

# CH-53E SUPER STALLION



**BIG  
BOLD  
NEEDED**



**SIKORSKY AIRCRAFT**







## TODAY - THAT NEED IS EVEN MORE URGENT.

To satisfy the requirements of both services, the Department of Defense authorized the Navy in 1971 to proceed with the prototype development of the CH-53E, a triple-turbine powered, seven-bladed helicopter with a 16-ton payload capability over a radius of 50 n.m. - and one that is shipboard compatible. Named the "Super Stallion", this helicopter built by Sikorsky, doubles the lift of the Marine CH-53D medium transport.

The CH-53E serves these needs:

- Amphibious assault ● Aircraft and equipment retrieval
- Vertical onboard delivery ● Container logistics

And is shipboard compatible

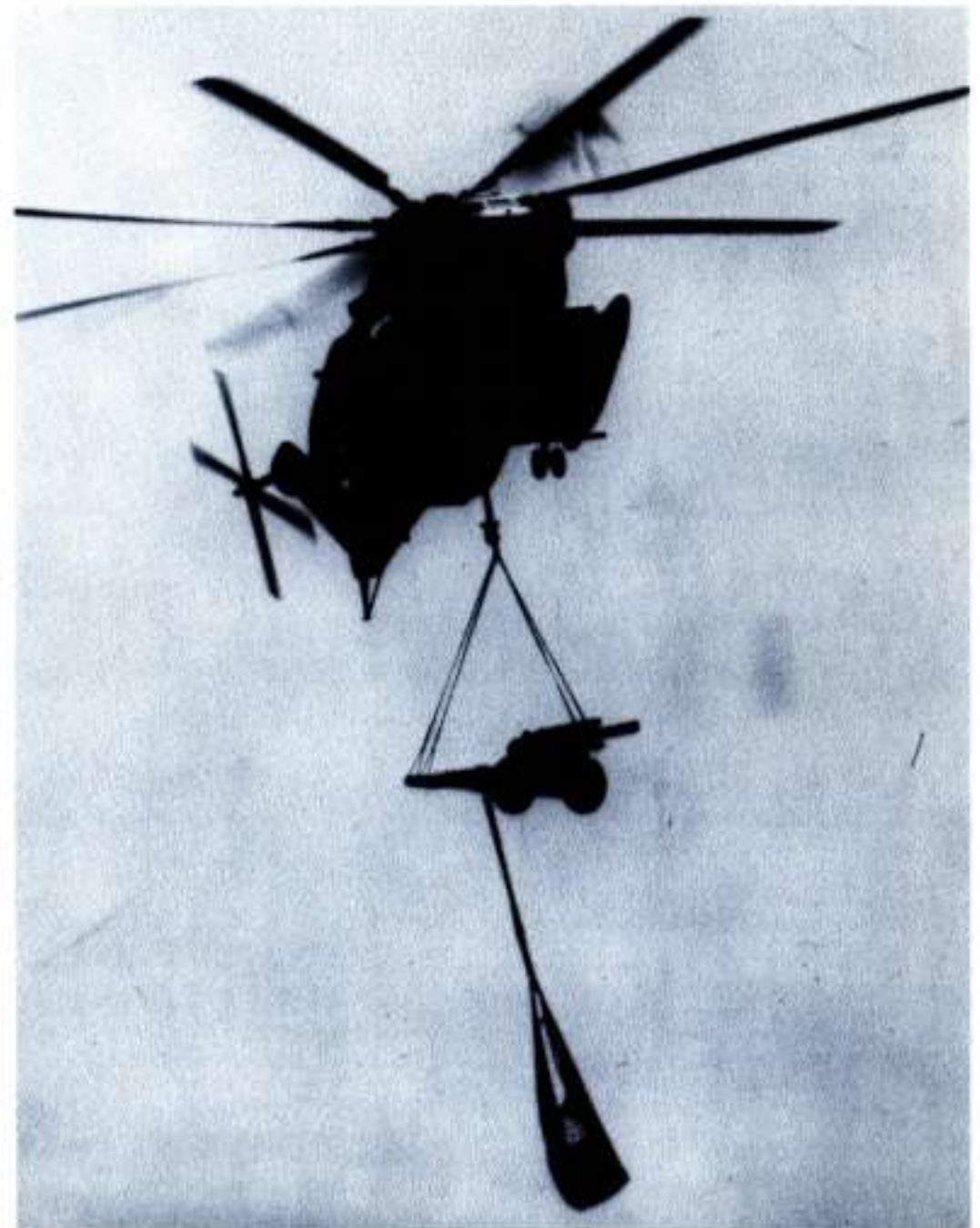


**No other helicopter in the Western World can match it**

## AMPHIBIOUS ASSAULT

Marine studies of past combat operations and scenarios of potential combat areas have highlighted the vulnerability of unsupported heliborne assault forces against a highly mechanized enemy. The CH-53E provides the lift required for essential weapons, vehicles and engineering equipment needed immediately upon landing the assault forces.

The CH-53E can respond quickly.





## AIRCRAFT/EQUIPMENT RETRIEVAL

With the CH-53E, all Army, Navy, Marine and Air Force helicopters can be retrieved - even another CH-53E. All present Navy and Marine tactical fixed wing aircraft can be retrieved. Only the F-14, E-2, and A-6 require minor disassembly.

By lifting battle-damaged aircraft from carrier decks to another ship or directly to a repair facility, the CH-53E allows carriers to maintain a higher state of combat readiness.

The CH-53E keeps proving it has the muscle and stamina to do the job.

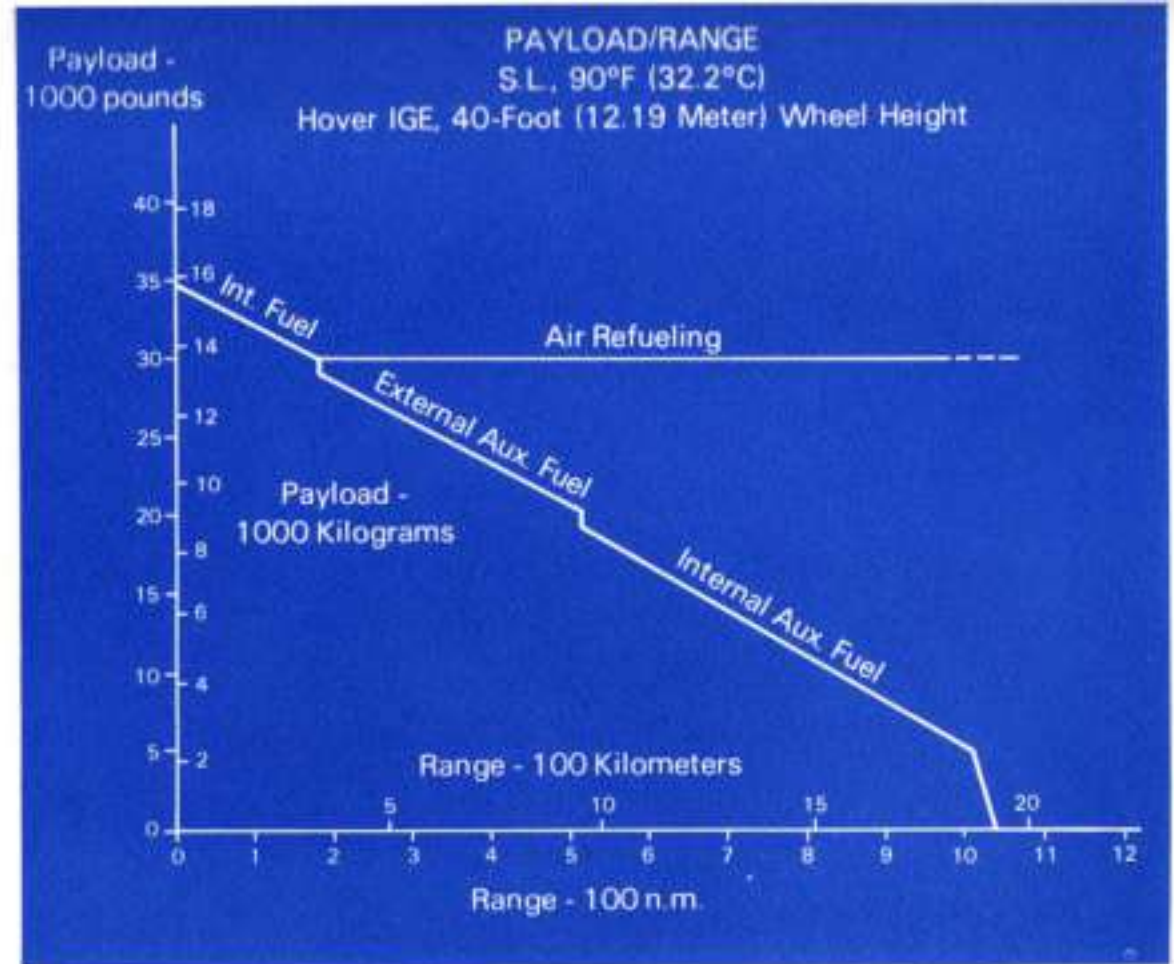


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The CH-53E is NEEDED for

## VERTICAL ONBOARD DELIVERY

With extended range and increased payload, the CH-53E can deliver men, high priority goods, needed spare parts and mail to virtually all kinds of ships - whether at anchor or underway. It can make hover deliveries to ships without landing platforms.





A J-79 engine used in F4s in its shipping container can be delivered on board.

**Cabin dimensions:** 30 ft. (9.14 m.) long  
6-1/2 ft. (1.98 m.) high  
7-1/2 ft. (2.29 m.) wide

**Accommodates:** 7 standard 40 in. x 48 in. (1.02 m. x 1.22 m.) pallets or 55 passengers



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## CONTAINER LOGISTICS

### Ship to Shore/Ship to Ship

By 1980, more than 80 percent of all cargo will be containerized. Because these containers are large and bulky, they cannot be transferred from ship to shore without sophisticated port facilities, nor can they be transferred from one ship to another at sea.

In any future military emergency, service fleet activities on the open sea will include transferring containerized supplies - from the deck of a delivering commercial containership to the deck of a replenishment ship servicing combat forces.





With the CH-53E, containers can be lifted from underway containerships to stores ships or combat units.

As more and more U. S. cargo is containerized, a helicopter with a heavy lift capability provides a better means to move it.

The CH-53E is the answer.



The CH-53E is

## **SHIPBOARD COMPATIBLE**

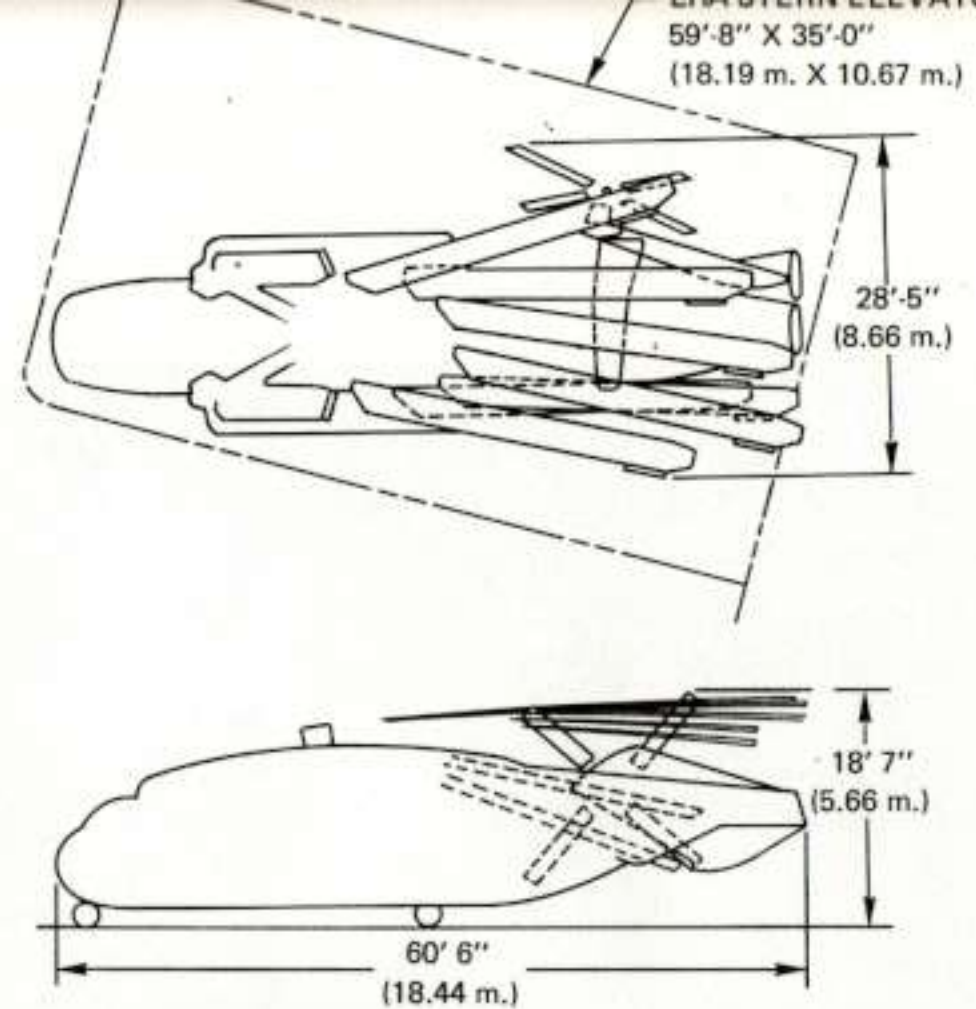
With powered main rotor and tail pylon fold systems, the aircraft is fully compatible with and can be based aboard the LPH and LHA amphibious ships. It can conduct operations from the flight decks of the LPD, LSD and LST ships of the Amphibious Task Force.

The versatile CH-53E can also operate from the flight decks of the Navy's AOEs and AORs.

When folded the CH-53E occupies only 10 percent more space than a folded CH-53D.

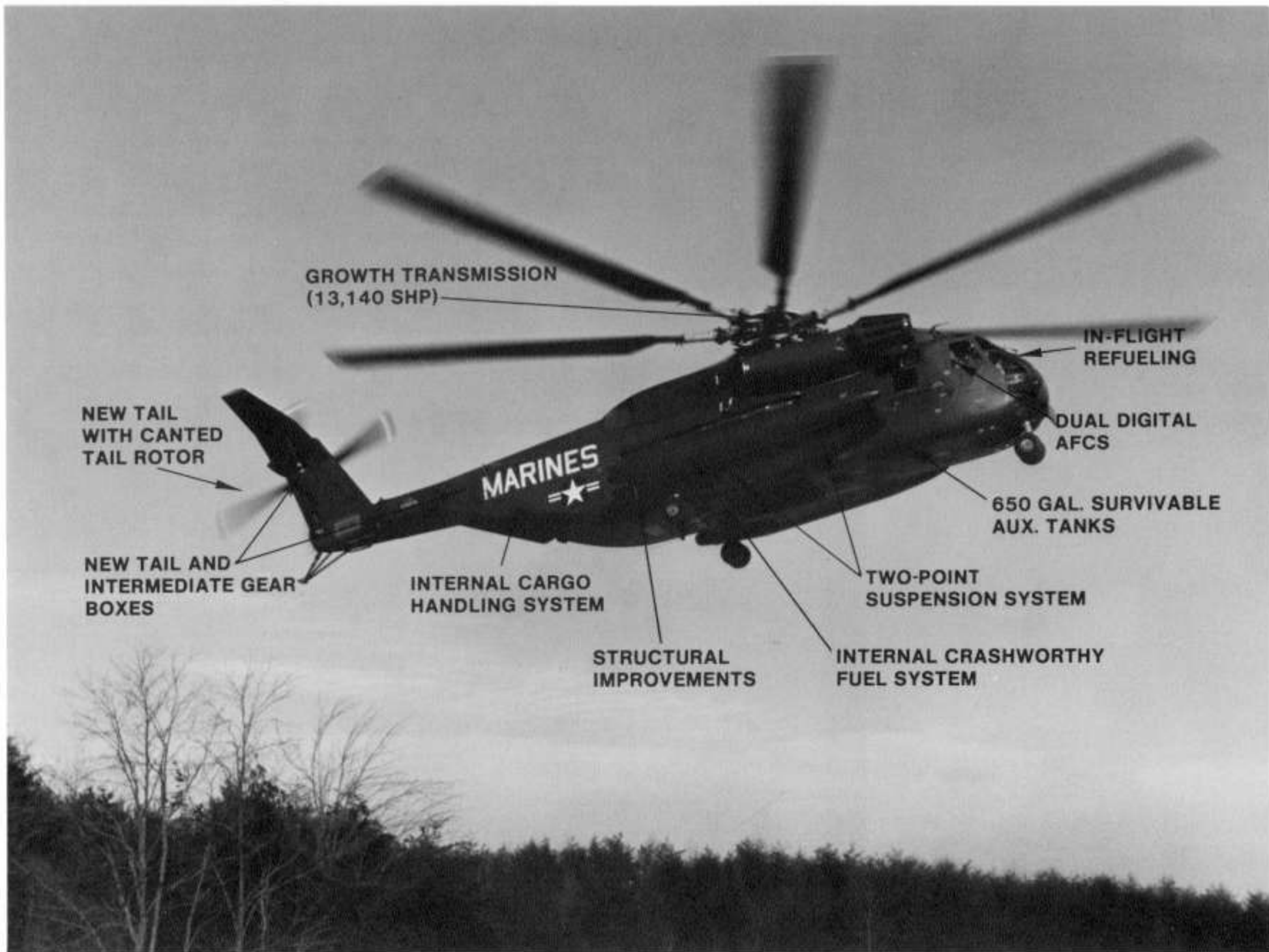






From a stowed configuration, the aircraft can be spread and ready for flight checkout in less than two minutes. Primary flight systems also can be checked in the stowed position.





GROWTH TRANSMISSION  
(13,140 SHP)

IN-FLIGHT  
REFUELING

NEW TAIL  
WITH CANTED  
TAIL ROTOR

DUAL DIGITAL  
AFCS

650 GAL. SURVIVABLE  
AUX. TANKS

NEW TAIL AND  
INTERMEDIATE GEAR  
BOXES

INTERNAL CARGO  
HANDLING SYSTEM

TWO-POINT  
SUSPENSION SYSTEM

STRUCTURAL  
IMPROVEMENTS

INTERNAL CRASHWORTHY  
FUEL SYSTEM



## THESE DISTINCTIVE DESIGN FEATURES

- Three T64-GE-415 engines (13,140 shp)
- Seven main rotor blades with titanium spars
- Main rotor diameter: 79 feet
- Tail rotor diameter: 20 feet

Although the CH-53E has exceptional capabilities that set it apart, it retains much commonality with other H-53s, minimizing the need for special parts, ground support equipment or training.



With these design features, the CH-53E provides

## HIGH RELIABILITY/MAINTAINABILITY

- BIM<sup>®</sup> blade integrity monitor system
- In-cockpit monitoring of critical fluid levels
- New digital automatic flight control system with built-in test capability
- Main and tail rotor blades removed “on condition”
- Main blade with titanium spar, Nomex trailing edge and fiberglass cover for greater durability and performance

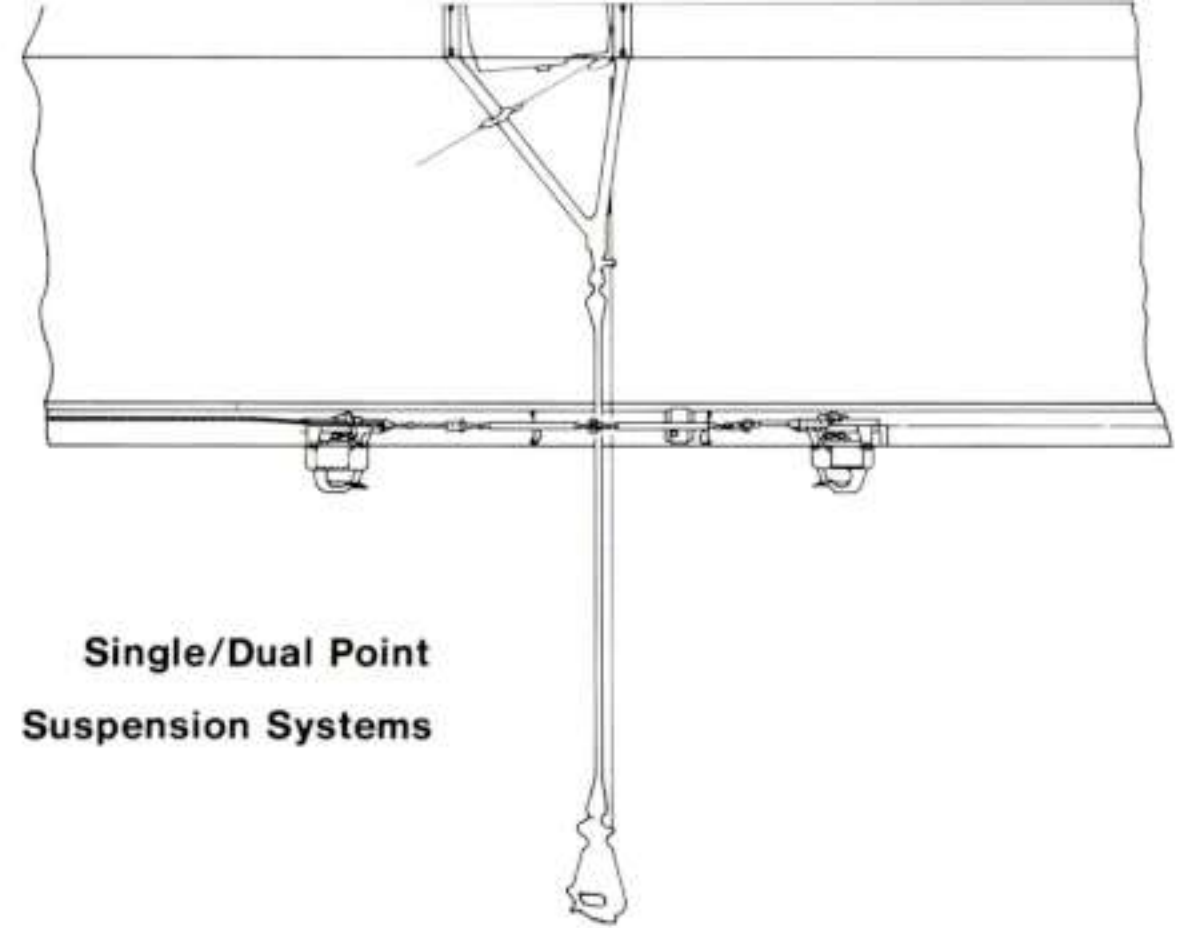




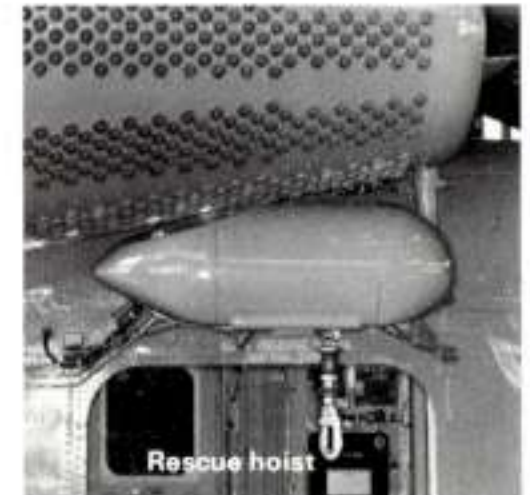
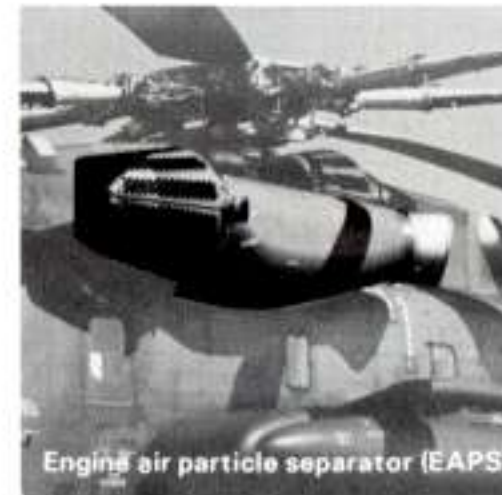
## ADAPTABLE TO MANY MISSION ENVIRONMENTS

### Mission features

- Emergency water landing capability
- Engine air particle separator (EAPS)
- Towing and mine sweeping
- Single/dual point suspension system
- In-flight refueling capability
- Extended range
- External auxiliary fuel tanks - 650-gal. (2460 liter) each
- Enlarged sponsons
- Rescue hoist
- Armor and armament



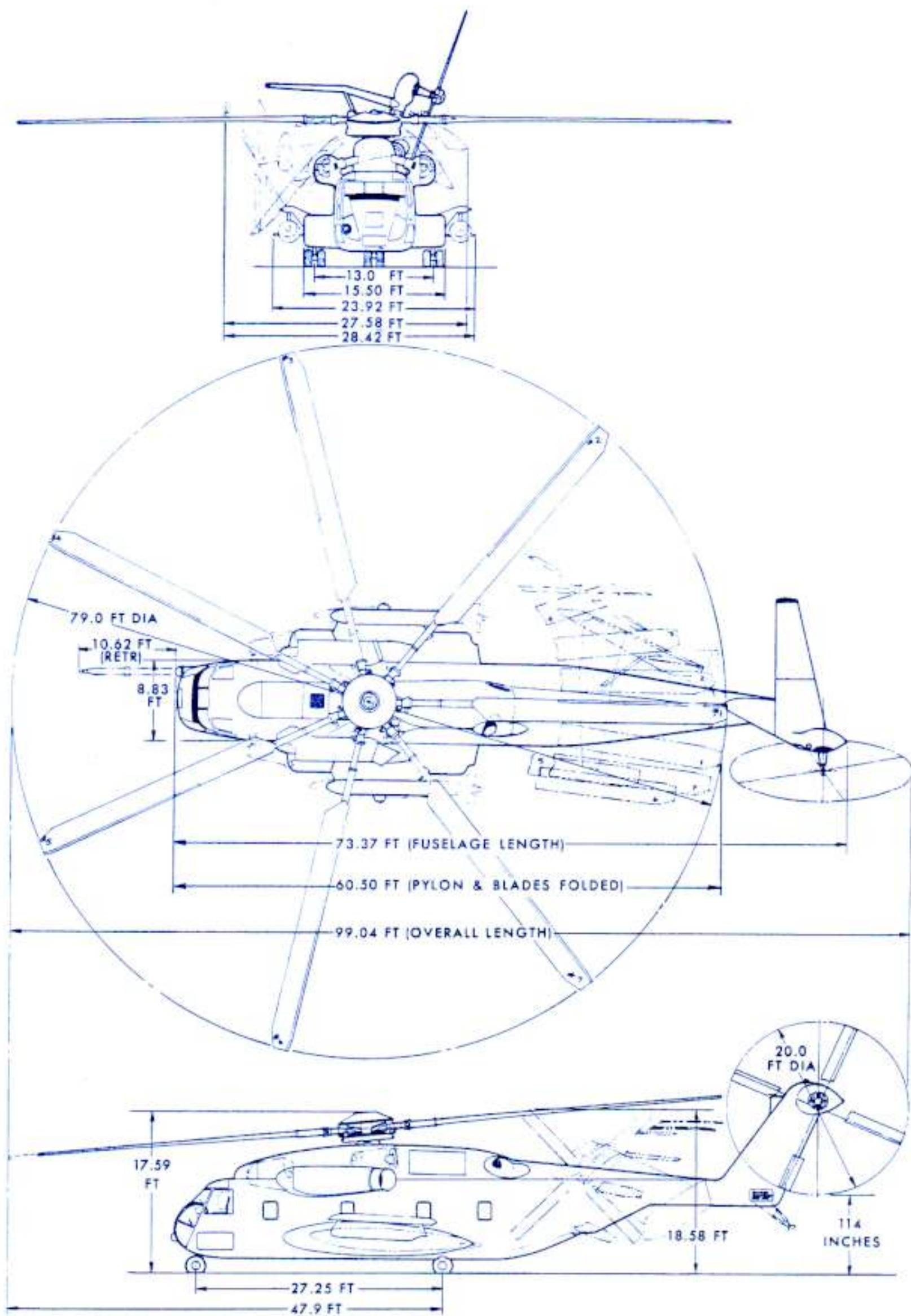
**Single/Dual Point  
Suspension Systems**





Sea Level, Standard Day	English	Metric
<b>PERFORMANCE</b>		
High speed	170 kts.	315 km./hr.
Cruise speed	150 kts.	278 km./hr.
Maximum rate of climb (15,000 lb. payload)	4,000 fpm	20.3 m/sec.
Engines: (3) T64-GE-415		
Rating:		
Maximum (10 min.)	4,380 SHP	4,380 SHP
Total (SHP)	13,140 SHP	13,140 SHP
Main transmission rating	13,140 SHP	13,140 SHP
<b>WEIGHTS</b>		
Maximum gross weight	69,750 lbs.	31,638 kg
Weight empty	32,878 lbs.	14,913 kg
Basic mission payload	32,000 lbs.	14,515 kg
<b>DIMENSIONS</b>		
Overall length (spread/folded)	99'1/2"/60'6"	30.18 m/18.44 m
Overall height (spread/folded)	28'5"/18'7"	8.66 m/5.66 m
Overall width (folded)	28'5"	8.66 m
Main rotor diameter	79'0"	24.07 m
Tail rotor diameter	20'0"	6.10 m
Internal:		
Cabin length	30'0"	9.14 m
Cabin width	7'6"	2.29 m
Cabin height	6'6"	1.98 m
Seating capacity:		
Crew	3	3
Troops	55	55





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## The CH-53E

### ACCOMPLISHMENTS

- Through Navy/Marine testing, the CH-53E has verified its mission capabilities.
- It has demonstrated lift capability
  - 19,500 pound M-54 truck
  - 20,000 pound S-3 aircraft
  - 26,500 pound A-6 aircraft
  - 28,500 pound Case 1150 bulldozer
  - 30,400 pound 155 mm howitzer with its basic load of ammo and 10-man gun crew
  - 32,000 pound 8' x 8' x 20' maritime cargo container
- The CH-53E successfully completed its shipboard compatibility demonstration and more than proved its mission suitability.
- Testing to date has demonstrated that the CH-53E meets or exceeds Navy/Marine requirements.







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**UNITED  
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