

# Bravura

## *Lightweight, high power density robotic deployment system*

This system is designed to deliver a process head into space restricted areas that are inaccessible for other automated deployment systems. Suitable tools include drills, fasteners, grippers, sealant dispensers and other various end effectors requiring high precision and accuracy.

It can be installed on

- the end of another robot
- cartesian axes
- an AGV (automated guided vehicle) for a fully flexible and mobile solution
- or a combination, in order to maximise reach and manoeuvrability



### ACCESS CONFINED SPACES

Designed to bend and twist through an opening into a confined space



### INFINITE AXIS ROTATION

No axis limits on the drives allowing each axis to rotate indefinitely



### LIGHTWEIGHT, COMPACT, HIGH-POWER DENSITY

Maximum reach or 1100mm with sizeable 5kg payload



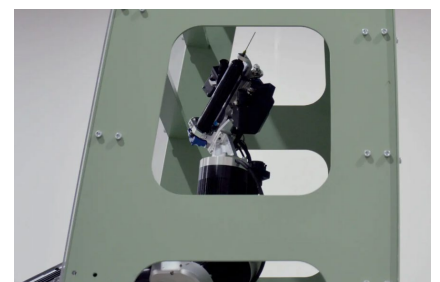
### MODULAR SECTIONS

Standard configuration with 7 joints. Adjustable to achieve higher payload with shorter reach

## How does it work?

Bravura uses custom configured frameless servo motors, paired with high ratio harmonic gearboxes, resulting in high power density drive units. The low overall weight is achieved with an aluminium construction.

Paths for the robot are defined in an offline editor. Entry paths to enclosed spaces are generated via solving the robot structure to a polyline and memorising movements during extraction.



## Modular design

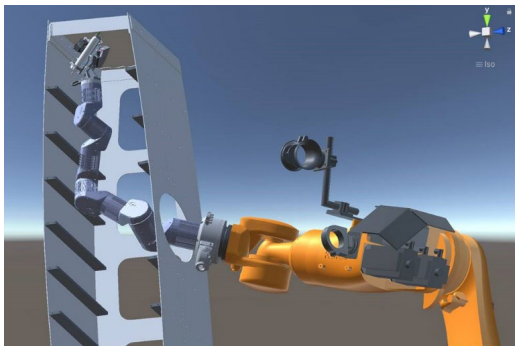
The standard configuration illustrated in this data sheet is comprised of:

- 2 x large joints
- 3 x medium joints
- 3 x small joints

As a modular design, it can be manufactured to achieve a higher payload with shorter reach or less axes, in order to suit the application.

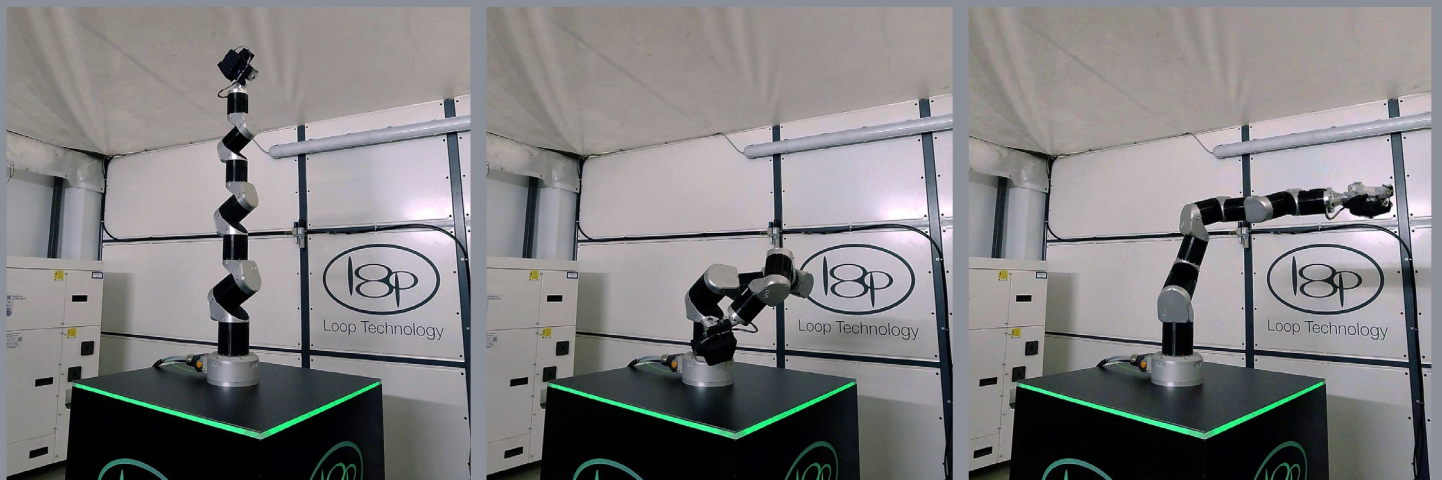
## Powerful simulation software

Reach and access capability studies can be performed for the desired process.



## Technical Specification

|                              |                         |
|------------------------------|-------------------------|
| Total number of axes         | 7                       |
| Maximum payload              | 5kg                     |
| Payload distance from Axis 7 | 200mm                   |
| Reach                        | 1100mm with 5kg payload |
| Tool speed                   | 100mm/s                 |
| Weight                       | 27kg                    |
| Operating temperature range  | 5 to 30°C               |
| Ingress protection           | IP4X                    |
| Noise                        | <75dB                   |
| Mains supply power           | Single phases           |
| Operational power            | 48VDC/A                 |
| Communication                | EtherCAT                |
| Programming                  | G-code                  |



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