

# Airpel-**AB** Specifications

	<u>MAB9</u>	<u>MAB16</u>	<u>MAB24</u>	<u>MAB32</u>
<b>Part 1: General Specifications</b>				
Air Cylinder Type	Single Acting, Air Extend	Single Acting, Air Extend	Single Acting, Air Extend	Single Acting, Air Extend
Bore (mm)	9.3	15.9	24.0	32.5
Piston Area (mm <sup>2</sup> )	67.7	198	452	830
Force factor (factor x pressure (MPa) = force output (N))	67.7	198	452	830
Maximum Pressure (MPa)	0.7	0.7	0.7	0.7
Minimum Pressure (MPa) with Cylinder Horizontal (see note 1)	0.15	0.15	0.15	0.15
Minimum Pressure (MPa) with Cylinder Vertical	0.03	0.03	0.03	0.03
Maximum Leak at 0.2 MPa (standard L/min)	5	6	9	14
Typical Leak at 0.2 MPa (standard L/min)	3.5	4	6	10
Piston Friction (N) with airsupply above minimum pressure	0	0	0	0
Operating Temperature Range (°C)	-20 to +90	-20 to +60	-20 to +50	-20 to +40
Note 1: Minimum pressure may be lower with short stroke units because of lower rod mass.				
<b>Part 2: Component Weights</b>				
	<u>MAB9S-NF</u>	<u>MAB16S-NX</u>	<u>MAB24S-NX</u>	<u>MAB32S-NX</u>
Weight of Piston/Rod Assembly Only (grams)	10.1 + (0.06 x stroke)	34.9 + (0.15 x stroke)	63.1 + (0.25 x stroke)	164.4 + (0.39 x stroke)
Weight of Complete Unit (grams)	29.5 + (0.37 x stroke)	72.0 + (0.66 x stroke)	155.8 + (1.22 x stroke)	602.3 + (3.49 x stroke)
	<u>MAB9S-NV</u>	<u>MAB16S-NV</u>	<u>MAB24S-NV</u>	<u>MAB32S-NV</u>
Weight of Piston/Rod Assembly Only (grams)	9.4 + (0.06 x stroke)	31.9 + (0.15 x stroke)	60.5 + (0.25 x stroke)	159.7 + (0.39 x stroke)
Weight of Complete Unit (grams)	28.8 + (0.37 x stroke)	68.9 + (0.66 x stroke)	153.2 + (1.22 x stroke)	597.6 + (3.49 x stroke)
	<u>MAB9S-SF</u>	<u>MAB16S-SX</u>	<u>MAB24S-SX</u>	
Weight of Piston/Rod Assembly Only (grams)	10.1 + (0.06 x stroke)	34.9 + (0.15 x stroke)	63.1 + (0.25 x stroke)	
Weight of Complete Unit (grams)	33.1 + (0.37 x stroke)	80.7 + (0.66 x stroke)	176.1 + (1.22 x stroke)	
	<u>MAB9S-SV</u>	<u>MAB16S-SV</u>	<u>MAB24S-SV</u>	
Weight of Piston/Rod Assembly Only (grams)	9.4 + (0.06 x stroke)	31.9 + (0.15 x stroke)	60.5 + (0.25 x stroke)	
Weight of Complete Unit (grams)	32.4 + (0.37 x stroke)	77.7 + (0.66 x stroke)	173.5 + (1.22 x stroke)	
<b>Part 3: Max Mounting Torque</b>				
Cylinder Nut (Nm)	7	10	15	19
Rod Nut, V Rod End Option (Nm)	0.6	1.4	2.1	Dependent on mating part
Rod Nut, F Rod End Option (Nm)	0.3	n/a	n/a	n/a
Rod Nut, X Rod End Option (Nm)	n/a	1.2	1.2	1.2

## Part 4: Other Important Information

- Airpel-AB cylinders must be supplied with clean, dry, unlubricated air. Particle filtration to be 1 micron or better. A coalescing filter is required.
- Airpel-AB cylinders are intended for use in straight line applications. Joints are provided to handle small misalignments, so take care to minimize parallel and angular misalignment.
- Airpel-AB cylinders require external stops. Piston must not be used as a stop in either direction.
- Because of the frictionless motion, Airpel-AB cylinders can be used at high speeds. Very high speeds in the extending direction can reduce the air bearing effect, possibly causing the piston to touch the cylinder wall.
- Airpel-AB cylinders cannot be used with vacuum.
- Consult the factory if you wish to use gases other than air.







