



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 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



	TDJ33FPT		TDJ50FPT		TDJ66FPT		TDJ90FPT		TDJ110FPT		TDJ130FPT		TDJ175FPT		TDJ220FPT		
Standby (kVA/kW)	33	26	50	40	66	52	90	72	110	88	130	104	175	140	220	176	
Prime (kVA/kW)	30	24	45	36	60	48	82	65	100	80	118	95	159	127	200	160	
Open type size (LxWxH mm)	2200 x 1000 x 1100						2350 x 1000 x 1300				2750 x 1100 x 1500				3000 x 1100 x 1500		
With cabinet (LxWxH mm)	2200 x 1000 x 1400						2350 x 1000 x 1550				2750 x 1100 x 1750				3000 x 1100 x 1750		
Open type weight (kg)	686		711		1113		1131				1456		1494		2003		
Open type weight (kg) (Except for antifreeze and oil)	668,2		679,7		1081,7		1099,7				1424,7		1451,3		1960,3		
Weight with cabinet (kg)	826		871		1273		1416				1806		1844		2453		
Weight with cabinet (kg) (Except for antifreeze and oil)	808,2		839,7		1241,7		1384,7				1774,7		1801,3		2410,3		
Tank capacity (L)	150						170				250				280		
MOTOR																	
Frequency	50Hz																
Manufacturer and model	FPT-IVECO 80313 AM1P		FPT-IVECO NEI45 AM1A		FPT-IVECO NEI45 SM1A		FPT-IVECO NEI45 SM3		FPT-IVECO NEI45 IM2A		FPT-IVECO NEI45 IM3		FPT-IVECO NEI45 IM3		FPT-IVECO NEI67 IM7		
Output rating	32kW		50kW		59kW		81kW		96kW		118kW		152kW		194kW		
Fuel	Diesel																
Injection	Direct																
Aspiration	Naturally aspirated				Turbocharged				Aftercooler / Turbocharged								
Cylinders	3		4												6		
Bore and Stroke	104 x 115mm		104 x 132mm														
Displacement	2,9 lt		4,5 lt												6,7lt		
Cooling	Water																
Engine oil specification	SAE 15W40																
Compression ratio	17:01		17,5:1														
Engine oil capacity (sump only)	8,8lt		12,8lt												17,2lt		
Coolant capacity (incl.radiator)	9lt		18,5lt												25,5lt		
Governor	Mechanical																
Air filter	Dry element																
FUEL CONSUMPTION																	
100% Load	6lt/h		11,6lt/h		13,7lt/h		19,4lt/h		22lt/h		27,6lt/h		36lt/h		42,1t/h		
75% Load	4,8lt/h		9,8lt/h		10,2lt/h		15,4lt/h		16,2lt/h		21,6lt/h		29lt/h		37,3lt/h		
50% Load	3,2lt/h		6,2lt/h		7lt/h		9,6lt/h		11lt/h		14,4lt/h		18lt/h		24lt/h		
EXHAUST SYSTEM																	
Maximum temperature	<525°C		<504°C		<483°C		<516°C		<535°C		<540°C		<570°C		<600°C		
Exhaust gas flow	153kg/h		211kg/h		325kg/h		345kg/h		533kg/h		538kg/h		739kg/h		793kg/h		
Maximum exhaust back pressure	70mBar		100mBar		50mBar		50mBar		50mBar		50mBar		50mBar		50mBar		
Exhaust flange size (internal dia.)	52mm		53mm		53mm		70mm		70mm		70mm		70mm		83mm		
AIR SYSTEM																	
Intake air flow	125m³/h		170m³/h		260m³/h		273m³/h		427m³/h		427m³/h		586m³/h				
Total cooling air flow	TBA				111,6m³/h		132m³/h						228m³/h				
STARTING SYSTEM																	
Starter motor	2,8kW						3kW										
Battery capacity	60Ah						72Ah		100Ah								
Auxiliary voltage	12V																
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



	TDJ275FPT		TDJ330FPT		TDJ385FPT		TDJ440FPT		TDJ495FPT		TDJ550FPT		TDJ660FPT		
Standby (kVA/kW)	275	220	330	264	385	308	440	352	495	396	550	440	660	528	
Prime (kVA/kW)	250	200	300	240	350	280	400	320	450	360	500	400	600	480	
Open type size (LxWxH mm)	3500 x 1200 x 1800				3700 x 1400 x 1800		3700 x 1600 x 1800						4000 x 1800 x 1900		
With cabinet (LxWxH mm)	3500 x 1200 x 2050				3700 x 1400 x 2050		3700 x 1600 x 2050						4000 x 1800 x 2350		
Open type weight (kg)	2154		2994		3069				3169		4792		5008		
Open type weight (kg) (Except for antifreeze and oil)	2109,2		2918		2967		2966		3098,9		4721,9		4923,5		
Weight with cabinet (kg)	2554		3444		3569				3639		5442		5658		
Weight with cabinet (kg) (Except for antifreeze and oil)	2509,2		3368		3467		3466		3568,9		5371,9		5573,5		
Tank capacity (L)	360				470								490		
MOTOR															
Frequency	50Hz														
Manufacturer and model	FPT-IVECO NEI67 IE8P		FPT-IVECO C87 IE4		FPT-IVECO C13 IE2A		FPT-IVECO C13 IE3A		FPT-IVECO CR13 IE6W		FPT-IVECO CR13 IE7W		FPT-IVECO CR16 IE1W		
Output rating	222kW		262kW		330kW		387kW		414kW		459kW		559kW		
Fuel	Diesel														
Injection	Direct														
Aspiration	Direct Common Rail				Direct E.U.I				Direct Electronic Common Rail						
Cylinders	6														
Bore and Stroke	104 x 132mm		117 x 135mm		135 x 150mm								141 x 170mm		
Displacement	6,7 lt		8,7 lt		12,88lt								15,9lt		
Cooling	Water														
Engine oil specification	SAE 15W40														
Compression ratio	17,5:1		16,5:1												15,5:1
Engine oil capacity (sump only)	17,2lt		28lt		35lt				32lt						
Coolant capacity (incl.radiator)	27,6lt		48lt		67lt		68lt		38,1lt				52,5lt		
Governor	Electronical (ECU)														
Air filter	Dry element														
FUEL CONSUMPTION															
100% Load	51,5t/h		68,6t/h		70lt/h		85,8lt/h		89,9lt/h		100,6lt/h		115lt/h		
75% Load	41,2lt/h		55,6lt/h		57,3lt/h		70,4lt/h		72,5lt/h		80,2lt/h		85lt/h		
50% Load	26,2lt/h		33,6lt/h		38,8lt/h		42,8lt/h		51,8lt/h		51,5lt/h		57lt/h		
EXHAUST SYSTEM															
Maximum temperature	<500°C		<511°C		<479°C		<445°C		<471°C		<520°C		<577,4°C		
Exhaust gas flow	970kg/h		1555kg/h		1865kg/h		2210kg/h		1731kg/h		2027kg/h		2548kg/h		
Maximum exhaust back pressure	30mBar		100mBar		50mBar										
Exhaust flange size (internal dia.)	70mm		94,5mm												106mm
AIR SYSTEM															
Intake air flow	1000m³/h		1240m³/h		1495m³/h		1770m³/h		1443m³/h		1576m³/h		2435m³/h		
Total cooling air flow	246m³/h		339m³/h		408m³/h										
STARTING SYSTEM															
Starter motor	3kW		4,5kW		5,5kW		6kW		7,8kW						
Battery capacity	2 x 100Ah										2 x 120Ah				
Auxiliary voltage	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														

