



DURA-SLIDE

Air Shuttles

MM-SERIES

2 POSITION SHUTTLING DEVICE

JJ-SERIES

3 POSITION SHUTTLING DEVICE

DURA-SLIDE MM and JJ Series of Air Shuttles are another R&I development made to answer the automation industry's requirement for a standard stroked slide to meet special applications. Both series offer a compact size and the quality construction and durability you've come to expect.

FEATURES

DURA-SLIDE MM and JJ Series were developed as isolation shuttles, typically found at the end of a parts feeder track for mounting tooling nests. However the shuttling devices can be used for any situation where accurate shuttling between 2 or 3 positions is required. Both the MM and JJ series have fixed internal stops to provide accurate strokes and to assure complete interchangeability for field replacement. Furthermore both the MM and JJ shuttles are fully field serviceable with our repair kits. Standard strokes are listed on the following pages and other strokes, in this range, are available at no extra cost and no extra delivery time.

The sliding tables are supported by Oilite bushings running on hardened shafting and utilize Buna-N cup seals.

MOUNTING STYLES

DURA-SLIDE MM and JJ Series units can be mounted and located in any plane with provided mounting holes and dowel pin holes. The sliding table also has tapped and dowel holes for easy adaptations to additional work moving/holding devices or customer tooling.

Air shuttles offer a compact alternative to standard linear slides or linear thrusters and are perfect for accurately shuttling or positioning of tooling.

- 2 position shuttle
- Air powered
- Standard strokes

MM

See Page **4-3.3**

- 3 position shuttle
- Air powered

JJ

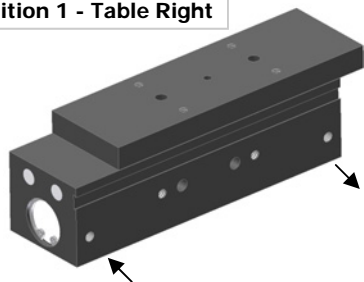
See Page **4-3.5**

OPERATING PRINCIPLE

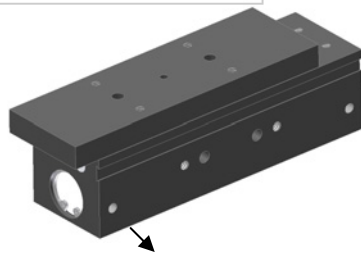
TECHNICAL SPECIFICATIONS

MM-Series - 2 Position Shuttle

Position 1 - Table Right



Position 2- Table Left

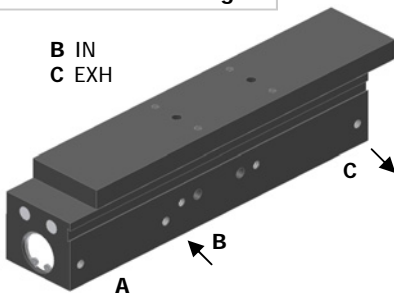


Pneumatic Specifications	ENGLISH	METRIC
Pressure Range	40-100 psi	3-7 bar
Cylinder Type	Double Acting	
Dynamic Seals	U-cups Buna-N	
Required Valves	4-way, 2 position	
Temperature Range		
Buna-N Seals	-30 to 180 F	-35 to 80 C
Viton Seals (-V option)	-20 to 300 F	-30 to 150 C

JJ-Series - 3 Position Shuttle

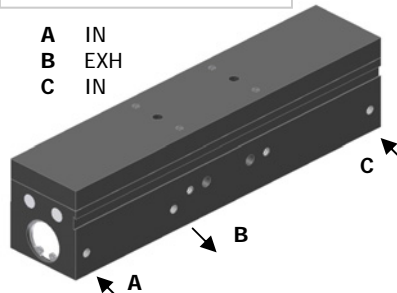
Position 1 - Table Right

B IN
C EXH



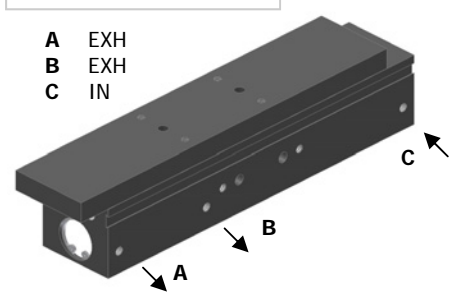
Position 2 - Table Center

A IN
B EXH
C IN



Position 3 - Table Left

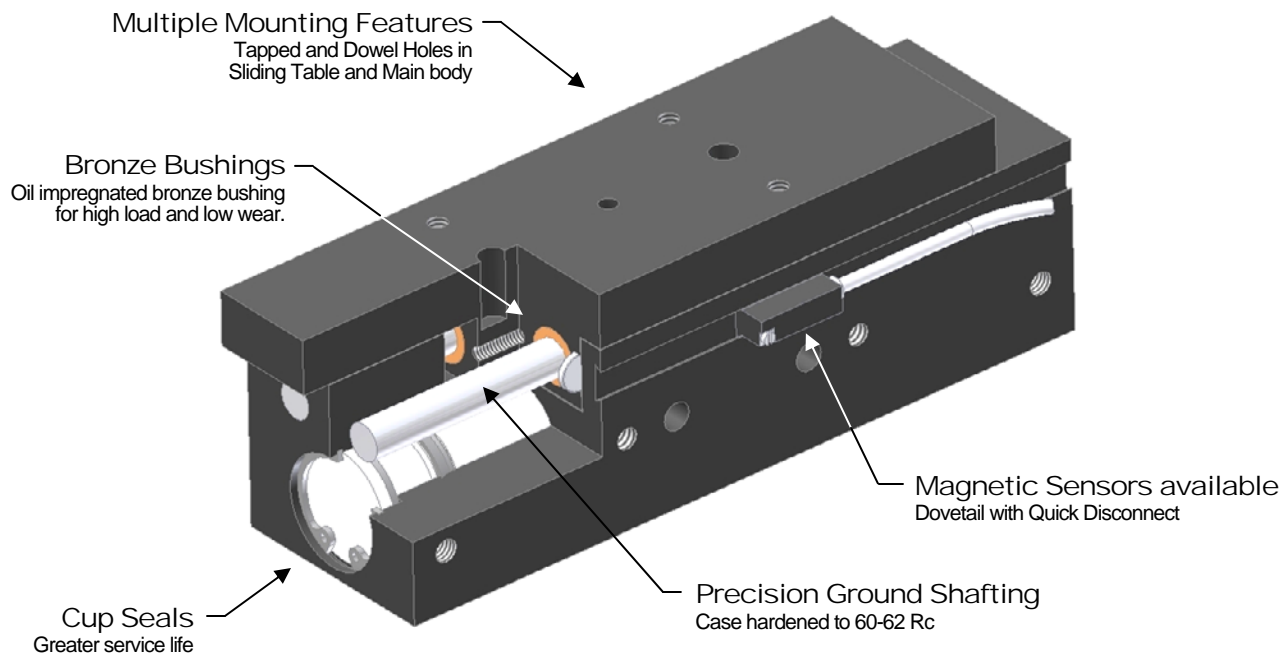
A EXH
B EXH
C IN





PRODUCT FEATURES

- Aircraft Grade Aluminum
Black Anodize Finish
- Simple and Highly Durable
Time tested, field approved design
- Compact Design
Internal cylinder reduces overall length



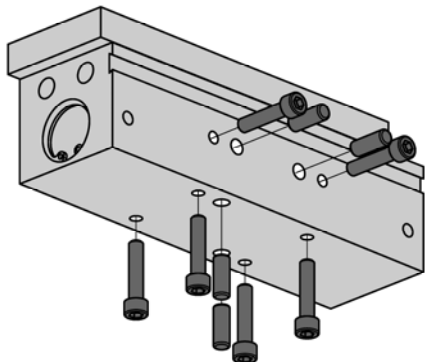
DESIGNED - MANUFACTURED - ASSEMBLED IN THE USA



MOUNTING INFORMATION

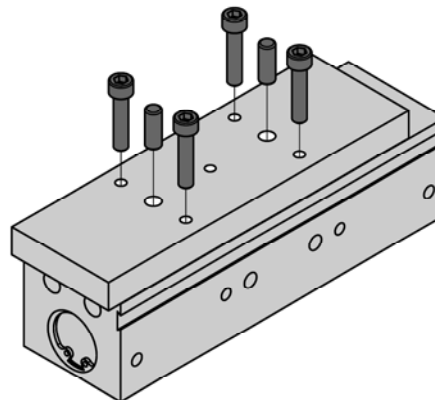
Mounts and operates in any orientation

MAIN BODY



Body can be mounted with Tapped holes on bottom and both sides. Positive location with slip fit Dowel holes.

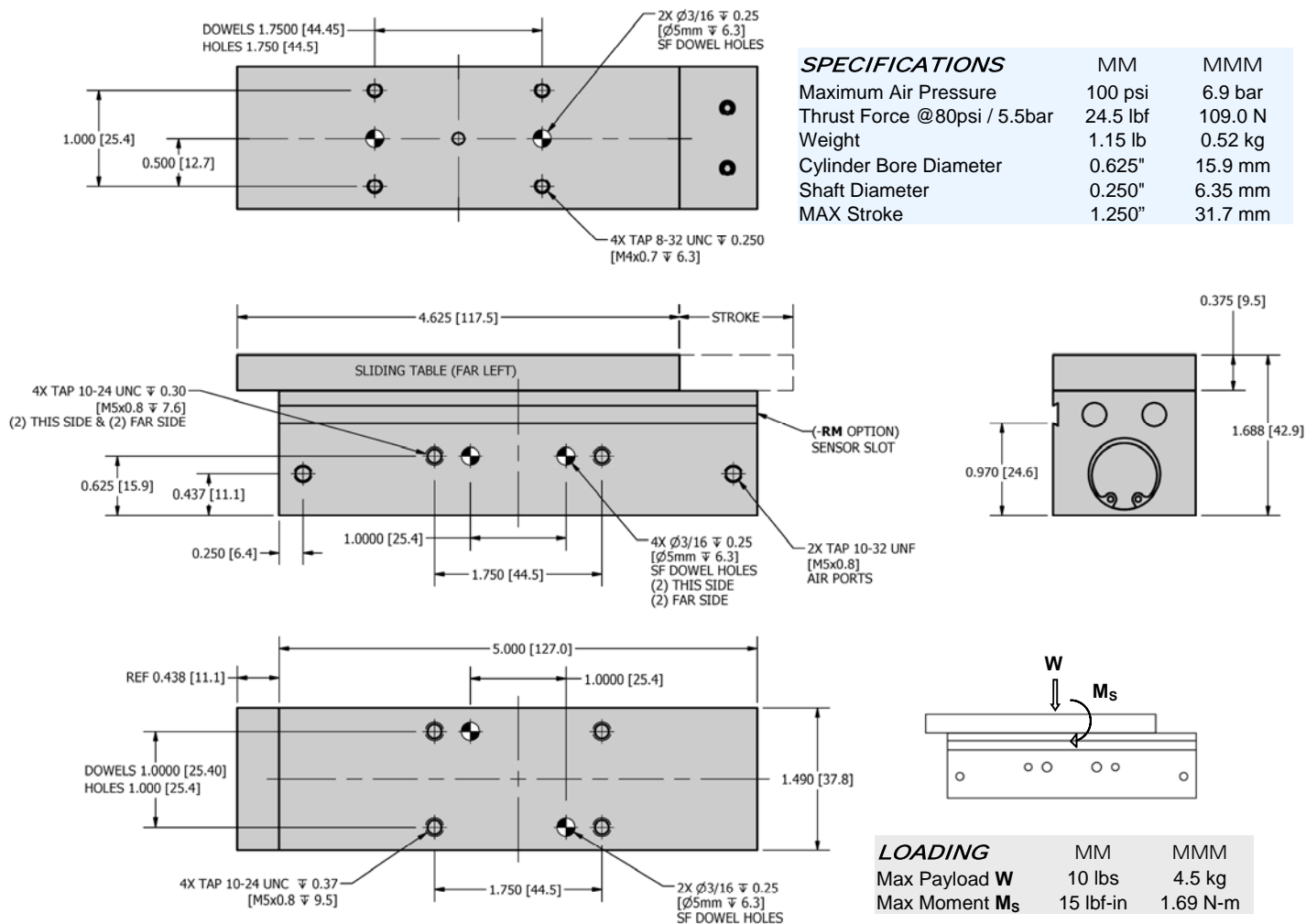
TOOLING



Payload can be mounted directly to sliding table with Tapped holes. Positive location with slip fit Dowel holes.



DIMENSIONAL DRAWING



Flow controls recommended for nearly all applications

HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)

METRIC BASIC MODEL STROKE SENSOR

M **MM** - - **V** - **RM**

SEALS

METRIC M

STROKE Inch: 1.25, 1.00, 0.75, 0.50, 0.25
mm: 31.75, 25.4, 19.05, 12.7, 6.35

SEALS V - Viton (standard Buna - N)

MAGNETS RM - Magnetic Sensor Ready

SAMPLE ORDER: MM-1.25-RM

Ex) MM Shuttle with 1.250" stroke with sensor magnets

MAGNETIC SENSOR KITS * (Dovetail mounted)

DSK-N - Magnetic Sensor NPN w/ quick disconnect Kit

DSK-P - Magnetic Sensor PNP w/ quick disconnect Kit

* Requires Sensor Ready (-RM). Sensors kits include (2) sensors and (2) 5 meter cables.

MAGNETIC SENSORS * (Dovetail mounted)

DS-N - Magnetic Sensor NPN w/ quick disconnect

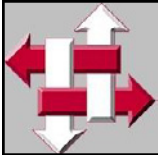
DS-P - Magnetic Sensor PNP w/ quick disconnect

* Requires Sensor Ready (-RM). Includes (1) sensor.

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

CUSTOM DESIGNS ALWAYS AVAILABLE PLEASE CONTACT US FOR INFORMATION



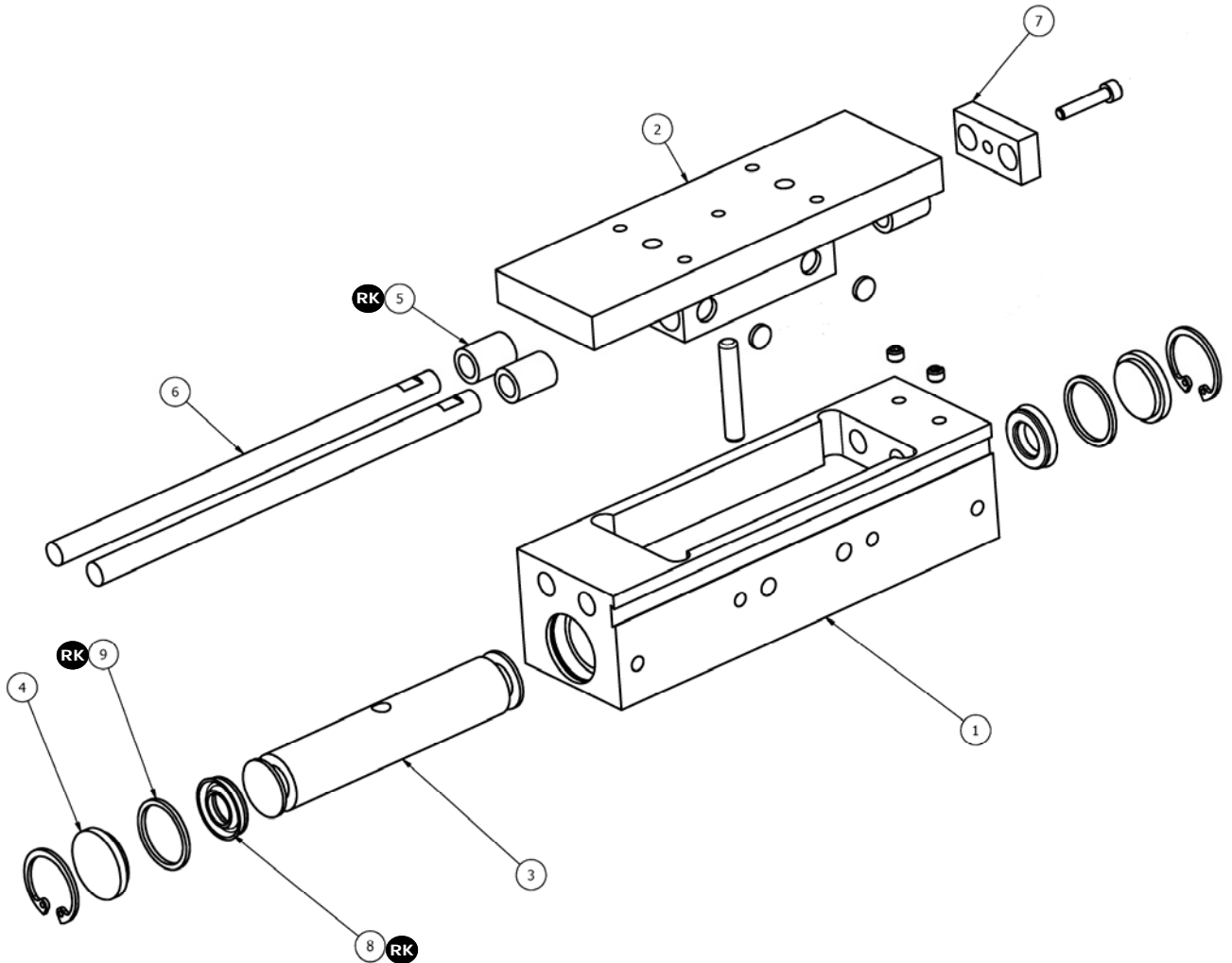
R&I
MANUFACTURING CO.

DURA-SLIDE
AIR SHUTTLES



MM-SERIES

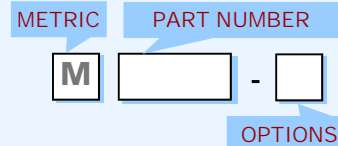
EXPLODED VIEW



PARTS LIST

HOW TO ORDER PARTS

ITEM	REQ'D	NAME	PART #	OPTIONS
1	1	Main Body	MM-101	-RM ³
2	1	Sliding Table	MM-102	-RM ³
3	1	Piston *	MM-103	
4	2	Cylinder Cap *	MM-104	
5	4	Bushing *	MM-105	
6	2	Rod *	MM-106	
7	1	Stroke Block	MM-107	-S ¹
8	2	U-cup *	UCP-215	-V ²
9	2	O-ring *	ORG-016	-V ²
RK	1	Repair Kit * #	MM-RK	-V ²



SAMPLE ORDER: MM-107-0.75

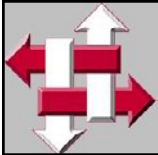
Ex) MM Stroke Block for 0.750" stroke

OPTIONS (see product pages for information)

- 1 - S = Stroke (Stroke Block only required for 1.000" [25.4mm] stroke and below)
- 2 - V = Viton Seals if required
- 3 - RM = Sensor Ready unit

NOTES

- * - Metric code not required
- # - Repair Kits include req'd qty of parts marked with RK



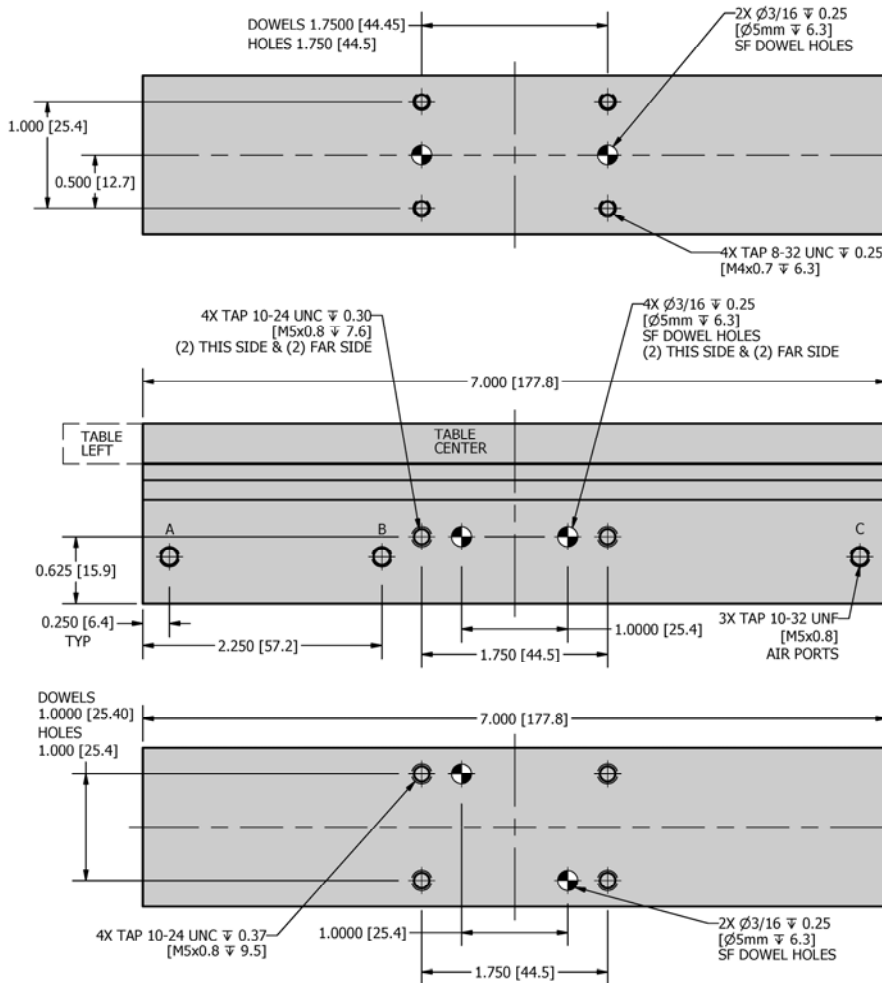
R&I
MANUFACTURING CO.

DURA-SLIDE
AIR SHUTTLES



3 POSITION
SHUTTLE DEVICE

DIMENSIONAL DRAWING



SPECIFICATIONS

	JJ	MJJ
Maximum Air Pressure	100 psi	6.9 bar
Thrust Force @80psi / 5.5bar	24.5 lbf	109.0 N
Weight	1.8 lb	0.82 kg
Cylinder Bore Diameter	0.625"	15.9 mm
Shaft Diameter	0.250"	6.35 mm
Stroke to Left or Right	0.625"	15.9 mm

LOADING

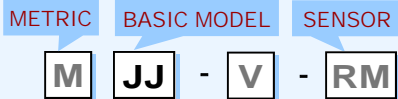
	JJ	MJJ
Max Payload W	10 lb	4.5 kg
Max Moment M_s	15 lbf-in	1.69 N-m



Flow controls recommended for nearly all applications

HOW TO ORDER : BASIC UNIT

ACCESSORIES (order separately)



METRIC M
SEALS V - Viton (standard Buna - N)
MAGNETS RM - Magnetic Sensor Ready
STROKE Custom Strokes available - Contact Factory

SAMPLE ORDER: JJ-V-RM

Ex) JJ Shuttle with Viton seals and sensor magnets

MAGNETIC SENSOR KITS * (Dovetail mounted)

DSK-3-N - Magnetic Sensor NPN w/ quick disconnect Kit

DSK-3-P - Magnetic Sensor PNP w/ quick disconnect Kit

* Requires Sensor Ready (-RM). Sensors kits include (3) sensors and (3) 5 meter cables.

MAGNETIC SENSORS * (Dovetail mounted)

DS-N - Magnetic Sensor NPN w/ quick disconnect

DS-P - Magnetic Sensor PNP w/ quick disconnect

* Requires Sensor Ready (-RM). Includes (1) sensor.

SENSOR CABLE

SENCAB-5 - Quick Disconnect PUR Cable 5M Length

CUSTOM DESIGNS ALWAYS AVAILABLE PLEASE CONTACT US FOR INFORMATION



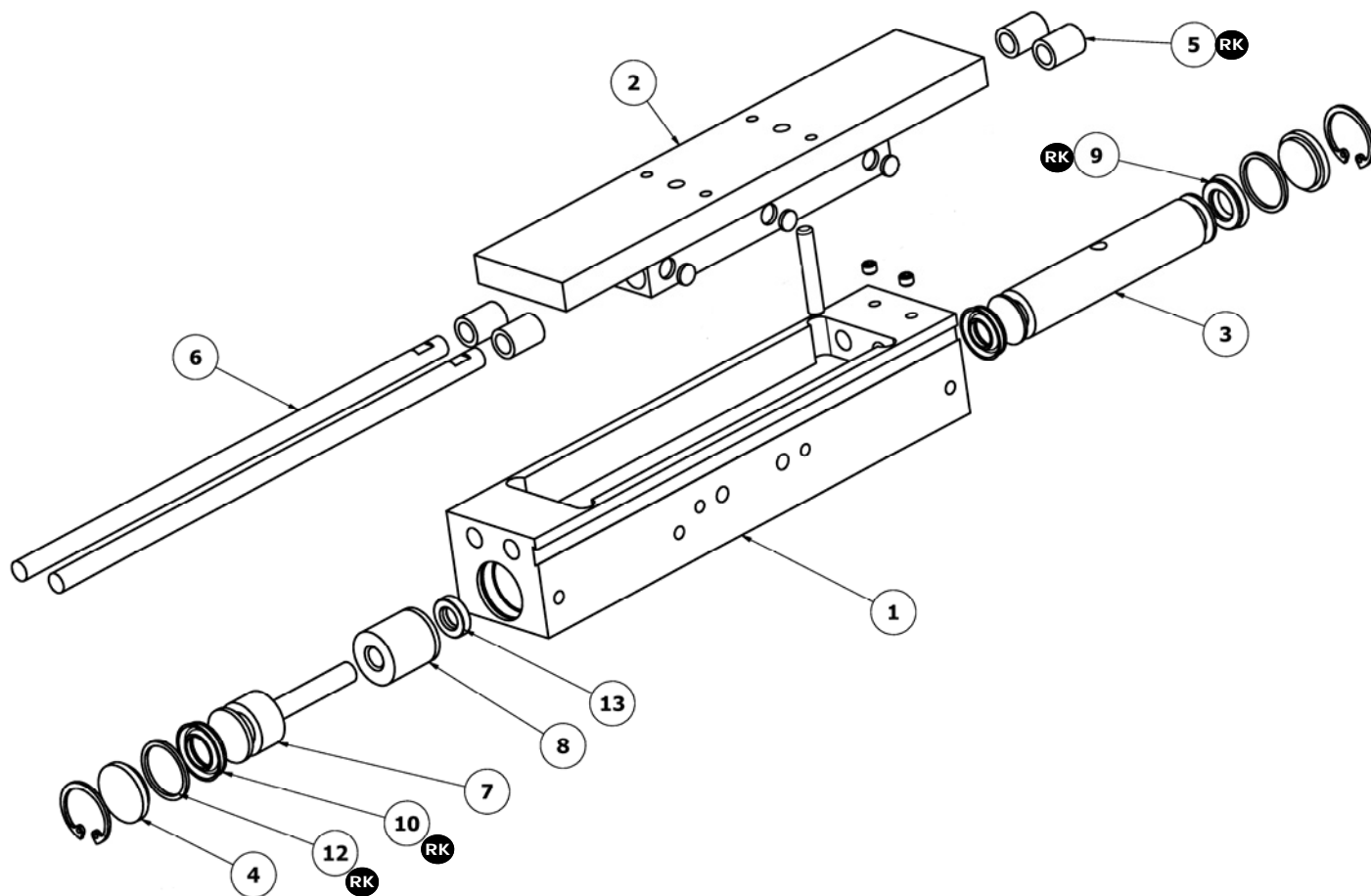
R&I
MANUFACTURING CO.

DURA-SLIDE
AIR SHUTTLES



JJ-SERIES

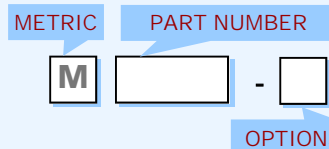
EXPLODED VIEW



PARTS LIST

HOW TO ORDER PARTS

ITEM	REQ'D	NAME	PART #	OPTIONS
1	1	Main Body	JJ-101	-RM ²
2	1	Sliding Table	JJ-102	-RM ²
3	1	Piston *	MM-103	
4	2	Cylinder Cap *	MM-104	
5	4	Bushing *	MM-105	
6	2	Rod *	JJ-106	
7	1	Piston Stop *	JJ-107	
8	1	Stop Guide *	JJ-108	
9	2	U-cup (Piston) *	UCP-215	-V ¹
10	1	U-cup (Piston Stop) *	UCP-220	-V ¹
12	2	O-ring *	ORG-016	-V ¹
13	1	Shaft Seal *	SSA-210	-V ¹
RK	1	Repair Kit * #	JJ-RK	-V ¹



SAMPLE ORDER: JJ-102

Ex) JJ Sliding Table

OPTIONS (see product pages for information)

- 1 - V = Viton Seals option
- 2 - RM = Sensor Ready unit

NOTES

- * - Metric code not required
- # - Repair Kits include req'd qty of parts marked with RK