VQM Series Metal Seal Low Friction Cylinder



Ordering Code

VQM Series Metal Seal Low Friction Cylinder

VQM — Metal seal low friction type

B — Mounting
- B: Basic type
- L: Foot type
- F: Rod side flange type
- G: Head side flange type
- C: Single clevis type (Non-integrated type)
- D: Double clevis type

16 — Bore size

□ — Thread type
- Nil: PT
- G: G
- N: NPT

\- 15 — Stroke

Bore(mm)	Standard stroke(mm)
16	15, 30, 45, 60, 75, 100
20	
25	

* Strokes are available in 1mm increments by installing spacers in standard stroke cylinders.
Example: VQMB20×20
(10mm width spacer is installed in VQMB20×30 to adjust the stroke.)

D — Action
- D: Double acting

Specifications

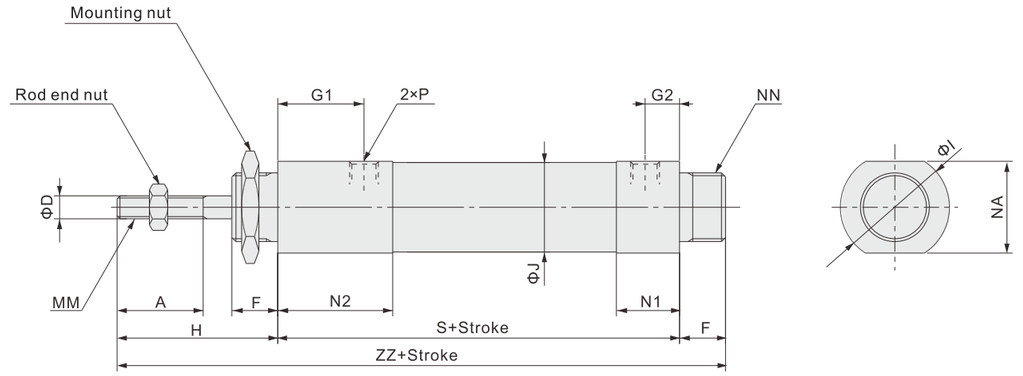
Bore size(mm)		16	20	25
Seal construction		Metal seal		
Acting type		Double acting		
Working medium		Clean air(40μm filteration)		
Proof pressure		1.05MPa		
Max. working pressure		0.7MPa		
Min. working pressure		0.005MPa		
Working temperature		-10 to 80℃		
Piston speed		0.5 to 1000mm/s		
Cushion		Rubber bumper		
Stroke length tolerance		+1.0mm 0		
Total leakage	Supply press. 0.1MPa	250cm³/min		300cm³/min
	Supply press. 0.3MPa	1000cm³/min		1200cm³/min
	Supply press. 0.5MPa	2500cm³/min		3000cm³/min

IS09001 CE
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Main Dimensions

Φ16, Φ20, Φ25



Bore (mm)	A	D	F	G1	G2	H	I	J	MM	N1	N2	NA	NN	P			S	ZZ
														—	TN	TF		
16	15	5	10	15	6	30	22	22	M5×0.8	12	21	19.5	M14×1	M5×0.8	—	—	74	114
20	18	8	13	25	8.5	40.5	31.5	28.5	M8×1.25	20.5	33	29	M20×1.5	Rc1/8	NPT1/8	G1/8	97.5	151
25	18	10	13	30	8.5	44.5	34.5	32	M10×1.25	20.5	38	32	M26×1.5	Rc1/8	NPT1/8	G1/8	102.5	160

⚠ Caution

① When mounting, thoroughly flush out the connector piping and be sure that dirt and chips, etc., do not get inside the cylinder.

② Install an air filter with a filtration degree of 5μm or less on the air supply. Furthermore, when controlling for low speed or controlled output, use clean air (atmospheric pressure dew point temperature of -10℃). Installation of a mist separator (filtration degree 0.3μm or less) is also recommended.

③ Use a metal seal type when using solenoid valves for cylinder actuation. If a rubber seal type is used, there may be an increase in operating resistance due to grease sprayed from the main valve.

④ Operate so that the load applied to the piston rod is normally in the axial direction. In the event that a lateral load is unavoidable, do not exceed the range of the allowable lateral load at the rod end.

⑤ Take care not to scratch or gouge the sliding portion of the rod. This may cause malfunction or shorten the unit's life.

⑥ When attaching a work piece to the end of the rod, move the rod to the fully retracted position and use the wrench flats at the end of the rod. Fasten the work piece without applying a large amount of torque to the rod.

⑦ Be certain to connect a load so that the rod axis is aligned with the load and its direction of movement. Especially when a cylinder rod is connected directly to a guide function (such as bearings, etc.) on the equipment side, the following is likely to occur. Either an offset load will occur and the sliding resistance will not be stable or galling will occur on the metal seal parts. Therefore, be sure to use a floating joint or a spherical joint.

⑧ When a piston rod is driven with a circuit from an external force such as force, control, tension control, etc., a stick-slip phenomenon will likely occur and sliding resistance will not be stable if the amount of displacement is 0.05mm or less.