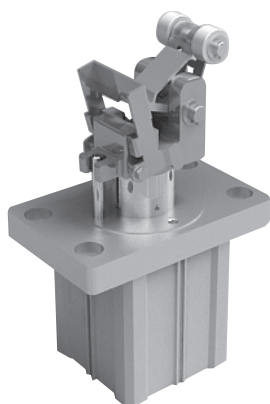


# Series **NST**

## Stopper Cylinder

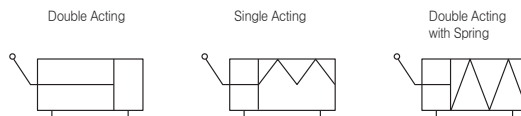
Bore Size(mm) : Ø50, Ø63, Ø80



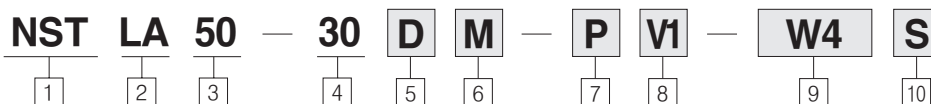
PAT

- IT IS POSSIBLE TO CHANGE THE ROTATION OF THE ACTUATOR BY 360 DEGREES WITH STEPS OF 90°
- SHOCK ABSORBER PRE-INSTALLED FOR EASY SETUP
- AUTO SWITCH CAPABLE
- SINGLE ACTION, DOUBLE ACTION, DOUBLE ACTION WITH SPRING EXTEND AVAILABLE

### Symbol



### How to Order



- ① **NST** : New Stopper Cylinder
- ② **LA** : Lever / Standard  
LB : Lever / Rod Cover Slim Type(Only φ 50 Available)  
LC : Lever / Rod Cover Quadrable Type(Only φ 50 Available)
- ③ **Bore Size(mm)**  
50 : φ 50  
63 : φ 63  
80 : φ 80
- ④ **Stroke(mm)**  
φ 50 : 25, 30, 40  
φ 63 : 30, 40  
φ 80 : 30, 40
- ⑤ **Action**  
Blank : Single Acting  
D : Double Acting  
Z : Double Acting with Spring
- ⑥ **Roller**  
Blank : MC Nylon  
M : Rolled steel(SPA material)
- ⑦ **Lever Lock**  
Blank : None  
S : Pallet Stop  
P : Pallet Pass  
SP : Pallet Stop, Pass  
R : Opposite Direction, Unlock Function  
(Lever lock function, pass pin attached)  
\* Only φ 80 available

- ⑧ **Valve**  
Blank : None  
V1 : AC 100V  
V2 : AC 220V  
V5 : DC 24V
  - ⑨ **Auto Switch**  
Blank : None  
W4 : Reed Auto Switch  
W8H/W8V : Reed auto switch (horizontal type/vertical type)
- Caution :**
1. According to the leading direction of the existing plug point or non plug point auto switch, it is separated into horizontal/vertical types.
  2. When the lead line length is 3m add an L to the end number of the product.  
ex) W8H:W8HL
  3. W4, W8H(V):Multiple use of DC24V, AC110V/ Multiple use of W9H(V):DC24V
- ⑩ **Number of Auto Switches**  
Blank : 2 pcs  
S : 1 pc  
N : N pcs

|             |
|-------------|
| ACP         |
| APM         |
| AS          |
| AX          |
| AM2         |
| AM          |
| AL<br>ALX   |
| AQ<br>ADQ   |
| AQ2<br>ADQ2 |
| AJ<br>AJM   |
| ABK         |
| ACK1        |
| NSK         |
| AG          |
| NGQ         |
| AGX<br>GX   |
| NP          |
| ADR         |
| AMR         |
| NDM         |
| ARD         |
| <b>NST</b>  |
| AST         |
| ASTH        |
| NLCD        |
| NLCS        |

# Series NST

## Specifications

|                               |   |
|-------------------------------|---|
| Action                        | Double Acting, Single Acting, Double Acting with Spring |
| Fluid                         | Air   |
| Proof pressure                | 1.5MPa(213psi)  |
| Max. operating pressure       | 1MPa(142psi)  |
| Min. operating pressure       | Double Acting : MPa                                     |
|                               | Single Acting : MPa                                     |
| Ambient and fluid temperature | -5~70°C   |
| Lubrication                   | Not Required  |
| Cushion                       | Rubber Cushion  |
| Stroke Length Tolerance       | +1.4<br>0   |
| Mounting type                 | Thru hole (standard), Both ends tapped                  |
| Auto Switch                   | Attachable  |

## Specifications

| Bore Size  | Standard Stroke(mm) |
|------------|---------------------|
| φ 50       | 25, 30, 40          |
| φ 63, φ 80 | 30, 40              |

## Specifications

| Tube Bore Size(mm) | ROD Size(mm) |
|--------------------|--------------|
| φ 50               | 32           |
| φ 63               | 40           |
| φ 80               | 50           |

## Specifications

| Pressure(Kgf/cm <sup>2</sup> )<br>Bore Size(mm) | Pressure(Kgf/cm <sup>2</sup> ) |    |     |     |     |     |     |
|---|--------------------------------|----|-----|-----|-----|-----|-----|
|   | 1.2                            | 2  | 3   | 4   | 5   | 6   | 7   |
| φ 50  | 5                              | 30 | 40  | 70  | 95  | 120 | 150 |
| φ 63  | 15                             | 40 | 75  | 120 | 150 | 180 | 225 |
| φ 80  | 20                             | 60 | 110 | 160 | 200 | 240 | 280 |

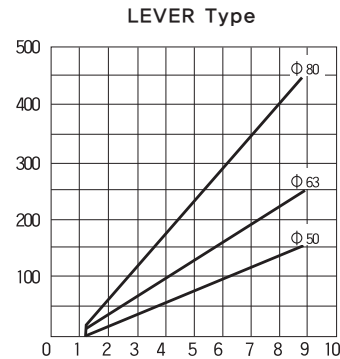
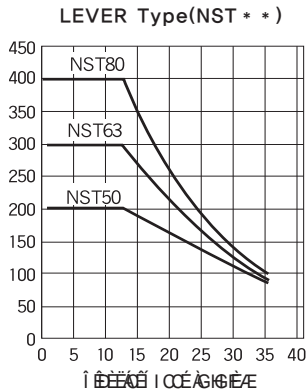
## Weight

(Unit : g)

| Bore Size(mm) | Stroke(mm) |       |       |
|---------------|------------|-------|-------|
|               | 25         | 30    | 40    |
| 50(Standard)  | 2,135      | 2,178 | 2,263 |
| 50(slim)      | 2,151      | 2,194 | -     |
| 63            | -          | 3,998 | 4,134 |
| 80            | -          | 5,528 | 5,808 |

# Series NST

## Stopper Cylinder Selection Process



### ⚠️ Precaution

Please be fully aware before using  
Please read the notice(Page 36) for safety.

### Selection

- When lever is in standing up position, do not make collision with pallet.
- when lever is in standing up position in shock absorber's inner lever type, in case pallet collides with it, energy is absorbed to the cylinder body, therefore, don't make collision happen.
- Please make sure no not to scratch the Connection parts.
- piston rod is not hardened, so damage can be occurred if connection part of pallet is sharp. In case of this, do not use. It causes non-function.

- When stopping temporarily loay which is be absorbed to cylinder in Stopper cylinder.
- Within the range of usage of CAT. Just use when stopping the pallet. In case of stopping the stopper cylinder, if the cylinder impellent force becomes horizontally lowered, please contact us.

### Mounting

- Do not give the rotation torque to cylinder rod.
- Contact area of cylinder should be parallel to contact area of pallet in order not to cause rotation torque on the cylinder rod.

### Operation

- Do not make outside force after lever locking when attaching a lever type lock device.
- When adjusting conveyor, move after pull down the cylinder.
- Do not use the oil at the connection area of piston rod.
- Oil causes non-function.
- Please be careful with hands and clothing during operation.

### Repair and inspection

When replacing the shock absorber, please fix the shock absorber well with fixing bolt.

## STOPPER CYLINDER Selection Process

1. From the crossing point of the maximum weight of the returned product and speed we select the size of the cylinder and damper model.
2. Through the friction calculation of the conveyor roller and pallet we bring out the constant horizontal weight. (Constant horizontal weight = Returned product weight × Friction calculation)
3. Set up the user pressure and select the cylinder size.

#### Application example

※ Condition used = Conveyor speed : 14m/min, Returned product total weight : 230kgf, Pressure used : 5kgf/cm<sup>2</sup>, Friction calculation number : 0.1

#### ※ Selection method

- Select the damper model and cylinder size  
LB(strong type) damper, 50 size cylinder
- Find the constant horizontal weight  
Returned product weight × Friction calculation number = 230kgf×0.1=23(kgf)  
The 50size cylinder is selected on the crossing point of the pressure used at 5kgf/cm<sup>2</sup>, and at the constant horizontal weight of 23kgf

ACP

APM

AS

AX

AM2

AM

AL  
ALX

AQ  
ADQ

AQ2  
ADQ2

AJ  
AJM

ABK

ACK1

NSK

AG

NGQ

AGX  
GX

NP

ADR

AMR

NDM

ARD

**NST**

AST

ASTH

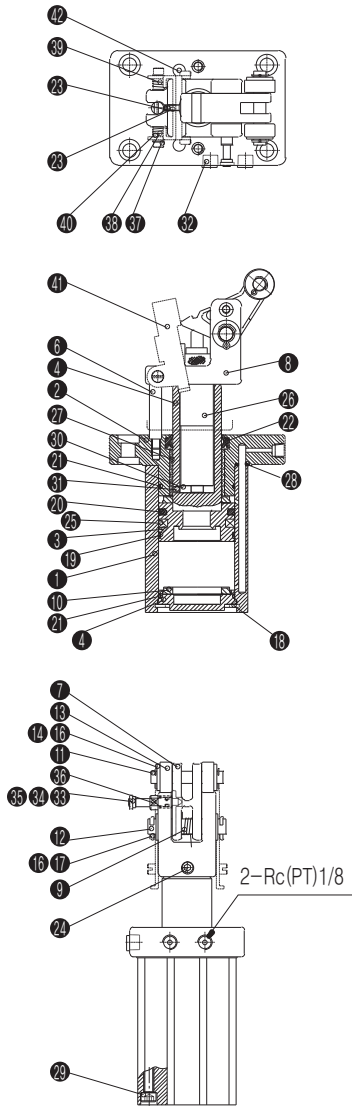
NLCD

NLCS

# Series NST

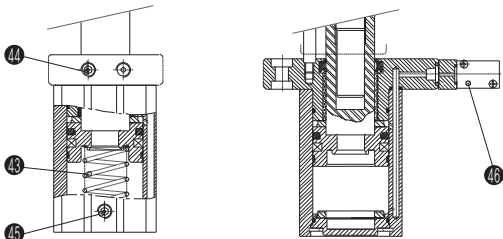
## Basic Type : Construction/Parts List

AMRBL  $\phi$  50, 63



■ Single Acting : ※T  
 ■ Single Acting : ※Z  
 /Built-in spring

■ V/V Type : ※Z-V※

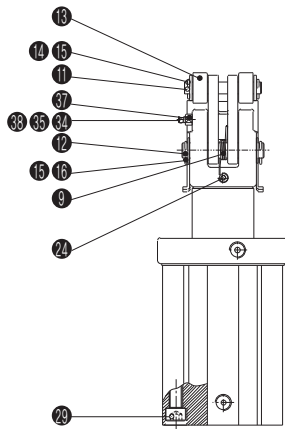
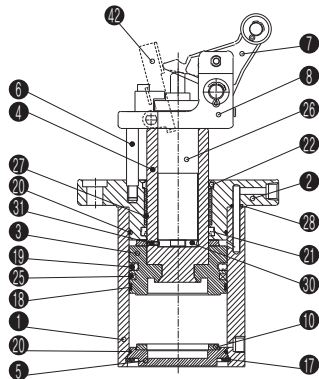
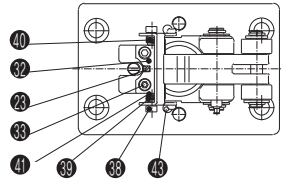


| No. | Description                | Material         |     | Note          |
|-----|----------------------------|------------------|-----|---------------|
| 1   | Tube                       | Aluminum alloy   | 1   |               |
| 2   | Rod Cover                  | Aluminum alloy   | 1   |               |
| 3   | Piston                     | Aluminum alloy   | 1   |               |
| 4   | Piston Rod                 | Carbon Steel     | 1   |               |
| 5   | Head Cover                 | Aluminum alloy   | 1   |               |
| 6   | Guide Rod                  | Carbon Steel     | 1   |               |
| 7   | Lever                      | Carbon Steel     | 1   |               |
| 8   | Holder                     | Carbon Steel     | 1   |               |
| 9   | Lever Spring               | Spring Steel     | 1   |               |
| 10  | Bumper                     | NBR              | 2   | Head, Rod     |
| 11  | Roller Pin                 | Carbon Steel     | 1   |               |
| 12  | Lever Pin                  | Carbon Steel     | 1   |               |
| 13  | Roller                     | Mc Nylon         | 2   |               |
| 14  | Washer                     | Rolled Steel     | 2   |               |
| 15  | Washer                     | Rolled Steel     | 2   |               |
| 16  | Split pin                  | Wrought Steel    | 2   |               |
| 17  | Split pin                  | Wrought Steel    | 2   |               |
| 18  | C Snap Ring                | Spring Steel     | 1   |               |
| 19  | Wearing                    | Resin            | 1   |               |
| 20  | Piston Packing             | NBR              | 1   |               |
| 21  | Gasket                     | NBR              | 2   |               |
| 22  | Rod Packing                | NBR              | 1   |               |
| 23  | Six angles hole stop Screw | Carbon Steel     | 2   |               |
| 24  | Six angles hole stop Screw | Carbon Steel     | 1   |               |
| 25  | Magnet Ring                | NBR              | 1   |               |
| 26  | Shock Absorber             | -                | 1   |               |
| 27  | Du Bush                    | Lead Bronze      | 1   |               |
| 28  | O-Ring                     | NBR              | 2   |               |
| 29  | Six Angles hole Bolt       | Carbon Steel     | 4   |               |
| 30  | Damper                     | Carbon Steel     | 1   |               |
| 31  | Six Angles stop Screw      | Carbon Steel     | 1   |               |
| 32  | Stopper Blook              | Carbon Steel     | 1   |               |
| 33  | Six Angles hole Bolt       | Carbon Steel     | 2   |               |
| 34  | Pass Ring                  | Carbon Steel     | (1) | Option        |
| 35  | O-Ring                     | NBR              | (1) | Option        |
| 36  | Look Bar                   | Carbon Steel     | (1) | Option        |
| 37  | Look Jig                   | Carbon Steel     | (1) | Option        |
| 38  | Fixing Bolt                | Carbon Steel     | (2) | Option        |
| 39  | Look Spring(left)          | Stcuinless Steel | (1) | Option        |
| 40  | Look Spring(Rigot)         | Stcuinless Steel | (1) | Option        |
| 41  | Collar Spacer              | Resin            | (2) | Option        |
| 42  | Look Bracket               | Rolled Steel     | (1) | Option        |
| 43  | Stopper                    | Alloy steel      | (2) | Option        |
| 44  | Return Sprring             | Swp-b            | 1   |               |
| 45  | Plug boff                  | Alloy Steel      | 1   | Siage Acting  |
| 46  | Solenoid V/V               | -                | 1   | DS2000 Series |

# Series NST

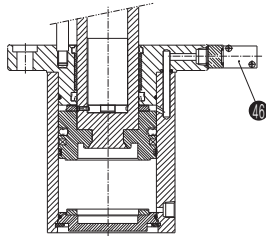
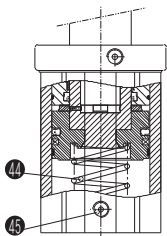
## Construction / Part List

AMRBL  $\phi$ 80



■ Single Acting : ※T  
 ■ Double Spring : ※Z  
 /Built-in spring

■ V/V Type : ※Z-V※



### Part List

| No. | Description                | Material         |     | Note          |
|-----|----------------------------|------------------|-----|---------------|
| 1   | Tube                       | Aluminum alloy   | 1   |               |
| 2   | Rod Cover                  | Aluminum alloy   | 1   |               |
| 3   | Piston                     | Aluminum alloy   | 1   |               |
| 4   | Piston Rod                 | Carbon Steel     | 1   |               |
| 5   | Head Cover                 | Aluminum alloy   | 1   |               |
| 6   | Guide Rod                  | Carbon Steel     | 1   |               |
| 7   | Lever                      | Carbon Steel     | 1   |               |
| 8   | Holder                     | Carbon Steel     | 1   |               |
| 9   | Lever Spring               | Spring Steel     | 1   |               |
| 10  | Bumper                     | NBR              | 2   | Head, Rod     |
| 11  | Roller Pin                 | Carbon Steel     | 1   |               |
| 12  | Lever Pin                  | Carbon Steel     | 1   |               |
| 13  | Roller                     | Mc Nylon         | 2   |               |
| 14  | Washer                     | Rolled Steel     | 2   |               |
| 15  | Washer                     | Rolled Steel     | 2   |               |
| 16  | Split pin                  | Wrought Steel    | 2   |               |
| 17  | Split pin                  | Wrought Steel    | 2   |               |
| 18  | C Snap Ring                | Spring Steel     | 1   |               |
| 19  | Wearing                    | Resin            | 1   |               |
| 20  | Piston Packing             | NBR              | 1   |               |
| 21  | Gasket                     | NBR              | 2   |               |
| 22  | Aod Packing                | NBR              | 1   |               |
| 23  | Six angles hole stop Screw | Carbon Steel     | 2   |               |
| 24  | Six angles hole stop Screw | Carbon Steel     | 1   |               |
| 25  | Magnet Ring                | NBR              | 1   |               |
| 26  | Shock Absorber             | -                | 1   |               |
| 27  | Du Bush                    | Lead Bronze      | 1   |               |
| 28  | O-Ring                     | NBR              | 2   |               |
| 29  | Six angles hole Bolt       | Carbon Steel     | 4   |               |
| 30  | Damper                     | Carbon Steel     | 1   |               |
| 31  | Six angles hole stop Screw | Carbon Steel     | 1   |               |
| 32  | Port Plug                  | Stainless Steel  | 2   |               |
| 33  | Pass Ring                  | Carbon Steel     | (1) | Option        |
| 34  | O-Ring                     | NBR              | (1) | Option        |
| 35  | Look Bar                   | Carbon Steel     | (1) | Option        |
| 36  | Look Jig                   | Carbon Steel     | (1) | Option        |
| 37  | Fixing Bolt                | Carbon Steel     | (2) | Option        |
| 38  | Look Spring(left)          | Stcuinless Steel | (1) | Option        |
| 39  | Look Spring(Rigot)         | Stcuinless Steel | (1) | Option        |
| 40  | Collar Spacer              | Resin            | (2) | Option        |
| 41  | Look Bracket               | Rolled Steel     | (1) | Option        |
| 42  | Stopper                    | Alloy steel      | (2) | Option        |
| 43  | Return Spring              | Swp-b            | 1   |               |
| 44  | Plug boff                  | Alloy Steel      | 1   | Siage Acting  |
| 45  | Plug boff                  | Alloy Steel      | 1   | Siage Acting  |
| 46  | Solenoid V/V               | -                | 1   | DS2000 Series |

ACP

APM

AS

AX

AM2

AM

AL  
ALX

AQ  
ADQ

AQ2  
ADQ2

AJ  
AJM

ABK

ACK1

NSK

AG

NGQ

AGX  
GX

NP

ADR

AMR

NDM

ARD

**NST**

AST

ASTH

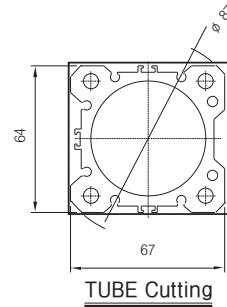
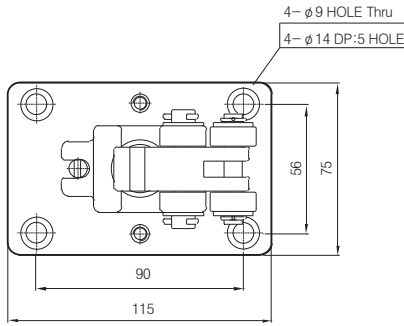
NLCD

NLCS

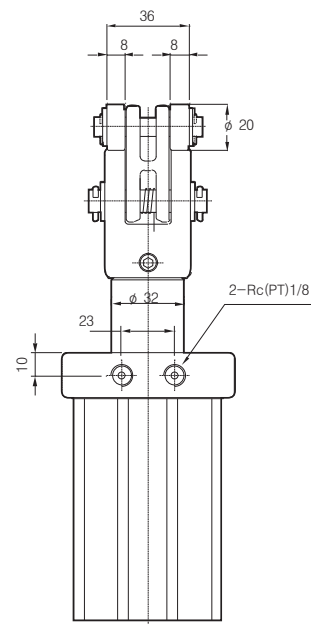
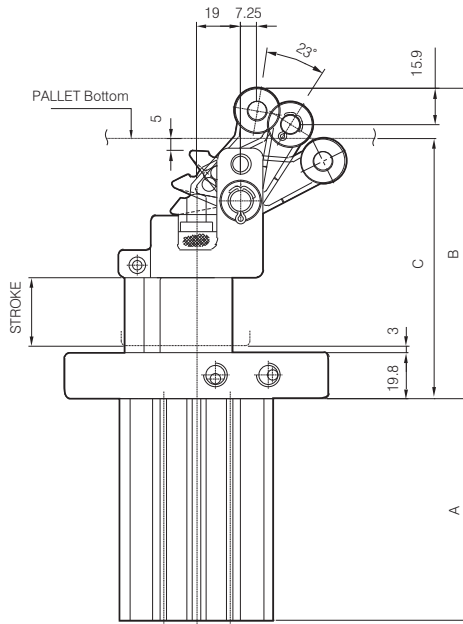
# Series NST

## Dimensions

NSTLA50 (Standard)



Caution : Mounting  $\square$  66x69



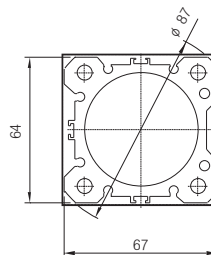
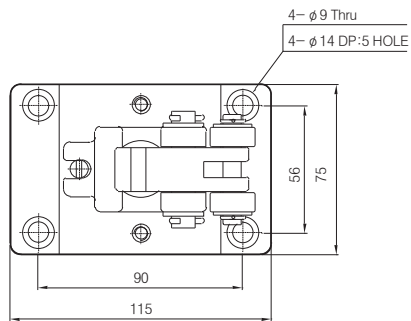
(Unit : mm)

| Dim    | A     | B   | C   |
|--------|-------|-----|-----|
| St. 25 | 91.7  | 130 | 108 |
| 30     | 96.7  | 135 | 113 |
| 40     | 106.7 | 145 | 123 |

# Series NST

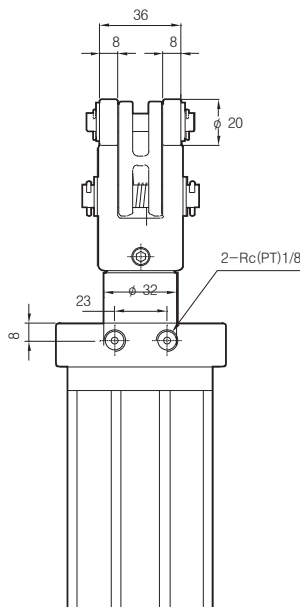
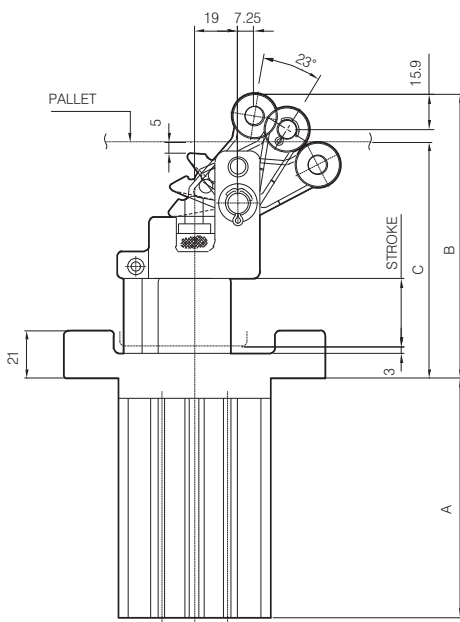
## Dimensions

NSTLB50 (Rod Cover Slim Type)



TUBE Cutting

Caution : Mounting □ 66×69



(Unit : mm)

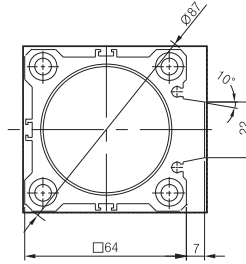
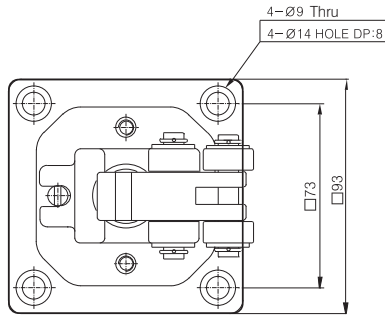
| St.                     | Dim | A     | B   | C   |
|-------------------------|-----|-------|-----|-----|
| 25(Rod Cover Slim Type) |     | 100.5 | 120 | 99  |
| 30(Rod Cover Slim Type) |     | 105.5 | 125 | 104 |

- ACP
- APM
- AS
- AX
- AM2
- AM
- AL
- ALX
- AQ
- ADQ
- AQ2
- ADQ2
- AJ
- AJM
- ABK
- ACK1
- NSK
- AG
- NGQ
- AGX
- GX
- NP
- ADR
- AMR
- NDM
- ARD
- NST**
- AST
- ASTH
- NLCD
- NLCS

# Series NST

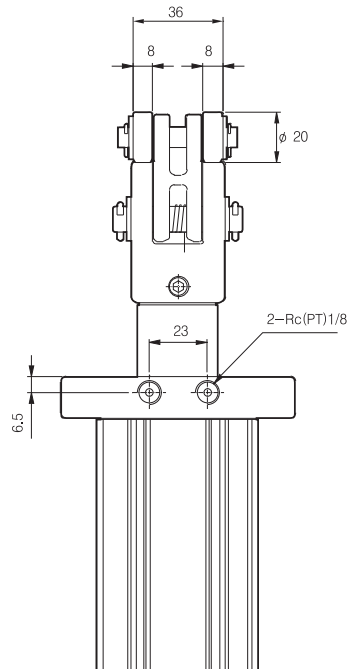
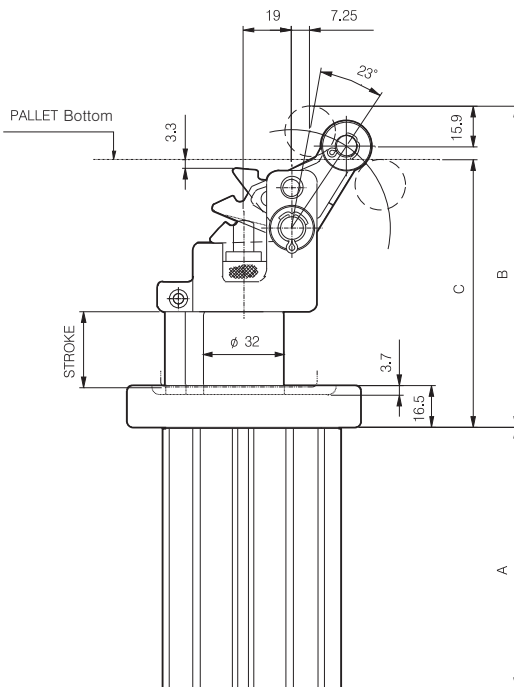
## Dimensions

NSTLC50 (Square)



### TUBE Cutting

Caution : Mounting □ 66×69



(Unit : mm)

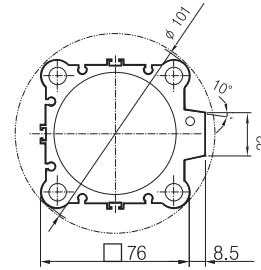
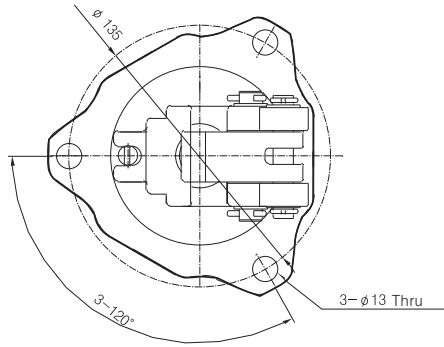
| St.        | Dim | A   | B     | C   |
|------------|-----|-----|-------|-----|
| 30(Square) |     | 103 | 127.2 | 106 |



# Series NST

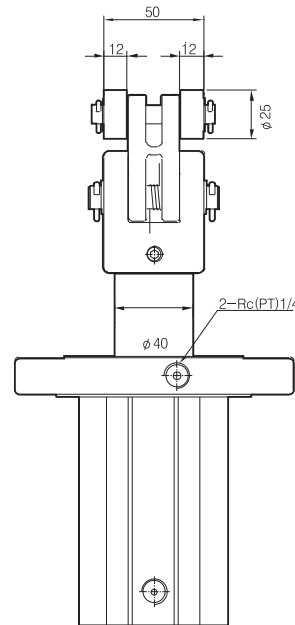
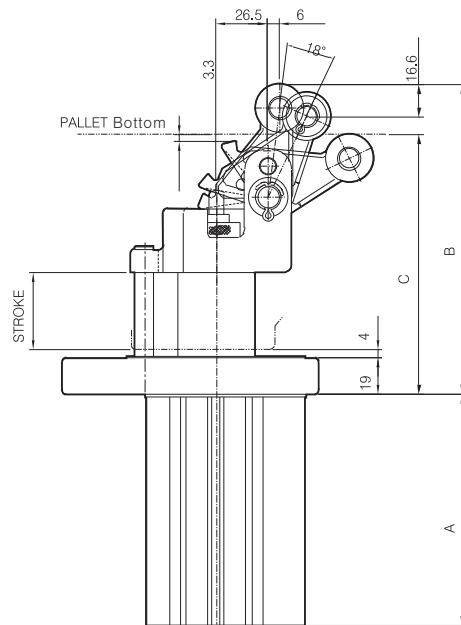
## Dimensions

NSTLA63 (Standard)



### TUBE Cutting

Caution : Mounting  $\varnothing 103$



- ACP
- APM
- AS
- AX
- AM2
- AM
- AL
- ALX
- AQ
- ADQ
- AQ2
- ADQ2
- AJ
- AJM
- ABK
- ACK1
- NSK
- AG
- NGQ
- AGX
- GX
- NP
- ADR
- AMR
- NDM
- ARD
- NST**
- AST
- ASTH
- NLCD
- NLCS

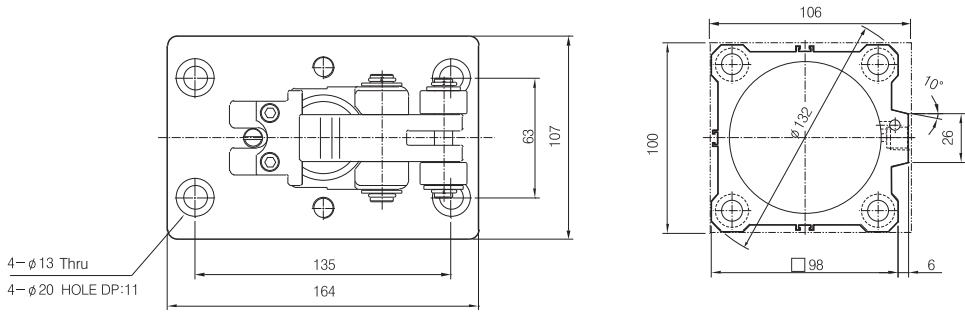
(Unit : mm)

| St. | Dim | A   | B   | C   |
|-----|-----|-----|-----|-----|
| 30  |     | 109 | 150 | 124 |
| 40  |     | 119 | 160 | 134 |

# Series NST

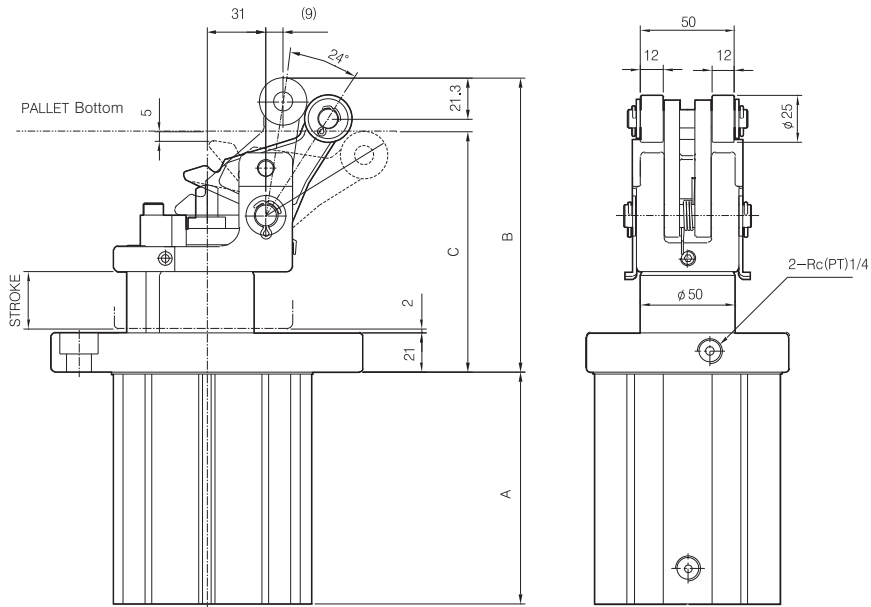
## Dimensions

NSTLA80 (Standard)



### TUBE Cutting

Caution : Mounting □ 100×106



(Unit : mm)

| St. | Dim | A   | B   | C   |
|-----|-----|-----|-----|-----|
| 30  |     | 122 | 155 | 127 |
| 40  |     | 132 | 165 | 137 |