



DIESEL GENERATOR SET CATALOGUE

ABOUT TESCOM



Tescom formerly known as Tümel Elektronik located in Izmir-Turkey is an independently owned corporation, offering a wide range of power protection products and services to a wide spectrum of industries and sectors.

During the establishment years the company was manufacturing electronic control devices and inverters, then in 1986 when the IT sector started developing rapidly, Tescom sensed the great need for clean, uninterruptible power and started designing and manufacturing Uninterruptible Power Supplies.

As well as an extensive standard UPS range Tescom also offers a variety of other products such as static transfer switch (STS), frequency and voltage converters, inverters and rectifiers under it's registered trademark "Tescom".

Today all Tescom branded power protection products are manufactured by 48 greatly experienced engineers and staff of 345 people.

One of the greatest advantages of Tescom has always been, flexibility. Which means we do not only offer standard products. Thank's to our high experienced R&D team we also design and manufacture products according to customers requirements.

Tescom has always made widespread use of the latest developments and technologies in manufacturing, which complies with all the necessary international standards and norms. All these past years of experience, has lead to over 300,000 manufactured power protection products which have been delivered to customers in more than 40 countries in 4 continents.

TESCOM DIESEL GENERATORS

STAND BY RATING (ESP)

It is the way that generators operate under variable load at certain time intervals. It can work as a backup power. It is not suitable to work under extreme load.

PRIME RATING (PRP)

Applicable for supplying power to varying electrical load for unlimited hours. 10% overload capability is available for a period of 1 hour within 12-hour period of operation.

CONTINUOUS OPERATION

It is the continuous working under constant load. Unlimited hours use of all (100%) of the defined power. It cannot be overloaded above the defined power. For use where there is no mains power.

DESCRIPTION

TESCOM TDJ Series Diesel generator set is a fully integrated power generation system, providing optimum performance, reliability, and versatility for stationary standby, prime power and continuous duty applications.

ENGINE FEATURES

- Heavy duty generator engine
- 4-stroke, water cooling, natural suction system
- Mechanical governor system
- 12/24 volt starter motor and charge alternator
- Replaceable; with air, fuel and oil filters
- With flexible fuel hose
- Oil drain valve and extension hose/oil drain pump
- Industrial capacity muffler and exhaust spiral or compensator
- Maintenance-free type starter battery
- Engine block water heater (available for automatic models)
- Diesel generator maintenance and operation manual and electrical diagrams



CANOPY STANDART SPECIFICATIONS

- Compact design connection with non-welded nuts and bolts.
- Integrated canopy, generator set, exhaust system fuel tank.
- Body made from steel components treated with polyester powder coating
- Easy access to all service points
- Exhaust system inside canopy
- Large doors on each side
- Control panel viewing window in a lockable access door
- Emergency stop push button mounted on cabin exterior
- Fuel fill and battery can only be reached via lockable access doors.
- Customer options available to meet your applications needs.
- TESCOM makes its generating sets noise level tests in accordance with directive 2000/14/EC validation of the noise level test has been approved by the notified body Szutest (CE conformity assessment body).

ALTERNATOR FEATURES

- Brushless, single bearing, flexible disc 4-pole synchronous alternator
- H Insulation class
- IP21-23 protection class
- Shunt excitation
- Electronic voltage regulator
- Stator winding 2/3 step against harmonic distortions
- Alternator windings are protected with isolation varnish against oil and acid

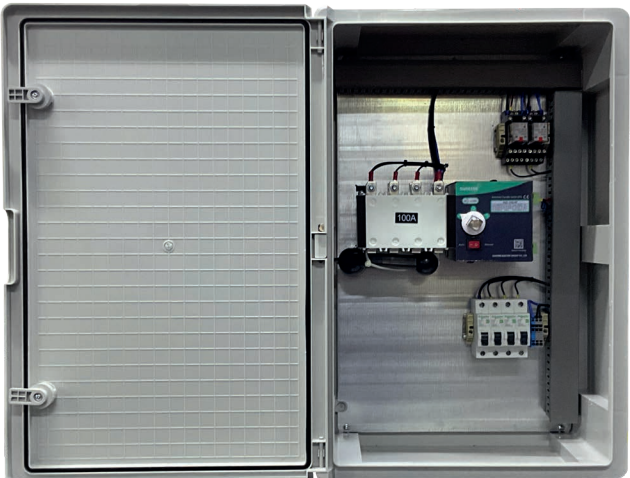
CONTROL PANEL FEATURES

- The cable group we use in our generators is fireproof cable class. Cable sheaths form the defense line of cables against various chemicals and flame.
- The use of Halogen-free materials in the outer sheath of the cables prevents the spread of toxic gases during a fire. At the same time, fireproof cable sheaths have low smoke density and flame retardant properties. This feature of fireproof cable sheaths prevents the spread of fire and minimizes possible damages.
- Schneider Electric breaker group is used in generator control panels. As a standard, all our products have a 4-pole MCCB (Molded Case Circuit Breaker)



ATS (AUTOMATIC TRASFER SWITCH) GENERAL FEATURES

- The SQ5 Dual Power Automatic Transfer Switch Series is a kind of automatic transfer switch that combines the switch and the logic controller, enabling the mechanical and electrical to become an inseparable whole.
- Superior electromagnetic compatibility, high resistance to interference.
- It has zero-time transfer technology with high reliability.
- It cuts the dual circuit power simultaneously.
- In addition to PLC remote control, it has a multi-circuit input / output interface that can automate the system.



ATS MODEL	GENERATOR POWER RANGE
100 A TRANSFER PANEL WITH TRANSFER SWITCH	0-70 kVA
160 A TRANSFER PANEL WITH TRANSFER SWITCH	82-124 kVA
250 A TRANSFER PANEL WITH TRANSFER SWITCH	125-165 kVA
400 A TRANSFER PANEL WITH TRANSFER SWITCH	220-275 kVA
630 A TRANSFER PANEL WITH TRANSFER SWITCH	300-440 kVA
800 A TRANSFER PANEL WITH TRANSFER SWITCH	500-550 kVA
1000 A TRANSFER PANEL WITH TRANSFER SWITCH	660-715 kVA
1250 A TRANSFER PANEL WITH TRANSFER SWITCH	750-825 kVA
1600 A TRANSFER PANEL WITH TRANSFER SWITCH	900-1100 kVA
2000 A TRANSFER PANEL WITH TRANSFER SWITCH	1250kVA
2500 A TRANSFER PANEL WITH TRANSFER SWITCH	1400-1600 kVA

CONTROL SYSTEM

The new TESCOM TCM01 genset controllers are a cost effective modular genset controller ready for internet monitoring through plug-in modules. Its main advantages are multifunctionality, support for multiple topologies, harmonic analysis and detailed power measurements.

Different brand controller can be offered upon request.

(DEIF AGC 150, DEIF SGC 120/12, DEIF SGC 420/421, Datacom D500, DEEPSEA 6120, DEEPSEA 7320, ComAp AMF25)

DESCRIPTION

Software features are complete with easy firmware upgrade through USB port. The Windows based PC software allows monitoring and programming through USB, RS-485, RS-232, Ethernet and GPRS. The Rainbow Scada web service allows monitoring and control of an unlimited number of gensets from a single central location.

MAJOR FEATURES

- Diesel and gas genset support
- 400Hz operation support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- 128x64 graphical LCD display
- Downloadable languages
- Waveform display of V & I
- Harmonic analysis of V & I
- 16Amp MCB & GCB outputs
- 8 configurable digital inputs
- 6 configurable digital outputs
- 3 configurable analog inputs
- Both CANBUS-J1939 & MPU
- 3 configurable service alarms
- Multiple automatic exerciser
- Weekly operation schedule
- Dual mutual standby with equal aging of gensets
- Manual "speed fine adjust" on selected ECUs
- Automatic fuel pump control
- Disable protections feature
- Excess power protection
- Reverse power protection
- Overload IDMT protection
- Load shedding, dummy load
- Multiple load management
- Current unbalance protection
- Voltage unbalance protection
- Fuel filling & fuel theft alarm
- Battery back-up real time clock
- Idle speed control
- Battery charge run enabled
- Combat mode support
- Multiple nominal conditions
- Contactor & MCB drive
- 4 quadrant genset power counters
- Mains power counters
- Fuel filling counter
- Fuel consumption counter
- Modem diagnostics display
- Configurable through USB, RS-485, Ethernet and GPRS
- Free configuration program
- Allows SMS controls
- Ready for central monitoring
- Mobile genset support
- Automatic GSM geo-location
- Easy USB firmware upgrade
- -40°C operation with optional display heater
- IP65 rating with optional gasket

COMMUNICATION

- USB Device
- J1939-CANBUS
- Geo-locating through GSM
- Internet Central Monitoring
- SMS message sending
- E-mail sending
- Free PC software: Rainbow Plus
- Modbus RTU (2400-57600baud)
- Modbus TCP/IP

PLUG-IN MODULES

- GSM Modem (2G-3G-4G)
- Ethernet 100Mbps
- Wi-Fi (802.11 b/g/n)
- RS-485 (2400-57600baud)
- RS-232 (2400-57600baud)

MEASUREMENTS

- Mains & genset PN/PP voltages
- Mains & genset frequency
- Mains & genset phase currents
- Mains & genset neutral currents
- Mains & genset, phase & total, kW, kVA, kVar, pf
- Engine speed
- Battery voltage

FUNCTIONALITIES

- AMF unit
- ATS unit
- Remote start controller
- Manual start controller
- Engine controller

TOPOLOGIES

- 3 ph 4 w, star & delta
- 3 ph 3 w, 2 CTs
- 2 ph 3 w
- 1 phase 2 wires



TESCOM TCM01



DEIF AGC 150



DEIF SGC 120



DEIF SGC 420



DATAKOM D500



DEEPSEA 6120



DEEPSEA 7320



ComAp AMF25

TECHNICAL SPECIFICATIONS



	TDJ34K		TDJ44K		TDJ50K		TDJ70K		TDJ82K	
Standby (kVA/kW)	34	27,2	44	35,2	50	40	70	56	82	65,6
Prime (kVA/kW)	30	24	40	32	45	36	63	50,4	75	60
Open type size (LxWxH mm)	2200 x 1000 x 1100									
With cabinet (LxWxH mm)	2200 x 1000 x 1400									
Open type weight (kg)	686		706		711		1113			
Open type weight (kg) (Except for antifreeze and oil)	660		680		685		1087			
Weight with cabinet (kg)	826		846		871		1273			
Weight with cabinet (kg) (Except for antifreeze and oil)	800		820		845		1247			
Tank capacity (L)	150									
MOTOR										
Manufacturer and model	N4100DS		N4100ZDS				N4105ZDS		N4105 ZLDS	
Frequency	50Hz									
Output rating	33kW		46kW				56kW		72kW	
Fuel	Diesel									
Injection	Swirl						Direct			
Aspiration	Naturally aspirated		Turbocharged						Naturally aspirated	
Cylinders	4									
Bore and Stroke	100 x 115mm		105 x 120mm						105 x 130mm	
Displacement	3,61lt		4,15lt							
Cooling	Water									
Engine oil specification	SAE 15W40									
Compression ratio	17:1									
Engine oil capacity (sump only)	13lt									
Coolant capacity (incl.radiator)	13lt									
Governor	Mechanical									
Air filter	Dry element									
FUEL CONSUMPTION										
100% Load	5,7lt/h		10,4lt/h				14,9lt/h		17,3lt/h	
75% Load	4,3lt/h		7,8lt/h				11,2lt/h		12,9lt/h	
50% Load	2,8lt/h		5,2lt/h				7,5lt/h		8,6lt/h	
EXHAUST SYSTEM										
Maximum temperature	< 600°C									
Exhaust gas flow	4,75m³/min						5,96m³/min		8,66m³/min	
Maximum exhaust back pressure	60mBar									
Exhaust flange size (internal dia.)	60mm									
AIR SYSTEM										
Intake air flow	2,3m³/min		4,5m³/min				5,65m³/min		8,2m³/min	
Air intake temperature rise	< 5°C									
STARTING SYSTEM										
Starter motor	3,7kW		4,8kW				6kW		4,3kW	
Battery capacity	60Ah		72Ah							
Auxiliary voltage	12V						24V			
ALTERNATOR										
Brand	Tescom									
Poles	4 Poles									
Frequency	50/60HZ									
Winding connections	Star									
Insulation	Class H									
Enclosure	IP23									
Power factor	0,8									
Altitude	1000m									
Exciter system	Self excitation									
Voltage regulator	AVR									
Steady state voltage regulation	± 1%									
Direction of rotation	Clockwise									
Cooling	Direct drive centrifugal blower fan									

TECHNICAL SPECIFICATIONS



	TDJ94K		TDJ110K		TDJ124K		TDJ165K		TDJ220K	
Standby (kVA/kW)	94	75,2	110	88	124	99,2	165	132	220	176
Prime (kVA/kW)	85	68	100	80	110	88	150	120	200	160
Open type size (LxWxH mm)	2350 x 1000 x 1300				2750 x 1100 x 1500				3000 x 1100 x 1500	
With cabinet (LxWxH mm)	2350 x 1000 x 1550				2750 x 1100 x 1750				3000 x 1100 x 1750	
Open type weight (kg)	1131				1456		1494		2003	
Open type weight (kg) (Except for antifreeze and oil)	1099				1424		1454		1963	
Weight with cabinet (kg)	1416				1806		1844		2453	
Weight with cabinet (kg) (Except for antifreeze and oil)	1384				1774		1804		2413	
Tank capacity (L)	170				250				280	
MOTOR										
Manufacturer and model	4RT55-88D		4RT55-110DE				R6105BZLDS		6RT80-176D	
Frequency	50Hz									
Output rating	88kW		110kW				132kW		176kW	
Fuel	Diesel									
Injection	Direct									
Aspiration	Turbocharged		Naturally aspirated				Turbocharged / Naturally aspirated			
Cylinders	4						6			
Bore and Stroke	110 x 140mm						105 x 130mm		110 x 140mm	
Displacement	5,32lt						6,75lt		7,98lt	
Cooling	Water									
Engine oil specification	SAE 15W40									
Compression ratio	17:1									
Engine oil capacity (sump only)	16lt						17lt			
Coolant capacity (incl.radiator)	16lt						23lt			
Governor	Mechanical		Electronical				Mechanical			
Air filter	Dry element									
FUEL CONSUMPTION										
100% Load	17,3lt/h		25,5lt/h		17,3lt/h		33,2lt/h		41,4lt/h	
75% Load	12,9lt/h		19lt/h		12,9lt/h		24,9lt/h		31,0lt/h	
50% Load	8,6lt/h		12,7lt/h		8,6lt/h		16,6lt/h		20,7lt/h	
EXHAUST SYSTEM										
Maximum temperature	< 600°C									
Exhaust gas flow	8,66m³/min						13,26m³/min		15,56m³/min	
Maximum exhaust back pressure	60mBar									
Exhaust flange size (internal dia.)	60mm						76mm			
AIR SYSTEM										
Intake air flow	8,2m³/min						12,56m³/min		15,71m³/min	
Air intake temperature rise	< 5°C									
STARTING SYSTEM										
Starter motor	6kW									
Battery capacity	72Ah						2 x 82Ah			
Auxiliary voltage	12V						24V			
ALTERNATOR										
Brand	Tescom									
Poles	4 Poles									
Frequency	50/60HZ									
Winding connections	Star									
Insulation	Class H									
Enclosure	IP23									
Power factor	0,8									
Altitude	1000m									
Exciter system	Self excitation									
Voltage regulator	AVR									
Steady state voltage regulation	± 1%									
Direction of rotation	Clockwise									
Cooling	Direct drive centrifugal blower fan									

