



ALTERNATOR SPECIFICATIONS

GENERAL DATAS	Manufacturer / Type	LEROY SOMER LSA442VS45
	Number of phase	3
	Power factor (Cos Phi)	0.8
	Altitude	< 1000 m
	Overspeed	2250 rpm
	Pole : number	4
	Exciter type	AREP
	Insulation : class, temperature rise	H / H
	Voltage regulator	R438
	Sustained short circuit current	2.1 AC
	Total harmonics (TGH/THC)	< 2%
	Wave form : NEMA = TIF – TGH/THC	< 50
	Wave form : CEI = FHT – TGH/THC	< 2%
	Bearing : number	1
	Coupling	Direct
	Voltage regulation 0 to 100% load	+/- 0.5%
	Recovery time (20% Volt dip) ms	500 ms
	SkVA with 90% of nominal sustained voltage (at 0.4PF)	skva
OTHER DATAS	Continuous nominal rating @ 40°C	105 kVA
	Standby rating @ 27°C	116 kVA
	Efficiencies @ 4/4 load	90.7 %
	Air flow	0.37m3/s [783.98cfm]
	Short circuit ratio;50 (Kcc)	0.35
	Direct axis synchro reactance unsaturated (Xd)	362 %
	Quadra axis synchro reactance unsaturated (Xq)	217 %
	Open circuit time constant;50 (T'do)	2555 ms
	Direct axis transient reactance saturated (X'd)	14.1 %
	Short circuit transient time constant (T'd)	100 ms
	Direct axis subtransient reactance saturated (X''d)	8.5 %
	Subtransient time constant (T''d)	10 ms
	Quadra axis subtransient reactance saturated (X''q)	10.4 %
	Zero sequence reactance unsaturated (Xo)	0.5 %
	Negative sequence reactance saturated (X2)	9.5 %
	Armature time constant (Ta)	15 ms
	No load excitation current (io)	0.5 A
	Full load excitation current (ic)	ic
	Full load excitation voltage (uc)	38 V
	Recovery time (Delta U = 20% transitoire)	500 ms
	Motor start (Delta = 20% perm. Or 50% trans.)	227.9 kVA
Transient dip (4/4 charge) – PF : 1.8 AR	14.3 %	
No load losses	1.80kW [1.80Kw]	
Heat rejection	8.5 kW	