

## Design Sheet

15000/18750 KVA, OAFA, 3 Ph, 60 Hz, 65 Rise, Fluid: EnviroTemp, Circular Core+Coil				CoreDetails: M6 StepLap D-Yoke CoreGrad 28.52																
Winding Number	Wdg 1	Wdg 2	Wdg 3	CoreDetails: M6 StepLap D-Yoke CoreGrad 28.52																
Name & BIL	LV1- 60	LV2 60	HV - 150	Flux Den(T) = 1.72275 Tie Plt Thk = 0.375																
Material	CU Bare-CTC	CU Bare-CTC	CU Wire	Volts/Turn = 63.2047 Tie Plt Width = 4 Fe Circle = 17.495																
Connection	Wye	Wye	Delta	Window Ht = 54.875 Window Width = 14.625 Stk/Width = 0.956																
Line-Line Voltage	2080 +	2080	25000	Leg Center = 31.625 Core Length = 80.25																
Max Coil Voltage	4160	26250																		
Coil Voltage	1200.89 +	1200.89	25000	TEMP: -20/30/43.33																
Min Coil Voltage			23750																	
Rated Coil Amps	2081.79	2081.79	200																	
Max Coil Amps	2602.24	2602.24	263.16																	
Maximum Turns			416																	
Rated Turns	19.0	19.0	396																	
Minimum Turns			376																	
Type Of Wdg	Helical	Helical	Disc																	
Trns/Lyr #OfDisc	19	19	42																	
#OfLyrs Trns/Disc	1.00	1.00	9.89																	
Standard Cond.	No	No	No																	
Bare Cond Thk	0.072	0.072	0.081																	
Bare Cond Width	0.248	0.248	0.294																	
Total Paper Insul	0.016 BARE	0.016	0.02																	
Strand Area	0.0172928	0.0172928	0.0232508																	
Pulls W X H EaGrp3	3 X 1 X 19	3 X 1 X 19	1 X 2																	
#of Parallel Grps	1	1	2																	
Total Cond Area	0.985690	0.985690	0.093003																	
Rated/Max A/in2	2112/2640	2112/2640	2150/2830																	
Side Radial Build	0.8091	0.8091	2.1210																	
End Rad Bld	0.8091	0.8091	2.1210																	
Eff Rad Bld/WH	0.8091/Y	0.8091/Y	2.1210/N																	
Space Factor	0.5291	0.5291	0.3972																	
I.D.	18.8610	21.8972	26.0354																	
O.D.	20.4792	23.5154	30.2774																	
Mean Turn	61.7954	71.3339	88.4559																	
Cond Lgth (ft)	293.5	338.8	18398.8																	
Lead Lgth(ft)	10.0	10.0	10.0																	
Cond/Lead Wt(lbs)	1140/39	1316/39	3448/4																	
Wdg Resis @ 85	0.003046150	0.00351630	0.963722																	
Lead Resis @ 85	0.000103780	0.000103780	0.00054999																	
Bus Resis @ 85	0.000076470	0.000076470	0.00076470																	
I2R Loss	(13652	15689	38571)	x1.12=76061																
Wdg Eddy/Stray	93/3492	107/4013	1319/9864																	
Total Loss in Wdg	17237	19809	49754																	
KS/Circle Width	14/1.5	14/1.5	18/1.5																	
KS thk/# Btwn Disc	0.0984/2	0.0984/2	0.0984/2																	
KS thk/# Intra Turn	0.0984/2	0.0984/2	0.0984/2																	
Add #OfKS/Col/Grp	37	37	10																	
#OfGap/AvgHt	0/0	0/0	0/0																	
GapBetweenGrps			0.25																	
Duct Under/Over	Yes/Yes	Yes/Yes	Yes/Yes	(5) OGW's HV																
Watts/in2 OA/Max	1.03/1.61	0.96/1.5	0.59/1.01	(5) OGW's LV1																
Gradient OA/Max	8.1/10.42	7.68/9.88	16.34/21.68																	
S_Grad OA/Max	18.71/22.5	18.17/21.85	20.06/25.03	(5) OGW's LV2																
ElecHt	43.745	43.745	43.658																	
Wire Space (Mech)	45.875	45.875	43.658																	
KeepBack/InternalKB	1.4375	1.4375	2.5/0																	
WdgSpace/toTop/BotYoke	48.75 / 4.125 / 2																			
Lead Type	WOC	WOC	WOC																	
Load Loss	I2R = 67912 , WdgEddy = 1519																			
Summary	WdgStray = 17369 , TankLoss = 447 , 1743 , 1105																			
DETC (Part# ; Current Rating ; BIL )																				
Radiators (&fans):																				
Radiators- 19W220C28U (7 Nos.)																				
FAN- 7400CFM,26"(4 NOS.)(60.10 dB) (For FFA)																				
-HV stress-28000 PSI																				
-LV1 LV2 Stress-30000 PSI																				