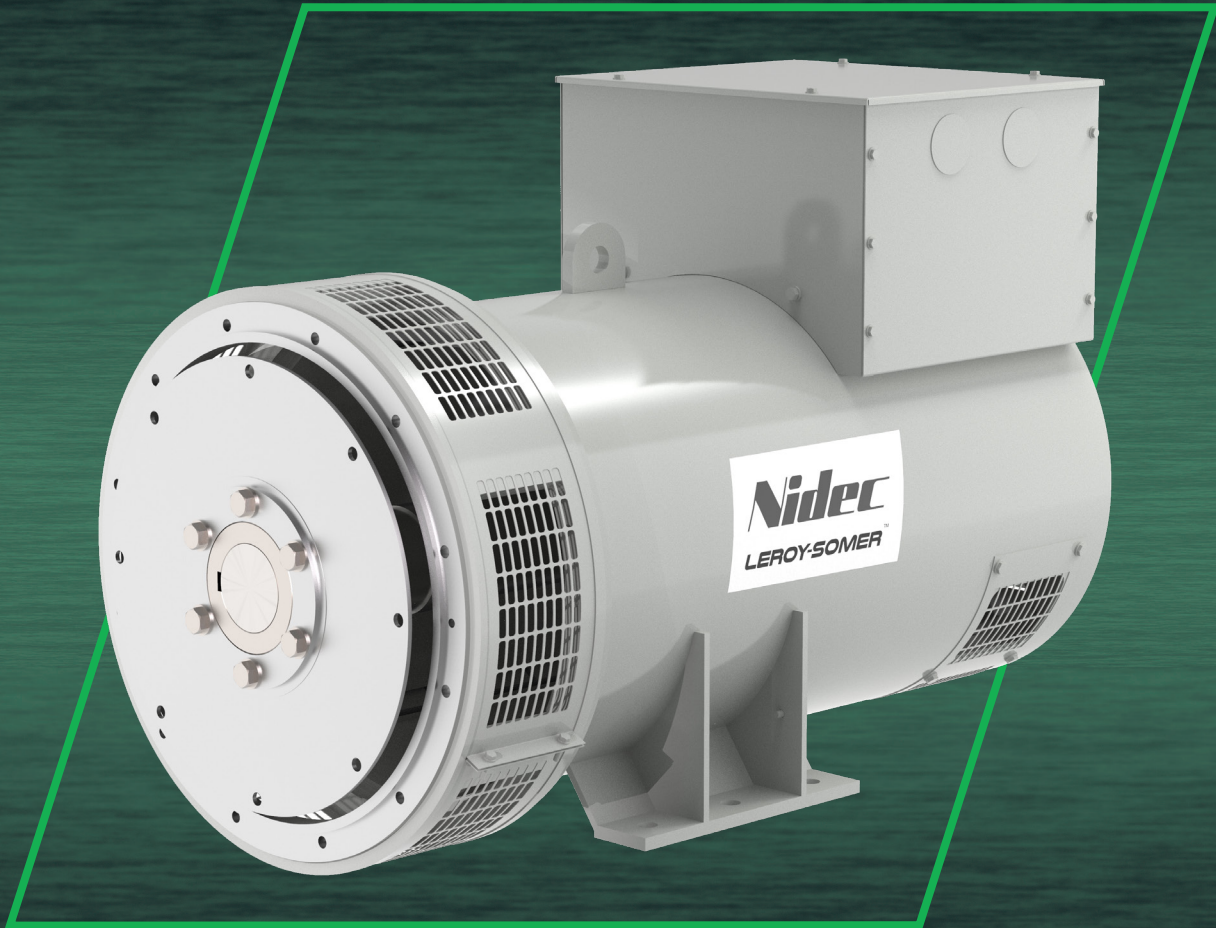


Nidec

Power



400 Hz

High Frequency Alternator

12 to 180 kVA

Electrical and mechanical data

LEROY-SOMER[™]

The best of performance

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

Nidec Power, 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 Power product meets the technical requirements of this exacting application.

The Leroy-Somer™ 400Hz alternator is brushless, self-excited generator (Shunt excitation), with the D550 digital AVR fitted as standard.

It complies with the main international standards such as 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

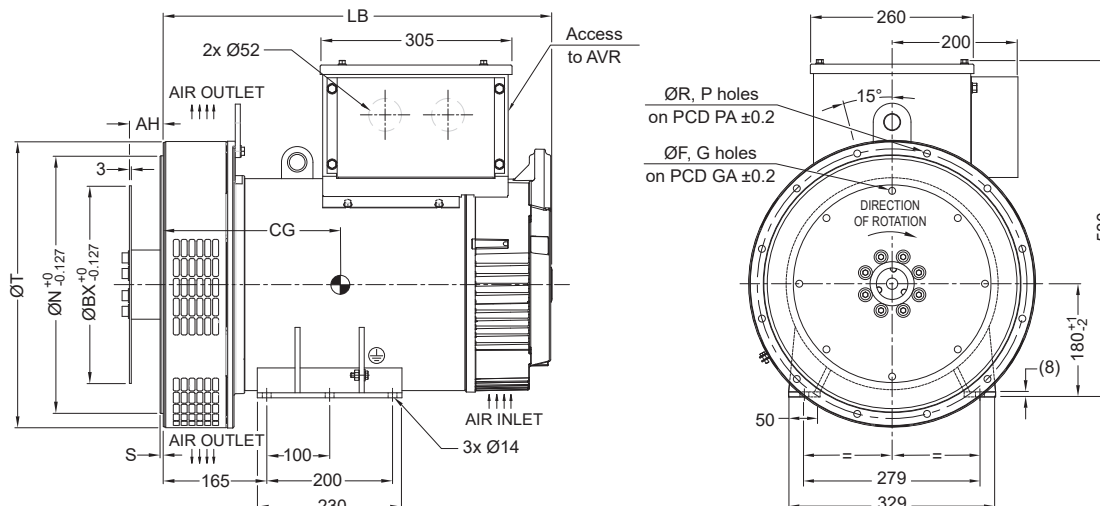
- Radio interference suppressor

Ratings

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

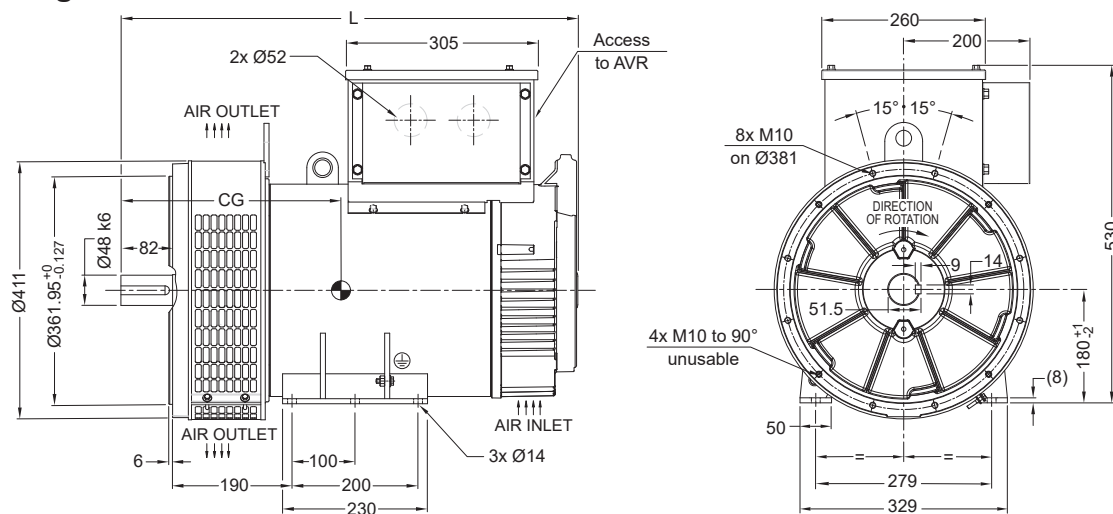


Dimensions (mm) and weight				Coupling			
Type	LB	CG	Weight (kg) approx.	Flange	Flex plate	10	11½
LSA 180 A	550	230	117	S.A.E 3	X	X	
LSA 180 B	550	230	117	S.A.E 2	X	X	
LSA 180 C	550	230	117				
LSA 180 D	550	250	137				
LSA 180 E	550	265	151				
LSA 180 F	550	280	165				
LSA 180 G	620	295	185				
LSA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

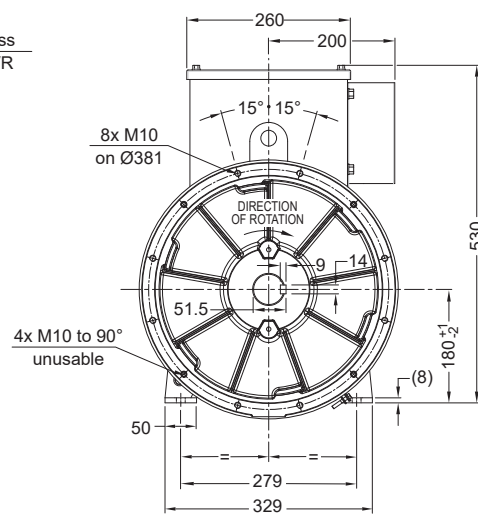
Flange (mm)						
S.A.E	ØN	ØT	PA	ØR	P	S
3	409.58	453	428.62	11	12	5
2	447.68	490	466.72	11	12	6

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

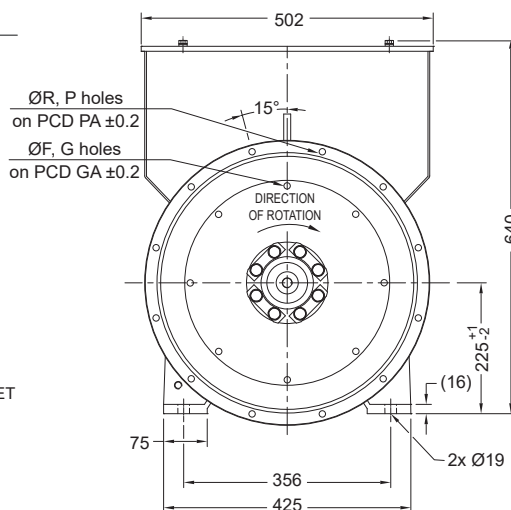
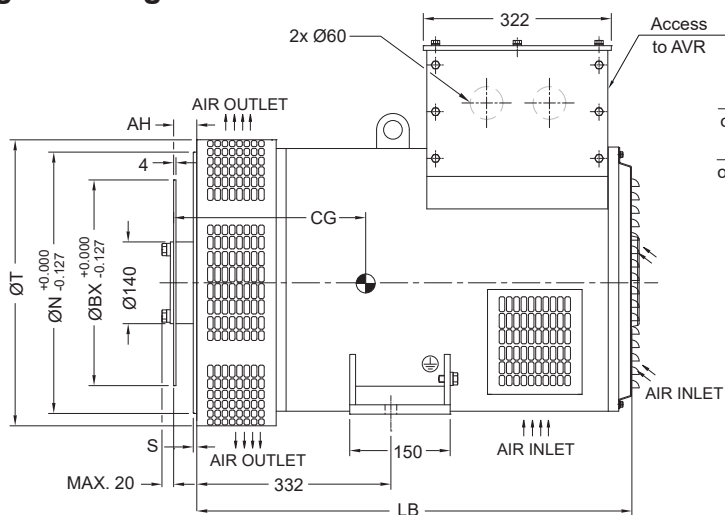
Two-bearing dimensions - LSA 180 16P



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

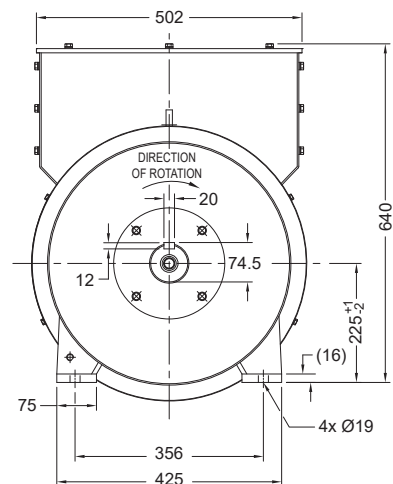
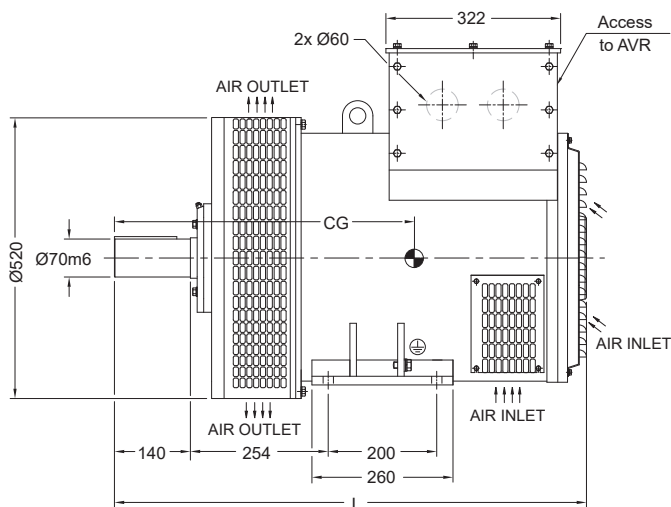


Dimensions (mm) and weight				Coupling	
Type	LB	CG	Weight (kg) approx.	Flange	Flex plate
LSA 225 A	680	338	290	S.A.E 3	X
LSA 225 B	680	338	310	S.A.E 2	X
LSA 225 C	680	358	330		

Flange (mm)						
S.A.E	$\varnothing N$	$\varnothing T$	PA	$\varnothing R$	P	S
3	409.58	476	428.60	11	12	8
2	447.68	490	466.70	11	12	6

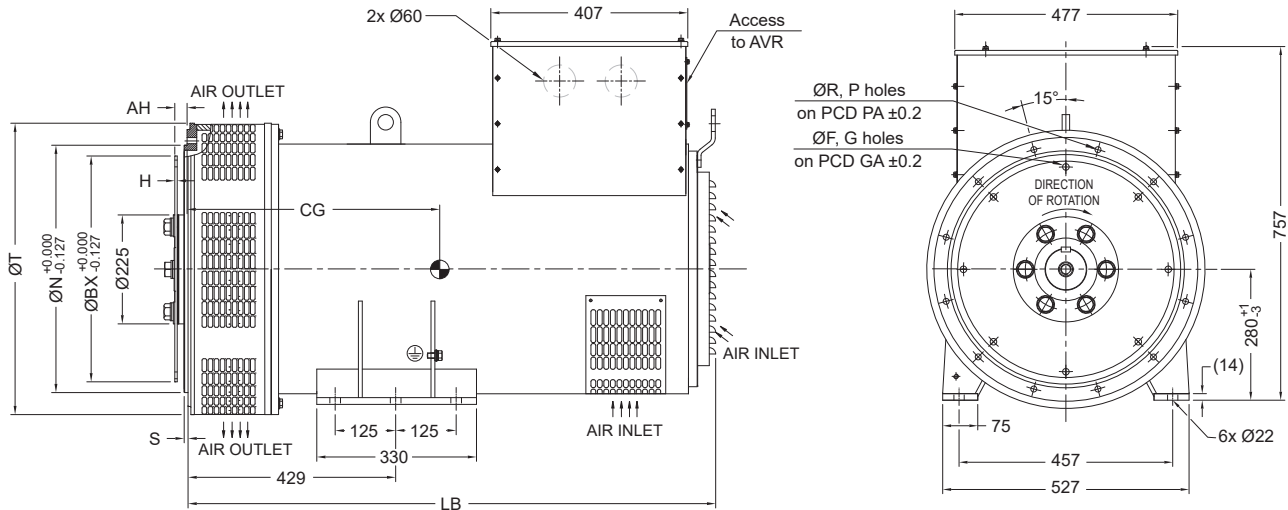
Flex plate (mm)					
S.A.E	$\varnothing BX$	AH	GA	$\varnothing F$	G
11 1/2	352.42	39.6	333.40	11	8

Two-bearing dimensions - LSA 225 24/26P



Dimensions (mm) and weight			
Type	L	CG	Weight (kg) approx.
LSA 225 A	870	546	315
LSA 225 B	870	546	335
LSA 225 C	870	553	355

Single bearing dimensions - LSA 280 24/26P



Dimensions (mm) and weight

Type	LB	CG	H	Weight (kg) approx.
LSA 280 A	915	420	3	570
LSA 280 B	995	430	3	725
LSA 280 C	995	440	4	740
LSA 280 D	995	450	4	780
LSA 280 E	996	470	4	810
LSA 280 F	1090	525	5	850

Coupling

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

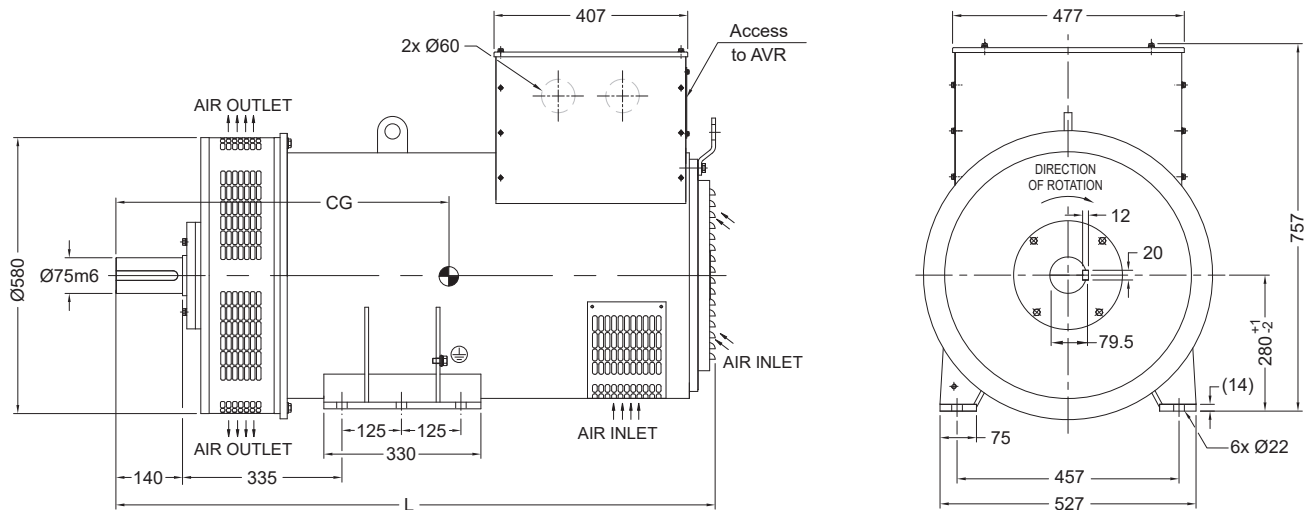
Flange (mm)

S.A.E	$\varnothing N$	$\varnothing T$	PA	$\varnothing R$	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	$\varnothing BX$	AH	GA	$\varnothing F$	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	600
LSA 280 B	1164	605	755
LSA 280 C	1164	615	770
LSA 280 D	1164	630	810
LSA 280 E	1164	645	840
LSA 280 F	1259	700	880



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