The Brand You Trust, The Power You Depend On.

LSA 50.2 – 1250 to 1650 kVA

Low Voltage Alternators - 4 Pole

- Compact & Rigid
- Industry best Efficiency
- Better motor starting capability
- High power density (Lighter weight)
- Superior thermal life

LEROY-SOMER™

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ELECTRICAL DATA — LSA 50.2 – 4 Pole — 50 HZ 1500 RPM

General Characteristics			
Insulation Class	H	**Excitation System**	AREP
Winding pitch	2/3	**AVR Model**	R 450 / D510 C (Optional)
Terminals	6 / 12 (Optional)	**Voltage Regulation (*)**	± 0.5%
Protection	IP 23	**Sustained short-circuit current**	300 % of FLC for 10 s
Altitude	≤ 1000 m	**Total harmonic Distortion (**)**	< 3.5%
Over speed	120% for 2 mins	**Wave form : TIF (**)**	< 50
Air flow	1.8 m^3/s		

(*) Steady state duty. (**) Total harmonic distortion between phases, no-load or on-load (non-distorting).

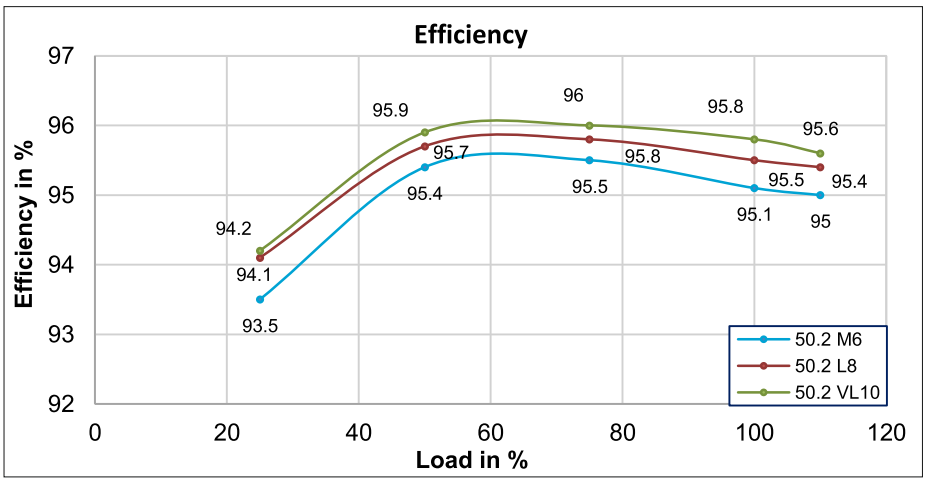
Ratings kVA @ 0.8 P.F — **3 Phase 415 V, 50 Hz – 1500 RPM*****

Duty	Class/Temp. Rise	M6	L8	VL 10
Continuous duty / 40° C	H / 125° C	1250	1500	1650
	F / 105° C	1125	1350	1485
Stand by - duty / 27° C	H / 163° C	1375	1650	1815

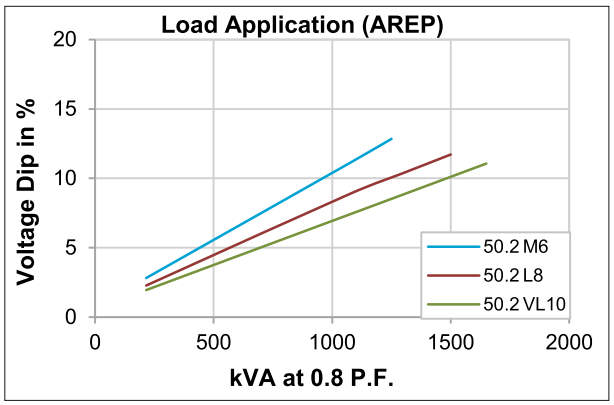
(***) Also offering multi-voltage/60 Hz/1800 RPM.

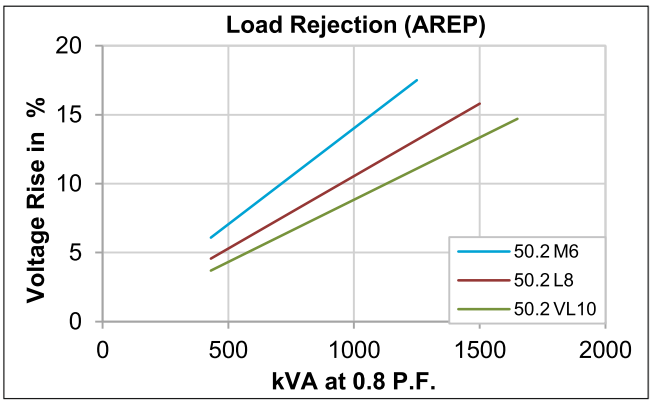
Reactance (%). Time constants (ms) - Class H / 125°C – 415 V				
Kcc	Short-circuit ratio	0.366	0.358	0.372
Xd	Direct-axis synchro reactance unsaturated	321.7	328.6	316.7
Xq	Quadrature-axis synchro reactance unsaturated	185.7	179.2	187.0
T'do	No Load Transient time constant	3634	3910	4058
X'd	Direct-axis transient reactance saturated	18.0	16.2	15.0
T'd	Short-Circuit transient time constant	180	180	180
X"d	Direct-axis sub transient reactance saturated	15.3	13.8	12.8
T"d	Sub transient time constant	18	18	18
X"q	Quadrature-axis sub transient reactance saturated	16.1	14.4	13.3
Xo	Zero sequence reactance unsaturated	3.5	3.2	3.0
X2	Negative sequence reactance saturated	15.7	14.1	13.0
Ta	Armature time constant	27	27	27
Other data - Class H / 125°C – 415 V				
io(A)	No load excitation current	1.0	1.0	1.0
ic(A)	Full load excitation current	4.1	3.9	3.6
uc(V)	Full load excitation voltage	44	42	49
ms	Recovery time (ΔU = 20% trans.)	≤500	≤500	≤500

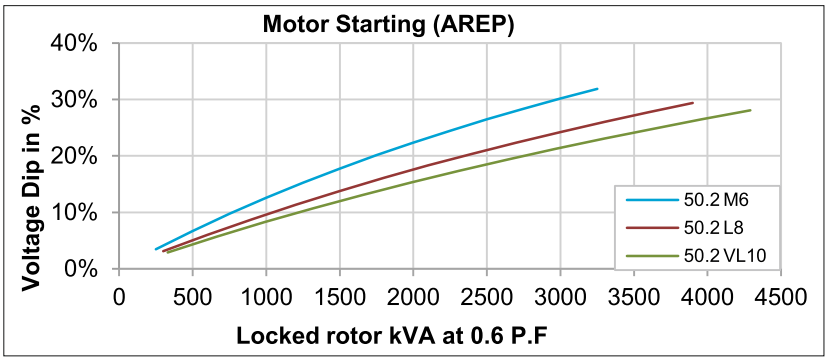
Efficiencies 415 V – 50 HZ (P.F – 0.8)



ELECTRICAL DATA — LSA 50.2 – 4 Pole — TRANSIENT VOLTAGE VARIATIONS

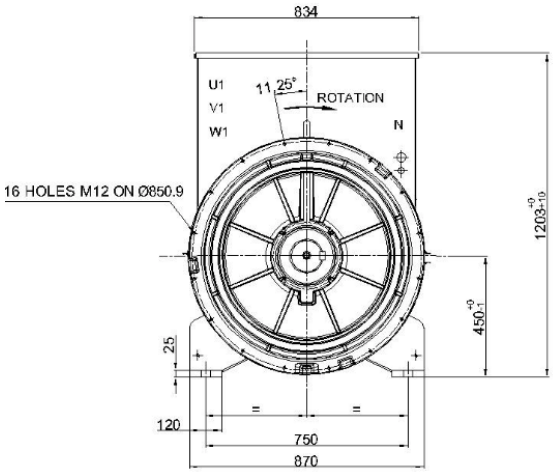


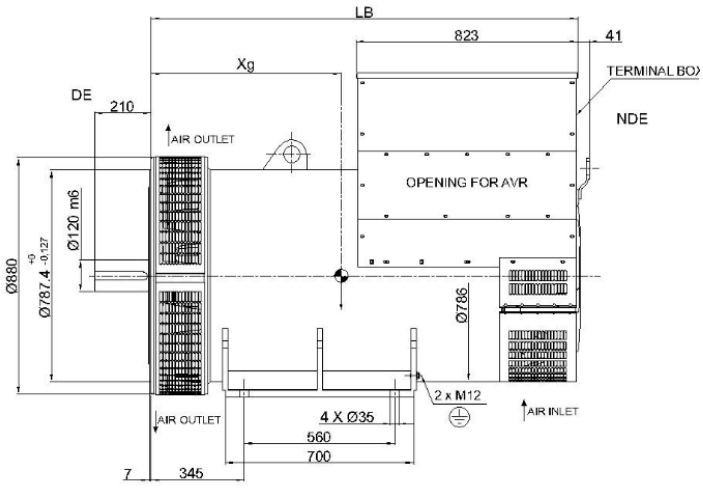




1. For a starting P.F. differing from 0.6, the starting kVA must be multiplied by (Sine φ /0.8)
2. For voltages other than 415V(Y) at 50 Hz, then kVA must be multiplied by (415/Other voltage)2

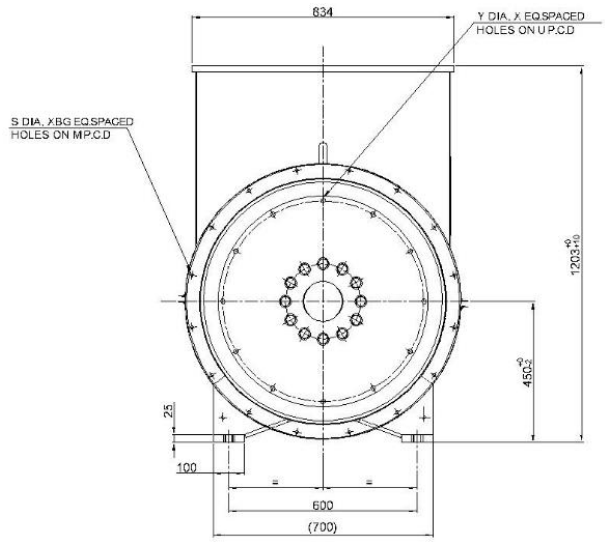
MECHANICAL DATA — DOUBLE BEARING

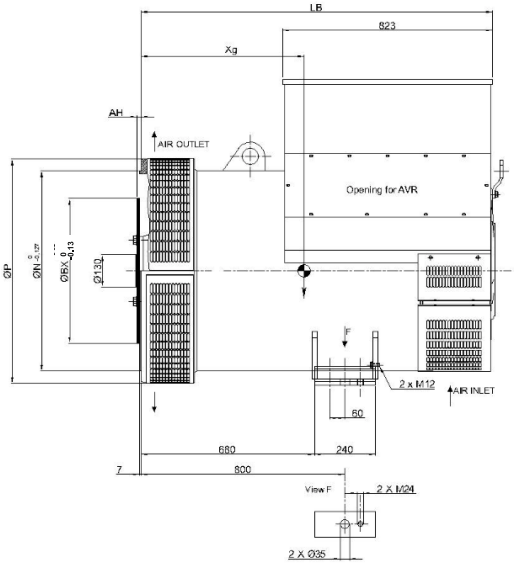




Type	LB	Xg	Weight (Kg) Approx.
LSA 50.2 M6	1378	620	2530
LSA 50.2 L8	1478	690	3010
LSA 50.2 VL10	1578	740	3300

MECHANICAL DATA — LSA 50.2 – 4 Pole — SINGLE BEARING

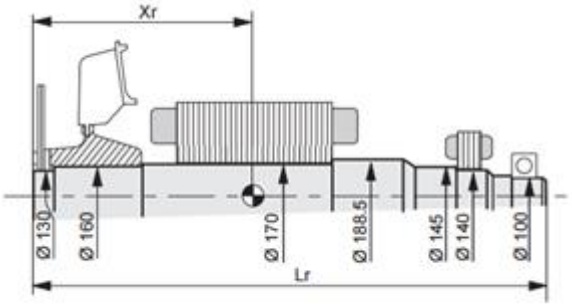




Frame Dimensions (mm) & Weight				Coupling		
Type	LB	Xg	Weight (Kg) Approx.	Flex Plate	18	21
LSA 50.2 M6	1378	640	2490	Flange S.A.E 0	✓	X
LSA 50.2 L8	1478	710	2790	Flange S.A.E 00	✓	✓
LSA 50.2 VL10	1578	760	3260			

Flange (mm)						Flex Plate (mm)					
S.A.E	P	N	M	XBG	S	S.A.E	BX	U	X	Y	AH
0	880	647.7	679.5	16	14	21	673.1	641.3	12	18	0
00	880	787.4	850.9	16	14	18	571.5	542.9	6	18	15.7

Torsional Analysis Data



Centre of gravity: Xr (mm), Rotor length: Lr (mm), Weight: M (kg), Moment of inertia: J (kgm²): (4J = MD²)								
	Flex Plate S.A.E. 18				Flex Plate S.A.E. 21			
Type	Xr	Lr	M	J	Xr	Lr	M	J
LSA 50.2 M6	608	1420.5	934	20.76	593	1420.5	932	21.09
LSA 50.2 L8	666	1520.5	1083	24.72	652	1520.5	1081	25.05
LSA 50.2 VL10	713	1620.5	1193	27.39	698	1620.5	1191	27.72

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According to IS : 13364, I.E.C. 60034-1/34-2. The values indicated are typical.

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