



400Hz Alternators



Electrical power
for military or civil aircraft

LEROY-SOMER[™]

Nidec
All for dreams

MAIN FEATURES AND OPTIONS

The best of performance

Nidec Leroy-Somer 400Hz alternators range is specifically designed to supply electrical power to both military or civil aircraft.

Nidec Leroy-Somer, world leader in alternators from 10 to 35,000 kVA, has been manufacturing a range of special frequency products destined for the aircraft industry, for the last 30 years.

Expertise in design and manufacturing ensures that each Nidec Leroy-Somer product meets the technical requirements of this exacting application.

The 400Hz alternators are brushless, self-excited generators (Shunt excitation), with the D550 digital AVR fitted as standard.

They meet the principal international standards, notably: IEC 60034-1.

Electrical characteristics

- Voltage: 200V (L-L) / 115V (L-N) adjustable to $\pm 5\%$
- Insulation class H
- Power factor: 0.8
- Transient voltage dip $\leq 10\%$ for 50% load variation
- Harmonic rate $< 3\%$ at no load
- Recovery time ≤ 500 ms
- D550 digital AVR specifications:
 - Voltage accuracy $\pm 1\%$ on balance linear load
 - Under speed protection
 - Integrated radio interference suppressor
 - Mounted inside the terminal box

Mechanical characteristics

- Single-bearing IM2005
- Two-bearing IM2001
- Steel frame and steel / cast-iron / aluminum end shields
- Cylindrical and standardized shaft end for two-bearing
- Sealed for life bearings
- IP 23 protection, self-ventilated alternator

Operating conditions

- Ambient temperature: $- 20^{\circ}\text{C}$ and $+ 50^{\circ}\text{C}$
- Altitude up to 1000m

Option

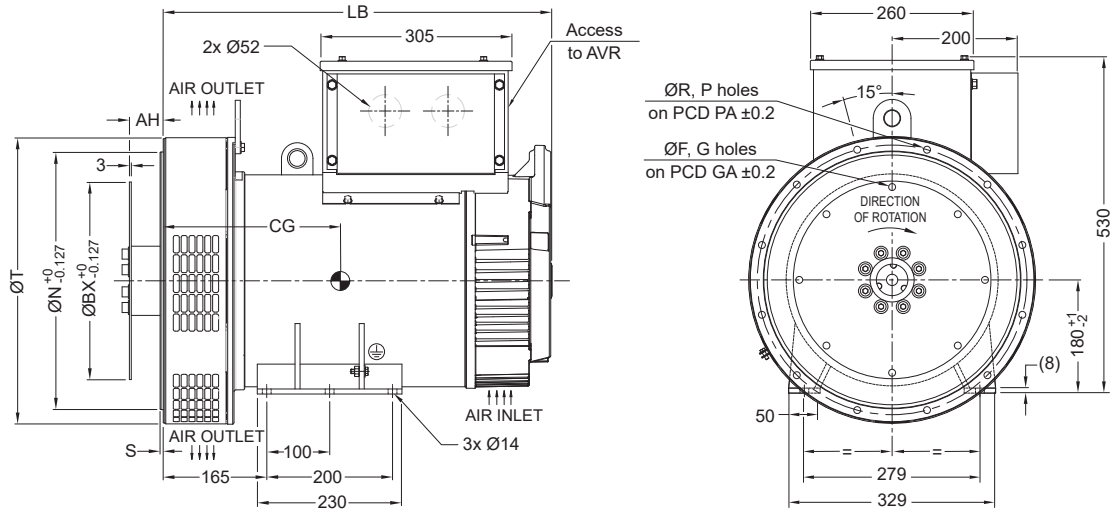
- Radio interference suppressor

RATING TABLE

400Hz - Continuous duty - Class H: 40°C - 115V (L-N) / 200V (L-L) ± 5% at 0.8 PF

Type	kVA	kW	Efficiency 4/4	Number of poles	Speed RPM
LSA 180 A 16	12	9.6	83.7	16	3000
LSA 180 B 16	16	12.8	84.1	16	3000
LSA 180 C 16	20	16	84.5	16	3000
LSA 180 D 16	30	24	85.7	16	3000
LSA 180 E 16	40	32	86.1	16	3000
LSA 180 F 16	50	40	86.3	16	3000
LSA 180 G 16	60	48	86.6	16	3000
LSA 180 H 16	70	56	86.9	16	3000
LSA 180 I 16	80	64	87.0	16	3000
LSA 180 J 16	90	72	87.1	16	3000
LSA 225 A 24	25	20	89.0	24	2000
LSA 225 B 24	40	32	89.6	24	2000
LSA 225 C 24	60	48	90.0	24	2000
LSA 280 A 24	90	72	92.0	24	2000
LSA 280 B 24	120	96	92.1	24	2000
LSA 280 C 24	140	112	92.3	24	2000
LSA 280 D 24	160	128	92.4	24	2000
LSA 280 E 24	180	144	92.7	24	2000
LSA 280 F 24	200	160	92.9	24	2000
LSA 225 A 26	25	20	88.7	26	1846
LSA 225 B 26	40	32	89.1	26	1846
LSA 225 C 26	60	48	89.5	26	1846
LSA 280 A 26	90	72	91.9	26	1846
LSA 280 B 26	120	96	92.0	26	1846
LSA 280 C 26	125	100	92.0	26	1846
LSA 280 D 26	140	112	92.1	26	1846
LSA 280 E 26	160	128	92.2	26	1846
LSA 280 F 26	180	144	92.7	26	1846

SINGLE BEARING DIMENSIONS - LSA 180 16P

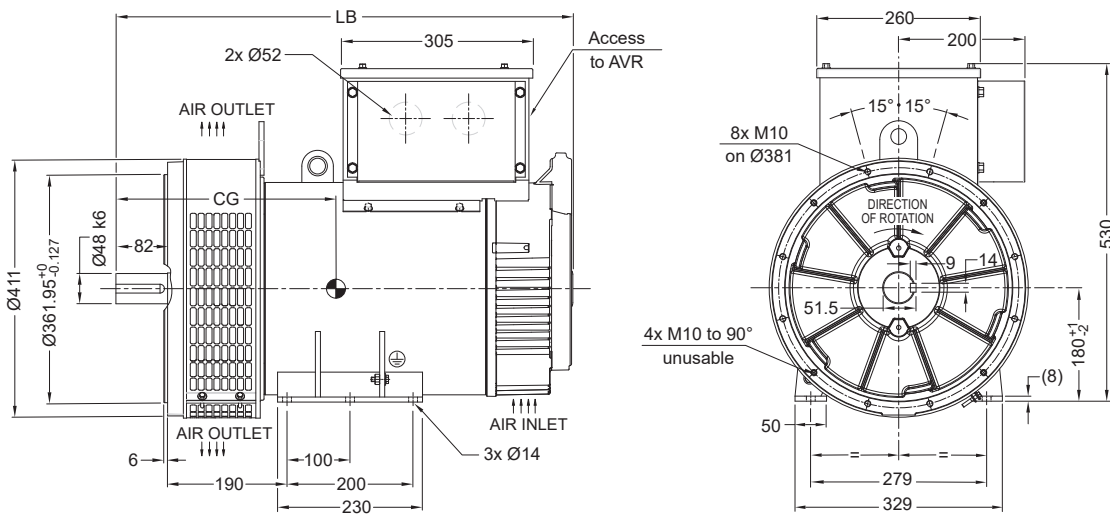


Dimensions (mm) and weight				Coupling			
Type	LB	CG	Weight (kg) approx.	Flange	Flex plate	10	11½
LSA 180 A	550	230	117	S.A.E 3	X	X	
LSA 180 B	550	230	117	S.A.E 2	X	X	
LSA 180 C	550	230	117				
LSA 180 D	550	250	137				
LSA 180 E	550	265	151				
LSA 180 F	550	280	165				
LSA 180 G	620	295	185				
LSA 180 H	620	295	185				
LSA 180 I	620	310	200				
LSA 180 J	620	325	214				

Flange (mm)						
S.A.E	ØN	ØT	PA	ØR	P	S
3	409.58	453	428.62	11	12	5
2	447.68	490	466.72	11	12	6

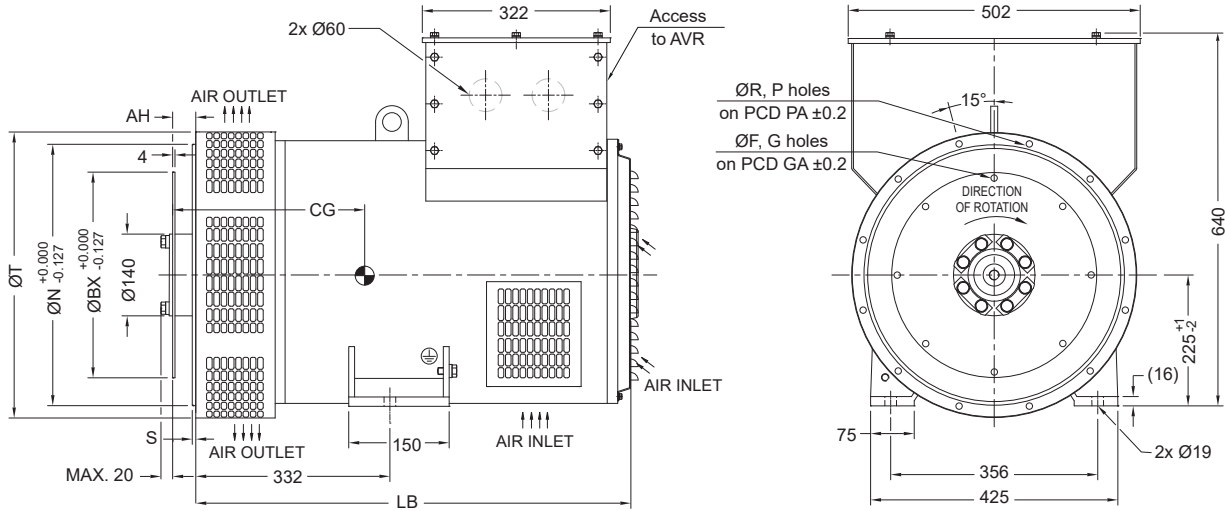
Flex plate (mm)					
S.A.E	ØBX	AH	GA	ØF	G
10	314.32	53.8	295.28	11	8
11½	352.42	39.6	333.38	11	8

TWO-BEARING DIMENSIONS - LSA 180 16P



Dimensions (mm) and weight			
Type	L	CG	Weight (kg) approx.
LSA 180 A	655	307	128
LSA 180 B	655	307	128
LSA 180 C	655	307	128
LSA 180 D	655	327	148
LSA 180 E	655	342	162
LSA 180 F	655	357	176
LSA 180 G	725	372	196
LSA 180 H	725	372	196
LSA 180 I	725	387	211
LSA 180 J	725	402	225

SINGLE BEARING DIMENSIONS - LSA 225 24/26P



Dimensions (mm) and weight

Type	LB	CG	Weight (kg) approx.
LSA 225 A	680	338	300
LSA 225 B	680	338	310
LSA 225 C	680	358	335

Coupling

Flange	Flex plate	11 ½
S.A.E 3		X
S.A.E 2		X

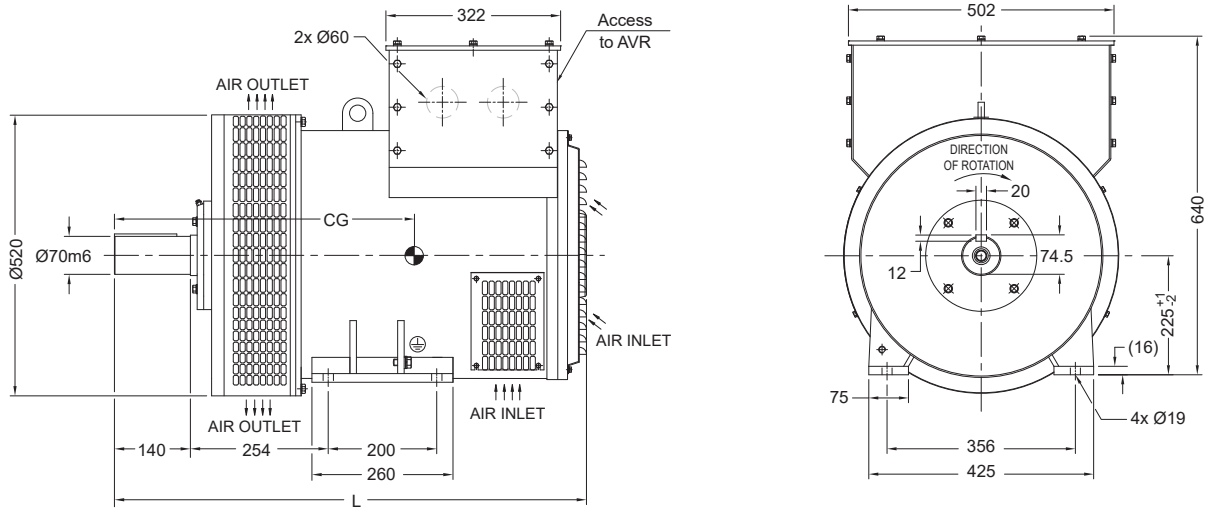
Flange (mm)

S.A.E	ØN	ØT	PA	ØR	P	S
3	409.58	476	428.60	11	12	8
2	447.68	490	466.70	11	12	6

Flex plate (mm)

S.A.E	ØBX	AH	GA	ØF	G
11 ½	352.42	39.6	333.40	11	8

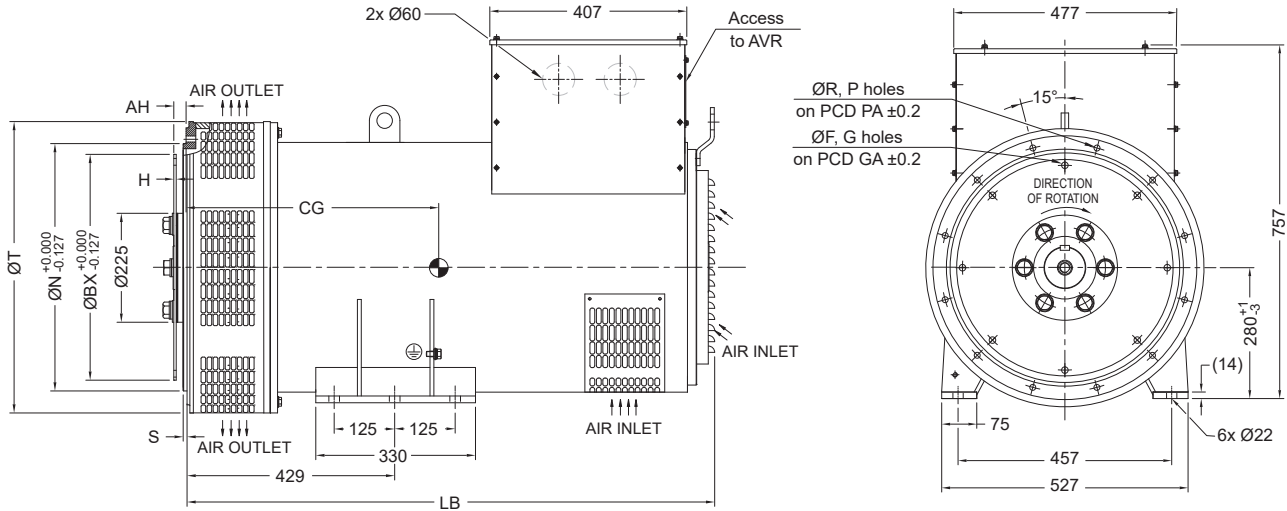
TWO-BEARING DIMENSIONS - LSA 225 24/26P



Dimensions (mm) and weight

Type	L	CG	Weight (kg) approx.
LSA 225 A	870	546	300
LSA 225 B	870	546	310
LSA 225 C	870	553	330

SINGLE BEARING DIMENSIONS - LSA 280 24/26P



Dimensions (mm) and weight

Type	LB	CG	H	Weight (kg) approx.
LSA 280 A	915	420	3	600
LSA 280 B	995	430	3	755
LSA 280 C	995	440	4	770
LSA 280 D	995	450	4	790
LSA 280 E	996	470	4	830
LSA 280 F	1090	525	5	880

Coupling

Flange	Flex plate 11 ½	14
S.A.E 3	X	
S.A.E 2	X	
S.A.E 1		X

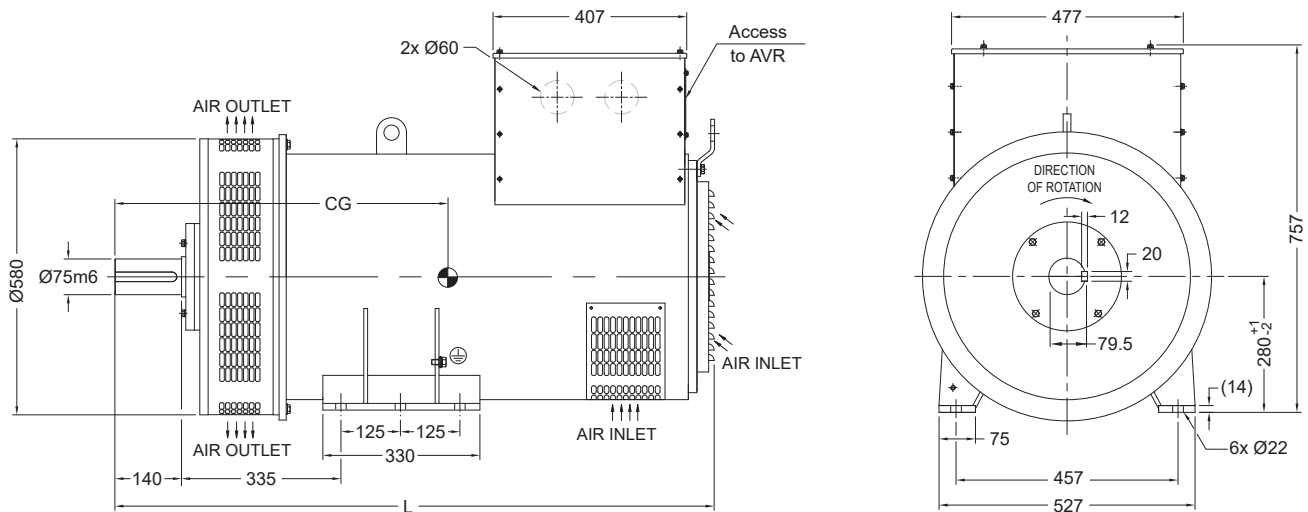
Flange (mm)

S.A.E	ØN	ØT	PA	ØR	P	S
3	409.58	600	428.60	11	12	6
2	447.68	600	466.70	11	12	6
1	511.18	600	530.22	12.7	12	6

Flex plate (mm)

S.A.E	ØBX	AH	GA	ØF	G
11 ½	352.42	39.6	333.40	11	8
14	466.72	25.4	438.15	14	8

TWO-BEARING DIMENSIONS - LSA 280 24/26P



Dimensions (mm) and weight

Type	L	CG	Weight (kg) approx.
LSA 280 A	1084	595	570
LSA 280 B	1164	605	725
LSA 280 C	1164	615	740
LSA 280 D	1164	630	780
LSA 280 E	1164	645	800
LSA 280 F	1259	700	850

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