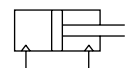









●: Standard ◎: Option ■: Not available

Variation	Model no. JIS symbol	Bore size (mm)	Standard stroke length (mm)						Min. stroke length (mm)	Max. stroke length (mm)	Option	Switch	Page
			10	15	20	25	30	Rod end female thread					
											N11		
Double acting chamfered round rod end	STK 	$\phi 20, \phi 32$ or equivalent	●	●				10	20	◎	◎	1136	
		$\phi 40, \phi 50$ or equivalent				●	●	●	20	30			◎
Single acting retract type chamfered round rod end	STK-Y 	$\phi 20, \phi 32$ or equivalent	●	●				10	20	◎	◎	1142	
		$\phi 40, \phi 50$ or equivalent				●	●	●	20	30			◎
Double acting spring integrated type chamfered round rod end	STK-Y1 	$\phi 20, \phi 32$ or equivalent	●	●				10	20	◎	◎	1148	
		$\phi 40, \phi 50$ or equivalent				●	●	●	20	30			◎
Double acting chamfered rod end	STK-M 	$\phi 20, \phi 32$ or equivalent	●	●				10	20	◎	◎	1154	
		$\phi 40, \phi 50$ or equivalent				●	●	●	20	30			◎
Single acting retract type chamfered rod end	STK-MY 	$\phi 20, \phi 32$ or equivalent	●	●				10	20	◎	◎	1160	
		$\phi 40, \phi 50$ or equivalent				●	●	●	20	30			◎
Double acting spring integrated type chamfered rod end	STK-MY1 	$\phi 20, \phi 32$ or equivalent	●	●				10	20	◎	◎	1166	
		$\phi 40, \phi 50$ or equivalent				●	●	●	20	30			◎
Single acting retract type roller rod end	STK-JY 	$\phi 20, \phi 32$ or equivalent	●	●				10	20		◎	1172	
		$\phi 40, \phi 50$ or equivalent				●	●	●	20	30			
Double acting spring integrated type roller rod end	STK-JY1 	$\phi 20, \phi 32$ or equivalent	●	●				10	20		◎	1178	
		$\phi 40, \phi 50$ or equivalent				●	●	●	20	30			

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure



Pneumatic components

Safety precautions

Always read this section before starting use.

Refer to Intro 71 for general precautions of the cylinder, and to Intro 78 for general precautions of the cylinder switch.

High rigid cylinder STK Series

Design & Selection

1. Common

CAUTION

■ Braking a load coupled with a cylinder, etc., using the high rigid cylinder.

- The working range applies only when the pallet is stopped on the conveyor. When stopping a load coupled with a cylinder, etc., using the high rigid cylinder, the cylinder thrust acts as a lateral load. Select the cylinder so the allowable energy absorption and lateral load ranges are satisfied.

2. Single acting STK-Y

CAUTION

■ Do not pressurize from the single acting head side.

- If air is supplied from the head side for the single acting type, the air will leak.

Installation & Adjustment

1. Common

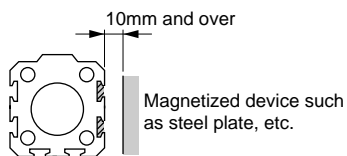
CAUTION

■ Do not apply torque to the piston rod. Install the piston rod with the rod contact surface parallel to the pallet contact surface so torque is not applied to the piston rod.

■ Do not apply oil, etc., to the piston rod sliding section.

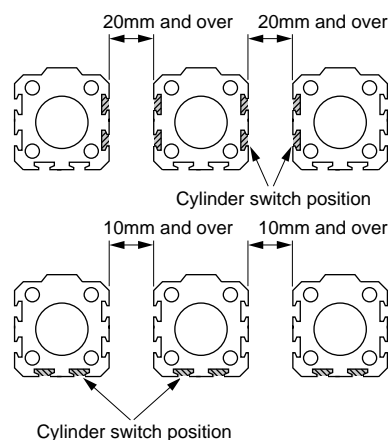
- The cylinder operation could fail, etc.

■ The cylinder may malfunction if a magnetic substance, as a steel plate, is nearby. Move the magnetic substance to at least 10 mm from the cylinder. (Same clearance for all bore size)



■ The Cylinder switch may malfunction if cylinders are installed adjacently. Separate cylinders by the following distances.

(Same clearance for all bore size)



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC

High rigid cylinder
Space saving structure

2. Single acting STK-Y

⚠ CAUTION

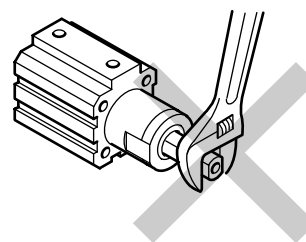
- Do not leave the single acting cylinder in the pressurized state. If left pressurized, the piston rod may not return with spring power when pressure is released.

3. Chamfered rod end female thread STK-M-N11

⚠ CAUTION

- Avoid using in methods that apply torque on the piston rod.
The baffle spacer may deviate, and the orientation of the chamfered piston rod may change.

- When fixing a workpiece to the end of the piston rod, pull the piston rod into the stroke end. Then, attach a wrench to the section protruding outside the parallel section of the rod, and tighten while checking that tightening torque is not applied to the cylinder.

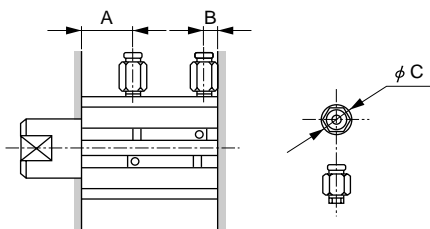


During Use & Maintenance

1. Common

⚠ CAUTION

- Usable pipe joints are limited, so see the following table to select the joint.



Descriptions Bore size (mm)	Port size	Port dimension		Applicable joints	Joint O.D. φ C	Inapplicable joints
		A	B			
φ 20	M5	8	5.5	SC3W-M5-4 SC3W-M5-6 GWS4-M5-S GWS4-M5 GWL4-M5 GWL6-M5	φ 11 or less	GWS6-M5
φ 32	Rc1/8	8	8	SC3W-6-4/6/8 GWS4-6 GWS6-6 GWS8-6 GWL4-6 GWL6-6	φ 15 or less	GWS10-6 GWL-8-6 GWL10-6
φ 40		12	8.5			
φ 50	Rc1/4	10.5	10.5	SC3W-8-6/8/10 GWS4-8 GWS6-8 GWS10-8 GWL4 to 12-8	φ 21 or less	GWS-12-8

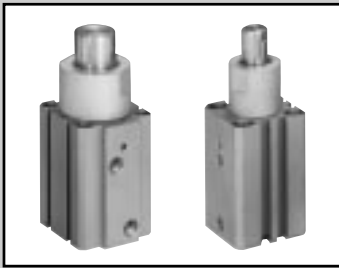
- When changing the direction of the baffle, loosen the 3 setscrews on the rod cover, change to the required position, then tighten again.

2. Spring integrated double acting SKT-Y1

⚠ CAUTION

- When using a double acting type with a spring, use only under normal conditions. If air is cut off, the rod is pushed to hold the stopper.

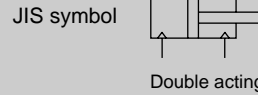
SCP*2
 CMK2
 CMA2
 SCM
 SCG
 SCA2
 SCS
 CKV2
 CA/OV2
 SSD
 CAT
 MDC2
 MVC
 SMD2
 MSD*
 FC*
STK
 ULK*
 JSK/M2
 JSG
 JSC3
 USSD
 USC
 JSB3
 LMB
 STG
 STS/L
 LCS
 LCG
 LCM
 LCT
 LCY
 STR2
 UCA2
 HCM
 HCA
 SRL2
 SRG
 SRM
 SRT
 MRL2
 MRG2
 SM-25
 CAC3
 UCAC
 RCC2
 MFC
 SHC
 GLC
 Ending



High rigid cylinder Double acting chamfered round rod end

STK Series

● Bore size: ϕ 20, ϕ 32, ϕ 40, ϕ 50



Specifications

Descriptions	STK			
Bore size mm	ϕ 20	ϕ 32	ϕ 40	ϕ 50
Actuation	Double acting			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.15	0.1		
Guaranty durability pressure MPa	1.6			
Ambient temperature $^{\circ}$ C	-10 to 60 (no freezing)			
Port size	M5	Rc1/8	Rc1/4	
Stroke tolerance mm	+2.0 0			
Working piston speed mm/s	50 to 500			
Cushion	Rubber cushioned			
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISOVG 32)			
Rod end form	Round bar type			
Allowable energy absorption J	Refer to page 1186.			

Stroke length

Bore size (mm)	Stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke length with switch (mm)
ϕ 20	10, 15, 20	20	10	10
ϕ 32				
ϕ 40	20, 25, 30	30	20	20
ϕ 50				

Note: Other than standard stroke length is custom order.

Switch specifications

- 1 color/2 color indicator

*The T0/T5 switch can be used with 220 VAC.
Consult CKD for working conditions.

Descriptions	Proximity 2 wire			Proximity 3 wire			Reed 2 wire						
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T3H/ T3V	T3PH/T3PV (Custom order)	T3YH/ T3YV	TOH/TOV	T5H/T5V		T8H/T8V			
Applications	Programmable controller relay, small solenoid valve	Programmable controller		Programmable controller, relay			Programmable controller, relay	Programmable controller, relay, IC circuit (w/o indicator light), serial connection		Programmable controller, relay			
Output method	-			NPN output	PNP output	NPN output	-						
Power voltage	-			10 to 28 VDC			-						
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC
Load current	5 to 100mA	5 to 20mA (Note 1)		100mA or less		50mA or less	5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Without indicator light		LED (ON lighting)			
Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC	1mA or less		10 μA or less			0mA						

- With preventive maintenance output

Descriptions	Proximity 3 wire		Proximity 4 wire		Proximity 3 wire		Proximity 4 wire		
	T2YFH/V		T3YFH/V		T2YMH/V		T3YMH/V		
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay		
Output method	NPN output								
Light	Red/green LED (ON lighting)								
	Installation position adjustment section	-		Yellow LED (ON lighting)				-	
Regular Output	Power voltage	-		10 to 28 VDC		-		10 to 28 VDC	
	Load voltage	10 to 30 VDC		30 VDC or less		10 to 30 VDC		30 VDC or less	
	Load current	5 to 20mA		50mA or less		5 to 20mA		50mA or less	
	Leakage current	1mA or less		10 μA or less		1.2mA or less		10 μA or less	
Preventive maintenance Output	Load voltage	30 VDC or less							
	Load current	20mA or less		50mA or less		5 to 20mA or less		50mA or less	
	Leakage current	10 μA or less							

Note 1: Refer to an Ending 1 page for other switches.

Note 2: Max. load current: 20mA above is the value at 25°C. When ambient temperature around switch is higher than 25°C, the value is lower than 20mA. (5 to 10mA at 60°C)

Cylinder weight table

Stroke length	10	15	20	25	30	Weight per switch (grommet)
Bore size						
φ 20	214	229	243	-	-	18
φ 32	438	463	488	-	-	
φ 40	-	-	793	834	875	
φ 50	-	-	1285	1311	1337	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure

How to order

Without switch

STK - 20 - 10 - N11

With switch

STK - 20 - 10 - T0H - R - N11

A Bore size

B Port thread type

C Stroke length

D Switch model no.
Note 1

E Switch quantity

F Option

Note on model no. selection

Note 1: Switches other than (D) switch model no. are available. (Custom order)
Refer to Ending 1 for the details.

Symbol	Descriptions
A Bore size (mm)	
20	φ20
32	φ32
40	φ40
50	φ50

B Port thread type	
Blank	Rc thread
NN	NPT thread (φ 32 and over) (custom order)
GN	G thread (φ 32 and over) (custom order)

C Stroke length (mm)					
Bore size		φ20	φ32	φ40	φ50
10	10	●	●		
15	15	●	●		
20	20	●	●	●	●
25	25			●	●
30	30			●	●

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	T0V*	Reed	1 color indicator type	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator type	
T1H*	T1V*	Proximity	1 color indicator type	2-wire
T2H*	T2V*		1 color indicator type (custom order)	3-wire
T3H*	T3V*			
T3PH*	T3PV*		2 color indicator type	2-wire
T2YH*	T2YV*			
T3YH*	T3YV*		2 color indicator type (without indicator light for preventive maintenance output)	3-wire
T2YFH*	T2YFV*			
T3YFH*	T3YFV*			
T2YMH*	T2YMV*		2 color indicator type (with indicator light for preventive maintenance output (1 color))	3-wire
T3YMH*	T3YMV*			
T2JH*	T2JV*	Off-delay type	2-wire	

*Lead wire length (m)

Blank	1m (standard)
3	3m (option)
5	5m (option)

E Switch quantity	
R	One on rod end
H	One on head end
D	2

F Option	
Blank	Without rod end thread
N11	Rod end female thread

<Example of model number>

STK-20-10-T0H-R-N11

Model: High rigid cylinder double acting chamfered round rod end

- A** Bore size : φ 20mm
- B** Port thread type : Rc thread
- C** Stroke length : 10mm
- D** Switch model no. : Reed T0H switch, lead wire 1m
- E** Switch quantity : One on rod end
- F** Option : With rod end female thread

How to order switch

SW - T0H

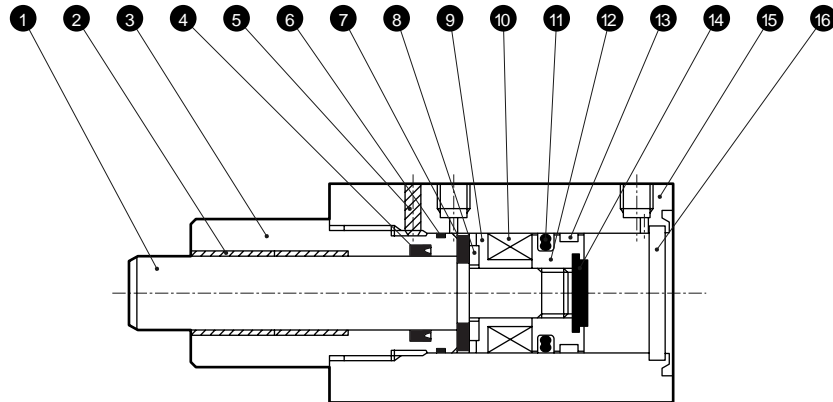
Switch model no.
(Item **D**) above)

Internal structure and parts list

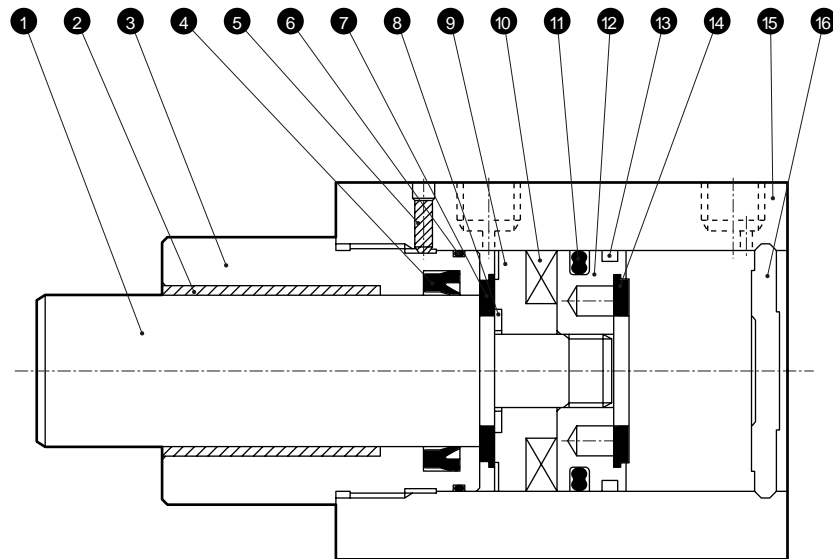
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure

● STK-20



● STK-32/40/50



N0.	Parts name	Material	Remarks	N0.	Parts name	Material	Remarks
1	Piston rod	ϕ 20: Stainless steel ϕ 32 to 50: Steel	Industrial chrome plating	9	Spacer	Polyamide	
2	Bush	Oilless dry met		10	Magnet	Plastic	
3	Rod cover	Aluminum alloy	Alumite	11	Piston packing seal	Nitrile rubber	
4	Rod packing seal	Nitrile rubber		12	Piston	Aluminum alloy	Chromate
5	Hexagon socket head set screw	Steel	Blackening	13	Wear ring	Acetar resin	
6	Metal gasket	Nitrile rubber		14	Cushion rubber (H)	Urethane rubber	
7	Cushion rubber (R)	Urethane rubber		15	Body	Aluminum alloy	Hard alumite
8	Spacer washer	Stainless steel		16	Guard	ϕ 20: Stainless steel ϕ 32 to 50: Aluminum alloy	ϕ 32 to 50: Chromate

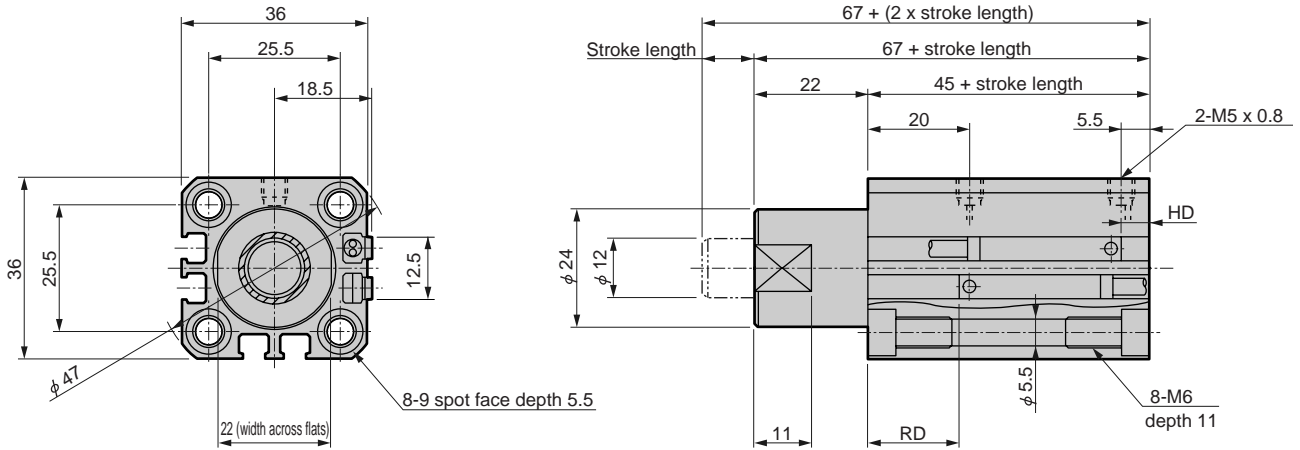
Repair parts list

Bore size (mm)	Kit No.	Repair parts number
ϕ 20	STK-20K	4 6 11
ϕ 32	STK-32K	
ϕ 40	STK-40K	13 14
ϕ 50	STK-50K	

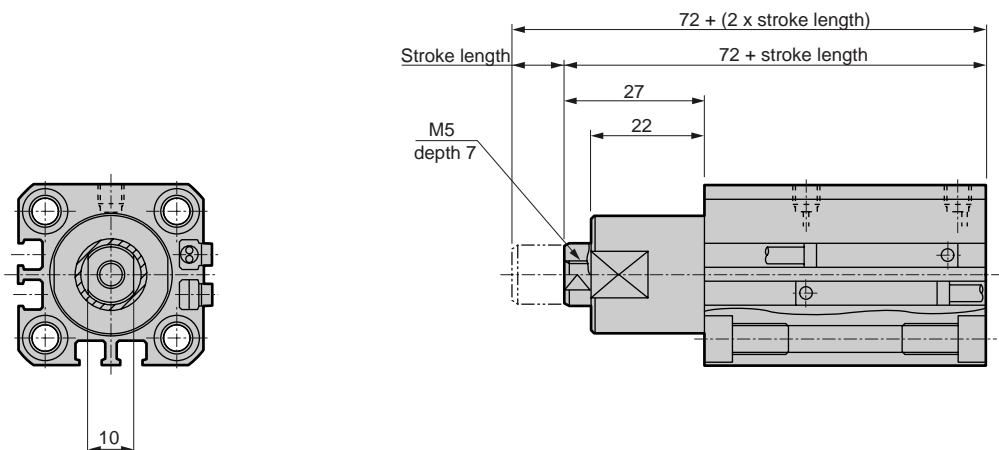
Dimensions



● STK-20



● STK-20-N11 (Dimensions other than listed are same as above (STK-20) dimensions.)



Dimensions with switch

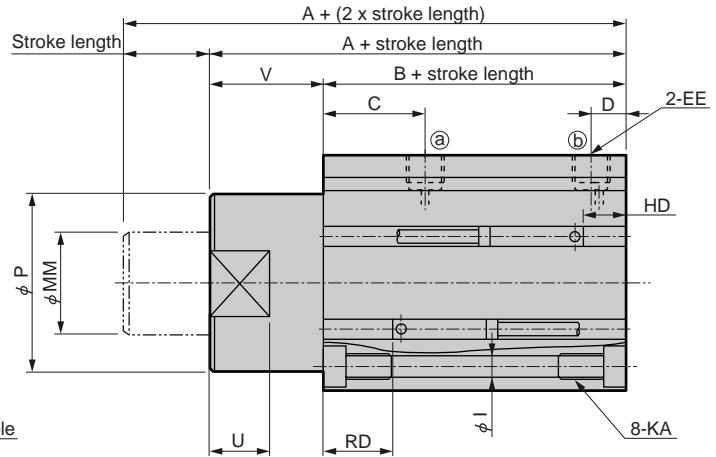
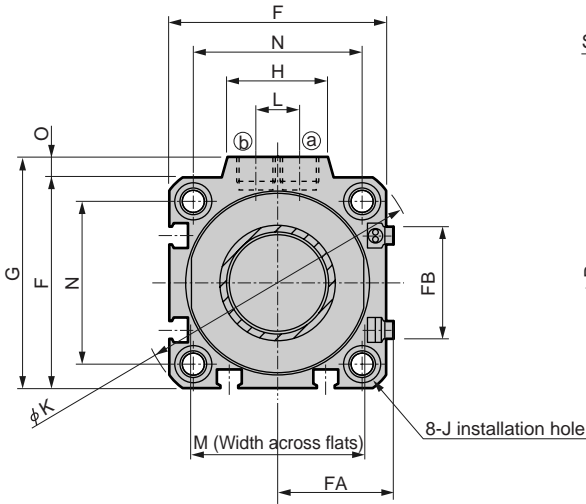
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
$\phi 20$	5.5	21	5.5	21

Note : Refer to page 1183 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

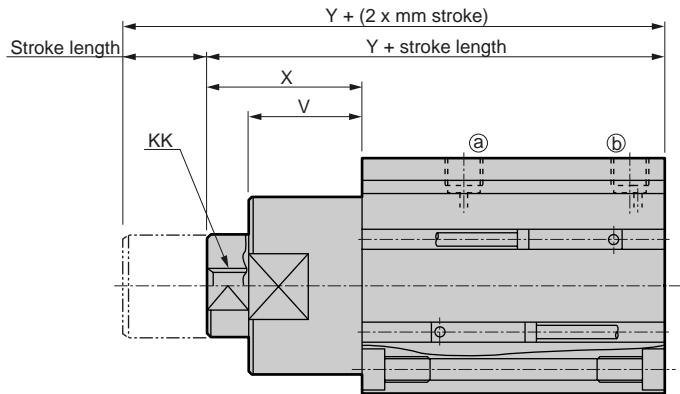
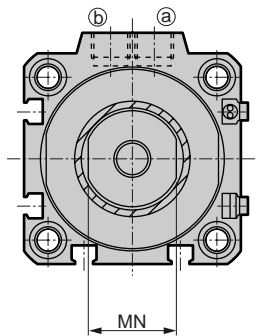
Dimensions



- STK-32/40/50



- STK-32/40/50-N11 (Dimensions other than listed are same as above (STK-32/40/50) dimensions.)



Symbol Bore size	A	B	C	D	EE	F	FA	FB	G	H	I	J	K	KA	KK	L	M	MM	MN	N	O	P	U	V	X	Y
φ 32	68	48	20	8	Rc1/8	45	23	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	32	20	17	34	4.5	36	13	20	30	78
φ 40	80.5	52.5	24.5	8.5	Rc1/8	52	26.5	27.5	57	24	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	41	25	22	40	5	44	15	28	38	90.5
φ 50	82	54	24.5	10.5	Rc1/4	64	32.5	28.5	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	50	30	27	50	7	56	15	28	43	97

Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
φ 32	9.5	21	9	21
φ 40	10.5	24	10.5	24
φ 50	11.5	24	11.5	24

Note : Refer to page 1183 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

High rigid cylinder
Space saving structure

SCP*2
 CMK2
 CMA2
 SCM
 SCG
 SCA2
 SCS
 CKV2
 CA/OV2
 SSD
 CAT
 MDC2
 MVC
 SMD2
 MSD*
 FC*
STK
 ULK*
 JSK/M2
 JSG
 JSC3
 USSD
 USC
 JSB3
 LMB
 STG
 STS/L
 LCS
 LCG
 LCM
 LCT
 LCY
 STR2
 UCA2
 HCM
 HCA
 SRL2
 SRG
 SRM
 SRT
 MRL2
 MRG2
 SM-25
 CAC3
 UCAC
 RCC2
 MFC
 SHC
 GLC
 Ending



High rigid cylinder Single acting retract type chamfered round rod end

STK-Y Series

● Bore size: ϕ 20, ϕ 32, ϕ 40, ϕ 50



Single acting retract type



Specifications

Descriptions	STK-Y			
Bore size mm	ϕ 20	ϕ 32	ϕ 40	ϕ 50
Actuation	Single acting retract type			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.22	0.12		
Withstanding pressure MPa	1.6			
Ambient temperature $^{\circ}$ C	-10 to 60 (no freezing)			
Port size	M5	Rc1/8	Rc1/4	
Stroke tolerance mm	+2.0 0			
Working piston speed mm/s	50 to 500			
Cushion	Rubber cushioned			
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISOVG 32)			
Rod end form	Round bar type			
Allowable energy absorption J	Refer to page 1186.			

Stroke length

Bore size (mm)	Stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke length with switch (mm)
ϕ 20	10, 15, 20	20	10	10
ϕ 32				
ϕ 40	20, 25, 30	30	20	20
ϕ 50				

Note: Other than standard stroke length is custom order.

Spring load

(Unit: N)

Bore size (mm)	Stroke length (mm)	Stroke length 0	Full stroke length during operation
ϕ 20	10	11.5	14.7
	15	9.9	
	20	8.2	
ϕ 32	10	24.5	31.4
	15	21.1	
	20	17.6	
ϕ 40	20	29.0	44.4
	25	25.3	
	30	21.5	
ϕ 50	20	55.4	84.8
	25	48.0	
	30	40.7	

Switch specifications

- 1 color/2 color indicator

*The T0/T5 switch can be used with 220 VAC. Consult CKD for working conditions.

Descriptions	Proximity 2 wire			Proximity 3 wire			Reed 2 wire						
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T3H/ T3V	T3PH/T3PV/ (Custom order)	T3YH/ T3YV	TOH/TOV		T5H/T5V		T8H/T8V		
Applications	Programmable controller relay, small solenoid valve	Programmable controller		Programmable controller, relay			Programmable controller, relay		Programmable controller, relay, IC circuit (w/o indicator light), serial connection		Programmable controller, relay		
Output method	-			NPN output	PNP output	NPN output	-						
Power voltage	-			10 to 28 VDC			-						
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC
Load current	5 to 100mA	5 to 20mA (Note 1)		100mA or less		50mA or less	5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)		
Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC	1mA or less		10 μA or less			0mA						

- With preventive maintenance output

Descriptions	Proximity 3 wire		Proximity 4 wire		Proximity 3 wire		Proximity 4 wire	
	T2YFH/V		T3YFH/V		T2YMH/V		T3YMH/V	
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay	
Output method	NPN output							
Light	Red/green LED (ON lighting)							
	Preventive maintenance output		-		Yellow LED (ON lighting)			
Regular Output	Power voltage		10 to 28 VDC		-		10 to 28 VDC	
	Load voltage		30 VDC or less		10 to 30 VDC		30 VDC or less	
	Load current		50mA or less		5 to 20mA		50mA or less	
	Leakage current		10 μA or less		1.2mA or less		10 μA or less	
Preventive maintenance Output	30 VDC or less							
	Load current		50mA or less		5 to 20mA or less		50mA or less	
	10 μA or less							

Note 1: Refer to Ending 1 for other switches.

Note 2: Max. load current: 20mA above is the value at 25°C. When ambient temperature around switch is higher than 25°C, the value is lower than 20mA. (5 to 10mA at 60°C)

Cylinder weight table

Stroke length	10	15	20	25	30	Weight per switch (grommet)
Bore size						
φ20	217	232	246	-	-	18
φ32	454	479	504	-	-	
φ40	-	-	809	850	891	
φ50	-	-	1299	1325	1351	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure

How to order

Without switch

STK-Y - **20** - **10** - **N11**

With switch

STK-Y - **20** - **10** - **T0H** - **R** - **N11**

A Bore size

B Port thread type

C Stroke length

D Switch model no.
Note 1

E Switch quantity

F Option

Symbol	Descriptions
A Bore size (mm)	
20	φ 20
32	φ 32
40	φ 40
50	φ 50

B Port thread type	
Blank	Rc thread
NN	NPT thread (φ32 and over) (custom order)
GN	G thread (φ 32 and over) (custom order)

C Stroke length				
Bore size	φ 20	φ 32	φ 40	φ 50
10	10	●	●	
15	15	●	●	
20	20	●	●	●
25	25			●
30	30			●

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	T0V*	Reed	1 color indicator type	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator type	
T1H*	T1V*	Proximity	1 color indicator type	2-wire
T2H*	T2V*		1 color indicator type (custom order)	3-wire
T3H*	T3V*			2 color indicator type
T3PH*	T3PV*		2 color indicator type (without indicator light for preventive maintenance output)	3-wire
T2YH*	T2YV*			4-wire
T3YH*	T3YV*		2 color indicator type (with indicator light for preventive maintenance output (1 color))	3-wire
T2YFH*	T2YFV*			4-wire
T3YFH*	T3YFV*		Off-delay type	3-wire
T2YMH*	T2YMV*			4-wire
T3YMH*	T3YMV*			2-wire
T2JH*	T2JV*			

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

E Switch quantity	
R	One on rod end on rod end
H	One on rod end on head end
D	2

F Option	
Blank	Without rod end thread
N11	Rod end female thread

Note on model no. selection

Note 1: Switches other than (D) switch model no. are also available. (Custom order)
Refer to Ending 1 for the details.

<Example of model number> **STK-Y-20-10-T0H-R-N11**

Model: High rigid cylinder single acting retract type
chamfered round rod end

- A** Bore size : φ 20mm
- B** Port thread type : Rc thread
- C** Stroke length : 10mm
- D** Switch model no. : Reed T0H switch,
lead wire 1m
- E** Switch quantity : One on rod end
- F** Option : With rod end female thread

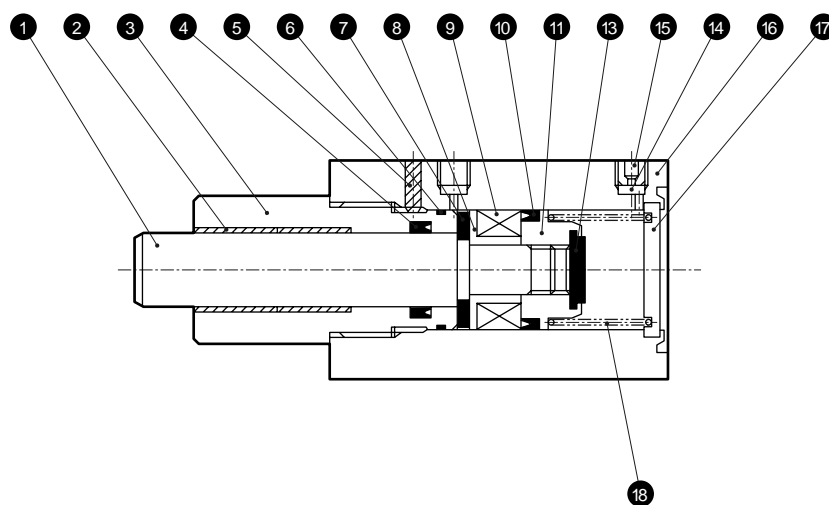
How to order switch

SW - **T0H**

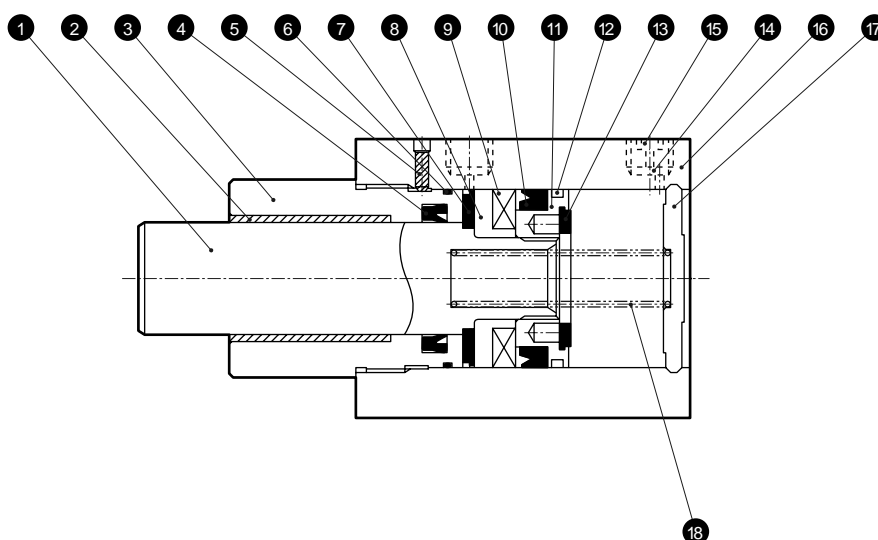
Switch model no.
(Item **D** above)

Internal structure and parts list

● STK-Y-20



● STK-Y-32/40/50



NO.	Parts name	Material	Remarks	NO.	Parts name	Material	Remarks
1	Piston rod	φ 20: Stainless steel φ 32 to 50: Steel	Industrial chrome plating	10	Piston packing seal	Nitrile rubber	
2	Bush	Oilless dry met		11	Piston	Aluminum alloy	Chromate
3	Rod cover	Aluminum alloy	Alumite	12	Wear ring	Acetar resin	
4	Rod packing seal	Nitrile rubber		13	Cushion rubber (H)	Urethane rubber	
5	Hexagon socket head set screw	Steel	Blackening	14	Stainless steel wire net	Stainless steel	
6	Metal gasket	Nitrile rubber		15	Plug	Stainless steel	
7	Cushion rubber (R)	Urethane rubber		16	Body	Aluminum alloy	Hard alumite
8	Spacer	Aluminum alloy	Chromate	17	Cover	φ 20: Steel φ 32 to 50: Aluminum alloy	φ 20: Galvanizing φ 32 to 50: Chromate
9	Magnet	Plastic		18	Coil spring	Steel	Electrode position coating

Repair parts list

Bore size (mm)	Kit No.	Repair parts number
φ 20	STK-Y-20K	4 6 10
φ 32	STK-Y-32K	4 6 10
φ 40	STK-Y-40K	12 13
φ 50	STK-Y-50K	12 13

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC

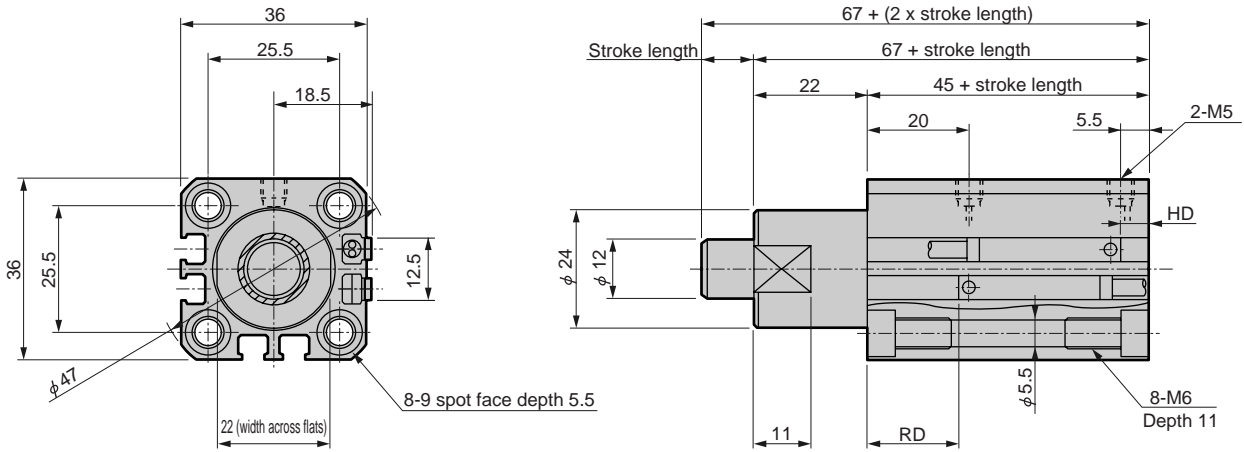
Ending
High rigid cylinder
Space saving structure

Dimensions

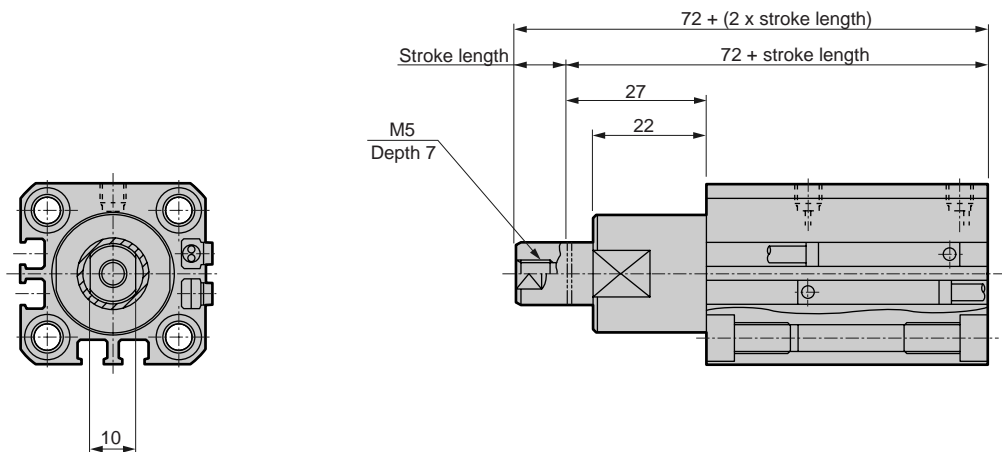


- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

● STK-Y-20



● STK-Y-20-N11 (Dimensions other than listed are same as above (STK-Y-20) dimensions.)



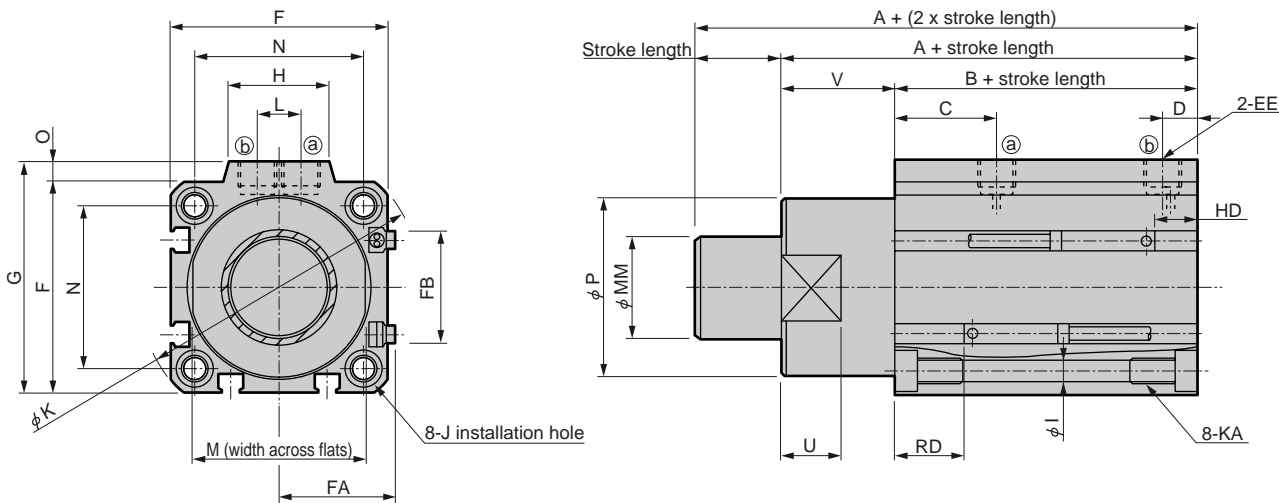
Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
$\phi 20$	7	19.5	7	19.5

Note : Refer to page 1184 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

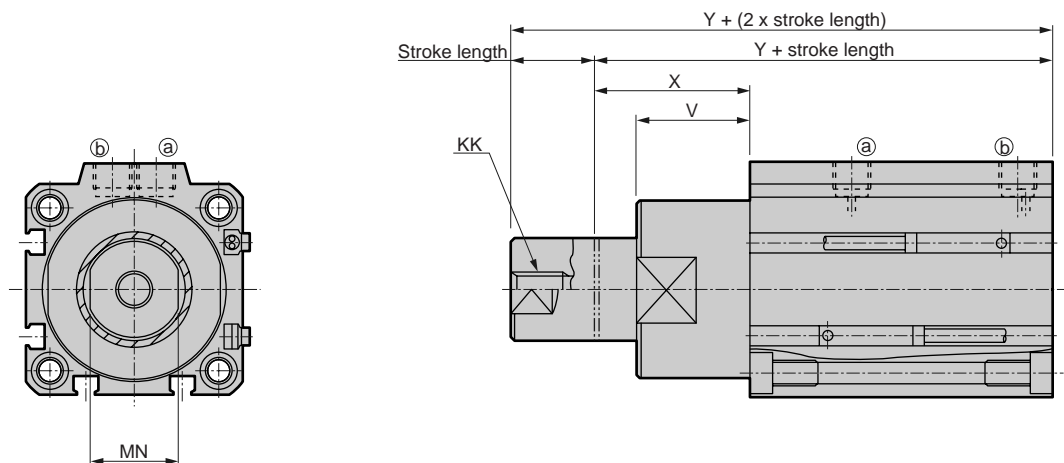
Dimensions



● STK-Y-32/40/50



● STK-Y-32/40/50-N11 (Dimensions other than listed are same as above (STK-Y-32/40/50) dimensions.)



Symbol Bore size	A	B	C	D	EE	F	FA	FB	G	H	I	J	K	KA	KK	L	M	MM	MN	N	O	P	U	V	X	Y
φ 32	68	48	20	8	Rc1/8	45	23	20.5	49.5	24	5.5	⁹ spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	32	20	17	34	4.5	36	13	20	30	78
φ 40	80.5	52.5	24.5	8.5	Rc1/8	52	26.5	27.5	57	24	5.5	⁹ spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	41	25	22	40	5	44	15	28	38	90.5
φ 50	82	54	24.5	10.5	Rc1/4	64	32.5	28.5	71	33	6.9	¹¹ spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	50	30	27	50	7	56	15	28	43	97

Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
φ 32	10.5	20	10.5	20
φ 40	11.5	23	11.5	23
φ 50	12.5	23	12.5	23

Note : Refer to page 1184 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC

Ending

High rigid cylinder
Space saving structure



High rigid cylinder Double acting spring integrated type chamfered round rod end

STK-Y1 Series

● Bore size: $\phi 20$, $\phi 32$, $\phi 40$, $\phi 50$



JIS symbol

Double acting spring integrated type



Specifications

Descriptions	STK-Y1			
Bore size mm	$\phi 20$	$\phi 32$	$\phi 40$	$\phi 50$
Actuation	Double acting spring integrated type			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.22		0.12	
Withstanding pressure MPa	1.6			
Ambient temperature $^{\circ}\text{C}$	-10 to 60 (no freezing)			
Port size	M5	Rc1/8		Rc1/4
Stroke tolerance mm	+2.0 0			
Working piston speed mm/s	50 to 500			
Cushion	Rubber cushioned			
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISOVG 32)			
Rod end form	Round bar type			
Allowable energy absorption J	Refer to page 1186.			

Stroke length

Bore size (mm)	Stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke length with switch (mm)
$\phi 20$	10, 15, 20	20	10	10
$\phi 32$				
$\phi 40$	20, 25, 30	30	20	20
$\phi 50$				

Note: Other than standard stroke length is custom order.

Spring load

(Unit: N)

Bore size (mm)	Stroke length (mm)	Stroke length 0	Full stroke length during operation
$\phi 20$	10	11.5	14.7
	15	9.9	
	20	8.2	
$\phi 32$	10	24.5	31.4
	15	21.1	
	20	17.6	
$\phi 40$	20	29.0	44.4
	25	25.3	
	30	21.5	
$\phi 50$	20	55.4	84.8
	25	48.0	
	30	40.7	

Switch specifications

- 1 color/2 color indicator

*The T0/T5 switch can be used with 220 VAC. Consult CKD for working conditions.

Descriptions	Proximity 2 wire			Proximity 3 wire			Reed 2 wire							
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T3H/ T3V	T3PH/T3PV (Custom order)	T3YH/ T3YV	TOH/TOV		T5H/T5V		T8H/T8V			
Applications	Programmable controller relay, small solenoid valve		Programmable controller			Programmable controller, relay			Programmable controller, relay		Programmable controller, relay, IC circuit (w/o indicator light), serial connection		Programmable controller, relay	
Output method	-			NPN output	PNP output	NPN output	-							
Power voltage	-			10 to 28 VDC			-							
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC	
Load current	5 to 100mA	5 to 20mA (Note 1)		100mA or less		50mA or less	5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)			
Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC	1mA or less		10 μA or less			0mA							

- With preventive maintenance output

Descriptions	Proximity 3 wire		Proximity 4 wire		Proximity 3 wire		Proximity 4 wire			
	T2YFH/V		T3YFH/V		T2YMH/V		T3YMH/V			
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay			
Output method	NPN output									
Light	Red/green LED (ON lighting)									
	Preventive maintenance output		-		-		Yellow LED (ON lighting)			
Regular Output	Power voltage		10 to 30 VDC		10 to 28 VDC		-		10 to 28 VDC	
	Load voltage		5 to 20mA		30 VDC or less		10 to 30 VDC		30 VDC or less	
	Load current		1mA or less		50mA or less		5 to 20mA		50mA or less	
	Leakage current				10 μA or less		1.2mA or less		10 μA or less	
Preventive maintenance Output	Load voltage		20mA or less		30 VDC or less					
	Load current				50mA or less		5 to 20mA or less		50mA or less	
	Leakage current				10 μA or less					

Note 1: Refer to Ending 1 for other switches.

Note 2: Max. load current: 20mA above is the value at 25°C. When ambient temperature around switch is higher than 25°C, the value is lower than 20mA. (5 to 10mA at 60°C)

Cylinder weight table

Stroke length	10	15	20	25	30	Weight per switch (grommet)
Bore size						
φ 20	217	232	246	-	-	18
φ 32	454	479	504	-	-	
φ 40	-	-	809	850	891	
φ 50	-	-	1299	1325	1351	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure

STK-Y1 Series

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

How to order

Without switch

STK-Y1 - **20** - **10** - **N11**

With switch

STK-Y1 - **20** - **10** - **T0H** - **R** - **N11**

A Bore size

B Port thread type

C Stroke length

D Switch model no.
Note 1

E Switch quantity

F Option

Symbol	Descriptions
A Bore size (mm)	
20	φ 20
32	φ 32
40	φ 40
50	φ 50

B Port thread type	
Blank	Rc thread
NN	NPT thread (φ32 and over) (custom order)
GN	G thread (φ32 and over) (custom order)

C Stroke length (mm)		φ 20	φ 32	φ 40	φ 50
Bore size					
10	10	●	●		
15	15	●	●		
20	20	●	●	●	●
25	25			●	●
30	30			●	●

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	T0V*	Reed	1 color indicator type	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator type	
T1H*	T1V*	Proximity	1 color indicator type	2-wire
T2H*	T2V*		1 color indicator type (custom order)	3-wire
T3PH*	T3PV*			2 color indicator type
T2YH*	T2YV*		2 color indicator type (without indicator light for preventive maintenance output)	3-wire
T3YH*	T3YV*			4-wire
T2YFH*	T2YFV*		2 color indicator type (with indicator light for preventive maintenance output (1 color))	3-wire
T3YFH*	T3YFV*			4-wire
T2YMH*	T2YMV*		Off-delay type	3-wire
T3YMH*	T3YMV*			4-wire
T2JH*	T2JV*			2-wire

*Lead wire length (m)

Blank	1m (standard)
3	3m (option)
5	5m (option)

E Switch quantity	
R	One on rod end
H	One on head end
D	2

F Option	
Blank	Without rod end thread
N11	Rod end female thread

⚠ Note on model no. selection

Note 1: Switches other than (D) switch model no. are also available. (Custom order)
Refer to Ending 1 for the details.

<Example of model number>
STK-Y1-20-10-T0H-R-N11

Model: High rigid cylinder double acting spring integrated type chamfered round rod end

- A** Bore size : φ 20mm
- B** Port thread type : Rc thread
- C** Stroke length : 10mm
- D** Switch model no. : Reed T0H switch, lead wire 1m
- E** Switch quantity : One on rod end
- F** Option : With rod end female thread

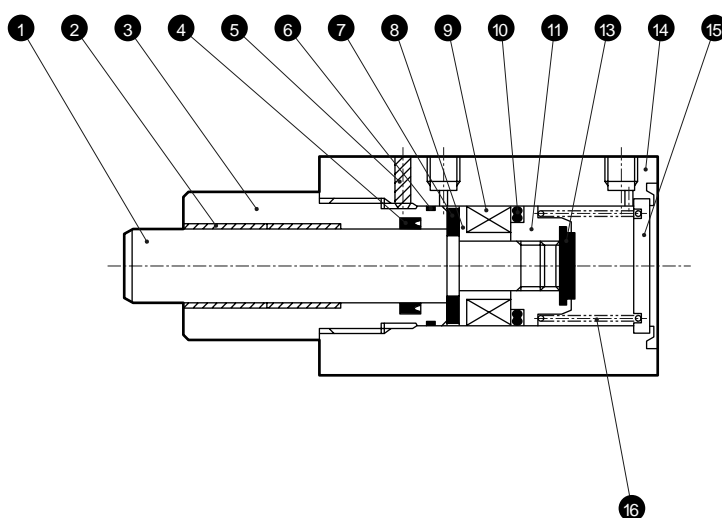
Switch model no.

SW - **T0H**

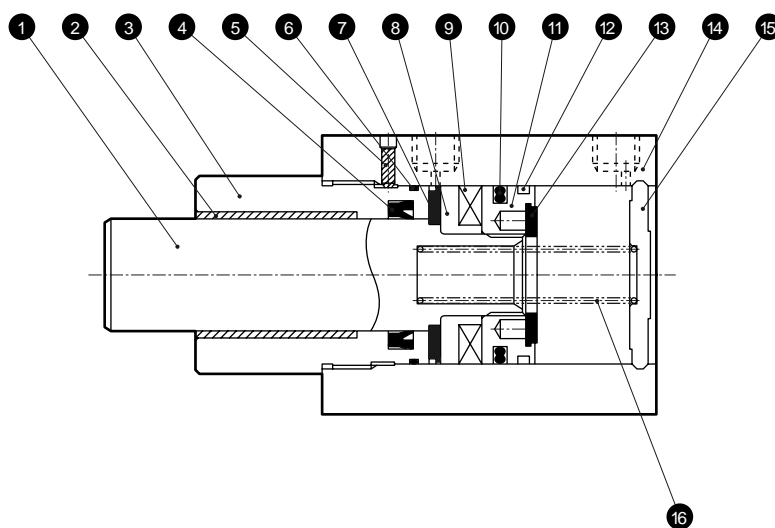
Switch model no.
(Item **D** above)

Internal structure and parts list

● STK-Y1-20



● STK-Y1-32/40/50



NO.	Parts name	Material	Remarks	NO.	Parts name	Material	Remarks
1	Piston rod	φ 20: Stainless steel φ 32 to 50: Steel	Industrial chrome plating	9	Magnet	Plastic	
2	Bush	Oilless dry met		10	Piston packing seal	Nitrile rubber	
3	Rod cover	Aluminum alloy	Alumite	11	Piston	Aluminum alloy	Chromate
4	Rod packing seal	Nitrile rubber		12	Wear ring	Acetar resin	
5	Hexagon socket head set screw	Steel	Blackening	13	Cushion rubber (H)	Urethane rubber	
6	Metal gasket	Nitrile rubber		14	Body	Aluminum alloy	Hard alumite
7	Cushion rubber (R)	Urethane rubber		15	Cover	φ 20: Steel φ 32 to 50: Aluminum alloy	φ 20: Galvanizing φ 32 to 50: Chromate
8	Spacer	Aluminum alloy	Chromate	16	Coil spring	Steel	Electrode position coating

Repair parts list

Bore size (mm)	Kit No.	Repair parts number
φ20	STK-Y1-20K	
φ32	STK-Y1-32K	4 6 10
φ40	STK-Y1-40K	
φ50	STK-Y1-50K	12 13

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC

Ending
High rigid cylinder
Space saving structure

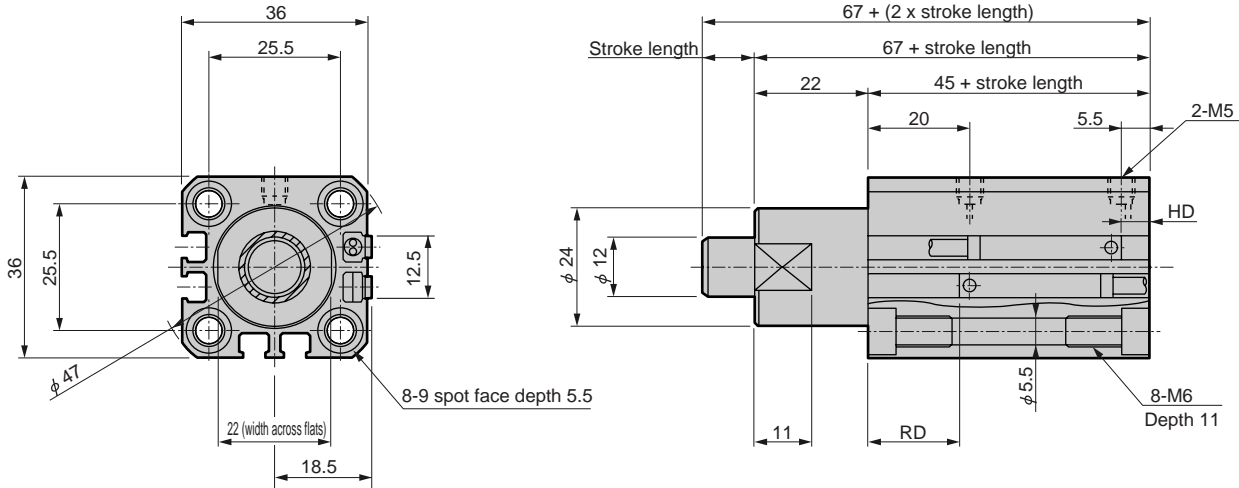
STK-Y1 Series

Dimensions

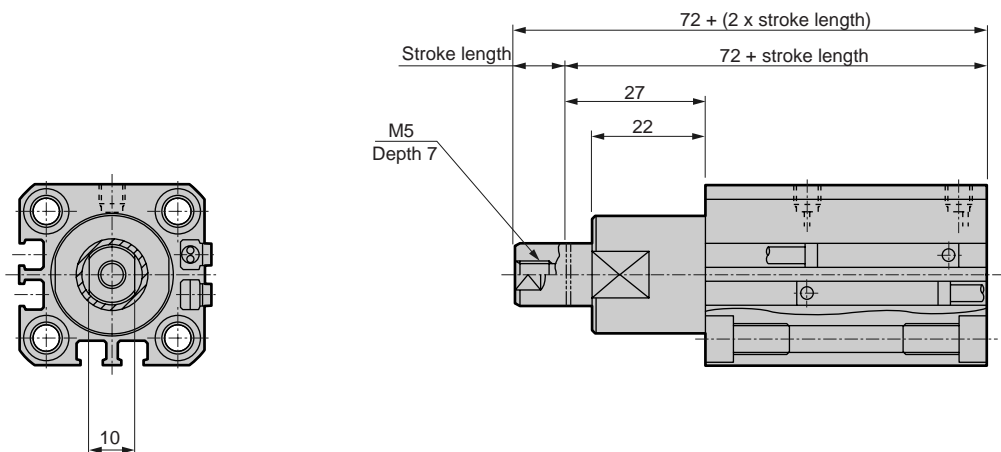


- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

● STK-Y1-20



● STK-Y1-20-N11 (Dimensions other than listed are same as above (STK-Y1-20) dimensions.)



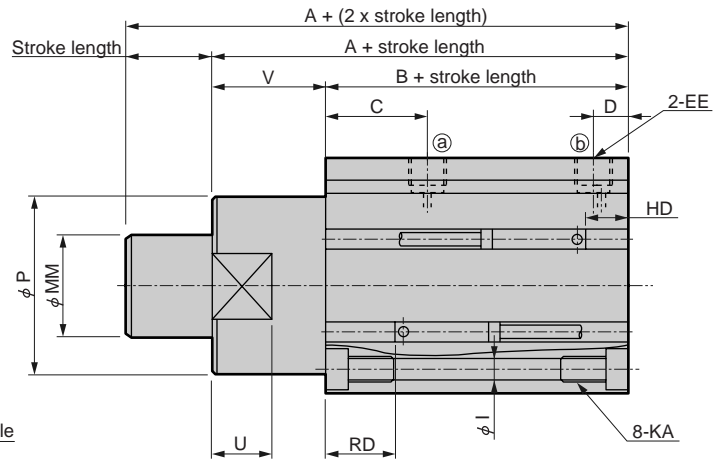
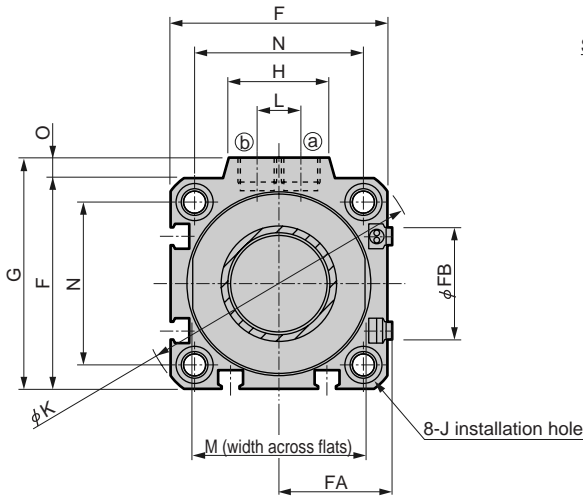
STK-Y1 dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
φ 20	7	19.5	7	19.5

Note : Refer to page 1184 for the HD, RD, and projecting dimensions of the 2-color indication type, off delay type, T1*, T8* switch.

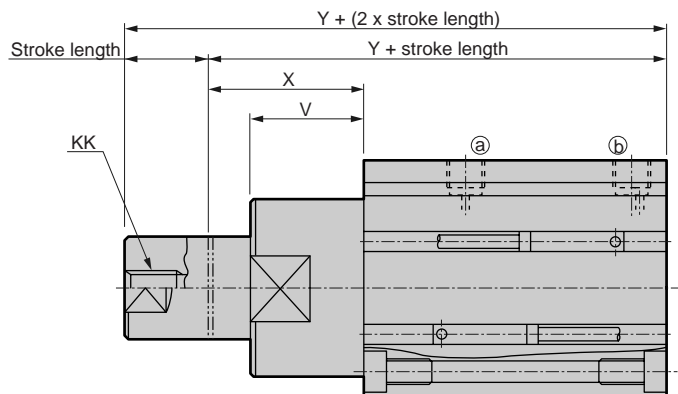
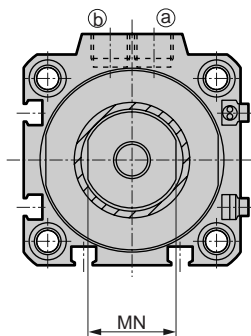
Dimensions



● STK-Y1-32/40/50



● STK-Y1-32/40/50-N11 (Dimensions other than listed are same as above (STK-Y1-32/40/50) dimensions.)



Symbol	A	B	C	D	EE	F	FA	FB	G	H	I	J	K	KA	KK	L	M	MM	MN	N	O	P	U	V	X	Y
ϕ 32	68	48	20	8	Rc1/8	45	23	20.5	49.5	24	5.5	⁹ spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	32	20	17	34	4.5	36	13	20	30	78
ϕ 40	80.5	52.5	24.5	8.5	Rc1/8	52	26.5	27.5	57	24	5.5	⁹ spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	41	25	22	40	5	44	15	28	38	90.5
ϕ 50	82	54	24.5	10.5	Rc1/4	64	32.5	28.5	71	33	6.9	¹¹ spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	50	30	27	50	7	56	15	28	43	97

Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
ϕ 32	10.5	20	10.5	20
ϕ 40	11.5	23	11.5	23
ϕ 50	12.5	23	12.5	23

Note : Refer to page 1184 for the HD, RD, and projecting dimensions of the 2-color indication type, off delay type, T1*, T8* switch.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

High rigid cylinder
Space saving structure

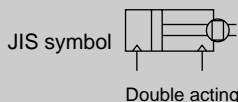
SCP*2
 CMK2
 CMA2
 SCM
 SCG
 SCA2
 SCS
 CKV2
 CA/OV2
 SSD
 CAT
 MDC2
 MVC
 SMD2
 MSD*
 FC*
STK
 ULK*
 JSK/M2
 JSG
 JSC3
 USSD
 USC
 JSB3
 LMB
 STG
 STS/L
 LCS
 LCG
 LCM
 LCT
 LCY
 STR2
 UCA2
 HCM
 HCA
 SRL2
 SRG
 SRM
 SRT
 MRL2
 MRG2
 SM-25
 CAC3
 UCAC
 RCC2
 MFC
 SHC
 GLC
 Ending



High rigid cylinder Double acting chamfered rod end

STK-M Series

● Bore size: ϕ 20, ϕ 32, ϕ 40, ϕ 50



Specifications

Descriptions		STK-M			
Bore size	mm	ϕ 20	ϕ 32	ϕ 40	ϕ 50
Actuation		Double acting			
Working fluid		Compressed air			
Max. working pressure	MPa	1.0			
Min. working pressure	MPa	0.15		0.1	
Withstanding pressure	MPa	1.6			
Ambient temperature	°C	-10 to 60 (no freezing)			
Port size		M5	Rc1/8		Rc1/4
Stroke tolerance	mm	+2.0 0			
Working piston speed	mm/s	50 to 500			
Cushion		Rubber cushioned			
Lubrication		Not required (when lubricating, use turbine oil Class 1 ISOVG 32)			
Rod end form		Chamfering type			
Allowable energy absorption	J	Refer to page 1186.			

Stroke length

Bore size (mm)	Stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke length with switch (mm)
ϕ 20	10, 15, 20	20	10	10
ϕ 32				
ϕ 40	20, 25, 30	30	20	20
ϕ 50				

Note: Other than standard stroke length is custom order.

Switch specifications

● 1 color/2 color indicator

*The T0/T5 switch can be used with 220 VAC. Consult CKD for working conditions.

Descriptions	Proximity 2 wire			Proximity 3 wire			Reed 2 wire						
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T3H/ T3V	T3PH/T3PV (Custom order)	T3YH/ T3YV	TOH/TOV		T5H/T5V		T8H/T8V		
Applications	Programmable controller relay, small solenoid valve	Programmable controller		Programmable controller, relay			Programmable controller, relay		Programmable controller, relay, IC circuit (w/o indicator light), serial connection		Programmable controller, relay		
Output method	-			NPN output	PNP output	NPN output	-						
Power voltage	-			10 to 28 VDC			-						
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC
Load current	5 to 100mA	5 to 20mA (Note 1)		100mA or less		50mA or less	5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)		
Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC	1mA or less		10 μA or less			0mA						

● With preventive maintenance output

Descriptions	Proximity 3 wire		Proximity 4 wire		Proximity 3 wire		Proximity 4 wire	
	T2YFH/V		T3YFH/V		T2YMH/V		T3YMH/V	
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay	
Output method	NPN output							
Light	Red/green LED (ON lighting)							
	Preventive maintenance output		-		Yellow LED (ON lighting)			
Regular Output	Power voltage		10 to 28 VDC		-		10 to 28 VDC	
	Load voltage		30 VDC or less		10 to 30 VDC		30 VDC or less	
	Load current		50mA or less		5 to 20mA		50mA or less	
	Leakage current		1mA or less		10 μA or less		1.2mA or less	
Preventive maintenance Output	30 VDC or less							
	Load current		50mA or less		5 to 20mA or less		50mA or less	
	10 μA or less							

Note 1: Refer to Ending 1 for other switches.

Note 2: Max. load current: 20mA above is the value at 25°C. When ambient temperature around switch is higher than 25°C, the value is lower than 20mA. (5 to 10mA at 60°C)

Cylinder weight table

Stroke length	10	15	20	25	30	Weight per switch (grommet)
Bore size						
φ20	215	230	244	-	-	18
φ32	441	466	491	-	-	
φ40	-	-	796	837	878	
φ50	-	-	1288	1314	1340	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure

How to order

Without switch

STK-M - **20** - **10** - **N11**

With switch

STK-M - **20** - **10** - **T0H** - **R** - **N11**

A Bore size

B Port thread type

C Stroke length

D Switch model no.
Note 1

E Switch quantity

F Option

Symbol	Descriptions
A Bore size (mm)	
20	φ 20
32	φ 32
40	φ 40
50	φ 50

B Port thread type	
Blank	Rc thread
NN	NPT thread (φ32 and over) (custom order)
GN	G thread (φ32 and over) (custom order)

C Stroke length (mm)					
Bore size		φ 20	φ 32	φ 40	φ 50
10	10	●	●		
15	15	●	●		
20	20	●	●	●	●
25	25			●	●
30	30			●	●

D Switch model no.				
Axial lead wire	Lead wire Radial	Contact	Indicator	Lead wire
T0H*	T0V*	Reed	1 color indicator type	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator type	
T1H*	T1V*	Proximity	1 color indicator type	2-wire
T2H*	T2V*			
T3H*	T3V*		1 color indicator type (custom order)	3-wire
T3PH*	T3PV*			
T2YH*	T2YV*		2 color indicator type	2-wire
T3YH*	T3YV*			
T2YFH*	T2YFV*		2 color indicator type (Without indicator light for preventive maintenance output)	3-wire
T3YFH*	T3YFV*			
T2YMH*	T2YMV*		2 color indicator type (With indicator light for preventive maintenance output (1 color))	3-wire
T3YMH*	T3YMV*			
T2JH*	T2JV*	Off-delay type	2-wire	

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

E Switch quantity	
R	One on rod end
H	One on head end
D	2

F Option	
Blank	Without rod end thread
N11	Rod end female thread

Note on model no. selection

Note 1: Switches other than (D) switch model no. are available.(Custom order)
Refer to Ending 1 for the details.

<Example of model number>

STK-M-20-10-T0H-R-N11

Model: High rigid cylinder double acting chamfered rod end

- A** Bore size : φ 20mm
- B** Port thread type : Rc thread
- C** Stroke length : 10mm
- D** Switch model no. : Reed T0H switch, lead wire 1m
- E** Switch quantity : One on rod end
- F** Option : With rod end female thread

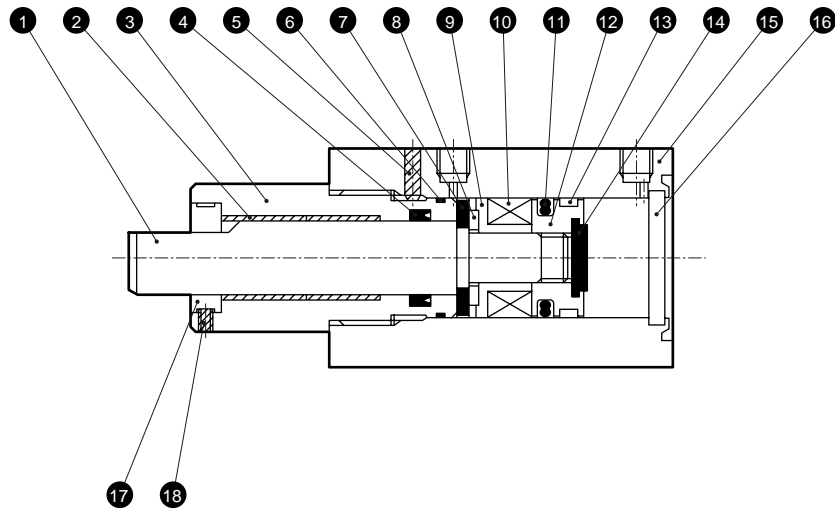
How to order switch

SW - **T0H**

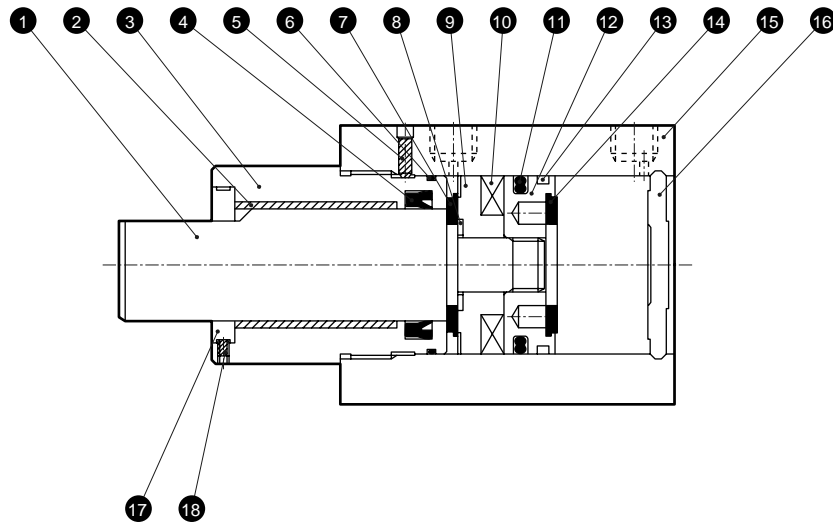
Switch model no.
(Item **D** above)

Internal structure and parts list

● STK-M-20



● STK-M-32/40/50



NO.	Parts name	Material	Remarks	NO.	Parts name	Material	Remarks
1	Piston rod	ϕ 20: Stainless steel ϕ 32 to 50: Steel	Industrial chrome plating	10	Magnet	Plastic	
2	Bush	Oilless dry met		11	Piston packing seal	Nitrile rubber	
3	Rod cover	Aluminum alloy	Alumite	12	Piston	Aluminum alloy	Chromate
4	Rod packing seal	Nitrile rubber		13	Wear ring	Acetar resin	
5	Hexagon socket head set screw	Steel	Blackening	14	Cushion rubber (H)	Urethane rubber	
6	Metal gasket	Nitrile rubber		15	Body	Aluminum alloy	Hard alumite
7	Cushion rubber (R)	Urethane rubber		16	Cover	ϕ 20: Stainless steel ϕ 32 to 50: Aluminum alloy	ϕ 32 to 50: Chromate
8	Spacer washer	Stainless steel		17	Non-rotating spacer	Steel	Nickeling
9	Spacer	Polyamide		18	Hexagon socket head set screw	Steel	Blackening

Repair parts list

Bore size (mm)	Kit No.	Repair parts number
ϕ 20	STK-20K	4 6 11
ϕ 32	STK-32K	4 6 11
ϕ 40	STK-40K	13 14
ϕ 50	STK-50K	13 14

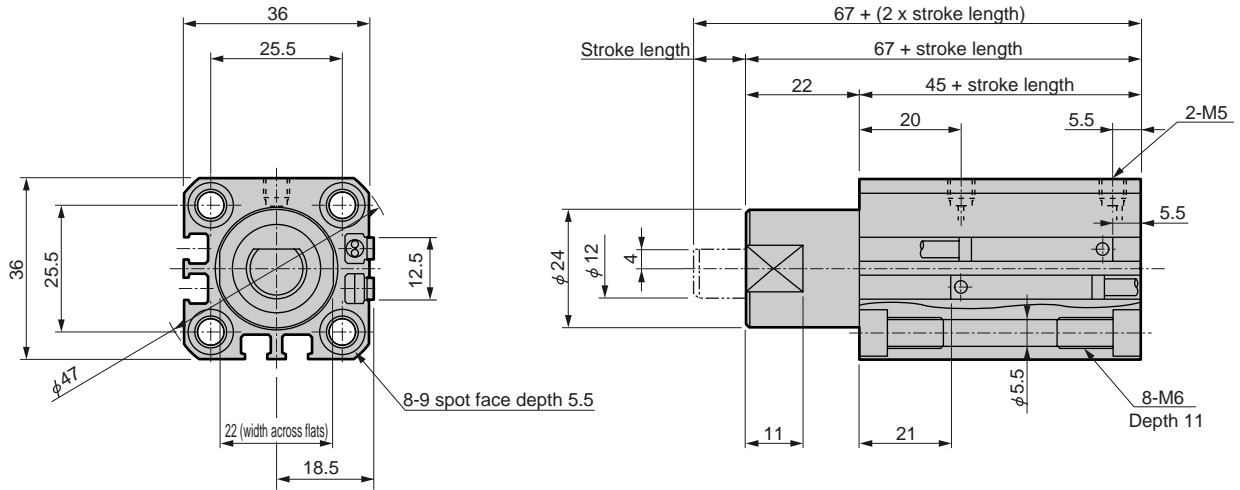
SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure

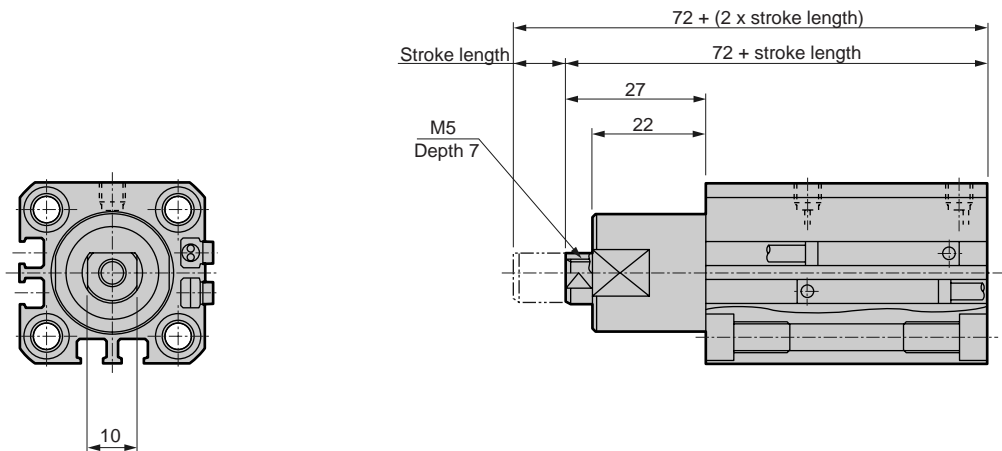
Dimensions



● STK-M-20



● STK-M-20-N11 (Dimensions other than listed are same as above (STK-M-20) dimensions.)

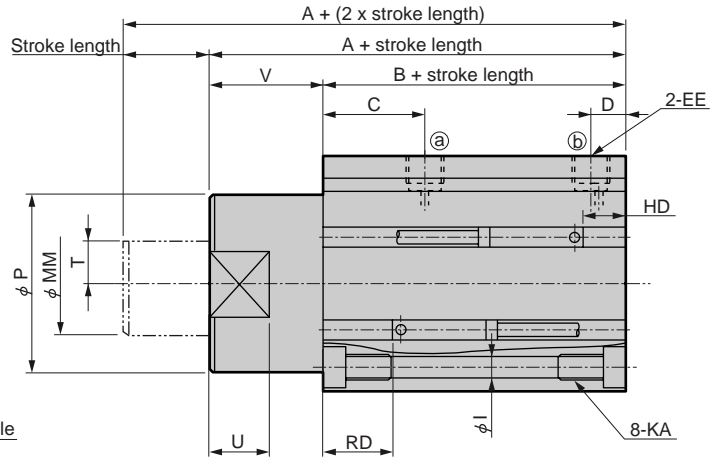
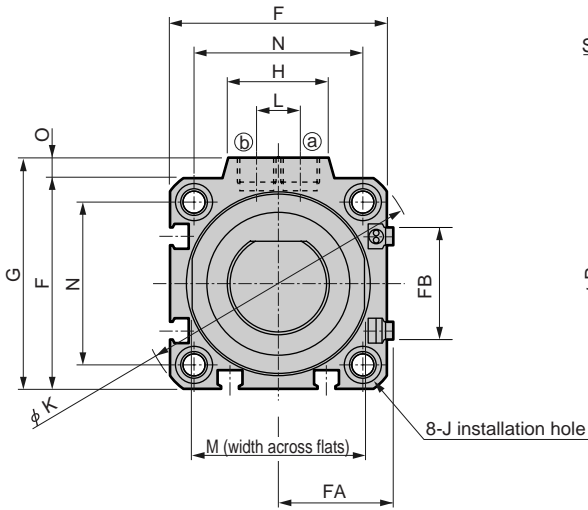


Note : Refer to page 1183 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

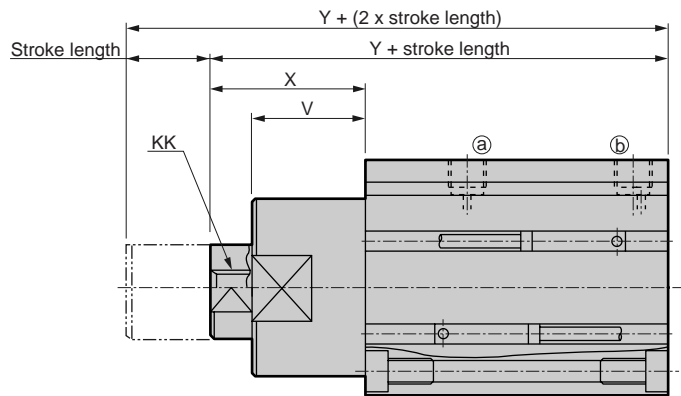
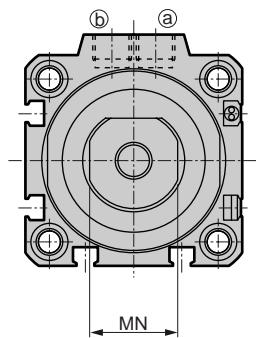
Dimensions



● STK-M-32/40/50



● STK-M-32/40/50-N11 (Dimensions other than listed are same as above (STK-M-32/40/50) dimensions.)



Symbol Bore size	A	B	C	D	EE	F	FA	FB	G	H	I	J	K	KA	KK	L	M	MM	MN	N	O	P	T	U	V	X	Y
φ 32	68	48	20	8	Rc1/8	45	23	20.5	49.5	24	5.5	⁹ spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	32	20	17	34	4.5	36	8	13	20	30	78
φ 40	80.5	52.5	24.5	8.5	Rc1/8	52	26.5	27.5	57	24	5.5	⁹ spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	41	25	22	40	5	44	10	15	28	38	90.5
φ 50	82	54	24.5	10.5	Rc1/4	64	32.5	28.5	71	33	6.9	¹¹ spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	50	30	27	50	7	56	12	15	28	43	97

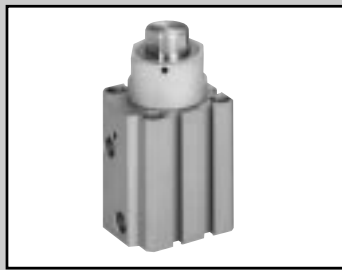
Dimension with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
φ 32	9.5	21	9.5	21
φ 40	10.5	24	10.5	24
φ 50	11.5	24	11.5	24

Note : Refer to page 1183 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC

Ending

High rigid cylinder
Space saving structure



High rigid cylinder Single acting retract type chamfered rod end

STK-MY Series

● Bore size: ϕ 20, ϕ 32, ϕ 40, ϕ 50

JIS symbol



Single acting retract



Specifications

Descriptions	STK-MY			
	ϕ 20	ϕ 32	ϕ 40	ϕ 50
Bore size mm	ϕ 20	ϕ 32	ϕ 40	ϕ 50
Actuation	Single acting retract type			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.22	0.12		
Withstanding pressure MPa	1.6			
Ambient temperature $^{\circ}$ C	-10 to 60 (no freezing)			
Port size	M5	Rc1/8	Rc1/4	
Stroke tolerance mm	+2.0 0			
Working piston speed mm/s	50 to 500			
Cushion	Rubber cushioned			
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISOVG 32)			
Rod end form	Chamfering type			
Allowable energy absorption J	Refer to page 1186.			

Stroke length

Bore size (mm)	Stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke length with switch (mm)
ϕ 20	10, 15, 20	20	10	10
ϕ 32				
ϕ 40	20, 25, 30	30	20	20
ϕ 50				

Note: Other than standard stroke length is custom order.

Spring load

(Unit: N)

Bore size (mm)	Stroke length (mm)	Stroke length 0	Full stroke length during operation
ϕ 20	10	11.5	14.7
	15	9.9	
	20	8.2	
ϕ 32	10	24.5	31.4
	15	21.1	
	20	17.6	
ϕ 40	20	29.0	44.4
	25	25.3	
	30	21.5	
ϕ 50	20	55.4	84.8
	25	48.0	
	30	40.7	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Switch specifications

- 1 color/2 color indicator

*The T0/T5 switch can be used with 220 VAC. Consult CKD for working conditions.

Descriptions	Proximity 2 wire			Proximity 3 wire			Reed 2 wire							
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/ T2YV	T3H/ T3V	T3PH/T3PV (Custom order)	T3YH/ T3YV	TOH/TOV	T5H/T5V			T8H/T8V			
Applications	Programmable controller relay, small solenoid valve		Programmable controller			Programmable controller, relay			Programmable controller, relay			Programmable controller, relay		
Output method	-			NPN output	PNP output	NPN output	-							
Power voltage	-			10 to 28 VDC			-							
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC	
Load current	5 to 100mA	5 to 20mA (Note 1)		100mA or less		50mA or less	5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light			LED (ON lighting)		
Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC		1mA or less		10 μA or less		0mA							

- With preventive maintenance output

Descriptions	Proximity 3 wire		Proximity 4 wire		Proximity 3 wire		Proximity 4 wire	
	T2YFH/V		T3YFH/V		T2YMH/V		T3YMH/V	
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay	
Output method	NPN output							
Light	Red/green LED (ON lighting)							
	Installation position adjustment section		-		Yellow LED (ON lighting)			
Regular Output	Power voltage		10 to 28 VDC		-		10 to 28 VDC	
	Load voltage		30 VDC or less		10 to 30 VDC		30 VDC or less	
	Load current		50mA or less		5 to 20mA		50mA or less	
	Leakage current		10 μA or less		1.2mA or less		10 μA or less	
Preventive maintenance Output	30 VDC or less							
	Load current		50mA or less		5 to 20mA or less		50mA or less	
	10 μA or less							

Note 1: Refer to Ending 1 for other switches.

Note 2: Max. load current: 20mA above is the value at 25°C. When ambient temperature around switch is higher than 25°C, the value is lower than 20mA. (5 to 10mA at 60°C)

Cylinder weight table

Stroke length	10	15	20	25	30	Weight per switch (grommet)
Bore size	218	233	247	-	-	
φ 20	457	482	507	-	-	
φ 32	-	-	812	853	894	
φ 40	-	-	1302	1328	1354	
φ 50	-	-	-	-	-	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure

How to order

Without switch

STK-MY - **20** - **10** - **N11**

With switch

STK-MY - **20** - **10** - **T0H** - **R** - **N11**

A Bore size

B Port thread type

C Stroke length

D Switch model no.
Note 1

E Switch quantity

F Option

Note on model no. selection

Note 1: Switches other than (D) switch model no. also do available. (Custom order)
Refer to Ending 1 for the details.

<Example of model number>

STK-MY-20-10-T0H-R-N11

Model: High rigid cylinder single acting retract type chamfered rod end

- A** Bore size : ϕ 20mm
- B** Port thread type : Rc thread
- C** Stroke length : 10mm
- D** Switch model no.: Reed T0H switch, lead wire 1m
- E** Switch quantity : One on rod end
- F** Option : With rod end female thread

Symbol	Descriptions
A Bore size (mm)	
20	ϕ 20
32	ϕ 32
40	ϕ 40
50	ϕ 50

B Port thread type	
Blank	Rc thread
NN	NPT thread (ϕ 32 and over) (custom order)
GN	G thread (ϕ 32 and over) (custom order)

C Stroke length (mm)		ϕ 20	ϕ 32	ϕ 40	ϕ 50
Bore size					
10	10	●	●		
15	15	●	●		
20	20	●	●	●	●
25	25			●	●
30	30			●	●

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	T0V*	Reed	1 color indicator type	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator type	
T1H*	T1V*	Proximity	1 color indicator type	2-wire
T2H*	T2V*			
T3H*	T3V*		1 color indicator type (custom order)	3-wire
T3PH*	T3PV*			
T2YH*	T2YV*		2 color indicator type	2-wire
T3YH*	T3YV*			
T2YFH*	T2YFV*		2 color indicator type (without indicator light for preventive maintenance output)	3-wire
T3YFH*	T3YFV*			
T2YMH*	T2YMV*		2 color indicator type (with indicator light for preventive maintenance output (1 color))	3-wire
T3YMH*	T3YMV*			
T2JH*	T2JV*		Off-delay type	2-wire

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

E Switch quantity	
R	One on rod end
H	One on head end
D	2

F Option	
Blank	Without rod end thread
N11	Rod end female thread

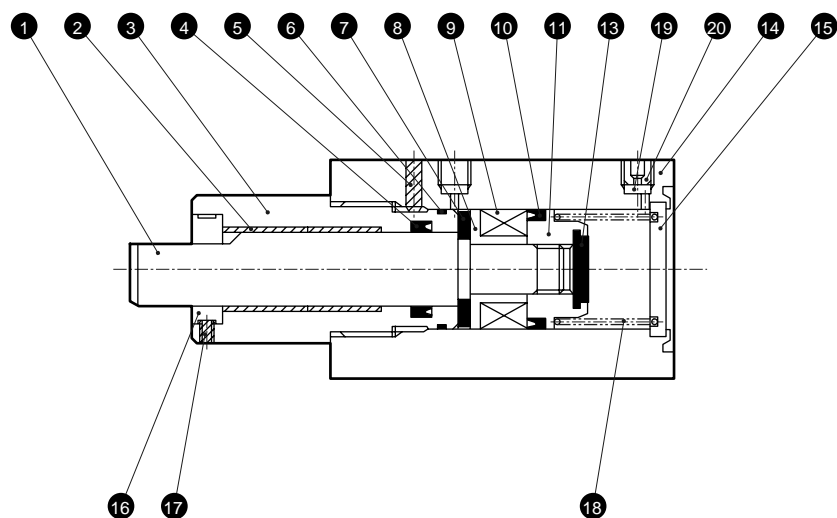
How to order switch

SW - **T0H**

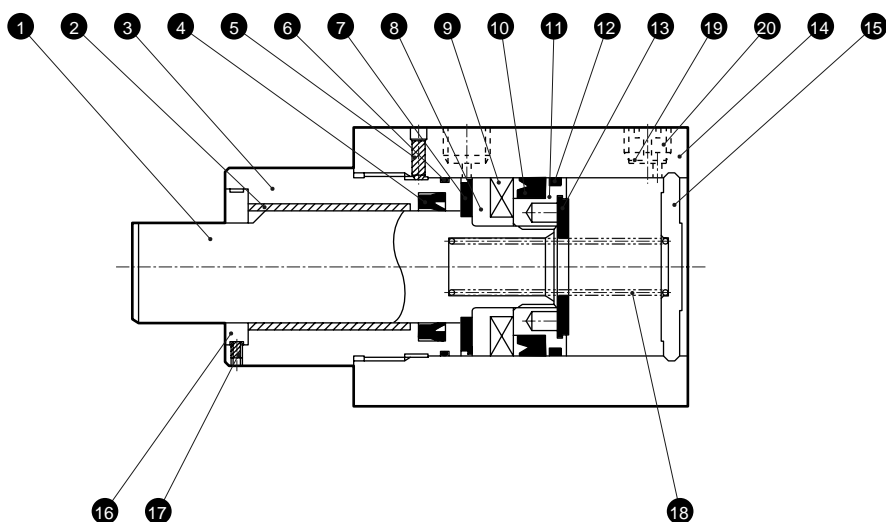
Switch model no.
(Item **D**) above

Internal structure and parts list

● STK-MY-20



● STK-MY-32/40/50



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

NO.	Parts name	Material	Remarks	NO.	Parts name	Material	Remarks
1	Piston rod	φ 20: Stainless steel φ 32 to 50: Steel	Industrial chrome plating	11	Piston	Aluminum alloy	Chromate
2	Bush	Oilless dry met		12	Wear ring	Acetar resin	
3	Rod cover	Aluminum alloy	Alumite	13	Cushion rubber (H)	Urethane rubber	
4	Rod packing seal	Nitrile rubber		14	Body	Aluminum alloy	Hard alumite
5	Hexagon socket head set screw	Steel	Blackening	15	Cover	φ 20: Steel φ 32 to 50: Aluminum alloy	φ 20: Galvanizing φ 32 to 50: Chromate
6	Metal gasket	Nitrile rubber		16	Non-rotating spacer	Steel	Nickeling
7	Cushion rubber (R)	Urethane rubber		17	Hexagon socket head set screw	Steel	Blackening
8	Spacer	Aluminum alloy	Chromate	18	Coil spring	Steel	Electrode position coating
9	Magnet	Plastic		19	Stainless steel wire net	Stainless steel	
10	Piston packing seal	Nitrile rubber		20	Plug	Stainless steel	

Repair parts list

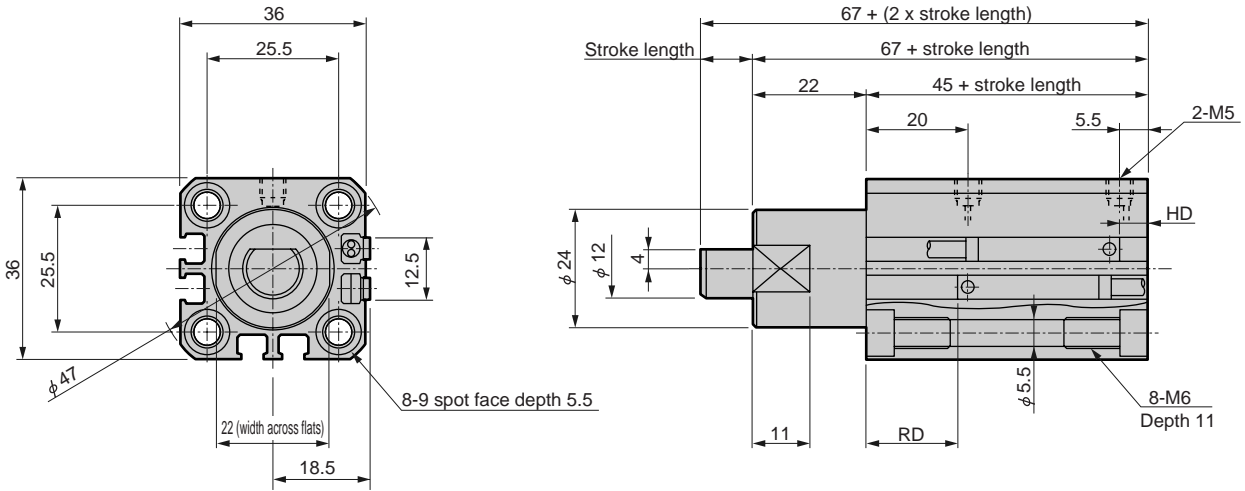
Bore size (mm)	Kit No.	Repair parts number
φ 20	STK-Y-20K	4 6 11
φ 32	STK-Y-32K	
φ 40	STK-Y-40K	13 14
φ 50	STK-Y-50K	

High rigid cylinder
Space saving structure

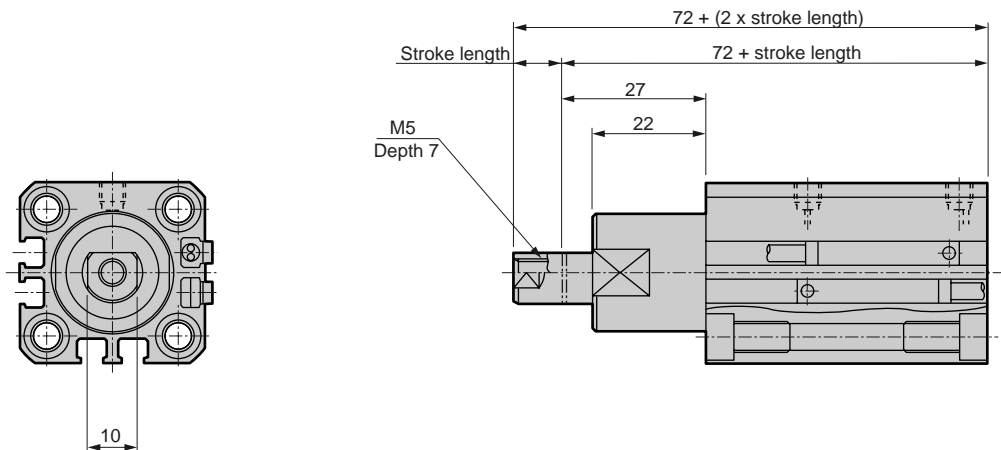
Dimensions



● STK-MY-20



● STK-MY-20-N11 (Dimensions other than listed are same as above (STK-MY-20) dimensions.)



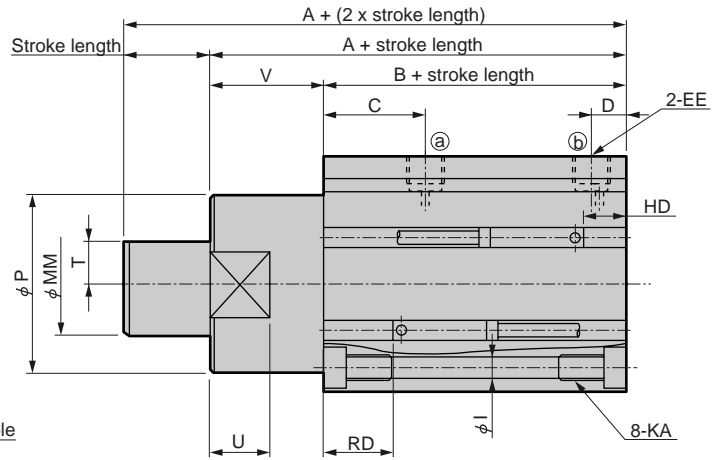
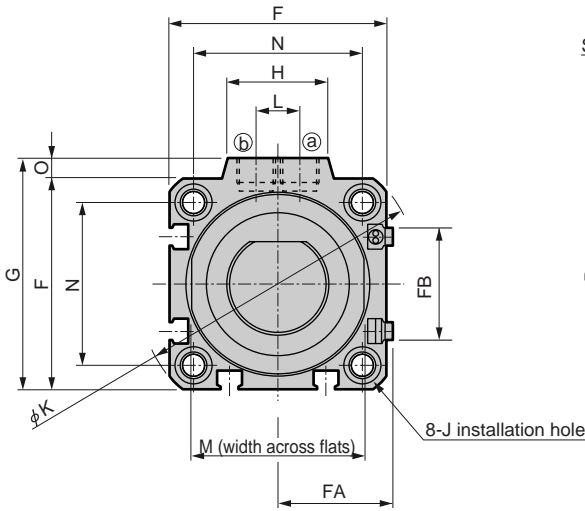
Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
$\phi 20$	7	19.5	7	19.5

Note : Refer to page 1184 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

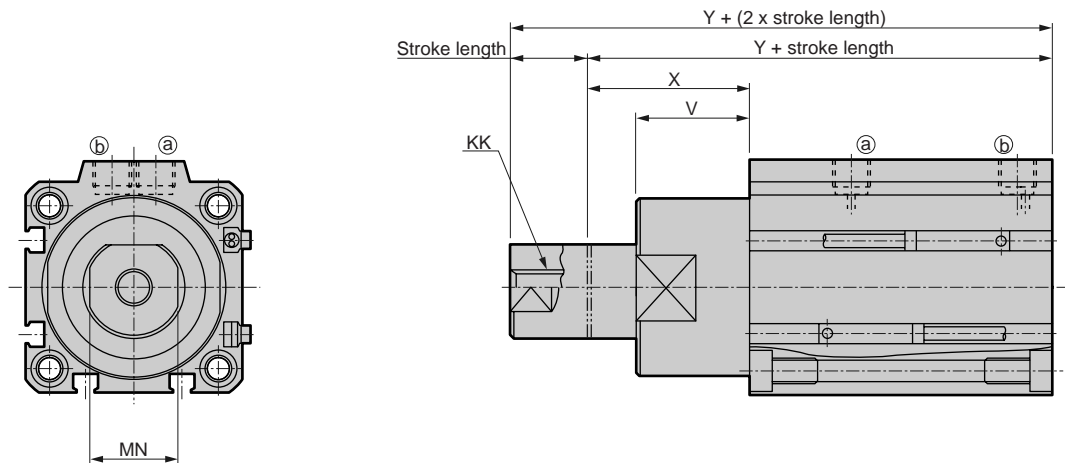
Dimensions



● STK-MY-32/40/50



● STK-MY-32/40/50-N11 (Dimensions other than listed are same as above (STK-MY-32/40/50) dimensions.)



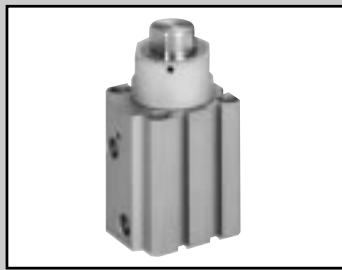
Symbol	A	B	C	D	EE	F	FA	FB	G	H	I	J	K	KA	KK	L	M	MM	MN	N	O	P	T	U	V	X	Y
φ 32	68	48	20	8	Rc1/8	45	23	20.5	49.5	24	5.5	⁹ spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	32	20	17	34	4.5	36	8	13	20	30	78
φ 40	80.5	52.5	24.5	8.5	Rc1/8	52	26.5	27.5	57	24	5.5	⁹ spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	41	25	22	40	5	44	10	15	28	38	90.5
φ 50	82	54	24.5	10.5	Rc1/4	64	32.5	28.5	71	33	6.9	¹¹ spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	50	30	27	50	7	56	12	15	28	43	97

Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
φ 32	10.5	20	10.5	20
φ 40	11.5	23	11.5	23
φ 50	12.5	23	12.5	23

Note : Refer to page 1184 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

High rigid cylinder
Space saving structure



High rigid cylinder Double acting spring integrated type chamfered rod end

STK-MY1 Series

● Bore size: ϕ 20, ϕ 32, ϕ 40, ϕ 50



Double acting spring integrated type



Specifications

Descriptions	STK-MY1			
Bore size mm	ϕ 20	ϕ 32	ϕ 40	ϕ 50
Actuation	Double acting spring integrated type			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.22		0.12	
Withstanding pressure MPa	1.6			
Ambient temperature $^{\circ}$ C	-10 to 60 (no freezing)			
Port size	M5	Rc1/8		Rc1/4
Stroke tolerance mm	+2.0 0			
Working piston speed mm/s	50 to 500			
Cushion	Rubber cushioned			
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISOVG 32)			
Rod end form	Chamfering type			
Allowable energy absorption J	Refer to page 1186.			

Stroke length

Bore size (mm)	Stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke length with switch (mm)
ϕ 20	10, 15, 20	20	10	10
ϕ 32				
ϕ 40	20, 25, 30	30	20	20
ϕ 50				

Note: Other than standard stroke length is custom order.

Spring load

(Unit: N)

Bore size (mm)	Stroke length (mm)	Stroke length 0	Full stroke length during operation
ϕ 20	10	11.5	14.7
	15	9.9	
	20	8.2	
ϕ 32	10	24.5	31.4
	15	21.1	
	20	17.6	
ϕ 40	20	29.0	44.4
	25	25.3	
	30	21.5	
ϕ 50	20	55.4	84.8
	25	48.0	
	30	40.7	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Switch specifications

- 1 color/2 color indicator

*The T0/T5 switch can be used with 220 VAC. Consult CKD for working conditions.

Descriptions	Proximity 2 wire			Proximity 3 wire			Reed 2 wire							
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T3H/T3V	T3PH/T3PV (Custom order)	T3YH/T3YV	TOH/TOV		T5H/T5V		T8H/T8V			
Applications	Programmable controller relay, small solenoid valve		Programmable controller	Programmable controller, relay			Programmable controller, relay		Programmable controller, relay, TC circuit (w/o indicator light), serial connection		Programmable controller, relay			
Output method	-			NPN output	PNP output	NPN output	-							
Power voltage	-			10 to 28 VDC			-							
Load voltage	85 to 265 VAC		10 to 30 VDC		30 VDC or less		12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC	
Load current	5 to 100mA		5 to 20mA (Note 1)		100mA or less		50mA or less	5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA
Light	LED (ON lighting)		LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)		Without indicator light		LED (ON lighting)		
Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC		1mA or less		10 μA or less			0mA						

- With preventive maintenance output

Descriptions	Proximity 3 wire		Proximity 4 wire		Proximity 3 wire		Proximity 4 wire	
	T2YFH/V		T3YFH/V		T2YMH/V		T3YMH/V	
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay	
Output method	NPN output							
Light	Red/green LED (ON lighting)							
	Installation position adjustment section		-		Yellow LED (ON lighting)			
Regular Output	Power voltage		10 to 28 VDC		-		10 to 28 VDC	
	Load voltage		30 VDC or less		10 to 30 VDC		30 VDC or less	
	Load current		50mA or less		5 to 20mA		50mA or less	
	Leakage current		10 μA or less		1.2mA or less		10 μA or less	
Preventive maintenance Output	30 VDC or less							
	Load current		50mA or less		5 to 20mA or less		50mA or less	
	10 μA or less							

Note 1: Refer to Ending 1 for other switches.

Note 2: Max. load current: 20mA above is the value at 25°C. When ambient temperature around switch is higher than 25°C, the value is lower than 20mA. (5 to 10mA at 60°C)

Cylinder weight

Stroke length	10	15	20	25	30	Weight per switch (grommet)
Bore size						
φ 20	218	233	247	-	-	
φ 32	457	482	507	-	-	
φ 40	-	-	812	853	894	
φ 50	-	-	1302	1328	1354	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure

STK-MY1 Series

How to order

Without switch

STK-MY1 - **20** - **10** - **N11**

With switch

STK-MY1 - **20** - **10** - **T0H** - **R** - **N11**

A Bore size

B Port thread type

C Stroke length

D Switch model no.
Note 1

E Switch quantity

F Option

⚠ Note on model no. selection

Note 1: Switches other than (D) switch model no. are also available. (Custom order)
Refer to Ending 1 for the details.

<Example of model number>

STK-MY1-20-10-T0H-R-N11

Model: High rigid cylinder

Double acting spring integrated type chamfered rod end

- A** Bore size : ϕ 20mm
- B** Port thread type : Rc thread
- C** Stroke length : 10mm
- D** Switch model no.: Reed T0H switch,
lead wire 1m
- E** Switch quantity : One on rod end
- F** Option : With rod end female thread

Symbol	Descriptions
A Bore size (mm)	
20	ϕ 20
32	ϕ 32
40	ϕ 40
50	ϕ 50

B Port thread type	
Blank	Rc thread
NN	NPT thread (ϕ 32 and over) (custom order)
GN	G thread (ϕ 32 and over) (custom order)

C Stroke length (mm)					
Bore size		ϕ 20	ϕ 32	ϕ 40	ϕ 50
10	10	●	●		
15	15	●	●		
20	20	●	●	●	●
25	25			●	●
30	30			●	●

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	T0V*	Reed	1 color indicator type	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator type	
T1H*	T1V*	Proximity	1 color indicator type	2-wire
T2H*	T2V*			
T3H*	T3V*		1 color indicator type (custom order)	3-wire
T3PH*	T3PV*			
T2YH*	T2YV*		2 color indicator type	3-wire
T3YH*	T3YV*			
T2YFH*	T2YFV*		2 color indicator type (without indicator light for preventive maintenance output)	3-wire
T3YFH*	T3YFV*			
T2YMH*	T2YMV*		2 color indicator type (with indicator light for preventive maintenance output (1 color))	3-wire
T3YMH*	T3YMV*			
T2JH*	T2JV*	Off-delay type	2-wire	

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

E Switch quantity	
R	One on rod end
H	One on head end
D	2

F Option	
Blank	Without rod end thread
N11	Rod end female thread

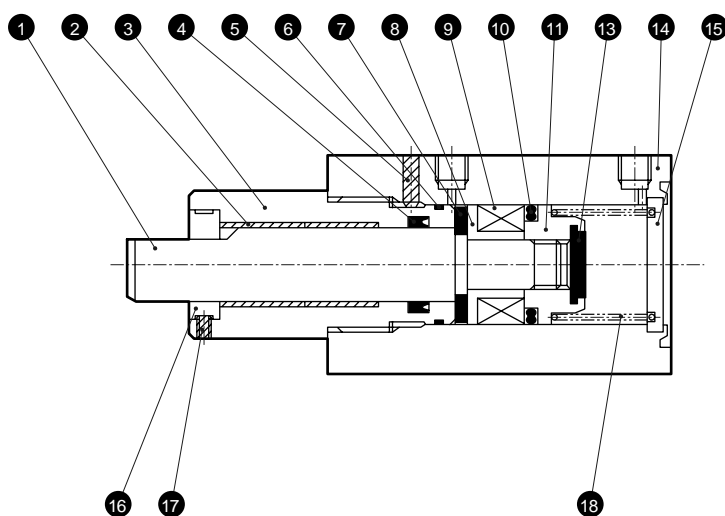
How to order switch

SW - **T0H**

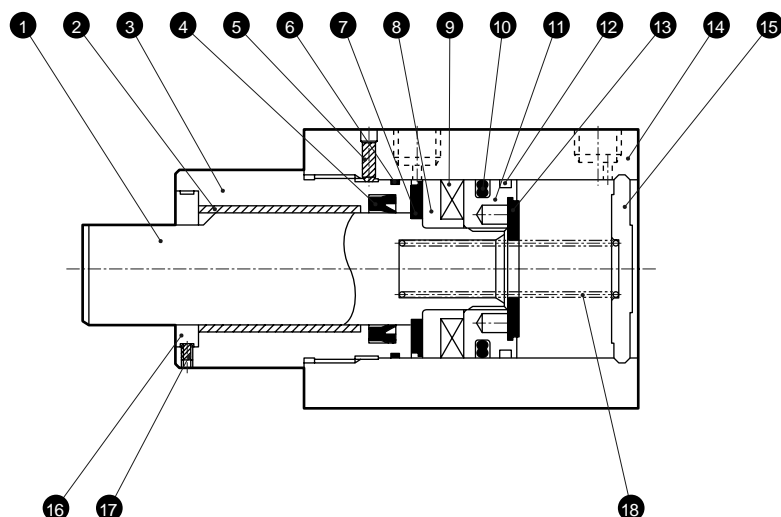
Switch model no.
(Item **D** above)

Internal structure and parts list

● STK-MY1-20



● STK-MY1-32/40/50



NO.	Parts name	Material	Remarks	NO.	Parts name	Material	Remarks
1	Piston rod	ϕ 20: Stainless steel ϕ 32 to 50: Steel	Industrial chrome plating	10	Piston packing seal	Nitrile rubber	
2	Bush	Oilless dry met		11	Piston	Aluminum alloy	Chromate
3	Rod cover	Aluminum alloy	Alumite	12	Wear ring	Acetar resin	
4	Rod packing seal	Nitrile rubber		13	Cushion rubber (H)	Urethane rubber	
5	Hexagon socket head set screw	Steel	Blackening	14	Body	Aluminum alloy	Hard alumite
6	Metal gasket	Nitrile rubber		15	Cover	ϕ 20: Steel ϕ 32 to 50: Aluminum alloy	ϕ 20: Galvanizing ϕ 32 to 50: Chromate
7	Cushion rubber (R)	Urethane rubber		16	Non-rotating spacer	Steel	Nickeling
8	Spacer	Aluminum alloy	Chromate	17	Hexagon socket head set screw	Steel	Blackening
9	Magnet	Plastic		18	Coil spring	Steel	Electrode position coating

Repair parts list

Bore size (mm)	Kit No.	Repair parts number
ϕ 20	STK-Y1-20K	4 6 10
ϕ 32	STK-Y1-32K	12 13
ϕ 40	STK-Y1-40K	
ϕ 50	STK-Y1-50K	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC

Ending
High rigid cylinder
Space saving structure

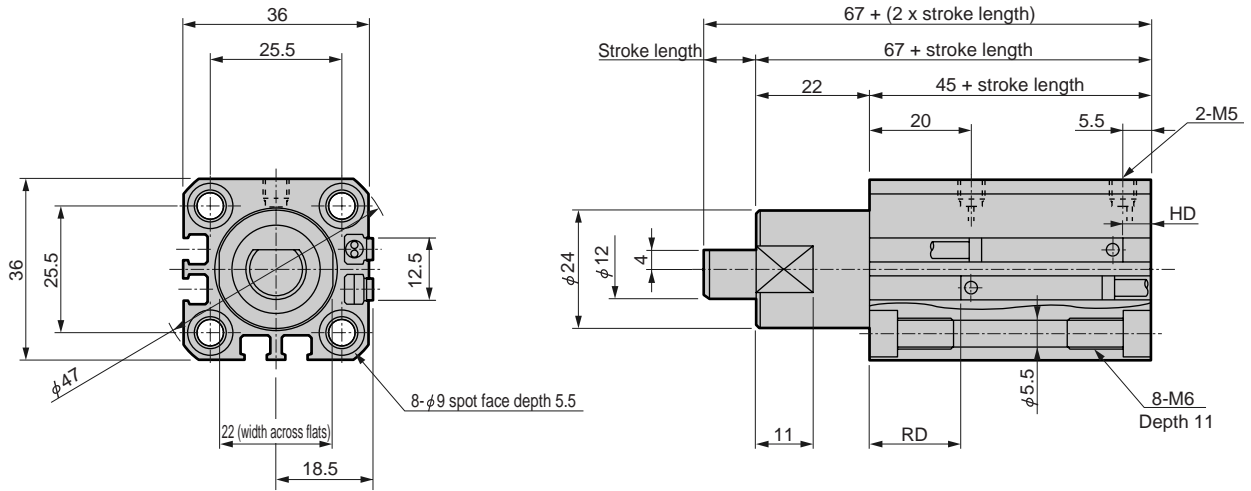
STK-MY1 Series

Dimensions

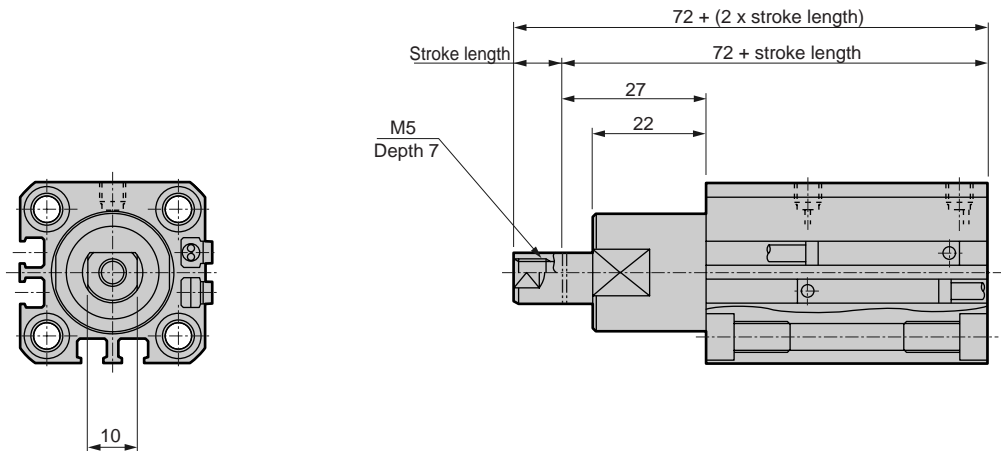


- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

● STK-MY1-20



● STK-MY1-20-N11 (Dimensions other than listed are same as above (STK-MY1-20) dimensions.)



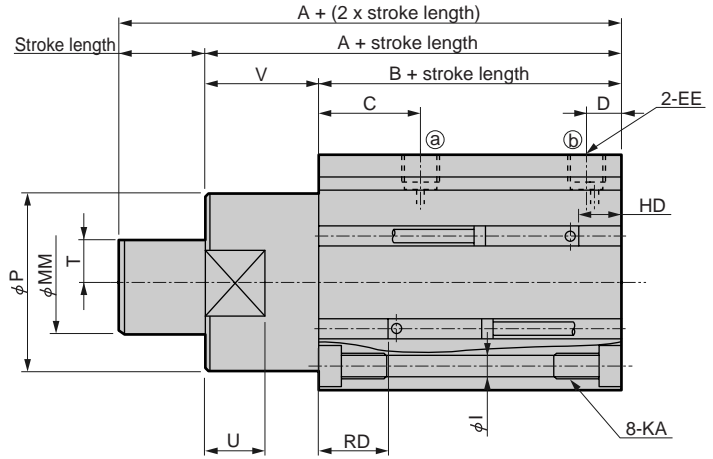
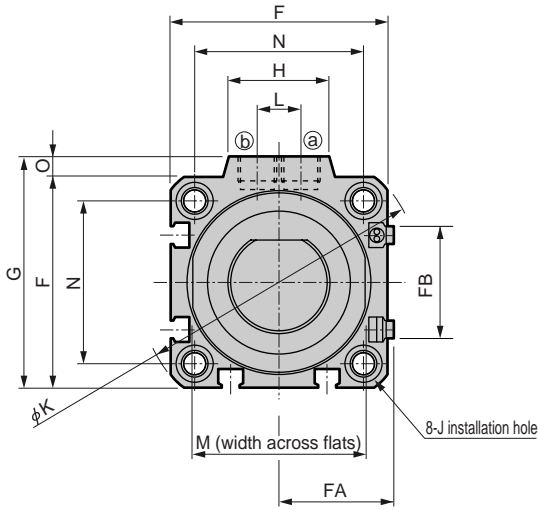
Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
$\phi 20$	7	19.5	7	19.5

Note : Refer to page 1184 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

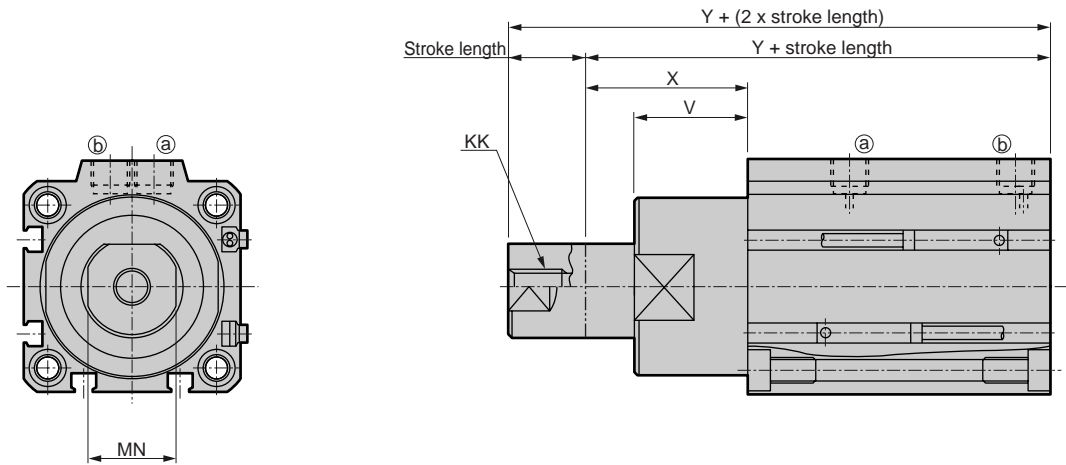
Dimensions



● STK-MY1-32/40/50



● STK-MY1-32-40-50-N11 (Dimensions other than listed are same as above (STK-MY1-32/40/50) dimensions.)



Symbol Bore size	A	B	C	D	EE	F	FA	FB	G	H	I	J	K	KA	KK	L	M	MM	MN	N	O	P	T	U	V	X	Y
φ32	68	48	20	8	Rc1/8	45	23	20.5	49.5	24	5.5	⁹ spot face depth 5.5	60	M6 depth 11	M8 depth 13	10	32	20	17	34	4.5	36	8	13	20	30	78
φ40	80.5	52.5	24.5	8.5	Rc1/8	52	26.5	27.5	57	24	5.5	⁹ spot face depth 5.5	69	M6 depth 11	M8 depth 13	10	41	25	22	40	5	44	10	15	28	38	90.5
φ50	82	54	24.5	10.5	Rc1/4	64	32.5	28.5	71	33	6.9	¹¹ spot face depth 6.5	86	M8 depth 13	M10 depth 15	15	50	30	27	50	7	56	12	15	28	43	97

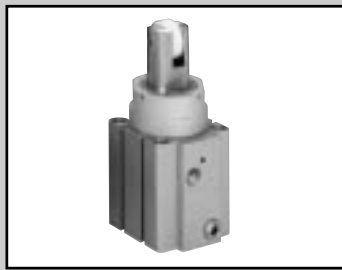
Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
φ32	10.5	20	10.5	20
φ40	11.5	23	11.5	23
φ50	12.5	23	12.5	23

Note : Refer to page 1184 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC

Ending

High rigid cylinder
Space saving structure



High rigid cylinder Single acting retract type roller rod end types

STK-JY Series

● Bore size: ϕ 20, ϕ 32, ϕ 40, ϕ 50



Single acting retract type



Specifications

Descriptions	STK-JY			
Bore size mm	ϕ 20	ϕ 32	ϕ 40	ϕ 50
Actuation	Single acting retract type			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.22	0.12		
Withstanding pressure MPa	1.6			
Ambient temperature $^{\circ}$ C	-10 to 60 (no freezing)			
Port size	M5	Rc1/8	Rc1/4	
Stroke tolerance mm	+2.0 0			
Working piston speed mm/s	50 to 500			
Cushion	Rubber cushioned			
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISOVG 32)			
Rod end form	Roller type			
Allowable energy absorption J	Refer to page 1186.			

Stroke length

Bore size (mm)	Stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke length with switch (mm)
ϕ 20	10, 15, 20	20	10	10
ϕ 32				
ϕ 40	20, 25, 30	30	20	20
ϕ 50				

Note: Other than standard stroke length is custom order.

Spring load

(Unit: N)

Bore size (mm)	Stroke length (mm)	Stroke length 0	Full stroke length during operation
ϕ 20	10	11.5	14.7
	15	9.9	
	20	8.2	
ϕ 32	10	24.5	31.4
	15	21.1	
	20	17.6	
ϕ 40	20	29.0	44.4
	25	25.3	
	30	21.5	
ϕ 50	20	55.4	84.8
	25	48.0	
	30	40.7	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Switch specifications

● 1 color/2 color indicator

*The T0/T5 switch can be used with 220 VAC.
Consult CKD for working conditions.

Descriptions	Proximity 2 wire			Proximity 3 wire			Reed 2 wire						
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T3H/T3V	T3PH/T3PV (Custom order)	T3YH/T3YV	TOH/TOV	T5H/T5V			T8H/T8V		
Applications	Programmable controller relay, small solenoid valve		Programmable controller	Programmable controller, relay			Programmable controller, relay	Programmable controller, relay, IC circuit (w/o indicator light), serial connection			Programmable controller, relay		
Output method	-			NPN output	PNP output	NPN output	-						
Power voltage	-			10 to 28 VDC			-						
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC
Load current	5 to 100mA	5 to 20mA (Note 1)		100mA or less		50mA or less	5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Without indicator light			LED (ON lighting)		
Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC	1mA or less		10 μA or less			0mA						

● With preventive maintenance output

Descriptions	Proximity 3 wire		Proximity 4 wire		Proximity 3 wire		Proximity 4 wire		
	T2YFH/V		T3YFH/V		T2YMH/V		T3YMH/V		
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay		
Output method	NPN output								
Light	Red/green LED (ON lighting)								
	Preventive maintenance output		-		Yellow LED (ON lighting)				
Regular Output	Power voltage	-		10 to 28 VDC		-		10 to 28 VDC	
	Load voltage	10 to 30 VDC		30 VDC or less		10 to 30 VDC		30 VDC or less	
	Load current	5 to 20mA		50mA or less		5 to 20mA		50mA or less	
	Leakage current	1mA or less		10 μA or less		1.2mA or less		10 μA or less	
Preventive maintenance Output	Load voltage	30 VDC or less							
	Load current	20mA or less		50mA or less		5 to 20mA or less		50mA or less	
	Leakage current	10 μA or less							

Note 1: Refer to Ending 1 for other switches.

Note 2: Max. load current: 20mA above is the value at 25°C. When ambient temperature around switch is higher than 25°C, the value is lower than 20mA.
(5 to 10mA at 60°C)

Cylinder weight

Stroke length Bore size	10	15	20	25	30	Weight per switch (grommet)
φ 20	225	240	254	-	-	18
φ 32	482	507	532	-	-	
φ 40	-	-	862	903	944	
φ 50	-	-	1362	1388	1414	

(g)

High rigid cylinder
Space saving structure

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

How to order

Without switch

STK-JY - **20** - **10**

With switch

STK-JY - **20** - **10** - **T0H** - **R**

A Bore size

B Port thread type

C Stroke length

D Switch model no.
Note 1

E Switch quantity

⚠ Note on model no. selection

Note 1: Switches other than (D) switch model no. are also available. (Custom order)
Refer to Ending 1 for the details.

Symbol	Descriptions
A Bore size (mm)	
20	φ20
32	φ32
40	φ40
50	φ50

B Port thread type	
Blank	Rc thread
NN	NPT thread (φ32 and over) (custom order)
GN	G thread (φ32 and over) (custom order)

C Stroke length (mm)					
Bore size		φ20	φ32	φ40	φ50
10	10	●	●		
15	15	●	●		
20	20	●	●	●	●
25	25			●	●
30	30			●	●

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	T0V*	Reed	1 color indicator type	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator type	
T1H*	T1V*	Proximity	1 color indicator type	2-wire
T2H*	T2V*			
T3PH*	T3PV*		1 color indicator type (custom order)	3-wire
T2YH*	T2YV*		2 color indicator type	2-wire
T3YH*	T3YV*			3-wire
T2YFH*	T2YFV*		2 color indicator type (without indicator light for preventive maintenance output)	3-wire
T3YFH*	T3YFV*		2 color indicator type (with indicator light for preventive maintenance output (1 color))	4-wire
T2YMH*	T2YMV*		2 color indicator type (with indicator light for preventive maintenance output (1 color))	3-wire
T3YMH*	T3YMV*		2 color indicator type (with indicator light for preventive maintenance output (1 color))	4-wire
T2JH*	T2JV*		Off-delay type	2-wire

*Lead wire length (m)

Blank	1m (standard)
3	3m (option)
5	5m (option)

E Switch quantity	
R	One on rod end
H	One on head end
D	2

<Example of model number>

STK-JY-20-10-T0H-R

Model: High rigid cylinder single acting retract type roller rod end

- A** Bore size : φ20mm
- B** Port thread type : Rc thread
- C** Stroke length : 10mm
- D** Switch model no. : Reed T0H switch, lead wire 1m
- E** Switch quantity : One on rod end

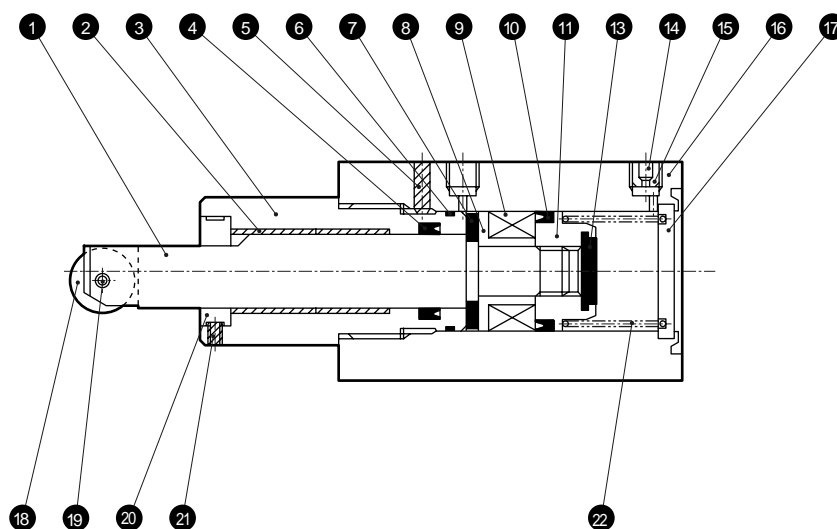
How to order switch

SW - **T0H**

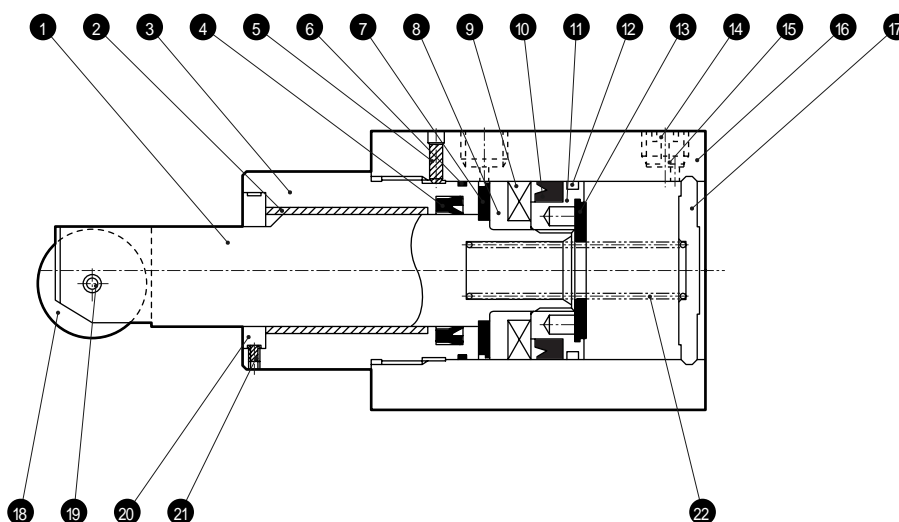
Switch model no.
(Item **D** above)

Internal structure and parts list

● STK-JY-20



● STK-JY-32/40/50



SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

N0.	Parts name	Material	Remarks	N0.	Parts name	Material	Remarks
1	Piston rod	Stainless steel	Industrial chrome plating	13	Cushion rubber (H)	Urethane rubber	
2	Bush	Oilless dry met		14	Stainless steel wire net	Stainless steel	
3	Rod cover	Aluminum alloy	Alumite	15	Plug	Stainless steel	
4	Rod packing seal	Nitrile rubber		16	Body	Aluminum alloy	Hard alumite
5	Hexagon socket head set screw	Steel	Blackening	17	Cover	φ 20: Steel φ 32 to 50: Aluminum alloy	φ 20: Galvanizing φ 32 to 50: Chromate
6	Metal gasket	Nitrile rubber		18	Roller	Resin	
7	Cushion rubber (R)	Urethane rubber		19	Spring pin	Carbon tool steel	
8	Spacer	Aluminum alloy	Chromate	20	Non-rotating spacer	Steel	Nickeling
9	Magnet	Plastic		21	Hexagon socket head set screw	Steel	Blackening
10	Piston packing seal	Nitrile rubber		22	Coil spring	Steel	Electrode position coating
11	Piston	Aluminum alloy	Chromate				
12	Wear ring	Acetar resin					

Repair parts list

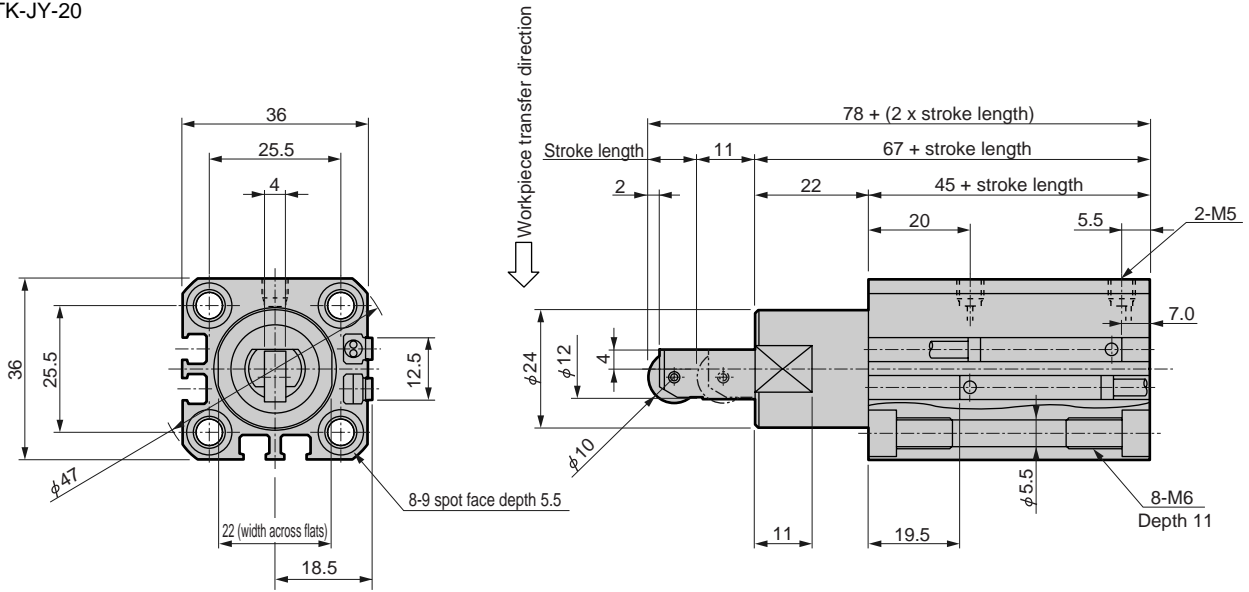
Bore size (mm)	Kit No.	Repair parts number
φ 20	STK-Y-20K	4 6 10
φ 32	STK-Y-32K	
φ 40	STK-Y-40K	12 13
φ 50	STK-Y-50K	

High rigid cylinder
Space saving structure

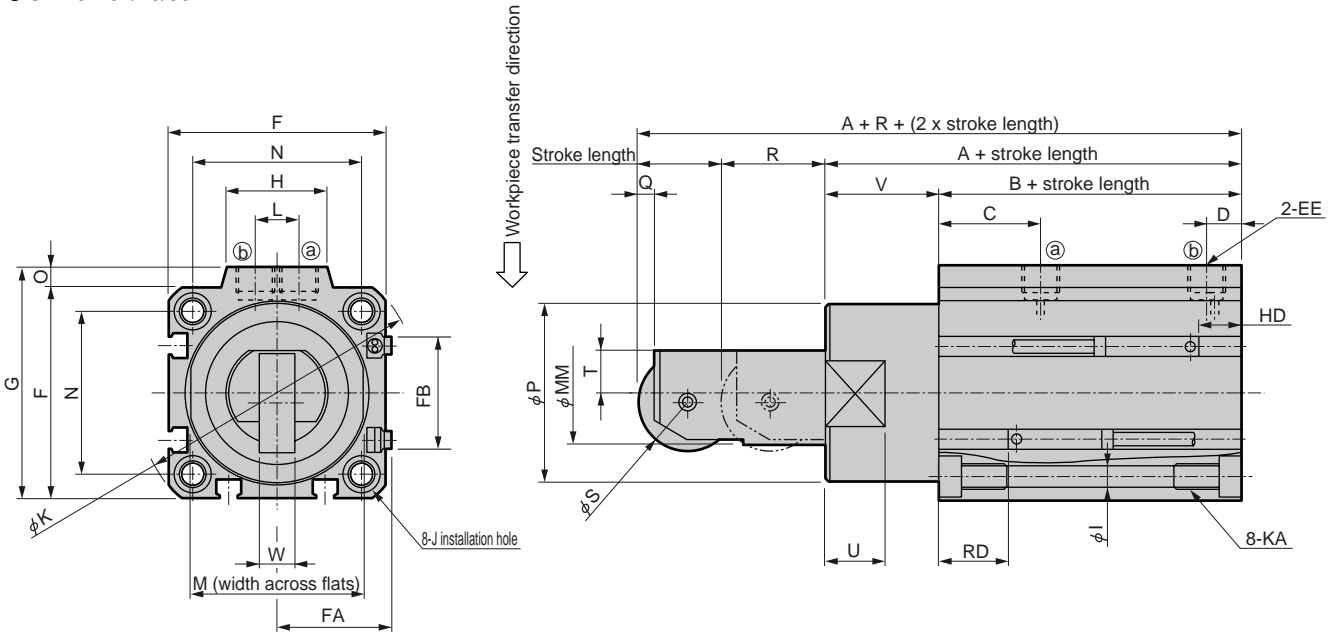
Dimensions



● STK-JY-20



● STK-JY-32/40/50



Symbol	A	B	C	D	EE	F	FA	FB	G	H	I	J	K	KA	L	M	MM	N	O	P	Q	R	S	T	U	V	W
φ 32	68	48	20	8	Rc1/8	45	23	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	10	32	20	34	4.5	36	3	19	18	8	13	20	8
φ 40	80.5	52.5	24.5	8.5	Rc1/8	52	26.5	27.5	57	24	5.5	9 spot face depth 5.5	69	M6 depth 11	10	41	25	40	5	44	4	25	24	10	15	28	9
φ 50	82	54	24.5	10.5	Rc1/4	64	32.5	28.5	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	15	50	30	50	7	56	4	25	28	12	15	28	10

Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
φ 32	10.5	20	10.5	20
φ 40	11.5	23	11.5	23
φ 50	12.5	23	12.5	23

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
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- CAT
- MDC2
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- SMD2
- MSD*
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- STK**
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- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
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- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending



High rigid cylinder Double acting spring integrated roller rod end type

STK-JY1 Series

● Bore size: ϕ 20, ϕ 32, ϕ 40, ϕ 50



Double acting spring integrated retract type



Specifications

Descriptions	STK-JY1			
Bore size mm	ϕ 20	ϕ 32	ϕ 40	ϕ 50
Actuation	Double acting spring integrated type			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.22	0.12		
Withstanding pressure MPa	1.6			
Ambient temperature $^{\circ}$ C	-10 to 60 (no freezing)			
Port size	M5	Rc1/8	Rc1/4	
Stroke tolerance mm	+2.0 0			
Working piston speed mm/s	50 to 500			
Cushion	Rubber cushioned			
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISOVG 32)			
Rod end form	Roller type			
Allowable energy absorption J	Refer to page 1186.			

Stroke length

Bore size (mm)	Stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)	Min. stroke length with switch (mm)
ϕ 20	10, 15, 20	20	10	10
ϕ 32	20, 25, 30	30	20	20
ϕ 40				
ϕ 50				

Note: Other than standard stroke length is custom order.

Spring load

(Unit: N)

Bore size (mm)	Stroke length (mm)	Stroke length 0	Full stroke length during operation
ϕ 20	10	11.5	14.7
	15	9.9	
	20	8.2	
ϕ 32	10	24.5	31.4
	15	21.1	
	20	17.6	
ϕ 40	20	29.0	44.4
	25	25.3	
	30	21.5	
ϕ 50	20	55.4	84.8
	25	48.0	
	30	40.7	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Switch specifications

- 1 color/2 color indicator

*The T0/T5 switch can be used with 220 VAC.
Consult CKD for working conditions.

Descriptions	Proximity 2 wire			Proximity 3 wire			Reed 2 wire						
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T3H/T3V	T3PH/T3PV (Custom order)	T3YH/T3YV	TOH/TOV	T5H/T5V			T8H/T8V		
Applications	Programmable controller relay, small solenoid valve		Programmable controller	Programmable controller, relay			Programmable controller, relay	Programmable controller, relay, IC circuit (w/o indicator light), serial connection			Programmable controller, relay		
Output method	-			NPN output	PNP output	NPN output	-						
Power voltage	-			10 to 28 VDC			-						
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC
Load current	5 to 100mA	5 to 20mA (Note 1)		100mA or less		50mA or less	5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA
Light	LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	Without indicator light			LED (ON lighting)		
Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC	1mA or less		10 μA or less			0mA						

- With preventive maintenance output

Descriptions	Proximity 3 wire		Proximity 4 wire		Proximity 3 wire		Proximity 4 wire		
	T2YFH/V		T3YFH/V		T2YMH/V		T3YMH/V		
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay		
Output method	NPN output								
Light	Red/green LED (ON lighting)								
	Installation position adjustment section		-		Yellow LED (ON lighting)				
Regular Output	Power voltage	-		10 to 28 VDC		-		10 to 28 VDC	
	Load voltage	10 to 30 VDC		30 VDC or less		10 to 30 VDC		30 VDC or less	
	Load current	5 to 20mA		50mA or less		5 to 20mA		50mA or less	
	Leakage current	1mA or less		10 μA or less		1.2mA or less		10 μA or less	
Preventive maintenance Output	Load voltage	30 VDC or less							
	Load current	20mA or less		50mA or less		5 to 20mA or less		50mA or less	
	Leakage current	10 μA or less							

Note 1: Refer to Ending 1 for other switches.

Note 2: Max. load current: 20mA above is the value at 25°C. When ambient temperature around switch is higher than 25°C, the value is lower than 20mA. (5 to 10mA at 60°C)

Cylinder weight table

Stroke length	10	15	20	25	30	Weight per switch (grommet)
Bore size						
φ 20	225	240	254	-	-	
φ 32	482	507	532	-	-	
φ 40	-	-	862	903	944	
φ 50	-	-	1362	1388	1414	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC

Ending

High rigid cylinder
Space saving structure

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

How to order

Without switch

STK-JY1 - **20** - **10**

With switch

STK-JY1 - **20** - **10** - **T0H** - **R**

A Bore size

B Port thread type

C Stroke length

D Switch model no.
Note 1

E Switch quantity

Note on model no. selection

Note 1: Switches other than (D) switch model no. are also available. (Custom order)
Refer to Ending 1 for the details.

<Example of model number>

STK-JY1-20-10-T0H-R

Model: High rigid cylinder

double acting spring integrated type roller rod end

- A** Bore size : ϕ 20mm
- B** Port thread type : Rc thread
- C** Stroke length : 10mm
- D** Switch model no.: Reed T0H switch,
lead wire 1m
- E** Switch quantity : One on rod end

Symbol	Descriptions
A Bore size (mm)	
20	ϕ 20
32	ϕ 32
40	ϕ 40
50	ϕ 50

B Port thread type	
Blank	Rc thread
NN	NPT thread (ϕ 32 and over) (custom order)
GN	G thread (ϕ 32 and over) (custom order)

C Stroke length (mm)		ϕ 20	ϕ 32	ϕ 40	ϕ 50
Bore size					
10	10	●	●		
15	15	●	●		
20	20	●	●	●	●
25	25			●	●
30	30			●	●

D Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	T0V*	Reed	1 color indicator type	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator type	
T1H*	T1V*	Proximity	1 color indicator type	2-wire
T2H*	T2V*			
T3H*	T3V*			
T3PH*	T3PV*		1 color indicator type (custom order)	3-wire
T2YH*	T2YV*		2 color indicator type	3-wire
T3YH*	T3YV*			
T2YFH*	T2YFV*		2 color indicator type (without indicator light for preventive maintenance output)	3-wire
T3YFH*	T3YFV*			
T2YMH*	T2YMV*	2 color indicator type (with indicator light for preventive maintenance output (1 color))	3-wire	
T3YMH*	T3YMV*			
T2JH*	T2JV*	Off-delay type	2-wire	

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

E Switch quantity	
R	One on rod end
H	One on head end
D	2

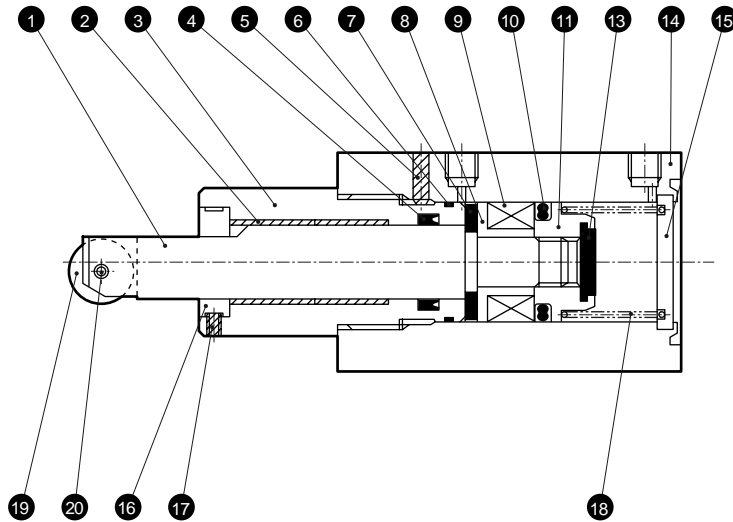
How to order switch

SW - **T0H**

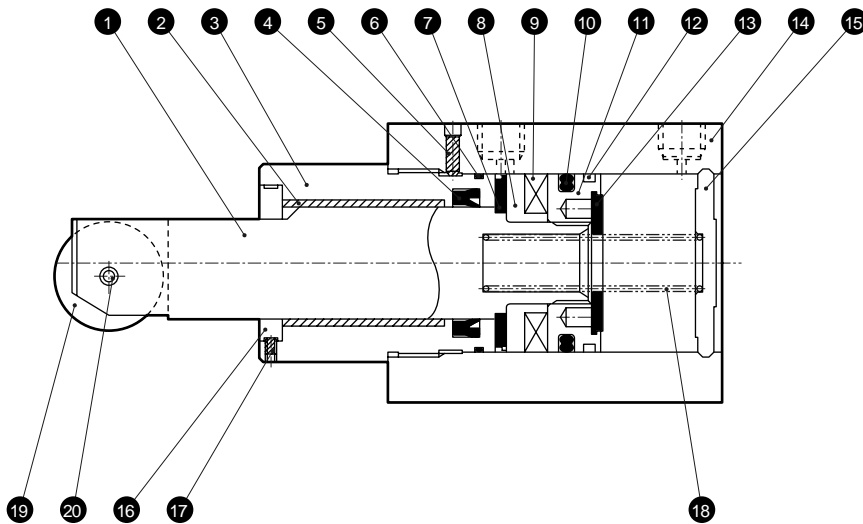
Switch model no.
(Item **D** above)

Internal structure and parts list

● STK-JY1-20



● STK-JY1-32/40/50



N0.	Parts name	Material	Remarks	N0.	Parts name	Material	Remarks
1	Piston rod	Stainless steel	Industrial chrome plating	12	Wear ring	Acetar resin	
2	Bush	Oilless dry met		13	Cushion rubber (H)	Urethane rubber	
3	Rod cover	Aluminum alloy	Alumite	14	Body	Aluminum alloy	Hard alumite
4	Rod packing seal	Nitrile rubber		15	Cover	φ 20: Steel φ 32 to 50: Aluminum alloy	φ 20: Galvanizing φ 32 to 50: Chromate
5	Hexagon socket head set screw	Steel	Blackening	16	Non-rotating spacer	Steel	Nickeling
6	Metal gasket	Nitrile rubber		17	Hexagon socket head set screw	Steel	Blackening
7	Cushion rubber (R)	Urethane rubber		18	Coil spring	Steel	Electrode position coating
8	Spacer	Aluminum alloy	Chromate	19	Roller	Resin	
9	Magnet	Plastic		20	Spring pin	Carbon tool steel	
10	Piston packing seal	Nitrile rubber					
11	Piston	Aluminum alloy	Chromate				

Repair parts list

Bore size (mm)	Kit No.	Repair parts number
φ 20	STK-Y1-20K	4 6 10
φ 32	STK-Y1-32K	
φ 40	STK-Y1-40K	12 13
φ 50	STK-Y1-50K	

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3

UCAC
RCC2
MFC
SHC
GLC
Ending

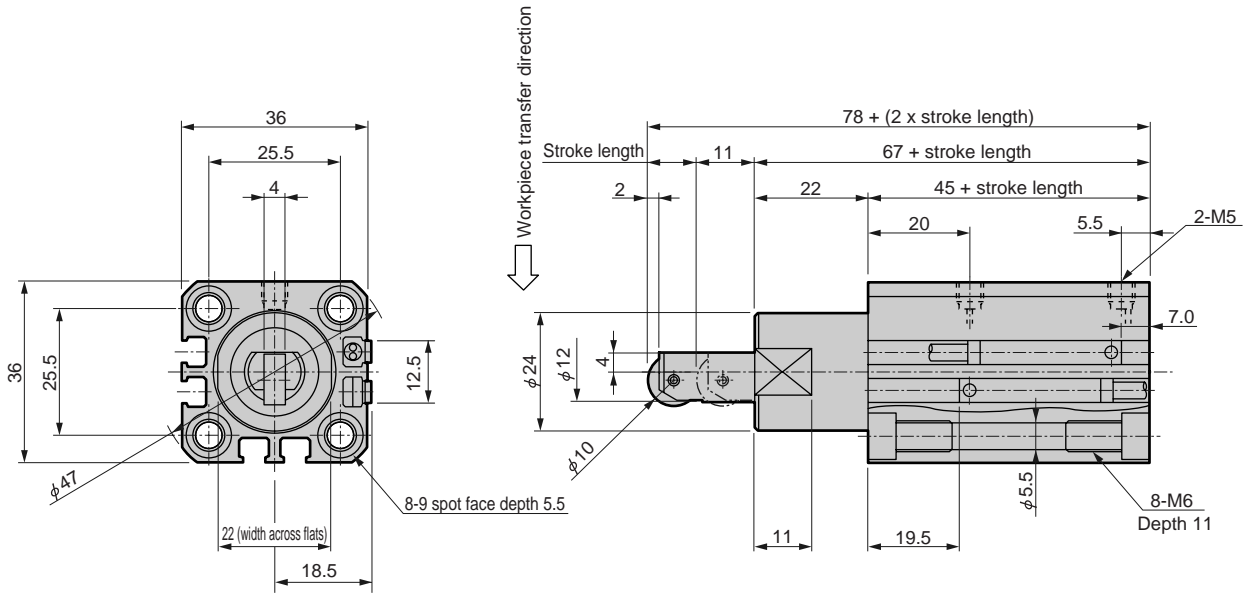
High rigid cylinder
Space saving structure

STK-JY1 Series

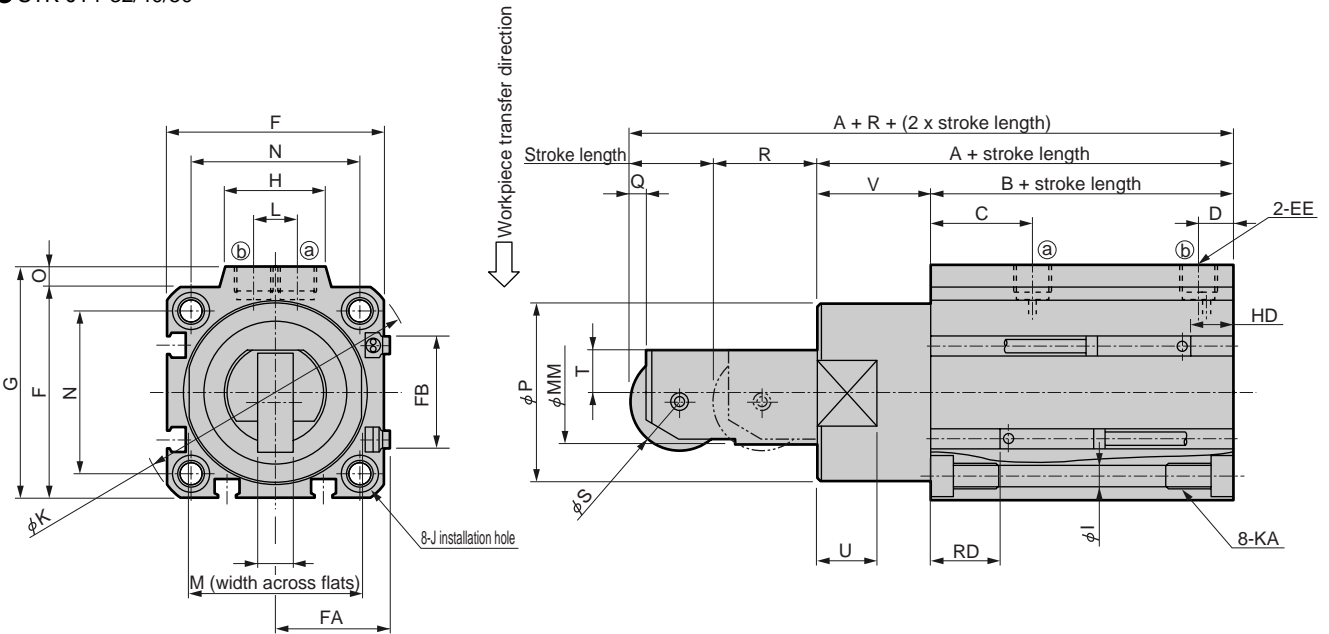


Dimensions

● STK-JY1-20



● STK-JY1-32/40/50



Symbol	A	B	C	D	EE	F	FA	FB	G	H	I	J	K	KA	L	M	MM	N	O	P	Q	R	S	T	U	V	W
φ 32	68	48	20	8	Rc1/8	45	23	20.5	49.5	24	5.5	9 spot face depth 5.5	60	M6 depth 11	10	32	20	34	4.5	36	3	19	18	8	13	20	8
φ 40	80.5	52.5	24.5	8.5	Rc1/8	52	26.5	27.5	57	24	5.5	9 spot face depth 5.5	69	M6 depth 11	10	41	25	40	5	44	4	25	24	10	15	28	9
φ 50	82	54	24.5	10.5	Rc1/4	64	32.5	28.5	71	33	6.9	11 spot face depth 6.5	86	M8 depth 13	15	50	30	50	7	56	4	25	28	12	15	28	10

Dimensions with switch				
Bore size	Reed T0H/T0V/T5H/T5V		Proximity T2H/T2V/T3H/T3V	
	HD	RD	HD	RD
φ 32	10.5	20	10.5	20
φ 40	11.5	23	11.5	23
φ 50	12.5	23	12.5	23

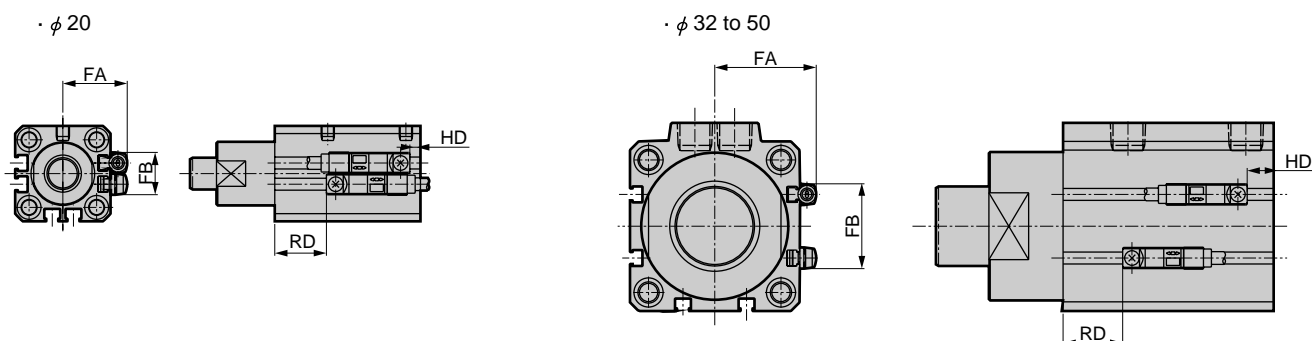
Note : Refer to page 1184 for the HD, RD, and projecting dimensions of the 2 color indication type, off delay type, T1*, T8* switch.

- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

STK Series common (2 color indicator, off-delay type, T1* or T8* with switch) dimensions

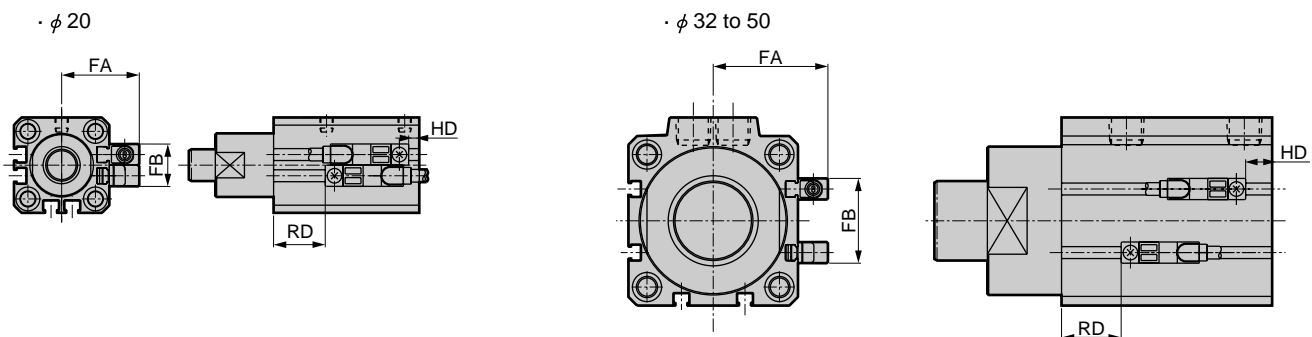
Double acting (STK, STK-M)

- T2YH/V, T3YH/V, T2JH/V, T8H/V



Symbol Bore size (mm)	FA	FB	T2JH/V, T2YH/V, T3YH/V		T8H/V	
			RD	HD	RD	HD
φ 20	24.3	16	19.5	4	15	0
φ 32	28.8	24	19.5	8	15	3.5
φ 40	32.3	31	22.5	8.5	18	4.5
φ 50	38.3	32	22.5	10	18	5.5

- T2YFH/V, T3YFH/V, T2YMH/V, T3YMH/V, T1H/V



Symbol Bore size (mm)	FA	FB	RD	HD
φ 32	28.8	24	19.5	8
φ 40	32.3	31	22.5	8.5
φ 50	38.3	32	22.5	10

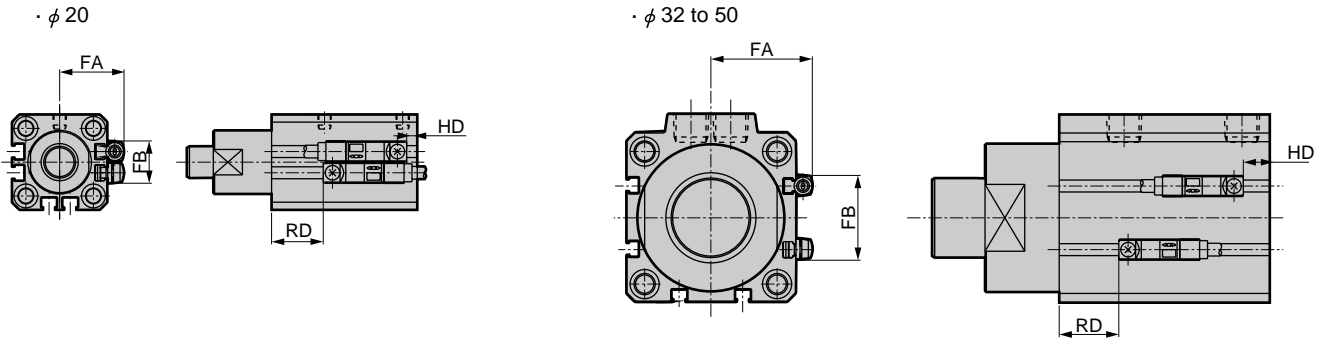
- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

High rigid cylinder
Space saving structure

STK Series common (2 color indicator, off-delay type, T1* or T8* with switch) dimensions

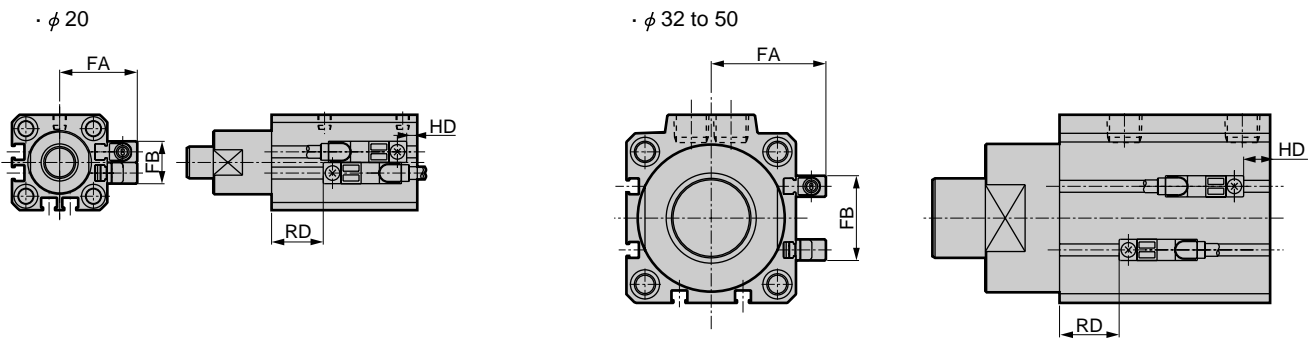
Single acting extend type, double acting spring integrated (STK-Y, STK-Y1, STK-MY, STK-MY1, STK-JY, STK-JY1)

- T2YH/V, T3YH/V, T2JH/V, T8H/V



Symbol	FA	FB	T2JH/V, T2YH/V, T3YH/V		T8H/V	
			RD	HD	RD	HD
Bore size (mm)						
φ 20	24.3	16	18	5.5	13.5	1
φ 32	28.8	24	18.5	9	14	4.5
φ 40	32.3	31	21.5	10	17	5.5
φ 50	38.3	32	21.5	11	17	6.5

- T2YFH/V, T3YFH/V, T2YMH/V, T3YMH/V, T1H/V



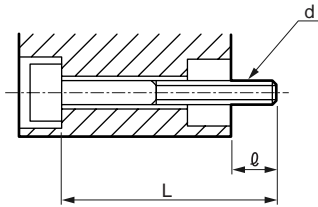
Symbol	FA	FB	RD	HD
Bore size (mm)				
φ 20	24.3	16	18	5.5
φ 32	28.8	24	18.5	9
φ 40	32.3	31	21.5	10
φ 50	38.3	32	21.5	11

Mounting bolt model no.

STK - **BOLT** - **d x L**

Mounting bolt (4 bolts per set)

How to read the list



Material: Steel

Treatment: Blackening

d : Mounting bolt screw diameter

L : Mounting bolt length

φ : Effective threading length on mate side

(Note) Mounting bolt is indicated as d x L.

Mounting bolt for STK-□

Model no.	φ	d x L
STK-20-10	10.5	M5 x 60
15		X 65
20		X 70
STK-32-10	12.5	M5 x 65
15		X 70
20		X 75

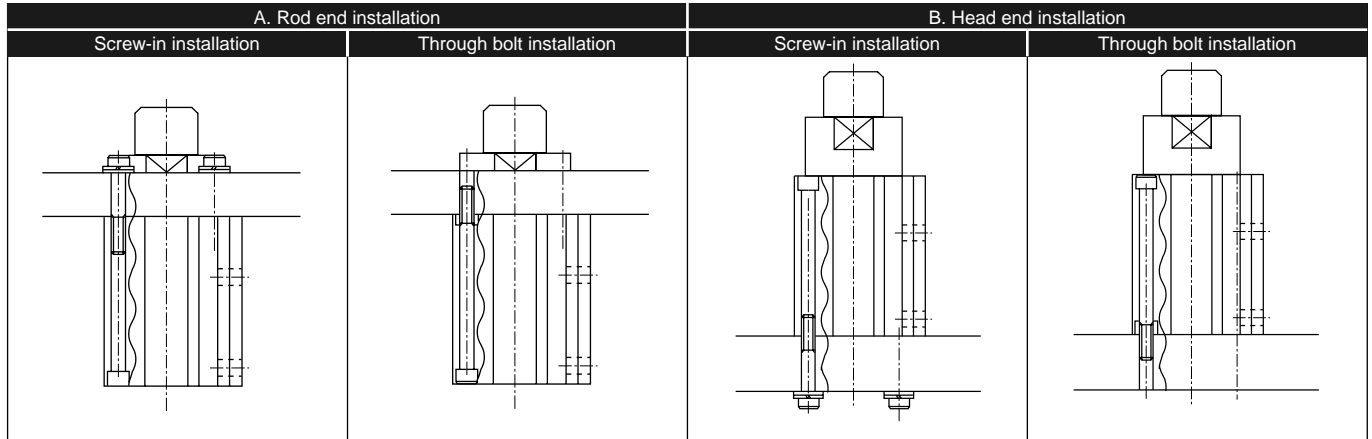
Model no.	φ	d x L
STK-40-20	13	M5 x 80
25		X 85
30		X 90
STK-50-20	12.5	M6 x 80
25		X 85
30		X 90

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

High rigid cylinder
Space saving structure

High rigid cylinder selection guide

Allowable energy absorption may differ depending on installation methods. Check the installation method on the following diagram A or B before selecting model.



1. Specified range selection method

Find the kinetic energy according to transfer weight (m) and transfer speed (V), then select the model whose allowable energy absorption is not greater than the value on the right graph.

Formula of kinetic energy

$$E = \frac{1}{2} mV^2$$

E : Kinetic energy J
m : Transfer weight kg
V : Transfer speed m/s

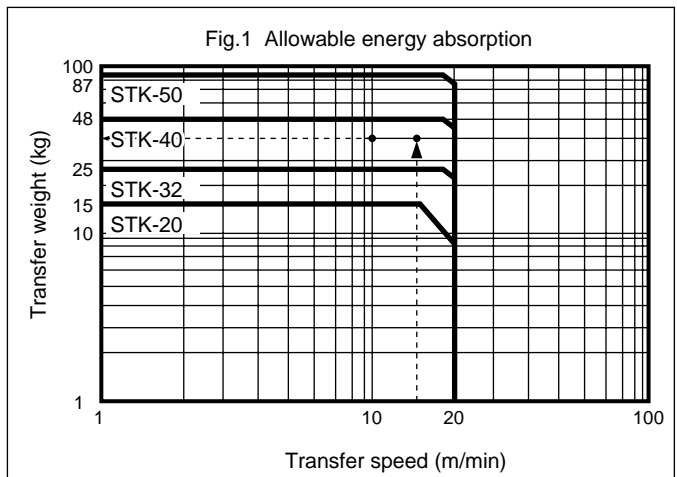
(Example) Transfer speed 15m/min, transfer weight 40kg

A. For mounting on rod side

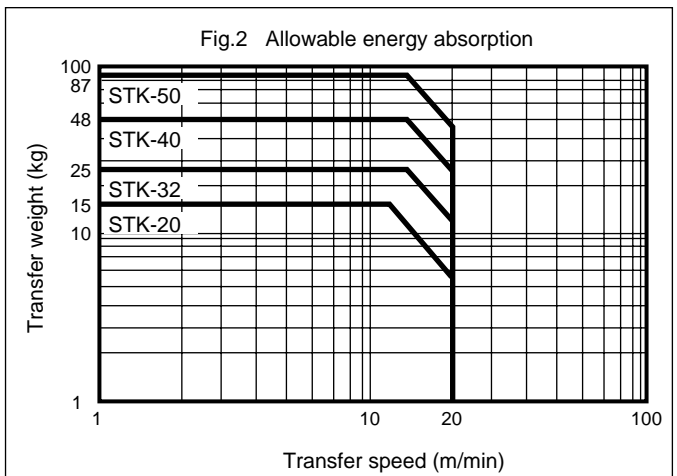
<How to read the graph>

To select the above specifications, obtain the intersection of the horizontal axis speed 15m/min and vertical axis weight 40kg from Graph 1 at the upper right, and select STK-40 which is within the allowable absorption energy range

A. Rod end installation



B. Head end installation



(Note) Rod end form: Compatible with round bar type, chamfering type, roller type.

Lateral load and working pressure

Working pressure at cylinder retracted may vary depending on lateral load applied to rod end. Find the required working pressure according to the following steps.

1. Find the lateral load (F) applied to rod end.

$$F = 10/m/n/\mu_1$$

F : Lateral load (N)

m : Transfer weight (kg)

n : Quantity of transferred work piece

μ_1 : Friction coefficient between transfer pallet and conveyer

2. Find the required thrust (P) at cylinder retracted.

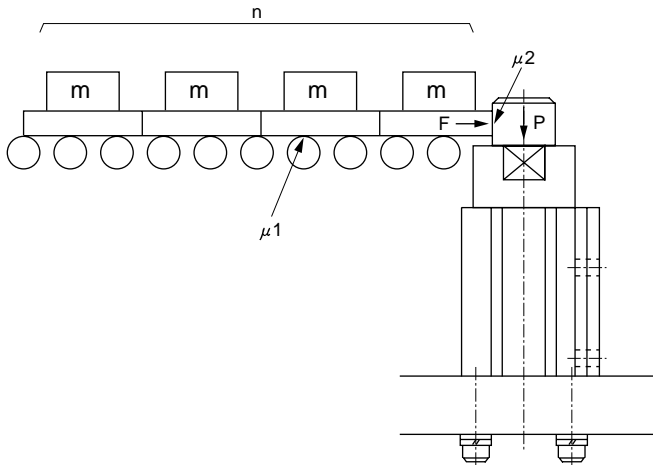
$$P = F \cdot \mu_2$$

P : Required thrust (N)

μ_2 : Friction coefficient between transferred work piece and rod

(Note) Since friction coefficient may differ depending on transferred work piece material, refer to coefficient on the table below.

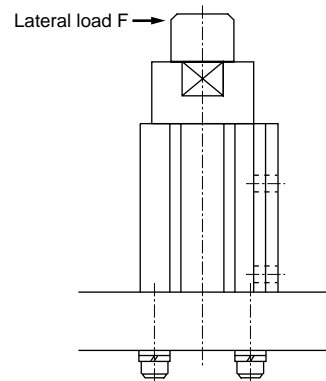
Transferred work piece material	Steel	Aluminum	Urethane
μ_2	0.5	0.8	2.0



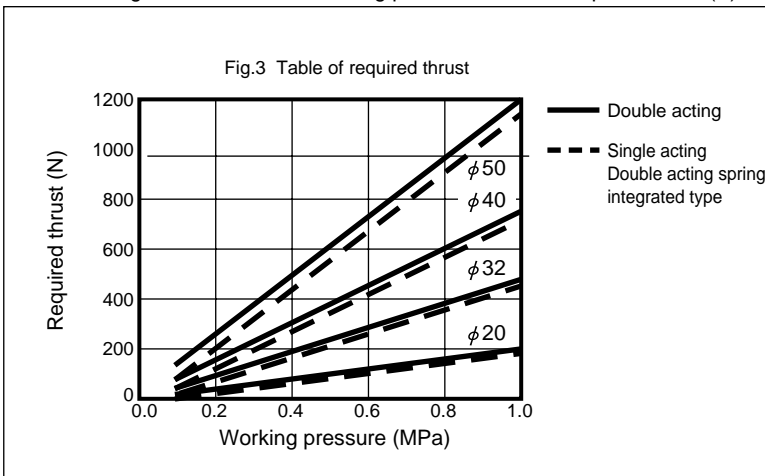
Allowable lateral load

Unit: N

Bore size	Stroke length				
	10	15	20	25	30
$\phi 20$	106.5	99.4	93.2	-	-
$\phi 32$	272.8	254.6	238.7	-	-
$\phi 40$	-	-	371.3	352.1	334.8
$\phi 50$	-	-	582.8	552.8	525.8



3. Refer to Fig. 3 and obtain the working pressure from the required thrust (P).



- SCP*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD**
- CAT
- MDC2
- MVC
- SMD2
- MSD*
- FC*
- STK**
- ULK*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
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- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
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- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

High rigid cylinder
Space saving structure