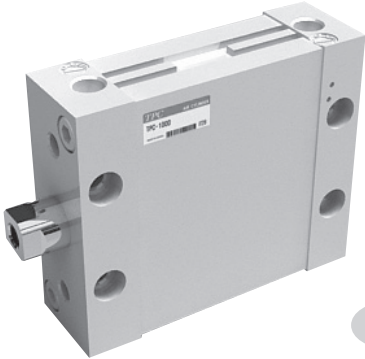


# Series NP

## Plate Cylinder/Double Acting : Single Rod Non-Rotate

Bore Size(mm) : Ø50, Ø63



PAT

- COMPACT DESIGN
- INTERNAL ADJUSTABLE AIR CUSHIONS
- INTERNAL MULTIPLE MOUNTING LOCATIONS
- COIL SCRAPER AVAILABLE
- MICRO-SIZED AUTO SWITCHES
- ALLOWS MULTIPLE CYLINDERS TO BE MOUNTED SIDE BY SIDE

- 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

### How to Order

1 **NP**
2 **D**
3 **50-100**
4 **B**
5 **V**
6 **M**
7 **W2P**
8 
9 
10 **X104**

**1** New Plate Cylinder

**2** Magnet

Blank : None  
D : Built-in Magnet

**3** Inner Diameter of Tube - Stroles

50 : 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100, 125, 150  
63 : 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100, 125, 150, 200

**4** Mounting

Blank : None  
B : Y Knuckle (Rod's Bolt)  
+ Head Cover Detachable Clevis  
C : Y Knuckle (Rod's Bolt)  
E : Detachable Clevis for Head Part  
HB : Y Knuckle(18mm Rod's Bolt)  
+Head Cover 2 Clevis

**5** Mounting Locations

V : Standard (Side)  
H : Axial (Back)

**6** Rod-Top Types

Blank : Rod-end female thread  
M : Rod-end male thread

**7** Auto Switch

Blank : None  
W2P : Magnetic reed switch with 5 meter leads

**8** Lead Wire

Blank : 0.5m (only for micro switches)  
L : 3m  
Z : 5m (only for W2P switches)

**9** Number of Auto Switches

Blank : 2 pcs  
S : 1 pc  
N : N pcs

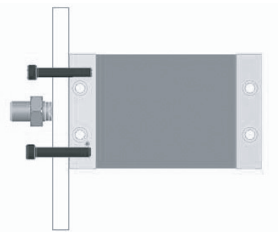
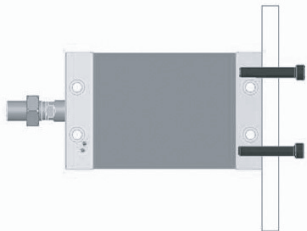
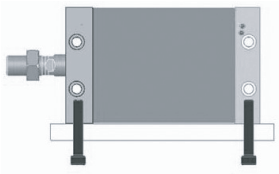
**10** Coil Scraper

Blank : None  
X104 : Coil Scraper Included

# Series NP

General Specifications		
Operation Type	Double-Acting	
Type	Pneumatic	
Internal Pressure	1.05MPa(10.53kgf/cm <sup>2</sup> )	
Range of Applicable Pressure	0.05MPa(0.53kgf/cm <sup>2</sup> )~1.02MPa(10.43kgf/cm <sup>2</sup> )	
Temperature of Surroundings and Hydraulic Used	-5 ~ 60°C	
Piston Velocity	50 ~ 500mm/sec	
Lubrication	Non-lube	
Cushion	Rubber Cushion	
Stroke Tolerance	+1.4 0	
Inner diameter of Tube(mm)	Ø50	
Rod-top Type	Rod-top Bolt, Rod-top Nut	
AUTO S/W	W2P	Magnetic(Welding) Semi-conductors or Electronic
	W8, W9	Equipments

## Multiple Mounting Options



Standard Strokes	
Inter Diameter of Cylinder(mm)	Stroke(mm)
50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100, 125, 150, 200
63	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100, 125, 150, 200



Bore Size	Diameter of Rod(mm)	Operational Direction	Piston's Hydraulic Pressure(mm <sup>2</sup> )	Pressure Used(NPa)					
				0.2	0.3	0.4	0.5	0.6	0.7
50	20	OUT	1960	392	588	784	980	1176	1372
		IN	1646	329	494	658	823	968	1152
63	20	OUT	3117	623	935	1247	1559	1870	2182
		IN	2803	561	841	1121	1402	1682	1962

Note) Theoretical Output (N) = Pressure • Piston's Hydraulic Pressure(mm<sup>2</sup>). 1N≒0.102kgf, 1MPa≒10.2kgf/cm<sup>2</sup>

Model	Remarks Strokes(mm)					
	50	75	100	125	150	Remarks
NP50	1,198	1,362	1,526	1,691	1,856	Standard Type
NP63	1,664	1,875	2,083	2,295	2,504	Standard Type

Theoretical Output		Rod Type	Model No.	Masses(g)	Remarks
Y Kunckle	Detachable	For Nuts	Y-NP50	325 (Pin Attached)	Ø50, 63
		For Bolts	YMNP50	280 (Pin Attached)	Ø50, 63
Head Cover Clevis	Detachable	HYNP50, 63		485 (Pin Attached)	
Rod Cover Clevis	Detachable	RYNP50, 63		515 (Pin Attached)	

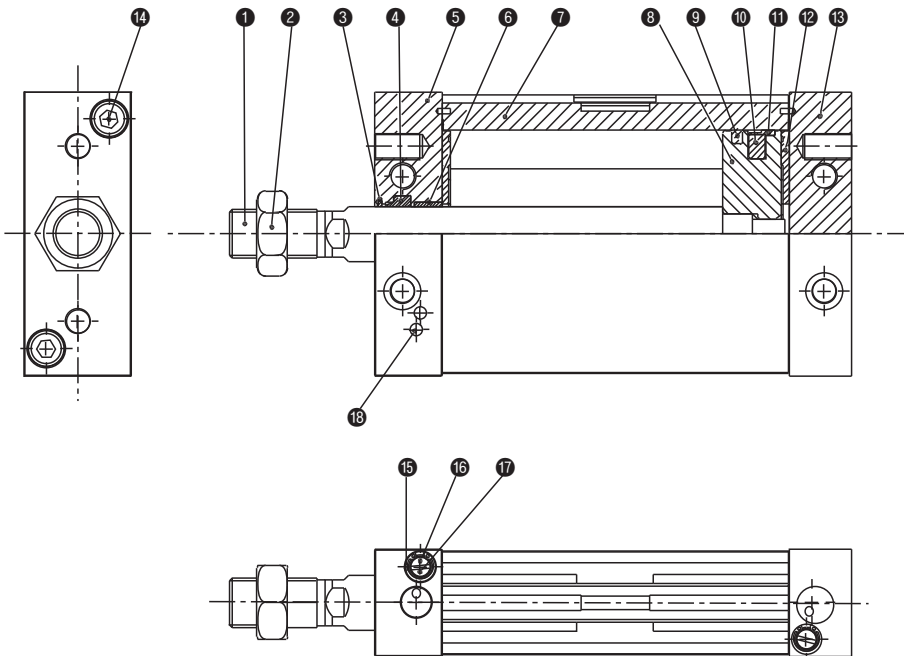
Note) 1. The types of metal parts include pins exclusively for clevises and separators and general washers. The metal parts for clevises are packaged with metal bolts for joints.

2. Y-NP50 and RYNP50 are not standard types and must be specially ordered.

3. The mass of detachable clevis? metal parts includes that of two metal bolts for joints.

# Series NP

## Structure



### List of Parts

No.	Name of Part	Material	
1	PISTON ROD	Carbon Steel	
2	NUT	Stainless Steel	
3	METAL SCRAPER	Bronze Alloy	Option
4	ROD PACKING	NBR	
5	ROD COVER	Aluminum Alloy	
6	BUSH	Sintered Alloy	
7	TUBE	Aluminum Alloy	
8	PISTON	Aluminum Alloy	
9	PISTON PACKING	NBR	
10	MAGNET	Magnetic Circuit	Option
11	WEARING	Plastic Resin	
12	BUMPER	Urethane	
13	HEAD COVER	Aluminum Alloy	
14	Hexagonal Groove Bolt	Stainless Steel	
15	SNAP RING	Spring Steel	
16	SPEED CON <sup>1</sup>	Stainless Steel	
17	SPEED CON <sup>1</sup> PACKING	NBR	
18	STEEL BALL	Stainless Steel	

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

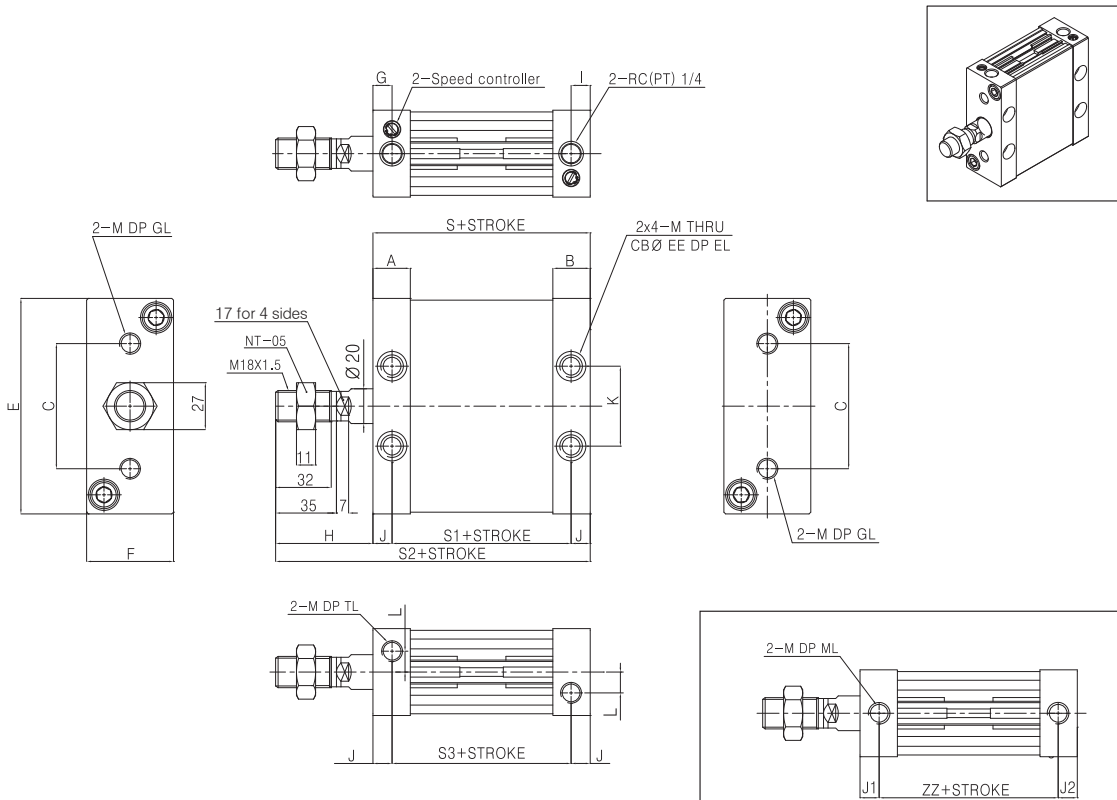
ASTH

NLCD

NLCS

# Series NP

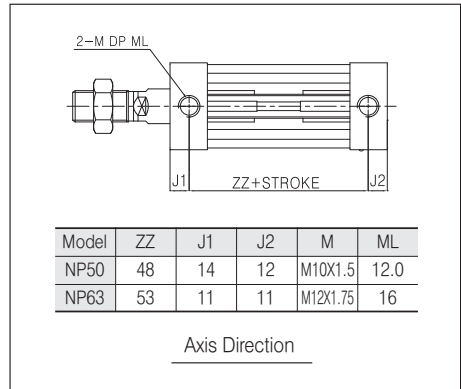
## NP50 Dimensions (Bolts)



Model	A	B	S	S1	S2	S3	C	E	F	G
NP50	22.5	20.5	74	54	127	54	64	104	39	12.5
NP63	21.5	21.5	75	53	131	53	72	124	50	11

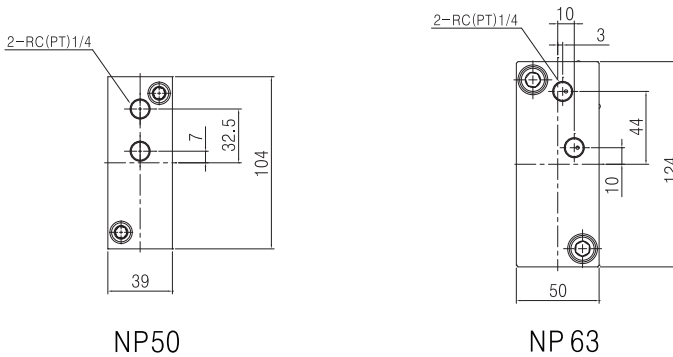
Model	I	H	J	K	L	M	GL	TL	EE	EL
NP50	11.5	53	10	42	9	M10X1.5	15	14.5	13.5	8.5
NP63	11	56	11	46	12	M12X1.75	15	16	17	10.5



Model	ZZ	J1	J2	M	ML
NP50	48	14	12	M10X1.5	12.0
NP63	53	11	11	M12X1.75	16

Axis Direction

## Port Dimensions

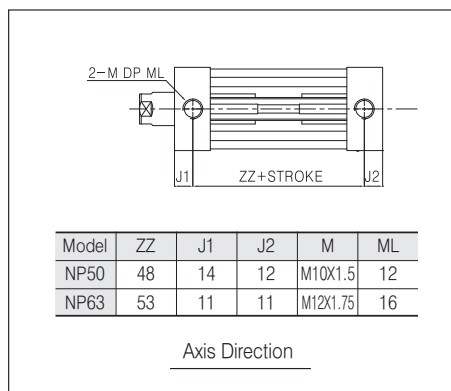
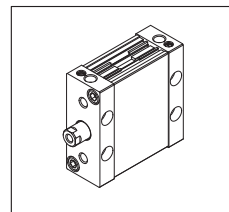
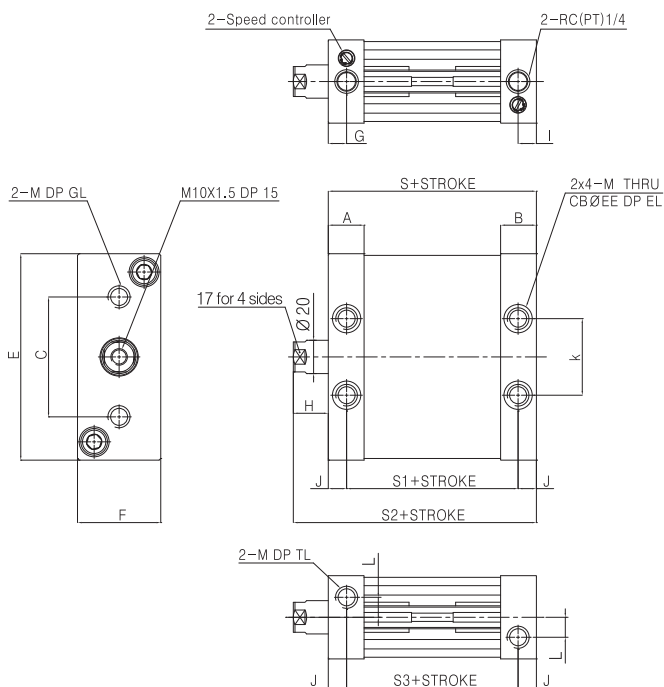


NP50

NP 63

# Series NP

## NP50 Dimensions (Nuts)



Model	A	B	S	S1	S2	S3	C	E	F	G
NP50	22.5	20.5	74	54	92	54	64	104	39	12.5
NP63	21.5	21.5	75	53	96	53	72	124	50	11

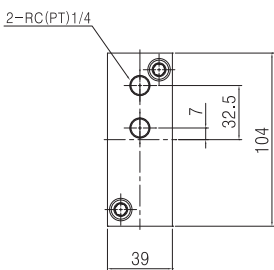
  

Model	I	H	J	K	L	M	GL	TL	EE	EL
NP50	11.5	18	10	42	9	M10X1.5	15	14.5	13.5	8.5
NP63	11	21	11	46	12	M12X1.75	15	16	17	10.5

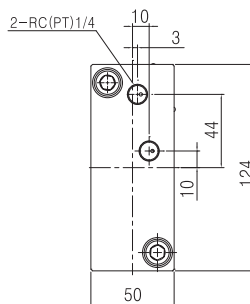
Model	ZZ	J1	J2	M	ML
NP50	48	14	12	M10X1.5	12
NP63	53	11	11	M12X1.75	16

Axis Direction

## Port Dimensions



NP50

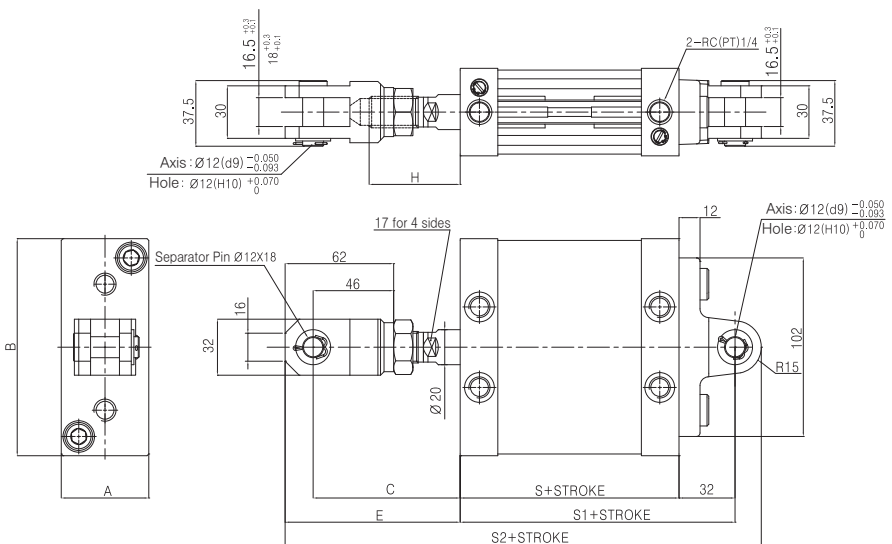
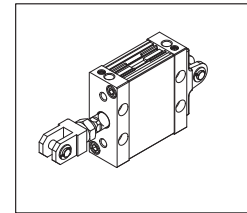


NP 63

- 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 NP

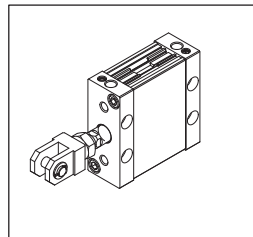
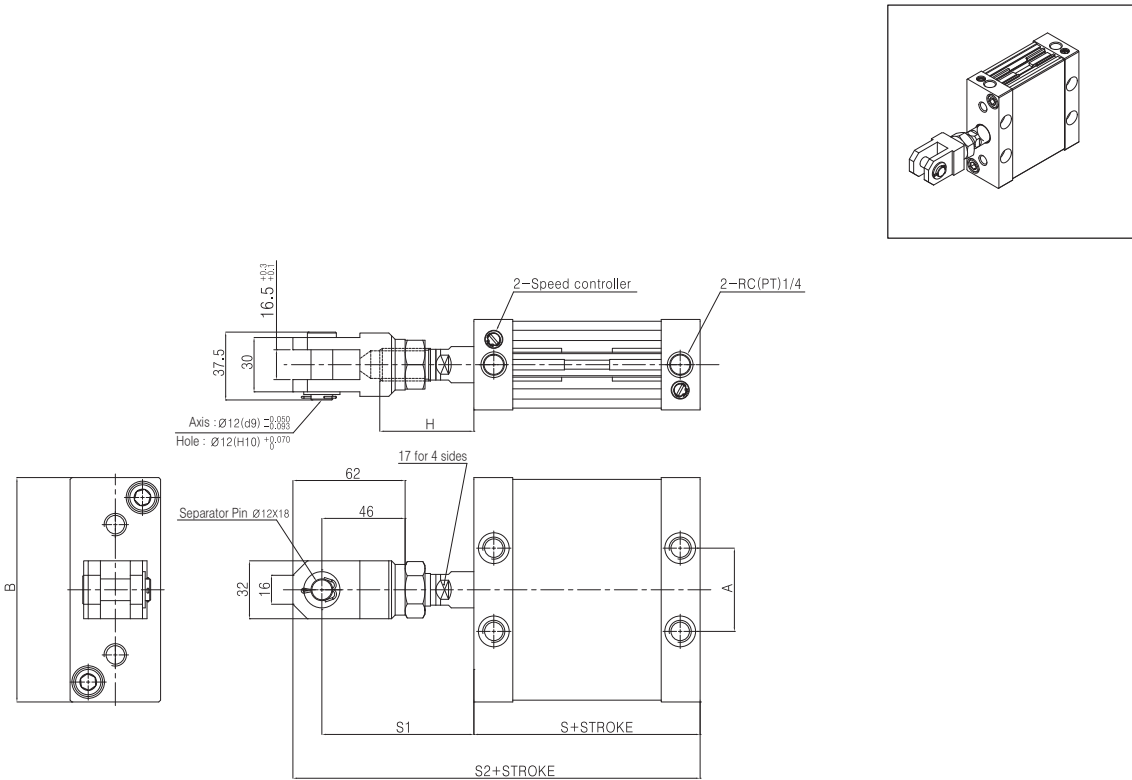
## NP50 Dimensions (Detachable Clevis on Head)



Model	S	S1	S2	A	B	C	E	H
NP50	74	106	218	39	104	81	97	53
NP63	75	107	222	50	124	84	100	56

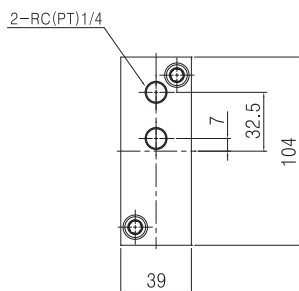
# Series NP

## NP50 Dimensions (Standard Y-Knuckles)

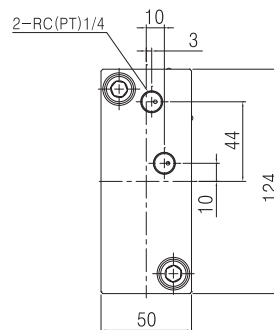


Model	S	S1	S2	A	B	H
NP50	74	81	171	42	104	53
NP63	75	84	175	46	124	56

## Sectional Dimensions



NP50

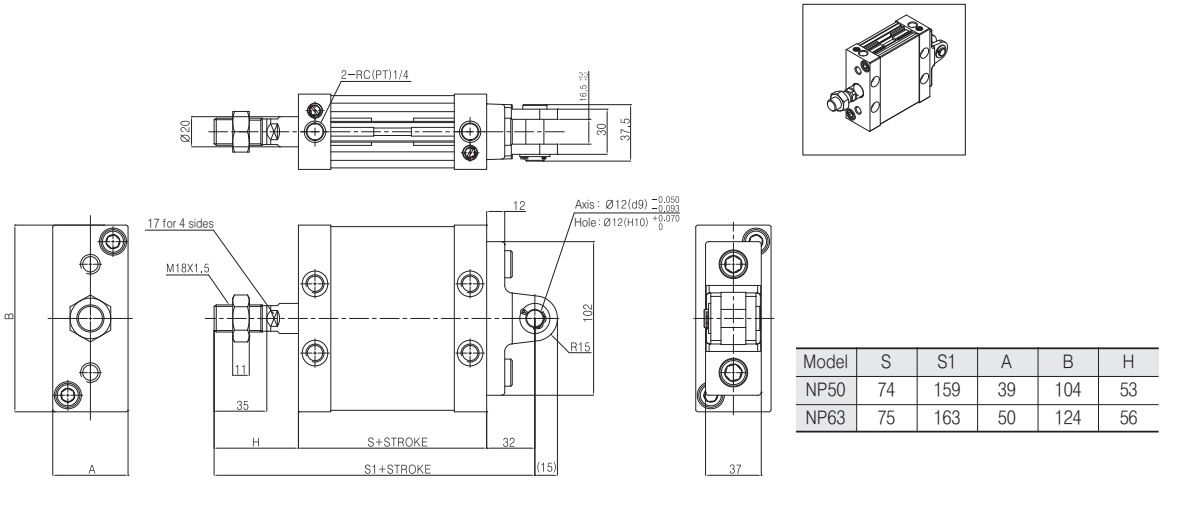


NP 63

- 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

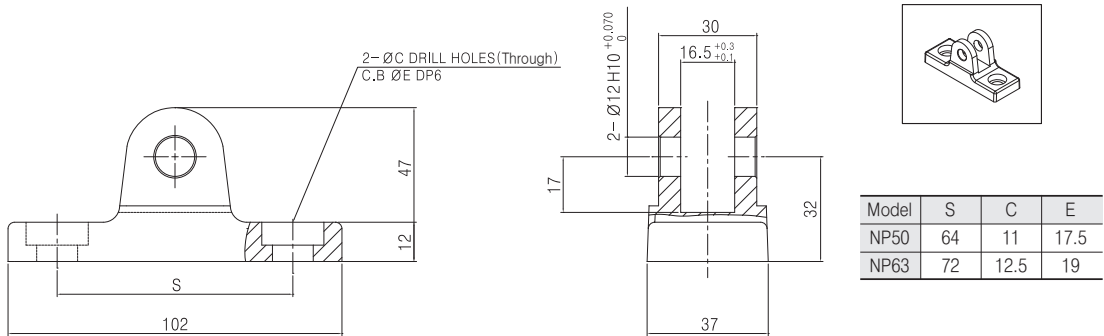
# Series NP

## NP50 Dimensions (Head Cover Detachable Clevis) (Metric Only)

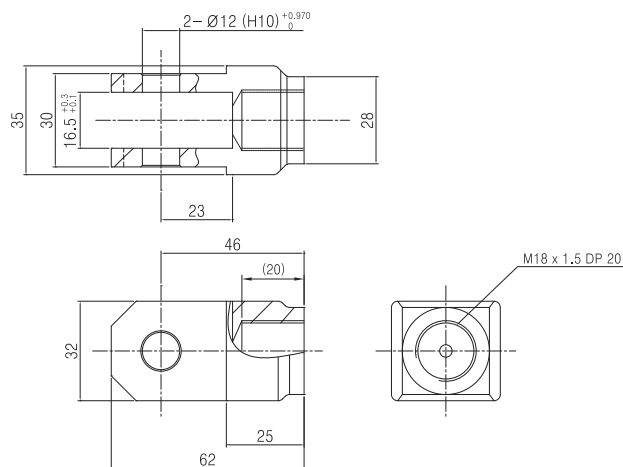


## Size of Metal Parts

### Detachable Clevis



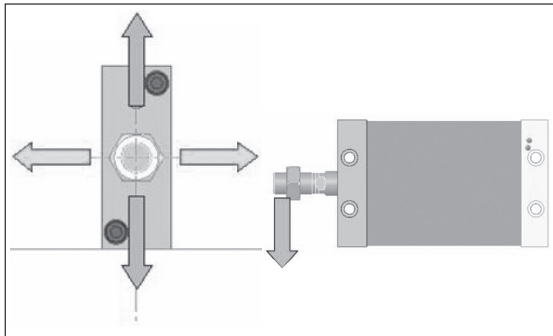
### Sectional Dimension Rod Series





**△ Safety Suggestions**

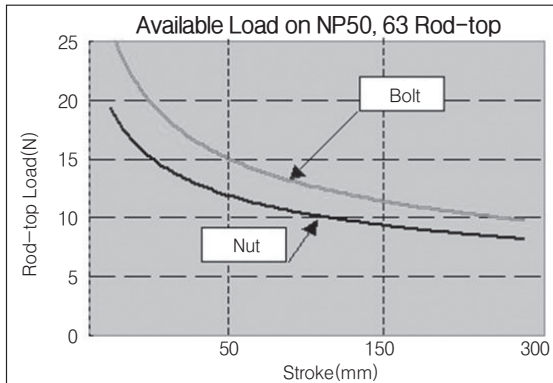
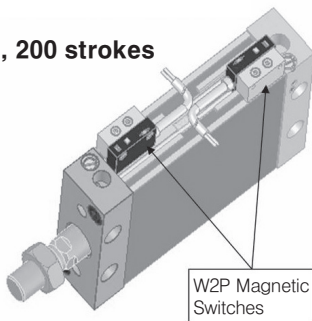
1. As the piston rod does not rotate, push back the rod when jointing the operator on top of the piston rod and use the wrench hanger to connect the operator within the torque permitted.  
Torque permitted : 5.0 N.m
2. Load the piston rod on axial direction.
3. Please use caution as the speed cone attached in the inside of the cylinder's two covers (head cover, rod cover) is completely open and not included.
4. As shown in the illustration on the right, the plate cylinder has loads working to both X and Y directions. The loads are equivalent to the lateral load permitted. The lateral load permitted varies according to each stroke, so please refer to the table on the right for details.



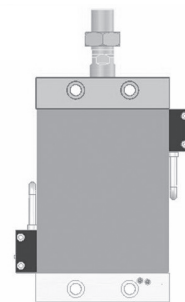
**Application of Auto Switch**

Two switches can be mounted on same side for stroke length of 75mm, 100mm, 125mm, 150mm, 200mm

**75,100,125,150, 200 strokes**



Use of switch on 50mm or less stroke mount switch on opposite side of cylinder



**Available Rotating Torque of Piston Rod (N.m)**

Model	NP50	NP63
Available Rotating Torque of Rod	1.25	2.0

**Non-rotation Tolerance of Rod**

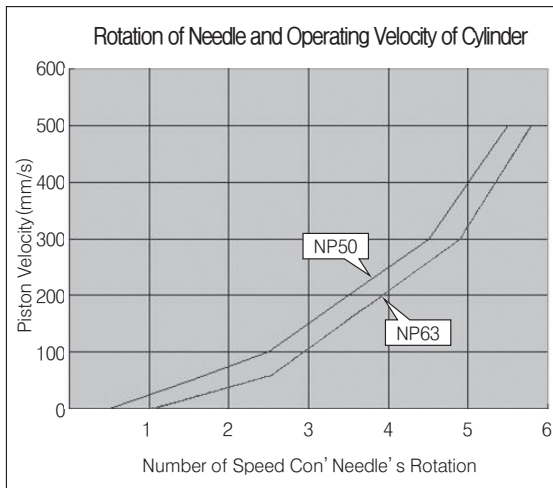
Model	NP50	NP63
Non-rotation Tolerance of Rod	±0.5°	±0.5°

**Packing List (NP50)**

Number	Model	Material	Part No.
1	PISTON PACKING	NBR	RHH-007710N713
2	ROD PACKING	NBR	PSA-20
3	BUMPER & GASKET	Urethane	NP050-34-7370

**Packing List (NP63)**

Number	Model	Material	Part No.
1	PISTON PACKING	NBR	NP063-45-7381
2	ROD PACKING	NBR	PSA-20
3	BUMPER & GASKET	Urethane	NP063-34-7381



- 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