

# BRAVO 5

A Tough, 5-Function Manipulator for Inspection Class Vehicles



Mission Specific End-Effectors

All Electric

## 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

## 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.



Designed for Leading ROV's

Master Controller Enabled

- ◀ **DEXTEROUS**  
5-Function  
Highly Modular & Configurable
- ◀ **RUGGED**  
300m Depth Rating  
12kg Full Reach Lift
- ◀ **SMART**  
In-Built Kinematics  
Master Arm Controlled



Note: Master Arm not included

## Mission Specific End-Effectors | Interchange With Ease

Parallel Jaws



SS Wide Quad Jaws



Quad Jaws



Cable Cutter



Interlocking Quad Jaws



## SPECIFICATIONS

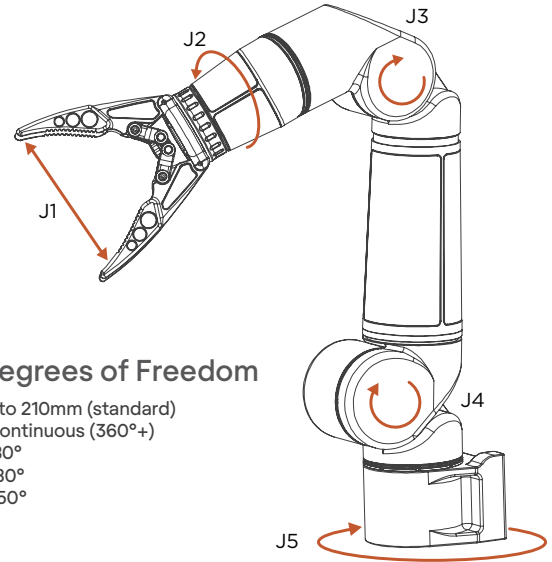
Reach	0.7m
Full Reach Lift	12kg
Max Lift Capacity	20kg
Joint Speed	60deg/s nominal
End-effector Accuracy	<1cm
Grabber Close Force	2000N
Optional Sensor Interface	PWR + 232 + 485 + Ethernet
Control Modes	Position, Velocity, Cartesian (XYZ)

### Power Interface

Bulkhead	MCBH4M – MC 4C Male
Pigtail	MCIL4F – MC Inline, 4C Female, 60cm

### Comms Interface

Bulkhead	MCBH8ME – MC Ethernet, 8C Male
Pigtail	MC Ethernet Inline, 8C Female 100cm



### 4 Degrees of Freedom

- J1: 0 to 210mm (standard)
- J2: Continuous (360°+)
- J3: 180°
- J4: 180°
- J5: 350°

### ELECTRICAL

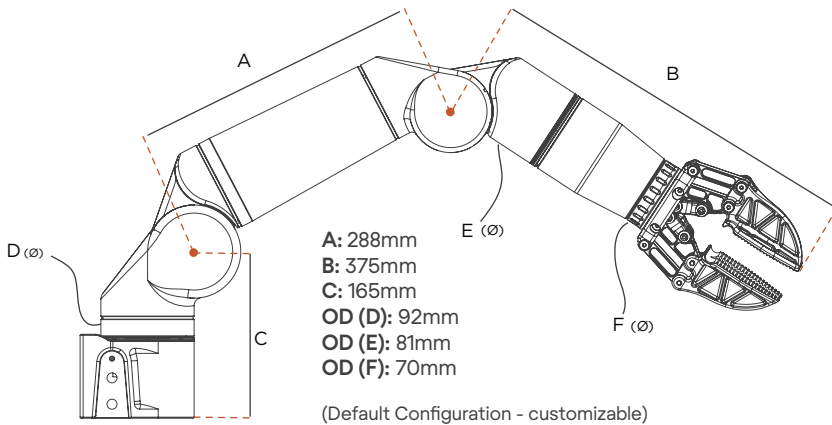
Voltage	20-48V
Nominal Power	200W(10kg Load)
Peak Power	300W(10kg Load)
COMS	RS232/RS485/Ethernet

### ENVIRONMENTAL

Depth	300MSW
Temp	-10°C to 35°C
Material	AL6061

### MECHANICAL

Lift Capacity	12kg (full reach)
Max Lift	20kg
Weight (Air)	7.5kg
Weight (Water)	4kg



### High Mobility & Compact

