

Dynamax[®] Pneumatics



NQ Cast NFPA Series

Pneumatic Cylinders

TECHNICAL PRODUCT CATALOG

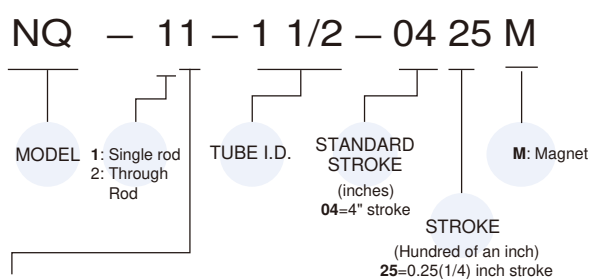
Specifications



Table for standard stroke

Tube I.D.	Stroke (inch)
ø1 1/2"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20
ø2", 2 1/2"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24
ø3 1/4", 4"	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24

Order example



STYLE

Code	Symbol	Description
1 1		Double acting / Single Rod / Male thread

* Order example for special specification, refer to page 0-7.

Features

■ Non lubrication

Special housing and bushing enables self lubrication of piston rod.

■ High quality long service life

Hard anodised aluminium cylinder tubes offer a high resistance to corrosion and low internal friction.

■ Full range of NFPA interchangeable mounting configurations

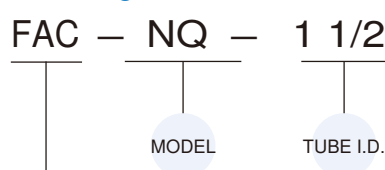
Mounting dimensions are in accordance with ANSI (NFPA) T3.6.7 R2-1996, fluid power systems and products-square head industrial cylinders-mounting dimensions.

Specification

Model	MCQN				
Tube I.D. (inch)	1 1/2"	2"	2 1/2"	3 1/4"	4"
Tube I.D. (mm)	40	50	63	80	100
Port size	NPT3/8			NPT1/2	
Medium	Air				
Operating pressure range	0.05~1 MPa				
Proof pressure	1.5 MPa				
Ambient temperature	-5~+60°C (No freezing)				
Available speed range	50~500 mm/sec				
Sensor switch (☼)	RCA				
Sensor switch holder	HV1	HV2	HV2	HV3	HV3

* RCA specification, please refer to page 8-6.

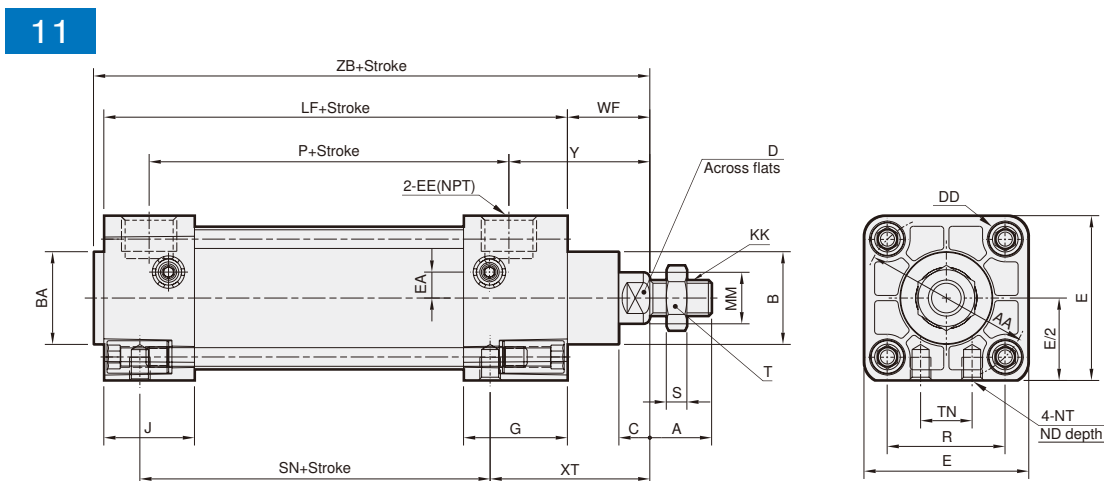
Mounting accessories



MOUNTING TYPE

	LB
	CA
	CB
	CB2
	FAC
	FBC
	TC
	Y
	I

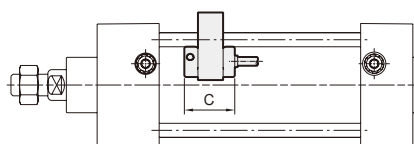
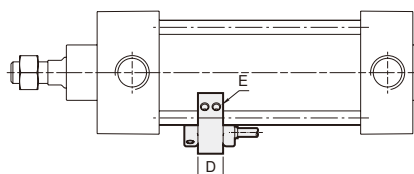
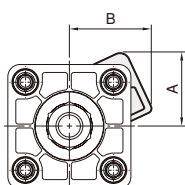
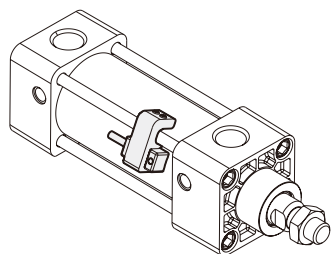
Dimensions - 1-1/2 to 4 inch bores



Code Tube I.D.	A	AA	B	BA	C	D	DD	E	EA	EE	G	J	KK	LF	MM	ND	NT	P	R	S	SN
1 1/2"	3/4	2.02	1 1/8	1 1/8	3/8	9/16	1/4-28	2	0.32	3/8	1.26	1.10	7/16-20	3 5/8	5/8	9/32	1/4-20	2.36	1.43	0.26	2 1/4
2"	3/4	2.60	1 1/8	1 1/8	3/8	9/16	5/16-24	2 1/2	0.43	3/8	1.26	1.06	7/16-20	3 5/8	5/8	7/16	5/16-18	2.40	1.84	0.26	2 1/4
2 1/2"	3/4	3.10	1 1/8	1 1/8	3/8	9/16	5/16-24	3	0.47	3/8	1.30	1.06	7/16-20	3 3/4	5/8	19/32	3/8-16	2.48	2.19	0.26	2 3/8
3 1/4"	1 1/8	3.90	1 1/2	1 1/2	1/2	7/8	3/8-24	3 3/4	—	1/2	1.57	1.18	3/4-16	4 1/4	1	5/8	1/2-13	2.72	2.76	0.42	2 5/8
4"	1 1/8	4.70	1 1/2	1 1/2	1/2	7/8	3/8-24	4 1/2	—	1/2	1.57	1.18	3/4-16	4 1/4	1	5/8	1/2-13	2.72	3.32	0.42	2 5/8

Code Tube I.D.	T	TN	WF	XT	Y	ZB
1 1/2"	0.69	0.63	1	1 15/16	1.71	4 3/4
2"	0.69	0.88	1	1 15/16	1.71	4 3/4
2 1/2"	0.69	1.25	1	1 15/16	1.75	4 7/8
3 1/4"	1.12	1.50	1 3/8	2 7/16	2.34	5 53/64
4"	1.12	2.06	1 3/8	2 7/16	2.34	5 53/64

Installation of sensor switch



Code Tube I.D.	Sensor switch	Hold	A	B	C	D	E
1 1/2"	RCA	HV1	1.10	1.47	1.02	0.51	M4×10L
2"	RCA	HV2	1.49	1.68	1.02	0.51	M4×10L
2 1/2"	RCA	HV2	1.66	1.86	1.02	0.51	M4×10L
3 1/4"	RCA	HV3	1.87	2.13	1.02	0.51	M4×10L
4"	RCA	HV3	2.15	2.42	1.02	0.51	M4×10L

Mounting Accessories - 1-1/2 to 4 inch bores

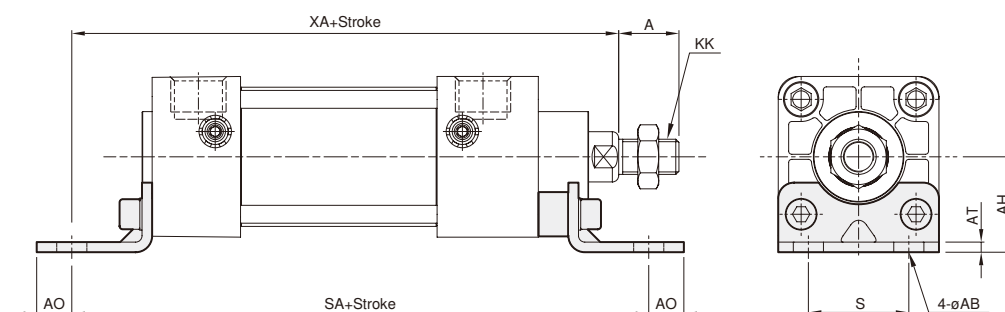
Cylinder weight

Unit: kg

Model	Basic weight MCQN-11	Basic weight (magnet) MCQN-11	Stroke 1 inch MCQN-11
Tube I.D.			
ø1 1/2"	0.664	0.676	0.078
ø2"	0.965	0.981	0.096
ø2 1/2"	1.314	1.334	0.108
ø3 1/4"	2.482	2.510	0.200
ø4"	3.266	3.300	0.220

Model	LB	FAC/FBC	I	PIN	Y	TC	CB	CB2
Tube I.D.								
ø1 1/2"	0.160	0.246	0.150	0.065	0.205	0.554	0.229	0.287
ø2"	0.240	0.403	0.150	0.065	0.205	0.644	0.377	0.424
ø2 1/2"	0.300	0.576	0.150	0.065	0.205	0.840	0.521	0.563
ø3 1/4"	0.633	1.408	0.522	0.175	0.662	1.098	1.302	1.482
ø4"	0.955	2.015	0.522	0.175	0.662	1.450	1.821	2.033

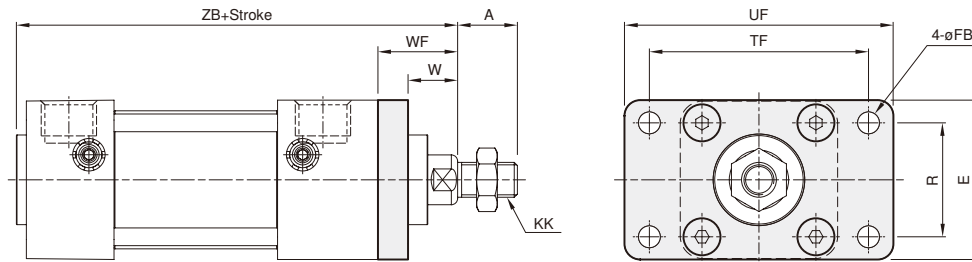
LB



Code Tube I.D.	A	AB	AH	AT	AO	KK	S	SA	XA
1 1/2"	3/4	3/8	1 3/16	1/8	7/16	7/16-20	1 1/4	6	5 5/8
2"	3/4	3/8	1 7/16	1/8	9/16	7/16-20	1 3/4	6	5 5/8
2 1/2"	3/4	3/8	1 5/8	1/8	9/16	7/16-20	2 1/4	6 1/8	5 3/4
3 1/4"	1 1/8	1/2	1 15/16	11/64	3/4	3/4-16	2 3/4	7 3/8	6 7/8
4"	1 1/8	1/2	2 1/4	15/64	3/4	3/4-16	3 1/2	7 3/8	6 7/8

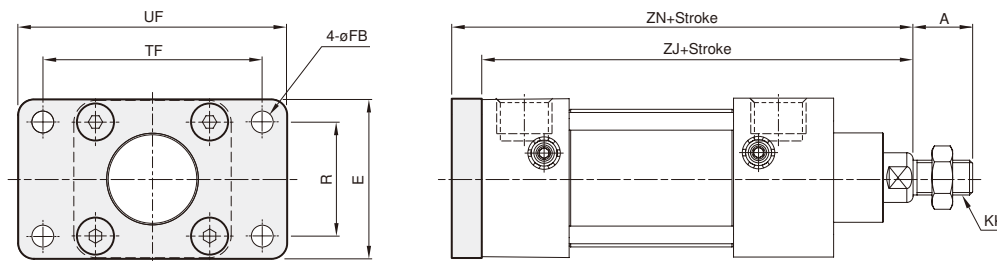
Mounting Accessories - FAC / LB

FAC



Code Tube I.D.	A	E	FB	KK	R	TF	UF	W	WF	ZB
1 1/2"	3/4	2	0.25	7/16-20	1.43	2.75	3.38	0.63	1	4 3/4
2"	3/4	2 1/2	0.31	7/16-20	1.84	3.38	4.13	0.63	1	4 3/4
2 1/2"	3/4	3	0.31	7/16-20	2.19	3.88	4.63	0.63	1	4 7/8
3 1/4"	1 1/8	3 3/4	0.38	3/4-16	2.76	4.68	5.50	0.75	1 3/8	5 53/64
4"	1 1/8	4 1/2	0.38	3/4-16	3.32	5.44	6.25	0.75	1 3/8	5 53/64

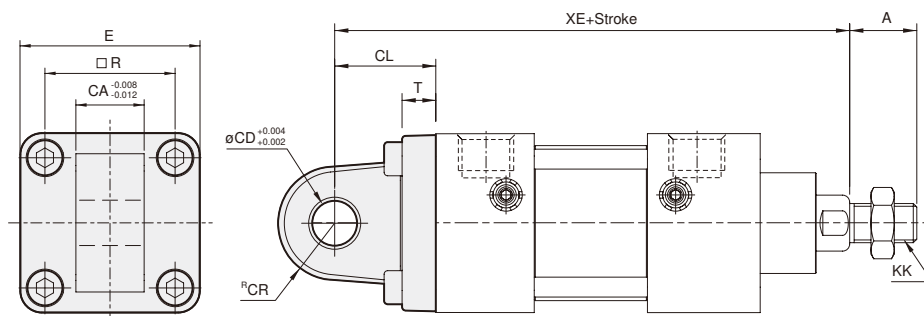
FBC



Code Tube I.D.	A	E	FB	KK	R	TF	UF	ZJ	ZN
1 1/2"	3/4	2	0.25	7/16-20	1.43	2.75	3.38	4.63	5.00
2"	3/4	2 1/2	0.31	7/16-20	1.84	3.38	4.13	4.63	5.00
2 1/2"	3/4	3	0.31	7/16-20	2.19	3.88	4.63	4.75	5.13
3 1/4"	1 1/8	3 3/4	0.38	3/4-16	2.76	4.68	5.50	5.63	6.25
4"	1 1/8	4 1/2	0.38	3/4-16	3.32	5.44	6.25	5.63	6.25

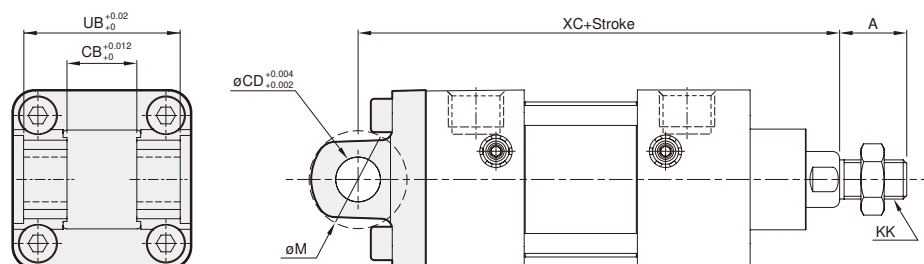
Mounting Accessories - CA / CB / CB2

CA



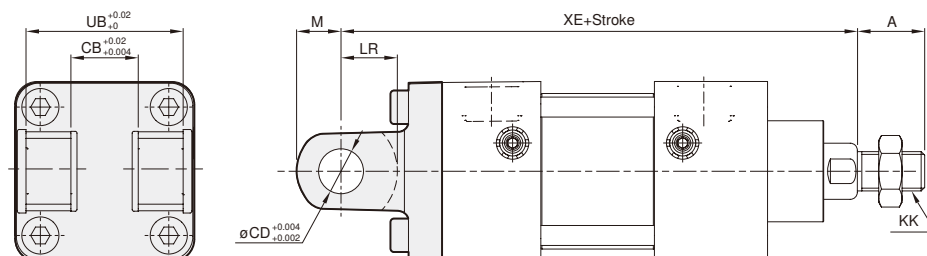
Code Tube I.D.	A	CA	CD	CL	CR	E	KK	R	T	XE
1 1/2"	3/4	0.75	0.50	1.125	0.63	2	7/16-20	1.43	0.375	5 3/4
2"	3/4	0.75	0.50	1.125	0.63	2 1/2	7/16-20	1.84	0.375	5 3/4
2 1/2"	3/4	0.75	0.50	1.125	0.63	3	7/16-20	2.19	0.375	5 7/8
3 1/4"	1 1/8	1.25	0.75	1.875	0.87	3 3/4	3/4-16	2.76	0.625	7 1/2
4"	1 1/8	1.25	0.75	1.875	0.87	4 1/2	3/4-16	3.32	0.625	7 1/2

CB



Code Tube I.D.	A	CB	CD	KK	M	UB	XC
1 1/2"	3/4	0.78	0.50	7/16-20	1.24	1.75	5.38
2"	3/4	0.78	0.50	7/16-20	1.24	1.75	5.38
2 1/2"	3/4	0.78	0.50	7/16-20	1.24	1.75	5.50
3 1/4"	1 1/8	1.28	0.75	3/4-16	1.88	2.50	6.88
4"	1 1/8	1.28	0.75	3/4-16	1.88	2.50	6.88

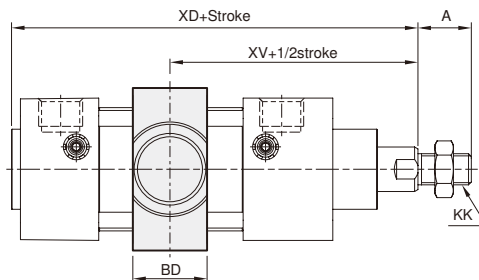
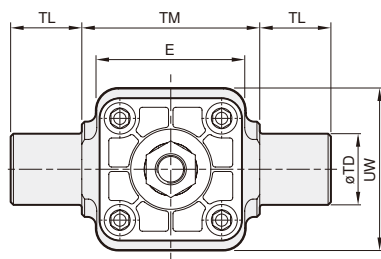
CB2



Code Tube I.D.	A	CB	CD	KK	LR	M	UB	XE
1 1/2"	3/4	0.75	0.50	7/16-20	5/8	0.5	1.75	5 3/4
2"	3/4	0.75	0.50	7/16-20	5/8	0.5	1.75	5 3/4
2 1/2"	3/4	0.75	0.50	7/16-20	5/8	0.5	1.75	5 7/8
3 1/4"	1 1/8	1.25	0.75	3/4-16	1	0.75	2.50	7 1/2
4"	1 1/8	1.25	0.75	3/4-16	1	0.75	2.50	7 1/2

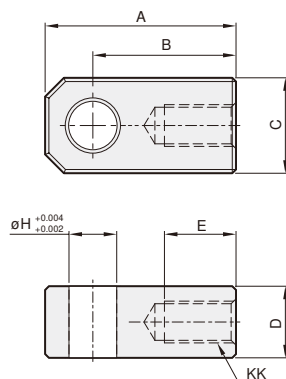
Mounting Accessories - TC / Connectors / Pins

TC



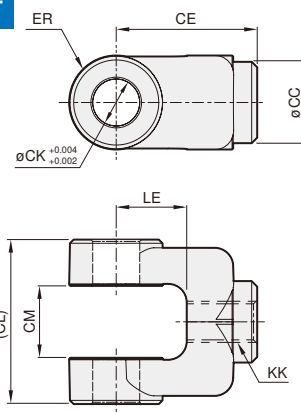
Code Tube I.D.	A	BD	E	KK	TD	TM	TL	UW	XD	XV
1 1/2"	3/4	1.04	2.11	7/16-20	1	2.50	1	2.28	4.94	3.20
2"	3/4	1.04	2.60	7/16-20	1	3.00	1	2.60	5.03	3.32
2 1/2"	3/4	1.10	3.09	7/16-20	1	3.50	1	3.23	5.07	3.33
3 1/4"	1 1/8	1.18	3.70	3/4-16	1	4.50	1	4.17	6.16	4.19
4"	1 1/8	1.22	4.49	3/4-16	1	5.25	1	4.96	6.18	4.19

I connector



Code Tube I.D.	A	B	C	D	E	H	KK
1 1/2"~2 1/2"	2.00	1.50	1.0	0.75	0.75	0.50	7/16-20
3 1/4"~4"	2.81	2.06	1.5	1.25	1.13	0.75	3/4-16

Y connector



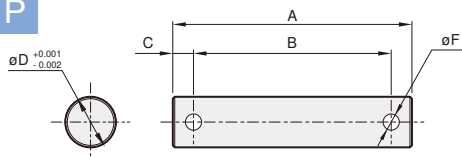
Code Tube I.D.	CC	CE	CL	CM	CK	ER	KK	LE
1 1/2"~2 1/2"	0.87	1.50	1.75	0.765	0.50	0.50	7/16-20	0.75
3 1/4"~4"	1.34	2.38	2.50	1.265	0.75	0.75	3/4-16	1.25

* Please do not take the sand casting plate as the mounting plate, because we do not machine it. If you have this special demand, please contact our sales representative.

PIN

for CB & CB2 accessory and Y & I connector.

P



Code Tube I.D.	A	B	C	D	F
1 1/2"~2 1/2"	2.36	1.95	0.20	0.50	0.16
3 1/4"~4"	3.13	2.74	0.19	0.75	0.20

Order example

PIN — NQ — 1 1/2 — P

MODEL

TUBE I.D.

P: With split pin