

## The OMRON TM20 Cobot adds more power and versatility to an already strong collaborative robot line up.

With a 20 kg payload, the TM20 collaborative robot offers the largest payload in our line-up, while maintaining a small footprint. Customers can expand their material-handling possibilities and handle heavier parts and materials without giving up valuable floorspace. At 33 kg, the TM20 is incredibly lightweight, which makes it ideal for MoMa applications. Optional built-in vision features includes a built-in camera, Omron Landmark, and integrated vision.

### Key features:

- 20 kg payload capacity
- 1300 mm reach
- Built-in vision (Optional)
- Profinet and Ethernet/IP options
- Enhanced joint covers prevents damage from cutting oil

## Small footprint means simple integration into a production line.

OMRON collaborative robots have a compact footprint to minimize the amount of space dedicated to the robot and make the most of valuable floorspace. As a collaborative robot, there is no required safety zone, and the robot is fully capable of working side-by-side with human workers. The physical footprint of the robot itself is minimized to help you get the most out of your workspace.

### Material Handling

With a payload capacity of 20 kg, the TM20 provides greater material handling flexibility to any operation. The optional vision system allows for easy identification and sophisticated inspection of parts or products without the need for installing additional cameras or lighting equipment.

### Mobile Manipulation (MoMa)

The small footprint, light weight, and heavy payload of the TM20 makes it an ideal cobot for MoMa applications. When paired with an Omron LD mobile robot the cobot can travel throughout a facility and perform operations wherever it is needed.

### Palletizing

Our space-saving cobots can streamline end-of-line case stacking onto a pallet. The TM20 offers the heaviest payload in Omron's cobot line up and exceeds the weight that can be safely handled by a single person. With built-in vision, cases can be sorted by barcode or other visual indication.

### Machine Tending

Cobots can be used to tend CNC machines, injection molding machines, stamping and punch pressers, grinding, and cutting machines, relieving workers from repetitive and dangerous work. Enhanced joint covers are resistant to cutting oil and many other harsh elements.

### Assembly

Our cobots can improve throughput and consistency of repetitive or complex assembly tasks including part joining, insertion, and tool changing, all while working side-by-side with people.



# OMRON TM Collaborative Robots



Product Name		TM20		TM20X	
Power Source		AC	DC	AC	DC
Power Supply		110 to 240 VAC 50/60 HZ	20 to 60 VDC	110 to 240 VAC 50/60 HZ	20 to 60 VDC
Weight (kg)		33			
Controller Weight (kg)		14.1			
Max Payload (kg)		20			
Reach (mm)		1300			
Mounting		Wall, Table, Ceiling			
Typical Speed (m/s)		1.3			
Joint Range	Joint 1	±270°		±360°	
	Joint 2, 4, 5	±180°		±360°	
	Joint 3	±166°			
	Joint 6	±270°		±360°	
Joint Speeds	Joint 1, 2	90°/s			
	Joint 3	120°/s			
	Joint 4	150°/s			
	Joint 5	180°/s			
	Joint 6	225°/s			
Repeatability (mm)		±0.1			
Ingress Protection		IP 54 (robot arm), IP 32 (control box), IP 40 (robot stick)			
Cleanroom Class		ISO Class 3			
Operating Temperature and Humidity		0 to 50°C, 85% max. (with no condensation)			
Storage Temperature and Humidity		-20 to 60°C, 75% max. (with no condensation)			
Operating and Storage Environment		No exposure to corrosive gases or liquids			
Motor Power Supply		100 to 240 VAC, 50/60 Hz	24 to 60 VDC	100 to 240 VAC, 50/60 Hz	24 to 60 VDC
Robot Arm Cable Length		3 m or 12 m	1.5 m	3 m or 12 m	1.5 m
I/O Ports	Control Box	Digital In: 16, Digital Out: 16 Analog In: 2, Analog Out: 1			
	Tool	Digital In: 4, Digital Out: 4 Analog In: 1, Analog Out: 0			
Communication		RS232, Ethernet (master), Modbus TCP/RTU (master & slave) PROFINET (optional), EtherNet/IP (optional)			
I/O Power Supply		24 VDC 2.0 A (control box) 24 VDC 1.5 A (tool)			
Programming Environment		TMFlow, flowchart based			
Integrated Camera Available		5M pixels, color	None	5M pixels, color	None
SEMI S2 Certification Available*		No	Yes	No	Yes



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### Authorized Distributor:

In the interest of product improvement,  
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\* SEMI (Semiconductor Equipment and Materials International) is the central global network of manufacturers of micro and nano electronics that issues safety guidelines. SEMI S2 is the most well-known standard in semiconductor manufacturing equipment for Environmental, Health, and Safety (EHS).