

ژنراتور : Mecc alte

موتور دیزل : Perkins

Standby		Prime		دیزل ژنراتور
KVA	KW	KVA	KW	
33	-	30	24	



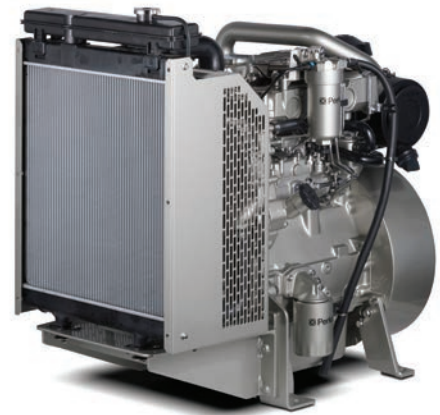
1100 Series 1103A-33G Diesel Engine – Electropak

30.4 kWm (40.8 bhp) 1500 rpm
35.4 kWm (47.5 bhp) 1800 rpm

Building upon Perkins proven reputation within the power generation industry, the 1100 Series range of Electropak engines now fit even closer to customers needs.

In the world of power generation success is only gained by providing more for less. With the 1103A-33G Perkins has engineered even higher levels of reliability, yet lowered the cost of ownership.

1100A units are designed for territories that do not require compliance to EPA or EU emissions legislation. These units are able to meet TA luft legislation.



Compact, efficient power

- 1100 Series is the result of an intensive period of customer research that has guided the development of the range
- The new 3.3 litre cylinder block ensures bore roundness is maintained under the pressures of operation. It also ensures combustion and mechanical noise is lowered
- A new cylinder head has re-established Perkins mastery of air control

Quality by design

- Product design and Class A manufacturing improvements enhance product reliability while maintaining Perkins legendary reputation for durability

Cost effective power

- Compact size and low noise
- Lower fuel consumption and oil use
- 500 hour service intervals
- Two year warranty

Product support

- Perkins actively pursues product support excellence by ensuring our distribution network invest in their territory – strengthening relationships and providing more value to you, our customer
- Through an experienced global network of distributors and dealers, fully trained engine experts deliver total service support around the clock, 365 days a year. They have a comprehensive suite of web based tools at their fingertips covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts and service. We give 100% reassurance that you receive the very best in terms of quality for lowest possible cost .. wherever your Perkins powered machine is operating in the world

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To find your local distributor

Engine Speed (rpm)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	30.0	24.0	28.2	37.8	27.7	37.1
	Standby (maximum)	33.0	26.4	31.0	41.6	30.4	40.8
1800	Prime Power	34.9	27.9	33.2	44.5	32.2	43.2
	Standby (maximum)	38.2	30.6	36.5	48.9	35.4	47.5

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1. Derating may be required for conditions outside these; consult Perkins Engines Company Limited.

Generator powers are typical and are based on an average alternator efficiency and a power factor (cos. θ) of 0.8. Fuel specification: BS 2869: Part 2 1998 Class A2 or DIN EN 590. Lubricating oil: 15W40 to API CG4.

Rating Definitions

Prime Power: Variable load. Unlimited hours usage with an average load factor of 80% of the published prime power over each 24 hour period. A 10% overload is available for 1 hour in every 12 hours of operation. **Standby Power:** Variable load. Limited to 500 hours annual usage, up to 300 hours of which may be continuous running. No overload is permitted.

Photographs are for illustrative purposes only and may not reflect final specification.

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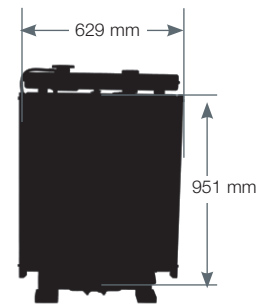
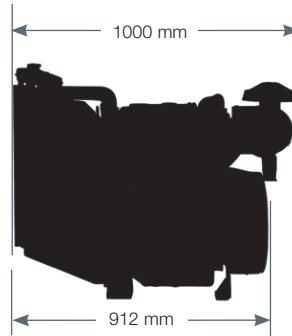
 **Perkins**[®]

THE HEART OF EVERY GREAT MACHINE

1100 Series 1103A-33G Diesel Engine – ElectropaK

30.4 kWm (40.8 bhp) 1500 rpm

35.4 kWm (47.5 bhp) 1800 rpm



Standard ElectropaK specification

Air inlet

- Mounted air filter

Fuel system

- Rotary type pump
- Next generation fuel filter

Lubrication system

- Wet sump with filler and dipstick
- Spin-on oil filter

Cooling system

- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping

Electrical equipment

- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run

Flywheel and housing

- High inertia flywheel to SAE J620 size 10/11½
- SAE 3 flywheel housing

Mountings

- Front engine mounting bracket

Literature

- User's Handbook
- Workshop manual (optional)
- Parts book (optional)

Optional equipment

- Woodward electronic governor (LCG2)

Engine Speed	Fuel Consumption litres/hour Temperate/Tropical				
	1500 rpm			1800 rpm	
	SFC	UK g/hr	l/hr	UK g/hr	l/hr
Standby	216.1	1.78	8.1	2.08	9.5
Prime Power	211.1	1.58	7.2	1.89	8.6
75% of Prime Power	216.0	1.23	5.61	1.45	6.6
50% of Prime Power	235.4	0.89	4.06	1.07	4.9
25% of Prime Power	309.0	0.58	2.65	-	-

General data

Number of cylinders	3 vertical in-line
Bore and stroke.....	105 x 127 mm (4.1 in x 5 in)
Displacement	3.3 litres (201 cubic in)
Aspiration	Naturally aspirated
Cycle.....	4 stroke
Combustion system.....	Direct injection
Compression ratio	19.25:1
Rotation.....	Anti-clockwise viewed from flywheel
Cooling system.....	Water-cooled
Total lubrication system capacity.....	8.3 litres (2.2 US gals)
Total coolant capacity	10.2 litres (2.7 US gals)
Dimensions – Length	1029 mm (40.5 in)
Width	629 mm (24.8 in)
Height	951 mm (37.4 in)
Dry weight (approximately).....	412 kg (908 lb)

Final weight and dimensions will depend on completed specification

Option groups

A selection of optional items is available to enable the customer to prepare a specification precisely matched to the needs.

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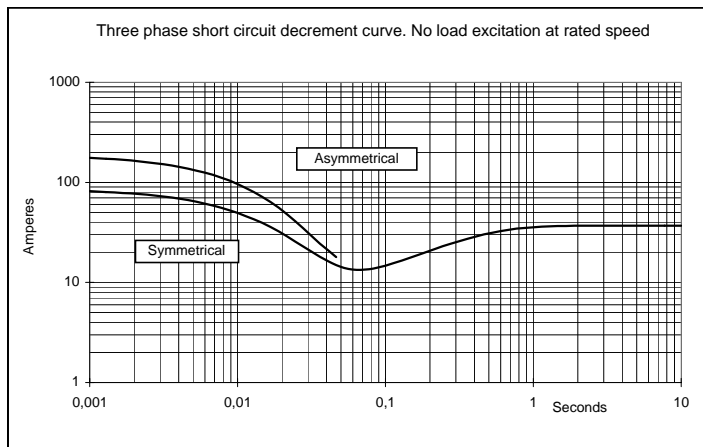
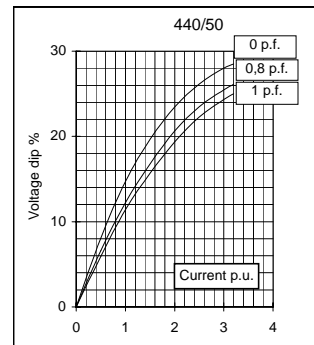
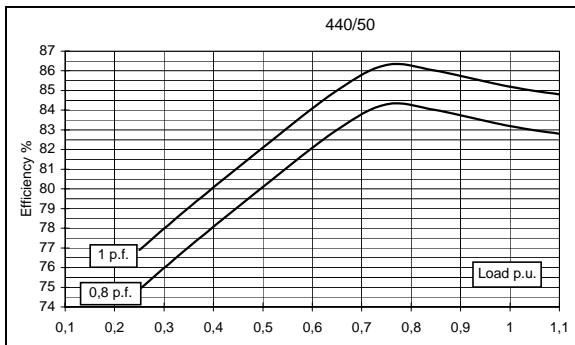
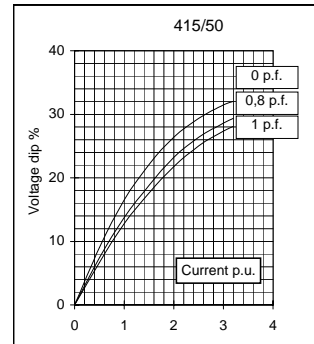
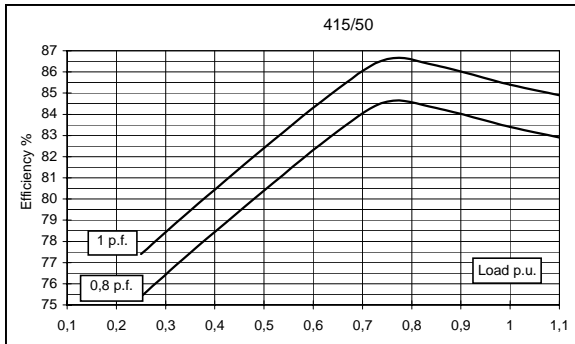
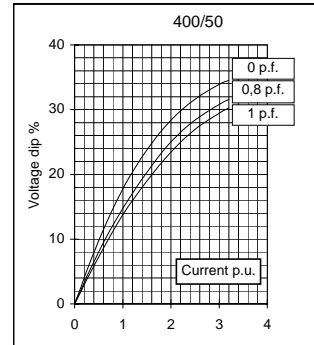
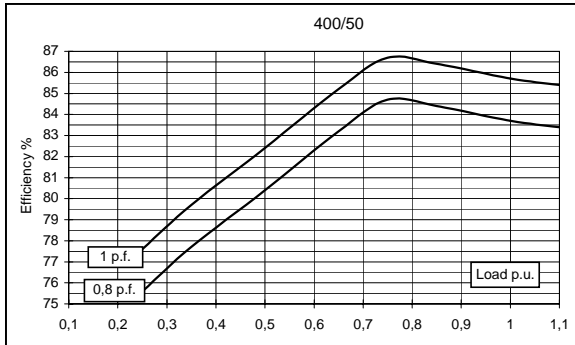
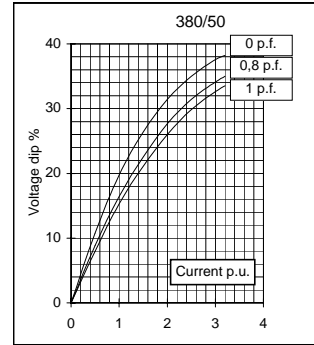
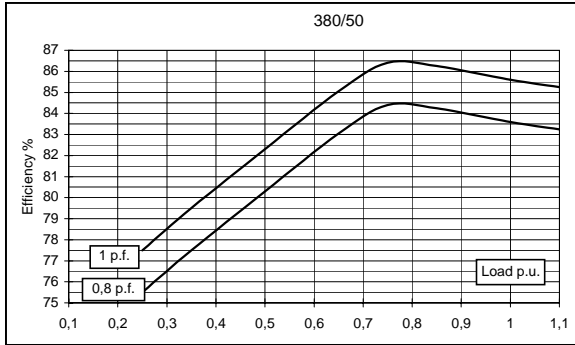
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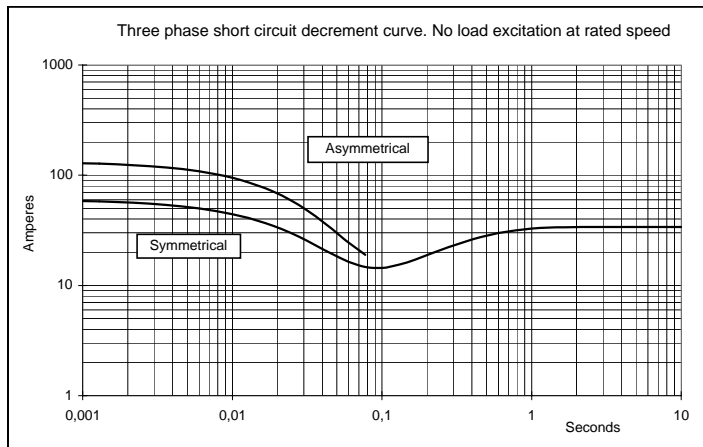
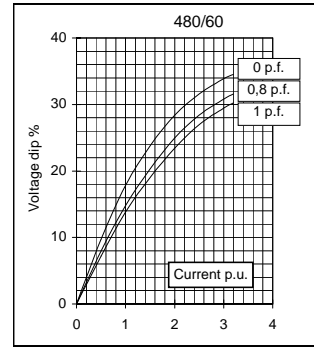
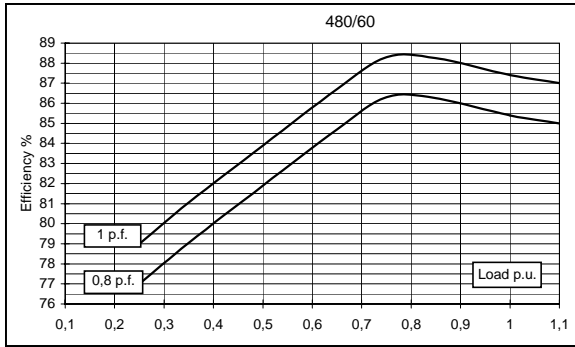
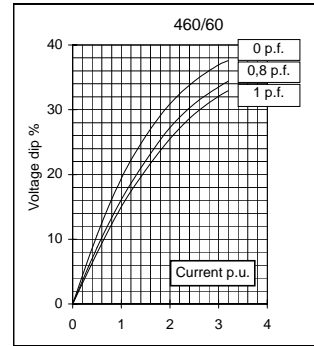
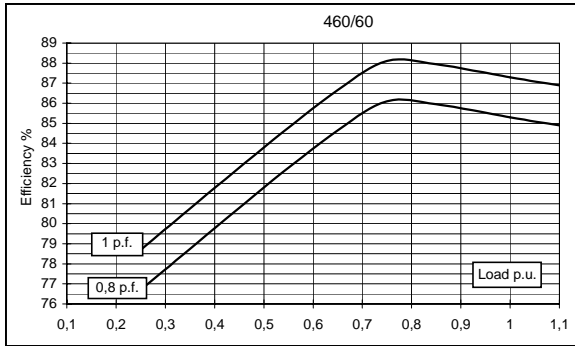
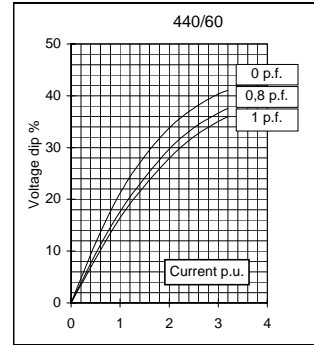
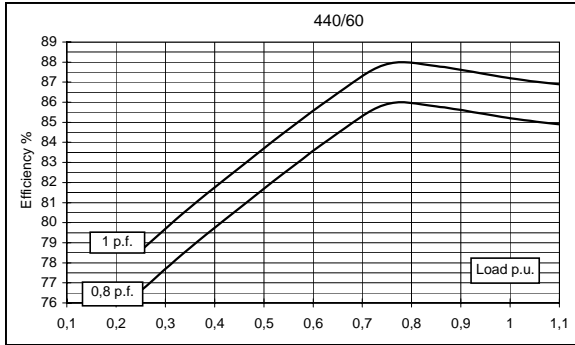
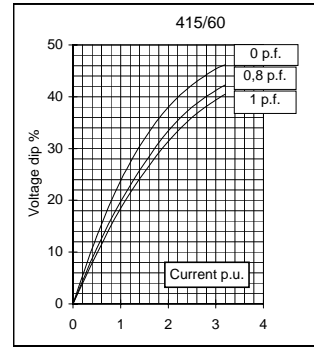
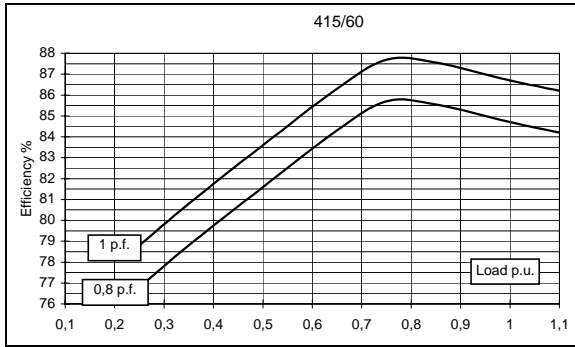
THE HEART OF EVERY GREAT MACHINE

Electrical Characteristics										
Frequency	Hz	50				60				
Voltage (star)	V	380	400	415	440	415	440	460	480	
Rated power class H	kVA	8	8	8	6,8	9	9,6	9,6	9,6	
	kW	6,4	6,4	6,4	5,4	7,2	7,7	7,7	7,7	
Rated power class F	kVA	7,5	7,5	7,5	6,4	7,5	8	9	9	
	kW	6	6	6	5,1	6	6,4	7,2	7,2	
Regulation with SR7/2		±1,5 % with any power factor and speed variations between -5% +30%								
Insulation class		H								
Execution		Brushless								
Stator winding		6 ends								
Rotor		without damping cage								
Efficiencies class H	4/4	%	83,6	83,7	83,4	83,2	84,7	85,2	85,3	85,4
(see graph. for details)	3/4	%	84,4	84,7	84,6	84,3	85,7	85,9	86,1	86,3
	2/4	%	80,3	80,4	80,4	80,1	81,6	81,7	81,8	81,9
	1/4	%	75,5	75,6	75,4	74,9	76,8	76,6	76,7	77
Reactances (f. l.cl. F)	Xd	%	201,7	182	169,1	127,9	228,3	216,6	198,2	182
	Xd'	%	18,17	16,4	15,24	11,52	20,57	19,52	17,86	16,4
	Xd''	%	13,07	11,8	10,96	8,29	14,80	14,04	12,85	11,8
	Xq	%	66,6	60,1	55,8	42,2	75,4	71,5	65,4	60,1
	Xq'	%	66,6	60,1	55,8	42,2	75,4	71,5	65,4	60,1
	Xq''	%	71,2	64,3	59,7	45,2	80,6	76,5	70,0	64,3
	X ₂	%	17,95	16,2	15,05	11,38	20,32	19,28	17,64	16,2
	X ₀	%	6,32	5,7	5,30	4,00	7,15	6,78	6,21	5,7
Short Circuit Ratio	Kcc		0,66	0,8	0,99	1,61	0,53	0,61	0,66	0,8
Time Constants	Td'	sec.	0,017							
	Td''	sec.	0,011							
	Tdo'	sec.	0,73							
	T _α	sec.	0,012							
Short Circuit Current Capacity		%	>300				>320			
Excitation at no load	Amp.		0,25	0,29	0,32	0,35	0,2	0,23	0,25	0,27
Excitation at full load	Amp.		0,7	0,8	0,9	1	0,6	0,65	0,7	0,75
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20°C)	Ω		1,272							
Rotor Winding Resistance (20°C)	Ω		7,141							
Exciter Resistance (20 °C)	Ω		Rotor : 1,453				Stator : 15,71			
Heat dissipation at f.l.cl.H	W		1256	1246	1274	1098	1301	1334	1324	1313
Telephone Interference			THF < 2%				TIF < 45			
Radio interference			EN60034-1, VDE 0875K. For others standards apply to factory							
Waveform Distors.(THD) at f. load	LL/LN %		2,8 / 2,4							
Waveform Distors.(THD) at no load	LL/LN %		2,7 / 2,5							
Mechanical characteristics										
Protection			IP 23 (other protection on request)							
DE bearing			6308-2RS							
NDE bearing			6305-2RS							
Weight of wound stator assembly	kg		20,9							
Weight of wound rotor assembly	kg		11,3							
Weight of complete generator	kg		70							
Maximun overspeed	rpm		2250							
Unbalanced magnetic pull at f.l.cl.F	kN/mm		2,8							
Cooling air requirement	m³/min		3,5				4,1			
Inertia Constant (H)	sec.		0,101				0,122			
Noise level at 1m/7m	dB(A)		72 / 58				78 / 60			

50 Hz



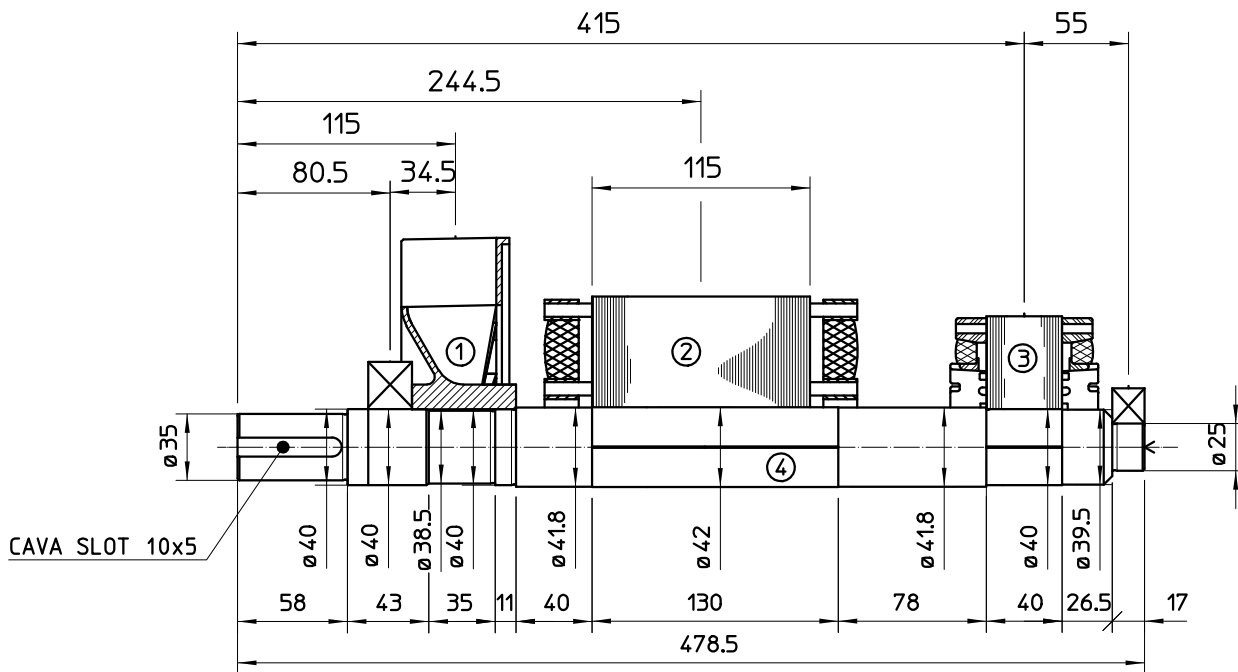
60 Hz



All technical data are to be considered as a reference and they can be modified without any notice

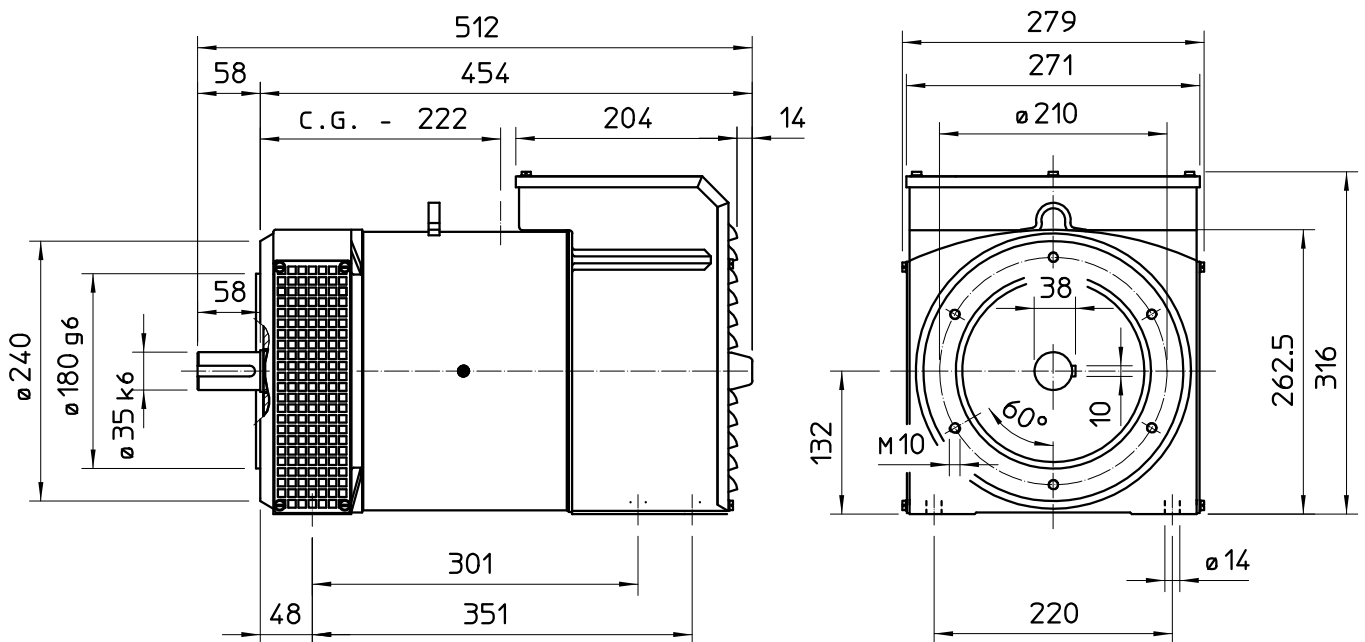
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TWO BEARING MOMENTS OF INERTIA

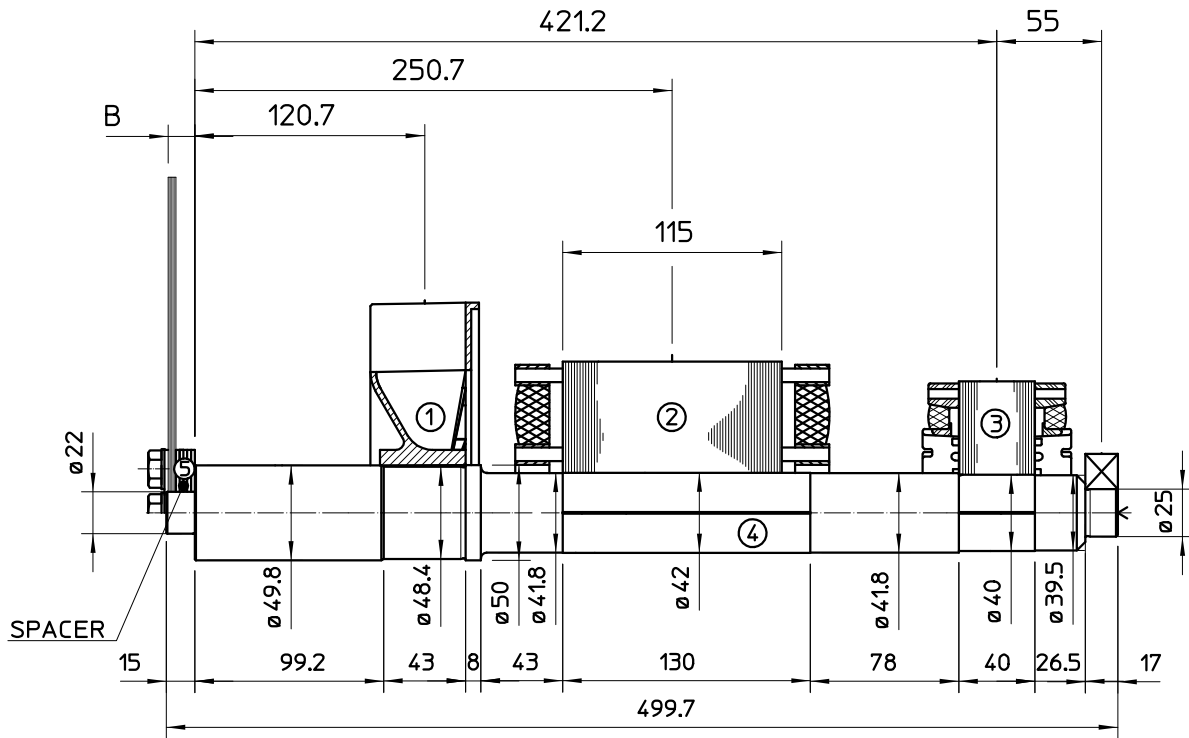


COMPONENT	WEIGHT Kg	J Kgm ²
1 FAN	0.93	0.0036
2 MAIN ROTOR	13.43	0.0472
3 EX ROTOR	4.12	0.011
4 SHAFT	4.7	0.00097
6 TOTAL	23.18	0.06277

TWO BEARING DIMENSIONS



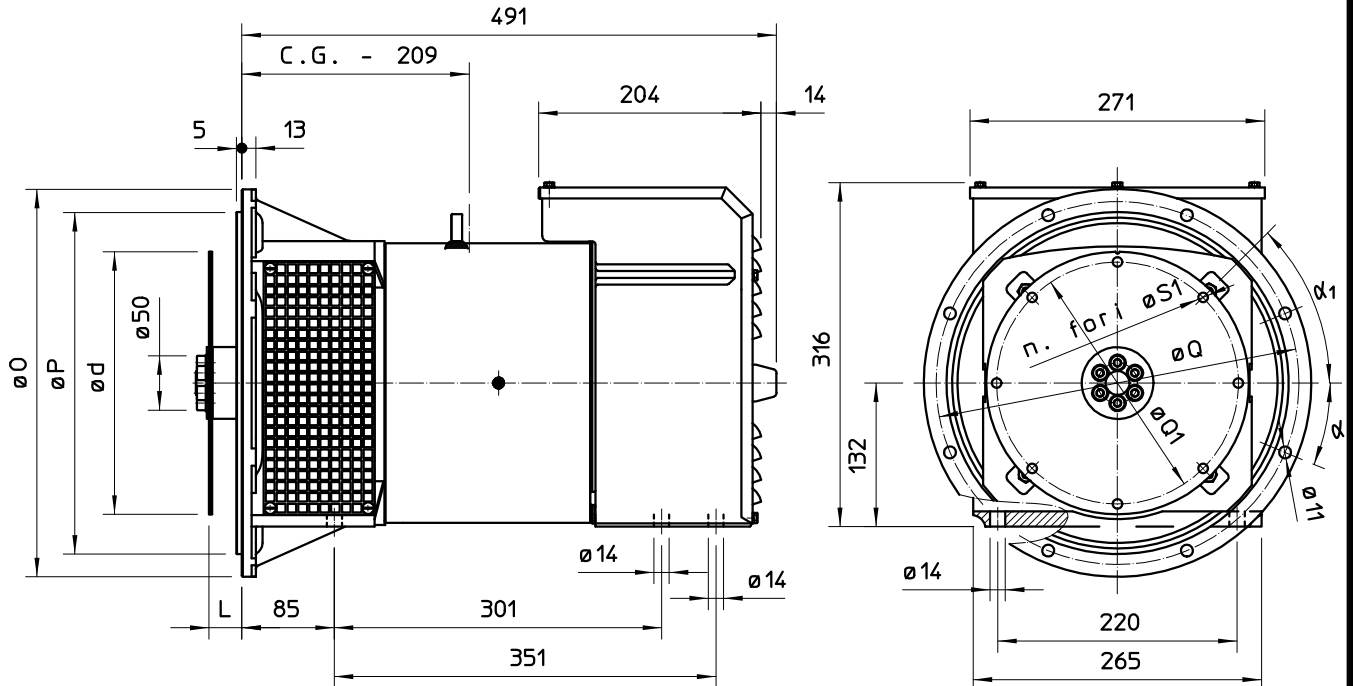
SINGLE BEARING MOMENTS OF INERTIA



COMPONENT	WEIGHT Kg	J Kg ^m ²
1 FAN	0.82	0.0032
2 MAIN ROTOR	13.43	0.0472
3 EX ROTOR	4.12	0.011
4 SHAFT	5.6	0.0012
TOTAL	23.97	0.0626

SAE N.	B (mm)	SHAFT COUPLING FLEX PLATE WEIGHT kg	J kgm ²
6 1/2	4	1.14	0.0067
7 1/2	4	1.42	0.0103
8	35.6	1.97	0.0171
10	27.6	2.59	0.0319
11 1/2	14	3.1	0.0481

SINGLE BEARING DIMENSIONS



GIUNTI A DISCO COUPLING DISC PLATEX
DISQUE DE MONPALIER SCHEIBENKUPPLUNG
JUNTAS A DISCOS

FLANGIA FLANGE BRIDE FLANSCH BRIDAS	SAE N.	O	P	Q	n. fori	α
	6	308	266.7	285.75	8	22°30'
	5	356	314.3	333.4	8	22°30'
	4	403	362	381	12	15°
	3	451	409.6	428.6	12	15°

SAE N.	L	d	Q1	n. fori	S1	α_1
6 1/2	30.2	215.9	200	6	9	60°
7 1/2	30.2	241.3	222.25	8	9	45°
8	62	263.52	244.47	6	11	60°
10	53.8	314.32	295.27	8	11	45°
11 1/2	39.6	352.42	333.37	8	11	45°

C.G. = GRAVITY CENTER