



*in the*

**HILLER 12/E...**

*top performance means more ton-miles per dollar*



## 12 E From a proven Army helicopter...

In early 1958, Hiller Helicopters began deliveries of its new H-23D helicopter to the U.S. Army. The H-23D was developed in a military-sponsored program to materially reduce helicopter operating costs through easier maintenance, fewer overhauls, and higher performance.

## 12 E A new utility model...

To the rugged H-23D design, Hiller has now introduced the new Lycoming VO-540 305 horsepower engine. Result: the 12E all-purpose utility helicopter—a spectacular new leader in helicopter performance.

## 12 E... with a new taste for work...

That means more payload moved in fewer trips—more ton-miles per dollar. The 12E brings to the light helicopter class a new versatility...the power to tackle many of the tasks previously restricted to larger helicopters.

1. Coordinated throttle-collective system.
2. Solenoid engaging starter button on collective stick replaces 12C manual type.
3. Redesigned and relocated cyclic control stick for greater pilot comfort.
4. Improved dielectric type fuel gage calibrated in lbs. insures greater fuel reading accuracy.
5. Increased C.G. travel for more loading freedom.
6. Improved cabin heating.
7. Light weight scissors assembly reduces cyclic feedback.
8. Hiller Rotomatic Control System now fitted with aerodynamic fairings for more efficient control and improved lift.
9. New collective pitch ballast system reduces collective stick forces.
10. All metal rotor blades are individually interchangeable.
11. Transmission designed for greatly extended periods between overhauls.
12. New light weight nickel cadmium battery.
13. 50 amp generator has double the 12C generator output.
14. Improved exhaust system.
15. Refined air induction and double filter system.
16. Tail rotor relocated for improved aerodynamic characteristics.
17. New laminated tail rotor tension-torsion bar similar to that of main rotor.
18. Minimized mechanical vibration with zero off-set flapping hinges.
19. Easily removable tail rotor drive system.
20. Entirely new 305 hp VO-540 Lycoming engine.
21. Refined engine mount assembly.
22. 46 gallon fuel cell.
23. Light weight landing gear.



## DATA AND DIMENSIONS

Construction All metal, semi-monocoque

Max. fuselage width	5.0 ft.
Max. fuselage length	27.8 ft.
Height (to top of cabin)	6.1 ft.
Height (to top of rotor)	9.8 ft.
Cabin width (max. interior)	4.9 ft.
Cabin width (at seat)	4.7 ft.
Cabin length (seat to nose)	4.7 ft.

Cabin height (floor to roof) 4.4 ft.

Power plant Lycoming VO-540-A1A

Normal rated power 305 hp at 3200 rpm  
at sea level

Main rotor diameter 35.4 ft.

Number of main rotor blades 2

Tail rotor diameter 5.5 ft.

Number of tail rotor blades 2

## WEIGHTS

Item	Lbs.
Empty Weight	1700
Useful Load	1000
Fuel	276
Oil	20
Pilot	170
Cargo or passengers	528
Gross Weight	2700

## PERFORMANCE SUMMARY

(With above weight)

Maximum permissible speed at S.L. (mph)	96
Cruise speed for max. range (mph)	82
Cruise speed (75% power) (mph)	98
Range at best cruise* (mi.)	185
Endurance* (hrs.)	2.7
Maximum rate of climb (ft./min.)	1,500
Maximum ceiling (ft.)	14,000
Service ceiling (ft.)	13,000
Hover ceiling (I.G.E.) (ft.)	3,500
Hover ceiling (O.G.E.) (ft.)	6,000

\*5 min. warm-up and hover allowance included.





### top power

The 12E is the most powerful helicopter in the two-to four place class. Engine is the Lycoming VO-540 rated at 305 horsepower. One of the best tests of this new performance is to observe how nimbly the 12E performs in transition from hover to forward flight. Compared with its commercial predecessor, the 12C, the new aircraft will transport 65% more payload, 50 miles further, and hover in ground effect 4 times higher.

### refined rotor system

All-metal rotor blades are individually interchangeable. Hiller Rotomatic Control System now fitted with fairings for more efficient control and improved lift characteristics. New light weight scissors assembly reduces cyclic feedback.



### new long-life transmission

One of the major growth potential components of the Army H-23D was its main transmission, which was originally designed for the higher power of the 12E. Compared with its predecessor, the new transmission achieves a 40% increase in horsepower capacity, and yet is 20% lighter.

### advanced tail rotor and drive system

The all new tail rotor system of the H-23D and 12E includes:  
Simplification of drive shaft couplings;  
Easy drive shaft removability;  
A revised gear box, relocating the tail rotor to the left side of the tail boom, and a new rotor with zero off-set flapping hinges... which completely eliminate tail rotor buzz.



### most cabin space

The three seat, dual control cockpit of the 12E is the most spacious in the light helicopter class. A number of instrument and control improvements, and a refined cabin heating system, are engineered for maximum pilot and passenger comfort.



## FOR MAXIMUM UTILITY...

New accessories have been developed for the 12E, to insure that every specialized operator may capitalize on the helicopter's exceptional versatility.

Among the principal available accessories:

HYDRAULIC PERSONNEL  
AND CARGO HOIST

QUICK-ATTACH LITTERS

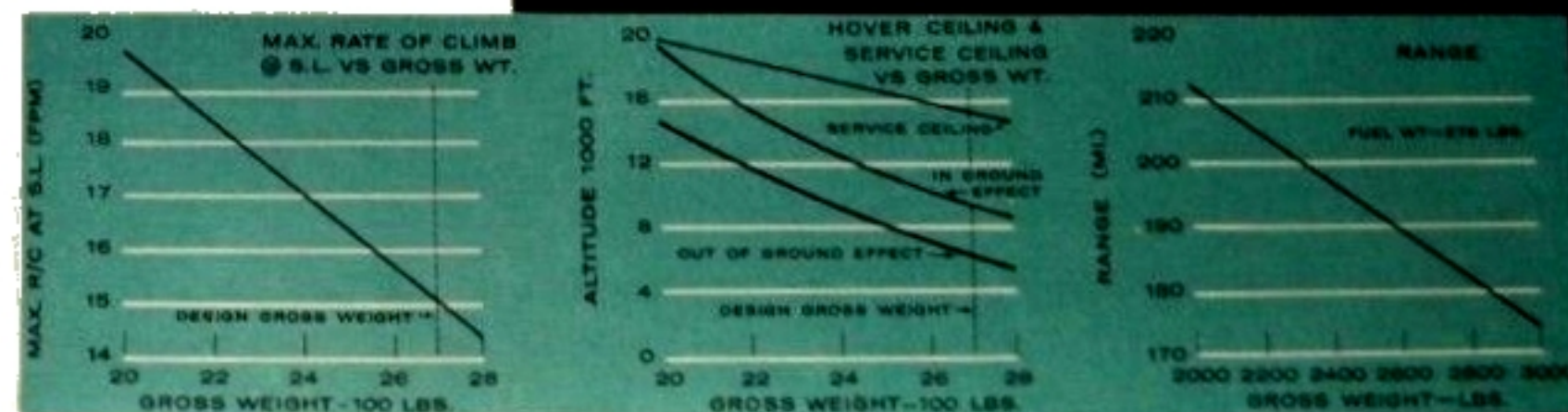
LIGHT WEIGHT FLOAT GEAR

QUICK-RELEASE CARGO SLING

CARGO RACKS

AGRICULTURAL DISPENSING  
EQUIPMENT

CONVERTIBLE TO  
FIRE FIGHTING GEAR





With the fast-growing, widespread acceptance of helicopters commercially, cost-conscious organizations are analyzing their operations for new economies and advantages possible through the use of helicopters. Many have uncovered recurring situations in which the helicopter is more economical than the cheapest surface vehicles.

Basically, the difference is performance: more payload faster. It stands to reason, therefore, that between helicopters, the one which offers the highest performance will, in the long run, bring its users the largest economies.

And there are many other essential qualities which make an advanced helicopter, such as dependability, safety, and well-engineered maintenance characteristics...

*The HILLER 12E invites comparison... point for point.*

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