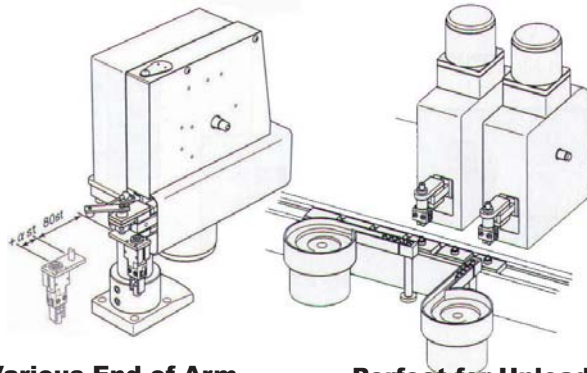
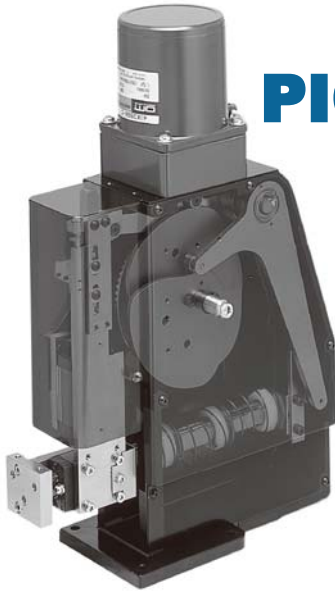


Mirai Intertech presents:

CAM DRIVEN PICK & PLACE MACHINES

- compact
- quick
- low-cost
- accurate

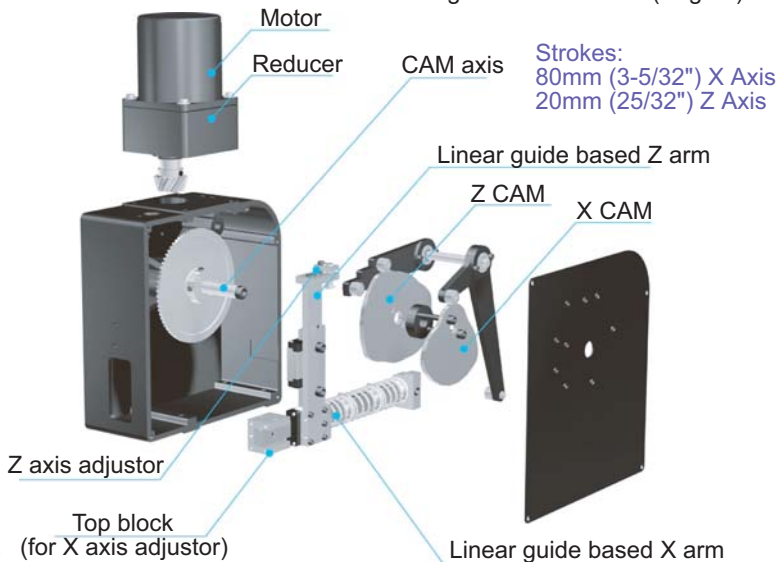


Various End-of-Arm Accessories Available

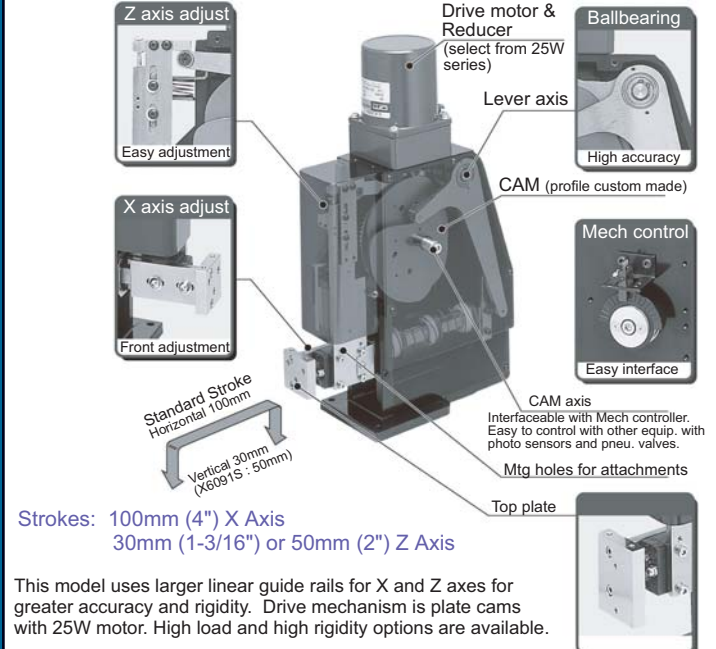
Perfect for Unloading Bowl Feeders

Economy model

Major components are top mounted and easily accessible. The mechanism is driven by plate cams and a standard 25W motor to ensure long life and low cost. (Page 2)



Standard model



brought to you by

mirai intertechnologies

www.miraiintertech.com

MD904M

MEG Pick&Place Unit

PPU Model Overview



The low-cost PPU line is suited for a wide range of pick and place applications. Simple structure and mounting make it easy to design in and install. The PPU provides smooth cam motion at high speed with low cost. Center or left carry, right carry or overhead carry options are available to suit your application.



Specifications of CAM Models

Models	Type	Center carry	Side carry	Model No.	Strokes (X x Z) mm	Application		Dynamic repeatability mm	Motor Power W
						Load incl. fixtures (Kg)	Cycle time (sec)		
Economy		O	O	X6092 X6072L X6072R	80 x 20	0.9 0.3	1.4 1.0	+/- 0.015	25
	Standard	O	O	X6091 X6071L X6071R X6071WL X6071WR X6076WL	100 x 30	1.5	2.1	+/- 0.015	25
						0.3	1.2		
1.5						2.1			
0.3						1.2			
2.0						1.7			
0.6						1.2			
High rigidity High rigidity Over head	O	O	X6076WR	100 x 50	1.3	1.9	+/- 0.015	25	
					0.7	1.5			
High rigidity High load High rigidity	O	O	X6091S X6071SL X6071SR X6071WSL X6071WSR X6074HSL X6074HSR X6076WSL X6076WSR	100 x 50	1.75	1.9	+/- 0.015	40	
					0.6	1.3			
					2.0	1.7			
					1.0	1.0			
					1.75	1.9			
					0.6	1.3			
Semi Long		O	O	X6094 X6074L X6074R	160 x 35	2.0 0.7	2.5 1.6	+/- 0.015	25
		O	O	X6094S X6074SL X6074SR	160 x 50	2.0 0.5	2.7 1.6		
		O	O	X6085	200 x 50	1.5 0.9	2.4 2.0		
Notes						* 8		* 2	

* 2 : Standard motor is the induction motor of Oriental motor.
* 3 : One CAM switch (with sensor) is included standard.

* 8 : Top data is max. wt and the min. cycle time for the max. wt. Bottom data is min. cycle time with max. weight. Please check the cycle time and carryable weight graph.
*** Specifications subject to change without notice.

Specifications of Stepper Drive Models

Models	Model No.	Strokes (X x Z) mm *2	Application		Dynamic repeatability *4	Motor Torque kgf-cm	Homing sensor
			Load incl. fixtures (Kg)	Cycle time (sec)			
Compact	X6303	30 x 10	0.2 0.1	0.6 0.4	+/- 0.025	8.3	Accessory
	X6305	50 x 15	0.2 0.05	0.74 0.4			
	X6307	70 x 15	0.2 0.05	0.9 0.5			
Intelligent	KS8015	80 x 13	0.1 0.07	0.6 0.4	+/- 0.025	16.6	Accessory
	KS12020	120 x 18	0.15	0.9			
			0.08	0.5			

* 2 : Z axis stroke data is valid stroke. There are about 2mm more to the mechanical end.
* 3 : Compact type has mech controller with photo sensor and dog as a standard.

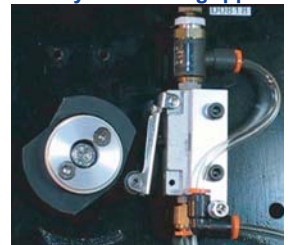
* 4 : Top data is max. weight and the min. cycle time for the max. weight. Bottom data is min. cycle time with max. weight. Please check the cycle time and carryable weight graph.
*** Specifications to be subject to change without notice.

PPU accessories :

CAM SWITCHES:
- 2 - 6 photo sensors



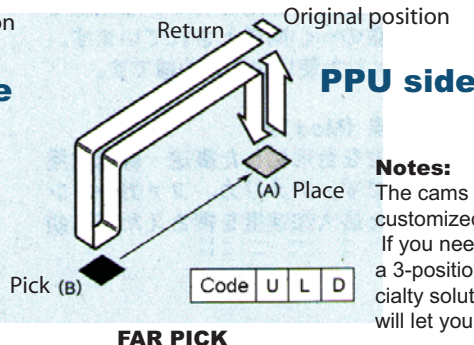
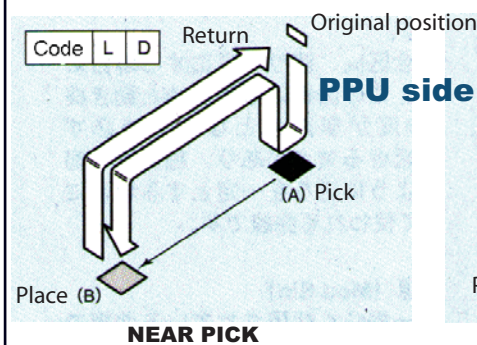
CAM OPERATED VALVE:
- Easy control of gripper



ROTARY GRIPPER MOUNT:
- Turn parts 0 - 90 degrees during stroke



Options :



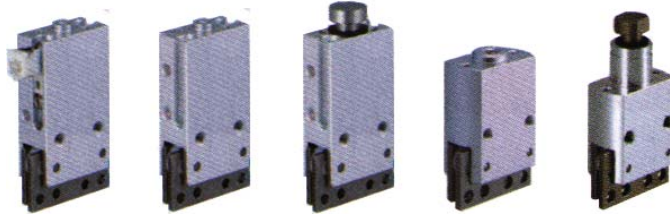
Notes:
The cams for your PPU can be customized to a certain extent. If you need multiple Z-axis motions, a 3-position design, or other specialty solutions please ask and we will let you know what we can do!

MEPAC

Parallel Grippers :

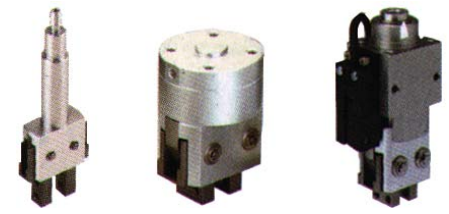
ECO model

Series	Multi-Single	Multi-Double	Multi-Mech	ECO	ECO-Mech
Stroke(mm):	4, 6	4, 6	3, 4	4, 6	4
Clamp force:	4.2N, 10.4N	4.9N, 12.2N	-	7.2N	3.2N
Features:	Compact	Compact	Airless	Wide stroke w/ compact body	Airless
Action:	Single	Double	Ext. pusher	Single	Ext. pusher
Width(mm):	14 ~ 27	22 ~ 39	17 ~ 22	14	14
Model No.:	X9608N, X9612N	X9608D, X9612D	X9608M, X9612M	X9610	X9610M



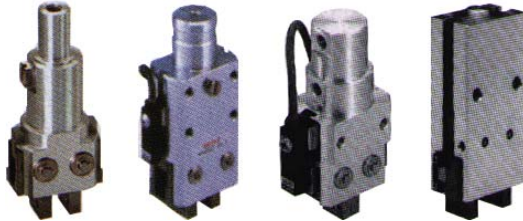
Special model

Series	Micro	Short	Float
Stroke(mm):	4	4, 6	4, 6
Clamp force:	3N	5 ~ 27N	13 ~ 27N
Features:	Thin	Chubby	Height check Collision safety
Action:	Single	Single	Single
Width(mm):	10	Dia 18 ~ 34	23 ~ 30
Model No.:	X960 **	X95 ** B	X956 *-FL



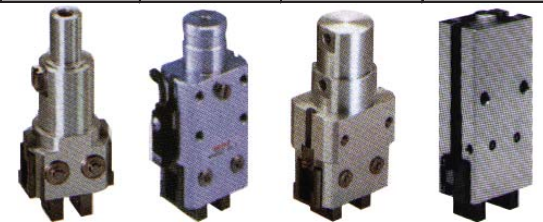
Standard (Single) model

Series	Standard	TA	AL	Smart
Stroke(mm):	4, 5, 6	8, 10	6, 8, 10, 12, 16	4, 6
Clamp force:	5 ~ 27N	38 ~ 68N	20.5 ~ 87.5N	16 ~ 31N
Features:	Wide range many types	many mtg face High torq.	Wide stroke	Hi accuracy w/LM guide
Action:	Single	Single	Single	Single
Width(mm):	14 ~ 27	31 ~ 38	22 ~ 39	17 ~ 22
Model No.:	X956 **	X956 ** T	X966 *	X967 *



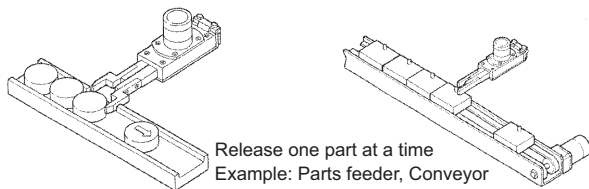
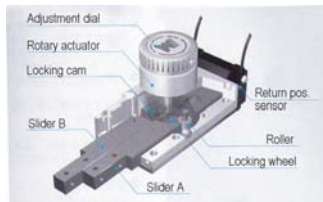
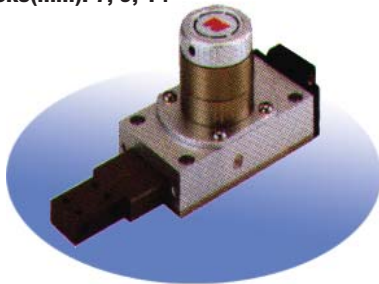
Standard (Double) model

Series	Standard	TA	AL	Smart
Stroke(mm):	4, 5, 6	8, 10	6, 8, 10, 12, 16	4, 6
Clamp force:	20.5 ~ 34N	52.5 ~ 87.5N	20.5 ~ 87.5N	16 ~ 31N
Features:	Wide range	many mtg face High torq.	many mtg face Wide stroke	Hi accuracy w/LM guide
Action:	Double	Double	Double	Double
Width(mm):	21.5 ~ 27	31 ~ 38	22 ~ 39	17 ~ 22
Model No.:	X957 **	X957 ** T	X966 *-DO	X967 *

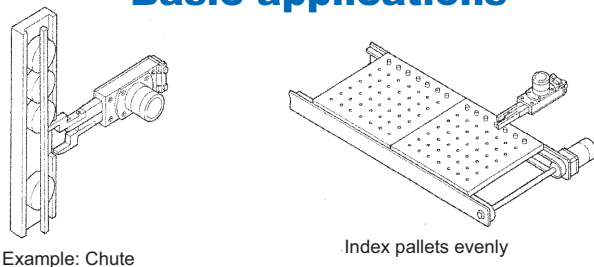


Model No.: X970 * A
Drive: Pneumatic
Features: Stable gating
Stroke(mm): 7, 9, 14

ESC (Escapement)

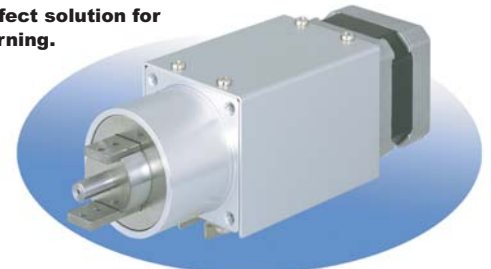


Basic applications



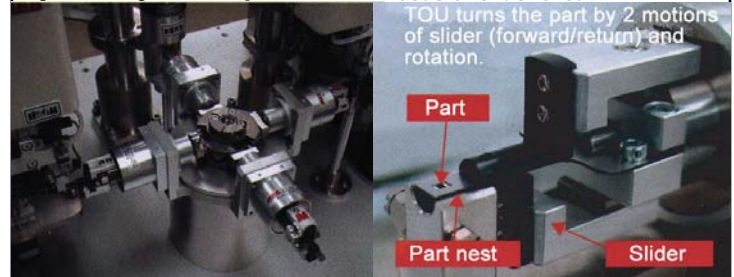
TOU (Parts turner)

MEG TOU is the perfect solution for high speed parts turning.



Systems layout example:

Focus of slider area :



TOU Parts Turner Turn Over Unit	Single drive type	Single drive type	Single drive type	Single drive type	Dual drive type
	Slider stroke 8mm	Slider stroke 16mm	Slider stroke 32mm	Slider stroke 48mm	Slider stroke ~ 8mm
	High speed turn by one drive	High speed turn by one drive	versatile turn	versatile turn	Flexible turn
	0.1~	0.2~	0.4~	0.4~	0.2~

Standard model

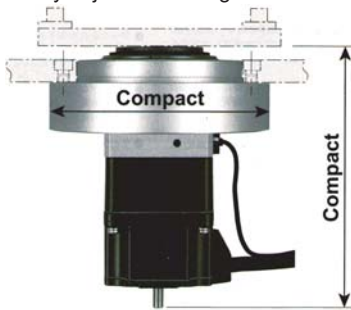
Model No.:	X3014	X3016
Stations:	4	6
Output torque:	0.98 N m	1.17 N m
	10 kgf cm	12 kgf cm
Locking torque:	1.96 N m	2.94 N m
	20 kgf cm	30 kgf cm
Accuracy:	+/- 7 arcmin	
Repeatability	3 arcmin	
Out shaft shake:	0.02 mm or smaller	
Max. table dia(mm):	270	
Cycle time:	0.5 - 0.9 sec	
Duty rate:	Max. 120 CPM	
Drive:	Reducer brushless DC motor	
Power:	AC120V, AC200V-Single, AC200V-3 phases	
Mechanism:	Geneva gear driven intermittent motion	

High load model

Model No.:	X3014W	X3016W
Stations:	4	6
Output torque:	1.96 N m	2.35 N m
	20 kgf cm	24 kgf cm
Locking torque:	3.675 N m	4.75 N m
	37.5 kgf cm	48 kgf cm
Accuracy:	+/- 7 arcmin	
Repeatability	3 arcmin	
Out shaft shake:	0.02 mm or smaller	
Max. table dia(mm):	500	
Cycle time:	0.5 - 0.9 sec	
Duty rate:	Max. 120 CPM	
Drive:	Reducer brushless DC motor	
Power:	AC120V, AC200V-Single, AC200V-3 phases	
Mechanism:	Geneva gear driven intermittent motion	

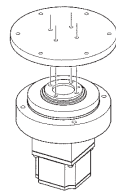
Features

- Compact size
- Energy Saving
- Easy control
- Easy adjustment using manual through shaft

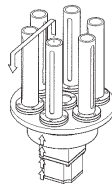


Applications

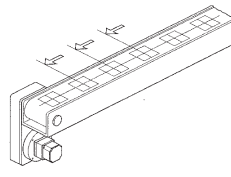
- High speed positioning easy to adjust speed by volume knob. consistent torque for any speed
- Smooth start/stop due to Geneva mech. the accel/decel motions are smooth.
- Backlashless lock The mechanism locks the table when each position is reached. This allows for high-accuracy positioning.
- Over load protection



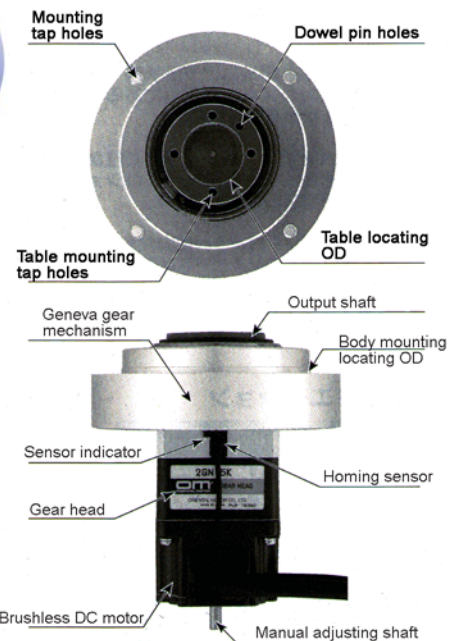
Index table



Rotary magazine



Index conveyor



Indexer group



FLA
Flexible Actuator :

Features

- Step motor with planetary gear that can index difficult dividing (3,6,9,12...)
- accuracy within +/- 4 minutes
- repeatability within 2 minutes
- hysteresis loss within 4 minutes



PGR
Backlashless Reducer :

Gear with input/output shaft

Features

- Planetary gear that can index difficult dividing (3,6,9,12...)
- accuracy within +/- 4 minutes
- repeatability within 2 minutes
- hysteresis loss within 4 minutes
- Gear with and without motor

Parts alignment is a very important process in automation systems. The MEG ALIGN unit is a complete solution to align your part from 4 directions.



ALIGN
Parts Aligner :

Features

- High accuracy
- No parts seizure/damage
- High speed 0.1 sec cycle time possible
- air drive model available
- Simple mechanism to avoid over- load
- Smooth stop due to the motor deceleration
- Air blow port to blow foreign particles out.

Buffer type

holds the part at the center with push force. The base is rigid type mechanism, therefore the operation is high speed.

Rigid type

holds the part at the center with clearance.

Presented by: