




APPROVAL STATEMENT

The Civil Aviation Authority of the United Kingdom hereby signifies approval of the data listed in this document. This Flight Manual was first approved on 20 May 1993.

Signed & Sealed

*R. Anderson* 

Record of Amendments

No.	Date	Affected Pages	Approval
34	04/06	iii, iv, 2, 3, 12, 13, 14, 15	Revision No. 34 to AFM, ref. LB HABFM is approved under the authority of DOA number EASA.21J.175.
35	01/07	iii, iv, 3, 3a, 7a, 9a, 11a	EASA Approval EASA.BA.C.01063, dated 5 February 2007
36	05/07	iii, iv, v, vi, 1, 3b, 4, 12, 15a, 18, S13-1, S14-1	EASA Approval EASA.BA.C.01097, dated 18 June 2007
37	01/08	ii, iii, iv, v, vi, 1, 2, 3, 12, 13, 15b, 15c, 15d, 16, 17, 19, S1A-1.38-1, S15-1	EASA Approval EASA.BA.C.01149, dated 5 June 2008
38	04/09	iii, iv, 3, 3a, 3b, 7, 7a, 9, 9a, 11, 11a, 12, 14	EASA Approval EASA BA.C.01192, dated 29 April 2009

Amendments

This manual is kept up to date by amendments consisting of looseleaf pages, required to add new information or amend existing information. Pages affected by an amendment and the effective date are shown above. The pages themselves are identified by a change of the issue number at the bottom of each page. The number after the point in the issue number represents the amendment level of that page, eg the page marked Issue 1.4 is at Issue 1, modified by Amendment 4. The checklist of pages indicates the issue level of all pages included in this Flight Manual.



Change of Ownership

If the ownership of this balloon changes, it is important for the new owner to contact Lindstrand Balloons to ensure that they receive Flight Manual Amendments and Supplements, as appropriate. This can be simply achieved by photocopying Page ii of this manual and writing your name and full correspondence address on the reverse side and sending to Lindstrand Balloons.

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## 1.5 Load Calculations

### 1.5.1 Maximum Mass

The Maximum Mass (MM) is the figure used in the design and certification of the envelope and this weight must never be exceeded. The Maximum Mass for all Lindstrand Balloons envelope sizes are tabulated below:

**TABLE 1 - LINDSTRAND ENVELOPES**

Balloon Type		Volume		FAI Class	Maximum Mass		Envelope Weight	
		cu.m	cu.ft		kg	Lbs	kg	lbs
A-Type	42	1190	42000	AX5	420	924	46	101
A-Type	56	1590	56000	AX6	560	1232	62	136
A-Type	60	1700	60000	AX7	600	1320	65	143
A-Type	69	1950	69000	AX7	690	1518	76	167
A-Type	77	2180	77000	AX7	770	1694	84	185
A-Type	90	2550	90000	AX8	900	1980	99	218
A-Type	105	2970	105000	AX8	1050	2310	115	253
A-Type	120	3400	120000	AX9	1200	2640	132	290
A-Type	150	4250	150000	AX10	1450	3190	161	363
A-Type	160	4530	160000	AX10	1600	3520	170	374
A-Type	180	5100	180000	AX10	1630	3586	176	387
A-Type	210	5950	210000	AX10	1890	4180	209	460
A-Type	240	6800	240000	AX11	1940	4268	242	532
A-Type	260	7362	260000	AX11	2270	4994	259	570
A-Type	310	8780	310000	AX11	2700	5940	291	640
A-Type	317	8976	317000	AX11	2760	6072	300	660
A-Type	330	9344	330000	AX12	2875	6325	305	671
A-Type	360	10194	360000	AX12	3132	6890	348	766
A-Type	400	11327	400000	AX12	3400	7480	350	770
A-Type	425	12034	425000	AX12	3610	7942	400	880

Balloon Type		Volume		FAI Class	Maximum Mass		Envelope Weight	
		cu.m	cu.ft		Kg	Lbs	kg	lbs
S-Type	210	5950	210000	AX10	1890	4180	263	579
S-Type	260	7362	260000	AX11	2270	4994	331	728
S-Type	317	8976	317000	AX11	2930	6446	382	840

Balloon Type		Volume		FAI Class	Maximum Mass		Envelope Weight	
		cu.m	cu.ft		Kg	lbs	kg	lbs
B-Type	56	1590	56000	AX6	560	1232	74	163
B-Type	69	1950	69000	AX7	690	1518	82	180
B-Type	77	2180	77000	AX7	770	1694	90	198
B-Type	90	2550	90000	AX8	900	1980	110	242
B-Type	105	2970	105000	AX8	1050	2310	121	266

Balloon Type		Volume		FAI Class	Maximum Mass		Envelope Weight	
		cu.m	cu.ft		kg	lbs	kg	lbs
C-Type	500	14158	500000	AX13	4250	9350	442	972
C-Type	600	16886	600000	AX14	5100	11220	530	1166



### 1.5.1.1 Minimum Landing Mass

The minimum landing mass is defined as the minimum mass of all of the balloon flight equipment, basket occupants and remaining fuel. For the larger sizes of balloons, the following minimum landing mass is recommended:

Envelope Size	Minimum Landing Mass		Envelope Size	Minimum Landing Mass	
	kg	lbs		kg	lbs
42	231	508	210	945	2079
56	252	554	240	970	2134
60	255	561	260	1135	2497
69	276	607	310	1350	2970
77	316	695	317	1465	3223
90	378	831	330	1437	3161
105	452	994	360	1566	3445
120	528	1161	400	1700	3740
150	652	1434	425	1800	3960
160	720	1584	500	2125	4675
180	750	1650	600	2550	5610

### 1.5.1.2 Reduced Mass Operations

If, for operational reasons the aircraft operator wishes to select a reduced Maximum Take Off Mass, MTOM, the following limits are advised by the company:

Envelope Size	Maximum Take-off Mass		Envelope Size	Maximum Take-off Mass	
	kg	lbs		kg	lbs
21	189	416	160	1440	3168
25	225	495	180	1467	3227
31	279	613	210	1701	3742
35	315	693	240	1746	3841
42	378	831	260	2043	4494
56	504	1108	310	2430	5346
60	540	1188	317	2484	5464
69	621	1366	330	2587	5691
77	693	1524	360	2819	6201
90	810	1782	400	3060	6732
105	900	1980	425	3249	7147
120	1080	2376	500	3825	8415
150	1305	2871	600	4590	10098

To achieve approval at these levels the operator must have a suitably qualified balloon inspector make a notation to that effect in the aircraft log book. It should be noted that operating to this Maximum Take Off Mass does not alter the operational limitations specified in section 1.5.3 and the continued airworthiness requirements remain in force, as published.

Restitution of the normal Maximum Weight Limitations as defined in section 1.5.1 are achieved by a qualified balloon inspector conducting an inspection in accordance with the Maintenance Schedule Ref. MS/BBAC/1-K and notifying the change in the aircraft log book



### 1.5.2 Empty Weight

The indicative empty weight for any balloon can be calculated by adding the weights of the individual components of the system. The weights of the differing models of Lindstrand Balloons baskets, burners and cylinders, are given below.

#### 1.5.2.1 Baskets

**TABLE 2 - LINDSTRAND BASKETS**

BASKET NO.	BASKET SIZE CM	BASKET STYLE	ENVELOPE SIZE RANGE	EMPTY WEIGHT	
				KG	LBS
01	110 x 115	Open	42 - 105	69	152
02	110 x 130	Open	56 - 105	75	165
03	110 x 155	Open	69 - 120	88	194
04	100 x 85	Open	21 - 42	50	110
05	98 x 113	Open	42 - 90	61	134
06	100 x 125	Open	42 - 105	68	150
07	100 x 137	Open	56 - 105	70	154
08	122 x 145	Open	77 - 120	91	200
09	96 x 102	Open	42 - 90	55	121
10	125x 125	Open	105 - 120	80	176
11	125x 165	Open	90 - 160	101	222
12	125x 185	ST	90 - 160	158	348
13	125x 205	ST	120 - 180	169	372
14	125x 220	ST	120 - 180	180	396
15	125x 260	DT	120 - 210	207	455
16	125 x 175	Open	90 - 160	110	242
17	125 x 205	P	120 - 180	160	352
20	152 x 205	ST	150 - 210	198	436
21	152 x 240	ST	180 - 240	233	513
22	152 x 270	ST	180 - 310	260	572
23	152 x 260	DT	180 - 310	255	561
24	152 x 300	DT	180 - 400	300	660
25	152 x 350	DT	180 - 400	350	770
26	152 x 390	DT	240 - 500	390	858
27	152 x 430	DT	310 - 500	430	946
28	152 x 300	ST	180 - 350	289	636
29	152 x 325	DT	180 - 350	321	706
30	152 x 280	DT	180 - 310	285	627
31	140 x 270	DT	150 - 310	245	539
32	140 x 300	DT	180 - 350	272	598
33	140 x 390	DT	180 - 500	359	790
34	140 x 240	DT	120 - 240	218	480
35	140 x 240	ST	120 - 240	207	455
36	140 x 270	ST	150 - 310	242	532
37	140 x 340	DT	180 - 350	313	689
39	152 x 280	DP	180 - 310	275	605
40	129 x 247	ST	120 - 210	200	440
41	135 x 285	ST	150 - 310	245	539
45	152 x 550	DT	425 - 600	646	1421
204	170 x 360	DT	240 - 500	342	752
50	152 x 610	DT	500 - 600	684	1505

For notes on the use of the above table, see overleaf.



METRIC LIFT READY RECKONER

	ENVELOPE VOLUME CUBIC METRES (CU.FT/1000)													
LIFT INDEX kg/m <sup>3</sup>	595 (21)	708 (25)	878 (31)	991 (35)	1190 (42)	1590 (56)	1700 (60)	1950 (69)	2180 (77)	2550 (90)	2970 (105)	3400 (120)	4250 (150)	4530 (160)
0.170	101	120	149	168	202	270	289	331	371	433	505	578	722	770
0.175	104	123	153	173	208	278	297	341	381	446	520	595	744	793
0.180	107	127	158	178	214	286	306	351	392	459	535	612	765	815
0.185	110	130	162	183	220	294	315	361	403	472	549	629	786	838
0.190	113	134	166	188	226	302	323	370	414	484	564	646	807	860
0.195	116	138	171	193	232	310	331	380	425	497	579	663	829	883
0.200	119	141	175	198	238	318	340	390	436	510	594	680	850	906
0.205	121	145	179	203	243	326	349	400	447	523	609	697	871	928
0.210	124	148	184	208	249	334	357	409	458	535	624	714	892	951
0.215	127	152	188	213	255	342	365	419	469	548	638	731	914	974
0.220	130	155	193	218	261	350	374	429	480	561	653	748	935	996
0.225	133	159	197	222	267	358	383	439	490	574	668	765	956	1019
0.230	136	162	201	227	273	366	391	448	501	586	683	782	977	1042
0.235	139	166	206	232	279	374	399	458	512	599	698	799	999	1064
0.240	142	169	210	237	285	382	408	468	523	612	713	816	1020	1087
0.245	145	173	215	242	291	390	417	478	534	625	728	833	1041	1110
0.250	148	177	219	247	297	398	425	487	545	637	742	850	1062	1132
0.255	151	180	223	252	303	405	433	497	556	650	757	867	1084	1155
0.260	154	184	228	257	309	413	442	507	567	663	772	884	1105	1178
0.265	157	187	232	262	315	421	450	517	578	676	787	901	1126	1200
0.270	160	191	237	267	321	429	459	526	589	688	802	918	1147	1223
0.275	163	194	241	272	327	437	467	536	599	701	817	935	1169	1246
0.280	166	198	245	277	333	445	476	546	610	714	832	952	1190	1268
0.285	169	201	250	282	339	453	485	556	621	727	846	969	1211	1291
0.290	172	205	254	287	345	461	493	565	632	739	861	986	1232	1314
0.295	175	208	259	292	351	469	501	575	643	752	876	1003	1254	1336
0.300	178	212	263	297	357	477	510	585	654	765	891	1020	1275	1359
0.305	181	215	267	302	363	485	519	595	665	778	906	1037	1296	1382
0.310	184	219	272	307	369	493	527	604	676	790	921	1054	1317	1404
0.315	187	223	276	312	375	501	535	614	687	803	935	1071	1339	1427
0.320	190	226	280	317	381	509	544	624	698	816	950	1088	1360	1450
0.325	193	230	285	322	387	517	553	634	708	829	965	1105	1381	1472
0.330	196	233	289	327	393	525	561	643	719	841	980	1122	1402	1495
0.335	199	237	294	331	399	533	569	653	730	854	995	1139	1424	1518
0.340	202	240	298	336	405	541	578	663	741	867	1010	1156	1445	1540
0.345	205	244	302	341	410	548	587	673	752	880	1025	1173	1450	1563
0.350	208	247	307	346	416	556	595	682	763	892	1039	1190	1450	1586
0.355	210	250	310	350	420	560	600	690	770	900	1050	1200	1450	1600



METRIC LIFT READY RECKONER

	ENVELOPE VOLUME CUBIC METRES (CU.FT/1000)										
LIFT INDEX kg/m <sup>3</sup>	5100 (180)	5950 (210)	6800 (240)	7362 (260)	8780 (310)	9344 (330)	10194 (360)	11327 (400)	12036 (425)	14158 (500)	16990 (600)
0.170	867	1011	1156	1251	1492	1588	1733	1926	2046	2407	2888
0.175	892	1041	1190	1288	1536	1635	1784	1982	2106	2477	2973
0.180	918	1071	1224	1325	1580	1681	1835	2039	2166	2548	3058
0.185	943	1101	1258	1362	1624	1728	1886	2095	2227	2619	3143
0.190	969	1130	1292	1399	1668	1775	1937	2152	2287	2690	3228
0.195	994	1160	1326	1435	1712	1822	1988	2209	2347	2761	3313
0.200	1020	1190	1360	1472	1756	1868	2039	2265	2407	2832	3398
0.205	1045	1220	1394	1509	1800	1915	2090	2322	2467	2902	3482
0.210	1071	1249	1428	1546	1843	1962	2141	2379	2528	2973	3567
0.215	1096	1279	1462	1583	1887	2008	2192	2435	2588	3044	3652
0.220	1122	1309	1496	1619	1931	2055	2242	2491	2648	3115	3737
0.225	1147	1339	1530	1656	1975	2102	2294	2549	2708	3186	3822
0.230	1173	1368	1564	1693	2019	2149	2345	2605	2768	3256	3907
0.235	1198	1398	1598	1730	2063	2195	2396	2661	2828	3327	3992
0.240	1224	1428	1632	1767	2107	2242	2446	2718	2889	3398	4077
0.245	1249	1458	1666	1803	2151	2289	2497	2775	2949	3469	4162
0.250	1275	1487	1700	1840	2195	2336	2548	2831	3009	3540	4247
0.255	1300	1517	1734	1877	2238	2382	2599	2888	3069	3610	4332
0.260	1326	1547	1768	1914	2282	2429	2650	2945	3129	3681	4417
0.265	1351	1577	1802	1951	2326	2476	2701	3001	3190	3752	4502
0.270	1377	1606	1836	1987	2370	2522	2752	3058	3250	3823	4587
0.275	1402	1636	1870	2024	2414	2569	2803	3115	3310	3893	4672
0.280	1428	1666	1904	2061	2458	2616	2854	3171	3370	3964	4757
0.285	1453	1696	1938	2098	2502	2663	2905	3228	3430	4032	4842
0.290	1479	1725	1940	2135	2546	2709	2956	3285	3490	4106	4927
0.295	1504	1755	1940	2171	2590	2756	3007	3341	3551	4177	5012
0.300	1530	1785	1940	2208	2634	2803	3058	3398	3610	4247	5097
0.305	1555	1815	1940	2245	2677	2849	3109	3400	3610	4250	5100
0.310	1581	1844	1940	2270	2700	2875	3132	3400	3610	4250	5100
0.315	1606	1874	1940	2270	2700	2875	3132	3400	3610	4250	5100
0.320	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
0.325	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
0.330	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
0.335	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
0.340	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
0.345	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
0.350	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
0.355	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100



UK LIFT READY RECKONER

	ENVELOPE VOLUME/1000 CU.FT.													
LIFT INDEX KG/1000 CU.FT.	21	25	31	35	42	56	60	69	77	90	105	120	150	160
4.8	100	120	148	168	201	269	288	331	370	432	504	576	720	768
5.0	105	125	155	175	210	280	300	345	385	450	525	600	750	800
5.2	109	130	161	182	218	291	312	359	400	468	546	624	780	832
5.4	113	135	167	189	227	302	324	373	416	486	567	648	810	864
5.6	117	140	173	196	235	314	336	386	431	504	588	672	840	896
5.8	121	145	179	203	244	325	348	400	447	522	609	696	870	928
6.0	126	150	186	210	252	336	360	414	462	540	630	720	900	960
6.2	130	155	192	217	260	347	372	428	477	558	651	744	930	992
6.4	134	160	198	224	269	358	384	442	493	576	672	768	960	1024
6.6	138	165	204	231	277	370	396	455	508	594	693	792	990	1056
6.8	142	170	210	238	286	381	408	469	524	612	714	816	1020	1088
7.0	147	175	217	245	294	392	420	483	539	630	735	840	1050	1120
7.2	151	180	223	252	302	403	432	497	554	648	756	864	1080	1152
7.4	155	185	229	259	311	414	444	511	570	666	777	888	1110	1184
7.6	159	190	235	266	319	426	456	524	585	684	798	912	1140	1216
7.8	163	195	241	273	328	437	468	538	601	702	819	936	1170	1248
8.0	168	200	248	280	336	448	480	552	616	720	840	960	1200	1280
8.2	172	205	254	287	344	459	492	566	631	738	861	984	1230	1312
8.4	176	210	260	294	352	470	504	580	647	756	882	1008	1260	1344
8.6	180	215	266	301	361	482	516	593	662	774	903	1032	1290	1376
8.8	184	220	272	308	370	493	528	607	678	792	924	1056	1320	1408
9.0	189	225	279	315	378	504	540	621	693	810	945	1080	1350	1440
9.2	193	230	285	322	386	515	552	635	708	828	966	1104	1380	1472
9.4	197	235	291	329	395	526	564	649	724	846	987	1128	1410	1504
9.6	201	240	297	336	403	538	576	662	739	864	1008	1152	1440	1536
9.8	205	245	303	343	412	549	588	676	755	882	1029	1176	1450	1568
10.0	210	250	310	350	420	560	600	690	770	900	1050	1200	1450	1600



UK LIFT READY RECKONER

	ENVELOPE VOLUME/1000 CU.FT.										
LIFT INDEX KG/1000 CU.FT.	180	210	240	260	310	330	360	400	425	500	600
4.8	864	1008	1152	1248	1488	1584	1728	1920	2040	2400	2880
5.0	900	1050	1200	1300	1550	1650	1800	2000	2125	2500	3000
5.2	936	1092	1248	1352	1612	1716	1872	2080	2210	2600	3120
5.4	972	1134	1296	1404	1674	1782	1944	2160	2295	2700	3240
5.6	1008	1176	1344	1456	1736	1848	2016	2240	2380	2800	3360
5.8	1044	1218	1392	1508	1798	1914	2088	2320	2465	2900	3480
6.0	1080	1260	1440	1560	1860	1980	2160	2400	2550	3000	3600
6.2	1116	1302	1488	1612	1922	2046	2232	2480	2635	3100	3720
6.4	1152	1344	1536	1664	1984	2112	2304	2560	2720	3200	3840
6.6	1188	1386	1584	1716	2046	2178	2376	2640	2805	3300	3960
6.8	1224	1428	1632	1768	2108	2244	2448	2720	2890	3400	4080
7.0	1260	1470	1680	1820	2170	2310	2520	2800	2975	3500	4200
7.2	1296	1512	1728	1872	2232	2376	2592	2880	3060	3600	4320
7.4	1332	1554	1776	1924	2294	2442	2664	2960	3145	3700	4440
7.6	1368	1596	1824	1976	2356	2508	2736	3040	3230	3800	4560
7.8	1404	1638	1872	2028	2418	2574	2808	3120	3315	3900	4680
8.0	1440	1680	1920	2080	2480	2640	2880	3200	3400	4000	4800
8.2	1476	1722	1940	2132	2542	2706	2952	3280	3485	4100	4920
8.4	1512	1764	1940	2184	2604	2772	3024	3360	3570	4200	5040
8.6	1548	1806	1940	2236	2666	2838	3096	3400	3610	4250	5100
8.8	1584	1848	1940	2270	2700	2875	3132	3400	3610	4250	5100
9.0	1620	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
9.2	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
9.4	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
9.6	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
9.8	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100
10.0	1630	1890	1940	2270	2700	2875	3132	3400	3610	4250	5100



Page 7a IMPERIAL LIFT READY RECKONER

	ENVELOPE VOLUME/1000 CU.FT.													
LIFT INDEX lbs/1000 CU.FT.	21	25	31	35	42	56	60	69	77	90	105	120	150	160
10.50	220	262	325	367	441	588	630	724	808	945	1102	1260	1575	1680
10.75	225	268	333	376	451	602	645	742	828	967	1129	1290	1612	1720
11.00	231	275	341	385	462	616	660	759	847	990	1155	1320	1650	1760
11.25	236	281	348	393	472	630	675	776	866	1012	1181	1350	1687	1800
11.50	241	287	356	402	483	644	690	793	885	1035	1207	1380	1725	1840
11.75	246	293	364	411	493	658	705	811	905	1057	1234	1410	1762	1880
12.00	252	300	372	420	504	672	720	828	924	1080	1260	1440	1800	1920
12.25	257	306	379	428	514	686	735	845	943	1102	1286	1470	1837	1960
12.50	262	312	387	437	525	700	750	862	962	1125	1312	1500	1875	2000
12.75	267	318	395	446	535	714	765	880	982	1147	1339	1530	1912	2040
13.00	273	325	403	455	546	728	780	897	1001	1170	1365	1560	1950	2080
13.25	278	331	410	463	556	742	795	914	1020	1192	1391	1590	1987	2120
13.50	283	337	418	472	567	756	810	931	1039	1215	1417	1620	2025	2160
13.75	288	343	426	481	577	770	825	949	1059	1237	1444	1650	2062	2200
14.00	294	350	434	490	588	784	840	966	1078	1260	1470	1680	2100	2240
14.25	299	356	441	498	598	798	855	983	1097	1282	1496	1710	2137	2280
14.50	304	362	449	507	609	812	870	1000	1116	1305	1522	1740	2175	2320
14.75	309	368	457	516	619	826	885	1018	1136	1327	1549	1770	2212	2360
15.00	315	375	465	525	630	840	900	1035	1155	1350	1575	1800	2250	2400
15.25	320	381	472	533	640	854	915	1052	1174	1372	1601	1830	2287	2440
15.50	325	387	480	542	651	868	930	1069	1193	1395	1627	1860	2325	2480
15.75	330	393	488	551	661	882	945	1087	1213	1417	1654	1890	2362	2520
16.00	336	400	496	560	672	896	960	1104	1232	1440	1680	1920	2400	2560
16.25	341	406	503	568	682	910	975	1121	1251	1462	1706	1950	2437	2600
16.50	346	412	511	577	693	924	990	1138	1270	1485	1732	1980	2475	2640
16.75	351	418	519	586	703	938	1005	1156	1290	1507	1759	2010	2512	2680
17.00	357	425	527	595	714	952	1020	1173	1309	1530	1785	2040	2550	2720
17.25	362	431	534	603	724	966	1035	1190	1328	1552	1811	2070	2587	2760
17.50	367	437	542	612	735	980	1050	1207	1347	1575	1837	2100	2625	2800
17.75	372	443	550	621	745	994	1065	1225	1367	1597	1864	2130	2662	2840
18.00	378	450	558	630	756	1008	1080	1242	1386	1620	1890	2160	2700	2880
18.25	383	456	565	638	766	1022	1095	1259	1405	1642	1916	2190	2737	2920
18.50	388	462	573	647	777	1036	1110	1276	1424	1665	1942	2220	2775	2960
18.75	393	468	581	656	785	1050	1125	1294	1444	1687	1969	2250	2812	3000
19.00	399	475	589	665	798	1064	1140	1311	1463	1710	1995	2280	2850	3040
19.25	404	481	596	673	808	1078	1155	1328	1482	1732	2021	2310	2887	3080
19.50	409	487	604	682	819	1092	1170	1345	1501	1755	2047	2340	2925	3120
19.75	414	493	612	691	829	1106	1185	1363	1521	1777	2074	2370	2962	3160
20.00	420	500	620	700	840	1120	1200	1380	1540	1800	2100	2400	3000	3200
20.25	425	506	627	708	850	1134	1215	1397	1559	1822	2126	2430	3037	3240
20.50	430	512	635	717	861	1148	1230	1414	1578	1845	2152	2460	3075	3280
20.75	435	518	643	726	871	1162	1245	1432	1598	1867	2179	2490	3112	3320
21.00	441	525	651	735	882	1176	1260	1449	1617	1890	2205	2520	3150	3360
21.25	446	531	658	743	892	1190	1275	1466	1636	1912	2231	2550	3187	3400
21.50	451	537	666	752	903	1204	1290	1483	1655	1935	2257	2580	3190	3440
21.75	456	543	674	761	913	1218	1305	1501	1675	1957	2284	2610	3190	3480
22.00	462	550	682	770	924	1232	1320	1518	1694	1980	2310	2640	3190	3520



IMPERIAL LIFT READY RECKONER

	ENVELOPE VOLUME/1000 CU.FT.										
LIFT INDEX lbs/1000 CU.FT.	180	210	240	260	310	330	360	400	425	500	600
10.50	1890	2205	2520	2730	3255	3465	3780	4200	4462	5250	6300
10.75	1935	2257	2580	2795	3332	3547	3870	4300	4569	5375	6450
11.00	1980	2310	2640	2860	3410	3630	3960	4400	4675	5500	6600
11.25	2025	2362	2700	2925	3487	3712	4050	4500	4781	5625	6750
11.50	2070	2415	2760	2990	3565	3795	4140	4600	4888	5750	6900
11.75	2115	2467	2820	3055	3642	3877	4230	4700	4994	5875	7050
12.00	2160	2520	2880	3120	3720	3960	4320	4800	5100	6000	7200
12.25	2205	2572	2940	3185	3797	4042	4410	4900	5206	6125	7350
12.50	2250	2625	3000	3250	3875	4125	4500	5000	5313	6250	7500
12.75	2295	2677	3060	3315	3952	4207	4590	5100	5419	6375	7650
13.00	2340	2730	3120	3380	4030	4290	4680	5200	5525	6500	7800
13.25	2385	2782	3180	3445	4107	4372	4770	5300	5631	6625	7950
13.50	2430	2835	3240	3510	4185	4455	4860	5400	5738	6750	8100
13.75	2475	2887	3300	3575	4262	4537	4950	5500	5844	6875	8250
14.00	2520	2940	3360	3640	4340	4620	5040	5600	5950	7000	8400
14.25	2565	2992	3420	3705	4417	4702	5130	5700	6056	7125	8550
14.50	2610	3045	3480	3770	4495	4785	5220	5800	6163	7250	8700
14.75	2655	3097	3540	3835	4572	4867	5310	5900	6269	7375	8850
15.00	2700	3150	3600	3900	4650	4950	5400	6000	6375	7500	9000
15.25	2745	3202	3660	3965	4727	5032	5490	6100	6481	7625	9150
15.50	2790	3255	3720	4030	4805	5115	5580	6200	6588	7750	9300
15.75	2835	3307	3780	4095	4882	5197	5670	6300	6694	7875	9450
16.00	2880	3360	3840	4160	4960	5280	5760	6400	6800	8000	9600
16.25	2925	3412	3900	4225	5037	5362	5850	6500	6906	8125	9750
16.50	2970	3465	3960	4290	5115	5445	5940	6600	7013	8250	9900
16.75	3015	3517	4020	4355	5192	5527	6030	6700	7119	8375	10050
17.00	3060	3570	4080	4420	5270	5610	6120	6800	7225	8500	10200
17.25	3105	3622	4140	4485	5347	5692	6210	6900	7331	8625	10350
17.50	3150	3675	4200	4550	5425	5775	6300	7000	7438	8750	10500
17.75	3195	3727	4260	4615	5502	5857	6390	7100	7544	8875	10650
18.00	3240	3780	4268	4680	5580	5940	6480	7200	7650	9000	10800
18.25	3285	3832	4268	4745	5657	6022	6570	7300	7756	9125	10950
18.50	3330	3885	4268	4810	5735	6105	6660	7400	7863	9250	11100
18.75	3375	3937	4268	4862	5812	6187	6750	7480	7942	9350	11220
19.00	3420	3990	4268	4940	5890	6270	6840	7480	7942	9350	11220
19.25	3465	4042	4268	4994	5940	6325	6890	7480	7942	9350	11220
19.50	3510	4095	4268	4994	5940	6325	6890	7480	7942	9350	11220
19.75	3555	4147	4268	4994	5940	6325	6890	7480	7942	9350	11220
20.00	3586	4180	4268	4994	5940	6325	6890	7480	7942	9350	11220
20.25	3586	4180	4268	4994	5940	6325	6890	7480	7942	9350	11220
20.50	3586	4180	4268	4994	5940	6325	6890	7480	7942	9350	11220
20.75	3586	4180	4268	4994	5940	6325	6890	7480	7942	9350	11220
21.00	3586	4180	4268	4994	5940	6325	6890	7480	7942	9350	11220
21.25	3586	4180	4268	4994	5940	6325	6890	7480	7942	9350	11220
21.50	3586	4180	4268	4994	5940	6325	6890	7480	7942	9350	11220
21.75	3586	4180	4268	4994	5940	6325	6890	7480	7942	9350	11220
22.00	3586	4180	4268	4994	5940	6325	6890	7480	7942	9350	11220



## .6 Equipment Interchangeability

For each size of Lindstrand envelope, there are a range of different sizes of baskets, burners and cylinders which are designed to be used. The scope of fitment for each of these components is shown on tables 1 - 3 inclusive, in Section 1.5. Furthermore, because of the uniformity of interface between the envelope range manufactured by Lindstrand Balloons, and the load frames, basket, burners and cylinders manufactured by Cameron Balloons, Thunder & Colt Ltd, Sky Balloons Ltd, Fire Balloons, and Ultramagic Balloons, a degree of interchangeability exists such that basket, burner and load frames manufactured by these companies, can be used with Lindstrand Balloons manufactured envelopes. It should be noted that if any equipments that are manufactured by any of the above manufacturers are used with Lindstrand manufactured envelopes, then the operating limitations, maintenance schedules and instructions for continued airworthiness which have been published for those equipments must be adhered to. The scope of fitment for each of the components, along with the indicative empty weight is given in the following tables:

### 1.6.1 Cameron Balloons Equipment

Table 5 - CAMERON BASKETS

BASKET NO.	BASKET SIZE CM	BASKET STYLE	ENVELOPE SIZE RANGE	EMPTY WEIGHT	
				KG	LBS
61	112 x 112	Open	42	45	99
62	112 x 124	Open	56 - 69	60	132
63	112 x 147	Open	69 - 120	65	143
64	122 x 157	Open	90 - 120	70	154
65	122 x 189	Open	120 - 160	95	209
66	135 x 195	P	120 - 160	100	220
67	144 x 230	ST	150 - 180	165	363
68	170 x 236	ST	150 - 180	180	396
69	170 x 282	ST	210 - 240	185	407
70	170 x 266	DT	180 - 240	195	429
71	170 x 305	DT	210 - 310	225	495
72	170 x 347	DT	240 - 310	245	539
73	76 x 96 (CB3116)	Mini	31 - 56	45	99
74	Duo Air Chair (CB8340)	Seat	42 - 77	35	77
75	Folding Basket (CB3327)	Open	69 - 105	59	130
76	170 x 360 (CB3040)	DT	240 - 500	350	770
77	CB8320 Hopper	Seat	21 - 35	17	37

### Notes

- a) The basket dimensions refer to nominal outside dimensions.
- b) The empty weight figure is an indicative figure. The actual basket weight is shown in the aircraft log book.
- c) Under basket style 'P' stands for one partitioned wall.



1.6.2 Thunder & Colt Ltd Equipment

**TABLE 8 - THUNDER & COLT BASKETS**

BASKET NO.	BASKET SIZE INCHES / CM	BASKET STYLE	ENVELOPE SIZE RANGE	EMPTY WEIGHT	
				KG	LBS
91	40" x 40"	Open	42 - 77	48	106
92	40" x 48"	Open	56 - 90	57	125
93	40" x 54"	Open	69 - 105	67	147
94	40" x 60"	Open	77 - 120	69	152
95	48" x 68"	ST	105 - 160	105	231
96	48" x 82"	ST	120 - 180	132	290
97	60" x 87"	ST	150 - 180	160	352
98	60" x 90"	ST	180 - 210	170	374
99	60" x 102"	ST	180 - 240	206	453
100	60" x 98"	DT	180 - 240	252	554
101	60" x 118"	DT	180 - 310	284	625
102	60" x 126"	DT	180 - 310	415	913
103	165 x 445 cm CB8285	DT	300 - 425	416	915
104	Sky Chariot (SC-002)	Seat	31 - 56	16	35

Notes

- a) The basket dimensions refer to outside dimensions.
- b) The empty weight figure is an indicative figure. The actual basket weight is shown in the aircraft log book.

**TABLE 9 - THUNDER & COLT BURNERS**

BURNER NO.	BURNER TYPE	ENVELOPE SIZE RANGE	EMPTY WEIGHT	
			KG	LBS
81	C2 Double	42 - 180	17	37
82	C2 Triple	120 - 260	25	55
83	C2 Triple + CLF	150 - 310	26	57
84	C2 Quad	180 - 310	28	62
85	Magnum Double	42 - 180	20	44
86	Magnum Double + CLF	120 - 260	23	51
87	Magnum Triple	120 - 260	28	62
88	Magnum Triple + CLF	150 - 310	31	68
89	Magnum Quad	180 - 310	37	81
90	Stratus Double	42 - 210	24	53
91	Stratus Triple	120 - 300	44	97
92	Stratus Quad	180 - 415	52	115
93	C2 Single (B2-50)	31 - 90	13	29