

PARALLEL PNEUMATIC GRIPPERS

MINIATURE SERIES RPMC

CLEAN ROOM AND HARSH ENVIRONMENTS DESIGNED FOR MANIFOLD MOUNTING



**RPMC Series
Starts at
\$421**



**Small Part
Handling**

- Precision Gripping—Preloaded V Roller Bearings Eliminate Side Play Resulting in Excellent Part Positioning
- Clean Room Grease and Corrosion Resistant Shields Allow for Use in Clean Room and Harsh Environments
- Accuracy of 0.05 mm (0.002") and Repeatability of 0.03 mm (0.001")
- Rated Grip Force @ 7 Bar (100 psi), 36 N (8 lbs)
- Compact Design for Gripping Small Parts in Small Places
- Rigid and Low Friction Design Allows for Longer Finger Lengths for Use on Delicate Parts
- Group Multiple Grippers in Close Array Using Top Manifold Mounting Surface
- Up to 5 Million Cycles in Typical Operation and 10 Million with Maintenance
- Operating Temperature -35 to 80°C (-30 to 180°F)
- System Requires 3 to 7 bar (5 to 100 psi) Dry Filtered (40 Micron or Better) Air Supply
- Requires 4-Way, 2 Position Valve and Regulator for Delicate Parts



PRODUCT FEATURES

Preload Bearings

Bearings are preloaded for maximum support and zero side play

Hard Coat Anodize

The body has hard-coat anodize 60 RC with PTFE impregnation

Purge/Scavenge Port

Purge/Scavenge port for extreme environments from dirty and gritty to clean-room Class 10 or better

Adjustable Preload Screw

Adjustable preload screw allows for adjustment of preload on roller bearings

Clean-Room Contaminants

Units are lubricated with a clean-room grade grease

Quality Components

External components are made from corrosion resistant materials for resistance to de-ionized water or for use in FDA and medical parts handling applications

One Piece Body

One piece lightweight aluminum body

Slip Fit Dowel Pin Holes

Located in body and jaws

Roller Bearings

Patented Dual-"V" roller bearings provide low friction rolling motion and maximum rigidity for fingers

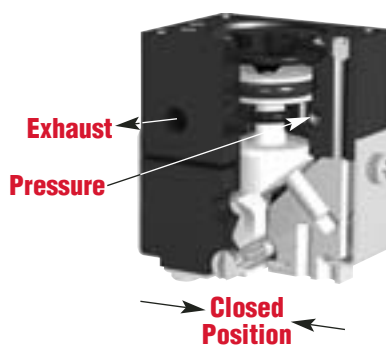
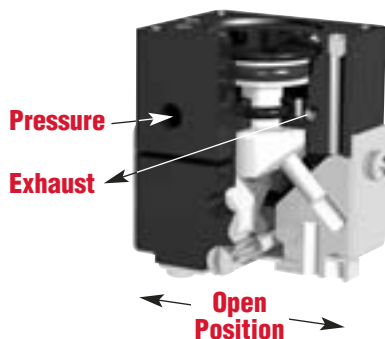
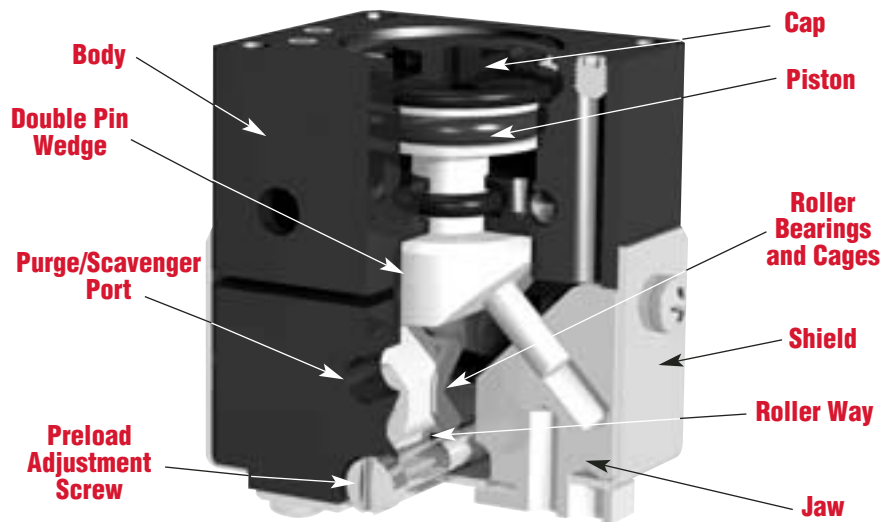
Stainless Steel Cover

Stationary and non-contacting cover eliminates the possibility of particle generation





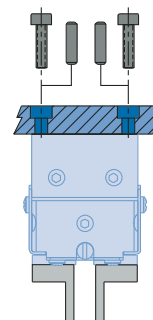
OPERATING PRINCIPLE



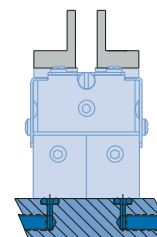
- A double acting piston is connected by a shaft to a double sided pin wedge.
- The pin wedge slides in a hole located in each of the jaws converting vertical motion of the wedge into horizontal synchronous motion of the jaws.
- This gripper is suitable for internal or external gripping.

MOUNTING INFORMATION

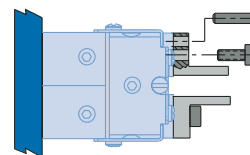
Grippers can be mounted and operated in any orientation.



Body mounts with screws and locates with slip-fit dowel pins for accuracy.



Unit has top manifold ports.



Fingers attach to jaws with screws and locate with dowel pins or by keying.

TECHNICAL SPECIFICATIONS

Pneumatic Specifications

Pressure Operating Range: 3 to 7 bar (40 to 100 psi)

Cylinder Type: Double acting

Dynamic Seals: Internally lubricated Buna-N

Valve Required to Operate: 4-way, 2-position

Air Quality Requirements

Air Filtration: 40 micron or better

Air Lubrication: Not necessary*

Air Humidity: Low moisture content (dry)

Temperature Operating Range

Buna-N Seals (Standard): -35 to 80°C (-30 to 180°F)

Viton® Seals (Optional): -30 to 120°C (-20 to 250°F)

Maintenance Specifications

Expected Life:

Normal Application: 5 million cycles

With Preventative Maintenance: 10+ million cycles*

Field Repairable: Yes

Seal Repair Kits Available: Yes

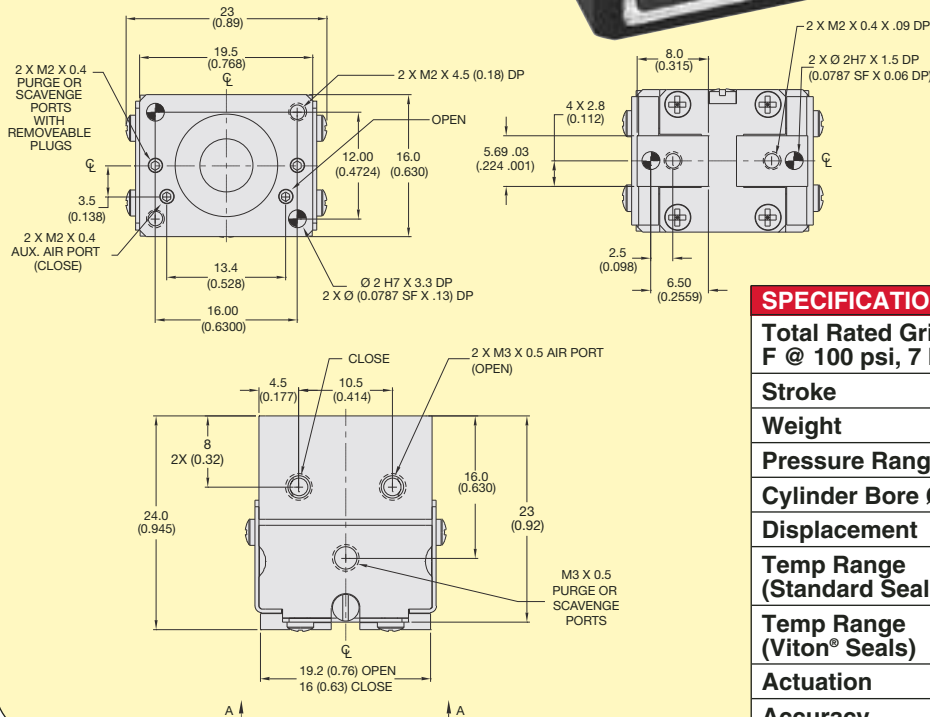
*Addition of lubrication will greatly increase service life.

PARALLEL PNEUMATIC GRIPPER— MINIATURE CLEAN ROOM SERIES RPMC-1M



RPMC-1M, \$421, shown
larger than actual size.

Dimensions: mm (in)



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Dimensions are symmetrical about centerline

Third Angle Projection

All Dowel Holes are SF (Slip Fit). Locational Tolerance ± 0.005 " or ± 0.13 mm

Metric mm Imperial (in)

0. = ± 0.25 (0.00) = ± 0.01

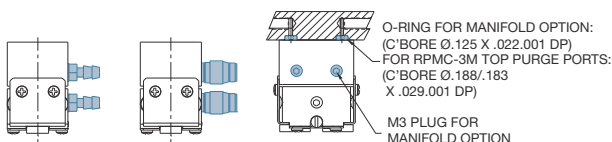
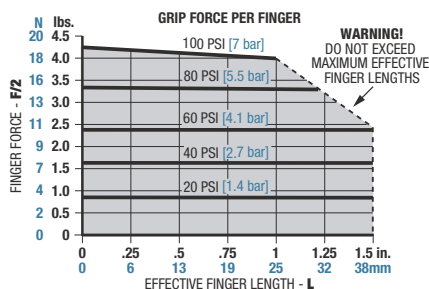
0.0 = ± 0.13 (0.000) = ± 0.005

0.00 = ± 0.013 (0.0000) = ± 0.0005

Metric Threads

Course Pitch

SPECIFICATIONS	RPMC-1M
Total Rated Grip Force $F @ 100 \text{ psi}, 7 \text{ bar}$	36 N (8 lb)
Stroke	3.2 mm (0.13")
Weight	0.024 Kg (0.052 lb)
Pressure Range	3 to 7 bar (40 to 100 psi)
Cylinder Bore Ø	10 mm (0.394")
Displacement	0.13 cm ³ (0.008"³)
Temp Range (Standard Seals)	-35 to 80°C (-30 to 180°F)
Temp Range (Viton® Seals)	-30 to 120°C (-20 to 250°F)
Actuation	0.10 sec
Accuracy	$\pm 0.05 \text{ mm}$ (± 0.002 ")
Repeatability	$\pm 0.03 \text{ mm}$ (± 0.001 ")
Valve Required to Actuate	4-way, 2-position



LOADING CAPACITY†	STATIC	DYNAMIC
Maximum Tensile T	89 N (20 lbs)	31 N (7 lbs)
Maximum Compressive C	89 N (20 lbs)	31 N (7 lbs)
Maximum Moment M_x	1 Nm (12"/lbs)	0.5 Nm (4"/lbs)
Maximum Moment M_y	2 Nm (15"/lbs)	0.6 Nm (5"/lbs)
Maximum Moment M_z	1 Nm (12"/lbs)	0.5 Nm (4"/lbs)

† Capacity are per set of jaws and not simultaneous.

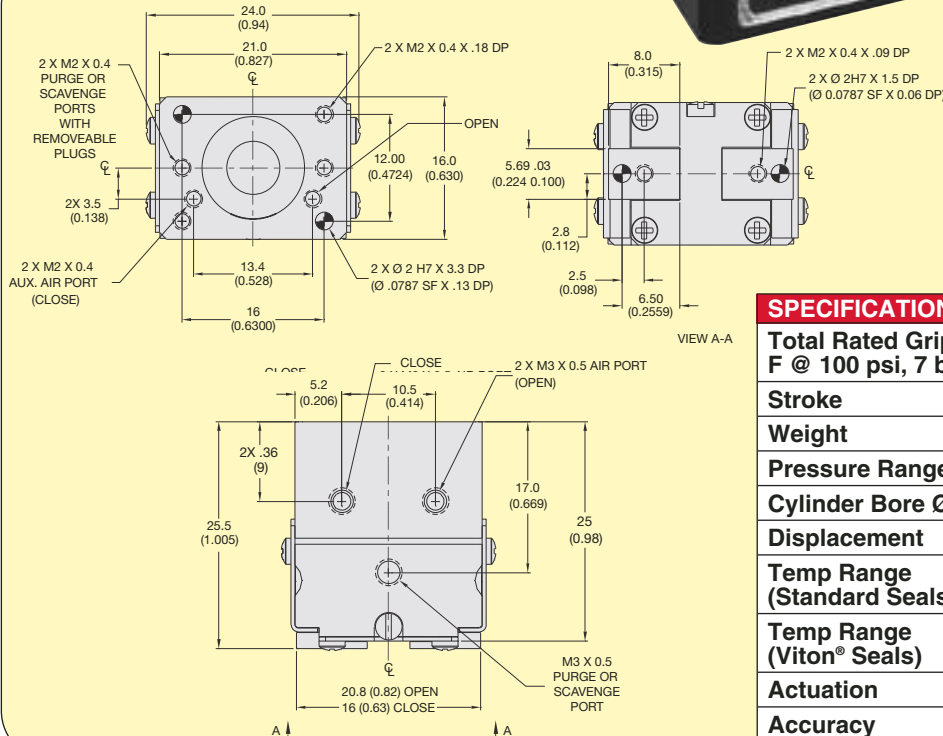


PARALLEL PNEUMATIC GRIPPER— MINIATURE CLEAN ROOM SERIES RPMC-2M



RPMC-2M, \$427, shown
larger than actual size.

Dimensions: mm (in)

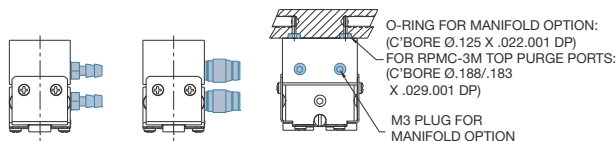
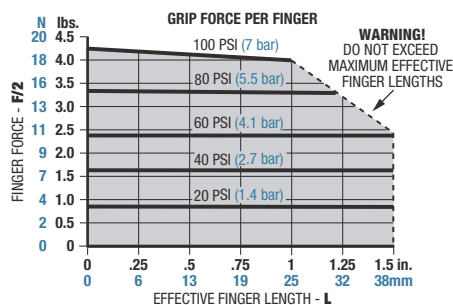


UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Third Angle Projection Metric Threads Course Pitch	All Dowel Holes are SF (Slip Fit). Locational Tolerance ± 0.005 or $(\pm 0.13 \text{ mm})$
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Metric mm	Imperial (in)
0. = ± 0.25	(0.00) = (± 0.01)
0.0 = ± 0.13	(0.000) = (± 0.005)
0.00 = ± 0.013	(0.0000) = (± 0.0005)

SPECIFICATIONS	RPMC-2M
Total Rated Grip Force F @ 100 psi, 7 bar	36 N (8 lb)
Stroke	4.8 mm (0.19")
Weight	0.026 Kg (0.058 lb)
Pressure Range	3 to 7 bar (40 to 100 psi)
Cylinder Bore Ø	10 mm (0.394")
Displacement	0.20 cm ³ (0.012" ³)
Temp Range (Standard Seals)	-35 to 80°C (-30 to 180°F)
Temp Range (Viton® Seals)	-30 to 120°C (-20 to 250°F)
Actuation	0.10 sec
Accuracy	± 0.05 mm (± 0.002 ")
Repeatability	± 0.03 mm (± 0.001 ")
Valve Required to Actuate	4-way, 2-position



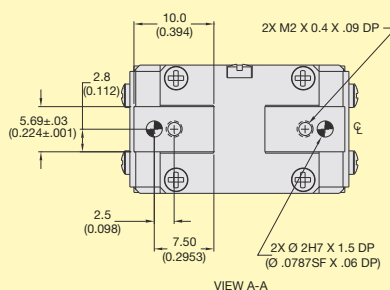
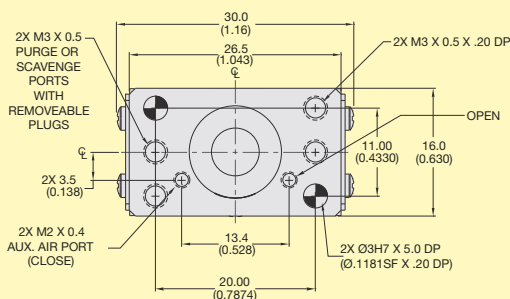
LOADING CAPACITY†	STATIC	DYNAMIC
Maximum Tensile T	89 N (20 lbs)	31 N (7 lbs)
Maximum Compressive C	89 N (20 lbs)	31 N (7 lbs)
Maximum Moment M_x	1 Nm (12"/lbs)	0.5 Nm (4"/lbs)
Maximum Moment M_y	2 Nm (15"/lbs)	0.6 Nm (5"/lbs)
Maximum Moment M_z	1 Nm (12"/lbs)	0.5 Nm (4"/lbs)

† Capacity are per set of jaws and not simultaneous.

PARALLEL PNEUMATIC GRIPPER— MINIATURE CLEAN ROOM SERIES RPMC-3M



Dimensions: mm (in)



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

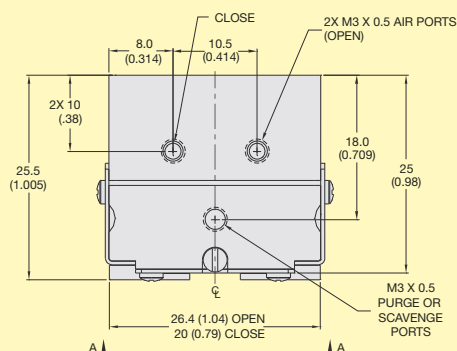
Dimensions are symmetrical about centerline

Third Angle Projection

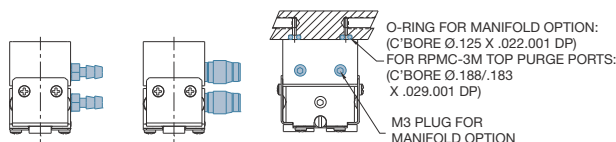
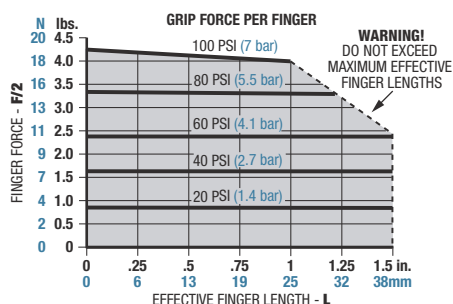
All Dowel Holes are SF (Slip Fit). Locational Tolerance ±.0005" or (±.013mm)

Metric mm Imperial (in)

Metric Threads 0. = ±.25 (0.00) = (±.01)
0.0 = ±.13 (0.000) = (±.005)
0.00 = ±.013 (0.0000) = (±.0005)



SPECIFICATIONS	RPMC-3M
Total Rated Grip Force F @ 100 psi, 7 bar	36 N (8 lb)
Stroke	6.3 mm (0.25")
Weight	0.034 Kg (0.074 lb)
Pressure Range	3 to 7 bar (40 to 100 psi)
Cylinder Bore Ø	10 mm (0.394")
Displacement	0.25 cm ³ (0.015"³)
Temp Range (Standard Seals)	-35 to 80°C (-30 to 180°F)
Temp Range (Viton® Seals)	-30 to 120°C (-20 to 250°F)
Actuation	0.10 sec
Accuracy	±0.05 mm (±0.002")
Repeatability	±0.03 mm (±0.001")
Valve Required to Actuate	4-way, 2-position



LOADING CAPACITY†	STATIC	DYNAMIC
Maximum Tensile T	89 N (20 lbs)	31 N (7 lbs)
Maximum Compressive C	89 N (20 lbs)	31 N (7 lbs)
Maximum Moment M _x	1 Nm (12"/lbs)	0.5 Nm (4"/lbs)
Maximum Moment M _y	2 Nm (15"/lbs)	0.6 Nm (5"/lbs)
Maximum Moment M _z	1 Nm (12"/lbs)	0.5 Nm (4"/lbs)

† Capacity are per set of jaws and not simultaneous.

AVAILABLE FOR FAST DELIVERY!

To Order (Specify Model Number)

MODEL NO.	PRICE	LENGTH mm (in)	DEPTH mm (in)	HEIGHT mm (in)	STROKE mm (in)
RPMC-1M	\$421	23 (0.89)	16 (0.630)	23 (0.92)	3.2 (0.13)
RPMC-2M	427	24 (0.94)	16 (0.630)	25 (0.98)	4.8 (0.19)
RPMC-3M	432	30 (1.16)	16 (0.630)	25 (0.98)	6.3 (0.25)

Ordering Example: RPMC-2M mini gripper clean-room series with maximum stroke of 4.8 mm (0.19"), \$427.
Recommended accessories SLKT-143V top air port manifold seal kit for remote air fitting use, \$27.

ACCESSORIES

MODEL NO.	PRICE	DESCRIPTION
SLKT-121	\$16	Standard seal repair kit
SLKT-143V	27	Top air port manifold seal kit (Viton® only)

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• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers, Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ethernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters