Lightweight Desktop Collaborative Robot

MG400 is a lightweight desktop robot with a footprint smaller than a piece of A4 paper. Engineered to be lightweight, user-friendly and safe, MG400 can be easily integrated into any production line or lab bench, making it universally accessible and affordable. Because of its cost and capabilities, MG400 thrives in applications with small-scale production, laboratory automation, research and development.

Born for Desktop Application Scenarios

MG400 is designed with small-scale production in mind. With a 190mm (7.48 inches) ×190mm(7.48 inches) footprint, the robot is lightweight enough to carry in a backpack, and compact enough to sit on a desk or workbench as well as alongside an existing production line or cell, offering you full flexibility across your business.

Industrial-Grade Performance

All axes use low-voltage DC servo motors with high-precision absolute position encoders, and mechanical transmission parts with low backlash, thus producing repeatability up to ±0.05mm.

The adopted vibration suppression algorithm increases repeatability bandwidth stability by 60% and reduces residual vibration by 70% without affecting the space trajectory accuracy of multi-axis motion.

Multiple Controls for Beginners & Professionals

MG400 is programmable through teach and playback, block program and LUA scripting, suitable for beginners with no programming experience and veteran programmers alike.

Teaching MG400 is as Easy as Moving Your Own Hand

With dynamic gravity compensation algorithm adopted in the robot, first-time users can effortlessly move the robot wherever they like. MG400 will be able to move to these taught with best-in-class precision.

SDK Support for Developers

DOBOT MG400 provides support for four programming languages: C, C++, C# and Python. Precompiled dynamic library for WINDOWS and Linux two platforms, along with demo projects for Qt, ROS, LabVIEW, and MATLAB platform.

Open Ecosystem for Compatibility, Expandability & Scalability

With the support of TCP/IP and MODBUS TCP, the robot can be connected to a wide range of technologies such as:

☑ smart cameras for dynamic positioning of variable parts on conveyor belts,

☑ PLCs for multi-robot collaboration,

☑ third-party visual software such as DobotVisionStudio – giving you,

☑ the required flexibility to create quick and simple testing applications,

☑ various types of plug and play grippers, making it faster for users to set up applications,

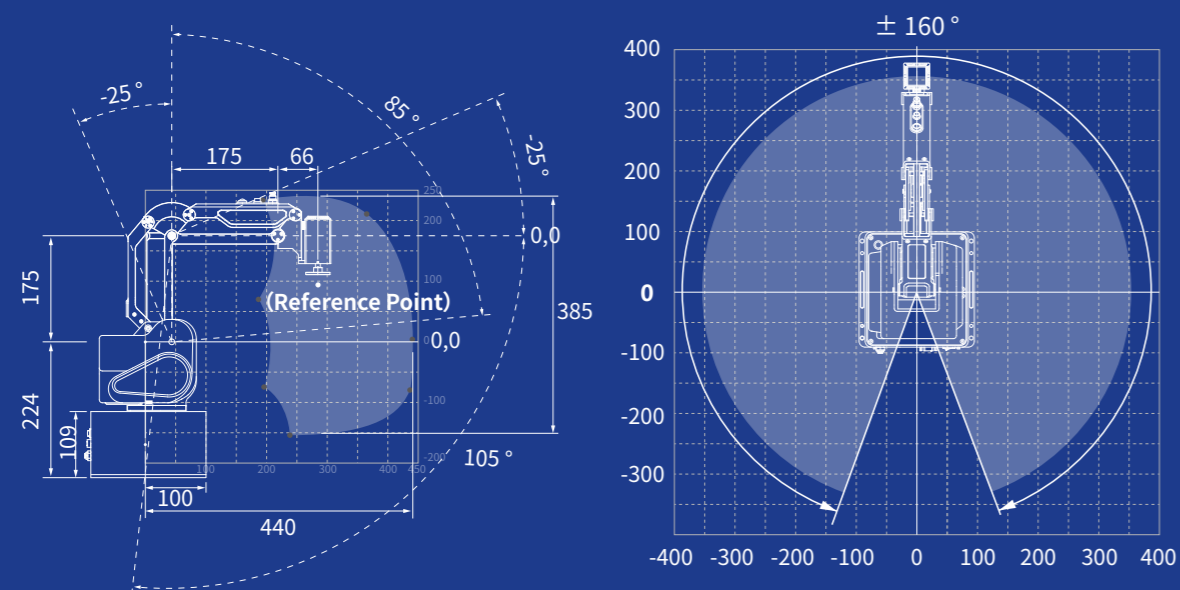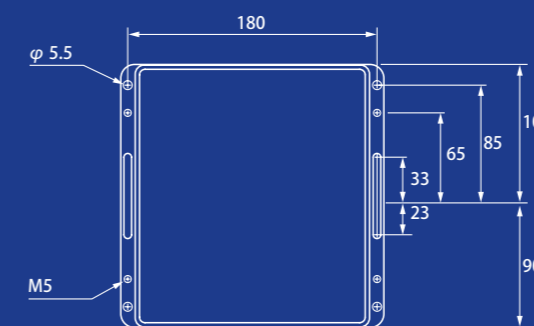☑ and even robotic application programs customized by users.

Specifications

Name		
		MG400
Model		DT-MG400-4R075-01
Number of Axes		4
Payload		500g (Max.750g)
Max. Reach		440 mm
Repeatability		±0.05 mm
Joint Range	J1	±160°
	J2	-25°~85°
	J3	-25°~105°
	J4	-360°~360°
Joint Maximum Speed	J1	300°/s
	J2	300°/s
	J3	300°/s
	J4	300°/s
Power		100~240 V AC, 50/60 Hz
Rated Voltage		48V
Rated Power		150W
Communication Mode		TCP/IP, Modbus TCP
Installation		Desktop
Weight		8 kg
Footprint		190 mm × 190 mm
Environment		0 °C ~40 °C
Software		DobotStudio 2020, SCStudio

Working Range

Mounting Holes

	Digital Input	16
	Digital Outp	16
Interface	Ethernet	2
	USB 2.0	2
	Encoder Input	1

I/O Interface	Digital Input	2
	Digital Output	2

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