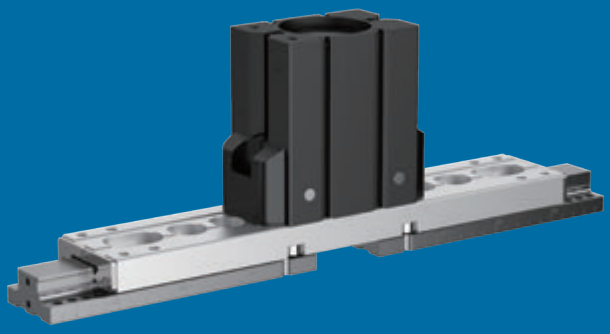
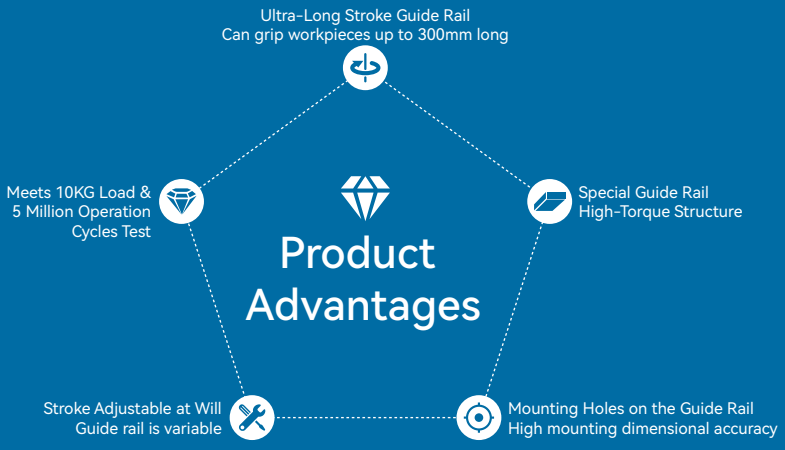
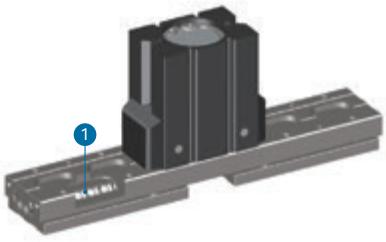
15A-AHZ2K Series



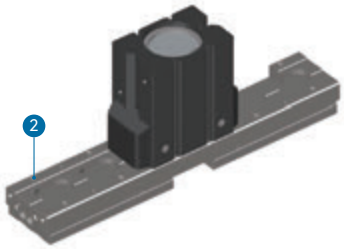


Air Gripper (Parallel Opening/Closing Type) AHZ2K Series Features

①The guide rail slider uses crossed roller guides as the rolling unit, offering strong torsion resistance and high load capacity.

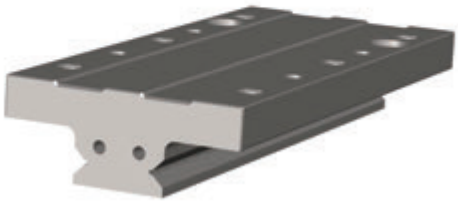


②Mounting holes are arranged on the guide rail, ensuring high mounting dimensional accuracy.

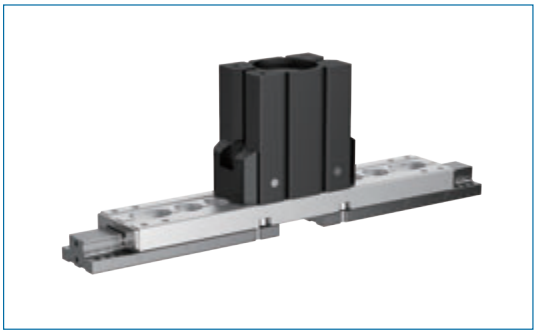


③The transmission gripper section uses non-lubricated sliders and features pre-drilled stroke position holes, allowing the gripping range to be adjusted based on the required clamping width.

④The slider adopts an integrated T-shaped structure design, capable of withstanding high torque during movement and flipping processes, preventing breakage.



Air Gripper (Parallel Opening/Closing Type) 15A-AHZ2K Series



Specifications

Bore Size		40mm
Fluid Medium		Air
Operating Pressure Range	Double-acting	0.1~0.7MPa
Ambient & Fluid Temp.		-10~60°c(Non-freezing)
Max. Operating Frequency (c.p.m)		60
Lubrication		Non-lubricated
Action Type		Double-acting
Magnetic Switch (Option)		Non-contact magnetic switch
Port Size		M5 x 0.8

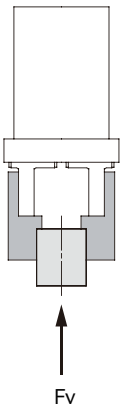
Model Selection

15A — AHZ2K — 40 — D — B — M9B — T — □

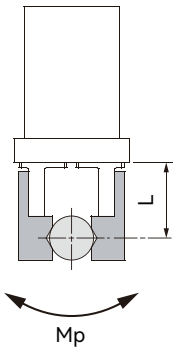
① Copper-Free Series	② Series	③ Bore	④ Action	⑤ Version	⑥ Magnetic Switch Model	⑦ Magnetic Switch Model	⑧ Number of Magnetic Switches
15A	AHZ2K	40	D:Double-acting	Version B	No symbol: No magnetic switch	Blank (Standard, cannot pass through)	Blank:2
				Version C	M9B:Two-wire magnetic switch	T:(Can pass through cable carrier)	s:1
					M9N:Three-wire magnetic switch		n:n

Allowable load calculation

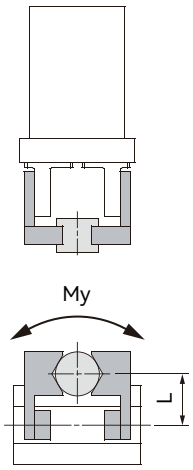
(Figure 1)



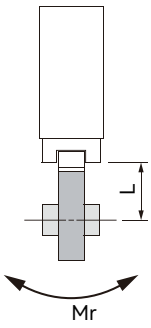
(Figure 2)



(Figure 3)



(Figure 4)



Model	Maximum allowable thrust Fv(N)	Maximum allowable moment		
		Mp(N·m)	My (N·m)	Mr (N·m)
15A-AHZ2K-40D-B	2646	30.33	30.33	60.66

[Note] The load and moment values in the table represent static values.

Maximum load force F at distance L	Calculation example (using 15A-AHZ2K-40D-B)
$\text{Maximum load force } F\ (N) = \frac{M}{\text{Maximum allowable}\ L \times 10^{-3}}$ (*Pay attention to unit conversion during calculation.)	As shown in (Figure 2), with a load force of f = 98N applied at a distance of L = 130mm from the guide rail surface, can the AHZ2K-40D withstand this load? $\text{Maximum Allowable Load } F = \frac{30.33}{130 \times 10^{-3}} = 233.3(N)$ Actual Load Force f =98(N)<233.3(N) Therefore, the 15A-AHZ2K-40D-B is fully suitable.

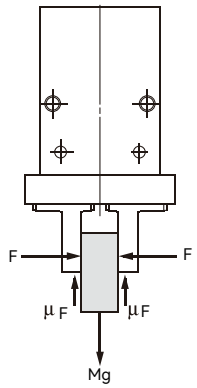
Air Gripper (Parallel Opening/Closing Type) 15A-AHZ2K Series

Gripping ForceReference Table

Theoretical pressure 0.5MPa:

Action Type	Model	Gripping Force N (Effective value per finger)		Opening/Closing Stroke (both sides) mm
		External Grip	Internal Grip	
Double-acting	15A-AHZ2K-40D-B 15A-AHZ2K-40D-C	254	318	30

Friction Coefficientand Safety Factor Check



Recommended calculation formula:
F:Gripping force of one finger
μ:Friction coefficient
m:Workpiece mass
g:Gravitational acceleration(=9.8 m/s^2)
mg:Workpiece weight

$2 \times \mu F > mg$

2 fingers

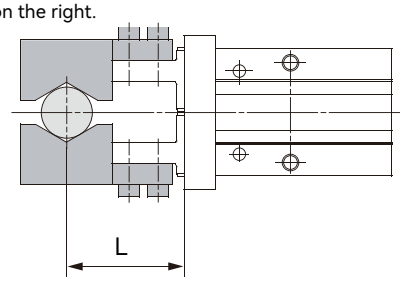
a:Safety factor

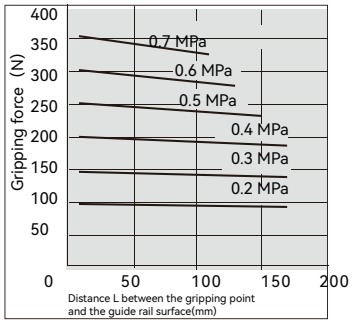
$$F = \frac{mg}{2 \times \mu} \times a$$

Performance parameters corresponding to different pressures

External gripping force

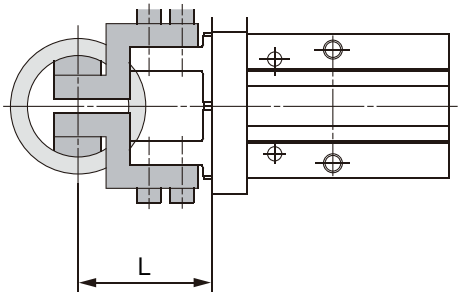
As shown in the figure below, when the fingers and attachments are in complete contact with the workpiece, the finger gripping force and distance L should be referenced against the graph on the right.

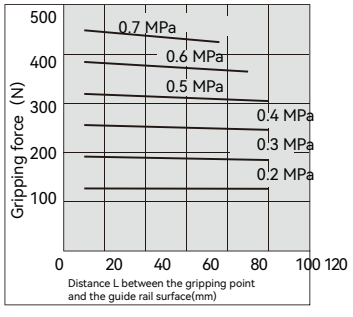




Internal gripping force

As shown in the figure below, when the fingers and attachments are in complete contactwith the workpiece, the finger gripping force and distance L should be referenced againstthe graph on the right.

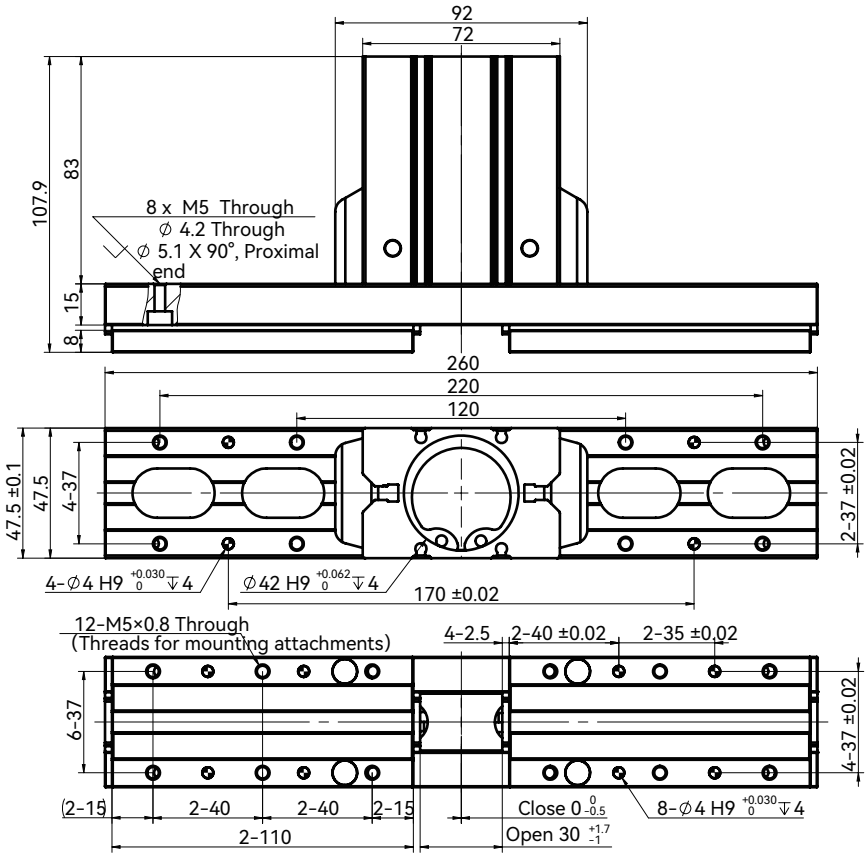


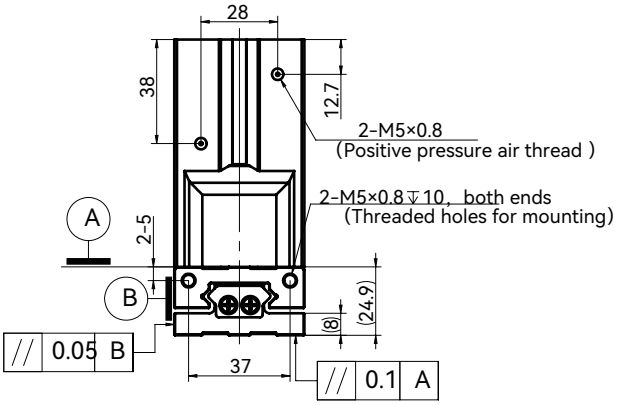


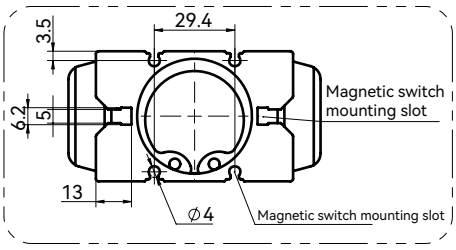
Air Gripper (Parallel Opening/Closing Type) 15A-AHZ2K Series

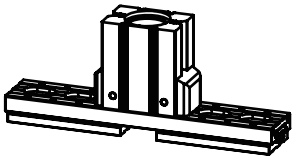
Outline Dimension Drawing (mm)

AHZ2K-40D-B









Air Gripper (Parallel Opening/Closing Type) 15A-AHZ2K Series

Outline Dimension Drawing (mm)

15A-AHZ2K-40D-C