The Brand You Trust, The Power You Depend On.

LSAP 45 – 180 to 320 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™

Nidec
All for dreams

ELECTRICAL DATA — LSAP 45 – 4 Pole — 50 HZ 1500 RPM

General Characteristics			
Insulation Class	H	Excitation System	SHUNT / AREP (Optional)
Winding pitch	2 /3	AVR Model	R 120 / R 150 (SHUNT)
Terminals	6 /12 (Optional)		R 180/R 450/D 510 C (AREP)
Protection	IP 23	Voltage Regulation (*)	±1%
Altitude	≤ 1000 m	Sustained short-circuit current	300% of FLC for 10 s (AREP)
Over speed	120% for 2 mins	Total harmonic Distortion (**)	< 2.5%
Air flow	0.31 m3/s	Wave form : TIF (**)	< 50

(*) Steady state duty. (**) Total harmonic content line to line, at no load or full rated linear and balanced load.

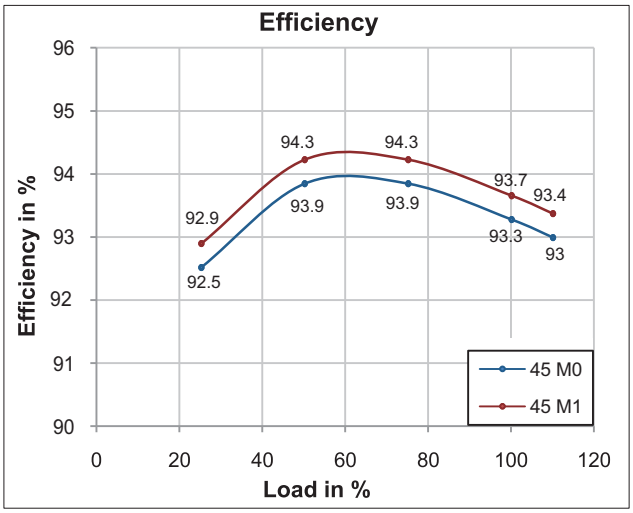
Ratings kVA @ 0.8 P.F — **3 Phase 415 V, 50 Hz – 1500 RPM*****

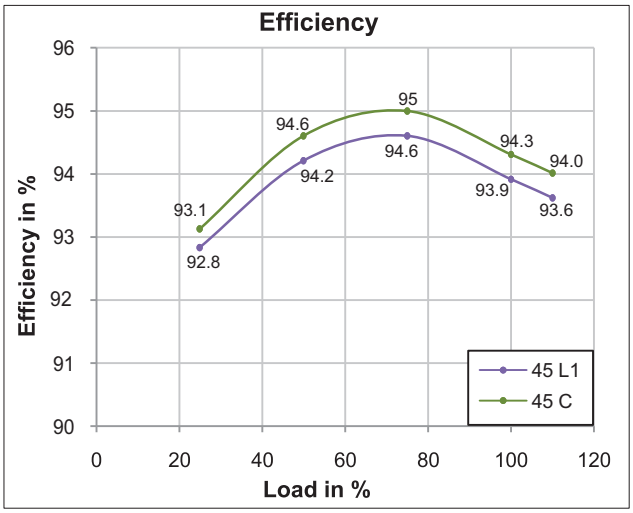
Duty	Class/Temp. Rise	M0	M1	L1	C
Continuous duty / 40° C	H / 125°C	180	200	250	320
	F / 105°C	162	180	225	288
Stand-by duty / 27°C	H / 163°C	198	220	275	352

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

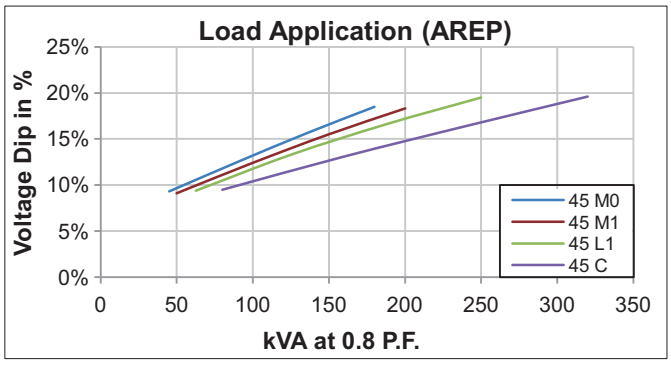
Reactance (%). Time constants (ms) - Class H / 125°C – 415 V					
Kcc	Short-circuit ratio	0.410	0.382	0.430	0.440
Xd	Direct-axis synchro reactance unsaturated	406.5	436.3	387.5	378.7
Xq	Quadrature-axis synchro reactance unsaturated	141.6	195.5	178.8	203.3
T'do	No Load Transient time constant	895	865	992	1540
X'd	Direct-axis transient reactance saturated	18.7	19.4	16.5	18.5
T'd	Short-Circuit transient time constant	93	91	103	173
X"d	Direct-axis sub transient reactance saturated	12.4	12.7	10.2	11.1
T"d	Sub transient time constant	11	15	18	24
X"q	Quadrature-axis sub transient reactance saturated	14.3	14.6	11.5	11.8
Xo	Zero sequence reactance unsaturated	2.3	2.3	1.8	1.8
X2	Negative sequence reactance saturated	13.6	13.5	11.3	11.3
Ta	Armature time constant	20	23	27	31
Other data - Class H / 125°C – 415 V					
io(A)	No load excitation current	1.30	0.93	1.32	122
ic(A)	Full load excitation current	4.80	44	49	4.9
uc(V)	Full load excitation voltage	47	45	54	55
ms	Recovery time (ΔU = 20% trans.)	≤500	≤500	≤500	≤500

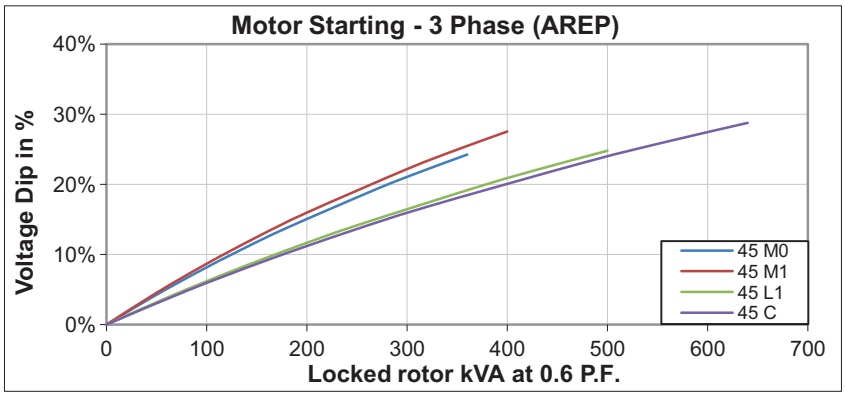
Efficiencies 415 V – 50 HZ (P.F – 0.8)





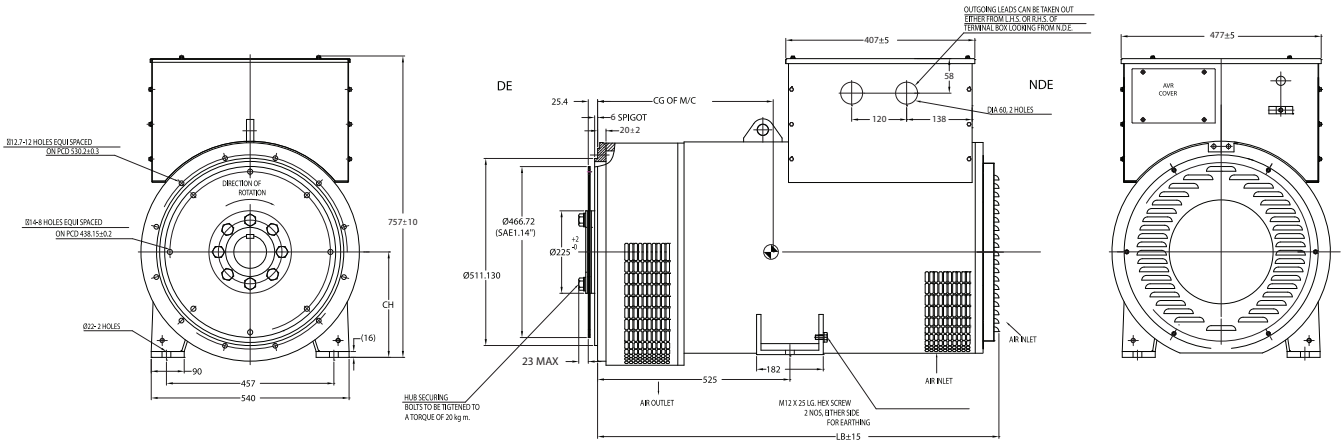
ELECTRICAL DATA — LSAP 45 – 4 Pole — TRANSIENT VOLTAGE VARIATIONS





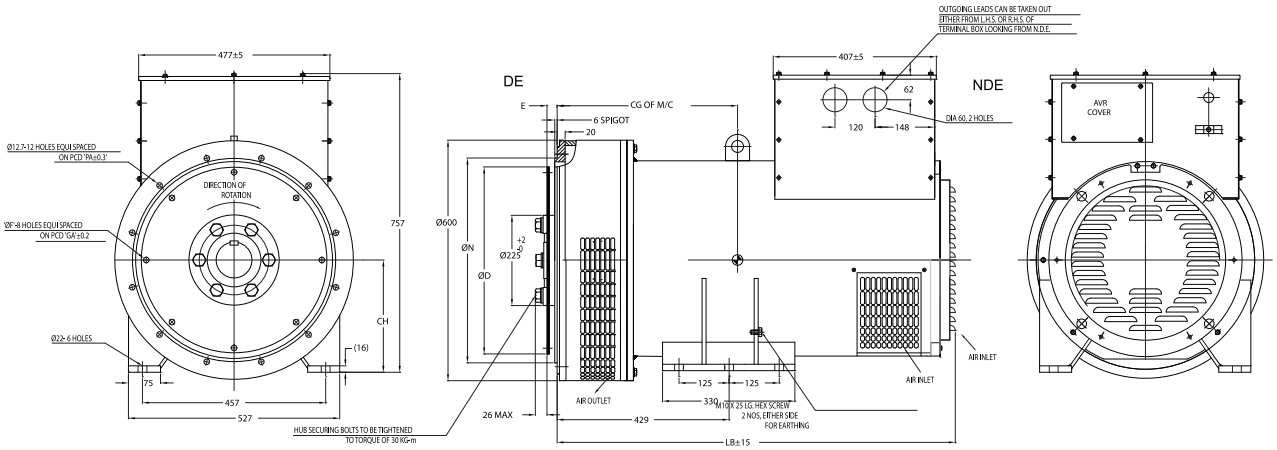
1. For a starting P.F. differing from 0.6, the starting kVA must be multiplied by (Sine φ /0.8)
2. For voltages other than 415V(Y) at 50 Hz, then kVA must be multiplied by (415/Other voltage)2

MECHANICAL DATA — LSAP 45 – 4 Pole — SINGLE BEARING



LSAP 45 C

MECHANICAL DATA — LSAP 45 – 4 Pole — SINGLE BEARING

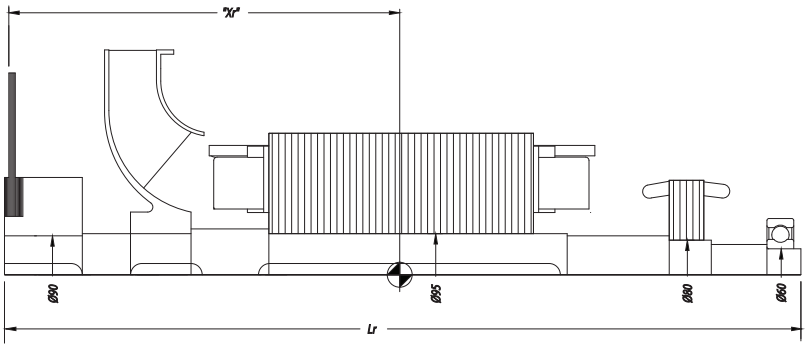


LSAP 45 M0, M1 & L1

Frame Dimensions (mm) & Weight					Coupling		
Type	LB	CH	CG	Weight (Kg) Approx.	Flex Plate	11 1/2	14
LSAP 45 M0	915	280	435	556	Flange S.A.E 1	X	✓
LSAP 45 M1	915	280	440	576	Flange S.A.E 2	✓	X
LSAP 45 L1	995	280	450	684			
LSAP 45 C	995	280	480	816			

Flange (mm)			Flex Plate (mm)				
S.A.E	N	PA	S.A.E	E	D	GA	F
1	511.130	530.218	11 1/2	39.6	352.42	333.38	11
2	447.675	466.725	14	25.4	466.72	438.15	14

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. 11 1/2				Flex Plate S.A.E. 14			
Type	Xr	Lr	M	J	Xr	Lr	M	J
LSAP 45 M0	428	927	228.4	7.16	447	913	225	7.00
LSAP 45 M1	435	927	235.4	7.56	458	913	233	7.48
LSAP 45 L1	475	1021	280	8.99	461	1007	278.4	9.38
LSAP 45 C	512	1021	338	12.4	498	1007	335	12.31

Nidec
All for dreams

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

Nidec Industrial Automation India Private Ltd.
#45, Nagarur, Huskur Road, Off Tumkur Road, Bengaluru - 562 162. India
T +91 80 6726 4800 | F +91 80 2371 7808
Sales Enquiry: sales.epgi@mail.nidec.com | Service Enquiry: service.epgi@mail.nidec.com