

# BRAVO 5 A Tough, 5-Function Manipulator

A Tough, 5-Function Manipulator for Inspection Class Vehicles



## Be Confident.

The Bravo 5 is a 5-Function manipulator that opens up new compact inspection and intervention opportunities for service providers, researchers, and other operators.

Designed to conduct tasks usually reserved for human divers, the arm's dexterity and responsiveness pave the way for advanced applications.

The form factor was specifically designed for industry leading inspection-class ROVs making it a ready-to-go option for existing fleets.

# **FEATURES**

- Ready-built and designed for industry leading inspection-class vehicles
- Master Arm Controlled
- All-Electric, Zero Oil
- End effectors: grabbers, probe handlers, cutters (or BYO)
- Advanced software interface with 3D visualisation
- Adjustable grab force pick up a sea urchin or cut a cable
- One-click deploy/stow position





5-Function Highly Modular & Configurable

RUGGED

300m Depth Rating 12kg Full Reach Lift

**◆ SMART**

In-Built Kinematics
Master Arm Controlled



Designed for Leading ROV's

# Mission Specific End-Effectors | Interchange With Ease

Parallel Jaws

**Quad Jaws** 

Rope Cutter

Standard Jaws









SPECIFICATIONS	
Reach	0.75m
Full Reach Lift	12kg
Max Lift Capacity	20kg
Joint Speed	60deg/s nominal
Grabber Opening	210mm
End-effector Accuracy	<1cm
Grabber Close Force	2000N
Optional Sensor Interface	PWR + 485 + Ethernet
Control Modes	Position, Velocity, Cartesian (XYZ)

#### Power Interface Bulkhead MCBH4M - MC 4C Male MCIL4F - MC Inline, 4C Female, 60cm Pigtail Comms Interface Bulkhead MCBH8ME - MC Ethernet, 8C Male MC Ethernet Inline, 8C Female 100cm Pigtail

E (Ø)

(Default Configuration - customizable)

**A:** 288mm

**B:** 375mm **C:** 165mm

**OD (D):** 92mm

**OD (E):** 81mm **OD (F):** 70mm

D (Ø)



**ELECTRICAL** 

Voltage 20-36V Nominal Power 200W(10kg Load) 300W(10kg Load) Peak Power COMS RS485/Ethernet

#### **ENVIRONMENTAL**

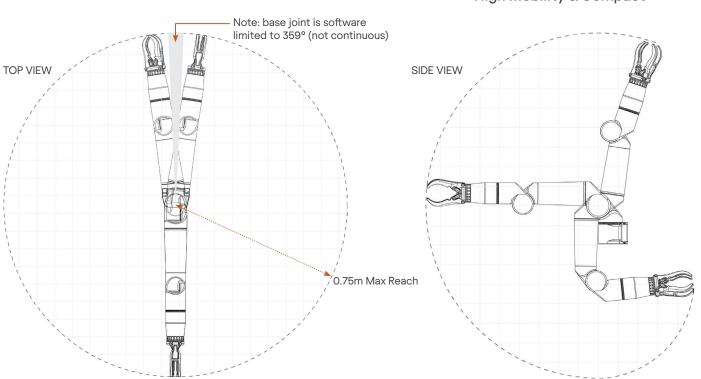
300MSW Depth -10°C to 35°C Temp

Material AL6061

### **MECHANICAL**

Lift Capacity 10kg (full reach) 20kg Max Lift Weight (Air) 7.5kg Weight (Water) 4kg

# **High Mobility & Compact**



F (Ø)