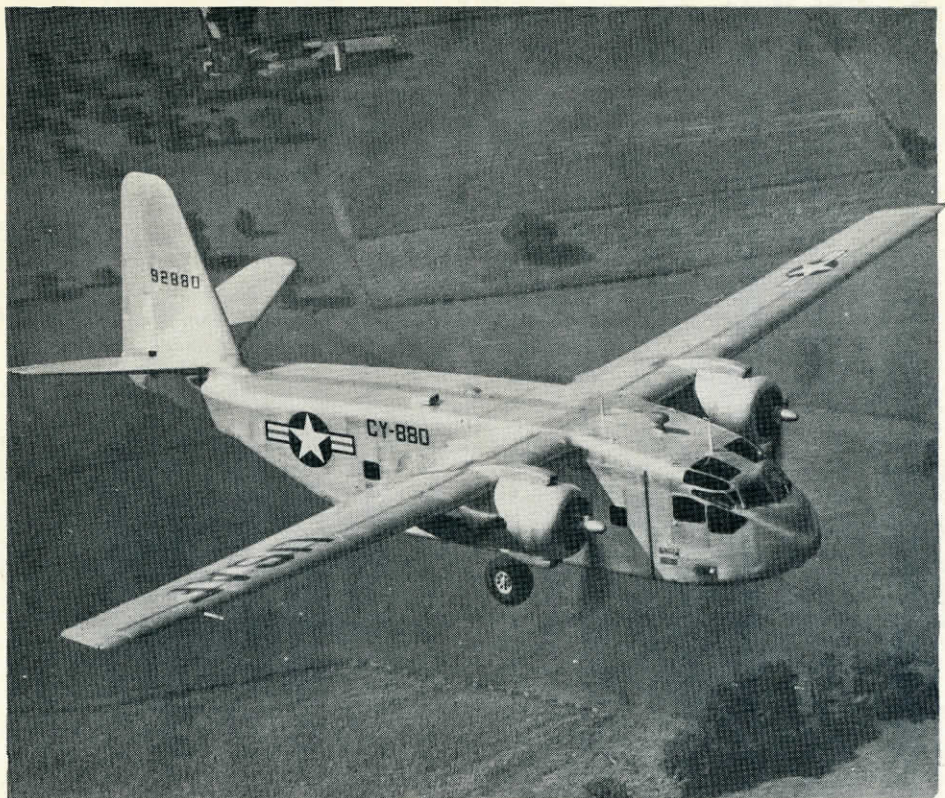




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YC-122C

Troop and Cargo Carrying Transport

Chase AIRCRAFT CO., Inc.
WEST TRENTON, NEW JERSEY

THE YC-122C

twin-engine cargo and troop carrying transport, was designed and constructed to meet aviation's ever increasing need for dependable cargo carriers, which offer economy and ease of operation in the movement of air cargo of all kinds.

To properly perform the mission for which it was designed, and at the same time, offer maximum protection to flight personnel, the YC-122C includes many unique and outstanding features.

Principal among these features are the convenient and rapid loading and unloading facilities provided by the spacious cargo compartment and a special loading ramp in the rear of the fuselage.

The combination loading ramp and cargo door, hydraulically operated, is a significant feature of Avitruc. The ramp section which extends the full width of the cargo compartment, drops to the ground while the door folds up into the plane, giving full head room to the largest piece of equipment carried. Conveniently located side doors may be opened in flight for dropping supplies, while the cargo door may be opened for dropping larger bundles. The low floor line (30" above ground level) further simplifies the task of loading. Cargo tie-down rings of 10,000 lbs. capacity are located on the floor of the cargo compartment on a standard 20" grid pattern, assuring positive tie-down of any cargo.

The floor of the cargo compartment is capable of supporting distributed loads of up to 500 lbs. psf. Two treadways accommodate vehicles with loads up to 4,000 lbs. per wheel (limit L.F. = 3.00)

Heavy shipments or vehicles without power can be pulled aboard by means of a cargo assist device (which can be mounted to cargo tie-down fittings) either through rear or side doors.

The provision for loading at truck bed height completely eliminates the hustle of fork lift trucks. The propeller pitch can be reversed, the plane backed into a loading area, the ramp lowered to a waiting motor truck, and cargo transfer made in a matter of minutes. Cumbersome shipments need not be disassembled for loading, and consequently may, in time of emergency, be put into service hours earlier.

The need for ease of handling characteristics was carefully considered in the YC-122C design. As a result, the training of new pilots or familiarization of experienced flight personnel would be greatly simplified in the event that rapid expansion of armed forces was necessary.

Among typical military loads which the YC-122C can accommodate are one 1 1/2 ton personnel carrier; 105 mm Howitzer plus one jeep; or comparable combination of wheeled units.

As a personnel carrier, it can accommodate 30 fully equipped troops. Personnel can enter either by side doors or ramp. Side doors may also be used for parachute jumping.

For use in the evacuation of wounded or for rescue operation, the plane can transport

24 litter patients, plus two attendants with medical equipment.

Its use as a personnel carrier or for evacuation in any climate, is enhanced by the installation of cockpit and cargo compartment heating systems.

Complete de-icing equipment offers efficient operation in cold weather climates.

The YC-122C is capable of being towed by other aircraft from prepared fields, or by snatch pick-up from unprepared fields. Easily removable nacelles make it possible for it to be towed either with or without engines. Also, it may be used as a glider tug since tow release assemblies are built into both the nose and rear of the fuselage.

Among the safety features offering protection to flight personnel, are a welded steel tube fuselage construction for crash protection, sturdy bulkhead between cockpit and cargo compartment as protection against load shifts, jettisonable self-sealing nacelle fuel tanks, and complete fire control instrumentation. Provisions are also made for the installation of droppable wing tip tanks for longer range operation.

Extreme short field landings are possible through the use of maximum flap deflection (75°) reversible propellers and excellent low speed lateral control.

SPECIFICATIONS

WING

Span	95 ft. 8 in.
Gross Area	812.8 sq. ft.
Total Aileron Area	46.72 sq. ft.
Total Flap Area	129.0 sq. ft.
Aspect Ratio	11.26

TAIL AREAS

Total Horizontal Area	192.9 sq. ft.
Total Vertical Area	121.1 sq. ft.
Stabilizer	113.5 sq. ft.
Elevator	79.4 sq. ft.
Fin	77.4 sq. ft.
Rudder	43.7 sq. ft.

FUSELAGE

Length	61 ft. 8 in.
Height to Fin Tip	24 ft. 8 in.
Cargo Compartment:	
Height	6 ft. 6 in.
Length	31 ft. 8 in.
Width	7 ft. 8 in.
Usable Floor Area	240 sq. ft.
Usable Cubage	1,560 cu. ft.

WEIGHTS

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Empty	19,000
Design Gross	32,000
Maximum Gross	40,000 (L. F. 2.4)
Normal Useful Load	13,000
Maximum Useful Load	21,000
Wing Loading	39.4 lbs. sq. ft.
Power Loading	11.2 lbs. per hp
Wheel Loading	3,500

LANDING GEAR

Type	Tricycle
Wheel Base	14 ft. 9.36 in.
Main Gear	Fixed
Tread	10 ft. 8 in.
Tire Size	17:00 x 16
Nose Wheel	Dual-Fixed
Tire Size	11:00 x 12
Shock Absorbers	Air-Oil

CONSTRUCTION

Wing	High-Cantilever
Covering	Aluminum Alloy
Rib	Truss and Web
Ailerons	Aluminum Alloy-Fabric Covering
Flaps	Aluminum Alloy
Fuselage	Welded Steel Tube
Covering	Aluminum Alloy
Tail	Single
Covering	Aluminum Alloy and Fabric

POWER PLANTS

No. Engines	Two
Make	Wright R-1820-101
Horsepower (Take-off)	1,425 at 2,700 RPM
Horsepower (Rated)	1,275 at 2,500 RPM

PROPELLERS

Make	Curtiss Electric
Blades	Three-Steel
Diameter	12 ft. 6 in.
Type	Constant Speed Full Feathering-reversible

PERFORMANCE

(Limit L.F. 3.0-Gross Weight 32,000)

High Speed	240 mph
Cruising Speed	200 mph
Landing Speed	85 mph
Stalling Speed	75 mph
Rate of Climb (S. L.)	1,340 FPM
Range:	
Combat-(Nacelle Tanks Only)	1300 miles
Normal-(Nacelle and Internal Wing Tanks)	2900 miles
Ferry-(Nacelle, Internal Wing and External Drop Tanks)	4540 miles
Service Ceiling	29,100 ft.
Take-off Distance Over 50 ft. Obstacle	1,150 ft.
Landing Distance Over 50 ft. Obstacle	900 ft.

ELECTRICAL SYSTEM

Voltage	24 volts
Battery Capacity	68 amp. hrs.
Generator Capacity	300 amps each

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AVITRUC—designed for the job