

Have Peace of Mind with your Food and Beverage Manufacturing Needs with OMRON's™ TM Collaborative Robot.

OMRON introduces the TM Collaborative Robot — Food-Grade Grease (FGG), our advanced solution to prevent potential food contamination from oil leakage.

The OMRON TM Cobot - FGG allows customers to expand their material-handling possibilities and operate freely in a selected food-handling, packaging, and palletizing environment. Our collaborative robot family is designed for various applications and now provides a worry-free process by eliminating product waste and creating a more sanitary workplace.

Key features:

- Food-grade grease (NSF H1 registered) applied in the robotic arm
- 4 kg - 14 kg payload capacity
- 700 mm - 1300 mm reach
- Built-in vision
- Easy-to-clean surface
- Profinet and Ethernet/IP options

Food-grade lubricants are a must.

These specially formulated lubricants are designed to meet the stringent requirements of the food industry. Not only is the food-grade grease tasteless and odorless, but it's resistant to plastics and other common packaging materials. In addition, OMRON's™ lineup of FGG collaborative robots includes a variety of models to guarantee the right reach and payload for

different applications, including the fieldbus version with Profinet and EtherNet/IP options.

A safe and contamination-free environment.

OMRON offers exceptionally low contamination levels due to the included food-grade grease (FGG) as standard, allowing the OMRON TM Cobot to be used in environments with incidental food contamination risk. When using food-grade lubricants, customers can easily handle food materials while meeting safety regulations. Our unit design is ISO 10218-1 (including TS 15066) and ISO 13849-1.

More flexibility and productivity than ever.

Quality is never sacrificed when it comes to productivity due to accurate automation that can reduce waste. The cobot can seamlessly handle delicate food products with an extensive range of grippers. Cobots not only work side-by-side with human workers but have now met the strict food contamination requirements when it comes to the food and beverage industry, allowing more flexibility.

* This is not a FDA certified food-grade robot and works only for the selected food related application. End user must evaluate the installed environment and perform a comprehensive risk assessment.



OMRON™ Collaborative Robot — Food-Grade Grease

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Product Name		TM5-700	TM5X-700	TM5-900	TM5X-900	TM12	TM12X	TM14	TM14X
Part Number		RT6-0007031 RT6-0007041*	RT6-0017031 RT6-0017041*	RT6-0009031 RT6-0009041*	RT6-0019031 RT6-0019041*	RT6-1001331 RT6-1001341*	RT6-1011331 RT6-1011341*	RT6-2001131 RT6-2001141*	RT6-2011131 RT6-2011141*
Weight (kg)		22.11	21.8	22.6	22.3	32.8	32.25	32.5	32.2
Max Payload (kg)		6		4		12		14	
Reach (mm)		700		900		1300		1100	
Mounting		Wall, Table, Ceiling							
Typical Speed (m/s)		1.1		1.4		1.3		1.1	
Joint Range	Joint 1	±270°	±360°	±270°	±360°	±270°	±360°	±270°	±360°
	Joint 2, 4, 5	±180°	±360°	±180°	±360°	±180°	±360°	±180°	±360°
	Joint 3	±155°				±166°		±163°	
	Joint 6	±270°	±360°	±270°	±360°	±270°	±360°	±270°	±360°
Joint Speeds	Joint 1	180°/s				120°/s			
	Joint 2,4,5	180°/s				180°/s			
	Joint 3	225°/s				180°/s		150°/s	
	Joint 6	225°/s				180°/s			
Repeatability (mm)		±0.05				±0.1			
Ingress Protection		IP54 (robot arm), IP32 (control box), IP40 (robot stick)							
Cleanroom Class		ISO Class 5							
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 corrosive gases or exposure to water-soluble cutting oil.**							
Motor Power Supply		100 to 240 VAC, 50/60 Hz							
Robot Arm Cable Length		3 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							
I/O Interface		COM: 3, HDMI: 1, LAN: 3, USB2.0: 4, USB3.0: 2							
Communication		RS232, Ethernet (master), Modbus TCP/RTU (master & slave)							
I/O Power Supply		24 VDC 1.5 A (control box and tool)							
Programming Environment		TMflow, flowchart based							
Integrated Camera Available		5M pixels, color							
Fieldbus Available		EtherNet/IP, PROFINET*							

* Fieldbus version with EtherNet/IP and Profinet module.

** If water-soluble cutting oil is present, use a protective sleeve to prevent damage to the robot housing.

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