

Supported by the Getting Building Fund

Statement of requirements for Collaborative Robotics

The requirement is for a collaborative robotic arm (cobot) which is designed specifically for human/robot interaction, without the need for protective devices. The cobot will be capable of carrying out repetitive/assistive tasks in an industrial manufacturing SME environment. It will have sufficient sensors on the cobot to ensure that the cobot doesn't cause injury to its human colleagues.

Tasks required to be undertaken include, but are not limited to:

- CNC machine loading/tending
- Testing
- Inspection
- Cleaning
- Packaging
- Manoeuvring of components
- Deburring

Specification

The cobot is required to have:

- Minimum payload of 10 kgs
- Minimum reach of 1300mm
- Certifications EN ISO 13849-1, EN ISO 10218-1 and PLd Category 3
- Mounting capability within any orientation
- End effectors in the form of grippers or similar modules
- IP Rating sufficient to be capable of working in contact with CNC cutting fluids
- Power supply 240V AC 50 Hz UK 3 pin
- Teach pendant and appropriate software in order to be able to program
- Control Box

It is a condition that the item quoted for is collaborative, which means that it must contain torque sensors with such sensitivity to recognise when a human is present during a move, and if collision occurs, the arm will halt.

Quotations submitted must advise the following additional information applicable to the cobot they are offering against:

- Degrees of freedom and Number of rotating joints
- Power supply voltage
- Power consumption maximum average
- Repeatability (defined/measured in +/-0mm)
- Axis range in degrees & max speeds per second, per joint
- Noise in dBA
- Colours available
- Anticipated lifespan
- Footprint
- Tooling back end type
- Cable lengths
- IP Ratings for cobot, teach pendant and control box
- Additional benefits
- Additional Safety certifications
- Weight
- Footprint
- End Effector Integration information
- Supply imagery of article being offered
- Ease of setup
- Integration opportunities with other technologies (number & ease)
- Physical interface (useability/longevity/aesthetics)
- Warranty period
- Maintenance / calibration requirements

Quantity

2 off system

Place of delivery

Unit 1 Apollo Office Park, Ironstone Lane, Wroxton, OX15 6AY

Price

Maximum = £70,000

Questions

Questions should be sent to Amy Taylor. This can be done by e-mailing amy@mhde.co.uk . All questions and answers will be made public. The deadline for questions will be 19th September 2021. Questions and answers will be posted on www.mhde.co.uk

Timing

The listing will go live on Contracts finder on 9th September 2021.

The delivery of goods **must** be supplied and invoiced by no later than Friday 3rd December 2021.

Selection Criteria

Scored Criteria for this RFQ and respective weightings:

Price = 25%

Quality = 25%

Specification = 25%

Useability = 25%

Scoring Mechanism for price (25 points)

Tenderer	Price	(price - lowest price) / lowest price = % of price which is above lowest price	Score Maximum points x (100% - % of price which is above lowest price)
1	£100	$(£100 - £100) / £100 = 0.00\%$	$25 \times (100\% - 0\%) = 25.00$
2	£125	$(£125 - £100) / £125 = 20.00\%$	$25 \times (100\% - 20.00\%) = 20.00$
3	£150	$(£150 - £100) / £150 = 33.33\%$	$25 \times (100\% - 33.33\%) = 16.67$
4	£175	$(£175 - £100) / £175 = 42.85\%$	$25 \times (100\% - 42.85\%) = 14.29$

5	£200	$(£200 - £100) / £200 = 50.00\%$	$25 \times (100\% - 50.00\%) = 12.50$
6	£300	$(£300 - £100) / £300 = 66.66\%$	$25 \times (100\% - 66.66\%) = 8.34$

Scoring Mechanism for:

- **Quality (25 points)**
- **Useability (25 points)**
- **Specification (25 points)**

Score	Definition
0	No answer given or non-compliant
5	Very poor. Provides very little of the requirement. The response meets very little of what would be expected.
10	Poor. Provides some of the requirements with significant issues. The response meets elements of the requirement, but gives concern in a number of significant areas. There are reservations because of one or all of the following; <ul style="list-style-type: none"> • There are significant issues needing considerable attention • There is insufficient evidence to demonstrate competence or understanding • The response is light and unconvincing
15	Fair. Provides a basic measure of the requirement. The response meets most of the requirements but there is at least one significant issue of concern, or several smaller issues. These would require some further clarification or attention later in the procurement process and may arise through lack of demonstrated capability and/or appropriate evidence. The response therefore shows: <ul style="list-style-type: none"> • Basic understanding of the specification and additional requirements • Basic competence demonstrated through relevant evidence • Some areas of concern that require attention.
20	Good. Provides the requirement with limited minor issues.

	<p>The response broadly meets what is expected for the criteria. There are no significant areas of concern, although there may be limited minor issues that need further exploration or attention later in the procurement process. The response therefore shows:</p> <ul style="list-style-type: none"> • Good understanding of the specification and additional requirements • Sufficient competence demonstrated through relevant evidence • Some insight demonstrated into the relevant issues.
25	<p>Very Good The response meets all that is expected for the criteria. It leaves no doubt as to the capability and commitment to deliver what is required. The response therefore shows:</p> <ul style="list-style-type: none"> • Excellent understanding of the specification and additional requirements • Considerable competence demonstrated through relevant evidence • Considerable insight into the relevant issues