numatics®

CGT Series

Compact Guide Slide

We're everywhere you need us to be!

CGT Series Compact Guide Slide 3-5

Rev. 2/04

CGT Series Compact Guide Slide

A. Body
Anodized aluminum alloy, lightweight and durable. Multiple mounting options, counter bored holes, drilled and tapped holes and extruded "T" slots.

B. Tool Plate
Precision machines anodized aluminum alloy, easy access mounting holes for tooling attachment.

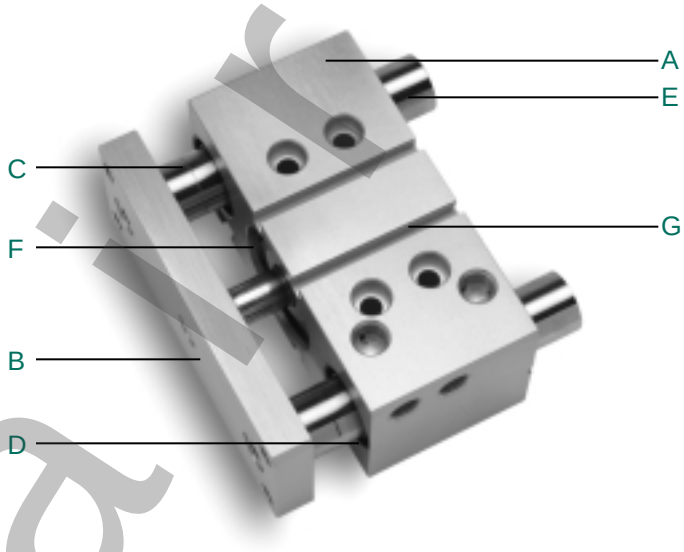
C. Bearings
Two choices, recirculating ball for heavy-duty applications and sintered bronze for medium to light duty applications.

D. Rod Wipers
Steel reinforced rod wiper assures wiping action on guide shafts to protect bearings form operating environment contamination.

E. Guide Shafts
Hardened, ground and polished, Oversized diameter for additional load support and rigidity.

F. Piston
Internal to body. Magnetic band for position sensing standard on all sizes and strokes.

G. Sensor Mounting Track
Extruded directly in body, no external brackets, easy access for Hall effect and Reed switches.



How to Order

CGT 032 050 B 1 6 D X

Bore Diameter
016 = 16 mm
020 = 20 mm
025 = 25 mm
032 = 32 mm
040 = 40 mm
050 = 50 mm

Stroke
010 = 10 mm
020 = 20 mm
025 = 25 mm
030 = 30 mm
040 = 40 mm
050 = 50 mm
075 = 75 mm
100 = 100 mm
Reference Standard Stroke table for available bore and stroke.

Bearing Option
B = Bronze Bushing
L = Linear Ball Bearing

Seal Option
1 = Buna-N

Options
X = No Options

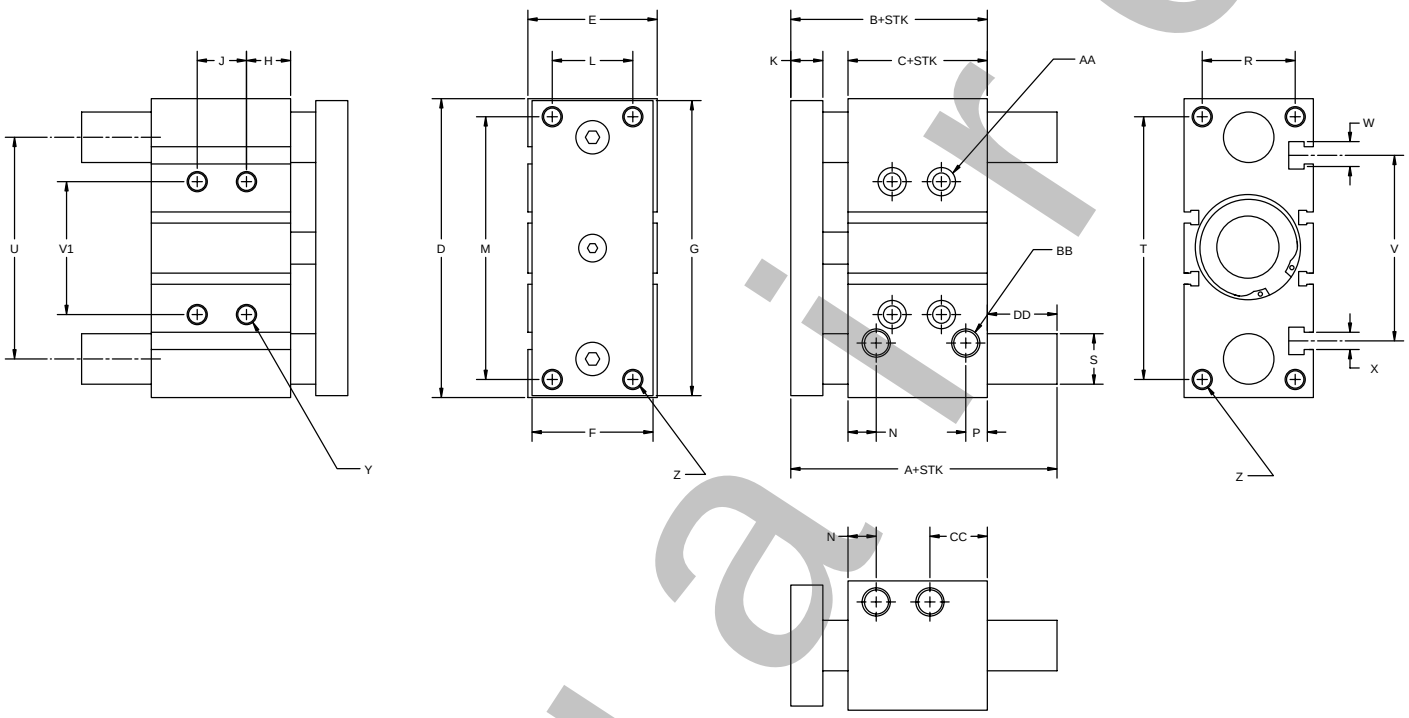
Sensing Position
A = Single Position Extend
B = Single Position Retract
C = Two Position Sensing
D = No Sensing

Sensing Type
Standard Cord Set
1 = Hall Effect - PNP (sourcing)
2 = Hall Effect - NPN (sinking)
3 = Reed Switch
6 = No Sensing
Quick Connect Cord Set
Z = Hall Effect - PNP (sourcing)
Y = Hall Effect - NPN (sinking)
X = Reed Switch

When 0rdering Additional Sensors

SWITCH DESCRIPTION	STANDARD PART NO.
Hall Effect - PNP (Sourcing)	HPNPS31
Hall Effect - NPN (Sinking)	HNPNS32
Reed Switch	RSS02

CGT Series Dimensions



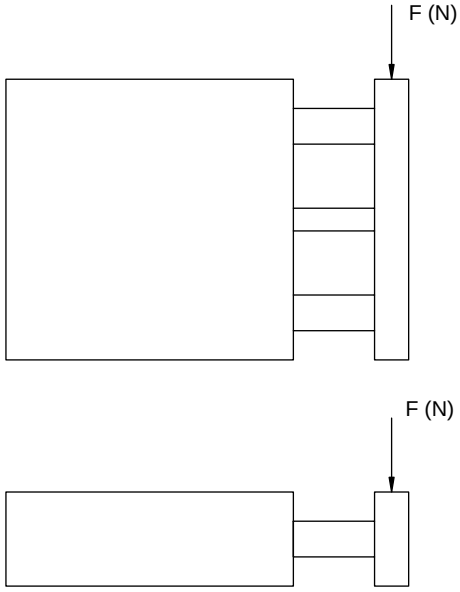
BORE	B	C	D	E	F	G	H	K	L	M	N	P	R
16	46.0	33.0	64.0	30.0	25.0	62.0	5.0	8.0	16.0	54.0	11.0	8.0	22.0
20	53.0	37.0	83.0	36.0	30.0	81.0	17.0	10.0	18.0	70.0	10.5	8.5	24.0
25	53.5	37.5	93.0	42.0	38.0	91.0	17.0	10.0	26.0	78.0	11.5	9.0	30.0
32	59.5	37.5	112.0	48.0	44.0	110.0	21.0	12.0	30.0	96.0	12.5	9.0	34.0
40	66.0	44.0	120.0	54.0	44.0	118.0	22.0	12.0	30.0	104.0	14.0	10.0	40.0
50	72.0	44.0	148.0	64.0	60.0	146.0	22.0	16.0	40.0	130.0	14.0	11.0	46.0

BORE	S	T	U	V	V1	W	X	Y	Z	AA	BB	CC
16	10.0	56.0	46.0	38.0	24.0	7.40	4.4	M5	M5	4 mm SHCS	M5	18.0
20	12.0	72.0	54.0	44.0	28.0	8.40	5.4	M6	M5	5 mm SHCS	G 1/8	24.5
25	16.0	82.0	64.0	49.7	34.0	8.54	5.2	M6	M6	5 mm SHCS	G 1/8	25.0
32	20.0	98.0	78.0	63.0	42.0	10.50	6.5	M8	M8	6 mm SHCS	G 1/8	30.5
40	20.0	106.0	86.0	72.0	50.0	10.50	6.5	M8	M8	6 mm SHCS	G 1/8	31.0
50	25.0	130.0	110.0	92.4	66.0	13.4	8.4	M10	M10	8 mm SHCS	G 1/4	35.0

BORE	STROKE					
	10 TO 50 A	75 TO 100 A	10 TO 30 J	40 TO 100 J	25 J	50 TO 100 J
16	46.0	–	24.0	44.0	–	–
20	53.0	84.5	24.0	44.0	–	–
25	53.5	85.0	24.0	44.0	–	–
32	97.0	102.0	–	–	24.0	48.0
40	97.0	102.0	–	–	24.0	48.0
50	106.5	118.0	–	–	24.0	48.0

BORE	(STROKE)	
	DD	DD
16	0 (10-30)	20 (40-100)
20	0 (20-30)	32.5 (40-100)
25	0 (20-30)	32.5 (75-100)
32	37.5 (25-50)	47.5 (75-100)
40	31 (25-50)	41 (75-100)
50	34.5 (25) 42 (50)	46 (75-100)

CGT Series

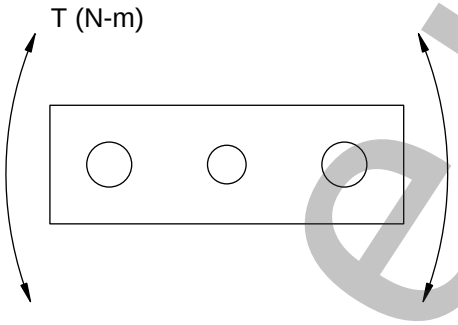


Load vs Stroke

Load Values = N (newtons)

BORE mm	BEARING TYPE	STROKE 10	20	25	30	40	50	75	100
16	Bronze	28.0	28.0	–	25.0	22.0	19.0	–	–
	Linear Ball	35.0	30.0	–	26.0	37.0	33.0	–	–
20	Bronze	–	51.0	–	44.0	38.0	34.0	53.0	44.0
	Linear Ball	–	55.0	–	47.0	78.0	69.0	57.0	49.0
25	Bronze	–	70.0	–	60.0	53.0	47.0	59.0	51.0
	Linear Ball	–	71.0	–	61.0	77.0	72.0	77.0	65.0
32	Bronze	–	–	88.0	–	–	59.0	137.0	108.0
	Linear Ball	–	–	196.0	–	–	167.0	275.0	216.0
40	Bronze	–	–	88.0	–	–	59.0	137.0	108.0
	Linear Ball	–	–	196.0	–	–	167.0	275.0	216.0
50	Bronze	–	–	137.0	–	–	88.0	215.0	176.0
	Linear Ball	–	–	294.0	–	–	255.0	392.0	313.0

To Convert Newtons to Pounds: newtons x 0.2248 = pounds force



Twisting Moment vs Stroke

Moment Values = N-m (newton-meters)

BORE mm	BEARING TYPE	STROKE 10	20	25	30	40	50	75	100
16	Bronze	0.51	0.43	–	0.35	0.31	0.27	–	–
	Linear Ball	0.75	0.58	–	0.48	0.71	0.64	–	–
20	Bronze	–	0.91	–	0.78	0.71	0.63	1.04	0.88
	Linear Ball	–	1.26	–	1.06	1.77	1.58	1.22	1.01
25	Bronze	–	1.53	–	1.31	1.16	1.03	1.65	1.41
	Linear Ball	–	1.96	–	1.69	2.16	2.00	1.68	1.42
32	Bronze	–	–	1.96	–	–	2.94	2.45	1.96
	Linear Ball	–	–	3.92	–	–	0.98	2.94	2.45
40	Bronze	–	–	2.45	–	–	1.45	2.94	2.45
	Linear Ball	–	–	4.41	–	–	3.43	6.37	5.39
50	Bronze	–	–	3.43	–	–	2.45	4.90	4.41
	Linear Ball	–	–	7.35	–	–	5.88	10.78	8.33

To Convert Newtons-Meters to Inch-Pounds: newton-meters x 8.850 = inch-pounds

Output Force vs Pressure

	16	20	25	32	40	50
Extend Force (N) @ 6 bar	120 (N)	187 (N)	293 (N)	472 (N)	747 (N)	1161 (N)
Retract Force (N) @ 6 bar	91 (N)	141 (N)	247 (N)	406 (N)	624 (N)	974 (N)

Max Operating Pressure: 10 bar (145 psi)
Operating Temperature: -20°C (-4°F) to 80°C (176°F)

To Convert Newtons to Pounds: newtons x 0.2248 = pounds