

TA80 Manipulator

The TA80 represents a highly cost effective heavy duty robotic manipulator arm designed to work in the harsh conditions of deep sea environments. It has the highest lift capacity to arm weight in its class. Evolved from the successful TA40 manipulator, construction is of anodized high strength aluminum alloy or stainless steel machinings. Joint movement is provided by a combination of hydraulic cylinders and rotary actuators. All key maintenance points are easily accessed. Recessed fasteners and radiused edges minimize potential operation snagging points. The arm is supplied as standard in 6 degrees-of-freedom configuration with a parallel jaw (100mm). A variety of alternative end effectors are available, including a 3-finger intermeshing jaw (150mm), 4-finger intermeshing jaw (285mm) and grabber jaw (300mm). Hydraulic control is provided from a separate valve manifold.

Two levels of control or available:

Rate: The arm is controlled by individual operation of a bank of solenoid directional valves. Feedback is visual only.

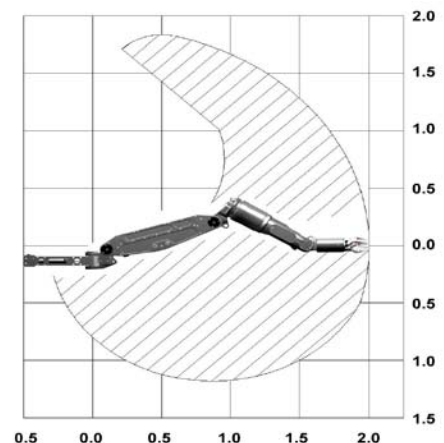
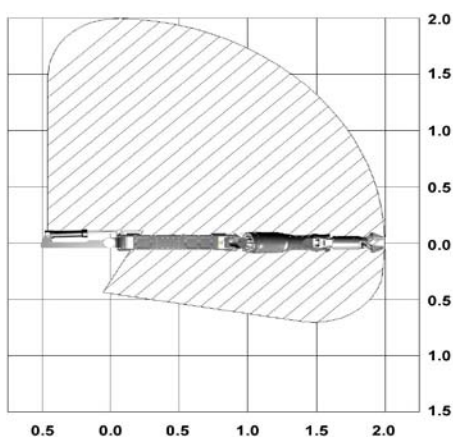
Advanced Digital Control (ADC): The ADC system consists of servo valves and resolvers. The user operates a miniature master arm mounted on a colour LCD console. The ADC provides extensive operational options and diagnostic information: individual joints can be frozen, the gain between master and slave joints can be justified, automatic stow and deploy, master/slave re-indexing, teach and learn. These are only some of the many features that arise the operational effectiveness to new levels. The TA80 is a dexterous and powerful manipulator, ideally suited for heavy duty tasks in operations to depths of 3000m.

Features

- ISO 13628-8 Class 1 and 2
- Paddle/T-Bar Interface
- 120 ft lbs/160Nm
- Torque Feedback



TA80 Operational Envelope



Specifications		Options
Degrees of Freedom:	6 plus end effector	Mechanical Options
Shoulder Slew:	110°	■ 4 finger 285 mm Intermeshing Jaw
Shoulder Pitch:	90°	■ 305 mm Grabber Jaw
Elbow Pitch:	125°	■ Left or Right Hand Operation
Forearm Rotate:	Continuous	Control Options
Wrist Jaw:	100°	■ Advanced Digital Controller
Wrist Rotate:	Continuous	■ Rate Control
Jaw Grip Force:	5000 N	
Jaw Open/Close:	100 mm	
Wrist Rotation Torque:	400 Nm	
Slave Weight in Air:	106 kg	
Slave Weight in Water:	72 kg	
Flow Rate:	9 lpm max	
Minimum Supply Pressure:	160 bar	
Maximum Supply Pressure:	207 bar	
Minimum Lift Radius:	200 mm	
Maximum Lift Radius:	2000 mm	
Maximum Lift at Full Radius:	215 kg	
Lift Through Envelope:	160 kg	
Valve Pack Weight in Air:	20 kg	
Valve Pack Weight in Water:	14 kg	
Data Sheet: A001-350-046 issue 4		

The specification details are illustrative for marketing purposes only. Actual equipment may be different as a result of product improvement or other reasons. Specific interface and performance information should be reconfirmed at time of order placement.

