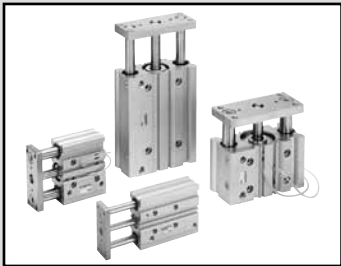


LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Guided cylinder, double acting/single rod

STG-M_B Series

● Bore size:φ12/φ16/φ20/φ25/φ32/φ40
φ50/φ63/φ80/φ100

JIS symbol 



Specifications

Descriptions		STG-M/B									
Bore size	mm	φ12	φ16	φ20	φ25	φ32	φ40	φ50	φ63	φ80	φ100
Actuation		Double acting									
Working fluid		Compressed air									
Max. working pressure		1.0 (≈150 psi, 10 bar)									
Min. working pressure		MPa0.15 (≈22 psi, 1.5 bar)0.1 (≈15 psi, 1 bar)									
Proof pressure		MPa1.6 (≈230 psi, 16 bar)									
Ambient temperature		°C-10 (14°F) to 60 (140°F) (no freezing)									
Port size		M5Rc1/8Rc1/4Rc3/8									
Stroke tolerance		mm+2.00									
Working piston speed		mm/s50 to 50050 to 300									
Cushion		With rubber cushion									
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)									
Allowable absorbed energy	J	0.056	0.088	0.157	0.157	0.401	0.627	0.980	1.560	2.510	3.92

Stroke length

Bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke (mm) (switch)
φ12	10/20/30/40/50/75/100/	250	5	5(10) *2
φ16	125/150/175/200/250			
φ20	20/30/40/50/75/100/125/	400		
φ25	150/175/200/250/300/350/400			
φ32	25/50/75/100 125/150/175 200/250/300 350/400			
φ40				
φ50				
φ63				
φ80				
φ100				

*1: The custom stroke length is available in 5 mm increments. However, the total dimensions are the same as the longer standard stroke length.
A dedicated body with dimensions matched to the stroke length is available. Contact CKD for details.

*2: For types with one or two switches. The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
φ12	Push	-	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10 ²	1.13×10 ²
	Pull	-	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
φ16	Push	-	30.2	40.2	60.3	80.4	1.01×10 ²	1.21×10 ²	1.41×10 ²	1.61×10 ²	1.81×10 ²	2.01×10 ²
	Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10 ²	1.21×10 ²	1.36×10 ²	1.51×10 ²
φ20	Push	-	47.1	62.8	94.2	1.26×10 ²	1.57×10 ²	1.88×10 ²	2.20×10 ²	2.51×10 ²	2.83×10 ²	3.14×10 ²
	Pull	-	35.3	47.1	70.7	94.2	1.18×10 ²	1.41×10 ²	1.65×10 ²	1.88×10 ²	2.12×10 ²	2.36×10 ²
φ25	Push	-	73.6	98.2	1.47×10 ²	1.96×10 ²	2.45×10 ²	2.95×10 ²	3.44×10 ²	3.93×10 ²	4.42×10 ²	4.91×10 ²
	Pull	-	56.7	75.6	1.13×10 ²	1.51×10 ²	1.89×10 ²	2.27×10 ²	2.64×10 ²	3.02×10 ²	3.40×10 ²	3.78×10 ²
φ32	Push	80.4	1.21×10 ²	1.61×10 ²	2.41×10 ²	3.22×10 ²	4.02×10 ²	4.83×10 ²	5.63×10 ²	6.43×10 ²	7.24×10 ²	8.04×10 ²
	Pull	60.3	90.5	1.21×10 ²	1.81×10 ²	2.41×10 ²	3.02×10 ²	3.62×10 ²	4.22×10 ²	4.83×10 ²	5.43×10 ²	6.03×10 ²
φ40	Push	1.26×10 ²	1.88×10 ²	2.51×10 ²	3.77×10 ²	5.03×10 ²	6.28×10 ²	7.54×10 ²	8.80×10 ²	1.01×10 ³	1.13×10 ³	1.26×10 ³
	Pull	1.06×10 ²	1.58×10 ²	2.11×10 ²	3.17×10 ²	4.22×10 ²	5.28×10 ²	6.33×10 ²	7.39×10 ²	8.44×10 ²	9.50×10 ²	1.06×10 ³
φ50	Push	1.96×10 ²	2.95×10 ²	3.93×10 ²	5.89×10 ²	7.85×10 ²	9.82×10 ²	1.18×10 ³	1.37×10 ³	1.57×10 ³	1.77×10 ³	1.96×10 ³
	Pull	1.65×10 ²	2.47×10 ²	3.30×10 ²	4.95×10 ²	6.60×10 ²	8.25×10 ²	9.90×10 ²	1.15×10 ³	1.32×10 ³	1.48×10 ³	1.65×10 ³
φ63	Push	3.12×10 ²	4.68×10 ²	6.23×10 ²	9.35×10 ²	1.25×10 ³	1.56×10 ³	1.87×10 ³	2.18×10 ³	2.49×10 ³	2.81×10 ³	3.12×10 ³
	Pull	2.80×10 ²	4.20×10 ²	5.61×10 ²	8.41×10 ²	1.12×10 ³	1.40×10 ³	1.68×10 ³	1.96×10 ³	2.24×10 ³	2.52×10 ³	2.80×10 ³
φ80	Push	5.03×10 ²	7.54×10 ²	1.01×10 ³	1.51×10 ³	2.01×10 ³	2.51×10 ³	3.02×10 ³	3.52×10 ³	4.02×10 ³	4.52×10 ³	5.03×10 ³
	Pull	4.54×10 ²	6.80×10 ²	9.07×10 ²	1.36×10 ³	1.81×10 ³	2.27×10 ³	2.72×10 ³	3.17×10 ³	3.63×10 ³	4.08×10 ³	4.54×10 ³
φ100	Push	7.85×10 ²	1.18×10 ³	1.57×10 ³	2.36×10 ³	3.14×10 ³	3.93×10 ³	4.71×10 ³	5.50×10 ³	6.28×10 ³	7.07×10 ³	7.85×10 ³
	Pull	7.15×10 ²	1.07×10 ³	1.43×10 ³	2.14×10 ³	2.86×10 ³	3.57×10 ³	4.29×10 ³	5.00×10 ³	5.72×10 ³	6.43×10 ³	7.15×10 ³

Switch specifications

- 1-color/2-color display/for AC magnetic field proof

	Proximity 2-wire		Proximity 2-wire			Proximity 3-wire				Reed 2-wire				Proximity 2-wire		
Descriptions	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/T3PV (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V	T8H/T8V		T2YD			
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay	For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay		For programmable controller		
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*2)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	50 mA or less	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Without indicator lamp	LED (Lit when ON)			Red/green LED (Lit when ON)		
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 µA or less				0 mA						1 mA or less	
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80			1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.

*2 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*3 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.

*4 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.

*5 : Dimensions depend on switch model No. Refer to Ending Page 18 for details.

Cylinder weight

- STG-M

Unit: kg

Descriptions	Stroke length																Switch weight
Bore size (mm)	10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400	
φ12	0.23	0.27		0.30	0.34	0.38	0.49	0.57	0.68	0.77	0.86	0.95	1.13				Refer to the weight in the switch specifications.
φ16	0.32	0.37		0.42	0.47	0.51	0.66	0.78	0.94	1.06	1.18	1.31	1.55				
φ20		0.65		0.73	0.81	0.88	1.13	1.33	1.52	1.71	1.90	2.10	2.55	2.94	3.32	3.71	
φ25		0.92		1.02	1.13	1.23	1.60	1.86	2.12	2.40	2.66	2.92	3.56	4.08	4.62	5.14	
φ32			1.64			2.01	2.54	2.94	3.34	3.73	4.12	4.51	5.49	6.27	7.07	7.85	
φ40			1.89			2.30	2.75	3.15	3.57	3.98	4.39	4.80	5.81	6.64	7.47	8.29	
φ50			3.26			3.88	4.59	5.21	5.83	6.45	7.07	7.69	9.25	10.48	11.74	13.00	
φ63			4.05			4.79	5.61	6.34	7.07	7.81	8.54	9.27	11.06	12.51	13.97	15.42	
φ80			7.02			8.12	9.51	10.60	11.70	12.80	13.90	15.00	17.80	19.92	22.10	24.30	
φ100			10.24			11.58	13.29	14.63	15.96	17.30	18.64	19.98	23.27	25.94	28.62	31.29	

- STG-B

Unit: kg

Descriptions	Stroke length																Switch weight
Bore size (mm)	10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400	
φ12	0.23	0.26		0.29	0.34	0.38	0.46	0.54	0.64	0.72	0.81	0.88	1.05				Refer to the weight in the switch specifications.
φ16	0.33	0.38		0.42	0.49	0.54	0.65	0.77	0.90	1.01	1.13	1.24	1.46				
φ20		0.68		0.75	0.86	0.94	1.11	1.27	1.47	1.64	1.81	1.98	2.35	2.69	3.03	3.37	
φ25		0.95		1.04	1.21	1.30	1.52	1.76	2.02	2.24	2.46	2.69	3.17	3.63	4.07	4.52	
φ32			1.49			1.79	2.23	2.54	2.90	3.21	3.51	3.82	4.49	5.10	5.71	6.32	
φ40			1.74			2.09	2.56	2.91	3.32	3.67	4.02	4.37	5.12	5.82	6.52	7.22	
φ50			3.02			3.55	4.28	4.81	5.43	5.97	6.50	7.03	8.23	9.28	10.38	11.45	
φ63			3.81			4.45	5.30	5.94	6.67	7.31	7.96	8.60	9.99	11.35	12.61	13.87	
φ80			7.25			8.03	9.27	10.30	11.30	12.10	13.31	14.32	16.60	18.60	20.62	22.64	
φ100			10.15			11.69	13.57	14.81	16.05	17.29	18.52	19.76	22.85	25.32	27.80	30.27	

How to order

Without switch (built-in magnet for switch)

STG - **M** - **32** - **25** - **P6**

With switch (built-in magnet for switch)

STG - **M** - **32** - **25** - **T2H** - **R** - **P6**

Model No.

A Bearing

B Bore size

C Port thread

D Stroke length

E Switch model
No. *1 *3 *4

F Switch
quantity

G Option
*2

⚠ Precautions for model No. selection

- *1: Switches other than **E** Switch model No. are also available. (Custom order product)
Refer to Ending Page 1 for details.
- *2: **G** Copper and PTFE free specifications for STG-M-80, 100 require a custom order.
- *3: T8H/V switch cannot be installed on STG-12 or 16.
- *4: Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

STG-B-40-75-T0H-D

Model: Guided cylinder, double acting/single rod

- A** Bearing : Ball bearing
- B** Bore size : $\phi 40$ mm
- C** Port thread : Rc thread
- D** Stroke length : 75 mm
- E** Switch model No. : Reed T0H switch, lead wire length 1 m
- F** Switch quantity : 2

Code	Content					
A Bearing						
M	Metal bush bearing					
B	Ball bearing					
B Bore size (mm)						
12	φ12					
16	φ16					
20	φ20					
25	φ25					
32	φ32					
40	φ40					
50	φ50					
63	φ63					
80	φ80					
100	φ100					
C Port thread						
Blank	M5(φ12 to φ16) Rc thread (φ20 to φ100)					
NN	NPT thread (φ20 or more) custom order product					
GN	G thread (φ20 or more) custom order product					
D Stroke length (mm)						
Refer to the stroke length table on the following page						
E Switch model No.						
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
			AC	DC		
T0H*	T0V*	Reed	●	●	1-color display	2-wire
T5H*	T5V*		●	●	Without indicator lamp	
T8H*	T8V*		●	●	1-color display	
T1H*	T1V*	Proximity	●		1-color display	2-wire
T2H*	T2V*			●		
T3H*	T3V*			●	3-wire	
T3PH*	T3PV*			●	1-color display (custom order)	3-wire
T2WH*	T2WV*			●	2-color display	2-wire
T2YH*	T2YV*			●		
T3WH*	T3WV*			●		3-wire
T3YH*	T3YV*			●	1-color display off-delay	2-wire
T2JH*	T2JV*			●		
T2YD*	-			●		2-color display
T2YDT*	-			●	AC magnetic field	
* Lead wire length						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					
F Switch quantity						
R	1 on rod side					
H	1 on head side					
D	2					
T	3					
G Option						
P6	Copper and PTFE free (for STG-B-12 to 32, copper and PTFE free is provided as standard)					

D Stroke length

Stroke length (mm)		Bore size									
		φ12	φ16	φ20	φ25	φ32	φ40	φ50	φ63	φ80	φ100
Standard stroke length	10	●	●								
	20	●	●	●	●						
	25					●	●	●	●	●	●
	30	●	●	●	●						
	40	●	●	●	●						
	50	●	●	●	●	●	●	●	●	●	●
	75	●	●	●	●	●	●	●	●	●	●
	100	●	●	●	●	●	●	●	●	●	●
	125	●	●	●	●	●	●	●	●	●	●
	150	●	●	●	●	●	●	●	●	●	●
	175	●	●	●	●	●	●	●	●	●	●
	200	●	●	●	●	●	●	●	●	●	●
	250	●	●	●	●	●	●	●	●	●	●
	300			●	●	●	●	●	●	●	●
	350			●	●	●	●	●	●	●	●
	400			●	●	●	●	●	●	●	●
Min. stroke length *3		5(10)									
Custom stroke length *1, *2		In 5 mm increments									

*1: The total dimensions are the same as the longer standard stroke length.
*2: A dedicated body with dimensions matched to the stroke length is available. Contact CKD for details.
*3: The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

How to order switch

SW - T0V

Switch model No.
(Item E on the previous page)

Note: Contact CKD when using
an environment-friendly T switch.

Specifications for rechargeable battery (Catalog No. CC-1226A)

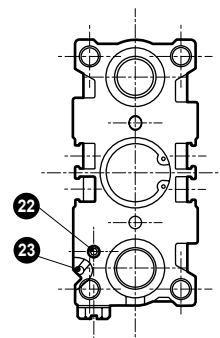
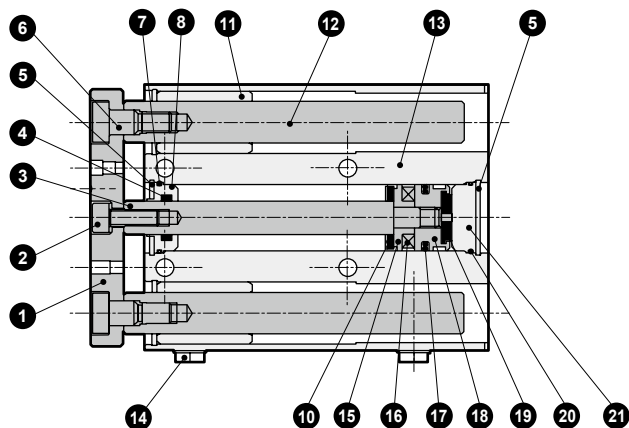
● Design compatible with rechargeable battery manufacturing process.

STG - ^M_B - - P4*

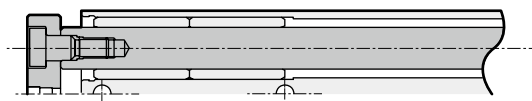
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list (STG-M-12 to 25)

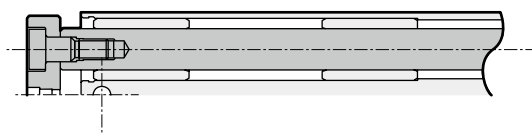
- $\phi 12, \phi 16$
- 50 or less stroke length



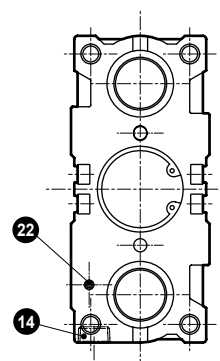
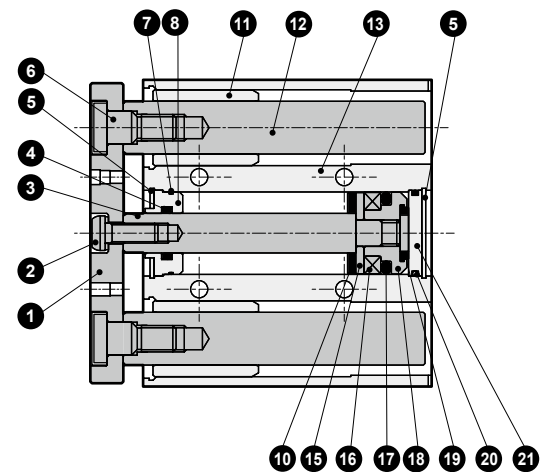
- Over 50 to 100 stroke length



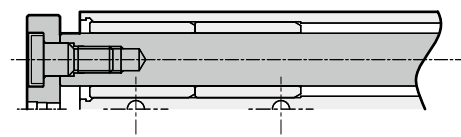
- Over 100 stroke length



- $\phi 20, \phi 25$
- 50 or less stroke length



- Over 50 to 200 stroke length

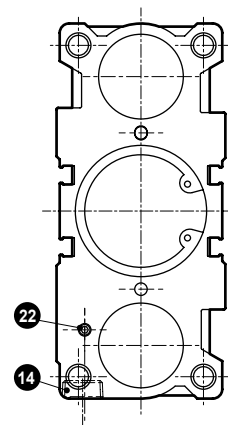
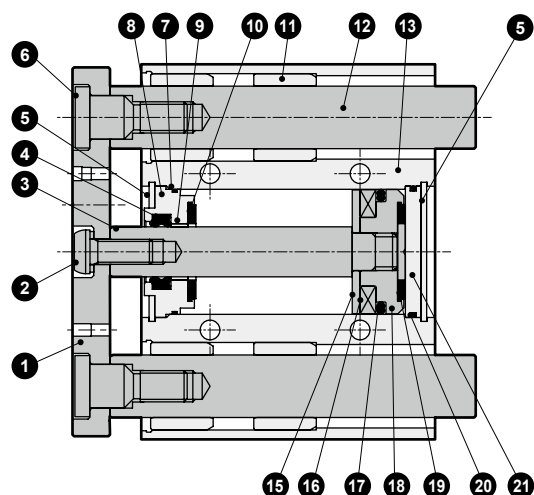


- Over 200 stroke length



Internal structure and parts list (STG-M-32 to 63)

● φ32 to φ63



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	End plate	Steel	Nickeling	12	Guide rod	Stainless steel (φ12 to φ16)	Industrial chrome plating
2	Hex socket head cap screw (φ12 to φ16)	Alloy steel	Zinc chromate	13	Cylinder body	Steel (φ20 to φ63)	Industrial chrome plating
		Alloy steel	Zinc chromate			Aluminum alloy	Hard alumite
3	Piston rod	Stainless steel (φ12 to φ25)	Industrial chrome plating	14	Plug	Copper alloy or steel	
		Steel (φ32 to φ63)	Industrial chrome plating	15	Spacer	Aluminum alloy	
4	Rod packing	Nitrile rubber		16	Magnet	Plastic	
5	C type snap ring	Steel	Zinc phosphate	17	Piston packing	Nitrile rubber	
6	Bolt	Alloy steel	Zinc chromate	18	Piston	Aluminum alloy	
7	Metal gasket	Nitrile rubber		19	Cushion rubber	Urethane rubber	
		Special aluminum alloy (φ12 to φ32)	Alumite	20	O-ring	Nitrile rubber	
8	Rod metal	Aluminum alloy (φ40 to φ63)	Chromate	21	Base plate	Aluminum alloy	Chromate
9	Bush	Dry bearing (φ40 to φ63)	*1	22	Hexagon socket set screw	Stainless steel	
10	Cushion rubber	Urethane rubber		23	Steel ball	Stainless steel	
11	Metal	Oil-impregnated copper alloy bearing	*2				

*1: Aluminum for copper and PTFE free.

*2: Oil-impregnated cast iron bearing for copper and PTFE free.

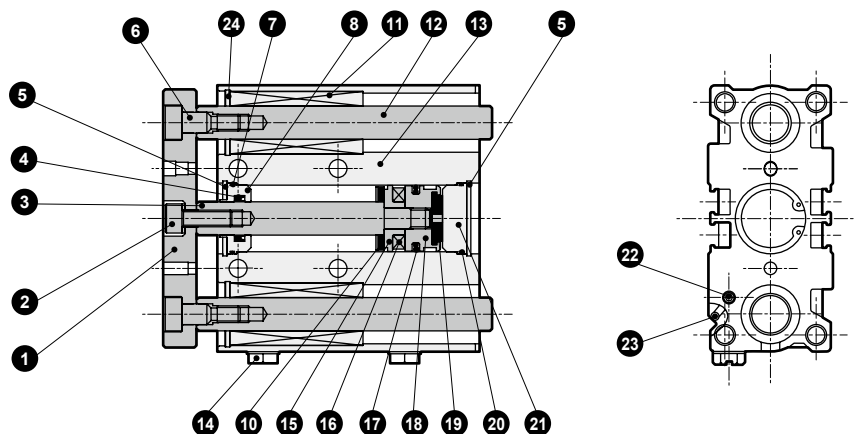
Repair parts list

Bore size (mm)	Kit No. STG-M/B	Repair parts No.
φ12	STG-12K	
φ16	STG-16K	
φ20	STG-20K	
φ25	STG-25K	
φ32	STG-32K	4 7 10 17 19 20
φ40	STG-40K	
φ50	STG-50K	
φ63	STG-63K	

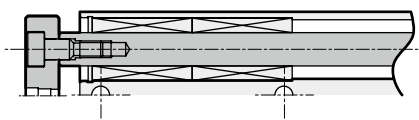
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list (STG-B-12 to 25)

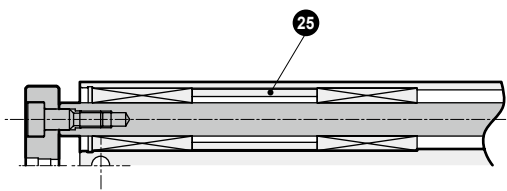
- $\phi 12$, $\phi 16$
- 30 or less stroke length



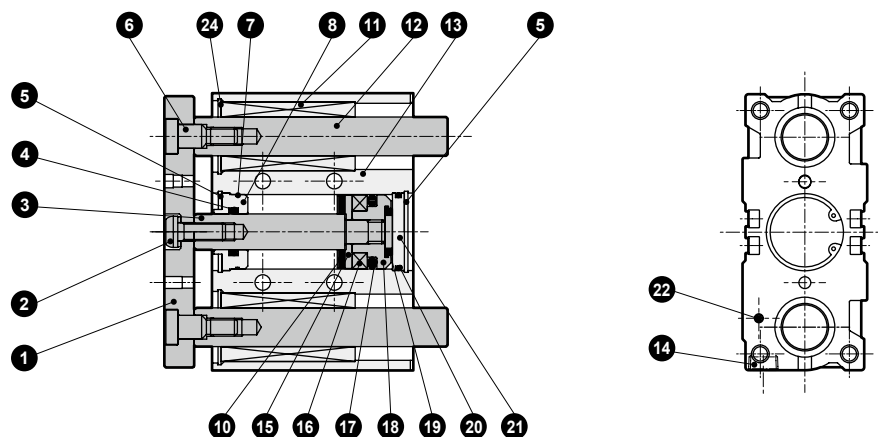
- Over 30 to 100 stroke length



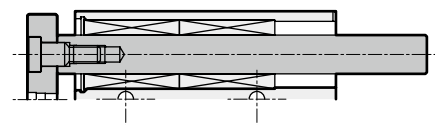
- Over 100 stroke length



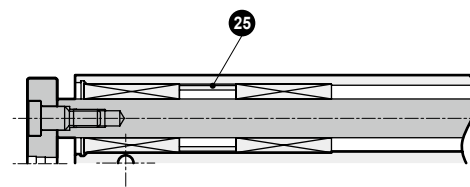
- $\phi 20$, $\phi 25$
- 30 or less stroke length



- Over 30 to 100 stroke length



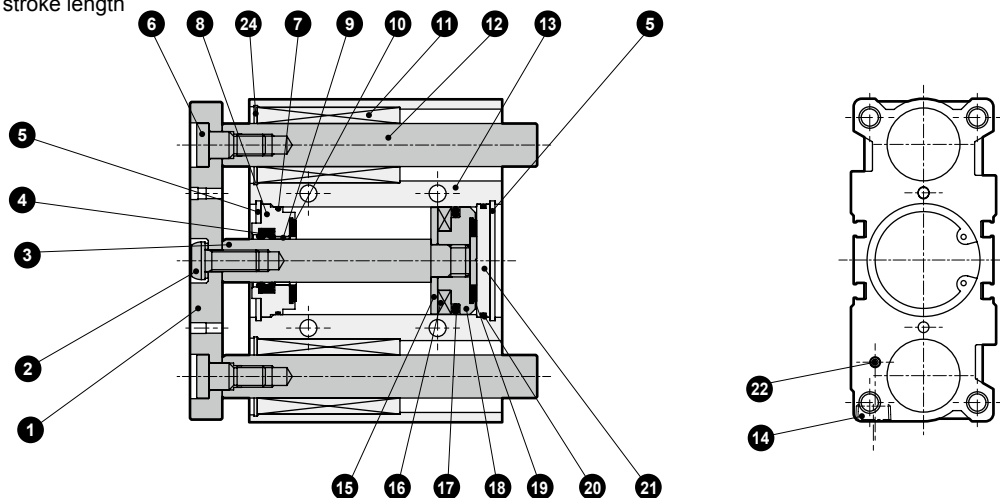
- Over 100 stroke length



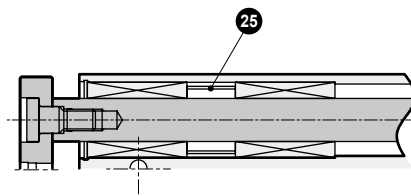
Internal structure and parts list (STG-B-32 to 63)

● $\phi 32$ to $\phi 63$

· 100 or less stroke length



· Over 100 stroke length



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	End plate	Steel	Nickeling	12	Guide rod	Alloy steel	Industrial chrome plating
2	Hex socket head cap screw ($\phi 12$ to $\phi 16$)	Alloy steel	Zinc chromate	13	Cylinder body	Aluminum alloy	Hard alumite
	Hex socket button head bolt ($\phi 20$ to $\phi 63$)	Alloy steel	Zinc chromate	14	Plug	Copper alloy or steel	
3	Piston rod	Stainless steel ($\phi 12$ to $\phi 25$)	Industrial chrome plating	15	Spacer	Aluminum alloy	
		Steel ($\phi 32$ to $\phi 63$)	Industrial chrome plating	16	Magnet	Plastic	
4	Rod packing	Nitrile rubber		17	Piston packing	Nitrile rubber	
5	C type snap ring	Steel	Zinc phosphate	18	Piston	Aluminum alloy	
6	Bolt	Alloy steel	Zinc chromate	19	Cushion rubber	Urethane rubber	
7	Metal gasket	Nitrile rubber		20	O-ring	Nitrile rubber	
8	Rod metal	Special aluminum alloy ($\phi 12$ to $\phi 32$)	Alumite	21	Base plate	Aluminum alloy	Chromate
		Aluminum alloy ($\phi 40$ to $\phi 63$)	Chromate	22	Hexagon socket set screw	Stainless steel	
9	Bush	Dry bearing ($\phi 40$ to $\phi 63$)	*1	23	Steel ball	Stainless steel	
10	Cushion rubber	Urethane rubber		24	C type snap ring	Steel	Zinc phosphate
11	Ball bushing			25	Collar	Aluminum alloy	

*1: Aluminum for copper and PTFE free.

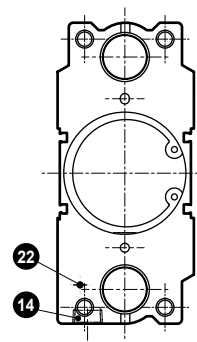
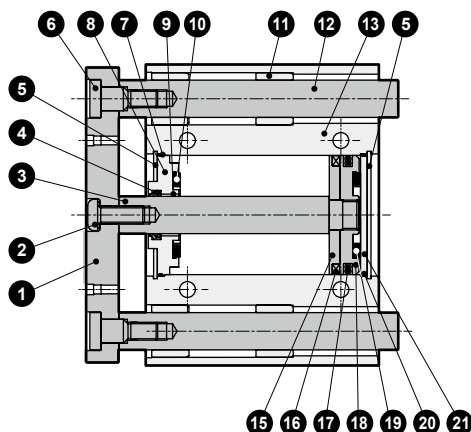
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
	STG-M/B	
$\phi 12$	STG-12K	
$\phi 16$	STG-16K	
$\phi 20$	STG-20K	
$\phi 25$	STG-25K	
$\phi 32$	STG-32K	4 7 10 17 19 20
$\phi 40$	STG-40K	
$\phi 50$	STG-50K	
$\phi 63$	STG-63K	

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

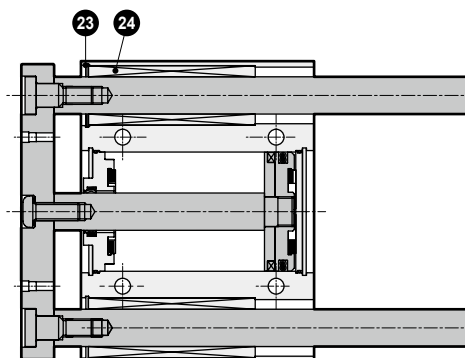
Internal structure and parts list (STG-M-80, 100/STG-B-80, 100)

● STG-M-80,100

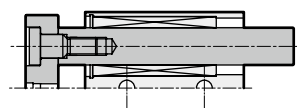


● STG-B-80,100

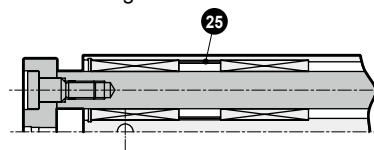
· Over 50 to 200 stroke length



· 50 or less stroke length



· Over 200 stroke length



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	End plate	Steel	Nickeling	14	Plug	Steel	
2	Hexagon socket button head bolt	Alloy steel	Zinc chromate	15	Spacer	Aluminum alloy	
3	Piston rod	Steel	Industrial chrome plating	16	Magnet	Plastic	
4	Rod packing	Nitrile rubber		17	Piston packing	Nitrile rubber	
5	C type snap ring	Steel	Zinc phosphate	18	Piston	Aluminum alloy	
6	Bolt	Alloy steel	Zinc chromate	19	Cushion rubber	Urethane rubber	
7	Metal gasket	Nitrile rubber		20	O-ring	Nitrile rubber	
8	Rod metal	Aluminum alloy	Chromate	21	Base plate	Steel	Zinc chromate
9	Bush	Dry bearing		22	Hexagon socket set screw (φ80)	Stainless steel	
10	Cushion rubber	Urethane rubber			Plug (φ100)	Steel	Nickeling
11	Metal	Oil-impregnated copper alloy bearing		23	C type snap ring	Steel	Zinc phosphate
12	Guide rod	Alloy steel or steel	Industrial chrome plating	24	Ball bushing		
13	Cylinder body	Aluminum alloy	Hard alumite	25	Collar	Aluminum alloy	

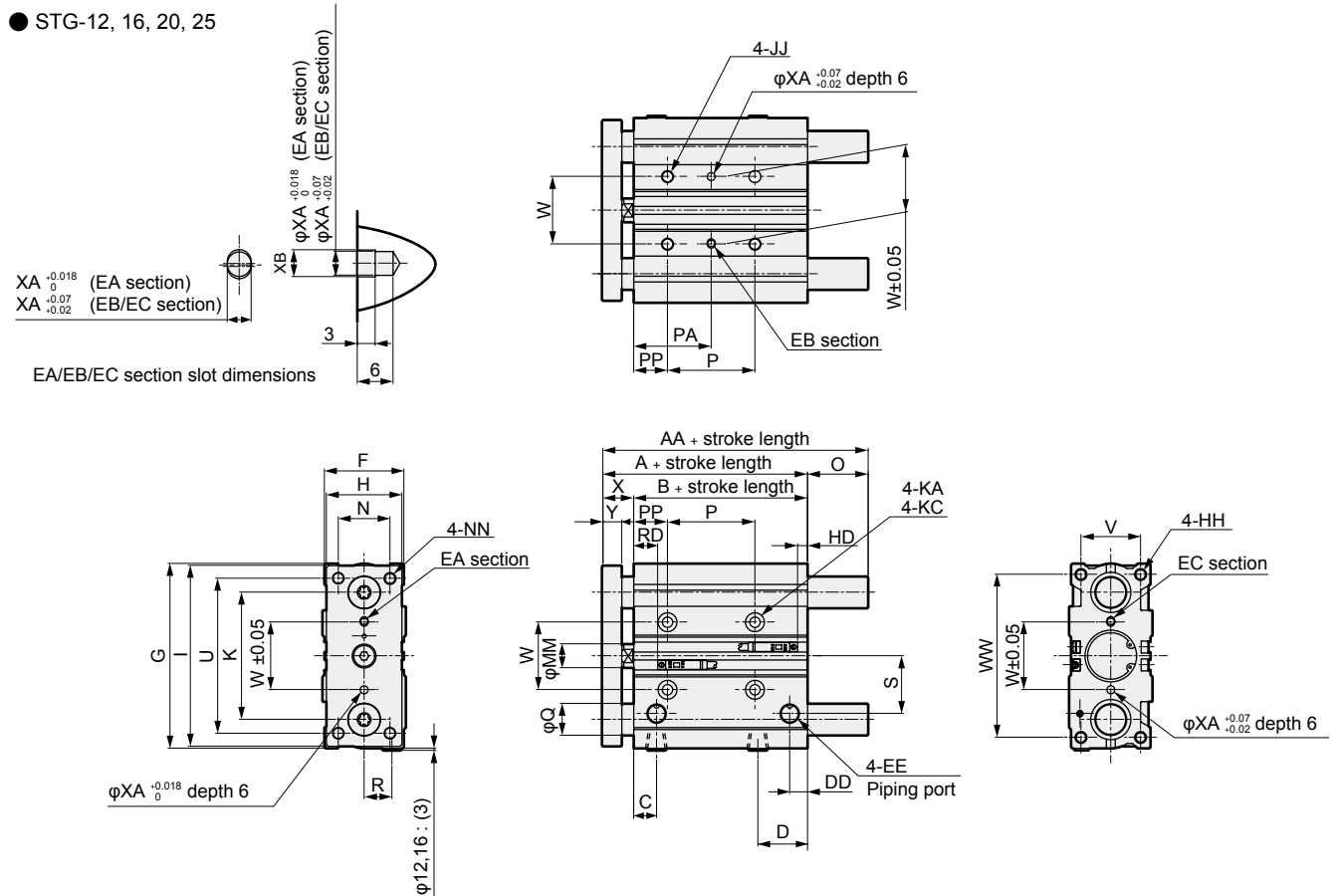
Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
φ80	STG-80K	4 7 10 17 19 20
φ100	STG-100K	

Dimensions (φ12, φ16, φ20, φ25)



● STG-12, 16, 20, 25



● STG-M/B common

Code	Standard stroke length (mm)					A	B	C	D	DD	EE	F	G	H	HH		I	JJ		
Bore size (mm)																				
φ12	10,20,30,40,50,75,100,125					42	29	12	16	7	M5	26	58	22	M4 depth 10		56	M5 depth 10		
φ16	150,175,200,250					46	33	12	18	7.5	M5	30	64	25	M5 depth 12		62	M5 depth 10		
φ20	20,30,40,50,75,100,125,150					53	37	10.5	24.5	8.5	Rc1/8	36	83	30	M5 depth 13		81	M6 depth 12		
φ25	175,200,250,300,350,400					53.5	37.5	11.5	25	9	Rc1/8	42	93	38	M6 depth 15		91	M6 depth 12		
Code	P																			
Bore size (mm)	K	KA	MM	N	NN	KC	30 or less		Over 30 to 100		Over 100 to 200		Over 200 to 300		Over 300					
φ12	41	4.3 through	6	14	M4 through	7.5 spot face depth 4.5	20		40		110		200		-					
φ16	46	4.3 through	8	16	M5 through	8 spot face depth 4.5	24		44		110		200		-					
φ20	54	5.2 through	10	18	M5 through	9.5 spot face depth 5.5	24		44		120		200		300					
φ25	64	5.2 through	12	26	M6 through	9.5 spot face depth 5.5	24		44		120		200		300					
Code	PA					T0/T5/T2/T3/T2W/T3W														
Bore size (mm)	30 or less	Over 30 to 100	Over 100 to 200	Over 200 to 300	Over 300	PP	R	S	U	V	W	WW	X	Y	RD	HD	RD	HD	XA	XB
φ12	15	25	60	105	-	5	8	17	48	18	23	50	13 ⁰ _{-1.5}	7.5	5	5	7	7	3	3.5
φ16	17	27	60	105	-	5	10	18	54	22	24	56	13 ⁰ _{-1.5}	7.5	4	10	6	12	3	3.5
φ20	29	39	77	117	167	17	11	25	70	24	28	72	16 ⁰ ₋₂	9.5	9.5	8.5	11.5	10.5	3	3.5
φ25	29	39	77	117	167	17	14	29	78	30	34	82	16 ⁰ ₋₂	9.5	10	8.5	12	10.5	4	4.5

● STG-M

Code	AA				O		
Bore size (mm)	50 or less	Over 50 to 100	Over 100	Q	50 or less	Over 50 to 100	Over 100
φ12	42	55	85	8	0	13	43
φ16	46	63	95	10	0	17	49

Code	AA				O		
Bore size (mm)	50 or less	Over 50 to 200	Over 200	Q	50 or less	Over 50 to 200	Over 200
φ20	53	78	122	12	0	25	69
φ25	53.5	84	122	16	0	30.5	68.5

● STG-B

Code	AA				O		
Bore size (mm)	30 or less	Over 30 to 100	Over 100	Q	30 or less	Over 30 to 100	Over 100
φ12	43	55	85	6	1	13	43
φ16	49	65	95	8	3	19	49

Code	AA				O			
Bore size (mm)	30 or less	Over 30 to 100	Over 100 to 200	Over 200	Q	30 or less	Over 30 to 100	Over 100 to 200
φ20	59	78	100	122	10	6	25	47
φ25	65	84	103	122	13	11.5	30.5	49.5

*1 : When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

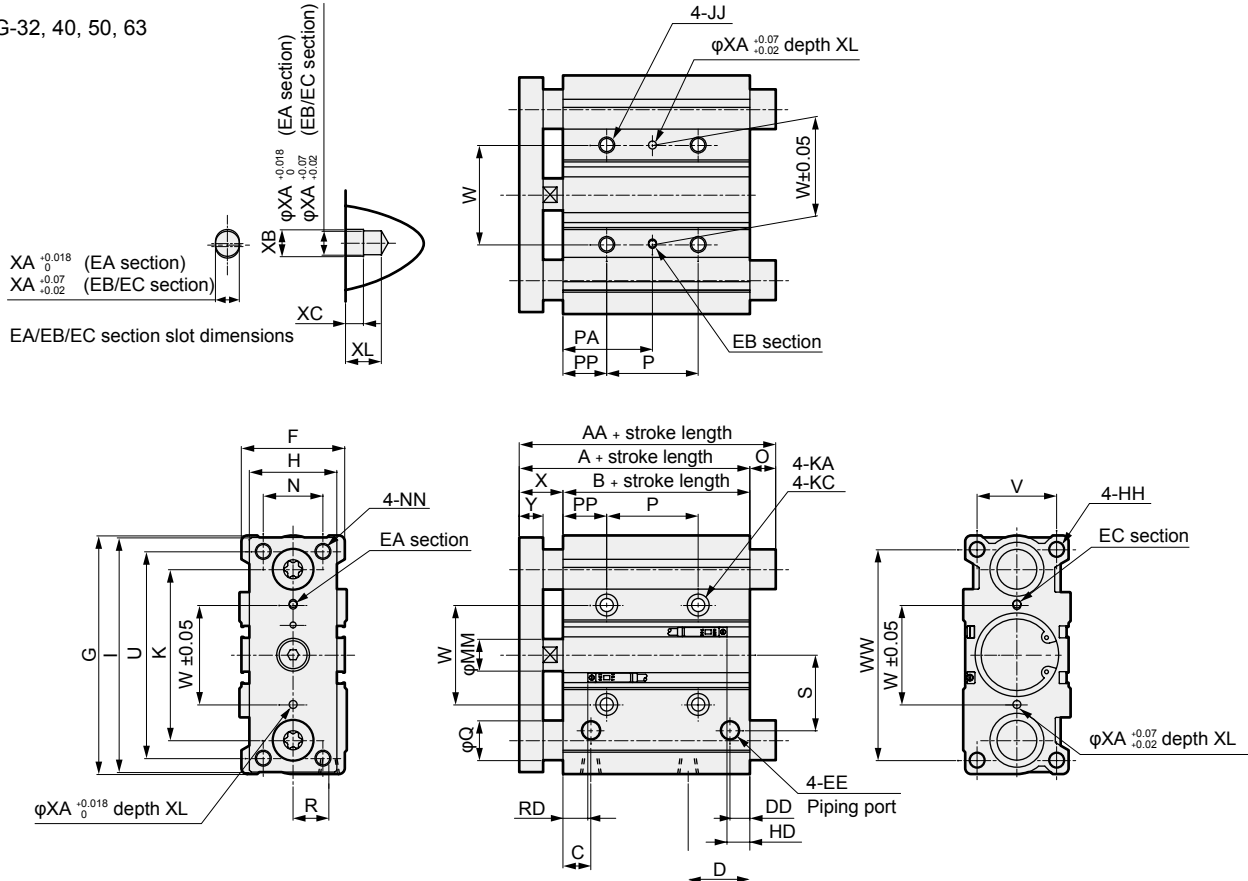
*2 : Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, T1H/V and T8H/V switches.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Dimensions (φ32, φ40, φ50, φ63)

● STG-32, 40, 50, 63



● STG-M/B common

Code	Standard stroke length (mm)	A	B	C	D	DD	EE	F	G	H	HH		I	JJ	K	KA				
Bore size (mm)		59.5	37.5	12.5	30.5	9	Rc1/8	48	112	44	M8 depth 20	110	M8 depth 16	78	6.3 through					
φ32		66	44	14	31	10	Rc1/8	54	120	44	M8 depth 20	118	M8 depth 16	86	6.3 through					
φ40		72	44	14	35	11	Rc1/4	64	148	60	M10 depth 22	146	M10 depth 20	110	8.6 through					
φ50		77	49	16.5	35	15	Rc1/4	78	162	70	M10 depth 22	158	M10 depth 20	124	8.6 through					
φ63																				
Code					P								PA							
Bore size (mm)	KC	MM	N	NN	25 or less		Over 25 to 100		Over 100 to 200		Over 200 to 300		Over 300		25 or less		Over 25 to 100			
φ32	11 spot face depth 7.5	16	30	M8 through	24		48		124		200		300		33		45			
φ40	11 spot face depth 7.5	16	30	M8 through	24		48		124		200		300		34		46			
φ50	14 spot face depth 9	20	40	M10 through	24		48		124		200		300		36		48			
φ63	14 spot face depth 9	20	50	M10 through	28		52		128		200		300		38		50			
Code	PA												T0/T5/T2/T3		T2W/T3W					
Bore size (mm)	Over 100 to 200	Over 200 to 300	Over 300	PP	R	S	U	V	W	WW	X	Y	RD HD		RD HD		XA	XB	XC	XL
φ32	83	121	171	21	15	34	96	34	42	98	22 ⁰ / ₂	11.5	10	8.5	12	10.5	4	4.5	3	6
φ40	84	122	172	22	18	38	104	40	50	106	22 ⁰ / ₂	11.5	13	12	15	14	4	4.5	3	6
φ50	86	124	174	24	21.5	47	130	46	66	130	28 ⁰ / ₂	15.5	13.5	11.5	15.5	13.5	5	6	4	8
φ63	88	124	174	24	28	55	130	58	80	142	28 ⁰ / ₂	15.5	14	16	18	18	5	6	4	8

● STG-M

Code	AA			Q	O		
Bore size (mm)	50 or less	Over 50 to 200	Over 200		50 or less	Over 50 to 200	200 Over
φ32	79	100	140	20	19.5	40.5	80.5
φ40	79	100	140	20	13	34	74
φ50	91	116	161	25	19	44	89
φ63	91	116	161	25	14	39	84

*1 : When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

*2 : Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, T1H/V and T8H/V switches.

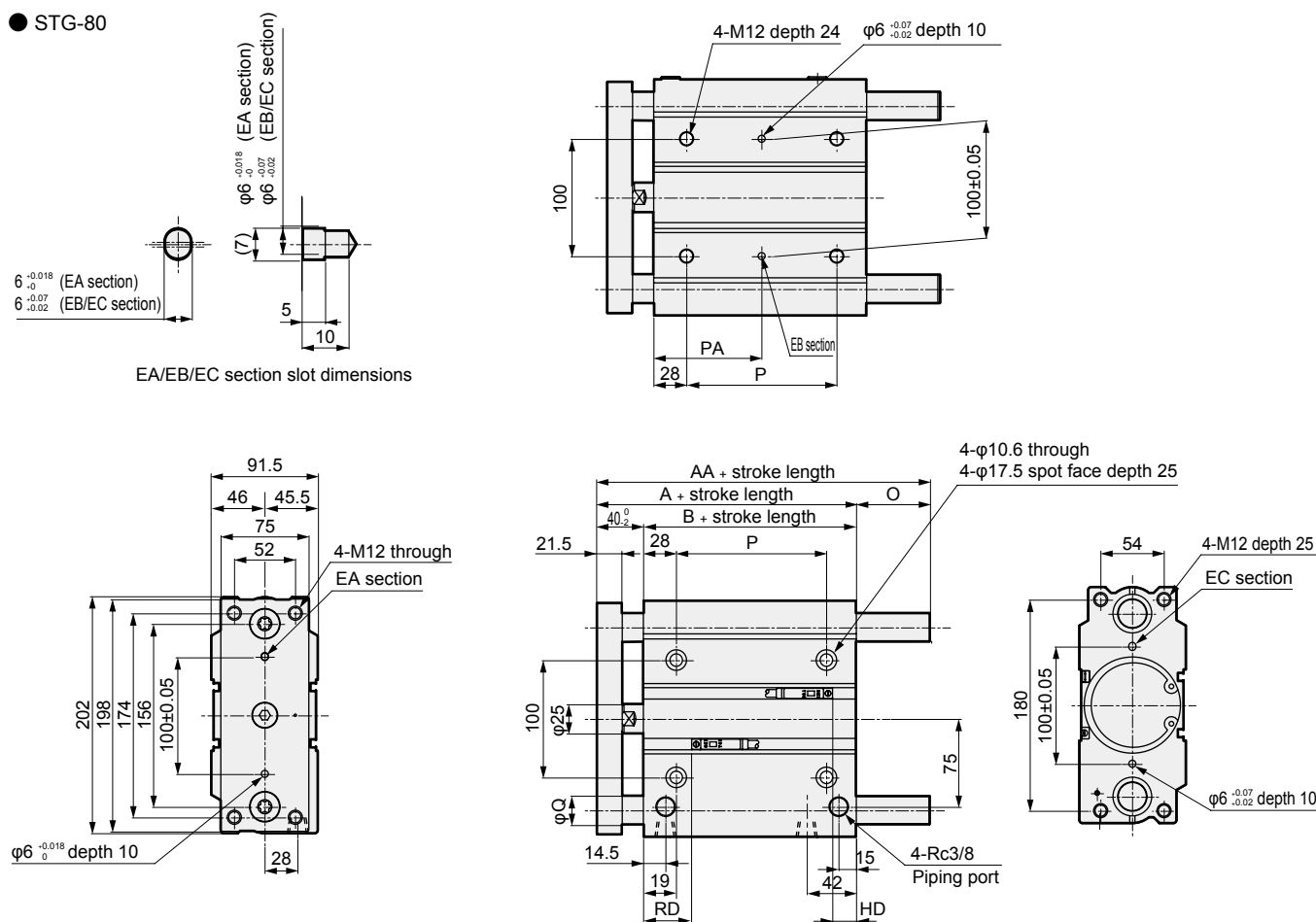
● STG-B

Code	AA				Q	O			
Bore size (mm)	50 or less	Over 50 to 100	Over 100 to 200	Over 200		50 or less	Over 50 to 100	Over 100 to 200	Over 200
φ32	79	98	118	140	16	19.5	38.5	58.5	80.5
φ40	79	98	118	140	16	13	32	52	74
φ50	91	114	134	161	20	19	42	62	89
φ63	91	114	134	161	20	14	37	57	84

Dimensions (φ80)



● STG-80



● STG-M/B common

Standard stroke length	A	B	P					PA					T0/T5/T2/T3		T2W/T3W	
			25 st or less	Over 25 st to 100 st	Over 100 st to 200 st	Over 200 st to 300 st	Over 300 st	25 st or less	Over 25 st to 100 st	Over 100 st to 200 st	Over 200 st to 300 st	Over 300 st	RD	HD	RD	HD
25,50,75,100,125,150,175,200,250,300,350,400	96.5	56.5	28	52	128	200	300	42	54	92	128	178	18	19.5	20	21.5

● STG-M

AA			Q	O		
50 st or less	Over 50 st to 200 st	Over 200 st		50 st or less	Over 50 st to 200 st	Over 200 st
115	142	193	30	18.5	45.5	96.5

● STG-B

AA				Q	O			
25 st or less	Over 25 st to 50 st	Over 50 st to 200 st	Over 200 st		25 st or less	Over 25 st to 50 st	Over 50 st to 200 st	Over 200 st
109.5	130	160	193	25	13	33.5	63.5	96.5

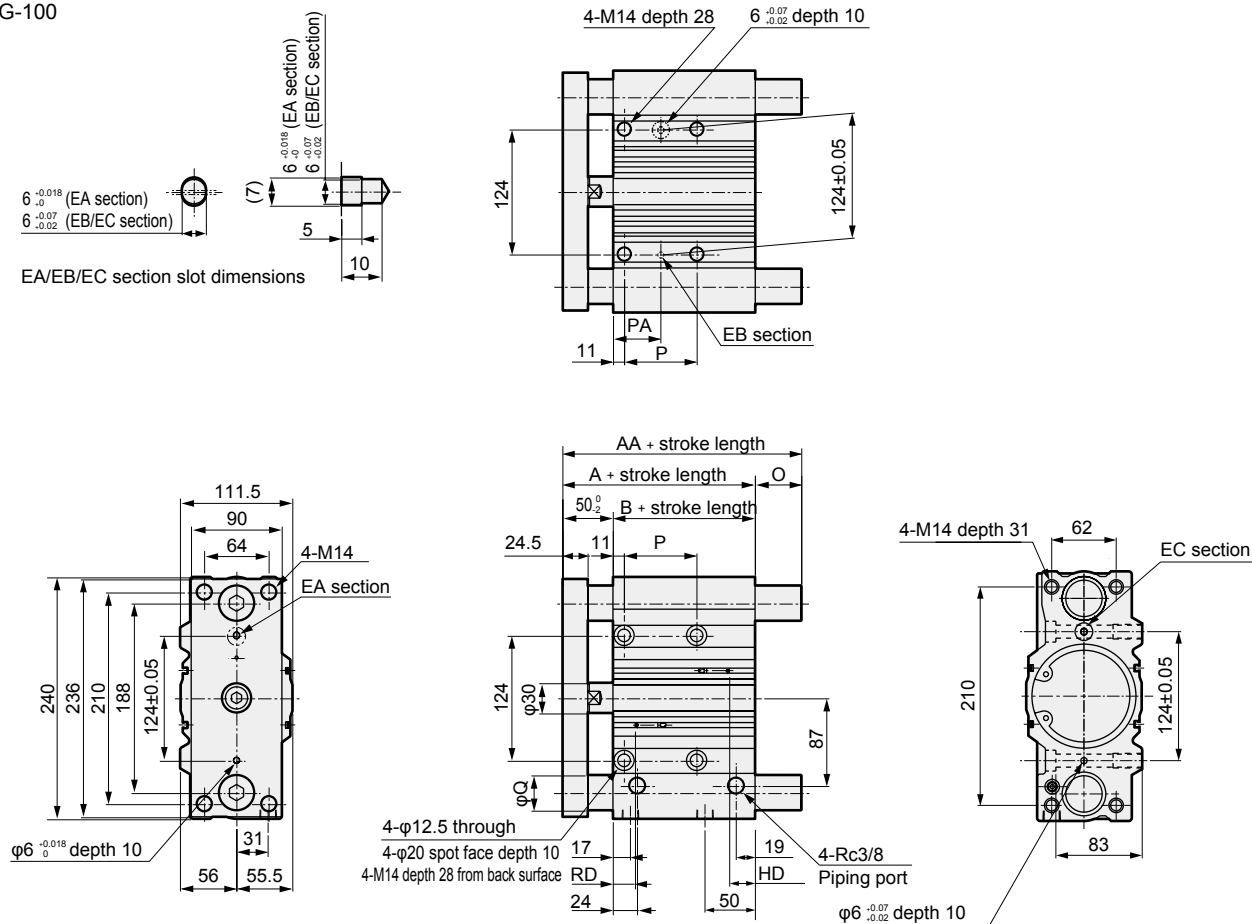
*1 : When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

*2 : Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, T1H/V and T8H/V switches.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions (φ100)

● STG-100



● STS-M/B common

Standard stroke length	A	B	P					PA					T0/T5/T2/T3		T2W/T3W	
			25 st or less	Over 25 st to 100 st	Over 100 st to 200 st	Over 200 st to 300 st	Over 300 st	25 st or less	Over 25 st to 100 st	Over 100 st to 200 st	Over 200 st to 300 st	Over 300 st	RD	HD	RD	HD
25,50,75,100,125,150,175,200,250,300,350,400	116	66	48	72	148	220	320	35	47	85	121	171	22	25.5	24	27.5

● STG-M

AA			Q	O		
50 st or less	Over 50 st to 200 st	Over 200 st		50 st or less	Over 50 st to 200 st	Over 200 st
137	162	203	35	21	46	87

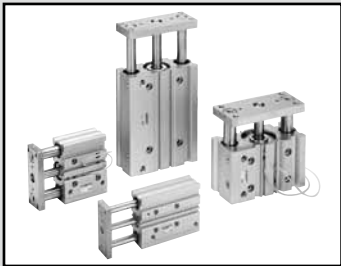
● STG-B

AA				Q	O			
25 st or less	Over 25 st to 50 st	Over 50 st to 200 st	Over 200 st		25 st or less	Over 25 st to 50 st	Over 50 st to 200 st	Over 200 st
121	147	180	203	30	5	31	64	87

MEMO

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Guided cylinder, double acting/rubber-air cushioned

STG-M-B-*C Series

● Bore size: $\phi 32/\phi 40/\phi 50/\phi 63$

JIS symbol



Specifications

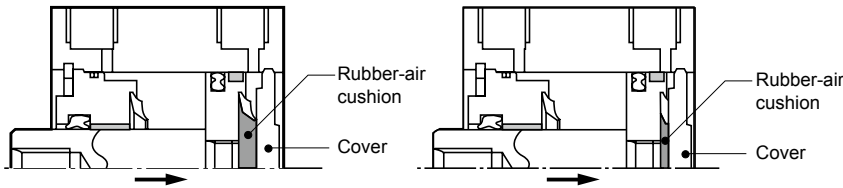
Descriptions		STG-M/B-°C			
Bore size	mm	φ32	φ40	φ50	φ63
Actuation		Double acting			
Working fluid		Compressed air			
Max. working pressure	MPa	1.0 (≈150 psi, 10 bar)			
Min. working pressure	MPa	0.2 (≈29 psi, 2 bar)			
Proof pressure	MPa	1.6 (≈230 psi, 16 bar)			
Ambient temperature	°C	-10 (14°F) to 60 (140°F) (no freezing)			
Port size		Rc1/8		Rc1/4	
Stroke tolerance	mm	+2.0 0			
Working piston speed	mm/s	50 to 500			50 to 300
Cushion		Rubber-air cushioned			
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)			
Allowable absorbed energy	J	0.401	0.627	0.980	1.560

Stroke length

Bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke (mm)/(switch)
$\phi 32$	25/50/75/100 125/150/175 200/250/300 350/400	400	5	5(10) *2
$\phi 40$				
$\phi 50$				
$\phi 63$			10	10

*1: The custom stroke length is available in 5mm increments. However, the total dimensions are the same as the longer standard stroke length.
*2: For types with one or two switches. The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

Rubber-air cushion mechanism

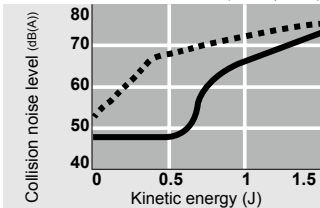


When pulled

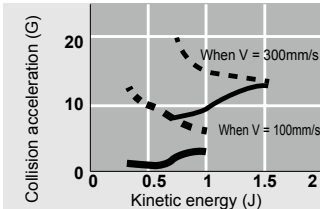
An airtight space is created in the area when the piston operates and the rubber-air cushion and cover make contact. Air in the airtight area is further compressed, absorbing energy as the piston operates. At the end of the stroke, energy generated by compression distortion of the air cushion is also added.

--- Cylinder with rubber cushion
— Cylinder with rubber-air cushion

Data of the reduction of collision noise level (an example case)



Data of the reduction of collision acceleration level (an example case)



Switch specifications

- 1-color/2-color display/for AC magnetic field proof

Descriptions	Proximity 2-wire		Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/T3PV/ (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD	
Applications	For programmable controller, relay, compact solenoid valve		Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-								
Pwr. supp. V.	-				10 to 28 VDC				-								
Load voltage	85 to 265 VAC		10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA		5 to 20 mA (*2)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	≤50 mA	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)	
Leakage current	≤ 1 mA at 100 VAC, ≤ 2 mA at 200 VAC		1 mA or less			10 µA or less				0 mA							1 mA or less
Weight g	1 m:33	1 m:18	1 m:33	1 m:18	1 m:18		1 m:33	1 m:18	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61	
	3 m:87	3 m:49	3 m:87	3 m:49	3 m:49		3 m:87	3 m:49								3 m:166	
	5 m:142	5 m:80	5 m:142	5 m:80	5 m:80		5 m:142	5 m:80								5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.

*2 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*3 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.

*4 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.

*5 : Dimensions depend on switch model No. Refer to Ending Page 18 for details.

Cylinder weight

- STG-M-*C

Unit: kg

Descriptions	Stroke length												Switch weight
Bore size (mm)	25	50	75	100	125	150	175	200	250	300	350	400	
φ32	1.64	2.01	2.54	2.94	3.34	3.73	4.12	4.51	5.49	6.27	7.07	7.85	Refer to the weight in the switch specifications.
φ40	1.89	2.30	2.75	3.15	3.57	3.98	4.39	4.80	5.81	6.64	7.47	8.29	
φ50	3.26	3.88	4.59	5.21	5.83	6.45	7.07	7.69	9.25	10.48	11.74	13.00	
φ63	4.05	4.79	5.61	6.34	7.07	7.81	8.54	9.27	11.06	12.51	13.97	15.42	

- STG-B-*C

Unit: kg

Descriptions	Stroke length												Switch weight
Bore size (mm)	25	50	75	100	125	150	175	200	250	300	350	400	
φ32	1.49	1.79	2.23	2.54	2.90	3.21	3.51	3.82	4.49	5.10	5.71	6.32	Refer to the weight in the switch specifications.
φ40	1.74	2.09	2.56	2.91	3.32	3.67	4.02	4.37	5.12	5.82	6.52	7.22	
φ50	3.02	3.55	4.28	4.81	5.43	5.97	6.50	7.03	8.23	9.28	10.38	11.45	
φ63	3.81	4.45	5.30	5.94	6.67	7.31	7.96	8.60	9.99	11.35	12.61	13.87	

Theoretical thrust table

(Unit: N)

</

STG-*C Series

How to order

Without switch (built-in magnet for switch)

STG - **M** - **32** - **C** - **25**

With switch (built-in magnet for switch)

STG - **M** - **32** - **C** - **25** - **T2H** - **R**

Model No.

A Bearing

B Bore size

C Port thread

Rubber-air cushioned

D Stroke length

E Switch model No.
*1, *2

F Switch quantity

Code		Content												
A Bearing														
M	Metal bush bearing													
B	Ball bearing													
B Bore size (mm)														
32	φ32													
40	φ40													
50	φ50													
63	φ63													
C Port thread														
Blank	Rc thread													
N	NPT thread (custom order product)													
G	G thread (custom order product)													
D Stroke length (mm)														
Refer to the stroke length table on the following page														
E Switch model No.														
Axial lead wire		Radial lead wire		Contact		Voltage		Display		Lead wire				
						AC		DC						
T0H*		T0V*		Reed		●		●		1-color display		2-wire		
T5H*		T5V*				●		●		Without indicator lamp				
T8H*		T8V*				●		●		1-color display				
T1H*		T1V*				●								
T2H*		T2V*		Proximity				●		1-color display		2-wire		
T3H*		T3V*						●				3-wire		
T3PH*		T3PV*						●		1-color display (custom order)		3-wire		
T2WH*		T2WV*						●		2-color display		2-wire		
T2YH*		T2YV*						●				3-wire		
T3WH*		T3WV*						●						
T3YH*		T3YV*						●						
T2JH*		T2JV*						●		1-color display off-delay		2-wire		
T2YD*		-						●		2-color display		2-wire		
T2YDT*		-						●		for AC magnetic field				
* Lead wire length														
Blank		1 m (standard)												
3		3 m (option)												
5		5 m (option)												
F Switch quantity														
R		1 on rod side												
H		1 on head side												
D		2												
T		3												

⚠ Precautions for model No. selection

*1 : Switches other than **E** Switch model No. are also available. (Custom order product) Refer to Ending Page 1 for details.

*2 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

STG-M-32C-50-T0H-R

Model: Guided cylinder double acting/with rubber-air cushioned

A Bearing : Metal bush bearing

B Bore size : φ32 mm

C Port thread : Rc thread

D Stroke length : 50 mm

E Switch model No. : Reed T0H switch, lead wire length 1 m

F Switch quantity : 1 on rod side

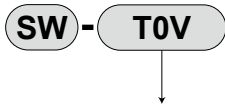
D Stroke length

Stroke length (mm)		Bore size			
		φ32	φ40	φ50	φ63
Standard stroke length	25	●	●	●	●
	50	●	●	●	●
	75	●	●	●	●
	100	●	●	●	●
	125	●	●	●	●
	150	●	●	●	●
	175	●	●	●	●
	200	●	●	●	●
	250	●	●	●	●
	300	●	●	●	●
	350	●	●	●	●
	400	●	●	●	●
Min. stroke length	*2	5(10)			10
Custom stroke length	*1	In 5 mm increments			

*1: The total dimensions are the same as the longer standard stroke length.

*2: The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

How to order switch



Switch model No.
(Item (E) on the previous page)

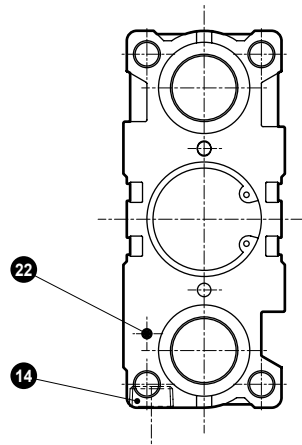
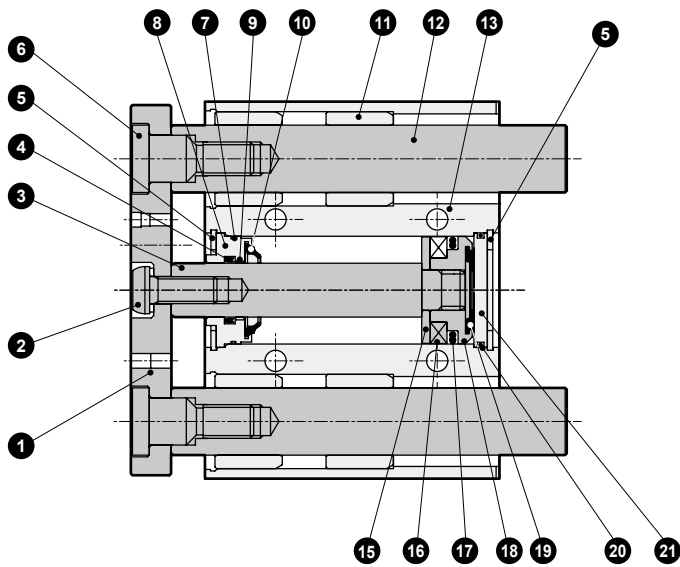
Note: Contact CKD when using
an environment-friendly T switch.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list

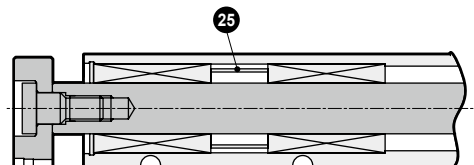
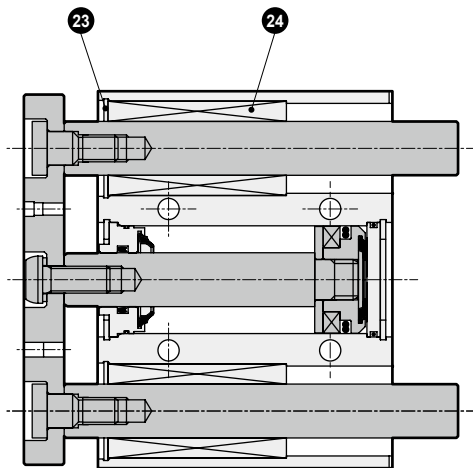
● STG-M-32 to 63(φ32 to φ63)



● STG-B-32 to 63(φ32 to φ63)

· 100 or less stroke length

· Over 100 stroke length



Internal structure and parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	End plate	Steel	Nickeling	14	Plug	Steel	
2	Hexagon socket button head bolt	Alloy steel	Zinc chromate	15	Spacer	Aluminum alloy	Alumite
3	Piston rod	Steel	Industrial chrome plating	16	Magnet	Plastic	
4	Rod packing	Nitrile rubber		17	Piston packing	Nitrile rubber	
5	C type snap ring	Steel	Zinc phosphate	18	Piston	Aluminum alloy	Alumite
6	Bolt	Alloy steel	Zinc chromate	19	Rubber air cushion (H)	Special rubber	
7	Metal gasket	Nitrile rubber		20	O-ring	Nitrile rubber	
8	Rod metal	Aluminum alloy	Alumite	21	Base plate	Aluminum alloy	Alumite
9	Bush	Oiles drymet (φ40 to φ63)		22	Hexagon socket set screw	Stainless steel	
10	Rubber air cushion (R)	Special rubber		23	C type snap ring	Steel	Zinc phosphate
11	Metal	Oil-impregnated copper alloy bearing		24	Ball bushing		
12	Guide rod	Steel	Industrial chrome plating	25	Collar	Aluminum alloy	
13	Cylinder body	Aluminum alloy	Hard alumite				

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
	STG-M/B	
φ32	STG-32CK	4 7 10 17 19 20
φ40	STG-40CK	
φ50	STG-50CK	
φ63	STG-63CK	

Dimensions

Same as STG Series (double acting/single rod). Refer to page 346.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Technical data

Refer to page 412 for guided cylinder selection guide.

[Comparison of collision noise level]

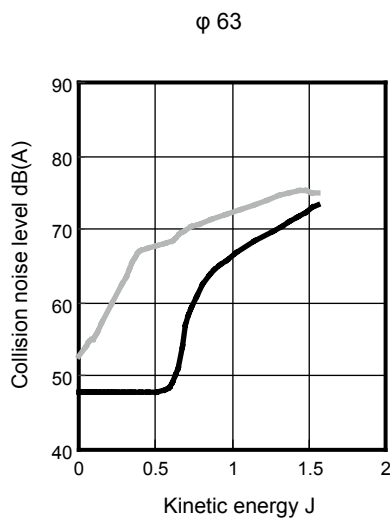
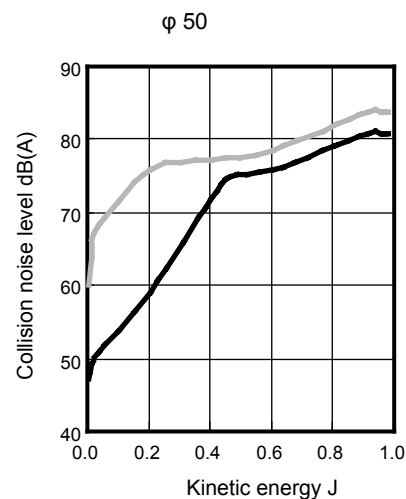
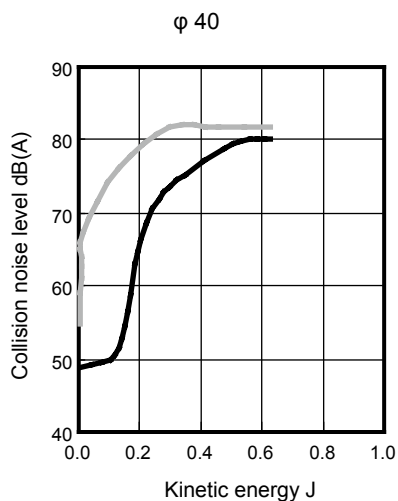
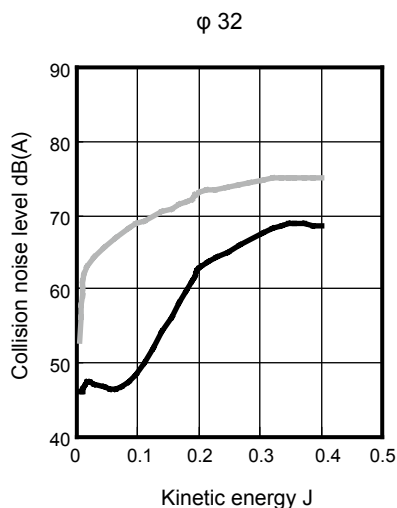
Values are comparison samples obtained under the conditions below.

As the values vary with base rigidity, etc., they are not guaranteed.

(Test conditions)

Cylinder	: STG
Mounting direction of cylinder	: Vertical with rod upward
Cylinder supply pressure	: 0.5 MPa
Measurement position of sound level meter	: 1 m from sample

Standard rubber cushion: 
 Rubber-air cushion: 

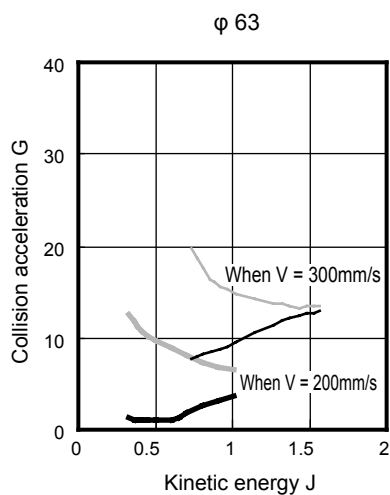
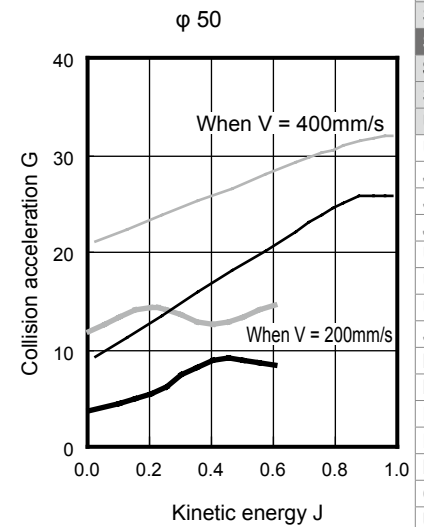
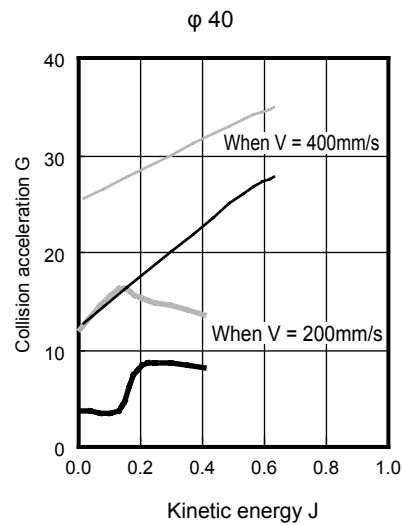
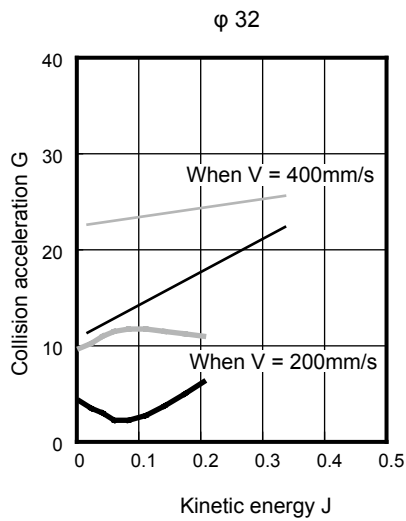


Technical data

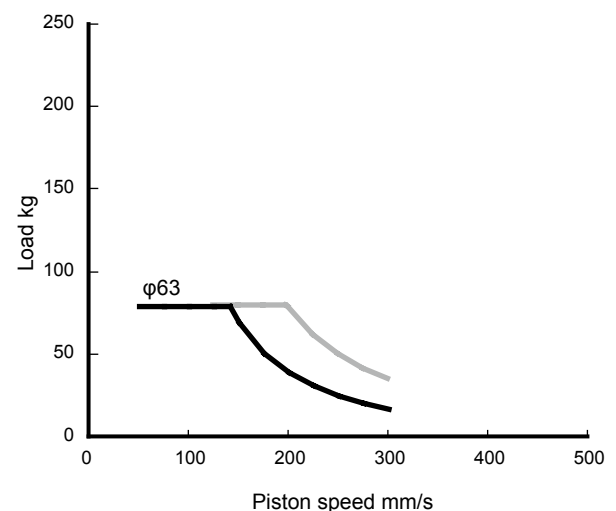
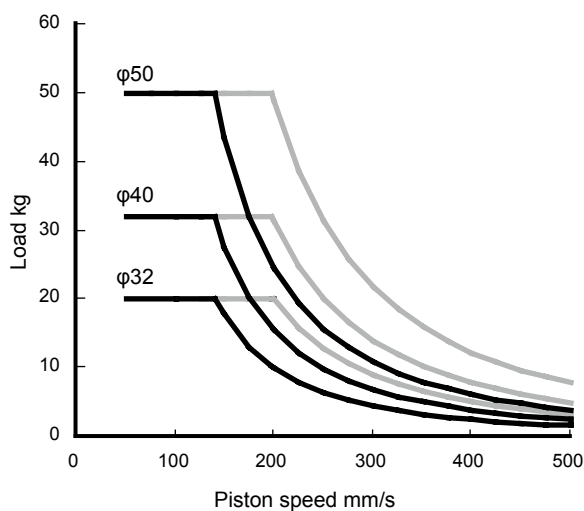
[Comparison of collision acceleration]

Standard rubber cushion: —

Rubber-air cushion: —



[Allowable energy value]



Usable in the range below and to the left of the curve.

Although it can be used in the range marked with —, the use within the range marked with solid line is recommended to maximize the noise reduction effect.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Guided cylinder, double acting/air cushioned

STG-M BC Series

● Bore size: φ16/φ20/φ25/φ32/φ40/φ50/φ63

JIS symbol



Specifications

Descriptions		STG-M _B C						
Bore size	mm	φ16	φ20	φ25	φ32	φ40	φ50	φ63
Actuation		Double acting/air cushioned						
Working fluid		Compressed air						
Max. working pressure	MPa	1.0 (≈150 psi, 10 bar)						
Min. working pressure	MPa	0.15 (≈22 psi, 1.5 bar)			0.1 (≈15 psi, 1 bar)			
Proof pressure	MPa	1.6 (≈230 psi, 16 bar)						
Ambient temperature		-10 (14°F) to 60 (140°F) (no freezing)						
Port size		M5	Rc1/8				Rc1/4	
Stroke tolerance	mm	+2.0 0						
Working piston speed	mm/s	50 to 500						50 to 300
Cushion		With air cushion						
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)						
Allowable absorbed energy	J	0.3	0.7	1.0	2.5	3.7	3.8	5.5

Stroke length

Bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke (mm)(switch)
φ16	25/50/75/100/125/150/175/200/250	250	15 *2	15
φ20	25/50/75/100 125/150/175 200/250/300 350/400	400		
φ25				
φ32				
φ40				
φ50				
φ63				

*1: The custom stroke length is available in 1 mm increments. However, the total dimensions are the same as the longer standard stroke length. (Custom order)
 *2: For min. stroke length and below, select the basic since there is no cushion effect.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
φ16	Push	-	30.2	40.2	60.3	80.4	1.01 × 10 ²	1.21 × 10 ²	1.41 × 10 ²	1.61 × 10 ²	1.81 × 10 ²	2.01 × 10 ²
	Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06 × 10 ²	1.21 × 10 ²	1.36 × 10 ²	1.51 × 10 ²
φ20	Push	-	47.1	62.8	94.2	1.26 × 10 ²	1.57 × 10 ²	1.88 × 10 ²	2.20 × 10 ²	2.51 × 10 ²	2.83 × 10 ²	3.14 × 10 ²
	Pull	-	35.3	47.1	70.7	94.2	1.18 × 10 ²	1.41 × 10 ²	1.65 × 10 ²	1.88 × 10 ²	2.12 × 10 ²	2.36 × 10 ²
φ25	Push	-	73.6	98.2	1.47 × 10 ²	1.96 × 10 ²	2.45 × 10 ²	2.95 × 10 ²	3.44 × 10 ²	3.93 × 10 ²	4.42 × 10 ²	4.91 × 10 ²
	Pull	-	56.7	75.6	1.13 × 10 ²	1.51 × 10 ²	1.89 × 10 ²	2.27 × 10 ²	2.64 × 10 ²	3.02 × 10 ²	3.40 × 10 ²	3.78 × 10 ²
φ32	Push	80.4	1.21 × 10 ²	1.61 × 10 ²	2.41 × 10 ²	3.22 × 10 ²	4.02 × 10 ²	4.83 × 10 ²	5.63 × 10 ²	6.43 × 10 ²	7.24 × 10 ²	8.04 × 10 ²
	Pull	60.3	90.5	1.21 × 10 ²	1.81 × 10 ²	2.41 × 10 ²	3.02 × 10 ²	3.62 × 10 ²	4.22 × 10 ²	4.83 × 10 ²	5.43 × 10 ²	6.03 × 10 ²
φ40	Push	1.26 × 10 ²	1.88 × 10 ²	2.51 × 10 ²	3.77 × 10 ²	5.03 × 10 ²	6.28 × 10 ²	7.54 × 10 ²	8.80 × 10 ²	1.01 × 10 ³	1.13 × 10 ³	1.26 × 10 ³
	Pull	1.06 × 10 ²	1.58 × 10 ²	2.11 × 10 ²	3.17 × 10 ²	4.22 × 10 ²	5.28 × 10 ²	6.33 × 10 ²	7.39 × 10 ²	8.44 × 10 ²	9.50 × 10 ²	1.06 × 10 ³
φ50	Push	1.96 × 10 ²	2.95 × 10 ²	3.93 × 10 ²	5.89 × 10 ²	7.85 × 10 ²	9.82 × 10 ²	1.18 × 10 ³	1.37 × 10 ³	1.57 × 10 ³	1.77 × 10 ³	1.96 × 10 ³
	Pull	1.65 × 10 ²	2.47 × 10 ²	3.30 × 10 ²	4.95 × 10 ²	6.60 × 10 ²	8.25 × 10 ²	9.90 × 10 ²	1.15 × 10 ³	1.32 × 10 ³	1.48 × 10 ³	1.65 × 10 ³
φ63	Push	3.12 × 10 ²	4.68 × 10 ²	6.23 × 10 ²	9.35 × 10 ²	1.25 × 10 ³	1.56 × 10 ³	1.87 × 10 ³	2.18 × 10 ³	2.49 × 10 ³	2.81 × 10 ³	3.12 × 10 ³
	Pull	2.80 × 10 ²	4.20 × 10 ²	5.61 × 10 ²	8.41 × 10 ²	1.12 × 10 ³	1.40 × 10 ³	1.68 × 10 ³	1.96 × 10 ³	2.24 × 10 ³	2.52 × 10 ³	2.80 × 10 ³

Switch specifications

- 1-color/2-color display/for AC magnetic field proof

Descriptions	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire						Proximity 2-wire	
	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/T3PV (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V		T2YD	
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay		For programmable controller	
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC	24 VDC ±10%		30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*2)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	≤50 mA	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)		Red/green LED (Lit when ON)	
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA						1 mA or less	
Weight g	1 m:33	1 m:18	1 m:33	1 m:18	1 m:18		1 m:33	1 m:18	1 m:18 3 m:49 5 m:80			1 m:33 3 m:87 5 m:142			1 m:61	
	3 m:87	3 m:49	3 m:87	3 m:49	3 m:49		3 m:87	3 m:49							3 m:166	
	5 m:142	5 m:80	5 m:142	5 m:80	5 m:80		5 m:142	5 m:80							5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.

*2 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*3 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.

*4 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.

*5 : Dimensions depend on switch model No. Refer to Ending Page 18 for details.

Cylinder weight

- STG-M

Unit: kg

Descriptions	Stroke length												Switch weight
	25	50	75	100	125	150	175	200	250	300	350	400	
Bore size (mm)													
φ16	0.49	0.61	0.76	0.88	1.04	1.16	1.28	1.41	1.65				Refer to the weight in the switch specifications.
φ20	0.85	1.04	1.30	1.49	1.68	1.87	2.06	2.26	2.71	3.10	3.48	3.87	
φ25	1.19	1.45	1.83	2.09	2.35	2.62	2.89	3.15	3.80	4.32	4.86	5.38	
φ32	1.90	2.26	2.80	3.18	3.58	3.96	4.35	4.73	5.71	6.48	7.26	8.03	
φ40	2.28	2.70	3.16	3.58	4.01	4.43	4.86	5.28	6.31	7.17	8.02	8.87	
φ50	3.87	4.51	5.24	5.88	6.51	7.15	7.79	8.43	10.04	11.30	12.60	13.90	
φ63	4.93	5.69	6.53	7.29	8.04	8.80	9.55	10.31	12.15	13.65	15.15	16.64	

- STG-B

Unit: kg

Descriptions	Stroke length												Switch weight
	25	50	75	100	125	150	175	200	250	300	350	400	
Bore size (mm)													
φ16	0.52	0.64	0.75	0.87	1.00	1.11	1.22	1.34	1.55				Refer to the weight in the switch specifications.
φ20	0.90	1.10	1.27	1.43	1.63	1.80	1.97	2.14	2.50	2.84	3.18	3.52	
φ25	1.26	1.52	1.75	1.98	2.24	2.46	2.69	2.91	3.40	3.85	4.30	4.74	
φ32	1.75	2.04	2.47	2.77	3.13	3.43	3.72	4.02	4.68	5.27	5.87	6.46	
φ40	2.12	2.48	2.97	3.33	3.75	4.11	4.47	4.83	5.61	6.32	7.04	7.76	
φ50	3.62	4.17	4.92	5.47	6.10	6.65	7.20	7.75	8.98	10.07	11.20	12.30	
φ63	4.69	5.34	6.21	6.87	7.63	8.29	8.96	9.62	11.05	12.45	13.75	15.05	

How to order

Without switch (built-in magnet for switch)

STG - **M** **C** - **32** - **25**

With switch (built-in magnet for switch)

STG - **M** **C** - **32** - **25** - **T2H** - **R**

Model No.

With air cushion

A Bearing

B Bore size

C Port thread

D Stroke length

E Switch model No.
*1, *2

F Switch quantity

Code		Content						
A Bearing								
M	Metal bush bearing							
B	Ball bearing							
B Bore size (mm)								
16	φ16							
20	φ20							
25	φ25							
32	φ32							
40	φ40							
50	φ50							
63	φ63							
C Port thread								
Blank	M5(φ16)							
	Rc thread (φ20 to φ63)							
NN	NPT thread (φ20 or more) custom order product							
GN	G thread (φ20 or more) custom order product							
D Stroke length (mm)								
Refer to the stroke length table on the following page								
E Switch model No.								
Axial lead wire		Radial lead wire		Contact	Voltage		Display	Lead wire
					AC	DC		
TOH*		T0V*		Reed	●	●	1-color display	2-wire
T5H*		T5V*			●	●	Without indicator lamp	
T8H*		T8V*			●	●	1-color display	
T1H*		T1V*		Proximity	●		1-color display	2-wire
T2H*		T2V*				●		1-color display (custom order)
T3H*		T3V*				●	2-color display	
T3PH*		T3PV*				●		2-color display
T2WH*		T2WV*				●	1-color display off-delay	
T2YH*		T2YV*				●		2-color display
T3WH*		T3WV*				●	2-color display	
T3YH*		T3YV*				●		2-color display
T2JH*		T2JV*				●	for AC magnetic field	
T2YD*		-				●		for AC magnetic field
T2YDT*		-				●	for AC magnetic field	
* Lead wire length								
Blank	1 m (standard)							
3	3 m (option)							
5	5 m (option)							
F Switch quantity								
R	1 on rod side							
H	1 on head side							
D	2							
T	3							

⚠ Precautions for model No. selection

*1 : Switches other than **E** Switch model No. are also available. (Custom order product) Refer to Ending Page 1 for details.

*2 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

*3 : T8H/V switch cannot be installed on STG-M_BC-16.

[Example of model No.]

STG-MC-25-50-T0H3-D

Model: Guided cylinder, double acting/air cushioned

A Bearing : Metal bush bearing

B Bore size : φ25 mm

C Port thread : Rc thread

D Stroke length : 50 mm

E Switch model No. : Reed T0H switch, lead wire length 3m

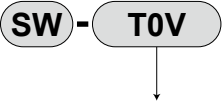
F Switch quantity : 2

D Stroke length

Stroke length (mm)		Applicable bore size						
		φ16	φ20	φ25	φ32	φ40	φ50	φ63
Standard stroke length	25	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●
	75	●	●	●	●	●	●	●
	100	●	●	●	●	●	●	●
	125	●	●	●	●	●	●	●
	150	●	●	●	●	●	●	●
	175	●	●	●	●	●	●	●
	200	●	●	●	●	●	●	●
	250	●	●	●	●	●	●	●
	300		●	●	●	●	●	●
	350		●	●	●	●	●	●
	400		●	●	●	●	●	●
Min. stroke length *1		15						
Custom stroke length *2		In 1 mm increments (custom order)						

*1: For min. stroke length and below, select the basic since there is no cushion effect.
*2: The total dimensions are the same as the longer standard stroke length.

How to order switch



Switch model No.
(Item E on the previous page)
Note: Contact CKD when using
an environment-friendly T switch.

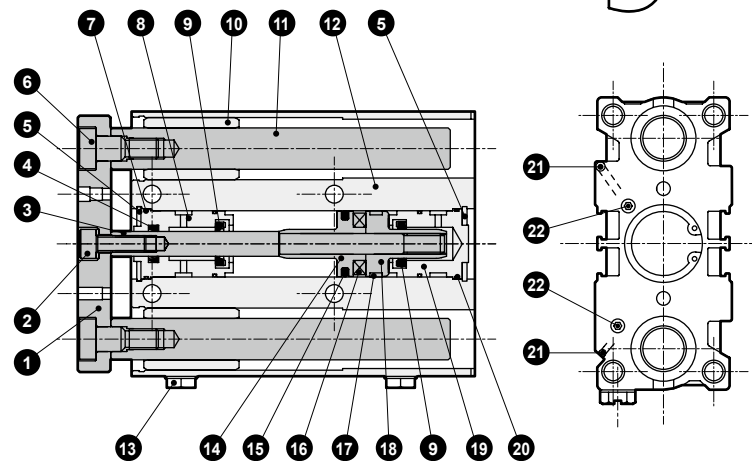
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG-MC Series

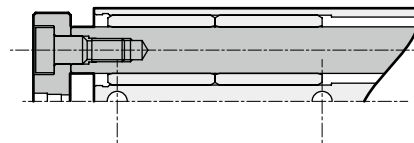
Internal structure and parts list (STG-MC-16 to 40)

● $\phi 16$

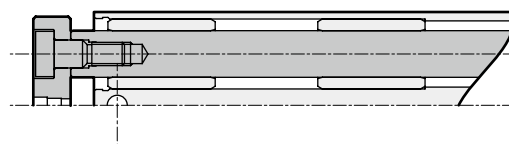
· 25 stroke length



· Over 25 to 100 stroke length

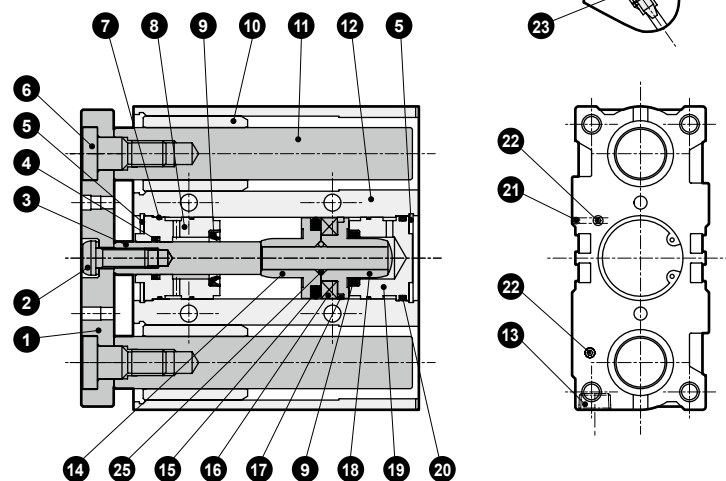


· Over 100 stroke length

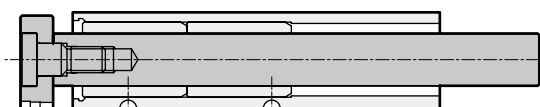


● $\phi 20$ to $\phi 40$

· 25 stroke length ($\phi 20$, $\phi 25$)



· Over 25 to 200 stroke length ($\phi 20$, $\phi 25$)

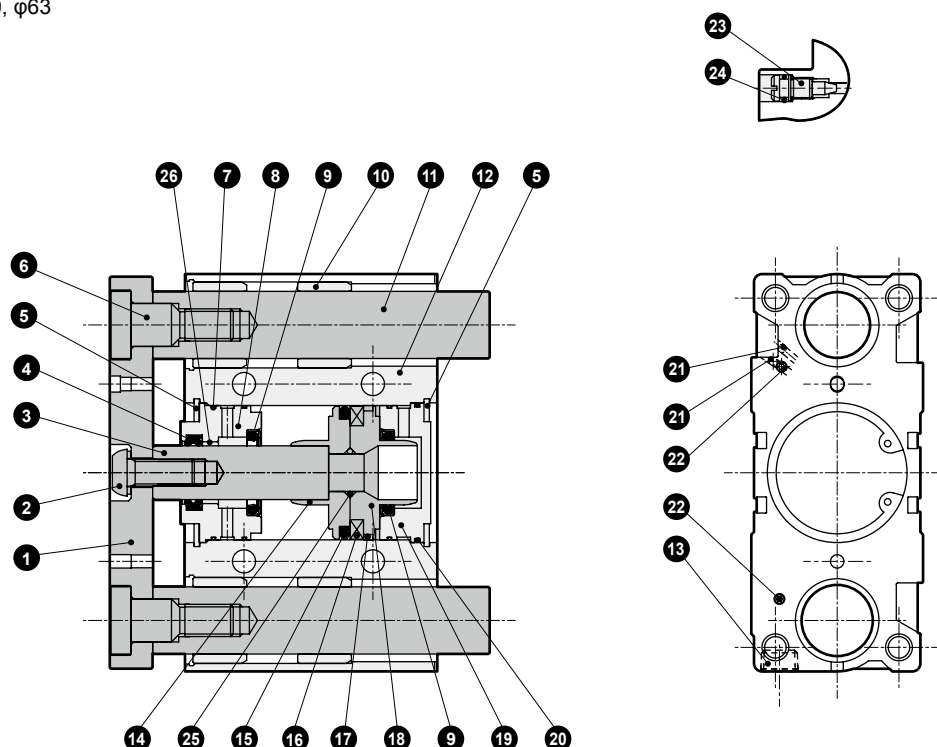


· Over 200 stroke length ($\phi 20$, $\phi 25$, $\phi 32$, $\phi 40$)



Internal structure and parts list (STG-MC-50, 63)

● $\phi 50$, $\phi 63$



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	End plate	Steel	Nickeling	12	Cylinder body	Aluminum alloy	Hard alumite
2	Hexagon socket head cap screw ($\phi 16$) Hex socket button head bolt ($\phi 20$ to $\phi 63$)	Alloy steel	Zinc chromate	13	Plug	Copper alloy or steel	
		Alloy steel	Zinc chromate	14	Piston (R)	Aluminum alloy	Chromate ($\phi 16$ to $\phi 32$)
3	Piston rod	Stainless steel ($\phi 16$ to $\phi 25$)	Industrial chrome plating	15	Piston packing	Nitrile rubber	
		Steel ($\phi 32$ to $\phi 63$)	Industrial chrome plating	16	Magnet	Plastic	
4	Rod packing	Nitrile rubber		17	Wear ring	Acetal resin	
5	C type snap ring	Steel	Zinc phosphate	18	Piston (H)	Aluminum alloy	Chromate ($\phi 16$ to $\phi 32$)
6	Bolt	Alloy steel	Zinc chromate	19	Base plate	Aluminum alloy	Chromate
7	Metal gasket	Nitrile rubber		20	O-ring	Nitrile rubber	
8	Rod metal	Special aluminum alloy ($\phi 16$ to $\phi 32$)	Alumite	21	Steel ball	Stainless steel	
		Aluminum alloy ($\phi 40$ to $\phi 63$)	Chromate	22	Hexagon socket set screw	Stainless steel	
9	Cushion packing	Nitrile rubber/steel		23	Cushion needle	Copper alloy	
10	Metal	Oil impregnated bearing alloy		24	Needle gasket	Nitrile rubber	
11	Guide rod	Stainless steel ($\phi 16$)	Industrial chrome plating	25	Piston gasket	Nitrile rubber	
		Steel ($\phi 20$ to $\phi 63$)	Industrial chrome plating	26	Bush	Oiles drymet ($\phi 40$ to $\phi 63$)	

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
	STG-M/B	
$\phi 16$	STG-C-16K	
$\phi 20$	STG-C-20K	
$\phi 25$	STG-C-25K	
$\phi 32$	STG-C-32K	
$\phi 40$	STG-C-40K	
$\phi 50$	STG-C-50K	
$\phi 63$	STG-C-63K	

Note: For support of new and old products, both sizes are available for
 20 O-rings of $\phi 20$ to $\phi 50$.
 For complete replacement, note that 2 will be left over.

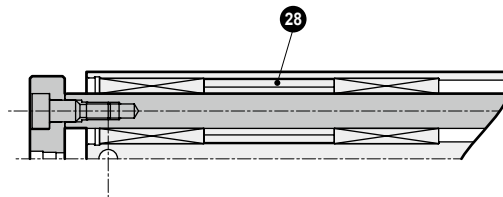
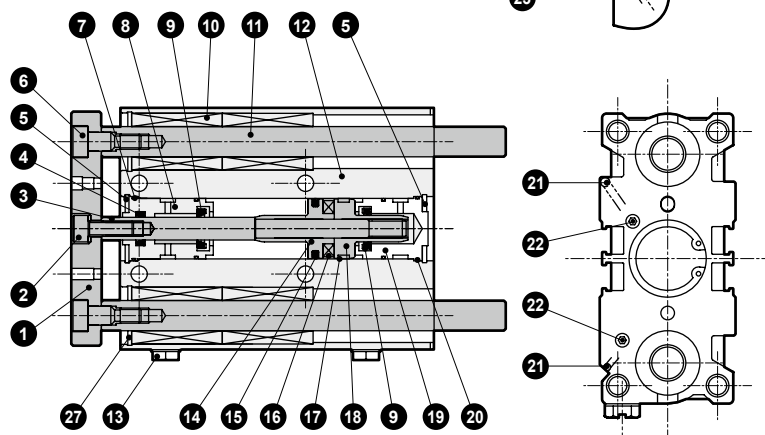
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list (STG-BC-16 to 40)

● $\phi 16$

· Over 25 to 100 stroke length

· Over 100 stroke length



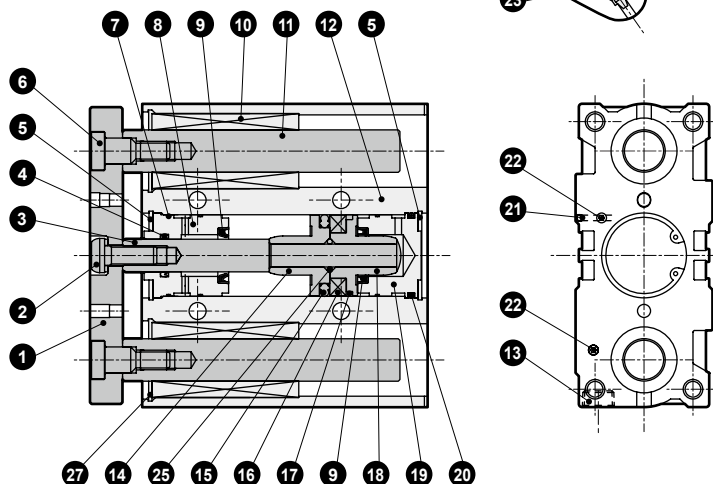
● $\phi 20$ to $\phi 40$

· 25 stroke length ($\phi 20$, $\phi 25$)

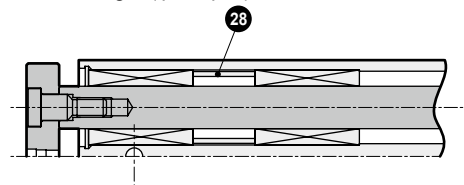
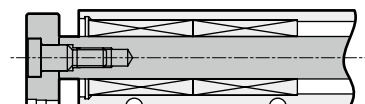
· 100 mm stroke length or less ($\phi 32$, $\phi 40$)

· Over 25 to 100 stroke length ($\phi 20$)

· Over 25 to 75 stroke length ($\phi 25$)

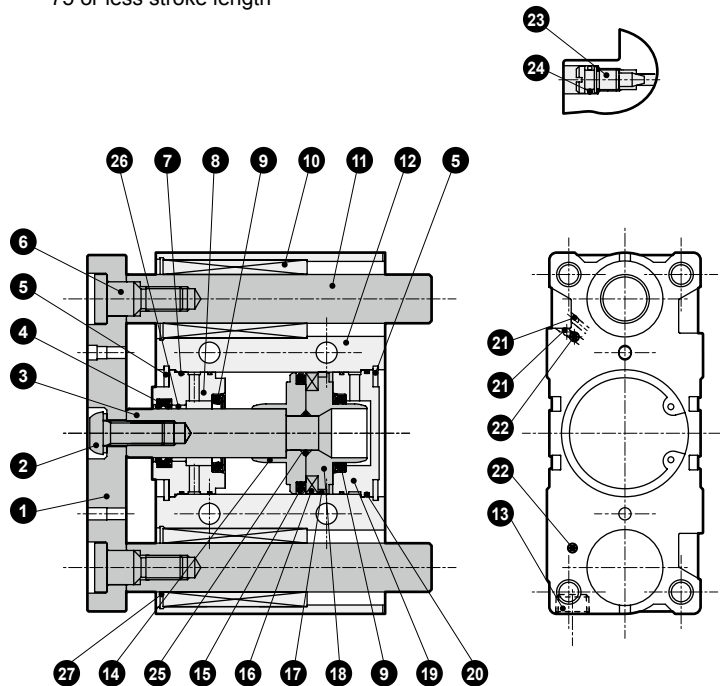


· Over 100 stroke length ($\phi 20$)
· Over 75 stroke length ($\phi 25$)
· Over 100 stroke length ($\phi 32$, $\phi 40$)

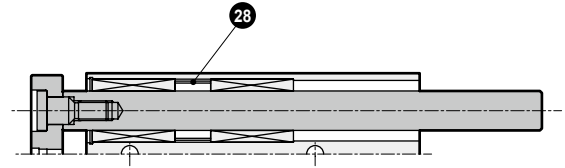


Internal structure and parts list (STG-BC-50, 63)

- $\phi 50$, $\phi 63$
- 75 or less stroke length



- Over 75 stroke length



No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	End plate	Steel	Nickeling	14	Piston (R)	Aluminum alloy	Chromate ($\phi 16$ to $\phi 32$)
2	Hex socket head cap screw ($\phi 12$ to $\phi 16$)	Alloy steel	Zinc chromate	15	Piston packing	Nitrile rubber	
	Hex socket button head bolt ($\phi 20$ to $\phi 63$)	Alloy steel	Zinc chromate	16	Magnet	Plastic	
3	Piston rod	Stainless steel ($\phi 16$ to $\phi 25$)	Industrial chrome plating	17	Wear ring	Acetal resin	
		Steel ($\phi 32$ to $\phi 63$)	Industrial chrome plating	18	Piston (H)	Aluminum alloy	Chromate ($\phi 16$ to $\phi 32$)
4	Rod packing	Nitrile rubber		19	Base plate	Aluminum alloy	Chromate
5	C type snap ring	Steel	Zinc phosphate	20	O-ring	Nitrile rubber	
6	Bolt	Alloy steel	Zinc chromate	21	Steel ball	Stainless steel	
7	Metal gasket	Nitrile rubber		22	Hexagon socket set screw	Stainless steel	
8	Rod metal	Special aluminum alloy ($\phi 16$ to $\phi 32$)	Alumite	23	Cushion needle	Copper alloy	
		Aluminum alloy ($\phi 40$ to $\phi 63$)	Chromate	24	Needle gasket	Nitrile rubber	
9	Cushion packing	Nitrile rubber/steel		25	Piston gasket	Nitrile rubber	
10	Ball bushing			26	Bush	Oiles drymet ($\phi 40$ to $\phi 63$)	
11	Guide rod	Alloy steel	Industrial chrome plating	27	C type snap ring	Steel	Zinc phosphate
12	Cylinder body	Aluminum alloy	Hard alumite	28	Collar	Aluminum alloy	
13	Plug	Copper alloy or steel					

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
$\phi 16$	STG-C-16K	
$\phi 20$	STG-C-20K	
$\phi 25$	STG-C-25K	
$\phi 32$	STG-C-32K	
$\phi 40$	STG-C-40K	
$\phi 50$	STG-C-50K	
$\phi 63$	STG-C-63K	



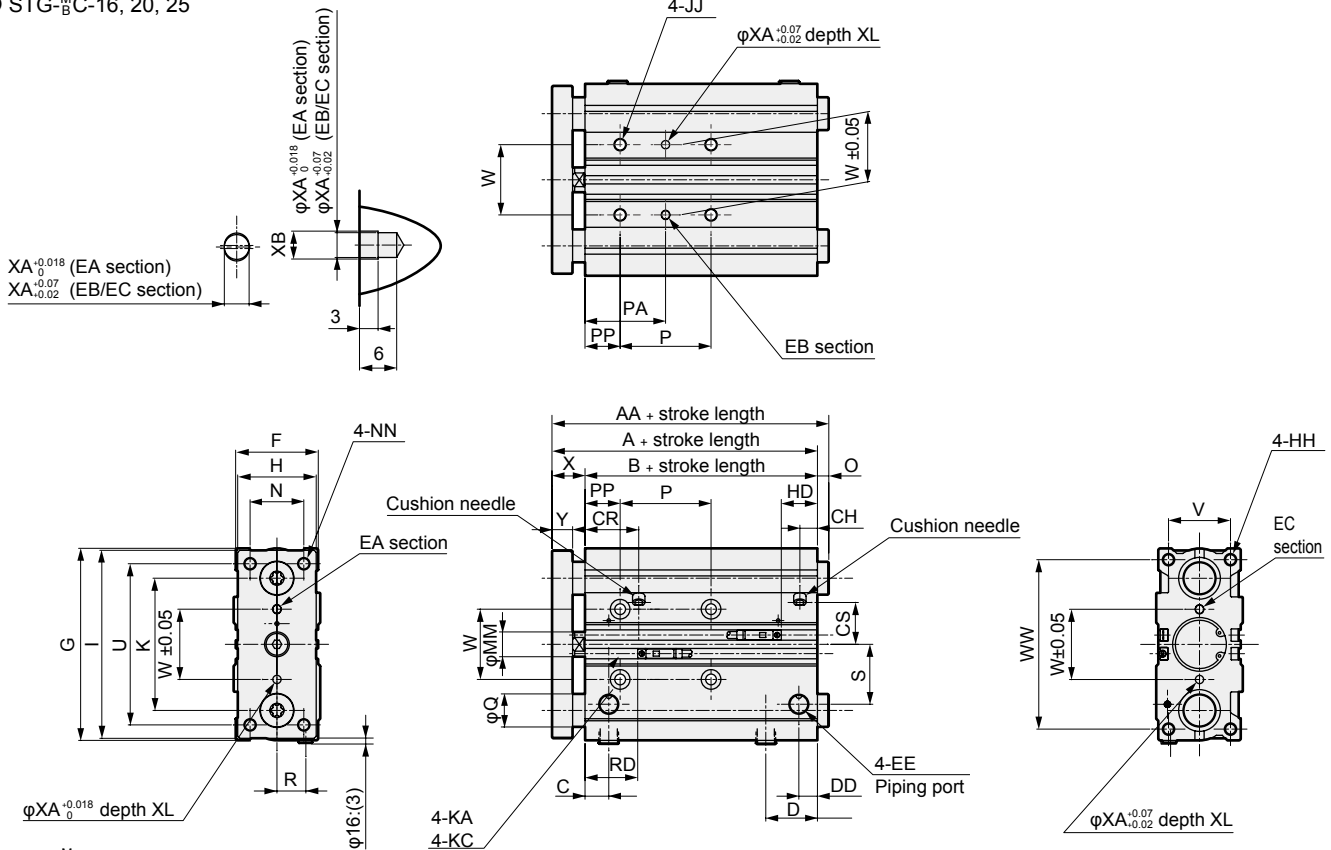
Note: For support of new and old products, both sizes are available for
 ● O-rings of $\phi 20$ to $\phi 50$.
 For complete replacement, note that 2 will be left over.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Dimensions (φ16, φ20, φ25)

● STG-MC-16, 20, 25



● STG-MC common

Code	Standard stroke length (mm)	A	B	C	D	DD	EE	F	G	H	HH	I	JJ	K	KA
φ16	25,50,75,100,125,150,175,200,250	71	58	12	18	7.5	M5	30	64	25	M5 depth 12	62	M5 depth 10	46	4.3 through
φ20	25,50,75,100,125,150	78	62	10.5	24.5	8.5	Rc1/8	36	83	30	M5 depth 13	81	M6 depth 12	54	5.2 through
φ25	175,200,250,300,350,400	78.5	62.5	11.5	25	9	Rc1/8	42	93	38	M6 depth 15	91	M6 depth 12	64	5.2 through

Code	MM	N	NN	KC	P				PA				PP	R	S
Bore size (mm)					75 st or less	Over 75 st to 175 st	>175 st, ≤250 st	>250 st, ≤400 st	75 st or less	Over 75 st to 175 st	>175 st, ≤250 st	>250 st, ≤400 st			
φ16	6	16	M5 through	8 spot face depth 4.5	44	110	200	-	27	60	105	-	5	10	18
φ20	8	18	M5 through	9.5 spot face depth 5.5	44	120	200	300	39	77	117	167	17	11	25
φ25	10	26	M6 through	9.5 spot face depth 5.5	44	120	200	300	39	77	117	167	17	14	29

Code	U	V	W	WW	X	Y	T0/T5/T2/T3		T2W/T3W		XA	XB	CR	CH	CS
Bore size (mm)							RD	HD	RD	HD					
φ16	54	22	24	56	13 ^{0.15}	7.5	20.5	18	22.5	20	3	3.5	23.5	9	16
φ20	70	24	28	72	16 ^{0.2}	9.5	23.5	19.5	25.5	21.5	3	3.5	25	11	19
φ25	78	30	34	82	16 ^{0.2}	9.5	25.5	17.5	27.5	19.5	4	4.5	26	8.5	20

● STG-MC

Code	AA					Q	O				
Bore size (mm)	25 st or less	Over 25 st to 50 st	Over 50 st to 100 st	>100 st, ≤200 st	Over 200 st		25 st or less	Over 25 st to 50 st	Over 50 st to 100 st	>100 st, ≤200 st	Over 200 st
φ16	71	88	71	95	95	10	0	17	0	24	24
φ20	78	84.5	79	79	122	12	0	6.5	1	1	44
φ25	78.5	84	84	84	122	16	0	5.5	5.5	5.5	43.5

● STG-BC

Code	AA					Q	O				
Bore size (mm)	25 st or less	Over 25 st to 75 st	100st	>100 st, ≤200 st	Over 200 st		25 st or less	Over 25 st to 75 st	100st	>100 st, ≤200 st	Over 200 st
φ16	80	71	71	95	95	8	9	0	0	24	24
φ20	93	79	79	100	122	10	15	1	1	22	44
φ25	99	84	103	103	122	13	20.5	5.5	24.5	24.5	43.5

*1: Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, T1H/V and T8H/V switches.

STG- $\frac{M}{B}$ C-32, 40, 50, 63

$XA_{-0.07}^{+0.018}$ (EA section)
 $XA_{-0.02}^{+0.07}$ (EB/EC section)

$\phi XA_{-0.018}^{+0.018}$ (EA section)
 $\phi XA_{-0.02}^{+0.07}$ (EB/EC section)

EA/EB/EC section slot dimensions

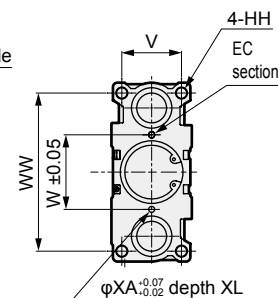
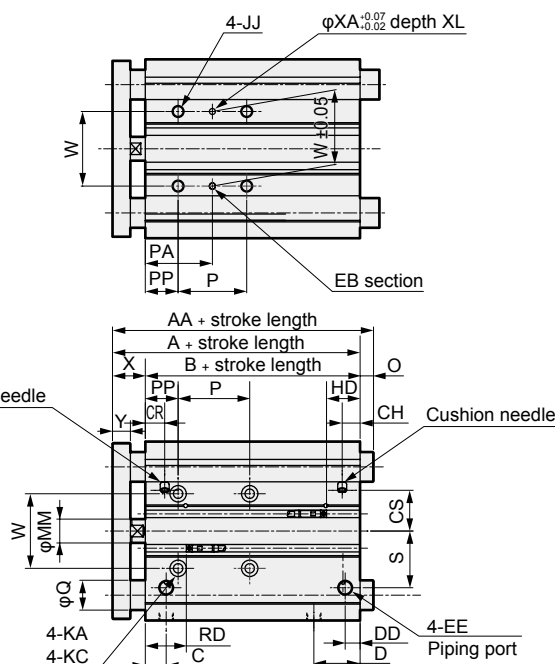
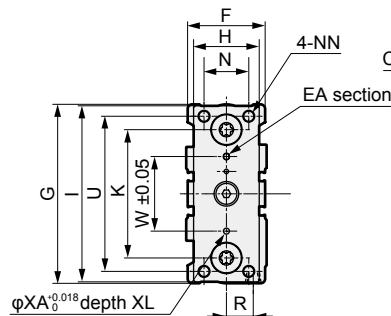


Table 3-10: Summary																		
Code		Standard stroke length (mm)			A	B	C	D	DD	EE	F	G	H	HH	I	JJ	K	KA
Bore size (mm)																		
φ32		25,50,75,100,125, 150,175,200,250, 300,350,400			84.5	62.5	12.5	30.5	9	Rc1/8	48	112	44	M8 depth 20	110	M8 depth 16	78	6.3 through
φ40					91	69	14	31	10	Rc1/8	54	120	44	M8 depth 20	118	M8 depth 16	86	6.3 through
φ50					97	69	14	35	11	Rc1/4	64	148	60	M10 depth 22	146	M10 depth 20	110	8.6 through
φ63					102	74	16.5	35	15	Rc1/4	78	162	70	M10 depth 22	158	M10 depth 20	124	8.6 through
Code		KC		MM	N	NN	P				PA				PP	R	S	U
Bore size (mm)							75 st or less	Over 75 st to 175 st	>175 st, ≤250 st	Over 250 st	75 st or less	Over 75 st to 175 st	>175 st, ≤250 st	Over 250 st				
φ32		11 spot face depth 7.5	12	30	M8 through	48	124	200	300	45	83	121	171	21	15	34	96	
φ40		11 spot face depth 7.5	16	30	M8 through	48	124	200	300	46	84	122	172	22	18	38	104	
φ50		14 spot face depth 9	20	40	M10 through	48	124	200	300	48	86	124	174	24	21.5	47	130	
φ63		14 spot face depth 9	20	50	M10 through	52	128	200	300	50	88	124	174	24	28	55	130	
Code		V	W	WW	X	Y	T0/T5/T2/T3		T2W/T3W		XA	XB	XC	XL	CR	CH	CS	
Bore size (mm)							RD	HD	RD	HD								
φ32		34	42	98	22 ^ø _{±0.02}	11.5	23.5	20	25.5	22	4	4.5	3	6	12.5	9.2	25	
φ40		40	50	106	22 ^ø _{±0.02}	11.5	27.5	22.5	29.5	24.5	4	4.5	3	6	13	12	27.5	
φ50		46	66	130	28 ^ø _{±0.02}	15.5	30	20.5	32	22.5	5	6	4	8	15	12.5	39.5	
φ63		58	80	142	28 ^ø _{±0.02}	15.5	31	24	33	26	5	6	4	8	32.5	31.5	45.5	

Code	AA				Q	O			
Bore size (mm)	25st	50st	Over 50 st to 200 st	Over 200 st		25st	50st	Over 50 st to 200 st	Over 200 st
φ32	84.5	125	100	140	20	0	40.5	15.5	55.5
φ40	91	125	100	140	20	0	34	9	49
φ50	97	116	116	161	25	0	19	19	64
φ63	102	116	116	161	25	0	14	14	59

*1: Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, T1H/V and T8H/V switches.

Code	AA						Q	O					
Bore size (mm)	25st	50st	75st	100st	>100 st, ≤200 st	Over 200 st		25st	50st	75st	100st	>100 st, ≤200 st	Over 200 st
φ32	84.5	123	98	98	118	140	16	0	38.5	13.5	13.5	33.5	55.5
φ40	91	123	98	98	118	140	16	0	32	7	7	27	49
φ50	97	114	114	159	134	161	20	0	17	17	62	37	64
φ63	102	114	114	159	134	161	20	0	12	12	57	32	59

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USD
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Endint

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

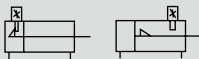


Guided cylinder, double acting/position locking

STG-M^BQ Series

● Bore size:φ20/φ25/φ32/φ40/φ50/φ63

JIS symbol



Specifications

Descriptions		STG-M/BQ					
Bore size	mm	φ20	φ25	φ32	φ40	φ50	φ63
Actuation		Double acting/position locking					
Working fluid		Compressed air					
Max. working pressure	MPa	1.0 (≈150 psi, 10 bar)					
Min. working pressure	MPa	0.2 (≈29 psi, 2 bar)		0.15 (≈22 psi, 1.5 bar)			
Proof pressure	MPa	1.6 (≈230 psi, 16 bar)					
Ambient temperature	°C	-10 (14°F) to 60 (140°F) (no freezing)					
Port size		Rc1/8				Rc1/4	
Stroke tolerance	mm	+2.0					
		0					
Working piston speed	mm/s	50 to 500					50 to 300
Cushion		With rubber cushion					
Position locking mechanism		Rod side or head side					
Holding force		Max. thrust x 0.7					
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					
Allowable absorbed energy	J	0.157	0.157	0.401	0.627	0.980	1.560

Stroke length

Bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke (mm)/(switch)
φ20	25/50/75/100 125/150/175 200/250/300 350/400	400	5	Refer to Table 1
φ25				
φ32				
φ40				
φ50				
φ63				

*1: The custom stroke length is available in 5mm increments. However, the total length is the same as that of the next longer standard stroke length.

Table 1

	1-color display (excluding T1) T0/T5/T2/T3/T3P	2-color display, strong magnetic field proof T1/T ² ₃ Y/T2J/T2YD/T2YDT
Axial lead wire T*H	20	30
Radial lead wire T*V	5	15

*2: For types with one or two switches.

Be sure to read the “Safety precautions” Position locking on pages 423 to 425 before use.

Switch specifications

- 1-color/2-color display/for AC magnetic field proof

Descriptions	Proximity 2-wire		Proximity 2-wire			Proximity 3-wire				Reed 2-wire							Proximity 2-wire
	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/T3PV (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V			T2YD	
Applications	For programmable controller, relay, compact solenoid valve		Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For program controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay			For programmable controller
Output method	-				NPN output	PNP output	NPN output	NPN output	-								
Pwr. supp. V.	-				10 to 28 VDC				-								
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%	
Load current	5 to 100 mA		5 to 20 mA (*2)		100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	≤50 mA	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA	
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)	
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC		1 mA or less			10 µA or less				0 mA							1 mA or less
Weight g	1 m:33	1 m:18	1 m:33	1 m:18	1 m:18		1 m:33	1 m:18	1 m:18 3 m:49 5 m:80				1 m:33 3 m:87 5 m:142			1 m:61	
	3 m:87	3 m:49	3 m:87	3 m:49	3 m:49		3 m:87	3 m:49								3 m:166	
	5 m:142	5 m:80	5 m:142	5 m:80	5 m:80		5 m:142	5 m:80								5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.

*2 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*3 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.

*4 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.

*5 : Dimensions depend on switch model No. Refer to Ending Page 18 for details.

Cylinder weight

- STG-MQ

Unit: kg

Descriptions	Stroke length												Switch weight
Bore size (mm)	25	50	75	100	125	150	175	200	250	300	350	400	
φ20	0.71	1.15	1.35	1.54	1.73	1.92	2.12	2.35	2.77	3.15	3.54	3.92	Refer to the weight in the switch specifications.
φ25	1.00	1.63	1.90	2.16	2.43	2.69	2.95	3.27	3.85	4.38	4.91	5.43	
φ32	2.06	2.60	2.99	3.39	3.78	4.18	4.57	5.06	5.94	6.73	7.52	8.30	
φ40	2.38	2.83	3.24	3.66	4.06	4.48	4.89	5.39	6.32	7.15	7.97	8.79	
φ50	4.02	4.72	5.34	5.96	6.59	7.21	7.83	8.61	10.01	11.25	12.51	13.77	
φ63	5.01	5.82	6.56	7.29	8.02	8.75	9.49	10.38	12.00	13.45	14.91	16.36	

- STG-BQ

Unit: kg

Descriptions	Stroke length												Switch weight
Bore size (mm)	25	50	75	100	125	150	175	200	250	300	350	400	
φ20	0.74	1.13	1.29	1.50	1.66	1.84	2.00	2.19	2.54	2.88	3.22	3.56	Refer to the weight in the switch specifications
φ25	1.03	1.56	1.79	2.05	2.27	2.50	2.72	2.96	3.43	3.88	4.33	4.78	
φ32	1.85	2.29	2.60	2.96	3.27	3.57	3.88	4.22	4.86	5.47	6.08	6.69	
φ40	2.18	2.65	3.00	3.40	3.75	4.10	4.45	4.84	5.56	6.26	6.96	7.66	
φ50	3.69	4.41	4.95	5.57	6.10	6.63	7.17	8.27	8.90	9.97	11.06	12.13	
φ63	4.66	5.51	6.15	6.89	7.53	8.18	8.82	9.51	10.88	12.19	13.45	14.71	

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
φ20	Push	-	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
φ25	Push	-	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
φ32	Push	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
φ40	Push	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
φ50	Push	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
φ63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3

How to order

Without switch (built-in magnet for switch)

STG - M - Q - 32 - 25 - H - M1

With switch (built-in magnet for switch)

STG - M - Q - 32 - 25 - H - T2H - R - M1

Model No.

Position locking

A Bearing

B Bore size

C Port thread

D Stroke length

E Position locking mechanism

F Switch model No.
*1, *2, *3, *4, *6

⚠ Precautions for model No. selection

*1 : Switches other than F Switch model No. are also available. (Custom order product) Refer to Ending Page 1 for details.

*2 : T8H/V switch cannot be installed on STG-Q.

*3 : Note that the min. stroke length varies depending on the switch.

*4 : In some cases, a switch cannot be inserted from the rod side of the head side position locking of 25 mm or less stroke length.

In this case, temporarily remove the end plate and install the switch.

Contact CKD to inquire about the removal and assembling method of the end plate.

*5 : Only non-locking manual override is available if "M0" or "M1" of H Option is not selected. Release bolt is not included.

*6 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

STG-BQ-50-75-H-T0H-D-M0

Model: Guided cylinder Double acting/position locking

- A Bearing : Ball bearing
- B Bore size : φ50 mm
- C Port thread : Rc thread
- D Stroke length : 75 mm
- E Position locking mechanism : Head side position locking mechanism
- F Switch model No. : Reed T0H switch, lead wire length 1 m
- G Switch quantity : 2
- H Option : Non-locking manual override

Code		Content				
A Bearing						
M	Metal bush bearing					
B	Ball bearing					
B Bore size (mm)						
20	φ20					
25	φ25					
32	φ32					
40	φ40					
50	φ50					
63	φ63					
C Port thread						
Blank	Rc thread					
NN	NPT thread (custom order product)					
GN	G thread (custom order product)					
D Stroke length (mm)						
Refer to the stroke length table on the following page						
E Position locking mechanism						
H	Head side position locking mechanism					
R	Rod side position locking mechanism					
F Switch model No.						
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
			AC	DC		
T0H*	T0V*	Reed	●	●	1-color display	2-wire
T5H*	T5V*		●	●	Without indicator lamp	
T1H*	T1V*		●		1-color display	2-wire
T2H*	T2V*			●	1-color display	
T3H*	T3V*			●	1-color display (custom)	3-wire
T3PH*	T3PV*	Proximity		●	2-color display	2-wire
T2WH*	T2WV*			●		
T2YH*	T2YV*			●		3-wire
T3WH*	T3WV*			●		
T3YH*	T3YV*			●	1-color display off-delay	2-wire
T2JH*	T2JV*			●	2-color display	2-wire
T2YD*	-			●	for AC magnetic field	
T2YDT*	-			●		
* Lead wire length						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					
G Switch quantity						
R	1 on rod side					
H	1 on head side					
D	2					
T	3					
H Option						
M0	Non-locking manual override (with release bolt)					
M1	Locking manual override					

G Switch quantity

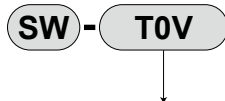
H Option
*5

D Stroke length

Stroke length (mm)		Applicable bore size					
		φ20	φ25	φ32	φ40	φ50	φ63
Standard stroke length	25	●	●	●	●	●	●
	50	●	●	●	●	●	●
	75	●	●	●	●	●	●
	100	●	●	●	●	●	●
	125	●	●	●	●	●	●
	150	●	●	●	●	●	●
	175	●	●	●	●	●	●
	200	●	●	●	●	●	●
	250	●	●	●	●	●	●
	300	●	●	●	●	●	●
	350	●	●	●	●	●	●
	400	●	●	●	●	●	●
Min. stroke length	*2	Refer to page 368.					
Custom stroke length	*1	In 5 mm increments					

*1: The total dimensions are the same as the longer standard stroke length.

How to order switch



Switch model No.
(Item ⑥ on the previous page)

Note: Contact CKD when using
an environment-friendly T switch.

Specifications for rechargeable battery

(Catalog No. CC-1226A)

- Design compatible with rechargeable battery manufacturing process.

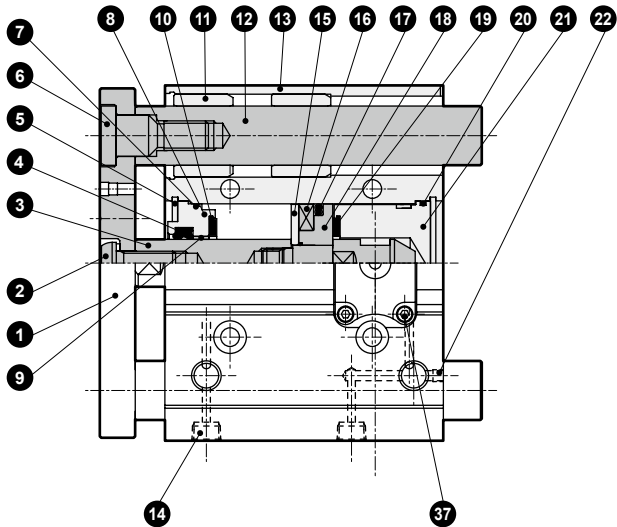
STG-^M_BQ - - P4*

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

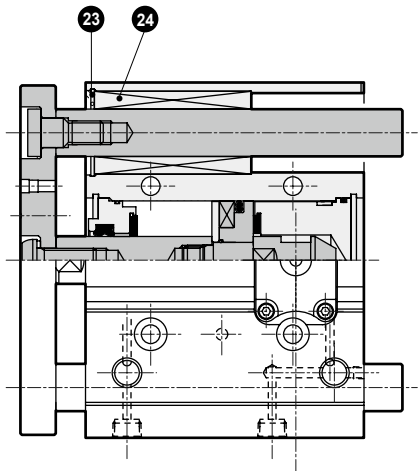
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list

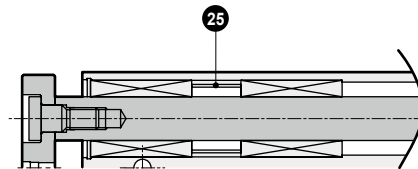
● Metal bush bearing STG-MQ



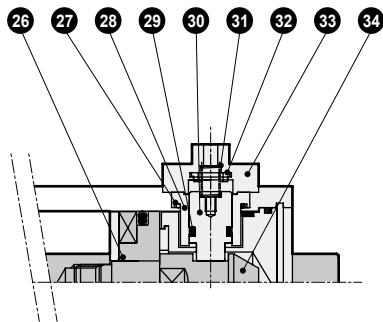
● Ball bearing STG-BQ



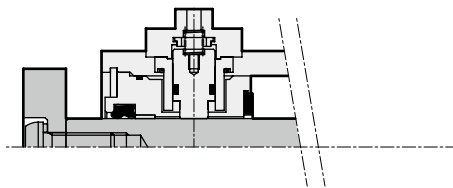
· 100 and over stroke length



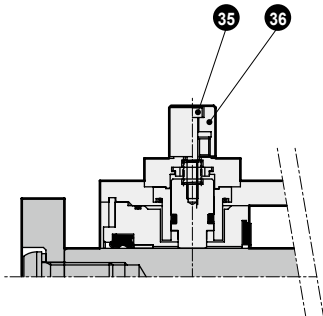
● Head side position locking STG- Q-H_B



● Rod side position locking STG- Q-R_B



● Locking manual override (M1)



Parts list

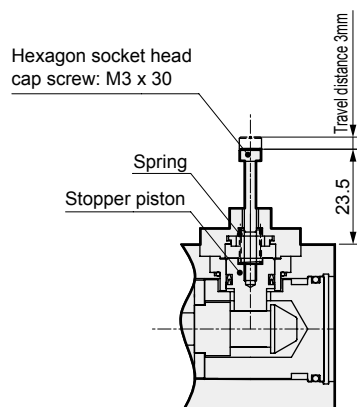
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	End plate	Steel	Nickeling	19	Cushion rubber	Urethane rubber	
2	Hexagon socket button head bolt	Alloy steel	Zinc chromate	20	O-ring	Nitrile rubber	
3	Piston rod	Stainless steel (φ20 to φ25)	Industrial chrome plating	21	Head cover	Aluminum alloy	Chromate
		Steel (φ32 to φ63)	Industrial chrome plating	22	Hexagon socket set screw	Stainless steel	
4	Rod packing	Nitrile rubber		23	C type snap ring	Steel	Zinc phosphate
5	C type snap ring	Steel	Zinc phosphate	24	Ball bushing		
6	Bolt	Alloy steel	Zinc chromate	25	Collar	Aluminum alloy	
7	Metal gasket	Nitrile rubber		26	O-ring	Nitrile rubber	
8	Rod metal	Special aluminum alloy (φ20 to φ25)	Alumite	27	O-ring	Nitrile rubber	
		Aluminum alloy (φ40 to φ63)	Chromate	28	Stopper housing	Aluminum alloy (φ20 to φ50)	Alumite
9	Bush	Oiles drymet	H: φ40 and over R: φ32 and over			Alloy steel (φ63)	Chromate
10	Cushion rubber	Urethane rubber		29	Stopper packing	Nitrile rubber	
11	Metal	Oil impregnated bearing alloy		30	Stopper piston	Steel	Nitriding
12	Guide rod	Steel	Industrial chrome plating	31	Coil spring	Steel	Paint
13	Cylinder body	Aluminum alloy	Hard alumite	32	Cushion rubber	Urethane rubber	
14	Plug	Steel	Nickeling	33	Stopper cover	Aluminum alloy	Chromate
15	Spacer	Aluminum alloy	Chromate	34	Sleeve	Steel	Nitriding
16	Magnet	Plastic		35	Hexagon socket head cap screw	Alloy steel	
17	Piston packing	Nitrile rubber		36	Round nut	Aluminum alloy	
18	Piston	Aluminum alloy	Chromate	37	Hexagon socket head cap screw	Alloy steel	

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
φ20	STG-Q-H-20K STG-Q-R-20K	
φ25	STG-Q-H-25K STG-Q-R-25K	4 7 10 17 19 20 27 29 32
φ32	STG-Q-32K	
φ40	STG-Q-40K	
φ50	STG-Q-50K	
φ63	STG-Q-63K	

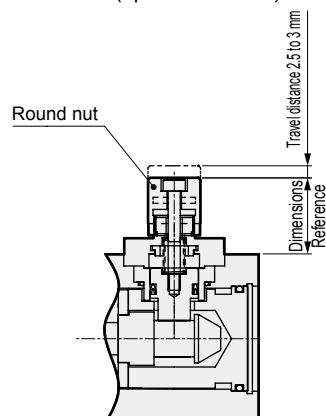
[Explanation of manual override]

● Non-locking manual override (option code: M0)



By screwing the hexagon socket head cap screw (M3 x 30) into the stopper piston and pulling the bolt with force of 20 N or more, the stopper piston moves and the lock is released. (Carry out work when the cylinder is horizontally installed with no load or when the opposite side port is pressurized.) When the bolt is released from the hand, the stopper piston is returned to the original position by the built-in spring and engaged in the groove, and the piston is locked.

● Locking manual override (option code: M1)



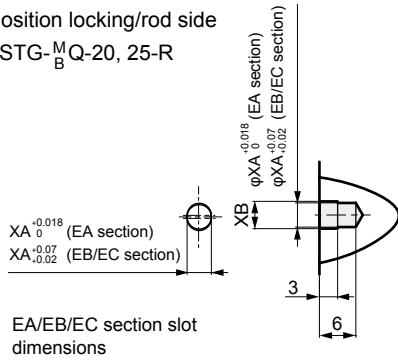
By rotating the round nut leftward (counterclockwise), the stopper piston moves and the lock is released. Locking the round nut by rotating it to the right (clockwise) causes the stopper piston to return. When it fits into the lock groove, the piston is locked. When locking, screw in the round nut fully, since the cylinder may be damaged if the stopper piston is not securely locked in the groove.

Dimensions

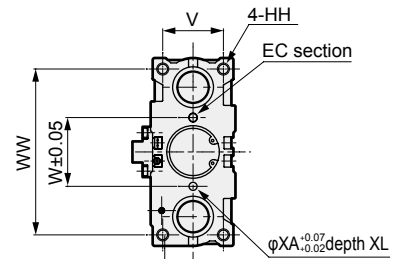
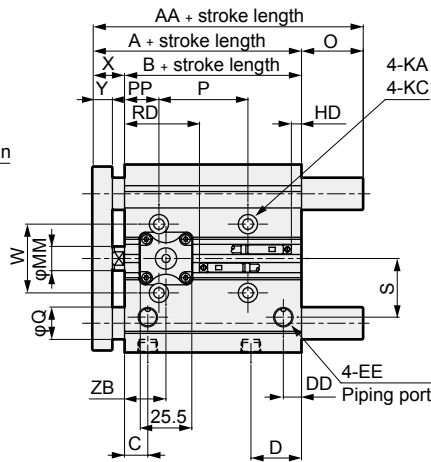
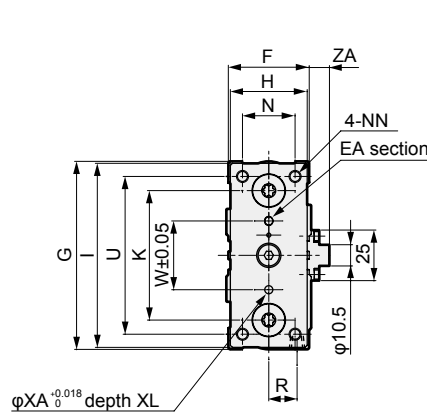
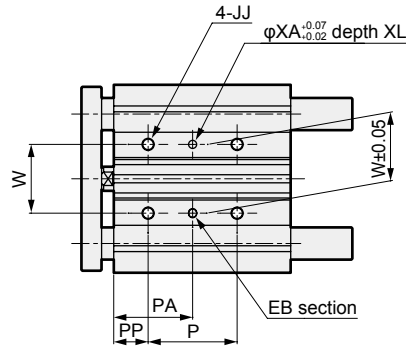


● Position locking/rod side

·STG-M_BQ-20, 25-R

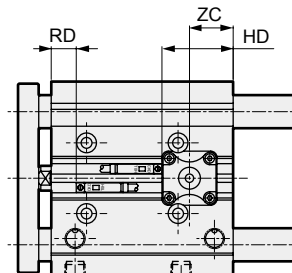


EA/EB/EC section slot dimensions

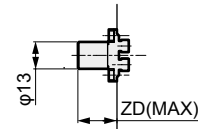


● Position locking/head side

·STG-M_BQ-20, 25-H



·Locking manual (M1)



*1 : When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

*2 : Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, and T1H/V switches.

● STG-M_BQ common

Code	Standard stroke length (mm)	A	B	C	D	DD	EE	F	G	H	HH	I	JJ	K	KA
φ20	25,50,75,100,125,150	78	62	10.5	24.5	8.5	Rc1/8	36	83	30	M5 depth 13	81	M6 depth 12	54	5.2 through
φ25	175,200,250,300,350,400	78.5	62.5	11.5	25	9	Rc1/8	42	93	38	M6 depth 15	91	M6 depth 12	64	5.2 through

Code	MM	N	NN	KC	P				PA				PP	R	S
Bore size (mm)					75 st or less	Over 75 st to 175 st	>175 st, ≤250 st	Over 250 st	75 st or less	Over 75 st to 175 st	>175 st, ≤250 st	Over 250 st			
φ20	10	18	M5 through	9.5 spot face depth 5.5	44	120	200	300	39	77	117	167	17	11	25
φ25	12	26	M6 through	9.5 spot face depth 5.5	44	120	200	300	39	77	117	167	17	14	29

Code	U	V	W	WW	X	Y	XA	XB	Position locking mechanism				Head side position locking				Rod side position locking			
Bore size (mm)									ZA	ZB	ZC	ZD	T0/T5/T2/T3	T2W/T3W	T0/T5/T2/T3	T2W/T3W	RD	HD	RD	HD
φ20	70	24	28	72	16 ± 0.2	9.5	3	3.5	11	20	23	23	9.5	36	8.5	41	34.5	8.5	36.5	10.5
φ25	78	30	34	82	16 ± 0.2	9.5	4	4.5	9	20.5	21	21	10	34	12	36	35	8.5	37	10.5

● STG-MQ

Code	AA			Q	O		
Bore size (mm)	25 st or less	Over 25 st to 175 st	Over 175 st		25 st or less	Over 25 st to 175 st	Over 175 st
φ20	78	84.5	122	12	0	6.5	44
φ25	78.5	84	122	16	0	5.5	43.5

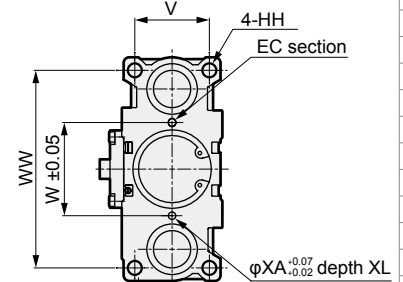
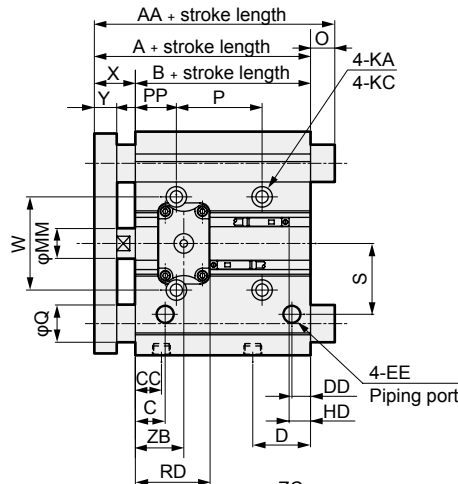
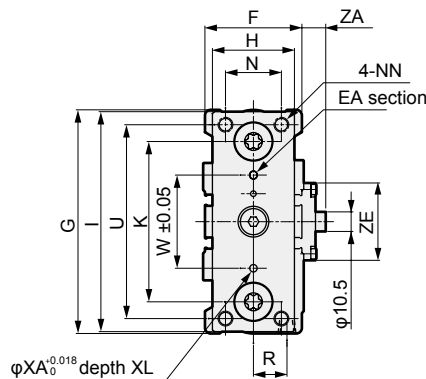
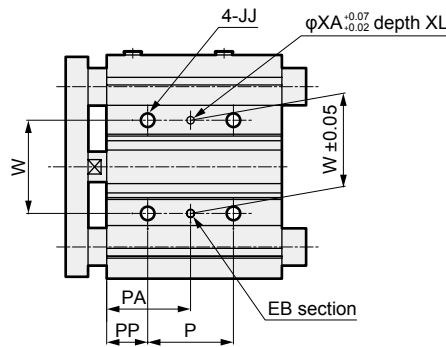
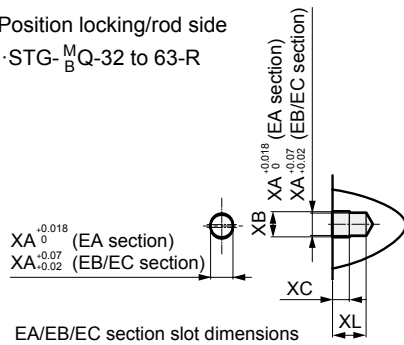
● STG-BQ

Code	AA			Q	O		
Bore size (mm)	75 st or less	Over 75 st to 175 st	Over 175 st		75 st or less	Over 75 st to 175 st	Over 175 st
φ20	80	100	122	10	2	22	44
φ25	84	103	122	13	5.5	24.5	43.5

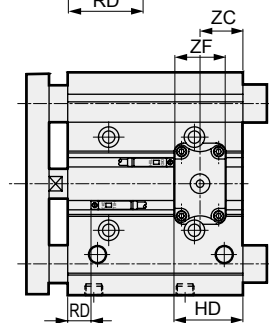
Dimensions



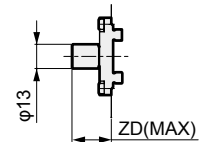
- Position locking/rod side
·STG-M_BQ-32 to 63-R



- Position locking/head side
·STG-M_BQ-32 to 63-H



·Locking manual (M1)



- STG-M_BQ common
- *1 : When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.
- *2 : Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, T1H/V switches.

Code	Standard stroke length (mm)					A	B	C	D	DD	EE	F	G	H	HH	I	JJ	K						
Bore size (mm)	25,50,75,100,125, 150,175,200,250, 300,350,400					84.5	62.5	12.5	30.5	9	Rc1/8	48	112	44	M8 depth 20	110	M8 depth 16	78						
φ32						91	69	14	31	10	Rc1/8	54	120	44	M8 depth 20	118	M8 depth 16	86						
φ40						97	69	14	35	11	Rc1/4	64	148	60	M10 depth 22	146	M10 depth 20	110						
φ50						102	74	16.5	35	15	Rc1/4	78	162	70	M10 depth 22	158	M10 depth 20	124						
φ63																								
Code	KA		KC		MM	N	NN		P				PA				PP		R	S				
Bore size (mm)									75 st or less	Over 75 st to 175 st	Over 175 st to 275 st	Over 275 st	75 st or less	Over 75 st to 175 st	Over 175 st to 275 st	Over 275 st								
φ32	6.3 through	11 spot face depth 7.5	16		30	M8 through		48	124	200	300	45	83	121	171	21	15	34						
φ40	6.3 through	11 spot face depth 7.5	16		30	M8 through		48	124	200	300	46	84	122	172	22	18	38						
φ50	8.6 through	14 spot face depth 9	20		40	M10 through		48	124	200	300	48	86	124	174	24	21.5	47						
φ63	8.6 through	14 spot face depth 9	20		50	M10 through		52	128	200	300	50	88	124	174	24	28	55						
Code											Position locking mechanism						Head side position locking				Rod side position locking			
Bore size (mm)	U	V	W	WW	X	Y	XA	XB	XC	XL	ZA	ZB	ZC	ZD	ZE	ZF	T0/T5/T2/T3	T2W/T3W	T0/T5/T2/T3	T2W/T3W				
φ32	96	34	42	98	22 ⁰ / ₂	11.5	4	4.5	3	6	10	21	21	23.5	33.5	26.5	10	34.5	10.5	37	35	8.5	37	10.5
φ40	104	40	50	106	22 ⁰ / ₂	11.5	4	4.5	3	6	12	26	23	23.5	41.5	27	13	37	14	42	40	12	42	14
φ50	130	46	66	130	28 ⁰ / ₂	15.5	5	6	4	8	12	25	23	24.5	41.5	27	13.5	37	13.5	41	39	11.5	41	13.5
φ63	130	58	80	142	28 ⁰ / ₂	15.5	5	6	4	8	11.5	25	25.5	24	41.5	27	14	40	18	41	39	16	41	18

- STG-MQ

Code		AA			Q	O		
Bore size (mm)	25 st or less	Over 25 st to 175 st	Over 175 st	25 st or less		Over 25 st to 175 st	Over 175 st	
φ32	84.5	100	140	20	0	15.5	55.5	
φ40	91	100	140	20	0	9	49	
φ50	97	116	161	25	0	19	64	
φ63	102	116	161	25	0	14	59	

- STG-BQ

Code		AA				Q	O			
Bore size (mm)	25 st or less	Over 25 st to 75 st	Over 75 st to 175 st	Over 175 st	25 st or less		Over 25 st to 75 st	Over 75 st to 175 st	Over 175 st	
φ32	84.5	98	118	140	16	0	13.5	33.5	55.5	
φ40	91	98	118	140	16	0	7	27	49	
φ50	97	114	134	161	20	0	17	37	64	
φ63	102	114	134	161	20	0	12	32	59	

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Guided cylinder, double acting/rubber scraper
Guided cylinder, double acting/coil scraper

STG-MG Series STG-MG1 Series

● Bore size: $\phi 20/\phi 25/\phi 32/\phi 40/\phi 50/\phi 63$

JIS symbol



Specifications

Descriptions		STG- ^M _B G/STG- ^M _B G1					
Bore size	mm	φ20	φ25	φ32	φ40	φ50	φ63
Actuation		Double acting/scraper					
Working fluid		Compressed air					
Max. working pressure	MPa	1.0 (≈150 psi, 10 bar)					
Min. working pressure	MPa	0.2 (≈29 psi, 2 bar)		0.15 (≈22 psi, 1.5 bar)			
Proof pressure	MPa	1.6 (≈230 psi, 16 bar)					
Ambient temperature	°C	-10 (14°F) to 60 (140°F) (no freezing)					
Port size		Rc1/8				Rc1/4	
Stroke tolerance	mm	+2.0 0					
Working piston speed	mm/s	50 to 500					50 to 300
Cushion		With rubber cushion					
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					
Allowable absorbed energy	J	0.157	0.157	0.401	0.627	0.980	1.560

Stroke length

Bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke (mm)(switch)
$\phi 20$	20/30/40/50/75/100/125	400	5	5(10)
$\phi 25$	150/175/200/250/300/350/400			
$\phi 32$	25/50/75/100			
$\phi 40$	125/150/175			
$\phi 50$	200/250/300			
$\phi 63$	350/400			

*1: The custom stroke length is available in 5mm increments. However, the total length is the same as that of the next longer standard stroke length.

*2: For types with one or two switches. The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$\phi 20$	Push	-	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
$\phi 25$	Push	-	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
$\phi 32$	Push	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
$\phi 40$	Push	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
$\phi 50$	Push	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
$\phi 63$	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3

Switch specifications

- 1-color/2-color display/for AC magnetic field proof

Descriptions	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire						Proximity 2-wire	
	T1H/ T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/ T3V	T3PH/T3PV (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V		T2YD	
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay		For programmable controller	
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC	24 VDC ±10%		30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*2)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	≤50 mA	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)		Red/green LED (Lit when ON)	
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 μA or less				0 mA						1 mA or less	
Weight g	1 m:33	1 m:18	1 m:33	1 m:18	1 m:18		1 m:33	1 m:18	1 m:18 3 m:49 5 m:80			1 m:33 3 m:87 5 m:142			1 m:61	
	3 m:87	3 m:49	3 m:87	3 m:49	3 m:49		3 m:87	3 m:49							3 m:166	
	5 m:142	5 m:80	5 m:142	5 m:80	5 m:80		5 m:142	5 m:80							5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.

*2 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*3 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.

*4 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.

*5 : Dimensions depend on switch model No. Refer to Ending Page 18 for details.

Cylinder weight

- STG-MG/STG-MG1

Unit: kg

Descriptions	Stroke length																Switch weight
Bore size (mm)	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400		
φ20	0.69		0.77	0.85	0.92	1.17	1.37	1.56	1.75	1.94	2.14	2.59	2.98	3.36	3.75	Refer to the weight in the switch specifications.	
φ25	0.98		1.08	1.19	1.29	1.66	1.92	2.18	2.46	2.72	2.98	3.62	4.14	4.68	5.20		
φ32		1.76			2.13	2.66	3.06	3.46	3.85	4.24	4.63	5.61	6.39	7.19	7.97		
φ40		2.03			2.44	2.89	3.29	3.71	4.12	4.53	4.94	5.95	6.78	7.61	8.43		
φ50		3.47			4.09	4.80	5.42	6.04	6.66	7.28	7.90	9.46	10.69	11.95	13.21		
φ63		4.31			5.05	5.87	6.60	7.33	8.07	8.80	9.53	11.32	12.77	14.23	15.68		

- STG-BG/STG-BG1

Unit: kg

Descriptions	Stroke length															Switch weight
Bore size (mm)	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400	
φ20	0.72		0.79	0.90	0.98	1.15	1.31	1.51	1.68	1.85	2.02	2.39	2.73	3.07	3.41	Refer to the weight in the switch specifications.
φ25	1.01		1.10	1.27	1.36	1.58	1.82	2.08	2.30	2.52	2.75	3.23	3.69	4.13	4.58	
φ32		1.61			1.91	2.35	2.66	3.02	3.33	3.63	3.94	4.61	5.22	5.83	6.44	
φ40		1.88			2.23	2.70	3.05	3.46	3.81	4.16	4.51	5.26	5.96	6.66	7.36	
φ50		3.23			3.76	4.49	5.02	5.64	6.18	6.71	7.24	8.44	9.49	10.59	11.66	
φ63		4.07			4.71	5.56	6.20	6.93	7.57	8.22	8.86	10.25	11.61	12.87	14.13	

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG-M_BG/STG-M_BG1 Series

How to order

Without switch (built-in magnet for switch)

STG - **M** **G** - **32** - **25**

With switch (built-in magnet for switch)

STG - **M** **G** - **32** - **25** - **T2H** - **R**

Model No.

A Bearing

B Model No.

C Bore size

D Port thread

E Stroke length

F Switch model No.
*1, *2

G Switch quantity

Code		Content					
A Bearing							
M	Metal bush bearing						
B	Ball bearing						
B Model No.							
G	Rubber scraper						
G1	Coil scraper						
C Bore size (mm)							
20	φ20						
25	φ25						
32	φ32						
40	φ40						
50	φ50						
63	φ63						
D Port thread							
Blank	Rc thread						
NN	NPT thread (custom order product)						
GN	G thread (custom order product)						
E Stroke length (mm)							
Refer to the stroke length table on the following page							
F Switch model No.							
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire	
			AC	DC			
T0H*	T0V*	Reed	●	●	1-color display	2-wire	
T5H*	T5V*		●	●	Without indicator lamp		
T8H*	T8V*		●	●	1-color display		
T1H*	T1V*		●	●	1-color display	2-wire	
T2H*	T2V*	Proximity		●	1-color display	2-wire	
T3H*	T3V*			●		3-wire	
T3PH*	T3PV*			●	1-color display (custom order)	3-wire	
T2WH*	T2WV*			●	2-color display	2-wire	
T2YH*	T2YV*			●			
T3WH*	T3WV*			●		3-wire	
T3YH*	T3YV*			●			
T2JH*	T2JV*			●	1-color display off-delay	2-wire	
T2YD*	-			●	2-color display	2-wire	
T2YDT*	-			●	for AC magnetic field		
* Lead wire length							
Blank	1 m (standard)						
3	3 m (option)						
5	5 m (option)						
G Switch quantity							
R	1 on rod side						
H	1 on head side						
D	2						
T	3						

⚠ Precautions for model No. selection

*1 : Switches other than **F** Switch model No. are also available. (Custom order product)
Refer to Ending Page 1 for details.

*2 : Switches are shipped with the product.
Contact CKD if assembling before shipment is necessary.

[Example of model No.]

STG-MG1-40-50-T0H-H

Model: Guided cylinder/double acting/coil scraper

A Bearing : Metal bush bearing

B Model No. : Coil scraper

C Bore size : φ40 mm

D Port thread : Rc thread

E Stroke length : 50 mm

F Switch model No. : Reed T0H switch, lead wire length 1 m

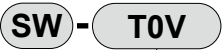
G Switch quantity : 1 on head side

E Stroke length

Stroke length (mm)		Applicable bore size					
		φ20	φ25	φ32	φ40	φ50	φ63
Standard stroke length	20	●	●				
	25			●	●	●	●
	30	●	●				
	40	●	●				
	50	●	●	●	●	●	●
	75	●	●	●	●	●	●
	100	●	●	●	●	●	●
	125	●	●	●	●	●	●
	150	●	●	●	●	●	●
	175	●	●	●	●	●	●
	200	●	●	●	●	●	●
	250	●	●	●	●	●	●
	300	●	●	●	●	●	●
	350	●	●	●	●	●	●
	400	●	●	●	●	●	●
Min. stroke length *2		5(10)					
Custom stroke length *1		In 5 mm increments					

*1: The total dimensions are the same as the longer standard stroke length.
*2: The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

How to order switch



Switch model No.
(Item ⑤ on the previous page)
Note: Contact CKD when using
an environment-friendly T switch.

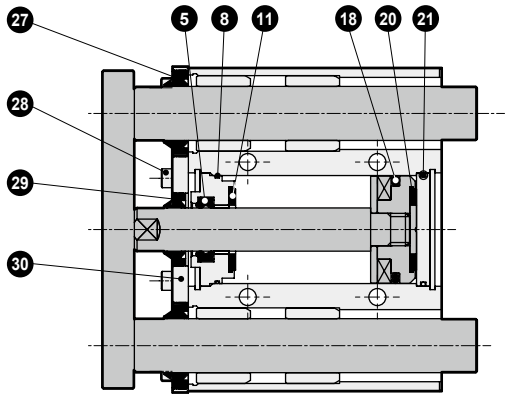
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG-M^BG/STG-B^MG1 Series

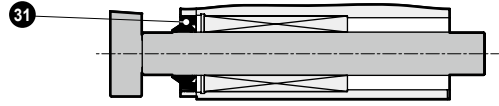
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list

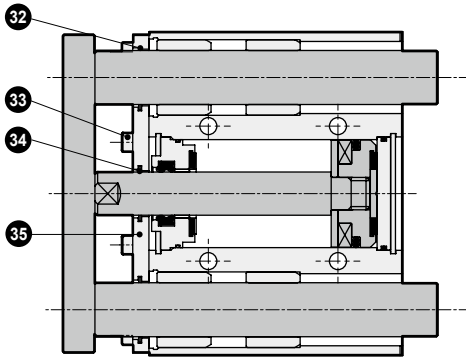
● Rubber scraper
· STG-MG



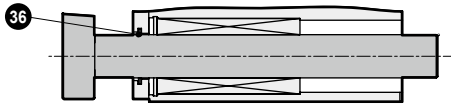
· STG-BG



● Coil scraper
· STG-MG1



· STG-BG1



Parts list

* Parts other than those listed below are the same as those of double acting/standard single rod. Refer to pages 340 to 343.

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
STG-M/BG (rubber scraper)				STG-M/GG1 (coil scraper)			
27	Rubber scraper	Nitrile rubber + steel		32	Coil scraper	Phosphor bronze	
28	Hexagon socket head cap screw	Alloy steel	Zinc chromate	33	Hexagon socket head cap screw	Alloy steel	Zinc chromate
29	Rubber scraper	Nitrile rubber + steel		34	Coil scraper	Phosphor bronze	
30	Adaptor plate A	Aluminum alloy	Chromate	35	Adaptor plate B	Aluminum alloy	Alumite
31	Rubber scraper	Nitrile rubber + steel		36	Coil scraper	Phosphor bronze	

Repair parts list (Note: specify the kit No. when ordering repair parts.)

● STG-MG (rubber scraper)

Bore size (mm)	Kit No.	Repair parts No.
φ20	STG-MG-20K	
φ25	STG-MG-25K	
φ32	STG-MG-32K	5 8 11 18
φ40	STG-MG-40K	20 21 27 29
φ50	STG-MG-50K	
φ63	STG-MG-63K	

● STG-MG1 (coil scraper)

Bore size (mm)	Kit No.	Repair parts No.
φ20	STG-MG1-20K	
φ25	STG-MG1-25K	
φ32	STG-MG1-32K	5 8 11 18
φ40	STG-MG1-40K	20 21 32 34
φ50	STG-MG1-50K	
φ63	STG-MG1-63K	

● STG-BG (rubber scraper)

Bore size (mm)	Kit No.	Repair parts No.
φ20	STG-BG-20K	
φ25	STG-BG-25K	
φ32	STG-BG-32K	5 8 11 18
φ40	STG-BG-40K	20 21 29 31
φ50	STG-BG-50K	
φ63	STG-BG-63K	

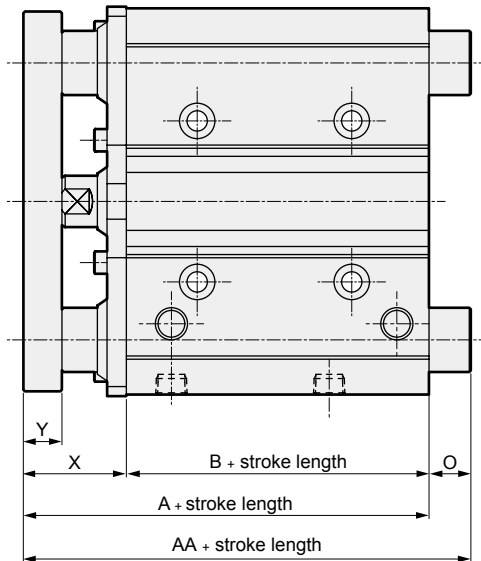
● STG-BG1 (coil scraper)

Bore size (mm)	Kit No.	Repair parts No.
φ20	STG-BG1-20K	
φ25	STG-BG1-25K	
φ32	STG-BG1-32K	5 8 11 18
φ40	STG-BG1-40K	20 21 34 36
φ50	STG-BG1-50K	
φ63	STG-BG1-63K	

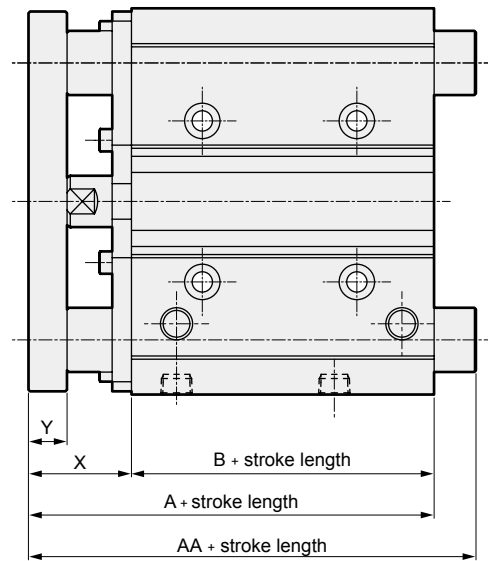
Dimensions



● STG-M^BG



● STG-M^BG1



● STG-MG/G1

* Dimensions not listed below are the same as those of double acting/single rod on pages 345 to 346.
*1: When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

Code Bore size (mm)	Standard stroke length	A	AA			B	O			X	Y
			50 st or less	Over 50 st to 200 st	Over 200 st		50 st or less	Over 50 st to 200 st	Over 200 st		
φ20	20,30,40,50,75,100,125,150,175	63	63	88	132	37	0	25	69	26 ⁰ _{-2.0}	9.5
φ25	200,250,300,350,400	63.5	63.5	94	132	37.5	0	30.5	68.5	26 ⁰ _{-2.0}	9.5
φ32	25,50,75,100,125,150,175 200,250,300,350,400	69.5	89	110	150	37.5	19.5	40.5	80.5	32 ⁰ _{-2.0}	11.5
φ40		76	89	110	150	44	13	34	74	32 ⁰ _{-2.0}	11.5
φ50		82	101	126	171	44	19	44	89	38 ⁰ _{-2.0}	15.5
φ63		87	101	126	171	49	14	39	84	38 ⁰ _{-2.0}	15.5

● STG-BG/G1

Code Bore size (mm)	Standard stroke length	A	AA				B	O				X	Y
			30 st or less	Over 30 st to 100 st	Over 100 st to 200 st	Over 200 st		30 st or less	Over 30 st to 100 st	Over 100 st to 200 st	Over 200 st		
φ20	20,30,40,50,75,100,125,150,175	63	69	88	110	132	37	6	25	47	69	26 ⁰ _{-2.0}	9.5
φ25	200,250,300,350,400	63.5	75	94	113	132	37.5	11.5	30.5	49.5	68.5	26 ⁰ _{-2.0}	9.5
φ32	25,50,75,100,125,150,175 200,250,300,350,400	69.5	89	108	128	150	37.5	19.5	38.5	58.5	80.5	32 ⁰ _{-2.0}	11.5
φ40		76	89	108	128	150	44	13	32	52	74	32 ⁰ _{-2.0}	11.5
φ50		82	101	124	144	171	44	19	42	62	89	38 ⁰ _{-2.0}	15.5
φ63		87	101	124	144	171	49	14	37	57	84	38 ⁰ _{-2.0}	15.5

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Guided cylinder Double acting/coolant proof

STG-MG²₃ Series

● Bore size:φ20/φ25/φ32/φ40/φ50/φ63

JIS symbol



Specifications

Descriptions	STG-MG ² ₃					
Bore size mm	φ20	φ25	φ32	φ40	φ50	φ63
Actuation	Double acting/coolant proof					
Working fluid	Compressed air					
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)					
Min. working pressure MPa	0.2 (≈29 psi, 2 bar)		0.15 (≈22 psi, 1.5 bar)			
Proof pressure MPa	1.6 (≈230 psi, 16 bar)					
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)					
Port size	Rc1/8				Rc1/4	
Stroke tolerance mm	+2.0					
	0					
Working piston speed mm/s	50 to 500					50 to 300
Cushion	Rubber cushioned (urethane rubber)					
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					
Allowable absorbed energy J	0.157	0.157	0.401	0.627	0.980	1.560

Stroke length

Bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke (mm)(switch)
φ20	20/30/40/50/75/100/125/ 150/175/200/250/300/350/400	400	5	10
φ25				
φ32	25/50/75/100 125/150/175 200/250/300 350/400			
φ40				
φ50				
φ63				
				*2

*1: The custom stroke length is available in 5mm increments. However, the total length is the same as that of the next longer standard stroke length.

*2: For types with one or two switches.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
φ20	Push	-	47.1	62.8	94.2	1.26×10 ²	1.57×10 ²	1.88×10 ²	2.20×10 ²	2.51×10 ²	2.83×10 ²	3.14×10 ²
	Pull	-	35.3	47.1	70.7	94.2	1.18×10 ²	1.41×10 ²	1.65×10 ²	1.88×10 ²	2.12×10 ²	2.36×10 ²
φ25	Push	-	73.6	98.2	1.47×10 ²	1.96×10 ²	2.45×10 ²	2.95×10 ²	3.44×10 ²	3.93×10 ²	4.42×10 ²	4.91×10 ²
	Pull	-	56.7	75.6	1.13×10 ²	1.51×10 ²	1.89×10 ²	2.27×10 ²	2.64×10 ²	3.02×10 ²	3.40×10 ²	3.78×10 ²
φ32	Push	80.4	1.21×10 ²	1.61×10 ²	2.41×10 ²	3.22×10 ²	4.02×10 ²	4.83×10 ²	5.63×10 ²	6.43×10 ²	7.24×10 ²	8.04×10 ²
	Pull	60.3	90.5	1.21×10 ²	1.81×10 ²	2.41×10 ²	3.02×10 ²	3.62×10 ²	4.22×10 ²	4.83×10 ²	5.43×10 ²	6.03×10 ²
φ40	Push	1.26×10 ²	1.88×10 ²	2.51×10 ²	3.77×10 ²	5.03×10 ²	6.28×10 ²	7.54×10 ²	8.80×10 ²	1.01×10 ³	1.13×10 ³	1.26×10 ³
	Pull	1.06×10 ²	1.58×10 ²	2.11×10 ²	3.17×10 ²	4.22×10 ²	5.28×10 ²	6.33×10 ²	7.39×10 ²	8.44×10 ²	9.50×10 ²	1.06×10 ³
φ50	Push	1.96×10 ²	2.95×10 ²	3.93×10 ²	5.89×10 ²	7.85×10 ²	9.82×10 ²	1.18×10 ³	1.37×10 ³	1.57×10 ³	1.77×10 ³	1.96×10 ³
	Pull	1.65×10 ²	2.47×10 ²	3.30×10 ²	4.95×10 ²	6.60×10 ²	8.25×10 ²	9.90×10 ²	1.15×10 ³	1.32×10 ³	1.48×10 ³	1.65×10 ³
φ63	Push	3.12×10 ²	4.68×10 ²	6.23×10 ²	9.35×10 ²	1.25×10 ³	1.56×10 ³	1.87×10 ³	2.18×10 ³	2.49×10 ³	2.81×10 ³	3.12×10 ³
	Pull	2.80×10 ²	4.20×10 ²	5.61×10 ²	8.41×10 ²	1.12×10 ³	1.40×10 ³	1.68×10 ³	1.96×10 ³	2.24×10 ³	2.52×10 ³	2.80×10 ³

Switch specifications

Type/model No.	Proximity switch specifications	
Descriptions	T2YLH/T2YLV	T3YLH/T3YLV
Applications	Dedicated for programmable controller	Programmable controller, relay
Output method	-	NPN output
Power supply voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA *1	30 VDC or less, 50 mA or less
Indicator lamp	Red/green LED (Lit when ON)	
Leakage current	1 mA or less	10 µA or less
Shock resistance	980 m/s ²	
Weight	g 1 m:33 3 m:87 5 m:142	

*1 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*2 : Refer to Ending Page 1 for other switch specifications.

Cylinder weight

● STG-MG2/STG-MG3

Unit: kg

Descriptions	Stroke length															Switch weight
Bore size (mm)	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400	
φ20	0.68		0.76	0.84	0.91	1.16	1.36	1.55	1.74	1.93	2.13	2.58	2.97	3.35	3.74	Refer to the weight in the switch specifications
φ25	0.96		1.06	1.17	1.27	1.64	1.90	2.16	2.44	2.70	2.96	3.60	4.12	4.66	5.18	
φ32		1.68			2.05	2.58	2.98	3.38	3.77	4.16	4.55	5.53	6.31	7.11	7.89	
φ40		1.93			2.34	2.79	3.19	3.61	4.02	4.43	4.84	5.85	6.68	7.51	8.33	
φ50		3.32			3.94	4.65	5.27	5.89	6.51	7.13	7.75	9.31	10.54	11.80	13.06	
φ63		4.15			4.89	5.71	6.44	7.17	7.91	8.64	9.37	11.16	12.61	14.07	15.52	

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG-MG²₃Series

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

How to order

Without switch (built-in magnet for switch)

STG - M G2 - 32 - 25

With switch (built-in magnet for switch)

STG - M G2 - 32 - 25 - T2YLH - R

Model No.

A Degree of protection level

B Bore size

C Port thread

D Stroke length

E Switch model No.
*1

F Switch quantity

Code	Content				
A Degree of protection level					
G2	Coolant proof scraper + packing NBR				
G3	Coolant proof scraper + packing FKM				
B Bore size (mm)					
20	φ20				
25	φ25				
32	φ32				
40	φ40				
50	φ50				
63	φ63				
C Port thread					
Blank	Rc thread				
NN	NPT thread (custom order product)				
GN	G thread (custom order product)				
D Stroke length (mm)					
Refer to the stroke length table on the following page					
E Switch model No.					
Axial lead wire	Radial lead wire	Contact	Voltage	Indicator	Lead wire
T2YLH*	T2YLV*	Proximity	DC	2-color display	2-wire
T3YLH*	T3YLV*				3-wire
* Lead wire length					
Blank	1 m (standard)				
3	3 m (option)				
5	5 m (option)				
F Switch quantity					
R	1 on rod side				
H	1 on head side				
D	2				
T	3				

⚠ Precautions for model No. selection

*1: Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

STG-MG2-20-50-T2YLH-R

Model: Guided cylinder, double acting/coolant proof

- A** Degree of protection level : Coolant proof scraper + packing NBR
- B** Bore size : φ20 mm
- C** Port thread : Rc thread
- D** Stroke length : 50 mm
- E** Switch model No. : Proximity T2YLH switch, lead wire length 1 m
- F** Switch quantity : 1 on rod side

D Stroke length

Stroke length (mm)		Applicable bore size					
		φ20	φ25	φ32	φ40	φ50	φ63
Standard stroke length	20	●	●				
	25			●	●	●	●
	30	●	●				
	40	●	●				
	50	●	●	●	●	●	●
	75	●	●	●	●	●	●
	100	●	●	●	●	●	●
	125	●	●	●	●	●	●
	150	●	●	●	●	●	●
	175	●	●	●	●	●	●
	200	●	●	●	●	●	●
	250	●	●	●	●	●	●
	300	●	●	●	●	●	●
	350	●	●	●	●	●	●
	400	●	●	●	●	●	●
Min. stroke length	*2	5(10)					
Custom stroke length	*1	In 5 mm increments					

*1: The total dimensions are the same as the longer standard stroke length.

*2: The value in () is for type with switch.

How to order switch

SW - T2YLH

Switch model No.
(Item **E** on the previous page)

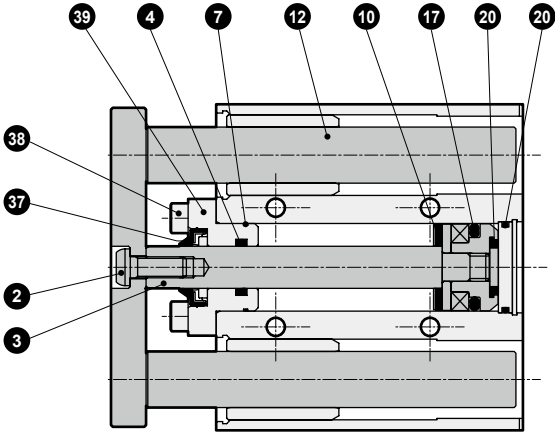
Note: Contact CKD when using
an environment-friendly T switch.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

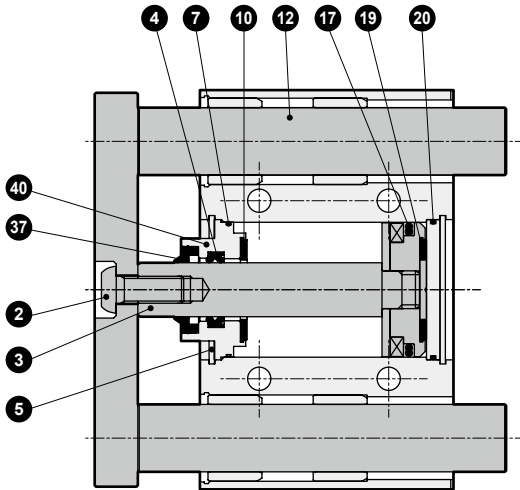
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list

● STG-MG2/MG3
· φ20 to φ32



· φ40 to φ63



Parts list

* Parts other than those listed below are the same as those of double acting/single rod. Refer to pages 340 to 343.

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
2	Hexagon socket button head bolt	Stainless steel		17	Piston packing	G2 Nitrile rubber	
3	Piston rod	Stainless steel				G3 Fluoro rubber	
4	Rod packing	G2 Nitrile rubber		20	O-ring	G2 Nitrile rubber	
		G3 Fluoro rubber				G3 Fluoro rubber	
5	C type snap ring	Stainless steel		37	Scraper	G2 Nitrile rubber	
7	Metal gasket	G2 Nitrile rubber				G3 Fluoro rubber	
		G3 Fluoro rubber		38	Hexagon socket head cap screw	Stainless steel	
12	Guide rod	Stainless steel		39	Rod cover	Aluminum alloy	Alumite
14	Plug	Stainless steel		40	Rod metal	Aluminum alloy	Alumite

Repair parts list (Note: specify the kit No. when ordering repair parts.)

● STG-MG2 (packing material: nitrile rubber)

Bore size (mm)	Kit No.	Repair parts No.
φ20	STG-MG2-20K	
φ25	STG-MG2-25K	
φ32	STG-MG2-32K	4 7 10 17
φ40	STG-MG2-40K	19 20 37
φ50	STG-MG2-50K	
φ63	STG-MG2-63K	

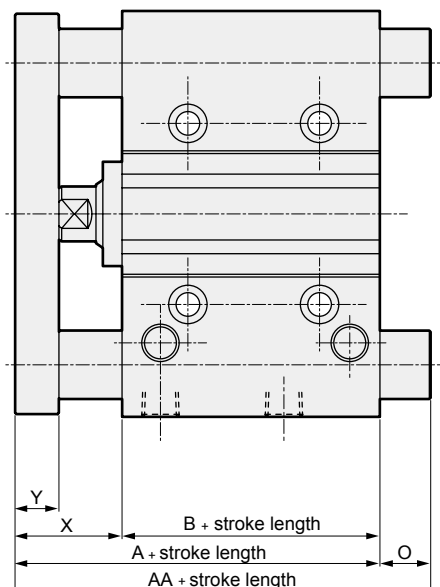
● STG-MG3 (packing material: fluoro rubber)

Bore size (mm)	Kit No.	Repair parts No.
φ20	STG-MG3-20K	
φ25	STG-MG3-25K	
φ32	STG-MG3-32K	4 7 10 17
φ40	STG-MG3-40K	19 20 37
φ50	STG-MG3-50K	
φ63	STG-MG3-63K	

Dimensions



● STG-MG₃



* Dimensions not listed below are the same as those of double acting/single rod on pages 345 and 346.
*1: When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

● STG-M-G2/G3

Code Bore size (mm)	Standard stroke length	A	AA			B	O			X	Y
			50 st or less	Over 50 st to 200 st	Over 200 st		50 st or less	Over 50 st to 200 st	Over 200 st		
φ20	20,30,40,50,75,100,125,150,175	66	66	91	135	37	0	25	69	29 ⁰ / ₂	9.5
φ25	200,250,300,350,400	67.5	67.5	98	136	37.5	0	30.5	68.5	30 ⁰ / ₂	9.5
φ32	25,50,75,100,125,150,175 200,250,300,350,400	71.5	91	112	152	37.5	19.5	40.5	80.5	34 ⁰ / ₂	11.5
φ40		78	91	112	152	44	13	34	74	34 ⁰ / ₂	11.5
φ50		83	102	127	172	44	19	44	89	39 ⁰ / ₂	15.5
φ63		88	102	127	172	49	14	39	84	39 ⁰ / ₂	15.5

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Guided cylinder, double acting/anti-spatter adherence

STG-M G4 Series

● Bore size: $\phi 40/\phi 50/\phi 63$

JIS symbol



Specifications

Descriptions		STG-M _B G4		
Bore size	mm	φ40	φ50	φ63
Actuation		Double acting/anti-spatter adherence		
Working fluid		Compressed air		
Max. working pressure	MPa	1.0 (≈150 psi, 10 bar)		
Min. working pressure	MPa	0.15 (≈22 psi, 1.5 bar)		
Proof pressure	MPa	1.6 (≈230 psi, 16 bar)		
Ambient temperature	°C	-10 (14°F) to 60 (140°F) (no freezing)		
Port size		Rc1/8	Rc1/4	
Stroke tolerance	mm	+2.0 0		
Working piston speed	mm/s	50 to 500		50 to 300
Cushion		With rubber cushion		
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)		
Allowable absorbed energy	J	0.627	0.980	1.560

Stroke length

Bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke (mm)(switch)
$\phi 40$	25/50/75/100/125	400	5	10
$\phi 50$	150/175/200/250			
$\phi 63$	300/350/400			

*1: The custom stroke length is available in 5mm increments. However, the total length is the same as that of the next longer standard stroke length.

*2: For types with one or two switches.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$\phi 40$	Push	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
$\phi 50$	Push	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
$\phi 63$	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3

Switch specifications

Descriptions	Proximity 2-wire	
	T2YD	T2YDT
Applications	Dedicated for programmable controller	
Indicator lamp	Red/green LED (Lit when ON)	
Load voltage	24 VDC $\pm 10\%$	
Load current	DC5 to 20 mA	
Internal voltage drop	6V or less	
Leakage current	1.0 mA or less	
Output delay time *1 (ON delay, OFF delay)	60 ms or less	
Lead wire length *2	1 m (oil-resistant vinyl cabtyre cable 2-conductor 0.5 mm ²) (standard)	1 m (flame-resistant vinyl cabtyre cable 2-conductor 0.5 mm ²) (option)
Insulation resistance	100 M Ω and over at 500 VDC megger	
Withstand voltage	No failure after 1 minute of 1,000 VAC application.	
Shock resistance	980 m/s ²	
Ambient temperature	-10 to +60°C	
Degree of protection	JIS C0920 (water-tight), IEC standards IP67, oil resistance	
Weight g	1m:61 3m:166 5m:272	

*1: Indicates the time from magnetic sensor detection of the piston magnet until switch output.

*2: 3 m and 5 m lead wires are available as options.

*3: This switch cannot be used in DC magnetic field.

Cylinder weight

● STG-MG4

Unit: kg

Descriptions	Stroke length												Switch weight
	25	50	75	100	125	150	175	200	250	300	350	400	
φ40	2.03	2.44	2.89	3.29	3.71	4.12	4.53	4.94	5.95	6.78	7.61	8.43	Refer to the weight in the switch specifications.
φ50	3.47	4.09	4.80	5.42	6.04	6.66	7.28	7.90	9.46	10.69	11.95	13.21	
φ63	4.31	5.05	5.87	6.60	7.33	8.07	8.80	9.53	11.32	12.77	14.23	15.68	

● STG-BG4

Unit: kg

Descriptions	Stroke length												Switch weight
	25	50	75	100	125	150	175	200	250	300	350	400	
φ40	1.88	2.23	2.70	3.05	3.46	3.81	4.16	4.51	5.26	5.96	6.66	7.36	Refer to the weight in the switch specifications.
φ50	3.23	3.76	4.49	5.02	5.64	6.18	6.71	7.24	8.44	9.49	10.59	11.66	
φ63	4.07	4.71	5.56	6.20	6.93	7.57	8.22	8.86	10.25	11.61	12.87	14.13	

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG-M^BG4 Series

How to order

Without switch (built-in magnet for switch)

STG - **M** **G4** - **40** - **25**

With switch (built-in magnet for switch)

STG - **M** **G4** - **40** - **25** - **T2H** - **R**

Model No.

Anti-spatter adherence

A Bearing

B Bore size

C Port thread

D Stroke length

E Switch model No. *1

F Switch quantity

⚠ Precautions for model No. selection

*1: Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

STG-BG4-50-100-T2YD3-D

Model: Guided cylinder, double acting/anti-spatter adherence

A Bearing : Ball bearing

B Bore size : φ50 mm

C Port thread : Rc thread

D Stroke length : 100 mm

E Switch model No.: Proximity switch T2YD, lead wire length 3 m

F Switch quantity : 2

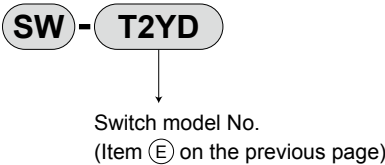
Code	Content				
A Bearing					
M	Metal bush bearing				
B	Ball bearing				
B Bore size (mm)					
40	φ40				
50	φ50				
63	φ63				
C Port thread					
Blank	Rc thread				
NN	NPT thread (custom order product)				
GN	G thread (custom order product)				
D Stroke length (mm)					
Refer to the stroke length table on the following page					
E Switch model No.					
Axial lead wire		Contact	Voltage	Display	Lead wire
T2YD*		Proximity	DC	Strong magn field proof (For AC magnetic field)	2-wire
T2YDT*					
* Lead wire length					
Blank	1 m (standard)				
3	3 m (option)				
5	5 m (option)				
F Switch quantity					
R	1 on rod side				
H	1 on head side				
D	2				
T	3				

D Stroke length

Stroke length (mm)		Applicable bore size		
		φ40	φ50	φ63
Standard stroke length	25	●	●	●
	50	●	●	●
	75	●	●	●
	100	●	●	●
	125	●	●	●
	150	●	●	●
	175	●	●	●
	200	●	●	●
	250	●	●	●
	300	●	●	●
	350	●	●	●
	400	●	●	●
Min. stroke length	*2	5(10)		
Custom stroke length	*1	In 5 mm increments		

*1: The total dimensions are the same as the longer standard stroke length.
*2: The value in () is for type with switch.

How to order switch

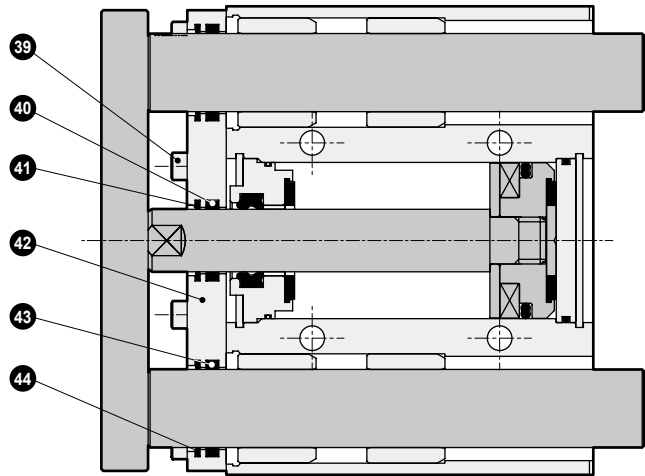


LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

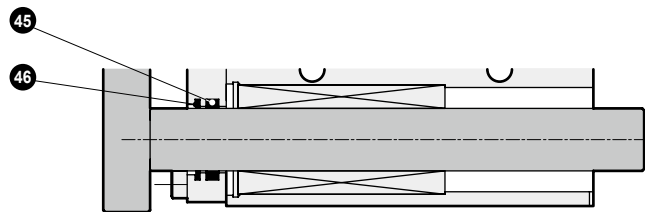
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list

● STG-MG4



● STG-BG4



Parts list

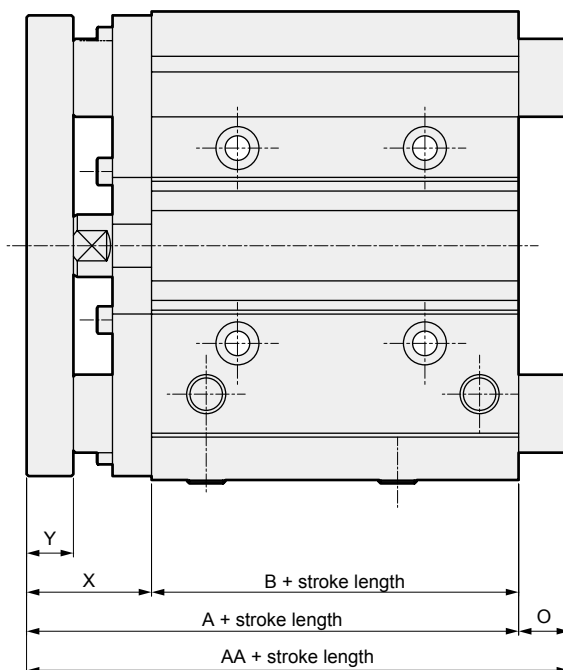
* Parts other than those listed below are the same as those of double acting/single rod. Refer to pages 340 to 343.

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
39	Hexagon socket head cap screw	Alloy steel	Zinc chromate	43	Lube keeping structure	Special rubber	
40	Lube keeping structure	Special rubber		44	Coil scraper	Phosphor bronze	
41	Coil scraper	Phosphor bronze		45	Lube keeping structure	Special rubber	
42	Adaptor	Aluminum alloy	Alumite	46	Coil scraper	Phosphor bronze	

Dimensions



● STG-M^BG4



* Dimensions not listed below are the same as those on page 346 (double acting/single rod).

*1: When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

● STG-MG4

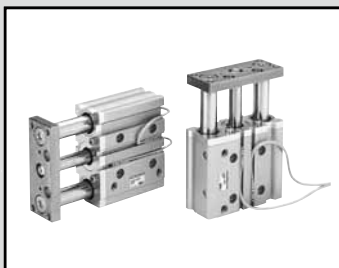
Code	Standard stroke length	A	AA			B	O			X	Y
Bore size (mm)			50 st or less	Over 50 st to 200 st	Over 200 st		50 st or less	Over 50 st to 200 st	Over 200 st		
φ40	25,50,75,100,125,150,175 200,250,300,350,400	76	89	110	150	44	13	34	74	32 ⁰ / ₂	11.5
φ50		82	101	126	171	44	19	44	89	38 ⁰ / ₂	15.5
φ63		87	101	126	171	49	14	39	84	38 ⁰ / ₂	15.5

● STG-BG4

Code	Standard stroke length	A	AA				B	O				X	Y
Bore size (mm)			30 st or less	Over 30 st to 100 st	Over 100 st to 200 st	Over 200 st		30 st or less	Over 30 st to 100 st	Over 100 st to 200 st	Over 200 st		
φ40	25,50,75,100,125,150,175 200,250,300,350,400	76	89	108	128	150	44	13	32	52	74	32 ⁰ / ₂	11.5
φ50		82	101	124	144	171	44	19	42	62	89	38 ⁰ / ₂	15.5
φ63		87	101	124	144	171	49	14	37	57	84	38 ⁰ / ₂	15.5

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Guided cylinder double acting/single rod/environment-resistant scraper

STG-MG5 Series

● Bore size: $\phi 20/\phi 25/\phi 32/\phi 40/\phi 50/\phi 63/\phi 80/\phi 100$

JIS symbol



RoHS

Specifications

* Custom order product.

Descriptions		STG-MG5							
Bore size	mm	φ20	φ25	φ32	φ40	φ50	φ63	φ80	φ100
Actuation		Double acting							
Working fluid		Compressed air							
Max. working pressure	MPa	1.0 (≈150 psi, 10 bar)							
Min. working pressure	MPa	0.25 (≈36 psi, 2.5 bar)					0.2 (≈29 psi, 2 bar)		
Proof pressure	MPa	1.6 (≈230 psi, 16 bar)							
Ambient temperature	°C	-10 (14°F) to 60 (140°F) (no freezing)							
Port size		Rc1/8				Rc1/4		Rc3/8	
Stroke tolerance	mm	+2.0 0							
Working piston speed	mm/s	50 to 500					50 to 300		
Cushion		With rubber cushion							
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)							
Allowable absorbed energy	J	0.157	0.157	0.401	0.627	0.980	1.560	2.510	3.92

Stroke length

Bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke with switch (mm)
φ20	20/30/40/50/75/100/125/150/ 175/200/250/300/350/400	400	5	5(10) *2
φ25				
φ32				
φ40				
φ50	25/50/75/100/125/150/175/ 200/250/300/350/400			
φ63				
φ80				
φ100				

*1: The custom stroke length is available in 5 mm increments. However, the total dimensions are the same as the longer standard stroke length.

*2: For types with one or two switches. The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

Theoretical thrust table (double acting)

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$\phi 20$	Push	-	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
$\phi 25$	Push	-	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
$\phi 32$	Push	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
$\phi 40$	Push	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
$\phi 50$	Push	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
$\phi 63$	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
$\phi 80$	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
$\phi 100$	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

Switch specifications

● 1-color/2-color display/for AC magnetic field

Descriptions	Proximity 2-wire				Proximity 3-wire				Reed 2-wire						Proximity 2-wire	
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V	T5H/T5V		T8H/T8V		T2YD		
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay	For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay		For programmable controller		
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%		30 VDC or less			12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*2)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	≤50 mA	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Without indicator lamp		LED (Lit when ON)			Red/green LED (Lit when ON)	
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 µA or less				0 mA						1 mA or less	
Weight g	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80		1 m:33 3 m:87 5 m:142	1 m:18 3 m:49 5 m:80	1 m:18 3 m:49 5 m:80			1 m:33 3 m:87 5 m:142			1 m:61 3 m:166 5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.

*2 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*3 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.

*4 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.

*5 : Dimensions depend on switch model No. Refer to Ending Page 18 for details.

Cylinder weight table

(Unit: kg)

Descriptions	Stroke length															Switch weight
Bore size (mm)	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400	
φ20	0.68		0.75	0.83	0.91	1.16	1.35	1.55	1.73	1.93	2.12	2.58	2.96	3.34	3.73	Refer to the weight in the switch specifications
φ25	0.95		1.05	1.16	1.26	1.63	1.89	2.16	2.43	2.69	2.95	3.59	4.12	4.65	5.17	
φ32		1.73			2.10	2.63	3.02	3.43	3.82	4.21	4.60	5.58	6.36	7.15	7.94	
φ40		2.00			2.41	2.86	3.27	3.68	4.09	4.51	4.91	5.92	6.76	7.58	8.41	
φ50		3.44			4.06	4.77	5.39	6.01	6.63	7.25	7.87	9.44	10.66	11.92	13.18	
φ63		4.31			5.05	5.87	6.60	7.33	8.07	8.80	9.53	11.32	12.77	14.23	15.68	
φ80		7.65			8.75	10.14	11.23	12.33	13.43	14.53	15.63	18.43	20.55	22.73	24.93	
φ100		11.04			12.38	14.09	15.43	16.76	18.10	19.44	20.78	24.07	26.74	29.42	32.09	

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG-MG5 Series

How to order

Without switch (built-in magnet for switch)

STG - M G5 - 32 - 25

With switch (built-in magnet for switch)

STG - M G5 - 32 - 25 - T2H - R

Model No.

Metal
bush
bearing

A Bore size

Environment-
resistant
scraper

B Port thread

C Stroke length

D Switch model No.
*1

E Switch quantity

⚠ Precautions for model No. selection

*1: Switches are shipped with the product.
Contact CKD if assembling before shipment
is necessary.

[Example of model No.]

STG-MG5-40-75-T0H-D

Model: Guided cylinder double acting/single rod/environment-resistant scraper

A Bore size : $\phi 40$ mm

B Port thread : Rc thread

C Stroke length : 75 mm

D Switch model No. : Reed T0H switch
Lead wire length 1 m

E Switch quantity : 2

Code	Content
A Bore size (mm)	
20	$\phi 20$
25	$\phi 25$
32	$\phi 32$
40	$\phi 40$
50	$\phi 50$
63	$\phi 63$
80	$\phi 80$
100	$\phi 100$

B Port thread	
Blank	Rc thread
NN	NPT thread (custom order product)
GN	G thread (custom order product)

C Stroke length (mm)	
Refer to the stroke length table on the following page.	

D Switch model No.					
Axial lead wire	Radial lead wire	Contact	Voltage		Lead wire
			AC	DC	
T0H*	T0V*	Reed	●	●	2-wire
T5H*	T5V*		●	●	
T8H*	T8V*		●	●	
T1H*	T1V*	Proximity	●	●	2-wire
T2H*	T2V*		●	●	3-wire
T3H*	T3V*		●	●	
T3PH*	T3PV*		●	●	3-wire
T2WH*	T2WV*		●	●	
T2YH*	T2YV*		●	●	2-wire
T3WH*	T3WV*		●	●	
T3YH*	T3YV*		●	●	3-wire
T2JH*	T2JV*		●	●	
T2YD*	-		●	●	2-wire
T2YDT*	-		●	●	

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

E Switch quantity	
R	1 on rod side
H	1 on head side
D	2
T	3

[Stroke length table]

Stroke length (mm)		Applicable bore size							
		φ20	φ25	φ32	φ40	φ50	φ63	φ80	φ100
Standard stroke length	10								
	20	●	●						
	25			●	●	●	●	●	●
	30	●	●						
	40	●	●						
	50	●	●	●	●	●	●	●	●
	75	●	●	●	●	●	●	●	●
	100	●	●	●	●	●	●	●	●
	125	●	●	●	●	●	●	●	●
	150	●	●	●	●	●	●	●	●
	175	●	●	●	●	●	●	●	●
	200	●	●	●	●	●	●	●	●
	250	●	●	●	●	●	●	●	●
	300	●	●	●	●	●	●	●	●
	350	●	●	●	●	●	●	●	●
	400	●	●	●	●	●	●	●	●
Min. stroke length (mm) *2		5(10)							
Custom stroke length *1		In 5 mm increments							

*1: The total dimensions are the same as the longer standard stroke length.

*2: The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

How to order switch

SW - T0V

Switch model No.
(Item ① on the previous page)

Note: Contact CKD when using an environment-friendly T switch.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

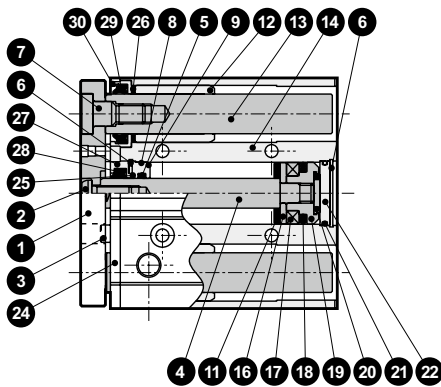
STG-MG5 Series

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
USC3/USC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

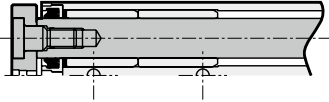
Internal structure and parts list (STG-MG5-20 to 63)

● $\phi 20$, $\phi 25$

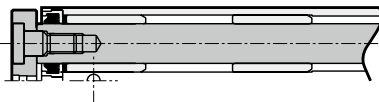
50 stroke length or less



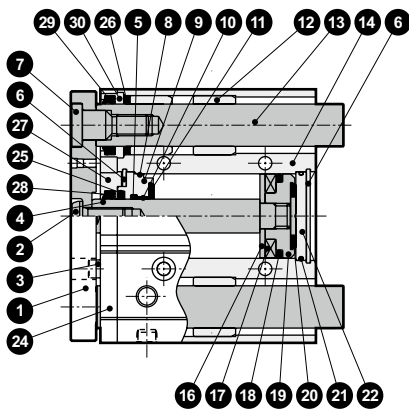
Over 50 to 200 stroke length



Over 200 mm stroke length



● $\phi 32$ to $\phi 63$



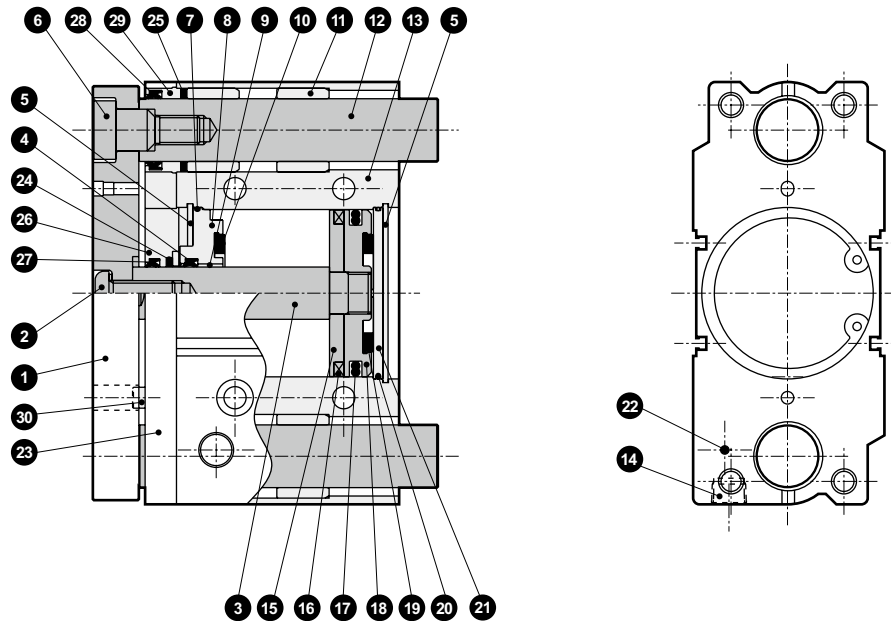
Main parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	End plate	Steel	Nickeling	15	Plug	Copper alloy or steel	
2	Hexagon socket button head bolt	Alloy steel	Zinc chromate	16	Spacer	Aluminum alloy	
3	Hexagon socket head cap screw	Steel	Zinc chromate	17	Magnet	Plastic	
4	Piston rod	Stainless steel ($\phi 20$ to $\phi 25$)	Industrial chrome plating	18	Piston packing	Nitrile rubber	
		Steel ($\phi 32$ to $\phi 63$)	Industrial chrome plating	19	Piston	Aluminum alloy	
5	Rod packing	Nitrile rubber		20	Cushion rubber	Urethane rubber	
6	C type snap ring	Steel	Zinc phosphate	21	O-ring	Nitrile rubber	
7	Bolt	Alloy steel	Zinc chromate	22	Base plate	Aluminum alloy	Chromate
8	Metal gasket	Nitrile rubber		23	Hexagon socket set screw	Stainless steel	
9	Rod metal	Special aluminum alloy ($\phi 20$ to $\phi 32$)	Alumite	24	Adaptor plate	Aluminum alloy	Alumite
		Aluminum alloy ($\phi 40$ to $\phi 63$)	Chromate	25	Lube keeping structure	Special rubber	
10	Bush	Dry bearing		26	Lube keeping structure	Special rubber	
11	Cushion rubber	Urethane rubber		27	Holder R	Aluminum alloy	Chromate
12	Metal	Oil-impregnated copper alloy bearing		28	Scraper	Nitrile rubber	
13	Guide rod	Steel	Industrial chrome plating	29	Scraper	Nitrile rubber	
14	Cylinder body	Aluminum alloy	Hard alumite	30	Holder G	Aluminum alloy	Chromate

Repair parts list

Bore size (mm)	Kit No.	Repair parts No.
$\phi 20$	STG-MG5-20K	
$\phi 25$	STG-MG5-25K	
$\phi 32$	STG-MG5-32K	5 8 11 18 20
$\phi 40$	STG-MG5-40K	21 25 26 28 29
$\phi 50$	STG-MG5-50K	
$\phi 63$	STG-MG5-63K	

Internal structure and parts list (STG-MG5-80 to 100)



Main parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	End plate	Steel	Nickeling	17	Piston packing	Nitrile rubber	
2	Hexagon socket button head bolt	Alloy steel	Zinc chromate	18	Piston	Aluminum alloy	
3	Piston rod	Steel	Industrial chrome plating	19	Cushion rubber	Urethane rubber	
4	Rod packing	Nitrile rubber		20	O-ring	Nitrile rubber	
5	C type snap ring	Steel	Zinc phosphate	21	Base plate	Aluminum alloy (φ80)	Chromate
6	Bolt	Alloy steel	Zinc chromate			Steel (φ100)	Zinc chromate
7	Metal gasket	Nitrile rubber		22	Hexagon socket set screw (φ80)	Stainless steel	
8	Rod metal	Aluminum alloy	Chromate		Plug (φ100)	Steel	Nickeling
9	Bush	Dry bearing		23	Adaptor plate	Aluminum alloy	Alumite
10	Cushion rubber	Urethane rubber		24	Lube keeping structure	Special rubber	
11	Metal	Oil-impregnated copper alloy bearing		25	Lube keeping structure	Special rubber	
12	Guide rod	Alloy steel or steel	Industrial chrome plating	26	Holder R	Aluminum alloy	Chromate
13	Cylinder body	Aluminum alloy	Hard alumite	27	Scraper	Nitrile rubber	
14	Plug	Steel		28	Scraper	Nitrile rubber	
15	Spacer	Aluminum alloy		29	Holder G	Aluminum alloy	Chromate
16	Magnet	Plastic		30	Hexagon socket head cap screw	Steel	Zinc chromate

Repair parts list

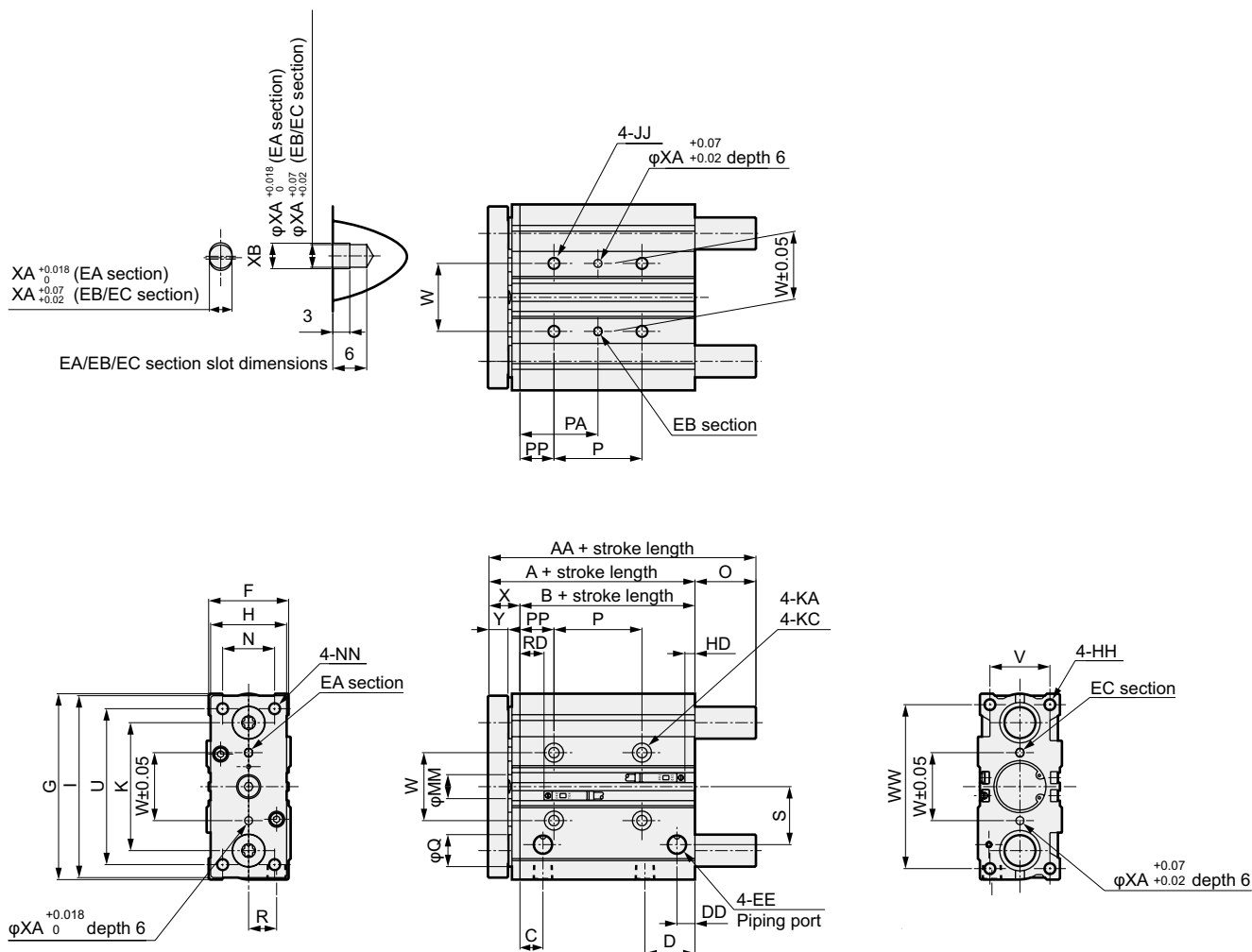
Bore size (mm)	Kit No.	Repair parts No.
φ80	STG-MG5-80K	4 7 10 17 19
φ100	STG-MG5-100K	20 24 25 27 28

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG-MG5 Series

Dimensions (φ20, φ25)

● STG-MG5-20, 25



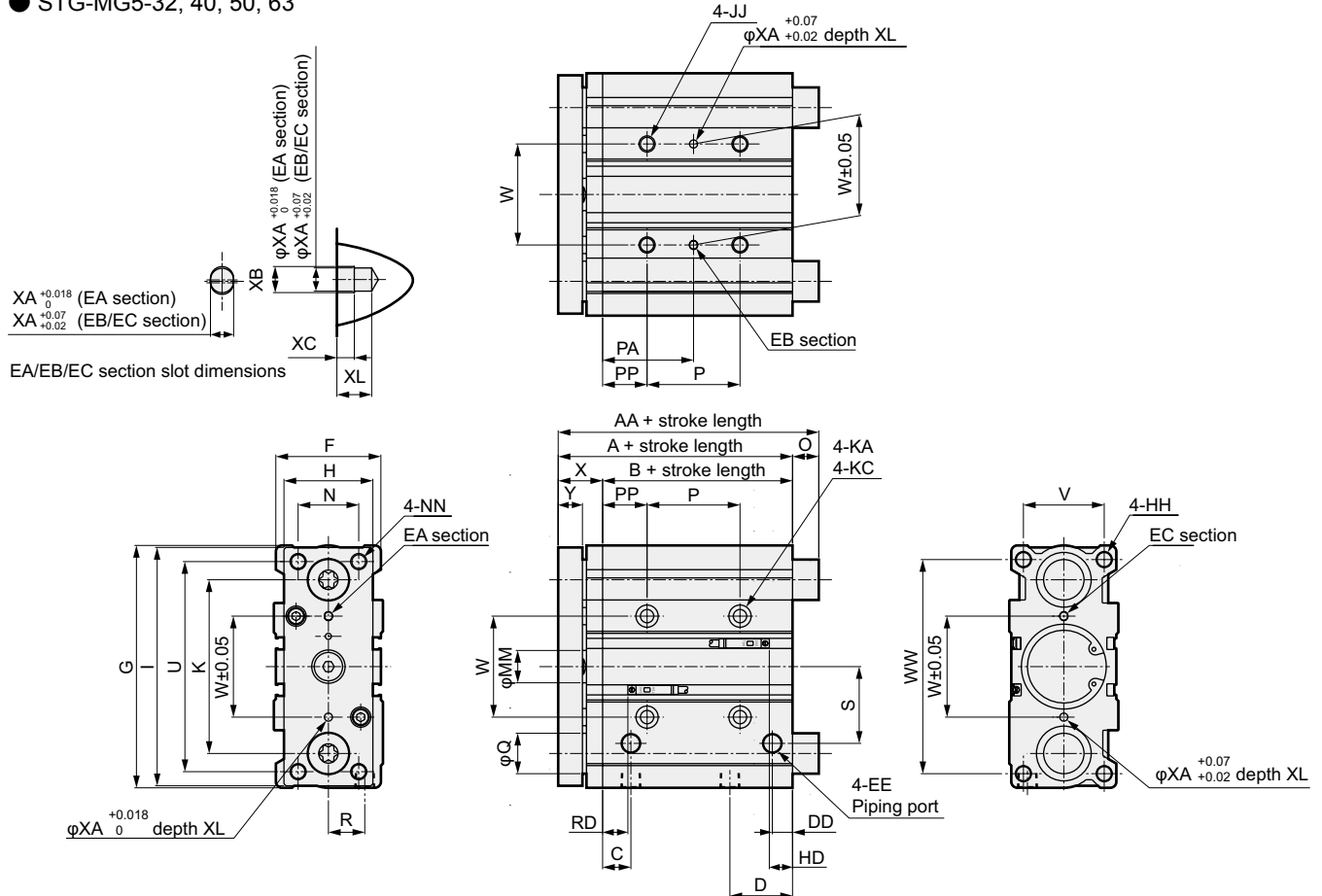
*1: When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

Code	Standard stroke length (mm)						A	B	C	D	DD	EE	F	G	H	HH	I	JJ
Bore size																		
φ20	20,30,40,50,75,100,125,150,						53	37	10.5	24.5	8.5	Rc1/8	36	83	30	M5 depth 13	81	M6 depth 12
φ25	175,200,250,300,350,400						53.5	37.5	11.5	25	9	Rc1/8	42	93	38	M6 depth 15	91	M6 depth 12
Code	K	KA	MM	N	NN	KG	P											
Bore size							30 or less	Over 30 to 100	Over 100 to 200	Over 200 to 300	Over 300							
φ20	54	5.2 through	10	18	M5 through	9.5 spot face depth 5.5	24	44	120	200	300							
φ25	64	5.2 through	12	26	M6 through	9.5 spot face depth 5.5	24	44	120	200	300							
Code	PA						PP	R	S	U	V	W	WW	X	Y	XA	XB	
Bore size	30 or less	Over 30 to 100	Over 100 to 200	Over 200 to 300	Over 300													
φ20	29	39	77	117	167	17	11	25	70	24	28	72	16	9.5	3	3.5		
φ25	29	39	77	117	167	17	14	29	78	30	34	82	16	9.5	4	4.5		
Code	AA				Q	O												
Bore size	50 or less	Over 50 to 200	Over 200															
φ20	53	78	122	12	0	25	69											
φ25	53.5	84	122	16	0	30.5	68.5											

Switch dimensions	Reed/proximity 1-color		Proximity 2-color		T8H/V switch	
Bore size	HD	RD	HD	RD	HD	RD
φ20	8.5	9.5	7.5	8.5	2.5	3.5
φ25	8.5	10	7.5	9	2.5	4

Dimensions (φ32, φ40, φ50, φ63)

● STG-MG5-32, 40, 50, 63



*1: When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

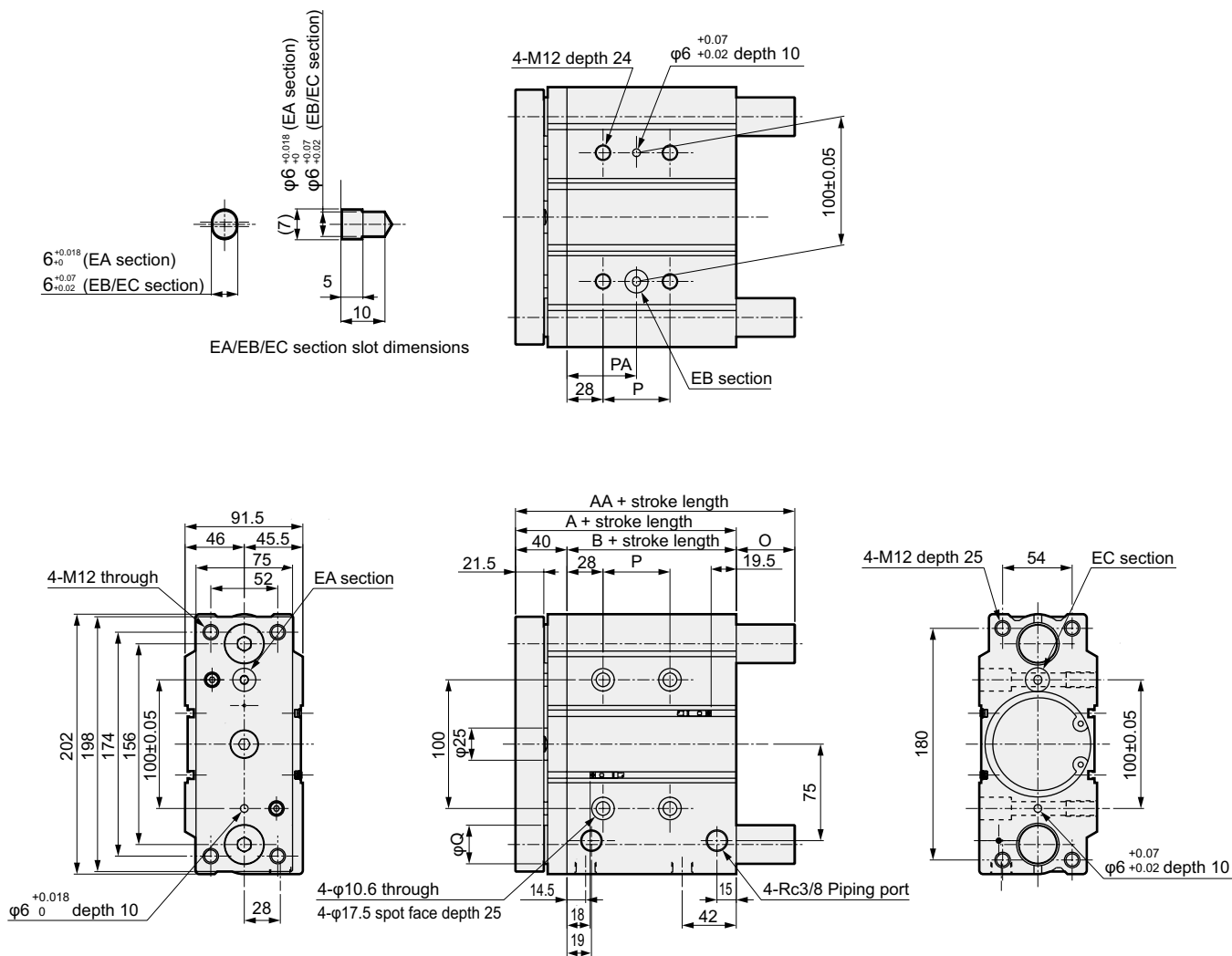
Code	Standard stroke length (mm)				A	B	C	D	DD	EE	F	G	H	HH	I	JJ	K	KA
Bore size	25,50,75,100,125, 150,175,200,250, 300,350,400				59.5	37.5	12.5	30.5	9	Rc1/8	48	112	44	M8 depth 20	110	M8 depth 16	78	6.3 through
φ32					66	44	14	31	10	Rc1/8	54	120	44	M8 depth 20	118	M8 depth 16	86	6.3 through
φ40					72	44	14	35	11	Rc1/4	64	148	60	M10 depth 22	146	M10 depth 20	110	8.6 through
φ50					77	49	16.5	35	15	Rc1/4	78	162	70	M10 depth 22	158	M10 depth 20	124	8.6 through
Code	KC	MM	N	NN	P									PA				
Bore size					25 or less	Over 25 to 100	Over 100 to 200	Over 200 to 300	Over 300					25 or less	Over 25 to 100			
φ32	11 spot face depth 7.5	16	30	M8 through	24	48	124	200	300					33	45			
φ40	11 spot face depth 7.5	16	30	M8 through	24	48	124	200	300					34	46			
φ50	14 spot face depth 9	20	40	M10 through	24	48	124	200	300					36	48			
φ63	14 spot face depth 9	20	50	M10 through	28	52	128	200	300					38	50			
Code	PA				PP	R	S	U	V	W	WW	X	Y	XA	XB	XC	XL	
Bore size	Over 100 to 200	Over 200 to 300	Over 300															
φ32	83	121	171	21	15	34	96	34	42	98	22	11.5	4	4.5	3	6		
φ40	84	122	172	22	18	38	104	40	50	106	22	11.5	4	4.5	3	6		
φ50	86	124	174	24	21.5	47	130	46	66	130	28	15.5	5	6	4	8		
φ63	88	124	174	24	28	55	130	58	80	142	28	15.5	5	6	4	8		
Code	AA				Q	O												
Bore size	50 or less	Over 50 to 200	Over 200	50 or less		Over 50 to 200	Over 200											
φ32	79	100	140	20	19.5	40.5	80.5											
φ40	79	100	140	20	13	34	74											
φ50	91	116	161	25	19	44	89											
φ63	91	116	161	25	14	39	84											
Switch dimensions	T0/T5/T2/T3		T2YH/V / T3YH/V		T2WH/V / T3WH/V switch		T8H/V switch											
Bore size	HD	RD	HD	RD	HD	RD	HD	RD										
φ32	8.5	10	8	9	10.5	12	2.5	4										
φ40	12	13	11	12	14	15	6	7										
φ50	11.5	13.5	10.5	12.5	13.5	15.5	5.5	7.5										
φ63	16	14	15	13	18	16	10	8										

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG-MG5 Series

Dimensions (φ80)

● STG-MG5-80



Standard stroke length (mm)	A	B	P					PA				
			25 st or less	Over 25 st to 100 st	Over 100 st to 200 st	Over 200 st to 300 st	Over 300 st	25 st or less	Over 25 st to 100 st	Over 100 st to 200 st	Over 200 st to 300 st	Over 300 st
25,50,75,100,125,150,175,200,250,300,350,400	96.5	56.5	28	52	128	200	300	42	54	92	128	178

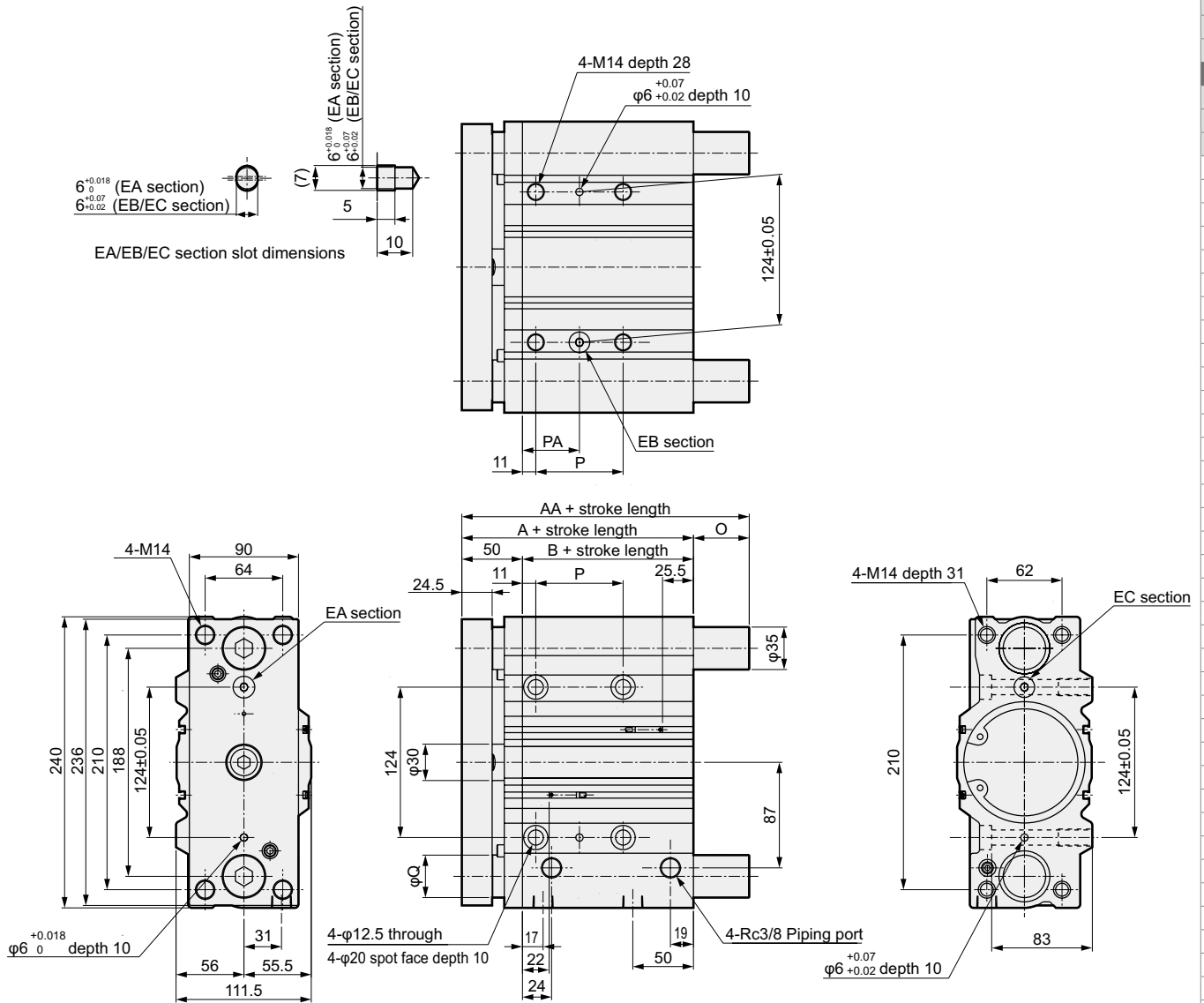
AA			Q	O		
50 st or less	Over 50 st to 200 st	Over 200 st		50 st or less	Over 50 st to 200 st	Over 200 st
115	142	193	30	18.5	45.5	96.5

● Switch dimensions

T0/T5/T2/T3		T2YH/V / T3YH/V		T2WH/V / T3WH/V switch		T8H/V switch	
HD	RD	HD	RD	HD	RD	HD	RD
19.5	18	18.5	17	21.5	20	13.5	12

Dimensions (φ100)

● STG-MG5-100



Standard stroke length (mm)	A	B	P					PA				
			25 st or less	Over 25 st to 100 st	Over 100 st to 200 st	Over 200 st to 300 st	Over 300 st	25 st or less	Over 25 st to 100 st	Over 100 st to 200 st	Over 200 st to 300 st	Over 300 st
25,50,75,100,125,150,175,200,250,300,350,400	116	66	48	72	148	220	320	35	47	85	121	171

AA			Q	O		
50 st or less	Over 50 st to 200 st	Over 200 st		50 st or less	Over 50 st to 200 st	Over 200 st
137	162	203	35	21	46	87

● Switch dimensions

T0/T5/T2/T3		T2YH/V / T3YH/V		T2WH/V / T3WH/V switch		T8H/V switch	
HD	RD	HD	RD	HD	RD	HD	RD
25.5	22	24.5	21	27.5	24	19.5	16

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending



Guided cylinder, double acting/single rod/clean-room specifications

STG-B -P7* Series

● Bore size: $\phi 12/\phi 16/\phi 20/\phi 25/\phi 32/\phi 40/\phi 50/\phi 63$

JIS symbol



Specifications

Descriptions	STG-B							
Bore size mm	φ12	φ16	φ20	φ25	φ32	φ40	φ50	φ63
Actuation	Double acting							
Working fluid	Compressed air							
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)							
Min. working pressure MPa	0.2 (≈29 psi, 2 bar)		0.15 (≈22 psi, 1.5 bar)		0.1 (≈15 psi, 1 bar)			
Proof pressure MPa	1.6 (≈230 psi, 16 bar)							
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)							
Port size	M5		Rc1/8				Rc1/4	
Port size (pressure relief port)	M5							
Stroke tolerance mm	+2.0 0							
Working piston speed mm/s	50 to 500							50 to 300
Cushion	With rubber cushion							
Lubrication	Not available							
Allowable absorbed energy J	0.056	0.088	0.157	0.157	0.401	0.627	0.980	1.560

Stroke length

Bore size	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke (mm)(switch)
φ12	10/20/30/40/50/75/100	250	5	5(10)
φ16	125/150/175/200/250			
φ20	20/30/40/50/75/100/125	400		
φ25	150/175/200/250/300/350/400			
φ32	25/50/75/100			
φ40	125/150/175			
φ50	200/250/300			
φ63	350/400	*2		

*1: The custom stroke length is available in 5 mm increments. However, the total dimensions are the same as the longer standard stroke length.

*2: For types with one or two switches. The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
$\phi 20$	Push	-	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
$\phi 25$	Push	-	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
$\phi 32$	Push	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
$\phi 40$	Push	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
$\phi 50$	Push	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
$\phi 63$	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3

Switch specifications

- 1-color/2-color display/for AC magnetic field proof

Descriptions	Proximity 2-wire	Proximity 2-wire			Proximity 3-wire				Reed 2-wire						Proximity 2-wire	
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T2WH/ T2WV	T3H/T3V	T3PH/T3PV (custom)	T3YH/ T3YV	T3WH/ T3WV	T0H/T0V		T5H/T5V		T8H/T8V		T2YD	
Applications	For programmable controller, relay, compact solenoid valve	Dedicated for programmable controller			For programmable controller, relay				For programmable controller, relay		For programmable controller, relay, IC circuit (no indicator lamp), serial connection		For programmable controller, relay		For programmable controller	
Output method	-				NPN output	PNP output	NPN output	NPN output	-							
Pwr. supp. V.	-				10 to 28 VDC				-							
Load voltage	85 to 265 VAC	10 to 30 VDC		24 VDC ±10%	30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*2)			100 mA or less		50 mA or less		5 to 50 mA	7 to 20 mA	≤50 mA	≤20 mA	5 to 50 mA	7 to 20 mA	7 to 10 mA	5 to 20 mA
Indicator lamp	LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)		Red/green LED (Lit when ON)	
Leakage current	≤1 mA at 100 VAC, ≤2 mA at 200 VAC	1 mA or less			10 µA or less				0 mA						1 mA or less	
Weight g	1 m:33	1 m:18	1 m:33	1 m:18	1 m:18		1 m:33	1 m:18	1 m:18 3 m:49 5 m:80			1 m:33 3 m:87 5 m:142			1 m:61	
	3 m:87	3 m:49	3 m:87	3 m:49	3 m:49		3 m:87	3 m:49							3 m:166	
	5 m:142	5 m:80	5 m:142	5 m:80	5 m:80		5 m:142	5 m:80							5 m:272	

*1 : Refer to Ending Page 1 for other switch specifications.

*2 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*3 : The T0/T5 switch can also be used with 220 VAC. Contact CKD about working conditions.

*4 : Switch for AC magnetic field (T2YD) cannot be used in DC magnetic field.

*5 : Dimensions depend on switch model No. Refer to Ending Page 18 for details.

Cylinder weight

- STG-B-P7

Unit: kg

Descriptions	Stroke length																Switch weight
Bore size (mm)	10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400	
φ12	0.27	0.30		0.33	0.38	0.42	0.50	0.58	0.68	0.76	0.84	0.92	1.09				Refer to the weight in the switch specifications.
φ16	0.38	0.43		0.47	0.54	0.59	0.70	0.82	0.95	1.06	1.17	1.29	1.50				
φ20		0.76		0.83	0.94	1.02	1.18	1.35	1.55	1.72	1.89	2.06	2.43	2.77	3.10	3.44	
φ25		1.06		1.14	1.32	1.41	1.63	1.86	2.12	2.35	2.57	2.79	3.28	3.73	4.18	4.63	
φ32			1.62			1.92	2.36	2.67	3.03	3.34	3.64	3.95	4.62	5.23	5.84	6.45	
φ40			1.90			2.25	2.72	3.07	3.48	3.83	4.18	4.53	5.28	5.98	6.68	7.38	
φ50			3.24			3.78	4.50	5.04	5.66	6.19	6.73	7.26	8.45	9.51	10.61	11.67	
φ63			4.12			4.76	5.61	6.25	6.98	7.62	8.27	8.91	10.30	11.66	12.92	14.18	

STG-B-P7* Series

How to order

Without switch (built-in magnet for switch)

STG - **B** - **32** - **25** - **P72**

With switch (built-in magnet for switch)

STG - **B** - **32** - **25** - **T2H** - **R** - **P72**

Model No.

A Bearing

B Bore size

C Stroke length

D Switch model No.
*1 *2 *3

E Switch quantity

F Clean-room specifications

Code		Content				
A Bearing						
B	Ball bearing					
B Bore size (mm)						
12	φ12					
16	φ16					
20	φ20					
25	φ25					
32	φ32					
40	φ40					
50	φ50					
63	φ63					
C Stroke length (mm)						
Refer to the stroke length table on the following page						
D Switch model No.						
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
			AC	DC		
T0H*	T0V*	Reed	●	●	1-color display	2-wire
T5H*	T5V*		●	●	Without indicator lamp	
T8H*	T8V*		●	●	1-color display	
T1H*	T1V*		●		1-color display	2-wire
T2H*	T2V*		●	3-wire		
T3H*	T3V*		●	3-wire		
T3PH*	T3PV*	Proximity		●	1-color display (custom order)	3-wire
T2WH*	T2WV*			●	2-color display	2-wire
T2YH*	T2YV*			●		3-wire
T3WH*	T3WV*			●		
T3YH*	T3YV*			●	1-color display off-delay	2-wire
T2JH*	T2JV*			●	2-color display	2-wire
T2YD*	-			●	AC magnetic field	
T2YDT*	-			●		
* Lead wire length						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					
E Switch quantity						
R	1 on rod side					
H	1 on head side					
D	2					
T	3					
F Clean-room specifications						
P72	Exhaust port					
P73	Vacuum treatment					

⚠ Precautions for model No. selection

*1 : Switches other than **D** Switch model No. are also available. (Custom order product)
Refer to Ending Page 1 for details.

*2 : T8H/V cannot be installed on φ12 and φ16.

*3 : Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

[Example of model No.]

STG-B-40-75-T0H-D-P72

Model: Guided cylinder, double acting/single rod

- A** Bearing : Ball bearing
- B** Bore size : φ40 mm
- C** Stroke length : 75 mm
- D** Switch model No. : Reed T0H switch, lead wire length 1 m
- E** Switch quantity : 2
- F** Clean-room specifications: Exhaust port

Stroke length

Stroke length (mm)		Applicable bore size							
		φ12	φ16	φ20	φ25	φ32	φ40	φ50	φ63
Standard stroke length	10	●	●						
	20	●	●	●	●				
	25					●	●	●	●
	30	●	●	●	●				
	40	●	●	●	●				
	50	●	●	●	●	●	●	●	●
	75	●	●	●	●	●	●	●	●
	100	●	●	●	●	●	●	●	●
	125	●	●	●	●	●	●	●	●
	150	●	●	●	●	●	●	●	●
	175	●	●	●	●	●	●	●	●
	200	●	●	●	●	●	●	●	●
	250	●	●	●	●	●	●	●	●
	300			●	●	●	●	●	●
	350			●	●	●	●	●	●
	400			●	●	●	●	●	●
Min. stroke length *2		5(10)							
Custom stroke length *1		In 5 mm increments							

*1: The total dimensions are the same as the longer standard stroke length.
*2: The value in () is the min. stroke length for switches of the 2-color display and AC magnetic field proof.

How to order switch

SW - T0V

Switch model No.
(Item ④ on the previous page)

Note: Contact CKD when using an environment-friendly T switch.

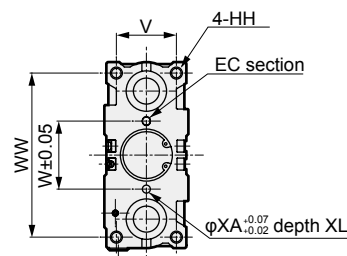
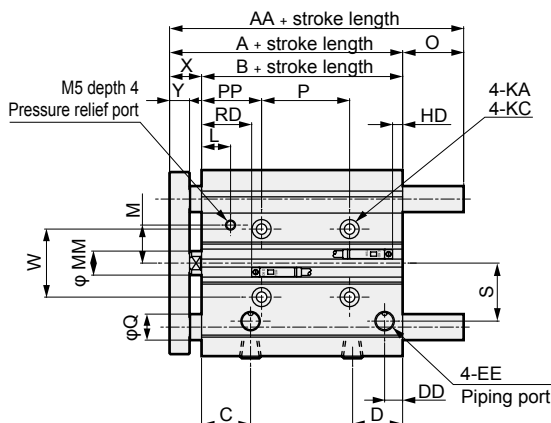
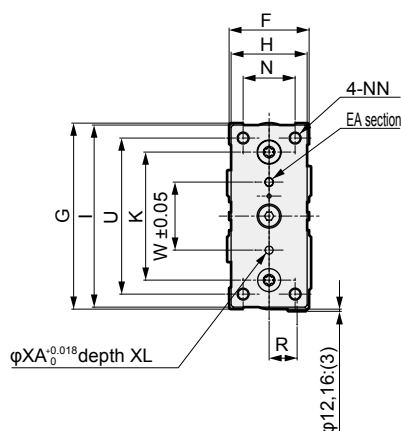
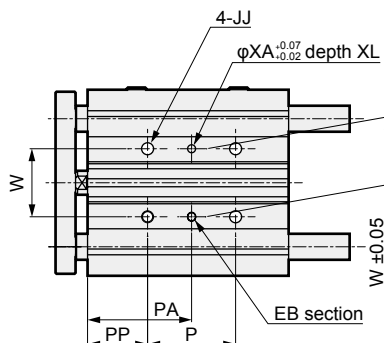
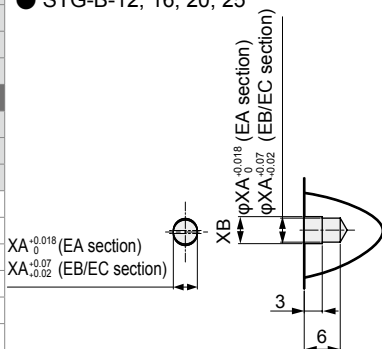
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG-B-P7* Series



Dimensions (φ12, φ16, φ20, φ25)

● STG-B-12, 16, 20, 25



Code	Standard stroke length (mm)	A	B	C	D	DD	EE	F	G	H	HH	I	JJ
φ12	10,20,30,40,50,75,100,125	55	42	25	16	7	M5	26	58	22	M4 depth 10	56	M5 depth 10
φ16	150,175,200,250	59	46	25	18	7.5	M5	30	64	25	M5 depth 12	62	M5 depth 10
φ20	20,30,40,50,75,100,125,150	66	50	23.5	24.5	8.5	Rc1/8	36	83	30	M5 depth 13	81	M6 depth 12
φ25	175,200,250,300,350,400	66.5	50.5	24.5	25	9	Rc1/8	42	93	38	M6 depth 15	91	M6 depth 12

Code	K	KA	MM	N	NN	KC	P					L	M
Bore size (mm)							30 or less	Over 30 to 100	Over 100 to 200	Over 200 to 300	Over 300		
φ12	41	4.3 through	6	14	M4 through	7.5 spot face depth 4.5	20	40	110	200	—	9	12.5
φ16	46	4.3 through	8	16	M5 through	8 spot face depth 4.5	24	44	110	200	—	8.5	13
φ20	54	5.2 through	10	18	M5 through	9.5 spot face depth 5.5	24	44	120	200	300	13.5	14
φ25	64	5.2 through	12	26	M6 through	9.5 spot face depth 5.5	24	44	120	200	300	14.5	17

Code	PA					PP	R	S	U	V	W	WW	X	Y
Bore size (mm)	30 or less	Over 30 to 100	Over 100 to 200	Over 200 to 300	300 Over									
φ12	28	38	73	118	—	18	8	17	48	18	23	50	13 ^{0.5}	7.5
φ16	30	40	73	118	—	18	10	18	54	22	24	56	13 ^{0.5}	7.5
φ20	42	52	90	130	180	30	11	25	70	24	28	72	16 ^{0.2}	9.5
φ25	42	52	90	130	180	30	14	29	78	30	34	82	16 ^{0.2}	9.5

Code	RD	HD	XA	XB
Bore size (mm)				
φ12	18	5	3	3.5
φ16	17	10	3	3.5
φ20	22.5	8.5	3	3.5
φ25	23	8.5	4	4.5

*1 : When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

*2 : Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, T1H/V and T8H/V switches.

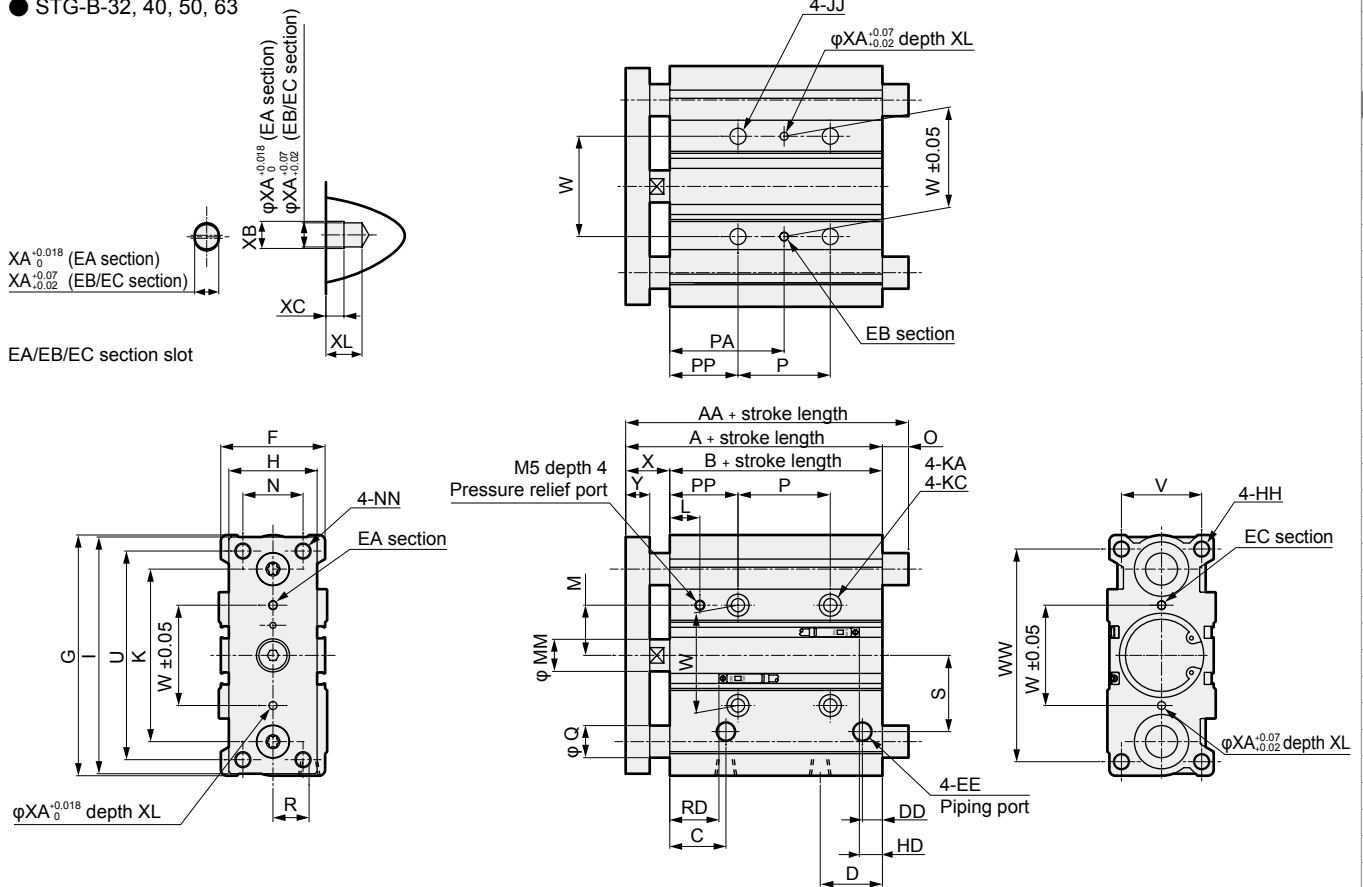
Code	AA				Q	O		
Bore size (mm)	30 or less	Over 30 to 100	Over 100 to 200	Over 200		30 or less	Over 30 to 100	Over 100 to 200
φ12	55	55	85	6	0	0	30	
φ16	59	65	95	8	0	6	36	

Code	AA				Q	O			
Bore size (mm)	30 or less	Over 30 to 100	Over 100 to 200	Over 200		30 or less	Over 30 to 100	Over 100 to 200	Over 200
φ20	66	78	100	122	10	0	12	34	56
φ25	66.5	84	103	122	13	0	17.5	36.5	55.5

Dimensions (φ32, φ40, φ50, φ63)



● STG-B-32, 40, 50, 63



Code	Standard stroke length (mm)			A	B	C	D	DD	EE	F	G	H	HH	I	JJ
Bore size (mm)	25,50,75,100,125, 150,175,200,250, 300,350,400			71.5	49.5	24.5	30.5	9	Rc1/8	48	112	44	M8 depth 20	110	M8 depth 16
φ32				78	56	26	31	10	Rc1/8	54	120	44	M8 depth 20	118	M8 depth 16
φ40				83	55	25	35	11	Rc1/4	64	148	60	M10 depth 22	146	M10 depth 20
φ50				88	60	27.5	35	15	Rc1/4	78	162	70	M10 depth 22	158	M10 depth 20
φ63															
Code	K	KA	KC	MM	N	NN	P					L	M		
Bore size (mm)							25 or less	Over 25 to 100	Over 100 to 200	Over 200 to 300	Over 300				
φ32	78	6.3 through	11 spot face depth 7.5	16	30	M8 through	24	48	124	200	300	14.5	21		
φ40	86	6.3 through	11 spot face depth 7.5	16	30	M8 through	24	48	124	200	300	15	25		
φ50	110	8.6 through	14 spot face depth 9	20	40	M10 through	24	48	124	200	300	14	33		
φ63	124	8.6 through	14 spot face depth 9	20	50	M10 through	28	52	128	200	300	14.5	40		
Code	PA						PP	R	S	U	V	W	WW	X	Y
Bore size (mm)	25 or less		Over 25 to 100	Over 100 to 200	Over 200 to 300	Over 300									
φ32	45		57	95	133	183	33	15	34	96	34	42	98	22 ⁰ ₋₂	11.5
φ40	46		58	96	134	184	34	18	38	104	40	50	106	22 ⁰ ₋₂	11.5
φ50	47		59	97	135	185	35	21.5	47	130	46	66	130	28 ⁰ ₋₂	15.5
φ63	49		61	99	135	185	35	28	55	130	58	80	142	28 ⁰ ₋₂	15.5
Code	RD	HD	XA	XB	XC	XL	*1 : When using a custom stroke length, the total dimensions are the same as the longer standard stroke length. *2 : Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, T1H/V and T8H/V switches.								
Bore size (mm)															
φ32	22	8.5	4	4.5	3	6									
φ40	25	12	4	4.5	3	6									
φ50	24.5	11.5	5	6	4	8									
φ63	25	16	5	6	4	8									
Code	AA				Q	O									
Bore size (mm)	50 or less		Over 50 to 100	Over 100 to 200	Over 200	50 or less		Over 50 to 100	Over 100 to 200	Over 200					
φ32	79		98	118	140	7.5		26.5	46.5	68.5					
φ40	79		98	118	140	1		20	40	62					
φ50	91		114	134	161	8		31	51	78					
φ63	91		114	134	161	3		26	46	73					

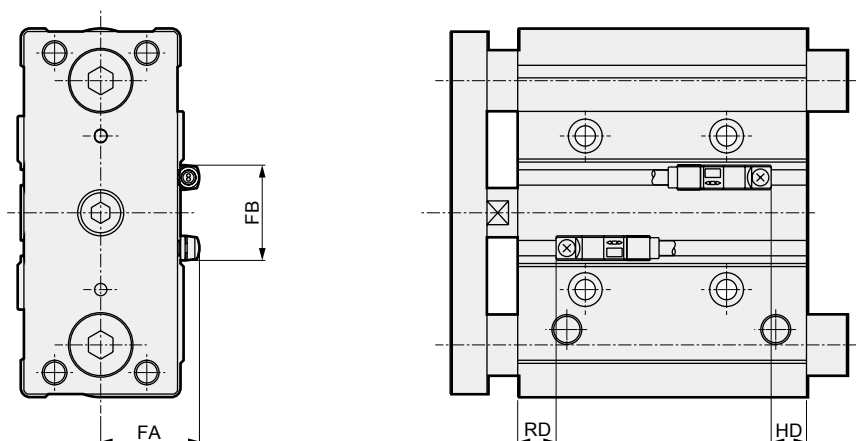
*1 : When using a custom stroke length, the total dimensions are the same as the longer standard stroke length.

*2 : Refer to page 410 for RD, HD and protruding dimensions of the 2-color display (except for T2WH/V and T3WH/V), off-delay, AC magnetic field proof, T1H/V and T8H/V switches.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

STG Series common dimensions (Switches of the 2-color display, off-delay, AC magnetic field proof, T8H/V and T1H/V)

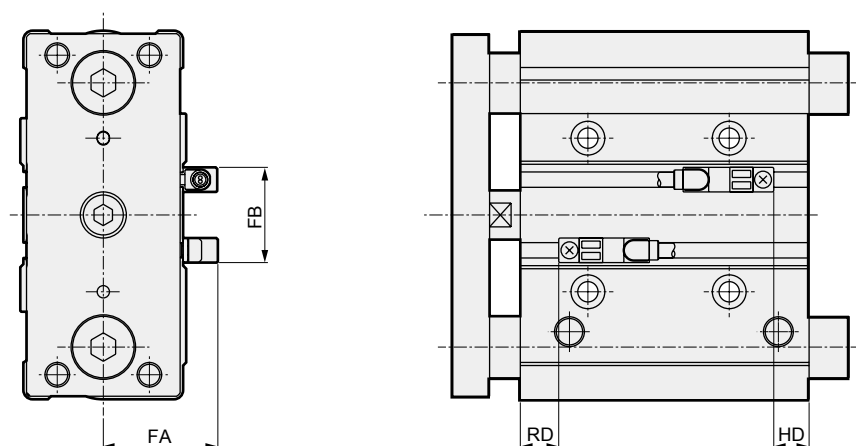
● STG-**-**-T YH/V²



Code Bore size (mm)	FA	FB	RD									HD						
			T*YH/V, T2JH/V						T8H/V			T*YH/V, T2JH/V				T8H/V		
			STG	STG-P7	STG-C	STG-Q-R, rod side position locking	STG-Q-H, head side position locking	STG	STG-P7	STG-C	STG STG-P7	STG-C	STG-Q-R, rod side position locking	STG-Q-H, head side position locking	STG	STG-P7	STG-C	
φ12	19	16	4	17	—	—	—	- *1	- *1	—	4	—	—	—	- *1	- *1	—	
φ16	21	16	3	16	19.5	—	—	- *1	11	14.5	9	17	—	—	- *1	4	12	
φ20	24	17	8.5	21.5	22.5	34	8.5	3.5	16.5	17.5	7.5	18.5	7.5	36	2.5	2.5	15.5	
φ25	27	24	9	22	24.5	34.5	9	4	17	19.5	7.5	16.5	7.5	34	2.5	2.5	11.5	
φ32	30	24	9	21	22.5	34.5	9	4	16	17.5	8	19	8	34.5	2.5	2.5	16.5	
φ40	33	31	12	24	26.5	39.5	12	7	19	21.5	11	21.5	11	36.5	6	6	16.5	
φ50	38	32	12.5	23.5	29	39	12.5	7.5	18.5	24	10.5	19.5	10.5	37	5.5	5.5	16.5	
φ63	45	32	13	24	30	39	13	8	19	25	15	23	15	39	10	10	18	
φ80	51	56	17	—	—	—	—	12	—	—	18.5	—	—	—	13.5	—	—	
φ100	60	62	21	—	—	—	—	16	—	—	24.5	—	—	—	19.5	—	—	

*1: T8H/V switch cannot be installed on STG-12, 16, STG-12-P7, or STG-Q-20 to 63-(R/H).

● STG-**-**-T2YD*, T1H/V



Code Bore size (mm)	FA	FB	RD						HD			
			STG	STG-P7*	STG-C	STG-Q-R Rod side position locking	STG-Q-H Head side position locking		STG	STG-P7*	STG-Q-R Rod side position locking	STG-Q-H With head side position locking
φ12	24	16	4	17	—	—	—	—	4	—	—	—
φ16	26	16	3	16	19.5	—	—	—	9	17	—	—
φ20	29	17	8.5	21.5	22.5	34	8.5	7.5	18.5	7.5	36	
φ25	32	24	9	22	24.5	34.5	9	7.5	16.5	7.5	34	
φ32	35	24	9	21	22.5	34.5	9	8	19	8	34.5	
φ40	38	31	12	24	26.5	39.5	12	11	21.5	11	36.5	
φ50	43	32	12.5	23.5	29	39	12.5	10.5	19.5	10.5	37	
φ63	50	32	13	24	30	39	13	15	23	15	39	
φ80	56	56	17	—	—	—	—	18.5	—	—	—	
φ100	65	62	21	—	—	—	—	24.5	—	—	—	