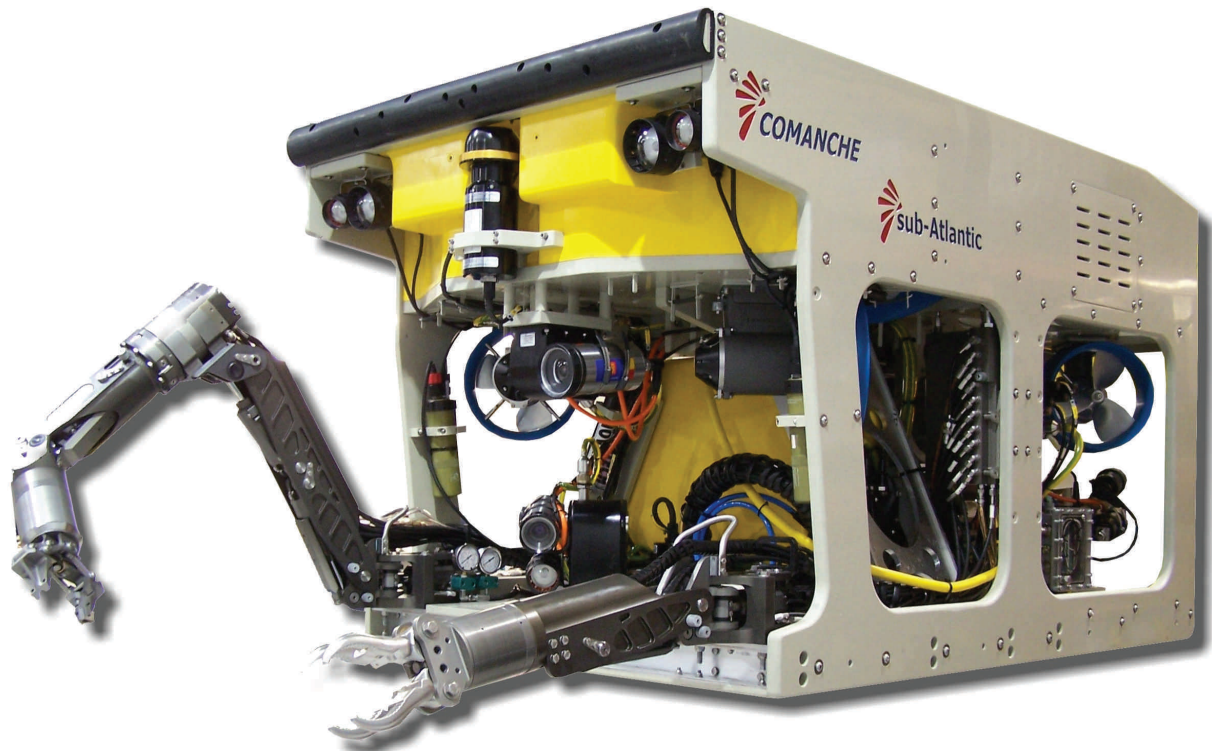


## SeaTrepid Comanche



**The SeaTrepid Comanche is an ideal source when seeking a work class solution in a small package. Offering a generous 15kW / 20 hp hydraulic power unit for work class manipulation and tooling combined with a powerful control and diagnostics package for survey and other data collection, the Comanche offers high performance, high reliability, and high adaptability while still providing important customer benefits with regard to capital, reliability, and requiring less deck space than comparable systems.**

This system has been developed for these and other tasks: Construction IRM - cleaning, cutting, NDT; drill / rig / completion support and well intervention (for example AX-VX gasket change out, BOP shutdown, fluid injection, hot stabbing, drilling and tapping). Additionally, survey including pre/post pipe/cable lay and touch-down monitoring, diver support, renewable energy, submarine or maritime rescue, munitions search and recovery, scientific research and data / sample collection plus numerous other missions.

Optional equipment includes: survey expansion electronics pods, industry standard manipulators (7 and 4 function) and cutters, dredge systems, high definition cameras and lights, live download of digital stills, motion and navigation reference sensors, geophysical and bathymetric sensors, NDT sensors, cleaning jets and brushes, pipe and cable tracking and inspection, threat detection, and imaging intervention systems. These tasks fall within the capabilities of the Comanche ROV system.



# SeaTrepid Comanche

## PERFORMANCE / DIMENSIONS:

Depth rating:	9,840 fsw (3,000 msw) standard
Standard payload:	474 lb (215 kg) lead ballast
Height:	49 in (1,250 mm)
Length:	83 in (2,100 mm)
Width:	51 in (1,300 mm)
Mass in air:	2,491 lb (1,130 kg)
Optimum speed	3.0 Kts (1.5 m/s)

### Thrust@ 0 Knots (bollard pull)

Forward:	529 lbf (240 Kgf)
Reverse:	529 lbf (240 Kgf)
Lateral:	529 lbf (240 Kgf)
Vertical:	496 lbf (225 Kgf)

## CONTROL SYSTEM:

This system incorporates the SubCan telemetry system providing simple, intuitive control GUI that allows various sensors and diagnostics tools to be at the pilot's fingertips. Communications are maintained with a 16 bit cyclic redundancy check to insure a robust connection with the subsea hardware. Also diagnostic feedback such as voltage, current, and temperature is provided for each PCB as well as ground fault detection on both high and low voltage lines to assist in rapid fault finding.

## HYDRAULIC SYSTEM:

The Comanche is supplied with a 15kW / 20 HP hydraulic system valve pack to provide tooling expandability including soft line cutters, wire rope cutters, 10" rotary cutters, rotary grinder/buffer, multi-fluid intensifier, gasket replacement tool, pressure test unit, low pressure water jetting system, hydraulic dredge pump, class 1-4 torque tool. Providing 21 LPM / 5.5 GPM at 2500 psi.

## MANIPULATORS:

The frame is configured with one Schilling Orion 7 function proportional arm and one Schilling Orion 4 function rate arm.

## BUOYANCY:

The Comanche buoyancy is manufactured from four separate modules with closed cell micro spheres, 9840 fsw (3000 m) rated.

## TELEMETRY SYSTEM:

Communication is controlled via a Focal 907 plus telemetry module. This fibre optic module combines 4 video, 4 RS232, and 2 RS485 signals transmitted across a single fibre. Ethernet, ECL, and other various telemetry interfaces are also available.

## LIGHTING:

4 x 24 VDC, LED lamps, dimmer controlled, and mounted on the frame and camera tilt unit.

## PROPULSION SYSTEM:

The vehicle is propelled by seven Sub-Atlantic thrusters incorporating highly reliable DC brushless motors. Each thruster develops 220 lbf (100Kgf) and is arranged for maximum efficiency:

4 x SPE 250 vectored thrusters mounted in a 45 degree vectored configuration producing very high all around thrust.

3 x SPE 250, 2 vertical thrusters vectored to clear the vehicle's lower deck and a single pitch thruster at the rear to counteract the manipulator loading effects.

## CAMERAS AND SONAR:

One forward pan & tilt, one forward tilt camera, and one fixed aft camera  
4 simultaneous video channels per telemetry module  
Obstacle avoidance sonar (standard). Various sonars and sensors available upon request

## OPTIONAL EQUIPMENT:

The Comanche ROV system will support equipment, available as options to the standard specification, including:

- Industry standard manipulators and cutters
- Dredge systems
- Live download of digital stills
- Obstacle avoidance sonars
- Motion and navigation reference sensors
- Non destructive test sensors
- Cleaning jets and brushes
- Pipe and cable tracking and inspection systems
- Drill support and well intervention tooling
- Threat detection, imaging, and intervention systems
- Industry standard HD cameras
- HD sonar systems
- Side scan sonar
- Geographic, bathymetric, and oceanographic sensors
- Multi-sensor Interface
- CP and wall thickness probes
- High pressure water jet
- Multiple video channels
- FMD (flooded member detection).

## LAUNCH AND RECOVERY SYSTEM (LARS):

The LARS is fitted with a docking head to provide a safer working environment for the personnel and equipment.

### A Frame Winch and HPU:

Weight:	41,000 lb (18,600 kg / 20.5 ton)
Length:	18' 6" (5.64 m)
Width:	9' 6" (2.90 m)
Height (Maximum during Operations):	25' 2" (7.67 m)
Height (Travel):	10' 0" (3.05 m)
LARS power requirements:	440-480 V 3 Phase 150 KW