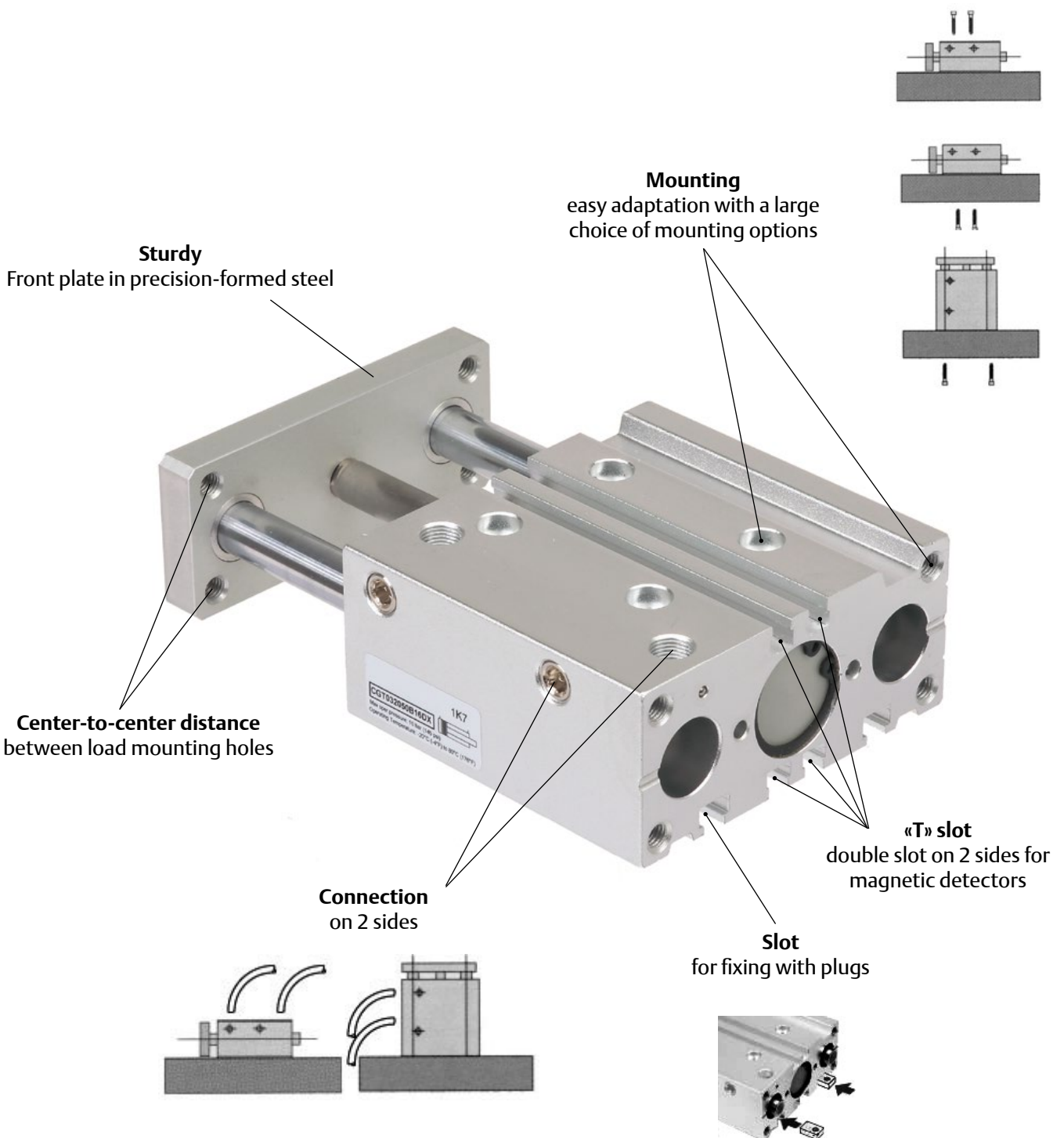


# AVENTICS™ Guide Cylinder

with plain bronze or linear ball bearings

Series  
CGT

- Transfer and positioning of loads with accurate force, torque, speed and position control
- Compact design, ideally suited for installation in confined spaces
- Options for dusty environments, precision metal component manufacturing and welding applications
- Linear guide slides with plain bronze or ball bearings



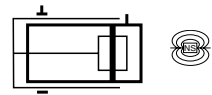
# AVENTICS™ Guide Cylinder

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Series  
CGT

## Features & Benefits

- Compact guide slide with pneumatic ports on two sides
- Excellent resistance to radial loads and torque



## General

<b>Detection</b>	<b>Equipped for magnetic position detectors</b>
<b>Fluid</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	10 bar max.
<b>Ambient temperature</b>	-20°C to +80°C
<b>Max. speed</b>	0.4 to 0.8 m/s



## Construction

<b>Body</b>	Anodised aluminium alloy
<b>Seals</b>	Highly wear-resistant polyurethane
<b>Guiding rods</b>	Hardened and polished steel
<b>Wiper seals</b>	Reinforced steel
<b>Piston</b>	Fitted with a permanent annular magnet
<b>Front plate</b>	Treated steel
<b>Bearings</b>	Plain bronze or ball

## Product selection guide

**CGT    032    050    B    1    6    D    X**

**Diameter** \_\_\_\_\_

016 = 16 mm  
020 = 20 mm  
025 = 25 mm  
032 = 32 mm  
040 = 40 mm  
050 = 50 mm  
063 = 63 mm

Ø (mm)	Standard stroke (mm) (recommended standard strokes)											
	10	20	25	30	40	50	75	100	125	150	175	200
16	•	•		•	•	•	•	•				
20		•		•	•	•	•	•				
25		•	•	•	•	•	•	•	•	•	•	•
32			•			•	•	•	•	•	•	•
40			•			•	•	•	•	•	•	•
50			•			•	•	•	•	•	•	•
63			•			•	•	•	•	•	•	•

**Bearing option** \_\_\_\_\_

B = Plain bronze  
L = Linear ball bearing

**Seal Option** \_\_\_\_\_

1 = Polyurethane

**Options**

X = No option  
A = Adjustable Stroke  
L = Front and Rear Metal Scraper  
G = Front Plate Reinforced Seals  
R = Front & Rear Reinforced Seals  
M = Front Plate Metal Scraper  
B = Pneumatic Cushioning  
C = Double Tooling Plate

**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

Quick Connect Set

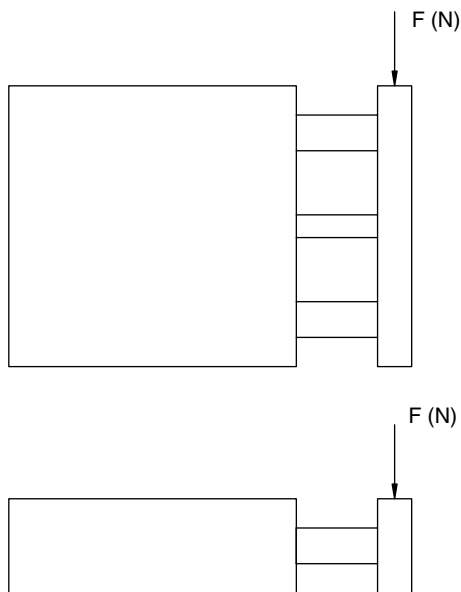
Z = Hall Effect - PNP (sourcing)  
Y = Hall Effect - NPN (sinking)  
X = Reed Switch

### When Ordering Additional Sensors

Switch Description	Standard Part No.
Hall Effect - PNP (Sourcing)	PNP-FL2-00-U
Hall Effect - NPN (Sinking)	NPN-FL2-00-U
Reed Switch	REED-FL2-00S

- **Detectors:** The magnetic position detectors must be ordered separately. - "T" model, magneto-resistive type

## Maximum admissible load



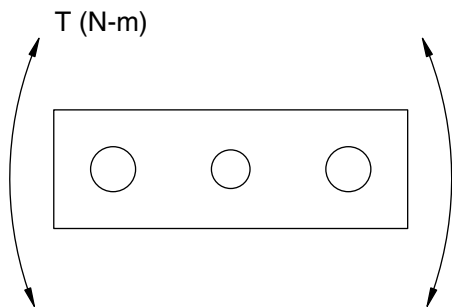
### Load / Stroke

Load values = N

Ø (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
63	Bronze	-	-	137.0	-	-	88.0	215.0	176.0
	Linear ball	-	-	294.0	-	-	255.0	392.0	313.0

### Twisting moment / Stroke

Moment = Nm



Ø (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
63	Bronze	-	-	3.43	-	-	2.45	4.90	4.41
	Linear ball	-	-	7.35	-	-	5.88	10.78	8.33

### Output force / Pressure

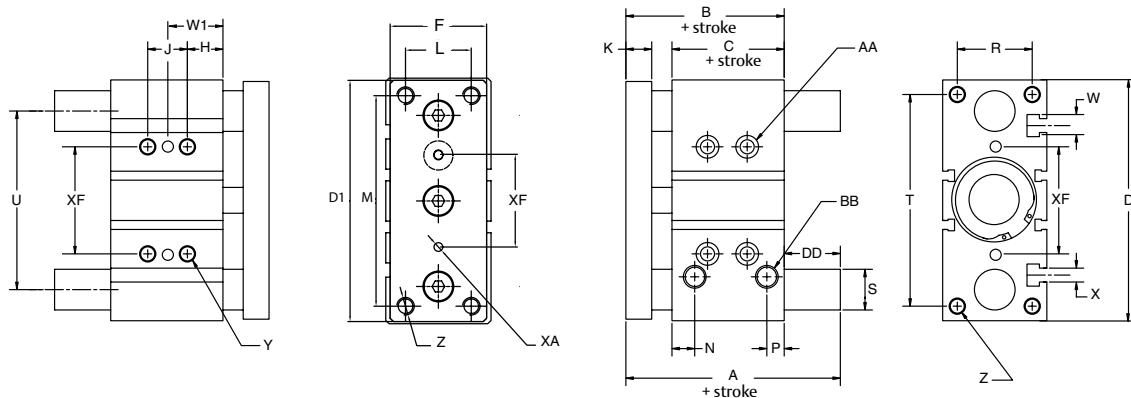
	16	20	25	32	40	50	63
Extend force (N) at 6 bar	120 (N)	187 (N)	293 (N)	472 (N)	747 (N)	1161 (N)	1700 (N)
Retract force (N) at 6 bar	91 (N)	141 (N)	247 (N)	406 (N)	624 (N)	974 (N)	1540 (N)

# AVENTICS™ Guide Cylinder

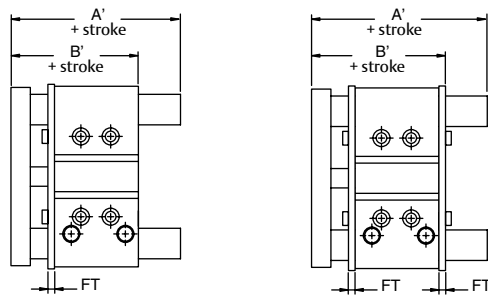
with plain bronze or linear ball bearings

Series  
CGT

## Dimensions (mm), Weight (kg)

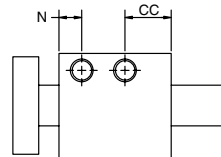


### with metal rod wipers



single wiper seal

double wiper seals



Ø (mm)	B	B'	C	D	D1	F	FT	H	K	L	M	N	P	R
16	46.0	-	33.0	64.0	62.0	25.0	-	5.0	8.0	16.0	54.0	11.0	8.0	22.0
20	53.0	63.0	37.0	83.0	81.0	30.0	5	17.0	10.0	18.0	70.0	10.5	8.5	24.0
25	53.5	63.5	37.5	93.0	91.0	38.0	5	17.0	10.0	26.0	78.0	11.5	9.0	30.0
32	59.5	69.5	37.5	112.0	110.0	44.0	6	21.0	12.0	30.0	96.0	12.5	9.0	34.0
40	66.0	76.0	44.0	120.0	118.0	44.0	6	22.0	12.0	30.0	104.0	14.0	10.0	40.0
50	72.0	82.0	44.0	148.0	146.0	60.0	6	24.0	16.0	40.0	130.0	14.0	11.0	46.0
63	77.0	87.0	49.0	162.0	158.0	70.0	6	24.0	16.0	50.0	130.0	16.5	13.5	58.0

Ø (mm)	S	T	U	W	X	Y	Z	AA	BB	CC	XA	XF
16	10.0	56.0	46.0	7.40	4.4	M5	M5	4 mm SHCS	M5	18.0	3	24.0
20	12.0	72.0	54.0	8.40	5.5	M6	M5	5 mm SHCS	G 1/8	24.5	3	28.0
25	16.0	82.0	64.0	8.40	5.5	M6	M6	5 mm SHCS	G 1/8	24.0	4	34.0
32	20.0	98.0	78.0	10.50	6.5	M8	M8	6 mm SHCS	G 1/8	30.5	4	42.0
40	20.0	106.0	86.0	10.50	6.5	M8	M8	6 mm SHCS	G 1/8	31.0	4	50.0
50	25.0	130.0	110.0	13.5	8.5	M10	M10	8 mm SHCS	G 1/4	35.0	5	66.0
63	25.0	142.0	124.0	17.8	11.0	M10	M10	8 mm SHCS	G 1/4	35.0	5	80.0

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Ø (mm)	(stroke)																				
	plain bronze bearing						linear ball bearing						J	J	J	W1	W1	W1			
	A	A'	A	A'	DD	DD	A	A'	A	A'	DD	DD									
16	46.0 (10-50)	-	64.5 (75-100)	-	0 (10-50)	18.5 (75-100)	46.0 (10-30)	-	66.0 (40-100)	-	0 (10-30)	20 (40-100)	24 (10-30)	44 (40-100)	-	17 (10-30)	27 (40-100)	-			
20	53.0 (20-50)	63.0 (20-50)	84.5 (75-200)	94.5 (75-200)	0 (20-50)	31.5 (75-200)	53.0 (20-30)	63.0 (20-30)	85.5 (40-200)	95.5 (40-200)	0 (20-30)	32.5 (40-200)	24 (20-30)	44 (40-100)	120 (125-200)	29 (20-30)	39 (40-100)	77 (125-200)			
25	53.5 (20-50)	63.5 (20-50)	85.0 (75-200)	95.0 (75-200)	0 (20-50)	31.5 (75-200)	53.5 (20-30)	63.5 (20-30)	86.0 (40-200)	96.0 (40-200)	0 (20-30)	32.5 (40-200)	24 (20-30)	44 (40-100)	120 (125-200)	29 (20-30)	39 (40-100)	77 (125-200)			
32	97.0 (25-50)	107.0 (25-50)	107.0 (75-200)	117.0 (75-200)	37.5 (25-50)	47.5 (75-200)	97.0 (25-50)	107.0 (25-50)	107 (75-200)	117 (75-200)	37.5 (25-50)	47.5 (75-200)	24 (25)	48 (50-100)	124 (125-200)	33 (25)	45 (50-100)	83 (125-200)			
40	97.0 (25-50)	107.0 (25-50)	107.0 (75-200)	117.0 (75-200)	31 (25-50)	41 (75-200)	97.0 (25-50)	107.0 (25-50)	107 (75-200)	117 (75-200)	31 (25-50)	41 (75-200)	24 (25)	48 (50-100)	124 (125-200)	34 (25)	46 (50-100)	84 (125-200)			
50	106.5 (25-50)	116.5 (25-50)	118.0 (75-200)	128.0 (75-200)	34.5 (25-50)	46 (75-200)	106.5 (25)	114 (50)	116.5 (25)	124 (50)	118 (75-200)	128 (75-200)	34.5 (25)	42 (50)	46 (75-200)	24 (25)	48 (50-100)	124 (125-200)	36 (25)	48 (50-100)	86 (125-200)
63	106.5 (25-50)	116.5 (25-50)	118.0 (75-200)	128.0 (75-200)	29.5 (25-50)	41 (75-200)	106.5 (25)	114 (50)	116.5 (25)	124 (50)	118 (75-200)	128 (75-200)	29.5 (25)	37 (50)	41 (75-200)	28 (25)	52 (50-100)	128 (125-200)	38 (25)	50 (50-100)	88 (125-200)

## Weight (kg)

Ø (mm)	stroke											
	10	20	25	30	40	50	75	100	125	150	175	200
16	0.350	0.400	-	0.450	0.500	0.550	0.750	0.900	-	-	-	-
20	-	0.690	-	0.830	0.910	0.990	1.310	1.510	1.625	1.740	1.855	1.970
25	-	0.870	-	0.990	1.080	1.260	1.680	2.100	2.500	2.900	3.300	3.700
32	-	-	1.770	-	-	2.120	2.770	3.080	3.410	3.740	4.065	4.395
40	-	-	1.990	-	-	2.390	2.940	3.050	3.460	3.880	4.300	4.720
50	-	-	3.355	-	-	3.955	4.755	5.355	5.955	6.555	7.155	7.755
63	-	-	4.030	-	-	5.070	5.790	6.505	7.225	7.945	8.660	9.380