موتور دیزل : Perkins	ژنراتور : Meccalte

Standby		Prime		
KVA	KW	KVA	KW	
665	532	610	488	دیزل ژنراتور

2800 Series 2806A-E18TAG1A Diesel Engine – ElectropaK

574 kWm at 1500 rpm
598 kWm at 1800 rpm

The Perkins 2800 Series is a family of well-proven 6 cylinder 16 and 18 litre in-line diesel engines, designed to address today's uncompromising demands within the power generation industry with particular aim at the standby market sector. Developed from a proven heavy-duty industrial base, the engine offers superior performance and reliability.

The 2806A-E18TAG1A is a turbocharged and air-to-air charge cooled, 6 cylinder diesel engine of 18 litres capacity. Its premium features provide economic and durable operation, low gaseous emissions and advanced overall performance and reliability.

Economic power

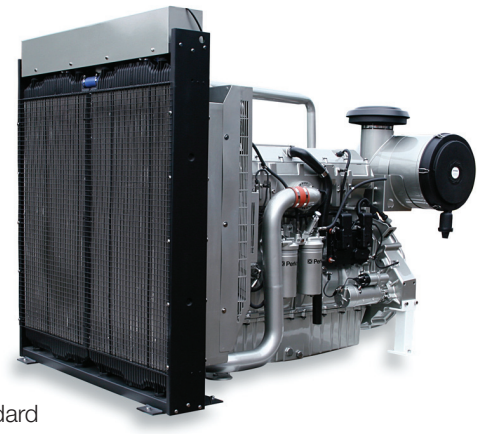
- Mechanically operated unit fuel injectors with electronic control combined with carefully matched turbocharging give excellent fuel atomisation and combustion with optimum economy
- Low emissions result from electronic control of fuel injected

Reliable power

- Developed and tested using the latest engineering techniques and finite element analysis for high reliability, low oil usage and low wear rates
- High compression ratios also ensure clean rapid starting in all conditions
- Perkins global product support is designed to enhance the customer experience of owning a Perkins powered machine. We deliver this through the quality of our distribution network, extensive global coverage and a range of Perkins supported OEM partnership options. So whether you are an end-user or an equipment manufacturer our engine expertise is essential to your success

Compact, clean and efficient power

- Exceptional power to weight ratio and compact size give optimum power density with easier installation and cost effective transportation
- Designed to provide excellent service access for ease of maintenance
- The availability of a low emissions specification allows minimum environmental impact through operation, and complies with all major emissions legislation. The standard specification model provides superior fuel consumption which maximises engine efficiency



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

This engine does not comply with harmonized international regulated emissions limits

Engine Speed (rev/min)	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	600	480	540	724	522	700
	Standby Power	660	528	593	795	574	770
1800	Prime Power	625	500	568	762	543	728
	Standby Power	687	550	623	835	598	802

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514. **Derating may be required for conditions outside these; consult Perkins Engines Company Limited.**

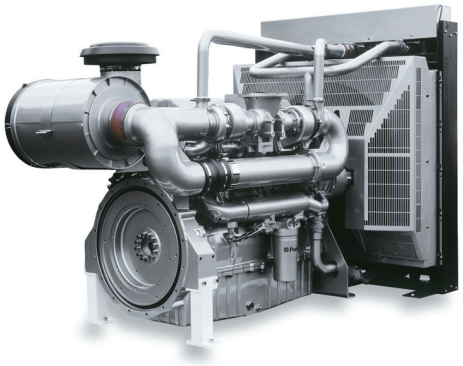
Generator powers are typical and are based on an average alternator efficiency and a power factor (cos. θ) of 0.8. **Fuel specification:** BS 2869: Part 2 1998 Class A2 or ASTM D975 D2. **Lubricating oil:** 15W40 to API CG4.

Rating Definitions
Prime Power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours operation.
Standby Power: Power available in the event of a main power network failure up to a maximum of 500 hours per year of which up to 300 hours may be run continuously. Load factor may be up to 100% of standby power. No overload is permitted.

Perkins®
THE HEART OF EVERY GREAT MACHINE

2800 Series 2806A-E18TAG1A Diesel Engine – ElectropaK

574 kWm at 1500 rpm
598 kWm at 1800 rpm



Standard ElectropaK specification

Air inlet
- Mounted air filter

Fuel system
- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G2 with isochronous capability
- Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator
- Fuel cooler

Lubrication system
- Wet sump with filler and dipstick
- Full-flow replaceable 'Ecoplus' filter
- Oil cooler integral with filter header

Cooling system
- Gear-driven circulating pump
- Mounted belt-driven pusher fan
- Radiator incorporating air-to-air charge cooler, (supplied loose)
- System designed for ambients up to 50ºC
- Low coolant level switch

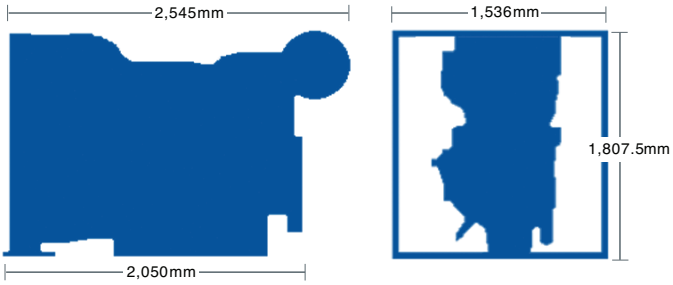
Electrical equipment
- 24 volt starter motor and 24 volt 70 amp alternator with DC output
- ECM mounted on engine with wiring looms and sensors
- 3 level engine protection system

Flywheel and housing
- High inertia flywheel to SAE J620 size 18
- SAE '0' flywheel housing

Mountings
- Front engine mounting bracket

Literature
- User's Handbook

Optional equipment
- 110 volt/240 volt immersion heater
- Additional speed sensor
- Temperature and pressure sensors for gauges
- Electric hours counter
- Air filter rain hood
- Twin starters/facility for second starter
- Tool kit
- Parts manual/Workshop manual



Fuel Consumption				
Engine Speed	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
Standby	201	134	203	141
Prime Power	203	123	202	127
Baseload Power	199	90	–	–
75% of Prime Power	199	90	201	95
50% of Prime Power	203	61	210	66

General data

Number of cylinders 6
Cylinder arrangement ..... Vertical in-line
Cycle ..... 4 stroke
Induction system ..... Turbocharged and air-to-air charge cooled
Combustion system ..... Direct injection
Cooling system ..... Water-cooled
Bore and stroke ..... 145 mm x 183 mm
Displacement ..... 18.1 litres
Compression ratio 14.5:1
Direction of rotation ..... Anti-clockwise, viewed on flywheel
Total lubrication system capacity ..... 62 litres
Total coolant capacity ..... 61 litres
Total dry weight ..... 2050 kg
Dimensions – Length ..... 2545 mm
Width ..... 1536 mm
Height ..... 1808 mm

Final weight and dimensions will depend on completed specification

Publication No. PN1870/09/12 Produced in England

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Perkins®
THE HEART OF EVERY GREAT MACHINE

GENERATOR TYPE ECO 40-1.5L/4

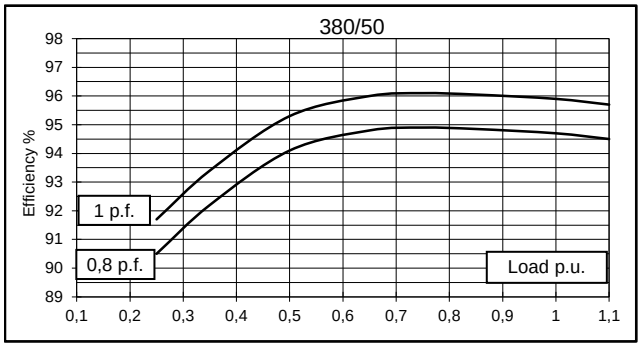
Document : **DS069A/1**
issue 006 date 21/03/2014

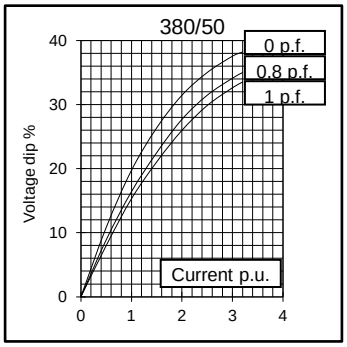
Electrical Characteristics									
Frequency		Hz	50				60			
Voltage (parallel star)		V	380	400	415	440	415	440	460	480
Rated power class H		kVA	620	620	620	570	660	700	744	744
		kW	496	496	496	456	528	560	595	595
Rated power class F		kVA	560	560	560	515	600	632	672	672
		kW	448	448	448	412	480	506	538	538
Regulation with		DER1	±1% with any power factor and speed variations between -5% +30%							
Insulation class			H							
Execution			Brushless							
Stator winding			12 ends							
Rotor			with damping cage							
Efficiencies class H	4/4	%	94,7	94,9	94,6	94,4	95,4	95,8	95,9	96,1
(see graph. for details)	3/4	%	94,9	95,1	94,9	94,6	95,6	96	96,1	96,3
	2/4	%	94,1	94,2	94,1	94	94,8	94,9	95	95,2
	1/4	%	90,5	90,6	90,6	90,4	91,6	91,6	91,7	91,8
Reactances (f. l.cl. F)	Xd	%	285	250	135	85	430	370	285	250
	Xd'	%	19,6	18,4	17,6	16,4	20,9	19,6	19,6	18,4
	Xd"	%	10,8	9,8	9,1	8,7	11,4	10,7	10,8	9,8
	Xq	%	156	146	128	114	162	158	156	146
	Xq'	%	156	146	128	114	162	158	156	146
	Xq"	%	23,7	22,3	21,2	20,7	24,3	23,4	23,7	22,3
	X_2	%	12,4	11,5	10,7	9,3	13,4	12,6	12,4	11,5
	X_0	%	3,1	2,7	2,5	2,2	3,5	3,2	3,1	2,7
Short Circuit Ratio	Kcc		0,35	0,40	0,75	1,30	0,23	0,27	0,35	0,40
Time Constants	Td'	sec.	0,15							
	Td"	sec.	0,019							
	Tdo'	sec.	3,10							
	Tα	sec.	0,04							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load		Amp.	0,65	0,74	0,8	0,95	0,47	0,54	0,6	0,65
Excitation at full load		Amp.	3	3,1	3,5	3,6	2,3	2,5	2,8	3
Overload (long-term)		%	1 hour in a 6 hours period 110% rated load							
Overload per 20 sec.		%	300							
Stator Winding Resistance (20°C)		Ω	0,0087							
Rotor Winding Resistance (20°C)		Ω	1,376							
Exciter Resistance (20 °C)		Ω	Rotor : 0,050				Stator : 8,85			
Heat dissipation at f.l.cl.H		W	27759	26655	28313	27051	25459	24551	25447	24155
Telephone Interference			THF < 2%				TIF < 40			
Radio interference			EN61000-6-3, EN61000-6-2. For others standards apply to factory							
Waveform Distors.(THD) at f. load		LL/LN %	2,2 / 2,4							
Waveform Distors.(THD) at no load		LL/LN %	2,4 / 2,5							
Mechanical characteristics										
Protection			IP 21 (other protection on request)							
DE bearing			6322							
NDE bearing			6318.2RS							
Weight of wound stator assembly		kg	524							
Weight of wound rotor assembly		kg	369							
Weight of complete generator		kg	1380							
Maximun overspeed		rpm	2250							
Unbalanced magnetic pull at f.l.cl.F		kN/mm	6,1							
Cooling air requirement		m^3/min	54				64,8			
Inertia Constant (H)		sec.	0,179				0,214			
Noise level at 1m/7m		dB(A)	94 / 82				98 / 88			

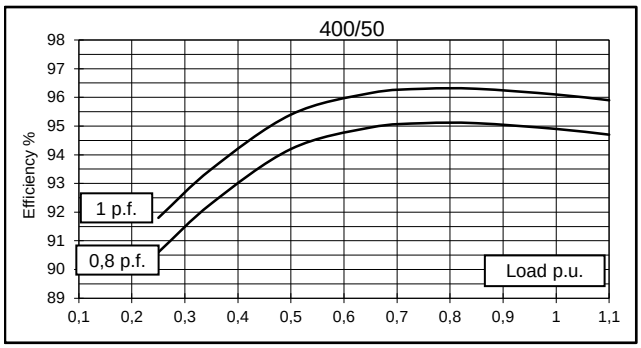
All technical data are to be considered as a reference and they can be modified without any notice.

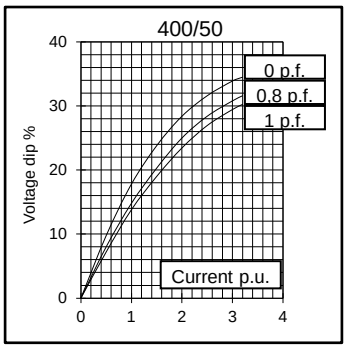
GENERATOR TYPE ECO 40-1.5L/4

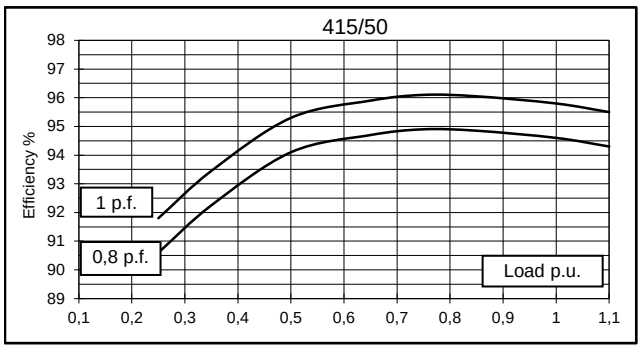
50 Hz

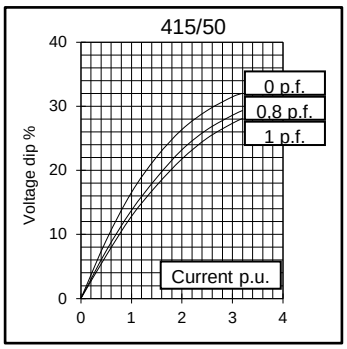


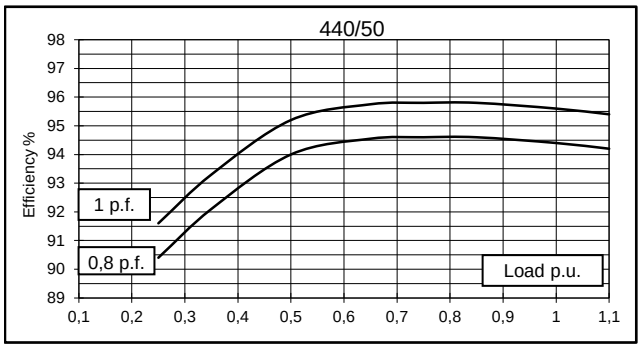


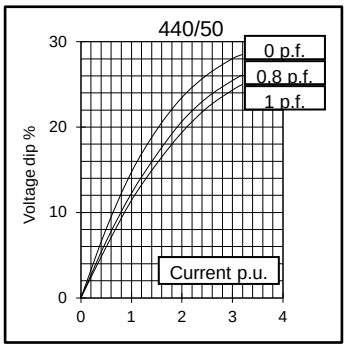


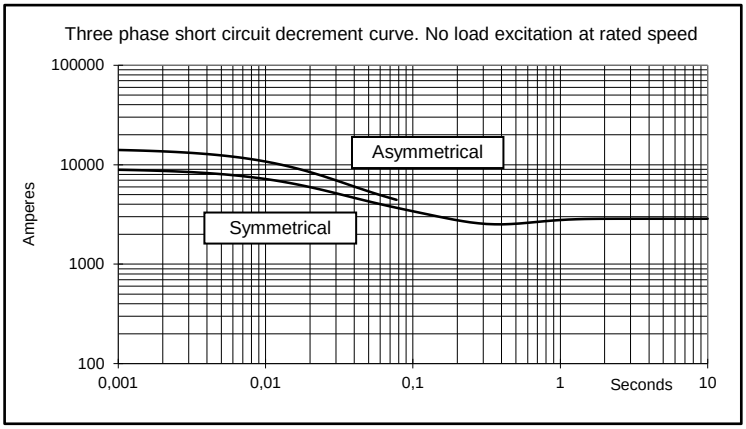






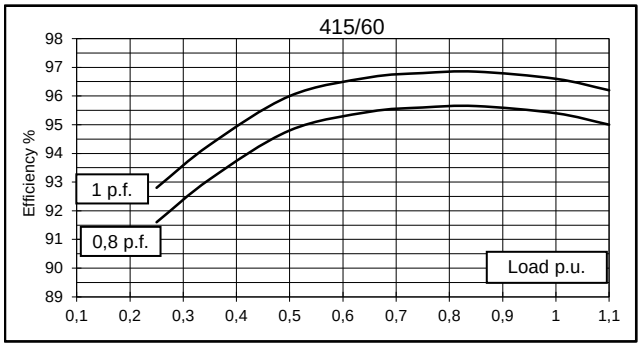


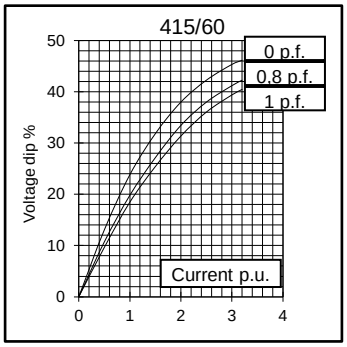


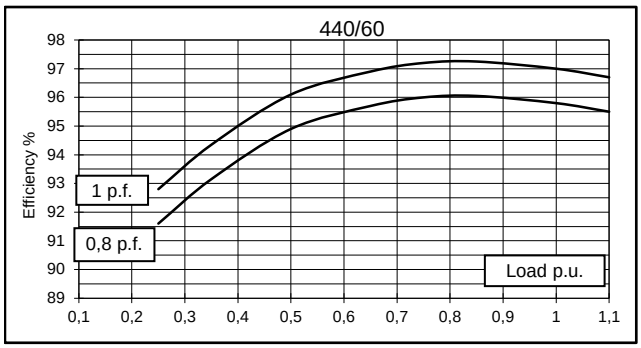


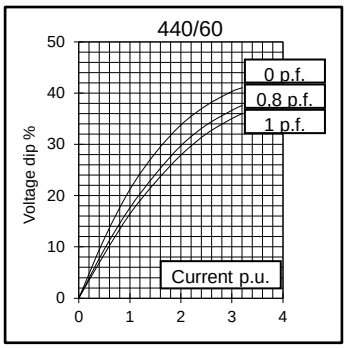
GENERATOR TYPE ECO 40-1.5L/4

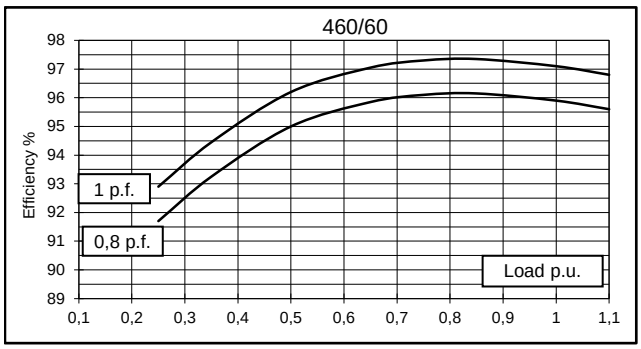
60 Hz

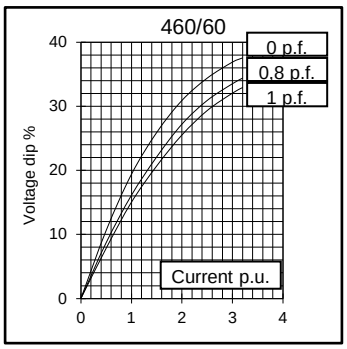


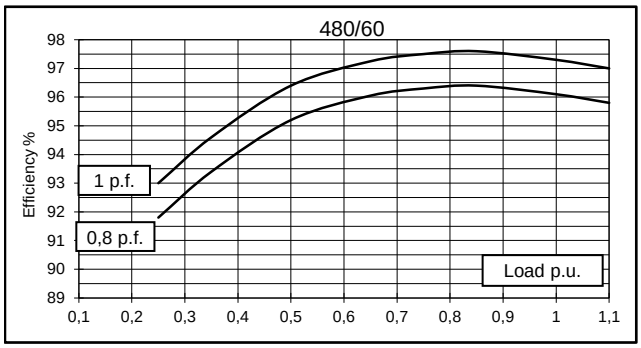


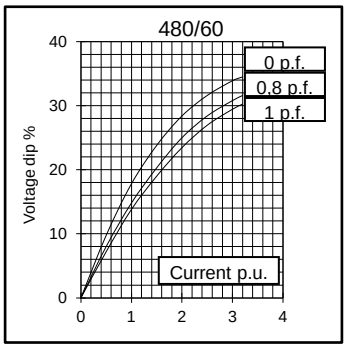


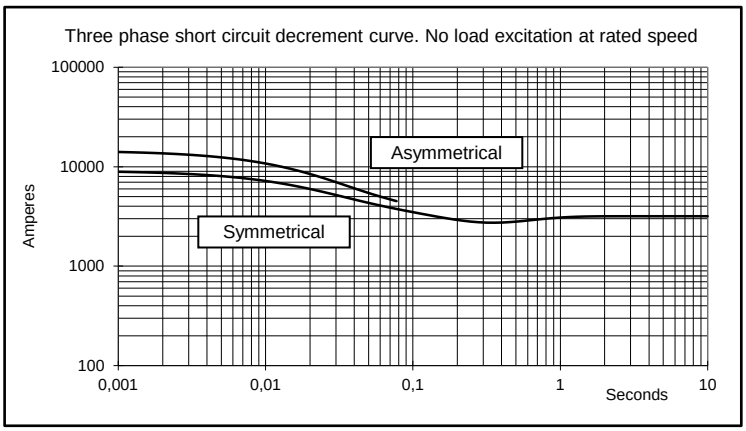




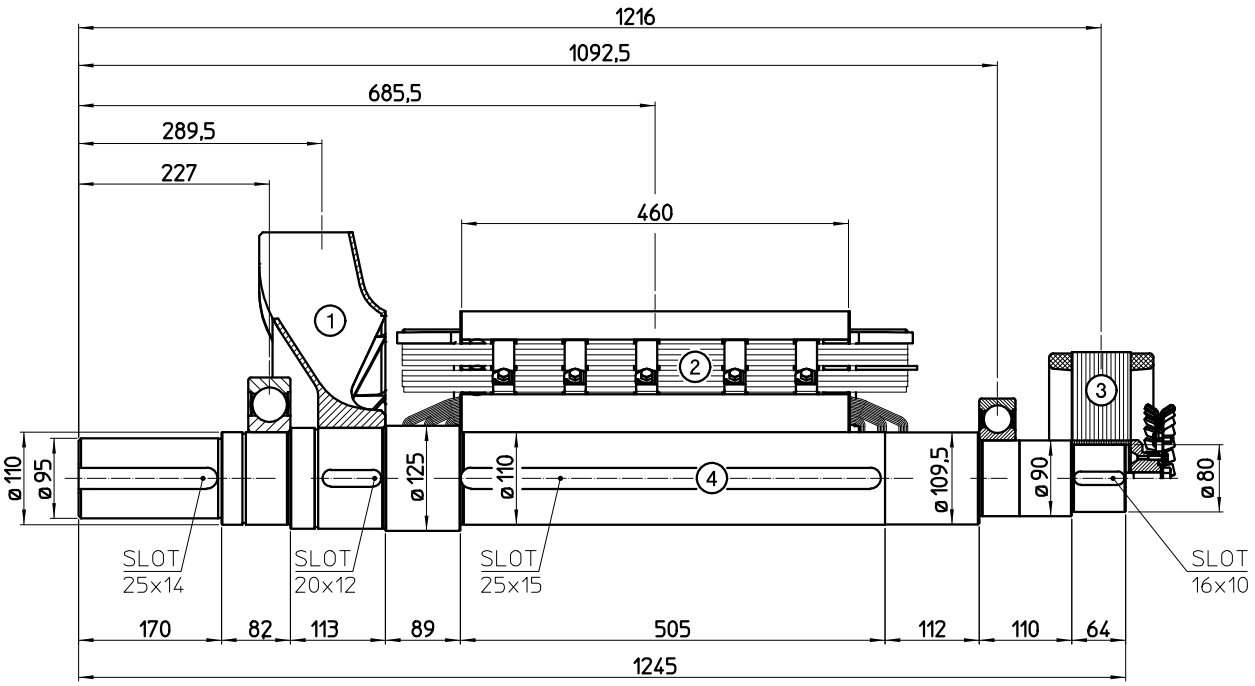






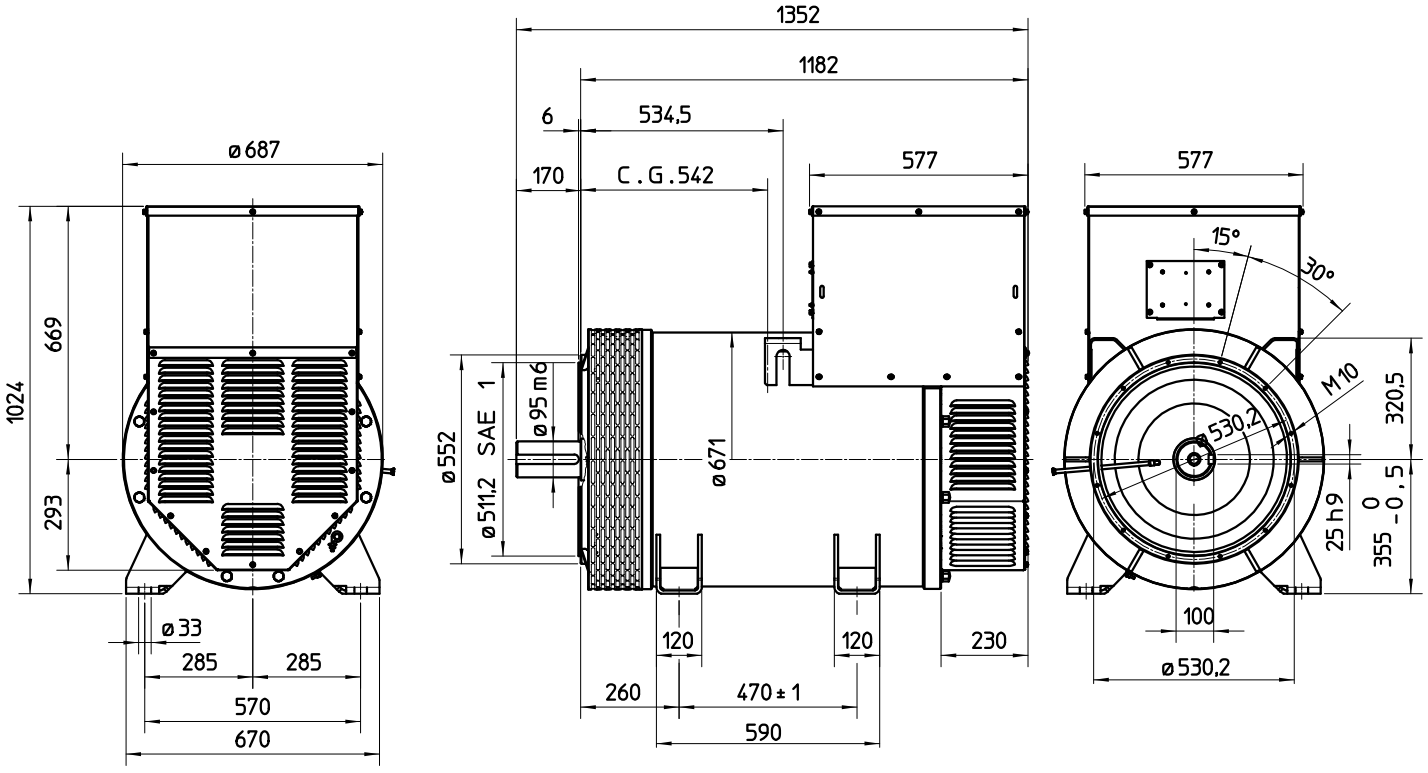


TWO BEARING MOMENTS OF INERTIA



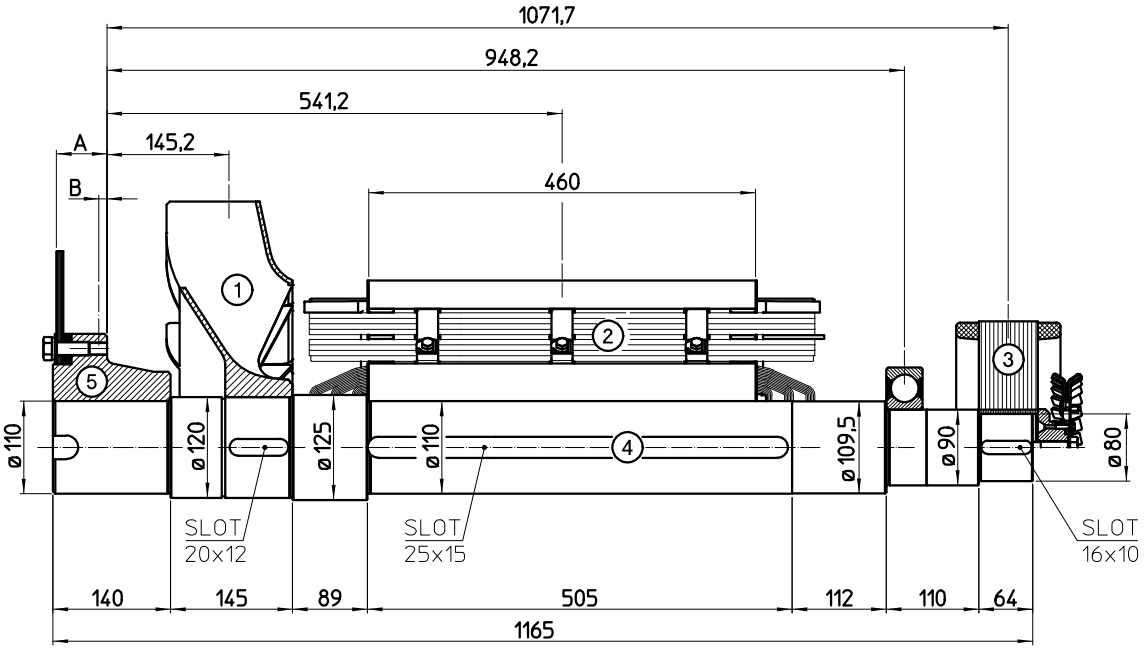
	COMPONENT	WEIGHT kg	J kgm ^{2}
1	FAN	10,2	0,335
2	MAIN ROTOR	369	7.715
3	EX. ROTOR	35	0,562
4	SHAFT	85.7	0.127
	TOTAL	499.9	8.739

TWO BEARING DIMENSIONS



C.G.= GRAVITY CENTER

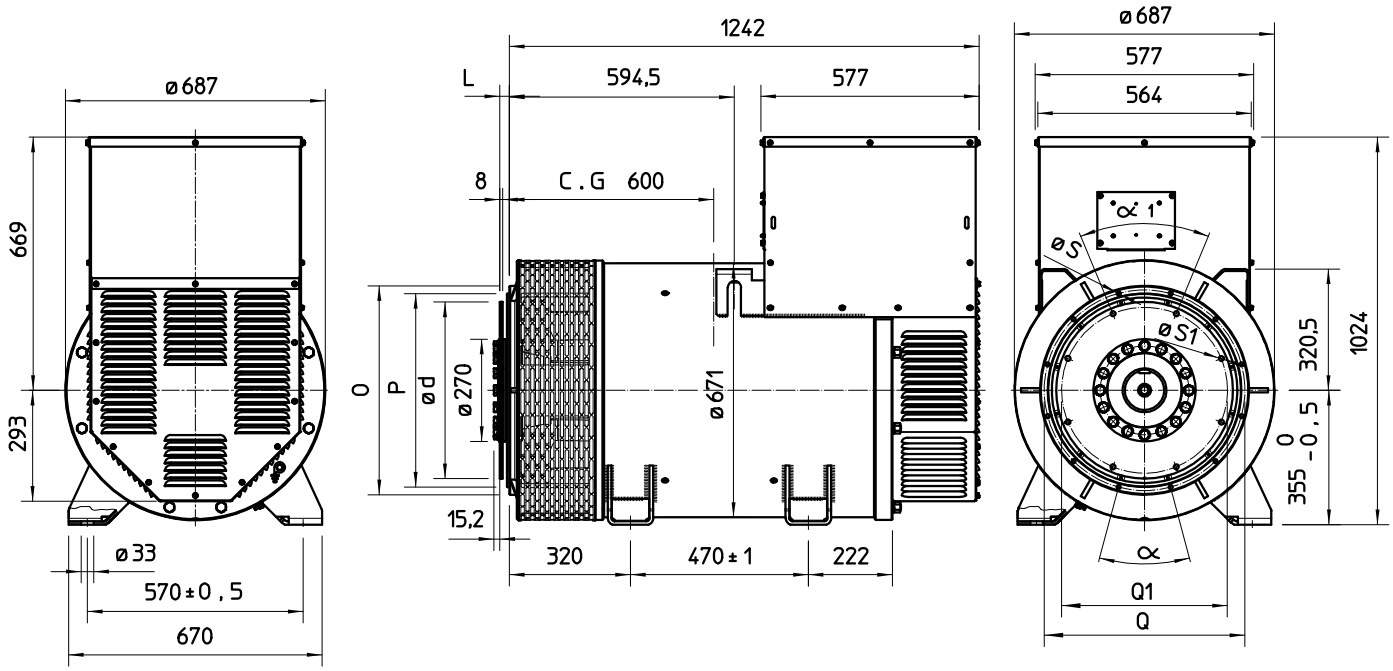
SINGLE BEARING MOMENTS OF INERTIA



	COMPONENT	WEIGHT kg	J kgm ^{2}
1	FAN	10,2	0,335
2	MAIN ROTOR	369	7.715
3	EX. ROTOR	35	0,562
4	SHAFT	84.2	0.129
	TOTAL	498.4	8.741

Sae No	⑤ SHAFTS COUPLING FLEX PLATE			
	A	B	WEIGHT kg	J kgm^2
14	60	9,6	41,4	0,511
18	50	6,6	45,1	0,858

SINGLE BEARING DIMENSIONS



SAE N.	FLANGIA / FLANGE BRIDE / FLANSCH					
	O	P	Q	N. FORI	S	∝
1	552	511,2	530,2	12	11	30°
1/2	648	584,2	619,1	12	14	30°
0	711	647,7	679,5	16	14	22,5°
00	883	787,4	850,9	16	14	22,5°

VOL. N.	GIUNTI A DISCHI / DISC COUPLING DISCQUE DE MONOPALIER / SCHEIBENKUPPLUNG					
	L	d	Q1	N. FORI	S1	∝1
14	25,4	466,72	438,15	8	14	45°
18	15,7	571,5	542,92	6	17	60°

C.G.= GRAVITY CENTER