrement curves.

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Dimensions compact version with baseframe fuel tank

Length (mm) * Width (mm) * Height (mm)	4765 * 2250 * 2465
Dry weight (kg)	9150
Tank capacity (L)	500

Container dimensions ISO20 soundproofed version

Length (mm) * Width (mm) * Height (mm)	6060 * 2440 * 2896
Dry weight (kg)	14940
Tank capacity (L)	500
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	91
Sound power level guaranteed (Lwa) 50Hz (75% PRP)	112
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	82

* dimensions and weight without options

Reference Conditions: 25°C Air Inlet Temperature, 40°C Fuel Inlet Temperature, 100 kPa Barometric Pressure; 10.7 g/kg of dry air Humidity. Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit; Fuel density at 0.85 kg/L.
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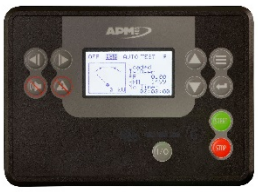
APM403



BASIC GENERATING SET AND POWER PLANT CONTROL

The APM403 is a versatile control unit which allows operation in manual or automatic mode

- Measurements : voltage and current
- kW/kWh/kVA power meters
- Standard specifications: Voltmeter, Frequency meter.
- Optional : Battery ammeter.
- J1939 CAN ECU engine control
- Alarms and faults: Oil pressure, Coolant temperature, Overspeed, Start-up failure, alternator min/max, Emergency stop button.
- Engine parameters: Fuel level, hour counter, battery voltage.
- Optional (standard at 24V): Oil pressure, water temperature.
- Event log/ Management of the last 300 genset events.
- Mains and genset protection
- Clock management
- USB connections, USB Host and PC,
- Communications : RS485 INTERFACE
- ModBUS protocol /SNMP
- Optional : Ethernet, GPRS, remote control, 3G, 4G,
- Websupervisor, SMS, E-mails

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STANDARD DELIVERY

All our electrical generating sets (compact version) are equipped with:

- Water-cooled DIESEL engine
- Electronic control device and mechanical injection
- High filtration air filter
- Radiator without coolant
- Electric starter & 24 VDC charging alternator
- Single-bearing alternator, IP 23, H/H Class Insulation/Temp
- Welded steel base frame with vibration damping supports
- Flexible fuel lines and lubrication oil drainage pump
- Primary filter
- Exhaust outlet with hose and clamps
- Included in your preconfigured pack:
    - Starter batteries
    - Automatic start-up pack including a battery charger and a preheating kit
    - APM403 control/command (P or S) depending on configuration
    - 4-pole circuit breakers, manual or motorized depending on configuration
- User documentation (1 copy)
- Packaged in film

Excluded from the supply:

- For Baudouin XPRESS products, from 25 to 1500 kVA: oil and antifreeze liquid
- For Baudouin XPRESS products, from 25 to 165 kVA: batteries

CODES AND STANDARDS

Engine-generators set is designed and manufactured in facilities certified to standards ISO9001:2015 & ISO14001:2015. The generator sets and its components are prototype-tested, factory built and production tested and are in compliance with the relevant standards:

- Machinery Directive 2006/42/EC of May 17th 2006
- EMC Directive2014/30/UE
- Safety objectives set out in the Low Voltage Directive 2014/35/UE
- EN ISO 8528-13, EN 60034-1, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 55011, EN 1679-1 et EN 60204-1

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TERMS OF USE

According to the standard, the nominal power assigned by the genset is given for 25°C Air Intlet Temperature, of a barometric pressure of 100 kPA (100 m A.S.L), and 30% relative humidity. For particular conditions in your installation, refer to the derating table.

WARRANTY INFORMATIONS

Standard Warranty Period:

- for Products in "back-up" service
    - 30 months from the date the Product leaves the plant
    - 24 months from the Product's commissioning date
    - 1,000 running hours

  The warranty expires when one of the above conditions is met.

- for Products in "prime" or "continuous" service (continuous supply of electricity, either in the absence of any normal electricity grid or to complement the grid),
    - 18 months from the date the Product leaves the plant
    - 12 months from the Product's commissioning date
    - 2,500 running hours

  The warranty expires when one of the above conditions is met.

For more details regarding conditions of application and scope of the warranty please refer to our General "terms & conditions of sales".

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