

# Pneumatic Module Units

## Vertical

To be used in vertical operations such as pressurization cutting and push motion.

**Pneumatic Module Units**

RoHS10

### Specifications List

Part Number	Specifications		
Type	No.	Cylinder	Base
MAT25	NN (S)	N (without)	N (without)
MAT32	NB (S)	N (without)	B (with)
MAT40	CN (S)	C (with)	N (without)
MAT63	CB (S)	C (with)	B (with)

**MAT25**  
**MAT32**  
**MAT40**  
**MAT50**  
**MAT63**

### Components

Parts	Base	Slider	Related Connecting Parts
Material	6063 Aluminum Alloy	6063 Aluminum Alloy	Stainless Steel
Surface Treatment	Clear Anodize	Clear Anodize	—

- Possible to select the unit without a cylinder and mount other manufacturer's cylinder.
- Compatible cylinder diameters are Ø25, Ø32, Ø40, Ø50 and Ø63.
- MAT25 is the only option for S Type. (MAT25 (S))
- S Type shaft diameter is Ø16. (See the Components List below)

### Module Components

Part Number	Component Name								
Type	No.	Cylinder	Linear Shafts	Floating Joints	Linear Bushings	Retaining Rings	Shaft Collars	Stand Brackets	
MAT25	NNS / NBS	—	PSFJZ16 (Shaft Dia. 16)	FJUCS10	LMU16	RTWS28	SSCSPDJ16	PFFM16	
	CNS / CBS	MSCCA25	PSFJZ20 (Shaft Dia. 20)		LMU20	RTWS32	SSCSPDJ20	PFFM20	
	NN / NB	—	PSFJZ25 (Shaft Dia. 25)		FJUCS14	LMU25	RTWS40	SSCSPDJ25	PFFM25
	CN / CB	MSCCA25							
MAT32	NN / NB	MSCCA32							
MAT40	NN / NB	—							
MAT40	CN / CB	MSCCA40							
	MAT50	NN / NB	—						
MAT50	CN / CB	MSCCA50							
	MAT63	NN / NB	—						
MAT63	CN / CB	MSCCA63							
			P.3586	P.210	P.3620	P.375	P.2460	P.343	P.2246

For details of the components above, please confirm on the relevant catalog pages.

Part Number	Selection	Stand Mounting Dimensions	Base Dimensions (When type with base is selected.)															
Type	No.	S	P	L (10 mm Increment)	CB	C	CP	Cm	Cd	SB	Slider Dimensions	d	f	w	t <sub>s</sub>	D <sub>1</sub>	SD	
MAT25	NN (S)	120 150 200 S 120 Only	30	120-300 (S=30)	17	28	5	50	M5	50	P SW SP <sub>1</sub> SP <sub>2</sub> t <sub>1</sub> t <sub>2</sub> a b c e	120 160 70 130 46 25 12 40 15 60	5.5	32	20	12	6.6	S
	NB (S)																	
	CN (S)																	
	CB (S)																	
MAT32	NN	150 200	30	160-300 (S=50)	27	34	5	68	Rc1/8	68	P SW SP <sub>1</sub> SP <sub>2</sub> t <sub>1</sub> t <sub>2</sub> a b c e	150 200 100 170 52 27 15 60 10 20 80	6.6	35	25	12	9	45
	NB																	
	CN																	
	CB																	
MAT40	NN	150 200	30	120-250 (S=30)	27	40	6	68	Rc1/8	68	P SW SP <sub>1</sub> SP <sub>2</sub> t <sub>1</sub> t <sub>2</sub> a b c e	200 256 140 226 60 32 17 80 10 20 100	9	45	35	12	9	45
	NB																	
	CN																	
	CB																	
MAT50	NN	200	30	160-250 (S=50)	32	50	8	72	Rc1/4	72	P SW SP <sub>1</sub> SP <sub>2</sub> t <sub>1</sub> t <sub>2</sub> a b c e	200 256 140 226 60 32 17 80 10 20 100	9	45	35	12	9	45
	NB																	
	CN																	
	CB																	
MAT63	NN	200	30	160-250 (S=50)	32	60	10	72	Rc1/4	72	P SW SP <sub>1</sub> SP <sub>2</sub> t <sub>1</sub> t <sub>2</sub> a b c e	200 256 140 226 60 32 17 80 10 20 100	9	45	35	12	9	45
	NB																	
	CN																	
	CB																	

Part Number Example: MAT25NN - 30 - 120 - 180

Part Number Alterations: MAT25NN - 30 - 120 - 180 - NSC

Alteration	Code	Spec.
Without Shaft Collar	NSC	Excluding Shaft Collar
With Auto Switches	AS	Auto switches are included. Part Number MD11L3 2 Pcs. Applicable to cylinder units only.

# Pneumatic Module Units

## Vertical, continued

### Mass

Part Number	Type	No.	Mass (kg)																	
			Cylinder Stroke S=30						Cylinder Stroke S=50											
			L=120-200			L=210-250			L=260-300			L=160-200			L=210-250			L=260-300		
			P Slider Pitch			P Slider Pitch			P Slider Pitch			P Slider Pitch			P Slider Pitch			P Slider Pitch		
	120	150	200	120	150	200	150	200	120	150	200	120	150	200	150	200				
MAT25	NNS	2.2	—	—	2.3	—	—	—	—	2.2	—	—	—	2.3	—	—				
	NBS	2.5	—	—	2.7	—	—	—	—	2.5	—	—	—	2.7	—	—				
	CNS	2.5	—	—	2.6	—	—	—	—	2.6	—	—	—	2.7	—	—				
	CBS	2.9	—	—	3.0	—	—	—	—	3.0	—	—	—	3.1	—	—				
	NN	2.7	3.1	3.8	3.0	3.4	4.0	3.6	4.3	2.7	3.1	3.8	3.0	3.4	4.0	3.6	4.3			
	NB	3.1	3.8	4.5	3.4	4.0	4.8	4.2	5.0	3.1	3.8	4.5	3.4	4.0	4.8	4.2	5.0			
MAT32	CN	3.1	3.5	4.1	3.3	3.7	4.3	3.9	4.6	3.1	3.5	4.2	3.4	3.8	4.4	4.0	4.7			
	CB	3.5	4.1	4.9	3.7	4.3	5.1	4.6	5.4	3.5	4.2	4.9	3.8	4.4	5.2	4.7	5.4			
	NN	—	5.0	5.9	—	5.4	6.3	5.8	6.7	—	5.0	5.9	—	5.4	6.3	5.8	6.7			
	NB	—	5.8	6.8	—	6.2	7.1	6.5	7.5	—	5.8	6.8	—	6.2	7.1	6.5	7.5			
	CN	—	5.5	6.4	—	5.9	6.7	6.3	7.1	—	5.6	6.5	—	6.0	6.8	6.4	7.2			
	CB	—	6.2	7.2	—	6.6	7.6	7.0	8.0	—	6.3	7.3	—	6.7	7.7	7.1	8.1			
MAT40	NN	—	5.0	5.9	—	5.4	6.3	5.8	6.7	—	5.0	5.9	—	5.4	6.3	5.8	6.7			
	NB	—	5.8	6.8	—	6.1	7.1	6.5	7.5	—	5.8	6.8	—	6.1	7.1	6.5	7.5			
	CN	—	5.5	6.4	—	5.9	6.8	6.3	7.2	—	5.6	6.5	—	6.0	6.9	6.4	7.3			
	CB	—	6.3	7.3	—	6.6	7.6	7.0	8.0	—	6.4	7.4	—	6.7	7.7	7.1	8.1			
	NN	—	—	6.6	—	—	7.0	—	7.4	—	—	6.6	—	—	7.0	—	7.4			
	NB	—	—	7.9	—	—	8.3	—	8.7	—	—	7.9	—	—	8.3	—	8.7			
MAT50	CN	—	—	7.3	—	—	7.7	—	8.0	—	—	7.5	—	—	7.9	—	8.3			
	CB	—	—	8.6	—	—	8.9	—	9.3	—	—	8.8	—	—	9.2	—	9.6			
	NN	—	—	6.6	—	—	7.0	—	7.4	—	—	6.6	—	—	7.0	—	7.4			
	NB	—	—	7.9	—	—	8.3	—	8.7	—	—	7.7	—	—	8.1	—	8.5			
	CN	—	—	7.7	—	—	8.1	—	8.5	—	—	7.9	—	—	8.3	—	8.7			
	CB	—	—	9.0	—	—	9.4	—	9.8	—	—	9.2	—	—	9.6	—	10.0			
MAT63	NN	—	—	6.6	—	—	7.0	—	7.4	—	—	6.6	—	—	7.0	—	7.4			
	NB	—	—	7.9	—	—	8.3	—	8.7	—	—	7.7	—	—	8.1	—	8.5			
	CN	—	—	7.7	—	—	8.1	—	8.5	—	—	7.9	—	—	8.3	—	8.7			
	CB	—	—	9.0	—	—	9.4	—	9.8	—	—	9.2	—	—	9.6	—	10.0			

### Velocity / Load Capacity / Force / Allowable Moment

Type	P Slider Pitch	Slider Mass (Incl. Joint)	Maximum Speed (mm/s)	Load Capacity (kN)	Cylinder Thrust Force Reference Value (kN)								Allowable Static Moment (N-m)								
					at 0.4 MPa		at 0.5 MPa		at 0.6 MPa		at 0.7 MPa		Ma	Mb	Mc						
					Instroke	Outstroke	Instroke	Outstroke	Instroke	Outstroke	Instroke	Outstroke									
MAT25 (S)	120	0.9	500	0.08	0.15	0.20	0.19	0.25	0.23	0.30	0.26	0.34	3.6	3.6	5.9						
MAT25	120	0.9														4.8	4.8	6.9			
	150	1.3																	4.8	4.8	8.6
	200	1.8																			
MAT32	150	1.8														7.7	7.7	9.8			
	200	2.6																	7.7	7.7	13.1
MAT40	150	1.8	7.7	7.7	9.8																
	200	2.6				7.7	7.7	13.1													
MAT50	200	2.8	7.7	7.7	13.1																
	MAT63	200							2.8	7.7	7.7	13.1									
			0.59	1.12	1.25	1.40	1.56	1.68	1.87				1.96	2.18	7.7	7.7	13.1				

### Accuracy

Part Number	Running Parallelism to Reference Axis (Upright)					
	Under No Load			Under Load (Reference)		
	Slider Pitch			Slider Pitch		
Type	120	150	200	120	150	200
MAT25 (S)	0.07	—	—	0.08	—	—
MAT25	0.07	0.07	0.07	0.10	0.10	0.10
MAT32	—	0.07	0.07	—	0.10	0.10
MAT40	—	0.07	0.07	—	0.10	0.10
MAT50	—	—	0.07	—	—	0.10
MAT63	—	—	0.07	—	—	0.10

- Measurement reference is Axis A.
- Method for Under Load measurement: 3kg mass load 70mm away from the body as shown by Load Position in Arrow View B.
- Accuracy does not vary by difference in cylinder stroke.
- Running parallel values are for reference only.

