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“ We built our success,  
with EMSA expertise and energy ”

Since 1977, as one of the leading diesel generator producers, Emsa Generator is the first company in production of alternator in Turkey.

Starting the production of diesel generators in 1982 EMSA also developed R&D projects and became a pioneer in the industry.

Today for high capacity needs, EMSA's synchronized diesel generator systems provide considerable advantages compared to the same power of a single generator system.

EMSA Generator as the industry's leading company offers Free Remote Access system to the customers. With this system, Emsa provides decrease in service costs, as well as uninterrupted power with early detection.

With CE, ISO 9001:2008, ISO 14001:2004, ISO 10002:2006, OHSAS 18001:2007, TS ISO 8528-5, TS EN 12601 TSEHYB certificates, Emsa makes production of generators with 10 – 2500 kVA power by using world famous diesel engines like Deutz, Perkins, Volvo etc. Via sales and after sales networks both in and outside the country, Emsa made a substantial contribution to the industry with its almost 40 years experience and will continue to be the raising star in the generator sector.



# “ Emsa Power Generators are all around the World ”



EMSA, spreading to whole world especially Europe, Middle East, Africa and C.I.S. countries, is among the most important players of generating sets market in the world with its experience of over 40 years.



## PERKINS 10-22 kVA

### Technical Specifications



#### ENGINE

- PERKINS series heavy duty diesel engine
- 4 cycle, water cooled, naturally aspirated
- Indirect injection
- Mechanic / Rotary type pump
- 12 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



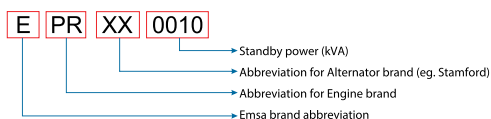
Warning system for decreasing fuel with electronic fuel level sender



### PERKINS Series Diesel Generator Sets 10-22 kVA

MODEL				E PR XX 0010	E PR XX 0015	E PR XX 0022
GROUP	GEN - SET POWER	STAND BY	kVA	10	14,5	22,3
			kW	8	11,6	17,8
		PRIME	kVA	9	13	20,3
			kW	7,2	10,5	16,2
	CANOPY DIMENSION (W x L x H) mm			900 x 2100 x 1310	900 x 2100 x 1310	900 x 2100 x 1310
	CANOPY WEIGHT kg			515	525	595
	OPEN DIMENSION (W x L x H) mm			900 x 1750 x 1145	900 x 1750 x 1235	900 x 1750 x 1285
	OPEN WEIGHT kg			395	405	480
ENGINE	BRAND			PERKINS	PERKINS	PERKINS
	TYPE			403A - 11G1	403A - 15G1	404A - 22G1
	POWER	STAND BY	kW	9,2	13,2	20,3
		PRIME	kW	8,4	12	18,4
	SPEED (rpm)			1500	1500	1500
	CYCLE			4	4	4
	DISPLACEMENT (lt)			1,131	1,496	2,216
	NUMBER OF CYLINDERS			3 IN LINE	3 IN LINE	4 IN LINE
	BORE AND STROKE (mm x mm)			77 x 81	84 x 90	84 x 100
	COMPRESSION RATIO			23:1	22,5 : 1	23,3 : 1
	GOVERNOR TYPE			MECHANIC		
	INDUCTION			NATURAL		
	COMBUSTION SYSTEM			INDIRECT INJECTION		
	COOLING SYSTEM			WATER		
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		3,00	3,70	5,30
		75% OF PRIME POWER		2,30	2,80	4,00
50% OF PRIME POWER		1,70	2,00	2,90		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			4,9	6	10,6	
TOTAL COOLANT CAPACITY (lt)			5,2	6	7	
FUEL TANK CAPACITY (lt)			92	92	92	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## PERKINS 33-112 kVA

### Technical Specifications



#### ENGINE

- PERKINS series heavy duty diesel engine
- 4 cycle, water cooled, natural / turbocharged / turbocharged & air to air charge cooled
- Direct injection
- Rotary type pump
- 12/24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



### PERKINS Series Diesel Generator Sets 33-112 kVA

MODEL			E PR XX 0033	E PR XX 0050	E PR XX 0066	E PR XX 0072	E PR XX 088	E PR XX 0112	
GROUP	GEN - SET POWER	STAND BY	kVA	33	50	66	72	88	112
			kW	26,4	40	52,8	57,6	70,4	89,6
		PRIME	kVA	30	45	60	65	80	101,4
			kW	24	36	48	52	64	81,1
	CANOPY DIMENSION (W x L x H) mm			1000 x 2450 x 1610	1000 x 2450 x 1610	1000 x 2450 x 1610	1000 x 2880 x 1610	1000 x 2880 x 1610	1000 x 2880 x 1610
	CANOPY WEIGHT kg			920	970	1085	1180	1230	1350
	OPEN DIMENSION (W x L x H) mm			1000 x 2050 x 1400	1000 x 2050 x 1400	1000 x 2050 x 1400	1000 x 2400 x 1390	1000 x 2400 x 1390	1000 x 2400 x 1390
	OPEN WEIGHT kg			725	775	890	960	1010	1130
ENGINE	BRAND			PERKINS	PERKINS	PERKINS	PERKINS	PERKINS	PERKINS
	TYPE			1103A - 33G	1103A - 33TG1	1103A - 33TG2	1104A - 44TG1	1104A - 44TG2	1104C - 44TAG2
	POWER	STAND BY	kW	30,4	45,6	59,3	64,3	79,1	99,5
		PRIME	kW	27,7	41,3	53,8	58,4	71,9	90,1
	SPEED (rpm)			1500	1500	1500	1500	1500	1500
	CYCLE			4	4	4	4	4	4
	DISPLACEMENT (lt)			3,3	3,3	3,3	4,4	4,4	4,4
	NUMBER OF CYLINDERS			3 IN LINE	3 IN LINE	3 IN LINE	4 IN LINE	4 IN LINE	4 IN LINE
	BORE AND STROKE (mm x mm)			105 x 127	105 x 127	105 x 127	105 x 127	105 x 127	105 x 127
	COMPRESSION RATIO			19,25 : 1	17,25 : 1	17,25 : 1	17,25 : 1	17,25 : 1	18,2:1
	GOVERNOR TYPE			MECHANIC	MECHANIC/ ELECTRONIC			MECHANIC	ELECTRONIC
	INDUCTION			NATURAL	TURBOCHARGED				TURBOCHARGED - AIR TO AIR CHARGE COOLED
	COMBUSTION SYSTEM			DIRECT INJECTION					
	COOLING SYSTEM			WATER					
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		7,20	10,80	13,9	14,80	18,70	22,60
		75% OF PRIME POWER		5,61	8,23	10,4	11,20	14,00	17,10
50% OF PRIME POWER		4,06	5,83	7,2	8,00	9,70	11,20		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			8,3	7,9	7,9	8	8	8	
TOTAL COOLANT CAPACITY (lt)			10,2	10,2	10,2	13	13	12,6	
FUEL TANK CAPACITY (lt)			132	132	132	180	180	180	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.

## PERKINS 150-220 kVA

### Technical Specifications



#### ENGINE

- PERKINS series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged / turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 12/24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender





### PERKINS Series Diesel Generator Sets 150-220 kVA

MODEL				E PR XX 0150	E PR XX 0165	E PR XX 0200	E PR XX 0220
GROUP	GEN - SET POWER	STAND BY	kVA	150	165	200	220
			kW	120	132	160	176
		PRIME	kVA	135	150	180	200
			kW	108	120	144	160
	CANOPY DIMENSION (W x L x H) mm			1050 x 3180 x 1870	1050 x 3180 x 1870	1050 x 3580 x 1870	1050 x 3580 x 1870
	CANOPY WEIGHT kg			1750	1750	1940	1940
	OPEN DIMENSION (W x L x H) mm			1050 x 2700 x 1650	1050 x 2700 x 1650	1050 x 3100 x 1650	1050 x 3100 x 1650
	OPEN WEIGHT kg			1505	1505	1680	1680
ENGINE	BRAND			PERKINS	PERKINS	PERKINS	PERKINS
	TYPE			1106A - 70TG1	1106A - 70TAG2	1106A - 70TAG3	1106A - 70TAG4
	POWER	STAND BY	kW	131,4	144,1	175,2	191,3
		PRIME	kW	118,3	131	157,7	173,9
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			7,01	7,01	7,01	7,01
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			105 x 135	105 x 135	105 x 135	105 x 135
	COMPRESSION RATIO			18,2 : 1	16:01	16:01	16:01
	GOVERNOR TYPE			MECHANIC			ELECTRONIC
	INDUCTION			TURBOCHARGED	TURBOCHARGED - AIR TO AIR CHARGE COOLED		
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		30,2	33,40	41,2	45,8
75% OF PRIME POWER		22,70	24,70	30,9	34,3		
50% OF PRIME POWER		15,90	16,40	20,6	22,9		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			18,0	16,5	16,5	16,5	
TOTAL COOLANT CAPACITY (lt)			21	21	21	21	
FUEL TANK CAPACITY (lt)			280	280	380	380	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.

## PERKINS 250-330 kVA

### Technical Specifications



#### ENGINE

- PERKINS series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



### PERKINS Series Diesel Generator Sets 250-330 kVA

MODEL				E PR XX 0250	E PR XX 0275	E PR XX 0300	E PR XX 0330
GROUP	GEN - SET POWER	STAND BY	kVA	250	275	300	330
			kW	200	220	240	264
		PRIME	kVA	230	250	275	300
			kW	184	200	220	240
	CANOPY DIMENSION (W x L x H) mm			1150 x 3820 x 2460	1150 x 3820 x 2460	1150 x 3820 x 2460	1150 x 3820 x 2460
	CANOPY WEIGHT kg			2500	2515	2520	2670
	OPEN DIMENSION (W x L x H) mm			1150 x 3340 x 1900	1150 x 3340 x 1900	1150 x 3340 x 1900	1150 x 3340 x 1900
	OPEN WEIGHT kg			2200	2220	2220	2370
ENGINE	BRAND			PERKINS	PERKINS	PERKINS	PERKINS
	TYPE			1506A - E88TAG2	1506A - E88TAG3	1506A-E88TAG4	1506A-E88TAG5
	POWER	STAND BY	kW	223	245	267	293
		PRIME	kW	201	223	244	267
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			8,8	8,8	8,8	8,8
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			112 x 149	112 x 149	112 x 149	112 x 149
	COMPRESSION RATIO			16,1 : 1	16,1 : 1	16,1 : 1	16,1 : 1
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED			
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		48,6	55,5	60,2	64,9
		75% OF PRIME POWER		35,7	41,6	45,8	48,2
50% OF PRIME POWER		23,5	28,9	31,6	33,00		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			41	41	41	41	
TOTAL COOLANT CAPACITY (lt)			29,6	29,6	33,2	33,2	
FUEL TANK CAPACITY (lt)			585	585	585	585	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.

## PERKINS 400-550 kVA

### Technical Specifications



#### ENGINE

- PERKINS series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



### PERKINS Series Diesel Generator Sets 400-550 kVA

MODEL			E PR XX 0400	E PR XX 0450	E PR XX 0500	E PR XX 0550	
GROUP	GEN - SET POWER	STAND BY	kVA	400	450	500	550
			kW	320	360	400	440
		PRIME	kVA	350	400	455	500
			kW	280	320	364	400
	CANOPY DIMENSION (W x L x H) mm			1500 x 4400 x 2660	1500 x 4400 x 2660	1500 x 4400 x 2660	1500 x 4400 x 2660
	CANOPY WEIGHT kg			3520	3610	3815	3850
	OPEN DIMENSION (W x L x H) mm			1500 x 3600 x 2200	1500 x 3600 x 2200	1500 x 3600 x 2200	1500 x 3600 x 2200
	OPEN WEIGHT kg			3010	3105	3310	3345
ENGINE	BRAND			PERKINS	PERKINS	PERKINS	PERKINS
	TYPE			2206A - E13TAG2	2206A - E13TAG3	2506A - E15TAG1	2506A - E15TAG2
	POWER	STAND BY	kW	349	392	435	478
		PRIME	kW	305	349	396	435
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			12,5	12,5	15,2	15,2
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			130 x 157	130 x 157	137 x 171	137 x 171
	COMPRESSION RATIO			16,3 : 1	16,3 : 1	16,0:1	16,0:1
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED			
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		71,00	81,00	95,00	100,00
75% OF PRIME POWER		54,00	62,00	72,00	76,00		
50% OF PRIME POWER		37,00	42,00	50,00	53,00		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			40	40	62	62	
TOTAL COOLANT CAPACITY (lt)			51,40	51,40	58	58	
FUEL TANK CAPACITY (lt)			970	970	970	970	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.

## PERKINS 630-700 kVA

### Technical Specifications



#### ENGINE

- PERKINS series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



### PERKINS Series Diesel Generator Sets 630-700 kVA

MODEL				E PR XX 0630	E PR XX 0650	E PR XX 0700
GROUP	GEN - SET POWER	STAND BY	kVA	630	650	700
			kW	504	520	560
		PRIME	kVA	591	591	650
			kW	472,8	472,8	520
	CANOPY DIMENSION (W x L x H) mm			1700 x 4400 x 2750	1700 x 4400 x 2750	1700 x 4400 x 2750
	CANOPY WEIGHT kg			4620	4620	4760
	OPEN DIMENSION (W x L x H) mm			1700 x 3600 x 2250	1700 x 3600 x 2250	1700 x 3600 x 2250
	OPEN WEIGHT kg			4070	4070	4210
ENGINE	BRAND			PERKINS	PERKINS	PERKINS
	TYPE			2806A - E18TAG1A	2806A - E18TAG1A	2806A - E18TAG2
	POWER	STAND BY	kW	574	574	609
			PRIME	kW	522	522
	SPEED (rpm)			1500	1500	1500
	CYCLE			4	4	4
	DISPLACEMENT (lt)			18,1	18,1	18,1
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			145 x 183	145 x 183	145 x 183
	COMPRESSION RATIO			14,5 : 1	14,5 : 1	14,5 : 1
	GOVERNOR TYPE			ELECTRONIC		
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED		
	COMBUSTION SYSTEM			DIRECT INJECTION		
	COOLING SYSTEM			WATER		
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		123,00	123,00	132,00
		75% OF PRIME POWER		90,00	90,00	97,00
50% OF PRIME POWER		61,00	61,00	66,00		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			62	62	62	
TOTAL COOLANT CAPACITY (lt)			61	61	61	
FUEL TANK CAPACITY (lt)			1100	1100	1100	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.

## PERKINS 825-1250 kVA

### Technical Specifications



#### ENGINE

- PERKINS series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender





### PERKINS Series Diesel Generator Sets 825-1250 kVA

MODEL			E PR XX 0825	E PR XX 0900	E PR XX 1002	E PR XX 1125	E PR XX 1250	
GROUP	GEN - SET POWER	STAND BY	kVA	825	900	1002	1125	1250
			kW	660	720	802	900	1000
		PRIME	kVA	750	800	911	1022	1125
			kW	600	640	729	818	900
	CANOPY DIMENSION (W x L x H) mm			1900 x 5250 x 3330	1900 x 5250 x 3330	2200 x 5550 x 3300	2200 x 5550 x 3300	2200 x 5550 x 3300
	CANOPY WEIGHT kg			6525	6835	9635	9995	10025
	OPEN DIMENSION (W x L x H) mm			1900 x 5000 x 2395	1900 x 5000 x 2395	2200 x 5300 x 2640	2200 x 5300 x 2640	2200 x 5300 x 2640
	OPEN WEIGHT kg			5180	5490	8090	8450	8480
ENGINE	CONTAINER DIMENSION (W x L x H) mm			1900 x 5290 x 3640	1900 x 5290 x 3640	2200 x 5300 x 3390	2200 x 5300 x 3390	2200 x 5300 x 3390
	CONTAINER WEIGHT kg			8100	8100	9700	9800	9800
	BRAND			PERKINS	PERKINS	PERKINS	PERKINS	PERKINS
	TYPE			4006 - 23TAG2A	4006 - 23TAG3A	4008TAG1A	4008TAG2A	4008-30TAG3
	POWER	STAND BY	kW	695	760	855	958	1055
		PRIME	kW	632	679	778	872	947
	SPEED (rpm)			1500	1500	1500	1500	1500
	CYCLE			4	4	4	4	4
	DISPLACEMENT (lt)			22,921	22,921	30,561	30,561	30,561
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	8 IN LINE	8 IN LINE	8 IN LINE
	BORE AND STROKE (mm x mm)			160 x 190	160 x 190	160 x 190	160 x 190	160 x 190
	COMPRESSION RATIO			13,6 : 1	13,6 : 1	13,6 : 1	13,6 : 1	13,1 : 1
	GOVERNOR TYPE			ELECTRONIC				
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED				
	COMBUSTION SYSTEM			DIRECT INJECTION				
	COOLING SYSTEM			WATER				
FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		161,00	172,00	195,00	215,00	244,00	
	75% OF PRIME POWER		122,00	130,00	143,00	162,00	188,00	
	50% OF PRIME POWER		83,00	90,00	98,00	111,00	120,00	
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			113,4	113,4	153	153	153	
TOTAL COOLANT CAPACITY (lt)			105	105	149	149	140	
FUEL TANK CAPACITY (lt)			1400	1400	2000	2000	2000	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.

## PERKINS 1375-1880 kVA

### Technical Specifications



#### ENGINE

- PERKINS series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled / turbocharged & air to water charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



### PERKINS Series Diesel Generator Sets 1375-1880 kVA

MODEL			E PR XX 1375	E PR XX 1385	E PR XX 1500	E PR XX 1656	E PR XX 1880	
GROUP	GEN - SET POWER	STAND BY	kVA	1375	1385	1500	1656	1880
			kW	1100	1108	1200	1325	1504
		PRIME	kVA	1250	1250	1350	1505	1710
			kW	1000	1000	1080	1204	1368
	CANOPY DIMENSION (W x L x H) mm			N/A	N/A	N/A	N/A	N/A
	CANOPY WEIGHT kg			N/A	N/A	N/A	N/A	N/A
	OPEN DIMENSION (W x L x H) mm			2200 x 5350 x 2750	2200 x 5350 x 2750	2200 x 5350 x 2750	2200 x 5350 x 2750	2200 x 5350 x 2750
	OPEN WEIGHT kg			8080	8080	8745	8745	9075
ENGINE	CONTAINER DIMENSION (W x L x H) mm			N/A	N/A	N/A	N/A	N/A
	CONTAINER WEIGHT kg			N/A	N/A	N/A	N/A	N/A
	BRAND			PERKINS	PERKINS	PERKINS	PERKINS	PERKINS
	TYPE			4012 - 46TAG0A	4012 - 46TWG2A	4012 - 46TAG1A	4012 - 46TAG2A	4012 - 46TAG3A
	POWER	STAND BY	kW	1158	1166	1263	1395	1583
		PRIME	kW	1053	1055	1148	1267	1440
	SPEED (rpm)			1500	1500	1500	1500	1500
	CYCLE			4	4	4	4	4
	DISPLACEMENT (lt)			45,842	45,842	45,842	45,842	45,842
	NUMBER OF CYLINDERS			12 - 60° V	12 - 60° V	12 - 60° V	12 - 60° V	12 - 60° V
	BORE AND STROKE (mm x mm)			160 x 190	160 x 190	160 x 190	160 x 190	160 x 190
	COMPRESSION RATIO			13:1	13,6:1	13:1	13,6:1	13,6:1
	GOVERNOR TYPE			ELECTRONIC				
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED	TURBOCHARGED - AIR TO WATER CHARGE COOLED	TURBOCHARGED - AIR TO AIR CHARGE COOLED		
	COMBUSTION SYSTEM			DIRECT INJECTION				
	COOLING SYSTEM			WATER				
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		259,00	258,00	281,00	301,00	370,00
75% OF PRIME POWER		199,00	196,00	212,00	237,00	275,00		
50% OF PRIME POWER		139,00	143,00	154,00	162,00	187,00		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			177	177	177	177	177	
TOTAL COOLANT CAPACITY (lt)			210	210	210	210	210	
FUEL TANK CAPACITY (lt)			2500	2500	2500	2500	3000	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.  
N/A: These dimensions and weights may change depending upon the characteristics of the project. Please contact us.

## PERKINS 2028-2500 kVA

### Technical Specifications



#### ENGINE

- PERKINS series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled / turbocharged & air to water charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



### PERKINS Series Diesel Generator Sets 2028-2500 kVA

MODEL			E PR XX 2028	E PR XX 2250	E PR XX 2264	E PR XX 2500	
GROUP	GEN - SET POWER	STAND BY	kVA	2028	2250	2264	2500
			kW	1622	1800	1811,2	2000
		PRIME	kVA	1844	2000	2058	2250
			kW	1476	1600	1646,4	1800
	CANOPY DIMENSION (W x L x H) mm			N/A	N/A	N/A	N/A
	CANOPY WEIGHT kg			N/A	N/A	N/A	N/A
	OPEN DIMENSION (W x L x H) mm			2200 x 6000 x 3140	2200 x 6000 x 3140	2200 x 6000 x 3140	2200 x 6000 x 3140
	OPEN WEIGHT kg			10760	10800	10800	11190
ENGINE	CONTAINER DIMENSION (W x L x H) mm			N/A	N/A	N/A	N/A
	CONTAINER WEIGHT kg			N/A	N/A	N/A	N/A
	BRAND			PERKINS	PERKINS	PERKINS	PERKINS
	TYPE			4016TAG1A	4016 - 61TRG2	4016TAG2A	4016 - 61TRG3
	POWER	STAND BY	kW	1690	1895	1886	2083
		PRIME	kW	1537	1684	1715	1875
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			61,123	61,123	61,123	61,123
	NUMBER OF CYLINDERS			16 - 60° V	16 - 60° V	16 - 60° V	16 - 60° V
	BORE AND STROKE (mm x mm)			160 x 190	160 x 190	160 x 190	160 x 190
	COMPRESSION RATIO			13,6 : 1	13,6 : 1	13,6 : 1	13,6:1
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED	TURBOCHARGED - AIR TO WATER CHARGE COOLED	TURBOCHARGED - AIR TO AIR CHARGE COOLED	TURBOCHARGED - AIR TO WATER CHARGE COOLED
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER	REMOTE RADIATOR	WATER	REMOTE RADIATOR
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		383,00	422,00	434,00	470,00
75% OF PRIME POWER		277,00	318,00	327,00	344,00		
50% OF PRIME POWER		185,00	216,00	222,00	234,00		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			237,2	237,2	237,2	237,2	
TOTAL COOLANT CAPACITY (lt)			316	252	316	270	
FUEL TANK CAPACITY (lt)			3000	3500	3500	4000	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.  
N/A: These dimensions and weights may change depending upon the characteristics of the project. Please contact us.

## DEUTZ 40-60 kVA

### Technical Specifications



#### ENGINE

- DEUTZ 226B series heavy duty diesel engine
- 4 cycle, water cooled, natural / turbocharged
- Direct injection
- Mechanic / electronic governor system
- 12 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



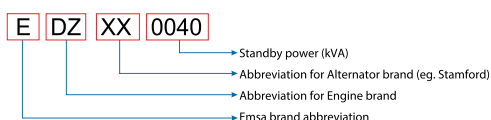
# DEUTZ 226B Series

## Diesel Generator Sets

### DEUTZ 226B Series Diesel Generator Sets 40-60 kVA

MODEL				E DZ XX 0040	E DZ XX 0060
GROUP	GEN - SET POWER	STAND BY	kVA	40	60
			kW	32	48
		PRIME	kVA	36	55
			kW	29	44
	CANOPY DIMENSION (W x L x H) mm			1000 x 2450 x 1610	1000 x 2450 x 1610
	CANOPY WEIGHT kg			930	1015
	OPEN DIMENSION (W x L x H) mm			1000 x 2050 x 1390	1000 x 2050 x 1520
	OPEN WEIGHT kg			735	820
ENGINE	BRAND			DEUTZ	DEUTZ
	TYPE			D226B-3D	TD226B-3D
	POWER	STAND BY	kW	36,5	55,2
			PRIME	kW	32
	SPEED (rpm)			1500	1500
	CYCLE			4	4
	DISPLACEMENT (lt)			3,12	3,12
	NUMBER OF CYLINDERS			3 IN LINE	3 IN LINE
	BORE AND STROKE (mm x mm)			105 x 120	105 x 120
	COMPRESSION RATIO			16,4:1	15,5:1
	GOVERNOR TYPE			MECHANIC / ELECTRONIC	
	INDUCTION			NATURAL	TURBOCHARGED
	COMBUSTION SYSTEM			DIRECT INJECTION	
	COOLING SYSTEM			WATER	
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		7,56	12,35
		75% OF PRIME POWER		5,69	9,26
50% OF PRIME POWER		3,92	6,54		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			7,25	7,25	
TOTAL COOLANT CAPACITY (lt)			28	28	
FUEL TANK CAPACITY (lt)			132	132	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



**Turkey**  
Discover the potential

## DEUTZ 72-110 kVA

### Technical Specifications



#### ENGINE

- DEUTZ WP series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged
- Direct injection
- Mechanic / electronic governor system
- 12/24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender





# DEUTZ WP Series

## Diesel Generator Sets

### DEUTZ WP Series Diesel Generator Sets 72-110 kVA

MODEL				E DZ XX 0072	E DZ XX 0082	E DZ XX 0110	
GROUP	GEN - SET POWER	STAND BY	kVA	72	82	110	
			kW	58	66	88	
		PRIME	kVA	65	75	100	
			kW	52	60	80	
	CANOPY DIMENSION (W x L x H) mm				1000 x 2880 x 1610	1000 x 2880 x 1610	1050 x 3180 x 1870
	CANOPY WEIGHT kg				1315	1315	1435
	OPEN DIMENSION (W x L x H) mm				1000 x 2400 x 1520	1000 x 2400 x 1520	1050 x 2700 x 1520
	OPEN WEIGHT kg				1095	1095	1195
ENGINE	BRAND			DEUTZ	DEUTZ	DEUTZ	
	TYPE			WP4D66E200	WP4D66E200	WP4D108E200	
	POWER	STAND BY	kW	86	86	108	
		PRIME	kW	78	78	94	
	SPEED (rpm)			1500	1500	1500	
	CYCLE			4	4	4	
	DISPLACEMENT (lt)			4,5	4,5	4,50	
	NUMBER OF CYLINDERS			4 IN LINE	4 IN LINE	4 IN LINE	
	BORE AND STROKE (mm x mm)			105 x 130	105 x 130	105 x 130	
	COMPRESSION RATIO			18:1	18:1	18:1	
	GOVERNOR TYPE			MECHANIC / ELECTRONIC		ELECTRONIC	
	INDUCTION			TURBOCHARGED		TURBOCHARGED - AIR TO AIR CHARGE COOLED	
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		16,40	18,93	22,29	
		75% OF PRIME POWER		12,33	14,23	16,68	
50% OF PRIME POWER		9,70	10,11	11,38			
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			10	10	10		
TOTAL COOLANT CAPACITY (lt)			15,30	15,30	16,30		
FUEL TANK CAPACITY (lt)			180	180	280		

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## DEUTZ 150-165 kVA

### Technical Specifications



#### ENGINE

- DEUTZ WP series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# DEUTZ WP Series

## Diesel Generator Sets

### DEUTZ WP Series Diesel Generator Sets 150-165 kVA

MODEL				E DZ XX 0150	E DZ XX 0165
GROUP	GEN - SET POWER	STAND BY	kVA	150	165
			kW	120	132
		PRIME	kVA	136	150
			kW	109	120
	CANOPY DIMENSION (W x L x H) mm			1050 x 3580 x 1870	1050 x 3580 x 1870
	CANOPY WEIGHT kg			1760	1760
	OPEN DIMENSION (W x L x H) mm			1050 x 3100 x 1690	1050 x 3100 x 1690
OPEN WEIGHT kg			1500	1500	
ENGINE	BRAND			DEUTZ	DEUTZ
	TYPE			WP6D140E200	WP6D152E200
	POWER	STAND BY	kW	140	152
		PRIME	kW	128	138
	SPEED (rpm)			1500	1500
	CYCLE			4	4
	DISPLACEMENT (lt)			6,75	6,75
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			105 x 130	105 x 130
	COMPRESSION RATIO			18:1	18:1
	GOVERNOR TYPE			ELECTRONIC	
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED	
	COMBUSTION SYSTEM			DIRECT INJECTION	
	COOLING SYSTEM			WATER	
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		30,4	32,64
75% OF PRIME POWER		23,1	24,56		
50% OF PRIME POWER		15,9	16,65		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			16	16	
TOTAL COOLANT CAPACITY (lt)			28	28	
FUEL TANK CAPACITY (lt)			280	280	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## DEUTZ 275-440 kVA

### Technical Specifications



#### ENGINE

- DEUTZ 1015 series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged / turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# DEUTZ 1015 Series

## Diesel Generator Sets

### DEUTZ 1015 Series Diesel Generator Sets 275-440 kVA

MODEL			E DT XX 0275	E DT XX 0290	E DT XX 0360	E DT XX 0440	
GROUP	GEN - SET POWER	STAND BY	kVA	275	290	360	440
			kW	220	232	288	352
		PRIME	kVA	250	264	330	400
			kW	200	211	264	320
	CANOPY DIMENSION (W x L x H) mm			1400 x 3300 x 2585	1400 x 3300 x 2585	1600 x 3250 x 2475	1600 x 3250 x 2475
	CANOPY WEIGHT kg			2480	2480	2765	2855
	OPEN DIMENSION (W x L x H) mm			1400 x 3000 x 2270	1400 x 3000 x 2270	1600 x 3000 x 1900	1600 x 3000 x 1900
	OPEN WEIGHT kg			2095	2095	2380	2475
ENGINE	BRAND			DEUTZ	DEUTZ	DEUTZ	DEUTZ
	TYPE			BF6M1015-LA-GA	BF6M1015C-LA-G1A	BF6M1015C-LA-G3A	BF6M1015CP-LA-G
	POWER	STAND BY	kW	231	250	314	365
		PRIME	kW	208	228	282	328
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			11,906	11,906	11,906	11,906
	NUMBER OF CYLINDERS			6 CYLINDERS- V TYPE	6 CYLINDERS- V TYPE	6 CYLINDERS- V TYPE	6 CYLINDERS- V TYPE
	BORE AND STROKE (mm x mm)			132 x 145	132 x 145	132 x 145	132 x 145
	COMPRESSION RATIO			16.5:1	16.5:1	16.5:1	16.5:1
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBOCHARGED	TURBOCHARGED - AIR TO AIR CHARGE COOLED		
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CON-SUMPTION (lt/h)	100% OF PRIME POWER		48,53	53,20	65,80	76,53
75% OF PRIME POWER		36,4	39,90	49,35	57,40		
50% OF PRIME POWER		24,26	26,60	32,90	38,25		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			38	38	38	38	
TOTAL COOLANT CAPACITY (lt)			62	62	62	67	
FUEL TANK CAPACITY (lt)			565	565	760	760	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## DEUTZ 520-575 kVA

### Technical Specifications



#### ENGINE

- DEUTZ 1015 series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# DEUTZ 1015 Series

## Diesel Generator Sets

### DEUTZ 1015 Series Diesel Generator Sets 520-575 kVA

MODEL				E DT XX 0520	E DT XX 0575	
GROUP	GEN - SET POWER	STAND BY	kVA	520	575	
			KW	416	460	
		PRIME	kVA	475	522	
			KW	380	418	
	CANOPY DIMENSION (W x L x H) mm				1600 x 4000 x 2875	1600 x 4000 x 2875
	CANOPY WEIGHT kg				3440	3480
	OPEN DIMENSION (W x L x H) mm				1600 x 3500 x 1980	1600 x 3500 x 1980
OPEN WEIGHT kg				2975	3015	
ENGINE	BRAND			DEUTZ	DEUTZ	
	TYPE			BF8M1015C-LA-G2	BF8M1015CP-LA-G4	
	POWER	STAND BY	KW	440	540	
		PRIME	KW	403	490	
	SPEED (rpm)			1500	1500	
	CYCLE			4	4	
	DISPLACEMENT (lt)			15,874	15,874	
	NUMBER OF CYLINDERS			8 CYLINDERS- V TYPE	8 CYLINDERS- V TYPE	
	BORE AND STROKE (mm x mm)			132 x 145	132 x 145	
	COMPRESSION RATIO			16.5:1	16.5:1	
	GOVERNOR TYPE			ELECTRONIC		
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED		
	COMBUSTION SYSTEM			DIRECT INJECTION		
	COOLING SYSTEM			WATER		
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		94,03	104,70	
		75% OF PRIME POWER		70,53	78,52	
50% OF PRIME POWER		47,02	52,35			
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			48	48		
TOTAL COOLANT CAPACITY (lt)			87	93		
FUEL TANK CAPACITY (lt)			1145	1145		

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## DEUTZ 630-850 kVA

### Technical Specifications



#### ENGINE

- DEUTZ 1015 series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender





# DEUTZ 1015 Series

## Diesel Generator Sets

### DEUTZ 1015 Series Diesel Generator Sets 630-850 kVA

MODEL				E DT XX 0630	E DT XX 0700	E DT XX 0850
GROUP	GEN - SET POWER	STAND BY	kVA	630	700	850
			kW	504	560	680
		PRIME	kVA	570	636	775
			kW	456	509	620
	CANOPY DIMENSION (W x L x H) mm			1600 x 4000 x 2875	1600 x 4000 x 2875	2100 x 4700 x 3000
	CANOPY WEIGHT kg			3675	3815	4615
	OPEN DIMENSION (W x L x H) mm			1600 x 3500 x 1980	1600 x 3500 x 1980	2100 x 4000 x 2460
	OPEN WEIGHT kg			3210	3350	4115
ENGINE	BRAND			DEUTZ	DEUTZ	DEUTZ
	TYPE			BF8M1015CP-LA-G4	BF8M1015CP-LA-G5	HC12V132ZL
	POWER	STAND BY	kW	540	560	740
		PRIME	kW	490	509	660
	SPEED (rpm)			1500	1500	1500
	CYCLE			4	4	4
	DISPLACEMENT (lt)			15,874	15,874	23,812
	NUMBER OF CYLINDERS			8 CYLINDERS- V TYPE	8 CYLINDERS- V TYPE	12 CYLINDERS- V TYPE
	BORE AND STROKE (mm x mm)			132 x 145	132 x 145	132 x 145
	COMPRESSION RATIO			16.5:1	16.5:1	16.5:1
	GOVERNOR TYPE			ELECTRONIC		
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED		
	COMBUSTION SYSTEM			DIRECT INJECTION		
	COOLING SYSTEM			WATER		
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		114,33	118,77	154,79
		75% OF PRIME POWER		85,75	89,08	116,09
50% OF PRIME POWER		57,17	59,38	77,39		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			48	48	54	
TOTAL COOLANT CAPACITY (lt)			93	93	111	
FUEL TANK CAPACITY (lt)			1145	1145	1250	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## BAUDOUIN 17-22 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIN series heavy duty diesel engine
- 4 cycle, water cooled, natural / turbocharged
- Direct injection
- Mechanic / electronic governor system
- 12 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



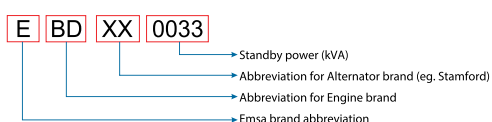
# BAUDOUIN Series

## Diesel Generator Sets

### BAUDOUIN Series Diesel Generator Sets 17-22 KVA

MODEL			E BD XX 0017	E BD XX 0022	
GROUP	GEN - SET POWER	STAND BY	kVA	17	22
			kW	14	18
		PRIME	kVA	15	20
			kW	12	16
	CANOPY DIMENSION (W x L x H) mm			900 x 2100 x 1310	900 x 2100 x 1310
	CANOPY WEIGHT kg			560	605
	OPEN DIMENSION (W x L x H) mm			900 x 1750 x 1235	900*1750 x 1235
	OPEN WEIGHT kg			440	485
ENGINE	BRAND			BAUDOUIN	BAUDOUIN
	TYPE			4M05G17/5	4M06G22/5
	POWER	STAND BY	kW	19	25
		PRIME	kW	18	23
	SPEED (rpm)			1500	1500
	CYCLE			4	4
	DISPLACEMENT (lt)			2,1	2,3
	NUMBER OF CYLINDERS			4 IN LINE	4 IN LINE
	BORE AND STROKE (mm x mm)			89 x 90	89 x 92
	COMPRESSION RATIO			17,5:1	17,5:1
	GOVERNOR TYPE			MECHANIC / ELECTRONIC	
	INDUCTION			NATURAL	
	COMBUSTION SYSTEM			DIRECT INJECTION	
	COOLING SYSTEM			WATER	
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		5,2	6,1
		75% OF PRIME POWER		3,9	4,5
		50% OF PRIME POWER		2,8	3,2
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			8	9,5	
TOTAL COOLANT CAPACITY (lt)			9,8	11,7	
FUEL TANK CAPACITY (lt)			92	92	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## BAUDOUIIN 33-55 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIIN series heavy duty diesel engine
- 4 cycle, water cooled, natural / turbocharged
- Direct injection
- Mechanic / electronic governor system
- 12 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# BAUDOIN Series

## Diesel Generator Sets

### BAUDOIN Series Diesel Generator Sets 33-55 KVA

MODEL			E BD XX 0033	E BD XX 0044	E BD XX 0050	E BD XX 0055	
GROUP	GEN - SET POWER	STAND BY	kVA	33	44	50	55
			kW	26	35	40	44
		PRIME	kVA	30	40	45	50
			kW	24	32	36	40
	CANOPY DIMENSION (W x L x H) mm			1000 x 2450 x 1610	1000 x 2450 x 1610	1000 x 2450 x 1610	1000 x 2450 x 1610
	CANOPY WEIGHT kg			905	925	945	960
	OPEN DIMENSION (W x L x H) mm			1000 x 2050 x 1390	1000 x 2050 x 1400	1000 x 2050 x 1400	1000 x 2050 x 1520
	OPEN WEIGHT kg			710	730	750	765
ENGINE	BRAND			BAUDOIN	BAUDOIN	BAUDOIN	BAUDOIN
	TYPE			4M06G33/5	4M06G44/5	4M06G50/5	4M06G55/5
	POWER	STAND BY	kW	33	40	48	53
		PRIME	kW	30	36	44	48
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			3,12	2,3	2,3	2,3
	NUMBER OF CYLINDERS			4 IN LINE	4 IN LINE	4 IN LINE	4 IN LINE
	BORE AND STROKE (mm x mm)			105 x 120	89 x 92	89 x 92	89 x 92
	COMPRESSION RATIO			15,5:1	17,5:1	17,5:1	17,5:1
	GOVERNOR TYPE			MECHANIC / ELECTRONIC			
	INDUCTION			NATURAL	TURBOCHARGED	TURBOCHARGED+INTERCOOLED	
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		8,1	9,3	10,4	11,3
		75% OF PRIME POWER		6,4	6,8	7,5	8,4
50% OF PRIME POWER		4,7	4,6	5,2	5,7		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			7,25	9,5	9,5	9,5	
TOTAL COOLANT CAPACITY (lt)			15	11,7	11,7	11,7	
FUEL TANK CAPACITY (lt)			132	132	132	132	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## BAUDOUIIN 72-110 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIIN series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged / turbocharged & air to air charge cooled
- Direct injection
- Mechanic / electronic governor system
- 12/24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# BAUDOIN Series

## Diesel Generator Sets

### BAUDOIN Series Diesel Generator Sets 72-110 KVA

MODEL				E BD XX 0072	E BD XX 0088	E BD XX 0110	
GROUP	GEN - SET POWER	STAND BY	kVA	72	88	110	
			kW	58	70	88	
		PRIME	kVA	65	80	100	
			kW	52	64	80	
	CANOPY DIMENSION (W x L x H) mm				1000 x 2880 x 1610	1000 x 2880 x 1610	1050 x 3180 x 1870
	CANOPY WEIGHT kg				1270	1355	1380
	OPEN DIMENSION (W x L x H) mm				1000 x 2400 x 1520	1000 x 2400 x 1520	1050 x 2700 x 1520
	OPEN WEIGHT kg				1050	1135	1160
ENGINE	BRAND				BAUDOIN	BAUDOIN	BAUDOIN
	TYPE				4M11G70/5e2	4M11G90/5e2	4M11G110/5e2
	POWER	STAND BY	kW	66	81	108	
			PRIME	kW	60	74	98
	SPEED (rpm)				1500	1500	1500
	CYCLE				4	4	4
	DISPLACEMENT (lt)				4,5	4,5	4,5
	NUMBER OF CYLINDERS				4 IN LINE	4 IN LINE	4 IN LINE
	BORE AND STROKE (mm x mm)				105 x 130	105 x 130	105 x 130
	COMPRESSION RATIO				18:1	18:1	18:1
	GOVERNOR TYPE				MECHANIC / ELECTRONIC		ELECTRONIC
	INDUCTION				TURBOCHARGED		TURBOCHARGED - AIR TO AIR CHARGE COOLED
	COMBUSTION SYSTEM				DIRECT INJECTION		
	COOLING SYSTEM				WATER		
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER			14,5	17,8	23,3
		75% OF PRIME POWER			11	13,3	17,4
50% OF PRIME POWER			7,7	9,2	11,9		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)				10	10	10	
TOTAL COOLANT CAPACITY (lt)				15,30	15,30	20,8	
FUEL TANK CAPACITY (lt)				180	180	280	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## BAUDOUIIN 150-165 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIIN series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender





# BAUDOIN Series

## Diesel Generator Sets

### BAUDOIN Series Diesel Generator Sets 150-165 KVA

MODEL				E BD XX 0150	E BD XX 0165
GROUP	GEN - SET POWER	STAND BY	KVA	150	165
			KW	120	132
		PRIME	KVA	135	150
			KW	109	120
	CANOPY DIMENSION (W x L x H) mm			1050 x 3180 x 1870	1050 x 3180 x 1870
	CANOPY WEIGHT kg			1520	1585
	OPEN DIMENSION (W x L x H) mm			1050 x 2700 x 1690	1050 x 2700 x 1690
	OPEN WEIGHT kg			1280	1340
ENGINE	BRAND			BAUDOIN	BAUDOIN
	TYPE			6M11G150/5e2	6M11G165/5e2
	POWER	STAND BY	KW	140	152
		PRIME	KW	128	138
	SPEED (rpm)			1500	1500
	CYCLE			4	4
	DISPLACEMENT (lt)			6,75	6,75
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			105 x 130	105 x 130
	COMPRESSION RATIO			18:1	18:1
	GOVERNOR TYPE			ELECTRONIC	
	INDUCTION			TURBOCHARGED - AIR TO AIR CHARGE COOLED	
	COMBUSTION SYSTEM			DIRECT INJECTION	
	COOLING SYSTEM			WATER	
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		30,4	32,7
		75% OF PRIME POWER		23,1	24,5
		50% OF PRIME POWER		15,9	16,7
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			16	16	
TOTAL COOLANT CAPACITY (lt)			28	28	
FUEL TANK CAPACITY (lt)			280	280	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## BAUDOUIIN 220-330 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIIN series heavy duty diesel engine
- 4 cycle, water cooled turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# BAUDOUIN Series

## Diesel Generator Sets

### BAUDOUIN Series Diesel Generator Sets 220-330 KVA

MODEL				E BD XX 0220	E BD XX 0250	E BD XX 0275	E BD XX 0330
GROUP	GEN - SET POWER	STAND BY	kVA	220	250	275	330
			kW	176	200	220	264
		PRIME	kVA	200	225	250	300
			kW	160	180	200	240
	CANOPY DIMENSION (W x L x H) mm			1150 x 3820 x 2460	1150 x 3820 x 2460	1150 x 3820 x 2460	1400 x 3705 x 2645
	CANOPY WEIGHT kg			2140	2235	2250	2690
	OPEN DIMENSION (W x L x H) mm			1150 x 3340 x 1860	1150 x 3340 x 1860	1150 x 3340 x 1860	1400 x 3250 x 1750
	OPEN WEIGHT kg			1845	1935	1950	2285
ENGINE	BRAND			BAUDOUIN	BAUDOUIN	BAUDOUIN	BAUDOUIN
	TYPE			6M16G220/5e2	6M16G250/5e2	6M16G275/5e2	6M16G330/5e2
	POWER	STAND BY	kW	200	238	264	320
		PRIME	kW	182	216	240	290
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			9,726	9,726	9,726	9,726
	NUMBER OF CYLINDERS			6 CYLINDERS INLINE	6 CYLINDERS INLINE	6 CYLINDERS INLINE	6 CYLINDERS INLINE
	BORE AND STROKE (mm x mm)			126 X 130	126 X 130	126 X 130	126 X 130
	COMPRESSION RATIO			17:1	17:1	17:1	17:1
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBO CHARGED-INTERCOOLER			
	COMBUSTION SYSTEM			DIRECT			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		42,1	49,7	56,9	70,5
75% OF PRIME POWER		31,6	37,5	42,2	52,3		
50% OF PRIME POWER		21,9	26,0	28,4	35,3		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			24	24	24	30	
TOTAL COOLANT CAPACITY (lt)			50	50	50	50	
FUEL TANK CAPACITY (lt)			380	585	585	585	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## BAUDOUIIN 385-440 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIIN series heavy duty diesel engine
- 4 cycle, water cooled turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# BAUDOIN Series

## Diesel Generator Sets

### BAUDOIN Series Diesel Generator Sets 385-440 KVA

MODEL				E BD XX 0385	E BD XX 0440
GROUP	GEN - SET POWER	STAND BY	kVA	385	440
			kW	308	352
		PRIME	kVA	350	400
			kW	280	320
	CANOPY DIMENSION (W x L x H) mm			1400 x 3705 x 2645	1400 x 3705 x 2645
	CANOPY WEIGHT kg			2860	2950
	OPEN DIMENSION (W x L x H) mm			1400 x 3250 x 1750	1400 x 3250 x 1750
	OPEN WEIGHT kg			2455	2550
ENGINE	BRAND			BAUDOIN	BAUDOIN
	TYPE			6M21G385/5e2	6M21G440/5e2
	POWER	STAND BY	kW	385	405
		PRIME	kW	350	368
	SPEED (rpm)			1500	1500
	CYCLE			4	4
	DISPLACEMENT (lt)			12,54	12,54
	NUMBER OF CYLINDERS			6 CYLINDERS INLINE	6 CYLINDERS INLINE
	BORE AND STROKE (mm x mm)			127 X 165	127 X 165
	COMPRESSION RATIO			16:1	16:1
	GOVERNOR TYPE			ELECTRONIC	
	INDUCTION			TURBO CHARGED-INTERCOOLER	
	COMBUSTION SYSTEM			DIRECT	
	COOLING SYSTEM			WATER	
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		82,1	85,0
		75% OF PRIME POWER		60,6	63,5
		50% OF PRIME POWER		40,9	43,1
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			36	36	
TOTAL COOLANT CAPACITY (lt)			65	65	
FUEL TANK CAPACITY (lt)			890	890	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## BAUDOUIIN 500-550 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIIN series heavy duty diesel engine
- 4 cycle, water cooled turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# BAUDOIN Series

## Diesel Generator Sets

### BAUDOIN Series Diesel Generator Sets 500-550 KVA

MODEL				E BD XX 0500	E BD XX 0550
GROUP	GEN - SET POWER	STAND BY	kVA	500	550
			kW	400	440
		PRIME	kVA	455	500
			kW	364	400
	CANOPY DIMENSION (W x L x H) mm			1600 x 4400 x 2650	1600 x 4400 x 2650
	CANOPY WEIGHT kg			4105	4150
	OPEN DIMENSION (W x L x H) mm			1600 x 4000 x 2220	1600 x 4000 x 2220
	OPEN WEIGHT kg			3590	3630
ENGINE	BRAND			BAUDOIN	BAUDOIN
	TYPE			6M216500/5	6M266550/5e2
	POWER	STAND BY	kW	450	484
		PRIME	kW	409	440
	SPEED (rpm)			1500	1500
	CYCLE			4	4
	DISPLACEMENT (lt)			12,54	15,90
	NUMBER OF CYLINDERS			6 CYLINDERS INLINE	6 CYLINDERS INLINE
	BORE AND STROKE (mm x mm)			127 X 165	150 X 150
	COMPRESSION RATIO			16,5:1	15,7:1
	GOVERNOR TYPE			ELECTRONIC	
	INDUCTION			TURBO CHARGED-INTERCOOLER	
	COMBUSTION SYSTEM			DIRECT	
	COOLING SYSTEM			WATER	
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		112,9	104,9
		75% OF PRIME POWER		77,8	78,4
		50% OF PRIME POWER		52,0	53,6
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			36	50	
TOTAL COOLANT CAPACITY (lt)			69,2	142	
FUEL TANK CAPACITY (lt)			1145	1145	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## BAUDOUIIN 660-715 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIIN series heavy duty diesel engine
- 4 cycle, water cooled turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender





# BAUDOIN Series

## Diesel Generator Sets

### BAUDOIN Series Diesel Generator Sets 660-715 KVA

MODEL				E BD XX 0660	E BD XX 0715
GROUP	GEN - SET POWER	STAND BY	kVA	660	715
			kW	528	572
		PRIME	kVA	600	650
			kW	480	520
	CANOPY DIMENSION (W x L x H) mm			1800 x 4500 x 3075	1800 x 4500 x 3075
	CANOPY WEIGHT kg			5590	5590
	OPEN DIMENSION (W x L x H) mm			1800 x 4290 x 2340	1800 x 4290 x 2340
	OPEN WEIGHT kg			4900	4900
ENGINE	BRAND			BAUDOIN	BAUDOIN
	TYPE			6M33G660/5e2	6M33G715/5e2
	POWER	STAND BY	kW	572	633
		PRIME	kW	520	575
	SPEED (rpm)			1500	1500
	CYCLE			4	4
	DISPLACEMENT (lt)			19,60	19,60
	NUMBER OF CYLINDERS			6 CYLINDERS INLINE	6 CYLINDERS INLINE
	BORE AND STROKE (mm x mm)			150 X 185	150 X 185
	COMPRESSION RATIO			15:1	15:1
	GOVERNOR TYPE			ELECTRONIC	
	INDUCTION			TURBO CHARGED-INTERCOOLER	
	COMBUSTION SYSTEM			DIRECT	
	COOLING SYSTEM			WATER	
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		122,8	134,7
		75% OF PRIME POWER		92,8	90,3
		50% OF PRIME POWER		64,4	76,8
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			60,5	60,5	
TOTAL COOLANT CAPACITY (lt)			126,63	126,63	
FUEL TANK CAPACITY (lt)			1530	1530	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## BAUDOUIIN 825-1100 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIIN series heavy duty diesel engine
- 4 cycle, water cooled turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# BAUDOIN Series

## Diesel Generator Sets

### BAUDOIN Series Diesel Generator Sets 825-1100 KVA

MODEL				E BD XX 0825	E BD XX 0900	E BD XX 1000	E BD XX 1100	
GROUP	GEN - SET POWER	STAND BY	kVA	825	900	1000	1100	
			kW	660	720	800	880	
		PRIME	kVA	750	818	900	1000	
			kW	600	655	720	800	
	CANOPY DIMENSION (W x L x H) mm				2200 x 5150 x 3425	2200 x 5150 x 3425	2200 x 5150 x 3425	2200 x 5150 x 3425
	CANOPY WEIGHT kg				7480	7790	7890	8250
	OPEN DIMENSION (W x L x H) mm				2200 x 4900 x 2580	2200 x 4900 x 2580	2200 x 4900 x 2580	2200 x 4900 x 2580
	OPEN WEIGHT kg				6000	6310	6410	6770
ENGINE	BRAND			BAUDOIN	BAUDOIN	BAUDOIN	BAUDOIN	
	TYPE			6M33G825/5	12M26G900/5e2	12M26G1000/5e2	12M26G1100/5e2	
	POWER	STAND BY	kW	725	792	902	968	
			PRIME	kW	659	720	820	880
	SPEED (rpm)			1500	1500	1500	1500	
	CYCLE			4	4	4	4	
	DISPLACEMENT (lt)			19,6	31,8	31,8	31,8	
	NUMBER OF CYLINDERS			6 CYLINDERS V-TYPE	12 CYLINDERS V-TYPE	12 CYLINDERS V-TYPE	12 CYLINDERS V-TYPE	
	BORE AND STROKE (mm x mm)			150 X 185	150 X 150	150 X 150	150 X 150	
	COMPRESSION RATIO			15,0:1	15,5:1	15,5:1	15,5:1	
	GOVERNOR TYPE			ELECTRONIC				
	INDUCTION			TURBO CHARGED-INTERCOOLER				
	COMBUSTION SYSTEM			DIRECT				
	COOLING SYSTEM			WATER				
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		150,1	172,5	196,8	205,00	
		75% OF PRIME POWER		112,2	130,4	147,2	154,1	
50% OF PRIME POWER		72,5	91	101,8	105,7			
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			62	113	113	113		
TOTAL COOLANT CAPACITY (lt)			129	180	198	210		
FUEL TANK CAPACITY (lt)			2000	2000	2000	2000		

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



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## BAUDOUIIN 1250-1400 kVA

### Technical Specifications



#### ENGINE

- BAUDOUIIN series heavy duty diesel engine
- 4 cycle, water cooled turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# BAUDOIN Series

## Diesel Generator Sets

### BAUDOIN Series Diesel Generator Sets 1250-1400 KVA

MODEL				E BD XX 1250	E BD XX 1400
GROUP	GEN - SET POWER	STAND BY	kVA	1250	1400
			kW	1000	1120
		PRIME	kVA	1125	1250
			kW	900	1000
	CANOPY DIMENSION (W x L x H) mm			2400 x 5450 x 3470	2400 x 5450 x 3470
	CANOPY WEIGHT kg			9035	9120
	OPEN DIMENSION (W x L x H) mm			2400 x 5200 x 2675	2400 x 5200 x 2675
	OPEN WEIGHT kg			7370	7450
ENGINE	BRAND			BAUDOIN	BAUDOIN
	TYPE			12M33G1250/5e2	12M33G1400/5e2
	POWER	STAND BY	kW	1108	1210
		PRIME	kW	1007	1100
	SPEED (rpm)			1500	1500
	CYCLE			4	4
	DISPLACEMENT (lt)			39,2	39,2
	NUMBER OF CYLINDERS			12 CYLINDERS V-TYPE	12 CYLINDERS V-TYPE
	BORE AND STROKE (mm x mm)			150 X 185	150 X 185
	COMPRESSION RATIO			15,1:1	15,1:1
	GOVERNOR TYPE			ELECTRONIC	
	INDUCTION			TURBO CHARGED-INTERCOOLER	
	COMBUSTION SYSTEM			DIRECT	
	COOLING SYSTEM			WATER	
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		236,1	259,1
		75% OF PRIME POWER		174,9	191,0
50% OF PRIME POWER		119,4	129,5		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			146	146	
TOTAL COOLANT CAPACITY (lt)			232,94	232,94	
FUEL TANK CAPACITY (lt)			2000	2000	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.  
N/A: These dimensions and weights may change depending upon the characteristics of the project. Please contact us.



## VOLVO 94-142 kVA

### Technical Specifications



#### ENGINE

- VOLVO series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled / turbocharged & air to water charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



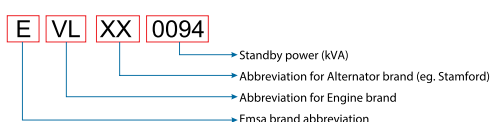
Warning system for decreasing fuel with electronic fuel level sender



### VOLVO Series Diesel Generator Sets 94-142 kVA

MODEL				E VL XX 0094	E VL XX 0109	E VL XX 0142	
GROUP	GEN - SET POWER	STAND BY	kVA	94	109	142	
			kW	76	87	114	
		PRIME	kVA	85	100	130	
			kW	68	80	104	
	CANOPY DIMENSION (W x L x H) mm				1000 x 2880 x 1610	1000 x 2880 x 1610	1050 x 3180 x 1870
	CANOPY WEIGHT kg				1350	1375	1470
	OPEN DIMENSION (W x L x H) mm				1000 x 2400 x 1350	1000 x 2400 x 1520	1050 x 2700 x 1660
	OPEN WEIGHT kg				1130	1155	1225
ENGINE	BRAND			VOLVO	VOLVO	VOLVO	
	TYPE			TAD 530 GE	TAD 531 GE	TAD 532 GE	
	POWER	STAND BY	kW	83	98	125	
		PRIME	kW	74	88	112	
	SPEED (rpm)			1500	1500	1500	
	CYCLE			4	4	4	
	DISPLACEMENT (lt)			4,76	4,76	4,76	
	NUMBER OF CYLINDERS			4 SIRA TİP	4 SIRA TİP	4 SIRA TİP	
	BORE AND STROKE (mm x mm)			108 x 130	108 x 130	108 x 130	
	COMPRESSION RATIO			18 : 1	18 : 1	17,5 : 1	
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBOCHARGED - AIR TO AIR			
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		19,12	22,84	28,53	
		75% OF PRIME POWER		14,47	17,13	21,00	
50% OF PRIME POWER		10,18	11,78	14,2			
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			13	13	13		
TOTAL COOLANT CAPACITY (lt)			19,7	19,7	19,7		
FUEL TANK CAPACITY (lt)			180	180	280		

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## VOLVO 167-278 kVA

### Technical Specifications



#### ENGINE

- VOLVO series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled / turbocharged & air to water charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender





### VOLVO Series Diesel Generator Sets 167-278 kVA

MODEL				E VL XX 0167	E VL XX 0205	E VL XX 0224	E VL XX 0278
GROUP	GEN - SET POWER	STAND BY	kVA	167	205	224	278
			kW	133	165	179	219
		PRIME	kVA	152	186	201	250
			kW	121	149	161	200
	CANOPY DIMENSION (W x L x H) mm			1150 x 3820 x 2460	1150 x 3820 x 2460	1150 x 3820 x 2460	1150 x 3820 x 2460
	CANOPY WEIGHT kg			1870	2165	2165	2330
	OPEN DIMENSION (W x L x H) mm			1150 x 2700 x 1660	1150 x 2700 x 1860	1150 x 2700 x 1860	1150 x 2700 x 1920
	OPEN WEIGHT kg			1570	1865	1865	2030
ENGINE	BRAND			VOLVO	VOLVO	VOLVO	VOLVO
	TYPE			TAD 731 GE	TAD 732 GE	TAD 733 GE	TAD 734 GE
	POWER	STAND BY	kW	148	179	195	238
			PRIME	kW	133	160	175
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			7,15	7,15	7,15	7,15
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			108 x 130	108 x 130	108 x 130	108 x 130
	COMPRESSION RATIO			18 : 1	18 : 1	18,1 : 1	17 : 1
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBOCHARGED - AIR TO AIR			
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		34,04	40,57	45,00	51,73
		75% OF PRIME POWER		25,65	30,43	33,44	41,27
50% OF PRIME POWER		17,73	20,86	22,6	29,54		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			20	34	34	29	
TOTAL COOLANT CAPACITY (lt)			23,8	37	38	32	
FUEL TANK CAPACITY (lt)			585	585	585	585	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.

## VOLVO 305-387 kVA

### Technical Specifications



#### ENGINE

- VOLVO series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled / turbocharged & air to water charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



### VOLVO Series Diesel Generator Sets 305-387 kVA

MODEL				E VL XX 0305	E VL XX 0351	E VL XX 0387
GROUP	GEN - SET POWER	STAND BY	kVA	305	351	387
			kW	244	280,8	310
		PRIME	kVA	277	319	352
			kW	221	255	282
	CANOPY DIMENSION (W x L x H) mm			1400 x 3950 x 2605	1400 x 3950 x 2605	1400 x 3950 x 2605
	CANOPY WEIGHT kg			3610	3765	3815
	OPEN DIMENSION (W x L x H) mm			1400 x 3500 x 1920	1400 x 3500 x 1920	1400 x 3500 x 1920
	OPEN WEIGHT kg			3090	3245	3295
ENGINE	BRAND			VOLVO	VOLVO	VOLVO
	TYPE			TAD 1341 GE	TAD 1341 GE	TAD 1342 GE
	POWER	STAND BY	kW	298	298	333
		PRIME	kW	271	271	303
	SPEED (rpm)			1500	1500	1500
	CYCLE			4	4	4
	DISPLACEMENT (lt)			12,78	12,78	12,78
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			131 x 158	131 x 158	131 x 158
	COMPRESSION RATIO			18,1 : 1	18,1 : 1	18,1 : 1
	GOVERNOR TYPE			ELECTRONIC		
	INDUCTION			TURBOCHARGED - AIR TO AIR		
	COMBUSTION SYSTEM			DIRECT INJECTION		
	COOLING SYSTEM			WATER		
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		56,14	61,63	68,9
		75% OF PRIME POWER		42,94	47,19	52,22
50% OF PRIME POWER		30,87	32,59	36,26		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			36	36	36	
TOTAL COOLANT CAPACITY (lt)			46	46	46	
FUEL TANK CAPACITY (lt)			1043	1043	1043	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.

## VOLVO 414-501 kVA

### Technical Specifications



#### ENGINE

- VOLVO series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled / turbocharged & air to water charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



### VOLVO Series Diesel Generator Sets 414-501 kVA

MODEL				E VL XX 0414	E VL XX 0452	E VL XX 0501	
GROUP	GEN - SET POWER	STAND BY	kVA	414	452	501	
			kW	331	362	401	
		PRIME	kVA	378	412	451	
			kW	302	329	361	
	CANOPY DIMENSION (W x L x H) mm				1400 x 3950 x 2605	1400 x 3950 x 2605	1400 x 3950 x 2605
	CANOPY WEIGHT kg				3905	3905	3945
	OPEN DIMENSION (W x L x H) mm				1400 x 3500 x 1920	1400 x 3500 x 1920	1400 x 3500 x 1920
	OPEN WEIGHT kg				3390	3390	3430
ENGINE	BRAND			VOLVO	VOLVO	VOLVO	
	TYPE			TAD 1343 GE	TAD 1344 GE	TAD 1345 GE	
	POWER	STAND BY	kW	356	389	431	
		PRIME	kW	325	354	388	
	SPEED (rpm)			1500	1500	1500	
	CYCLE			4	4	4	
	DISPLACEMENT (lt)			12,78	12,78	12,78	
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE	
	BORE AND STROKE (mm x mm)			131 x 158	131 x 158	131 x 158	
	COMPRESSION RATIO			18,1 : 1	18,1 : 1	18,1 : 1	
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBOCHARGED - AIR TO AIR			
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		74,29	81,77	90,54	
		75% OF PRIME POWER		56	62,27	68,25	
50% OF PRIME POWER		38,7	42,15	45,97			
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			36	36	36		
TOTAL COOLANT CAPACITY (lt)			46	46	46		
FUEL TANK CAPACITY (lt)			1043	1043	1043		

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## VOLVO 556-700 kVA

### Technical Specifications



#### ENGINE

- VOLVO series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled / turbocharged & air to water charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



### VOLVO Series Diesel Generator Sets 556-700 kVA

MODEL				E VL XX 0556	E VL XX 0651	E VL XX 0700	
GROUP	GEN - SET POWER	STAND BY	kVA	556	651	700	
			kW	445	521	560	
		PRIME	kVA	505	591	630	
			kW	404	473	504	
	CANOPY DIMENSION (W x L x H) mm				1600 x 4000 x 2700	1600 x 4000 x 2700	1800 x 4000 x 2700
	CANOPY WEIGHT kg				4245	4440	5005
	OPEN DIMENSION (W x L x H) mm				1600 x 3500 x 2200	1600 x 3500 x 2200	1800 x 3500 x 2250
OPEN WEIGHT kg				3725	3920	4485	
ENGINE	BRAND			VOLVO	VOLVO	VOLVO	
	TYPE			TAD 1641 GE	TAD 1642 GE	TWD 1643 GE	
	POWER	STAND BY	kW	473	554	596	
		PRIME	kW	430	503	536	
	SPEED (rpm)			1500	1500	1500	
	CYCLE			4	4	4	
	DISPLACEMENT (lt)			16,12	16,12	16,12	
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE	
	BORE AND STROKE (mm x mm)			144 x 165	144 x 165	144 x 165	
	COMPRESSION RATIO			16,5 : 1	16,5 : 1	16,5 : 1	
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBOCHARGED - AIR TO AIR		TURBOCHARGED - AIR TO WATER	
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		101,88	118,58	127,00	
		75% OF PRIME POWER		75,25	87,59	93,81	
50% OF PRIME POWER		50,94	58,4	62,54			
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			42	48	48		
TOTAL COOLANT CAPACITY (lt)			63	63	95		
FUEL TANK CAPACITY (lt)			1043	1043	1175		

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.

## KUBOTA 10-30 kVA

### Technical Specifications



#### ENGINE

- KUBOTA series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled / turbocharged & air to water charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender

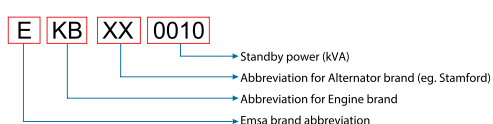




### KUBOTA Series Diesel Generator Sets 10-30 kVA

MODEL				E KB XX 0010	E KB XX 0017	E KB XX 0023	E KB XX 0030
GROUP	GEN - SET POWER	STAND BY	kVA	10	17	22	29,7
			kW	8	13,6	18	24
		PRIME	kVA	9	15	20	27
			kW	7	12	16	21,6
	CANOPY DIMENSION (W x L x H) mm			900 x 2100 x 1310	900 x 2100 x 1310	900 x 2100 x 1310	900 x 2100 x 1310
	CANOPY WEIGHT kg			435	530	565	700
	OPEN DIMENSION (W x L x H) mm			900 x 1750 x 1300	900 x 1750 x 1300	900 x 1750 x 1300	900 x 1750 x 1300
	OPEN WEIGHT kg			315	410	445	580
ENGINE	BRAND			KUBOTA	KUBOTA	KUBOTA	KUBOTA
	TYPE			D1105-BG	D1703-M-BG	V2203-M-E3BG	V3300-BG
	POWER	STAND BY	kW	9,5	15	20,1	28,9
		PRIME	kW	8,4	12,8	17,2	26,3
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			1,123	1,647	2,197	3,318
	NUMBER OF CYLINDERS			3 IN LINE	3 IN LINE	4 IN LINE	4 IN LINE
	BORE AND STROKE (mm x mm)			78 x 78,4	87 x 92,4	87 x 92,4	98 x 110
	COMPRESSION RATIO			24:1	22:1	22:1	22:1
	GOVERNOR TYPE			MECHANIC			
	INDUCTION			NATURAL			
	COMBUSTION SYSTEM			INDIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		2,47	3,58	4,77	7,61
		75% OF PRIME POWER		1,85	2,68	3,58	5,71
50% OF PRIME POWER		1,25	1,82	2,42	3,84		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			5,1	5,6	7,6	13,2	
TOTAL COOLANT CAPACITY (lt)			6	8	9	10	
FUEL TANK CAPACITY (lt)			92	92	92	92	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## YANG DONG 13-30 kVA

### Technical Specifications



#### ENGINE

- YANG DONG series heavy duty diesel engine
- 4 cycle, water cooled, naturally aspirated
- Direct injection
- Mechanic / electronic governor system
- 12/24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets.
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



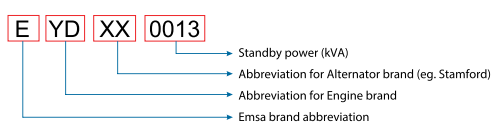
# YANG DONG Series

## Diesel Generator Sets

### YANG DONG Series Diesel Generator Sets 13-30 kVA

MODEL				E YD XX 0013	E YD XX 0017	E YD XX 0022	E YD XX 0030
GROUP	GEN - SET POWER	STAND BY	kVA	13	17	22	30
			kW	11	13,6	17,6	24
		PRIME	kVA	11	15	20	27
			kW	8,8	12	16	21,8
	CANOPY DIMENSION (W x L x H) mm			900 x 2100 x 1310	900 x 2100 x 1310	900 x 2100 x 1310	900 x 2100 x 1310
	CANOPY WEIGHT kg			530	560	595	655
	OPEN DIMENSION (W x L x H) mm			900 x 1750 x 1300	900 x 1750 x 1300	900 x 1750 x 1300	900 x 1750 x 1300
	OPEN WEIGHT kg			415	440	475	540
ENGINE	BRAND			YANG DONG	YANG DONG	YANG DONG	YANG DONG
	TYPE			YD385D	YD480D	YND485D	YSD490D
	POWER	STAND BY	kW	13	16	21	29
		PRIME	kW	12	14	19	26
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			1,532	1,809	2,156	2,54
	NUMBER OF CYLINDERS			3 IN LINE	4 IN LINE	4 IN LINE	4 IN LINE
	BORE AND STROKE (mm x mm)			85 x 90	80 x 90	85 x 95	90 x 100
	COMPRESSION RATIO			18:1	18:1	18:1	18:1
	GOVERNOR TYPE			MECHANIC / ELECTRONIC			
	INDUCTION			NATURAL			
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		3,69	4,16	5,58	6,4
		75% OF PRIME POWER		2,74	3,12	4,19	4,86
50% OF PRIME POWER		1,84	2,08	2,79	3,17		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			5,30	6,70	5,5	7,60	
TOTAL COOLANT CAPACITY (lt)			7,6	7,6	9	9	
FUEL TANK CAPACITY (lt)			92	92	92	92	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## RICARDO 35-94 kVA

### Technical Specifications



#### ENGINE

- RICARDO series heavy duty diesel engine
- 4 cycle, water cooled, natural / turbocharged / turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 12/24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



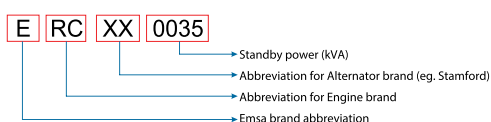
Warning system for decreasing fuel with electronic fuel level sender



### RICARDO Series Diesel Generator Sets 35-94 kVA

MODEL			E RC XX 0035	E RC XX 0050	E RC XX 0070	E RC XX 0082	E RC XX 0094	
GROUP	GEN - SET POWER	STAND BY	kVA	35	50	70	82	94
			kW	28	40	56	65,6	75
		PRIME	kVA	32	45	65	75	85
			kW	26	36	52	60	68
	CANOPY DIMENSION (W x L x H) mm			1000 x 2450 x 1610	1000 x 2450 x 1610	1000 x 2880 x 1610	1000 x 2880 x 1610	1000 x 2880 x 1610
	CANOPY WEIGHT kg			845	910	1150	1175	1225
	OPEN DIMENSION (W x L x H) mm			1000 x 2050 x 1430	1000 x 2050 x 1465	1000 x 2400 x 1510	1000 x 2400 x 1510	1000 x 2400 x 1510
	OPEN WEIGHT kg			650	715	930	955	1005
ENGINE	BRAND			RICARDO	RICARDO	RICARDO	RICARDO	RICARDO
	TYPE			K4100D	K4100ZD	R4105ZD	R4105ZD	4105IZLD
	POWER	STAND BY	kW	33	45	73	73	85
		PRIME	kW	30	41	66	66	78
	SPEED (rpm)			1500	1500	1500	1500	1500
	CYCLE			4	4	4	4	4
	DISPLACEMENT (lt)			3,61	3,61	4,33	4,33	4,33
	NUMBER OF CYLINDERS			4 IN LINE	4 IN LINE	4 IN LINE	4 IN LINE	4 IN LINE
	BORE AND STROKE (mm x mm)			100 x 115	100 x 115	105 x 125	105 x 125	105 x 125
	COMPRESSION RATIO			19:1	19:1	17:1	17:1	17:1
	GOVERNOR TYPE			ELECTRONIC				
	INDUCTION			NATURAL	TURBOCHARGED			TURBOCHARGED & AIR TO AIR CHARGE COOLED
	COMBUSTION SYSTEM			DIRECT INJECTION				
	COOLING SYSTEM			WATER				
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		9,21	12,2	15,02	17,6	20,8
		75% OF PRIME POWER		6,75	9,05	11,41	13,02	15,8
50% OF PRIME POWER		4,6	6,1	7,66	8,97	10,6		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			14	14	16	16	16	
TOTAL COOLANT CAPACITY (lt)			18	18	24	24	26	
FUEL TANK CAPACITY (lt)			132	132	180	180	180	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## RICARDO 110-165 kVA

### Technical Specifications



#### ENGINE

- RICARDO series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged / turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 12/24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender



# RICARDO Series

## Diesel Generator Sets

### RICARDO Series Diesel Generator Sets 110-165 kVA

MODEL				E RC XX 0110	E RC XX 0125	E RC XX 0150	E RC XX 0165
GROUP	GEN - SET POWER	STAND BY	kVA	110	125	150	165
			kW	88	100	120	132
		PRIME	kVA	100	115	136	150
			kW	80	92	109	120
	CANOPY DIMENSION (W x L x H) mm			1050 x 3180 x 1870	1050 x 3180 x 1870	1050 x 3180 x 1870	1050 x 3580 x 1870
	CANOPY WEIGHT kg			1510	1535	1625	1665
	OPEN DIMENSION (W x L x H) mm			1050 x 2700 x 1550	1050 x 2700 x 1550	1050 x 2700 x 1690	1050 x 3100 x 1710
	OPEN WEIGHT kg			1270	1290	1385	1405
ENGINE	BRAND			RICARDO	RICARDO	RICARDO	RICARDO
	TYPE			R6105ZD	R6105ZD	R6105AZLD	R6105IZLD
	POWER	STAND BY	kW	110	110	131	144
		PRIME	kW	100	100	119	130
	SPEED (rpm)			1500	1500	1500	1500
	CYCLE			4	4	4	4
	DISPLACEMENT (lt)			6,49	6,49	6,75	7,01
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			105 x 125	105 x 125	105 x 130	105 x 135
	COMPRESSION RATIO			17:1	17:1	17:1	17:1
	GOVERNOR TYPE			ELECTRONIC			
	INDUCTION			TURBOCHARGED		TURBOCHARGED - AIR TO AIR CHARGE COOLED	
	COMBUSTION SYSTEM			DIRECT INJECTION			
	COOLING SYSTEM			WATER			
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		23,4	26,6	30,8	33,73
75% OF PRIME POWER		17,32	20,26	23,47	25,63		
50% OF PRIME POWER		11,46	13,83	15,70	17,20		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			19	19	19	19	
TOTAL COOLANT CAPACITY (lt)			25	25	40	40	
FUEL TANK CAPACITY (lt)			280	280	280	380	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## DONGFENG 220-460 kVA

### Technical Specifications



#### ENGINE

- DONGFENG series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged / turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



Warning system for decreasing fuel with electronic fuel level sender

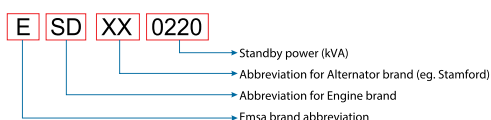




### DONGFENG Series Diesel Generator Sets 220-460 KVA

MODEL			E SD XX 0220	E SD XX 0285	E SD XX 0330	E SD XX 0385	E SD XX 0460	
GROUP	GEN - SET POWER	STAND BY	kVA	220	285	330	385	460
			kW	176	228	264	308	368
		PRIME	kVA	200	260	300	350	420
			kW	160	208	240	280	336
	CANOPY DIMENSION (W x L x H) mm			1150 x 3820 x 2460	1150 x 3820 x 2460	1400 x 3705 x 2645	1400 x 3705 x 2645	1600 x 4000 x 2875
	CANOPY WEIGHT kg			3000	3165	3115	3165	3460
	OPEN DIMENSION (W x L x H) mm			1150 x 3340 x 1960	1150 x 3340 x 1960	1400 x 3450 x 2070	1400 x 3450 x 2070	1600 x 3500 x 2250
	OPEN WEIGHT kg			2705	2865	2710	2760	2995
ENGINE	BRAND			DONGFENG SHANGHAI DIESEL	DONGFENG SHANGHAI DIESEL	DONGFENG SHANGHAI DIESEL	DONGFENG SHANGHAI DIESEL	DONGFENG SHANGHAI DIESEL
	TYPE			SY129TD17	SY129TAD23	SYG128TAD26	SYG128TAD31	SYG142TAD38
	POWER	STAND BY	kW	190	245	308	329	393
		PRIME	kW	173	223	280	299	357
	SPEED (rpm)			1500	1500	1500	1500	1500
	CYCLE			4	4	4	4	4
	DISPLACEMENT (lt)			12,9	12,9	12,9	12,9	14,2
	NUMBER OF CYLINDERS			6 IN LINE	6 IN LINE	6 IN LINE	6 IN LINE	6 IN LINE
	BORE AND STROKE (mm x mm)			135 X 150	135 X 150	135 X 150	135 X 150	135 x 165
	COMPRESSION RATIO			16:1	16:1	15,75:1	15,75:1	15,5:1
	GOVERNOR TYPE			ELECTRONIC				
	INDUCTION			TURBOCHARGED	TURBOCHARGED & AIR TO AIR CHARGE COOLED			
	COMBUSTION SYSTEM			DIRECT				
	COOLING SYSTEM			WATER				
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		40,9	55,48	60,2	69,7	84,15
		75% OF PRIME POWER		31,5	41,81	44,68	51,8	61,8
		50% OF PRIME POWER		21,52	29,6	30,6	36,3	43,13
TOTAL LUBRICATION SYSTEM CAPACITY (lt)			28,7	28,7	40	40	35	
TOTAL COOLANT CAPACITY (lt)			46	49	52	52	61	
FUEL TANK CAPACITY (lt)			585	585	890	890	1145	

Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



## DONGFENG 515-825 kVA

### Technical Specifications



#### ENGINE

- DONGFENG series heavy duty diesel engine
- 4 cycle, water cooled, turbocharged & air to air charge cooled
- Direct injection
- Electronic governor system
- 24 volt self-starter and charger alternator
- Changeable air, fuel and oil filter
- Tropical type radiator
- Flexible fuel pipe
- Oil discharge valve and extension pipe
- Industrial type silencer, exhaust spiral or compensator
- Maintenance free battery
- Engine block water heater (in automatic models)
- Diesel gen-set maintenance and operating instructions and electrical circuit diagram

#### QUALITY STANDARD

Our generators are manufactured in compliance with VDE 0530, BSE 4999 BS5000, IEC 34, TS ISO 8528, TS EN ISO 3744, TS EN ISO 3746, TS EN 60034-1, TS EN 60204-1, TS EN 60335-1, TS EN 61439-1, EN 61000, TS EN ISO12100 standards.

We have ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 and ISO10002:2006 management system certificates from Kiwa & MEYER, an accredited independent quality organization.

Our generators up to 400 kw are manufactured in compliance with 2000/14/EC European noise emission directive and certified from Ente Certificazione Macchine.

We also have TS ISO 8528-4, TS ISO 8528-5, TS EN 13501-1+A1:2013 flame retardancy and TS EN ISO 9227 certificates against anti-corrosion together with CE Declaration.

#### ALTERNATOR

- Brushless, single bearing, flexible disc 4 poles alternator for harmonic failure
- H type isolation class
- IP 21-23 protection class
- Self exciter
- Electronic automatic voltage regulator
- Stator 2/3 step for harmonic failure

- The alternator windings are protected by insulating varnish against oil and acid.

#### EXTRA EQUIPMENTS

- Charge ammeter
- Moulded case circuit breaker (in automatic models)
- Hospital/Critical type silencer
- Sound-proof canopy
- Mobile - trailer
- Synchronization control panel for 2-16 gensets
- 3 pole/4 pole automatic transfer panel (A.T.S.)
- Fuel and oil heater
- Alternator heater
- Automatic fuel filling system
- Fuel-water separator filter
- PMG warning system

#### CANOPY

- Modular type sound-proof canopy
- Canopy installation executed with screw and nut, without welding process
- Epoxy and polyester powder painted canopy
- Canopy designed for easy maintenance
- Lockable doors on both sides of canopy
- Emergency stop button
- Transparent panel inspection window

#### AUTOMATIC CONTROL PANEL

- LCD display screen
- Battery charger
- Hardware and materials needed
- USB port & RS-485 output

#### GEN-SET SAFETY PROTECTION & ALARMS

- High water temperature
- Low oil pressure
- High & low engine speed
- Low radiator water level
- Over current load
- High & low genset voltage
- Start/stop failure



Easy maintenance canopy design



Refilling from the outside of the canopy



Canopy made of galvanized steel



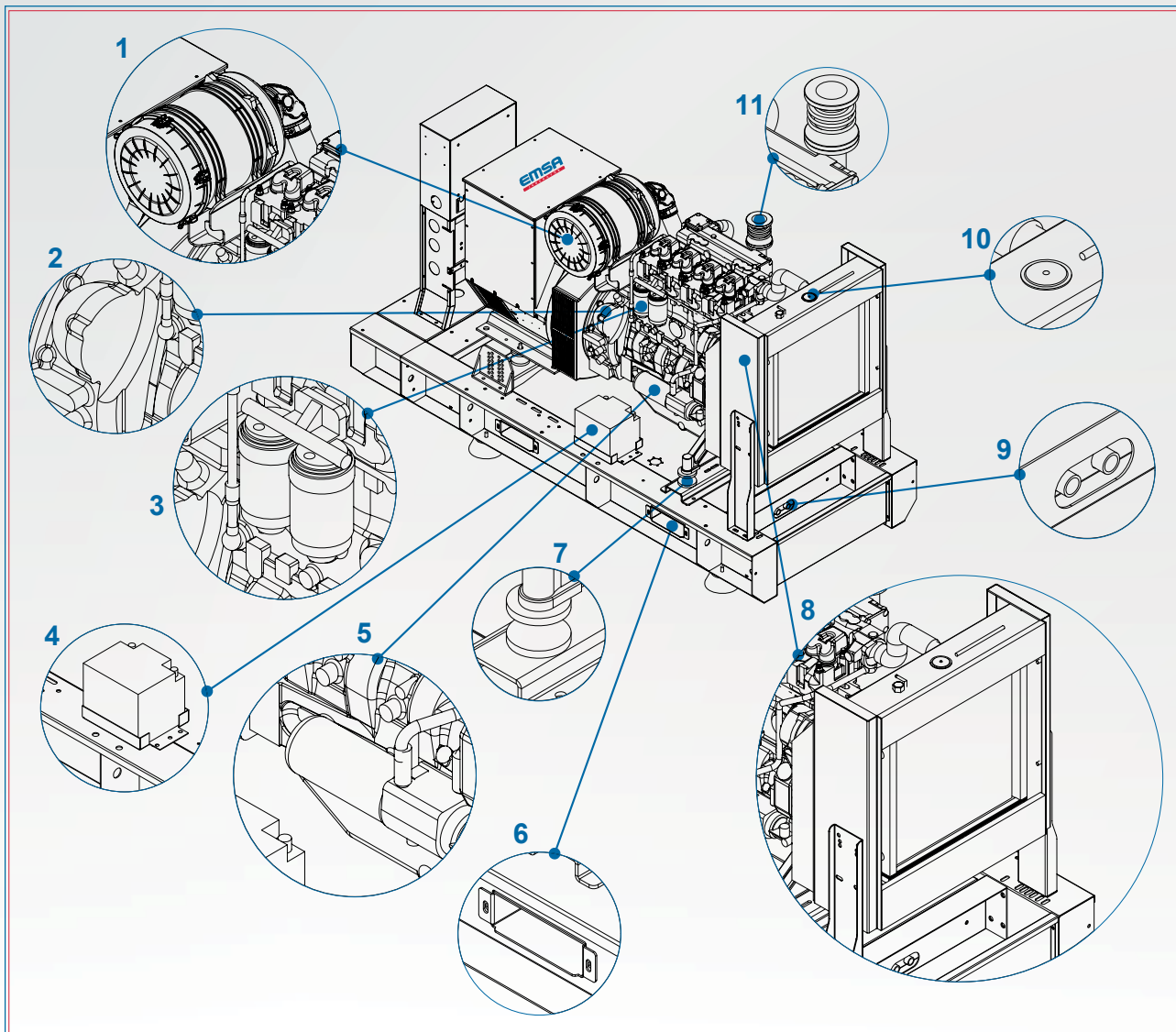
Warning system for decreasing fuel with electronic fuel level sender



### DONGFENG Series Diesel Generator Sets 515-825 KVA

MODEL			E SD XX 0515	E SD XX 0570	E SD XX 0640	E SD XX 0715	E SD XX 0825	
GROUP	GEN - SET POWER	STAND BY	kVA	515	570	640	715	825
			kW	412	456	512	572	660
		PRIME	kVA	470	520	585	650	750
			kW	376	416	468	520	600
	CANOPY DIMENSION (W x L x H) mm			1700 x 4200 x 2780	1700 x 4200 x 2780	1700 x 4200 x 2780	1700 x 4200 x 2780	1700 x 4200 x 2780
	CANOPY WEIGHT kg			4565	4600	4795	4935	5300
	OPEN DIMENSION (W x L x H) mm			1700 x 3750 x 2170	1700 x 3750 x 2170	1700 x 3750 x 2170	1700 x 3750 x 2170	1700 x 3750 x 2170
OPEN WEIGHT kg			3930	3970	4165	4305	4665	
ENGINE	BRAND		DONGFENG SHANGHAI DIESEL	DONGFENG SHANGHAI DIESEL	DONGFENG SHANGHAI DIESEL	DONGFENG SHANGHAI DIESEL	DONGFENG SHANGHAI DIESEL	
	TYPE		SYG258TAD45	SYG258TAD51	SYG266TAD56	SYG266TAD63	SY283TAD72	
	POWER	STAND BY	kW	438	486	545	610	700
		PRIME	kW	398	441	495	555	636
	SPEED (rpm)		1500	1500	1500	1500	1500	
	CYCLE		4	4	4	4	4	
	DISPLACEMENT (lt)		25,80	25,80	26,60	26,60	29,6	
	NUMBER OF CYLINDERS		12 V TYPE	12 V TYPE	12 V TYPE	12 V TYPE	12 V TYPE	
	BORE AND STROKE (mm x mm)		135 X 150	135 X 150	135 X 155	135 X 155	138 X 165	
	COMPRESSION RATIO		16:1	16:1	16:1	16:1	14,6:1	
	GOVERNOR TYPE		ELECTRONIC					
	INDUCTION		TURBOCHARGED & AIR TO AIR CHARGE COOLED					
	COMBUSTION SYSTEM		DIRECT					
	COOLING SYSTEM		WATER					
	FUEL CONSUMPTION (lt/h)	100% OF PRIME POWER		99,5	110,25	123,75	145,35	166,57
		75% OF PRIME POWER		75,62	81,58	94,05	110,47	126,59
50% OF PRIME POWER		49,6	56,20	63,11	73,95	84,66		
TOTAL LUBRICATION SYSTEM CAPACITY (lt)		57,4	57,4	57,4	57,4	62		
TOTAL COOLANT CAPACITY (lt)		110	110	110	110	132		
FUEL TANK CAPACITY (lt)		1310	1310	1310	1310	1310		

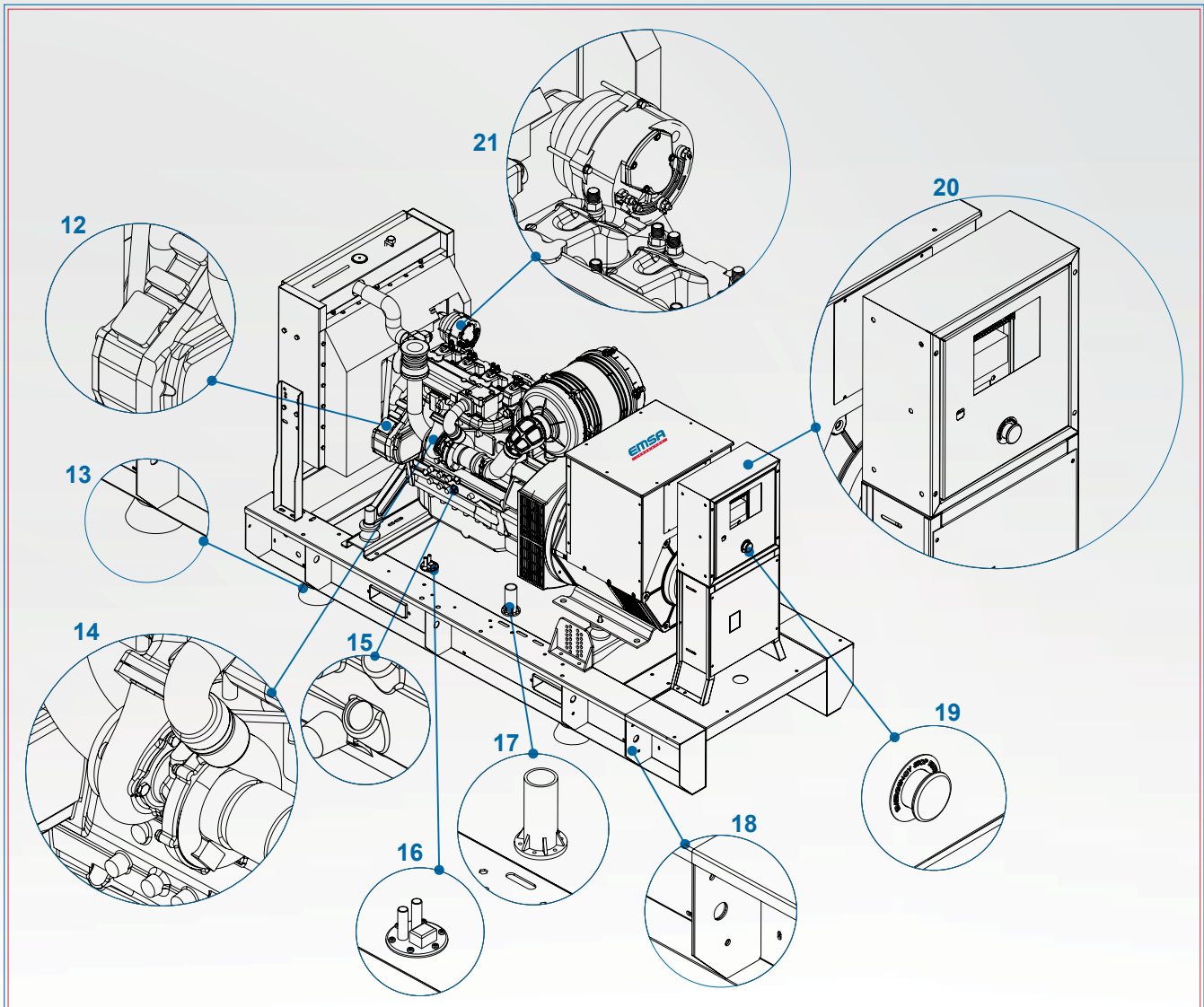
Emsa reserves the right to make changes in model, technical specifications, color, equipment & accessories without prior notice.



- |                |                              |                          |
|----------------|------------------------------|--------------------------|
| 1. AIR FILTER  | 5. OIL FILTER                | 9. DRAIN VALVE           |
| 2. STARTER     | 6. LIFT TRUCK LIFTING POINT  | 10. RADIATOR FILLING CAP |
| 3. FUEL FILTER | 7. VIBRATION DAMPERING MOUNT | 11. COMPENSATOR          |
| 4. BATTERY     | 8. RADIATOR                  |                          |

- **Continuous Power** is used in applications where supplying power is at a constant %100 load for an unlimited number of hours each year. Continuous power rated units are most widely used in applications where the power grid is unreachable
- **Prime Power** is the maximum power accessible at the variable load for an unlimited number of hours per year in a variable load setting. It is not advisable that the variable load exceed 70% average of the prime power rating during any operational period. If the engine is running at 100% prime power, yearly hours should not exceed 500. Overload situations should be avoided however a 10% overload capability is available for a 1 hour period within a 12 hour cycle of operation.
- **Standby Rating** for a standby engine should be sized for a maximum of 70% average load factor and roughly 200 hours per year. Standby power ratings should never be applied except in true emergency outage situations. With standby rated generators there is no overload capability built into the units

# General Description



- 12. OIL FILLER CAP
- 13. SEISMIC INSULATION BLOCK
- 14. TURBOCHARGER UNIT
- 15. OIL DIPSTICK

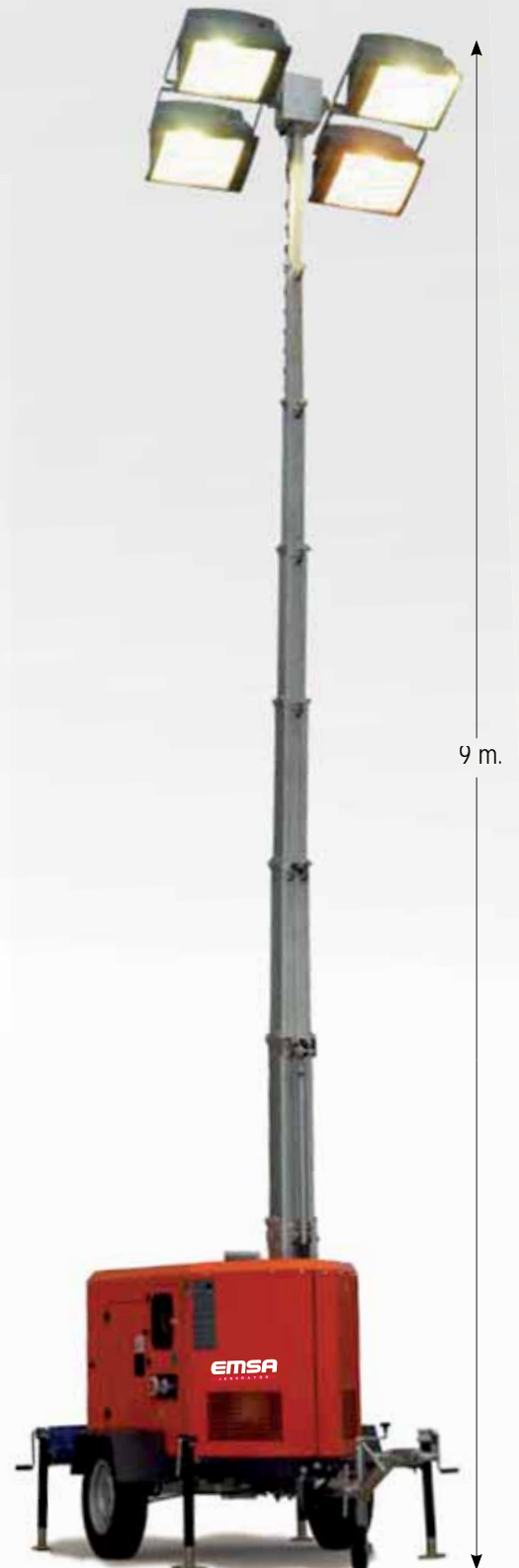
- 16. FUEL INTAKE RETURN AND ELECTRONIC FUEL LEVEL UNIT
- 17. REFUELLING
- 18. CRANE LIFTING POINT

- 19. EMERGENCY STOP BUTTON
- 20. GENERATOR CONTROL PANEL
- 21. CHARGE GENERATOR



## EMSA Mobile Lighting Tower

Generator set is mounted on a trailer with a torsion axle, automatic braking equipment. There are 4-6 pieces of metal halide projector. Vertical tower is galvanized, mechanically reaches a height of 9 m. Each set has four pillars of stability. Each lamp consists of on/off switches. There is a 220 V. socket on a protection canopy.



# EMSA Mobile Lighting Tower


## EMSA Mobile Lighting Tower

TECHNICAL SPECIFICATIONS		LT EM0010-4	LT KB0010-4	LT EM0022-4	LT KB0022-4
DIESEL ENGINE	BRAND	EMSA	KUBOTA	EMSA	KUBOTA
	MODEL	Y385D	D1105-BG2	YD485D	V2203-M-BG
	TYPE	DIESEL, WATER COOLDI	DIESEL, WATER COOLDI	DIESEL, WATER COOLDI	DIESEL, WATER COOLDI
	SPEED (rpm)	1500	1500	1500	1500
	NUMBER OF CYLINDERS	3	3	4	4
	FUEL CONSUMPTION (lt/hr)	2,8	2,4	4,2	3,9
ALTERNATOR	BRAND	EMSA	EMSA	EMSA	EMSA
	MODEL	EG160-8N2	EG160-8N2	EG160-16N2	EG160-16N2
	FREQUENCY (Hz.)	50	50	50	50
	TYPE	BRUSHLESS	BRUSHLESS	BRUSHLESS	BRUSHLESS
LIGHT TOWER	POWER KW (kVA)	8 (10)	8 (10)	16 (22)	16 (22)
	VOLTAGE (V)	231/400 V	231/400 V	231/400 V	231/400 V
	LIGHTING TYPE	METAL HALIDE	METAL HALIDE	METAL HALIDE	METAL HALIDE
	LAMP POWER	1000 W	1000 W	1000 W	1000 W
	LAMP QUANTITY	4	4	4	4
	LIGHT FLUX	85.000 lm	85.000 lm	85.000 lm	85.000 lm
	TOWER HEIGHT	9 m	9 m	9 m	9 m
	ROTATION CAPACITY	340°	340°	340°	340°
	LIFTING SYSTEM	HYDRAULIC / MECHANICAL	HYDRAULIC / MECHANICAL	HYDRAULIC / MECHANICAL	HYDRAULIC / MECHANICAL
	FUEL TANK CAPACITY (lt)	55	55	80	80
	WIND SPEED	80 km/h	80 km/h	80 km/h	80 km/h
LIGHT TOWER DIMENSIONS	MAX. TOWER HEIGHT	9000 mm	9000 mm	9000 mm	9000 mm
	LENGTH	3000 mm	3000 mm	3200 mm	3200 mm
	WIDTH	1500 mm	1500 mm	1500 mm	1500 mm
	HEIGHT (tower off)	2900 mm	2900 mm	2900 mm	2900 mm

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