

# TA70 Manipulator

**Titanium Manipulator** - The TA70 manipulator is manufactured from high strength titanium, ensuring it possesses an exceptionally high resistance to corrosion and damage from collisions.

Hydraulic cylinders are used to significantly reduce actuator complexity and eliminate actuator leakage. Hydraulic efficiency is maximized and flow is only required when motion is demanded but not when the manipulator is static or loaded.

All sensors, electrical wiring/cabling and pressure compensated oil filled areas to, from and within the manipulator are eliminated, thus removing the chance of failure and consequent recovery and repair costs due to sensor failure, wire fatigue, shorting, breakages or water ingress.

The lack of an in arm pressure compensation system also eliminates the time consuming and often complex process of bleeding air from the system. Thus reliability is inevitably increased and required maintenance is minimized, plus start up training is greatly simplified.

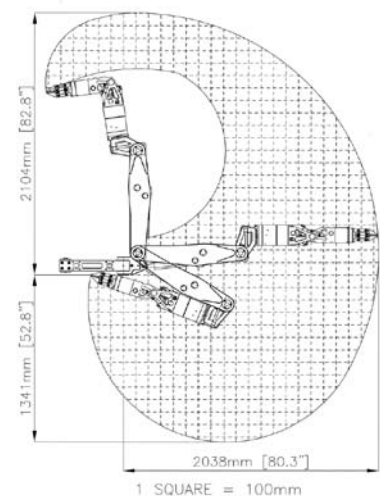
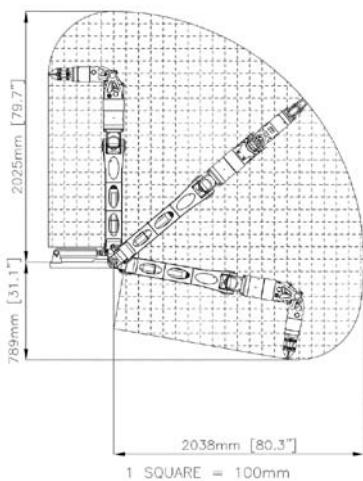
**Hybrid Feedback Control System** - Using Hybrid Feedback Technology the TA70 manipulator system achieves levels of master slave performance only previously attainable with servo manipulators, while providing the enviable reliability of a basic rate manipulator. Combining these two features makes this a class leading control solution, not only from the operators view point in terms of performance and reliability but also in terms of through life.

## Features

- Titanium Construction
- Increased Depth Rating
- High Lift Capacity
- All in Arm Electronics are Eliminated
- Reduced through Lift Costs
- Ergonomic Surface Control System



## TA70 Operational Envelope



## Specifications

### General Specification

Mode of Operation:	Hybrid Feedback Position Control
Input Device:	Replica Master Arm
Number of Functions:	Seven

### Manipulator Specification

Primary Construction Material:	Titanium
Standard Depth Rating:	4,000 msw (13,124 fsw)
Extended Depth Rating:	7,000 msw (22, 967 fsw)
Maximum Reach:	2m (79in)
Weight in Air:	106 kg (234 lb)
Weight in Water:	81 kg (179 lb)
Lift at Full Extension:	125 kg (276 lb)
Max Claw Operating:	100 mm (3.9 in)
Grip Force Nominal:	5000 N (1124 lbf)
Wrist Torque Nominal:	170 Nm (125 ft-lb)
Wrist Rotate:	360 Degrees Continuous, 4-35 rpm
Forearm Torque Nominal:	650 Nm (480 ft-lb)
Forearm Rotate:	360 Degrees Continuous, 0-8 rpm



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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.