ALL GENERATORS
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LEROY-SOMER™

ALTERNATOR TECHNICAL DATASHEET
LSAP 42.3 K

General Characteristics			
Alternator Frame	**LSAP 42.3 K**		
Rating	**62.5**	**kVA**	**50 kW**
Phase	3		
Pole	4		
Rated Speed	1500	RPM	
Rated Voltage [L-L] (V)	415	V	
Rated Current	87.0	A	
Frequency	50	Hz	
Rated Power Factor	0.8	Lag	
Voltage Regulation	±1%	With 4 % Engine Governing.	
Insulation System	H	Class	
Temperature Rise Limit	H	Class	
Winding Pitch	2/3		
Over Load	10 % Over Load for 1 hour once in 12 hours		
Waveform Distortion	No-Load < 2%		
Temperature Ambient	40	° C	
Altitude	1000	m	

Electrical Parameters		
Stator Wdg Res(L-L) @20°C	0.183	Ω
Rotor Wdg Res @20°C	0.954	Ω
Excn. Current At No Load	0.60	A
Excn. Current At Full Load	2.40	A

Connection & Controls	
Stator Winding	Double layer equal pitch winding
Control System	Self-regulated and self-excited
Excitation System	Brushless (Shunt)
AVR Type	Analogue
AVR Model	R 120

Performance: Efficiency @0.8 p.f		
100% Load	90.1	%
75% Load	91.1	%
50% Load	91.5	%
25% Load	89.9	%

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Reactance & Time constant

Reactances are Saturated & Per Unit at Rating and Voltage Indicated. Time Constant are In Seconds

Reactances

Short Circuit Ratio	0.430
X_d Dir Axis Reactance	2.320
X'_d Dir Axis Transient Reactance	0.143
X''_d Dir Axis Sub Transient Reactance	0.072
X_q Quad Axis Reactance	0.703
X''_q Quad Axis Subtransient Reactance	0.103
X_l Leakage Reactance	0.072
X_2 Negative Sequence Reactance	0.087
X_0 Zero Sequence Reactance	0.003

Time Constant

T'_d Transient Time Constant	0.050
T''_d Sub Transient Time Constant	0.005
T'_{do} O.C Field Time Constant	0.962
T_a Armature Time Constant	0.008

Mechanical Parameters

Protection	IP 23	
Cooling	IC01	
Air flow	0.10	m^3/sec
WR^2	0.44	kg-m^2
Bearing Drive End	NA	
Bearing Non-Drive End	BALL 6306 C3	
Coupling	Single bearing	
Maximum Over Speed	120% for 2 mins	
Dimensional Drawing	AG319350	
Machine Dim. L x B x H (mm)	Refer Dimension Drawing	
Weight of Generator	212	kg

Note: The rating is industrial and conforms to IS:13364 and IS/IEC: 60034-1

Continuous development of our products entitles us to change specification details without notice

DO NOT SCALE THE DRAWING

IF IN DOUBT ASK........

ALL DIMENSIONS ARE IN mm

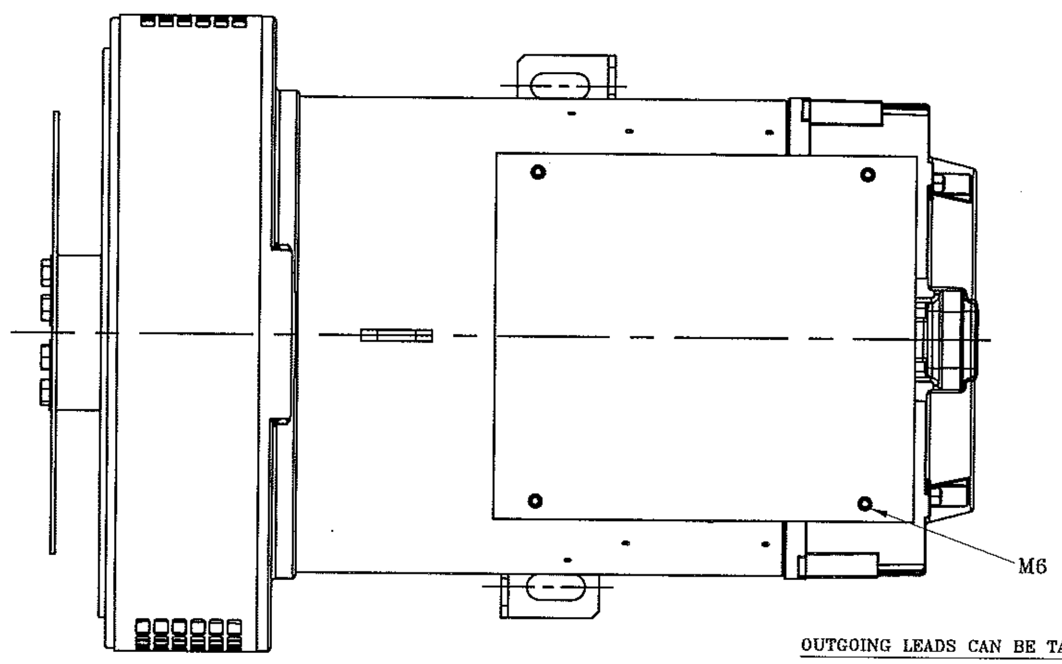
SL. NO.	FRAME	IN kVA 3PH	M/C NET WT (Kg)	GD ^{2} kg-m^2	XG	LB
1	LSAP 423 K	62.5	212	0.4415	310	620

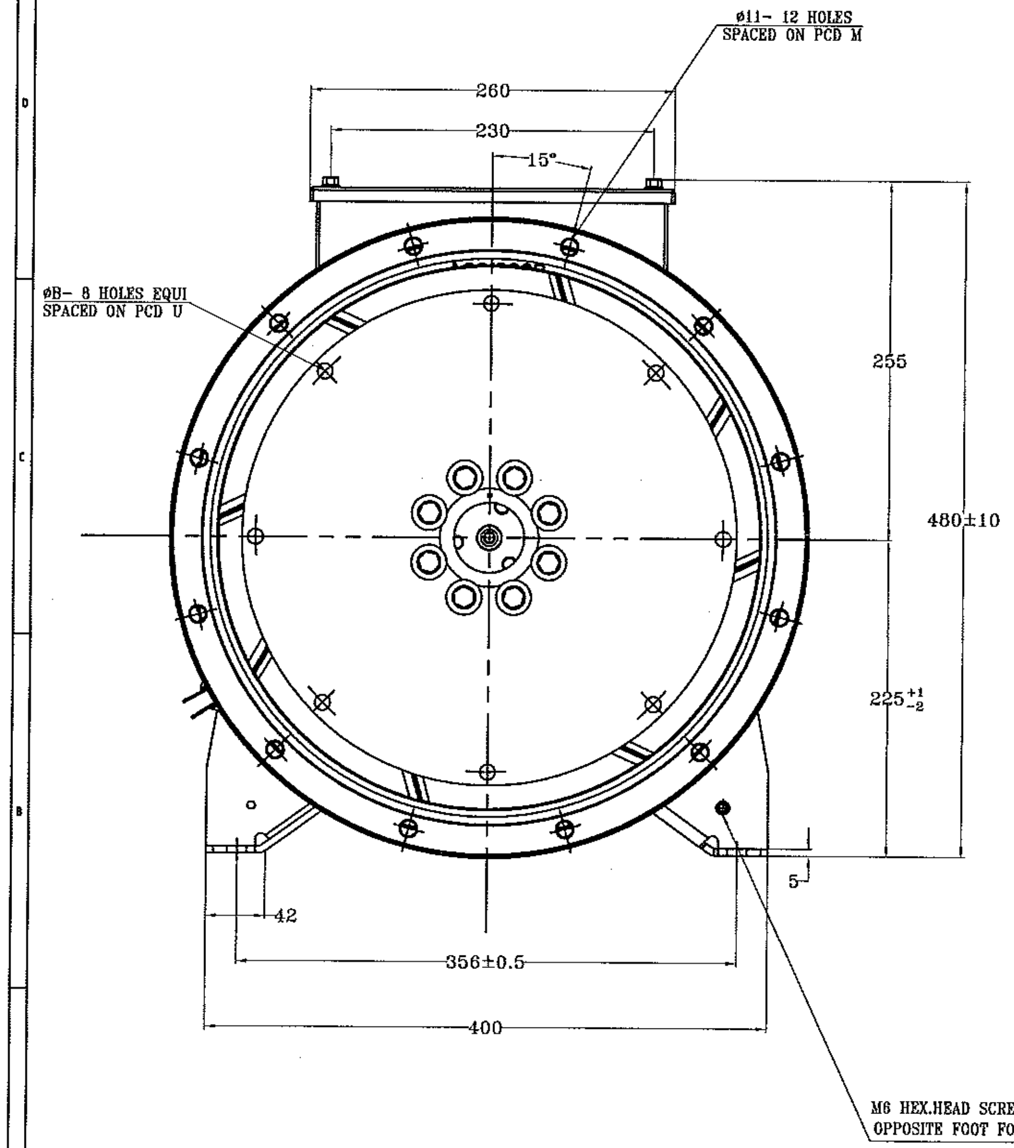
FLANGE	øP	øN	øM
SAE 2	490	447.675	466.725
SAE 3	452.5	409.575	428.625

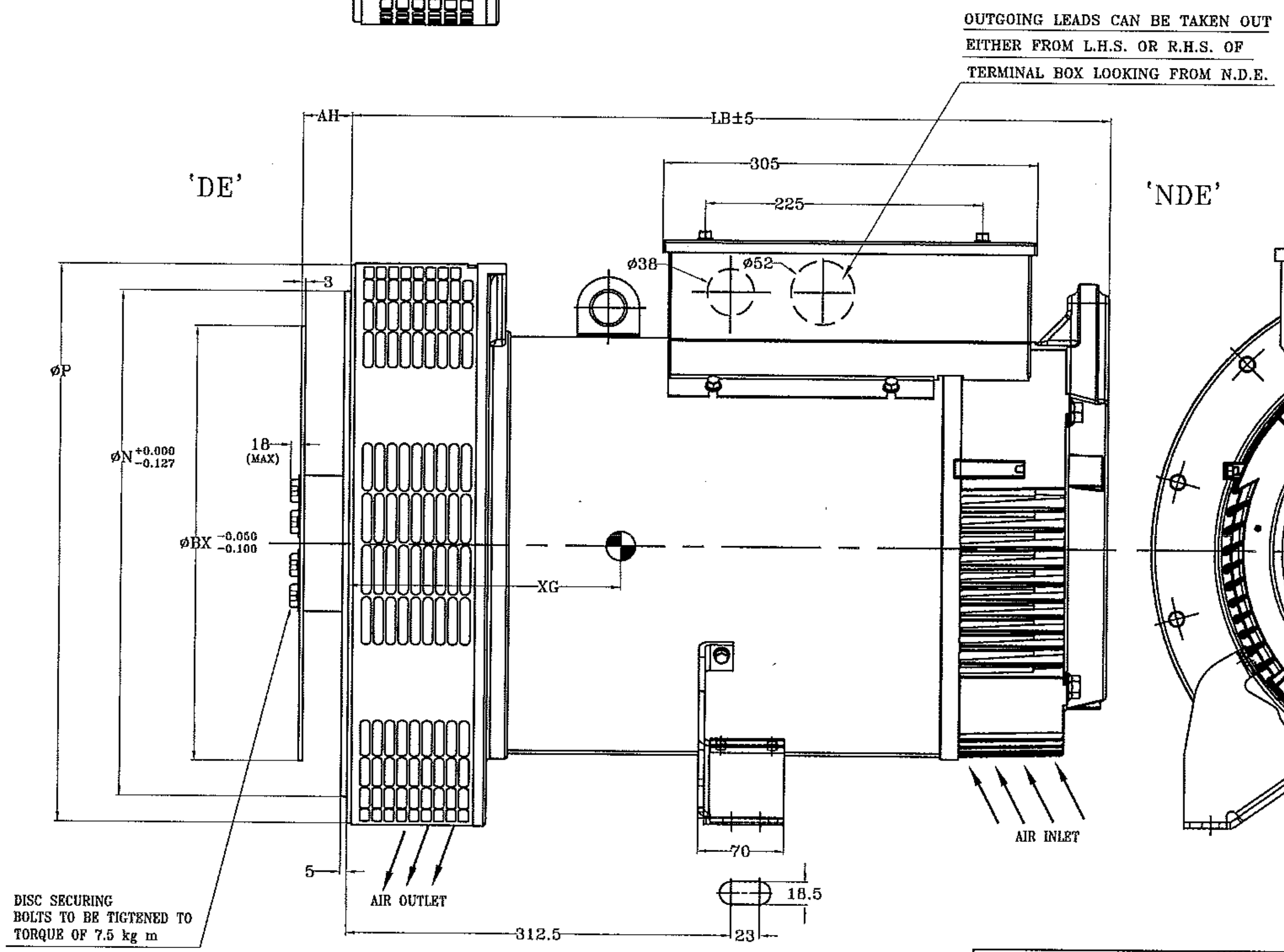
DISC	AH	øBX	øB	øU
11.5"	39.6	352.37	11	333.38
10"	53.8	314.32	11	295.28

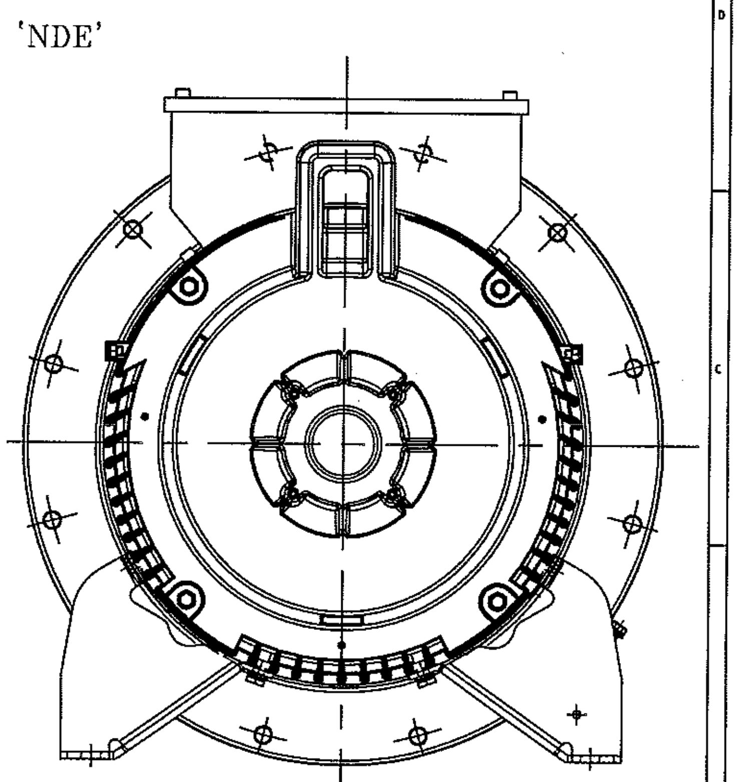
NOTES:-

1. DIMENSIONS ARE SUBJECT TO ALTERATION WITHOUT NOTICE. CERTIFIED DIMENSION DRAWING WILL BE SENT ALONG WITH THE MACHINE WHEN ORDERED.
2. SUFFICIENT CLEAR SPACE AROUND THE GENERATOR TO BE PROVIDED FOR FREE ENTRY / EXIT OF THE REQUIRED QUANTITY OF COOLING AIR TO ENSURE GOOD VENTILATION.
3. ENSURE THE ENGINE FLYWHEEL & FLYWHEEL HOUSING SPIGOT DIMENSIONS TO MATCH THE GENERATOR FLANGE & DISC DIMENSIONS AS PER SAE. CHECK FOR ECCENTRICITY & OVALITY IN THE SPIGOT.
4. END PLAY OF ±1.5 mm PROVIDED.









2	--	--	FEET SLOT 23 X 18.5 WAS 23 X 14.	M.K	08.07.16
1	--	16A-339	MACHINE WEIGHT 212 WAS 203 Kg's	OSS	31.05.16
REV	ZONE	CT No.	BRIEF RECORD	SIGNATURE	DATE

LEROY SOMER

USED ON: LSAP-42.3K

SCALE	DRAWN	CHECKED	APPROVED
NTS	OSS	KRR	CG
	Dt.23/04/16	Dt.	Dt.

TITLE: DIMENSION DRAWING

DRG. No. AG316126 R02

1st RELEASE ON CT No.16A-173

SHEET No. 01 OF 01