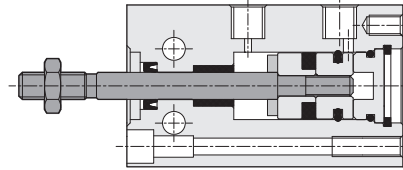
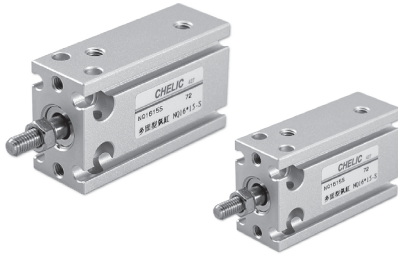


# NQ series Free Mount Cylinder

## Product features

CHELIC

### Internal structure



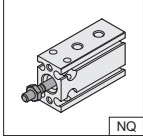
### Specification

Item	Bore size (mm)	Ø6	Ø10	Ø16	Ø20	Ø25	Ø32
Action		Double acting					
Fluid		Air					
Mounting type		Horizontal mounting, Side mounting, Vertical mounting					
Pressure range	Kgf/cm <sup>2</sup> (kPa)	1.5 ~ 8.5 ( 150 ~ 850)					
Ambient and fluid temperature	°C	0 ~ 60					
Piston speed	mm/s	50 ~ 700					
Body material		Aluminum alloy					
Cushion		Rubber washer					
Lubrication		Lubrication free type					
Port size		M5 X 0.8P					
Sensing device		Standard: Without magnet/ S: With magnet					

### Code of order

**NQ** × **20** × **30** - **SD 2**

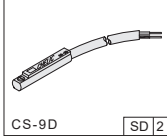
**Model**      **Bore size**      **Stroke**      **Sensor switch**



NQ: Standard Double acting

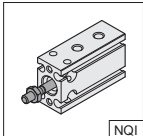
6 - Ø6 mm  
10 - Ø10 mm  
16 - Ø16 mm  
20 - Ø20 mm  
25 - Ø25 mm  
32 - Ø32 mm

Ø6 - 5 ~ 30 mm  
Ø10 - 5 ~ 30 mm  
Ø16 - 5 ~ 30 mm  
Ø20 - 5 ~ 50 mm  
Ø25 - 5 ~ 50 mm  
Ø32 - 5 ~ 50 mm

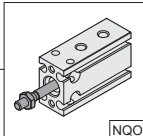


CS-9D      SD 2

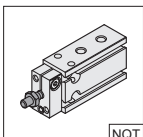
None : Standard  
SD1 : Sensor switch (CS-9D)  
SB1 : Sensor switch (CS-9B)  
2 : Number of sensor switch  
1 = 1 PCS  
2 = 2 PCS



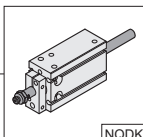
NQI: Single acting Normal in



NQO: Single acting Normal out



NQT: Non-Rotating rod type



NQDK: Free Mount Cylinder (For Vacuum)

# NQ series Free Mount Cylinder

## Product features

CHELIC

### ◉ Bore size and stroke

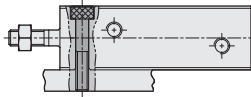
#### ■ Standard

Item	Stroke	5	10	15	20	25	30	40	50	60
NQ	∅ 6	●	●	●	●	●	●	—	—	—
NQ	∅10, ∅16	●	●	●	●	●	●	—	—	—
NQT		●	●	●	●	●	●	●	●	●
NQI	∅10 ~ ∅32	●	●	●	—	—	—	—	—	—
NQO		●	●	●	—	—	—	—	—	—
NQDK	∅20, ∅25, ∅32	●	●	●	●	●	●	●	●	●

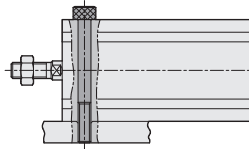
#### ■ With magnet

Item	Stroke	5	10	15	20	30	40	50
NQ	∅ 6	●	●	●	●	●	—	—
NQ	∅10, ∅16	●	●	●	●	●	—	—
NQT		●	●	●	●	●	●	●
NQI	∅10 ~ ∅32	●	●	●	—	—	—	—
NQO		●	●	●	—	—	—	—
NQDK	∅20, ∅25, ∅32	●	●	●	●	●	●	●

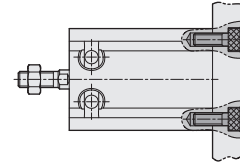
### ◉ Mounting type



■ Side mounting

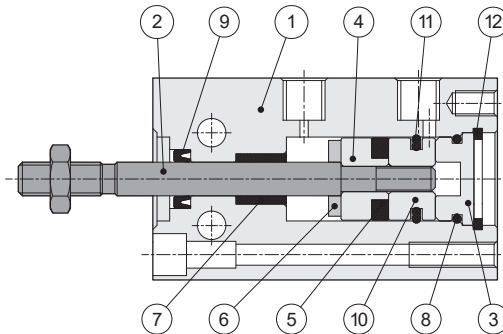


■ Upper mounting



■ Bottom mounting

### ◉ Internal structure



### ◉ Component and material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	07	Bush	Teflon
02	Main shaft	Medium carbon steel	08	Rear cover O-ring	NBR
03	Rear cover	Aluminum alloy	09	Shaft packing	NBR
04	Magnet cover	Copper alloy	10	Piston	Copper alloy
05	Magnet	Plastic	11	Piston packing	NBR
06	Washer	Rubber	12	Clip	Spring steel

### ◉ Packing and O-ring

Unit: mm

Item	Piston packing	Shaft packing	Rear cover O-ring
quantity	1	1	1
Bore size			
∅ 6	MYA - 3 (2pcs)	MYA - 3	5 x 1
∅ 10	MYA - 7 (2pcs)	MYA - 4	8 x 1.5
∅ 16	COP - 16	EM - 8	15.5 x 1.45
∅ 20	COP - 20	EM - 10	17.5 x 1.5
∅ 25	COP - 25	EM - 12	24.35 x 2.0
∅ 32	COP - 32	EM - 16	30 x 2.0

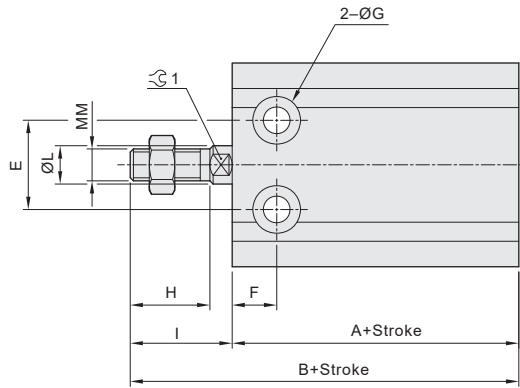
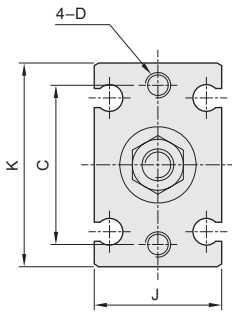
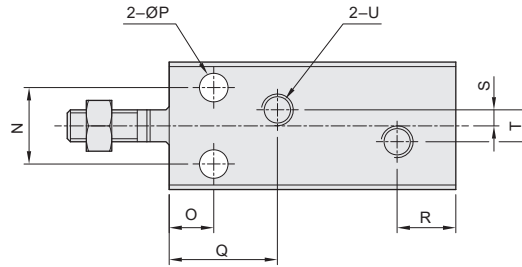
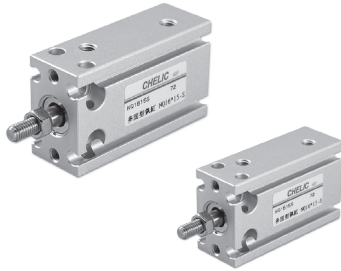
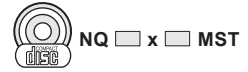
Note: Piston and rod packing adapt in Osaka and Mitsubishi imports

# NQ series Free Mount Cylinder

Dimension-Standard type

CHELIC

☉ NQ Ø6 ~ Ø32



Bore size	Standard		With magnet		C	D	E	F	G	H	I	J
	A	B	A	B								
Ø 6	33	46	33	46	17	M3x0.5P x 5 dp	10	7	Ø3.2 Thru-hole, Hole Ø6 x 4.5 dp	7	13	13
Ø10	36	52	36	52	18	M3x0.5P x 5 dp	11	7	Ø3.5 Thru-hole, Hole Ø6 x 5 dp	10	16	15
Ø16	30	46	40	56	25	M4x0.7P x 6 dp	14	7	Ø4.2 Thru-hole, Hole Ø7.5 x 5 dp	12.5	16	20
Ø20	36	55	46	65	30	M5x0.8P x 8 dp	16	9	Ø5.5 Thru-hole, Hole Ø9 x 7 dp	14	19	26
Ø25	40	63	50	73	38	M5x0.8P x 8 dp	20	10	Ø5.5 Thru-hole, Hole Ø9 x 8.5 dp	18	23	32
Ø32	42	69	52	79	48	M6x1.0P x 9 dp	24	11	Ø6.5 Thru-hole, Hole Ø11 x 11.5 dp	22	27	40

Bore size	K	L	MM	N	O	P	Q	R	S	T	U	⌀ 1
Ø 6	22	Ø3	M3 x 0.5P	7	7	Ø3.2	15	10	—	—	M5 x 0.8P	—
Ø10	24	Ø4	M4 x 0.7P	9	7	Ø3.4	15.5	10	—	—	M5 x 0.8P	—
Ø16	32	Ø6	M5 x 0.8P	12	7	Ø4.5	14.5	10.5	2	4	M5 x 0.8P	5
Ø20	40	Ø8	M6 x 1.0P	16	9	Ø5.5	19.5	7	6	12	M5 x 0.8P	6
Ø25	50	Ø10	M8 x 1.25P	20	10	Ø5.5	21	7.5	7	14	M5 x 0.8P	8
Ø32	62	Ø12	M10 x 1.25P	24	11	Ø6.6	24.2	9	11	22	Rc 1/8	10

NA

NA2

NB

NU

ND

NQ

MSI

JQ

JD

JG

JTD

JTF

JCB

JCF

JE

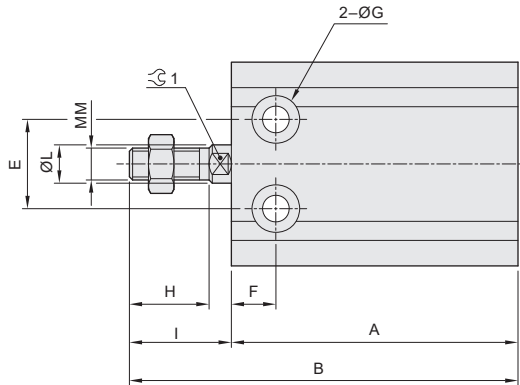
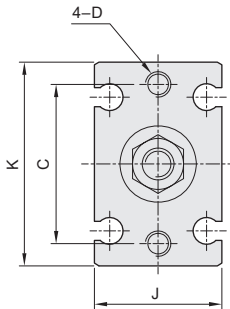
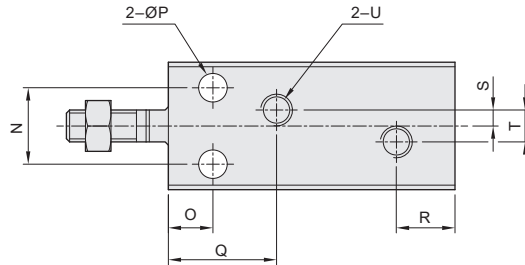
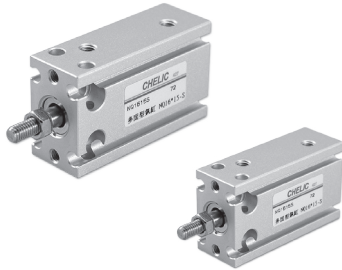
JM

# NQ series Free Mount Cylinder

Dimension-Single acting normal in

CHELIC

● NQI Ø10 ~ Ø32



Bore size	Standard						With magnet						C	D	G
	A			B			A			B					
	5st	10st	15st	5st	10st	15st	5st	10st	15st	5st	10st	15st			
Ø10	41	46	56	57	62	72	41	46	56	57	62	72	18	M3x0.5P x 5 dp	Ø3.5 Thru-hole, Hole Ø6x5 dp
Ø16	35	40	50	51	56	66	45	50	60	61	66	76	25	M4x0.7P x 6 dp	Ø4.2 Thru-hole, Hole Ø7.5x4.1 dp
Ø20	41	46	56	60	65	75	51	56	66	70	75	85	30	M5x0.8P x 8 dp	Ø5.5 Thru-hole, Hole Ø9x8 dp
Ø25	45	50	60	68	73	83	55	60	70	78	83	93	38	M5x0.8P x 8 dp	Ø5.5 Thru-hole, Hole Ø9x8.5 dp
Ø32	47	52	62	74	79	89	57	62	72	84	89	99	48	M6x1.0P x 9 dp	Ø6.5 Thru-hole, Hole Ø11x11 dp

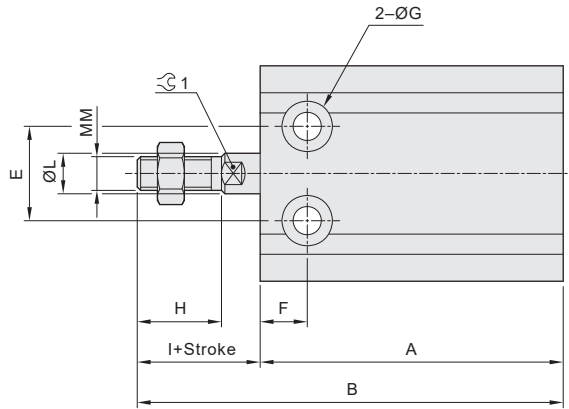
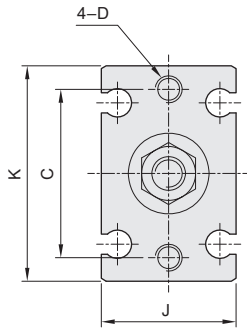
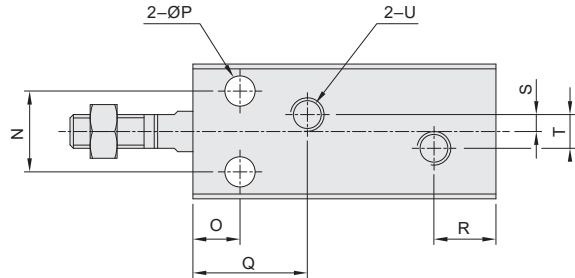
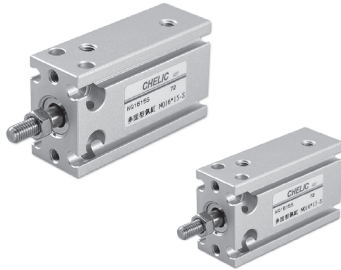
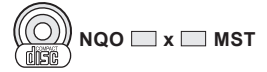
Bore size	E	F	H	I	J	K	L	MM	N	O	P	Q	R	S	T	U	⊕1
Ø10	11	7	10	16	15	24	Ø4	M4 x 0.7P	9	7	Ø3.4	15.5	10	—	—	M5 x 0.8P	—
Ø16	14	7	12.5	16	20	32	Ø6	M5 x 0.8P	12	7	Ø4.5	15.3	10.5	2	4	M5 x 0.8P	5
Ø20	16	9	14	19	26	40	Ø8	M6 x 1.0P	16	9	Ø5.5	19.5	7	6	12	M5 x 0.8P	6
Ø25	20	10	18	23	32	50	Ø10	M8 x 1.25P	20	10	Ø5.5	21	7.5	7	14	M5 x 0.8P	8
Ø32	24	11	22	27	40	62	Ø12	M10 x 1.25P	24	11	Ø6.6	24.2	9	11	22	Rc 1/8	10

# NQ series Free Mount Cylinder

Dimension-Single acting normal out

CHELIC

☉ NQO Ø10 ~ Ø32



Bore size	Standard						With magnet						C	D	G
	A			B			A			B					
	5st	10st	15st	5st	10st	15st	5st	10st	15st	5st	10st	15st			
Ø10	41	46	56	62	72	87	41	46	56	62	72	87	18	M3x0.5P x 5 dp	Ø3.5 Thru-hole, Hole Ø6x5 dp
Ø16	35	40	50	56	66	81	45	50	60	66	76	91	25	M4x0.7P x 6 dp	Ø4.2 Thru-hole, Hole Ø7.5x4.1 dp
Ø20	41	46	56	65	75	90	51	56	66	75	85	100	30	M5x0.8P x 8 dp	Ø5.5 Thru-hole, Hole Ø9x8 dp
Ø25	45	50	60	73	83	98	55	60	70	83	93	108	38	M5x0.8P x 8 dp	Ø5.5 Thru-hole, Hole Ø9x8.5 dp
Ø32	47	52	62	79	89	104	57	62	72	89	99	114	48	M6x1.0P x 9 dp	Ø6.5 Thru-hole, Hole Ø11x11 dp

Bore size	E	F	H	I	J	K	L	MM	N	O	P	Q	R	S	T	U	⊕ 1
Ø10	11	7	10	16	15	24	Ø4	M4 x 0.7P	9	7	Ø3.4	15.5	10	—	—	M5 x 0.8P	—
Ø16	14	7	12.5	16	20	32	Ø6	M5 x 0.8P	12	7	Ø4.5	15.3	10.5	2	4	M5 x 0.8P	5
Ø20	16	9	14	19	26	40	Ø8	M6 x 1.0P	16	9	Ø5.5	19.5	7	6	12	M5 x 0.8P	6
Ø25	20	10	18	23	32	50	Ø10	M8 x 1.25P	20	10	Ø5.5	21	7.5	7	14	M5 x 0.8P	8
Ø32	24	11	22	27	40	62	Ø12	M10 x 1.25P	24	11	Ø6.6	24.2	9	11	22	Rc 1/8	10

NA

NA2

NB

NU

ND

NQ

MSI

JQ

JD

JG

JTD

JTF

JCB

JCF

JE

JM

# NQ series Free Mount Cylinder

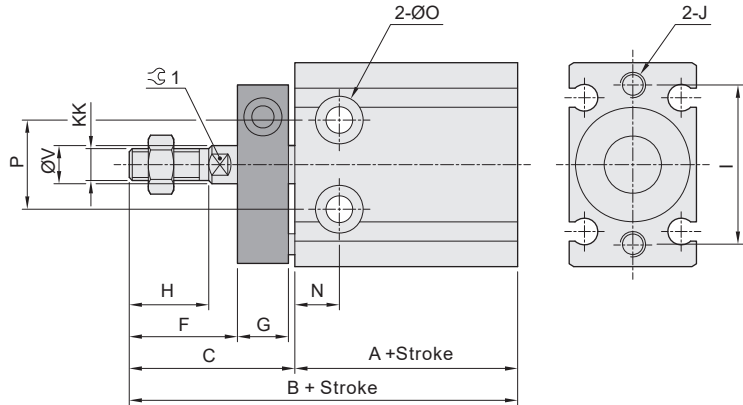
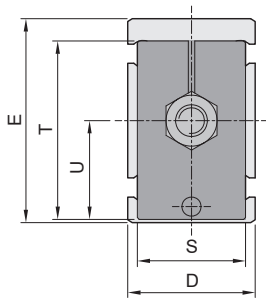
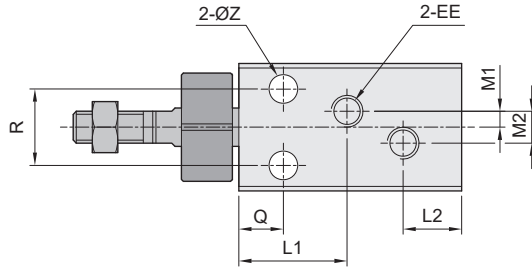
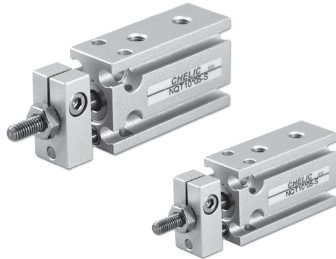
Dimension-Non-Rotating type

CHELIC

Q NQT Ø10 ~ Ø32



NQT  x  MST



Bore size	Standard		With magnet		C	D	E	EE	F	G	H	I	J	KK	L1	L2	M1	M2
	A	B	A	B														
Ø10	36	57	36	57	21	15	24	M5 x 0.8P	12	8	10	18	M3x0.5P x 5 dp	M4x0.7P	15.5	10	—	—
Ø16	30	56	40	66	26	20	32	M5 x 0.8P	17	8	12.5	25	M4x0.7P x 6 dp	M5x0.8P	15.3	10.5	2	4
Ø20	36	65	46	75	29	26	40	M5 x 0.8P	20	8	14	30	M5x0.8P x 8 dp	M6x1.0P	19.5	7	6	12
Ø25	40	73	50	83	33	32	50	M5 x 0.8P	22	10	18	38	M5x0.8P x 8 dp	M8x1.25P	21	7.5	7	14
Ø32	42	84	52	94	42	40	62	Rc 1/8	29	12	22	48	M6x1.0P x 9 dp	M10x1.25P	24.2	9	11	22

Bore size	N	O	P	Q	R	S	T	U	V	Z	1
Ø10	7	Ø3.5 Thru-hole, Hole Ø6x5 dp	11	7	9	12	22	11.5	Ø4	Ø3.4	—
Ø16	7	Ø4.2 Thru-hole, Hole Ø7.5x4.1 dp	14	7	12	13	28	15.5	Ø6	Ø4.5	5
Ø20	9	Ø5.5 Thru-hole, Hole Ø9x8 dp	16	9	16	16	33	19.5	Ø8	Ø5.5	6
Ø25	10	Ø5.5 Thru-hole, Hole Ø9x8.5 dp	20	10	20	20	43.5	24.5	Ø10	Ø5.5	8
Ø32	11	Ø6.5 Thru-hole, Hole Ø11x11 dp	24	11	24	24	51.5	30.5	Ø12	Ø6.6	10

# NQ series Free Mount Cylinder

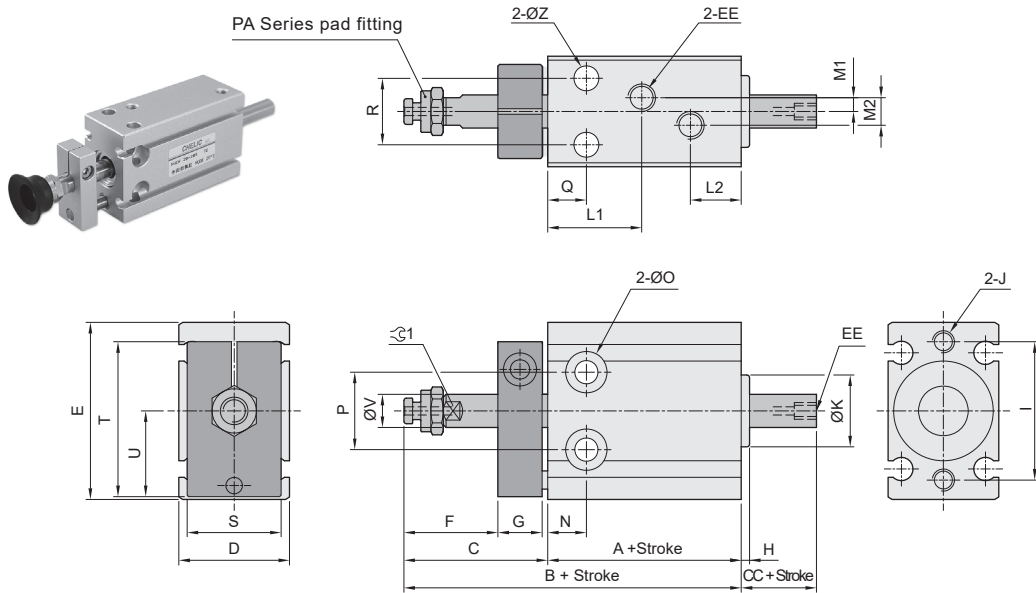
Dimension-For vacuum type

CHELIC

● NQDK Ø20 ~ Ø32



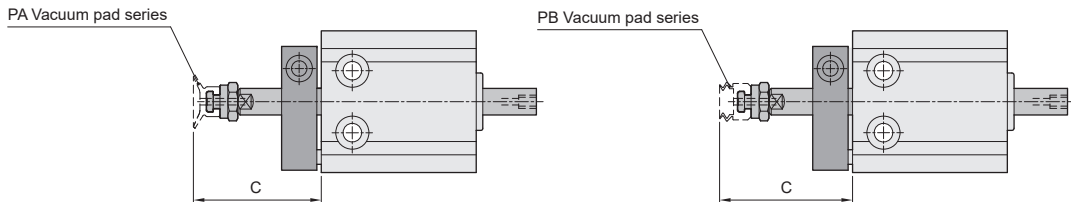
NQDK □ x □ MST



Bore size	Standard		With magnet		C	CC	D	E	EE	F	G	H	I	J	K	L1	L2	M1
	A	B	A	B														
Ø20	36	65	46	75	29	14	26	40	M5 x 0.8P	20	8	1.5	30	M5x0.8P x 8 dp	13	19.5	7	6
Ø25	40	73	50	83	33	14	32	50	M5 x 0.8P	22	10	1.9	38	M5x0.8P x 8 dp	17	21	7.5	7
Ø32	42	84	52	94	42	15	40	62	Rc 1/8	29	12	3.3	48	M6x1.0P x 9 dp	22	24.2	9	11

Bore size	M2	N	O	P	Q	R	S	T	U	V	Z	∠1
Ø20	12	9	Ø5.5 Thru-hole, Hole Ø9x8 dp	16	9	16	16	33	19.5	Ø8	Ø5.5	6
Ø25	14	10	Ø5.5 Thru-hole, Hole Ø9x8.5 dp	20	10	20	20	43.5	24.5	Ø10	Ø5.5	8
Ø32	22	11	Ø6.5 Thru-hole, Hole Ø11x11 dp	24	11	24	24	51.5	30.5	Ø12	Ø6.6	10

## ● Model of vacuum pad



Bore size	Ø20					Ø25			Ø32		
Model of vacuum pad	PA-05	PA-06	PA-08	PA-10	PA-15	PA-20	PA-25	PA-30	PA-35	PA-40	PA-50
C	31.4	31.4	31.9	32.4	32.9	43	47	45	56.5	56.5	57.5
Model of vacuum pad	PB-10		PB-15		PB-20		PB-30		PB-40		PB-50
C	34.4		35.9		46		51		60.5		62.7

NA

NA2

NB

NU

ND

NQ

MSI

JQ

JD

JG

JTD

JTF

JCB

JCF

JE

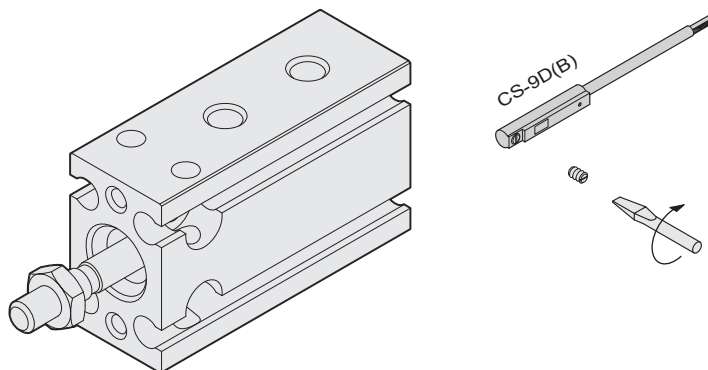
JM

# NQ series Free Mount Cylinder

## Sensor switch operating range and the setting

CHELIC

### ▶ Sensor switch installation



### ▶ Sensing range

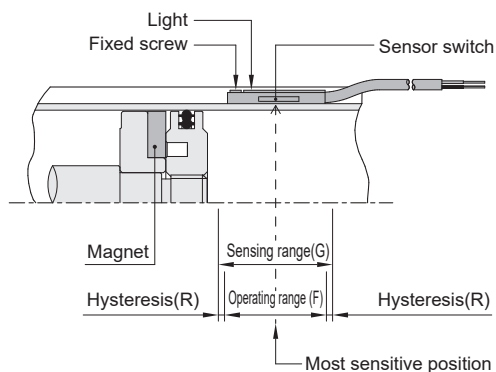
Sensor switch is fixed on the cylinder body. The magnetic piston head will activate the Sensor switch when it enters the operating range. It has 0.5mm differential.

### ▶ Operating range

When piston head moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch. (Please refer to the below table)

### ▶ Sensor switch setting and operating range

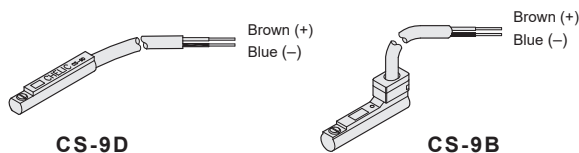
#### ● CS-9D(B)



Unit: mm

Model	CS-9D(B)	
Bore size	Operating range (F)	Hysteresis(R)
Ø 6	5	1
Ø 10	5	1
Ø 16	5	1
Ø 20	8	1
Ø 25	8	1
Ø 32	10	1

### ▶ Sensor switch introduction



Voltage: DC 5 ~ 120 V  
AC 5 ~ 120 V