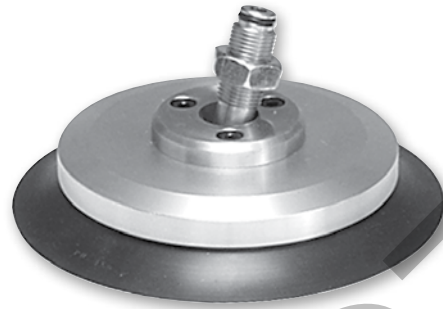


A

30° inclusive swivel, single lip cup for smooth, slightly curved surfaces and flexible products. Rigid construction provides good stability against acceleration and deceleration forces during product transfer.

The single edge swivel cup is for smooth surfaces with slightly curved surfaces or flexible sheets with substantial weights. Typically, lift capacities and break away forces are higher for flat cups which may be necessary for good stability during lift and transfer. The position of the internal swivel joint minimizes moments during lift and transfer. The swivel joint compensates for load and angular misalignment instead of the cup material, prolonging cup life. Maintenance costs are minimized by replacing only the cup portion of the assembly.



Features

- Internal swivel joint design
- 30° Inclusive angle for flexible products
- Increased stability for horizontal lifts
- Lower maintenance costs
- 60mm to 100mm diameters

Styles

- PUTYK series barbed bulkhead
- PUTYS series bulkhead level compensator

Specifications

Suction cup material	Nitrile (NBR)	Silicon (SI)
Operating temperature (°C)	-20° to +120°	-60° to +250°
Color	Black	White
Hardness, shore A (°Sh)	55 ±5	55 ±5

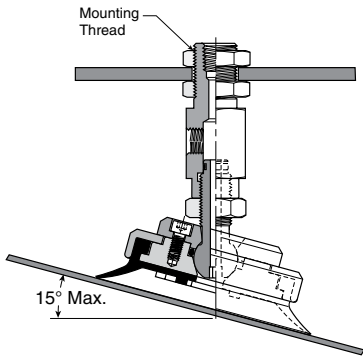
Application guide

Swivel Bellows

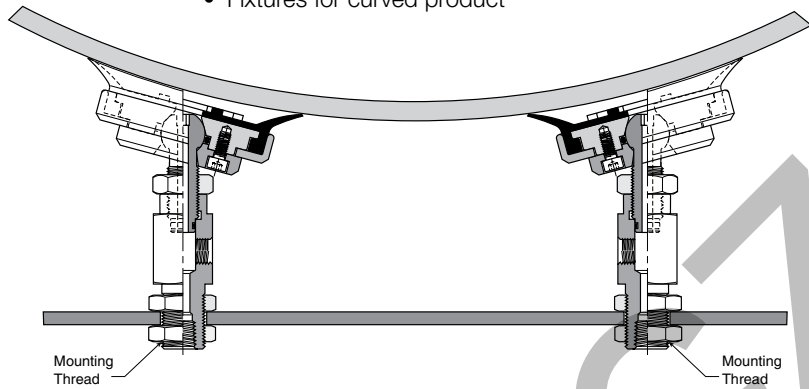
Flat surface, thin section	Flat surface, any section	Slightly bowed surface, thin section	Slightly bowed surface, any section	Metal sheet handling	Not for vertical lift

Applications

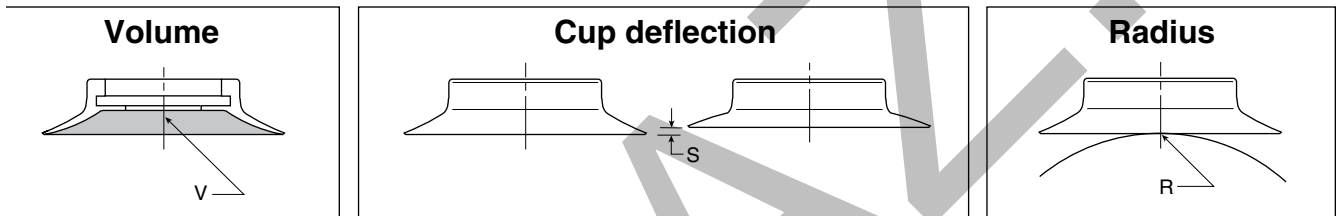
- Angles pickup



- Fixtures for curved product



Main data for swivel bellows PUG cups

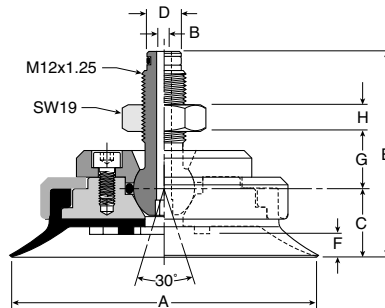


Model number	Cup diameter mm	Area cm ²	Volume (V) liters	Lifting force @ 60% (N)		Cup deflection (S) mm	Radius R (mm)
PUGB-60-*	60	28.3	0.0090	173	—	5	70
PUGB-80-*	80	50.3	0.025	308	—	6	100
PUGB-100-*	100	78.5	0.045	480	—	6	150

* Cup material

PUGB Series Barbed Bulkhead Dimensions

PUGB-60 thru
PUGB-100



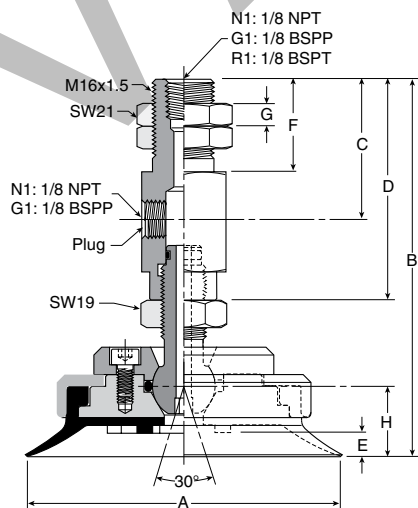
Dimensions (mm)

Model number	ØA	ØB	C	ØD	E	F	G	H
PUGB-60-*	60	3.9	16	9	52	5	15	7
PUGB-80-*	80	3.9	18	9	54	6	15	7
PUGB-100-*	100	3.9	18	9	54	6	15	7

* Cup material

PUTYK Series Barbed Bulkhead Dimensions

PUTYK-60 thru
PUTYK-100



Dimensions (mm)

Model number	ØA	B	C	D	E	F	G	H	Wt g
PUTYK-60-*	60	93	16	48	5	23	6	16	352
PUTYK-80-*	80	95	35	55	6	23	6	18	444
PUTYK-100-*	100	95	35	55	6	23	6	18	568

* Cup material





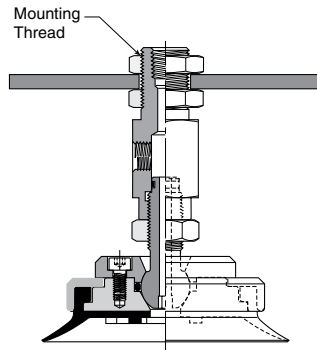
PUTYK Series Barbed Bulkhead

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

Installation

Note:

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



Cup size	Vacum port	Cup material Nitrile assembly (NBR)	Replacement PUGB swivel with cup only	Replacement cup only (NBR)	Cup fitting
60	1/8 BSPP	PUTYK-60-NBR-G1	PUGB-60-NBR	PUG-60-NBR	UTYK-60-G1
80	1/8 BSPP	PUTYK-80-NBR-G1	PUGB-80-NBR	PUG-80-NBR	UTYK-60-G1
100	1/8 BSPP	PUTYK-100-NBR-G1	PUGB-100-NBR	PUG-100-NBR	UTYK-60-G1

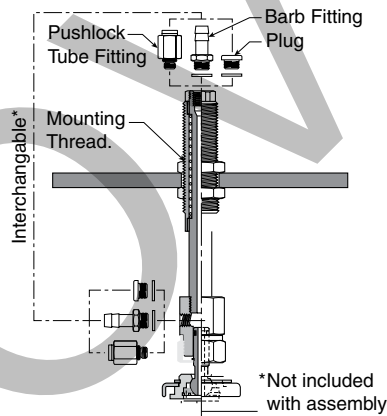
PUTYS Series Bulkhead Level Compensator

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:

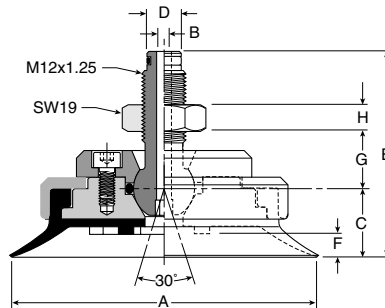
When installing cup assemblies, use a sealant material to secure the assembly and prevent vacuum leakage. Shown are interchangeable connectors & plugs for port connections.



Cup diameter (mm)	Vacum port	Stroke (mm)	Spring compression Force lbf (N)		PUTYS assembly (NBR)	Replacement PUGB swivel with cup only	Replacement cup only NBR	Level compensator P/N
			0%	100%				
60	1/8 BSPP	30	1.6 (6.8)	3.6 (15.6)	PUTYS6030NBRG1	PUGB-60-NBR	PUG-60-NBR	UTYS-60-30-G1
60	1/8 BSPP	50	1.9 (8.3)	4.5 (19.6)	PUTYS6050NBRG1	PUGB-60-NBR	PUG-60-NBR	UTYS-60-50-G1
80	1/8 BSPP	30	1.6 (6.8)	3.6 (15.6)	PUTYS8030NBRG1	PUGB-80-NBR	PUG-80-NBR	UTYS-60-30-G1
80	1/8 BSPP	50	1.9 (8.3)	4.5 (19.6)	PUTYS8050NBRG1	PUGB-80-NBR	PUG-80-NBR	UTYS-60-50-G1
100	1/8 BSPP	30	1.6 (6.8)	3.6 (15.6)	PUTYS10030NBRG1	PUGB-100-NBR	PUG-100-NBR	UTYS-60-30-G1
100	1/8 BSPP	50	1.9 (8.3)	4.5 (19.6)	PUTYS10050NBRG1	PUGB-100-NBR	PUG-100-NBR	UTYS-60-50-G1

PUGB Series Barbed Bulkhead Dimensions

PUGB-60 thru
PUGB-100



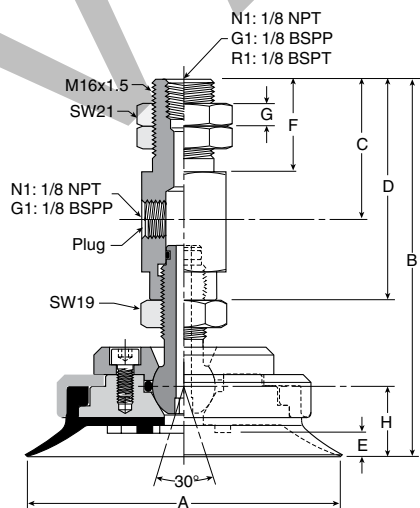
Dimensions (mm)

Model number	ØA	ØB	C	ØD	E	F	G	H
PUGB-60-*	60	3.9	16	9	52	5	15	7
PUGB-80-*	80	3.9	18	9	54	6	15	7
PUGB-100-*	100	3.9	18	9	54	6	15	7

* Cup material

PUTYK Series Barbed Bulkhead Dimensions

PUTYK-60 thru
PUTYK-100



Dimensions (mm)

Model number	ØA	B	C	D	E	F	G	H	Wt g
PUTYK-60-*	60	93	16	48	5	23	6	16	352
PUTYK-80-*	80	95	35	55	6	23	6	18	444
PUTYK-100-*	100	95	35	55	6	23	6	18	568

* Cup material

A



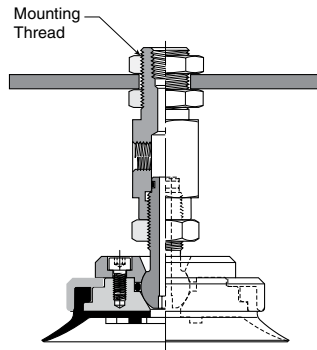
PUTYK Series Barbed Bulkhead

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

Installation

Note:

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



Cup size	Vacum port	Cup material Nitrile assembly (NBR)	Replacement PUGB swivel with cup only	Replacement cup only (NBR)	Cup fitting
60	1/8 BSPP	PUTYK-60-NBR-G1	PUGB-60-NBR	PUG-60-NBR	UTYK-60-G1
80	1/8 BSPP	PUTYK-80-NBR-G1	PUGB-80-NBR	PUG-80-NBR	UTYK-60-G1
100	1/8 BSPP	PUTYK-100-NBR-G1	PUGB-100-NBR	PUG-100-NBR	UTYK-60-G1

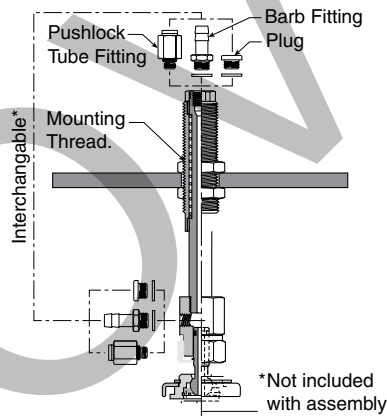
PUTYS Series Bulkhead Level Compensator

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.

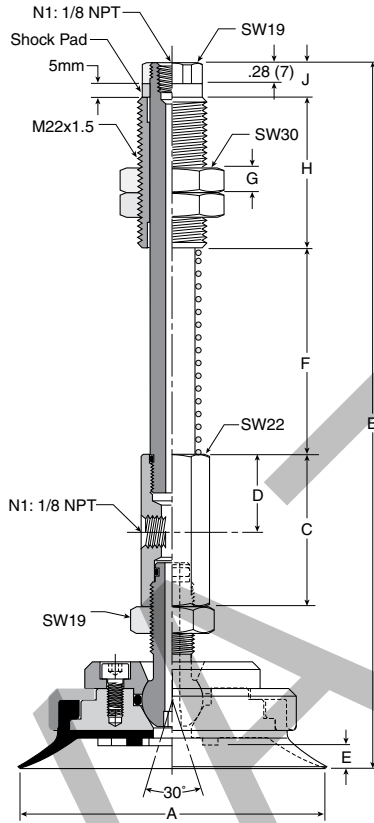


Cup diameter (mm)	Vacum port	Stroke (mm)	Spring compression Force lbf (N)		PUTYS assembly (NBR)	Replacement PUGB swivel with cup only	Replacement cup only NBR	Level compensator P/N
			0%	100%				
60	1/8 BSPP	30	1.6 (6.8)	3.6 (15.6)	PUTYS6030NBRG1	PUGB-60-NBR	PUG-60-NBR	UTYS-60-30-G1
60	1/8 BSPP	50	1.9 (8.3)	4.5 (19.6)	PUTYS6050NBRG1	PUGB-60-NBR	PUG-60-NBR	UTYS-60-50-G1
80	1/8 BSPP	30	1.6 (6.8)	3.6 (15.6)	PUTYS8030NBRG1	PUGB-80-NBR	PUG-80-NBR	UTYS-60-30-G1
80	1/8 BSPP	50	1.9 (8.3)	4.5 (19.6)	PUTYS8050NBRG1	PUGB-80-NBR	PUG-80-NBR	UTYS-60-50-G1
100	1/8 BSPP	30	1.6 (6.8)	3.6 (15.6)	PUTYS10030NBRG1	PUGB-100-NBR	PUG-100-NBR	UTYS-60-30-G1
100	1/8 BSPP	50	1.9 (8.3)	4.5 (19.6)	PUTYS10050NBRG1	PUGB-100-NBR	PUG-100-NBR	UTYS-60-50-G1

Dimensions

**PUTYS60 thru
 PUTYS100**

A



Dimensions (mm)

Model number	ØA	B	C	D	E	F	G	H	J	Wt g
PUTYS6030*	60	185	40	20	5	45	10	50	12	487
PUTYS6050*	60	210	40	20	5	70	10	50	12	521
PUTYS8030*	80	187	40	20	6	45	10	50	12	559
PUTYS8050*	80	212	40	20	6	70	10	50	12	595
PUTYS10030*	30	187	40	20	6	45	10	50	12	729
PUTYS10050*	30	212	40	20	6	70	10	50	12	756

* Cup material

PUYK Vacuum Cup Assemblies



Model Number Index

PUYK - 10 - NBR

Cup Diameter [mm]			
10	10	30	30
15	15	35	35
20	20	40	40
25	25	50	50

Cup Material	
NBR	Nitrile Rubber
SI	Silicone

More materials on request.
Please see page 8 for material specifications.

PUTYK - 60 - NBR - G1

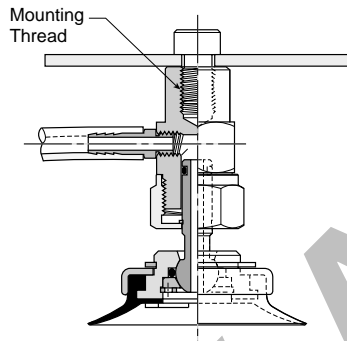
Cup Diameter [mm]			
60	60	120	120
80	80	150	150
100	100	200	200

Vacuum Port	
Blank	Barb
G1	1/8 BSPP
G2	1/4 BSPP
See Chart Below	

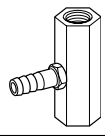
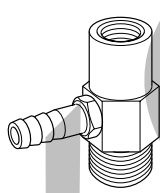
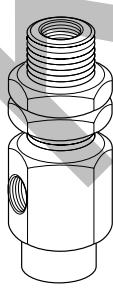
Installation

Note:

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



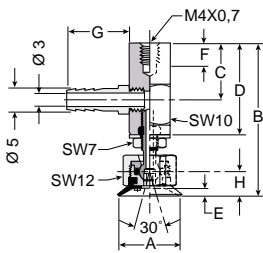
90° Barbed Adapter for PUGB Cups

PUGB Cup Diameter [mm]	UYK Fitting Part Number	Mounting Thread
 10 15	UYK-10	M4x0,7 Female
 20 25 30 35 40 50	UYK-20 UYK-40	M6x1 Female M8x1,25 Female
 60 80 100 120 150 200	UTYK-60-G1 UTYK-120-G1 UTYK-200-G2	M16x1,5 Male M22x1,5 Male M22x1,5 Male

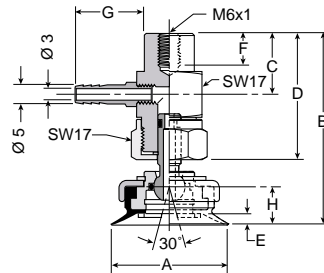
Millimeter

Dimensions

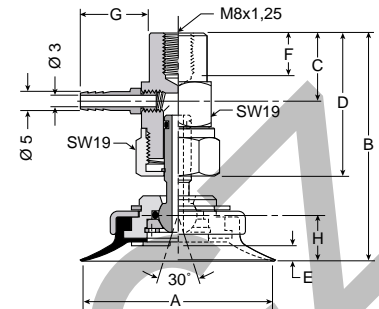
PUYK-10 thru
PUYK-15



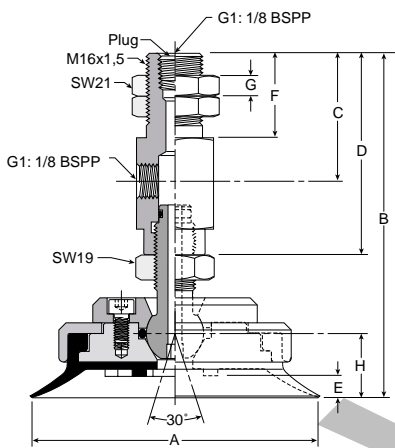
PUYK-20 thru
PUYK-35



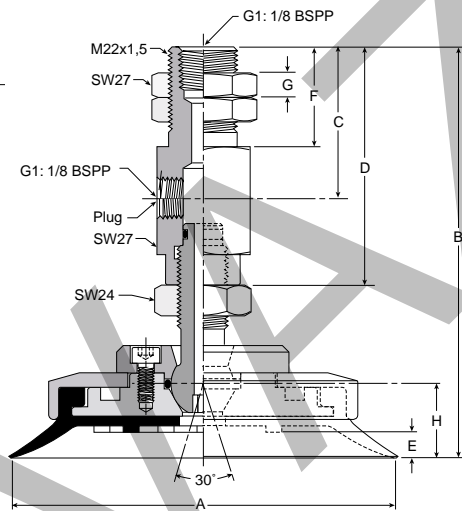
PUYK-40 and
PUYK-50



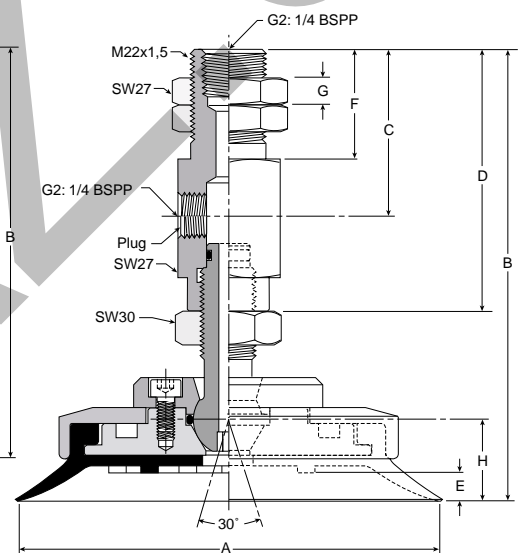
PUTYK-60 thru
PUTYK-100



PUTYK-120 thru
PUTYK-150



PUTYK-200



Model Number	ØA	B	C	D	E	F	G	H	Wt [g]
PUYK-10*	10	36,5	14	22,5	1	6	21	5	20
PUYK-15*	15	37,5	14	22,5	1,4	6	21	5	20
PUYK-20*	20	49	16	33	2	8	24,5	9	66
PUYK-25*	25	49,5	16	33	2,5	8	24,5	9,5	66
PUYK-30*	30	50	16	33	2	8	24,5	10	73
PUYK-35*	35	51	16	33	3	8	24,5	11	73
PUYK-40*	40	59	18	38	3	10	25,5	11	116
PUYK-50*	50	60	18	38	4	10	25,5	12	117
PUTYK-60*	60	93	35	55	5	23	6	16	352
PUTYK-80*	80	95	35	55	6	23	6	18	444
PUTYK-100*	100	95	35	55	6	23	6	18	568
PUTYK-120*	120	128	46	75	8	32	8	23	63
PUTYK-150*	150	130	46	75	10	32	8	25	1107
PUTYK-200*	200	140	46	79	12	32	8	29	2340

Millimeter

* Cup Material