

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRA2
NCRB2
ACK
SRC
QCK
NCK1



1. Small and light
2. Strong lateral load resistance
3. Strong Torque Resistance
4. High accuracy without rotation

5. Bearings with guide rods can be selected as sliding bearings or ball bearings
6. Easy installation
7. Two-sided nozzle location.

Specifications

Bore size(mm)		12	16	20	25	32	40	50	63	80	100
Fluid		Air (to be filtered by 40μm filter element)									
Action		Double acting									
Maximum operating pressure		1.0MPa									
Minimum operating pressure		0.12MPa		0.1MPa							
Ambient and fluid temperature		-10 to 60℃ (No freezing)									
Piston speed (mm/s)		50~500									50~400
Cushion		Rubber bumper on both ends									
Stroke length tolerance (mm)		+0.15 0									
Lubrication (Note)		Not required (Non-lube)									
Bearing		Slide bearing/Ball bushing bearin									
Non-rotation accuracy of piston rod	Slide bearing	±0.08°	±0.07°	±0.06°	±0.05°	±0.04°					
	Ball bushing bearing	±0.10°	±0.09°	±0.08°	±0.06°	±0.05°					
Port size		M5×0.8		1/8"			1/4"		3/8"		

Note: If lubrication is required, please use turbine No.1 oil ISO VG32.

Ordering code

N M G P M				20		-	50	-	Z73	
Bearing type				Port thread type		Stroke		Number of magnetic switches		
M	Slide bearing			Blank	M5×0.8	Refer to stroke table for details		Blank	2 pcs.	
L	Ball bushing bearing				RC			S	1 pc.	
Bore size				N	NPT	Magnetic switch type Blank Without magnetic switch * Magnetic switch type refer stroke /Magnetic switch model table				
12	12mm	40	40mm	TF	G					
16	16mm	50	50mm							
20	20mm	63	63mm							
25	25mm	80	80mm							
32	32mm	100	100mm							

Stroke/magnetic switch model table

Bore size (mm)	Standard stroke (Note 1)	Magnetic switch model Rail installation (Note 2)
12, 16	10, 20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250	M9B M9P M9N
20, 25	20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400	
32, 40, 50, 63, 80, 100	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400	

Note: 1. Intermediate stroke interval is 1mm (Φ12~Φ32) or 5mm (Φ40~Φ100); if non-standard stroke is required, gaskets should be added to the non-standard stroke cylinder.
2. The specifications and characteristics of magnetic switches can be referred to the series of magnetic switches.
Wire length representation mark: no mark-0.5m, L-3m, Z-5m, Example: M9N, M9NL.

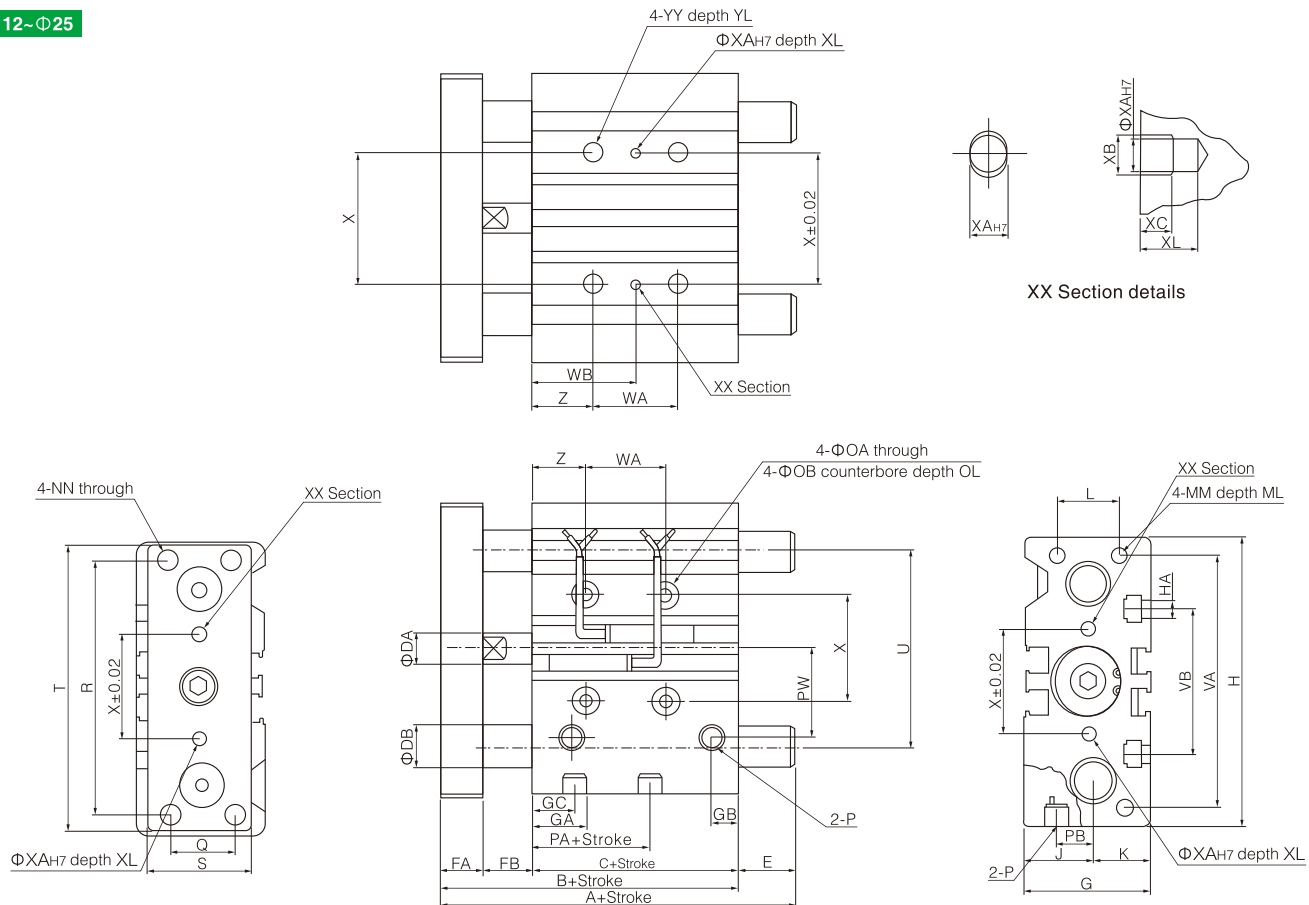
Load and torque



Bore size (mm)	Bearing type	Maximum lateral load F(N)																Maximum torque T(N.m)																
		Stroke																Stroke																
		10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400	10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400	
12	NMGP	24	19	-	17	14	13	26	22	19	17	15	13	11	-	-	-	0.39	0.32	-	0.27	0.24	0.21	0.43	0.36	0.31	0.27	0.24	0.22	0.19	-	-	-	
	NMGP	37	27	-	22	35	30	23	18	15	12	11	10	8	-	-	-	0.61	0.45	-	0.35	0.58	0.50	0.37	0.29	0.24	0.20	0.18	0.16	0.12	-	-	-	
	NMGP	38	31	-	27	23	21	37	32	27	24	22	20	16	-	-	-	0.69	0.58	-	0.49	0.43	0.38	0.69	0.58	0.50	0.44	0.40	0.36	0.30	-	-	-	
16	NMGP	54	40	-	32	54	47	35	28	23	20	17	15	12	-	-	-	0.99	0.74	-	0.59	0.99	0.86	0.65	0.52	0.43	0.37	0.32	0.28	0.23	-	-	-	
	NMGP	-	49	-	43	38	35	87	75	66	59	54	49	42	36	32	29	-	1.05	-	0.93	0.83	0.75	1.88	1.63	1.44	1.28	1.16	1.06	0.90	0.78	0.69	0.62	
	NMGP	-	58	-	48	101	90	70	58	62	54	48	43	35	30	26	23	-	1.26	-	1.03	2.17	1.94	1.52	1.25	1.34	1.17	1.03	1.93	0.76	0.65	0.56	0.49	
20	NMGP	-	69	-	60	54	49	116	100	88	79	71	65	55	48	43	38	-	1.76	-	1.55	1.38	1.25	2.96	2.57	2.26	2.02	1.83	1.67	1.42	1.24	1.09	0.98	
	NMGP	-	82	-	68	132	118	93	77	80	70	62	55	45	38	33	29	-	2.11	-	1.75	3.37	3.02	2.38	1.97	2.05	1.78	1.58	1.41	1.16	0.98	0.85	0.74	
	NMGP	-	-	203	-	-	164	182	159	142	127	116	106	91	80	71	64	-	-	-	6.35	-	-	5.13	5.69	4.97	4.42	3.98	3.61	3.31	2.84	2.48	2.20	1.98
25	NMGP	-	-	203	-	-	164	182	159	142	127	116	106	91	80	71	64	-	-	-	7.00	-	-	5.66	6.27	5.48	4.87	4.38	3.98	3.65	3.13	2.74	2.43	2.19
	NMGP	-	-	190	-	-	157	163	144	203	185	171	158	137	121	108	97	-	-	-	6.55	-	-	5.39	5.62	4.96	6.98	6.38	5.87	5.43	4.72	4.16	3.71	3.35
	NMGP	-	-	296	-	-	245	273	241	216	195	179	164	142	125	111	101	-	-	-	13.0	-	-	10.8	12.0	10.6	9.50	8.60	7.86	7.24	6.24	5.49	4.90	4.43
32	NMGP	-	-	208	-	-	173	223	199	264	242	224	207	181	159	142	128	-	-	-	9.17	-	-	7.62	9.83	8.74	11.6	10.7	9.83	9.12	7.95	7.02	6.26	5.63
	NMGP	-	-	296	-	-	245	273	241	216	195	179	164	142	125	111	101	-	-	-	14.7	-	-	12.1	13.5	11.9	10.7	9.69	8.86	8.16	7.04	6.19	5.52	4.99
	NMGP	-	-	206	-	-	171	221	196	262	240	221	205	178	157	140	126	-	-	-	10.2	-	-	8.48	11.0	9.74	13.0	11.9	11.0	10.2	8.84	7.80	6.94	6.24
40	NMGP	-	-	352	-	-	297	368	329	298	272	251	232	202	179	161	146	-	-	-	21.9	-	-	18.6	22.9	20.5	18.6	17.0	15.6	14.5	12.6	11.2	10.0	9.11
	NMGP	-	-	243	-	-	373	364	331	302	278	256	238	207	181	161	143	-	-	-	15.1	-	-	23.3	22.7	20.6	18.9	17.3	16.0	14.8	12.9	11.3	10.0	8.94
	NMGP	-	-	515	-	-	445	498	450	410	377	349	325	285	254	229	208	-	-	-	38.8	-	-	33.5	37.5	33.8	30.9	28.4	26.2	24.4	21.4	19.1	17.2	15.7
50	NMGP	-	-	360	-	-	407	503	460	423	390	362	337	294	259	230	206	-	-	-	27.1	-	-	30.6	37.9	34.6	31.8	29.3	27.2	25.3	22.1	19.5	17.3	15.5

Dimensions

Φ12~Φ25



NMGP, NMGPL Common dimensions

St=Stroke

Bore size (mm)	Standard stroke	B	C	DA	FA	FB	G	GA	GB	H	HA	J	K	L	MM	ML	NN	OA	OB	OL	P	PA	PB	PW	Q
12	10, 20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250	42	29	6	8	5	26	11	7.5	58	M4	13	13	18	M4×0.7	10	M4×0.7	4.3	8	4.5	M5×0.8	13	8	18	14
16	20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250	46	33	8	8	5	30	11	8	64	M4	15	15	22	M5×0.8	12	M5×0.8	4.3	8	4.5	M5×0.8	15	10	19	16
20	20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400	53	37	10	10	6	36	10.5	8.5	83	M5	18	18	24	M5×0.8	13	M5×0.8	5.6	9.5	5.5	1/8"	12.5	10.5	25	18
25	20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400	53.5	37.5	12	10	6	42	11.5	9	93	M5	21	21	30	M6×1.0	15	M6×1.0	5.6	9.5	5.5	1/8"	12.5	13.5	28.5	26

Bore size (mm)	Standard stroke	R	S	T	U	VA	VB	WA					WB					X	XA	XB	XC	XL	YY	YL	Z
								30 st or less	30st ~100st	100st ~200st	200st ~300st	Over 300 st	30 st or less	30st ~100st	100st ~200st	200st ~300st	Over 300 st								
12	10,20,30,40,50,75,100125,150,175,200,250	48	22	56	41	50	37	20	40	110	200	-	15	25	60	105	-	23	3	3.5	3	6	M5×0.8	10	5
16		54	25	62	46	56	38	24	44	100	200	-	17	27	60	105	-	24	3	3.5	3	6	M5×0.8	10	5
20	20,30,40,50,75,100,125,150,175,200,250,300,350,400	70	30	81	54	72	44	24	44	120	200	300	29	39	77	117	167	28	3	3.5	3	6	M6×1.0	12	17
25		78	38	91	64	82	50	24	44	120	200	300	29	39	77	117	167	34	4	4.5	3	6	M6×1.0	12	17

NMGP (Slide bearing) A, DB, E dimensions

Bore size (mm)	A			DB	E		
	50st≥	50st< 100st≥	100st<		50st≥	50st< 100st≥	100st<
12	42	60.5	85	8	0	18.5	43
16	46	64.5	95	10	0	18.5	49

NMGPL (Ball bushing) A, DB, E dimensions

Bore size (mm)	A			DB	E		
	30st≥	30st< 100st≥	100st<		30st≥	30st< 100st≥	100st<
12	43	55	85	6	1	13	43
16	49	65	95	8	3	19	49

NMGP (Slide bearing) A, DB, E dimensions

Bore size (mm)	A			DB	E		
	50st≥	50st< 200st≥	200st<		50st≥	50st< 200st≥	200st<
20	53	84.5	122	12	0	31.5	69
25	53.5	85	122	16	0	31.5	68.5

NMGPL (Ball bushing) A, DB, E dimensions

Bore size (mm)	A				DB	E			
	30st≥	30st< 100st≥	100st< 200st≥	200st<		30st≥	30st< 100st≥	100st< 200st≥	200st<
20	63	80	104	122	10	10	27	51	69
25	69.5	80.5	104.5	122	13	16	32	51	68.5

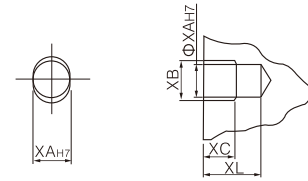
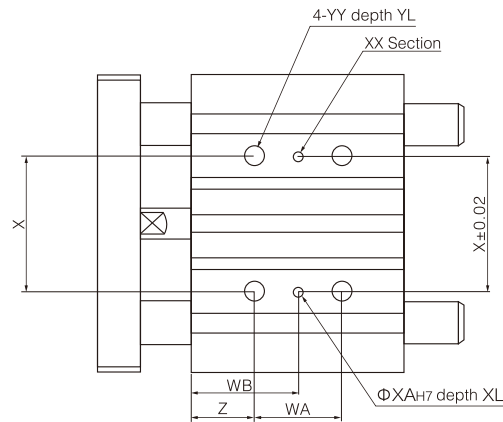
Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
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NMHY2
NMHT2
NMHW2
NMHF2
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NCRB2
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SRC
QCK
NCK1

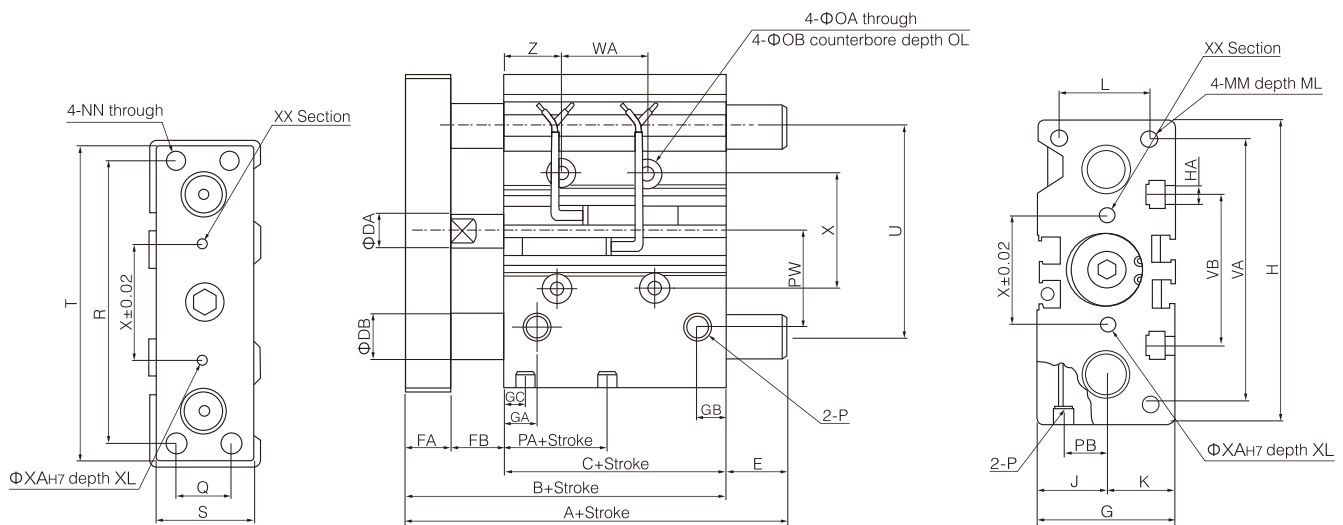
Cylinder

Φ32-Φ63

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
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NCUJ
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NCY1L
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NMSQ
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NCRQ2
NCRB2
ACK
SRC
QCK
NCK1



XX Section details



NMGP, NMGPL Common dimensions

St=Stroke

Bore size (mm)	Standard stroke	B	C	DA	FA	FB	G	GA	GB	GC	H	HA	J	K	L	MM	ML	NN	OA	OB	OL	P	PA	PB	PW	Q
32	20,50,75,	59.5	37.5	16	12	10	48	12.5	9	12.5	112	M6	24	24	34	M8×1.25	20	M8×1.25	6.6	11	7.5	1/8"	7	15	34	30
40	100,125,150,	66	44	16	12	10	54	14	10	14	120	M6	27	27	40	M8×1.25	20	M8×1.25	6.6	11	7.5	1/8"	13	18	38	30
50	175,200,250,	72	44	20	16	12	64	14	11	12	148	M8	32	32	46	M10×1.5	22	M10×1.5	8.6	14	9	1/4"	9	21.5	47	40
63	300,350,400,	77	49	20	16	12	78	16.5	13.5	16.5	162	M10	39	39	58	M10×1.5	22	M10×1.5	8.6	14	9	1/4"	14	28	55	50

Bore size (mm)	R	S	T	U	VA	VB	WA					WB					X	XA	XB	XC	XL	YY	YL	Z
							25 st or less	25st ~100st	100st ~200st	200st ~300st	Over 300 st	25 st or less	25st ~100st	100st ~200st	200st ~300st	Over 300 st								
32	96	44	110	78	98	63	24	48	124	200	300	33	45	83	121	171	42	4	4.5	3	6	M8×1.25	16	21
40	104	44	118	86	106	72	24	48	124	200	300	34	46	84	122	172	50	4	4.5	3	6	M8×1.25	16	22
60	130	60	146	110	130	92	24	48	124	200	300	36	48	86	124	174	66	5	6	4	8	M10×1.5	20	24
63	130	70	158	124	142	110	28	52	128	200	300	38	50	88	124	174	80	5	6	4	8	M10×1.5	20	24

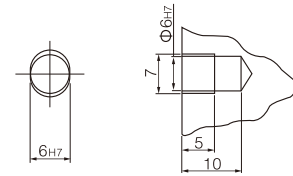
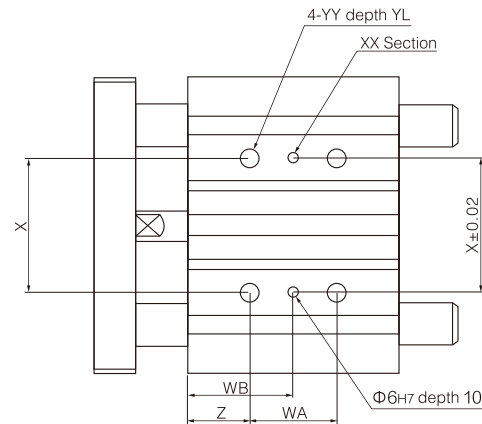
NMGP (Slide bearing) A, DB, E dimensions

Bore size (mm)	A			DB	E		
	50st≥	50st<100st≥	200st≥		50st≥	50st<200st≥	200st≥
32	97	102	140	20	37.5	42.5	80.5
40	97	102	140	20	31	36	74
50	106.5	118	161	25	34.5	46	89
63	106.5	118	161	25	29.5	41	84

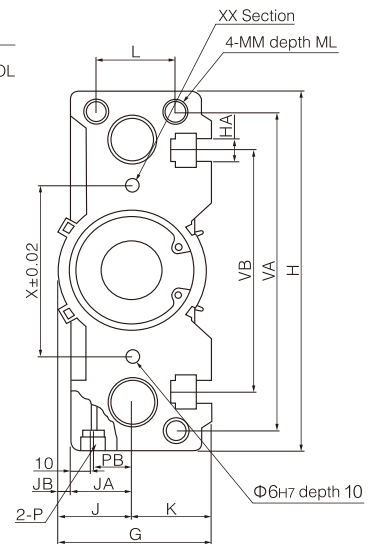
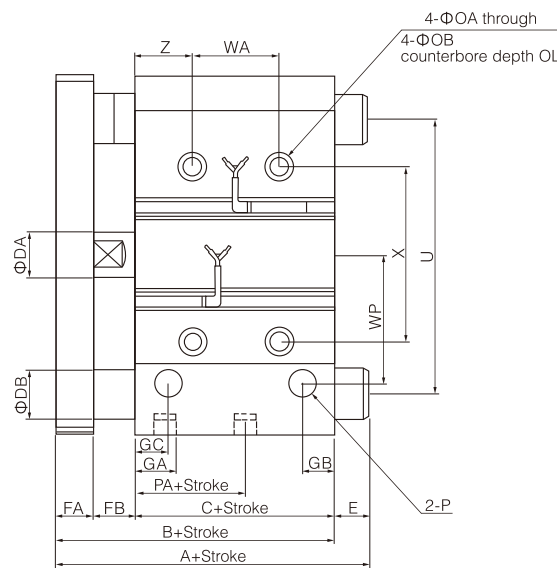
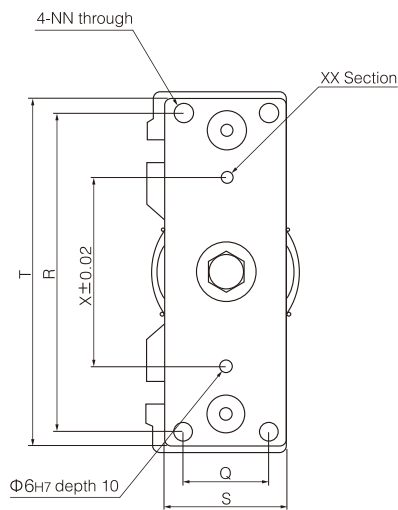
NMGPL (Ball bushing) A, DB, E dimensions

Bore size (mm)	A				DB	E			
	50st≥	50st<100st≥	100st<200st≥	200st<		50st≥	50st<100st≥	100st<200st≥	200st<
32	81	98	118	140	16	21.5	38.5	58.5	80
40	81	98	118	140	16	15	32	52	74
50	93	114	134	161	20	21	42	62	89
63	93	114	134	161	20	16	37	57	84

Φ82~Φ100



XX Section details



NMGP, NMGPL Common dimensions

St=Stroke

Bore size (mm)	Standard stroke	B	C	DA	FA	FB	G	GA	GB	GC	H	HA	J	JA	JB	K	L	MM	ML	NN	OA	OB	OL	P	PA	PB	PW
80	25,50,75,100, 125,150,175,200,	96.5	56.5	25	22	18	91.5	19	15.5	14.5	202	M12	45.5	38	7.5	46	54	M12×1.75	25	M12×1.75	10.6	17.5	8	3/8"	14.5	25.5	74
100	250,300,350,400,	116	66	30	25	25	111.5	23	19	18	240	M14	55.5	45	10.5	56	62	M14×2.0	31	M14×2.0	12.5	20	8	3/8"	17.5	32.5	89

Bore size (mm)	Standard stroke	Q	R	S	T	U	VA	VB	WA					WB					X	YY	YL	Z
									25 st	25st ~100st	100st ~200st	200st ~300st	Over 300 st	25 st	25st ~100st	100st ~200st	200st ~300st	Over 300 st				
80	25,50,75,100, 125,150,175,200,	52	174	75	198	156	180	140	28	52	128	200	300	42	54	92	128	178	100	M12×1.75	24	28
100	250,300,350,400,	64	210	90	236	188	210	166	48	72	148	200	300	35	47	85	121	171	124	M14×2.0	28	11

NMGP (Slide bearing)

Bore size (mm)	A			DB	E		
	50st≥	50st< 200st≥	200st<		50st≥	50st< 200st≥	200st<
80	115	142	193	30	18.5	45.5	96.5
100	137	162	203	36	21	46	87

NMGPL (Ball bushing)

Bore size (mm)	A				DB	E			
	25st≥	25st< 50st≥	50st< 200st≥	200st<		25st≥	25st< 50st≥	50st< 200st≥	200st<
80	109.5	130	160	193	25	13	33.5	63.5	96.5
100	121	147	180	203	30	5	31	64	87

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1