



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



	TDJ22P		TDJ33P		TDJ50P		TDJ66P		TDJ70P		TDJ88P		TDJ110P		TDJ150P	
Standby (kVA/kW)	22	17,6	33	26,4	50	40	66	52,8	70	56	88	70,4	110	88	150	120
Prime (kVA/kW)	20	16	30	24	45	36	60	48	63	50,4	80	64	100	80	135	108
Open type size (LxWxH mm)	2000 x 900 x 1000		2200 x 1000 x 1100								2350 x 1000 x 1300				2750 x 1100 x 1500	
With cabinet (LxWxH mm)	2000 x 900 x 1300		2200 x 1000 x 1400								2350 x 1000 x 1550				2750 x 1100 x 1750	
Open type weight (kg)	619		686		711		1113				1131				1456	
Open type weight (kg) (Except for antifreeze and oil)	601,4		667,5		692,5		1094,5		1092		1110		1110,4		1417	
Weight with cabinet (kg)	769		826		871		1273				1416				1806	
Weight with cabinet (kg) (Except for antifreeze and oil)	751,4		807,5		852,5		1254,5		1252		1395		1395,4		1767	
Tank capacity (L)	110		150								170				250	
MOTOR																
Frequency	50Hz															
Manufacturer and model	Perkins 404A 22G1		Perkins 1103A 33G		Perkins 1103A 33TG1		Perkins 1103A 33TG2		Perkins 1104A 44TG1		Perkins 1104A 44TG2		Perkins 1104C 44TAG2		Perkins 1106A-70TG1	
Output rating	20,6kW		30,4kW		45,6kW		59,3kW		64,3kW		79,1kW		99,5kW		135,8kW	
Fuel	Diesel															
Injection	Direct															
Aspiration	Naturally aspirated				Turbocharged								Aftercooler / Turbocharged		Turbocharged	
Cylinders	4		3						4						6	
Bore and Stroke	84 x 100mm		105 x 127mm												105 x 135mm	
Displacement	2,216lt		3,3 lt						4,4 lt						7,01 lt	
Cooling	Water															
Engine oil specification	SAE 15W40															
Compression ratio	23,3:1		19,25:1		17,25:1								18-23:1		18.2:1	
Engine oil capacity (sump only)	10,6lt		8,3lt						8lt						18lt	
Coolant capacity (incl.radiator)	7lt		10,2lt						13lt				12,6lt		21lt	
Governor	Mechanical								Electronical							
Air filter	Dry element															
FUEL CONSUMPTION																
100% load	5,3lt/h		7,1lt/h		10,7lt/h		13,9lt/h		14,8lt/h		18,7lt/h		22,6lt/h		30,3lt/h	
75% load	4lt/h		5,4lt/h		8,2lt/h		10,4lt/h		11,2lt/h		14,0lt/h		17,1lt/h		22,7lt/h	
50% load	2,9lt/h		3,9lt/h		5,7lt/h		7,2lt/h		8lt/h		9,7lt/h		11,8lt/h		15,9lt/h	
EXHAUST SYSTEM																
Maximum temperature	<505°C		<520°C		<537°C		<571°C		<550°C		<580°C		<543°C		<576°C	
Exhaust gas flow	3,94m³/min		5,8m³/min		7,7m³/min		10,4m³/min		11,4m³/min		13,3m³/min		16,3m³/min		22,6m³/min	
Maximum exhaust back pressure	102mBar		80mBar		100mBar								180mBar		60mBar	
Exhaust flange size (internal dia.)	42mm		52mm				56mm		64mm						72mm	
AIR SYSTEM																
Intake air flow	1,45m³/min		2,13m³/min		3,1m³/min				4,2m³/min		5,14m³/min		6,27m³/min		8,09m³/min	
Air intake temperature rise	40,3lt/min		53m³/min				89m³/min						165,6m³/min		182m³/min	
STARTING SYSTEM																
Starter motor	2kW		3kW												4,2kW	
Battery capacity	60Ah								72Ah				100Ah			
Auxiliary voltage	12V															
ALTERNATOR																
Brand	Leroy Somer, Meccalte															
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



	TDJ165P		TDJ220P		TDJ250P		TDJ275P		TDJ330P		TDJ385P		TDJ440P		TDJ500P		
Standby (kVA/kW)	165	132	220	176	250	200	275	220	330	264	385	308	440	352	500	400	
Prime (kVA/kW)	150	120	200	160	225	180	250	200	300	240	350	280	400	320	450	360	
Open type size (LxWxH mm)	2750 x 1100 x 1500		3000 x 1100 x 1500		3500 x 1200 x 1800						3700 x 1400 x 1800		3700 x 1600 x 1800				
With cabinet (LxWxH mm)	2750 x 1100 x 1750		3000 x 1100 x 1750		3500 x 1200 x 2050						3700 x 1400 x 2050		3700 x 1600 x 2050				
Open type weight (kg)	1494		2003		2154				2317		2994		3069				
Open type weight (kg) (Except for antifreeze and oil)	1455		1964		2113				2242,8		2902,6		2977,6		2949		
Weight with cabinet (kg)	1844		2453		2554				2767		3444		3569				
Weight with cabinet (kg) (Except for antifreeze and oil)	1805		2414		2513				2692,8		3352,6		3477,6		3449		
Tank capacity (L)	250		280		360						470						
MOTOR																	
Frequency	50Hz																
Manufacturer and model	Perkins 1106A 70TAG2		Perkins 1106A 70TAG4		Perkins 1206A E70TTAG2		Perkins 1206A E70TTAG3		Perkins 1706A E93TAG1		Perkins 1706A E93TAG2		Perkins 220 6A E13TAG3		Perkins 250 6A E15TAG1		
Output rating	149,1kW		196,3kW		226,1kW		248,6kW		293kW		368kW		412,5kW		451kW		
Fuel	Diesel																
Injection	Direct																
Aspiration	Aftercooler/Turbocharged																
Cylinders	6																
Bore and Stroke	105 x 135mm								112 x 149mm		130 x 157mm				130 x 171mm		
Displacement	7,01 lt								8,8 lt		12,5 lt				15,2 lt		
Cooling	Water																
Engine oil specification	SAE 15W40																
Compression ratio	18.2:1		16:01		15.8:1				16,1:1		16,3:1						
Engine oil capacity (sump only)	18lt				16lt				41lt		40lt				62lt		
Coolant capacity (incl.radiator)	21lt				25lt				33,2lt		51,4lt				58lt		
Governor	Electronical																
Air filter	Dry element																
FUEL CONSUMPTION																	
100% load	30,4lt/h		45,8lt/h		51lt/h		56,9lt/h		64,9lt/h		71lt/h		81lt/h		95lt/h		
75% load	24,7lt/h		34,7lt/h		38lt/h		41,5lt/h		48,2lt/h		54lt/h		62lt/h		72lt/h		
50% load	16,4lt/h		23,1lt/h		25,5lt/h		28,1lt/h		33,0lt/h		37lt/h		42lt/h		50lt/h		
EXHAUST SYSTEM																	
Max. temperature	<484°C		<550°C		TBA				<574°C		<630°C				<550°C		
Exhaust gas flow	25,53m³/min		36,8m³/min		TBA				50m³/min		64,8m³/min		72,5m³/min		81m³/min		
Max. exhaust back pressure	60mBar				TBA				100mBar		68mBar						
Exhaust flange size (internal dia.)	72mm				72mm				TBAmm		123mm				127mm		
AIR SYSTEM																	
Intake air flow	10,67m³/min		13,2m³/min		TBA				18,3m³/min		23,6m³/min		26,4m³/min		30,5m³/min		
Air intake temperature rise	282m³/min				TBA				370m³/min		654m³/min				866m³/min		
STARTING SYSTEM																	
Starter motor	4,2kW				TBA				5,3 or 6 kW		7,8kW				7,5kW		
Battery capacity	100Ah								2 x 100Ah		2 x 120Ah						
Auxiliary voltage	12V								24V								
ALTERNATOR																	
Brand	Leroy Somer, Meccalte																
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



	TDJ550P		TDJ660P		TDJ715P		TDJ825P		TDJ880P		TDJ1100P		TDJ1250P		
Standby (kVA/kW)	550	440	660	528	725	580	825	660	880	704	1100	888	1250	1000	
Prime (kVA/kW)	500	400	600	480	650	520	750	600	800	640	1000	800	1125	900	
Open type size (LxWxH mm)	3700 x 1600 x 1800		4000 x 1800 x 1900				4500 x 2000 x 1900								TBA
With cabinet (LxWxH mm)	3700 x 1600 x 2050		4000 x 1800 x 2350				4500 x 2000 x 2350								
Open type weight (kg)	3169		5528		6928		7318		7481		8246				
Open type weight (kg) (Except for antifreeze and oil)	3049		5405		6805		7140,5		7247,6		7954				
Weight with cabinet (kg)	3639		6278		8128		8518		8681		10746				
Weight with cabinet (kg) (Except for antifreeze and oil)	3519		6155		8005		8340,5		8447,6		10454				
Tank capacity (L)	470		490				570								
MOTOR															
Frequency	50Hz														
Manufacturer and model	Perkins 250 6A E15TAG2		Perkins 280 6A E18TAG1A		Perkins 280 6A E18TAG2		Perkins 280 6A E18TTAG5 SAE1 14		Perkins 4006 23TAG3A		Perkins 4008 TAG2A		Perkins 4008 30TAG3		
Output rating	495kW		592kW		628kW		743kW		786kW		924kW		1105kW		
Fuel	Diesel														
Injection	Direct														
Aspiration	Aftercooler/Turbocharged								Turbocharged		Turbocharged and Aircooled		Turbocharged and air to air charge cooled		
Cylinders	6										8				
Bore and Stroke	130 x 171 mm		145 x 183mm						160 x 19 mm						
Displacement	15,2 lt		18,13 lt				18,1 lt		22,92 lt		30,56 lt				
Cooling	Water														
Engine oil specification	SAE 15W40														
Compression ratio	16,3:1		14,5:1				14:01		13,6:1				13:01		
Engine oil capacity (sump only)	62lt						68lt		113,4lt		149lt		153lt		
Coolant capacity (incl.radiator)	58lt		61lt				109,5lt		120lt		143lt		140lt		
Governor	Electronical														
Air filter	Dry element														
FUEL CONSUMPTION															
100% load	100lt/h		123lt/h		132lt/h		162lt/h		172lt/h		220lt/h		244lt/h		
75% load	76lt/h		90lt/h		97lt/h		118lt/h		130lt/h		160lt/h		188lt/h		
50% load	53lt/h		61lt/h		66lt/h		81lt/h		90lt/h		108lt/h		120lt/h		
EXHAUST SYSTEM															
Maximum temperature	<550°C		<571°C		<553°C		<474°C		<500°C		<440°C		<482°C		
Exhaust gas flow	98m³/min		104m³/min		114m³/min		142m³/min		193m³/min		183m³/min		240m³/min		
Maximum exhaust back pressure	68mBar		69mBar				100mBar		60mBar		TBA		70mBar		
Exhaust flange size (internal dia.)	127mm		202mm				139,7mm		152,4mm		152mm				
AIR SYSTEM															
Intake air flow	36,6m³/min		36m³/min		40m³/min		62m³/min		73m³/dk		74m³/min		96m³/min		
Air intake temperature rise	722m³/min		702m³/min				TBA		870m³/min				TBA		
STARTING SYSTEM															
Starter motor	7,5kW		9kW						7,5kW		8,2kW				
Battery capacity	2 x 120Ah		2 x 150Ah												
Auxiliary voltage	24V														
ALTERNATOR															
Brand	Leroy Somer, Meccalte														
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														

