

**MAIN FEATURES**

|  |  |
|--|--|
| Highest quality and reliability.<br>ComAp IL-NT AMF25 controller.<br>Ready to control MAINS – GENERATOR transfer switch.<br>Configured for both manual and automatic mode (MRS + AMF).<br>Wide range of remote communications options. | Wide range of standard and optional equipment.<br>Engine heater – ready to load just after start.<br>Drip tray,<br>Anticorrosion coating: frame - Zr, canopy – Zr, Al-Zn.<br>Brushless alternator. |
|--|--|



The presented image is for illustration purpose only.

**GENERAL DATA**

|                                   |                    |
|-----------------------------------|--------------------|
| Code                              | F.0020.PA.G        |
| Standby power E.S.P. [kVA] / [kW] | 22,0 / 17,6        |
| Prime power P.R.P. [kVA] / [kW]   | 20,0 / 16,0        |
| Prime current P.R.P [A]           | 28,9               |
| Frequency [Hz]                    | 50                 |
| Voltage [V]                       | 400                |
| Exhaust emission                  | non-emission       |
| Fuel type                         | Diesel (EN 590)    |
| Fuel consumption - 50% load [l/h] | 2,9                |
| - 75% load [l/h]                  | 4,0                |
| - 100% load [l/h]                 | 5,3                |
| - 110% load [l/h]                 | 6,1                |
| Standard fuel tank capacity [l]   | 115                |
| Autonomy with 100% load [h]       | 21,7               |
| Engine control voltage [V]        | 12                 |
| Weight without fuel [kg]          | ~740               |
| Dimensions L x W x H [mm]         | 1954 x 1005 x 1435 |
| Guaranteed noise power Lwa [dBA]  | 91                 |
| Acoustic pressure Lpa (7m) [dBA]  | 60,2 ± 2           |

**Nominal power P.R.P.:**

Prime power available in variable load application in accordance with ISO 8528, 10% overload capacity is available for a period of 1 hour within a 12-hour period of operation. Average power consumption should not exceed 80% PRP for each 24-hour period of operation.

**Stand-by power E.S.P.:**

Emergency standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload allowed, limited to 500 hours of operation per year. Continuous operation limited to 300h..

**Remark:**

Ratings represent the genset performance capabilities to standard conditions specified in ISO 8528-1

**Norms and directives:**

- Machinery directive 2006/42/EC
- Low voltage directive 2014/35/EC
- EC directive 2014/30/EC
- Noise directive 2000/14/EC
- Emission directive 97/68/EC
- ISO 8528-1:2005, ISO 8528-5:2013
- ISO 8528-13:2016
- EN 60204-1

**STANDARD CONTROLLER**

Controller type: AMF 25

Easy to operate, intuitive graphical interface

Real time clock with battery supply

AMF function available

Flexible event based history with up to 119 events

3 Phase generator current measurement

Generator and Mains phase voltage measurement

Active/reactive power measurement

Active and reactive energy counter

Running hours counter

Battery charging alternator circuit connection

Fuel level measurement

Generator protection (over/under frequency, voltage, overcurrent)

Communication with ECU supporting CAN J1939 standard

Communication interface RS 485 and RS 232 supporting Modbus RTU (IL-NT RS232-485 module required)

GSM modem / wireless internet (IL-NT GPRS module required)

Internet/Ethernet communication (IB-Lite module required)

InteliMonitor software for single gen-set view

WebSupervisor software for Android mobile devices or PC's for fleet management

Active SMS or e-mail (IL-NT GPRS or IB-Lite module required)


**ENGINE**

|                             |                  |
|-----------------------------|------------------|
| Brand                       | Perkins          |
| Type                        | 404A-22G1        |
| Made in                     | Great Britain    |
| Engine power [kW]           | 18,4             |
| Emission standard*          | non-emission     |
| Rotation per minute [rpm]   | 1500             |
| Engine governor             | mechanical       |
| Governor class**            | G2               |
| Displacement [l]            | 2,2              |
| No of cylinder              | 4                |
| Fuel system                 | direct injection |
| Electrical system [V]       | 12               |
| Cooling system capacity [l] | 7,0              |
| Oil pan capacity [l]        | 10,6             |
| Fuel type                   | Diesel (EN 590)  |

**ALTERNATOR**

|                                    |                      |
|------------------------------------|----------------------|
| Nominal Voltage [V]                | 400                  |
| Nominal power factor (cos phi)     | 0,8                  |
| Ambient temperature, altitude      | 40 °C, 1000m a.m.s.l |
| Nominal Power [kVA]                | 20,0                 |
| IP protection                      | IP 23                |
| No of bearing                      | single bearing       |
| Coupling                           | direct               |
| Technology                         | brushless            |
| Short circuit maintaining capacity | 270% 10s             |
| Efficiency [%]                     | 87,1                 |
| Insulation class                   | H                    |
| Total harmonic content THD [%]     | <3,5                 |
| Reactance Xd'' [%]                 | 7,7                  |
| Voltage regulator type             | DVR, digital         |
| Voltage measurement                | 3 phases             |
| Voltage accuracy [%]               | +/- 1                |
| AVR supply system                  | auxiliary winding    |
| Made in                            | EU                   |

\* According directive 97/68/EC non road mobile machinery engine emission.

\*\* According ISO 8528-5:2013



# FOCUSSED ON GENERATORS ONLY

## Power Generator FDG 20 P

### STANDARD EQUIPMENT

|  |   |
|--|---|
| Perkins 404A-22G1 engine                         | ✓ |
| Oil low pressure switch                          | ✓ |
| Engine high temperature switch                   | ✓ |
| Engine preheating with thermostat                | ✓ |
| Engine oil Titan Cargo 15W40                     | ✓ |
| Fuel filter with water separator                 | ✓ |
| Coolant Fuchs Maintain Fricofin LL-35            | ✓ |
| Coolant inlet outside of the canopy              | ✓ |
| Starting batteries 75 Ah                         | ✓ |
| Battery charger                                  | ✓ |
| GCB Schneider-Z32/4                              | ✓ |
| GCB shunt release coil                           | ✓ |
| Controller ComAp IL-NT-AMF25                     | ✓ |
| Controller switch                                | ✓ |
| Acoustic alarm                                   | ✓ |
| Emergency stop button                            | ✓ |
| Silenced canopy made with Al.-Zn.                | ✓ |
| Standard color RAL 7032                          | ✓ |
| Fuel tank integrated with a frame with drip tray | ✓ |
| Welded frame with fuel tank                      | ✓ |
| Fuel inlet outside of the canopy with lock       | ✓ |
| Fuel level measurement                           | ✓ |
| Exhaust compensator and silencer                 | ✓ |
| Engine and alternator vibro isolators            | ✓ |
| Transportation brackets                          | ✓ |

### OPTIONAL EQUIPMENT

|  |   |
|--|---|
| Oil pressure sensor                                | ✓ |
| Engine temperature sensor                          | ✓ |
| Oil draining hand pump                             | ✓ |
| Battery disconnection switch                       | ✓ |
| Power socket connection                            | ✓ |
| Power socket box                                   | ✓ |
| Transfer switch controlled by generator controller | ✓ |
| Transfer switch with ATS controller                | ✓ |
| GPRS communication card                            | ✓ |
| Ethernet card                                      | ✓ |
| RS 485, RS 232 card                                | ✓ |
| Remote display                                     | ✓ |
| Drip space level sensor                            | ✓ |
| Fuel and retention pump                            | ✓ |
| Non-standard fuel tank size                        | ✓ |
| External fuel tank 1 000 – 10 000 l                | ✓ |
| 3-way valve for external fuel tank connection      | ✓ |
| Fuel tank filling pump and shut-off valve          | ✓ |
| Non-standard canopy color (RAL palette)            | ✓ |

**INSTALLATION GUIDELINES**

|  |                                |
|--|--------------------------------|
| Power terminal                                       | GCB terminal                   |
| Recommended cable for up to 30m power cable way      | Flexible 5x6 mm <sup>2</sup>   |
| Recommended cable for do 30m generator heater supply | Flexible 3x2,5 mm <sup>2</sup> |

\*For additional cable connection with FOGO ATS see ATS wiring diagram

|  |         |
|--|---------|
| Exhaust pipe min diameter (max. 7 m, 4 bends)  | 48,3 mm |
| Exhaust pipe min diameter (max. 15 m, 4 bends) | 60,3 mm |

**MAINTENANCE GUIDELINES**

|                                     |   |
|-------------------------------------|---|
| Fuel filters replacement            | 500 h / 1 year  |
| Oil replacement                     | After first 100h, then every 500 h / 1 year             |
| Oil filters replacement             | After first 100h, then every 500 h / 1 year             |
| Coolant replacement                 | 1000 h / 2 years  |
| Battery replacement                 | 2 years   |
| Electrical installation supervising | According to local requirements, at least once per year |

**WARRANTY**

|                            |                                    |
|----------------------------|------------------------------------|
| Continuous work generators | 12 months up to 1000 working hours |
|----------------------------|------------------------------------|