

CLIMB 270 KIAS .78 INDICATED MACH * indicates step climb required																																
T.O. WEIGHT	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000		
PRESSURE ALTITUDE	5000ft ISA = 5°C = 41°F						10000ft ISA = 5°C = 23°F						15000ft ISA = -15°C = 6°F						20000ft ISA = -27°C = -16°F													
	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM
ISA +20°C	MIN	3	2	2	2	2	2	6	5	5	4	4	4	10	9	8	7	8	7	7	6	5	5	4	3	2	10	9	8	7	6	5
	NM	13	12	11	10	9	8	29	27	24	22	20	18	52	47	43	39	43	39	35	31	28	26	23	20	18	17	15	14	12	10	9
	LB	174	159	146	133	121	110	365	332	303	276	251	228	587	530	481	436	395	357	317	278	243	209	180	153	132	118	105	93	82	72	
	FPM	1749	1923	2106	2310	2538	2796	1398	1553	1716	1897	2099	2327	1048	1185	1329	1487	1663	1861													
ISA +10°C	MIN	2	2	2	2	1	1	4	4	4	3	3	3	7	7	6	5	5	5	5	5	5	4	3	2	6	5	4	3	2	1	0
	NM	9	9	8	7	7	7	21	20	18	16	15	14	37	34	31	28	26	24	22	20	18	16	14	12	10	9	8	7	6	5	4
	LB	143	131	121	111	102	93	294	269	247	227	208	189	459	419	384	351	320	291	262	233	204	175	146	117	88	59	30	1	0	0	0
	FPM	2320	2531	2753	3001	3280	3597	1966	2159	2362	2587	2840	3127	1563	1735	1915	2114	2338	2590													
ISA	MIN	2	2	1	1	1	1	3	3	3	3	2	2	5	5	5	4	4	4	4	4	4	3	2	1	4	3	2	1	0	0	0
	NM	7	7	6	6	5	5	16	15	14	13	12	11	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0	0	0	0	0
	LB	121	112	103	95	88	80	247	227	210	193	177	162	381	350	322	296	271	248	226	204	182	160	138	116	94	72	50	28	6	0	0
	FPM	2978	3231	3499	3798	4136	4520	2540	2771	3013	3284	3589	3936	2095	2302	2520	2762	3034	3342													
ISA -10°C	MIN	2	1	1	1	1	1	1	1	1	1	1	3	3	3	3	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0
	NM	7	6	6	5	5	5	16	15	13	12	11	10	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0	0	0	0	0
	LB	116	107	99	91	84	77	236	217	201	185	170	155	364	334	308	283	259	236	214	192	170	148	126	104	82	60	38	16	0	0	0
	FPM	3032	3290	3564	3869	4213	4605	2589	2824	3072	3349	3660	4013	2135	2347	2569	2817	3094	3409													
PRESSURE ALTITUDE	17000ft ISA = -19°C = -2°F						19000ft ISA = -23°C = -9°F						21000ft ISA = -27°C = -16°F																			
	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM
ISA +20°C	MIN	12	11	10	9	8	7	14	12	11	10	9	8	16	14	13	12	10	9	8	7	6	5	4	3	12	11	10	9	8	7	6
	NM	64	57	52	47	42	38	76	68	61	55	50	45	90	80	72	65	58	52	46	41	36	31	27	23	20	18	17	15	14	12	
	LB	685	616	558	505	456	412	785	705	636	575	519	467	889	795	716	646	582	523	463	404	345	286	227	168	109	50	0	0	0	0	
	FPM	1009	1145	1287	1444	1618	1814	951	1085	1224	1378	1549	1741	915	1048	1186	1339	1509	1699													
ISA +10°C	MIN	8	8	7	6	5	4	10	9	8	7	6	5	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0
	NM	45	41	37	34	31	28	52	48	43	39	36	33	61	55	50	46	41	37	33	29	25	21	17	13	9	6	4	2	1	0	
	LB	529	482	441	403	367	333	600	545	498	454	414	375	670	609	555	506	460	417	373	328	283	238	193	148	103	58	33	18	10	5	
	FPM	1535	1707	1886	2086	2308	2560	1509	1681	1860	2059	2282	2533	1487	1659	1839	2038	2261	2512													
ISA	MIN	6	6	5	4	4	4	7	6	6	5	5	4	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0
	NM	33	31	28	26	24	21	39	36	33	30	27	25	45	41	38	34	31	29	25	22	19	16	13	10	7	4	2	1	0	0	
	LB	436	400	368	338	310	282	491	450	414	380	347	317	547	501	460	421	385	351	317	282	247	213	179	145	111	77	44	24	13	7	
	FPM	2114	2323	2544	2790	3065	3377	2087	2297	2518	2763	3039	3351	2048	2258	2478	2723	2997	3307													
ISA -10°C	MIN	6	5	5	4	4	4	7	6	6	5	5	4	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0
	NM	32	30	27	25	23	21	38	34	32	29	26	24	43	39	36	33	30	27	23	20	17	14	11	8	5	3	1	0	0	0	
	LB	417	382	352	323	296	270	469	430	395	362	332	302	522	478	439	402	367	335	300	265	230	195	160	125	90	55	30	16	9	5	
	FPM	2154	2368	2594	2845	3127	3446	2127	2342	2568	2819	3101	3420	2085	2299	2525	2775	3055	3373													
PRESSURE ALTITUDE	23000ft ISA = -31°C = -23°F						25000ft ISA = -35°C = -30°F						27000ft ISA = -39°C = -37°F																			
	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM	MIN	NM	LB	FPM
ISA +20°C	MIN	18	16	15	14	13	12	21	18	16	15	14	13	23	20	18	16	15	14	13	12	11	10	9	8	18	16	15	14	13	12	11
	NM	104	93	83	74	67	60	119	106	94	85	76	68	137	121	108	96	86	77	69	61	54	48	42	36	108	96	86	77	69	61	
	LB	1187	1107	1017	917	817	719	619	1100	1000	900	800	700	1200	1100	1000	900	800	700	600	500	400	300	200	100	0	0	0	0	0	0	0
	FPM	902	1035	1174	1328	1498	1689	848	979	1115	1266	1434	1621	729	854	984	1128	1287	1465													
ISA +10°C	MIN	12	11	10	9	8	8	14	13	11	10	9	9	15	14	13	11	10	9	8	7	6	5	4	3	10	9	8	7	6	5	4
	NM	69	63	57	52	47	43	79	71	64	59	53	48	89	80	73	66	60	54	48	42	36	31	27	23	20	18	17	15	14	12	
	LB	741	672	613	558	509	462	817	737	671	614	554	500	832	752	686	620	554	488	422	356	290	224	158	92	26	0	0	0	0	0	
	FPM	1452	1623	1802	2001	2222	2472	1347	1513	1688	1880	2095	2337	1202	1362	1528	1712	1917	2147													
ISA	MIN	9	9	8	7	7	6	10	9	8	7	7	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0
	NM	51	47	43	39	36	32	57	52	48	44	40	36	64	59	54	49	45	41	37	33	29	25	21	17	13	9	5	3	1	0	
	LB	602	555	505	463	423	385	658	601	551	505	461	420	715	653	599	547	500	452	404	356	308	260	212	164	116	70	34	18	10	5	
	FPM	2043	2254	2476	2723	2999	3312	1959	2167	2386	2628	2900	3207	1804	2004	2241	2448	2709	3003													
ISA -10°C	MIN	9	8	8	7	6	6	10	9	8	7	7	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0
	NM	49	45	41	37	34	31	55	50	46	42	38	34	62	56	52	47	43	39	35	31	27										

CLIMB 300 KIAS .80 INDICATED MACH * indicates step climb required																									
T.O. WEIGHT	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000	
PRESSURE ALTITUDE	5000ft ISA = 5°C = 41°F						10000ft ISA = -5°C = 23°F						15000ft ISA = -15°C = 6°F												
	MIN	3	2	2	2	2	7	6	6	5	5	4	13	12	11	10	9	8	36,100	34,000	32,000	30,000	28,000	26,000	
ISA +20°C	NM	13	12	11	10	9	35	32	29	26	24	22	77	68	61	55	49	44							
	LB	174	159	146	133	121	421	382	347	316	286	259	784	698	627	564	507	455							
	FPM	1749	1623	1506	1390	1273	853	1072	1107	1135	1168	1194	1136	1012	904	807	712	627							
ISA +10°C	MIN	2	2	2	2	1	5	4	4	4	3	3	9	8	7	7	7	6	5						
	NM	9	9	8	7	7	6	5	4	4	4	3	16	14	13	12	11	10	9						
	LB	143	131	121	111	102	328	300	275	252	231	210	550	500	456	416	379	344							
ISA	MIN	2	1	1	1	1	4	3	3	3	3	2	6	6	5	5	4	4							
	NM	7	7	6	6	5	19	17	16	15	13	12	34	31	29	26	24	22							
	LB	121	112	103	95	88	270	249	230	211	194	177	433	397	365	335	307	280							
ISA -10°C	MIN	2	1	1	1	1	4	3	3	3	3	2	6	6	5	5	4	4							
	NM	7	6	6	6	5	18	16	15	14	13	12	33	30	28	25	23	21							
	LB	116	107	99	91	84	258	238	219	202	185	169	413	379	349	320	293	268							
	FPM	3032	3290	3564	3869	4213	2207	2409	2623	2861	3128	3433	1753	1931	2118	2326	2559	2823							
PRESSURE ALTITUDE	17000ft ISA = -19°C = -2°F						19000ft ISA = -23°C = -9°F						21000ft ISA = -27°C = -16°F												
	MIN	17	15	13	12	11	21	18	16	14	13	11	25	22	19	17	15	13							
ISA +20°C	NM	100	88	78	70	62	126	110	97	86	76	68	153	133	117	103	91	81							
	LB	966	853	761	681	609	1154	1012	898	800	713	636	1349	1177	1039	922	819	729							
	FPM	548	645	745	856	979	517	613	712	821	942	1078	500	595	693	802	922	1057							
ISA +10°C	MIN	10	9	9	8	7	6	12	11	10	9	8	7	14	13	11	10	9	9						
	NM	59	54	49	44	40	36	71	64	58	53	48	43	84	75	68	62	56	50						
	LB	647	587	535	487	442	745	674	613	557	505	457	843	761	691	627	568	514							
ISA	MIN	1128	1265	1408	1565	1741	1940	1104	1240	1382	1540	1715	1913	1102	1240	1383	1542	1719	1918						
	NM	41	38	35	32	29	26	49	45	41	37	34	56	52	47	43	39	36							
	LB	502	460	422	387	353	569	521	478	438	401	365	637	581	538	494	449	404							
ISA -10°C	MIN	1746	1923	2110	2317	2549	2812	1765	1945	2134	2344	2579	2846	1706	1884	2071	2278	2511	2774						
	NM	40	36	33	31	28	25	47	43	39	36	33	30	54	50	45	41	38	34						
	LB	479	439	403	370	338	308	545	506	467	428	389	350	598	555	509	466	422	388						
	FPM	1777	1958	2148	2360	2597	2866	1796	1980	2174	2389	2629	2902	1734	1915	2106	2319	2556	2825						
PRESSURE ALTITUDE	23000ft ISA = -31°C = -23°F						25000ft ISA = -35°C = -30°F						27000ft ISA = -38°C = -37°F												
	MIN	29	25	22	19	17	33	28	25	22	19	17	38	32	28	25	22	19							
ISA +20°C	NM	182	157	137	121	107	211	182	159	139	123	108	249	213	185	161	142	125							
	LB	1541	1338	1178	1041	923	1731	1498	1315	1160	1026	909	1963	1687	1474	1295	1142	1009							
	FPM	512	607	707	817	940	465	558	656	763	883	1016	343	429	519	618	728	851							
ISA +10°C	MIN	16	14	13	12	11	10	18	16	14	13	12	21	18	16	15	13	12							
	NM	96	87	78	71	64	110	99	89	80	73	65	126	113	102	92	84	75							
	LB	940	847	768	696	630	1038	935	846	766	693	625	1148	1031	932	842	760	685							
ISA	MIN	1103	1241	1386	1546	1725	1926	1008	1141	1281	1436	1608	1802	845	971	1101	1245	1406	1585						
	NM	11	10	9	8	7	12	11	10	9	8	7	13	12	11	10	9	8							
	LB	65	59	54	49	45	73	67	61	56	51	46	83	75	68	63	57	52							
ISA -10°C	MIN	1693	1872	2059	2267	2501	2764	1622	1797	1982	2187	2416	2675	1466	1634	1810	2005	2223	2469						
	NM	62	57	52	47	43	70	64	59	53	49	45	79	72	66	60	55	50							
	LB	672	614	563	515	470	738	673	616	563	514	467	806	735	672	614	559	508							
	FPM	1721	1903	2095	2308	2547	2817	1650	1830	2019	2229	2464	2729	1491	1663	1844	2044	2267	2520						
PRESSURE ALTITUDE	29000ft ISA = -42°C = -44°F						31000ft ISA = -46°C = -52°F						33000ft ISA = -50°C = -59°F												
	MIN	44	38	32	28	25	52	43	37	32	28	24	58	48	41	35	30	26							
ISA +20°C	NM	302	254	218	189	165	366	302	257	221	191	166	416	340	287	245	211	183							
	LB	2268	1926	1668	1456	1277	2611	2187	1876	1626	1418	1242	2870	2383	2030	1751	1521	1328							
	FPM	276	357	442	537	642	759	847	933	1026	1120	1216	377	492	618	766	918	1087							
ISA +10°C	MIN	22	20	18	16	15	13	25	22	20	18	16	14	27	24	22	19	17	13						
	NM	146	130	117	105	94	84	167	148	132	119	106	95	183	162	144	129	116	103						
	LB	1274	1140	1027	926	834	751	1402	1250	1123	1010	908	816	1497	1331	1194	1072	962	863						
ISA	MIN	750	671	597	535	489	802	698	606	530	466	408	608	528	458	392	330	274							
	NM	12	11	10	9	8	15	16	15	13	12	11	10	17	16	14	13	12							
	LB	93	85	77	70	64	104	95	86	78	71	64	113	102	93	84	77	71							
ISA -10°C	MIN	923	840	767	700	638	579	999	908	829	755	687	624	1056	958	874	796	724	656						
	NM	1371	1235	1106	986	878	1540	1372	1224	1094	978	864	752	1325	1184	1052	928	806	686						
	LB	112	105	98	91	84	131	118	107	97	88	79	144	129	116	104	93	84	75						
	FPM	1109	1007	916	833	757	1167	1056	960	873	792	717	1239	1116	1012	918	831	751							
	NM	18	16	15	14	12	11	19	18	16	14	13	12	21	19	17	16	14	13						
	LB	117	106	96	87	79	71	126	114	103	93	84	76	140	125	112	101	91	82						
	FPM	1059	959	873	794	721	654	1114	1008	916	832	755	683	1185	1066	966	876	793	716						
	FPM	1741	1583	1437	1291	1154	1366	1203	1066	938	814	7													
T.O. WEIGHT	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000	36,100	34,000	32,000	30,000	28,000	26,000	
PRESSURE ALTITUDE	35000ft ISA = -54°C = -66°F						37000ft ISA = -57°C = -70°F						39000ft ISA = -57°C = -70°F												
	MIN	63	52	44	38	32	28	26	48	36	47	40	34	30	*100	63	52	44	37						
ISA +20°C	NM	455	371	311	265	228	197	694	401	335	284	244	211	757	463	268	204	167	229						
	LB	3065	2534	2152	1865	1603	1397	3245	1876	1575	1397	1221													