

**Features**

These cups are for curved, corrugated, lightly textured surfaces and flexible product. Under vacuum, the bellow cup will collapse on contact and lift the product for a short distance. This inherent performance facilitates lifting and destack operations by breaking the vacuum between stacked product. The bellow style adds level compensation for applications that have inconsistent stack heights or uneven surfaces. The inclusive 30-degree rotation of the bellow helps maintain the vacuum seal when lifting sheet products that flex. Because of it's shape however the bellows suction cup is not very well suitable for applications involving lifting vertical surfaces.



**Features**

- Bellows design for level compensation within restricted clearances
- Sheet separation for flexible and stacked products
- Soft seal lip for flexible products
- 10mm to 150mm diameters

**Styles**

- PBTM series male thread connector
- PBTF series female thread connector
- PBTk series barbed bulkhead
- PBYK series 90° barbed adapter
- PBTYS series bulkhead level compensator

**Specifications**

Cup material	Nitrile	Silicon	Urethane
Material code	NBR	SI	U
Operating temperature (°C)	-20° to +120°	-60° to +250°	-20° to +75°
Color	Black	White	Blue
Hardness, shore A (°Sh)	55 ±5	55 ±5	55 ±5

**How to order**

Cups assemblies and replacement cups are specified by cup diameter and material. Standard nitrile and silicon are listed on the following pages. To specify an alternative material, replace the cup material with alternative cup material code.

**Example:** To specify a cup assembly with urethane (U), replace (NBR) with (U) in the part number. PBTM-20B-NBR-G1 becomes PBTM-20B-U-G1. Inquire with factory for availability.

**Application guide**

**Bellows**



Flat surface, thin section	Flat surface, any section	Slightly bowed surface, thin section	Slightly bowed surface, any section	Bowed surface, thin section	Bowed surface, any section	Soft porous material, any section	Differences in heights and levels	Corrugated sheet handling	Not for vertical lift	Metal sheet handling
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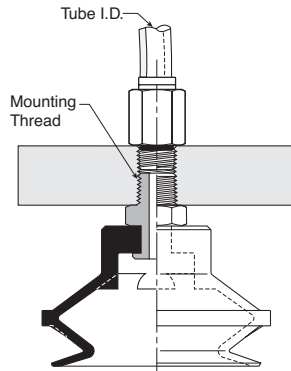
**PBTM Series Male Thread Connector**

Simple male connection for low profile positions secured to a plate or bracket. NPT, G, metric threads.  
 Fitting material: aluminum.

**Installation**

**Note:**

When installing cup assemblies, use a sealant material to secure the assembly and prevent vacuum leakage.



Cup diameter (mm)	Vacuum port	Complete assembly Nitrile (NBR)	Replacement cup Nitrile (NBR)	Complete assembly Silicon (SI)	Replacement cup Silicon (SI)	Replacement cup fitting
10	M5	<b>PBTM-10A-NBR-M5</b>	PBG-10A-NBR	PBTM-10A-SI-M5	PBG-10A-SI	FTM-5A-M5H
10	1/8 BSPP	<b>PBTM-10A-NBR-G1</b>	PBG-10A-NBR	PBTM-10A-SI-G1	PBG-10A-SI	FTM-5A-G1
15	M5	<b>PBTM-15A-NBR-M5</b>	PBG-15A-NBR	PBTM-15A-SI-M5	PBG-15A-SI	FTM-5A-M5H
15	1/8 BSPP	<b>PBTM-15A-NBR-G1</b>	PBG-15A-NBR	PBTM-15A-SI-G1	PBG-15A-SI	FTM-5A-G1
20	1/8 BSPP	<b>PBTM-20B-NBR-G1</b>	PBG-20B-NBR	PBTM-20B-SI-G1	PBG-20B-SI	FTM-20B-G1H
20	1/4 BSPP	<b>PBTM-20B-NBR-G2</b>	PBG-20B-NBR	PBTM-20B-SI-G2	PBG-20B-SI	FTM-20B-G2
20	M10	PBTM-20B-NBR-M10	<b>PBG-20B-NBR</b>	PBTM-20B-SI-M10	<b>PBG-20B-SI</b>	FTM-20B-M10
20	1/8 NPT	<b>PBTM-20B-NBR-N1</b>	PBG-20B-NBR	PBTM-20B-SI-N1	PBG-20B-SI	FTM-20B-N1
30	1/8 BSPP	<b>PBTM-30-NBR-G1</b>	PBG-30-NBR	PBTM-30-SI-G1	PBG-30-SI	FTM-20B-G1H
30	1/4 BSPP	<b>PBTM-30-NBR-G2</b>	PBG-30-NBR	PBTM-30-SI-G2	PBG-30-SI	FTM-20B-G2
30	M10	PBTM-30-NBR-M10	<b>PBG-30-NBR</b>	PBTM-30-SI-M10	<b>PBG-30-SI</b>	FTM-20B-M10
30	1/8 NPT	<b>PBTM-30-NBR-N1</b>	PBG-30-NBR	PBTM-30-SI-N1	PBG-30-SI	FTM-20B-N1
40	1/8 BSPP	<b>PBTM-40-NBR-G1</b>	PBG-40-NBR	PBTM-40-SI-G1	PBG-40-SI	FTM-20B-G1H
40	1/4 BSPP	<b>PBTM-40-NBR-G2</b>	PBG-40-NBR	PBTM-40-SI-G2	PBG-40-SI	FTM-20B-G2
40	M10	PBTM-40-NBR-M10	<b>PBG-40-NBR</b>	PBTM-40-SI-M10	<b>PBG-40-SI</b>	FTM-20B-M10
40	1/8 NPT	<b>PBTM-40-NBR-N1</b>	PBG-40-NBR	PBTM-40-SI-N1	PBG-40-SI	FTM-20B-N1
50	1/8 BSPP	<b>PBTM-50-NBR-G1</b>	PBG-50-NBR	PBTM-50-SI-G1	PBG-50-SI	FTM-50-G1H
50	1/4 BSPP	<b>PBTM-50-NBR-G2</b>	PBG-50-NBR	PBTM-50-SI-G2	PBG-50-SI	FTM-50-G2
50	1/8 NPT	PBTM-50-NBR-N1	<b>PBG-50-NBR</b>	PBTM-50-SI-N1	PBG-50-SI	FTM-50-N1
75	1/4 BSPP	<b>PBTM-75-NBR-G2</b>	PBG-75-NBR	PBTM-75-SI-G2	PBG-75-SI	FTM-60-G2
75	M10	PBTM-75-NBR-M10	<b>PBG-75-NBR</b>	PBTM-75-SI-M10	PBG-75-SI	FTM-60-M10
75	1/4 NPT	<b>PBTM-75-NBR-N2</b>	PBG-75-NBR	PBTM-75-SI-N2	PBG-75-SI	FTM-60-N2

■ Most popular.



### PBTF Series Female Thread Connector

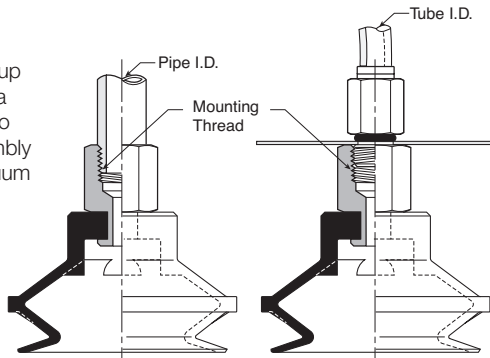
Simple female connection for low profile positions secured to a plate or bracket. NPSF, G threads. Fitting material: aluminum.

**A**

#### Installation

**Note:**

When installing cup assemblies, use a sealant material to secure the assembly and prevent vacuum leakage.



Cup diameter (mm)	Vacuum port	Complete assembly Nitrile (NBR)	Replacement cup Nitrile (NBR)	Complete assembly Silicon (SI)	Replacement cup Silicon (SI)	Replacement cup fitting
10	1/8 BSPP	<b>PBTF-10A-NBR-G1</b>	PBG-10A-NBR	<b>PBTF-10A-SI-G1</b>	PBG-10A-SI	<b>FTF-5A-G1</b>
10	M5	<b>PBTF-10A-NBR-M5</b>	PBG-10A-NBR	<b>PBTF-10A-SI-M5</b>	PBG-10A-SI	<b>FTF-5A-M5</b>
15	1/8 BSPP	<b>PBTF-15A-NBR-G1</b>	PBG-15A-NBR	<b>PBTF-15A-SI-G1</b>	PBG-15A-SI	<b>FTF-5A-G1</b>
15	M5	<b>PBTF-15A-NBR-M5</b>	<b>PBG-15A-NBR</b>	<b>PBTF-15A-SI-M5</b>	PBG-15A-SI	<b>FTF-5A-M5</b>
20	1/8 BSPP	<b>PBTF-20B-NBR-G1</b>	<b>PBG-20B-NBR</b>	<b>PBTF-20B-SI-G1</b>	<b>PBG-20B-SI</b>	<b>FTF-20B-G1</b>
30	1/8 BSPP	<b>PBTF-30-NBR-G1</b>	<b>PBG-30-NBR</b>	<b>PBTF-30-SI-G1</b>	<b>PBG-30-SI</b>	<b>FTF-20B-G1</b>
30	1/4 BSPP	PBTF-30-NBR-G2	<b>PBG-30-NBR</b>	PBTF-30-SI-G2	<b>PBG-30-SI</b>	FTF-20B-G2
40	1/8 BSPP	<b>PBTF-40-NBR-G1</b>	<b>PBG-40-NBR</b>	<b>PBTF-40-SI-G1</b>	<b>PBG-40-SI</b>	<b>FTF-20B-G1</b>
40	1/4 BSPP	PBTF-40-NBR-G2	<b>PBG-40-NBR</b>	PBTF-40-SI-G2	<b>PBG-40-SI</b>	FTF-20B-G2
50	1/8 BSPP	PBTF-50-NBR-G1	<b>PBG-50-NBR</b>	PBTF-50-SI-G1	<b>PBG-50-SI</b>	FTF-50-G1
50	1/4 BSPP	PBTF-50-NBR-G2	<b>PBG-50-NBR</b>	PBTF-50-SI-G2	<b>PBG-50-SI</b>	FTF-50-G2
75	1/4 BSPP	PBTF-75-NBR-G2	<b>PBG-75-NBR</b>	PBTF-75-SI-G2	PBG-75-SI	<b>FTF-60-G2</b>
75	1/4 NPT	<b>PBTF-75-NBR-N2</b>	<b>PBG-75-NBR</b>	PBTF-75-SI-N2	PBG-75-SI	<b>FTF-60-N2</b>
110	1/2 BSPP	<b>PBTF-110-NBR-G4</b>	<b>PBG-110-NBR</b>	<b>PBTF-110-SI-G4</b>	<b>PBG-110-SI</b>	<b>FTF-120-G4</b>
110	1/2 NPT	<b>PBTF-110-NBR-N4</b>	<b>PBG-110-NBR</b>	<b>PBTF-110-SI-N4</b>	<b>PBG-110-SI</b>	<b>FTF-120-N4</b>
150	1/2 BSPP	<b>PBTF-150-NBR-G4</b>	<b>PBG-150-NBR</b>	PBTF-150-SI-G4	PBG-150-SI	<b>FTF-120-G4</b>
150	1/2 NPT	<b>PBTF-150-NBR-N4</b>	<b>PBG-150-NBR</b>	PBTF-150-SI-N4	PBG-150-SI	<b>FTF-120-N4</b>

■ Most popular.

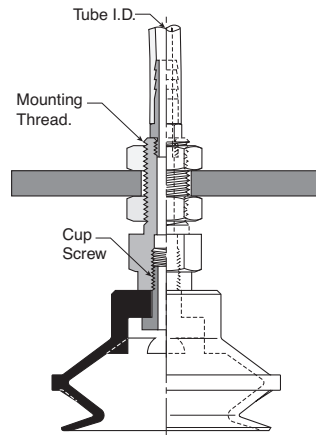


**PBTK Series Barbed Bulkhead**

Top stem connectors secured with jam nuts and allow tubing connections at the top side. Fitting materials: nickel plated brass.

**Installation**

**Note:**  
 When installing cup assemblies, use a sealant material to secure the assembly and prevent vacuum leakage.



Cup diameter (mm)	Vacuum port	Complete assembly Nitrile (NBR)	Replacement cup Nitrile (NBR)	Complete assembly Silicon (SI)	Replacement cup Silicon (SI)	Replacement cup fitting
10	Barb	<b>PBTK-10A-NBR</b>	<b>PBG-10A-NBR</b>	<b>PBTK-10A-SI</b>	<b>PBG-10A-SI</b>	<b>FTK-5A</b>
15	Barb	<b>PBTK-15A-NBR</b>	<b>PBG-15A-NBR</b>	<b>PBTK-15A-SI</b>	<b>PBG-15-SI</b>	<b>FTK-5A</b>
20	Barb	PBTK-20-NBR	<b>PBG-20-NBR</b>	PBTK-20-SI	<b>PBG-20-SI</b>	FTK-20
30	Barb	<b>PBTK-30-NBR</b>	<b>PBG-30-NBR</b>	<b>PBTK-30-SI</b>	<b>PBG-30-SI</b>	<b>FTK-25</b>
40	Barb	<b>PBTK-40-NBR</b>	<b>PBG-40-NBR</b>	<b>PBTK-40-SI</b>	<b>PBG-40-SI</b>	<b>FTK-25</b>
50	Barb	<b>PBTK-50-NBR</b>	<b>PBG-50-NBR</b>	<b>PBTK-50-SI</b>	<b>PBG-50-SI</b>	<b>FTK-50</b>
75	1/8 BSPP	<b>PBTK-75-NBR-G1</b>	<b>PBG-75-NBR</b>	PBTK-75-SI-G1	<b>PBG-75-SI</b>	<b>FTK-60-G1</b>
75	1/8 NPT	<b>PBTK-75-NBR-N1</b>	<b>PBG-75-NBR</b>	PBTK-75-SI-N1	PBG-75-SI	<b>FTK-60-N1</b>

■ Most popular.



**A**

Technical

PBG Flat

PBG Bellows

P5V-CFS Flat

PJG Short Bellows

PCG Multiple Bellows

PUGB Flat Swivel

Cup Fittings

**A**

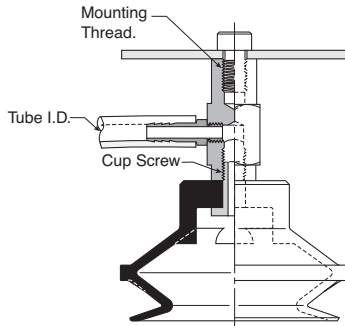
**PBYK Series 90° Barbed Adapter**

Side stem connectors allow you to secure the stem with a bolt through a plate or "L" bracket to allow the tube connection from the side port. Fitting material: nickel plated brass.

**Installation**

**Note:**

When installing cup assemblies, use a sealant material to secure the assembly and prevent vacuum leakage.



Cup diameter (mm)	Vacuum port	Complete assembly Nitrile (NBR)	Replacement cup Nitrile (NBR)	Complete assembly Silicon (SI)	Replacement cup Silicon (SI)	Replacement cup fitting
10	Barb	<b>PBYK-10A-NBR</b>	<b>PBG-10A-NBR</b>	<b>PBYK-10A-SI</b>	<b>PBG-10A-SI</b>	<b>FYK-5A</b>
15	Barb	<b>PBYK-15A-NBR</b>	<b>PBG-15A-NBR</b>	<b>PBYK-15A-SI</b>	<b>PBG-15A-SI</b>	<b>FYK-15</b>
20	Barb	<b>PBYK-20-NBR</b>	<b>PBG-20-NBR</b>	<b>PBYK-20-SI</b>	<b>PBG-20-SI</b>	<b>FYK-20</b>
30	Barb	<b>PBYK-30-NBR</b>	<b>PBG-30-NBR</b>	<b>PBYK-30-SI</b>	<b>PBG-30-SI</b>	<b>FYK-25</b>
40	Barb	<b>PBYK-40-NBR</b>	<b>PBG-40-NBR</b>	<b>PBYK-40-SI</b>	<b>PBG-40-SI</b>	<b>FYK-25</b>
50	Barb	PBYK-50-NBR	PBG-50-NBR	PBYK-50-SI	PBG-50-SI	FYK-50
75	1/8 BSPP	PBYK-75-NBR-G1	<b>PBG-75-NBR</b>	PBYK-75-SI-G1	PBG-75-SI	FYK-60-G1
75	1/8 NPT	<b>PBYK-75-NBR-N1</b>	<b>PBG-75-NBR</b>	PBYK-75-SI-N1	PBG-75-SI	<b>FYK-60-N1</b>
110	1/8 BSPP	PBYK-110-NBR-G1	PBG-110-NBR	PBYK-110-SI-G1	PBG-110-SI	FYK-120-G1
110	1/8 NPT	PBYK-110-NBR-N1	PBG-110-NBR	PBYK-110-SI-N1	PBG-110-SI	FYK-120-N1
150	1/8 BSPP	<b>PBYK-150-NBR-G1</b>	<b>PBG-150-NBR</b>	PBYK-150-SI-G1	PBG-150-SI	<b>FYK-120-G1</b>
150	1/8 NPT	<b>PBYK-150-NBR-N1</b>	<b>PBG-150-NBR</b>	PBYK-150-SI-N1	PBG-150-SI	<b>FYK-120-N1</b>

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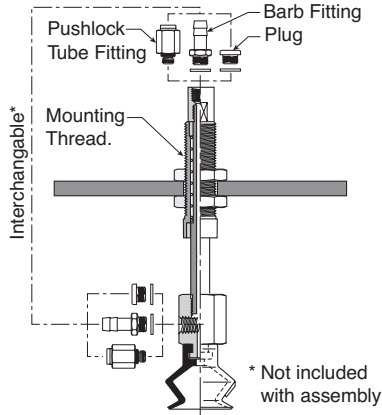
**PBTYS Series Bulkhead Level Compensator**

303 stainless steel construction secured with jam nuts. Spring biased compensators can absorb impacts of down-strokes and adjust for different levels of pick up points. 303 stainless corrosion resistant materials with drymet bushings increases the strength and life.

**Installation**

**Note:**

When installing cup assemblies, use a sealant material to secure the assembly and prevent vacuum leakage. Shown are interchangeable connectors & plugs for port connections.



Cup dia. (mm)	Vacuum port	Stroke (mm)	Spring compression Force lbf (N)		Cup material Nitrile assembly (NBR)	Replacement cup Nitrile (NBR)	Cup material Silicon assembly (SI)	Replacement cup Silicon (SI)	Level Compensator P/N
			0%	100%					
10	M5	10	.11 (.49)	.13 (.59)	<b>PBTYS10A10NBRM5</b>	<b>PBG-10A-NBR</b>	PBTYS10A10SIM5	PBG-10A-SI	<b>TYS-5A-10</b>
10	M5	15	.11 (.49)	.13 (.59)	<b>PBTYS10A15NBRM5</b>	<b>PBG-10A-NBR</b>	PBTYS10A15SIM5	PBG-10A-SI	<b>TYS-5A-15</b>
15	M5	10	.11 (.49)	.13 (.59)	<b>PBTYS15A10NBRM5</b>	<b>PBG-15A-NBR</b>	PBTYS15A10SIM5	PBG-15A-SI	<b>TYS-5A-10</b>
15	M5	15	.11 (.49)	.13 (.59)	<b>PBTYS15A15NBRM5</b>	<b>PBG-15A-NBR</b>	PBTYS15A15SIM5	PBG-15A-SI	<b>TYS-5A-15</b>
20	M5	15	.56 (2.5)	.79 (3.4)	<b>PBTYS20B15NBRM5</b>	<b>PBG-20B-NBR</b>	PBTYS20B15SIM5	PBG-20B-SI	<b>TYS-20B-15</b>
20	M5	30	.56 (2.5)	1.2 (4.9)	<b>PBTYS20B30NBRM5</b>	<b>PBG-20B-NBR</b>	PBTYS20B30SIM5	PBG-20B-SI	<b>TYS-20B-30</b>
30	M5	15	.56 (2.5)	.79 (3.4)	<b>PBTYS3015NBRM5</b>	<b>PBG-30-NBR</b>	PBTYS3015SIM5	PBG-30-SI	<b>TYS-20B-15</b>
30	M5	30	.56 (2.5)	1.2 (4.9)	<b>PBTYS3030NBRM5</b>	<b>PBG-30-NBR</b>	PBTYS3030SIM5	PBG-30-SI	<b>TYS-20B-30</b>
40	M5	15	.56 (2.5)	.79 (3.4)	<b>PBTYS4015NBRM5</b>	<b>PBG-40-NBR</b>	PBTYS4015SIM5	PBG-40-SI	<b>TYS-20B-15</b>
40	M5	30	.56 (2.5)	1.2 (4.9)	<b>PBTYS4030NBRM5</b>	<b>PBG-40-NBR</b>	PBTYS4030SIM5	PBG-40-SI	<b>TYS-20B-30</b>
50	M5	15	.56 (2.5)	1.2 (4.9)	<b>PBTYS5015NBRM5</b>	<b>PBG-50-NBR</b>	PBTYS5015SIM5	PBG-50-SI	<b>TYS-50-15</b>
50	M5	30	.67 (2.9)	1.4 (5.9)	<b>PBTYS5030NBRM5</b>	<b>PBG-50-NBR</b>	PBTYS5030SIM5	PBG-50-SI	<b>TYS-50-30</b>
75	1/8 NPT	30	1.6 (6.8)	3.6 (15.6)	<b>PBTYS7530NBRN1</b>	<b>PBG-75-NBR</b>	PBTYS7530SIN1	PBG-75-SI	<b>TYS-60-30</b>
75	1/8 NPT	50	1.9 (8.3)	4.5 (19.6)	<b>PBTYS7550NBRN1</b>	<b>PBG-75-NBR</b>	PBTYS7550SIN1	PBG-75-SI	<b>TYS-60-50</b>
110	1/4 NPT	20	3.6 (15.6)	6.8 (29)	PBTYS12020NBRN2	PBG-110-NBR	PBTYS11020SIN2	PBG-110-SI	TYS-120-20
110	1/4 NPT	70	3.4 (14.7)	6.8 (29)	PBTYS12070NBRN2	PBG-110-NBR	PBTYS11070SIN2	PBG-110-SI	<b>TYS-120-70</b>
150	1/4 NPT	20	3.6 (15.6)	6.8 (29)	PBTYS15020NBRN2	<b>PBG-150-NBR</b>	PBTYS15020SIN2	PBG-150-SI	TYS-120-20
150	1/4 NPT	70	3.4 (14.7)	6.8 (29)	<b>PBTYS15070NBRN2</b>	<b>PBG-150-NBR</b>	PBTYS15070SIN2	PBG-150-SI	<b>TYS-120-70</b>

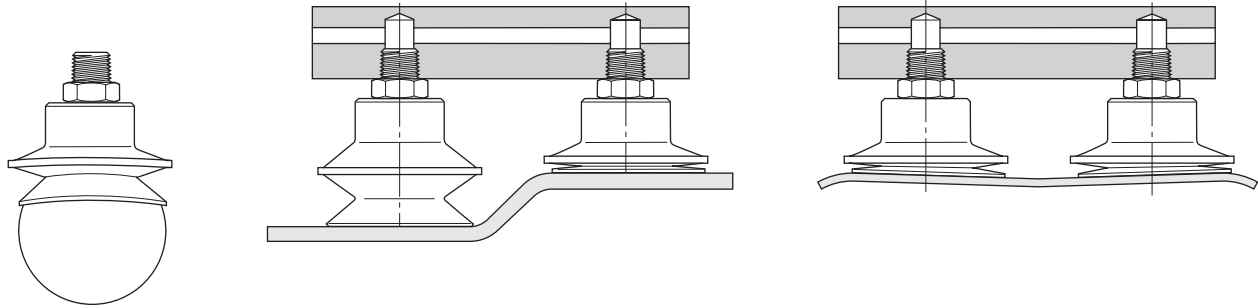
■ Most popular.



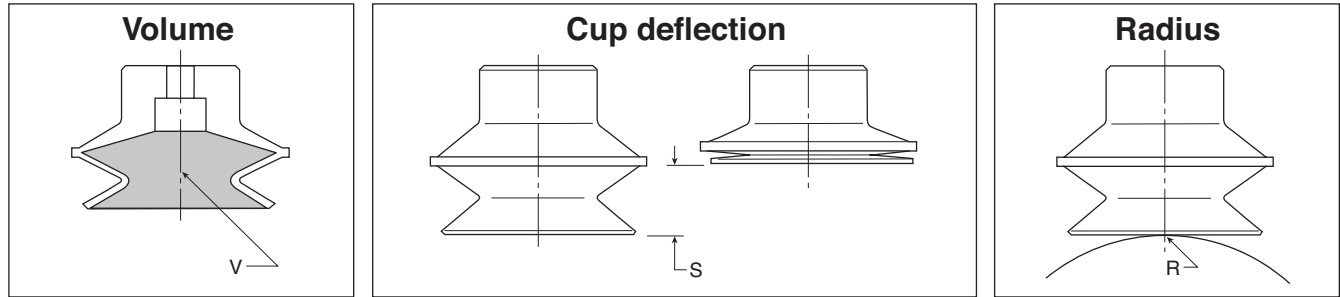
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Applications

- Round objects
- Uneven surfaces
- Curved product
- Level compensation
- Flexible product
- Soft seal lip



Main data for bellows PBG cups

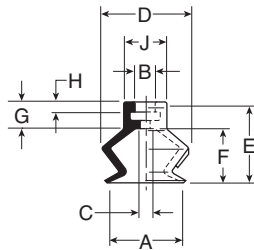


Model number	Cup diameter inches (mm)	Area cm <sup>2</sup>	Volume (V) liters	Lifting force @60% (N)		Cup deflection (S) (mm)	Radius (R) (mm)
PBG-10A-*	.39 (10)	0.79	.0002	4.80	—	.16 (4)	4
PBG-15A-*	.59 (15)	1.77	.0007	10.80	—	.24 (6)	6
PBG-20-*	.79 (20)	3.14	.001	19.20	—	.35 (9)	8
PBG-20B-*	.79 (20)	3.14	.001	19.20	—	.35 (9)	8
PBG-30-*	1.18 (30)	7.07	.004	43.2	—	.51 (13)	15
PBG-40-*	1.57 (40)	12.60	.009	76.9	—	.51 (13)	30
PBG-50-*	1.97 (50)	19.60	.026	120	—	.79 (20)	40
PBG-75-*	2.95 (75)	44.02	.076	270	—	.87 (22)	70
PBG-110-*	4.33 (110)	95.00	.111	434	—	1.14 (29)	100
PBG-150-*	5.91 (150)	176.70	.260	1081	—	1.50 (38)	130

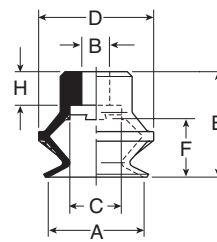
\* Cup material

**PBG Series Replacement Cup Dimensions**

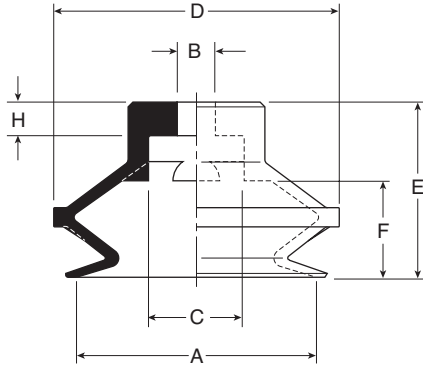
**PBG-10A and  
PBG-20B**



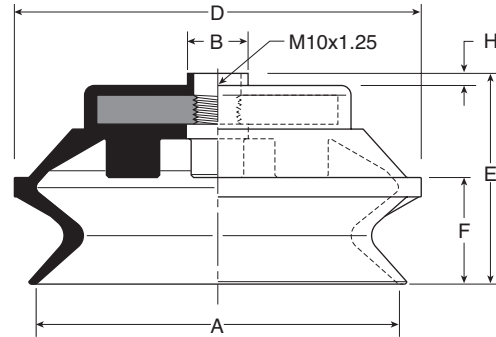
**PBG-20 thru  
PBG-40**



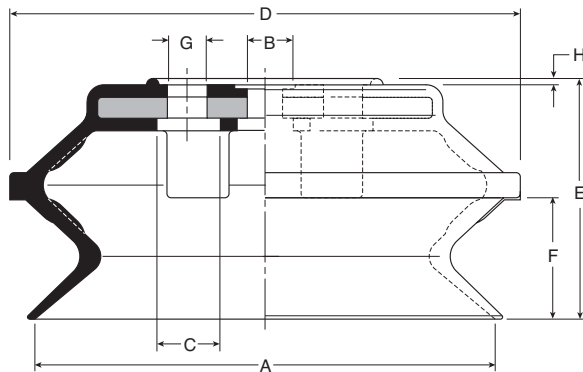
**PBG-50**



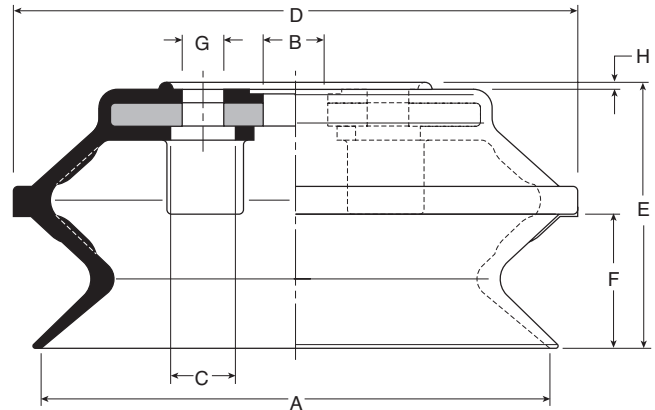
**PBG-75**



**PBG-110**



**PBG-150**



Model number	ØA	ØB	ØC	ØD	E	F	G	H	ØJ
PBG-10A-*	.42 (10.6)	.16 (4)	.08 (2)	.49 (12.4)	.53 (13.5)	.30 (7.5)	.24 (6)	.08 (2)	.24 (6)
PBG-15A-*	.59 (15)	.16 (4)	.16 (4)	.67 (17)	.63 (16)	.39 (10)	.24 (6)	.08 (2)	.24 (6)
PBG-20B-*	.79 (20)	.24 (6)	.43 (10.8)	.94 (24)	.87 (22)	.47 (12)	—	.28 (7)	—
PBG-20-*	.79 (20)	.18 (4.6)	.43 (10.8)	.94 (24)	.77 (19.5)	.47 (12)	—	.18 (4.5)	—
PBG-30-*	1.18 (30)	.23 (5.8)	.43 (10.8)	1.42 (36)	1.20 (30.5)	.67 (17)	—	.28 (7)	—
PBG-40-*	1.57 (40)	.23 (5.8)	.43 (10.8)	1.81 (46)	1.20 (30.5)	.61 (15.5)	—	.28 (7)	—
PBG-50-*	1.97(50)	.31 (7.8)	.78 (19.8)	2.34 (59.5)	1.44 (36.5)	.79 (20)	—	.28 (7)	—
PBG-75-*	2.95 (75)	.49 (12.5)	—	3.31 (84)	1.71 (43.5)	.87 (22)	—	.10 (2.5)	—
PBG-110-*	4.33 (110)	.55 (14)	.55 (14)	4.80 (122)	2.26 (57.5)	1.14 (29)	—	.059 (1.5)	—
PBG-150-*	5.91 (150)	.79 (20)	.55 (14)	6.57 (167)	3.01 (76.5)	1.50 (38)	4xØ9xØ40	.059 (1.5)	—

Inches (mm)  
\* Cup material

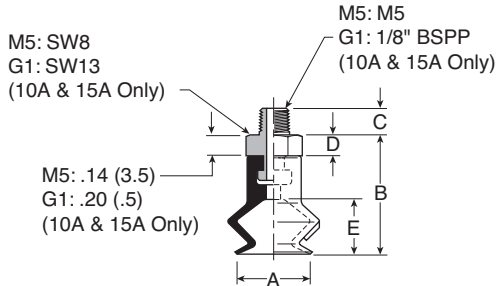
<b>A</b>
Technical
PBG Flat
PBG Bellows
P5V-CFS Flat
PJG Short Bellows
PCG Multiple Bellows
PUGB Flat Swivel
Cup Fittings



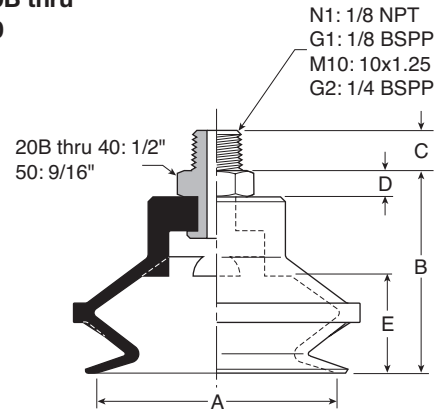
**Dimensions**

**A**

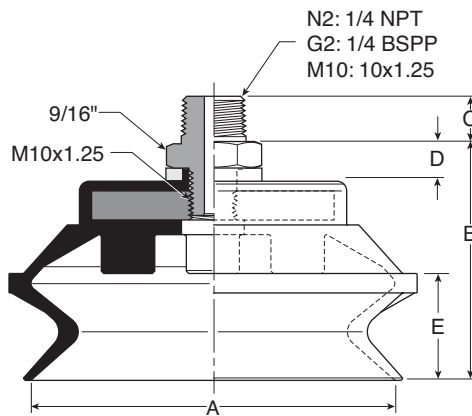
**PBTM-10A thru  
 PBTM-15**



**PBTM-20B thru  
 PBTM-50**



**PBTM-75**

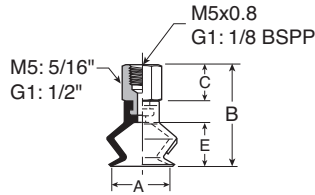


Model number	ØA	B	C (M5)	C (N1 / G1)	C (M10 / G2)	C (N2)	D	E
PBTM-10A-*†	.39 (10)	.67 (17)	.18 (4.5)	.31 (8)	—	—	See Dwg.	.30 (7.5)
PBTM-15A-*†	.59 (15)	.77 (19.5)	.18 (4.5)	.31 (8)	—	—	See Dwg.	.39 (10)
PBTM-20B-*†	.79 (20)	1.06 (27)	—	.31 (8)	.39 (10)	—	.20 (5)	.47 (12)
PBTM-30-*†	1.18 (30)	1.40 (35.5)	—	.31 (8)	.39 (10)	—	.20 (5)	.67 (17)
PBTM-40-*†	1.57 (40)	1.40 (35.5)	—	.31 (8)	.39 (10)	—	.20 (5)	.61 (15.5)
PBTM-50-*†	1.97 (50)	1.63 (41.5)	—	.31 (8)	.39 (10)	—	.20 (5)	.79 (20)
PBTM-75-*†	3.74 (95)	1.99 (50.5)	—	—	.39 (10)	.59 (15)	.28 (7)	.87 (22)

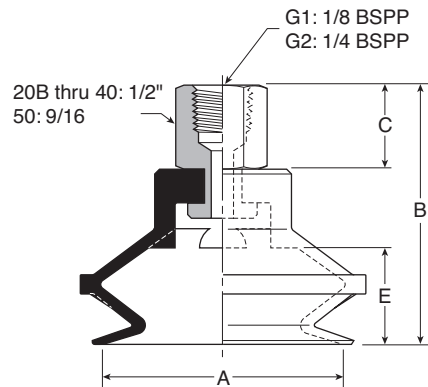
Inches (mm)  
 \* Cup material  
 † Thread size

**Dimensions**

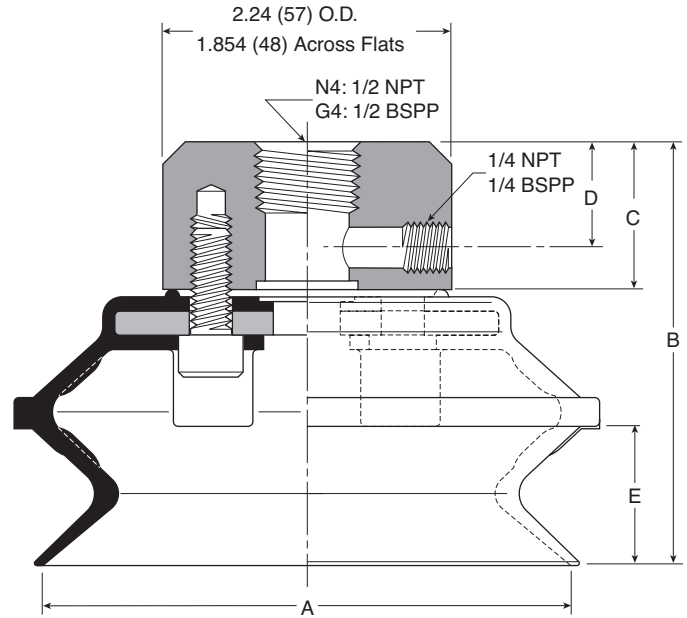
**PBTF-10A thru  
 PBTF-15A**



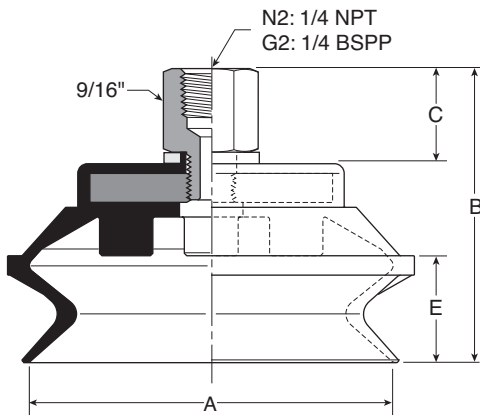
**PBTF-20B thru  
 PBTF 50**



**PBTF-110 thru  
 PBTF-150**



**PBTF-75**



Model number	ØA	B	B (M5)	C	C (M5)	D	E
PBTF-10A-*.†	.39 (10)	.85 (21.5)	1.08 (27.5)	.31 (8)	.55 (14)	—	.30 (7.5)
PBTF-15A-*.†	.59 (15)	.94 (24)	1.18 (30)	.31 (8)	.55 (14)	—	.39 (10)
PBTF-20B-*.†	.79 (20)	1.42 (36)	—	.55 (14)	—	—	.47 (12)
PBTF-30-*.†	1.18 (30)	1.75 (44.5)	—	.55 (14)	—	—	.70 (17)
PBTF-40-*.†	1.57 (40)	1.75 (44.5)	—	.55 (14)	—	—	.61 (15.5)
PBTF-50-*.†	1.97 (50)	1.99 (50.5)	—	.55 (14)	—	—	.79 (20)
PBTF-75-*.†	3.74 (95)	2.38 (60.5)	—	.77 (19.5)	—	—	.87 (22)
PBTF-110-*.†	4.72 (120)	3.07 (78)	—	.94 (24)	—	.51 (13)	1.14 (29)
PBTF-150-*.†	5.91 (150)	3.82 (97)	—	.94 (24)	—	.51 (13)	1.50 (38)

Inches (mm)  
 \* Cup material  
 † Thread size

**A**

Technical

PGF  
Flat

PBG  
Bellows

P5V-CFS  
Flat

PJG Short  
Bellows

PCG  
Multiple  
Bellows

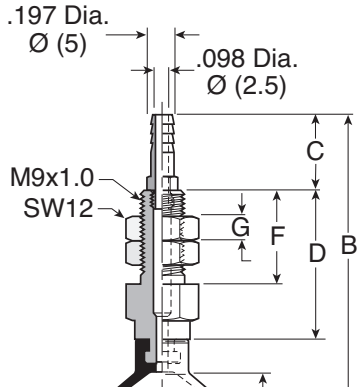
PUGB  
Flat Swivel

Cup  
Fittings

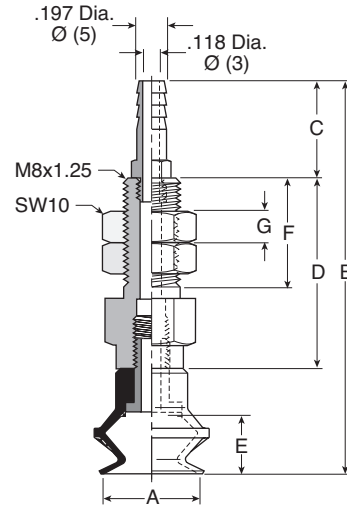
**Dimensions**

**A**

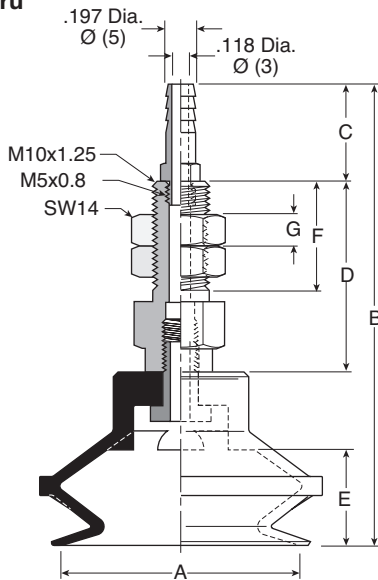
**PBTK-10A thru  
 PBTK-15A**



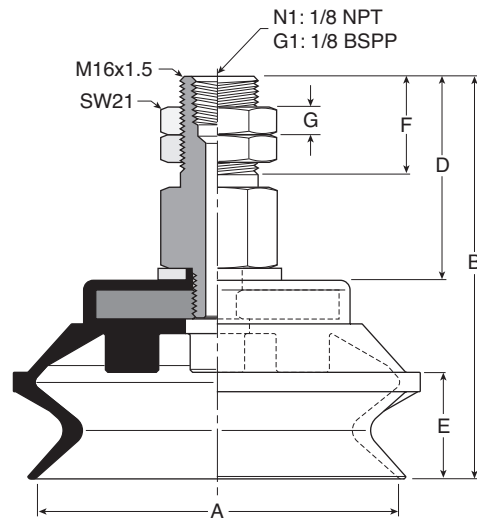
**PBTK-20**



**PBTK-30 thru  
 PBTK-50**



**PBTK-75**

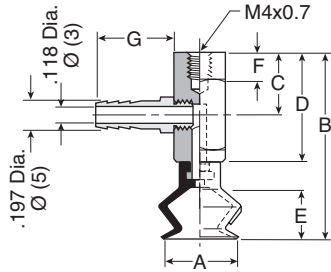


Model number	ØA	B	C	D	E	F	G	Wt oz (g)
PBTK-10A-*	.39 (10)	2.05 (52)	.39 (10)	.89 (22.5)	.30 (7.5)	.24 (6)	.61 (15.5)	.5 (15)
PBTK-15A-*	.59 (15)	2.15 (54.5)	.39 (10)	.89 (22.5)	.39 (10)	.24 (6)	.61 (15.5)	.5 (15)
PBTK-20-*	.79 (20)	2.26 (57.5)	.63 (16)	.87 (22)	.47 (12)	.24 (6)	.59 (15)	.7 (21)
PBTK-30-*	1.18 (30)	3.09 (78.5)	.63 (16)	1.26 (32)	.67 (17)	.24 (6)	.79 (20)	1.6 (45)
PBTK-40-*	1.57 (40)	3.09 (78.5)	.63 (16)	1.26 (32)	.61 (15.5)	.24 (6)	.79 (20)	1.7 (48)
PBTK-50-*	1.97 (50)	3.33 (84.5)	.63 (16)	1.26 (32)	.79 (20)	.24 (6)	.79 (20)	2.2 (62)
PBTK-75-*,†	3.74 (95)	3.29 (83.5)	—	1.67 (42.5)	.87 (22)	.43 (11)	—	6.5 (186)

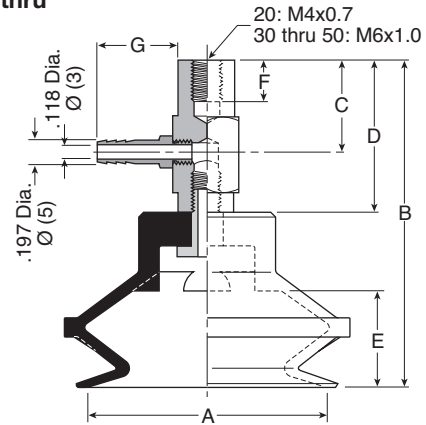
Inches (mm)  
 \* Cup material  
 † Vacuum port

**Dimensions**

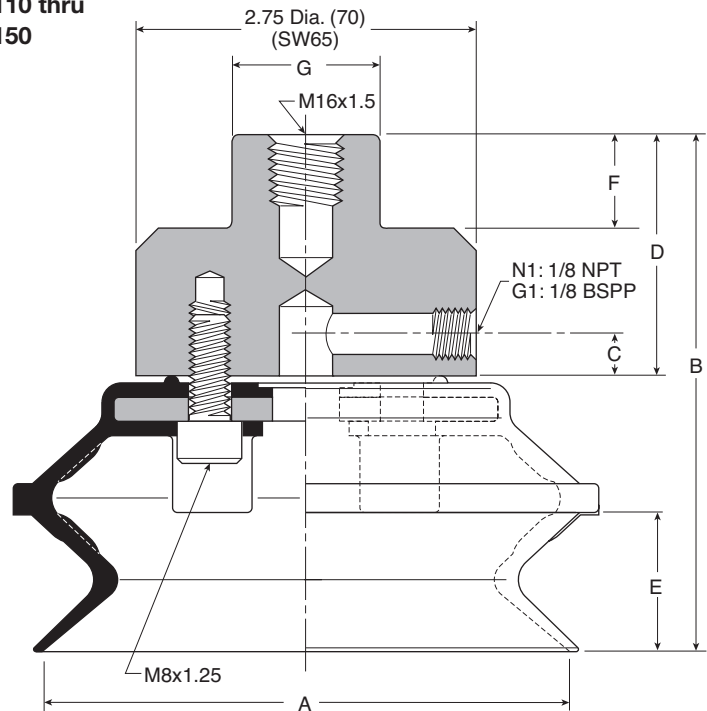
**PBYK-10A thru  
PBYK-15A**



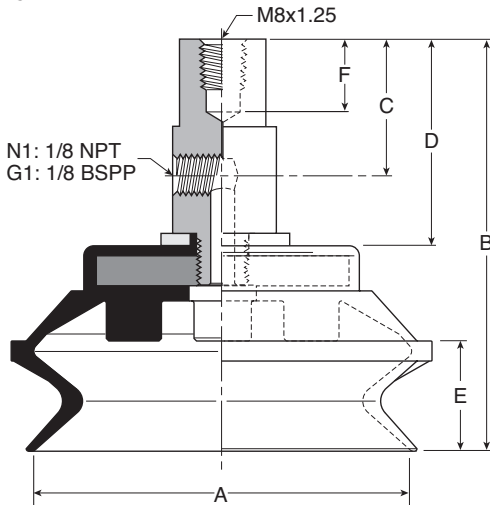
**PBYK-20 thru  
PBYK-50**



**PBYK-110 thru  
PBYK-150**



**PBYK-75**



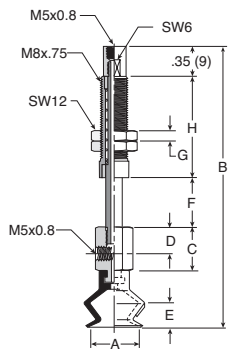
Model number	ØA	B	C	D	E	F	G	Wt oz (g)
PBYK-10A-*	.39 (10)	1.42 (36)	.51 (13)	.89 (22.5)	.29 (7.5)	.24 (6)	.63 (16)	.6 (16)
PBYK-15A-*	.59 (15)	1.52 (38.5)	.51 (13)	.89 (22.5)	.39 (10)	.24 (6)	.63 (16)	.6 (16)
PBYK-20-*	.79 (20)	1.63 (41.5)	.55 (14)	.87 (22)	.47 (12)	.24 (6)	.63 (16)	.7 (21)
PBYK-30-*	1.18 (30)	2.46 (62.5)	.79 (20)	1.26 (32)	.67 (17)	.24 (6)	.63 (16)	1.6 (45)
PBYK-40-*	1.57 (40)	2.46 (62.5)	.79 (20)	1.26 (32)	.61 (15.5)	.24 (6)	.63 (16)	2.0 (58)
PBYK-50-*	1.97 (50)	2.70 (68.5)	.79 (20)	1.26 (32)	.78 (20)	.24 (6)	.63 (16)	2.4 (67)
PBYK-75-*,†	3.74 (95)	3.29 (83.5)	1.10 (28)	1.67 (42.5)	.86 (22)	.43 (11)	—	6.9 (176)
PBYK-110-*,†	4.72 (120)	4.17 (106)	.47 (12)	1.97 (50)	1.14 (29)	.79 (20)	1.18 Dia. (30)	26.4 (670)
PBYK-150-*,†	5.91 (150)	4.92 (125)	.47 (12)	1.97 (50)	1.50 (38)	.79 (20)	1.18 Dia. (30)	46.5 (1180)

Inches (mm)  
\* Cup material  
† Vacuum port

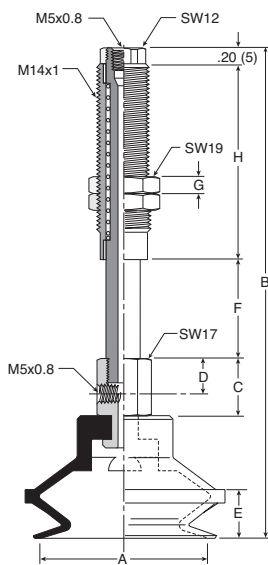
<b>A</b>
Technical
PFG Flat
PBG Bellows
P5V-CFS Flat
PJG Short Bellows
PCG Multiple Bellows
PUGB Flat Swivel
Cup Fittings

**Dimensions**

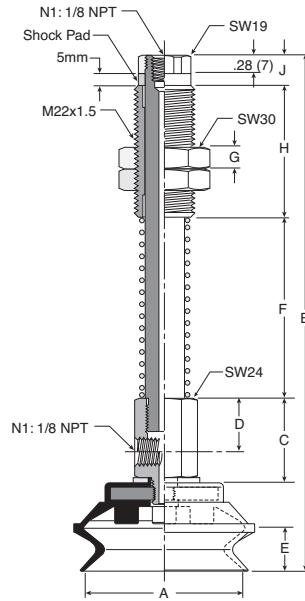
**PBTYS10A thru  
PBTYS15A1**



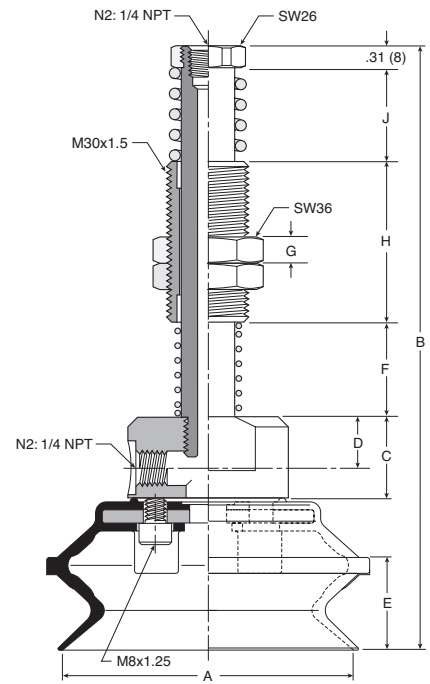
**PBTYS20B thru  
PBTYS50**



**PBTYS75**



**PBTYS110 thru  
PBTYS150**



Model number	ØA	B	C	D	E	F	G	H	J	Wt oz (g)
PBTYS10A10*	.39 (10)	2.70 (68.5)	.51 (13)	.31 (8)	.30 (7.5)	.39 (10)	.12 (3)	.91 (23)	—	.65 (18.5)
PBTYS10A15*	.39 (10)	3.19 (81)	.51 (13)	.31 (8)	.30 (7.5)	.59 (15)	.12 (3)	1.20 (30.5)	—	.7 (21)
PBTYS15A10*	.59 (15)	2.80 (71)	.51 (13)	.31 (8)	.39 (10)	.39 (10)	.12 (3)	.91 (23)	—	.65 (18.5)
PBTYS15A15*	.59 (15)	3.29 (83.5)	.51 (13)	.31 (8)	.39 (10)	.59 (15)	.12 (3)	1.20 (30.5)	—	.7 (21)
PBTYS20B15*	.79 (20)	3.90 (99)	.67 (17)	.39 (10)	.47 (12)	.59 (15)	.20 (5)	1.42 (36)	—	2.5 (72)
PBTYS20B30*	.79 (20)	5.36 (136)	.67 (17)	.39 (10)	.47 (12)	1.18 (30)	.20 (5)	2.28 (58)	—	3.4 (97)
PBTYS3015†	1.18 (30)	4.07 (103.5)	.67 (17)	.39 (10)	.67 (17)	.59 (15)	.20 (5)	1.42 (36)	—	3.4 (97)
PBTYS3030†	1.18 (30)	5.53 (140.5)	.67 (17)	.39 (10)	.67 (17)	1.18 (30)	.20 (5)	2.28 (58)	—	3.6 (102)
PBTYS4015†	1.57 (40)	4.07 (103.5)	.67 (17)	.39 (10)	.61 (15.5)	.59 (15)	.20 (5)	1.42 (36)	—	2.9 (83)
PBTYS4030†	1.57 (40)	5.53 (140.5)	.67 (17)	.39 (10)	.61 (15.5)	1.18 (30)	.20 (5)	2.28 (58)	—	3.8 (108)
PBTYS5015†	1.97 (50)	4.31 (109.5)	.67 (17)	.39 (10)	.78 (20)	.59 (15)	.20 (5)	1.42 (36)	—	3.4 (97)
PBTYS5030†	1.97 (50)	5.77 (146.5)	.67 (17)	.39 (10)	.78 (20)	1.18 (30)	.20 (5)	2.28 (58)	—	4.3 (122)
PBTYS7530†	2.95 (75)	7.01 (178)	1.28 (32.5)	.78 (20)	.87 (22)	1.77 (45)	.39 (10)	1.97 (50)	.47 (12)	12 (339)
PBTYS7550†	2.95 (75)	7.99 (203)	1.28 (32.5)	.78 (20)	.87 (22)	2.76 (70)	.39 (10)	1.97 (50)	.47 (12)	13 (373)
PBTYS11020†	4.33 (110)	8.82 (224)	1.18 (30)	.71 (18)	1.14 (29)	1.38 (35)	.39 (10)	2.36 (60)	1.38 (35)	42 (1194)
PBTYS11070†	4.33 (110)	11.38 (289)	1.18 (30)	.71 (18)	1.14 (29)	3.94 (100)	.39 (10)	2.36 (60)	1.38 (35)	45 (1276)
PBTYS15020†	5.91 (150)	9.57 (243)	1.18 (30)	.71 (18)	1.50 (38)	1.38 (35)	.39 (10)	2.36 (60)	1.38 (35)	60 (1704)
PBTYS15070†	5.91 (150)	12.13 (308)	1.18 (30)	.71 (18)	1.50 (38)	3.94 (100)	.39 (10)	2.36 (60)	1.38 (35)	63 (1786)

Inches (mm)  
\* Cup material  
† Vacuum port