

A

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°	-30° to +120°
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

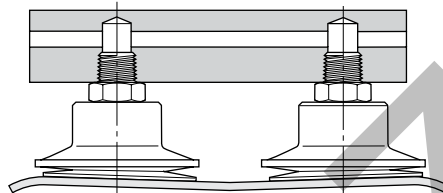
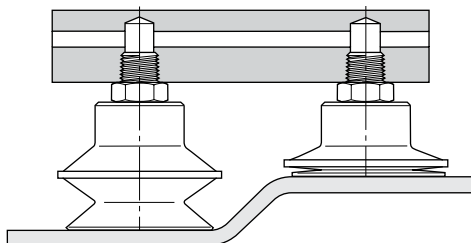
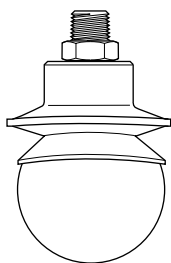
Flat surface, thin section	Flat surface, any section	Slightly bowed surface, thin section	Slightly bowed surface, any section	Bowed surface, thin section	Bowed surface, any section	Soft porous material, any section	Differences in heights and levels	Corrugated sheet handling	Not for vertical lift	Metal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

Applications

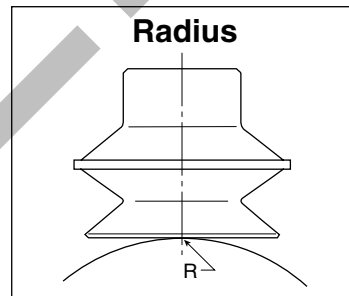
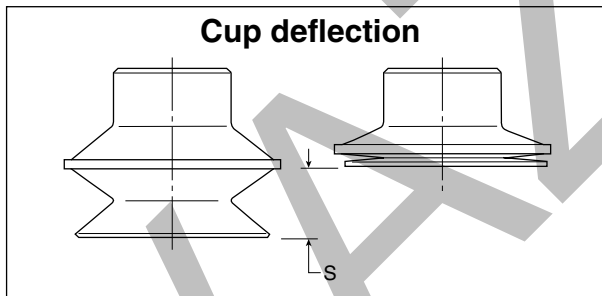
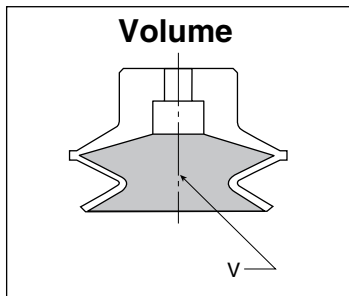
- Round objects

- Uneven surfaces
- Curved product
- Level compensation

- Flexible product
- Soft seal lip



Main data for bellows PBG cups

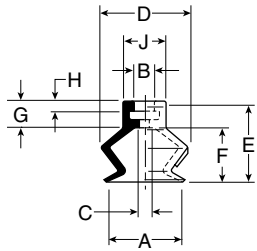


Model number	Cup diameter mm	Area cm ²	Volume (V) liters	Lifting force @60% (N)		Cup deflection (S) mm	Radius (R) mm
PBG-10A-*	10	0.79	.0002	4.80	—	4	4
PBG-15A-*	15	1.77	.0007	10.80	—	6	6
PBG-20-*	20	3.14	.001	19.20	—	9	8
PBG-20B-*	20	3.14	.001	19.20	—	9	8
PBG-30-*	30	7.07	.004	43.2	—	13	15
PBG-40-*	40	12.60	.009	76.9	—	13	30
PBG-50-*	50	19.60	.026	120	—	20	40
PBG-75-*	75	44.02	.076	270	—	22	70
PBG-110-*	110	95.00	.111	434	—	29	100
PBG-150-*	150	176.70	.260	1081	—	38	130

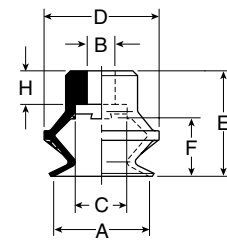
* Cup material

PBG Series Replacement Cup Dimensions

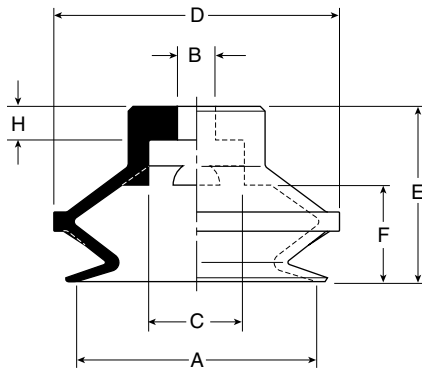
**PBG-10A and
 PBG-20B**



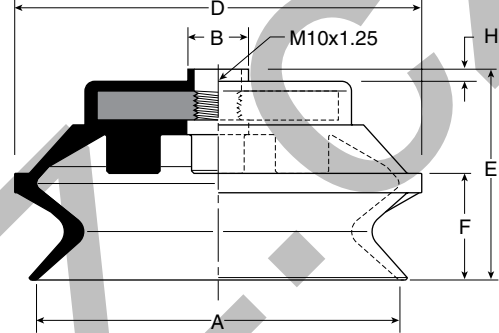
**PBG-20 thru
 PBG-40**



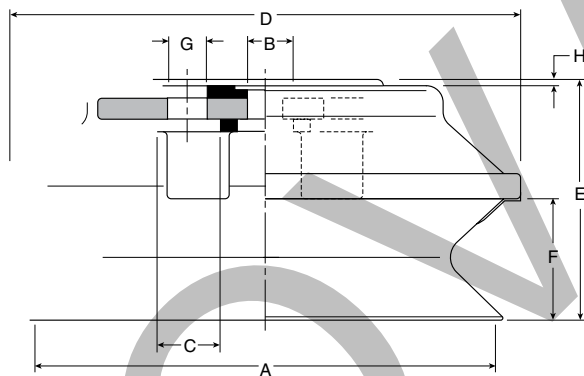
PBG-50



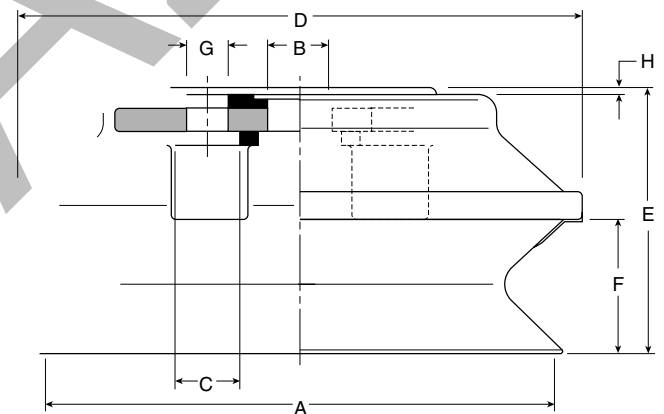
PBG-75



PBG-110



PBG-150



Dimensions (mm)

Model number	ØA	ØB	ØC	ØD	E	F	G	H	ØJ
PBG-10A-*	10.6	4	2	12.4	13.5	7.5	6	2	6
PBG-15A-*	15	4	4	17	16	10	6	2	6
PBG-20B-*	20	6	10.8	24	22	12	—	7	—
PBG-20-*	20	4.6	10.8	24	19.5	12	—	4.5	—
PBG-30-*	30	5.8	10.8	36	30.5	17	—	7	—
PBG-40-*	40	5.8	10.8	46	30.5	15.5	—	7	—
PBG-50-*	50	7.8	19.8	59.5	36.5	20	—	7	—
PBG-75-*	75	12.5	—	84	43.5	22	—	2.5	—
PBG-110-*	110	14	14	122	57.5	29	—	1.5	—
PBG-150-*	150	20	14	167	76.5	38	4xØ9xØ40	1.5	—

* Cup material

