Schilling Robotics
CONAN 7P Manipulator

The CONAN’s combination of high strength and low cost make it the manipulator of choice for medium and heavy-work class ROVs. This is a great choice for a seven-function, position-controlled, and high-capacity manipulator system.

» High Lift-to-Weight Ratio
» Seven Functions Provide Effective Operating Envelope
» Engineered with Component Commonality to Minimize Part Requirements
» Standard Depth Rating of 3,000msw
» Fully Self-Contained Arm for Easy Mounting

The CONAN 7P is designed to perform demanding tasks and yet be economical to install, operate, and maintain. Its power, reach, and rugged construction make it the perfect choice for subsea manipulator applications that require a combination of heavy lifting and dexterity. With a maximum lift capacity of 273kg, it can be used for a wide range of subsea tasks.

To ensure accurate and reliable operation of the CONAN, position sensors are magnetically coupled and sealed inside laser-welded titanium housings for protection. It is designed to be serviced on site and in less-than-ideal working conditions. It is also fitted with oversized joint pivot bearings increase resistance to structural overload.
CONAN manipulators combine strength and dexterity.

Trouble-Free Maintenance

The CONAN was engineered specifically to be easily maintainable in the field. This is true for both installation and maintenance. Through-base bolting makes it particularly easy to install. All electronic components and valves are located in enclosures on the manipulator arm, eliminating the need to install and interconnect an external subsea controller or valve package.

Position-Controlled

The CONAN 7P is ideally suited for applications requiring the accuracy and sophisticated control of a closed-loop, position-controlled manipulator system. The turn-key system includes a manipulator arm with a 152mm parallel-acting titanium gripper, a compact master controller with miniature replica master arm, control electronics, and a hydraulic compensator.

Operation with the miniature replica master arm and portable master controller is simple, comfortable, and intuitive. The master controller also contains function keys for selecting menu options and a display for viewing diagnostic and status information.

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- Arm Specifications
  - Standard Depth: 3,000 msw
  - Weight in air: 107kg
  - Weight in water: 73kg
  - Lift at full extension: 181kg
  - Maximum lift, nominal: 159kg
  - Standard Gripper Opening: 152mm
  - Grip Force, nominal: 4,448N
  - Wrist torque, nominal: 205Nm
  - Wrist rotate, continuous: 6-35rpm

- Actuator Function
  - Azimuth: Linear, 105°
  - Shoulder Pitch: Linear, 105°
  - Elbow Pitch: Linear 305mm
  - Wrist Pitch: Linear, 360°
  - Wrist Yaw: Linear, 284mm
  - Wrist Rotate: Gerotor, 360°
  - Gripper, Standard: Linear, 152mm

- Master Controller Specifications
  - Length: 470mm
  - Width: 177mm
  - Height: 67mm
  - Weight: 3.7kg

- Hydraulic Requirements
  - Fluid: Mineral, Glycol, or Synthetic
  - Viscosity: 10-200 cSt
  - Available Flow: 5.7 - 19 lpm
  - Max. Pressure: 3,000 psi
  - Hydraulic fluid temperature
    - Max: 54°C (130 °F)
    - Filtration: 3 microns
Many advanced operational features are standard with the system, including individual joint freeze, position scaling (altering the ratio of master arm movement to manipulator arm movement), password security, programmable stow/deploy routines, individual joint movement limits, incremental gripper movement, individual joint diagnostics, and automatic error checking.

Manipulator Compatibility
To create the best manipulators on the market, we took the most field-proven manipulator technologies and used them repetitively throughout the system. The result is a simple, reliable system with high component commonality that minimizes spare part requirements. Many parts are interchangeable throughout the entire manipulator line: TITAN 4, ATLAS, RigMaster, CONAN, and ORION.

Options and Accessories
» 198mm (7.8in) 4-finger Intermeshing Gripper
» Spares Kit
» Technician’s Tool Kit
» Dual Manipulator Configuration. Includes two manipulator arms and a single master controller with two replica master arms.
» 30 degree Offset of Wrist Yaw Range of Motion

SPECIFICATIONS

» Customer Supplied Hose Fittings
  Supply Hose: -4 JIC female, 1/4 in
  Return Hose: 6 JIC female, 3/8 in

» Electrical and Telemetry Requirements
  System Supply: 90-260VAC, 50/60Hz
  Arm: 24VDC

» Power Consumption:
  Master Controller: 6 W start, 3 W run
  Base module: 120 W start, 30 W run
  Telemetry: User selectable between RS-422/486 half duplex and RS-232

» Environmental Specifications
  Operating temperature: -2 to +54°C
  Storage temperature: -15 to +71°C
  (0% to 100% condensing)
We put you first.
And keep you ahead.

Gripper Options

- 6" Parallel
- 4" Parallel
- 7.8" Four Finger Intermeshing
- 7.5" Three Finger Intermeshing