Pneumatic CylindersII  
Catalog No. CB-030SA

Guided cylinder Double acting/ Single rod

# STS/STL-<sup>M</sup><sub>B</sub>Series

- Bore size:  $\varnothing 8/\varnothing 12/\varnothing 16/\varnothing 20/\varnothing 25/\varnothing 32$   
 $\varnothing 40/\varnothing 50/\varnothing 63/\varnothing 80/\varnothing 100$

JIS symbol



## Specifications

Item	STS-M/B STL-M/B										
Bore size mm	ø8	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting										
Working fluid	Compressed air										
Max. working pressure MPa	1.0										
Min. working pressure MPa	0.15					0.1					
Proof pressure MPa	1.6										
Ambient temperature °C	-10 to 60 (no freezing)										
Port size	M5					Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	+2.0										
	0										
Working piston speed mm/s	50 to 500								50 to 300		
Cushion	With rubber cushion										
Lubrication	Not available										
Allowable absorbed energy J	0.029	0.056	0.088	0.157	0.157	0.401	0.627	0.980	1.560	2.510	3.92

## Stroke

- Short Stroke STS

Bore size	Standard Stroke (mm)	Max. Stroke (mm)	Min. Stroke (mm)	Min. stroke with switch (mm)
ø8	10,20,30 40,50	50	5	5  With one or two switches
ø12				
ø16				
ø20	25,50			
ø25				
ø32				
ø40				
ø50				
ø63				
ø80	25,50,75,100			
ø100				

- Long Stroke STL

Bore size	Standard Stroke (mm)	Max. Stroke (mm)	Min. Stroke (mm)	Min. stroke with switch (mm)
ø8	50,75,100	200	50	50
ø12	125,150			With one or two switches
ø16	175,200			
ø20	50,75,100 125,150,175 200,225,250 275,300,325 350,375,400	400	30	30  With one or two switches
ø25				
ø32				
ø40				
ø50				
ø63				
ø80	75,100,125,150,175 200,225,250,275,300 325,350,375,400		55	55  With one or two switches
ø100	75,100,125,150,175,200	200		

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

## Compatibility table by variation

Applicable bore size		Double acting/ single rod	Double acting/ position locking	Double acting/air cushioned	Double acting/ rubber scraper
			Q	C	G
ø8 to 100	P4	●	▲	▲	▲
	P40	●	▲	▲	▲
	P42	▲	▲	▲	

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

## How to order

### Short Stroke

Without switch (built-in magnet for switch)

STS - M - 8 - 10 - P4 P40

With switch (built-in magnet for switch)

STS - M - 8 - 10 - SW11 - R - P4 P40

### Long stroke

Without switch (built-in magnet for switch)

STL - M - 8 - 50 - P4 P40

With switch (built-in magnet for switch)

STL - M - 8 - 50 - SW11 - R - P4 P40

Model No.

A Bearing

B Bore size

C Port thread

D Stroke

F Switch quantity

#### Custom Stroke

Available in 5 mm increments. However, the total length is the same as that of the next longer standard Stroke.

#### E Switch model

For the 2-color display, T1H/V, T8H/V and strong magnetic field proof switches for ø40 and over, insert "L1" with "-" between Items A and B. For ø80, ø100, the 2-color display, T1H/V, T8H/V and AC magnetic field proof switches cannot be retrofitted on a previously purchased standard product. In this case, order the model No. with "L1" inserted between Items A and B.

Example) STS-M-L1-80-50-P4

Code	Description
<b>A Bearing</b>	
M	Metal bush bearing
B	Ball bearing
<b>B Bore size (mm)</b>	
8	ø8
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100 (made to order)
<b>C Port thread</b>	
Blank	M5 (ø8 to ø25) Rc thread (ø32 to ø100)
NN	NPT thread (ø32 and over) (made to order)
GN	G thread (ø32 and over) (made to order)
<b>D Stroke (mm)</b>	
Refer to the Stroke table on the following page.	
<b>E Switch model No.</b>	
Refer to the compatibility table on Intro Pages 23 to 26 for switch model No.	
<b>* Lead wire length</b>	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)
<b>F Switch quantity</b>	
R	1 on rod side
H	1 on head side
D	2
T	3

## ⚠ Precautions for model No. selection

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

P4 Series

Pneumatic actuator  
Pneumatic cylinders  
Hand/Chuck  
Related products  
Cylinder Switch

Vacuum components

Pneumatic valves

Clean air components  
Speed controller

Pneumatic auxiliary components  
Fitting  
Auxiliary valve

Silencer  
Tube

Gas generator

Fluid control components

Electric actuator  
Motor specification  
Motorless specifications

**P4**  
Series


## D Stroke

Series	Stroke (mm)	Applicable bore size										
		ø8	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
STS	Standard Stroke	10	●	●	●							
		20	●	●	●							
		25				●	●	●	●	●	●	●
		30	●	●	●							
		40	●	●	●							
		50	●	●	●	●	●	●	●	●	●	●
		75									●	●
		100									●	●
Min. Stroke *1		5										
Custom Stroke *1,*2		In 5 mm increments										
STL	Standard Stroke	50	●	●	●	●	●	●	●	●		
		75	●	●	●	●	●	●	●	●	●	●
		100	●	●	●	●	●	●	●	●	●	●
		125	●	●	●	●	●	●	●	●	●	●
		150	●	●	●	●	●	●	●	●	●	●
		175	●	●	●	●	●	●	●	●	●	●
		200	●	●	●	●	●	●	●	●	●	●
		225				●	●	●	●	●	●	
		250				●	●	●	●	●	●	
		275				●	●	●	●	●	●	
		300				●	●	●	●	●	●	
		325				●	●	●	●	●	●	
		350				●	●	●	●	●	●	
		375				●	●	●	●	●	●	
		400				●	●	●	●	●	●	
	Min. Stroke *1		50			30					55	
	Custom Stroke *1,*2		In 5 mm increments									

\*1: The total dimensions are the same as the longer standard Stroke.

\*2: Special total length for custom Stroke can be provided when a custom Stroke is used. (Made to order)

## Related products

Speed controller												
Model No.	Appearance	Port size (Rc or R)				Compatible tube O.D.					Page	
		M5	1/8	1/4	3/8	4(ø4)	6(ø6)	8(ø8)	10(ø10)	12(ø12)		
SC3W-M5-*P4		●				●	●				530	
SC3W-6-*P4			●			●	●	●				
SC3W-8-*P4				●			●	●	●			
SC3W-10-*P4					●			●	●	●		

Specify the compatible tube O.D. code for \*.