

UNMANNED AERIAL VEHICLES AND DRONES

GENERAL DATA		DIMENSIONS AND WEIGHTS				POWERPLANT	PAYLOAD		PERFORMANCE			REMARKS/STATUS/OUTLOOK
DESIGNATION	MISSION	OVERALL LENGTH (FT.)	MAX. OVERALL SPAN (FT.)	BODY DIA. (FT.)	LAUNCH WT., LESS BOOSTER (LB.)	NUMBER, MAKE & MODEL	MANUFACTURER	TYPE	SPEED (MPH. OR NO.)	ENDURANCE (HR.)/MAX. RANGE (MI.)	MAX. ALTITUDE (FT.)	
<i>AAI, Hunt Valley, MD, USA</i>												
Shadow 200 (RQ-7A)	Multimission	11.2	12.8	0.9	337	1 x UAV Engines Ltd. AR 741 rotary	—	EO/IR-SAR	131	6 hr.	16,500	In production for US Army.
Shadow 400	Multimission	12.5	16.9	1.4	450	1 x UAV Engines Ltd. AR 741 rotary	—	EO/IR-SAR	131	5 hr.	12,000	In production.
Shadow 600	Multimission	13.5	22.4	1.4	585	1 x UAV Engine Ltd. AR 801 rotary	—	EO/IR-SAR	138	14 hr.	17,000	In production.
<i>ACCURATE AUTOMATION CORP., Chattanooga, TN, USA</i>												
ALAMM	Multimission	8	4.8	0.8	150	1 x AT-1700 tj.	Accurate Automation	EW, munition	M 0.95	2 hr./1,000 mi.	40,000	In development.
GLOV	Recon./surveillance	3	4.7	0.4	40	1 x diesel rotary	Accurate Automation	EO/IR	91	4 hr./365 mi.	20,000	Entering production. Three prototypes tested.
LoFLYTE	Neural network testbed	8.3	5.3	1.1	75	1 x AMT AT-450 tj.	Accurate Automation	EO/IR	200	20 min.	10,000	In flight test.
X-43A-LS	Hypersonics, neural network testbed	12.3	7.1	3.0	180	1 x AMT AT-1500 tj.	Accurate Automation	EO/IR	250	45 min.	10,000	In flight test.
<i>ADVANCED TECHNOLOGIES & ENGINEERING CO. (PTY) LTD., Republic of South Africa</i>												
Vulture	Multimission	10.2	17.1	2.3	276	1 x TTL-WAE 342	M-Tek	Optronic day sight	100	3 hr./125 mi.	16,400	In production for South African army.
<i>AEROSONDE PTY. LTD., Melbourne, Australia & AEROSONDE NORTH AMERICA, Boulder, CO, USA</i>												
Aerosonde	Environmental	5.6	9.5	0.6 x 0.75	30	1 x Aerosonde H-Type, 1.2 kw.	Aerosonde	Meteorological	50-80	30 hr./2,000 mi.	21,000	Also for remote sensing, radio relay.
<i>AEROVIRONMENT INC., Simi Valley, CA, USA</i>												
Black Widow	Micro-AV demonstrator	0.5	0.5	—	0.2	1 x 4W d.c. electric	Aerovirement	Color video	30-40	30 min./2 mi.	800	Under development for DARPA.
Centurion	High alt.	12	206	—	1,801	14 x Aerovirement, brushless	Aerovirement	Turbulence measuring	M 0.2	16 hr.	100,000	Under development for NASA ERAST.
Dragon Eye	Recon./surveillance	3	4	0.3	5.8	2 x 200W d.c. electric	Various	EO/B&W lowlight	40-50	0.8 hr./3 mi.	1,000	Under development for US Marines.
Helios	High alt., long-endur.	12	247	—	1,669	14 x Aerovirement, brushless	Aerovirement, JPL	Weather monitoring	M 0.2	96 hr./120 mi.	96,863	NASA ERAST. Earth science or telecommunications.
HILINE	High alt., long-end. recon.	19	50	—	770	1 x Akkerman eng. recip.	S-Tec, Tracor, AACOMS	Autop.data link, nav.comp.	120 loiter	1-2 days	40,000	200 lb. payload, autonomous flight, highly mobile.
Hornet	Micro-AV demonstrator	0.8	1.3	—	0.3	1 x 10W d.c. electric	Lynntech	Fuel cell	15-20	6 min./0.2 mi.	200	Under development for DARPA.
Pathfinder Plus	High alt., long-end. recon.	12	120	—	700	8 x Aerovirement electric	AACOMS	Environ. sensing	20	16 hr.	80,201	NASA ERAST. Experimental science payloads.
Pointer FQM-151A	Multipurpose/recon.	6	9	0.4	8	1 x 300W d.c. electric	Aerovirement, various	EO/IR, Chem. sensing	25-50	2 hr./5 mi.	12,500	Procured by US forces. Cooperation with EADS.
Puma	Multipurpose/recon.	6	9	0.4	11	1 x 600W d.c. electric	Aerovirement, various	EO/IR, Chem. sensing	25-60	4 hr./15 mi.	12,500	Under development for US military.
Raven	Recon./surveillance	3	4.4	0.3	4.5	1 x 200W d.c. electric	EO/IR	EO/IR	25-60	1 hr./0.5 mi.	10,000	Under development for US Army.
SOAR	Recon./targeting	1	1.5	0.2	1	Ballistic launch/glide or electric	EO	EO	45	0.4 hr./16 mi.	10,000	Under development for US Army.
Wasp	Micro-AV demonstrator	0.7	1.2	—	0.4	1 x 10W d.c. electric	—	—	25-30	107 min./0.2 mi.	300	Under development for DARPA.
<i>ALTEC INDUSTRIES, Paris, France</i>												
Mart Mk. 2	—	10.6	11.2	1.2	242.5	1 x TTL WAE 342-30A	Altec	TV	119	4 hr.	9,850	In production.
S-Mart	Surveillance, EW	9.9	11.2	1.4	317	1 x Alvis 731	Altec or other	TV, ECM, ESM	119	7 hr.	9,850	In development.
<i>AURORA FLIGHT SCIENCES CORP., Manassas, VA, USA</i>												
Chiron	Marine/atmospheric science	31.5	38	3.6 x 5.5	5,000	2 x Con. IO360	Various	Scientific	115	10 hr.	20,000	Can be flown as UAV or manned.
Golden Eye 50	Multipurpose	2.25	5	1.5	16	1 x 3W d.c. electric	Various	EO, Chem. sensing	115	45 min.	5,000	Maritime law enforcement, homeland security.
Golden Eye 100	Multipurpose	5.5	10	3	150	1 x UAV Engines Ltd. AR 741 rotary	Various	Imaging	184	4 hr.	10,000	Intelligence, surveillance, recon. payload.
Mars Flyer	Mars ARES pgm.	14.7	20.5	2	238	No engine-glider	NASA/Aurora	Fit. Test instruments	55.9	2 hr.	120,000	Flight test vehicle for 2007-2008 Mars survey mission.
Perseus B	Atmospheric science	25	71.5	2.6 x 2.4	2,400	1 x Arion 2B	Various	Atmospheric sampling	60-220	24 hr.	65,000	Flown to 60,000 ft., June, 1998.
Theseus	Multipurpose	29	117	3.5	7,800	1 x ASE TPE331	Various	—	60-290	24 hr./6,000 mi.	65,000	In development.
UCAV (1/4 scale)	Tech. demonstrator	12	7	—	142	—	Aurora/Athena	Instrumentation	115	10 min.	500	Flight test.
<i>BAE SYSTEMS, Santa Monica, CA, USA</i>												
Skyeye R4E	Multipurpose	13.4	24	—	1,250	1 x UAV Engines Ltd. 52 hp. rotary	Various	EO/IR, EW, IRLS	125	8-12 hr./238 mi.	15,000+	Procured by US Army and others. In production.
<i>BAE SYSTEMS NORTH AMERICA, Austin, TX, USA</i>												
Kalkara	Target	18.1	9.9	1.25	1,100	1 x Microturbo TRI60-5	Various	Various	M 0.85	1.25 hr.	40,000	For Royal Australian Navy.
MQM-107E	Target	18.1	9.9	1.25	1,100	1 x Microturbo TRI60-5	Various	Various	M 0.85	1.25 hr.	40,000	For US Army, US Air Force and Republic of China (Taiwan).
<i>BAI AEROSYSTEMS INC., Easton, MD, USA</i>												
BQM-147A Dragon Drone/Exdrone	Multipurpose/recon.	6	8	0.75	100	1 x 100 cc, 2-stroke or heavy fuel	BAI, various	Various	80	2.5 hr./30 mi.	5,000	Several hundred produced since 1985.
Dragon Eye/Snake Eye/Evolution	Multipurpose/recon.	2	4	0.25	6.5	2 x Aveox electric	BAI, Indigo	TV, IR	45	1 hr./5 mi.	500	In production.
Isis	Multipurpose/recon.	14	24	2	350	1 x UAE Engines Ltd. rotary, 38 hp.	BAI, various	Various	120	24 hr./2,000 mi.	15,000	Production-ready.
Javelin	Recon.	6	8	0.5	18	1 x 2-stroke, 2 hp.	BAI, various	TV	55	2.5 hr./5 mi.	3,000	Production-ready.
Tern	Multipurpose/recon.	8	10	1	125	1 x 100 cc, 2-stroke	BAI, various	Various	75	4 hr./30 mi.	10,000	In production.
<i>BELL HELICOPTER TEXTRON, Fort Worth, TX, USA</i>												
HV-911 Eagle Eye	Multipurpose	17.3	15.3	2.8	2,600	1 x PWC PW200	Various	Radar, EO/IR	253	6 hr./127 mi.	20,000	Tiltrotor.
<i>BRANDBURY TOOL CO. INC., Gaithersburg, MD, USA</i>												
Scythe	Multipurpose/recon.	5	6	0.4	17	1 x 10 cc. heavyfuel or 2-stroke	Brandebury Tool	—	100	12 hr./1,000 mi.	12,000	Airframe in production; payload in development.
<i>CHUNG-SHAN INSTITUTE OF SCIENCE AND TECHNOLOGY (CSIST), Taoyuan, Taiwan</i>												
Kestrel 2	Multipurpose	13.1	16.4	—	264	—	—	Flir/TV	80-115	8 hr.	12,000	—
<i>COMPOSITE ENGINEERING INC., Sacramento, CA, USA</i>												
BQM-167 Skeeter	Target	20	10	—	—	1 x tj.	Raytheon	Radar reflectors	600	2 hr.	40,000	Selected as US Air Force subscale target in 2002.

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DRS UNMANNED TECHNOLOGIES, INC., Mineral Wells, TX, USA												
Neptune	Recon./surv./target	6	7	4.8 x 2.3	116	1 x LAE 150, 14 hp.	Various	EO/IR/various	98	3 hr. at 40 mi.	8,000	Maritime vehicle. Pneumatic launch; skid or chute recovery.
Sentry	Recon./surv./target	8	11	3.4 x 2.5	250	1 x Herbrandson 290, 28 hp.	Various	EO/IR/various	110	6 hr. at 62 mi.	10,000	Pneumatic or wheeled launch. Skid or wheeled recovery.
Sentry HP	Recon./surv./target	8.4	12.8	4.4 x 4.5	325	1 x Herbrandson 290, 28 hp.	Various	EO/IR/various	139	5 hr. at 62 mi.	10,000	Pneumatic or wheeled launch. Wheeled recovery.
EADS, Amsterdam, The Netherlands												
Eagle 1	Reconnaissance	28	49	—	2,700	1 x Rotax 914	EADS	Various	120	39 hr./2,050 mi.	30,000	Under development. Operational in 2003.
EADS-CAC SYSTEMES, La Chapelle Vendomoise, France												
ECLIPSE T1	Target	12	2.9	0.8	300	1 x SNPE rocket engine	CAC Systemes/various	IR & RF equip.	M 2.5	Ballistic	42,000	In service.
ECLIPSE T2	Target	13	3.3	0.8	450	1 x SNPE rocket engine	CAC Systemes/various	IR & RF equip.	M 4.3	Ballistic	250,000	In service.
FOX AT	Recon./surv./target	9.1	12	1.5	160/250	1 x Limbach 22 hp. recip.	CAC Systemes/various	CCD, IR	60-120	3 hr.	10,000	In service.
FOX TS1	Target	9.1	12	1.5	150	1 x Limbach 22 hp. recip.	CAC Systemes/various	Autop., GPS	60-200	1 hr./40 mi.	10,000	In service.
FOX TS3	Target	9.1	12	1.5	220	1 x Limbach 50 hp. recip.	CAC Systemes/various	Autop., nav., GPS	80-280	1 hr./40 mi.	12,000	In service.
POINTER	Recon./surv./target	6	9	0.5	8	Electric	CAC/Aerovironment/various	CCD/IR/various	20-40	1 hr.	3,000	In service. Joint with Aerovironment.
ELBIT, Silver Arrow, Rishon-Lezion, Israel												
Hermes 180	ISTAR	14.5	19.7	1.7	430	1x UEL AR-74-1000 38 hp. rotary	Various	EO, various	70-105	10 hr./95 mi.	15,000	Runway/catapult launch, runway/parachute/airbag, recovery.
Hermes 450	Multipurpose	20	34.5	1.7	990	1x UEL AR-80-1010 52 hp. rotary	Various	EO, SAR	70-95	20 hr./125 mi.	18,000	Operational.
Hermes 1500	Recon./surv./target	30.8	49.2	2.4 x 3	3,640	2 x Rotax 914, 100 hp. (ea.), rotary	Various	EO, SAR	80-130	26 hr./125 mi.	30,000	Multi-payload UAV.
Mini-V	Recon./surveillance	9	12	0.7 x 0.7	110	2 x 5.5 hp., 2-stroke	Various	EO	60-85	5 hr./30 mi.	12,000	Catapult launch, parachute, recovery.
Seagull	Recon./surveillance	—	7	—	12	Electric	Various	—	20-40	—	—	Expendable, air-launched mini UAV.
Skylark	Recon./surveillance	—	7	—	12	Electric	Various	—	20-40	—	—	Hand, bungee-launched mini UAV.
EMT INGENIEURGESELLSCHAFT, Penzburg, Germany												
Aladin	Recon./surv./target	5	5	—	7	Electric	Various	EO/IR	—	45 min./3 mi.	12,000	In service.
Luna	Recon./surv./target	7.4	13.9	—	6.6	1 x 8 hp.	Various	EO, IO, SAR	37-75	2 hr./50 mi.	10,000	In service.
ENICS NITS, Kazan, Russian Federation												
E85	Target	10.5	6.6	—	308	1 x K346S pulse jet.	—	TV, IR or rad. det.	373	43.5 mi.	9,843	Simulates cruise missiles.
E95	Target	6.9	7.9	0.8	132	1 x M150 pulse jet.	—	Smoke, flares, IR decoy	255	0.4/94 mi.; 0.6/116 mi.	10,000	Simulates cruise missiles, glide bombs.
R90	Tactical recon.	4.7	8.4	0.7	99	1 x M44D pulse jet.	—	TV	75	0.5 hr./36 mi.	10,000	Aircraft container-launched.
FINMECCANICA, Meteor, Rome, Italy												
Falco	Multipurpose	18	23.7	1.9	1,122	1 x 75 hp.	—	EO/IR/SAR	130	14 hr.	21,000	Radio-controlled and autonomous navigation. In flight trials.
Mirach 26	Surv./target/acq.	12.4	15.5	1.2	440	1 x 28 hp.	Various	TV, LLTV, Flir, Elint	140	5 hr.	13,000	In service. Booster launch, parachute recovery (Italian army).
Mirach 100/5	Target	13	6.9	1.4	740	1 x Microturbo TRS 18-1 tj.	Meteor, various	R/c, autom., RCS, IR	M 0.86	1.2 hr.	40,000	Training, threat simulation (France, Italy, NATO and UK).
Mirach 150	Reconnaissance	15.4	6.9	1.2	760	1 x Microturbo TRS 18-1 tj.	Various	TV, IR, various	M 0.7	1.3 hr.	26,500	In service w/Italian army. Booster launch, parachute recovery.
Nibbio	Reconnaissance	13	6.9	1.4	1,000	1 x Microturbo TRS 18-1 tj.	Meteor, various	ESM, IR	M. 0.84	1.5 hr.	40,000	Autonomous navigation. In flight trials.
FLIGHT REFUELLING LTD., Wimborne, Dorset, England, UK												
Falconet	Target	12	10	—	450	1 x Microturbo TJA24	Various	—	M 0.72	1 hr.	—	In service.
Raven	Recon./surveillance	10.5	12	—	185	1 x Aerrow Quadra 200 cc	Various	TV, Flir	75 (cruise)	3 hr. +/60 mi.	15,000	Catapult launch, parachute recovery.
FREEWING AERIAL ROBOTICS, College Park, MD, USA												
Scorpion 60	Multipurpose	6.8	9.8	1	83	1 x 12 hp. recip.	—	Various 25 lb.	125	2 hr.	5,000	Thrust vectoring. No launcher or parachute.
Scorpion 100	Multipurpose	11.8	16.1	1.7	—	1 x Rotax 52 hp.	—	Day/night EO; 50 lb.	173	3-5 hr.	15,000	With MATRA BAE for Marvel, w/NASA for MTPE.
FUJI HEAVY INDUSTRIES LTD., Utsunomiya, Japan												
BQM-34AJ/AJ KAI	Target	22.9	12.9	3.1	2,500	1 x CAE J69-T-29	JAEI Ltd.	R/c	M 0.95	805 mi.	55,000	Various training. Teledyne license.
FFOS	Surveillance	17.4	14.8	3.9	606	1 x MG6	Fuji	—	84	3 hr.	—	Rotary-winged vehicle.
J/AMQ-1	Target	11.1	6.9	1.1	519	1 x MHI TJIM3 tj.	Fuji	R/c	M 0.9	15.6 min.	—	Expendable drone for JASDF.
RPH-2	Multipurpose	31.1	15.7	4.2	660	1 x EC-68	Fuji	—	62	1 hr.	—	Helicopter type for agricultural and other uses.
GENERAL ATOMICS AERONAUTICAL SYSTEMS INC., San Diego, CA, USA												
Altair	High alt. research	36	86	3.7	7,500	1 x Honeywell TPE331-10	Various	Scientific	220	32 hr.	52,000	First flight 2003.
Altus 1	High alt. research	23.6	55.3	2.5	1,800	1 x Rotax turbo, gasoline	Various	Scientific	115	40 hr. +	45,000	—
Altus 2	High alt. research	23.6	55.3	2.5	1,800	1 x Rotax twin turbo, gasoline	Various	Scientific	115	40 hr. +	65,000	Customer: NASA.
GNAT 750	Recon./surveillance	18	35	2.5	1,130	1 x Rotax 582	Wescam	Day TV or Flir	100	40 hr.	20,000	Exported to Turkey.
IGNAT	Recon./surveillance	20.8	42.2	3.7	1,400	1 x Rotax 914 turbo, gasoline	Various	EO/IR or SAR	140	40 hr. +	25,000	In production.
Predator (MQ-1)	Recon./surv./target	27	48.7	3.7	2,250	1 x Rotax 914 turbo, gasoline	Various	EO/IR, SAR, weapons	140	40 hr. +	25,000	In production for US Air Force.
Predator B (MQ-9)	Recon./surv./target	36	66	3.7	10,500	1 x Honeywell TPE331-10	Various	EO/IR, SAR, weapons	220	28 hr.	50,000	In production for US Air Force.
Predator B Jet	Recon./surv./target	36	66	3.7	10,500	1 x Williams FJ44-2A	Various	EO/IR, SAR, weapons	270	12 hr.	60,000	First flight in 2002.
Prowler 2	Tactical surveillance	14	24	2.4	800	1 x Rotax 582 (heavy fuel options)	Wescam	EO/IR	115	14 hr.	18,000	First flight June, 1998.
HONEYWELL, Phoenix, AZ, USA												
OAH-1S	Target	48	48	—	10,000	1 x ASE T-53-L-703	—	—	150	2 hr./315 mi.	12,200	Hokum X look-alike. Flight test on AH-1 complete.
THE INSITU GROUP, Bingen, WA, USA												
Seascan	Recon./surveillance	10	4	0.7	40	1 x 3W d.c. electric	Hood Tech	TV	78	15 hr./1,100 mi.	16,000	—

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ISL INC., Bosch Aerospace Div., Brownsboro, AL, USA												
Auto Blimp	Advertising	115	34	34	3,060	2 x Rotax 912, 4-cycle, 80 hp.	Wescam	Video camera	40	14 hr./60 mi.	5,000	Small airship for commercial advertising.
LEARS 4	Recon., research	11	16	1.0	120	1 x 70 cc, recip.	Various	Various	100	14 hr./700 mi.	14,000	GPS autopilot. 60-lb. payload.
SASS LITE	Multimission	99	28	26	2,100	2 x Rotax 912, 4-cycle, 80 hp.	Various	MTI radar, Flir, video, EW	45	18-24 hr./60 mi.	6,500	Military, police airship. 400-lb. payload.
WASP	Reconnaissance	3	7	0.5	10	1 x 10 cc	Various	Video camera	40	1-5 hr./30 mi.	7,500	Military, environmental, security.
ISRAEL AIRCRAFT INDUSTRIES, Malat Div., Tel Aviv, Israel												
E-Hunter	Multipurpose	24.7	50.5	—	2,100	2 x 64 hp. Dual	IAI Tamam	TV, IR, custom	122	25 hr./175 mi.	20,000	Runway t.o./landing. Upgrade kit to Hunter.
Heron	Multipurpose	28.2	54.5	2.8	2,420	1 x 100 hp.	IAI Tamam	TV, IR, custom	138	50 hr./620 mi.	30,000	Demonstrator.
Heron TP	Multipurpose	39.4	75.5	—	7,720	1 x 1,200 hp. turboprop	IAI Tamam, various	TV, IR, custom	242	24 hr./620 mi.	45,000	—
Hunter	Recon./surv./target acq.	22.6	29.2	—	1,600	2 x 64 hp. Dual	IAI Tamam	TV, IR	127	12 hr./175 mi.	15,000	In production. US Army, French army operation.
Ranger	Recon./surv./target acq.	15.1	18.7	—	550	1 x 40 hp. recip.	IAI Tamam	TV, IR	137	5 hr./62 mi.	15,000	—
Searcher Mk. 2	Recon./surv./target acq.	19.2	28.1	—	939	1 x 73 hp. rotary	IAI Tamam	TV, Flir	124	16 hr./155 mi.	18,500	In production. In use in Israel.
KAMOV, Moscow, Russian Federation												
Ka-137	Multipurpose	17.4	—	3.9	615	1 x Hirth 2706 P05, 65 hp.	Various	Various	95	4 hr.	16,400	R/c helo. Programmable. In development.
NII KULON, Moscow, Russian Federation												
Filin	Tactical recon.	—	—	—	6,600	Turbojet	—	TV, IR, SLAR	590	1 hr./186 mi.	19,686	Part of Malakit-F system, in development.
Moskit (Yula)	Tactical recon.	13.3	—	20.3	638	—	—	TV, IR, rad. det.	124	1.5 hr./50 mi.	11,483	Part of Yula recon. system.
MEGGITT DEFENCE SYSTEMS LTD., Ashford, Kent, England, UK												
Banshee BT13-400	Target/reconnaissance	10.0	8.2	1.0	200	1 x MDS 342 cc	Meggitt	Flares	54-200	1.5 hr.	23,000	Used by 30+ countries. Reusable. Visual or GPS navigation.
Banshee BT13-400	Target/reconnaissance	10.0	8.2	1.0	200	1 x MDS 520 cc	Meggitt	Countermeasures, camera	57-240	2.0 hr.	23,000	Reusable. Visual or GPS navigation.
Snipe Mk. 5	Aerial target	8.7	10	0.4	145	1 x MDS 342 cc	Meggitt	Flares	180	1.2 hr.	18,000	Used by 15+ countries.
Snipe Mk. 15	Aerial target	5.3	7.3	0.8	33	1 x MDS 60 cc	Meggitt	Flares	130	0.5 hr.	5,000	Used by 25+ countries.
Spectre 2	Surveillance, EW	8.9	10.7	1.5	350	1 x MDS 342 cc	Meggitt	IR camera, EW	77-150	3-6 hr.	23,000	In service in France as Crecerelle.
Voodoo	Target/surveillance	11.9	10.9	1.6	440	1 x MDS 955 cc	Meggitt	EO/IR countermeasures	90-350	1.5 hr.	20,000	High speed, sea-skimming capability.
MIG RUSSIAN AIRCRAFT CORP., Moscow, Russian Federation												
M-21	Target	40	23.5	3.35	—	1 x Tum P-13 or P-25	—	Telemetry	< M 1.0	—	—	MiG-21 target.
MISSION TECHNOLOGIES INC., San Antonio, TX, USA												
Buster	Recon./surveillance	3.3	4	—	10	1 x 1.6 hp. recip.	DRS	EO/IR	35-80	4 hr.	10,000	Launch from elastic-powered rail.
Hellfox	Multimission	10	11	—	350	1 x 38 hp. recip.	Various	CCD camera, Flir, SAR	60-120	8 hr.	18,000	Short takeoff and landing.
Mini-Vanguard	Multimission/surveillance	6.6	7.1	—	105	1 x 17 hp. recip.	Various	EO/IR, CCD camera	50-110	4 hr.	15,000	For Swedish forces.
NORTHROP GRUMMAN CORP., Northrop Grumman Integrated Systems, El Segundo, CA, USA												
BQM-34A	Target	22.9	12.9	3.1	2,500	1 x J85-GE-100 tj.	Various	Radar/IR augmentation	M 0.92	1.9 hr.	60,000	Highly maneuverable target. For US Air Force.
BQM-34S	Target	22.9	12.9	3.1	2,500	1 x J85-GE-100 tj.	Various	Radar/IR augmentation	M 0.92	1.9 hr.	60,000	Low altitude to 10 ft. For US Navy.
BQM-74E	Target	12.9	5.6	1.1	595	1 x WI 24-8, 240 lb. t.	Various	Radar/IR augmentation	M 0.82	1.3 hr.	40,000	Simulates antiship missiles. Chukar 3 is international product.
BQM-74F	Target	15	7	1.2	700	1 x WI 24-8G, 300 lb. t.	Various	Radar/IR augmentation	M 0.92	1.9 hr.	40,000	In development for US Navy.
Fire Scout (RQ-8A)	Recon.	22.9	27.5 (rotor)	—	3,150	1 x RR 250-C20W ts.	Northrop Grumman	EO/IR	144	8 hr./126 mi.	20,000	In development and low rate initial production.
Global Hawk (RQ-4A)	Recon.	44.4	116.2	4.8	25,600	1 x RR AE3007H lf.	Northrop Grumman	SAR/MTI, EO, IR	454	42 hr./16,566 mi.	65,000	In production.
M324	Recon.	20.2	11	—	2,400	1 x Teledyne CAE 373-8C	CAI/Honeywell	Wet film camera	M 0.85	1,610 mi.	43,000	Medium range recon. For Egyptian air force.
PEOPLE'S REPUBLIC OF CHINA												
ASN-206	Recon./surveillance	12.5	19.7	—	488.4	1 x HS-700, recip.	—	—	113	4-8 hr./80 mi.	—	Made by Xian ASN Technology Group.
B-2	Target	8.4	8.1	—	123.5	1 x HUOSAI 16 recip.	CSFI	R/c	149	1 hr.	—	—
Changhong I	Recon./surv./target	29.4	32	—	3,750	1 x WP-11	—	—	500	3 hr.	—	Made by Beijing Aerospace University.
Changkong IC	Target	27.8	24.7	1.9	5,401	1 x WP6 tj.	NAI	R/c	565	45 min.	—	Made by Nanjing Aerospace University.
D-4	Target	10.1	14.1	—	308	1 x HUOSAI 510 recip.	NPU	R/c	106	2.6 hr.	—	—
PIONEER UAV INC., Hunt Valley, MD, USA												
RQ-2B Pioneer	Recon./surv./target	13.9	16.8	1.2	450	1 x Sachs SF-350	IAI-Tamam, Wescam	IR & TV	115	5.5 hr./115 mi.	15,000	Joint AAI/IAI project. In service with US Marines.
RAYTHEON AIRCRAFT CO. (Beech), Wichita, KS, USA												
AQM-37A	Target	12.6	3.3	1.1	560	1 x Sabreliner-Premier RM-6599 liq. rocket	Raytheon	Programmed	M 0.7-2	138 mi.	70,000	Low/high altitude target.
AQM-37 Ballistic	Target	12.6	3.3	1.1	581	1 x Sabreliner-Premier RM-6599 liq. rocket	Raytheon	Radio cmd./preprog. autop.	M 3-5	168 mi.	330,000	Lower tier ballistic threat profiles.
AQM-37C/D	Target	12.6	3.3	1.1	581	1 x Sabreliner-Premier RM-6599 liq. rocket	Raytheon	Radio cmd./preprog. autop.	M 1-3.2	198 mi.	80,000	High speed/high altitude command dive and maneuvering.
AQM-37EP	Target	12.6	3.3	1.1	600	1 x Sabreliner-Premier RM-6599 liq. rocket	Raytheon	Radio cmd./preprog. autop.	M 1-4	172 mi.	100,000	Extended performance version, increased speed and altitude.
MQM-107B/D	Target	18.1	9.8	1.3	1,250	1 x Microturbo TRI 60-2-074	Raytheon	Radio cmd.	M 0.8	90 min./125 min.	44,000	Recoverable 5.5g instantaneous. Towed target.
MQM-107D	Target	18.1	9.8	1.3	1,250	1 x Microturbo TRI 60-5-220 or Teledyne CAE 373-8B	Raytheon	Radio cmd.	M 0.8	90 min./125 min.	44,000	Recoverable 5.5g instantaneous. Towed target.
MQM-107E	Target	18.1	9.8	1.3	1,250	1 x Microturbo TRI 60-5-220	Raytheon	Radio cmd./preprog. autop.	M 0.85	90 min./125 min.	44,000	Recoverable 6.25g instantaneous. Towed target, advanced maneuvers.
Super MQM	Target	19.2	9.8	1.3	1,440	1 x Microturbo TRI 60-5-220 or TRI 60-20	Raytheon	Radio cmd./prog.	M 0.93	174 min.	44,000	Recoverable +7g, towed target, advanced maneuvers.

UNMANNED AERIAL VEHICLES AND DRONES

GENERAL DATA		DIMENSIONS AND WEIGHTS				POWERPLANT	PAYLOAD		PERFORMANCE			REMARKS/STATUS/OUTLOOK
DESIGNATION	MISSION	OVERALL LENGTH (FT.)	MAX. OVERALL SPAN (FT.)	BODY DIA. (FT.)	LAUNCH WT., LESS BOOSTER (LB.)	NUMBER, MAKE & MODEL	MANUFACTURER	TYPE	SPEED (MPH. OR NO.)	ENDURANCE (HR.) / MAX. RANGE (MI.)	MAX. ALTITUDE (FT.)	
<i>RUAG AEROSPACE, Emmen, Switzerland</i>												
Ranger	Recon./surv./target	15.1	18.7	—	605	1 x Goebler-Hirth 42 hp., 2-stroke	IAI/Taman	EO	60-130	8 hr./97 mi.	18,000	Operational with Finnish and Swiss forces.
<i>SAGEM SA., Defence & Security, Paris, France</i>												
Crecerelle	Recon./surv./target	9.02	10.8	—	265	1 x recip. engine	SAGEM	Flir	155	5 hr.	15,000	Real-time video downlink. Deployed w/French army.
Crecerelle-EW	Comm. jamming	9.02	10.8	—	265	1 x rotary engine	Thales	EW	155	3.5 hr.	15,000	EW version is for comm. jamming.
Sperwer-EC/LE	Recon./multipurpose	11.05	21	—	770	1 x 70 hp., 2-stroke	SAGEM	Day TV, Flir, SAR, Airborne relay	95	12 hr./125 mi.	20,000	In production. In development for recon./target and radar jamming.
Sperwer/Ugglan	Recon./target	11.5	14.2	—	660	1 x 70 hp., 2-stroke	SAGEM	Day TV, Flir, EW, SAR	130	6 hr./125 mi.	17,000	In production for Dutch, Swedish (UGGLAN), Danish, French and Greek armies.
<i>SCALED COMPOSITES, Mojave, CA, USA</i>												
Proteus	Recon./scientific	58	95	3.75	12,500	2 x Williams-Rolls FJ44-2E tf.	Various	Various	M 0.4	18 hr./500 mi., 6 hr./3,000 mi.	63,500	Piloted version. UAV systems testbed.
<i>STN ATLAS ELECTRONIK, Bremen, Germany</i>												
Fledermaus	EW	8.0	11.9	1.2	419	1 x 45 hp. recip.	EADS/SSE	ESM	95	5 hr.	13,000	Based on KZO.
KZO	Recon./surv./target	7.4	11.2	1.2	355	1 x 30 hp. recip.	STN Atlas	Flir	95	3.5 hr. +	13,000	In production for German army.
Taifun	Recon. and attack	6.9	7.4	1.1	353	1 x 45 hp. recip.	EADS/Diehl	SAR/warhead	95	4 hr. +	13,000	In development for German army. 2005 entry into service.
Tucan/Mucke	EW	8.0	11.9	1.2	419	1 x 45 hp. recip.	EADS	Jammer	95	5 hr.	13,000	Based on KZO.
<i>STRELA PRODUCTION ASSN., Orenburg, Russian Federation</i>												
La-17MM	Target	27.4	24.6	1.8	6,743	1 x R11K tj.	—	Transponder	596	1 hr.	59,000	Lavochkin design. Standard target since 1956. Production ended.
M-932 Dan	Target	15.1	8.8	1.7	759	1 x MD-120 tj.	—	Transponder	440	40 min.	29,500	Replacement for La-17. Recoverable, ground-launched.
<i>A.N. TUPOLEV ANTK, Moscow, Russian Federation</i>												
Tu-123 (Yastreb)	Strategic reconnaissance	88.3	26.1	—	84,700	2 x R-15-300 tj.	—	Cameras	M 2.55	1.5 hr.	72,182	Retired mid-80s. May be in republics.
Tu-141 (VR-2 Strizh)	Tactical reconnaissance	46.9	12.5	—	11,814	1 x KR-17A tj.	—	TV, IR, rad. det.	683	621 mi.	19,686	152 built 1979-89.
Tu-243 (VR-3 Reys-D)	Tactical reconnaissance	27.2	7.4	—	3,080	1 x Izotov TR-3-117 tj.	—	TV, IR, rad. det.	584	118 mi.	16,405	Tu-300 is replacement.
<i>A.S. YAKOVLEV DESIGN BUREAU, Moscow, Russian Federation</i>												
Pchela 1	Recon.	9.1	10.7	1	304	1 x Kuznetsov, 32 hp.	—	TV	97	8,202	8,200	Entered service in 1997 as part of Stroy-PM system.
Yak-060	Recon./EW	8.8	7.8	1	216	1 x Kuznetsov, 20 hp.	—	TV or EW jammer	76	8,202	8,200	Limited production in 1982 as part of Stroy-PM system.

