Tescom®

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 latestdevelopments 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 perod of operation.

CONTINUOUS OPERATION

It is the continious 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 (avaliable 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 aproved 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

	TDJ76ST		TDJ100ST		TDJ135ST		TDJ150ST		TDJ175ST		TDJ200ST		TDJ225ST		TDJ236ST		TDJ260ST		TDJ300ST		TDJ330ST	
Standby (kVA/kW)	76	61	100	80	135	108	150	120	175	140	200	160	225	180	236	189	260	208	300	240	330	264
Prime (kVA/kW)	69	55	91	73	123	98	136	109	159	127	180	144	205	164	215	172	236	189	273	218	300	240
Open type size (LxWxH mm)	2070 x 1100 x 1450				2470 x 1100 x 1520				2710 x 1150 x 1600						2795 x 1150 x 1710				2980 x 1300 x 1750		3200 x 1500 x 1865	
With cabinet (LxWxH mm)	2650 x 1100 x 1890				2950 x 1100 x 1970				3300 x 1150 x 2260										3645 x 1300 x 2300		4302 x 1500 x 2485	
Open type weight (kg)	1084		1158		1412		1414		1672		1673		1761		1927		1943		2415		2689	
Open type weight (kg) (Except for antifreeze and oil)	1047,7		1121,2		1375,2		1377,2		1623,4		1624,4		1712,4		1868		1884		2350		2571,8	
Weight with cabinet (kg)	1344		1418		1742		1744		2102		2103		2191		2357		2373		2905		3334	
Weight with cabinet (kg) (Except for antifreeze and oil)	1307,7		1381,2		1705,2		1707,2		2053,4		2054,4		2142,4		2298		2314		2840		3219,8	
Tank capacity (L)	185				280				300										400		515	
MOTOR																						
Frequency	50Hz																					
Manufacturer and model	SDEC SC4H95D2		SDEC SC4H115D2		SDEC SC4H160D2		SDEC SC4H180D2		SDEC SC7H230D2		SDEC SC7H230D2		SDEC SC7H250D2		SDEC SC9D280D2		SDEC SC9D310D2		SDEC SC9D340D2		S SDEC C10E380D2	
Engine power	68/92 (kWm/hp)		86/117 (kWm/hp)		116/158 (kWm/hp)		132/179 (kWm/hp)		170/231 (kWm/hp)				185kW		204/277 (kWm/hp)		228/310 (kWm/hp)		250/340 (kWm/hp)		262/356 (kWm/hp)	
Revolution per min.	1500r.p.m																					
Total displacement	4,3lt								6,44lt						8,27lt				8,82lt		11,8lt	
Cylinders orientation	4 Vertical In-line								6 Vertical In-line													
Bore x Stroke	105 x 124 mm														114 x 135mm		114 x 144mm				128 x 135mm	
Compression ratio	17,3:1				16:1								16:01		18:1				16,5:1		17:1	
Governor type	Electronical																					
Aspiration system	Turbo				Turbo AAC																Turbocharged	
Injection	Direct																					
Cooling	Water																					
Electrical system	24VDC																					
Lub-oil capacity	13lt								17,5lt						19lt				25lt		41lt	
Engine coolant capacity	23,8lt								31,1lt						40lt						73,2lt	
Cooling air flow	-																		18,6m³/min		17,3m³/min	
Fuel	Diesel																					
FUEL CONSUMPTION																						
100% Load	14,8lt/h		20,2lt/h		25lt/h		28,6lt/h		36lt/h		36lt/h		39,3lt/h		48,6lt/h		50,6lt/h		54,1lt/h		60,8lt/h	
75% Load	11lt/h		15,2lt/h		16,7lt/h		21,4lt/h		26,8lt/h		26,8lt/h		29,1lt/ h		36,2lt/h		38,2lt/h		40,8lt/h		49,4lt/h	
50% Load	7,5lt/h		10,3lt/h		12,8lt/h		14,4lt/h		17,8lt/h		17,8lt/h		19,4lt/h		24,3lt/h		26,3lt/h		27,3lt/h		32,1lt/h	
EXHAUST SYSTEM																						
Max. exhaust temperature	600°C																					
Max. exhaust gas flow	10,4m³/h		14,1m³/h		16,3m³/h		18,2m³/h		27,2m³/h						35,9m³/h				41m³/h		2628m³/h	
Max. allowed back pressure	6kPa								5kPa												6kPa	
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 exication																					
Voltage regulator	AVR																					
Steady state voltage regulation	± 1%																					
Direction of rotation	Clockwise																					
Cooling	Direct drive centrifugal blower fan																					

TECHNICAL SPECIFICATIONS

	TDJ400ST		TDJ440ST		TDJ500ST		TDJ550ST		TDJ600ST		TDJ660ST		TDJ725ST		TDJ800ST		TDJ900ST		TDJ1000ST		TDJ1100ST	
Standby (kVA/kW)	400	320	440	352	520	416	550	440	600	480	660	528	725	580	800	640	900	720	1000	800	1100	880
Prime (kVA/kW)	364	291	400	320	472	377,6	500	400	540	436	600	480	659	527	727	582	818	655	910	727	1000	800
Open type size (LxWxH mm)	3275 x 1500 x 1880				3900 x 1900 x 2320										4300 x 1900 x 2295		5500 x 2000 x 2465		6000 x 2100 x 2350		5500 x 2200 x 2550	
With cabinet (LxWxH mm)	4300 x 1500 x 2510				4800 x 1900 x 2800										5300 x 1900 x 2810		6000 x 2000 x 2805		6000 x 2100 x 2800		6000 x 2200 x 2750	
Open type weight (kg)	3099		3452		4890		4940		5102		5103		5278		5636		7123		7512		8578	
Open type weight (kg) (Except for antifreeze and oil)	2982,5		3335,5		4710		4760		4922		4923		5098		5456		7048		7279		8320	
Weight with cabinet (kg)	3744		4097		5815		5865		6027		6028		6203		6502		8833		9222		10288	
Weight with cabinet (kg) (Except for antifreeze and oil)	3627,5		3980,5		5635		5685		5847		5848		5843		6322		8758		8989		10030	
Tank capacity (L)	515				1100										1020		1000		1160		1400	
MOTOR																						
Frequency	50Hz																					
Manufacturer and model	SDEC SC15G500D2				SDEC SC25G610D2		SDEC SC25G610D2		SDEC SC25G690D2		SDEC SC27G755D2		SDEC SC27G830D2		SDEC SC27G900D2		SDEC 6KTAA25-G32		SDEC SC3W1150D2		SDEC 6WTAA35-G31	
Engine power	373/507 (kWm/hp)				445/605 (kWm/hp)				505/687 (kWm/hp)		555/755 (kWm/hp)		610/830 (kWm/hp)		662/900 (kWm/hp)		754/1025 (kWm/hp)		860/1169 (kWm/hp)		970/1320 (kWm/hp)	
Revolution per min.	1500 r.p.m																					
Total displacement	14,16lt				25,8lt						26,6lt						25,18lt		32,8lt		35,1lt	
Cylinders orientation	6 Vertical In-line				12 Vertical In-line												6 Vertical In-line					
Bore x Stroke	136 x 165mm				135 x 150mm						135 x 155mm						170 x 185mm		180 x 215mm		186 x 215mm	
Compression ratio	15,55:1				16:1												14,5:1		15:1			
Governor type	Electronical																					
Aspiration system	Turbo AAC																					
Injection	Direct																					
Cooling	Water																					
Electrical system	24VDC																					
Lub-oil capacity	41lt				65lt												75lt				100lt	
Engine coolant capacity	75,5lt				115lt												TBA		158lt			
Cooling air flow	TBA																					
Fuel	Diesel																					
FUEL CONSUMPTION																						
100% Load	73,8lt/h		81lt/h		100,4lt/h				113,8lt/h		126lt/h		141lt/h		148,8lt/h		163lt/h		101,1lt/h		188,1lt/h	
75% Load	54,3lt/h		60lt/h		75,8lt/h				85,9lt/h		95,3lt/h		106,7lt/h		163,7lt/h		124lt/h		146,3lt/h		136,6lt/h	
50% Load	37,4lt/h		41lt/h		53,6lt/h				60,7lt/h		66,3lt/h		74,1lt/h		76,7lt/h		84lt/h		193,5lt/h		92,9lt/h	
EXHAUST SYSTEM																						
Max. exhaust temperature	600°C				650°C						600°C				650°C		690°C				650°C	
Max. exhaust gas flow	50,5m³/h				86m³/h				88,6m³/h		91,8m³/h		99,5m³/h		138m³/h		TBA		194,1m³/h		162,6m³/h	
Max. allowed back pressure	5kPa						6kPa		5kPa		10kPa						6kPa					
ALTERNATOR																						
Brand	Tescom																					
Poles	4 Poles																					
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