



- SINGLE ACTING TYPE **STS2**
- DOUBLE ACTING TYPE **STD2**
- DOUBLE ACTING TYPE WITH SPRINT **STB2**

Features

- Cushions by shock absorbers are available to serve as safety stops.
- Reed switches can be mounted on cylinder surfaces as input signals to controllers.
- The direction of rollers are adjustable for different applications.

Specification

Type	STS2	STD2	STB2
Bore	Φ 50		
Power fluid	Filtered air with or without lubrication		
The range of pressure	3.1 ~ 10.2 kgf/cm ²		
Proof pressure	15.3 kgf/cm ²		
The range of temperature	-10 ~ +70 °C (No freezing)		
Overall stroke tolerance	0 ~ +1.0 mm		
引下力 (When 0.5MPa)	559N (57kgf)		
Material of cylinder barrel	Aluminium extrusion, anodised 20 microns		

How to order

STS2	N	50	-	30	S	-	E	2	-	A
Type	Flange plate	Bore		Stroke	Cushion		Sensor switch	Quantity		Lock mechanism
STS2	No code : Square N : Rectangle	50 : Φ 50		30mm	- : No cushion S : With cushion		Reed switch E : NR501 F : NR505	1 : 1pc 2 : 2pcs		No code : Without lock mechanism A : With lock mechanism
STD2							No reed switch U : NS501 X : NS505			
STB2							501 length 1.5m 505 length 5m			

Weight table

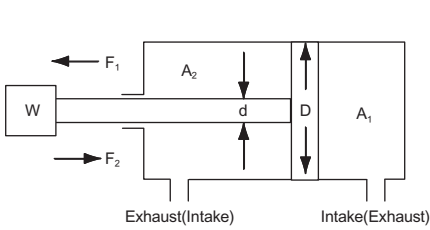
Bore	Basic weight			Plug weight			
	Single acting type	Double acting type		Flange plate		Cushion	Sensor switch
		With spring	Without spring	Square	Rectangle		
Φ 50	1800	1790	1756	0	- 24	180	19

Unit : g

Theoretic force

Load : 100%

Bore	Rod	Operating pressure (kgf/cm ²)																			
		1		2		3		4		5		6		7		8		9		10	
		Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull	Push	Pull
Φ50	Φ32	19.6	11.6	39.2	23.2	58.9	34.8	78.5	46.4	98.1	58.0	117	69.6	137	81.2	157	92.8	176	104	196	116

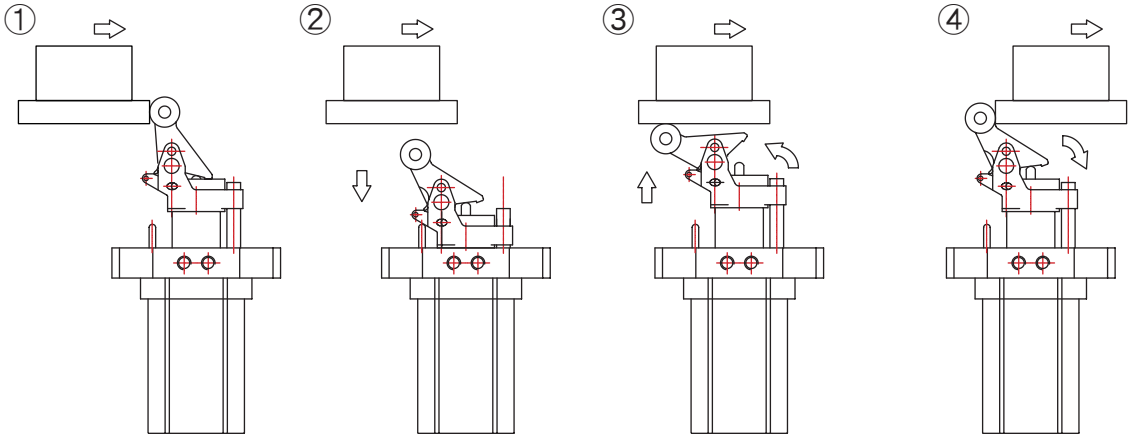


Push $F_1 = A_1 \times P \times \beta$ (kgf)
Pull $F_2 = A_2 \times P \times \beta$ (kgf)
Single acting (Axis inside) $F_3 = (A_1 \times P - S) \times \beta$ (kgf)
Single acting (Axis outside) $F_4 = (A_2 \times P - S) \times \beta$ (kgf)

A_1 : Push side piston pressure $A_1 = \frac{\pi}{4} D^2$
 A_2 : Pull side piston pressure $A_2 = \frac{\pi}{4} (D^2 - d^2)$

- D : Bore(mm)
d : Rod diameter(mm)
P : Pressure(kgf/cm²)
S : Spring(kgf)
β : Load
- Normally speed 65%
 - Low speed 80%
 - High speed 50% 以下

Action figure



When work piece touch cylinder shake block and stop work piece to move.

Axis of cylinder go down when intake, work piece will move right.

Axis of cylinder go up and shake block will forward dumping, wheel roll under work piece.

Spring to shake block back after work piece passing.

Sensor specification

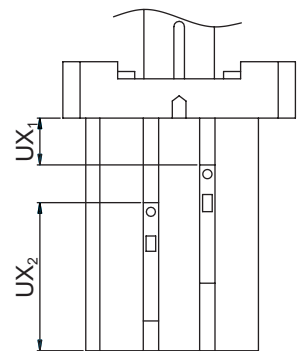
Type	NR501(length 1.5M)
The range of pressure	AC : 4~240 V , DC : 4~240
Switching current	AC : 4~44 mA , DC : 3~40 mA
Max. switching rating	AC : 8 VA , DC : 5 W
Internal voltage drop	2V
Delay time	≤ 1 ms
The range of temperature	-10 ~ 60 °C
Cable	φ 2.8 mm, 2C , PVC
Protection grade	IP66(IEC) JIS C0920
Indicator imap	LED
Wiring diagram	

Operating range tolerance

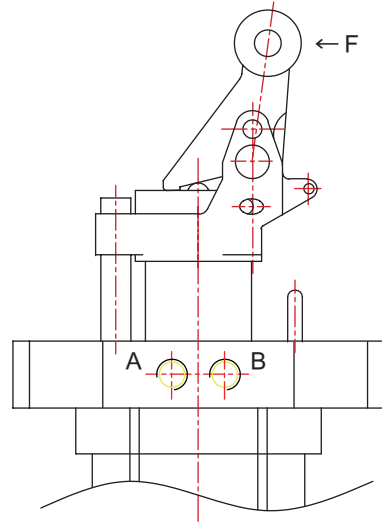
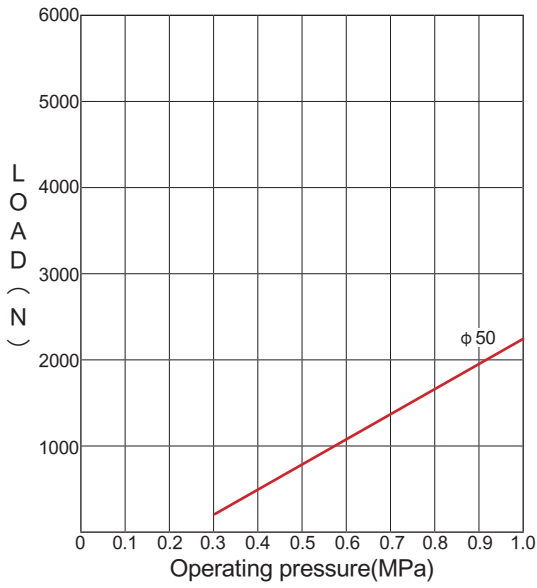
Bore	Operating range	tolerance
Φ50	11	1.5

Sensing point

Bore	UX ₁	UX ₂
Φ50	5.5	51.5



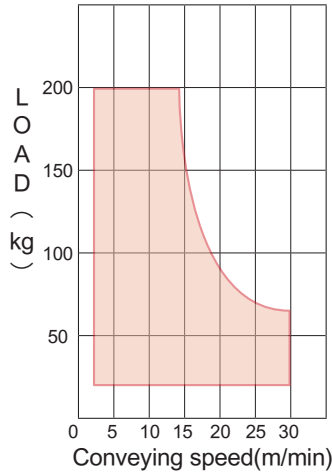
Load and operating pressure diagram



Conveying speed and load diagram

With cushion type

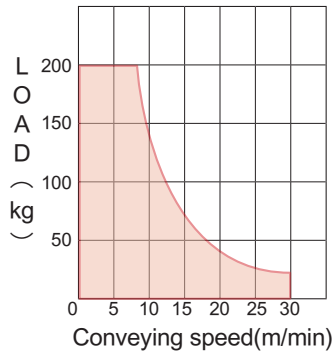
● Bore $\phi 50$



Conveying speed and load diagram

No cushion type

● Bore $\phi 50$



STS2 / STD2 / STB2

Bore $\phi 50$ / Dimensional features

