



OMRON

OMRON TM COLLABORATIVE ROBOT

THE OMRON™ COLLABORATIVE ROBOT

For more than 85 years, OMRON has excelled at building machines that help humans. Now we are taking that legacy one step further. Introducing the new **OMRON™ Collaborative Robot**.

Designed to work with both humans and machines, this robot is the latest in a long line of innovations in automation technology for industrial applications.

Safe and transportable, with **built-in vision**, this robot allows for **quick start-ups** and **rapid changeovers**. Its intuitive software enables the robot to be easily trained to perform almost any task wherever you may need it, freeing your workforce from repetitive tasks and increasing your productivity.

HUMAN AND MACHINE IN PERFECT HARMONY



DISCOVER OUR KEY BENEFITS

- VERSATILE
- QUICK CHANGEOVER
- BUILT-IN VISION
- SAFE
- TRANSPORTABLE



ADAPTABLE TO YOUR NEEDS

Whether you're working in automotive, semiconductors, secondary packaging for food, or cosmetics, the OMRON TM Collaborative Robot is designed to adapt to almost any industry.

Featured Industries:



Semiconductor



Automotive



Cosmetics

PACKAGING, PICK AND PLACE



ASSEMBLY



FLEXIBLE FOR YOUR FACTORY



The OMRON TM Collaborative Robot is so versatile it can be assigned to almost any task. Respond to any manufacturing need by configuring the robot at will, maximizing your resources and increasing productivity.

EASILY SWITCH END-EFFECTORS TO COMPLETE ANY TASK



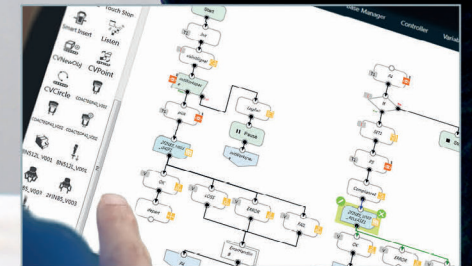
OMRON



QUICK START-UP AND CHANGEOVER

Downtime costs money, which means you need a robot that can start fast and stay running. Our Plug and Play software enables this robot to work right out of the box. It is so intuitive it allows for quick programming during startups and changeovers, getting your production up and running as fast as possible.

Designed to recognize a reference point, the robot can be moved and perform its tasks with no additional setup.

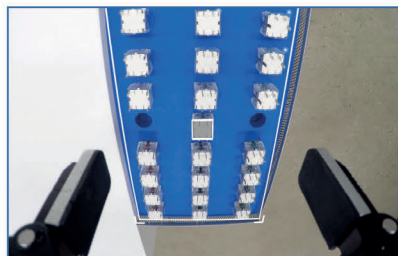


PLUG AND PLAY SOFTWARE

INTUITIVE SOFTWARE FOR EASY PROGRAMMING

FASTER SET-UP WITH BUILT-IN VISION

The OMRON TM Collaborative Robot features a built-in vision system. The integrated camera localizes objects in a wide field of vision, and the image-enhancement light enables object recognition under almost any conditions. The vision system improves reliability, consistency, and high-precision placement, and includes functions such as pattern matching, barcode reading, and color classification which enable inspection, measurements and sorting with no additional cost or effort.



**IMAGE-ENHANCING
LIGHT GUARANTEES
OUTSTANDING OBJECT
RECOGNITION**



FIVE MEGAPIXEL CAMERA WITH EXCEPTIONAL FIELD OF VISION



SAFETY

Harmony between humans and machines requires the highest standards of safety. The OMRON TM Collaborative Robot is designed to promote a safer workplace.

Body Region Risk Setting X More Limit Setting X

1. Please set body regions that could be contacted by the robot in the collaborative workspace

Face & Head
 Neck Muscle
 Shoulder Joint and Muscle
 Upper Arm & Elbow Joint
 Lower Arm & Wrist Joint
 Chest
 Abdominal Muscle
 Hand & Fingers
 Thigh & Knee
 Lower Leg

2. Result

When robot enters the collaborative workspace, the path motion set with 100% speed will be automatically changed into 180 mm/sec

When robot enters the collaborative workspace, the PTP motion set with 100% speed will be automatically changed into 8.1 %

Please check the minimum possible contact area between any equipment installed on the robot and human body is larger than 0.74 cm x cm

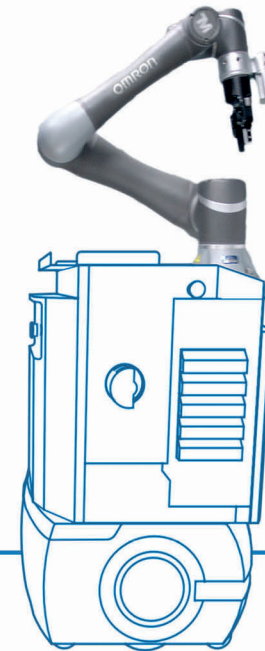
OUR SOFTWARE INTERFACE FACILITATES RISK ASSESSMENT

MOBILITY

COMING SOON



MANUAL



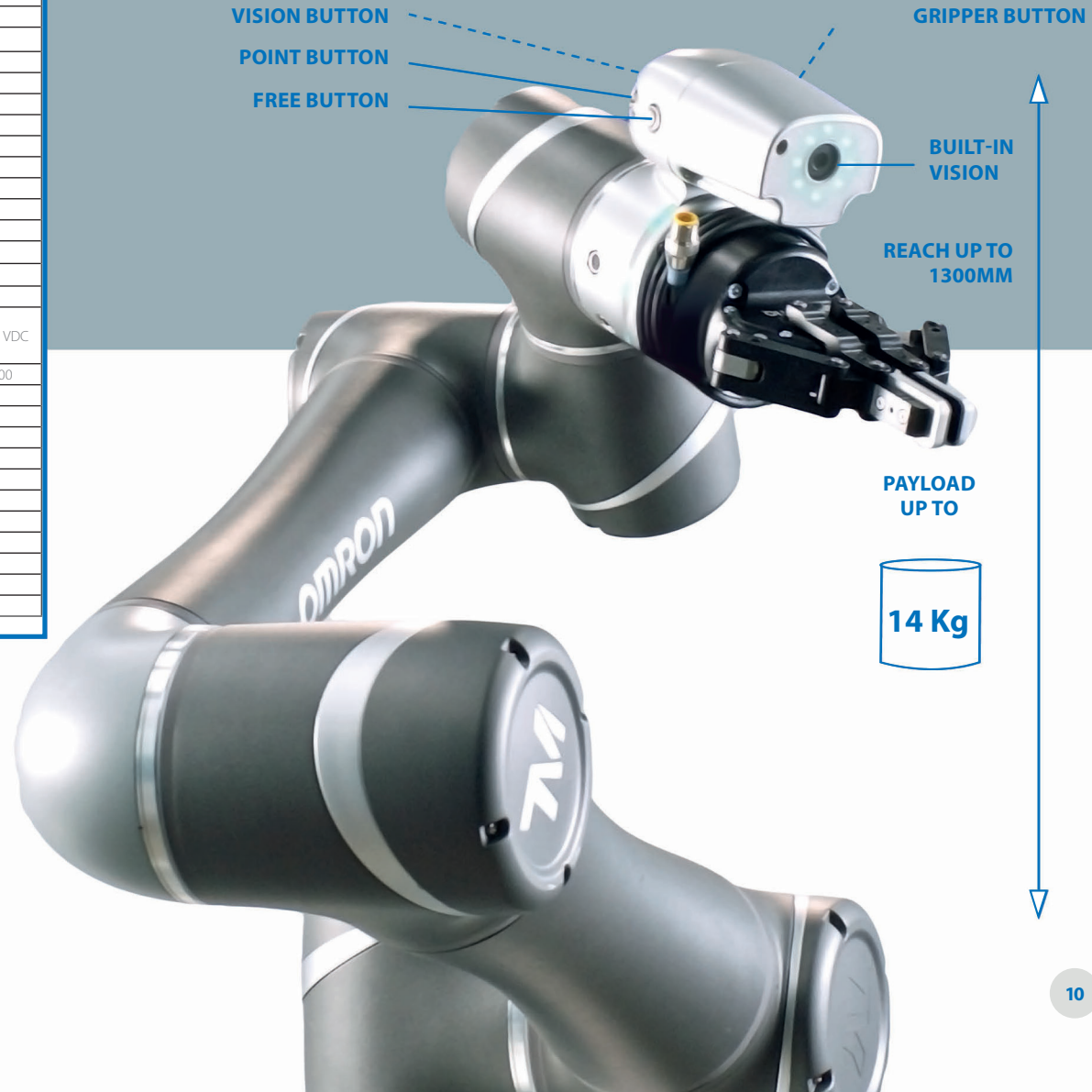
AUTONOMOUS

TRANSPORTABLE: The mobility of the OMRON TM Collaborative Robot allows you to easily relocate and recommission it for any new task.

AUTONOMOUS MOBILITY: Combining the OMRON TM Collaborative Robot with its industry-leading mobile robots provides maximum versatility in your workspace.

TECHNICAL DETAILS

		TM5				TM12		TM14	
		TM5-700	TMSM-700	TMS-900	TMSM-900	TM12	TM12M	TM14	TM14M
Weight (kg)		22.1		22.6		33.3		32.6	
Max Payload (kg)		6		4		12		14	
Reach (mm)		700		900		1300		1100	
Max Speed (m/s)		1.1		1.4		1.3		1.1	
Joint Ranges	J1	±270°				±270°			
	J2, J4, J5	±180°				±180°			
	J3	±155°				±166°		±163°	
	J6	±270°				±270°			
Joint Speeds	J1, J2	180°/s				120°/s			
	J3	180°/s				180°/s		180°/s	
	J4, J5	225°/s				180°/s		150°/s	
	J6	225°/s				180°/s			
Repeatability (mm)		±0.05				±0.1		±0.1	
IP (arm)		IP54							
Operating Temperature (°C)		0 to 50							
Power Supply		100-240 VAC, 50-60 Hz	20-60 VDC	100-240 VAC, 50-60 Hz	20-60 VDC	100-240 VAC, 50-60 Hz	20-60 VDC	100-240 VAC, 50-60 Hz	20-60 VDC
Max Power Capacity (w)		1400	1500	1400	1500	2200	1500	2200	1500
I/O Ports	CONTROL BOX				TOOL				
	Digital In	16				4			
	Digital Out	16				4			
	Analog In	2				1			
I/O Interface		1							
I/O Interface		3 X COM, 1 X HDMI, 3 X LAN, 4 X USB2.0, 2 X USB3.0							
Communication		3 X RS232, TCP/IP(Master), Modbus TCP/RTU(Master & Slave)							
Integrated Camera		5M pixels, color (AOI tasks: 5M; Others: 1.2M)							
I/O Power Supply		24V 1.5A (CONTROL BOX and TOOL)							
Programming Environment		TMFlow, flow chart based							
SEMI S2 Certified		Yes, as an option							



SEMI S2

OMRON RISK ASSESSMENT

Fulfil your legal safety compliance for machines

Manufacturers of machinery are required by law to complete a design-based risk assessment as they design and build machinery, even when the machine is made for the manufacturer's own use.

Our Risk Assessment service (complete in accordance with EN ISO 12100) helps you fulfil these requirements in accordance with the Machinery Directive 2006/42/EC.





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