DARSHAL ENGINEERING WORKS

HEAT TRANSMISSION TABLE FOR 'ON' COLLING
SECTION WIDTH 300 MM (4 CHANNELS)

HEAT DISSIPATED FOR OIL EXCESS TEMPERATURE OF									
Centre distance mm	Colling area M2	35C Watts/Sec	40C Watts/Sec	45C Watts/Sec	50C Watts/Sec	55C Watts/Sec	60C Watts/Sec	Oil Content Content per section	Weight per Section (in kgs
500	0.32	94	108	118	134	158	178	0.83	3.09
600	0.38	110	125	140	156	182	204	1.1	3.69
700	0.45	125	143	163	179	206	230	1.46	4.29
800	0.51	140	161	183	205	231	258	1.66	4.89
900	0.57	155	178	202	227	266	284	1.86	5.49
1000	0.64	169	194	220	248	279	310	2.06	6.09
1100	0.7	182	210	238	268	302	336	2.26	6.68
1200	0.76	194	228	255	287	325	360	2.46	7.28
1300	0.83	207	240	271	305	346	384	2.66	7.88
1400	0.89	219	254	288	322	366	405	2.86	8.48
1500	0.95	231	268	304	340	385	427	3.08	9.08
1600	1.01	242	282	319	357	404	446	3.26	9.68
1700	1.08	255	295	334	373	422	466	3.48	10.28
1800	1.14	266	310	348	390	440	486	3.66	10.87
1900	1.2	277	322	361	404	457	505	3.88	11.47
2000	1.27	289	333	376	420	474	523	4.06	12.07
2100	1.33	299	346	389	436	492	542	4.26	12.67
2200	1.39	309	358	404	448	508	560	4.46	13.27
2300	1.46	320	367	415	466	524	576	4.66	13.87
2400	1.52	331	380	428	480	539	594	4.86	14.47
2500	1.58	340	391	441	495	553	615	5.06	15.07
2600	1.84	350	401	455	510	569	625	5.26	15.66
2700	1.71	360	413	466	521	584	642	5.46	16.26
2800	1.77	368	425	480	536	597	660	5.66	16.86
2900	1.83	379	434	491	550	610	678	5.86	17.46
3000	1.9	389	446	502	563	626	694	6.06	18.06

* Add 0.60 Liter per section to inclide oil in header pipes.

* For the weight of the Radiators, multiply by number of section and add the weights of Planges, Strips, Sockets, Plugs et

DARSHAL ENGINEERING SERVICES

HEAT TRANSMISSION TABLE FOR 'ON' COLLING SECTION WIDTH 520 MM (7 CHANNELS)

HEAT DISSIPATED FOR OIL EXCESS TEMPERATURE OF									
Centre distance mm	Colling area M2	35C Watts/Sec	40C Watts/Sec	45C Watts/Sec	50C Watts/Sec	55C Watts/Sec	60C Watts/Sec	Oil Content Content per section	Weight per Section (in kgs
500	0.54	149	171	193	218	252	278	1.91	5.18
600	0.65	173	200	225	254	290	320	2.26	6.22
700	0.76	197	229	258	290	326	363	2.61	7.25
800	0.86	223	259	292	327	369	410	2.96	8.29
900	0.97	248	289	326	365	410	457	3.31	9.33
1000	1.08	272	318	359	401	449	501	3.66	10.36
1100	1.19	297	345	390	436	488	545	4.01	11.04
1200	1.3	319	371	420	469	525	586	4.36	12.43
1300	1.4	341	396	449	501	530	626	4.71	13.47
1400	1.51	361	420	476	531	594	665	5.06	14.51
1500	1.62	382	444	502	561	627	706	5.41	15.54
1600	1.72	401	467	527	589	658	736	5.76	16.58
1700	1.84	419	488	551	615	687	771	6.11	17.62
1800	1.94	437	507	575	642	717	803	6.46	18.65
1900	2.05	456	527	597	667	743	835	6.81	19.69
2000	2.16	471	549	618	691	771	864	7.16	20.72
2100	2.27	490	567	640	714	796	894	7.51	21.76
2200	2.38	504	587	661	737	822	920	7.86	22.08
2300	2.28	519	604	681	758	847	946	8.21	23.84
2400	2.59	534	622	700	778	871	975	8.56	24.88
2500	2.7	548	640	721	799	894	999	8.91	25.92
2600	2.81	564	654	741	820	918	1025	9.26	26.96
2700	2.92	577	671	758	843	942	1050	9.61	28
2800	3.02	590	686	777	862	965	1074	9.96	29.04
2900	3.13	604	702	796	883	990	1096	10.31	30.08
3000	3.24	616	716	813	904	1011	1121	10.66	31.12

30 Liter per section to inclide oil in header pipes.
Radiators, multiply by number of section and add the weight of flanges, straps, sockets, Plugs etc.

DARSHAL ENGINEERING WORKS

Transformer Radiator-520 mm Width (24 fulite)

HEAT DISSIPATION CHART

Center Distance CC In mm.	Cooling Surface Area per Section in m2	section for oil excess temperature 35 C ONAN	ONAN	40 C ONAN	ONAN	45 C ONAN	ONAN	50 C ONAN	ONAN	55 C ONAN	ONAN	60 C ONAN	ONAN	Oil per Section in Ltr	Section Weight for 1.2 mm thick
800	0.92	241	405	281	477	313	534	359	604	406	686	454	762	3.57	8.19
900	1.03	266	449	306	522	351	597	396	672	443	754	493	838	3.62	9.2
1000	1.16	296	499	342	573	382	649	433	724	487	823	541	913	4	10.23
1100	1.25	322	543	367	616	418	706	465	786	527	889	584	991	4.34	11.26
1200	1.35	341	576	389	659	447	753	501	846	564	958	626	1063	4.79	12.25
1300	1.47	362	612	422	714	474	806	533	903	600	1013	664	1123	5.03	13.32
1400	1.55	361	649	443	753	504	851	560	951	634	1077	707	1193	5.41	14.35
1500	1.72	401	680	472	797	531	896	589	1001	672	1132	737	1253	5.78	15.24
1600	1.83	423	721	491	830	556	943	626	1056	702	1191	783	1321	6.12	16.27
1700	1.95	439	747	515	872	581	986	654	1104	738	1240	813	1374	6.81	17.23
1800	2.02	459	779	541	915	618	1034	684	1159	771	1302	843	1431	6.93	18.26
1900	2.13	482	819	562	954	636	1071	713	1207	801	1353	882	1492	7.31	19.3
2000	2.25	503	855	586	992	661	1114	738	1296	832	1403	914	1534	7.69	20.32
2100	2.34	523	889	603	1022	679	1149	764	1313	854	1450	946	1603	8.08	21.33
2200	2.45	533	905	632	1064	706	1194	791	1334	885	1501	977	1652	8.41	22.46
2300	2.56	562	946	652	1099	739	1231	813	1383	916	1553	1013	1717	8.77	23.35
2400	2.69	580	980	671	1132	753	1276	840	1421	939	1592	1044	1763	9.01	24.36
2500	2.78	594	1006	684	1158	773	1312	861	1463	963	1632	1062	1806	9.43	25.31
2600	2.88	614	1042	705	1195	796	1343	891	1507	997	1684	1102	1862	9.83	26.27
2700	3	634	1062	730	1232	821	1382	914	1556	1021	1734	1130	1911	10.25	27.23
2800	3.13	652	1100	743	1261	841	1423	943	1594	1052	1783	1161	1960	10.53	28.19
2900	3.25	662	1123	765	1292	866	1462	963	1633	1076	1822	1192	2021	10.78	29.15
3000	3.36	684	1162	783	1322	886	1491	992	1673	1103	1874	1254	2121	11.15	30.19

rrection Factors :

ical distance in mm	0	100	200	300	400	500	600	800	1000	
en core center line adiator center line										
rrection Factor.	0.08	0.86	0.88	0.927	0.95	0.794	1.00	1.03	1.09	
oricontal distance tween radiators	575	600	625	630	700	750				
rrection Factor.	0.886	0.913	0.96	0.979	1.01	1.12				
mber of section per	3	4 - 5	6 - 8	9 - 11	12 -14	15 -17	18 - 20	21 - 24		

radiators.								
rrection Factor.	1.10	1.06	1.03	1.00	0.94	0.90	0.85	0.83

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