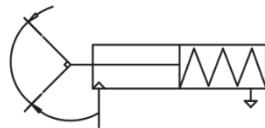


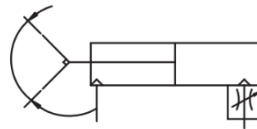
## PVSHY Series Air Gripper



PVSHYA: Single acting (N.O.)



PVSHY: Standard double acting



<b>P</b>	<b>V</b>	<b>S</b>	<b>H</b>	<b>Y</b>		<b>-</b>	<b>10</b>	<b>-</b>	<b>S</b>	
		<b>Series no.</b>			<b>Type No.</b>			<b>Bore</b>		
		PVSHY			Blank: Basic type			10		
					SA: Single acting (N.O.)			16		
								20		
								25		
									<b>Magnet No.</b>	
									S: With magnet	

## Product features

1. Single piston structure, large gripping torque.
2. Integrated with variable throttle valve, easy to adjust the gripping jaw opening & closing speed.
3. Reasonable gripping angle, wide range of application.
4. Accurate positioning accuracy, it is more accurate and reliable when gripping workpiece.
5. Multi mounting type, convenient for use in different application.
6. All series with magnet, easy to control.

## Theoretical clamping torque

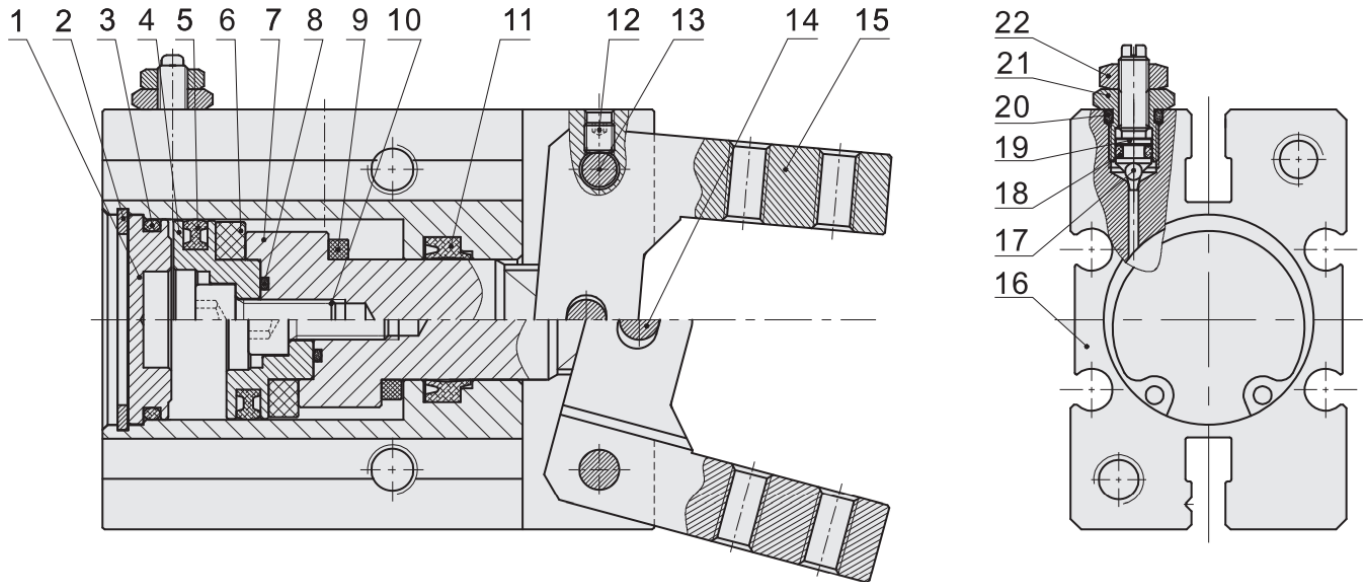
Acting type	Type	Theoretical clamping moment (N * cm)		Max. pinch point length (L) (mm)	Open angle	Closure angle
		Closure clamping torque	Open clamping torque			
Single acting (N.O.)	PVSHY-SA10	11.8XP	-	30	30 +3 0	-10 0 -3
	PVSHY-SA16	71.2XP	-	40		
	PVSHY-SA20	122.4XP	-	60		
	PVSHY-SA25	252XP	-	70		
Double acting	PVSHY10	17.6XP	29.4XP	30		
	PVSHY16	90XP	129XP	40		
	PVSHY20	152XP	252XP	60		
	PVSHY25	304XP	473XP	70		

Note: In the above table, "P" represents the actual use of pneumatic pressure, "P" unit: Mpa

## Specifications

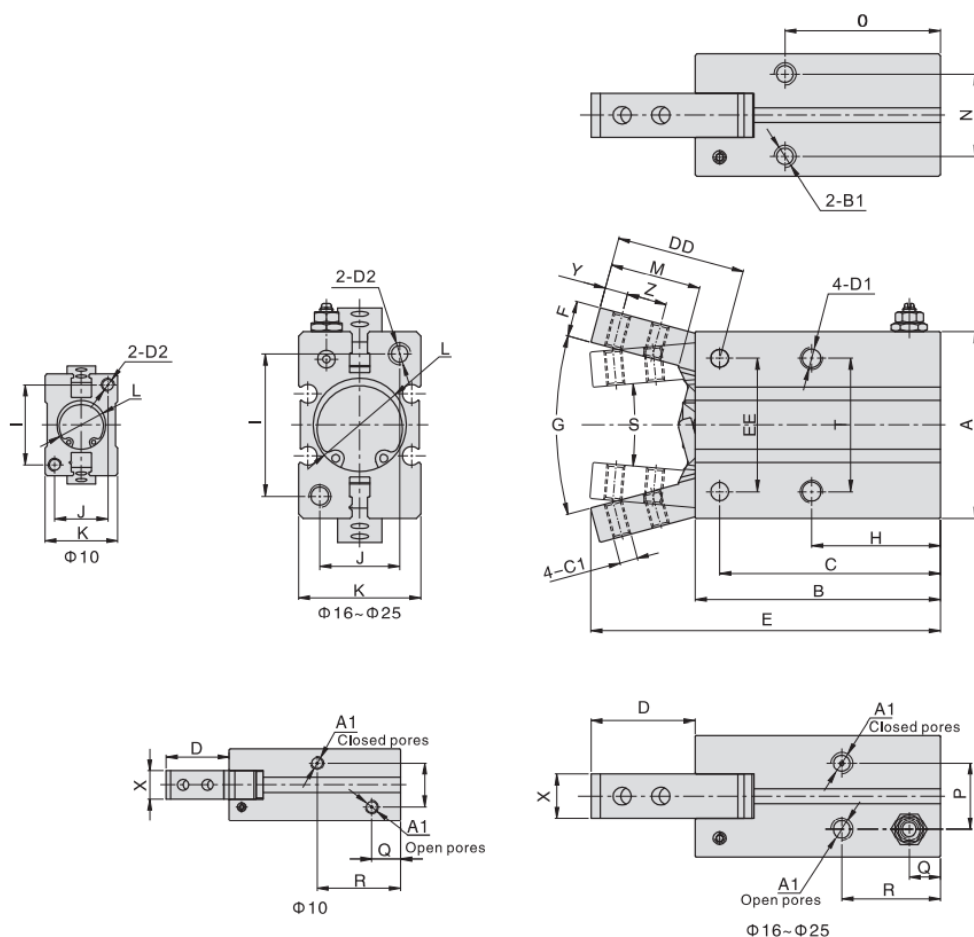
Bore size (mm)			10	16	20	25
Acting type			Single acting/double acting			
Working medium			Clean air (After 40 µm filtration)			
Applicable pressure range	Single acting	ø10	3~7 bar			
		ø16~ø25	2.5~7 bar			
	Double acting	ø10	1.5~7 bar			
		ø16~ø25	1~7 bar			
Working temperature (°C)			-20 ~ 80 (No freezing)			
Lubrication			Not required			
Max. frequency			180 (C.P.M)			
Port size			M3x0.5	M5x0.8		
Weight (g)			42	94	174	303

## Internal Structure



No.	Part name	Material
1	Rear cover	Aluminum alloy
2	C type retainer ring	Spring steel
3	O-ring	NBR
4	Piston	Aluminum alloy/stainless steel (ø10)
5	Piston seal	NBR
6	Magnet	Plastic
7	Piston rod	Aluminum alloy/stainless steel (ø10, ø16)
8	O-ring	NBR
9	Anti-bump cushion	PTEE
10	Hexagon socket cap screw	Carbon steel
11	Piston rod seal	TPU/NBR (ø25)
12	Hexagon socket set screw	Carbon steel
13	Pin	Stainless steel
14	Pin	Stainless steel
15	Claw	Cast steel
16	Barrel	Aluminum alloy
17	Steel ball	Stainless steel
18	O-ring	NBR
19	Buffer screw	Brass
20	O-ring	NBR
21	Buffer fixing screw	Brass
22	Hexagon nut	Carbon steel

## Main dimensions



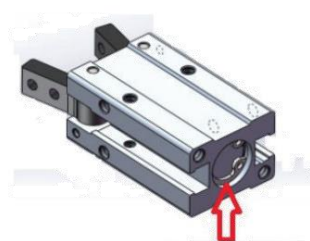
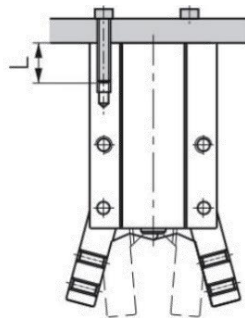
(mm)

Bore/Sign	A	A1	B	B1	C	C1	D	DD
PVSHY10	23	M3x0.5	38.6	M3x0.5 ∓ 6	35.8	M2.5x0.45	14.2	17.2
PVSHY16	30.6	M5x0.8	44.6	M4x0.7 ∓ 5.5	39.7	M3x0.5	18.9	23.6
PVSHY20	42	M5x0.8	55.2	M5x0.8 ∓ 8	49.7	M4x0.7	23.5	29
PVSHY25	52	M5x0.8	60.4	M6x1.0 ∓ 10	54.8	M5x0.8	32.8	38.5
Bore/Sign	D1	D2	E	EE	F	G	H	I
PVSHY10	M3x0.5 ∓ 6	M3x0.5 ∓ 6	52.8	14	4	30°	23	18
PVSHY16	M4x0.7 ∓ 9.5	M4x0.7 ∓ 8	63.5	24	7	30°	24.5	22
PVSHY20	M5x0.8 ∓ 11.5	M5x0.8 ∓ 10	78.7	30	8	30°	29	32
PVSHY25	M6x1.0 ∓ 14.5	M6x1.0 ∓ 12	93.2	36	10	30°	30	40
Bore/Sign	J	K	L	M	N	O	P	
PVSHY10	12	16.4	∅11 ∓ 1.5	12.5	11.4	27	10	
PVSHY16	15	23.6	∅17 ∓ 1.5	16.5	16	30	13	
PVSHY20	18	27.6	∅21 ∓ 1.5	20.5	18.6	35	15	
PVSHY25	22	33.6	∅26 ∓ 1.5	27.5	22	36.5	19.5	
Bore/Sign	Q	R	S	T	X	Y	Z	
PVSHY10	6.5	18.8	10°	16	6.4	3	5.7	
PVSHY16	6.5	18.3	10°	24	8	4	7	
PVSHY20	7	22.2	10°	30	10	5.2	9	
PVSHY25	7.4	23.5	10°	36	12	8	12	

## Installation and use

1. Installing a fall prevention device is recommended when applying a lowering clamping force. In the case of a sudden pressure duet o emergency stop, these prevention device can help to avoid personal or equipment injuries.
2. Air grippers are not intended for use under strong external or heavy impact forces.
3. When installing or repairing your air gripper take precautions to safely use your component.
4. Don't reverse the clamping gripper when installing clamping parts.
5. The locking torque of the fastening screw must be within the prescribed torque range shown in the chart below. If the locking torque is not set properly the unit will not perform correctly.

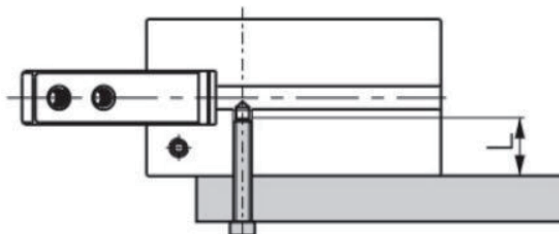
### Tail mounting type



The hole on the tail is for mounting and positioning

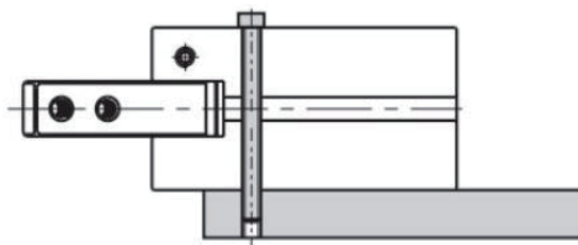
Bore/Sign	Bolt size	Max. locking Torque (Nm)	Max. screwed Depth (mm)	Tail positioning Bore dia (mm)	Tail positioning Depth (mm)
10	M3x0.5	0.88	6	11H9	1.5
16	M4x0.7	2.1	8	17H9	1.5
20	M5x0.8	4.3	10	21H9	1.5
25	M6x1.0	7.3	12	26H9	1.5

## Front tapped hole mounting



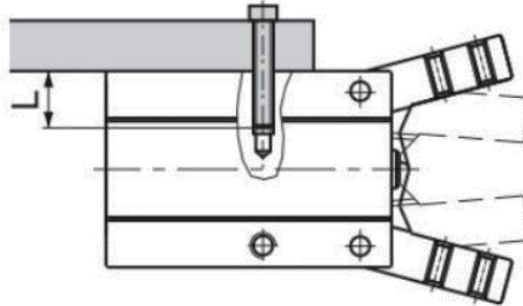
Bore/Sign	Bolt size	Max. locking Torque (Nm)	Max. screwed Depth (mm)
10	M3x0.5	0.69	5
16	M4x0.7	2.1	8
20	M5x0.8	4.3	10
25	M6x1.0	7.3	12

## Through hole mounting



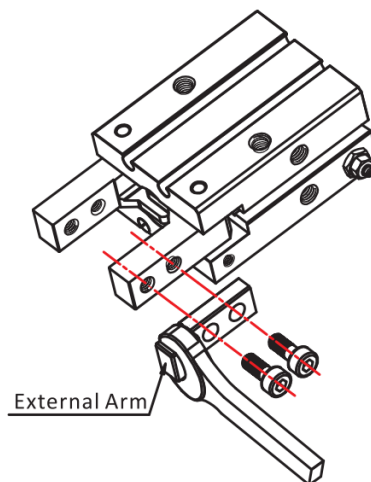
Bore/Sign	Bolt size	Max. locking Torque (Nm)	Max. screwed Depth (mm)
10	M2.5x0.45	0.49	5
16	M3x0.5	0.88	8
20	M4x0.7	2.1	10
25	M5x0.8	4.3	12

## Side tapped hole mounting



Bore/Sign	Bolt size	Max. locking Torque (Nm)	Max. screwed Depth (mm)
10	M3x0.5	0.88	6
16	M4x0.7	1.6	6.5
20	M5x0.8	3.3	8
25	M6x1.0	5.9	10

6. Clamping jaw installation: Never clamp the body directly and then lock the screws. The gripping jaw should be held by the spanner and the screw should be locked using a hex wrench.



Bore/Sign	Bolt size	Max. locking Torque (Nm)
10	M2.5x0.45	0.31
16	M3x0.5	0.59
20	M4x0.7	1.4
25	M5x0.8	2.8



7. When gripping an object, the item must be placed in the centre of the two gripping jaws, and the two gripping jaws should touch the object at the same time.
8. Avoid applying external forces to the gripping jaw. Always leave enough space to adequately grip and place your object. The gripper should be free moving.
9. When gripping an object the item should always be centered. When testing, you must reduce the pressure for low speed running, to guarantee the safety and no impact.
10. Please use the flow control valve to adjust the opening and closing speed of your gripper.
11. Always ensure the gripper path is clear of obstruction.
12. Before removing your air gripper, please make sure all power is disconnected and you've discharged residual compressed air.