

RTM Series Pneumatic Rotary Actuator



Product Overview

RTM Series vane-type pneumatic rotary actuators provide compact, stable angular motion for positioning, transfer, clamping, packaging, and assembly automation.

Key Features

- Compact vane mechanism converts compressed air into rotary motion.
- Eleven models provide torque from 0.14 to 113 N-m.
- Standard 90°, 180°, and 270° rotation angles.
- Double-acting operation supports controlled forward and reverse motion.
- Optional angle adjustment, shock absorbers, and position sensors.
- Aluminum alloy body for low weight and industrial durability.

Technical Specifications

Parameter	Specification
Product Name	Pneumatic Rotary Actuator
Series	RTM Series
Actuation Type	Double Acting
Drive Structure	Vane Rotary Mechanism
Available Models	RTM10, 15, 20, 30, 40, 50, 63, 80, 100, 125, 150
Torque Range	0.14-113 N-m
Rotation Angles	90°, 180°, 270°
Working Medium	Filtered compressed air
Pressure Range, RTM10-RTM40	0.20-0.70 MPa
Pressure Range, RTM50-RTM150	0.15-0.70 MPa
Ambient and Fluid Temperature	0-50 °C
Body Material	Aluminum alloy
Port Sizes	M5 x 0.8P, PT1/8, PT1/4, PT3/8, PT1/2
Sensor Options	CS-8G, CS-8GN, CS-8GP or CS-8B by model
Compatible Series	Compatible with CHELIC RTM Series

Model Selection

Model	Torque	Bore Size	Pressure Range	Allowable Kinetic Energy	Port Size
RTM10	0.14 N-m	4 mm	0.20-0.70 MPa	0.00015 J	M5 x 0.8P
RTM15	0.38 N-m	5 mm	0.20-0.70 MPa	0.001 J	M5 x 0.8P
RTM20	0.78 N-m	6 mm	0.20-0.70 MPa	0.003 J	M5 x 0.8P
RTM30	1.8 N-m	8 mm	0.20-0.70 MPa	0.02 J	M5 x 0.8P
RTM40	3.8 N-m	10 mm	0.20-0.70 MPa	0.04 J	M5 x 0.8P
RTM50	5 N-m	12 mm	0.15-0.70 MPa	0.082 J	PT1/8
RTM63	10 N-m	15 mm	0.15-0.70 MPa	0.12 J	PT1/8
RTM80	18 N-m	17 mm	0.15-0.70 MPa	0.39 J	PT1/4
RTM100	35 N-m	25 mm	0.15-0.70 MPa	0.60 J	PT1/4
RTM125	60 N-m	30 mm	0.15-0.70 MPa	1.03 J	PT3/8
RTM150	113 N-m	40 mm	0.15-0.70 MPa	1.94 J	PT1/2

Small RTM Rotary Actuators

RTM10 through RTM40 provide 0.14-3.8 N-m torque, M5 x 0.8P ports, and a 0.20-0.70 MPa operating range. Standard and flange mounting, angle adjustment, and sensor options are available.

Large RTM Rotary Actuators

RTM50 through RTM150 provide 5-113 N-m torque with PT1/8 to PT1/2 ports and a 0.15-0.70 MPa operating range. Shock absorbers and sensor brackets can be selected.

Selection Guidance

- Select torque with an appropriate safety margin.
- Confirm rotation angle, speed, load inertia, and kinetic energy.
- Verify shaft, mounting, port, sensor, and accessory requirements.

How to Order

RTM – 10 × 180 L C 1 SG									
Rotary Cylinder	Torque		Rotation Angle		Angle Adjustment	Sensor Mounting		Sensor Type	
	Bore Size (mm)	Torque (N·m)	Code	Rotation Angle		Code	Mounting Type	Code	Type
	10	0.14 N·m	90	90°		Nil	Standard Type	SG	General Purpose Type
	15	0.38 N·m	180	180°				SGN	NPN Output Type
	20	0.81 N·m	270	270°		Number of Sensors		SGP	PNP Output Type
	30	1.8 N·m				Code	Quantity		
	40	3.8 N·m				1	1 pc.		
						2	2 pcs.		

Small Model Ordering Example

RTMF-10 x 180-L-C1-8G1

Code	Selection
RTM	Product series
F	Flange type; omit for standard type
10 / 15 / 20 / 30 / 40	Torque model
90 / 180 / 270	Rotation angle
L	Adjustable angle option
C	With sensor bracket
1 / 2	Sensor bracket quantity
8G / 8GN / 8GP	Sensor switch type
1 / 2	Sensor quantity

Large Model Ordering Example

RTM50 x 180-LA1-C1-8B1

Code	Selection
RTM	Product series
50 / 63 / 80 / 100 / 125 / 150	Torque model
90 / 180 / 270	Rotation angle
LA	Shock absorber option
1 / 2	Shock absorber quantity
C	With sensor bracket
1 / 2	Sensor bracket quantity
8B	CS-8B sensor switch
1 / 2	Sensor quantity

Applications

- Indexing tables and rotary positioning mechanisms.
- Material transfer, pick-and-place, and feeding systems.
- Clamping, turning, reversing, and component orientation.
- Packaging machinery and automated assembly equipment.
- Inspection fixtures and controlled rotary stations.

Configuration Options

- 90°, 180°, or 270° rotation angle.
- Standard or flange mounting for small models.
- Adjustable-angle mechanism on selected small models.
- One or two shock absorbers on applicable large models.
- Sensor brackets and compatible magnetic switches.

Operating Guidance

Use clean, filtered compressed air and suitable upstream air treatment. Keep pressure within the range for the selected model and account for load inertia, rotation speed, and kinetic energy.

Replacement Checks

- Confirm installation dimensions and shaft configuration.
- Verify port thread, rotation angle, and mounting type.
- Match sensor, bracket, and shock absorber options.

Safety Notes

- Depressurize the actuator before installation or service.
- Do not exceed pressure, speed, torque, or kinetic-energy ratings.
- Secure the load and guard rotating mechanisms during operation.

Contact Information

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