

# Deep Cup



Suction cup with great internal depth.  
For workpieces whose surface have the projection,  
and suction while surrounding the projection!

<p>PH      PF</p> <p>Height comparison of PH and PF</p>	<p>Egg-shaped glass</p>	<p>Before suction      During suction Viewed from below</p> <p>Workpieces whose surface have the projection</p>
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Wide range of cup sizes.

φ30   φ45   φ65   φ90

Various fittings for many kinds of applications.



## Suction Cup

PHG		Cup size (mm) φ 30 ~ 90	P.325
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## Fitting

Type	Applicable cup size (mm)	Stroke (mm)	Vacuum port	Piping · Connector	Page
Cup with fixed fitting PHTK	 φ 30, 45	N/A	Top	Barb	P.327
	φ 65, 90			Female screw	
Cup with fixed fitting PHYK	 φ 30, 45	N/A	Side	Barb	P.327
	φ 65, 90			Female screw	
Cup with spring fitting NAPHTS	 φ 30, 45	6, 15, 30	Top	Female screw Push-in Barb	P.329
	φ 65, 90	10, 30, 50		Female screw	
Cup with spring fitting NAPHYS	 φ 30, 45	6, 15, 30	Side	Female screw Push-in Barb	P.329
	φ 65, 90	10, 30, 50		Female screw	
Cup with non-rotation spring fitting NAPHTH	 φ 30, 45	3, 10, 15	Top	Female screw Push-in Barb	P.333
Cup with non-rotation spring fitting NAPHYH	 φ 30, 45	3, 10, 15	Side	Female screw Push-in Barb	P.333
Setting screw		φ 30 ~ 90	—	—	P.503

## PHG Deep Cup

Suction Cup  
Deep Cup

### How to Order

PHG — 30 — N



#### ① Cup Size (mm)

Symbol	Cup size
30	φ30
45	φ45
65	φ65
90	φ90

#### ② Cup Rubber Material

Symbol	Material
N	NBR(Nitrile rubber)
S	Silicone rubber

※ Please consult with us for other material.

### Cup Rubber Material Standard Specifications

Symbol	Material	Hardness (A/s)	Ambient temperature (°C)	Color
N	NBR(Nitrile rubber)	55	-26 ~ 120	Black
S	Silicone rubber	55	-60 ~ 250	Translucent white

### Applicable Rubber Material Table

Material	Color	Symbol	Round type			
			30	45	65	90
NBR(Nitrile rubber)	Black	N	●	●	●	●
Silicone rubber	Translucent white	S	●	●	●	●

● : In stock   ○ : Made to order   × : None  
 ※Please consult with us for other material.

02

Suction Cup

PA

PB

PC

PCD

PD

PF

PFO

PH

PJ

CORE

PK2

PK2B

PK2L

PL

PN

PN-B

PP

PQ

PR

PU

PW

RA

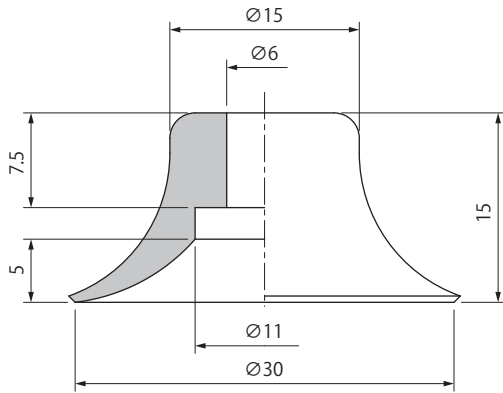
SM

TN

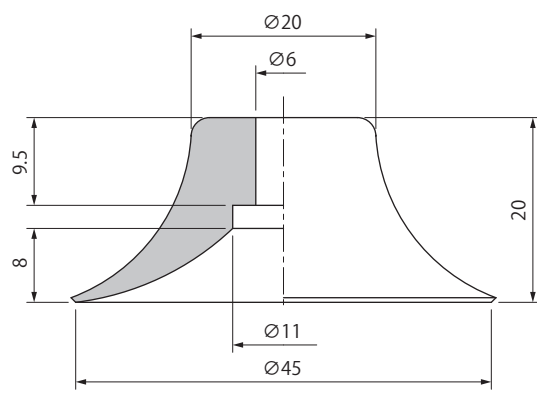
Dimensions

(mm)

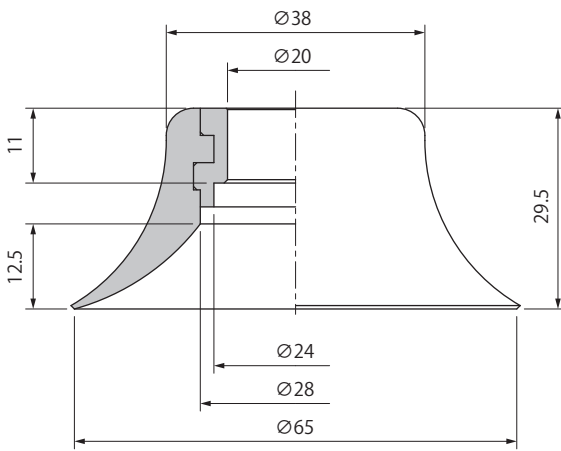
PHG-30



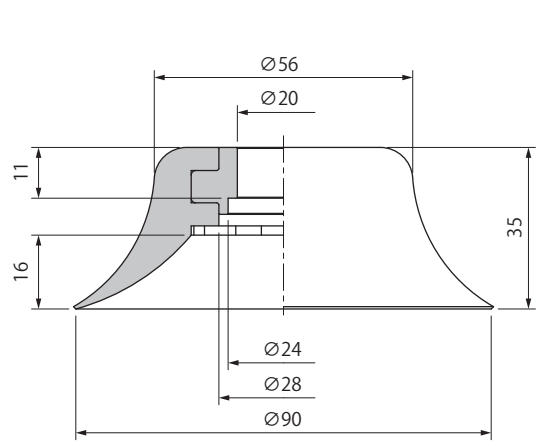
PHG-45



PHG-65



PHG-90



Weight

(g)

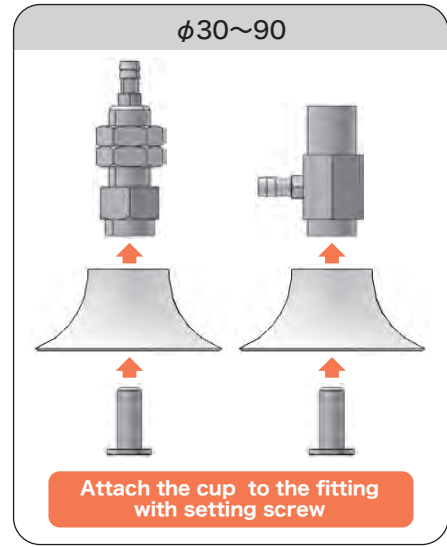
Model \ Material	N	S	Applicable setting screw (Screw Specifications)
PHG-30	3.0	3.0	TN-PF-25-M6 (Male M6X1.0)
PHG-45	10.0	10.0	
PHG-65	50.7	50.7	TN-PH-65-M10 (Female M10X1.25)
PHG-90	127.0	127.0	

※Please refer to P.503 for setting screw detailed specifications.

# PHTK·YK Cup with Fixed Fitting



Consisting of fitting, setting screw, suction cup.



Suction Cup  
Deep Cup

02  
Suction Cup

## How to Order

PH **T** K - **30** - **N**

① Vacuum Port

T	Top
Y	Side

② Cup Size (mm)

Symbol	Cup size
30	φ 30
45	φ 45
65	φ 65
90	φ 90

③ Cup Rubber Material

Symbol	Material
N	NBR(Nitrile rubber)
S	Silicone rubber

※ Please consult with us for other material.

## Combination Table

### Top Port

Model number	Cup	Setting screw	Fitting	Piping specifications	
PHTK-30-□	PHG-30-□	TN-PF-25-M6	PFTK-25-K	Barb	φ 6X4
PHTK-45-□	PHG-45-□				
PHTK-65-□	PHG-65-□	TN-PH-65-M10	PFTK-60-K	Rc1/8 (Female)	
PHTK-90-□	PHG-90-□				

※□ in the table indicates the cup material.

### Side Port

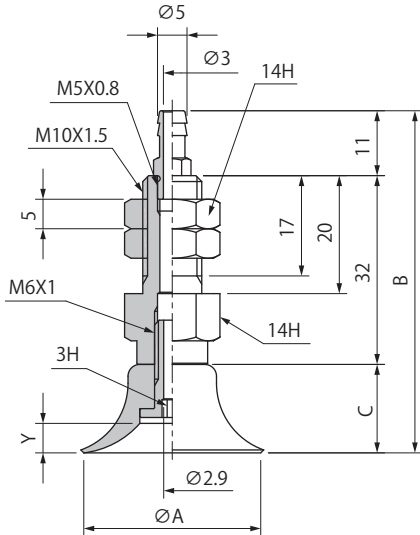
Model number	Cup	Setting screw	Fitting	Piping specifications	
PHYK-30-□	PHG-30-□	TN-PF-25-M6	PFYK-25-K	Barb	φ 6X4
PHYK-45-□	PHG-45-□				
PHYK-65-□	PHG-65-□	TN-PH-65-M10	PFYK-60-K	Rc1/8 (Female)	
PHYK-90-□	PHG-90-□				

※□ in the table indicates the cup material.

Dimensions

(mm)

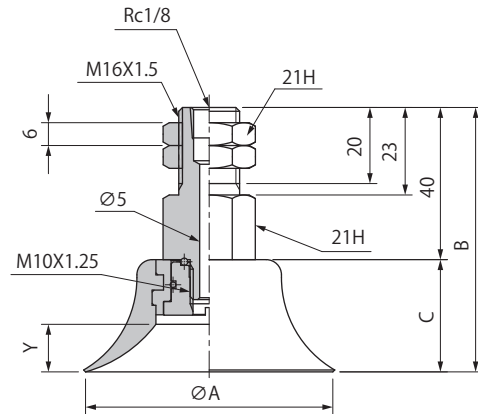
Top Port PHTK-30/45



Model number	A	B	C	Y	Weight (g)
PHTK-30-□	30	58	15	5	37
PHTK-45-□	45	63	20	8	44

※□ in the table indicates the cup material.  
※ The weight value is when NBR (Nitrile rubber) selected.

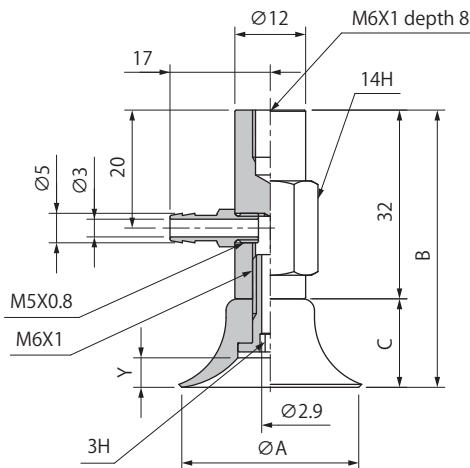
Top Port PHTK-65/90



Model number	A	B	C	Y	Weight (g)
PHTK-65-□	65	69.5	29.5	12.5	142
PHTK-90-□	90	75	35	16	188

※□ in the table indicates the cup material.  
※ The weight value is when NBR (Nitrile rubber) selected.

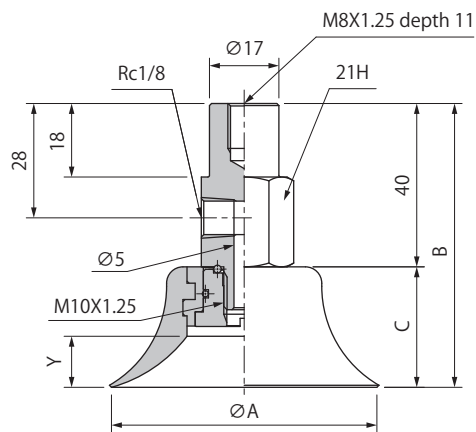
Side Port PHYK-30/45



Model number	A	B	C	Y	Weight (g)
PHYK-30-□	30	47	15	5	41
PHYK-45-□	45	52	20	8	48

※□ in the table indicates the cup material.  
※ The weight value is when NBR (Nitrile rubber) selected.

Side Port PHYK-65/90



Model number	A	B	C	Y	Weight (g)
PHYK-65-□	65	69.5	29.5	12.5	138
PHYK-90-□	90	75	35	16	184

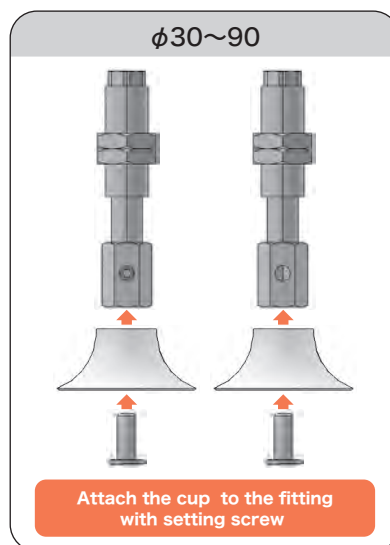
※□ in the table indicates the cup material.  
※ The weight value is when NBR (Nitrile rubber) selected.

## NAPHTS·YS Cup with Spring Fitting

Suction Cup  
Deep Cup



Consisting of fitting, setting screw, suction cup.



### How to Order

**NAPH** T **S** - 30-6 - **N** - T

① Vacuum Port

T	Top
Y	Side

② Cup Size - Stroke (mm)

Symbol	Cup size Stroke	Symbol	Cup size Stroke
30-6	φ30-6	65-10	φ65-10
30-15	φ30-15	65-30	φ65-30
30-30	φ30-30	65-50	φ65-50
45-6	φ45-6	90-10	φ90-10
45-15	φ45-15	90-30	φ90-30
45-30	φ45-30	90-50	φ90-50

③ Cup Rubber Material

Symbol	Material
N	NBR(Nitrile rubber)
S	Silicone rubber

※ Please consult with us for other material.

④ Connector

Blank	N/A
T	Barb
O	Push-in

※ φ 65, 90 can not be selected "T" and "O".

02

Suction Cup

PA

PB

PC

PCD

PD

PF

PFO

**PH**

PJ

CORE

PK2

PK2B

PK2L

PL

PN

PN-B

PP

PQ

PR

PU

PW

RA

SM

TN

## Spring Specifications

Cup size	Unit	φ30, 45			φ65, 90		
Stroke	mm	6	15	30	10	30	50
Spring load at 0 stroke	N	2.45		2.9	8.82	6.76	8.33
Spring load at full stroke	N	3.43	4.9	5.88	11.8	15.6	19.6

## Combination Table

Model number	Cup	Setting screw	Fitting	Piping specifications		
				Without connector·Blank	Barb connector·T	Push-in connector·O
NAPH○S-30-6-□ (-T/O)	PHG-30-□	TN-PF-25-M6	NAPF○S-20B-6-K (-T/O)	M5X0.8 (Female)	φ 6 X 4	
NAPH○S-30-15-□ (-T/O)			NAPF○S-20B-15-K (-T/O)			
NAPH○S-30-30-□ (-T/O)			NAPF○S-20B-30-K (-T/O)			
NAPH○S-45-6-□ (-T/O)	PHG-45-□		NAPF○S-20B-6-K (-T/O)			
NAPH○S-45-15-□ (-T/O)			NAPF○S-20B-15-K (-T/O)			
NAPH○S-45-30-□ (-T/O)			NAPF○S-20B-30-K (-T/O)			
NAPH○S-65-10-□	PHG-65-□	TN-PH-65-M10	NAPF○S-60-10-K	Rc1/8 (Female)	-	
NAPH○S-65-30-□			NAPF○S-60-30-K			
NAPH○S-65-50-□	PHG-90-□		NAPF○S-60-50-K			
NAPH○S-90-10-□			NAPF○S-60-10-K			
NAPH○S-90-30-□			NAPF○S-60-30-K			
NAPH○S-90-50-□			NAPF○S-60-50-K			

※□ in the table indicates the cup material.

※○ in the table indicates the vacuum port (T or Y).

02

Suction Cup

PA

PB

PC

PCD

PD

PF

PFO

PH

PJ

CORE

PK2

PK2B

PK2L

PL

PN

PN-B

PP

PQ

PR

PU

PW

RA

SM

TN



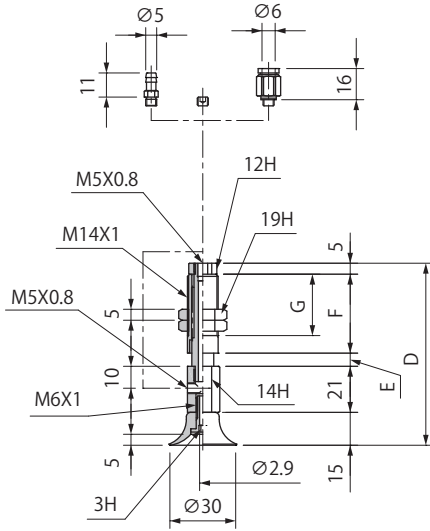
# NAPHTS·YS Cup with Spring Fitting

Suction Cup  
Deep Cup

## Dimensions

(mm)

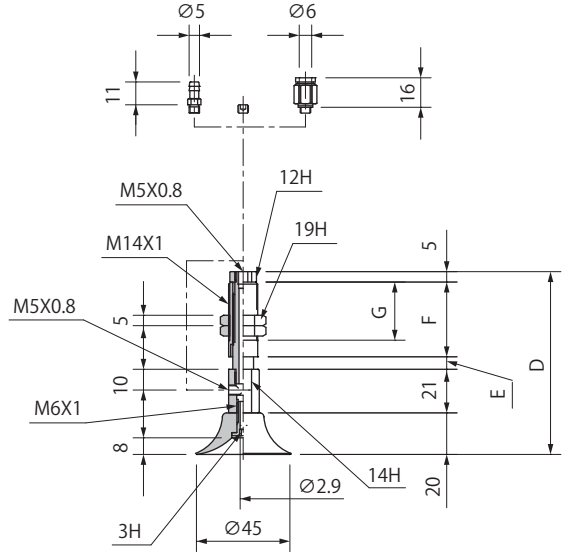
### NAPHT/YS-30



Model number	D	E	F	G	Weight (g)
NAPHT/YS-30-6-□ (-T/O)	83	6	36	28	69
NAPHT/YS-30-15-□ (-T/O)	92	15			74
NAPHT/YS-30-30-□ (-T/O)	129	30	58	50	99

※□ in the table indicates the cup material.  
※ The weight value is when NBR (Nitrile rubber) / without connector selected.

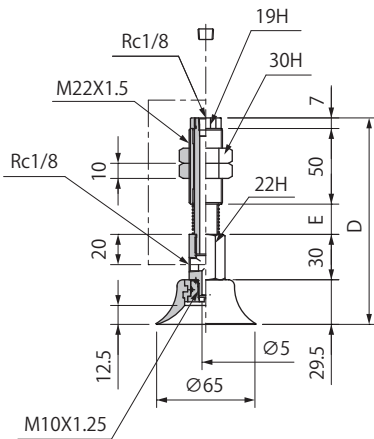
### NAPHT/YS-45



Model number	D	E	F	G	Weight (g)
NAPHT/YS-45-6-□ (-T/O)	88	6	36	28	73
NAPHT/YS-45-15-□ (-T/O)	97	15			78
NAPHT/YS-45-30-□ (-T/O)	134	30	58	50	103

※□ in the table indicates the cup material.  
※ The weight value is when NBR (Nitrile rubber) / without connector selected.

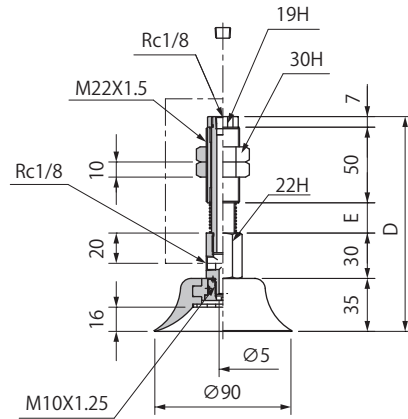
### NAPHT/YS-65



Model number	D	E	Weight (g)
NAPHT/YS-65-10-□ (-T/O)	136.5	20	331
NAPHT/YS-65-30-□ (-T/O)	166.5	50	365
NAPHT/YS-65-50-□ (-T/O)	191.5	75	392

※□ in the table indicates the cup material.  
※ The weight value is when NBR (Nitrile rubber) selected.

### NAPHT/YS-90



Model number	D	E	Weight (g)
NAPHT/YS-90-10-□ (-T/O)	142	20	408
NAPHT/YS-90-30-□ (-T/O)	172	50	442
NAPHT/YS-90-50-□ (-T/O)	197	75	469

※□ in the table indicates the cup material.  
※ The weight value is when NBR (Nitrile rubber) selected.

## Common Specifications

Connector Weight(g)

Symbol	Tube O.D φ 6
T	1.5
O	4.0

02

Suction Cup

PA

PB

PC

PCD

PD

PF

PFO

PH

PJ

CORE

PK2

PK2B

PK2L

PL

PN

PN-B

PP

PQ

PR

PU

PW

RA

SM

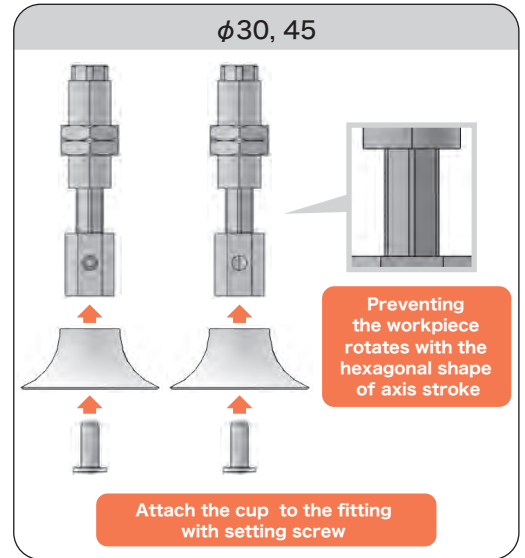
TN

# NAPHTH·YH Cup with Non-rotation Spring Fitting

Suction Cup  
Deep Cup



Consisting of fitting, setting screw, suction cup.



02

Suction Cup

PA

PB

PC

## How to Order

NAPH **T** H - **30-6** - **N** - **T**

① Vacuum Port

T	Top
Y	Side

② Cup Size - Stroke (mm)

Symbol	Cup size Stroke
30-6	φ30-6
30-15	φ30-15
30-30	φ30-30
45-6	φ45-6
45-15	φ45-15
45-30	φ45-30

③ Cup Rubber Material

Symbol	Material
N	NBR(Nitrile rubber)
S	Silicone rubber

※ Please consult with us for other material.

④ Connector

Blank	N/A
T	Barb
O	Push-in

## Spring Specifications

Cup size	Unit	φ30, 45		
		6	15	30
Stroke	mm			
Spring load at 0 stroke	N	2.45	2.9	
Spring load at full stroke	N	3.43	4.9	5.88

