

# Swing Clamp Cylinder Series NSK

Bore Size:  $\phi 20, \phi 25, \phi 32, \phi 40,$   
 $\phi 50, \phi 63$



- Possible to attach Autoswitch in a tube
- Max. Operating pressure : 1Mpa
- Compact size & Good design
- Built-in coil scraper ( $\phi 40 \sim \phi 63$ )

## How to Order

**N (D) SK B 20 - 20 R P - W8\* S**

1 2 3 4 5 6 7 8 9

1 New Actuator Swing K(clamp) cylinder

2 Magnet

Blank : without magnet  
D : Built-in magnet

3 Mount

B : Through-hole/Both ends tapped common(standard)  
G : Head side flange type

4 Bore size

20 :  $\phi 20$   
25 :  $\phi 25$   
32 :  $\phi 32$   
40 :  $\phi 40$

50 :  $\phi 50$   
63 :  $\phi 63$

5 Stroke

10 : 10mm/ $\phi 20, 25, 32, 40$   
20 : 20mm/ $\phi 20, 25, 32, 40, 50, 63$   
50 : 50mm/ $\phi 50, 63$

※ Refer to specification for rotation stroke.

6 Rotary direction

R : RIGHT  
L : LEFT

※ Refer to dimension for rotation.

7 Rotation plate(ARM)

Blank : Without Rotation Plate  
P : Without Rotation Plate

※ Not assembled

8 Applicable Auto Switch

Blank : without auto switch  
W4 : Reed switch

W8H(v): Reed switch-2wire

W9H(v): Solid state switch-2wire

W9H(v)N: Solid state switch-3wire

W2P : Magnetic switch(Solid state type, over $\phi 40$  available)

9 (Number of Auto switch)

Blank : 2 pcs

S : 1 pcs

N : n pcs

## Weight

(Unit : kg)

### 1. CYLINDER

| STROK<br>(mm) | Bore size |      |      |      |     |      |
|---------------|-----------|------|------|------|-----|------|
|               | 20        | 25   | 32   | 40   | 50  | 63   |
| 10            | 0.26      | 0.32 | 0.5  | 0.55 | -   | -    |
| 20            | 0.29      | 0.35 | 0.54 | 0.6  | 1.1 | 1.44 |
| 50            | -         | -    | -    | -    | 1.3 | 1.7  |

### 2. Component Parts

#### 1) SWING PLASTE

| Park number | Weight |
|-------------|--------|
| KP-020      | 0.05   |
| KP-032      | 0.14   |
| KP-050      | 0.19   |

#### 2) FLANGE

| Park number | Weight |
|-------------|--------|
| QF-020      | 0.05   |
| QF-025      | 0.14   |
| QF-032      | 0.19   |

| Park number | Weight |
|-------------|--------|
| QF-040      | 0.24   |
| QF-050      | 0.41   |
| QF-063      | 0.59   |

## Specifications

|                             |                  | Bore size   |           |            |           |           |           |
|-----------------------------|------------------|---|-----------|------------|-----------|-----------|-----------|
|                             |                  | $\phi 20$   | $\phi 25$ | $\phi 32$  | $\phi 40$ | $\phi 50$ | $\phi 63$ |
| Fluid                       |                  | air   |           |            |           |           |           |
| Rod O.D                     |                  | $\phi 12$   | $\phi 12$ | $\phi 16$  | $\phi 16$ | $\phi 20$ | $\phi 20$ |
| Stroke(mm)                  | Rotate section   | 9.5   |           | 15         |           | 19        |           |
|                             | Straight section | 10, 20  |           | 10, 20     |           | 20, 50    |           |
|                             | TOTAL            | 19.5, 29.5  |           | 25, 35     |           | 39, 69    |           |
|                             | Tolerance        | 0~+1.4mm  |           |            |           |           |           |
| Rotation angle & tolerance  |                  | 90 $\pm$ 10°                                      |           |            |           |           |           |
| Proof pressure              |                  | 15kgf/cm <sup>2</sup>                             |           |            |           |           |           |
| Max.Operating pressure      |                  | 9.9kgf/cm <sup>2</sup>                            |           |            |           |           |           |
| Min.Operating pressure      |                  | 1.0kgf/cm <sup>2</sup>                            |           |            |           |           |           |
| Action                      |                  | Double acting (Standard)                          |           |            |           |           |           |
| Piston speed                |                  | 50~200mm/sec.                                     |           |            |           |           |           |
| Cushion                     | Rod side         | Rubber (Rod end)                                  |           |            |           |           |           |
|                             | Head side        | None  |           |            |           |           |           |
| Ambient & Fluid temperature |                  | -5~60°C   |           |            |           |           |           |
| Lubrication                 |                  | Not necessary (Non-Lube)                          |           |            |           |           |           |
| Port size                   |                  | M5 $\times$ 0.8                                   |           | Rc(PT) 1/8 |           | Rc(PT)1/4 |           |
| Applicable Auto switch      |                  | W8*, W9, W4(over $\phi 32$ ) W2P(over $\phi 40$ ) |           |            |           |           |           |

## Theoretical OutPut

(Unit : kgf)

| Bore size<br>(mm) | Rod O.D.<br>(mm) | Operating<br>Direction | Piston<br>area | Operating Pressure(kgf/cm <sup>2</sup> ) |      |       |       |       |       |       |       |     |  |
|-------------------|------------------|------------------------|----------------|--|------|-------|-------|-------|-------|-------|-------|-----|--|
|                   |                  |                        |                | 2  | 3    | 4     | 5     | 6     | 7     | 8     | 9     | 10  |  |
| 20                | 12               | CLAMP                  | 2              | 4  | 6    | 8     | 10    | 12    | 14    | 16    | 18    | 20  |  |
|                   |                  | UNCLAMP                | 3              | 6  | 9    | 12    | 15    | 18    | 21    | 24    | 27    | 30  |  |
| 25                |                  | CLAMP                  | 3.7            | 7.4                                      | 11.1 | 14.8  | 18.5  | 22.2  | 25.9  | 29.6  | 33.3  | 37  |  |
|                   |                  | UNCLAMP                | 4.9            | 9.8                                      | 14.7 | 19.6  | 24.5  | 29.4  | 34.3  | 39.2  | 44.1  | 49  |  |
| 32                | 16               | CLAMP                  | 6              | 12                                       | 18   | 24    | 30    | 36    | 42    | 48    | 54    | 60  |  |
|                   |                  | UNCLAMP                | 8              | 16                                       | 24   | 32    | 40    | 48    | 56    | 64    | 72    | 80  |  |
| 40                |                  | CLAMP                  | 10.5           | 21                                       | 31.5 | 42    | 52.5  | 63    | 73.5  | 84    | 94.5  | 105 |  |
|                   |                  | UNCLAMP                | 12.5           | 25                                       | 37.5 | 50    | 62.5  | 75    | 87.5  | 100   | 112.5 | 125 |  |
| 50                | 20               | CLAMP                  | 16.4           | 32.8                                     | 49.2 | 65.6  | 82    | 98.4  | 114.8 | 161.2 | 147.6 | 164 |  |
|                   |                  | UNCLAMP                | 19.6           | 39.2                                     | 58.8 | 78.4  | 98    | 117.6 | 137.2 | 156.8 | 176.4 | 196 |  |
| 63                |                  | CLAMP                  | 28             | 56                                       | 84   | 112   | 140   | 168   | 196   | 224   | 252   | 280 |  |
|                   |                  | UNCLAMP                | 31.1           | 62.2                                     | 93.3 | 124.4 | 155.5 | 186.6 | 217.7 | 248.8 | 279.9 | 311 |  |

※ =Pressure(kgf/cm<sup>2</sup>)