



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 its 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. Thanks 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 STANDARD 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



	TDJ220DT / TDJ220DSS (*)		TDJ255DT / TDJ255DSS (*)		TDJ275DT / TDJ275DSS (*)		TDJ330DT / TDJ330DSS (*)		TDJ410DT / TDJ410DSS (*)		TDJ440DT / TDJ440DSS (*)		TDJ485DT / TDJ485DSS (*)		
Standby (kVA/kW)	220	176	255	204	275	220	330	264	410	328	440	352	485	388	
Prime (kVA/kW)	200	160	232	185	250	200	300	240	373	298	400	320	441	353	
Open type size (LxWxH mm)	3000 x 1100 x 1500		3500 x 1200 x 1800				3700 x 1400 x 1800		3700 x 1600 x 1800						
With cabinet (LxWxH mm)	3000 x 1100 x 1750		3500 x 1200 x 2050				3700 x 1400 x 2050		3700 x 1600 x 2050						
Open type weight (kg)	1990		2136		2409		2498		3160		3282		3528		
Open type weight (kg) (Except for antifreeze and oil)	1930,5		2076,5		2335		2424		3065		3181		3427		
Weight with cabinet (kg)	2420		2566		2899		2988		3835		3957		4203		
Weight with cabinet (kg) (Except for antifreeze and oil)	2360,5		2506,5		2825		2914		3740		3856		4102		
Tank capacity (L)	280		360						470						
MOTOR															
Frequency	50Hz														
Manufacturer and model	DOOSAN P086TI	DOOSAN DP086LA	DOOSAN P126TI	DOOSAN P126TIII	DOOSAN DP126LB	DOOSAN P158LE	DOOSAN P158LE								
Engine power	194/263 (kWm/hp)	219/298 (kWm/hp)	265/360 (kWm/hp)	287/390 (kWm/hp)	346/470 (kWm/hp)	398/541 (kWm/hp)	398/541 (kWm/hp)								
Revolution per min.	1500 r.p.m														
Total displacement	8,071lt			11,05lt			11,051lt		14,618lt		14,618lt				
Cylinders orientation	6 Vertical In-line						8 Cylinders - V type								
Bore x Stroke	111 x 139mm			123 x 155mm						128 x 142mm					
Compression ratio	16,4:01	16,7:01	17,1:01			17,2:1		15:01							
Governor type	Electronical														
Aspiration system	Turbo CAC														
Injection	Direct														
Cooling	Water														
Electrical system	24VDC														
Lub-oil capacity	15,5lt			23lt			44lt		21lt						
Engine coolant capacity	44lt			51lt						80lt					
Cooling air flow	190 m3/min.			370 m3/min.		450 m3/min.		312 m3/min.		522 m3/min.					
Fuel	Diesel														
FUEL CONSUMPTION															
100% Load	43,1lt/h	48,7lt/h	58,1lt/h	63,1lt/h	76lt/h	80,3lt/h	89,3lt/h								
75% Load	31,7lt/h	36,8lt/h	43,6lt/h	47lt/h	57,1lt/h	58,1lt/h	65,1lt/h								
50% Load	21,1lt/h	24,6lt/h	30lt/h	31,3lt/h	38,4lt/h	40,9lt/h	43,9lt/h								
EXHAUST SYSTEM															
Maximum exhaust temperature	509°C	530°C	560°C	590°C	575°C	503°C									
Maximum exhaust gas flow	33,9m³/h	33,9m³/h	2982m³/h	51,2m³/h	52,9m³/h	80,1m³/h									
Maximum allowed back pressure	5,9kPa														
ALTERNATOR															
Brand	Tescom / Stamford														
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														
(*) TDJ220-485DT Doosan Motor - Tescom Alternator / TDJ220-485DS Doosan Motor - Stamford Alternator															

TECHNICAL SPECIFICATIONS



	TDJ510DT / TDJ510DSS (*)		TDJ585DT / TDJ585DSS (*)		TDJ630DT / TDJ630DSS (*)		TDJ705DT / TDJ705DSS (*)		TDJ750DT / TDJ750DSS (*)		TDJ825DT / TDJ825DSS (*)		TDJ1000DT / TDJ1000DSS (*)		
Standby (kVA/kW)	510	408	585	468	630	504	705	564	750	600	825	660	1000	800	
Prime (kVA/kW)	464	371	532	425	573	458	641	513	682	545	750	600	909	727	
Open type size (LxWxH mm)	3700 x 1600 x 1800		4000 x 1800 x 1900						4500 x 2000 x 1900						
With cabinet (LxWxH mm)	3700 x 1600 x 2050		4000 x 1800 x 2350						4500 x 2000 x 2350						
Open type weight (kg)	3612		3728		4280		4390		4775		4899		6281		
Open type weight (kg) (Except for antifreeze and oil)	3511		3627		4155		4265		4621		4745		6140		
Weight with cabinet (kg)	4287		4403		5025		5135		5520		5644		7991		
Weight with cabinet (kg) (Except for antifreeze and oil)	4186		4302		4900		5010		5366		5490		7850		
Tank capacity (L)	470		490						570						
MOTOR															
Frequency	50Hz														
Manufacturer and model	DOOSAN DP158LC	DOOSAN DP158LD	DOOSAN DP180LA	DOOSAN DP180LB	DOOSAN DP222LB	DOOSAN DP222LC	DOOSAN DP222CC								
Engine power	433/589 (kWm/hp)		494/672 (kWm/hp)		536/729 (kWm/hp)		596/810 (kWm/hp)		640/870 (kWm/hp)		699/950 (kWm/hp)		854/1161 (kWm/hp)		
Revolution per min.	1500 r.p.m														
Total displacement	14,618lt				18,273lt				21,927lt						
Cylinders orientation	8 Cylinders - V type				10 Cylinders - V type				12 Cylinders - V type						
Bore x Stroke	128 x 142mm														
Compression ratio	15:1		15:1						14.6:1						
Governor type	Electronical														
Aspiration system	Turbo CAC												Turbo Intercooler		
Injection	Direct														
Cooling	Water														
Electrical system	24VDC														
Lub-oil capacity	22lt				34lt				40lt				75lt		
Engine coolant capacity	79lt				91lt				114lt				66lt		
Cooling air flow	700 m3/min.						860 m3/min.						1266 m3/min.		
Fuel	Diesel														
FUEL CONSUMPTION															
100% Load	99,6lt/h		115,1lt/h		123,6lt/h		136,4lt/h		147,1lt/h		161lt/h		190lt/h		
75% Load	72,9lt/h		83,4lt/h		94,2lt/h		103,8lt/h		109,2lt/h		119,1lt/h		147lt/h		
50% Load	48,9lt/h		55,1lt/h		64,8lt/h		71,2lt/h		73lt/h		79,3lt/h		102lt/h		
EXHAUST SYSTEM															
Maximum exhaust temperature	507°C		536°C		540°C		563°C		459°C		478°C		530°C		
Maximum exhaust gas flow	88m ³ /h		98m ³ /h		106m ³ /h		118m ³ /h		101m ³ /h		108m ³ /h		123m ³ /h		
Maximum allowed back pressure	5,9kPa														
ALTERNATOR															
Brand	Tescom / Stamford														
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														
(*) TDJ510-1000DT Doosan Motor - Tescom Alternator / TDJ510-1000DS Doosan Motor - Stamford Alternator															

