




Oil grooved pads PFO series

			Connector type	Top port	Side port	
Pad with locking fitting PFO□K φ20 ~ 40	⇒P237		Barb connector	PFOTK	PFOYK	
Pad with spring fitting NAPFO□S φ20 ~ 40 Stroke(mm) 6,15,30	⇒P239		Female screw (without connector)	NAPFOTS-□-□	NAPFOYS-□-□	
			Push-in connector	NAPFOTS-□-□-O	NAPFOYS-□-□-O	
			Barb connector	NAPFOTS-□-□-T	NAPFOYS-□-□-T	
Pad with spring fitting non-rotation NAPFO□H φ20 ~ 40 Stroke(mm) 6,15,30	⇒P241		Female screw (without connector)	NAPFOTH-□-□	NAPFOYH-□-□	
			Push-in connector	NAPFOTH-□-□-O	NAPFOYH-□-□-O	
			Barb connector	NAPFOTH-□-□-T	NAPFOYH-□-□-T	
Maintenance parts	Fitting ⇒P237, 239, 241 Setting screw ⇒P336 Pad ⇒P243		Pad with locking fitting	Barb connector	Reference each page	Reference each page
			Pad with spring fitting	Push-in connector	Reference each page	Reference each page
				Barb connector		
			Setting screw		Reference each page	
			Pad		PFOG	

Pad material table

●: Standard

	Material	Identification	Symble	Round pad				
				20	25	30	35	40
Standard	Nitrile	Black	N	●	●	●	●	●
	Silicone	Transparent white	S	●	●	●	●	●

Pad with locking fitting / PFOTK · YK

How to order

PFO ^① T K - ^② 20 - ^③ N

① Vacuum port

T	Top port
Y	Side port

② Pad diameter (mm)

20	φ20
25	φ25
30	φ30
35	φ35
40	φ40

③ Pad rubber material

N	NBR (Nitrile rubber)
S	Silicone rubber

Note) Please consult with us for other material.

Fitting specifications

Description			Vacuum port type	
Vacuum port type			Top port	Side port
Connection type	Barb connector	φ6 × 4	○ (M5)	○ (M5)
Fitting attachment type			Male screw	Female screw

Pad standard specifications

Symbol	Material	Hardness (Hs)	Ambient temperature	Color
N	NBR (Nitrile rubber)	A55/S	-26 ~ 120°C	Black
S	Silicone rubber	A55/S	-60 ~ 250°C	white

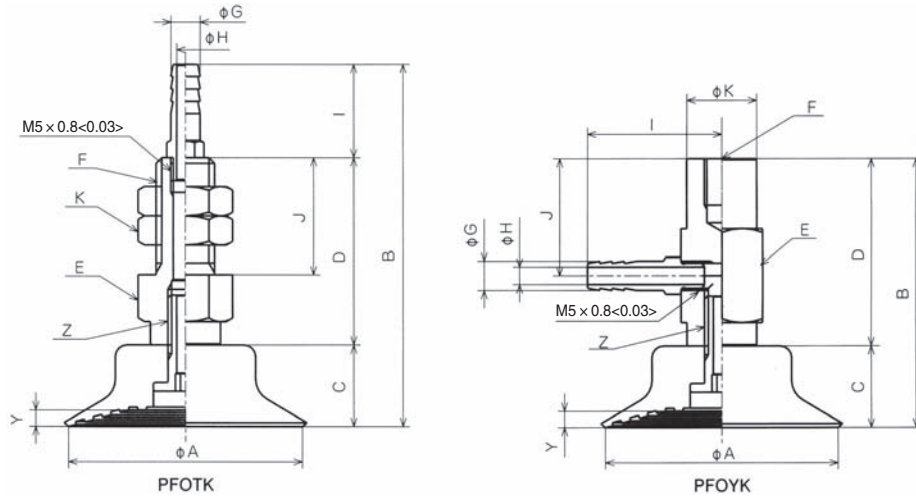
Applicable fitting table

		How to order	Round pad				
			20	25	30	35	40
Fitting	Top port	PFTK-15-K	○				
		PFTK-25-K		○	○	○	○
	Side port	PFYK-15-K	○				
		PFYK-25-K		○	○	○	○
Setting screw	TN-PF-20-M5	○					
	TN-PF-25-M6		○	○	○	○	

Note) A setting screw is needed to attach the pad with the fitting.

Dimensions

Unit : mm <inch>



mm

PFOTK	A	B	C	D	E	F	G	H	I	J	K	Y	Z	Mass(g)
PFOTK-20	20	43	10	22	10H	M8 x 1.25	5	3	11	15	10H	1.7	M5 x 0.8	20
PFOTK-25	25	57	14	32	14H	M10 x 1.5	5	3	11	20	14H	1.1	M6 x 1.0	41
PFOTK-30	30	55	12	32	14H	M10 x 1.5	5	3	11	20	14H	1.3	M6 x 1.0	41
PFOTK-35	35	55	12	32	14H	M10 x 1.5	5	3	11	20	14H	1.6	M6 x 1.0	41
PFOTK-40	40	57	14	32	14H	M10 x 1.5	5	3	11	20	14H	2.8	M6 x 1.0	41

inch

PFOTK	A	B	C	D	E	F	G	H	I	J	K	Y	Z	Mass(g)
PFOTK-20	0.79	1.69	0.39	0.87	0.39H	M8 x 0.05	0.2	0.12	0.43	0.59	0.39H	0.07	M5 x 0.03	20
PFOTK-25	0.98	2.24	0.55	1.26	0.55H	M10 x 0.06	0.2	0.12	0.43	0.79	0.55H	0.04	M6 x 0.04	41
PFOTK-30	1.18	2.17	0.47	1.26	0.55H	M10 x 0.06	0.2	0.12	0.43	0.79	0.55H	0.05	M6 x 0.04	41
PFOTK-35	1.38	2.17	0.47	1.26	0.55H	M10 x 0.06	0.2	0.12	0.43	0.79	0.55H	0.06	M6 x 0.04	41
PFOTK-40	1.57	2.24	0.55	1.26	0.55H	M10 x 0.06	0.2	0.12	0.43	0.79	0.55H	0.11	M6 x 0.04	41

mm

PFOYK	A	B	C	D	E	F	G	H	I	J	K	Y	Z	Mass(g)
PFOYK-20	20	32	10	22	10H	M4 depth 6	5	3	16	14	10	1.7	M5 x 0.8	20
PFOYK-25	25	46	14	32	14H	M6 depth 8	5	3	18	20	12	1.1	M6 x 1.0	41
PFOYK-30	30	44	12	32	14H	M6 depth 8	5	3	18	20	12	1.3	M6 x 1.0	41
PFOYK-35	35	44	12	32	14H	M6 depth 8	5	3	18	20	12	1.6	M6 x 1.0	41
PFOYK-40	40	46	14	32	14H	M6 depth 8	5	3	18	20	12	2.8	M6 x 1.0	51

inch

PFOYK	A	B	C	D	E	F	G	H	I	J	K	Y	Z	Mass(g)
PFOYK-20	0.79	1.26	0.39	0.87	0.39H	M4 depth 0.24	0.2	0.12	0.63	0.55	0.39	0.07	M5 x 0.03	20
PFOYK-25	0.98	1.81	0.55	1.26	0.55H	M6 depth 0.31	0.2	0.12	0.71	0.79	0.47	0.04	M6 x 0.04	41
PFOYK-30	1.18	1.73	0.47	1.26	0.55H	M6 depth 0.31	0.2	0.12	0.71	0.79	0.47	0.05	M6 x 0.04	41
PFOYK-35	1.38	1.73	0.47	1.26	0.55H	M6 depth 0.31	0.2	0.12	0.71	0.79	0.47	0.06	M6 x 0.04	41
PFOYK-40	1.57	1.81	0.55	1.26	0.55H	M6 depth 0.31	0.2	0.12	0.71	0.79	0.47	0.11	M6 x 0.04	51

Pad with spring fitting / NAPFOTS · YS

How to order

NAPFO ^① T S - ^② 20-6 - ^③ N - ^④ T

① Vacuum port

T	Top port
Y	Side port

② Pad diameter – stroke (mm)

20-6	φ20-6	35-6	φ35-6
20-15	φ20-15	35-15	φ35-15
20-30	φ20-30	35-30	φ35-30
25-6	φ25-6	40-6	φ40-6
25-15	φ25-15	40-15	φ40-15
25-30	φ25-30	40-30	φ40-30
30-6	φ30-6		
30-15	φ30-15		
30-30	φ30-30		

③ Pad rubber material

N	NBR (Nitrile rubber)
S	Silicone rubber

Note) Please consult with us for other material.

④ Connector

Blank	Without
T	Barb connector
O	Push-in connector

Fitting specifications

Description		Vacuum port type	
Vacuum port type		Top port	Side port
Connection type	Connector type Blank	M5	M5
	Barb connector φ6 × 4	○ (M5)	○ (M5)
	Push-in connector φ6 × 4	○ (M5)	○ (M5)
Fitting attachment type		Male screw	Male screw

Pad standard specifications

Symbol	Material	Hardness (Hs)	Ambient temperature	Color
N	NBR (Nitrile rubber)	A55/S	-26 ~ 120°C	Black
S	Silicone rubber	A55/S	-60 ~ 250°C	White

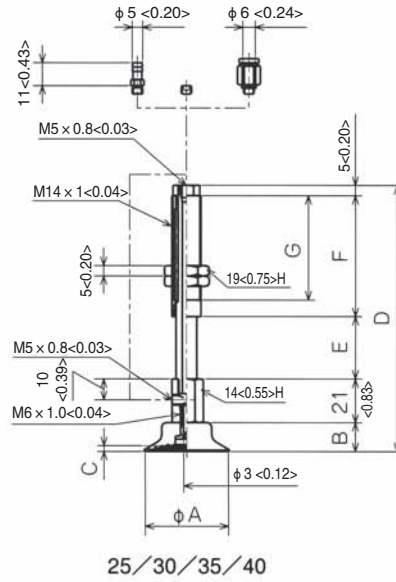
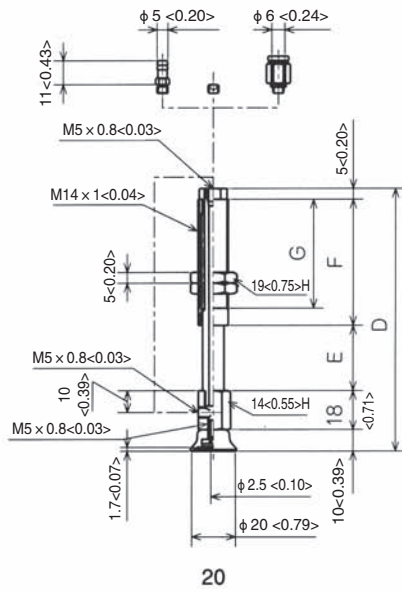
Applicable fitting table

	How to order	Round pad					
		20	25	30	35	40	
Fitting	Top port	NAPBTS-20-6-K	○				
		NAPBTS-20-15-K	○				
		NAPBTS-20-30-K	○				
		NAPFTS-20B-6-K		○	○	○	○
		NAPFTS-20B-15-K		○	○	○	○
		NAPFTS-20B-30-K		○	○	○	○
	Side port	NAPJYS-20-6-K	○				
		NAPJYS-25-15-K	○				
		NAPJYS-20-30-K	○				
		NAPFYS-20B-6-K		○	○	○	○
		NAPFYS-20B-15-K		○	○	○	○
		NAPFYS-20B-30-K		○	○	○	○
Setting screw	TN-PF-20-M5	○					
	TN-PF-25-M6		○	○	○	○	

Note) A setting screw is needed to attach the pad with the fitting.

Dimensions

Unit : mm <inch>



mm

NAPFOT/YS	A	B	C	D	E	F	G	F ¹	F ²	Mass(g)
NAPFOT/YS-20-6	/	/	/	75	6	36	28	2.45	3.43	66
NAPFOT/YS-20-15				84	15	36	28	2.45	4.9	71
NAPFOT/YS-20-30				121	30	58	50	2.9	5.88	96
NAPFOT/YS-25-6	25	14	1.1	82	6	36	28	2.45	3.43	66
NAPFOT/YS-25-15	25	14	1.1	91	15	36	28	2.45	4.9	71
NAPFOT/YS-25-30	25	14	1.1	128	30	58	50	2.9	5.88	96
NAPFOT/YS-30-6	30	12	1.3	80	6	36	28	2.45	3.43	66.5
NAPFOT/YS-30-15	30	12	1.3	89	15	36	28	2.45	4.9	71.5
NAPFOT/YS-30-30	30	12	1.3	126	30	58	50	2.9	5.88	96.5
NAPFOT/YS-35-6	35	12	1.6	80	6	36	28	2.45	3.43	68.5
NAPFOT/YS-35-15	35	12	1.6	89	15	36	28	2.45	4.9	73.5
NAPFOT/YS-35-30	35	12	1.6	126	30	58	50	2.9	5.88	98.5
NAPFOT/YS-40-6	40	14	2.8	82	6	36	28	2.45	3.43	70.5
NAPFOT/YS-40-15	40	14	2.8	91	15	36	28	2.45	4.9	75.5
NAPFOT/YS-40-30	40	14	2.8	128	30	58	50	2.9	5.88	100.5

inch

NAPFOT/YS	A	B	C	D	E	F	G	F ¹	F ²	Mass(g)
NAPFOT/YS-20-6	/	/	/	2.95	0.24	1.42	1.1	2.45	3.43	66
NAPFOT/YS-20-15				3.31	0.59	1.42	1.1	2.45	4.9	71
NAPFOT/YS-20-30				4.76	1.18	2.28	1.97	2.9	5.88	96
NAPFOT/YS-25-6	0.98	0.55	0.04	3.23	0.24	1.42	1.1	2.45	3.43	66
NAPFOT/YS-25-15	0.98	0.55	0.04	3.58	0.59	1.42	1.1	2.45	4.9	71
NAPFOT/YS-25-30	0.98	0.55	0.04	5.04	1.18	2.28	1.97	2.9	5.88	96
NAPFOT/YS-30-6	1.18	0.47	0.05	3.15	0.24	1.42	1.1	2.45	3.43	66.5
NAPFOT/YS-30-15	1.18	0.47	0.05	3.5	0.59	1.42	1.1	2.45	4.9	71.5
NAPFOT/YS-30-30	1.18	0.47	0.05	4.96	1.18	2.28	1.97	2.9	5.88	96.5
NAPFOT/YS-35-6	1.38	0.47	0.06	3.15	0.24	1.42	1.1	2.45	3.43	68.5
NAPFOT/YS-35-15	1.38	0.47	0.06	3.5	0.59	1.42	1.1	2.45	4.9	73.5
NAPFOT/YS-35-30	1.38	0.47	0.06	4.96	1.18	2.28	1.97	2.9	5.88	98.5
NAPFOT/YS-40-6	1.57	0.55	0.11	3.23	0.24	1.42	1.1	2.45	3.43	70.5
NAPFOT/YS-40-15	1.57	0.55	0.11	3.58	0.59	1.42	1.1	2.45	4.9	75.5
NAPFOT/YS-40-30	1.57	0.55	0.11	5.04	1.18	2.28	1.97	2.9	5.88	100.5

Note) Symbol F¹ in the table shows a spring load (N) at 0 stroke, and F² at full stroke.

Connector mass(g)

	Tube O.D φ4	Tube O.D φ6
T	0.5	1.5
O	3.0	4.0

Pad with spring fitting, non-rotation / NAPFOTH · YH

How to order

① ② ③ ④
NAPFO T H - 20-6 - N - T

① Vacuum port	② Pad diameter - stroke (mm)				③ Pad rubber material	
T Top port	20-6	φ20-6	35-6	φ35-6	N	NBR (Nitrile rubber)
Y Side port	20-15	φ20-15	35-15	φ35-15	S	Silicone rubber
	20-30	φ20-30	35-30	φ35-30	Note) Please consult with us for other material.	
	25-6	φ25-6	40-6	φ40-6	④ Connector	
	25-15	φ25-15	40-15	φ40-15	Blank	Without
	25-30	φ25-30	40-30	φ40-30	T	Barb connector
	30-6	φ30-6			O	Push-in connector
	30-15	φ30-15				
	30-30	φ30-30				

Fitting specifications

Description		Vacuum port type	
Vacuum port type		Top port	Side port
Connection type	Connector type blank	M5	M5
	Barb connector φ6 × 4	○ (M5)	○ (M5)
	Push-in connector φ6 × 4	○ (M5)	○ (M5)
Fitting attachment type		Male screw	Male screw

Note) ○ means that fitting and connector cannot be disassembled.

Pad standard specifications

Symbol	Material	Hardness (Hs)	Ambient temperature	Color
N	NBR (Nitrile rubber)	A55/S	-26 ~ 120°C	Black
S	Silicone rubber	A55/S	-60 ~ 250°C	White

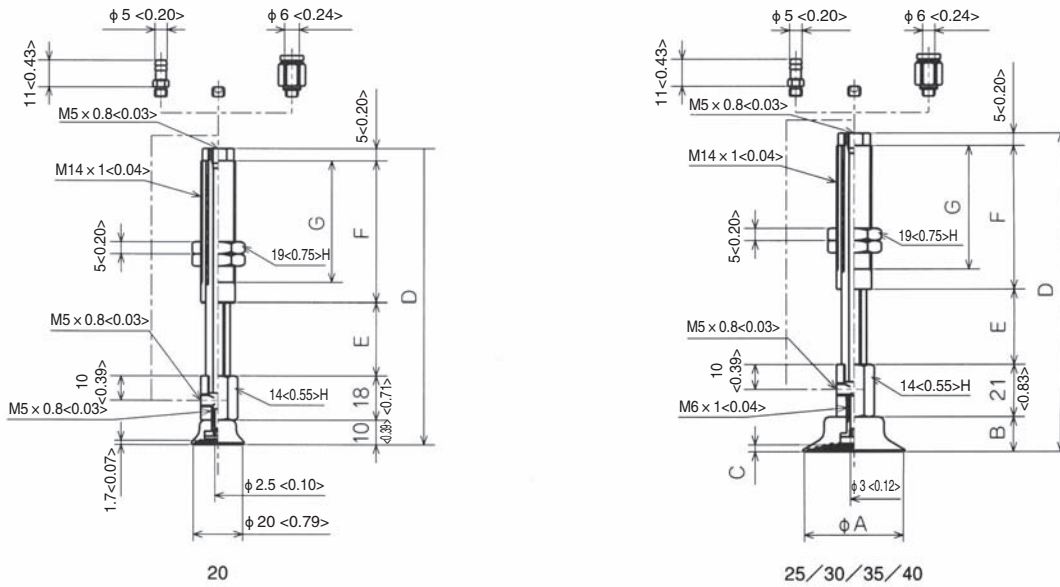
Applicable fitting table

	How to order	Round pad					
		20	25	30	35	40	
Fitting	Top port	NAPBTH-20-6-K	○				
		NAPBTH-20-15-K	○				
		NAPBTH-20-30-K	○				
		NAPFTH-20B-6-K		○	○	○	○
		NAPFTH-20B-15-K		○	○	○	○
		NAPFTH-20B-30-K		○	○	○	○
	Side port	NAPBYH-20-6-K	○				
		NAPBYH-25-15-K	○				
		NAPBYH-20-30-K	○				
		NAPFYH-20B-6-K		○	○	○	○
		NAPFYH-20B-15-K		○	○	○	○
		NAPFYH-20B-30-K		○	○	○	○
Setting screw	TN-PF-20-M5	○					
	TN-PF-25-M6		○	○	○	○	

Note) A setting screw is needed to attach the pad to the fitting.

Dimensions

Unit : mm <inch>



mm

NAPFOT/YH	A	B	C	D	E	F	G	F ¹	F ²	Mass(g)
NAPFOT/YH-20-6	/	/	/	75	6	36	28	2.45	3.43	64.5
NAPFOT/YH-20-15				84	15	36	28	2.45	4.9	69.5
NAPFOT/YH-20-30				121	30	58	50	2.9	5.88	93.5
NAPFOT/YH-25-6	25	14	1.1	82	6	36	28	2.45	3.43	64.5
NAPFOT/YH-25-15	25	14	1.1	91	15	36	28	2.45	4.9	69.5
NAPFOT/YH-25-30	25	14	1.1	128	30	58	50	2.9	5.88	93.5
NAPFOT/YH-30-6	30	12	1.3	80	6	36	28	2.45	3.43	65
NAPFOT/YH-30-15	30	12	1.3	89	15	36	28	2.45	4.9	70
NAPFOT/YH-30-30	30	12	1.3	126	30	58	50	2.9	5.88	94
NAPFOT/YH-35-6	35	12	1.6	80	6	36	28	2.45	3.43	67
NAPFOT/YH-35-15	35	12	1.6	89	15	36	28	2.45	4.9	72
NAPFOT/YH-35-30	35	12	1.6	126	30	58	50	2.9	5.88	96
NAPFOT/YH-40-6	40	14	2.8	82	6	36	28	2.45	3.43	69
NAPFOT/YH-40-15	40	14	2.8	91	15	36	28	2.45	4.9	74
NAPFOT/YH-40-30	40	14	2.8	128	30	58	50	2.9	5.88	98

inch

NAPFOT/YH	A	B	C	D	E	F	G	F ¹	F ²	Mass(g)
NAPFOT/YH-20-6	/	/	/	2.95	0.24	1.42	1.1	2.45	3.43	64.5
NAPFOT/YH-20-15				3.31	0.59	1.42	1.1	2.45	4.9	69.5
NAPFOT/YH-20-30				4.76	1.18	2.28	1.97	2.9	5.88	93.5
NAPFOT/YH-25-6	0.98	0.55	0.04	3.23	0.24	1.42	1.1	2.45	3.43	64.5
NAPFOT/YH-25-15	0.98	0.55	0.04	3.58	0.59	1.42	1.1	2.45	4.9	69.5
NAPFOT/YH-25-30	0.98	0.55	0.04	5.04	1.18	2.28	1.97	2.9	5.88	93.5
NAPFOT/YH-30-6	1.18	0.47	0.05	3.15	0.24	1.42	1.1	2.45	3.43	65
NAPFOT/YH-30-15	1.18	0.47	0.05	3.5	0.59	1.42	1.1	2.45	4.9	70
NAPFOT/YH-30-30	1.18	0.47	0.05	4.96	1.18	2.28	1.97	2.9	5.88	94
NAPFOT/YH-35-6	1.38	0.47	0.06	3.15	0.24	1.42	1.1	2.45	3.43	67
NAPFOT/YH-35-15	1.38	0.47	0.06	3.5	0.59	1.42	1.1	2.45	4.9	72
NAPFOT/YH-35-30	1.38	0.47	0.06	4.96	1.18	2.28	1.97	2.9	5.88	96
NAPFOT/YH-40-6	1.57	0.55	0.11	3.23	0.24	1.42	1.1	2.45	3.43	69
NAPFOT/YH-40-15	1.57	0.55	0.11	3.58	0.59	1.42	1.1	2.45	4.9	74
NAPFOT/YH-40-30	1.57	0.55	0.11	5.04	1.18	2.28	1.97	2.9	5.88	98

Note) Symbol F¹ in the table shows a spring load (N) at 0 stroke, and F² at full stroke.

Connector mass(g)

	Tube O.D φ 4	Tube O.D φ 6
T	0.5	1.5
O	3.0	4.0

Oil grooved pad / PFOG

How to order

PFOG - ①
20 - ②
N

① Pad diameter (mm)

20	φ20
25	φ25
30	φ30
35	φ35
40	φ40

② Pad rubber material

N	NBR (Nitrile rubber)
S	Silicone rubber

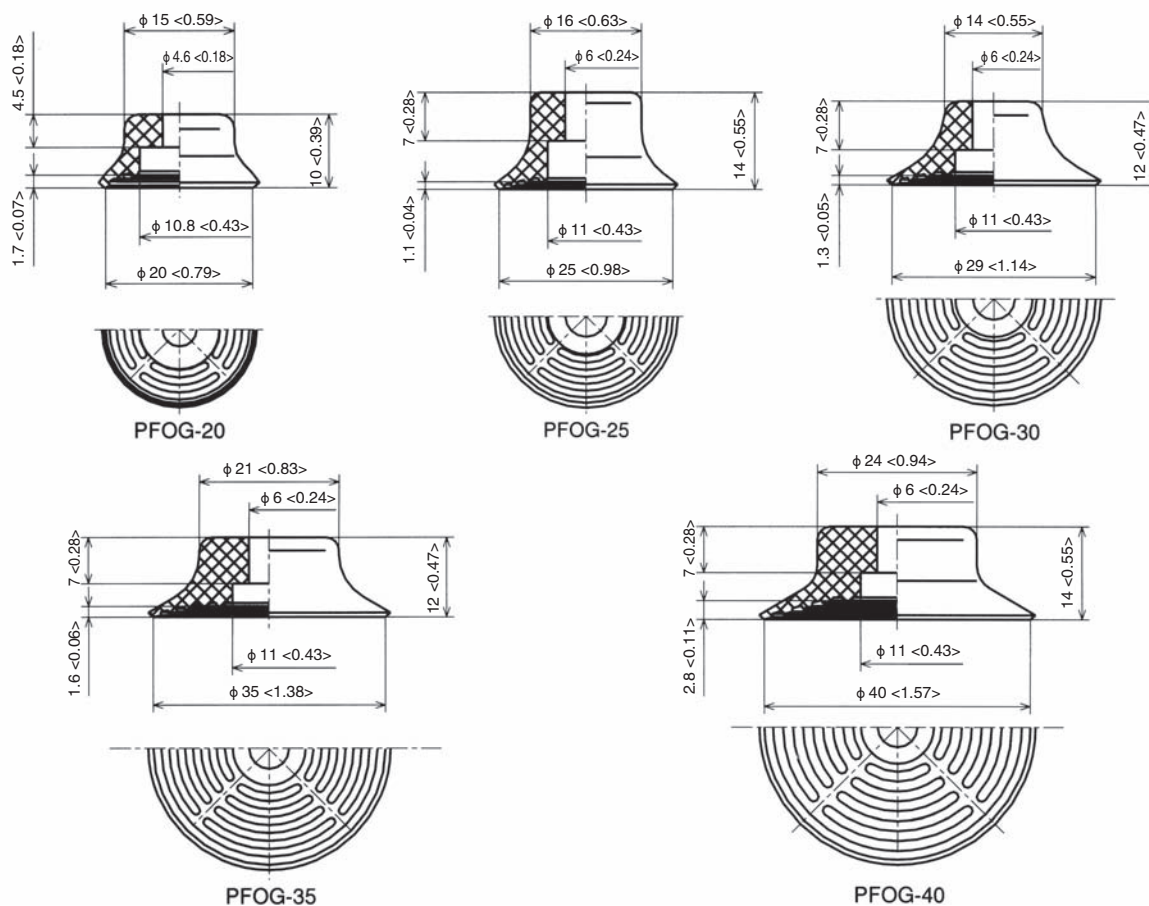
Note) Please consult with us for other material.

Pad standard specifications

Symbol	Material	Hardness (Hs)	Ambient temperature	Color
N	NBR (Nitrile rubber)	A55/S	-26 ~ 120°C	Black
S	Silicone rubber	A55/S	-60 ~ 250°C	white

Dimensions

Unit : mm <inch>



Suction pads