



STANDARD AIRCRAFT CHARACTERISTICS

AH-1T

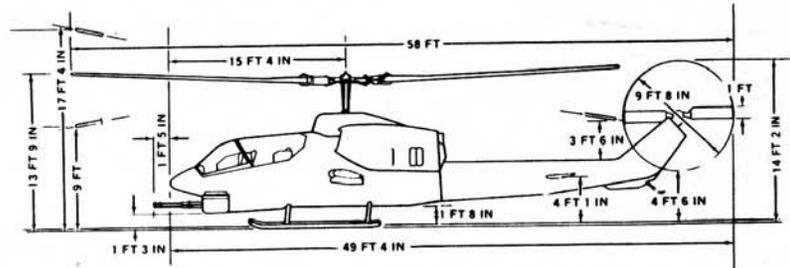
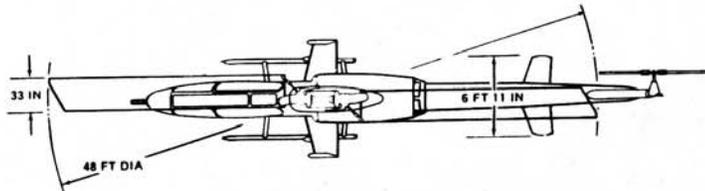
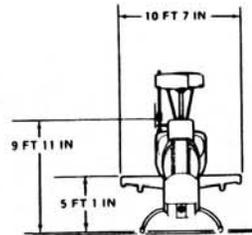
SEA COBRA

BELL

NOTE

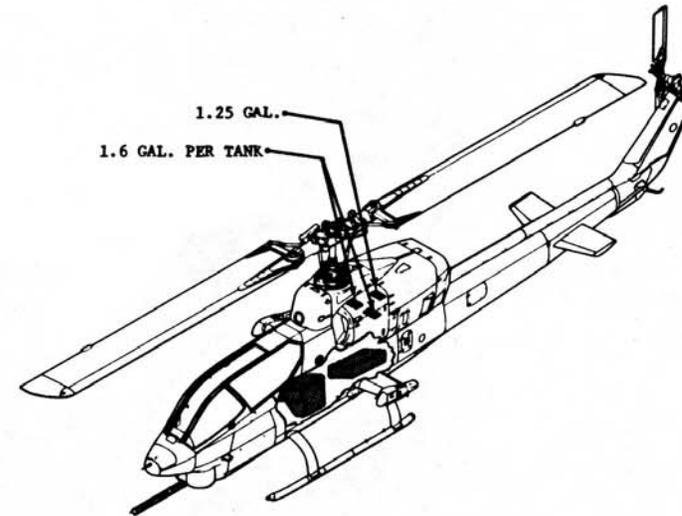
ALL INQUIRES CONCERNING DATA
IN THIS CHART SHOULD BE DIRECTED
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NAVAL AIR SYSTEMS COMMAND
NAVY DEPARTMENT



DESCRIPTIVE ARRANGEMENT

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NAVY DEPARTMENT

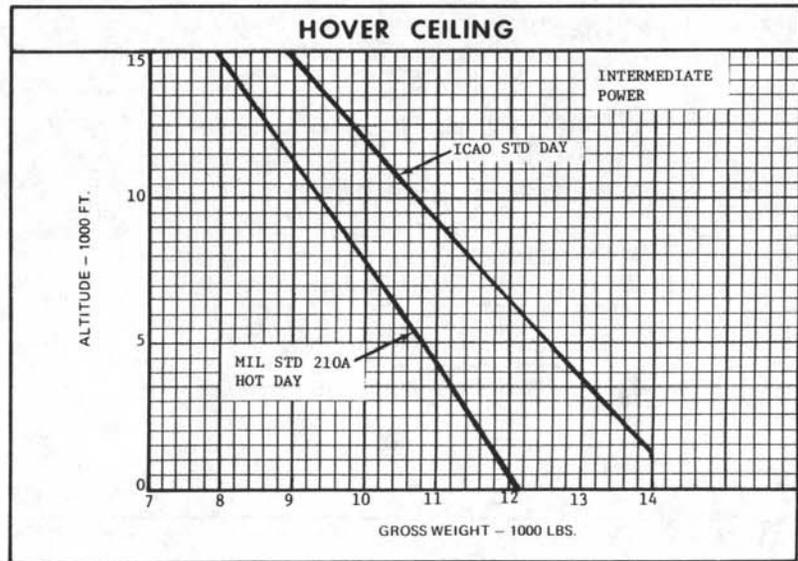
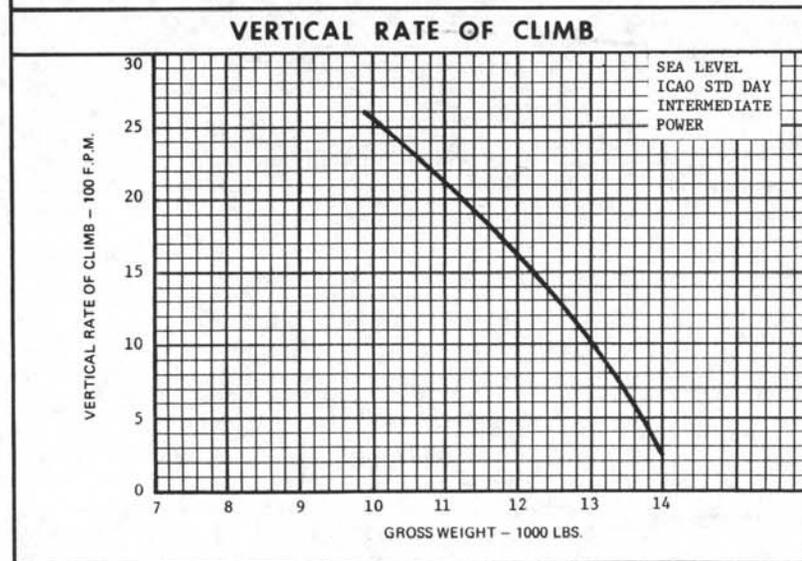
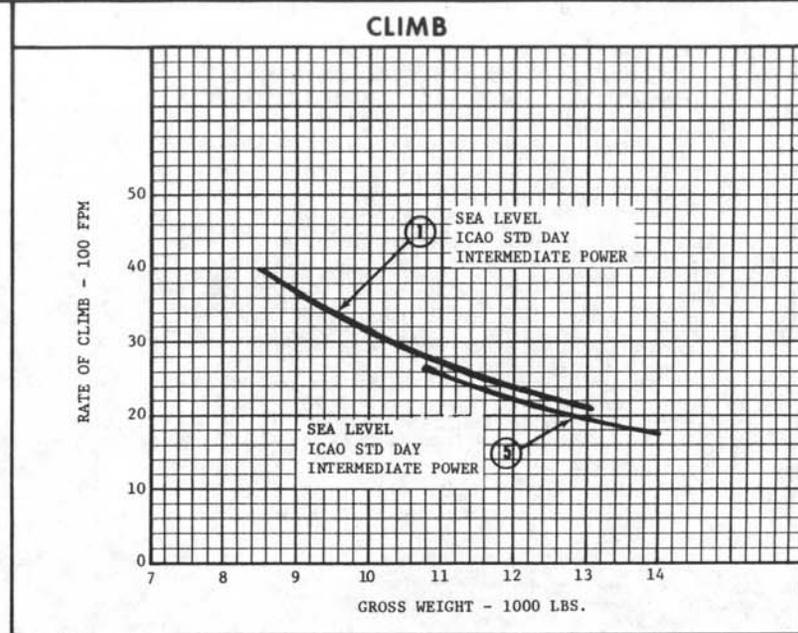
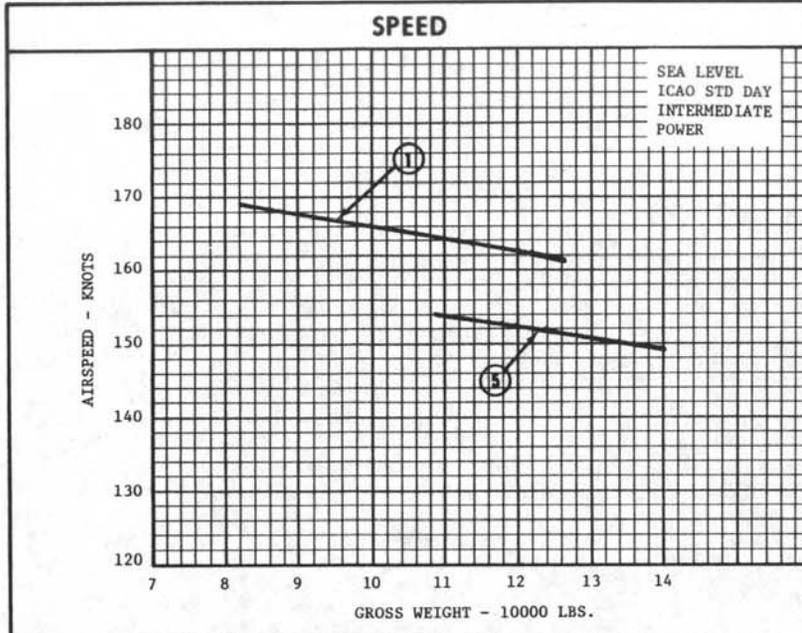


FUEL (GAL)

OIL (GAL)

ARMAMENT AND TANKAGE

POWER PLANT	MISSION AND DESCRIPTION	WEIGHTS																																																																		
<p>No. & Model . . . (1) T400-WV-402 Manufacturer . . . United Aircraft of Canada Pratt and Whitney)</p> <p>Engine Spec. No. 743A Type Twin Section Free Power Turbine with Reduction Gearbox</p> <p>Gear Reduction Ratios Main Rotor 21.288:1 Tail Rotor 4.520:1</p> <p style="text-align: center;">RATINGS</p> <table border="1"> <thead> <tr> <th></th> <th>SHP</th> <th>RPM</th> <th>ALT</th> </tr> </thead> <tbody> <tr> <td>Intermediate</td> <td>1970</td> <td>6600</td> <td>0</td> </tr> <tr> <td>Maximum Continuous</td> <td>1673</td> <td>6600</td> <td>0</td> </tr> <tr> <td colspan="4" style="text-align: center;">Single Power Section</td> </tr> <tr> <td>Intermediate</td> <td>970</td> <td>6600</td> <td>0</td> </tr> <tr> <td>Maximum Continuous</td> <td>824</td> <td>6600</td> <td>0</td> </tr> <tr> <td colspan="4" style="text-align: center;">Transmission Limits</td> </tr> <tr> <td>Takeoff (5 min)</td> <td>2050 SHP</td> <td></td> <td></td> </tr> <tr> <td>Maximum Continuous</td> <td>1850 SHP</td> <td></td> <td></td> </tr> </tbody> </table>		SHP	RPM	ALT	Intermediate	1970	6600	0	Maximum Continuous	1673	6600	0	Single Power Section				Intermediate	970	6600	0	Maximum Continuous	824	6600	0	Transmission Limits				Takeoff (5 min)	2050 SHP			Maximum Continuous	1850 SHP			<p>The primary mission of this aircraft is that of an armed tactical helicopter capable of delivering weapons fire, low altitude high speed flights, search and target acquisition, reconnaissance by five, multiple weapons fire support, and troop helicopter support. The aircraft is capable of performing this mission from prepared or unprepared areas, day or night, and operation from ships at sea.</p> <p>The gas turbine powered twin sea cobra is of combat design, featuring tandem seating to give both pilot and gunner excellent visibility. Both crew stations have flight control and fire control systems permitting flexibility in division of functions under normal and emergency situations.</p> <p>The twin engine installation gives increased safety and reliability. The 2050 shp transmission can transmit the full rated engine power under all conditions except for density altitudes well below sea level. A mission designed fuselage combined with the improved Model 214 rotor system gives increased load capability and speed. Four wing stores stations and integral chin turret provide good armament versatility with the capability of quickly mounting a wide variety of weapons to match the desired mission. Most components have been proven in the AH-1J and Model 214, assuring reliability and maintainability.</p> <p style="text-align: center;">DEVELOPMENT</p> <table border="1"> <thead> <tr> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Contract Placement</td> <td>June 23, 1975</td> </tr> <tr> <td>First Flight</td> <td>May 20, 1976</td> </tr> </tbody> </table>			Contract Placement	June 23, 1975	First Flight	May 20, 1976	<table border="1"> <thead> <tr> <th>Loading</th> <th>LB.</th> <th>LF</th> </tr> </thead> <tbody> <tr> <td>Empty</td> <td>8030</td> <td>-</td> </tr> <tr> <td>Basic</td> <td>8076</td> <td>-</td> </tr> <tr> <td>Design</td> <td>10,000</td> <td>3.5</td> </tr> <tr> <td>Maximum Takeoff</td> <td>14,000</td> <td>2.5</td> </tr> <tr> <td>Maximum Landing</td> <td>14,000</td> <td>2.5</td> </tr> </tbody> </table>	Loading	LB.	LF	Empty	8030	-	Basic	8076	-	Design	10,000	3.5	Maximum Takeoff	14,000	2.5	Maximum Landing	14,000	2.5						
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		<p style="text-align: center;">ORDNANCE</p> <p style="text-align: center;">20 MM CHIN TURRET WING STORES PYLONS (FOUR)</p> <p>Any combination of the following: LAU 61/A, 69/A, 68/A, 68A/A, and 68B/A rocket pods on sta. 1-4. CBU-55B fuel-air explosive on sta. 1 & 4 or 2 & 3. SU-44 Flare Dispenser on sta. 1-4. HTW, MK-155 - Mod 0 on sta. 1 & 4 using modified multiple sta. Bomb Rock (MSBR). M-118 Grenade Dispenser on sta. 1 & 4. MK-45 Parachute Flare on MSBR. Maximum ammunition capacity for the 20 MM chin turret is 750 rounds.</p> <p style="text-align: center;">ACCOMODATIONS</p> <table border="1"> <tbody> <tr> <td>Basic, Medium or Heavy Combat</td> <td></td> </tr> <tr> <td> Pilot</td> <td>1</td> </tr> <tr> <td> Gunner</td> <td>1</td> </tr> <tr> <td>Clean Mission</td> <td></td> </tr> <tr> <td> Pilot</td> <td>1</td> </tr> <tr> <td> Copilot</td> <td>1</td> </tr> </tbody> </table>	Basic, Medium or Heavy Combat		Pilot	1	Gunner	1	Clean Mission		Pilot	1	Copilot	1																																																						
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○ LOADING CONDITION COLUMN NUMBER

PERFORMANCE SUMMARY							
TAKE-OFF LOADING CONDITION		① CLEAN HIGH ALTITUDE	② ATTACK 2 LAU 68 PODS 750 RDS 20 MM	③ ATTACK 2 LAU 68 PODS 2 MINIGUN PODS 750 RDS 20 MM	④ CLOSE SUPPORT 2 LAU 68 PODS 2 MINIGUN PODS 750 RDS 20 MM	⑤ ATTACK 4 LAU 61A PODS 750 RDS 20 MM	⑥ FERRY CLEAN
TAKE-OFF WEIGHT	lb.	10,705(A)	11,746	12,401	12,401	13,928	10,705(A)
Fuel internal/external (JP-5)	lb./lb.	2,081/0	2,081/0	2,081/0	2,081/0	2,081/0	2,081/0
Payload	lb.	0	909	1,074	1,074	2,707	0
Disc loading	lb./sq. ft.	5.9	6.5	6.9	6.9	7.7	5.9
Vertical rate of climb at S.L.	(B) fpm.	2,258	1,770	1,390	1,390	301	2,258
Absolute hovering ceiling (OGE)	(B) ft.	10,000 (B)	7,150	5,350	5,350	1,200	10,000 (B)
Max. rate of climb at S.L.	(B) fpm.	2,880	2,460	2,190	2,190	1,785	2,880
Service ceiling	(C) ft.	10,000 (C,D)	10,000 (C,D)	10,000 (C,D)	10,000 (C,D)	7,400 (D)	10,000 (C,D)
Speed at S.L.	(B) kn.	165	161	157	157	149	165
Max speed/altitude	(B) kn./ft.	165/4,000	161/0	157/0	157/0	149/0	166/4,000
O.E.I. Service ceiling	(B) ft.	9,000	6,400	3,000	3,000	-100	9,000
Min. speed (O.E.I.)	(B) kn.	42	45	54	54	65	42
Max. speed (O.E.I.)	(B) kn.	112	109	105	105	95	112
Combat radius	n. mi.	165	116	113	74	108	314
Mission time	hrs.	2.81	1.63	1.63	2.31	1.63	2.60
Average cruising speed	kn.	121	150	146	121	138	121
Cruising altitude	ft.	10,000	S.L.	S.L.	S.L.	S.L.	10,000
Range	n. mi.	342	245	234	240	227	342
Average cruising speed	kn.	121	150	145	121	138	121
Cruising altitude	ft.	10,000	S.L.	S.L.	S.L.	S.L.	10,000
Maximum endurance	hrs.	3.42	2.73	2.62	2.62	2.41	3.42
Endurance speed	kn.	79	75	76	76	78	79
Endurance altitude	ft.	10,000	S.L.	S.L.	S.L.	S.L.	10,000

NOTES

- (A) Includes ammunition boxes for 20 MM cannon, which are required for proper CG.
- (B) At Intermediate Power
- (C) Limited by oxygen requirement; at maximum continuous power
- (D) At maximum continuous power

Performance Basis

- (1) All performance at standard day conditions
- (2) Flight test data from modified Model 309, April 1974
- (3) Engine specification fuel consumption increased 5%
- (4) 20 MM nose turret on all configurations