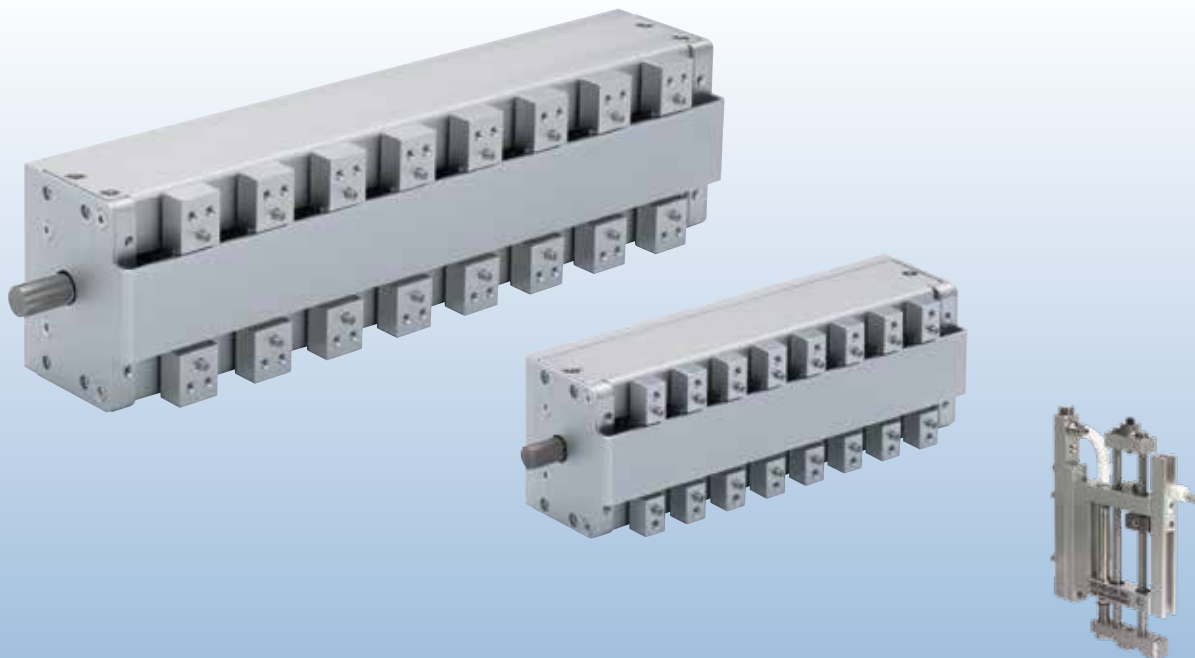


PCS

Pitch Changer



*An easy-to-use and convenient unit
for flexible pitch changing operations.*

MACHINE ENGINEERING CORPORATION

A simple and convenient unit that enables easy workpiece pitch changes.

When transferring multiple workpieces simultaneously, it is often necessary to change their pitch.

Until now, such mechanisms had to be custom-designed and manufactured to suit each machine specification, requiring considerable time and effort.

Based on cam technology cultivated over many years, MEG has developed a versatile unit that allows the pitch to be changed freely. Its compact and simple mechanism enables high-speed operation while providing stable and reliable performance over an extended period. We invite you to consider the Pitch Changer for your equipment and automation systems.

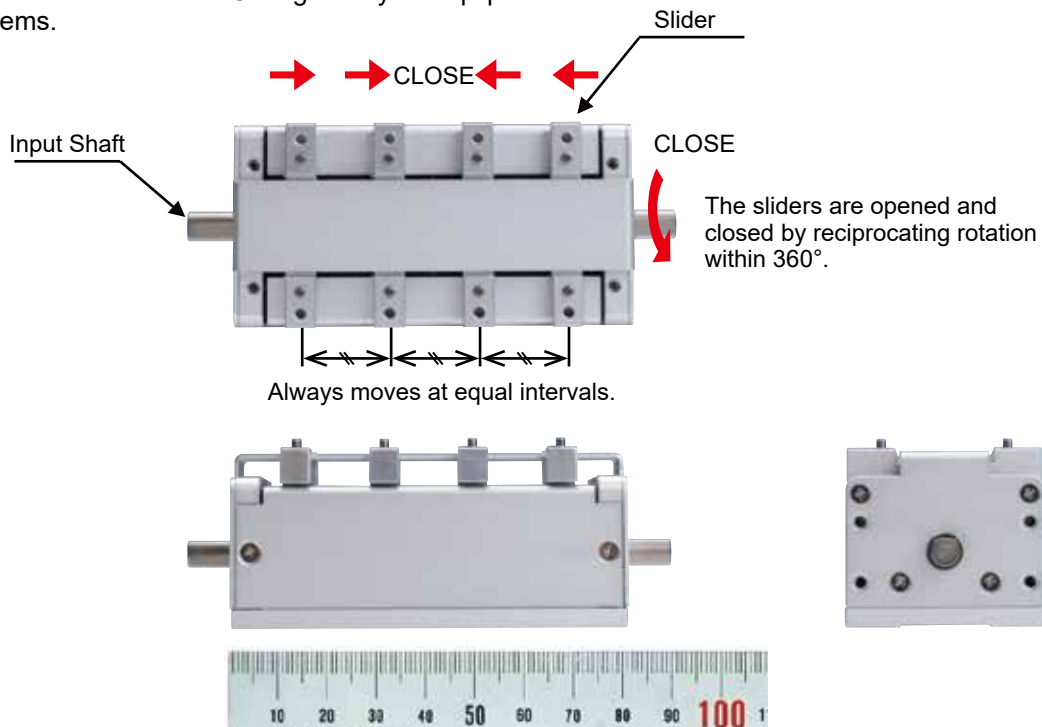
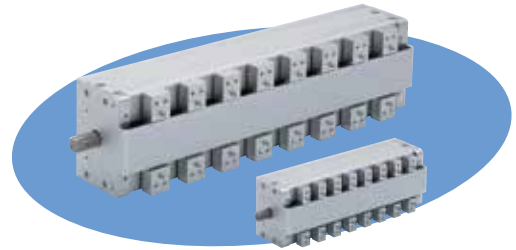
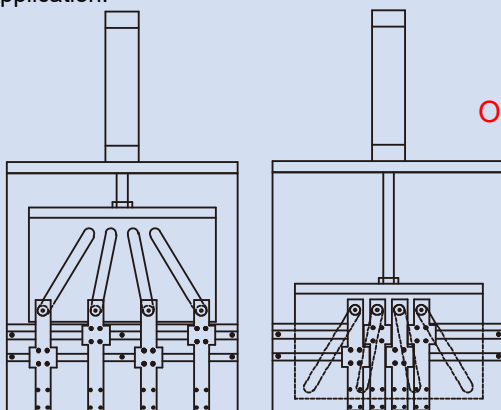


Photo: PCS08040F4

Conventional Method

Mechanisms using air cylinders or other actuators had to be designed and manufactured for each application.

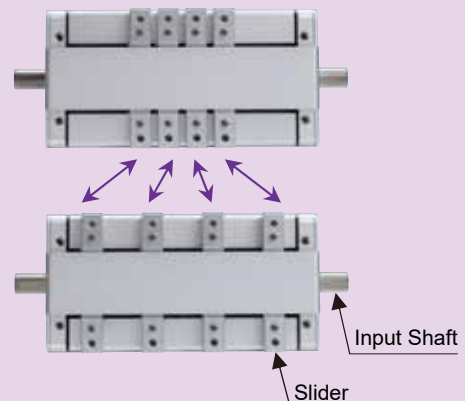


For a simple two-position pitch change, multiple grooved plates are moved up and down by air cylinders, causing the slide plates to open and close along the grooves.

Only 1/5 the Size!

From Now On

Take advantage of the many benefits of the standardized **MEG Pitch Changer**.

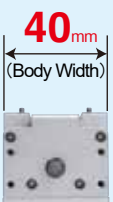
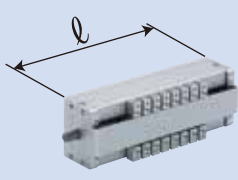
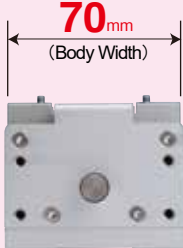
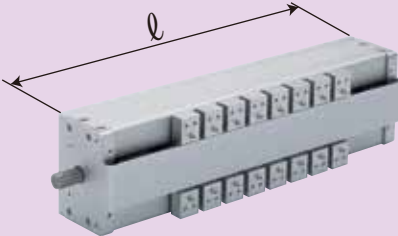
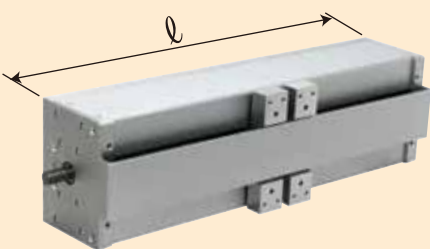


Simply rotating the input shaft turns the built-in cam, allowing the sliders to move at equal intervals to any desired position.



■ Available in Three Body Widths: 40, 70, and 100 mm

Based on two body lengths—S (Short) and L (Long)—eight models are available with 2 to 9 sliders.

		■ l Dimension S: 80mm L: 120mm ■ Number of Sliders S: 2 · 3 · 4 · 5 L: 6 · 7 · 8 · 9
		■ l Dimension S: 200mm L: 260mm ■ Number of Sliders S: 2 · 3 · 4 · 5 L: 6 · 7 · 8 · 9
		■ l Dimension S: 340mm L: 450mm ■ Number of Sliders S: 2 · 3 · 4 · 5 L: 6 · 7 · 8 · 9

■ Compact & Lightweight

The 40 mm-wide model is so compact that it fits in the palm of your hand!
(See photo on the right.)
Available with pitches starting from as little as 8 mm.



The 70 mm-wide model measures just 70 mm wide × 56 mm high, with an overall length starting at 200 mm. Weighing as little as 1.6 kg, it enables a lightweight and compact system.

The 100 mm-wide model can handle a maximum load of 1 kg per slider and can be equipped with a □42 Pick Up Unit.

■ High Speed

Simply controlling the input shaft to reciprocate within 360° enables high-speed movement.

■ Motor Option

The αSTEP AZ type is available as a motor option.
The motor is connected via a coupling.



■ Flexible Stroke

Simply rotating the input shaft opens and closes the sliders at a constant pitch.
When used with a pulse-controlled motor, the slider positions can be easily adjusted, allowing for multiple positioning points.

■ Application Example



MEG Pick Up Units can be mounted on the head for high-speed, high-precision transfer.
Please contact us for details on mounting.

* A demonstration video is available on our website.

40 mm Body Width Model PCS08040-PCS12040



- Ultra-compact design that fits in the palm of your hand, with a minimum pitch of 8 mm!
- The drive source can be selected to suit your equipment.
- The motor option is Oriental Motor Co., Ltd.'s αSTEP AZ (DC power supply type).

■ Variations

Model No.	Number of Sliders							
	2	3	4	5	6	7	8	9
PCS08040	○	○	○	○				
PCS12040					○	○	○	○

■ Product Weight

Without Motor	0.23	0.23	0.24	0.25	0.31	0.31	0.32	0.33
With αSTEP AZ Motor	0.42	0.42	0.43	0.44	0.5	0.5	0.51	0.52

(kg)

How to Read the Model Number

PCS 120 40 F 8 — MO Z24AK

Body Length	Body Width	Operating Specifications	Number of Sliders	Motor	Motor Code
080 : 80mm 120 : 120mm * XV : Special	40 : 40mm *	F : Free Stroke T : Special	2 : 2 Sliders 3 : 3 " 4 : 4 " 5 : 5 " 6 : 6 " 7 : 7 " 8 : 8 " 9 : 9 " * n : Special	No Symbol : Without Motor MO : With Motor MT : Special	Z24AK : AZM24AK (Note 1) Note 1: αSTEP AZ Motor (DC Power Supply Type), Oriental Motor Co., Ltd.

Model Example:
PCS12040F8-MOZ24AK

* Please contact us for customization of body length, operating specifications, number of sliders, motor, or other options.

<Customization Examples>



Base Model	PCS12040
Number of Sliders	13
Pitch [Operating Range]	7.3~8.1mm



Basic Specifications

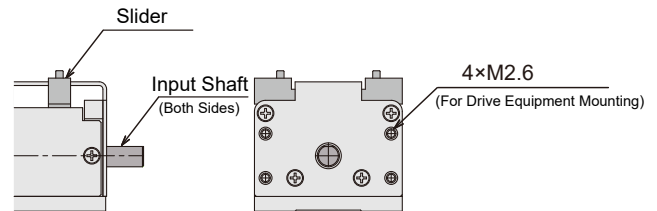
Base Model	PCS08040				PCS12040			
Number of Sliders	2	3	4	5	6	7	8	9
Pitch [Operating Range](mm)	8~56	8~28	8~18	8~14	8~18	8~15	8~13	8~11
Positioning Repeatability(mm)	±0.025							
Slider Pitch Accuracy(mm)	±0.05							
Slider Height Variation(mm)	±0.1 (Relative to Reference Dimension)							
Drive Method	External Input (Motor Available as an Option)							
Maximum Operating Frequency	120cpm(Max.)							
Ambient Temperature	10~40°C							
Lubrication	COSMO GREASE DYNAMAX EP							

* Please contact us for custom specifications other than those listed above.

External Input (Standard)

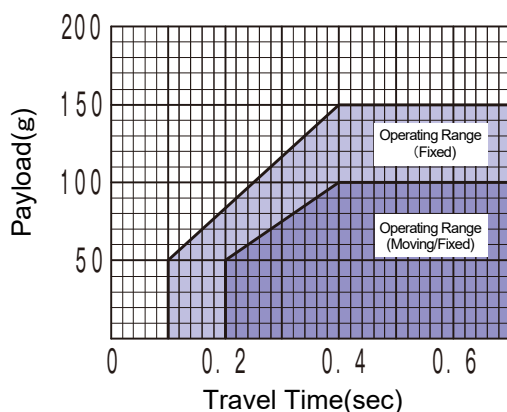
Input Shaft Diameter(mm)	Φ6 h 8
Recommended Motor Torque	0.055N · m ~

- Do not use the mechanical end at the end of the slider travel as a stopper.
- Do not operate the unit with the sliders pushing against each other.
- If a mechanical stopper is required to prevent interference, install it on the input shaft or on the drive equipment side.
- Do not use the motor's thrust force to hold or press the sliders against an object. Doing so may result in premature failure.



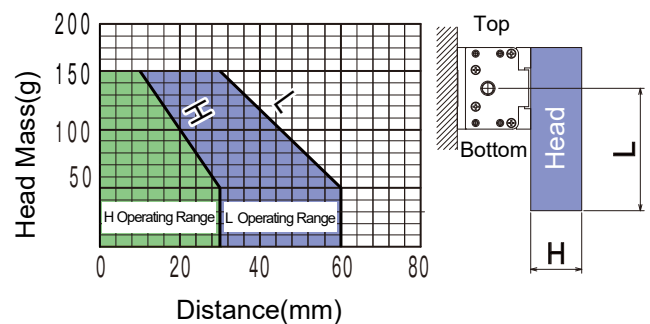
- Note 1 Do not modify the shaft.
 Note 2 When securing the round section of the input shaft with a set screw, insert a pressure pad between the round section and the setscrew.
 Note 3 Do not apply an axial (thrust) load to the input shaft.

Travel Time and Payload



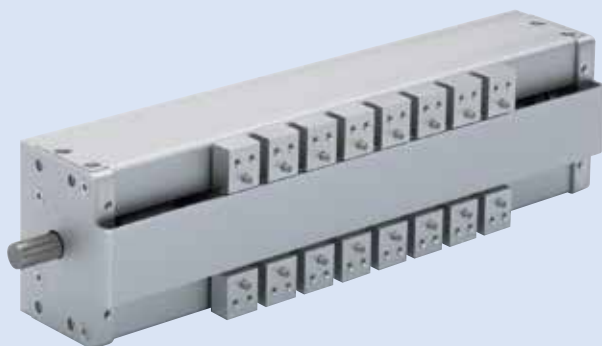
- Note 1: Payload is specified per slider.
 Note 2: Travel time is the time required to move from open to closed or from closed to open. Note 3: "Fixed" in the operating range refers to applications where the product itself is stationary.
 Note 4: Using the unit with a load exceeding the specified mass may cause problems. Do not exceed the specified operating range.
 Note 5: The performance data is for horizontal-axis applications. The unit cannot be used for vertical-axis applications.

Overhang



- Note 1: If the mounting orientation differs by 90° from that shown in the figure, use half the graph values as a guideline.
 Note 2: If the overhang is large, consider using an external support guide.

70 mm Body Width Model PCS20070-PCS26070



- The drive source can be selected to suit your equipment.
- The motor option is Oriental Motor Co., Ltd.'s αSTEP AZ (DC power supply type).

■ Variations

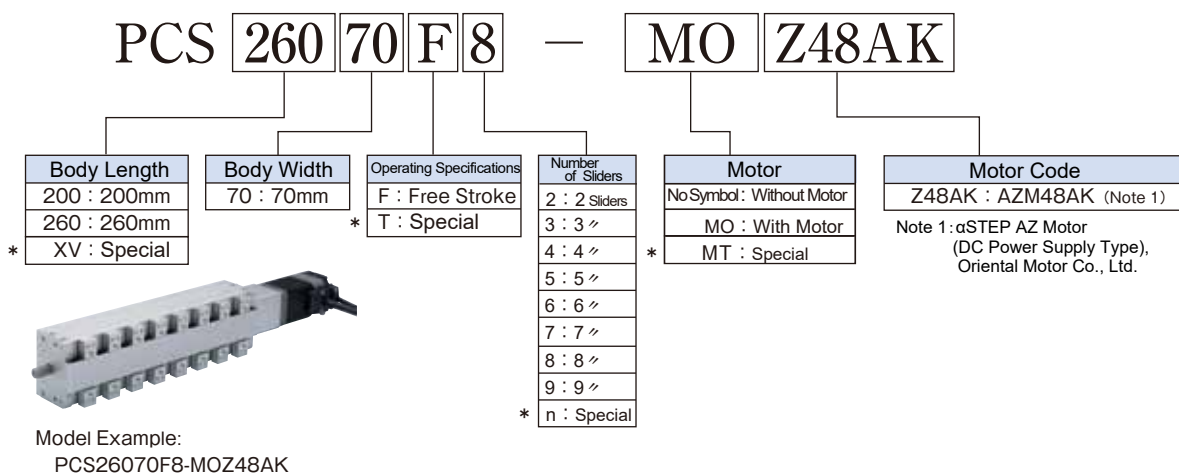
Model No.	Number of Sliders							
	2	3	4	5	6	7	8	9
PCS20070	○	○	○	○				
PCS26070					○	○	○	○

■ Product Weight

Without Motor	1.6	1.6	1.7	1.7	2.0	2.0	2.0	2.1
With αSTEP AZ Motor	2.3	2.4	2.4	2.4	2.7	2.7	2.8	2.8

(kg)

How to Read the Model Number



* Please contact us for customization of body length, operating specifications, number of sliders, motor, or other options.

<Customization Examples>



Body Length	Connected: 390 mm
Number of Sliders	6(One Center Slider Fixed)
Pitch Change	37mm



Basic Specifications

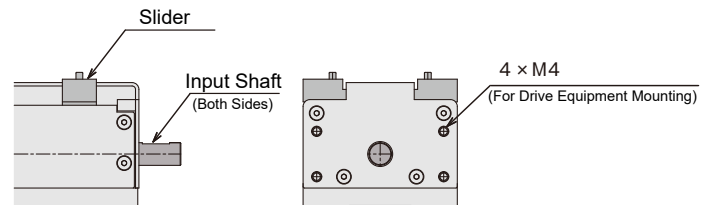
Base Model	PCS20070				PCS26070			
Number of Sliders	2	3	4	5	6	7	8	9
Pitch [Operating Range](mm)	20~150	20~76	20~50	20~38	20~40	20~35	20~30	20~26
Positioning Repeatability(mm)	±0.025							
Slider Pitch Accuracy(mm)	±0.05							
Slider Height Variation(mm)	±0.1 (Relative to Reference Dimension)							
Drive Method	External Input (Motor Available as an Option)							
Maximum Operating Frequency	100cpm(Max.)							
Ambient Temperature	10~40°C							
Lubrication	COSMO GREASE DYNAMAX EP							

* Please contact us for custom specifications other than those listed above.

External Input (Standard)

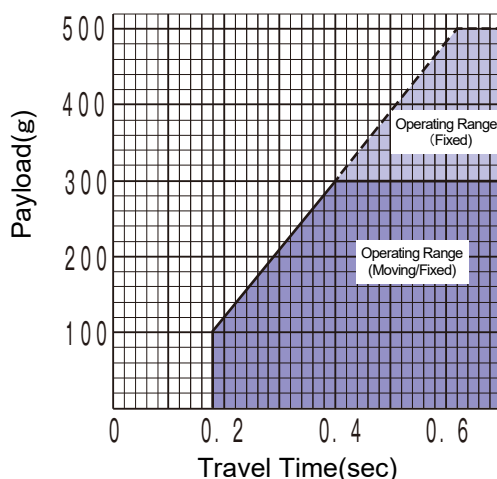
Input Shaft Diameter(mm)	φ 10 h 8
Recommended Motor Torque	0.6N · m ~

- Do not use the mechanical end at the end of the slider travel as a stopper.
- Do not operate the unit with the sliders pushing against each other.
- If a mechanical stopper is required to prevent interference, install it on the input shaft or on the drive equipment side.
- Do not use the motor's thrust force to hold or press the sliders against an object. Doing so may result in premature failure.



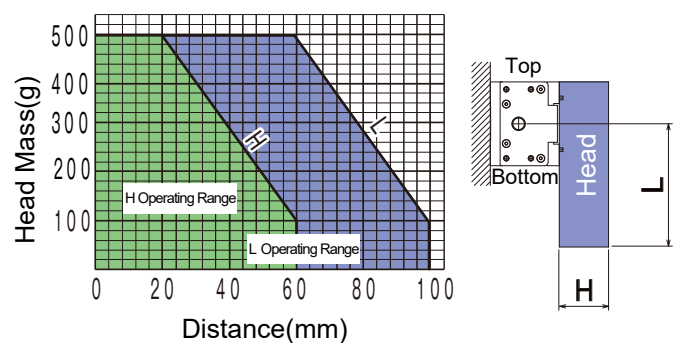
- Note 1 Do not modify the shaft.
 Note 2 When securing the round section of the input shaft with a set screw, insert a pressure pad between the round section and the setscrew.
 Note 3 Do not apply an axial (thrust) load to the input shaft.

Travel Time and Payload



- Note 1: Payload is specified per slider.
 Note 2: Travel time is the time required to move from open to closed or from closed to open. Note 3: "Fixed" in the operating range refers to applications where the product itself is stationary.
 Note 4: Using the unit with a load exceeding the specified mass may cause problems. Do not exceed the specified operating range.
 Note 5: The performance data is for horizontal-axis applications. The unit cannot be used for vertical-axis applications.

Overhang



- Note 1: If the mounting orientation differs by 90° from that shown in the figure, use half the graph values as a guideline.
 Note 2: If the overhang is large, consider using an external support guide.

100 mm Body Width Model PCS340100-PCS450100



- The drive source can be selected to suit your equipment.
- The motor option is Oriental Motor Co., Ltd.'s αSTEP AZ (DC power supply type).

■ Variations

Model No.	Number of Sliders							
	2	3	4	5	6	7	8	9
PCS340100	○	○	○	○				
PCS450100					○	○	○	○

■ Product Weight

Without Motor	4.9	5.2	5.4	5.7	7.2	7.5	7.7	8.0
With αSTEP AZ Motor	6.9	6.8	7.1	7.4	8.8	9.0	9.3	9.6

(kg)

How to Read the Model Number

PCS 450 100 F 6 — DM Z69AK

Body Length
340 : 340mm
450 : 450mm
* XV : Special

Body Width
100 : 100mm

Operating Specifications
F : Free Stroke
* T : Special

Number of Sliders
2 : 2 Sliders
3 : 3 〃
4 : 4 〃
5 : 5 〃
6 : 6 〃
7 : 7 〃
8 : 8 〃
9 : 9 〃
* n : Special

Motor
No Symbol : Without Motor
DM : Direct-Coupled

Motor Code
Z69AK : AZM69AK (Note 1)
Note 1 : αSTEP AZ Motor (DC Power Supply Type), Oriental Motor Co., Ltd.



Model Example:
PCS450100F6-DMZ69AK

* Please contact us for customization of body length, operating specifications, number of sliders, or other options.

<Customization Examples>



Body Length	Connected: 640mm
Number of Sliders	8(One Center Slider Fixed)
Pitch Change	43mm



Basic Specifications

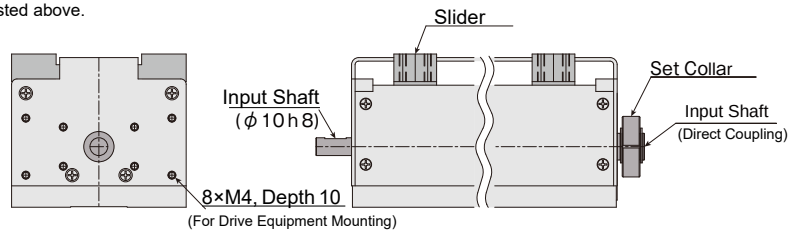
Base Model	PCS340100				PCS450100			
Number of Sliders	2	3	4	5	6	7	8	9
Pitch [Operating Range](mm)	34~272	34~136	34~90	34~68	34~76	34~64	34~54	34~48
Positioning Repeatability(mm)	±0.05							
Slider Pitch Accuracy(mm)	±0.1							
Slider Height Variation(mm)	±0.1 (Relative to Reference Dimension)							
Drive Method	External Input (Motor Available as an Option)							
Maximum Operating Frequency	60cpm(Max.)							
Ambient Temperature	10~40°C							
Lubrication	COSMO GREASE DYNAMAX EP							

* Please contact us for custom specifications other than those listed above.

External Input (Standard)

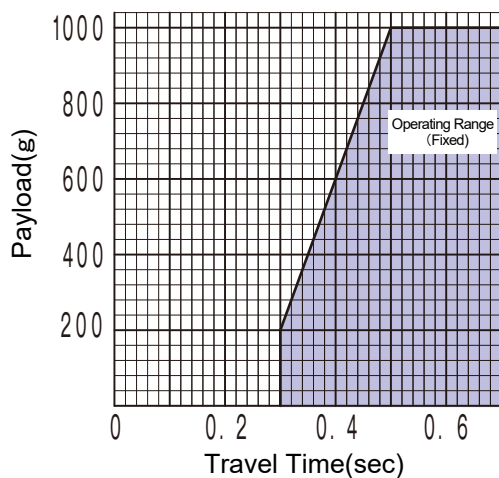
Input Shaft Diameter(mm)	Φ10 h 8
Recommended Motor Torque	2N · m~

- Connect the motor to the input shaft.
- Use the set collar for manual operation checks.
- Do not use the mechanical end at the end of the slider travel as a stopper.
- Do not operate the unit with the sliders pushing against each other.
- If a mechanical stopper is required to prevent interference, install it on the input shaft or on the drive equipment side.
- Do not use the motor's thrust force to hold or press the sliders against an object. Doing so may result in premature failure.



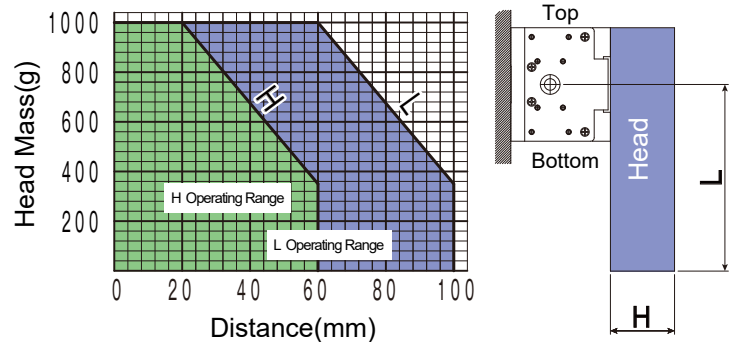
- Note 1 Do not modify the shaft.
 Note 2 When securing the round section of the input shaft with a set screw, insert a pressure pad between the round section and the set screw.
 Note 3 Do not apply an axial (thrust) load to the input shaft.

Travel Time and Payload



- Note 1: Payload is specified per slider.
 Note 2: Travel time is the time required to move from open to closed or from closed to open. Note 3: "Fixed" in the operating range refers to applications where the product itself is stationary. Please contact us if the unit is to be moved.
 Note 4: Using the unit with a load exceeding the specified mass may cause problems. Do not exceed the specified operating range.
 Note 5: The performance data is for horizontal-axis applications. The unit cannot be used for vertical-axis applications.

Overhang



- Note 1: If the mounting orientation differs by 90° from that shown in the figure, use half the graph values as a guideline.
 Note 2: If the overhang is large, consider using an external support guide.

Specifications

■ Operating Specifications

40 mm Body Width Model

Number of Sliders			2	3	4	5	6	7	8	9
Pitch (mm)	Closed End (Mechanical End) C		7.2							
	Operating Range	A (Min.)	8							
		B (Max.)	56	28	18	14	18	15	13	11
	Open End (Mechanical End) D		58	29	19.4	14.5	19.6	16.3	14	12.2
Pitch Change per 1°		mm/1°	0.181	0.078	0.044	0.026	0.044	0.033	0.024	0.018

70 mm Body Width Model

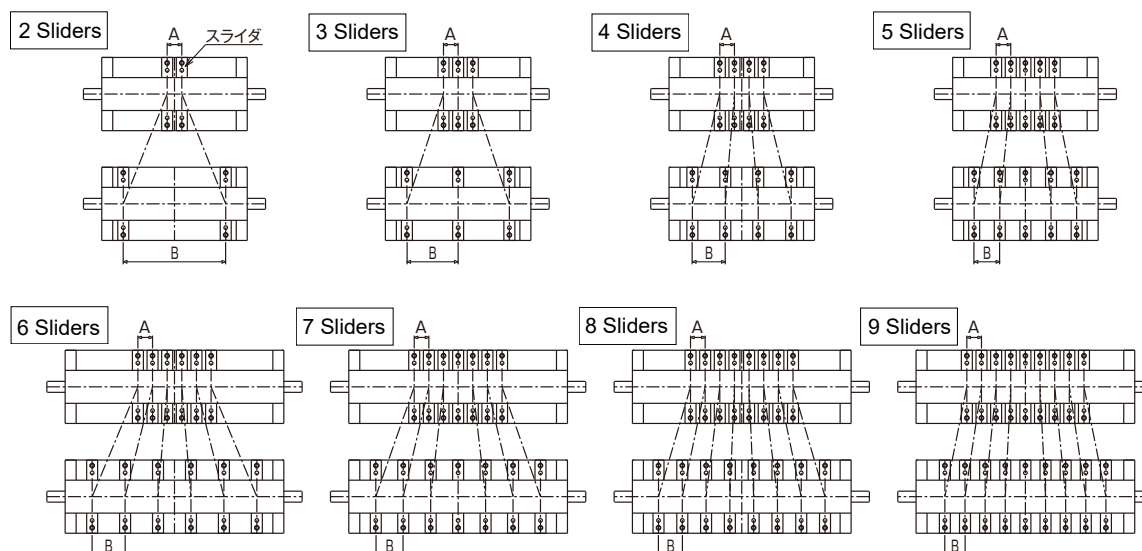
Number of Sliders			2	3	4	5	6	7	8	9
Pitch (mm)	Closed End (Mechanical End) C		19.2							
	Operating Range	A (Min.)	20							
		B (Max.)	150	76	50	38	40	35	30	26
	Open End (Mechanical End) D		159.2	79.5	52.2	39.5	42.9	36.5	31.2	27
Pitch Change per 1°		mm/1°	0.444	0.192	0.111	0.068	0.080	0.058	0.038	0.025

100 mm Body Width Model

Number of Sliders		2	3	4	5	6	7	8	9
	Closed End (Mechanical End) C	29.2							
	Operating Range	A (Min.)							
		34							
		B (Max.)	272	136	90	68	76	64	54
Open End (Mechanical End) D		282	141	94	70.5	78.4	65.4	56	49
Pitch Change per 1°	mm/1°	0.843	0.373	0.216	0.138	0.164	0.121	0.089	0.066

Note1. Please refer to the figure below and the following page for symbols A, B, C, and D.

Note2. The pitch change per degree is provided as a reference value for all models.



How to Calculate the Input Shaft Rotation Angle (Input Shaft Rotation)

Body Width : 70mm Model, 2 Sliders
Pitch Change : From 20 mm to 150 mm
150mm-20mm=130mm

Input Shaft

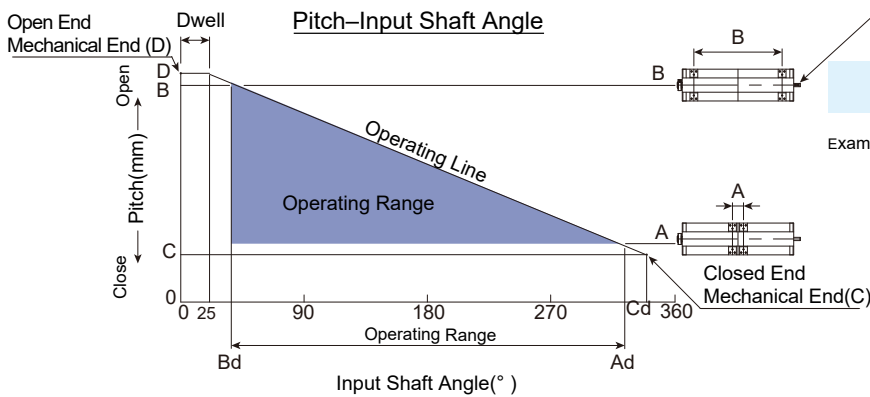
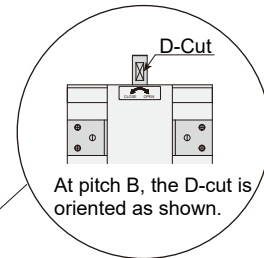
Rotation Angle: Pitch Change ÷ Pitch Change per 1°
130mm÷0.444=292.5°

Number of Travel Pulses : Travel Angle ÷ Motor Step Angle
292.5 ÷ 0.036° = 8125 Pulses
(When the AZ Motor Resolution Is Set to 10,000 P/R)



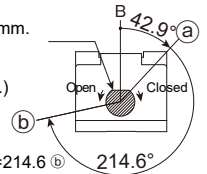
Input Shaft Specifications

- The pitch is changed by rotating the input shaft back and forth within one revolution.
- The sliders open and close along the operating line shown in the "Pitch-Input Shaft Angle Chart."
- The pitch can be changed by controlling the amount of rotation (number of pulses).
- Mechanical ends are provided at both the open and closed ends.
- Use the unit within the "Operating Range" shown in the table below.
- A dwell is provided over a 25° range from the mechanical end at the open end.
- A slight impact may occur when the sliders begin moving from the dwell at the open end (around 25°).
- Avoid continuous operation through this area, as it may cause malfunction or premature failure.
- At the maximum pitch (B) within the operating range, the D-cut is positioned as shown in the figure on the right.
- There is no dwell at the mechanical end on the closed side.



How to Calculate the Input Shaft Rotation Angle from Pitch B (D-Cut Position)

Example: 100 mm Wide Model, 3 Sliders
 Operating between pitches of 120mm and 40mm.
 • Pitch Change from Pitch B
 136mm-120mm=16mm
 (136mm is Point B in the Operating Range.)
 Input Shaft Rotation Angle from Pitch B
 $16\text{mm} \div 0.3727 = 42.9^\circ \text{ (a)}$
 • Pitch Change: 120mm-40mm=80mm
 Input Shaft Rotation Angle: $80\text{mm} \div 0.3727 = 214.6^\circ \text{ (b)}$



40 mm Body Width	Pitch-Input Shaft Angle			Number of Sliders									
				2	3	4	5	6	7	8	9		
	Operating Range	Max.	Pitch	A(mm)	8								
			Angle	Ad(°)	300.6	294.7	286.6	274.3	286.9	280.3	272	260	
		Min.	Pitch	B(mm)	56	28	18	14	18	15	13	11	
			Angle	Bd(°)	36.1	37.9	57.2	44.2	61.2	65	66.2	92.2	
	Mechanical End	Closed End	Pitch	C(mm)	7.2								
			Angle	Cd(°)	305°								
		Open End	Pitch	D(mm)	58	29	19.4	14.5	19.6	16.3	14	12.2	
			Angle	—	0 ~ 25°(Dwell Range)								

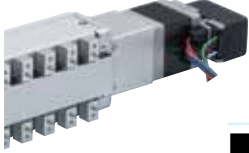
70 mm Body Width	Pitch-Input Shaft Angle				Number of Sliders								
					2	3	4	5	6	7	8	9	
	Operating Range	Max.	Pitch	A(mm)	20								
			Angle	Ad(°)	338.2	335.7	315	310.3	312	308.2	319	307.6	
		Min.	Pitch	B(mm)	150	76	50	38	40	35	30	26	
			Angle	Bd(°)	45.7	43.3	45	47	62	50.8	56.5	65.4	
	Mechanical End	Closed End	Pitch	C(mm)	19.2								
			Angle	Cd(°)	339.7	340	322	322	322	322	340	340	
		Open End	Pitch	D(mm)	159	79.5	52.2	39.5	42.9	36.5	31.2	27	
			Angle	—	0 ~ 25°(Dwell Range)								

100 mm Body Width	Pitch-Input Shaft Angle			Number of Sliders									
				2	3	4	5	6	7	8	9		
	Operating Range	Max.	Pitch	A(mm)	34								
			Angle	Ad(°)	319.3	312.1	302.8	290.1	295.7	285.2	271.3	252.3	
		Min.	Pitch	B(mm)	272	136	90	68	76	64	54	48	
			Angle	Bd(°)	36.9	38.4	43.5	43.1	39.6	36.6	47.4	40.2	
	Mechanical End	Closed End	Pitch	C(mm)	29.2								
			Angle	Cd(°)	325°								
		Open End	Pitch	D(mm)	282	141	94	70.5	78.4	65.4	56	49	
			Angle	—	0 ~ 25°(Dwell Range)								

Motor Options & Dimensions

40 mm Body Width Model

αSTEP AZ is available as a motor option.



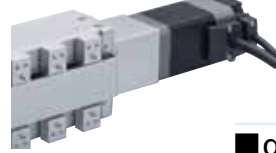
Option Model No.	Motor Type
MOZ24AK	αSTEP AZ

■ αSTEP AZ Type (Option)

Type	AZ Series
Motor Model No.	AZM24AK
Driver Model No.	AZD-K (To Be Provided by the Customer)
Power Supply Input	DC24V±5% 1.6A

70 mm Body Width Model

αSTEP AZ is available as a motor option.



Option Model No.	Motor Type
MOZ48AK	αSTEP AZ

■ αSTEP AZ Type (Option)

Type	AZ Series
Motor Model No.	AZM48AK
Driver Model No.	AZD-K (To Be Provided by the Customer)
Power Supply Input	DC24V±5% 2.2A

100 mm Body Width Model

αSTEP AZ is available as a motor option.

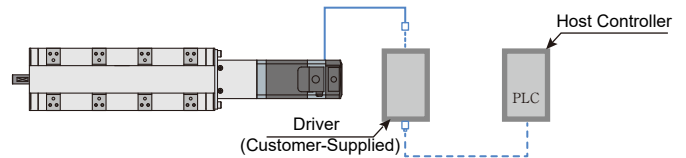


Option Model No.	Motor Type
DMZ69AK	αSTEP AZ

■ αSTEP AZ Type (Option)

Type	AZ Series
Motor Model No.	AZM69AK
Driver Model No.	AZD-K (To Be Provided by the Customer)
Power Supply Input	DC24V±5% 3.45A

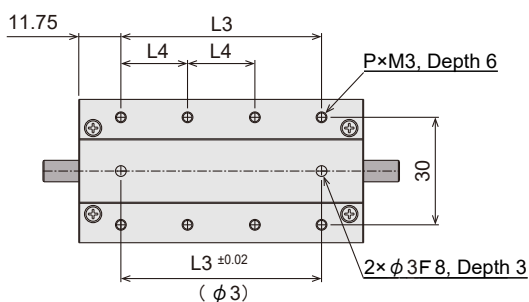
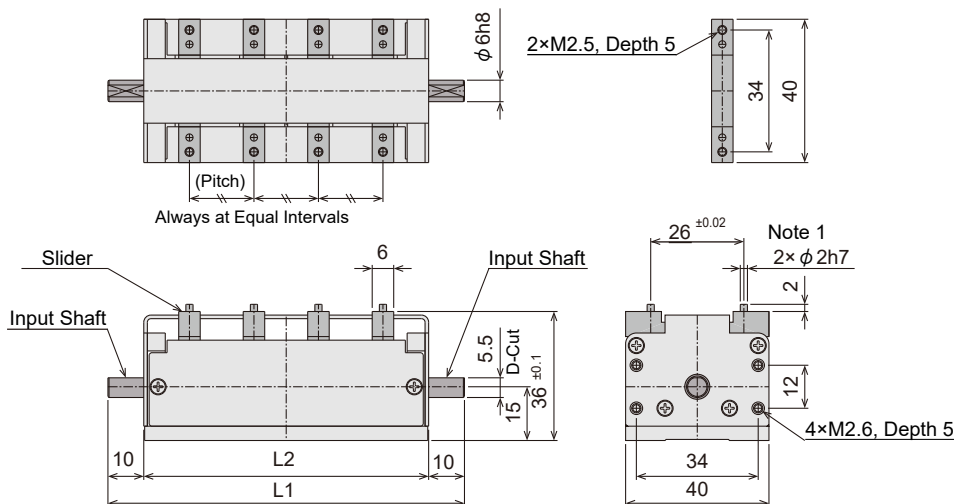
■ Control System



*Please provide the connection cables, including those between the motor and driver.
Please refer to the Oriental Motor "AZ Series DC Power Supply Input" catalog.

- Please provide the driver, cables, and controller.
- Use a resolution of 10,000 pulses (0.036°/step). A lower resolution may cause excessive vibration.

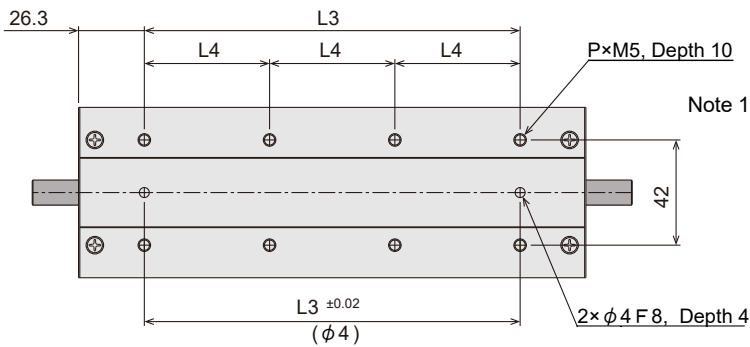
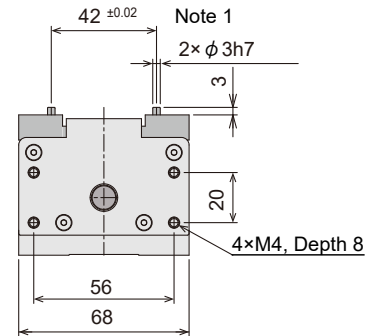
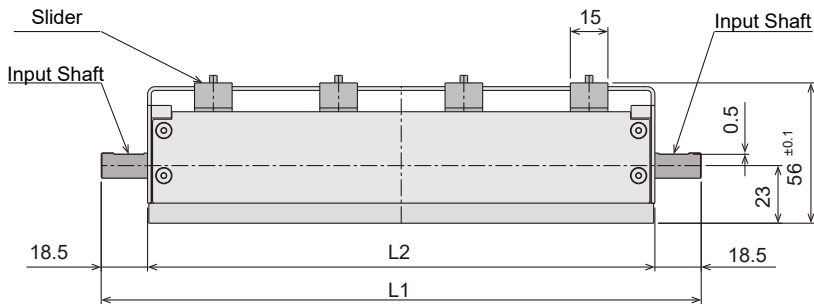
■ 40 mm Wide Model



Note 1. The 40 mm and 70 mm wide models have pins pre-installed in the sliders. Please machine the required holes in the parts to be mounted.

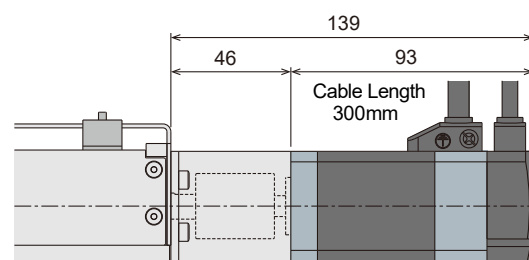
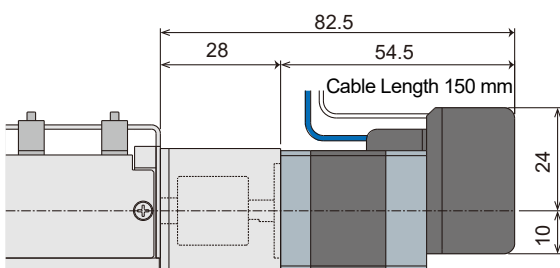
Model No.	L1	L2	L3	L4	P
PCS080	100	80	56	—	4
PCS120	140	120	96	32	8

(mm)



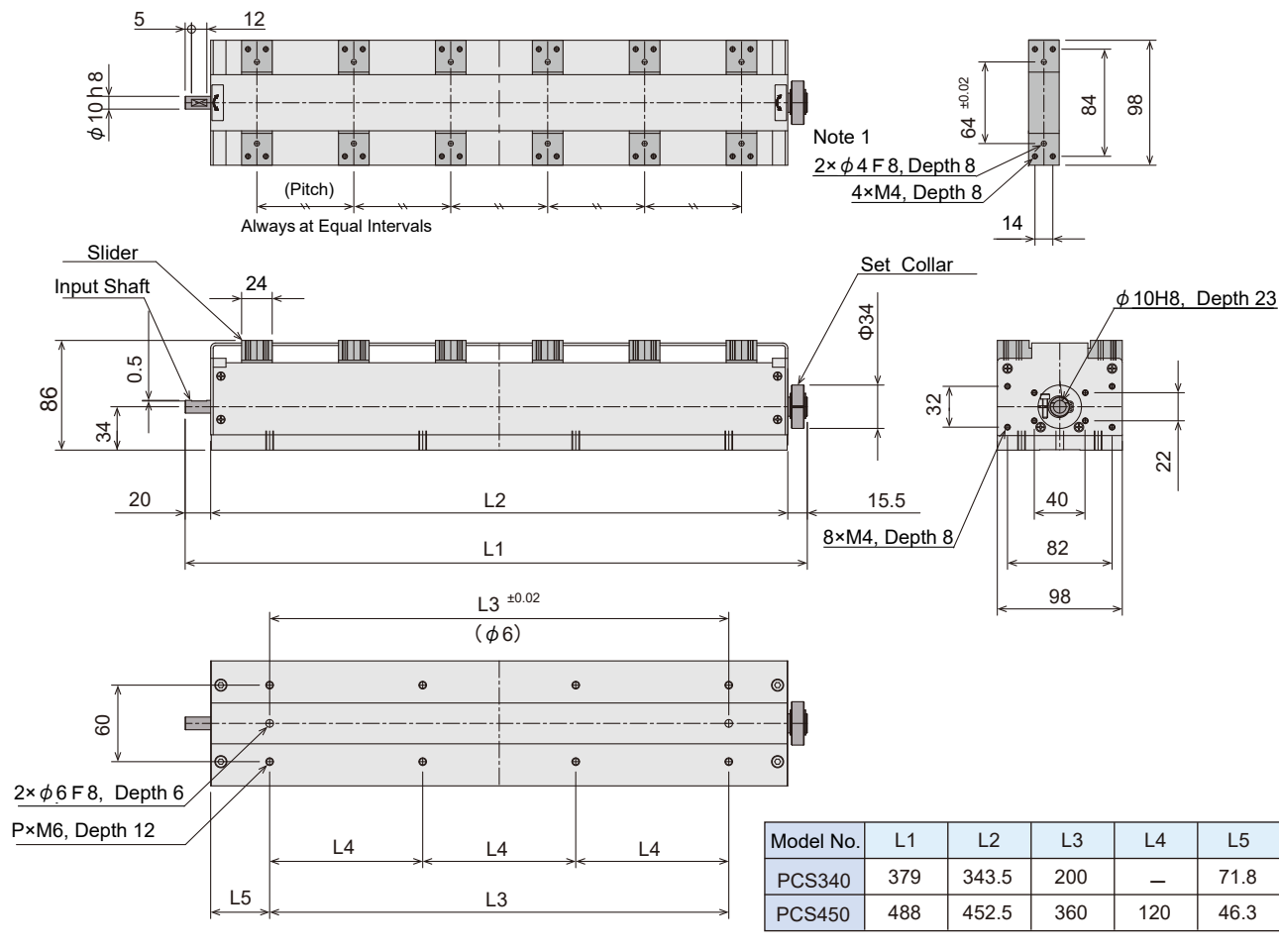
Model No.	L1	L2	L3	L4	P
PCS200	240	203	150	—	4
PCS260	300	263	210	70	8

(mm)



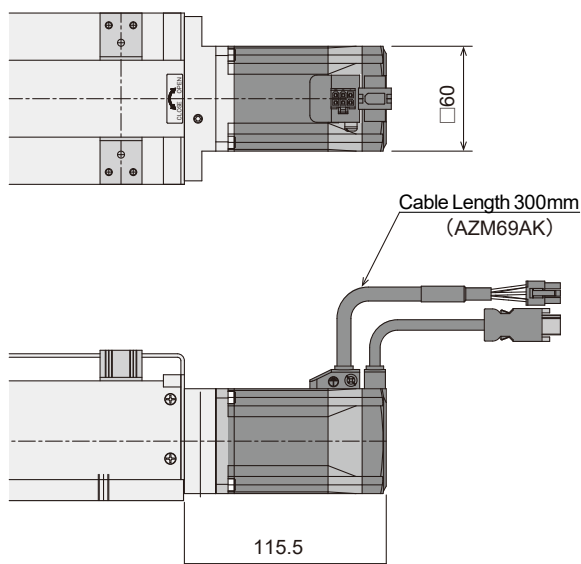
Motor Options & Dimensions

■ 100 mm Wide Model



Note 1. The 100 mm wide model has locating holes machined in the sliders. Install pins in the parts to be mounted and use them for positioning. The pins must be a clearance fit; do not press-fit them.

■ 100 mm Wide Model with Motor

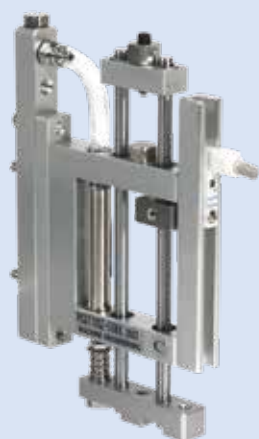




Pick-Up Cylinder

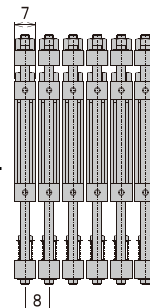


PIC0710-40BK
(With Pitch Changer Bracket)



PIC0710SZ-40BK-S-ZE255B
(With Sensor)

- Vertical unit mountable on the PCS08040 and PCS12040.
- Compact design with a width of just 7 mm.
- Available in three stroke lengths: 10 mm, 15 mm, and 20 mm.
- Enables multiple-unit installation at narrow pitches.



Basic Specifications

Model No.	PIC0710	PIC0715	PIC0720
Model No. (With Sensor)	PIC0710SZ	PIC0715SZ	PIC0720SZ
Stroke	10mm	15mm	20mm
Operating Method	Single-Acting, Push Type		
Operating Pressure Range	0.4~0.6MPa		
Operating Time	Full Stroke: 0.5 s or More (One Way)		
Operating Temperature Range	10~40°C		
Mounting Orientation	Vertical Downward Orientation Only		
Operating Frequency	60CPM(Max.)		
Lubrication	Not required(Pre-Lubricated)		
Weight	34 g	36 g	37 g
Weight (With Sensor)	37 g	39 g	40 g
Allowable Load Mass	40 g	30 g	20 g

Note 1. Weight including the bracket.
Note 2. The sensor weight is not included.

How to Read the Model Number

PIC0710SZ – 40BK – SS – ZE255B

Model No.

Bracket

40BK : Bracket for PCS40

Operation Confirmation Sensor

No symbol : None
S : 1 piece
SS : 2 pieces

Operation Confirmation Sensor Specification

Sensor Model No.
*Please choose the model from the table below.



When Combined with a Pitch Changer

Sensor Specification

Wiring Method	Cable Exit Direction	Cable Length	
		1m	3m
2-wire type	Right Angle Direction	ZE235A	ZE235B
3-wire type	Right Angle Direction	ZE255A	ZE255B



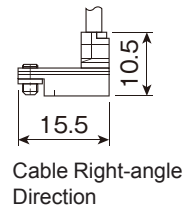
Cable Right Angle Direction

Operation Confirmation Sensor

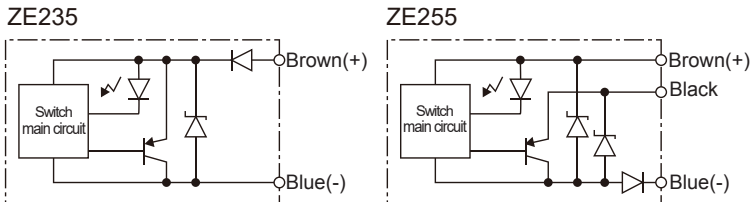
■ Operation Confirmation Sensor

Model	ZE235	ZE255
Wiring Method	2wire	3wire
Power Supply Voltage	—	DC 4.5–28 V
Load Voltage	DC 10–28 V	DC 4.5–28 V
Load Current	2.5–20 mA (at 25°C)	40 mA max
Weight	15g (1m) , 35g (3m)	
Manufacturer	KOGANEI Co., Ltd.	

Sensor Dimensions (ZE)

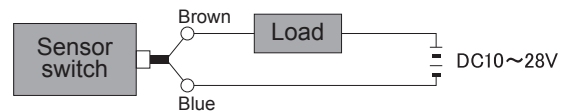


Internal Circuit

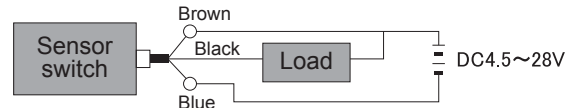


Basic Circuit

● 2-wire



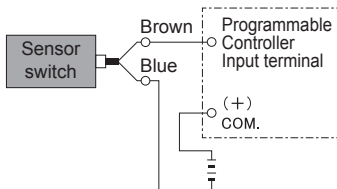
● 3-wire



Connection

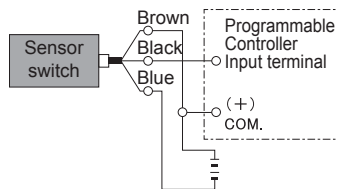
2-wire type

● Connection with a programmable controller

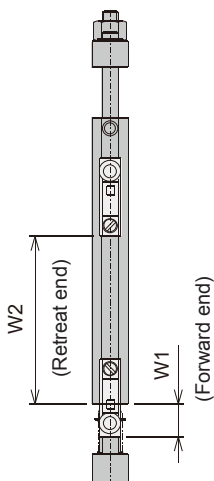


3-wire NPN Output type

● Connection with a programmable controller



■ Sensor Mounting Dimensions



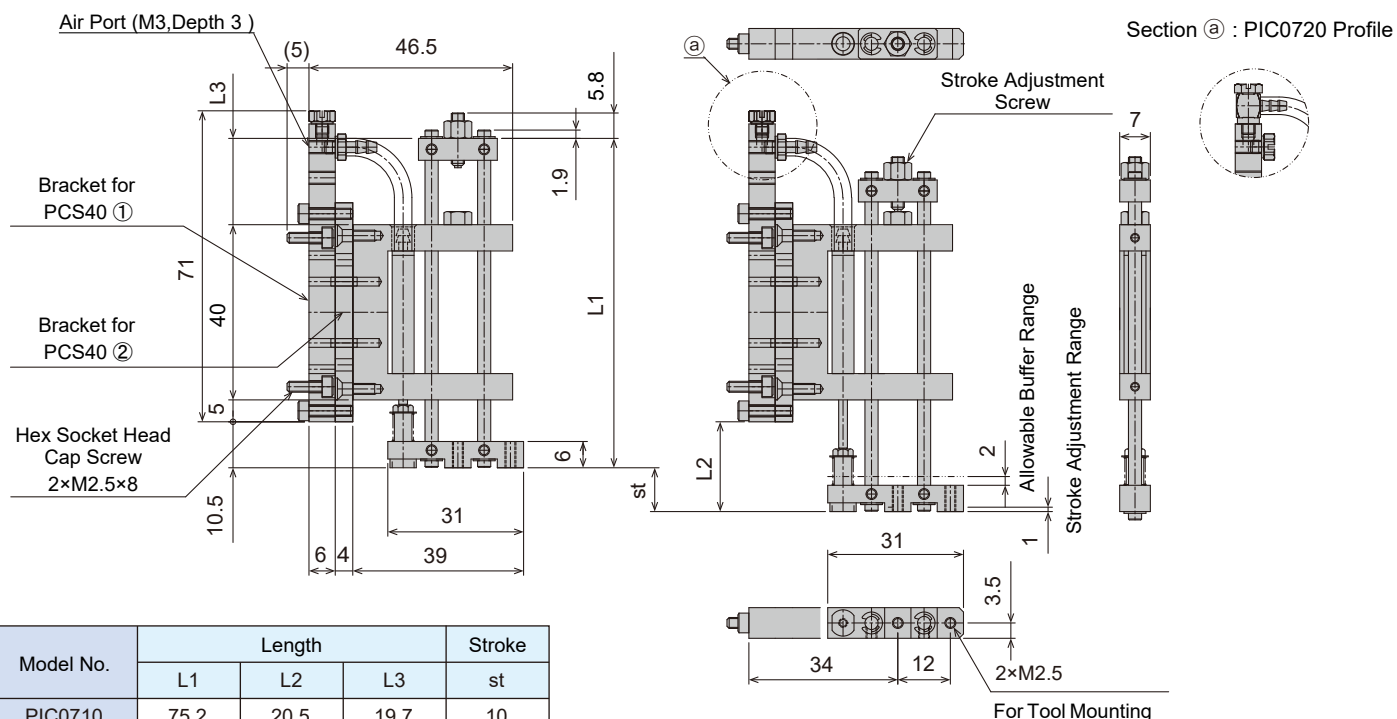
PIC0710SZ		PIC0715SZ		PIC0720SZ	
W1	W2	W1	W2	W1	W2
-4	32	1	32	6	32

- Dimensions measured from end surface of PIC body .
- Indicates approximate limit position for 'ON'.
- When mounting the sensor, allow a safety margin by positioning it toward the – side for the retracted position and toward the + side for the extended position.
- Ensure at least 10 mm of clearance beyond the protruding part of the sensor to prevent interference with other components.
- When Pick-Up Cylinders are installed close together, magnetic interference between the magnets may affect the sensor operating range.
In particular, when the cylinders move between closely spaced and separated positions, adjust and check the operating range at each position.
Depending on the position, the sensor may turn ON before the end of the stroke is reached.
Be sure to thoroughly check operation before starting operation.

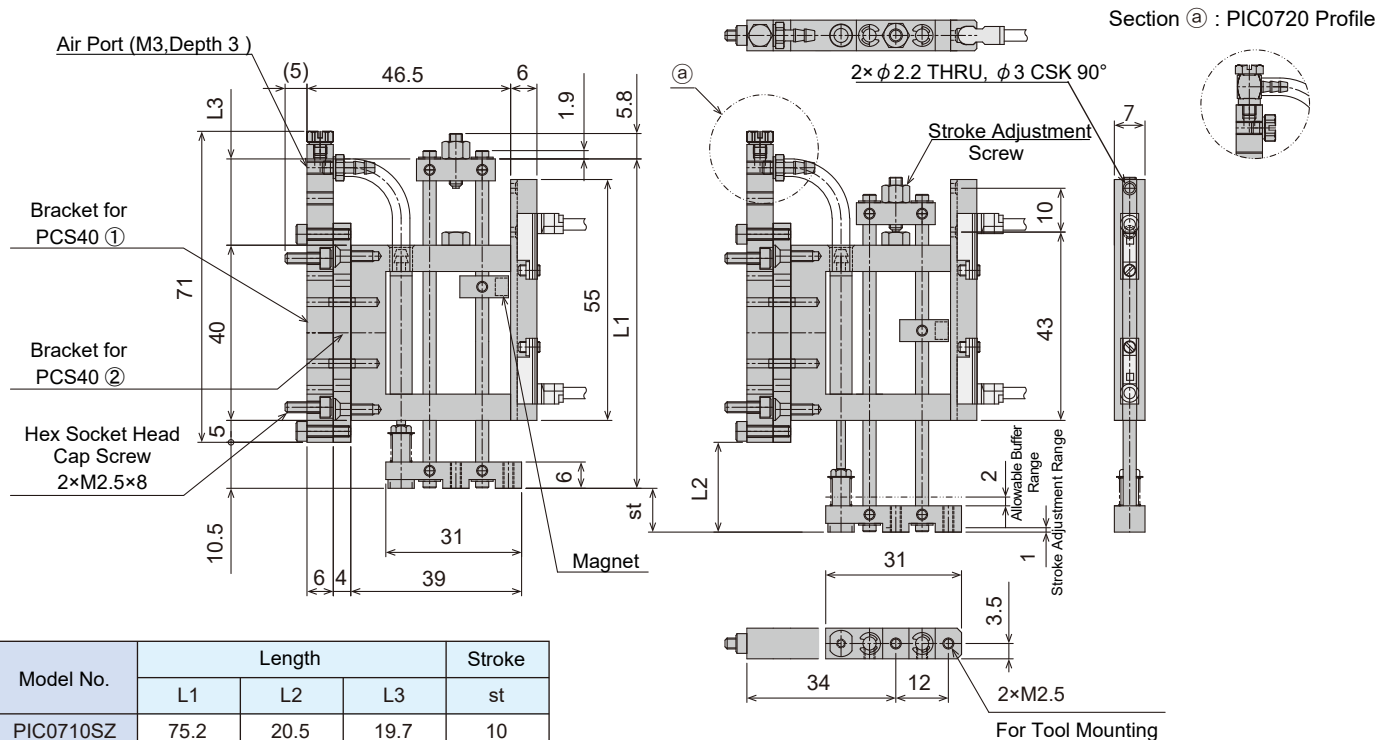


Dimensions

Without Sensor

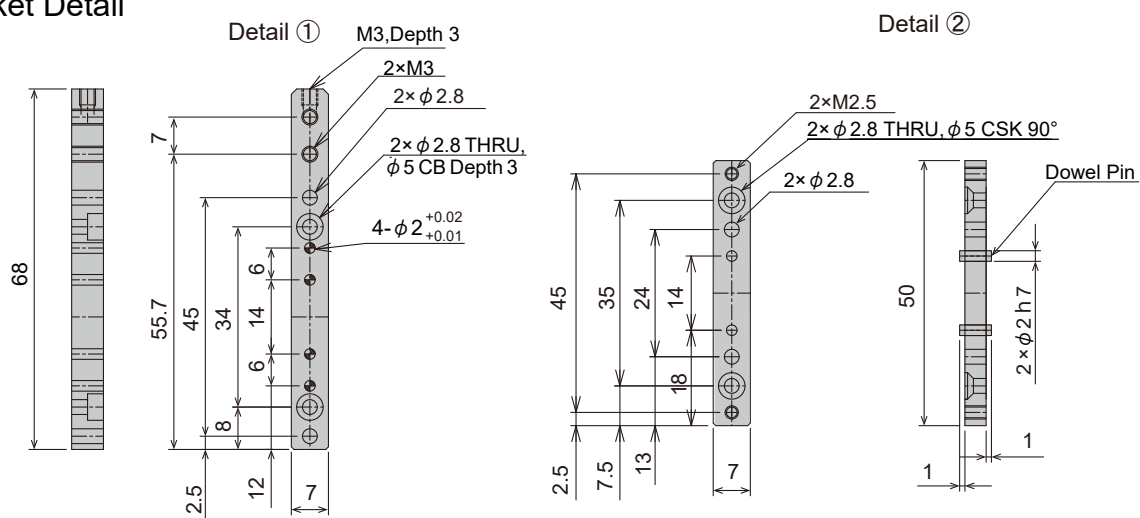


With Sensor



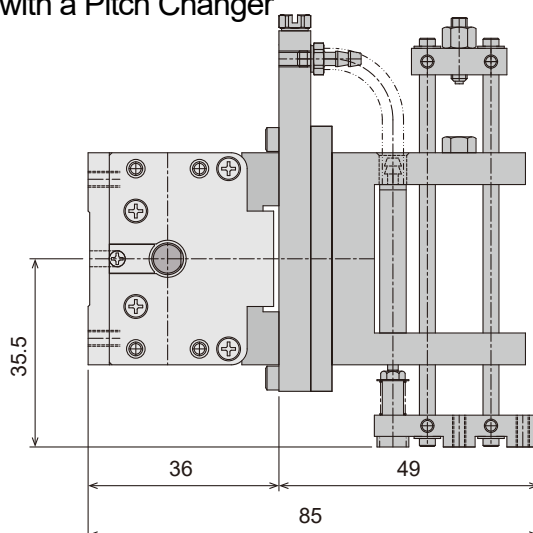
Dimensions&Example

■PCS40 Bracket Detail



■Dimensions When Combined with a Pitch Changer

PCS 080
120 40+PIC07□-40BK



■Application Example

~Pitch Changing and Transfer Example for Ø6 Steel Balls~

*The actual product may differ partially from the photograph.





PCS&PIC Precautions

■ PCS Selection Precautions

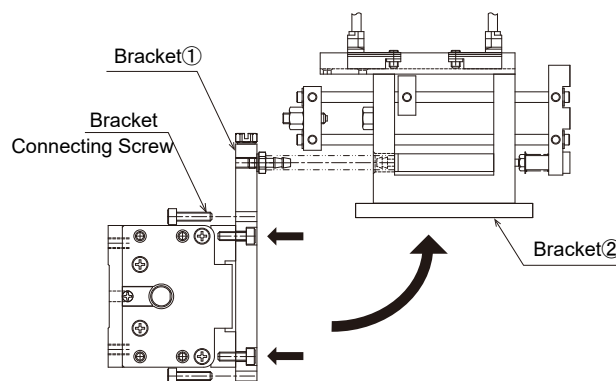
- Use this product with a horizontal axis. Do not use it with a vertical axis.
- The travel time varies depending on the load mass. Determine the allowable load mass based on the required travel time. Operating the unit beyond the allowable values shown in the graph may cause feeding errors or damage due to loss of synchronization, vibration, or other factors. Select the appropriate specifications after confirming the operating conditions with safety in mind.
- The pitch between the sliders always changes while maintaining equal spacing. The sliders cannot be moved individually.
- The pitch can be changed by controlling the amount of rotation (number of pulses).
- The input shaft must be rotated back and forth within 360°. Please contact us separately if continuous rotation in one direction is required.
- Use the unit within the specified operating range.
- Do not allow the sliders to collide with the mechanical ends or with each other, or install stoppers to restrict slider travel. Doing so may result in premature damage.
- Do not use the unit in environments subject to excessive vibration. Resonance or other factors may significantly reduce performance.
- When operating at high speeds, delays in controller response may cause feeding errors or timing deviations. Carefully select the peripheral equipment as well.
- For detailed dimensions, please refer to the CAD data.
- The motor option is mounted in the position shown in the dimensional drawing. If a different mounting orientation is required, the customer must make the necessary modifications.

■ PCS Precautions

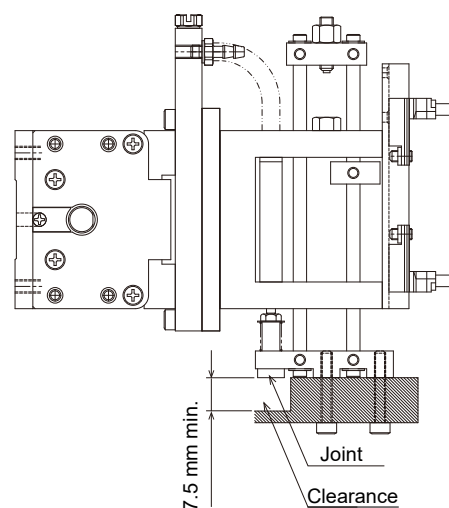
- Read the instruction manual before use and operate the unit safely and correctly.
- Do not drive pins into the locating holes in the main body. Doing so may cause damage.
- Install a safety cover over the drive mechanism.
- If necessary, install a safety cover on the head mounted on the sliders.
- Mount the unit on a sufficiently rigid support structure.
- Keep the head mounted on the sliders as lightweight as possible within the limits specified in the performance chart, and minimize the overhang.
- Excessive resistance from air tubing, sensor cables, or other connections to equipment mounted on the sliders may prevent the unit from achieving its full performance. Ensure that the tubing and wiring do not restrict slider movement.
- Ensure that no external force is applied to the sliders. Doing so may result in premature damage.
- Grease may be scattered from the slider guides or other areas. If grease contamination of workpieces or surrounding components is a concern, take measures such as extending the head beyond the unit or installing a cover.
- Do not allow foreign matter to fall into the slider area. Foreign matter may become trapped or enter the mechanism, causing malfunction.
- Use the unit within the specified pitch operating range. Near the mechanical ends, backlash may increase and impact during operation may become greater.
- Keep the motor temperature at 70°C or below. Higher temperatures may cause premature deterioration of internal components, resulting in reduced service life or failure.
- The standard product is not equipped with a sensor. Install the dog and sensor using the tapped holes provided for mounting the input shaft drive equipment.
- Read the instruction manual for the motor controller and wire it correctly according to the instructions.
- Avoid running the wiring in parallel with high-voltage or power lines, or using the same wiring. Induced interference may cause malfunction.

■ PIC Precautions

- This product contains built-in magnets. Use caution in environments where magnetic materials may cause problems, such as those with accumulated iron powder, nearby cylinder sensors, or workpieces.
- When mounting the product, remove the bracket connecting screws and separate the brackets as shown below. Mount Bracket ① to the Pitch Changer, then reconnect Brackets ① and ②.



- When mounting the unit to equipment other than a Pitch Changer, note that the bracket connecting screws and locating pins protrude. Ensure that they do not interfere with surrounding components, and provide sufficient space to secure the bracket connecting screws.
- The tip incorporates a buffer mechanism, and the joint may protrude beyond the tool mounting surface. Ensure that the tool does not interfere with the joint, or provide sufficient clearance.



* The contents of this catalog, including product specifications and other information, are subject to change without notice for product improvement.

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