AIRCRAFT SPECIFICATIONS
A REFERENCE FOR AVIATION WEATHER FORECASTING

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Abstract

To best interpret an aircraft pilot weather report, or to give the most effective aircrew weather briefing, it is important for the National Weather Service forecaster, Weather Service Specialist, or other aviation weather support person to understand the type of aircraft involved. This paper presents a comprehensive listing of common aircraft types and specifications, designed for use as a reference or familiarization tool.

1. Introduction

A significant portion of National Weather Service (NWS) activities support aviation. An understanding of different aircraft types is important for pilot weather briefings and the interpretation of aircraft pilot weather reports. A comprehensive reference is presented here, which provides the designators and general specifications for all common aircraft types operating within the United States.

Unlike current Federal Aviation Administration (FAA) publications, which are tailored for FAA personnel, this reference is designed for the forecaster and meteorological technician, who usually have less knowledge of aircraft types and characteristics. As such, this reference will provide more detailed information on aircraft for a wide range of types so that the meteorologist and meteorological technician can have a clearer idea, or "mental picture," of the aircraft whose pilot filed a report or requires a forecast. It is hoped, however, that this reference will also be of use to other organizations and agencies. This paper is an extension of the quick reference guide presented by Arkell (1992).

2. Existing FAA References

The FAA provides several sources of information for aircraft identification. Among these are aircraft type designation tables (Federal Aviation Administration 1991a, 1991b), which list 550, two-to-four character designators for 480 types of fixed-wing powered aircraft and helicopters. (Note, there is some duplication due to civilian and military variants.) A more extensive list of designators is provided by the International Civil Aviation Organization (ICAO 1991).

For each aircraft type in the FAA publications, the following information is given: type and number of engines; general weight class (small, large, and heavy); climb rate; descent rate; SOIR (simultaneous operations on intersecting runways) group; and SRS (same runway separation) category. These references are designed primarily for use in air traffic control facilities and flight service stations.

The FAA also publishes the *Controller Reference Aircraft Manual* (Federal Aviation Administration 1991c), which shows color photographs and silhouettes for 189 civilian and military aircraft, along with an expanded list of specifications. This is an excellent reference and can be a very good familiarization tool for NWS personnel and other aviation meteorologists.

3. Goals of New Reference

The primary goals of this new reference are threefold. The first is to provide more descriptive information than the FAA designator tables. The second is to cover more types of aircraft than in the *Controller Reference Aircraft Manual*. The third is to present four additional categories: homebuilts, sailplanes, hot air balloons, and airships (blimps).

4. Methodology

A. Aircraft Types

For the purposes of this reference, an aircraft type is defined as a specific aircraft model. A type can include one or more variants or military/civilian derivatives, and will thus sometimes have more than one designator. A type can also include a model that was made by more than one manufacturer during the course of its production history. The primary characteristic of a type is that its design and operating specifications are identifiable as one aircraft.

The FAA aircraft designator tables were used as a starting point to determine which fixed-wing powered aircraft and helicopter types to include in the reference. All common types were included. A common type was defined for the purposes of this paper as a type that would have at least a 50% chance of making at least one flight somewhere within the United States, Canada, northern Mexico, or the northern Caribbean on any given day.

A special report was prepared upon request by Insured Aircraft Title Service, Inc. (1991), which lists the number of every currently registered civilian aircraft type within the nation, including homebuilts, sailplanes, hot air balloons, and airships. This report was reviewed to help eliminate uncommon types.

Several older types were included, such as the Grumman amphibians, the DC-3, the Convair 240s through 640s, and the Martin 404, which are in the very last stages of their operational careers, but still can be found in some regions such as Alaska or the Caribbean. Older aircraft that fly only in air shows and exhibitions have been excluded.

The various branches of the military were contacted to help determine the appropriate military types to include. Common types were included, in addition to some uncommon types that are in the last stages of their careers, but are still used by the Air National Guard.

When there was no applicable FAA designator for a specific type, ICAO designators were given. In addition, a few aircraft were included that are in the process of being certified, but for which no FAA designators have yet been issued. Of this group, the ones included were those for which: (a) a significant number of firm orders have been placed, and

(b) the probable designator can readily be determined based on past designators for that manufacturer.

B. Aircraft Specifications

Specifications were chosen in such a way as to be as descriptive as possible. Such variables as type (business, airliner, utility, etc.), maximum takeoff weight, maximum cruise speed (75% of maximum power), service ceiling, and number of passengers were used. Additional variables, such as glide ratio for sailplanes and envelope volume for hot air balloons and blimps, were also used.

Specifications were obtained from several sources including: *Jane's All the World's Aircraft* (Taylor 1972 through 1991), *Jane's Encyclopedia of Aviation* (Taylor 1989), *The Observer's Book of Aircraft* (Green 1955 through 1991), *Modern Commercial Aircraft* (Green et al. 1987), and the *World Aircraft Recognition Handbook* (Wood 1989). In addition, several manufacturers, including Beechcraft, Cessna, Piper, Schweizer, Aerostar/Raven, Balloon Works, and Good Year, provided published material. Information was also obtained from several user groups, including the Soaring Society of America, the Ballooning Federation of America, several NWS and FAA offices, and the U.S. Forest Service.

Since most aircraft models have variants, it was necessary to take an average for some specifications, weighted by the estimated number of each variant in service. A range was generally used instead of an average if the difference was 10% or more for maximum takeoff weight or maximum cruise speed, and 20% or more for service ceiling or number of passengers.

Maximum takeoff weight can differ between variants because of slight modifications in fuselage length, different engines, and different passenger/cargo configurations. Maximum cruise speed can vary with differences in engine size and turbo charging. Service ceiling can vary because of pressurization variations; a pressurized variant can often fly 10,000 ft higher than an otherwise identical non-pressurized version. Lastly, passenger configurations can differ greatly due to cargo, passenger, and cargo and passenger combinations.

Once a list of common types and specifications had been developed, groupings were made, when possible, to reduce the number of types. For example, the Cessna 150 and 152 are very similar aircraft, and were thus grouped together into one type.

5. Summary

The resulting reference divides aircraft into seven categories:

(1) Fixed-wing powered, civilian
(2) Fixed-wing powered, military
(3) Helicopters
(4) Homebuilts, experimentals, and ultralights
(5) Sailplanes (gliders) and motorgliders
(6) Hot air balloons
(7) Airships (Blimps)

In the fixed-wing powered and helicopter categories (1 through 3), 340 types representing 445 designators were included. For the remaining categories (4 through 7), for which there are very few specific designators, there were 80 types. All together, the aircraft reference here should cover at least 95% of all aircraft encountered in most regions of the country.

This reference can be useful for pilot briefings, and for decoding pilot reports. It can be of interest to the aviation enthusiast. It can also help foster new interest for those who have no aviation background, especially when used in conjunction with the FAA's pictorial glossary *Controller Reference Aircraft Manual.*

Hopefully, this reference will help promote a better understanding of, interest in, and enthusiasm for aviation activities. In the long run this could result in better services for the end users.

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COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 1. Fixed-Wing Powered, Civilian

FAA Designator	Manufacturer	Model	Type	Max Takeoff (lbs)	Max Cruise (mph)	Service Ceiling 1000's ft	Typical # of passengers	Engine Config P=prop J=jet
AA1	Grumman/Gulfstrm	Yankee, Lynx, T-cat	private	1,500	130	12	2	1P
AA5	Grumman/Gulfstrm	Cheetah, Traveler	private	2,200	140	12	4	1P
AA7	Grumman/Gulfstrm	Cougar	private	3,800	185	17	4	2P
AC10, LARK	Rockwell	Darter 100/150,Lark Comdr	private	2,400	130	13	4	1P
AC12, AC2A, AC2T	Rockwell	Commander 111, 112	private	2,600	160	16	4	1P
AC14	Rockwell	Commander 114	private	3,200	185	17	4	1P
AC21	Rockwell	Jet Commander	executive jet	17,000	500	45	9	2J
AC50,52,56	Rockwell	Shrike Commander 500, 560	business	6-8,000	225	19	7	2P
AC60,68,85,95	Rockwell	Grand Comdr 680,Super Com 680S, Aero Comdr 685/695	business	9,000	250-285	28	8-10	2P
AC6T	Rockwell	Turbo Commander 690	business	10,200	320	33	8-11	2P
AC69,84	Rockwell/Gulfstm	Commander Jetprop, Jetprop 840/980/1000	business	10-11,200	320-360	30-35	8-11	2P
**	Rockwell/Ayres	Thrush, Turbo Thrush	agriculture	6,000-8,500	125-155	15-25	1-2	1P
AJ25	Israel Aircraft	Westwind Astra 1125	executive jet	23,500	535	45	12	2J
AR58, CH5	Aeronca/Champion	Champ	sport	1,250	85	12	2	1P
AT42	Aerospatiale	ATR42	feederliner	36,000	305	25	44	2P
AT72	Aerospatiale	ATR72	feederliner	45,000	325	25	66	2P
B707	Boeing	707	lrg airliner,cargo	325,000	600	40	3-160	4J
B720	Boeing	720	lrg airliner,cargo	230,000	600	40	2-125	4J
B727	Boeing	727	large airliner	200,000	600	37	160	3J
B737	Boeing	737	medium airliner	115-150,000	560	37	110-150	2J
B747	Boeing	747	jumbo jet	800,000	590	45	450	4J
B757	Boeing	757	large airliner	240,000	570	40	180	2J
B767	Boeing	767	large airliner	300-360,000	560	40	220-270	2J
BA11	British Aerospac	BAC One-Eleven	med airliner,cargo	100,000	540	37	2-90	2J
BA31, HP13	British Aerospac	Jetstream	commuter, business	15,000	300	25	10-20	2P
BA46	British Aerospac	BAe 146	small airliner	96,000	485	35	100	4J
BATP	British Aerospac	BAe ATP	small airliner	50,000	305	25	66	2P
BE02	Beechcraft	Beech 1900	commuter	16,500	305	25	21	2P
BE10,90	Beechcraft	King Air 90, 100 (military U21F)	business	11,500	270	25	8-15	2P
BE18, BE8S	Beechcraft	Twin Beech 18, Super H18	business, commuter	9,900	210-235	21	8-11	2P
BE19	Beechcraft	Sport	private	2,200	130	11	4	1P
BE20,30	Beechcraft	Super King Air 200, 300 (military C12)	business, commuter	13,500	350	35	8-15	2P
BE23	Beechcraft	Sundowner	private	2,400	140	13	4	1P
BE24	Beechcraft	Sierra	private	2,700	160	15	4-6	1P
BE33	Beechcraft	Debonair,Bonanza (T-tail)	private	3,400	200	18	4-5	1P
BE35	Beechcraft	Bonanza (V-tail)	private	3,400	200	18	4-5	1P
BE36	Beechcraft	Bonanza (T-tail)	private	3,700	195-225	17-25	4-6	1P
BE3B	Beechcraft	Super King Air 350	exec, commuter	15,000	360	35	10-17	2P
BE40, MU3	Beechcraft	Beechjet 400	executive jet	15,400	510	45	10	2J
BE45	Beechcraft	Mentor	See military T34					
BE50	Beechcraft	Twin Bonanza	business	7,000	220	20-29	6-7	2P
BE55,58	Beechcraft	Baron (military T42)	priv, lt business	5,200	200-230	20	6	2P
BE60	Beechcraft	Duke	business	6,700	275	30	4-6	2P
BE65,80,88	Beechcraft	Queen Air,Super Queen Air (military U8E,F)	business	8,500	230	27	6-11	2P
BE76	Beechcraft	Duchess	priv, lt business	3,900	190	20	4	2P
BE77	Beechcraft	Skipper	private, trainer	1,700	120	13	2	1P

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 1. Fixed-Wing Powered, Civilian - Continued

FAA Designator	Manufacturer	Model	Type	Max Takeoff (lbs)	Max Cruise (mph)	Service Ceiling 1000's ft	Typical # of passengers	Engine Config P=prop J=jet
BE90	Beechcraft	King Air 90	business	10,000	255-285	27	6-10	2P
BE95	Beechcraft	Travelair	priv, lt business	4,000	200	19	5	2P
BE99	Beechcraft	Airliner	commuter	10,900	280	27	17	2P
BE9F	Beechcraft	Beech F90	business	10,900	305	30	10	2P
BEST	Beechcraft	Starship 2000	business	14,400	385	35	7-12	2P
BL14,26,31	Bellanca	Cruisemaster, Viking	private	3,200	185-235	22	4	1P
BL28,30; CH9,10	Bellanca/Champn	Citabria,Scout,Decathelon	aerobatic, sport	1,650	115-135	16	2	1P
BL26,31	Bellanca	Super Viking,Turbo Viking	private	3,300	190-235	22	4	1P
BN2	Britten-Norman	Islander	commuter	6,800	165-195	12-25	10	2P
BN3	Britten-Norman	Trislander	commuter	10,000	165	13	18	3P
BT6S	Beagle	B-206	business	7,500	220	25	5-8	2P
C14	Cessna	140	private	1,200	100	12	2	1P
C150,152	Cessna	150, 152	private, trainer	1,600	120	14	2	1P
C170,172	Cessna	170,172/Skyhawk (mil T41)	private, trainer	2,400	135	13	4	1P
		172 Cutlass RG	private	2,600	160	17	4	1P
C175	Cessna	175, Skylark	private	2,400	140	13	4	1P
C177	Cessna	177, Cardinal	private	2,500	145	14	4	1P
		Cardinal RG	private	2,800	170	17	4	1P
C180,185	Cessna	180,185/Skywagon(mil U17)	light utility	3,300	165	18	2-6	1P
C182	Cessna	182/Skylane, Skylane RG	private	3,100	160-190	15-20	4	1P
C188	Cessna	188, AgWagon, AgHuskie	agriculture	4,200	100-120	8-14	1	1P
C190,195	Cessna	190, 195	private	3,300	165	18	5	1P
C205,206	Cessna	Super Skywagon,Stationair	utility	3,600	160-180	15-27	2-6	1P
C207	Cessna	Stationair 8	utility	3,800	170	13-26	2-8	1P
C208	Cessna	208/Caravan (milit U27A)	utility	7,300	210	27	2-10	1P
C210	Cessna	210/Centurion	light business	3,900	190-235	17-27	6	1P
C303	Cessna	303/Crusader	business	5,100	225	25	6	2P
C305	Cessna	305,321; Bird Dog(mil O1)	private	2,500	110	18	2	1P
C310,320	Cessna	310, 320; Skyknight	business	5,500	225-255	19-28	5	2P
C335,336,337	Cessna	335, 336/Skymaster	business	3,900	175	19	4-6	2P
C337	Cessna	337/Super Skymstr(mil O2)	business	4,700	190-230	18-30	4-6	2P
C340	Cessna	340	business	4 6,000	250	30	6	2P
C401,402,411,	Cessna	401, 402, 411	business, commuter	6,300	240	26	8	2P
C414	Cessna	Chancellor	business	6,800	260	31	7	2P
C404	Cessna	Titan 404	commuter	8,400	225	26	11	2P
C421	Cessna	421, Golden Eagle	business	7,400	270	30	8	2P
C425	Cessna	Corsair 425, Conquest I	business	8,600	300	35	6-10	2P
C441	Cessna	441, Conquest II	business	9,800	330	36	6-11	2P
C500,501	Cessna	Citation I	executive jet	11,600	400	41	7-9	2J
C550,551	Cessna	Citation II	executive jet	12,600	440	43	8-12	2J
C560	Cessna	Citation V	executive jet	15,900	490	45	9	2J
C650	Cessna	Citation III	executive jet	19,600	540	51	9-15	2J
CA21	CASA	C-212 Aviocar	utility, commuter	17,000	225	26	2-20	2P
CH5	See AR58							
CH9,10	See BL28							
CHCH	Cherdon/Christen	Eagle I,II	aerobatic, sport	1,600	165	17	1-2	1P
CI1	Christen	Pitts S-1 Special	aerobatic	1,200	175	20	1	1P
CI2	Christen	Pitts S-2	aerobatic	1,600	175	20	2	1P
CIA1	Christen	A-1 Huskie	utility, private	1,800	140	20	2	1P
CL21	Canadair	CL-215	amphibian, fire	40,000	180	20	3	2P
CL60,61	Canadair	Challenger	executive jet	42,000	525	41	21	2J
CONC	Aerospatiale/BAe	Concorde	SST/supersonic air	405,000	1,350	60	132	4J
CV34,44,58,60,64	Convair	340, 440, 580, 600, 640	sm airliner, cargo	46-58,000	300-340	25	2-54	2P

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 1. Fixed-Wing Powered, Civilian - Continued

FAA Designator	Manufacturer	Model	Type	Max Takeoff (lbs)	Max Cruise (mph)	Service Ceiling 1000's ft	Typical # of passengers	Engine Config P=prop J=jet
DA10	Dassault-Breguet	Falcon 10	executive jet	18,300	565	45	7-10	2J
DA20	Dassault-Breguet	Falcon 20, FJF (mil HU25)	executive jet	29,000	530	42	10-16	2J
DA50	Dassault-Breguet	Falcon 50	executive jet	38,880	545	45	8-14	2J
DA90	Dassault-Breguet	Falcon 900	executive jet	45,500	550	45	10-20	3J
DC3	McDonnell-Dougl	DC-3	small cargo	28,000	200-230	25	2-30	2P
DC4	McDonnell-Dougl	DC-4	medium cargo, fire	73,000	245	25	2-50	4P
DC6	McDonnell-Dougl	DC-6	medium cargo, fire	105,000	325	25	2-60	4P
DC7	McDonnell-Dougl	DC-7	medium cargo, fire	135,000	350	25	2-70	4P
DC8	McDonnell-Dougl	DC-8	lr airliner, cargo	300-350,000	580	39	3-204	4J
DC9	McDonnell Dougl	DC-9 (Series 10-50)	medium airliner	92-120,000	570	35	100-120	2J
DC10	McDonnell-Dougl	DC-10	jumbo jet	570,000	595	35	275	3J
DH2	DeHavilland	Beaver	light utility	5,300	135-165	18	2-10	1P
DH3	DeHavilland	Otter	light utility	8,000	130	18	2-11	1P
DH4	DeHavilland	Caribou (military C7)	med utility (STOL)	30,000	190	25	2-34	2P
DH6	DeHavilland	Twin Otter	utility, commuter	12,500	205	26	22	2P
DH7	DeHavilland	Dash 7	feeder/cargo(STOL)	44,000	260	24	52	4P
DH8	DeHavilland	Dash 8 100,300	feederliner, cargo	34-41,000	315	25	38-52	2P
DO28	Dornier	28D/128, Skyservant	utility, commuter	9,400	180-205	24-32	12	2P
DO81, DO82, D228	Dornier	228-100, 228-200	commuter	12,600	265	29	15-21	2P
DR40 thru 48	Robin	DR400/120 thru 180	private	2,000-2,400	130-165	14	4	1P
E110	Embraer	110/Bandeirante	commuter	13,000	245	22	20	2P
E120	Embraer	120/Brasilia	commuter, business	25,000	345	30	30	2P
EA30	Airbus	A300	large airliner	310-375,000	555	40	270	2J
EA31	Airbus	A310	large airliner	290-330,000	555	40	222	2J
EA32	Airbus	A320	medium airliner	160,000	560	40	152	2J
EA34*	Airbus	A340	jumbo jet	560,000	565	41	300	4J
FK10	Fokker	Fokker 100	small airliner	98,000	535	35	112	2J
FK27, FA27	Fokker/Fairchild	F27 Friendship	feederliner	45,000	295	29	47	2P
FK28	Fokker	F28 Fellowship	small airliner	73,000	520	35	87	2J
FK50	Fokker	Fokker 50	feederliner	45,000	330	25	52	2P
FO2	Alon/Ercoupe	Aircoupe	sport	1,500	130	17	2	1P
G1	Grumman/Gulfstrm	Gulfstream 1	business,feederlnr	35,000	350	34	12-26	2P
G2	Gulfstream	Gulfstream 2	executive jet	62,000	580	43	13-22	2J
G3,4	Gulfstream	Gulfstream 3,4 (mil C20)	executive jet	71,000	580	45	16-22	2J
G21	Grumman/McKinnon	Goose	amphibian	8,500	190	20	10	2P
G44	Grumman	Widgeon	amphibian	4,500	150	20	6	2P
G64	Grumman	Albatross	amphibian	31,000	240	20	14	2P
G89	Grumman	Tracker	fire, utility	26,000	250	22	2	2P
G159	Gulfstream	Gulfstream 1	business, commuter	35,000	345	33	12-22	2P
G164	Grumman	Ag-Cat, Super Ag-Cat	agriculture	4,500	130	12	1	1P
**	Great Lakes	Sport Trainer	aerobatic	1,800	120	17	2	1P
HE25,29,35,39	Helio	Courier,Super Courier (military U10)	utility (STOL)	3,500	170	15-20	2-6	1P
HE55	Helio	Stallion	utility (STOL)	5,100	205	28	2-11	1P
HP13	See BA31							
HS25	British Aerospac	HS-125	executive jet	27,000	510	42	10-16	2J
HS74	British Aerospac	HS-748	cargo, feederliner	45,000	275	25	2-42	2P
L101	Lockheed	L-1011 TriStar	jumbo jet	490,000	595	43	260	3J
L188	Lockheed	Electra, Orion (milit P3)	utility, fire	116-142,000	400	28	2-10	4P
L329	Lockheed	Jetstar (military C140)	executive jet	43,000	565	43	12	4J
L382	Lockheed	Hercules (military C130)	med cargo, fire	155,000	365	33	5-97	4P
LA25, LA2T	Lake	LA-250 Renegade	amphibian	3,000	150-170	14-20	6	1P

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 1. Fixed-Wing Powered, Civilian - Continued

FAA Designator	Manufacturer	Model	Type	Max Takeoff (lbs)	Max Cruise (mph)	Service Ceiling 1000's ft	Typical # of passengers	Engine Config P=prop J=jet
LA42	Lake	LA-4 Buccaneer	amphibian	2,500	130-150	14	4	1P
LR23,24	Gates Learjet	Learjet 23,24	executive jet	13,500	525	45	8-10	2J
LR25,28,31	Gates Learjet	Learjet 25,28,31	executive jet	15,500	520	45	10	2J
LR35,36	Gates Learjet	Learjet 35,36 (milit C21)	executive jet	18,000	525	45	10	2J
LR55	Gates Learjet	Learjet 55	executive jet	20,500	525	51	10-13	2J
M260, SM6T	SIAI-Marchetti	SF-260	private, aerobatic	2,400	215	21	3	1P
M404	Martin	404	cargo, feederliner	45,000	285	29	2-50	2P
MD11	McDonnell-Dougl	MD-11	jumbo jet	600,000	580	35	325	3J
MD80 through 88	McDonnell Dougl	MD-80 through 88	medium airliner	140-160,000	575	37	130-160	2J
ML4,5,6	Maule	Rocket,Lunar/Super Rocket	private (STOL)	2,500	140-160	13-20	4	1P
MO20,21	Mooney	Mark 20,21; Ranger; M20	private	2,600	170	17	4	1P
MO2J, MO2K	Mooney	201, 231	private	2,800	190-230	18-28	4	1P
MU2, MU24,26	Mitsubishi	Marquise, Solitaire	business	10-11,500	350	30	9-12	2P
MU3	See BE40							
N265	Rockwell	Sabreliner (military T39)	executive jet	25,000	540	42	10	2J
NA1	Navion/Rockwell	Rangemaster	private	3,400	200	21	6	1P
ND26	Nord	262, Mohawk/298	commuter, med util	23,800	260	23	2-26	2P
P2	Lockheed	Neptune	med utility, fire	79,000	350	22	2	2P
P166	Piaggio	P-166	sml util, commuter	8,700	220	13	8-12	2P
P180	Piaggio	P-180/Avanti	business	10,900	400	41	11	2P
PA11	Piper	Cub Special, J-3	private	1,200	100	14	2	1P
PA12	Piper	Super Cruiser	private	1,800	110	14	4	1P
PA18	Piper	Super Cub	private	1,800	100-115	12-16	2	1P
PA22	Piper	Tri-Pacer, Colt	private	2,000	110-130	12-16	2-4	1P
PA23	Piper	Apache	private	3,500	170	20	4-5	2P
PA24	Piper	Commanche	private	3,400	185-225	19-25	4-6	1P
PA25	Piper	Pawnee	agriculture	2,900	115	12	1	1P
PA28	Piper	Cherokee, Archer, Cadet, Warrior (military T35)	private, trainer	2,400	140	11-14	2-4	1P
		Arrow II, III	private	2,800	165-195	16-20	4	1P
		Dakota	private	3,000	165	17	4	1P
PA30	Piper	Twin Commanche	priv, lt business	3,700	195-240	20-25	4-6	2P
PA31	Piper	Navajo, Chieftain, Mojave	business, commuter	7,000	240-270	16-30	6-10	2P
		T-1020	commuter	7,000	230	24	11	2P
PA32	Piper	Cherokee 6,Lance,Saratoga	private	3,600	165-200	14-20	6	1P
PA36	Piper	Pawnee Brave, Brave	agriculture	4,400	125	12	1	1P
PA38	Piper	Tomahawk	private, trainer	1,700	125	13	2	1P
PA42	Piper	Cheyenne III,IV	business	11,000	340	35	8-11	2P
		Cheyenne 400	business	11,900	400	41	6-8	2P
PA44	Piper	Seminole	private	3,800	190	17	4	2P
PA46	Piper	Malibu	priv, lt business	4,100	250	25	6	1P
PA60, TS60	Piper/Ted Smith	Aerostar 600, 700	business	6,000	250-310	22-30	6	2P
PARO	Piper	Cherokee Arrow IV	private	3,000	195-225	16-20	4	1P
PASE, PA34	Piper	Seneca II, III	light business	4,600	190-220	19-25	6-7	2P
PAT4	Piper	T-1040	commuter	9,000	275	24	11	2P
PAYE	Piper	Cheyenne I, II	business	9,200	310	21-25	6-8	2P
PAZT	Piper	Aztec (military U11)	light business	5,200	210-245	21-30	6	2P
PIS1, PIS2	Pitts/Christen	Pitts Special S-1, S-2	aerobatic	1,600	175	21	1-2	1P
PL6,6A	Pilatus/Fairchld	Porter, Turbo Porter	sml utility (STOL)	5,400	130-160	17-30	2-10	1P
PN68	Partenavia	Victor	commuter, business	4,400	190	20	7	2P
PN6P	Partenavia	Spartacus, Viator	commuter, business	6,200	250	25	10	2P

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 1. Fixed-Wing Powered, Civilian - Continued

FAA Designator	Manufacturer	Model	Type	Max Takeoff (lbs)	Max Cruise (mph)	Service Ceiling 1000's ft	Typical # of passengers	Engine Config P=prop J=jet
S880, 885	Aerospat/Socata	Rallye 880 thru 887	private	1,700-2,000	110-135	12	3-4	1P
S890 thru 894	Aerospat/Socata	Rallye 890 thru 894	private	2,100-2,600	130-150	14	4	1P
SF34	Saab/Fairchild	SF-340	feederliner	28,000	320	25	35	2P
SH3	Shorts	330 (military C23)	feederliner, cargo	24,000	220	15	30	2P
SH6	Shorts	360	feederliner, cargo	27,000	245	15	38	2P
SH7	Shorts	SC-7 Skyvan	utility, commuter	13,700	205	15	2-21	2P
SM6T	See M260							
SW2	Fairchild/Swear	Merlin 2, 3	business, commuter	12¦500	280	27	9-12	2P
SW3,4	Fairchild/Swear	Metro, Merlin 4	business, commuter	15,000	320	27	12-22	2P
TB9,10	Aerospat/Socata	Tampico, Tabago	private	2,500	150	13	4-5	1P
TB20,21	Aerospat/Socata	Trinidad	private	3,100	190-220	20-25	4-5	1P
TC19,20,21	Taylorcraft	F-19,20,21	private, sport	1,800	120	14	2	1P
TS60	See PA60							
VC7, VC8	Vickers	Viscount	cargo, feederliner	62-72,000	315-350	25	2-49	4P
WW23,24	Israel Aircraft	Westwind/Jet Commander	executive jet	22,500	520	45	12	2J
WW25	See AJ25							
YS11	Mitsubishi/NAMC	YS-11	medium utility	54,000	290	23	2-60	2P

* Designator certification pending.
** No current designator.

Note: Specifications averaged (weighted by approximate number of each variant); if the range was generally greater than 10% for weight or speed, or 20% for ceiling or number of passengers, the range was given instead.

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 2. Fixed-Wing Powered, Military

FAA Designator	Manufacturer	Model	Type	Max Takeoff (lbs)	Max Cruise (mph)	Service Ceiling 1000's ft	Typical # of passengers	Engine Config P=prop J=jet
A4	McDonnell Dougl	A-4 Skyhawk	attack	25,000	620	43	1-2	1J
A6	Grumman	A-6 Intruder	attack, electronic	60,000	610	43	2	2J
A7	LTV/Vought	A-7 Corsair	attack	46,000	690	45	1	1J
A10A	Fairchild	A-10 Thunderbolt	attack	46,000	410	36	1	2J
A37	Cessna	A-37 Dragonfly	attack	See T37				
AU24	Helio	Stallion (civilian HE55)	lt utility (STOL)	5,100	205	28	2-11	1P
AV8	McDon-Doug/BAe	Harrier II	VTOL fighter	31,000	625	51	1	1J
B1	Rockwell	B-1B Lancer	bomber	475,000	795	55	4	4J
B2*	Northrop	B-2A	stealth bomber	370,000	570	55	2-3	4J
B52	Boeing	B-52 Stratofortress	bomber	490,000	575	55	6	8J
C5A	Lockheed	C-5A,B Galaxy	hvy cargo, transpt	830,000	560	36	5-300	4J
C7	DeHavilland	Caribou (civilian DH4)	med utility (STOL)	30,000	190	25	2-34	2P
C12	Beechcraft	Huron (civilian BE20)	exec/cargo transpt	13,500	350	35	8-15	2P
C17*	McDonnel-Dougl	C-17A	hvy cargo, transpt	580,000	510	40	3-105	4J
C20	Gulfstream	Gulfstream 3 (civil G3)	exec/cargo transpt	70,000	580	45	16-22	2J
C21	Gates Learjet	Learjet 35 (civil LR35)	exec/cargo transpt	18,000	525	45	10	2J
C23	Shorts	330/Sherpa (civilian SH3)	medium cargo	24,000	220	15	2-30	2P
C130	Lockheed	C-130 Hercules (civ L382)	med cargo, transpt	155,000	365	33	5-97	4P
C140	Lockheed	Jetstar (civilian L329)	executive jet	43,000	565	43	12	4J
C141	Lockheed	Starlifter	hvy cargo, transpt	340,000	560	42	4-158	4J
E2	Grumman	E-2 Hawkeye	electronic surveil	52,000	355	31	5	2P
E3	Boeing	E-3 Sentry	electronic surveil	325,000	495	40	17	4J
E6	Boeing	E-6 Hermes	communications	340,000	540	42	4-12	4J
F4	McDonnell-Dougl	F-4 Phantom	fighter	58,000	1,400	62	2	2J
F5	Northrup	F-5 Tiger	fighter	24,600	1,000	54	1	2J
F14	Grumman	F-14 Tomcat	fighter	74,000	1,400	60	2	2J
F15	McDonnell-Dougl	F-15 Eagle	fighter	68,000	1,500	63	1	2J
F16	Genrl Dynamics	F-16 Fighting Falcon	fighter	42,000	1,200	60	1	1J
F18	McDonnell-Dougl	F-18 Hornet	fighter	56,000	1,100	60	1	2J
F111	Genrl Dynamics	F-111	fighter, bomber	90,000	1,500	60	2	2J
F117*	Lockheed	F-117	stealth fighter	53,000	650	60	1	2J
HU25	Dassault-Bregut	Falcon 20 (civilian DA20)	surveillance, exec	29,000	530	42	10-16	2J
KC10	McDonnell-Dougl	KC-10 Extender	hvy tanker, cargo	590,000	595	36	5	3J
KC35, KE35, KR35	Boeing	KC-135 Stratotanker	hvy tanker, cargo	300,000	530	50	6	4J
O1	Cessna	Bird Dog	See civilian C305					
O2	Cessna	Super Skymaster(civ C337)	observation, util	4,700	190-230	18-30	4-6	2P
OV1	Grumman	OV-1 Mohawk	observation	15,000	300	25	2	2P
OV10	Rockwell	OV-10 Bronco	observation	9,900	260	30	2	2P
P2	Lockheed	P-2 Neptune	See civilian P2					
P3	Lockheed	P-3 Orion (civilian L188)	patrol	142,000	400	28	10	4P
S2	Grumman	Tracker	See civilian G89					
S3A	Lockheed	Viking	anti-sub, patrol	47,000	405	37	4	2J
T2	Rockwell	T-2 Buckeye	trainer	12,000	470	40	2	2J
T34	Beechcraft	T-34 Mentor	trainer	3,000-4,300	185-240	20-30	2	1P
T35	Piper	Cherokee (Civilian PA28)	trainer	2,400	140	11-14	2-4	1P
T37	Cessna	T-318	trainer	14,500	380	39	2	2J
T38	Northrop	T-38 Talon	trainer	12,200	630	54	2	2J

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 2. Fixed-Wing Powered, Military - Continued

FAA Designator	Manufacturer	Model	Type	Max Takeoff (lbs)	Max Cruise (mph)	Service Ceiling 1000's ft	Typical # of passengers	Engine Config P=prop J=jet
T39	Rockwell	Sabreliner (civil N265)	trainer	25,000	540	42	10	2J
T41	Cessna	Mescalero (civilian C172)	trainer	2,400	135	13	4	1P
T42	Beechcraft	Cochise (civilian BE55)	trainer	5,200	200	20	6	2P
T45*	McDon-Doug/BAe	Goshawk	trainer	12,800	575	42	2	1J
U8E,F	Beechcraft	Seminole (civil BE65,80)	small utility	8,500	230	27	6-11	2P
U10	Helio	Super Courier(civil HE29)	small util (STOL)	3,500	170	15-20	2-6	1P
U11	Piper	Aztec (civilian PAZT)	small utility	5,200	210-245	21-30	6	2P
U17	Cessna	Skywagon 185 (civil C185)	small utility	3,300	165	18	2-6	1P
U21, U21F	Beechcraft	Ute (civilian BE10)	medium utility	11,500	270	25	8-15	2P
U27*	Cessna	U-27A (civilian C208)	utility	7,300	210	27	2-10	1P

* Designator certification pending.

Notes: Military designator was sometimes retained after aircraft was retired to civilian use. Specifications averaged (weighted by approximate number of each variant); if the range was generally greater than 10% for weight or speed, or 20% for ceiling or number of passengers, the range was given instead.

COMMON AIRCRAFT TYPES AND SPECIFICATIONS - CONTINUED

Part 3. Helicopters

FAA Designator	Manufacturer	Model	Type	Max Takeoff (lbs)	Max Cruise (mph)	Service Ceiling 1000's ft	Typical # of passengers	# of rotors
A109	Augusta	A 109	utility, business	5,700	175	15	8	1
BH04; UH1	Bell	204, Iroquois	utility, fire	8,500	125	13	10	1
BH05; UH1	Bell	205; Iroquois	utility, fire	9,500	115	13	15	1
BH06; H57, OH58	Bell	Jet Ranger 206; Sea Ranger Kiowa (OH58A)	utility, business, fire	3,200	125-140	13-20	2-5	1
		Long Ranger; 406/Warrior (OH58D)	utility, business	4,200	135	20	2-7	1
BH09; AH1	Bell	209; HueyCobra, SeaCobra	med util, attack	10-14,000	170	18	2	1
BH12	Bell	212	utility	11,200	120	13	15	1
BH14	Bell	214B BigLifter	utility, commuter	15,000	150	16	16	1
BHST	Bell	z14ST Supertransport	utility, commuter	17,)00	160	16	20	1
BH22	Bell	222	exec, utility	8,200	160	16	6-10	1
BH30*	Bell	230	exec, utility	8,300	160	16	6-10	1
BH41	Bell	412	utility	11,900	140	17	15	1
BH47; H13	Bell	47; Sioux	traffic, sml util	3,000	90	18	2	1
H2	Kaman	H-2 Seasprite	maritime	13,500	155	21	3-8	1
HH12, HL12, HL2T	Fairchild/Hill	UH-12/Raven	utility	2,800	90	14	2-4	1
HK60; H43	Kaman	Huskie 600; H-43 Pedro	rescue, small util	6,500	110	23	2-8	1
HL11	Fairchild/Hillr	FH-1100	utility	2,800	125	17	5	1
HR15,30	Aerospatiale	Alouette II, Lama	utility, fire	4,300	115	13-18	5	1
HR35	Aerospatiale	Ecurueil, Astar	utility	4,500	145	15	4	1
HR3C; HH65	Aerospatiale	Dauphin 2	med util, business	9,000	175	12	14	1
HR55	Aerospatiale	Ecureuil 2, Twin Star	utility, business	5,600	145	12	5-6	1
HR60	Aerospatiale	Alouette III	utility, business	5,000	120	13	7	1
HU26,30; H55	McD-Doug/Hughes	269, 300; Osage	util,traffic,train	1,900	100-115	13	3	1
HU35,50,53; OH6	McD-Doug/Hughes	369,500,520,530; Cayuse	utility	3,000-3,800	140-160	13-16	5-7	1
HU64; AH64	McD-Doug/Hughes	77; Apache	attack	20,000	180	18	2	1
HV46; CH07	Boeing Vertol	107; Sea Knight	med util, transprt	21,000	140	15	28	2
HV47; CH47	Boeing Vertol	234; Chinook	lrg util, transprt	46,000	160	15	35-57	2
RH22	Robinson	R22	traffic, training	1,400	110	14	2	1
RH44*	Robinson	R44	utility	2,400	130	14	4	1
SK55; H19	Sikorsky	S-55; Chickasaw	medium utility	7,500	100	12	2-10	1
SK58; H34	Sikorsky/Westld	S-58; Choctaw; Wessex 60	medium utility	14,000	120	9	2-18	1
SK61; H3	Sikorsky	S-61; Sea King	med util, transprt	21,000	150	15	20	1
SK64; H54	Sikorsky	S-64 Skycrane; Tarhe	large utility	47,000	110	11	3	1
SK65; H53	Sikorsky	S-65; Super/Sea Stallion	lrg util, maritime	70,000	175	18	58	1
SK70; H60	Sikorsky	S-70; Black Hawk,Sea Hawk	med util, Transprt	21,000	165	14-19	14-21	1
SK76	Sikorsky	S-76 Mark II	exec, utility	10,300	170	15	14	1
WG30	Westland	Westland 30	med util, commuter	12,500	135	14	2-19	1

* Designator certification pending.

Notes: Civilian designators listed first, military designators second (when both listed). Military designator was sometimes retained after aircraft was retired to civilian use. Specifications averaged (weighted by approximate number of each variant); if the range was generally greater than 10% for weight or speed, or 20% for ceiling or number of passengers, the range was given instead.

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 4. Homebuilts, Experimentals, and Ultralights

FAA Designator@	Manufacturer	Model	Type	Max Takeoff (lbs)	Max Cruise (mph)	Service Ceiling 1000's ft	Typical # of passengers	Engine Config P=prop J=jet R=rotar
HXA	Ace	Baby Ace	sport	1,100	105	16	1	1P
HXA	Ace	Junior Ace	sport	1,335	105	10	2	1P
HXA	Aircraft Designs	Bumble Bee	gyrocopter	500	50	12	1	1R
HXA	Bowers	Fly Baby	sport	825	110	10	1	1P
HXB	Bushby	Midget Mustang	sport, aerobatic	900	190-225	17a	1	1P
HXB	Bushby	Mustang II	sport, aerobatic	1,500	205	21	2	1P
HXB	Christen	Eagle II	aerobatic	See civilian aircraft CHCH				
HXA	Denny	Kitfox	sport	950	80	20	2	1P
HXA	Eipper	Quicksilver 1	ultralight	550	50	10	1	1P
HXA	Eipper	Quicksilver 2	ultralight	700	50	10	2	1P
HXB	Hapi/Monnett	Sonerai I	sport	800	150	14	1	1P
HXB	Hapi/Monnett	Sonerai II	sport	1,150	150	14	2	1P
HXB	INAV/Monnett	Moni	motorglider	See Sailplanes				
HXA	Light Aero	Avid Flyer	sport	850	110	17	2	1P
HXB	Prowler	Prowler	sport	2,150	200	17	2	1P
HXA	Quad City	Challenger	sport	550	80	14	1	1P
HXA	Quad City	Challenger II	sport	850	85	14	2	1P
HXB	Quickie	Quickie	sport	520	130	14	1	1P
HXB	Quickie	Quickie Q2	sport	1,000	160	17	2	1P
HXB	RAF (Rutan)	Long-EZ	sport	1,325	185	24	2	1P
HXB	RAF (Rutan)	VariEze	sport	1,050	195	14	2	1P
HXB	RAF (Rutan)	Variviggen	sport	1,700	155	14	2	1P
HXB	Rand Robinson	KR-2	sport	1,100	220	26	2	1P
HXA	Rotec	Rally 2B, Sport	ultralight	470	40-50	10	1	1P
HXA	Rotec	Rally 3	ultralight	700	40	10	2	1P
HXA	Rotec	Panther	ultralight	500	60	10	1	1P
HXA	Rotec	Panther Plus	ultralight	630	65	10	1	1P
HXA	Rotec	Panther 2 Plus	sport, utility	930	70	10	2	1P
HXB	Stoddard-Hamilton	Glasair, Glasair II	sport, private	1,600	210	19	2	1P
HXC	Stoddard-Hamilton	Glasair III	sport, private	2,400	280	24	2	1P
HXB	Stolp/Steen	Skybolt	aerobatic	1,650	130	18	2	1P
HXA	Teratorn	Tierra I	ultralight	525	60	10	1	1P
HXA	Teratorn	Tierra II	ultralight	700	60	10	2	1P
HXB	Van	RV-3	sport	1,050	175	21	1	1P
HXB	Van	RV-4	sport	1,500	180	20	2	1P
HXB	Van	RV-6	sport	1,600	180	20	2	1P
HXB	Viking	Dragonfly	sport	1,075	150	18	2	1P

@ FAA uses categorical designators based on maximum cruise speed:
HXA for 100 kts (115 mph) or less;
HXB for greater than 100 kts (115 mph) up to and including 200 kts (230 mph); and
HXC for greater than 200 kts (230 mph).

Note: Specifications averaged (weighted by approximate number of each variant); if the range was generally greater than 10% for speed, the range was given instead of average.

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 5. Sailplanes (gliders) and motorgliders

ICAO Desig-nator@	Manufacturer	Model	Type	# of pass	Max Takeoff (lbs) @@	Max Smooth Air Speed (mph)	Best Glide Ratio at speed(mph)	Min sink (fps) at speed(mph)	Wing Span (ft)
	Aeronautique/ Centrair	Pegase	standard, club	1	1,000-1,110	155	40:1 at 62	2.1 at 52	49
	Glasflugel	Libelle	standard, club	1	640-725	155	37:1 at 54	1.8 at 46	49
	Glasser-Dirks/Elan	DG-100, 101	standard, club	1	920	161	39:1 at 65	1.9 at 46	49
	Glasser-Dirks/Elan	DG-300	standard	1	1,150	168	41:1 at 62	2.0 at 50	49
DG40	Glasser-Dirks/Elan	DG-400	motorglider self-launch	1	1,050	168	46:1 at 68	1.8 at 50	49
	Glasser-Dirks/Elan	DG-600	15-meter, open	1	1,150	168	46/50:1 at 68	1.8/1.6 at 50	49-55
	Grob	G-102	standard, club	1	840-990	155	37:1 at 57	1.9 at 47	49
	Grob	G-103 Twin 2,3	trainer	2	1,300	155	38:1 at 67	2.0 at 47	57-59
GR09	Grob	G-109B	motorglider self-launch	2	1,850	149	28:1 at 71	3.6 at 65	57
HK36	Hoffman	H-36 Dimonda	motorglider self-launch	2	1,700	171	27:1 at 65	3.0 at 50	52
HXB	INAV/Monnett	Moni	motorglider self-launch (homebuilt)	1	500	120	20:1 at 50	3.0 at 48	27
	Let	Blanik L-13	trainer	2	1,100	157	28:1 at 55	2.7 at 50	53
	Rollander/Schneidr	LS-4	standard	1	1,100	170	40:1 at 62	2.0 at 47	49
	Rollander/Schneidr	LS-6	15-meter	1	1,150	175	42:1 at 62	1.9 at 47	49
SF25	Scheibe	SF-25C Falcon	motorglider self-launch	2	1,430	112	24:1 at 54	3.2 at 50	50
	Schempp-Hirth	Cirrus	open	1	880	137	44:1 at 53	1.6 at 45	58
	Schempp-Hirth	Discus	standard	1	1,150	155	42:1 at 62	1.9 at 49	49
	Schempp-Hirth	Janus B	advanced trainer	2	1,360	136	40:1 at 68	2.3 at 56	59
	Schempp-Hirth	Janus C	advanced trainer	2	1,540	155	44:1 at 68	2.0 at 56	65
SSJM	Schempp-Hirth	Janus CM, CT	motorglider: self-launch, retrieve	2	1,540	155	40:1 at 68	2.3 at 56	65
	Schempp-Hirth	Nimbus 2	open	1	1,430	168	49:1 at 71	1.5 at 50	66
	Schempp-Hirth	Nimbus 3	open	1	1,650	168	57:1 at 59	1.4 at 47	75-80
	Schempp-Hirth/ VTC/Jastreb	Standard Cirrus	standard	1	860	137	38:1 at 56	2.1 at 48	49
	Schempp-Hirth	Ventus	15-meter	1	950-1,150	155	46:1 at 65	1.9 at 47	49-54
	Schempp-Hirth	Ventus	open	1	1,150	167	49:1 at 65	1.9 at 47	54-57
SSVM	Schempp-Hirth	Ventus CM, CT	motorglider: self-launch, retrieve	1	950	168	48:1 at 65	2.2 at 47	54-57
	Schleicher	ASK 13	trainer	2	1,060	124	28:1 at 56	2.6 at 44	52
SE16	Schleicher	ASK 16	motorglider:self-launch	2	1,550	124	25:1 at 55	3.3 at 46	52
	Schleicher	ASW 19	standard, club	1	1,000	158	39:1 at 70	2.4 at 56	49
	Schleicher	ASW 20	15-meter	1	840	165	42:1 at 60	1.9 at 53	49
	Schleicher	ASW 20L	open	1	1,000	155	46:1 at 60	1.8 at 53	54
	Schleicher	ASK 21	trainer	2	1,320	170	34:1 at 53	2.1 at 42	56
	Schleicher	ASW 22	open	1	1,650	174	60:1 at 59	1.4 at 50	82
	Schleicher	ASK 23	club	1	840	137	34:1 at 50	2.0 at 46	49
	Schleicher	ASW 24	standard	1	1,100	168	43:1 at 65	1.9 at 44	49
	Schweizer	1-26 A thru D	standard	1	575	110	23:1 at 49	2.6 at 40	40
	Schweizer	1-26 E	standard	1	700	114	23:1 at 53	2.9 at 40	40

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 5. Sailplanes (gliders) and motorgliders - Continued

ICAO Designator@	Manufacturer	Model	Type	# of pass	Max Takeoff (lbs) @@	Max Smooth Air Speed (mph)	Best Glide Ratio at speed(mph)	Min sink (fps) at speed(mph)	Wing Span (ft)
	Schweizer	1-34	standard	1	840	132	33:1 at 65	2.2 at 49	49
	Schweizer	1-35	15-meter	1	930	139	39:1 at 53	2.0 at 49	49
	Schweizer	1-36 Sprite	standard, club	1	710	121	31:1 at 53	2.2 at 42	46
	Schweizer	2-32	trainer	2-3	1,430	140	34:1 at 59	2.4 at 52	57
	Schweizer	2-33	trainer	2	1,040	98	22:1 at 52	3.1 at 42	51
SPF4	Sportavia	RF4	motorglider;self-launch	1	860	155	20:1 at 65	4.2 at 55	37
SPF5	Sportavia	RF5	motorglider;self-launch	2	1,450	167	22:1 at 67	4.3 at 57	45
SPF5	Sportavia	RF5B	motorglider;self-launch	2	1,500	139	26:1 at 61	3.1 at 50	56
	SZD	48 Jantar	standard	1	860-1,200	177	40:1 at 76	2.5 at 60	49

@ FAA does not have designators for sailplanes and motorgliders (GLDR often used); ICAO lists designators for motorgliders.

@@ Variations in weight usually caused by variations in water ballast capability.

Notes: Service ceilings limited to less than 18,000 ft by FAA positive control area regulations (except for requested clearances), and to 14,000 ft without oxygen equipment. Most motorgliders have service ceilings of 20,000 ft or less. Specifications averaged (weighted by approximate number of each variant); if the range was greater than 10%, the range was given instead of average.

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 6. Hot Air Balloons

FAA Designator@	Manufacturer	Model	Full Height (ft)	Volume (cf)	# of pass	Max Takeoff (lbs) @@	# of gores	# of burners	FAI category
	Aerostar/Raven	S-40	55	31,800	1	640	12	1	AX-4
	Aerostar/Raven	RX-6 Rally	58	56,400	2	1,100	12	1	AX-6
	Aerostar/Raven	S-50A	60	56,400	2	1,100	20	1	AX-6
	Aerostar/Raven	S-52A	62	65,000	3	1,300	20	1	AX-7
	Aerostar/Raven	RX-7 Rally	63	77,500	4	1,500	12	1	AX-7
	Aerostar/Raven	S-55A	63	77,500	4	1,500	24	1	AX-7
	Aerostar/Raven	RX-8 Rally	66	90,000	5	1,800	14	1-2	AX-8
	Aerostar/Raven	S-57A	66	90,000	5	1,800	24	1-2	AX-8
	Aerostar/Raven	S-60A	69	105,400	6	2,100	24	2	AX-8
	Aerostar/Raven	S-66A	75	141,000	8	2,800	24	2	AX-9
	Balloon Works	Dragonfly 42, Firefly 42	48	41,700	1-2	830	12	1	AX-5
	Balloon Works	Dragonfly 56, Firefly 56	53	55,700	2	1,100	12	1	AX-6
	Balloon Works	Dragonfly 65, Firefly 65	56	65,000	3	1,300	12	1	AX-7
	Balloon Works	Dragonfly 77, Firefly 77	58	76,500	4	1,500	18	1	AX-7
	Balloon Works	Dragonfly 90, Firefly 90	61	90,400	5	1,800	18	1-2	AX-8
	Balloon Works	Dragonfly 105,Firefly 105	64	104,400	6	2,100	24	2	AX-8
	Balloon Works	Firefly 140	75	140,000	8	2,800	36	2	AX-9
	Cameron	Viva-31	48	31,400	1	630	8	1	AX-4
	Cameron	O-31	48	31,400	1	630	12	1	AX-4
	Cameron	O-42	40	42,000	2	840	12	1	AX-5
	Cameron	Viva-56	56	56,100	2	1,100	8	1	AX-6
	Cameron	Viva-65, O-65, N-65	59	65,000	3	1,300	8,12,24	1	AX-7
	Cameron	Viva-77, O-77, N-77	62	77,300	4	1,500	8,12,24	1	AX-7
	Cameron	Viva-90, O-90, N-90	65	90,000	5	1,800	8,12,24	1-2	AX-8
	Cameron	O-105, A-105, N-105	68	104,900	6	2,100	12-24	2	AX-8
	Cameron	A-120, N-120	70	120,000	7	2,400	20,24	2	AX-9
	Cameron	A-140	72	139,900	8	2,800	20	2	AX-9
	Cameron	N-145	72	145,000	8	2,900	24	2	AX-10

@ FAA does not have designators for hot air balloons (BALLOON or HOT AIR in remarks often used).

@@ Based on 250°F envelope temperature (20 lbs lift per 1,000 cubic ft).

Note: Normally certified up to 10,000 ft without oxygen equipment, and up to 12,000 to 20,000 ft with equipment.

COMMON AIRCRAFT TYPES AND SPECIFICATIONS

Part 7. Airships (Blimps)

ICAO Design-ator@	Manufacturer	Model	Purpose	Length (ft)	Envelope (cub ft)	Max Takeoff (lbs)	Max speed (mph)	Service Ceiling 1000's ft	Typical # of passengers	# of engines (prop)
	American Blimp	A-60	Advertising, special events	132	75,000	5,100	57	10	5	2
	Good Year	GZ-20A: America Columbia, Enterprise	Advertising, special events	192	203,000	12,800	50	10	7	2
	Good Year	GZ-22: Spirit of Akron	Advertising, special events	205	248,000	15,000	65	10	10	2
	WDL	1B	Advertising, special events	196	244,000	15,600	60	10	10	2
SD5	Airship	Skyship 500	Tours, special events	170	182,000	11,600	63	10	8	2
SD6	Airship	Skyship 600	Tours, special events	193	235,000	15,000	67	10	14	2

@ FAA does not have designators for blimps (BLMP often used); ICAO lists designators for those certified for commercial service.

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