

# The 7 Benefits of **ROBO**



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# The **7 Benefits** of ROBO Cylinder®

# **Multiple Positioning**

With the ROBO Cylinder, you can achieve positioning of up to 20,000 stored points and a repeatability of  $\pm 0.01$ mm. ( $\pm 0.005$ mm for high-precision type) **Benefit** – Use one assembly line to produce a variety of products and achieve higher quality production with a repeatability of  $\pm 0.01$ mm or less.





(Set on a teaching pendant or using PC software)

No.	Position (mm)	Speed (mm/s)	Acceleration (G)	Deceleration (G)	Push (%)	Positioning Band (mm)
1	100	100	0.3	0.3	0	10
2	200	200	0.3	0.3	0	20

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# Push and Hold

The push force (pressing force) can be easily adjusted by changing the position data values. The push force can also be set to constant. This function is perfectly suited for press fit applications and parts holding.

**Benefit** – Push and hold hard/soft materials equally well without damaging your product. Great for press fitting and clamping applications.





#### Position Data Table

(	(Set on a teaching pendant or using PC software)							
	No	Position (mm)	Speed (mm/s)	Acceleration (G)	Deceleration (G)	Push (%)	Positioning Band (mm)	
	1	100	300	0.3	0.3	50	50	



# Acceleration/Deceleration Settings

Set the acceleration and deceleration independently on the ROBO Cylinder. **Benefit** – Improve cycle time and drastically reduce part defects. Produce more in less time.

Operation Example	Specified speed	Acceleration	Deceleration
	Stationary Speed Time	Acceleration	No shock (no jarring) deceleration

Position Data Table

(	(Set on a teaching pendant or using PC software)							
	No.	Position (mm)	Speed (mm/s)	Acceleration (G)	Deceleration (G)	Push (%)	Positioning band (mm)	
	1	300	100	0.3	0.01	0	0.1	
	2			0.3	0.01	0	0.1	

# **Zone Output**

Output a signal when the ROBO Cylinder reaches a preset range, without a need for any external sensors. The zone output function allows the ROBO Cylinder to shorten its cycle time, output a danger zone signal, and can be used for a variety of other applications.

**Benefit** – Save time, money and effort of adding cumbersome external sensors.



# **Pause Input**

Unlike pneumatic systems, ROBO Cylinders are capable of stopping at any point of the stroke during operation.

**Benefit** – This allows for collision prevention and greater safety for operators and equipment.



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# **Incremental/Decremental Moves**

When performing a continuous movement with uniform pitch, repetitive movement is possible with data of a single position. **Benefit** – This function can speed up programming and reduce I/O count.





#### Position Data Table

(Set on a teaching pendant or using PC software)

No.	Position (mm)	Speed (mm/s)	Acceleration (G)	Deceleration (G)	Push (%)	Positioning band (mm)
1	100	300	0.3	0.3	0	0.1
2	25	300	0.3	0.3	0	0.1

**Speed Change While in Motion** Speed can easily be changed while in motion. Easily set a position band and change your speed while in motion.

Benefit – Improve cycle time and minimize product defects, resulting in higher quality production and ROI.



# More Benefits...

#### **Energy Efficient**

ROBO Cylinders are highly energy efficient and will cut running costs, giving you substantial ROI. Functions such as Full Servo Control Mode and Automatic Servo Off Mode, further improve energy efficiency, making ROBO Cylinder the optimal choice for discerning automation engineers worldwide.

### Long Life = Greater ROI

In addition to less product defects, operator safety, shorter cycle times, energy efficiency, and higher quality production, ROBO Cylinder electric actuators have long lives.

#### **Quiet Operation**

Are you tired of the ear-splitting noise generated by pneumatic systems? ROBO Cylinder electric actuators offer quiet operation without the need for mufflers.

#### Free Technical Support

IAI America has offices in each of the 3 US time zones, to accommodate your schedule. Call us at your convenience to speak with one of our highly experienced technical support engineers.



Established in 1976, IAI has 7 overseas sales offices and 25 regional offices in Japan. IAI is proud to announce a newly constructed headquarters, with an adjacent state of the art manufacturing facility to produce the highest quality automation robots. When looking for innovative and high quality robots, excellent service and support for your unique needs, look no further than IAI!

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The information contained in this brochure may change without prior notice due to product improvements.

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