



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 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



	TDJ110VT / TDJ110VS (*)		TDJ145VT / TDJ145VS (*)		TDJ167VT / TDJ167VS (*)		TDJ200VT / TDJ200VS (*)		TDJ225VT / TDJ225VS (*)		TDJ330VT (842) / TDJ330VS (842) (*)	
Standby (kVA/kW)	110	88	145	116	167	134	200	160	225	180	330	264
Prime (kVA/kW)	100	80	132	105	152	121	182	145	205	164	300	240
Open type size (LxWxH mm)	2350 x 1000 x 1300		2750 x 1100 x 1500				3000 x 1100 x 1500				3500 x 1200 x 1800	
With cabinet (LxWxH mm)	2350 x 1000 x 1550		2750 x 1100 x 1750				3000 x 1100 x 1750				3500 x 1200 x 2050	
Open type weight (kg)	1198		1347		1674		1861		2007		2789	
Open type weight (kg) (Except for antifreeze and oil)	1165,3		1321		1603,2		1605,5		1935,8		2738	
Weight with cabinet (kg)	1458		1677		2104		2351		2497		3434	
Weight with cabinet (kg) (Except for antifreeze and oil)	1425,3		1651		2060,2		2275,5		2425,8		3383	
Tank capacity (L)	170		250				280				360	
MOTOR												
Frequency	50Hz											
Manufacturer and model	VOLVO PENTA TAD531GE		VOLVO PENTA TAD532GE		VOLVO PENTA TAD731GE		VOLVO PENTA TAD732GE		VOLVO PENTA TAD733GE		VOLVO PENTA TAD842GE	
Engine power	98/133 (kWm/hp)		125/169 (kWm/hp)		148 (kWm/hp)		179/243 (kWm/hp)		195/265 (kWm/hp)		287/390 (kWm/hp)	
Revolution per min.	1500r.p.m											
Total displacement	4,76				7,15						7,7lt	
Cylinders orientation	4				6							
Bore x Stroke	108 x 130 mm										110 x 135 mm	
Compression ratio	18:1								18,1:1		17,5:1	
Governor type	Mechanical		Electronical		Mechanical		Electronical					
Aspiration system	Turbo CAC											
Injection	Direct											
Cooling	Water											
Electrical system	12VDC						24VDC					
Lub-oil capacity	13lt				20lt		34lt				27lt	
Engine coolant capacity	19,7lt		13lt		23,8lt		41,8lt		37,2lt		28lt	
Cooling air flow	90 m³/min		174 m³/min		150 m³/min		234 m³/min				228 m³/min	
Fuel	Diesel											
FUEL CONSUMPTION												
100% load	22,4lt/h		31,4lt/h		33,9lt/h		39,9lt/h		44,72lt/h		62,9lt/h	
75% load	16,7lt/h		23lt/h		25,5lt/h		29,9lt/h		33,2lt/h		49,2lt/h	
50% load	11,6lt/h		16lt/h		17,7lt/h		20,5lt/h		22,5lt/h		35,3lt/h	
EXHAUST SYSTEM												
Maximum exhaust temperature	557°C		532°C		540°C		542°C		530°C		495°C	
Maximum exhaust gas flow	1104m³/h		1392m³/h		1812m³/h		2106m³/h		2232m³/h		2820m³/h	
Maximum allowed back pressure	5kPa										10kPa	
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											
(*) TDJ110-330VT Volvo Penta Motor - Tescom Alternator / TDJ110-330VS Volvo Penta Motor - Stamford Alternator												

TECHNICAL SPECIFICATIONS



	TDJ330VT / TDJ330VS (*)		TDJ350VT / TDJ350VS (*)		TDJ385VT / TDJ385VS (*)		TDJ415VT / TDJ415VS (*)		TDJ450VT / TDJ450VS (*)	
Standby (kVA/kW)	330	264	350	280	385	308	415	332	450	360
Prime (kVA/kW)	300	240	318	254	350	280	377	302	409	327
Open type size (LxWxH mm)	3500 x 1200 x 1800		3700 x 1400 x 1800						3700 x 1600 x 1800	
With cabinet (LxWxH mm)	3500 x 1200 x 2050		3700 x 1400 x 2050						3700 x 1600 x 2050	
Open type weight (kg)	2789		2884		2890		2894		3094	
Open type weight (kg) (Except for antifreeze and oil)	2709		2804		2810		2814		3014	
Weight with cabinet (kg)	3434		3529		3535		3539		3739	
Weight with cabinet (kg) (Except for antifreeze and oil)	3354		3449		3455		3459		3659	
Tank capacity (L)	360		470							
MOTOR										
Frequency	50Hz									
Manufacturer and model	VOLVO PENTA TAD1341GE		VOLVO PENTA TAD1341GE		VOLVO PENTA TAD1342GE		VOLVO PENTA TAD1343GE		VOLVO PENTA TAD1344GE	
Engine power	298/405 (kWm/hp)				333/453 (kWm/hp)		356/484 (kWm/hp)		389 (kWm/hp)	
Revolution per min.	1500r.p.m									
Total displacement	12,78									
Cylinders orientation	6									
Bore x Stroke	131 x 158 mm									
Compression ratio	18,1:1									
Governor type	Electronical									
Aspiration system	Turbo CAC									
Injection	Direct									
Cooling	Water									
Electrical system	24 VDC									
Lub-oil capacity	36lt									
Engine coolant capacity	44lt									
Cooling air flow	330 m³/min				402 m³/min		27 m³/min		390 m³/min	
Fuel	Diesel									
FUEL CONSUMPTION										
100% load	61,7lt/h				68lt/h		73,4lt/h		80,78lt/h	
75% load	47,3lt/h				51,6lt/h		55lt/h		61,53lt/h	
50% load	33,7lt/h				35,9lt/h		38,2lt/h		41,6lt/h	
EXHAUST SYSTEM										
Maximum exhaust temperature	414°C				402°C		420°C		465°C	
Maximum exhaust gas flow	3120m³/h				3400m³/h		3600m³/h		4050m³/h	
Maximum allowed back pressure	10kPa									
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									
(*) TDJ330-450VT Volvo Penta Motor - Tescom Alternator / TDJ330-450VS Volvo Penta Motor - Stamford Alternator										

TECHNICAL SPECIFICATIONS

**VOLVO
PENTA**

	TDJ500VT / TDJ500VS (*)		TDJ550VT / TDJ550VS (*)		TDJ650VT / TDJ650VS (*)		TDJ715VT / TDJ715VS (*)		TDJ770VT / TDJ770VS (*)	
Standby (kVA/kW)	500	400	550	440	650	520	715	572	770	616
Prime (kVA/kW)	455	364	500	400	591	473	650	520	700	560
Open type size (LxWxH mm)	3700 x 1600 x 1800				4000 x 1800 x 1900					
With cabinet (LxWxH mm)	3700 x 1600 x 2050				4000 x 1800 x 2350					
Open type weight (kg)	3681		3609		3822		4352		4520	
Open type weight (kg) (Except for antifreeze and oil)	3601		3501		3714		4204		4372	
Weight with cabinet (kg)	4536		4516		4729		5259		5427	
Weight with cabinet (kg) (Except for antifreeze and oil)	4456		4408		4621		5111		5279	
Tank capacity (L)	470				490					
MOTOR										
Frequency	50Hz									
Manufacturer and model	VOLVO PENTA TAD1345GE		VOLVO PENTA TAD1641GE		VOLVO PENTA TAD1642GE		VOLVO PENTA TAD1644GE		VOLVO PENTA TAD1645GE	
Engine power	431/586 (kWm/hp)		473/643 (kWm/hp)		536/729 (kWm/hp)		609/828 (kWm/hp)		654/890 (kWm/hp)	
Revolution per min.	1500r.p.m									
Total displacement	12,78		16,12							
Cylinders orientation	6									
Bore x Stroke	131 x 158 mm		144 x 165 mm							
Compression ratio	18,1:1		16,5:1				16,8:1			
Governor type	Electronical									
Aspiration system	Turbo CAC									
Injection	Direct									
Cooling	Water									
Electrical system	24VDC									
Lub-oil capacity	36lt		48lt							
Engine coolant capacity	44lt		60lt				100lt			
Cooling air flow	402 m³/min		781 m³/min		774 m³/min		684 m³/min		41,2 m³/min	
Fuel	Diesel									
FUEL CONSUMPTION										
100% load	62,9lt/h		100,7lt/h		114,7t/h		126lt/h		139,1lt/h	
75% load	49,2lt/h		75,5lt/h		84,lt/h		94lt/h		108,3lt/h	
50% load	35,3lt/h		50,4lt/h		56,5t/h		63lt/h		77,6lt/h	
EXHAUST SYSTEM										
Maximum exhaust temperature	570°C		445°C		482°C		480°C		501°C	
Maximum exhaust gas flow	3498m³/h		5520m³/h		5880m³/h		6000m³/h		6360m³/h	
Maximum allowed back pressure	10kPa									
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 exciation									
Voltage regulator	AVR									
Steady state voltage regulation	± 1%									
Direction of rotation	Clockwise									
Cooling	Direct drive centrifugal blower fan									
(*) TDJ500-770VT Volvo Penta Motor - Tescom Alternator / TDJ500-770VS Volvo Penta Motor - Stamford Alternator										

