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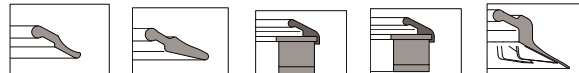



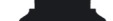











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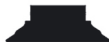





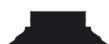





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Suction cup selection

Suction cup category		Features	Applications
	piGRIP® Modular suction cups	<ul style="list-style-type: none"> ▶ Unique modular suction cup concept with individually optimized lips and bellows for gripping, lifting and height compensation on almost any kind of object. ▶ A large selection of fittings makes piGRIP® cups ready to fit new machines and easy to retrofit. ▶ The material is 100% recyclable. ▶ Available in FDA approved qualities; silicone (PWIS) free and mark free versions. ▶ The combination of firm bellows and soft lips will allow for high machine speeds. 	Smooth, textured, uneven and also very rough surfaces on objects such as plastic pieces, wood, sheet metal (dry), glass, corrugated cardboard, carton, food, tiles, etc.
	DURAFLEX® Single durometer	<ul style="list-style-type: none"> ▶ Manufactured in a material that features the elasticity of rubber and wear resistance of polyurethane. ▶ The material is silicone free and mark free. ▶ Has an exceptional elastic memory. ▶ The single durometer DURAFLEX® cups are extra wear resistant and long lasting. 	Smooth surfaces on objects such as plastic pieces, furniture parts, sheet metal (dry), glass, solar panels, etc.
	DURAFLEX® Dual durometer	<ul style="list-style-type: none"> ▶ Manufactured in a material that features the elasticity of rubber and wear resistance of polyurethane. ▶ The material is silicone free and mark free. ▶ Has an exceptional elastic memory. ▶ The dual durometer DURAFLEX® cups have firm bellows or body and a soft pliable lip. ▶ The suction cup is then stable, durable and flexible with excellent sealing properties. 	Textured, uneven and also very rough surfaces on objects such as plastic pieces, wood, sheet metal (dry), glass, corrugated cardboard, carton, tiles, etc.
	DURAFLEX® Friction	<ul style="list-style-type: none"> ▶ Manufactured in a material that features the elasticity of rubber and wear resistance of polyurethane. ▶ The material is silicone free and mark free. ▶ Has an exceptional elastic memory. ▶ Have an exceptional grip/shear force on oily surfaces. ▶ Wear on the cups will not degrade the shear/grip performance, it will improve. ▶ These cups are outstanding for handling oily metal sheets with high speed and accelerations. 	Oily metal sheets and other lubricated surfaces.
	DURAFLEX® Bag	<ul style="list-style-type: none"> ▶ Manufactured in a material that features the elasticity of rubber and wear resistance of polyurethane. ▶ The material is silicone free and mark free. ▶ Has an exceptional elastic memory. ▶ Specially designed for plastic bag handling. ▶ The unique suction cup fitting allows the high initial flow needed for a secure grip. ▶ The dual-hardness suction cup with soft lip and firm bellows offers better sealing capabilities. ▶ Stable and secure handling. 	Plastic bag handling.

Model/Size range (mm)					
Model 25-77		Lip type (S, FX, FLIS, FLIF, BG)			
					
10-110 (B, BX)	80-110 (BF)	20-150 (F, FC)	20 (U)	20x60-65x170 (OB, OBL)	10x30-70x175 (OC, OF)
					
10-110 (B, BX)	80-110 (BF)	75-110 (F)	35x90-65x170 (OB)		
					
40-110 (BFF)	35-125 (FCF)	35x90-65x170 (OBF)	20x80-40x110 (OCF)		
					
30-50 (BL)					
					

Suction cup category		Features	Applications
	Silicone	<ul style="list-style-type: none"> ▶ Durable and food grade silicone material (FDA approved). ▶ Soft and pliable. ▶ Possible to get a good grip on non-smooth surfaces, e.g. food parts. ▶ Wide temperature range. ▶ Available from very small sizes. ▶ Options with detectable silicone material and conductive/anti-static silicone. 	Contact with food or FDA environments, packages, pre-coloured plastic parts (high temperature) , bakery (detectable), electronics/semiconductor (conductive/anti-static).
	Silicone Bag	<ul style="list-style-type: none"> ▶ Durable and food grade silicone material (FDA approved). ▶ Soft and pliable. ▶ Tailor-made for handling different types of bags and pouches with varying content. ▶ The design is optimized for uneven, wrinkled bags and pouches. ▶ It will minimize the “surface leakage” and maximize the grip. ▶ The unique fitting allows the high initial flow needed for a secure grip. 	Bags with fragile contents and food, bags with liquids, viscous contents and frozen food, “easy” bags, open bags.
	Nitrile-PVC and CR	<ul style="list-style-type: none"> ▶ Oil, petrol and ozone resistant material. ▶ Larger sizes are made of Nitrile-PVC and smaller sizes of CR (Chloroprene). 	Conventional suction cup material for general purposes.
	TPU	<ul style="list-style-type: none"> ▶ Probably the most mark-free suction cups on the market! (Almost all suction cups will leave detectable marks or traces on a “micro” level, some washable, others not. Tests have proven that these TPU cups are the best options when marks are not allowed.) 	Solar panels, glass, displays, screens.
	HNBR	<ul style="list-style-type: none"> ▶ High temperature applications where silicone or other paint-wetting impairment substances (PWIS) are not allowed. ▶ Made of HNBR. ▶ Very durable and wear resistant. 	Removing hot plastic parts from injection molding equipment, glass handling.

Model/Size range (mm)				
5-150 (B, BBL) 	15-150 (F) 	15-50 (D) 	2-50 (U) 	
20-50 (BL) 	15 (U) 			
5-150 (B, BL) 	15-150 (F) 	15-50 (D) 	4-50 (U) 	60x140 (OC) 
15-20 (B) 	15-20 (F) 			
20-110 (B) 	50-110 (F) 			

Material resistance

Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
Conductive silicone, CSIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Thermoeleastic polyurethane, TPU	Excellent	Excellent	Excellent	Poor	Poor	Poor	Good	Good
Polyurethane, PUR	Excellent	Excellent	Excellent	Poor	Fair	Poor	Fair	Good
Ethylene propylene, EPDM	Fair	Poor	Excellent	Good	Poor	Poor	Excellent	Excellent
Nitrile, NBR	Excellent	Excellent	Fair	Good	Good	Fair	Good	Good
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Polyurethane, PU	Excellent	Excellent	Excellent	Fair*	Fair	Fair*	Fair	Poor	Poor

*Please contact Piab.

Material	FDA approved	PWIS free	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Acids	Ethanol	Methanol oxidation
TPE (piGRIP® Support)	No	Yes	Excellent	Excellent	Excellent	Fair	Poor	Poor	Good	Good
TPE (piGRIP® Lip)	Yes	No	Fair	Poor	Excellent	Poor	Poor	Poor	Excellent	Good

Examples of applications

	Chloroprene CR	Silicone SIL	Conductive silicone CSIL	Nitrile-PVC NPV	Nitrile NBR	Polyurethane			Ethylene propylene EPDM	HNBR HNBR	Thermo Plastic Elastomers TPE
						PU	PUR	TPU			
Food-stuff		x									x
Oily objects	x			x	x	x	x	x		x	
Mark free requirements						x	x	x			
High temperature environments		x	x							x	
Low temperature environments	x	x	x							x	
Rough/uneven surfaces									x		
Electrical components			x						x		
Sensitivity to static electricity			x								

piGRIP® – Thousands of suction cups ready to improve your machine

A unique modular suction cup concept with individually optimized parts for gripping, lifting and height compensation.

FITTING & FLOW RESTRICTORS

A large selection of fittings makes piGRIP® cups ready to fit new machines and easy to retrofit existing cups. Available are both threaded and push on fittings. piSAVE restrict and piSAVE sense are options that are suitable for handling different sized or a variable number of objects.

BELLOWS

Firm and Stable 1-, 3- and 6- folded bellows allows for faster machine speeds. Thin-wall design makes them faster to compress using less force and energy. The strength of the material increases lifting capacity between 30-50% compared to similar conventional cups. FDA-approved material available (transparent).

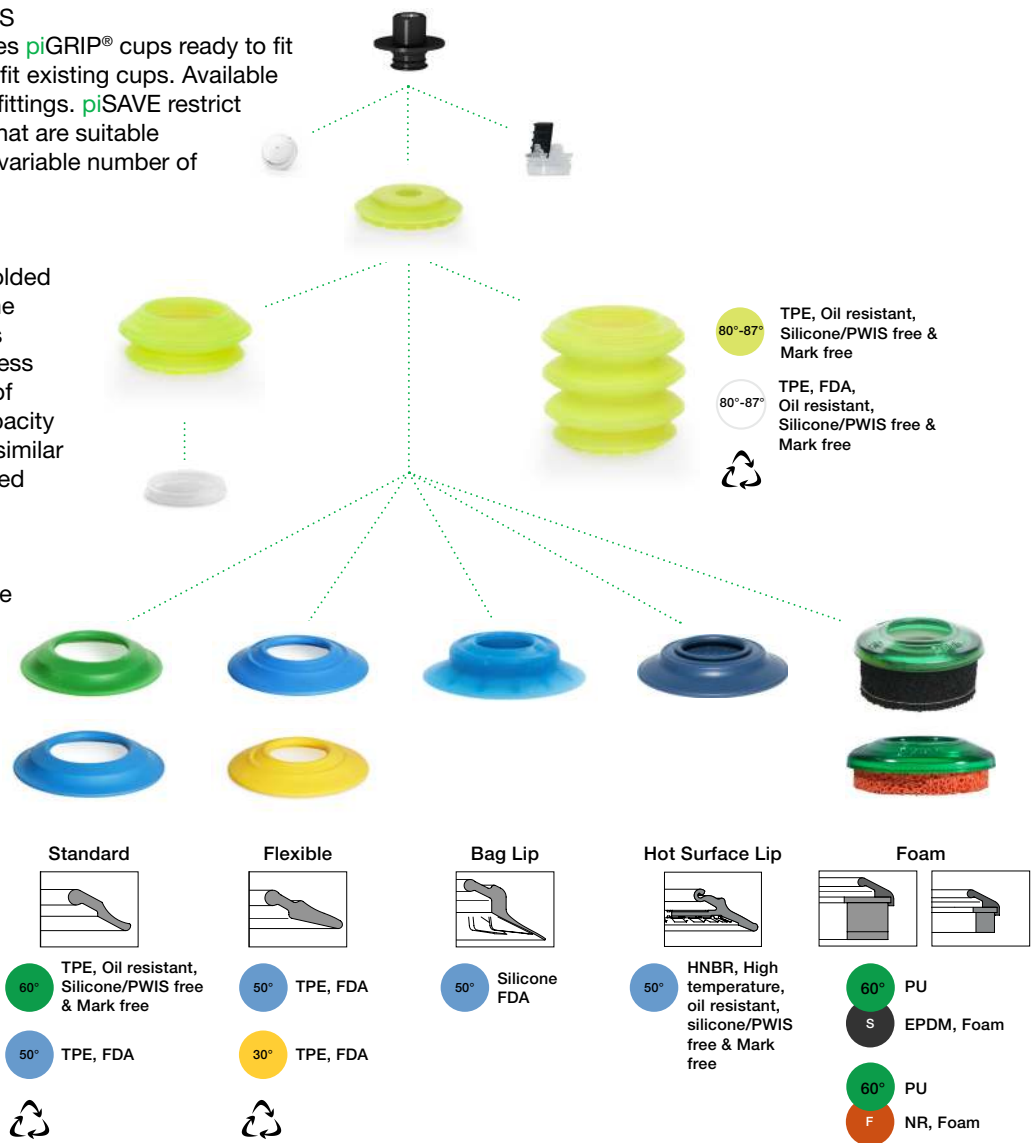
FILTERS




A low micron filter disc inside the bellows traps dust and particles increasing system reliability. A mesh filter is available in the fitting.

LIPS

Get an excellent grip on almost anything with the right lip for your application. Choose standard lips from 60° shore to extremely flexible, soft lips in 30° shore.

Tailor-made Bag lips for handling bags and pouches. Foam lips for objects which are difficult to grip with traditional cups. High temperature lips are also available when so needed.



Product Group								
	Lip				Bellows or Flat Cup		Support	
piGRIP®	Dimension & Type		Material & Durometer					
Code	Code	Description	Code	Description	Code	Description	Code	Description
G	S25	Ø 25 mm Standard lip	T60 T50	TPE 60° Shore A TPE 50° Shore A	B1	1 bellows	S1	Support type 1
	S35	Ø 35 mm Standard lip			B3	3 bellows		
	S50	Ø 50 mm Standard lip			B6	6 bellows (3+3)		
	S70	Ø 70 mm Standard lip			F	Flat		
	FX28	Ø 28 mm Flexible lip	T50 T30	TPE 50° Shore A TPE 30° Shore A				
	FX39	Ø 39 mm Flexible lip						
	FX55	Ø 55 mm Flexible lip						
	FX77	Ø 77 mm Flexible lip						
	FLI25S	Ø 25 mm Foam lip	S	Foam EDPM (soft)				
	FLI35S	Ø 35 mm Foam lip						
	FLI50S	Ø 50 mm Foam lip						
	FLI70S	Ø 70 mm Foam lip						
	FLI25F	Ø 25 mm Foam lip	F	Foam NR (firm)				
	FLI35F	Ø 35 mm Foam lip						
	FLI50F	Ø 50 mm Foam lip						
	FLI70F	Ø 70 mm Foam lip						
	BG34	Ø 34 mm Bag lip	S50	Silicone 50° Shore A				
	BG48	Ø 48 mm Bag lip						
	BG63	Ø 63 mm Bag lip						
	HS29	Ø 29 mm HS29	HN50	HNBR 50° Shore A				
	HS39	Ø 39 mm HS39						
	HS58	Ø 58 mm HS58						
	HS79	Ø 79 mm HS79						

Lips are available as spare parts.

G . S50T60 . B3 . S1 .



Fitting

Type		Size		Style	
Code	Description	Code	Description	Code	Description
G NT	G-Thread NPT-Thread	18	1/8"	M	Male
		14	1/4"		
		38	3/8"		
		12	1/2"		
GL NTL	G-Thread low NPT-Thread low	18	1/8"	M	Male
		14	1/4"		
		38	3/8"		
NS G	NPSF-Thread G-Thread	18	1/8"	F	Female
		14	1/4"		
		38	3/8"		
		12	1/2"		
		518	5x1/8"		
NT	NPT-Thread	14	1/4"	F	Female
		38	3/8"	F	Female
M	M-Thread	M6*	M6	M	Male
		MF8*	M8x1		
		M10	M10		
		M12	M12		
		MF14	M14x1		
		MF16	M16x1.5		
M	M-Thread	M5	M5	F	Female
		M6	M6		
		M8	M8		
		M10	M10		
		M12	M12		
		MF16	M16x1.5		
U	UNC-Thread	12	1/2"	F	Female
X	No Type	X	No Size	X	No style

*) Steel material.
Push-on fitting sold separately.



Option

Code	Description
00	No Filter
01	Filter mesh
02	Filter disc (only bellows cup)
03	piSAVE restrict Ø 0.7
04	piSAVE restrict Ø 1.0
05	piSAVE restrict Ø 1.3
06	piSAVE restrict Ø 0.7 and filter disc
07	piSAVE restrict Ø 1.0 and filter disc
08	piSAVE restrict Ø 1.3 and filter disc
09	piSAVE sense for high flow
10	piSAVE sense for high flow with filter
11	piSAVE sense for mid flow
12	piSAVE sense for mid flow with filter



FDA approved option
includes material
certificate

Code	Description
	No*
FDA	US Food and Drug Administration

*) Leave blank for no certificate.

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Option

Fitting

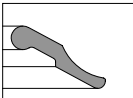
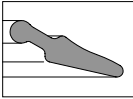
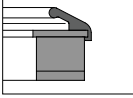
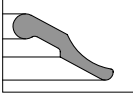
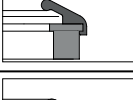

Support

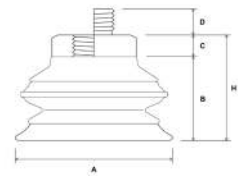
Bellows

Lip



Suction cup dimensions, mm

Lip type & size		Dim. A	<div>Dim. B</div>			
			<div>F (Flat)</div>	<div>B-1 (1 Bellows)</div>	<div>B-3 (3 Bellows)</div>	<div>B-6 (3+3 Bellows)</div>
	S25	25	10.9	18.7	29.8	48.7
	S35	35	12.4	23.3	38.8	65.2
	S50	50	14.7	30.3	52.4	90.1
	S70	70	17.8	39.6	70.6	123.4
	FX28	28	11.4	19.2	30.3	49.2
	FX39	38	13.1	24.0	39.5	65.9
	FX55	55	15.7	31.3	53.4	91.1
	FX77	77	19.2	41	72	124.8
	FLI25S	25	17.5	25.3	36.4	55.3
	FLI35S	35	21.5	32.4	47.9	74.3
	FLI50S	50	32.1	47.7	69.8	107.5
	FLI70S	70	34.1	55.9	86.9	139.7
	FLI25F	25	16	23.8	34.9	53.8
	FLI35F	35	17	27.9	43.4	69.8
	FLI50F	50	21.1	36.7	58.8	96.5
	FLI70F	70	23.1	44.9	75.9	128.7
	BG34	34	15.5	23.3	34.4	53.3
	BG48	48	18.4	29.3	44.8	71.2
	BG63	63	21.3	36.9	59	96.7
	HS29	29	13.4	14.2	25.3	44.2
	HS39	39	15.6	19.5	35	61.4
	HS58	58	19.5	27.5	50.2	87.9
	HS79	79	24.3	39.1	70.1	122.9



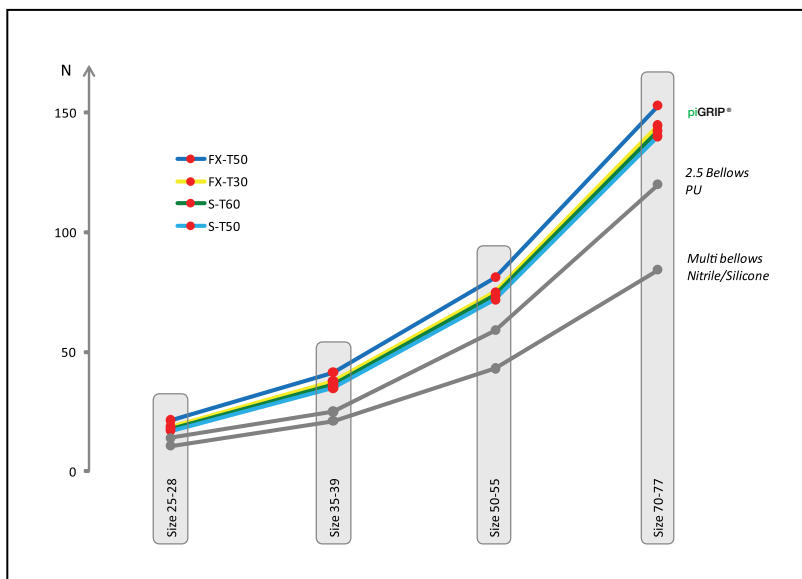
Build height:

$$B + C = H$$

$$18.7 + 5 = 23.7 \text{ mm}$$

piGRIP® Material Data

Up to 50% improved lifting force with piGRIP®. Use fewer cups or smaller sizes.



Proven function and lifting capacity within specified area of operation.
See suction cup selection guide on www.piab.com for specified performance data.

Material Specifications

Material	Hardness Shore A °	Item(s)	Colour	Temp. range °C	Special qualities
TPE	80-87	Support S1	Lime/Transparent	-20 – 60 / 100*	FDA**, silicone/PWIS free, mark free, oil resistant
TPE	87	Bellows	Lime/Transparent	-20 – 60 / 100*	FDA**, silicone/PWIS free, mark free, oil resistant
TPE	60	Standard Lip (S) T60	Green	-20 – 60 / 120*	Silicone/PWIS free, mark free, oil resistant
TPE	50	Standard Lip (S) T50	Blue	-40 – 60 / 120*	FDA
TPE	50	Flexible Lip (FX) T50	Blue	-40 – 60 / 120*	FDA
TPE	30	Flexible Lip (FX) T30	Yellow	-40 – 60 / 100*	FDA
EPDM	-	Foam Lip (FLI-S)	Green/Black	-20 – 80	Ultra soft cellular rubber
NR	-	Foam Lip (FLI-F)	Green/Orange	-20 – 80	Firm natural rubber
Silicone	50	Bag Lip (BG)	Blue	-40 – 200	FDA
HNBR	50	Hot Surface Lip (HS)	Blue	-30 – 120/150*	PWIS free, mark free
PU	60	Foam Lip holder	Green	10 – 50	

*) Max Temperature short term contact, <10 sec and 50% intermittence, ambient temperature 15-30 °C, mechanical properties will start to degrade.

**) FDA approved option in transparent material.

Fitting dimensions, mm

Type	Code	Dim. C	Dim. D	Description	Recommended fitting size for best performance*			
					S25 FX28 FLI25 BG34 HS29	S35 FX39 FLI35 BG48 HS39	S50 FX55 FLI50 BG63 HS58	S70 FX77 FLI70 HS79
	G18M	5	6	Fitting G1/8" male	x	x	x	
	G14M	6	9	Fitting G1/4" male	x	x	x	x
	G38M	6	10	Fitting G3/8" male		x	x	x
	G12M	6	10	Fitting G1/2" male			x	x
	GL18M	1.5	6	Fitting G1/8" low male	x	x	x	
	GL14M	1.5	9	Fitting G1/4" low male	x	x	x	x
	GL38M	1.5	10	Fitting G3/8" low male		x	x	x
	NT18M	5	7	Fitting 1/8" NPT male	x	x	x	
	NT14M	6	11	Fitting 1/4" NPT male	x	x	x	x
	NT38M	6	11.5	Fitting 3/8" NPT male		x	x	x
	NT12M	6	15	Fitting 1/2" NPT male			x	x
	NTL18M	1.5	7	Fitting 1/8" NPT low male	x	x	x	
	NTL14M	1.5	11	Fitting 1/4" NPT low male	x	x	x	x
	NTL38M	1.5	11.5	Fitting 3/8" NPT low male		x	x	x
	MM6M	5	6	Fitting M6 male	x	x		
	MMF8M	5	6	Fitting M8 x 1 male	x	x	x	
	MM10M	6	10	Fitting M10 male	x	x	x	
	MM12M	6	10	Fitting M12 male	x	x	x	
	MMF14M	6	12	Fitting M14 x 1 male	x	x	x	x
	G14F	10	-	Fitting G1/4" fem	x	x	x	
	G38F	13	-	Fitting G3/8" fem		x	x	x
	G12F	14	-	Fitting G1/2" fem			x	x
	NS18F**	7	-	Fitting 1/8" NPSF fem	x	x	x	
	NS14F	10	-	Fitting 1/4" NPSF fem	x	x	x	x
	NS38F	13	-	Fitting 3/8" NPSF fem		x	x	x
	NS12F	14	-	Fitting 1/2" NPSF fem			x	x
	NS518F**	18	-	Fitting 5x1/8" NPSF fem	x	x	x	
	NT14F	12	-	Fitting 1/4" NPT fem	x	x	x	x
	NT38F	13	-	Fitting 3/8" NPT fem		x	x	x
	U12F	12	-	Fitting 1/2" UNC fem			x	x
	MM5F	6	-	Fitting M5 fem	x	x		
	MM6F	6	-	Fitting M6 fem	x	x		
	MM8F	7	-	Fitting M8 fem	x	x	x	
	MM10F	7	-	Fitting M10 fem	x	x	x	
	MM12F	12	-	Fitting M12 fem	x	x	x	
	MMF16F	13	-	Fitting M16 x 1.5 fem		x	x	x

*) No flow restriction or excessive volume to evacuate, which will deteriorate the performance of the vacuum system.

**) Fitting code G18F and G518F are automatically changed to NS18F and NS518F due to identical threads.

Go to suction cup selection guide on www.piab.com to configure your suction cup.

Specifications subject to change without notice.

piGRAB kit



- ▶ Vacuum activated gripper/grabber, suitable for gentle and compliant gripping operations as well as locking/holding.
- ▶ Introduction kits - includes several options for arms and end-effector fingers.
- ▶ Suction cup with G1/8" male can be used as an end-effector finger. The enclosed flow-restrictor must be used in the arm when a cup is used.
- ▶ Available for individual vacuum source, such as Piab's VGS™3010, or a centralized vacuum source.
- ▶ Easy to fine-tune the gripping torque/force by controlling the vacuum level. piSAVE optimize and piSAVE on/off are products for vacuum level control.
- ▶ Application examples: Vision guided Bin-picking, pallet lifting, gentle handling of parts such as glass, fruits, etc.

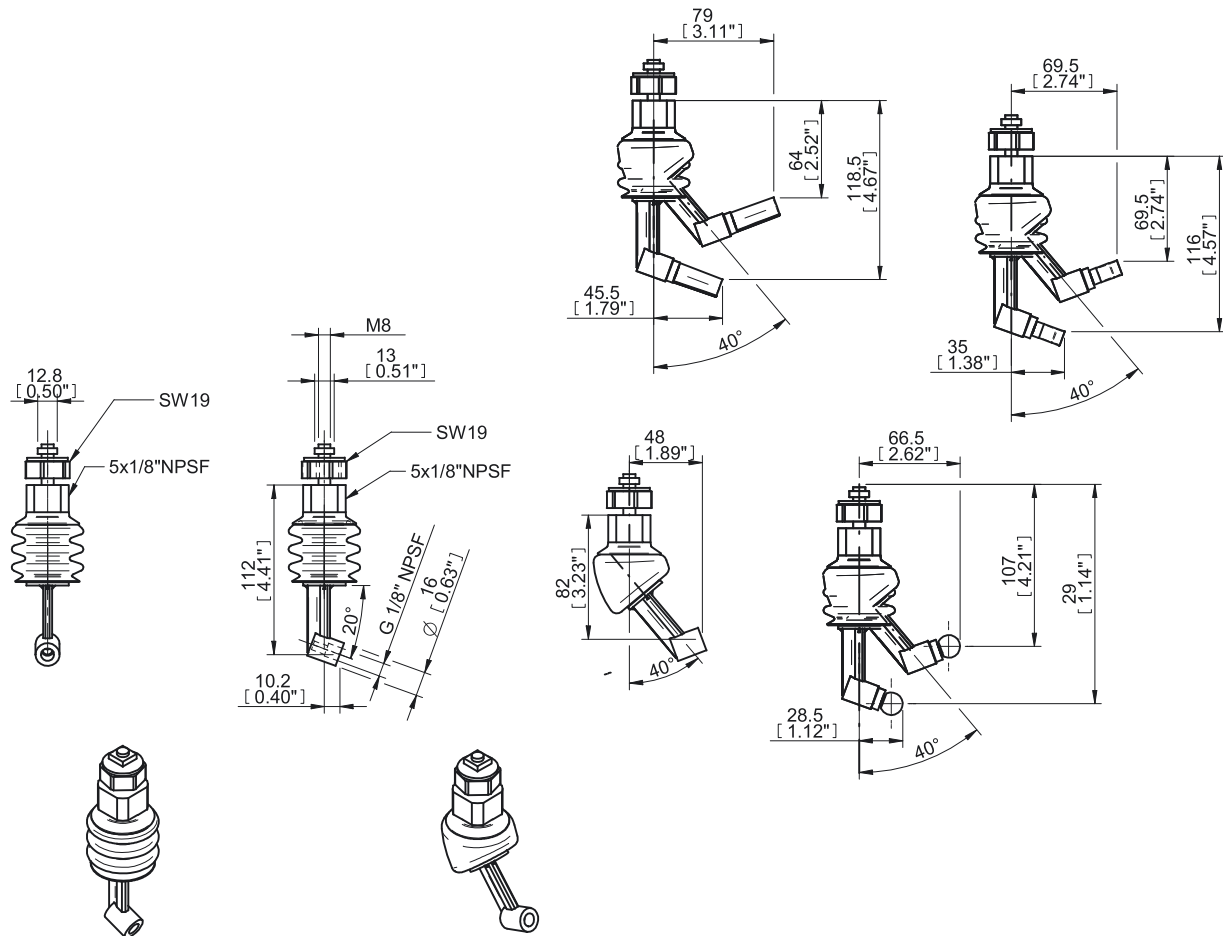
Technical data

Description	Unit	Value
Feed pressure, max.	MPa	Atm. pressure
Vacuum	-kPa	Operating range min. 101.3
Material		POM, PA, TPU, SS, AI, NBR
Temperature range	° C	-20-80
Weight	g	84.6
Volume	cm ³	20
Connection, centralized vacuum source		5x1/8" NPSF, Top profile kit M8 27 mm
Connection, decentralized vacuum source		G3/8" male
Max. load at 60 -kPa, tangential force at 30° actuation	kg	0.9
Action range	°	40 ±1.5
Accuracy, non actuated	°	0-7
Accuracy, actuated	°	40 ±1.5
Life span	cycles	5 million
Vacuum flow at 10 -kPa (when cup is used with end-effector finger)	NI/s	Straight arm = 0.28 / Elbow arm = 0.73
Bore-through diameter	mm	Straight = 3.07 / Elbow = 4.7

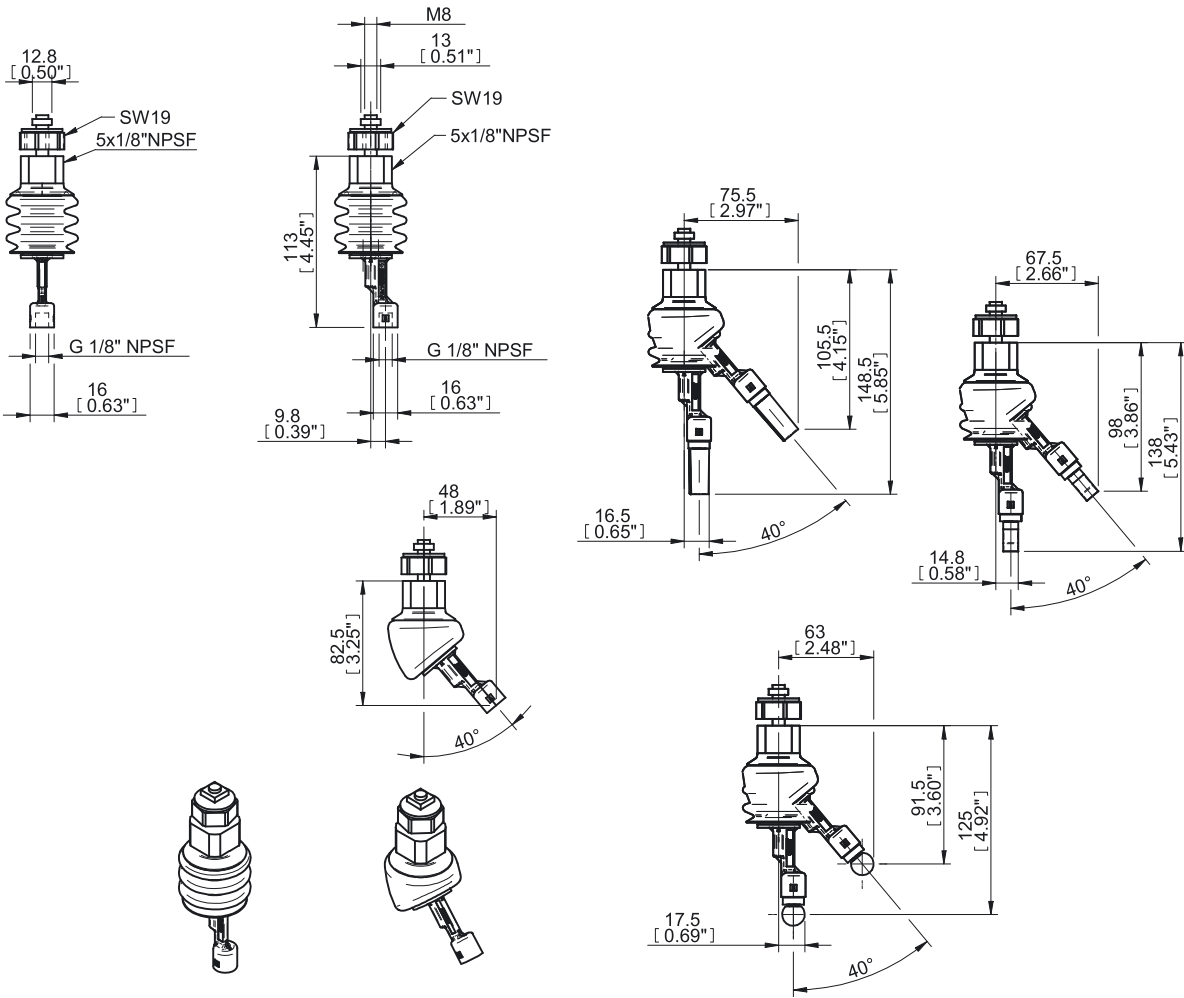
Ordering information

	Description	Art. No.
A	piGRAB kit with fitting 5x1/8" NPSF	0128756
B	piGRAB kit with fitting G3/8" male	0129044

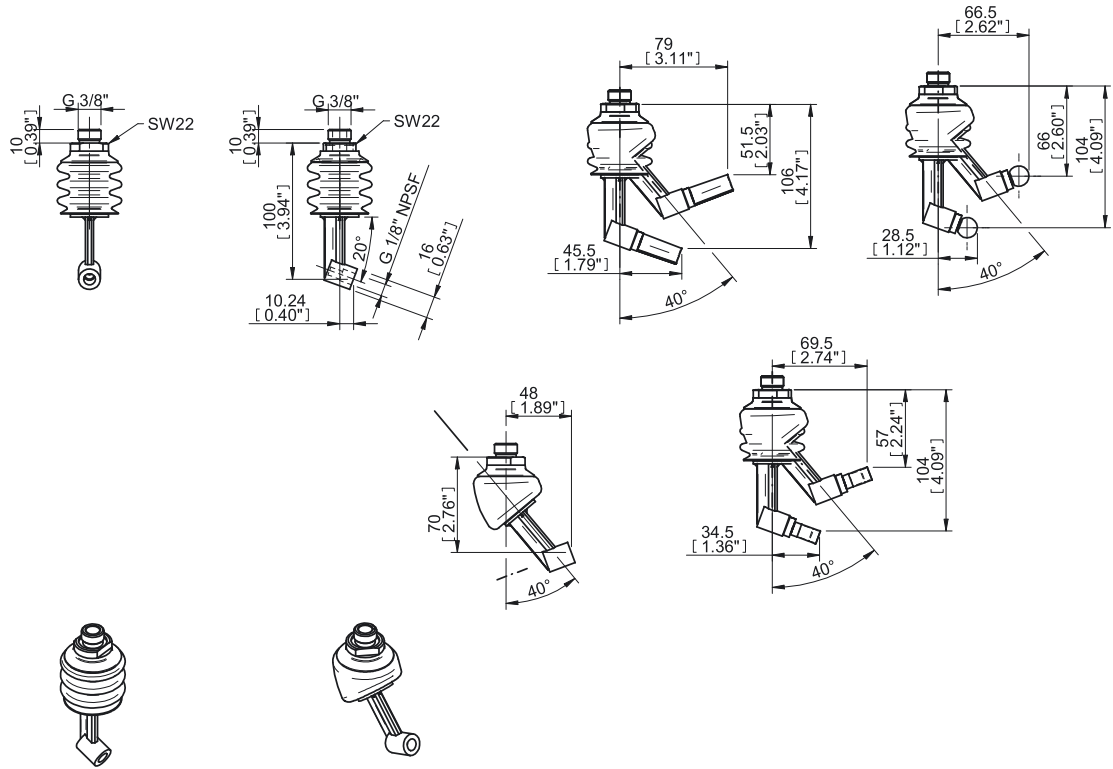
piGRAB kits are assembled with elbow arm. Straight arm and end-effector fingers are included.



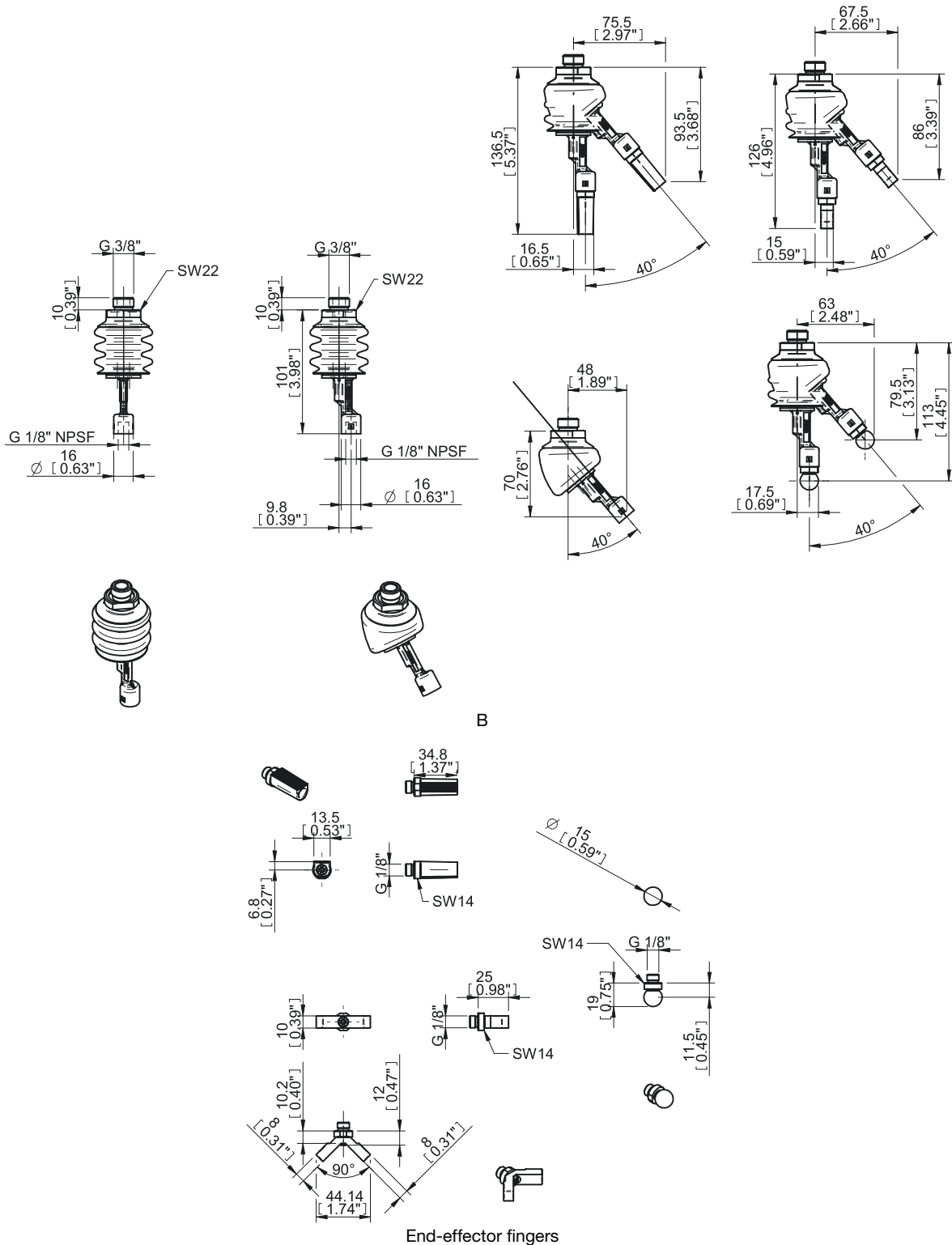
A



A



B



B75P



Suction cup with short bellows

- Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material of the DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	61	149	202	44	96	114	110	90	20	48
PU60°	83	196	255	121	229	298	110	90	20	72

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

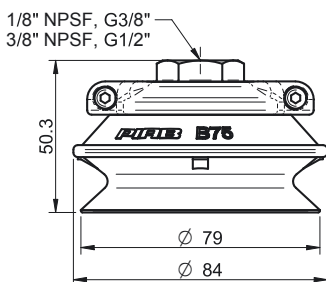
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

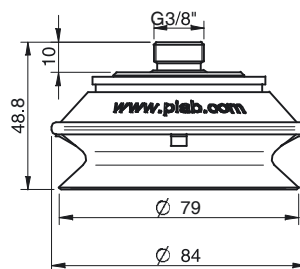
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Ordering information

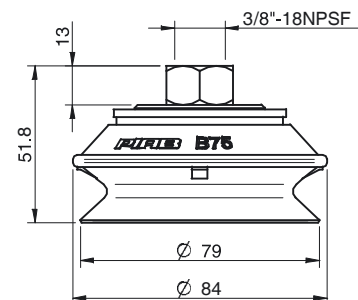
	Complete suction cups	Art. No
A	Suction cup B75P Polyurethane 30/60, 1/8" NPSF female, with mesh filter	0106345
A	Suction cup B75P Polyurethane 30/60, G3/8" female, with mesh filter	0106346
A	Suction cup B75P Polyurethane 30/60, 3/8" NPSF female, with mesh filter	0106347
A	Suction cup B75P Polyurethane 30/60, G1/2" female, with mesh filter	0106348
A	Suction cup B75P Polyurethane 60, 1/8" NPSF female, with mesh filter	0111600
A	Suction cup B75P Polyurethane 60, G3/8" female, with mesh filter	0111601
A	Suction cup B75P Polyurethane 60, 3/8" NPSF female, with mesh filter	0111602
A	Suction cup B75P Polyurethane 60, G1/2" female, with mesh filter	0111603
B	Suction cup B75P Polyurethane 30/60, thread insert G3/8" male, with mesh filter	0106833
B	Suction cup B75P Polyurethane 60, thread insert G3/8" male with mesh filter	0107319
C	Suction cup B75P Polyurethane 30/60, 3/8" NPSF female	0108790
C	Suction cup B75P Polyurethane 60, 3/8" NPSF female	0108791



A

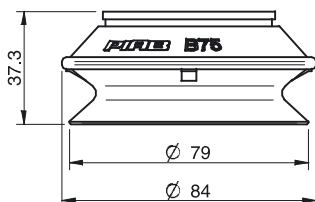


B

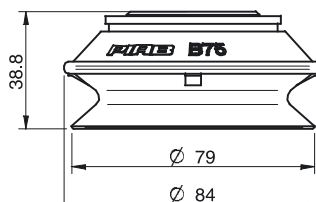


C

	Rubber parts	Art. No
A	Suction cup B75P Polyurethane 30/60	0104723
A	Suction cup B75P Polyurethane 60	0111594
B	Suction cup B75P Polyurethane 30/60, for thread insert	0106832
B	Suction cup B75P Polyurethane 60, for thread insert	0107318



A



B

Fittings	Art. No.
Fitting 75, 1/8" NPSF female, with mesh filter	0100548
Fitting 75, G3/8" female, with mesh filter	0100551
Fitting 75, 3/8" NPSF female, with mesh filter	0100553
Fitting 75, G1/2" female, with mesh filter	0100555
Thread insert G3/8" male, with O-ring and mesh filter	0107148

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

BF80P



Suction cup with short bellows

- Suitable for uneven surfaces.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material of the DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/50°	73	157	196	54	88	117	40	132	15	53
PU60°	98	225	294	68	127	166	40	132	15	53

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow	30	10–50
Polyurethane, PU50	Blue transparent	50	10–50
Polyurethane, PU60	Green transparent	60	10–50

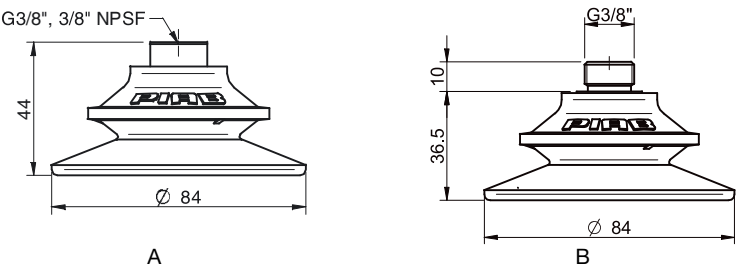
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BF80P Polyurethane 30/50, G3/8" female	0102370
A	Suction cup BF80P Polyurethane 30/50, 3/8" NPSF female	0102371
A	Suction cup BF80P Polyurethane 60, G3/8" female	0103307
A	Suction cup BF80P Polyurethane 60, 3/8" NPSF female	0103309
B	Suction cup BF80P Polyurethane 30/50, G3/8" male with mesh filter	0107326
B	Suction cup BF80P Polyurethane 60, G3/8" male with mesh filter	0107327
B	Suction cup BF80P Polyurethane 30/50, G3/8" male	0106985
B	Suction cup BF80P Polyurethane 60, G3/8" male	0107476



BF110P



Suction cup with short bellows

- Suitable for uneven surfaces.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material of the DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	128	229	225	106	210	246	110	55	24	110
PU60°	161	334	293	123	231	305	110	70	24	110

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

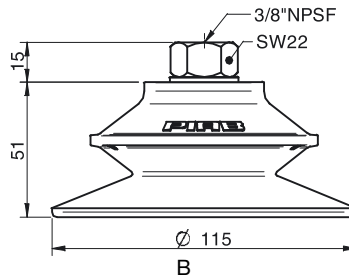
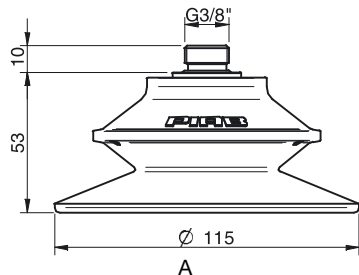
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

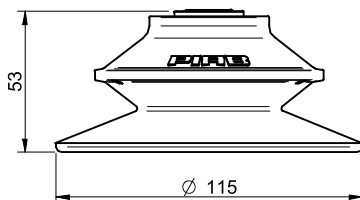
**Please contact Piab.

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BF110P Polyurethane 30/60, thread insert G3/8" male with mesh filter	0110290
B	Suction cup BF110P Polyurethane 30/60, 3/8" NPSF female	0110291
A	Suction cup BF110P Polyurethane 60, thread insert G3/8" male with mesh filter	0110287
B	Suction cup BF110P Polyurethane 60, 3/8" NPSF female	0110288



	Rubber parts	Art. No.
	Suction cup BF110P Polyurethane 30/60 with O-ring	0110289
	Suction cup BF110P Polyurethane 60, with O-ring	0110286



	Fittings	Art. No.
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

BX10P



- Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	1	2.3	3.7	—	—	—	0.56	4.0	4.5	1
PU60°	1	2.3	3.7	—	—	—	0.56	6.0	4.5	1

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

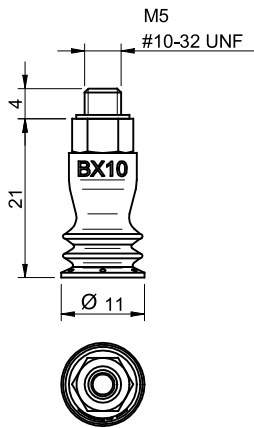
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

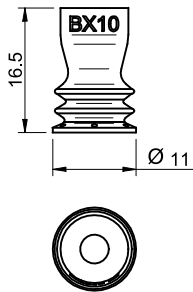
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Ordering information

Description	Art. No.
Suction cup BX10P Polyurethane 30/60, M5 male	0122869
Suction cup BX10P Polyurethane 60, M5 male	0122967



Rubber parts	Art. No.
Suction cup BX10P Polyurethane 30/60	0118329
Suction cup BX10P Polyurethane 60	0122966



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

BX15P



- Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	2.0	4.0	4.5	—	—	—	0.92	5.5	5.5	1.15
PU60°	2.0	6.0	6.0	—	—	—	0.92	6.0	5.5	1.14

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

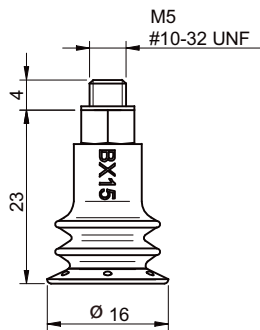
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

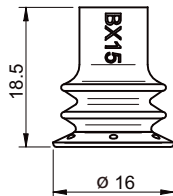
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Ordering information

Complete suction cups	Art. No.
Suction Cup BX15P Polyurethane 30/60, M5 male	0124344
Suction Cup BX15P Polyurethane 60, M5 male	0124345



Rubber parts	Art. No.
Suction cup BX15P Polyurethane 30/60	0118505
Suction cup BX15P Polyurethane 60	0124237



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

BX20P



Suction cup with 2½ bellows

- Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	4.8	7.0	11.0	—	—	—	1.16	8.5	6.5	1.43
PU60°	4.5	7.0	9.5	—	—	—	1.16	10.0	6.5	1.43

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

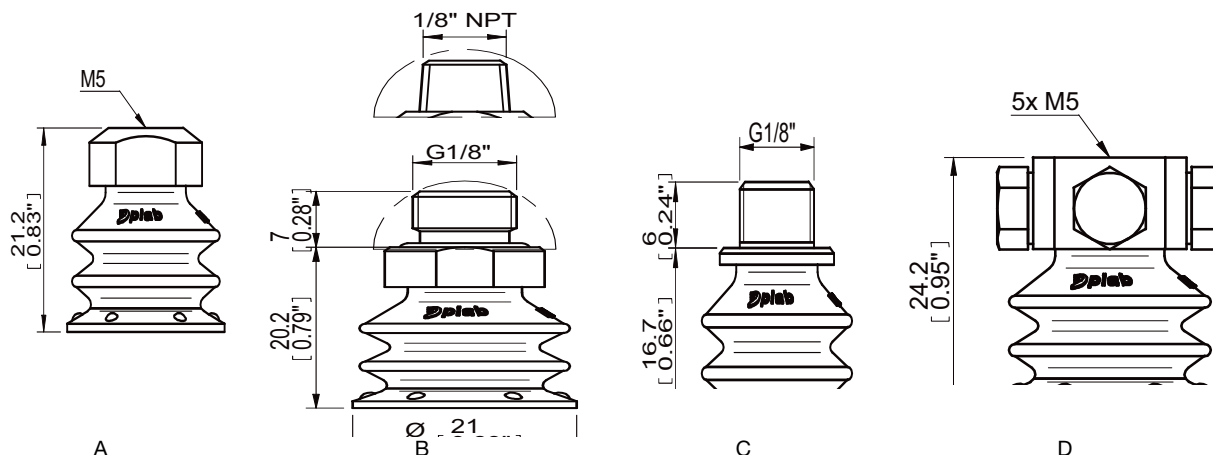
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

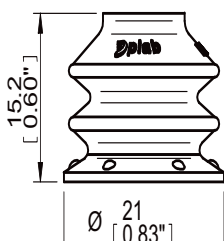
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Ordering information

	Complete suction cups	Art. No.
A	Suction cup BX20P Polyurethane 30/60, M5 female	0125104
B	Suction cup BX20P Polyurethane 30/60, G1/8" male	0125108
C	Suction cup BX20P Polyurethane 30/60, G1/8" male / M5 female	0125105
C	Suction cup BX20P Polyurethane 30/60, G1/8" male / M5 female, with dual flow control valve	0125106
D	Suction cup BX20P Polyurethane 30/60, 5xM5 female	0125107
A	Suction cup BX20P Polyurethane 60, M5 female	0125109
B	Suction cup BX20P Polyurethane 60, G1/8" male	0125112
C	Suction cup BX20P Polyurethane 60, G1/8" male / M5 female	0125110
D	Suction cup BX20P Polyurethane 60, 5xM5 female	0125111



Rubber parts	Art. No.
Suction cup BX20P Polyurethane 30/60	0118507
Suction cup BX20P Polyurethane 60	0124249



Fittings	Art. No.
Fitting M5 female	3250003
Fitting G1/8" male, with mesh filter	3250085
Fitting 1/8" NPT male, with mesh filter	3250088
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

BX25P



Suction cup with 2½ bellows

- Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	8.0	13.0	18.0	5.0*	10.0*	12.0*	3.0	6.0	8.5	3
PU60°	9.0	14.0	18.0	7.0*	11.0*	15.0*	3.0	8.0	8.5	3

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

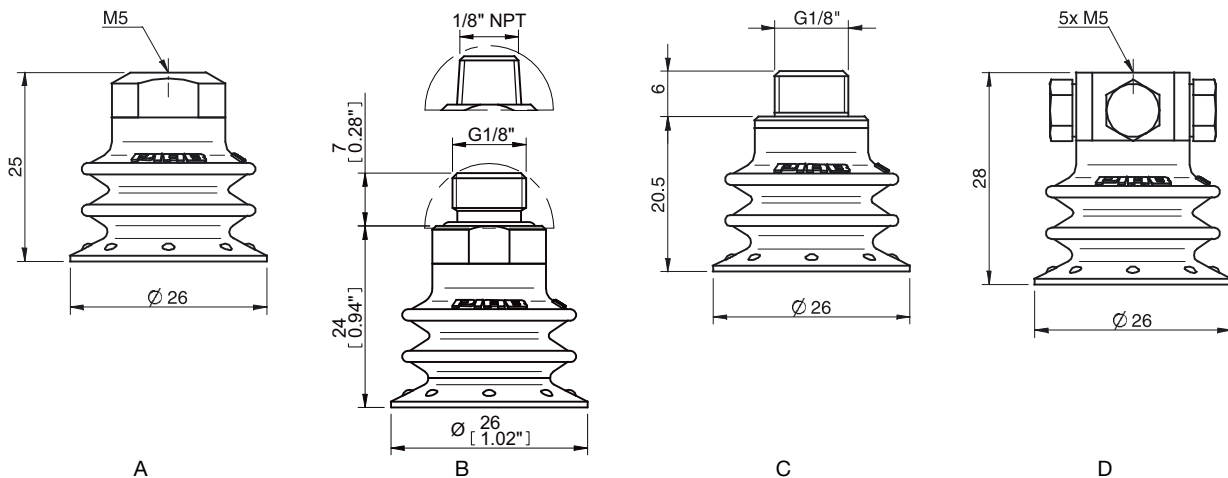
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

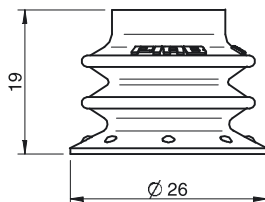
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Ordering information

	Complete suction cups	Art. No.
A	Suction cup BX25P Polyurethane 30/60 with filter, M5 female	0109404
B	Suction cup BX25P Polyurethane 30/60 with filter, G1/8" male / M5 female	0109402
B	Suction cup BX25P Polyurethane 30/60 with filter, G1/8" male / M5 female, with dual flow control valve	0109403
C	Suction cup BX25P Polyurethane 30/60 with filter, 5xM5 female	0109405
D	Suction cup BX25P Polyurethane 30/60 with filter, G1/8" male	0114131
A	Suction cup BX25P Polyurethane 60 with filter, M5 female	0109400
B	Suction cup BX25P Polyurethane 60 with filter, G1/8" male / M5 female	0109398
C	Suction cup BX25P Polyurethane 60 with filter, 5xM5 female	0109401
D	Suction cup BX25P Polyurethane 60 with filter, G1/8" male	0114149



Rubber parts	Art. No.
Suction cup BX25P Polyurethane 30/60	0109006
Suction cup BX25P Polyurethane 30/60, with filter	0109312
Suction cup BX25P Polyurethane 60	0108240
Suction cup BX25P Polyurethane 60, with filter	0109397



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male/M5 female	3250004
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Filter for BX25P	Polyester/TPE	-40-90	0109311

BX35P



Suction cup with 2½ bellows

- Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	12.0	20.0	28	14.0*	27*	34*	10.0	10.0	14.0	8.0
PU60°	15.0	25	30	22.0*	30*	36*	10.0	10.0	14.0	8.0

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

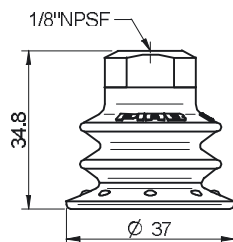
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

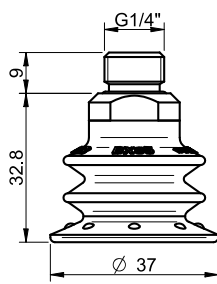
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Ordering information

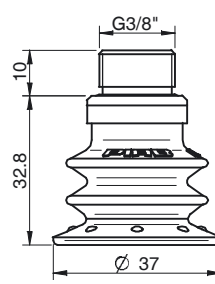
	Complete suction cups	Art. No.
A	Suction cup BX35P Polyurethane 30/60 with filter, 1/8" NPSF female	0106604
A	Suction cup BX35P Polyurethane 30/60 with filter, 1/8" NPSF female, with dual flow control valve	0106605
B	Suction cup BX35P Polyurethane 30/60 with filter, G1/4" male, with mesh filter	0114449
C	Suction cup BX35P Polyurethane 30/60 with filter, G3/8" male, with mesh filter	0107377
C	Suction cup BX35P Polyurethane 30/60 filter, G3/8" male, mesh filter, dual flow control valve	0107378
A	Suction cup BX35P Polyurethane 60 with filter, 1/8" NPSF female	0107561
A	Suction cup BX35P Polyurethane 60 with filter, 1/8" NPSF female, with dual flow control valve	0107562
C	Suction cup BX35P Polyurethane 60 with filter, G3/8" male, with mesh filter	0107379
C	Suction cup BX35P Polyurethane 60 with filter, G3/8" male, with mesh filter and dual flow control valve	0107380



A

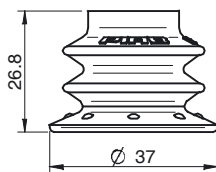


B



C

Rubber parts	Art. No.
Suction cup BX35P Polyurethane 30/60, with filter	0106619
Suction cup BX35P Polyurethane 60, with filter	0107376
Suction cup BX35P, Polyurethane 30/60	0106292
Suction cup BX35P, Polyurethane 60	0107477



Fittings	Art. No.
Fitting 1/8" NPSF female, 30-40	3250005
Fitting 1/8" NPSF female, 30-40, with dual flow control valve	3251006
Fitting G1/4" male, 30-40, with mesh filter	3250091
Fitting G3/8" male, 30-40, with mesh filter	3250086
Fitting G3/8" male, 30-40, with mesh and dual flow control valve	3251009

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Filter for BX35P	Polyester/TPE	-40-90	0106373

BX52P



Suction cup with 2½ bellows

- ▶ Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- ▶ In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- ▶ DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- ▶ The material DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	32	56	75	28*	44*	54*	30	32	19.0	24
PU60°	37	59	80	27*	49*	56*	30	32	19.0	24

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

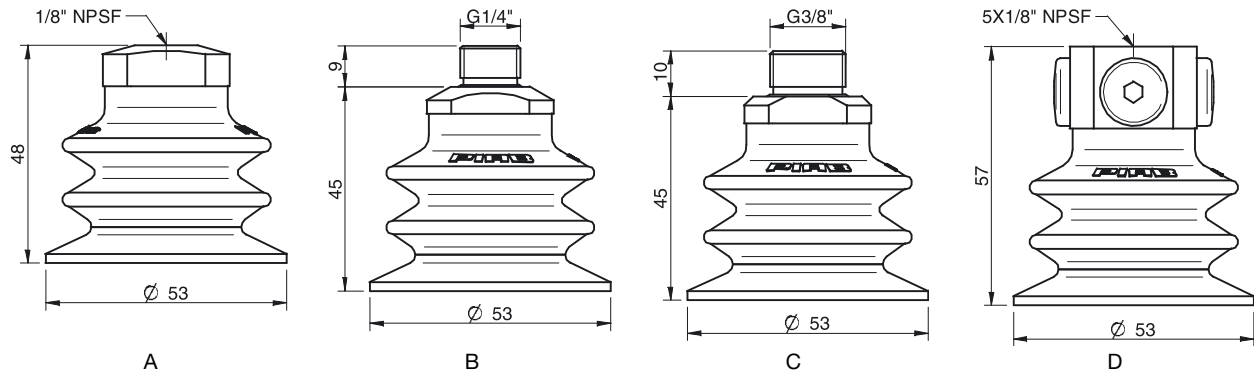
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

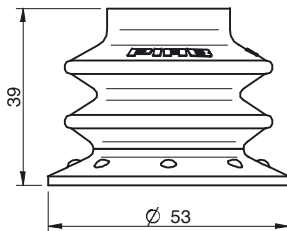
**Please contact Piab.

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BX52P Polyurethane 30/60 with filter, 1/8" NPSF female	0104727
A	Suction cup BX52P Polyurethane 30/60 with filter, 1/8" NPSF female, with mesh filter	0106044
A	Suction cup BX52P Polyurethane 30/60 with filter, 1/8" NPSF female, with dual flow control valve	0106019
B	Suction cup BX52P Polyurethane 30/60 with filter, G1/4" male, with mesh filter	0106045
B	Suction cup BX52P Polyurethane 30/60 with filter, G1/4" male, with dual flow control valve	0106739
C	Suction cup BX52P Polyurethane 30/60 with filter, G3/8" male, with mesh filter	0106740
C	Suction cup BX52P Polyurethane 30/60 with filter, G3/8" male, with dual flow control valve	0106741
D	Suction cup BX52P Polyurethane 30/60 with filter, 5x1/8" NPSF female	0106046
D	Suction cup BX52P Polyurethane 30/60 with filter, 5x1/8" NPSF female, with dual flow control valve	0106742
A	Suction cup BX52P Polyurethane 60 with filter, 1/8" NPSF female	0107383
A	Suction cup BX52P Polyurethane 60 with filter, 1/8" NPSF female, with mesh filter	0107382
B	Suction cup BX52P Polyurethane 60 with filter, G1/4" male, with mesh filter	0107385
B	Suction cup BX52P Polyurethane 60 with filter, G1/4" male, with dual flow control valve	0107386
C	Suction cup BX52P Polyurethane 60 with filter, G3/8" male, with mesh filter	0107387
C	Suction cup BX52P Polyurethane 60 with filter, G3/8" male, with dual flow control valve	0107388
D	Suction cup BX52P Polyurethane 60 with filter, 5x1/8" NPSF female	0107389
D	Suction cup BX52P Polyurethane 60 with filter, 5x1/8" NPSF female, with dual flow control valve	0107390



Rubber parts	Art. No.
Suction cup BX52P Polyurethane 30/60, with filter	0104729
Suction cup BX52P Polyurethane 60, with filter	0108039
Suction cup BX52P Polyurethane 30/60	0104529
Suction cup BX52P Polyurethane 60	0107381



Fittings	Art. No
Fitting 1/8" NPSF female, 50	3250017
Fitting 1/8" NPSF female, 50, with mesh filter	0101154
Fitting 1/8" NPSF female, 50, with dual flow control valve	3251012
Fitting G1/4" male, 50, with mesh filter	3250092
Fitting G1/4" male, with mesh filter and dual flow control valve	3251013
Fitting G3/8" male, 50, with mesh filter	3250087
Fitting G3/8" male, 50, with mesh filter and dual flow control valve	3251015
Fitting 5x1/8" NPSF female, 50	0100262
Fitting 5x1/8" NPSF female, 50, with dual flow control valve	3251017

For further information and dimensioned drawings, see section *Suction cups/grippers Fittings*.

Spare Part	Material	Temperature range °C	Art. No.
Filter for BX52P	Polyester/TPE	-40-90	0104726

BX75P



Suction cup with 2½ bellows

- Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	62	110	141	39*	83*	116*	80	23.0	26	71
PU60°	80	120	166	78*	114*	150*	80	23.0	26	71

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

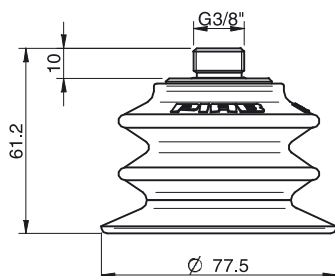
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

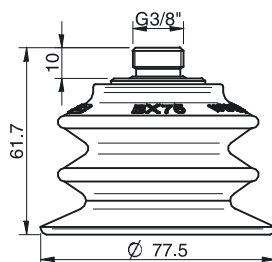
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Ordering information

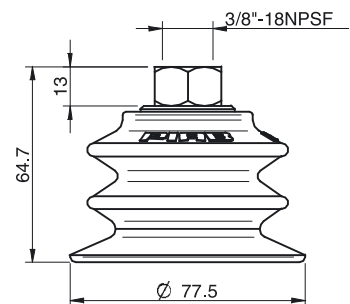
	Complete suction cups	Art. No.
A	Suction cup BX75P Polyurethane 30/60, G3/8" male / 1/8" NPSF female	0106293
A	Suction cup BX75P Polyurethane 30/60 with filter, G3/8" male / 1/8" NPSF female	0106606
B	Suction cup BX75P Polyurethane 30/60 with filter, thread insert G3/8" male	0107151
B	Suction cup BX75P Polyurethane 60 with filter, thread insert G3/8" male	0107149
C	Suction cup BX75P Polyurethane 30/60 with filter, 3/8" NPSF female	0108794
C	Suction cup BX75P Polyurethane 60 with filter, 3/8" NPSF female	0108795



A

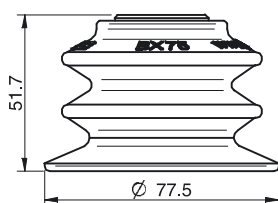


B



C

	Rubber parts	Art. No.
	Suction cup BX75P Polyurethane 30/60 with filter, for thread insert	0107145
	Suction cup BX75P Polyurethane 60 with filter, for thread insert	0107150



	Fittings	Art. No.
	Thread insert G3/8" male, with O-ring	0106797

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Filter for BX75P	Polyester/TPE	-40-90	0106374

BX110P



Suction cup with 2½ bellows

- Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.
- The material DURAFLEX® is mark free.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	158	306	346	83*	258*	260*	230	55	39	237
PU60°	181	426	424	158*	244*	293*	230	55	39	237

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

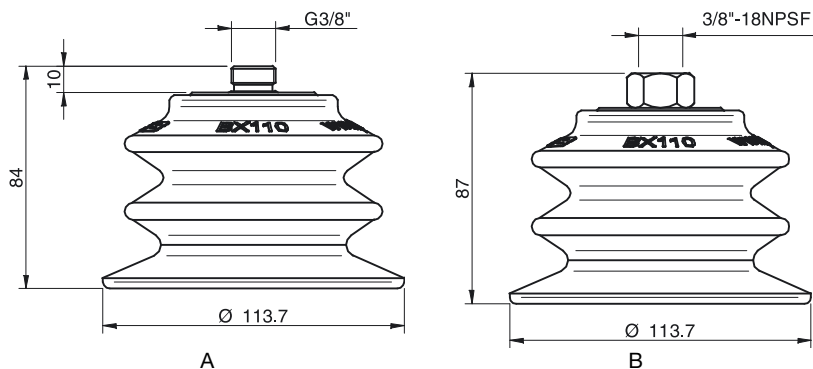
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

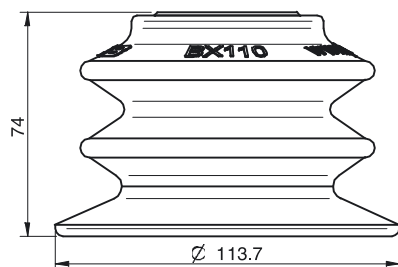
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Ordering information

	Complete suction cups	Art. No.
A	Suction cup BX110P Polyurethane 30/60 with filter, thread insert G3/8" male	0108273
B	Suction cup BX110P Polyurethane 30/60 with filter, 3/8" NPSF female	0108403
A	Suction cup BX110P Polyurethane 60 with filter, thread insert G3/8" male	0108341
B	Suction cup BX110P Polyurethane 60 with filter, 3/8" NPSF female	0108404



	Rubber parts	Art. No.
	Suction cup BX110P Polyurethane 30/60	0107093
	Suction cup BX110P Polyurethane 30/60, with filter	0108164
	Suction cup BX110P Polyurethane 60, with filter	0108340



	Fittings	Art. No.
	Thread insert G3/8" male, with O-ring	0106797

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Filter for BX110P	Polyester/TPE	-40-90	0108163

F75P



Flat suction cup with cleats

- ▶ Suitable for flat and rough surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- ▶ DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber parts g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	70	193	273	44	176	308	19	150	2	28
PU60°	82	231	330	47	113	169	19	150	2	53

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

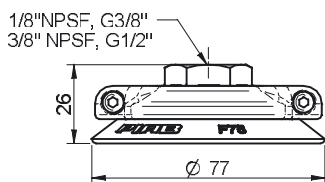
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

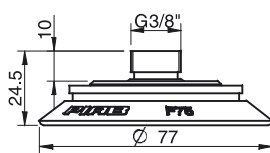
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Ordering information

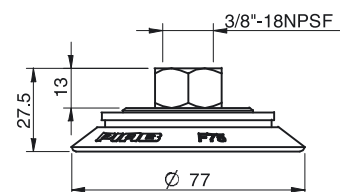
	Complete suction cups	Art. No.
A	Suction cup F75P Polyurethane 30/60, 1/8" NPSF female, with mesh filter	0106349
A	Suction cup F75P Polyurethane 30/60, G3/8" female, with mesh filter	0106350
A	Suction cup F75P Polyurethane 30/60, 3/8" NPSF female, with mesh filter	0106351
A	Suction cup F75P Polyurethane 30/60, G1/2" female, with mesh filter	0106352
A	Suction cup F75P Polyurethane 60, 1/8" NPSF female, with mesh filter	0111585
A	Suction cup F75P Polyurethane 60, G3/8" female, with mesh filter	0111586
A	Suction cup F75P Polyurethane 60, 3/8" NPSF female, with mesh filter	0111587
A	Suction cup F75P Polyurethane 60, G1/2" female, with mesh filter	0111588
B	Suction cup F75P Polyurethane 30/60, thread insert G3/8" male, with mesh filter	0106830
B	Suction cup F75P Polyurethane 60, thread insert G3/8" male, with mesh filter	0107321
C	Suction cup F75P Polyurethane 30/60, 3/8" NPSF female	0108800
C	Suction cup F75P Polyurethane 60, 3/8" NPSF female	0108801



A

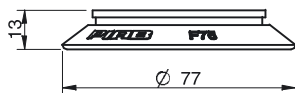


B



C

	Rubber parts	Art. No.
A	Suction cup F75P Polyurethane 30/60	0104724
A	Suction cup F75P Polyurethane 60	0111584
B	Suction cup F75P Polyurethane 30/60, for tread insert	0106829
B	Suction cup F75P Polyurethane 60, for tread insert	0107320



A



B

	Fittings	Art. No.
	Fitting 75, G3/8" female, with mesh filter	0100551
	Fitting 75, 1/8" NPSF female, with mesh filter	0100548
	Fitting 75, G1/2" female, with mesh filter	0100555
	Fitting 75, 3/8" NPSF female, with mesh filter	0100553
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

F110P



Flat suction cup with cleats

- Suitable for flat and rough surfaces.
- Fair stability and little inherent movement.
- Recommended when the lifting force is parallel to the surface of the object.
- In the two-coloured suction cup the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber parts g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU30°/60°	167	432	591	149	441	617	60	250	4	82
PU60°	191	498	705	297	523	664	60	250	4	133

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

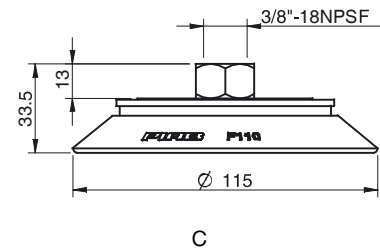
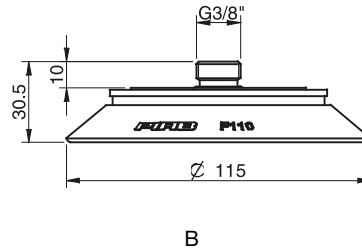
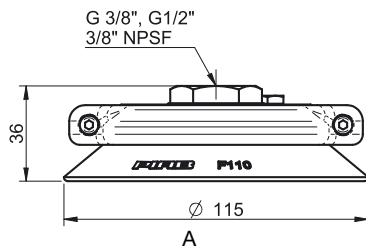
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

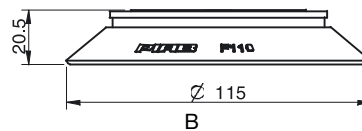
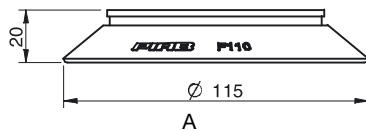
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Ordering information

	Complete suction cups	Art. No.
A	Suction cup F110P Polyurethane 30/60, G3/8" female, with mesh filter	0106353
A	Suction cup F110P Polyurethane 30/60, 3/8" NPSF female, with mesh filter	0106354
A	Suction cup F110P Polyurethane 30/60, G1/2" female, with mesh filter	0106355
A	Suction cup F110P Polyurethane 60, G3/8" female, with mesh filter	0111595
A	Suction cup F110P Polyurethane 60, 3/8" NPSF female, with mesh filter	0111596
A	Suction cup F110P Polyurethane 60, G1/2" female, with mesh filter	0111597
B	Suction cup F110P Polyurethane 30/60, thread insert G3/8" with mesh filter	0106798
B	Suction cup F110P Polyurethane 60, thread insert G3/8", with mesh filter	0107323
C	Suction cup F110P Polyurethane 30/60, 3/8" NPSF female	0108802
C	Suction cup F110P Polyurethane 60, 3/8" NPSF female	0108803



	Rubber parts	Art. No.
A	Suction cup F110P Polyurethane 30/60	0104725
A	Suction cup F110P Polyurethane 60	0111593
B	Suction cup F110P Polyurethane 30/60, for thread insert	0106796
B	Suction cup F110P Polyurethane 60, for thread insert	0107322



	Fitting	Art. No.
	Fitting 110 G3/8" female, with mesh filter	0100557
	Fitting 110, 3/8" NPSF female, with mesh filter	0100559
	Fitting 110, G1/2" female, with mesh filter	0100561
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

FC20P



Flat, concave suction cup with cleats

- Suitable for lifting small objects and narrow parts, also slightly domed, flat and oily surfaces, e.g., such as those encountered when handling steel sheets in press processes.
- Thanks to the high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- The suction cups have cleats that prevent thin objects from being disfigured.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm³	mm	mm	g
4.5	12.0	16.0	4.5	9.0	12.0	1.0	25	1.9	1.3

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU50	Blue transparent	50	10–50

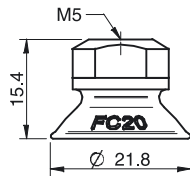
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

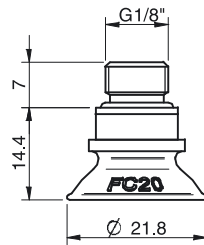
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Ordering information

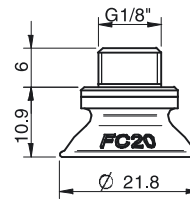
	Complete suction cups	Art. No.
A	Suction cup FC20P Polyurethane 50, M5 female	0106717
B	Suction cup FC20P Polyurethane 50, G1/8" male, with mesh filter	0106722
C	Suction cup FC20P Polyurethane 50, G1/8" male / M5 female, with mesh filter	0106718



A



B



C

Rubber part	Art. No.
Suction cup FC20P Polyurethane 50	0106016



Fittings	Art. No.
Fitting M5 female	3250003
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male/M5 female, with mesh filter	0101152

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

FC25P



Flat, concave suction cup with cleats

- ▶ Suitable for lifting small objects and narrow parts, also slightly domed, flat and oily surfaces, e.g., such as those encountered when handling steel sheets in press processes.
- ▶ Thanks to the high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- ▶ The suction cups have cleats that prevent thin objects from being disfigured.
- ▶ DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm³	mm	mm	g
8.0	20.0	27	9.0	12.0	18.0	3.0	45	4.0	3

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU50	Blue transparent	50	10–50

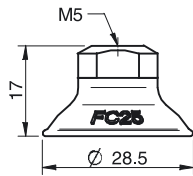
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

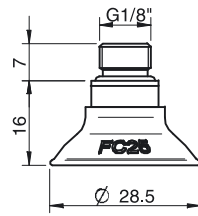
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Ordering information

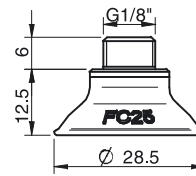
	Complete suction cups	Art. No.
A	Suction cup FC25P Polyurethane 50, M5 female	0106719
B	Suction cup FC25P Polyurethane 50, G1/8" male, with mesh filter	0106721
C	Suction cup FC25P Polyurethane 50, G1/8" male / M5 female, with mesh filter	0106720



A

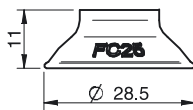


B



C

	Rubber part	Art. No.
	Suction cup FC25P Polyurethane 50	0104803



	Fittings	Art. No.
	Fitting M5 female	3250003
	Fitting G1/8" male, with mesh filter	3250085
	Fitting G1/8" male/M5 female, with mesh filter	0101152

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

FC35P



Flat, concave suction cup with cleats

- Suitable for slightly domed and flat and oily surfaces, e.g., such as those encountered when handling steel sheets in press processes.
- Thanks to the high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- The suction cups have cleats that prevent thin objects from being disfigured.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU50°	11.0	36	51	27	51	62	5.0	32	5.5	6
PU60°	11.0	34	49	27	41	51	5.0	32	5.5	6

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU50	Blue transparent	50	10–50
Polyurethane, PU60	Green transparent	60	10–50

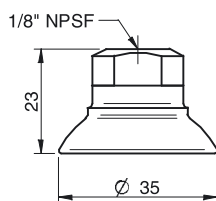
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

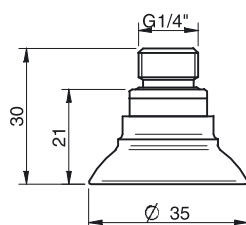
**Please contact Piab.

Ordering information

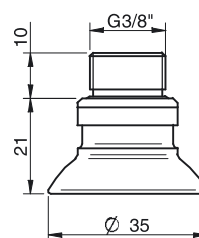
	Complete suction cups	Art. No.
A	Suction cup FC35P Polyurethane 50, 1/8" NPSF female, with mesh filter	0103705
A	Suction cup FC35P Polyurethane 50, 1/8" NPSF female, with dual flow control valve	0103709
B	Suction cup FC35P Polyurethane 50, G1/4" male, with mesh filter	0103711
B	Suction cup FC35P Polyurethane 50, G1/4" male, with mesh filter and dual flow control valve	0103713
C	Suction cup FC35P Polyurethane 50, G3/8" male, with mesh filter	0103719
A	Suction cup FC35P Polyurethane 60, 1/8" NPSF female, with mesh filter	0103706
B	Suction cup FC35P Polyurethane 60, G1/4" male, with mesh filter	0103712
C	Suction cup FC35P Polyurethane 60, G3/8" male, with mesh filter	0103720
C	Suction cup FC35P Polyurethane 60, G3/8" male, with mesh filter and dual flow control valve	0103722
D	Suction cup FC35P Polyurethane 60, 5x1/8" NPSF female	0103728



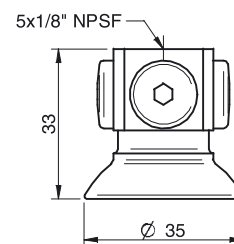
A



B

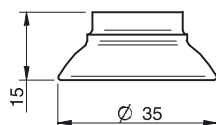


C



D

	Rubber parts	Art. No.
	Suction cup FC35P Polyurethane 50	0103290
	Suction cup FC35P Polyurethane 60	0103291



	Fittings	Art. No
	Fitting 1/8" NPSF female, 30–40, with mesh filter	0101153
	Fitting 1/8" NPSF female, 30–40, with dual flow control valve	3251006
	Fitting G1/4" male, 30–40, with mesh filter	3250091
	Fitting G1/4" male, 30–40, with mesh filter and dual flow control valve	3251007
	Fitting G3/8" male, 30–40, with mesh filter	3250086
	Fitting G3/8" male, 30–40, with mesh and dual flow control valve	3251009
	Fitting 5x1/8" NPSF female, 30–40	0100261
	Fitting 5x1/8" NPSF female, 30–40, with dual flow control valve	3251011

For further information and dimensioned drawings, see section Suction cups/grippers Fittings..

FC50P



Flat, concave suction cup with cleats

- Suitable for slightly domed and flat and oily surfaces, e.g., such as those encountered when handling steel sheets in press processes.
- Thanks to the high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- The suction cups have cleats that prevent thin objects from being disfigured.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight with fitting g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40°	28	77	103	49	82	100	10	53	5.0	28
PU60°	28	77	104	52	93	111	10	53	5.0	28

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU40	Red transparent	40	10–50
Polyurethane, PU60	Green transparent	60	10–50

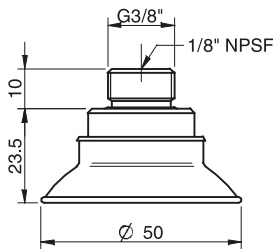
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

Complete suction cups	Art. No.
Suction cup FC50P Polyurethane 40, G3/8" male - 1/8" NPSF female	0103289
Suction cup FC50P Polyurethane 60, G3/8" male - 1/8" NPSF female	0103293



FC75P



Flat, concave suction cup with cleats

- Suitable for slightly domed and flat and oily surfaces, e.g., such as those encountered when handling steel sheets in press processes.
- Thanks to the high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- The suction cups have cleats that prevent thin objects from being disfigured.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight with fitting g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40°	73	157	215	107	200	230	30	78	6.5	45
PU60°	73	168	225	93	225	255	30	78	6.5	45

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU40	Red transparent	40	10–50
Polyurethane, PU60	Green transparent	60	10–50

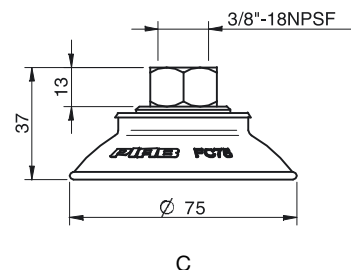
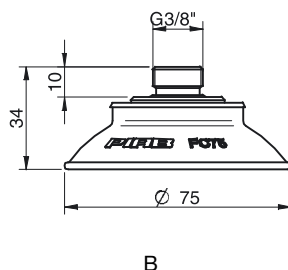
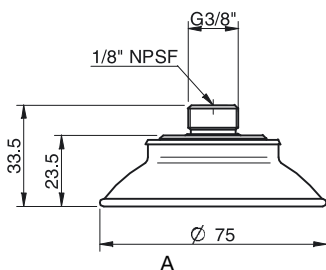
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

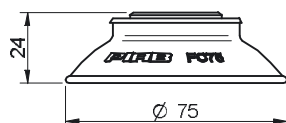
**Please contact Piab.

Ordering information

	Complete suction cups	Art. No.
A	Suction cup FC75P Polyurethane 40, G3/8" male - 1/8" NPSF female	0103294
A	Suction cup FC75P Polyurethane 60, G3/8" male - 1/8" NPSF female	0103296
B	Suction cup FC75P Polyurethane 40, thread insert G3/8" with mesh filter	0106959
B	Suction cup FC75P Polyurethane 60, thread insert G3/8" with mesh filter	0107303
C	Suction cup FC75P Polyurethane 40, 3/8" NPSF female	0108796
C	Suction cup FC75P Polyurethane 60, 3/8" NPSF female	0108797



	Rubber parts	Art. No.
	Suction cup FC75P Polyurethane 40, for tread insert	0106948
	Suction cup FC75P Polyurethane 60, for tread insert	0107302



	Fitting	Art. No.
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

FC100P



Flat, concave suction cup with cleats

- Suitable for slightly domed and flat and oily surfaces, e.g., such as those encountered when handling steel sheets in press processes.
- Thanks to the high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- The suction cups have cleats that prevent thin objects from being disfigured.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40°	137	284	377	176	318	420	80	110	10.2	64
PU60°	152	328	446	112	264	382	80	110	10.2	64

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU40	Red transparent	40	10–50
Polyurethane, PU60	Green transparent	60	10–50

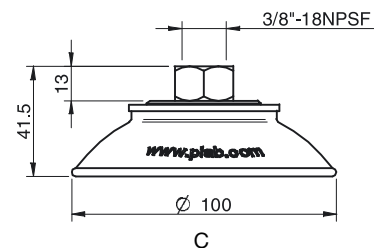
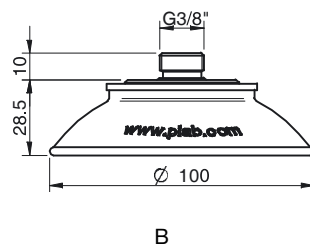
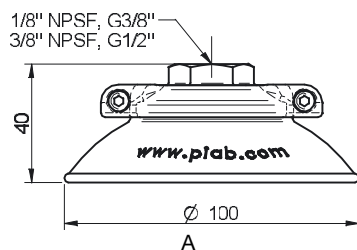
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

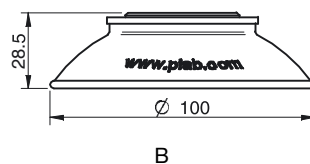
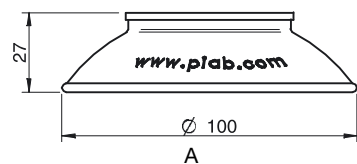
**Please contact Piab.

Ordering information

	Complete suction cups	Art. No.
A	Suction cup FC100P Polyurethane 40, 1/8" NPSF female, with mesh filter	0103731
A	Suction cup FC100P Polyurethane 40, G3/8" female, with mesh filter	0103734
A	Suction cup FC100P Polyurethane 40, 3/8" NPSF female, with mesh filter	0103737
A	Suction cup FC100P Polyurethane 40, G1/2" female, with mesh filter	0103740
A	Suction cup FC100P Polyurethane 60, 1/8" NPSF female, with mesh filter	0103733
A	Suction cup FC100P Polyurethane 60, G3/8" female, with mesh filter	0103736
A	Suction cup FC100P Polyurethane 60, G1/2" female, with mesh filter	0103742
A	Suction cup FC100P Polyurethane 60, 3/8" NPSF female, with mesh filter	0103739
B	Suction cup FC100P Polyurethane 40, thread insert G3/8" male, with mesh filter	0106836
B	Suction cup FC100P Polyurethane 60, thread insert G3/8" male, with mesh filter	0107305
C	Suction cup FC100P Polyurethane 40, 3/8" NPSF female	0108798
C	Suction cup FC100P Polyurethane 60, 3/8" NPSF female	0108799



	Rubber parts	Art. No.
A	Suction cup FC100P Polyurethane 40	0103297
A	Suction cup FC100P Polyurethane 60	0103299
B	Suction cup FC100P Polyurethane 40, for tread insert	0106835
B	Suction cup FC100P Polyurethane 60, for tread insert	0107304



	Fittings	Art. No.
	Fitting 75, 1/8" NPSF female, with mesh filter	0100548
	Fitting 75, G3/8" female, with mesh filter	0100551
	Fitting 75, 3/8" NPSF female, with mesh filter	0100553
	Fitting 75, G1/2" female, with mesh filter	0100555
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

FC150P



Flat, concave suction cup with cleats

- Suitable for slightly domed and flat and oily surfaces, e.g., such as those encountered when handling steel sheets in press processes.
- Thanks to the high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- The suction cups have cleats that prevent thin objects from being disfigured.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40°	274	716	932	343	765	902	250	165	14.2	213
PU60°	284	647	922	215	568	863	250	165	14.2	213

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU40	Red transparent	40	10–50
Polyurethane, PU60	Green transparent	60	10–50

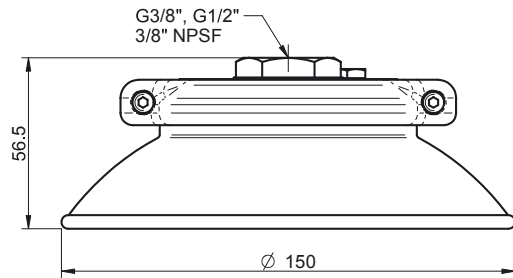
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

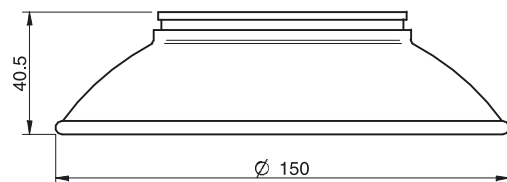
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Ordering information

Complete suction cups	Art. No.
Suction cup FC150P Polyurethane 40, G3/8" female, with mesh filter	0103743
Suction cup FC150P Polyurethane 40, 3/8" NPSF female, with mesh filter	0103749
Suction cup FC150P Polyurethane 40, G1/2" female, with mesh filter	0103755
Suction cup FC150P Polyurethane 60, G3/8" female, with mesh filter	0103745
Suction cup FC150P Polyurethane 60, 3/8" NPSF female, with mesh filter	0103751
Suction cup FC150P Polyurethane 60, G1/2" female, with mesh filter	0103757



Rubber parts	Art. No.
Suction cup FC150P Polyurethane 40	0101946
Suction cup FC150P Polyurethane 60	0103301



Fittings	Art. No.
Fitting 110 G3/8" female, with mesh filter	0100557
Fitting 110, 3/8" NPSF female, with mesh filter	0100559
Fitting 110, G1/2" female, with mesh filter	0100561

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

OB20x60P with swivel fitting



Oval suction cup with short bellows

- Suitable for level adjustment. Can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- Lifting movement to separate small and thin objects.
- DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- Swivel option, prior to the locking operation, for easy positioning of the oval cup.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight with fitting
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
13.0	34	57	13.0	37	48	24.0	7.0	4.5	11.0

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU60	Green transparent	60	10–50

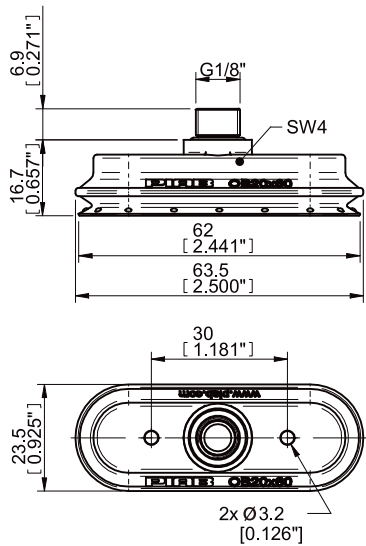
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

Complete suction cups	Art. No.
Suction cup OB20x60P Polyurethane 60, G1/8" male	0115291



OB35x90P



Oval suction cup with short bellows

- Suitable for level adjustment. Can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- Lifting movement to separate small and thin objects.
- In the two coloured suction cup, the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU60°	42	117	185	32	85	111	38	30.0	10.5	55
PU30°/60°	42	119	174	48	73	100	38	30.0	10.5	55

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

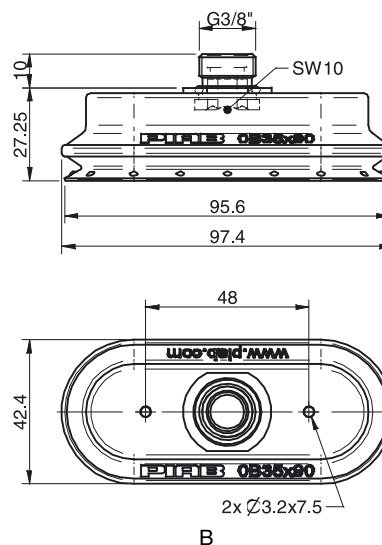
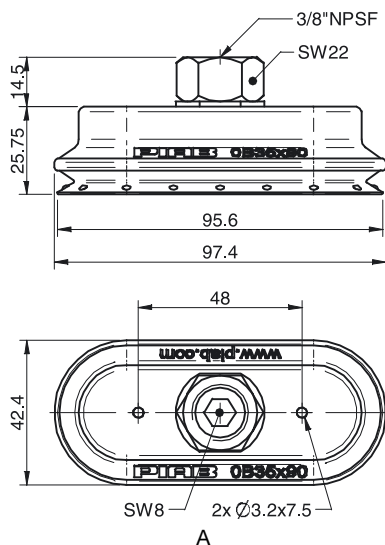
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

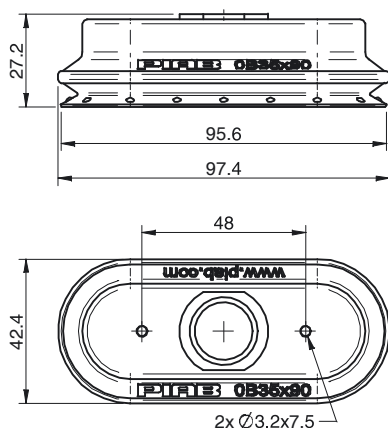
**Please contact Piab.

Ordering information

	Complete suction cups	Art. No.
A	Suction cup OB35x90P Polyurethane 60, 3/8" NPSF female	0108672
B	Suction cup OB35x90P Polyurethane 60, thread insert G3/8" male, with mesh filter	0108673
A	Suction cup OB35x90P Polyurethane 30/60, 3/8" NPSF female	0109857
B	Suction cup OB35x90P Polyurethane 30/60, thread insert G3/8" male, with mesh filter	0109856



	Rubber parts	Art. No.
	Suction cup OB35x90P Polyurethane 60	0109912
	Suction cup OB35x90P Polyurethane 30/60	0109913



	Fittings	Art. No.
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

OB50x140P



Oval suction cup with short bellows

- Suitable for level adjustment. Can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- Lifting movement to separate small and thin objects.
- In the two coloured suction cup, the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU60°	77	231	368	122	292	396	95	26	11.3	129
PU30°/60°	58	235	366	110	260	349	95	23.0	11.3	129

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

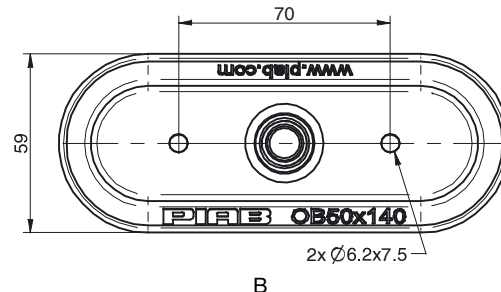
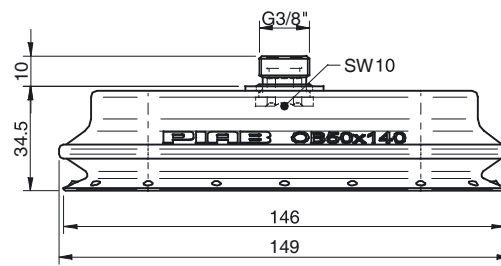
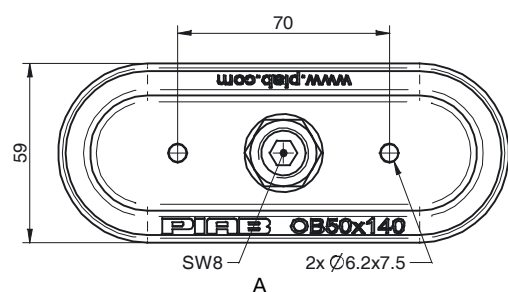
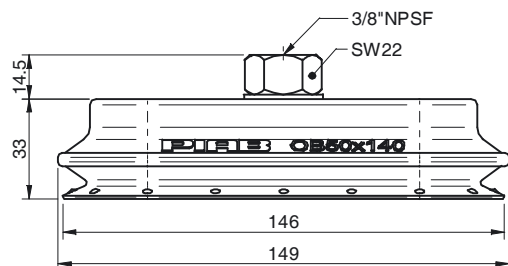
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

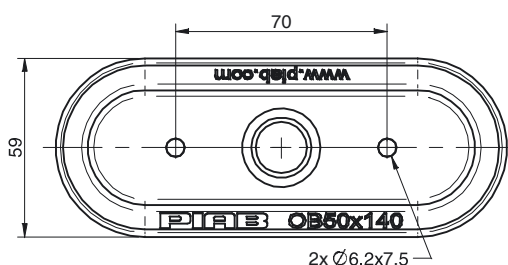
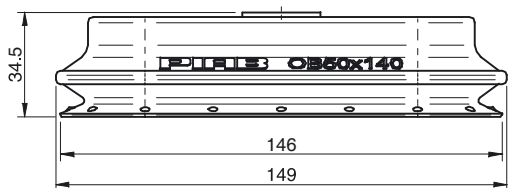
**Please contact Piab.

Ordering information

	Complete suction cups	Art. No.
A	Suction cup OB50x140P Polyurethane 60, 3/8" NPSF female	0108674
B	Suction cup OB50x140P Polyurethane 60, thread insert G3/8" male, with mesh filter	0108675
A	Suction cup OB50x140P Polyurethane 30/60, 3/8" NPSF female	0109859
B	Suction cup OB50x140P Polyurethane 30/60, thread insert G3/8" male, with mesh filter	0109858



	Rubber parts	Art. No.
	Suction cup OB50x140P Polyurethane 60	0109914
	Suction cup OB50x140P Polyurethane 30/60	0109915



	Fittings	Art. No.
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

OB65x170P



Oval suction cup with short bellows

- Suitable for level adjustment. Can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- Lifting movement to separate small and thin objects.
- In the two coloured suction cup, the bellows and the sealing lip are of different hardnesses, which makes the suction cup strong and stable and, at the same time, soft and flexible.
- DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU60°	130	310	533	170	440	600	175	38	16.0	241
PU30°/60°	119	335	541	141	379	532	175	38	16.0	241

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow transparent	30	10–50
Polyurethane, PU60	Green transparent	60	10–50

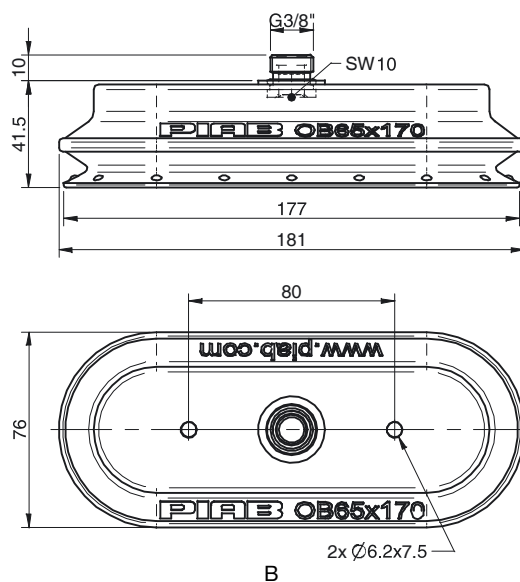
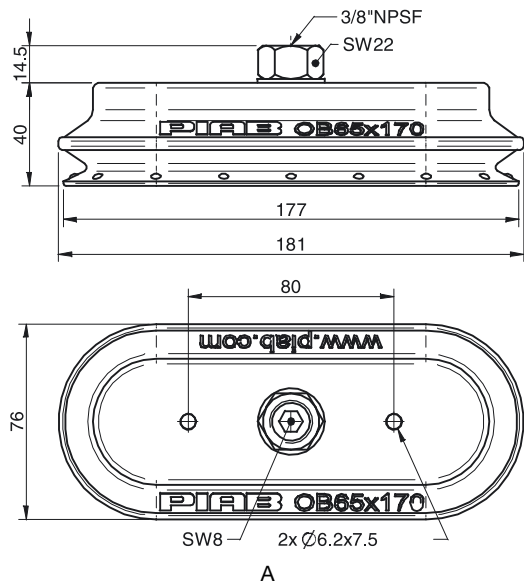
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

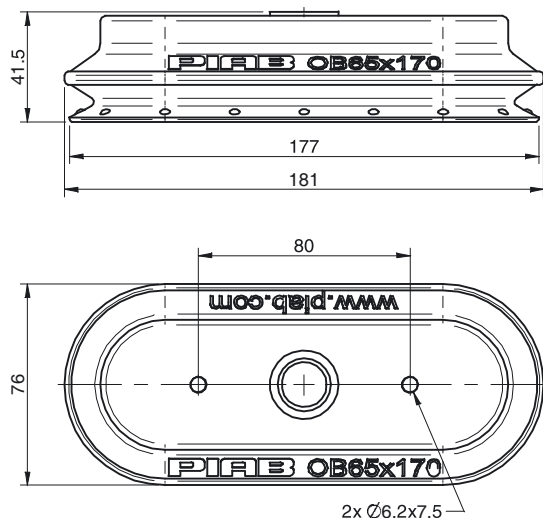
**Please contact Piab.

Ordering information

	Complete suction cups	Art. No.
A	Suction cup OB65x170P Polyurethane 60, 3/8" NPSF female	0108676
B	Suction cup OB65x170P Polyurethane 60, thread insert G3/8" male, with mesh filter	0108677
A	Suction cup OB65x170P Polyurethane 30/60, 3/8" NPSF female	0109861
B	Suction cup OB65x170P Polyurethane 30/60, thread insert G3/8" male, with mesh filter	0109860



	Rubber parts	Art. No.
	Suction cup OB65x170P Polyurethane 60	0109916
	Suction cup OB65x170P Polyurethane 30/60	0109917



	Fittings	Art. No.
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

OC35x90P



Oval, concave suction cup

- Suitable for oblong objects with slightly domed or flat and oily surfaces, such as those encountered in body parts in the automotive industry.
- DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- Fitting option, male G3/8", with a swivel function prior to the locking operation, for easy positioning of the oval cup.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight with fitting g	Weight with adj. thread insert g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa					
PU40°	49	117	171	53	112	147	20.0	—	3.0	27	40
PU60°	49	132	171	68	161	206	20.0	—	3.0	27	40

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU40	Red transparent	40	10–50
Polyurethane, PU60	Green transparent	60	10–50

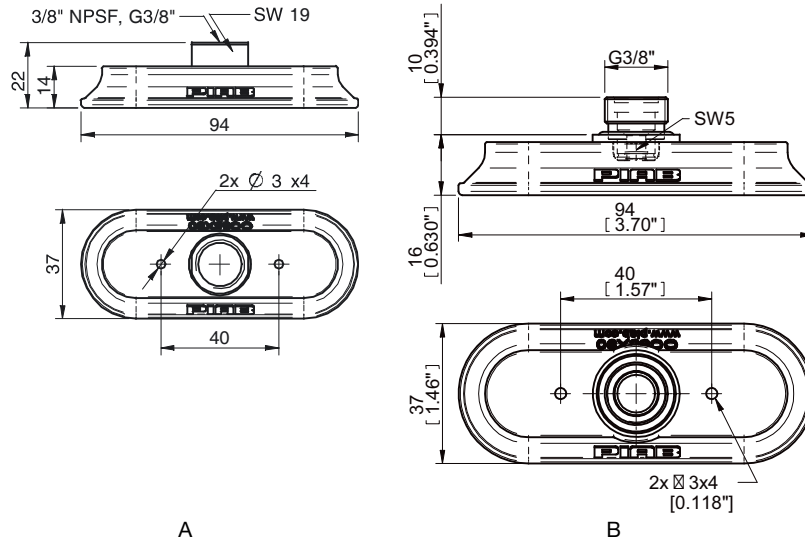
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

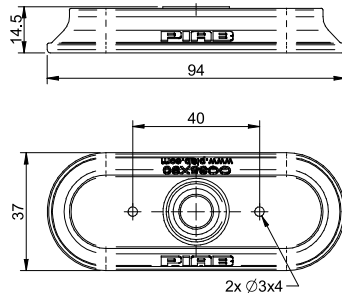
**Please contact Piab.

Ordering information

	Complete suction cups	Art. No.
A	Suction cup OC35x90P Polyurethane 40, G3/8" female	0102374
A	Suction cup OC35x90P Polyurethane 40, 3/8" NPSF female	0102375
A	Suction cup OC35x90P Polyurethane 60, G3/8" female	0103305
A	Suction cup OC35x90P Polyurethane 60, 3/8" NPSF female	0103303
B	Suction cup OC35x90P Polyurethane 40, adjustable thread insert G3/8" male with mesh filter	0115307
B	Suction cup OC35x90P Polyurethane 60, adjustable thread insert G3/8" male with mesh filter	0115313



Rubber parts	Art. No.
Suction cup OC35x90P Polyurethane 40	0115306



OF10x30P



Flat, oval suction cup with cleats

- Suitable for flat and rough surfaces.
- Fair stability and little inherent movement.
- Recommended when the lifting force is parallel to the surface of the object.
- Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight with fitting
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
4.0	11.0	17.0	6.0	12.0	17.0	0.5	15.0	1.0	4.0

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU50	Blue transparent	50	10–50

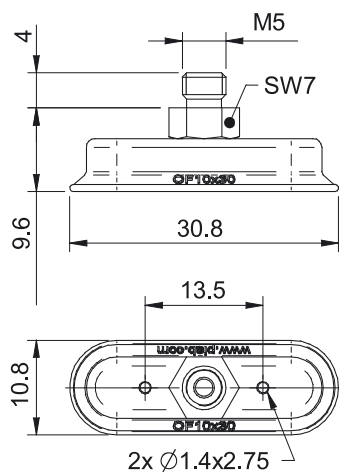
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

Complete suction cups	Art. No.
Suction cup OF10x30P Polyurethane 50, M5 male	0110084



OF15x45P with swivel fitting



Flat, oval suction cup with cleats

- Suitable for flat and rough surfaces.
- Fair stability and little inherent movement.
- Recommended when the lifting force is parallel to the surface of the object.
- Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- Swivel option, prior to the locking operation, for easy positioning of the oval cup.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight with fitting
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
9.0	27	41	6.0	20.0	34	1.0	30	1.0	8.25

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU50	Blue transparent	50	10–50

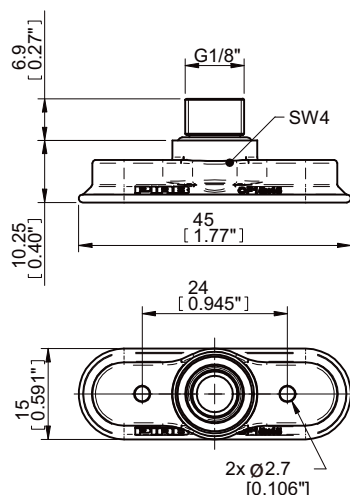
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

Complete suction cups	Art. No.
Suction cup OF15x45P Polyurethane 50, G1/8" male	0115285



OF25x70P with swivel fitting



Flat, oval suction cup with cleats

- ▶ Suitable for flat and rough surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- ▶ DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- ▶ Swivel option, prior to the locking operation, for easy positioning of the oval cup.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight with fitting g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40°	24.0	66	107	46	90	105	6.0	50	1.9	19
PU60°	24.0	77	118	42	127	161	6.0	50	1.9	19

Material specifications

Material	Color	Hardness °Shore A	Temperature range °C
Polyurethane, PU40	Red transparent	40	10–50
Polyurethane, PU60	Green transparent	60	10–50

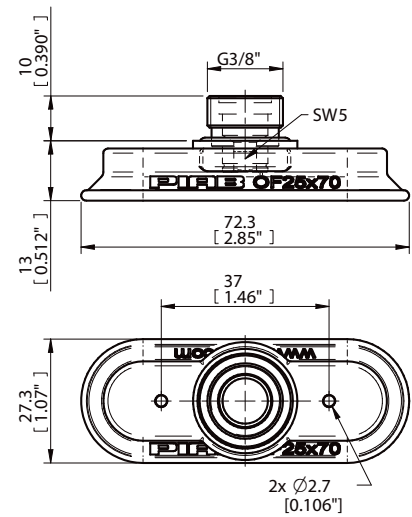
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

Complete suction cups	Art. No.
Suction cup OF25x70P Polyurethane 40, G3/8" male	0115304
Suction cup OF25x70P Polyurethane 60, G3/8" male	0115311



OF40x110P



Flat, oval suction cup with cleats

- ▶ Suitable for flat and rough surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- ▶ DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40°	69	203	293	120	230	296	21.0	77	3.1	48
PU60°	74	200	303	98	228	410	21.0	77	3.1	48

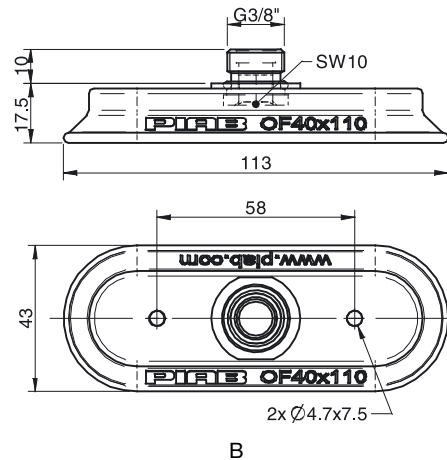
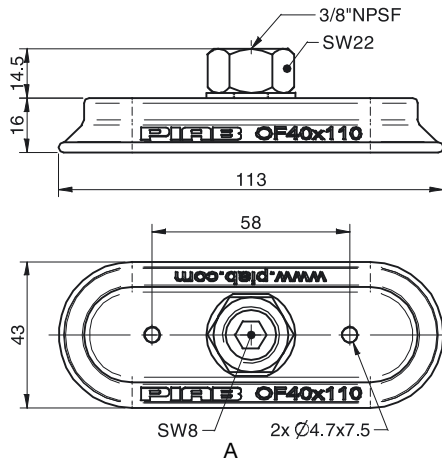
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

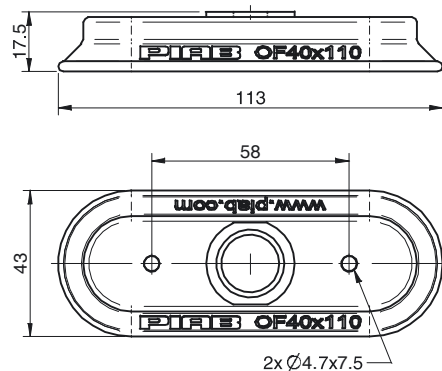
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Ordering information

	Complete suction cups	Art. No.
A	Suction cup OF40x110P Polyurethane 40, 3/8" NPSF female	0109851
B	Suction cup OF40x110P Polyurethane 40, thread insert G3/8" male, with mesh filter	0109850
A	Suction cup OF40x110P Polyurethane 60, 3/8" NPSF female	0108265
B	Suction cup OF40x110P Polyurethane 60, thread insert G3/8" male, with mesh filter	0108263



	Rubber parts	Art. No.
	Suction cup OF40x110P Polyurethane 40	0109907
	Suction cup OF40x110P Polyurethane 60	0109906



	Fittings	Art. No.
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

OF55x150P



Flat, oval suction cup with cleats

- ▶ Suitable for flat and rough surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- ▶ DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40°	131	366	527	155	350	455	37	150	3.0	109
PU60°	134	376	558	128	338	477	37	150	3.0	109

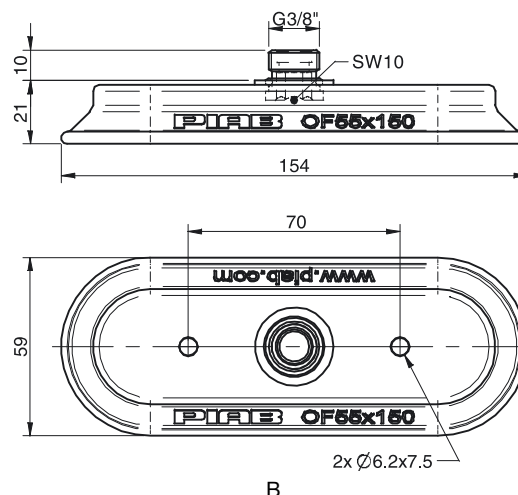
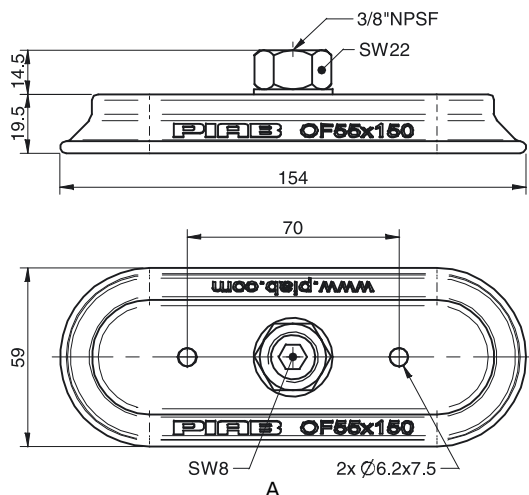
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

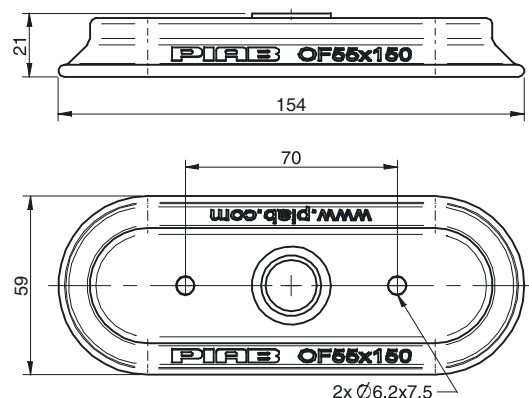
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Ordering information

	Complete suction cups	Art. No.
A	Suction cup OF55x150P Polyurethane 40, 3/8" NPSF female	0109853
B	Suction cup OF55x150P Polyurethane 40, thread insert G3/8" male, with mesh filter	0109852
A	Suction cup OF55x150P Polyurethane 60, 3/8" NPSF female	0108036
B	Suction cup OF55x150P Polyurethane 60, thread insert G3/8" male, with mesh filter	0108030



	Rubber parts	Art. No.
	Suction cup OF55x150P Polyurethane 40	0109909
	Suction cup OF55x150P Polyurethane 60	0109908



	Fittings	Art. No.
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

OF70x175P



Flat, oval suction cup with cleats

- ▶ Suitable for flat and rough surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- ▶ DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40°	190	530	785	170	440	630	80	130	5.7	193
PU60°	180	570	860	200	555	750	80	130	5.7	193

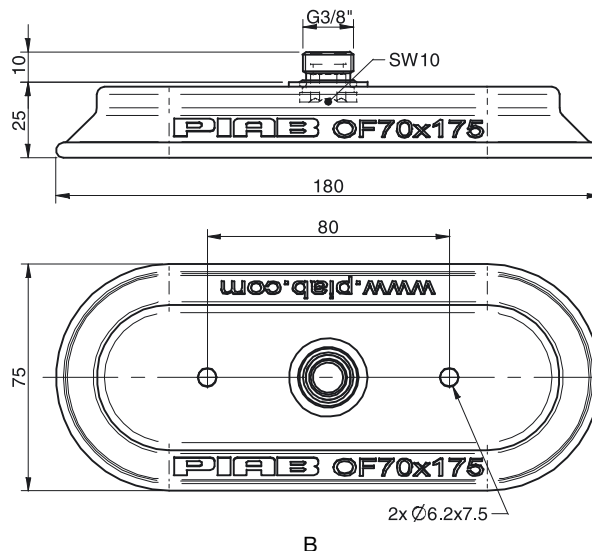
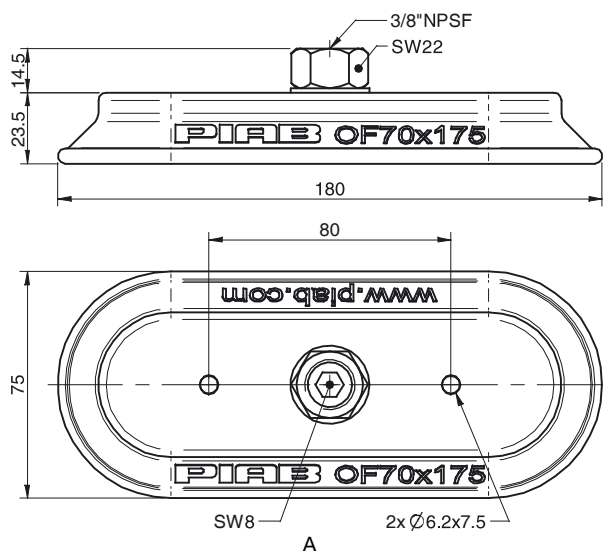
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

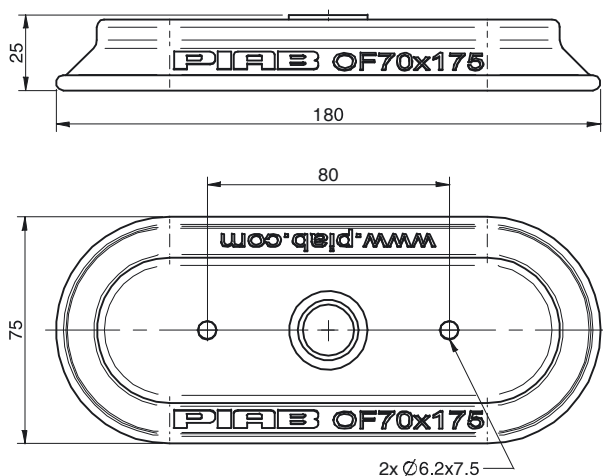
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Ordering information

	Complete suction cups	Art. No.
A	Suction cup OF70x175P Polyurethane 40, 3/8" NPSF female	0109855
B	Suction cup OF70x175P Polyurethane 40, thread insert G3/8" male, with mesh filter	0109854
A	Suction cup OF70x175P Polyurethane 60, 3/8" NPSF female	0108264
B	Suction cup OF70x175P Polyurethane 60, thread insert G3/8" male, with mesh filter	0108671



	Rubber parts	Art. No.
	Suction cup OF70x175P Polyurethane 40	0109911
	Suction cup OF70x175P Polyurethane 60	0109910



	Fittings	Art. No.
	Thread insert G3/8" male, with O-ring and mesh filter	0107148

U20-2P



Universal suction cup

- ▶ Long life time suction cup
- ▶ Suitable for several book binding applications
- ▶ Easy to handle different paper qualities due to the possibilities to order the U20-2P in three different shore
- ▶ DURAFLEX® are suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane.

Lifting forces & Technical data

Material	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40	3	10.5	14	1.5	3	6	0.7	9	5	1.7
PU50	3	11.5	15	1.5	3	6	0.7	9	5	1.7
PU60	3	14	21	3	6	8	0.7	12	5	1.7

Material specifications

Material	Color	Hardness °Shore A	Temperature range °C
Polyurethane, PU40	Red transparent	40	10–50
Polyurethane, PU50	Blue transparent	50	10–50
Polyurethane, PU60	Green transparent	60	10–50

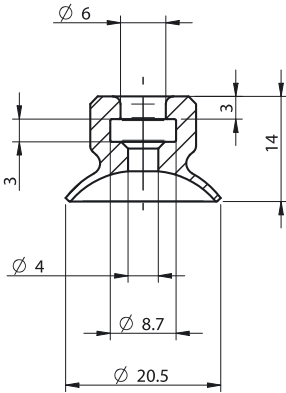
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

Rubber parts	Art. No.
Suction cup U20-2P Polyurethane 40	0119994
Suction cup U20-2P Polyurethane 50	0119995
Suction cup U20-2P Polyurethane 60	0119996



BFF40P, BFF60P, BFF80P, BFF110P



Features

- ▶ Special designed friction cups for oily surfaces, such as sheets in metal forming processes.
- ▶ Normal wear on friction cup will not affect the long term shear force performance.
- ▶ Best choice if $> 0,1\text{g/m}^2$ press oil is used on the sheet.
- ▶ Thanks to the strong grip on oily surfaces, the suction cups can withstand high shear forces, typically 2–4 times more than corresponding conventional suction cups.
- ▶ The "BFF" design is suitable for uneven/curved surfaces or if level compensation is needed, for example in de-stacking applications.
- ▶ The flat inner support gives stability during movement in any orientation.
- ▶ DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Model	Material to be handled	Lifting forces vertical to the surface, N, at vacuum level		Friction/shear forces parallel to the surface, N, at vacuum level		Volume cm ³	Min. curve radius mm	Weight g
		60 -kPa	90 -kPa	60 -kPa	90 -kPa			
BFF40P	Oily steel plate	45	60	35	45	10	23	20–34
BFF60P	Oily steel plate	82	106	76	93	20	35	30–61
BFF80P	Oily steel plate	174	207	110	160	50	50	66–141
BFF110P	Oily steel plate	284	345	235	253	110	95	160–275

Values valid for steel sheet with surface finish Ra 1 and 2-3g/m² of press oil.

Material specifications

Material	Colour	Hardness, °Shore A	Temperature range, °C
Polyurethane, PU55	Orange	55	10–50
Polyurethane, PU60	Green transparent	60	10–50

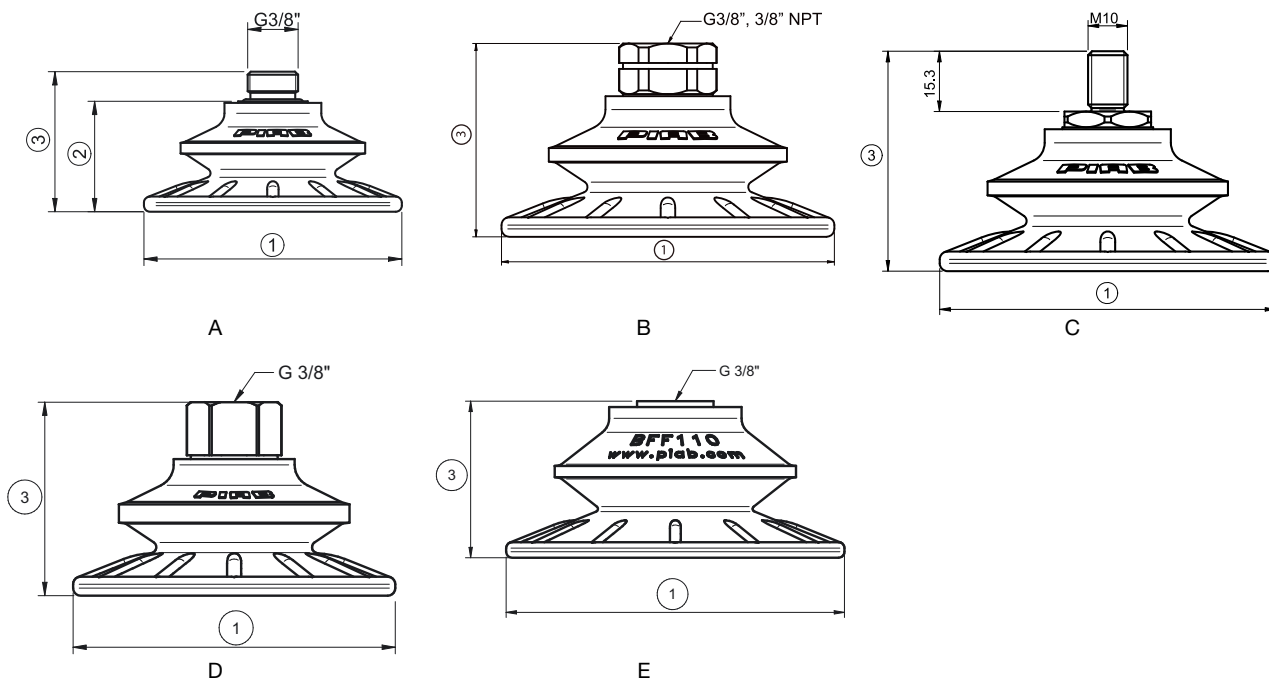
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

	Complete suction cups	Code	Art. No.
A	Suction cup BFF40P Polyurethane 55/60, G3/8" male, with mesh filter	BFF40P.4R.04UF	0118991
B	Suction cup BFF40P Polyurethane 55/60, G3/8" female	BFF40P.4R.04UA	0118992
B	Suction cup BFF40P Polyurethane 55/60, 3/8" NPT female	BFF40P.4R.04UN	0122278
C	Suction Cup BFF40P Polyurethane 55/60, M10x1.5 male	BFF40P.4R.M10M	0121427
A	Suction cup BFF60P Polyurethane 55/60, G3/8" male, with mesh filter	BFF60P.4R.06UF	0118994
B	Suction cup BFF60P Polyurethane 55/60, G3/8" female	BFF60P.4R.06UA	0118995
D	Suction cup BFF60P Polyurethane 55/60, G3/8" female, plastic thread	BFF60P.5RC.G56WC	0124742
B	Suction cup BFF60P Polyurethane 55/60, 3/8" NPT female	BFF60P.4R.06UN	0122279
C	Suction cup BFF60P Polyurethane 55/60, M10x1.5 male	BFF60P.4R.M10M	0121428
A	Suction cup BFF80P Polyurethane 55/60, G3/8" male, with mesh filter	BFF80P.5R.G45M	0118997
B	Suction cup BFF80P Polyurethane 55/60, G3/8" female	BFF80P.5R.G45W	0118670
D	Suction cup BFF80P Polyurethane 55/60, G3/8" female, plastic thread	BFF80P.5RC.G56WC	0124717
B	Suction cup BFF80P Polyurethane 55/60, 3/8" NPT female	BFF80P.5R.N47W	0122280
C	Suction cup BFF80P Polyurethane 55/60, M10x1.5 male	BFF80P.5R.M10M	0121384
A	Suction cup BFF110P Polyurethane 55/60, G3/8" male, with mesh filter	BFF110P.5R.G45M	0118671
B	Suction cup BFF110P Polyurethane 55/60, G3/8" female	BFF110P.5R.G45W	0118673
E	Suction cup BFF110P Polyurethane 55/60, G3/8" female, plastic thread	BFF110P.5RC.G57W C	0124734
B	Suction cup BFF110P Polyurethane 55/60, 3/8" NPT female	BFF110P.5R.N47W	0122281
C	Suction cup BFF110P Polyurethane 55/60, M10x1.5 male	BFF110P.5R.M10M	0121430



Measures complete suction cups															
	BFF40P			BFF60P				BFF80P				BFF110P			
	A	B	C	A	B	C	D	A	B	C	D	A	B	C	E
1	45	45	—	61	61	—	61	85	85	—	85	115	115	—	115
2	22	—	—	26	—	—	—	37	—	—	—	53	—	—	—
3	32	32	51.5	36	36	55.3	40	46	50	55.8	51	63	66	72.3	53
Max. vertical movement, mm	7	7	7	10	10	10	10	14	14	14	14	21	21	21	21
Max. expanding lip, mm	46	46	46	62	62	62	62	87	87	87	87	118	118	118	118

FCF35P, FCF50P, FCF75P, FCF100P, FCF125P



Features

- ▶ Special designed friction cups for oily surfaces, such as sheets in metal forming processes.
- ▶ Normal wear on friction cup will not affect the long term shear force performance.
- ▶ Best choice if $> 0,1\text{g/m}^2$ press oil is used on the sheet.
- ▶ Thanks to the strong grip on oily surfaces, the suction cups can withstand high shear forces, typically 2–4 times more than corresponding conventional suction cups.
- ▶ The "FCF" design is suitable for slightly domed and flat surfaces, e.g., such as those encountered when handling metal sheets in press lines.
- ▶ The suction cups have support cleats that prevent thin objects from being disfigured.
- ▶ DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Model	Material to be handled	Lifting forces vertical to the surface, N, at vacuum level		Friction/shear forces parallel to the surface, N, at vacuum level		Volume cm ³	Min. curve radius mm	Weight g
		60 -kPa	90 -kPa	60 -kPa	90 -kPa			
FCF35P	Oily steel plate	34	50	26	32	5	40	19–42
FCF50P	Oily steel plate	72	101	52	70	10	50	31–67
FCF75P	Oily steel plate	163	228	104	139	30	100	60–91
FCF100P	Oily steel plate	236	298	139	205	70	150	92–171
FCF125P	Oily steel plate	405	442	194	236	100	150	151–280

Values valid for steel sheet with surface finish Ra 1 and 2-3g/m² of press oil.

Material specifications

Material	Colour	Hardness, °Shore A	Temperature range, °C
Polyurethane, PU55	Orange	55	10–50
Polyurethane, PU60	Green transparent	60	10–50

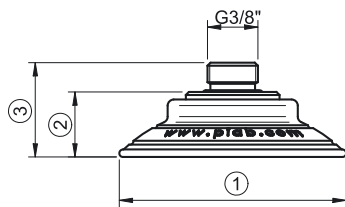
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

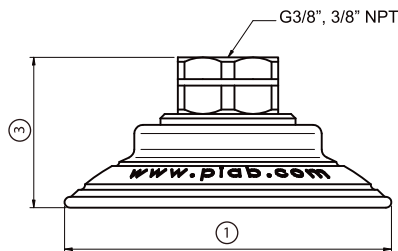
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Ordering information

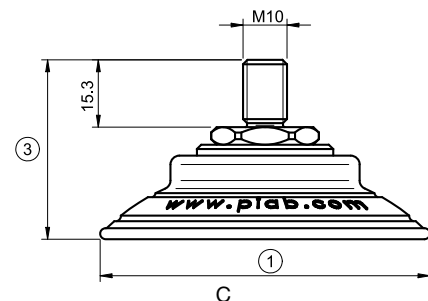
	Complete suction cups	Code	Art. No.
A	Suction cup FCF35P Polyurethane 55/60, G3/8" male, with mesh filter	FCF35P.4R.O4UF	0119913
B	Suction cup FCF35P Polyurethane 55/60, G3/8" female	FCF35P.4R.O4UA	0118981
B	Suction cup FCF35P Polyurethane 55/60, 3/8" NPT female	FCF35P.4R.O4UN	0122282
C	Suction cup FCF35P Polyurethane 55/60, M10x1.5 male	FCF35P.4R.M10M	0121431
A	Suction cup FCF50P Polyurethane 55/60, G3/8" male, with mesh filter	FCF50P.4R.O5UF	0118985
B	Suction cup FCF50P Polyurethane 55/60, G3/8" female	FCF50P.4R.O5UA	0118986
B	Suction cup FCF50P Polyurethane 55/60, 3/8" NPT female	FCF50P.4R.O5UN	0122283
C	Suction cup FCF50P Polyurethane 55/60, M10x1.5 male	FCF50P.4R.M10M	0121432
A	Suction cup FCF75P Polyurethane 55/60, G3/8" male, with mesh filter	FCF75P.5R.G45M	0118423
B	Suction cup FCF75P Polyurethane 55/60, G3/8" female	FCF75P.5R.G45W	0118429
D	Suction cup FCF75P Polyurethane 55/60, G3/8" female, plastic thread	FCF75P.5RC.G56WC	0124718
B	Suction cup FCF75P Polyurethane 55/60, 3/8" NPT female	FCF75P.5R.N47W	0122284
C	Suction cup FCF75P Polyurethane 55/60, M10x1.5 male	FCF75P.5R.M10M	0121433
A	Suction cup FCF100P Polyurethane 55/60 G3/8" male, with mesh filter	FCF100P.5R.G40M	0118430
B	Suction cup FCF100P Polyurethane 55/60, G3/8" female	FCF100P.5R.G46W	0118432
D	Suction cup FCF100P Polyurethane 55/60, G3/8" female, plastic thread	FCF100P.5RC.G56W C	0124669
B	Suction cup FCF100P Polyurethane 55/60, 3/8" NPT female	FCF100P.5R.N48W	0122285
C	Suction cup FCF100P Polyurethane 55/60, M10x1.5 male	FCF100P.5R.M10M	0121385
A	Suction cup FCF125P Polyurethane 55/60, G3/8" male, with mesh filter	FCF125P.5R.G40M	0118435
B	Suction cup FCF125P Polyurethane 55/60, G3/8" female	FCF125P.5R.G46W	0118437
D	Suction cup FCF125P Polyurethane 55/60, G3/8" female, plastic thread	FCF125P.5RC.G56W C	0124787
B	Suction cup FCF125P Polyurethane 55/60, 3/8" NPT female	FCF125P.5R.N48W	0122286
C	Suction cup FCF125P Polyurethane 55/60, M10x1.5 male	FCF125P.5R.M10M	0121435



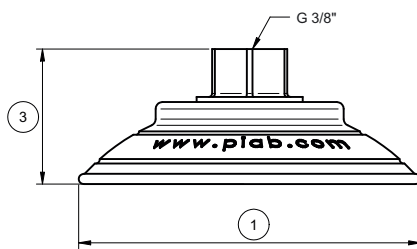
A



B



C



D

Measures complete suction cups																		
	FCF35P			FCF50P			FCF75P				FCF100P				FCF125P			
	A	B	C	A	B	C	A	B	C	D	A	B	C	D	A	B	C	D
1	35	35	35	50	50	50	75	75	75	75	100	100	100	100	126	126	126	126
2	19	—	—	24	—	—	22	—	—	—	26	—	—	—	32	—	—	—
3	29	29	47.8	34	31	49.9	31	34	40.8	34	36	39	44.8	41	42	45	50.8	44
Max. vertical movement, mm	2	2	2	3	3	3	4	4	4	4	6	6	6	6	8	8	8	8
Max. expanding lip, mm	38	38	38	54	54	54	79	79	79	79	105	105	105	105	132	132	132	132

OBF35x90P, OBF50x140P, OBF65x170P



Features

- ▶ Special designed friction cups for oily surfaces, such as sheets in metal forming processes.
- ▶ Normal wear on friction cup will not affect the long term shear force performance.
- ▶ Best choice if $> 0,1\text{g/m}^2$ press oil is used on the sheet.
- ▶ Thanks to the strong grip on oily surfaces, the suction cups can withstand high shear forces, typically 2–4 times more than corresponding conventional suction cups.
- ▶ The "OBF" design is suitable for oblong objects with domed and flat surfaces, such as those encountered with body parts in the automotive industry.
- ▶ Can handle objects with height differences.
- ▶ Fitting option, male G3/8", with a swivel function prior to the locking operation, for easy positioning of the oval cup.
- ▶ DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & Technical data

Model	Material to be handled	Lifting forces vertical to the surface, N, at vacuum level		Friction/shear forces parallel to the surface, N, at vacuum level		Volume cm ³	Min. curve radius mm	Weight g
		60 -kPa	90 -kPa	60 -kPa	90 -kPa			
OBF35x90P	Oily steel plate	108	157	105	151	36	30	77-97
OBF50x140P	Oily steel plate	246	372	271	347	95	50	172-190
OBF65x170P	Oily steel plate	403	502	538	665	200	50	289-310

Values valid for steel sheet with surface finish Ra 1 and 2-3g/m² of press oil.

Material specifications

Material	Colour	Hardness, °Shore A	Temperature range, °C
Polyurethane, PU55	Orange	55	10-50
Polyurethane, PU60	Green transparent	60	10-50

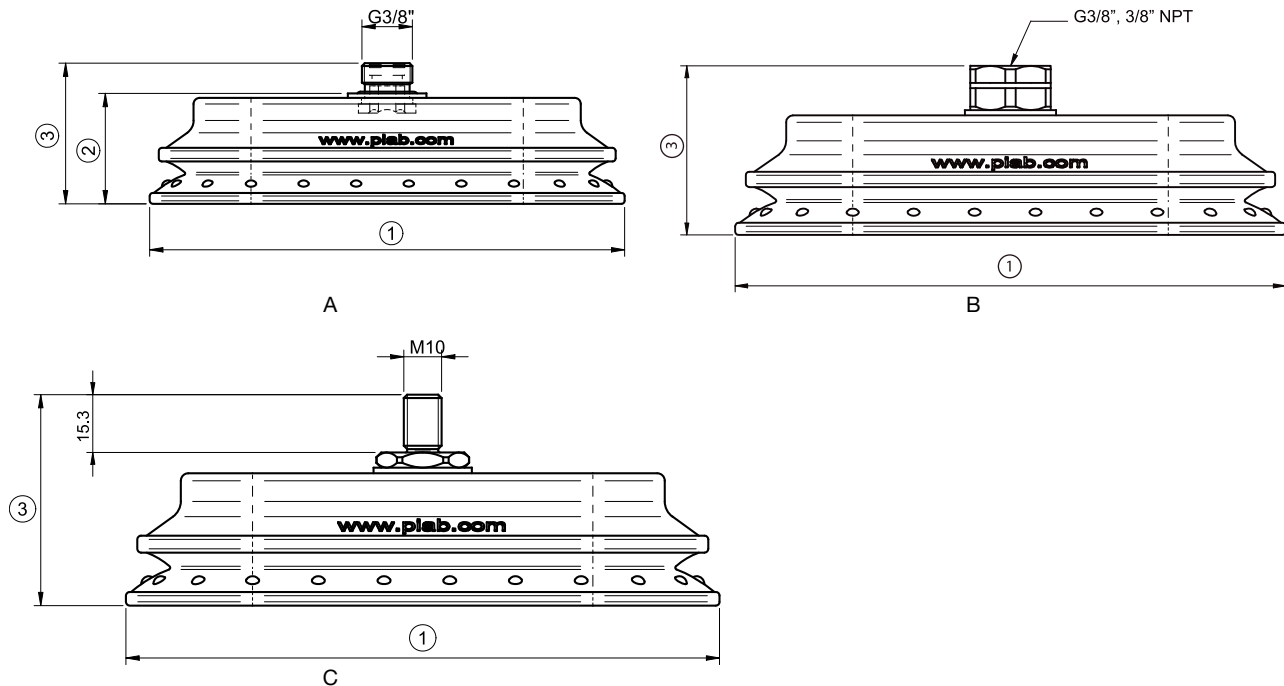
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

	Complete suction cups	Code	Art. No.
A	Suction cup OBF35x90P Polyurethane 55/60, G3/8" male, with mesh filter	OBF35x90P.5R.G40M	0119121
B	Suction cup OBF35x90P Polyurethane 55/60, G3/8" female	OBF35x90P.5R.G46W	0119123
B	Suction cup OBF35X90P Polyurethane 55/60, 3/8" NPT female	OBF35X90P.5R.N48W	0122287
C	Suction cup OBF35x90P Polyurethane 55/60, M10x1.5 male	OBF35x90P.5R.M10M	0121436
A	Suction cup OBF50x140P Polyurethane 55/60, G3/8" male, with mesh filter	OBF50x140P.5R.G40M	0119125
B	Suction cup OBF50x140P Polyurethane 55/60, G3/8" female	OBF50x140P.5R.G46W	0119127
B	Suction cup OBF50X140P Polyurethane 55/60, 3/8" NPT female	OBF50X140P.5R.N48W	0122288
C	Suction cup OBF50x140P Polyurethane 55/60, M10x1.5 male	OBF50x140P.5R.M10M	0121437
A	Suction cup OBF65x170P Polyurethane 55/60, G3/8" male, with mesh filter	OBF65x170P.5R.G40M	0119129
B	Suction cup OBF65x170P Polyurethane 55/60, G3/8" female	OBF65x170P.5R.G46W	0119131
B	Suction cup OBF65X170P Polyurethane 55/60, 3/8" NPT female	OBF65X170P.5R.N48W	0122289
C	Suction cup OBF65x170P Polyurethane 55/60, M10x1.5 male	OBF65x170P.5R.M10M	0121438



Measures complete suction cups									
	OBF35x90P			OBF50x140P			OBF65x170P		
	A	B	C	A	B	C	A	B	C
1	50x105	50x105	50x105	67x157	67x157	67x157	82x187	82x187	82x187
2	29	—	—	37	—	—	44	—	—
3	39	42	47.8	47	50	55.8	54	57	62.8
Max. vertical movement, mm	11	11	11	13	13	13	15	15	15
Max. expanding lip, mm	50x109	50x109	50x109	67x162	67x162	67x162	83x191	83x191	83x191

OCF20x80P, OCF30x90P, OCF40x110P



- ▶ Special designed friction cups for oily surfaces, such as sheets in metal forming processes.
- ▶ Normal wear on friction cup will not affect the long term shear force performance.
- ▶ Best choice if $> 0,1\text{g/m}^2$ press oil is used on the sheet.
- ▶ Thanks to the strong grip on oily surfaces, the suction cups can withstand high shear forces, typically 2–4 times more than corresponding conventional suction cups.
- ▶ The "OCF" design is suitable for oblong objects with slightly curved or flat surfaces, such as those encountered with body parts in the automotive industry.
- ▶ Fitting option, male G3/8", with a swivel function prior to the locking operation, for easy positioning of the oval cup.
- ▶ DURAFLEX® suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.

Lifting forces & technical data

Model	Material to be handled	Lifting force vertical to the surface, N, at vacuum level		Friction/Shear forces parallel to the surface, N, at vacuum level		Volume cm ³	Min. curve radius mm	Weight g
		60 -kPa	90 -kPa	60 -kPa	90 -kPa			
OCF20x80P	Oily steel plate	82	90	35	48	15	20	24
OCF30x90P	Oily steel plate	115	159	51	74	17	25	24
OCF40x110P	Oily steel plate	185	246	54	78	34	42	55

Values valid for steel sheet with surface finish Ra 1 and 2-3g/m of press oil.

Material specifications

Material	Colour	Hardness, °Shore A	Temperature range, °C
Polyurethane, PU55	Orange	55	10-50
Polyurethane, PU60	Green transparent	60	10-50

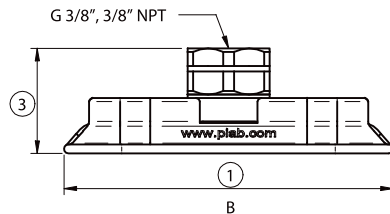
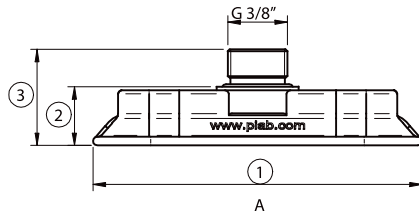
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Ordering information

	Complete suction cups	Code	Art. No.
A	Suction cup OCF20x80P Polyurethane 55/60, G3/8" male	OCF20x80P.5R.G41M	0121847
B	Suction cup OCF20x80P Polyurethane 55/60, 3/8" NPT female	OCF20x80P.5R.N47W	0121859
B	Suction cup OCF20x80P Polyurethane 55/60, G3/8" female	OCF20x80P.5R.G45W	0122455
A	Suction cup OCF30x90P Polyurethane 55/60, G3/8" male	OCF30x90P.5R.G41M	0122456
B	Suction cup OCF30x90P Polyurethane 55/60, 3/8" NPT female	OCF30x90P.5R.N47W	0122459
B	Suction cup OCF30x90P Polyurethane 55/60, G3/8" female	OCF30x90P.5R.G45W	0121786
A	Suction cup OCF40x110P Polyurethane 55/60, G3/8" male	OCF40x110P.5R.G40M	0122457
B	Suction cup OCF40x110P Polyurethane 55/60, 3/8" NPT female	OCF40x110P.5R.N48W	0121865
B	Suction cup OCF40x110P Polyurethane 55/60, G3/8" female	OCF40x110P.5R.G46W	0122860



	Measurements complete suction cups in mm					
	OCF20x80P		OCF30x90P		OCF40x110P	
	A	B	A	B	A	B
1	24x84	24x84	32.5x92.5	32.5x92.5	43x113	43x113
2	17.0	15.5	16.5	16.5	22.5	22.5
3	27.0	30.1	26.5	29.5	32.5	35.5
Max. vertical movement, mm	3	3	4	4	5	5
Max. expanding lip, mm	27x86.2	27x86.2	36x95	36x95	49x118	49x118

BL30-3P



Suction cup specially designed for plastic bag handling

- ▶ High-flow fitting allowing high initial vacuum flow needed for plastic bag handling.
- ▶ Suitable for level adjustment and uneven surfaces.
- ▶ Dual hardness allowing strength and stability in conjunction with softness and flexibility.
- ▶ DURAFLEX® material features the elasticity of rubber in combination with the wear resistance of polyurethane.
- ▶ The DURAFLEX® material is mark-free.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
10	22	28	9*	10*	16*	14	6	14	6

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow	30	10–50
Polyurethane, PU70	Black	70	10–50

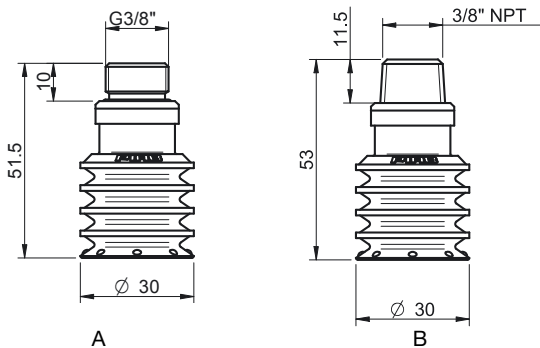
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

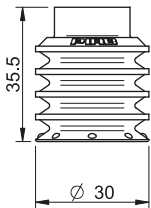
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Ordering information

	Complete suction cup	Art. No.
A	Suction cup BL30-3P Polyurethane 30/70, G3/8" male	0113743
B	Suction cup BL30-3P Polyurethane 30/70, 3/8" NPT male	0113744



Rubber part	Art. No.
Suction cup BL30-3P Polyurethane 30/70	0110545



Fitting	Art. No.
Fitting G3/8" male, bag	0112662
Fitting 3/8" NPT male, bag	0112692

BL40-3P



Suction cup specially designed for plastic bag handling

- ▶ High-flow fitting allowing high initial vacuum flow needed for plastic bag handling.
- ▶ Suitable for level adjustment and uneven surfaces.
- ▶ Dual hardness allowing strength and stability in conjunction with softness and flexibility.
- ▶ DURAFLEX® material features the elasticity of rubber in combination with the wear resistance of polyurethane.
- ▶ The DURAFLEX® material is mark-free.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
20	43	55	13*	24*	36*	27	13	21	12

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow	30	10–50
Polyurethane, PU70	Black	70	10–50

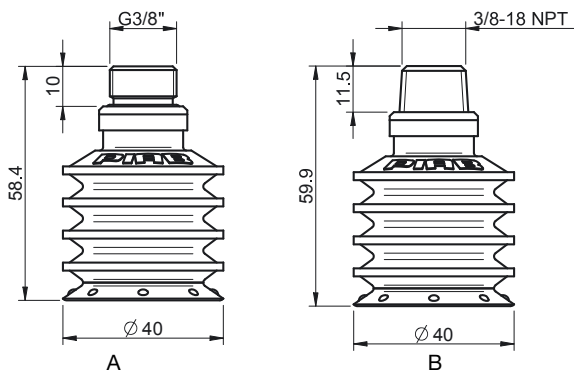
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

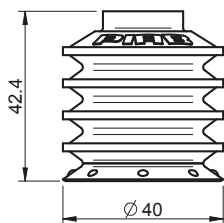
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Ordering information

	Complete suction cup	Art. No.
A	Suction cup BL40-3P Polyurethane 30/70, G3/8" male	0111791
B	Suction cup BL40-3P Polyurethane 30/70, 3/8" NPT male	0112693



	Rubber part	Art. No.
	Suction cup BL40-3P Polyurethane 30/70	0112667



	Fittings	Art. No.
	Fitting G3/8" male, bag	0112662
	Fitting 3/8" NPT male, bag	0112692

BL50-3P



Suction cup specially designed for plastic bag handling

- ▶ High-flow fitting allowing high initial vacuum flow needed for plastic bag handling.
- ▶ Suitable for level adjustment and uneven surfaces.
- ▶ Dual hardness allowing strength and stability in conjunction with softness and flexibility.
- ▶ DURAFLEX® material features the elasticity of rubber in combination with the wear resistance of polyurethane.
- ▶ The DURAFLEX® material is mark-free.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
24	60	75	22*	49*	60*	54	16	26	24

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Polyurethane, PU30	Yellow	30	10–50
Polyurethane, PU70	Black	70	10–50

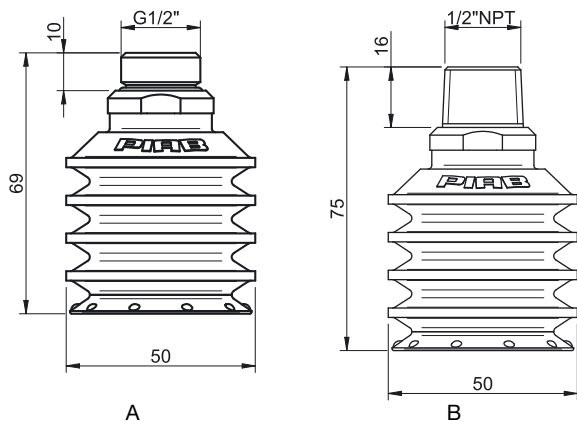
Material resistance

Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

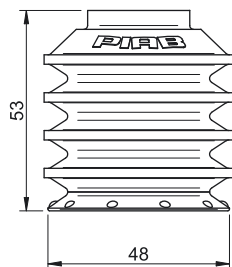
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Ordering information

	Complete suction cup	Art. No.
A	Suction cup BL50-3P Polyurethane 30/70, G1/2" male	0113745
B	Suction cup BL50-3P Polyurethane 30/70, 1/2" NPT male	0113746



	Rubber part	Art. No.
	Suction cup BL50-3P Polyurethane 30/70	0112641



	Fitting	Art. No.
	Fitting G1/2" male, bag	0113117
	Fitting 1/2" NPT male, bag	0113140

BL20-2



Suction cup with long bellows

- ▶ Suitable for level adjustment.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Less suitable when the lifting force is parallel to the surface of the object.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
0.32/3.2*	0.62/6.2*	—	—	—	—	4.0	4.0	13	3

*Lifting force with reinforcement rings.

Material specifications

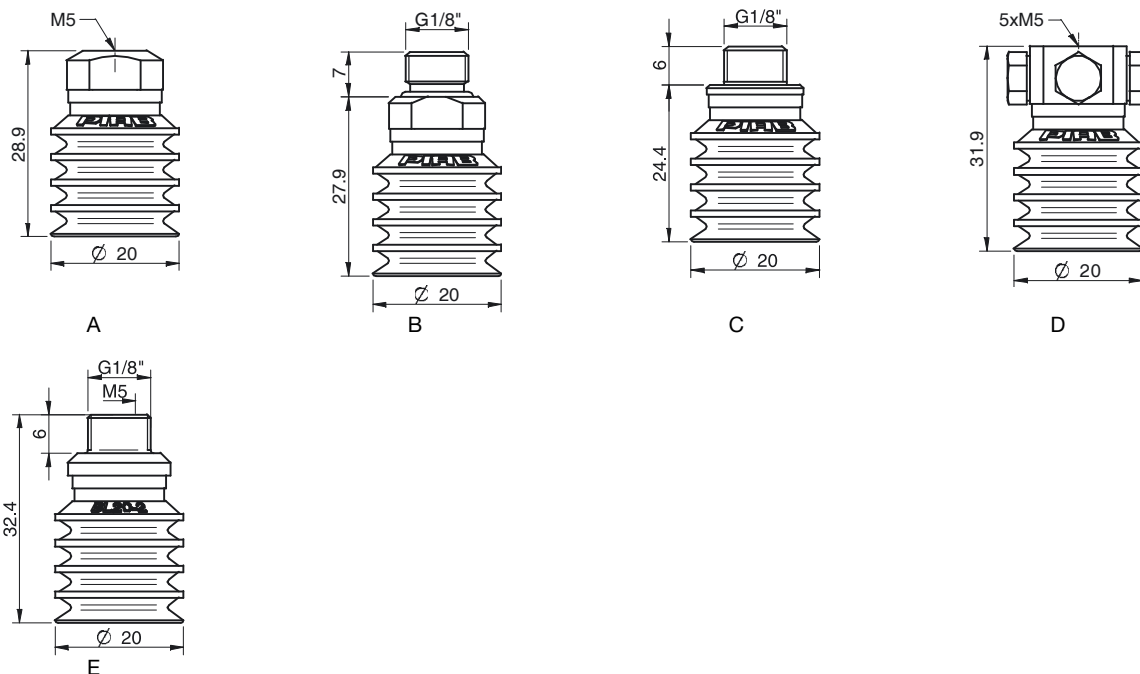
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

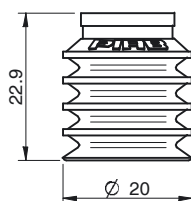
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BL20-2 Chloroprene, M5 female	0101193
B	Suction cup BL20-2 Chloroprene, G1/8" male, with mesh filter	0101194
B	Suction cup BL20-2 Chloroprene, G1/8" male, with mesh filter and dual flow control valve	0101200
C	Suction cup BL20-2 Chloroprene, G1/8" male/M5 female, with mesh filter	0101198
C	Suction cup BL20-2 Chloroprene, G1/8" male/M5 female, with dual flow control valve	0101202
D	Suction cup BL20-2 Chloroprene, 5xM5 female	0101197
A	Suction cup BL20-2 Silicone, M5 female	0101204
A	Suction cup BL20-2 Silicone, M5 female, with dual flow control valve	0101210
B	Suction cup BL20-2 Silicone, G1/8" male, with mesh filter	0101205
B	Suction cup BL20-2 Silicone, G1/8" male, with mesh filter and dual flow control valve	0101211
C	Suction cup BL20-2 Silicone, G1/8" male/M5 female, with mesh filter	0101209
D	Suction cup BL20-2 Silicone, 5xM5 female	0101208
E	Suction cup BL20-2 Chloroprene, G1/8" male/M5 female, PA	0109844
E	Suction cup BL20-2 Silicone, G1/8" male/M5 female, PA	0110339



Rubber parts	Art. No.
Suction cup BL20-2 Chloroprene	0101115
Suction cup BL20-2 Silicone	0101116



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005
Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Reinforcement ring for BL20-2, 4x	Polyamide, PA	-40-110	3150071

BL30-2



Suction cup with long bellows

- ▶ Suitable for level adjustment.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Less suitable when the lifting force is parallel to the surface of the object.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
0.64/6.4*	1.6/16.0*	—	—	—	—	10	8	20	7

*Lifting force with reinforcement rings.

Material specifications

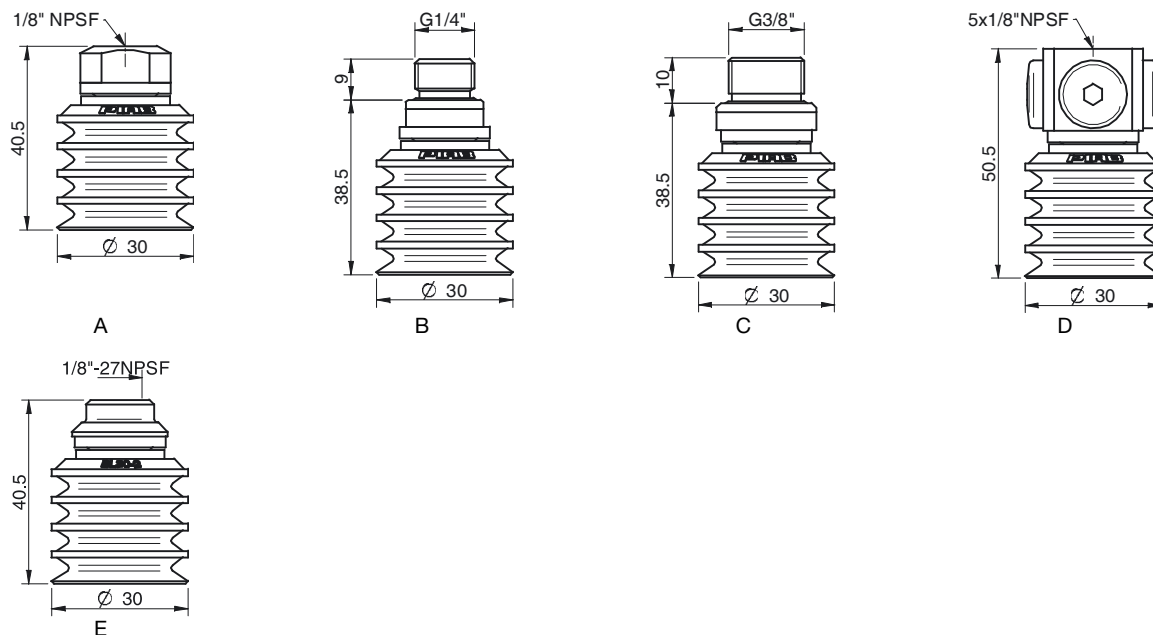
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

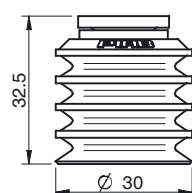
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BL30-2 Chloroprene, 1/8" NPSF female, with mesh filter	0101501
A	Suction cup BL30-2 Chloroprene, 1/8" NPSF female, with dual flow control valve	0101502
B	Suction cup BL30-2 Chloroprene, G1/4" male, with mesh filter	0101496
B	Suction cup BL30-2 Chloroprene, G1/4" male, with mesh filter and dual flow control valve	0101503
C	Suction cup BL30-2 Chloroprene, G3/8" male, with mesh filter	0101498
A	Suction cup BL30-2 Silicone, 1/8" NPSF female, with mesh filter	0101514
A	Suction cup BL30-2 Silicone, 1/8" NPSF female, with dual flow control valve	0101515
B	Suction cup BL30-2 Silicone, G1/4" male, with mesh filter	0101509
B	Suction cup BL30-2 Silicone, G1/4" male, with mesh filter and dual flow control valve	0101516
C	Suction cup BL30-2 Silicone, G3/8" male, with mesh filter	0101511
D	Suction cup BL30-2 Silicone, 5x1/8" NPSF female	0101513
E	Suction cup BL30-2 Chloroprene, 1/8" NPSF female, PA	0110951
E	Suction cup BL30-2 Silicone, 1/8" NPSF female, PA	0110340



Rubber parts	Art. No.
Suction cup BL30-2 Chloroprene	0101117
Suction cup BL30-2 Silicone	0101118



Fittings	Art. No
Fitting 1/8" NPSF female, 30–40, with mesh filter	0101153
Fitting 1/8" NPSF female, 30–40, with dual flow control valve	3251006
Fitting G1/4" male, 30–40, with mesh filter	3250091
Fitting G1/4" male, 30–40, with mesh filter and dual flow control valve	3251007
Fitting G3/8" male, 30–40, with mesh filter	3250086
Fitting G3/8" male, 30–40, with mesh and dual flow control valve	3251009
Fitting 5x1/8" NPSF female, 30–40	0100261
Fitting 5x1/8" NPSF female, 30–40, with dual flow control valve	3251011
Fitting 1/8" NPSF female, 30–40, PA	3150197

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Reinforcement ring for BL30-2, 4x	Polyamide, PA	-40–110	3150072

BL40-2



Suction cup with long bellows

- ▶ Suitable for level adjustment.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Less suitable when the lifting force is parallel to the surface of the object.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
1.1/11.0*	2.2/22.0*	—	—	—	—	27	11	33	10

*Lifting force with reinforcement rings.

Material specifications

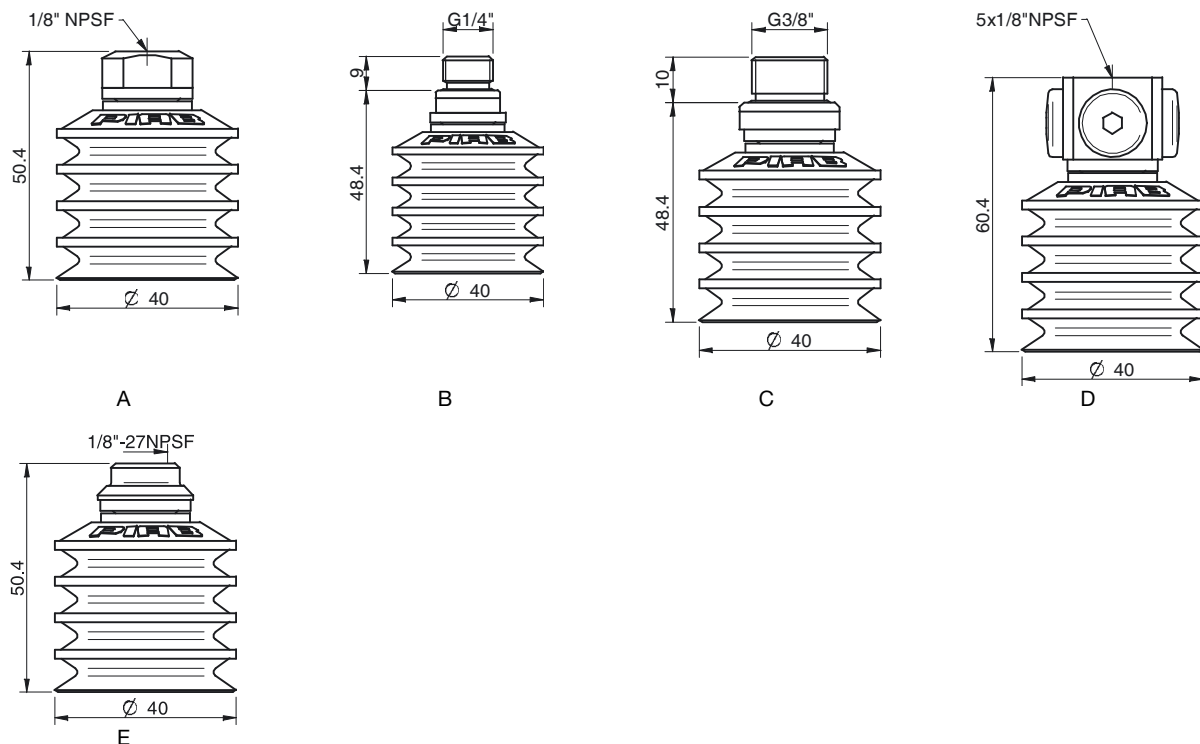
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

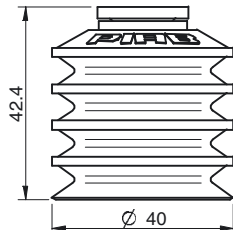
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BL40-2 Chloroprene, 1/8" NPSF female, with mesh filter	0101527
B	Suction cup BL40-2 Chloroprene, G1/4" male, with mesh filter	0101522
B	Suction cup BL40-2 Chloroprene, G1/4" male, with mesh filter and dual flow control valve	0101529
C	Suction cup BL40-2 Chloroprene, G3/8" male, with mesh filter	0101524
D	Suction cup BL40-2 Chloroprene, 5x1/8" NPSF female	0101526
D	Suction cup BL40-2 Chloroprene, 5x1/8" NPSF female, with dual flow control valve	0101533
A	Suction cup BL40-2 Silicone, 1/8" NPSF female, with mesh filter	0101540
B	Suction cup BL40-2 Silicone, G1/4" male, with mesh filter	0101535
B	Suction cup BL40-2 Silicone, G1/4" male, with mesh filter and dual flow control valve	0101542
C	Suction cup BL40-2 Silicone, G3/8" male, with mesh filter	0101537
D	Suction cup BL40-2 Silicone, 5x1/8" NPSF female	0101539
E	Suction cup BL40-2 Chloroprene, 1/8" NPSF female, PA	0110946
E	Suction cup BL40-2 Silicone, 1/8" NPSF female, PA	0110341



Rubber parts	Art. No.
Suction cup BL40-2 Chloroprene	0101119
Suction cup BL40-2 Silicone	0101120



Fittings	Art. No
Fitting 1/8" NPSF female, 30–40, with mesh filter	0101153
Fitting 1/8" NPSF female, 30–40, with dual flow control valve	3251006
Fitting G1/4" male, 30–40, with mesh filter	3250091
Fitting G1/4" male, 30–40, with mesh filter and dual flow control valve	3251007
Fitting G3/8" male, 30–40, with mesh filter	3250086
Fitting G3/8" male, 30–40, with mesh and dual flow control valve	3251009
Fitting 5x1/8" NPSF female, 30–40	0100261
Fitting 5x1/8" NPSF female, 30–40, with dual flow control valve	3251011
Fitting 1/8" NPSF female, 30–40, PA	3150197

For further information and dimensioned drawings, see section *Suction cups/grippers Fittings*.

Spare Part	Material	Temperature range °C	Art. No.
Reinforcement ring for BL40-2 & B-BL40-2, 4x	Polyamide, PA	-40–110	3150073

BL50-2



Suction cup with long bellows

- ▶ Suitable for level adjustment.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Less suitable when the lifting force is parallel to the surface of the object.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
1.7/17.0*	4.3/43*	—	—	—	—	53	13	34	20.0

*Lifting force with reinforcement rings.

Material specifications

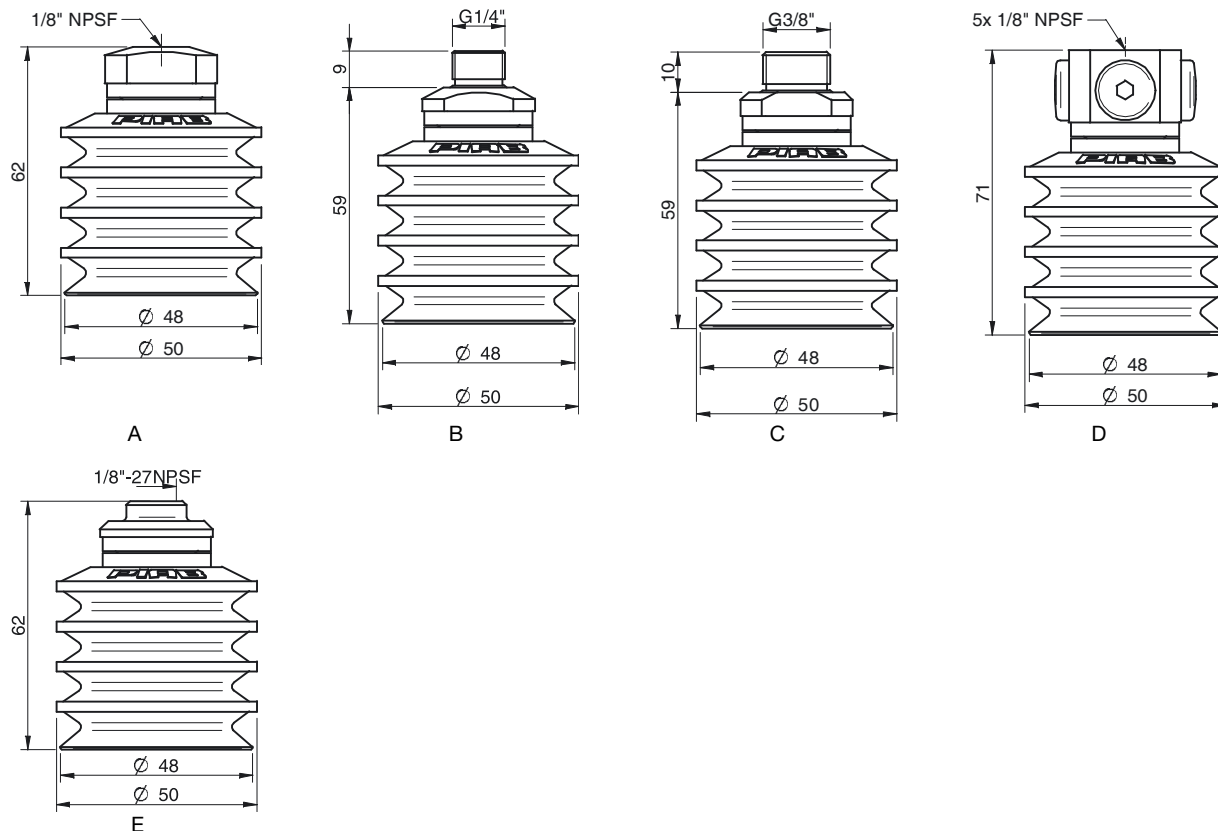
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

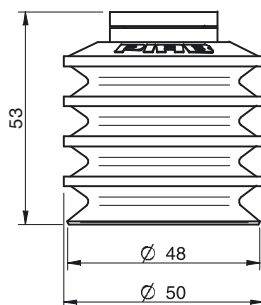
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BL50-2 Chloroprene, 1/8" NPSF female, with mesh filter	0101701
A	Suction cup BL50-2 Chloroprene, 1/8" NPSF female, with dual flow control valve	0101702
B	Suction cup BL50-2 Chloroprene, G1/4" male, with mesh filter	0101696
B	Suction cup BL50-2 Chloroprene, G1/4" male, with mesh filter and dual flow control valve	0101703
C	Suction cup BL50-2 Chloroprene, G3/8" male, with mesh filter	0101698
C	Suction cup BL50-2 Chloroprene, G3/8" male, with mesh filter and dual flow control valve	0101705
D	Suction cup BL50-2 Chloroprene, 5x1/8" NPSF female	0101700
A	Suction cup BL50-2 Silicone, 1/8" NPSF female, with mesh filter	0101714
A	Suction cup BL50-2 Silicone, 1/8" NPSF female, with dual flow control valve	0101715
B	Suction cup BL50-2 Silicone, G1/4" male, with mesh filter	0101709
C	Suction cup BL50-2 Silicone, G3/8" male, with mesh filter	0101711
E	Suction cup BL50-2 Chloroprene, 1/8" NPSF female, PA	0110958
E	Suction cup BL50-2 Silicone, 1/8" NPSF female, PA	0110342



Rubber parts	Art. No.
Suction cup BL50-2 Chloroprene	0101121
Suction cup BL50-2 Silicone	0101122



Fittings	Art. No
Fitting 1/8" NPSF female, 50, with mesh filter	0101154
Fitting 1/8" NPSF female, 50, with dual flow control valve	3251012
Fitting G1/4" male, 50, with mesh filter	3250092
Fitting G1/4" male, with mesh filter and dual flow control valve	3251013
Fitting G3/8" male, 50, with mesh filter	3250087
Fitting G3/8" male, 50, with mesh filter and dual flow control valve	3251015
Fitting 5x1/8" NPSF female, 50	0100262
Fitting 5x1/8" NPSF female, 50, with dual flow control valve	3251017
Fitting 1/8" NPSF female, 50, PA	3150198

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Reinforcement ring for BL50-2, 4x	Polamide, PA	-40-110	3150074

BL30-4



Suction cup with long bellows and long lip

- ▶ Long and flexible bellow
- ▶ Long and thin lip
- ▶ High flow fitting
- ▶ Working area = lip diameter
- ▶ Wide temperature range (-40°C to +200°C)
- ▶ The silicone material complies with FDA 21 CFR 177.2600

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm³	mm	mm	g
8.0	—	—	—	—	—	4.1	20	19	5

The suction cup is not intended for deeper vacuum levels than 20 -kPa.

Material specifications

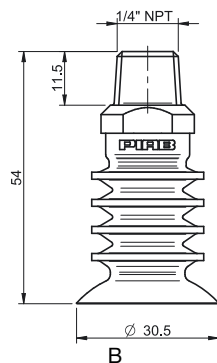
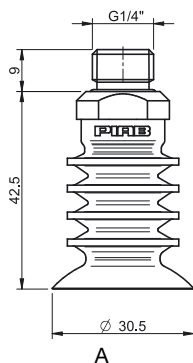
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40-200

Material resistance

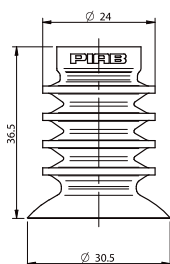
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BL30-4 Silicone, G1/4" male	0118369
B	Suction cup BL30-4 Silicone, 1/4" NPT male	0118371



Rubber parts	Art. No.
Suction cup BL30-4 Silicone	0116971



Fittings	Art. No.
Fitting G1/4" male, bag	0118793
Fitting 1/4" NPT male, bag	0118794

Spare Part	Material	Temperature range °C	Art. No.
Reinforcement ring for BL20-2, 4x	Polyamide, PA	-40-110	3150071

BL40-4



Suction cup with long bellows and long lip

- ▶ Long and flexible bellow
- ▶ Long and thin lip
- ▶ High flow fitting
- ▶ Working area = lip diameter
- ▶ Wide temperature range (-40°C to +200°C)
- ▶ The silicone material complies with FDA 21 CFR 177.2600

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
10	15	22	9*	16*	26*	15	15	18	8

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Material specifications

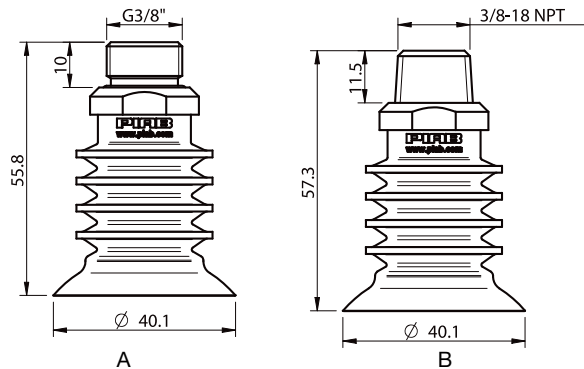
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40-200

Material resistance

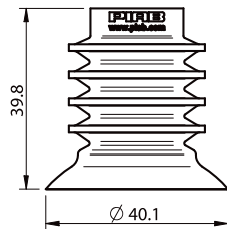
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cup	Art. No.
A	Suction cup BL40-4 Silicone, G3/8" male	0116993
B	Suction cup BL40-4 Silicone, 3/8" NPT male	0116996



Rubber part	Art. No.
Suction cup BL40-4 Silicone	0114848



Fittings	Art. No.
Fitting G3/8" male, bag	0112662
Fitting 3/8" NPT male, bag	0112692

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Reinforcement ring for BL30-2, 4x	Polyamide, PA	-40-110	3150072

BL50-4



Features

- ▶ Good sealing properties
- ▶ Suitable for bags with fragile content e.g. snacks and cookies and lifting frozen food
- ▶ Suitable for level compensation
- ▶ The silicone material complies with FDA 21 CFR 177.2600
- ▶ High flow fitting

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
8	25	—	—	—	—	35	30	22	25

Material specifications

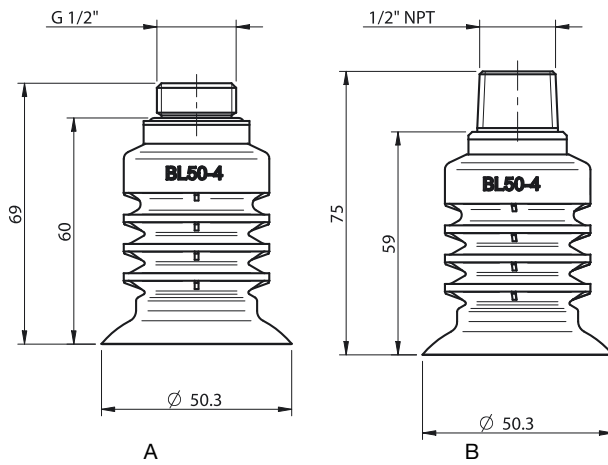
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40–200

Material resistance

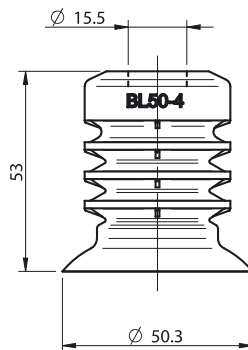
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cup	Art. No.
A	Suction cup BL50-4 Silicone, G1/2" male	0120543
B	Suction cup BL50-4 Silicone, 1/2" NPT male	0120544



	Rubber parts	Art. No.
	Suction cup BL50-4 Silicone	0117612



Description	Art. No.
Fitting G1/2" male, bag	0113117
Fitting 1/2" NPT male, bag	0113140

BL30-5



Suction cup specially optimised for difficult bag handling

- ▶ High initial flow, with re-enforced bellows and long, thin lip
- ▶ Suitable for handling difficult-to-handle bags, e.g., bags filled with liquid, frozen food, and for heavy bags
- ▶ Suitable working temperature is -40–200 °C
- ▶ Suitable for level compensation
- ▶ Made of silicone material that complies with FDA 21 CFR 177.2600

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level		Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	cm	mm	mm	g
8	9	8.55	17	11	14.5

Material specifications

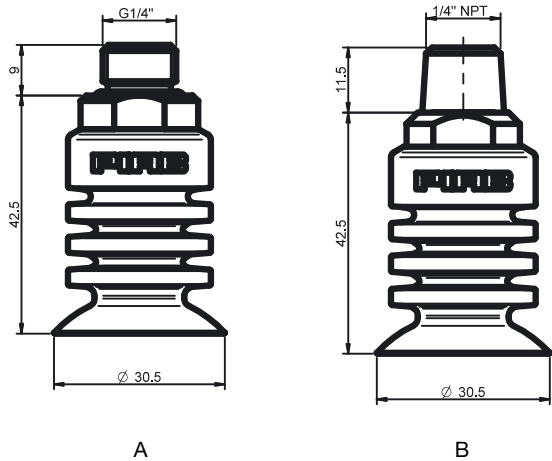
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40–200

Material resistance

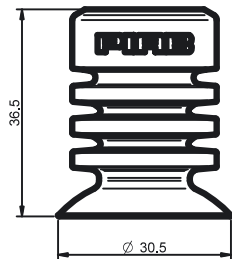
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BL30-5 Silicone, G1/4" male	0124515
B	Suction cup BL30-5 Silicone, 1/4" NPT male	0124516



Rubber part	Art. No.
Suction cup BL30-5 Silicone	0121519



Fittings	Art. No.
Fitting G1/4" male, bag	0118793
Fitting 1/4" NPT male, bag	0118794

BL40-5



Suction cup specially optimised for difficult bag handling

- ▶ High initial flow, with re-enforced bellows and long, thin lip
- ▶ Suitable for handling difficult-to-handle bags, e.g., bags filled with liquid, frozen food, and for heavy bags
- ▶ Suitable working temperature is -40–200 °C
- ▶ Suitable for level compensation
- ▶ Made of silicone material that complies with FDA 21 CFR 177.2600

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level		Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	cm ³	mm	mm	g
13	15	14	22	20	10

Material specifications

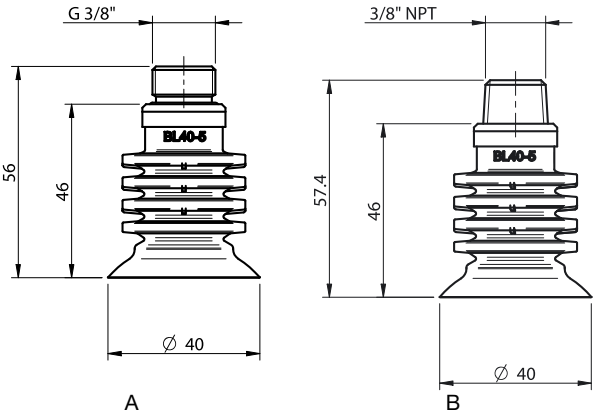
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40–200

Material resistance

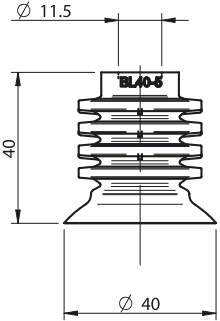
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BL40-5 Silicone, G3/8" male	0120576
B	Suction cup BL40-5 Silicone, 3/8" NPT male	0120577



	Rubber part	Art. No.
	Suction cup BL40-5 Silicone	0117611



	Fittings	Art. No.
	Fitting G3/8" male, bag	0112662
	Fitting 3/8" NPT male, bag	0112692

BL50-5



Suction cup specially optimised for difficult bag handling

- ▶ High initial flow, with re-enforced bellows and long, thin lip.
- ▶ Suitable for handling difficult-to-handle bags, e.g., bags filled with liquid, frozen food, and for heavy bags.
- ▶ Suitable working temperature is -40–200 °C.
- ▶ Suitable for level compensation.
- ▶ Made of silicone material that complies with FDA 21 CFR 177.2600.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm ³	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
8	25	—	—	—	—	26	30	18	29

Material specifications

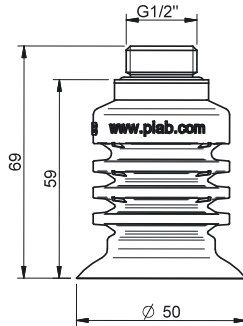
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40–200

Material resistance

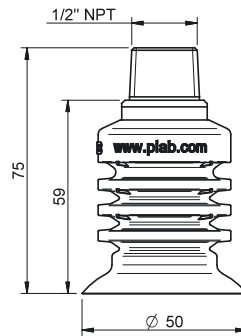
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup BL50-5 Silicone, G1/2" male	0122961
B	Suction cup BL50-5 Silicone, 1/2" NPT male	0122962

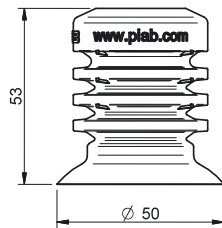


A



B

Rubber part	Art. No.
Suction cup BL50-5 Silicone	0121520



Description	Art. No.
Fitting G1/2" male, bag	0113117
Fitting 1/2" NPT male, bag	0113140

B15MF



Suction cup with short bellows, mark free

- ▶ Suction cup of TPU, a mark free material that leaves no trace on the object being handled.
- ▶ Suitable for level adjustment.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Only lightweight objects should be handled when the lifting force is parallel to the surface.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
4.0	8.0	12.0	4.5	7.0	10.0	1.1	11	2.0	1.3

Material specifications

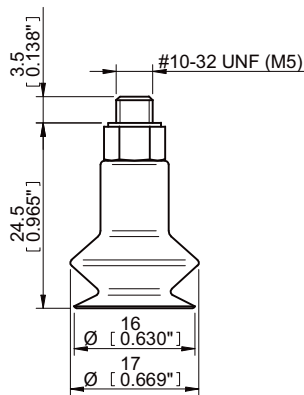
Material	Colour	Hardness °Shore A	Temperature range °C
Thermoelastic polyurethane, TPU	Transparent white	81	-20–80

Material resistance

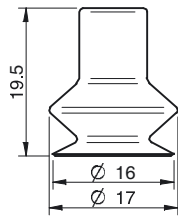
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Excellent	Excellent	Excellent	Poor	Poor	Poor	Good	Good

Ordering information

Complete suction cups	Art. No.
Suction cup B15MF Thermoelastic polyurethane, M5 male	3250069



Rubber parts	Art. No.
Suction cup B15MF Thermoelastic polyurethane	3150264



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B20MF



Suction cup with short bellows, mark free

- ▶ Suction cup of TPU, a mark free material that leaves no trace on the object being handled.
- ▶ Suitable for level adjustment.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Only lightweight objects should be handled when the lifting force is parallel to the surface.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
4.5	15.5	21.0	6.3	11.0	19.0	2.7	11	8.0	2.0

Material specifications

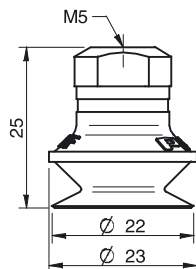
Material	Colour	Hardness °Shore A	Temperature range °C
Thermoelastic polyurethane, TPU	Transparent white	81	-20–80

Material resistance

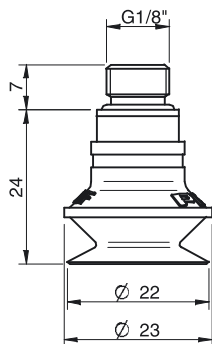
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Excellent	Excellent	Excellent	Poor	Poor	Poor	Good	Good

Ordering information

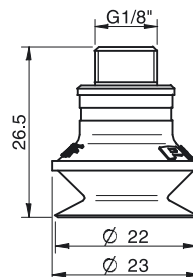
	Complete suction cups	Art. No.
A	Suction cup B20MF Thermoelastic polyurethane, M5 female	0101182
A	Suction cup B20MF Thermoelastic polyurethane, M5 female, with dual flow control valve	0101188
B	Suction cup B20MF Thermoelastic polyurethane, G1/8" male, with mesh filter	0101183
B	Suction cup B20MF Thermoelastic polyurethane, G1/8" male, with dual flow control valve and mesh filter	0101189
C	Suction cup B20MF Thermoelastic polyurethane, G1/8" male/M5 female, with mesh filter	0101187
C	Suction cup B20MF Thermoelastic polyurethane, G1/8" male/M5 fem., with dual flow control valve	0101191
D	Suction cup B20MF Thermoelastic polyurethane, 5xM5 female	0101186
D	Suction cup B20MF Thermoelastic polyurethane, 5xM5 female, with dual flow control valve	0101192



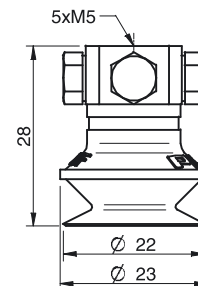
A



B

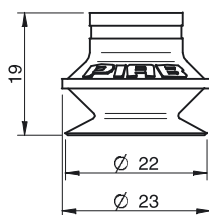


C



D

Rubber parts	Art. No.
Suction cup B20MF Thermoelastic polyurethane	0101111



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

F15MF



Flat suction cup with cleats, mark free

- ▶ Suction cup of TPU, a mark free material that leaves no trace on the object being handled.
- ▶ Suitable for flat surfaces.
- ▶ Good stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
4.0	8.0	12.0	4.5	9.0	14.5	0.37	17	1.0	0.8

Material specifications

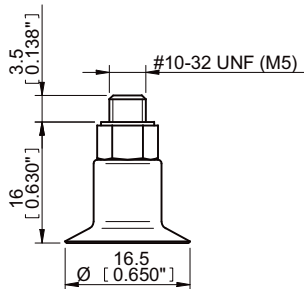
Material	Colour	Hardness °Shore A	Temperature range °C
Thermoelastic polyurethane, TPU	Transparent white	81	-20–80

Material resistance

Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Excellent	Excellent	Excellent	Poor	Poor	Poor	Good	Good

Ordering information

Complete suction cups	Art. No.
Suction cup F15MF Thermoelastic polyurethane, M5 male	3250074



Rubber parts	Art. No.
Suction cup F15MF Thermoelastic polyurethane	3150269



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

F20MF



Flat suction cup with cleats, mark free

- ▶ Suction cup of TPU, a mark free material that leaves no trace on the object being handled.
- ▶ Suitable for flat surfaces.
- ▶ Good stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
3.6	14.5	22.0	8.0	14.5	21.0	1.0	18	2.0	1.2

Material specifications

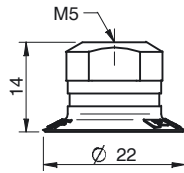
Material	Colour	Hardness °Shore A	Temperature range °C
Thermoelastic polyurethane, TPU	Transparent white	81	-20–80

Material resistance

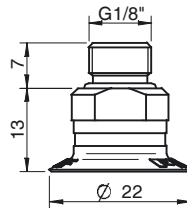
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Excellent	Excellent	Excellent	Poor	Poor	Poor	Good	Good

Ordering information

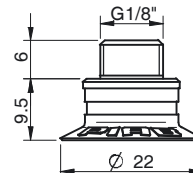
	Complete suction cups	Art. No.
A	Suction cup F20MF Thermoelastic polyurethane, M5 female	0101281
B	Suction cup F20MF Thermoelastic polyurethane, G1/8" male, with mesh filter	0101282
B	Suction cup F20MF Thermoelastic polyurethane, G1/8" male, with mesh filter and dual flow control valve	0101288
C	Suction cup F20MF Thermoelastic polyurethane, G1/8" male / M5 female, with mesh filter	0101286
C	Suction cup F20MF Thermoelastic polyurethane, G1/8" male / M5 fem., with dual flow control valve	0101290
D	Suction cup F20MF Thermoelastic polyurethane, 5xM5 female	0101285
D	Suction cup F20MF Thermoelastic polyurethane, 5xM5 female, with dual flow control valve	0101291



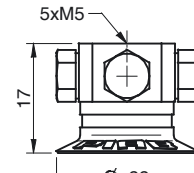
A



B

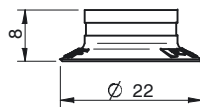


C



D

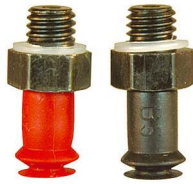
Rubber parts	Art. No.
Suction cup F20MF Thermoelastic polyurethane	0101139



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005
Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B5



Suction cup with short bellows

- ▶ Lifting movement to separate small and thin objects.
- ▶ Only lightweight objects should be handled when the lifting force is parallel to the surface.
- ▶ Suitable for level adjustment.
- ▶ Suction cups of conductive silicone are suitable for objects with sensitivity to static electricity.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
0.30	0.80	1.0	—	—	—	0.05	1.5	1.5	0.11

Material specifications

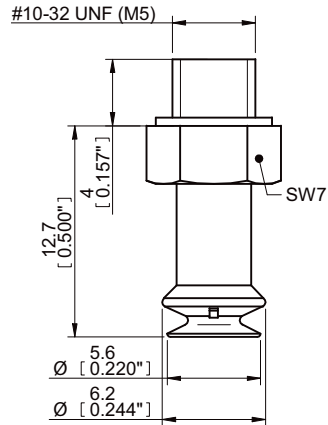
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200
Conductive silicone, CSIL	Black	50	-55–230

Material resistance

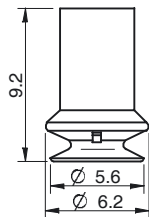
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
Conductive silicone, CSIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup B5 Chloroprene, M5 male	3250082
Suction cup B5 Silicone, M5 male	3250082S
Suction cup B5 Conductive silicone, M5 male	3250082SC



Rubber parts	Art. No.
Suction cup B5 Chloroprene	3150286
Suction cup B5 Silicone	3150286S
Suction cup B5 Conductive silicone	3150286SC



Fittings	Art. No.
Fitting M5 male, 5-8	3107031

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B8



Suction cup with short bellows

- ▶ Lifting movement to separate small and thin objects.
- ▶ Only lightweight objects should be handled when the lifting force is parallel to the surface.
- ▶ Suitable for level adjustment.
- ▶ Suction cups of conductive silicone are suitable for objects with sensitivity to static electricity.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
0.80	1.6	2.5	—	—	—	0.15	1.9	3.5	0.3

Material specifications

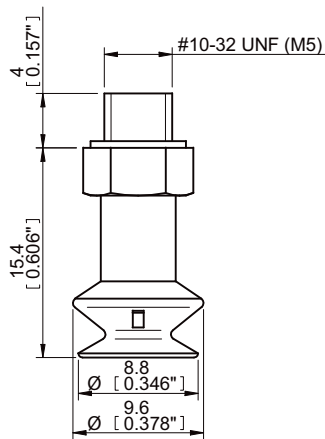
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200
Conductive silicone, CSIL	Black	50	-55–230

Material resistance

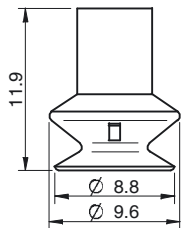
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
Conductive silicone, CSIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup B8 Chloroprene, M5 male	3250083
Suction cup B8 Silicone, M5 male	3250083S
Suction cup B8 Conductive silicone, M5 male	3250083SC



Rubber parts	Art. No.
Suction cup B8 Chloroprene	3150287
Suction cup B8 Silicone	3150287S
Suction cup B8 Conductive silicone	3150287SC



Fittings	Art. No.
Fitting M5 male, 5-8	3107031

For further information and dimensioned drawings, see section *Suction cups/grippers Fittings*.

B10-2



Suction cup with short bellows

- ▶ Suitable for level adjustment.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Only lightweight objects should be handled when the lifting force is parallel to the surface.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
1.5	3.4	4.9	—	—	—	0.48	4.0	4.5	1.0

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200
HNBR	Blue	50	-30–140*

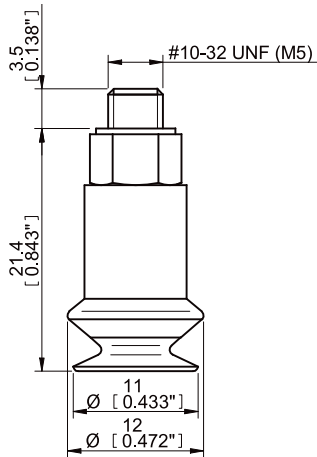
*For a shorter period of time up to 160 °C

Material resistance

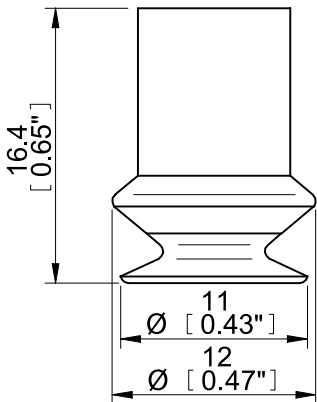
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup B10-2 Chloroprene, M5 male	3150023
Suction cup B10-2 Silicone, M5 male	3150023S
Suction cup B10-2 HNBR, M5 male	9906865



Rubber parts	Art. No.
Suction cup B10-2 Chloroprene	3150101
Suction cup B10-2 Silicone	3150101S
Suction cup B10-2 HNBR	0128692



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

For further information and dimensioned drawings, see section *Suction cups/grippers Fittings*.

B15-2



Suction cup with short bellows

- ▶ Suitable for level adjustment.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Only lightweight objects should be handled when the lifting force is parallel to the surface.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
2.9	5.9	8.9	—	—	—	1.1	5.0	6.5	1.5

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200
HNBR	Blue	50	-30-140*

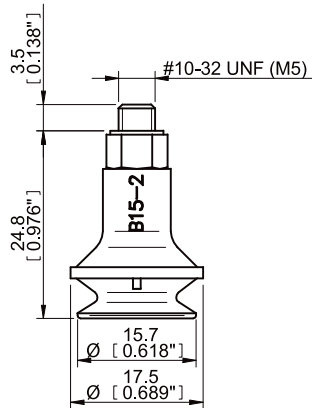
*For a shorter period of time up to 160 °C

Material resistance

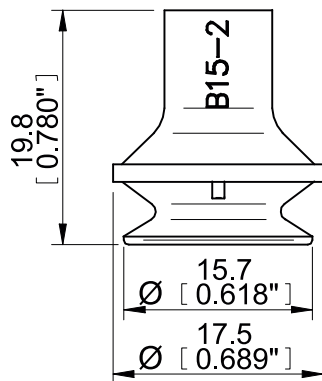
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup B15-2 Chloroprene, M5 male	3250037
Suction cup B15-2 Silicone, M5 male	3250037S
Suction cup B15-2 HNBR, M5 male	9906866



Rubber parts	Art. No.
Suction cup B15-2 Chloroprene	3150230
Suction cup B15-2 Silicone	3150230S
Suction cup B15-2 HNBR	0128693



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B20



Suction cup with short bellows

- ▶ Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- ▶ The lifting movement can be used to separate small and thin objects.
- ▶ Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
5.9	9.8	14	—	—	—	2.7	10	10	3.2

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200
HNBR	Blue	50	-30-140*

*For a shorter period of time up to 160 °C

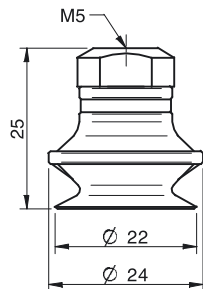
Material resistance

Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

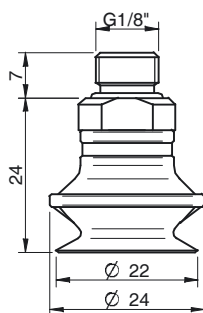
Ordering information

	Complete suction cups	Art. No.
A	Suction cup B20 Chloroprene, M5 female	0101160
A	Suction cup B20 Chloroprene, M5 female, with dual flow control valve	0101166
B	Suction cup B20 Chloroprene, G1/8" male, with mesh filter	0101161
B	Suction cup B20 Chloroprene, G1/8" male, with mesh filter and dual flow control valve	0101167
C	Suction cup B20 Chloroprene, G1/8" male/M5 female, with mesh filter	0101165
C	Suction cup B20 Chloroprene, G1/8" male/M5 female, with dual flow control valve	0101169
D	Suction cup B20 Chloroprene, 5xM5 female	0101164
A	Suction cup B20 Silicone, M5 female	0101171
A	Suction cup B20 Silicone, M5 female, with dual flow control valve	0101177
B	Suction cup B20 Silicone, G1/8" male, with mesh filter	0101172
B	Suction cup B20 Silicone, G1/8" male, with mesh filter and dual flow control valve	0101178
C	Suction cup B20 Silicone, G1/8" male/M5 female, with mesh filter	0101176
C	Suction cup B20 Silicone, G1/8" male/M5 female, with dual flow control valve	0101180
D	Suction cup B20 Silicone, 5xM5 female	0101175
D	Suction cup B20 Silicone, 5xM5 female, with dual flow control valve	0101181
A	Suction cup B20 HNBR, M5 female	9906875
A	Suction cup B20 HNBR, M5 female, with dual flow control valve	9906876
B	Suction cup B20 HNBR, G1/8" male, with mesh filter	9906877
B	Suction cup B20 HNBR, G1/8" male, with mesh filter and dual flow control valve	9906878

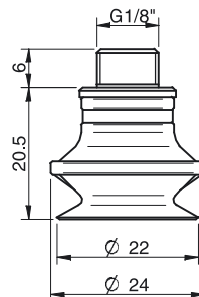
	Complete suction cups	Art. No.
C	Suction cup B20 HNBR, G1/8" male/M5 female, with mesh filter	9906880
C	Suction cup B20 HNBR, G1/8" male/M5 female, with dual flow control valve	9906881
D	Suction cup B20 HNBR, 5xM5 female	9906887
D	Suction cup B20 HNBR, 5xM5 female, with dual flow control valve	9906888
E	Suction cup B20 Chloroprene, G1/8" male/M5 female, PA	0110949
E	Suction cup B20 Silicone, G1/8" male/M5 female, PA	0110336



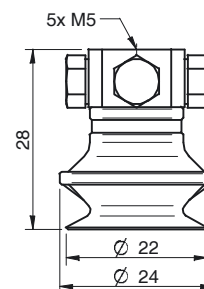
A



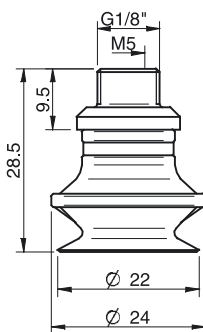
B



C

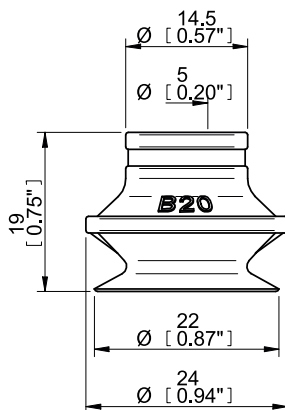


D



E

	Rubber parts	Art. No.
	Suction cup B20 Chloroprene	0101101
	Suction cup B20 Silicone	0101102
	Suction cup B20 HNBR	0128712



	Fittings	Art. No.
	Fitting M5 female	3250003
	Fitting M5 female, with dual flow control valve	3251001
	Fitting G1/8" male, with mesh filter	3250085
	Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
	Fitting G1/8" male/M5 female, with mesh filter	0101152
	Fitting G1/8" male/M5 female, with dual flow control valve	3251004
	Fitting 5xM5 female	0100260
	Fitting 5xM5 female, with dual flow control valve	3251005
	Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B30-2



Suction cup with short bellows

- ▶ Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- ▶ The lifting movement can be used to separate small and thin objects.
- ▶ Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
12.0	22.0	27	—	—	—	10	15	15	7.0

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200
HNBR	Grey-blue	75	-30–140*

*For a shorter period of time up to 160 °C.

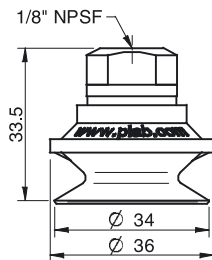
Material resistance

Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

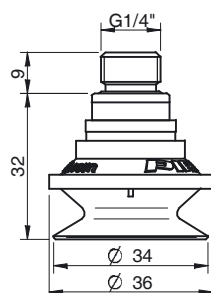
Ordering information

	Complete suction cups	Art. No.
A	Suction cup B30-2 Chloroprene, 1/8" NPSF female, with mesh filter	0101423
A	Suction cup B30-2 Chloroprene, 1/8" NPSF female, with dual flow control valve	0101424
B	Suction cup B30-2 Chloroprene, G1/4" male, with mesh filter	0101418
B	Suction cup B30-2 Chloroprene, G1/4" male, with mesh filter dual flow control valve	0101425
C	Suction cup B30-2 Chloroprene, G3/8" male, with mesh filter	0101420
C	Suction cup B30-2 Chloroprene, G3/8" male, with mesh filter and dual flow control valve	0101427
D	Suction cup B30-2 Chloroprene, 5x1/8" NPSF female	0101422
A	Suction cup B30-2 Silicone, 1/8" NPSF female, with mesh filter	0101436
A	Suction cup B30-2 Silicone, 1/8" NPSF female, with dual flow control valve	0101437
B	Suction cup B30-2 Silicone, G1/4" male, with mesh filter	0101431
B	Suction cup B30-2 Silicone, G1/4" male, with mesh filter and dual flow control valve	0101438
C	Suction cup B30-2 Silicone, G3/8" male, with mesh filter	0101433
C	Suction cup B30-2 Silicone, G3/8" male, with mesh filter and dual flow control valve	0101440
D	Suction cup B30-2 Silicone, 5x1/8" NPSF female	0101435
D	Suction cup B30-2 Silicone, 5x1/8" NPSF female, with dual flow control valve	0101442

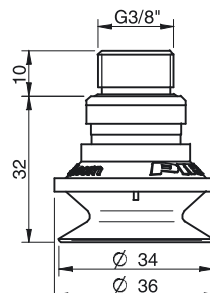
	Complete suction cups	Art. No.
A	Suction cup B30-2 HNBR, 1/8" NPSF female, with mesh filter	0108078
B	Suction cup B30-2 HNBR, G1/4" male, with mesh filter	0108167
C	Suction cup B30-2 HNBR, G3/8" male, with mesh filter	0108168
E	Suction cup B30-2 Chloroprene, 1/8" NPSF female, PA	0109845
E	Suction cup B30-2 Silicone, 1/8" NPSF female, PA	0110343



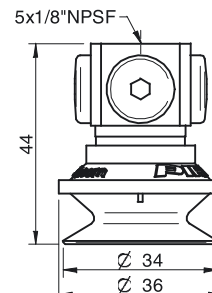
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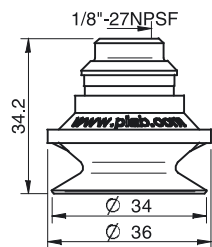
B



C

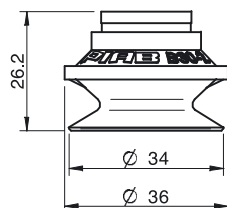


D



E

Rubber parts	Art. No.
Suction cup B30-2 Chloroprene	0101103
Suction cup B30-2 Silicone	0101104
Suction cup B30-2 HNBR	0108077



Fittings	Art. No
Fitting 1/8" NPSF female, 30-40, with mesh filter	0101153
Fitting 1/8" NPSF female, 30-40, with dual flow control valve	3251006
Fitting G1/4" male, 30-40, with mesh filter	3250091
Fitting G1/4" male, 30-40, with mesh filter and dual flow control valve	3251007
Fitting G3/8" male, 30-40, with mesh filter	3250086
Fitting G3/8" male, 30-40, with mesh and dual flow control valve	3251009
Fitting 5x1/8" NPSF female, 30-40	0100261
Fitting 5x1/8" NPSF female, 30-40, with dual flow control valve	3251011
Fitting 1/8" NPSF female, 30-40, PA	3150197

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B40



Suction cup with short bellows

- Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- The lifting movement can be used to separate small and thin objects.
- Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
22.0	39	49	—	—	—	15	20	12	10.0

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200
HNBR	Grey-blue	75	-30–140*

*For a shorter period of time up to 160 °C.

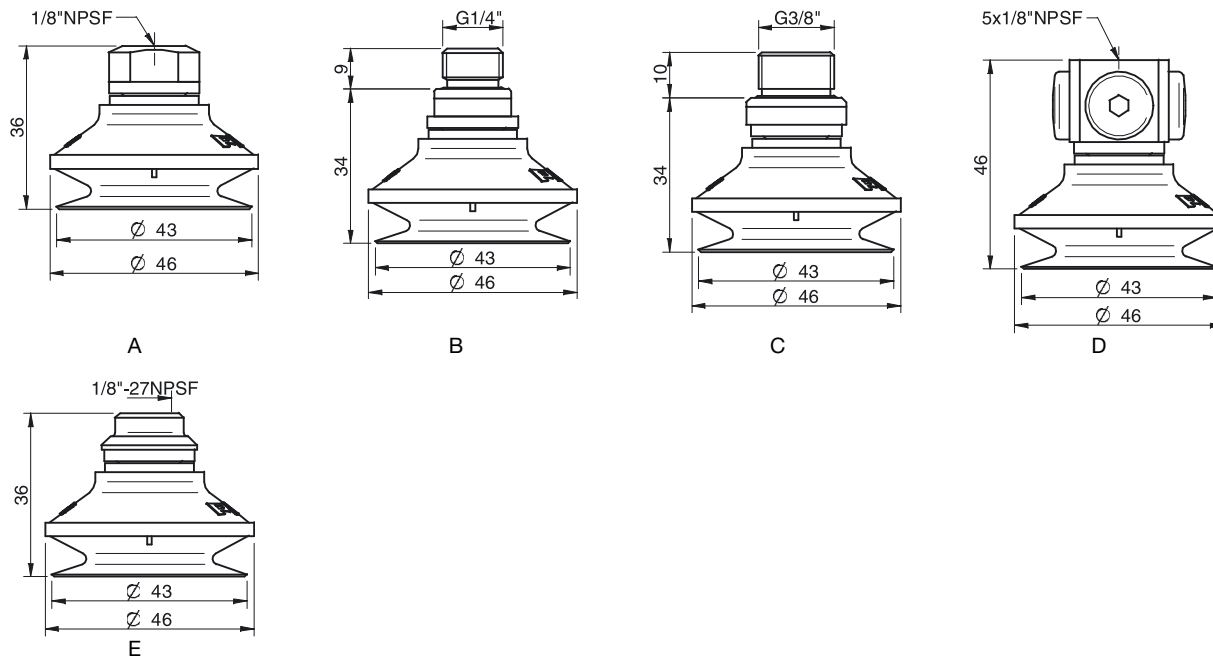
Material resistance

Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

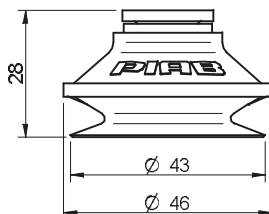
Ordering information

	Complete suction cups	Art. No.
A	Suction cup B40 Chloroprene, 1/8" NPSF female, with mesh filter	0101462
A	Suction cup B40 Chloroprene, 1/8" NPSF female, with dual flow control valve	0101463
B	Suction cup B40 Chloroprene, G1/4" male, with mesh filter	0101457
B	Suction cup B40 Chloroprene, G1/4" male, with mesh filter and dual flow control valve	0101464
C	Suction cup B40 Chloroprene, G3/8" male, with mesh filter	0101459
C	Suction cup B40 Chloroprene, G3/8" male, with mesh filter and dual flow control valve	0101466
D	Suction cup B40 Chloroprene, 5x1/8" NPSF female	0101461
A	Suction cup B40 Silicone, 1/8" NPSF female, with mesh filter	0101475
A	Suction cup B40 Silicone, 1/8" NPSF female, with dual flow control valve	0101476
B	Suction cup B40 Silicone, G1/4" male, with mesh filter	0101470
B	Suction cup B40 Silicone, G1/4" male, with mesh filter and dual flow control valve	0101477
C	Suction cup B40 Silicone, G3/8" male, with mesh filter	0101472
D	Suction cup B40 Silicone, 5x1/8" NPSF female	0101474
A	Suction cup B40 HNBR, 1/8" NPSF female, with mesh filter	0108082
B	Suction cup B40 HNBR, G1/4" male, with mesh filter	0108169

	Complete suction cups	Art. No.
C	Suction cup B40 HNBR, G3/8" male, with mesh filter	0108170
E	Suction cup B40 Chloroprene, 1/8" NPSF female, PA	0109843
E	Suction cup B40 Silicone, 1/8" NPSF female PA	0110337



	Rubber parts	Art. No.
	Suction cup B40 Chloroprene	0101105
	Suction cup B40 Silicone	0101106
	Suction cup B40 HNBR	0108081



	Fittings	Art. No
	Fitting 1/8" NPSF female, 30–40, with mesh filter	0101153
	Fitting 1/8" NPSF female, 30–40, with dual flow control valve	3251006
	Fitting G1/4" male, 30–40, with mesh filter	3250091
	Fitting G1/4" male, 30–40, with mesh filter and dual flow control valve	3251007
	Fitting G3/8" male, 30–40, with mesh filter	3250086
	Fitting G3/8" male, 30–40, with mesh and dual flow control valve	3251009
	Fitting 5x1/8" NPSF female, 30–40	0100261
	Fitting 5x1/8" NPSF female, 30–40, with dual flow control valve	3251011
	Fitting 1/8" NPSF female, 30–40, PA	3150197

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B50



Suction cup with short bellows

- Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- The lifting movement can be used to separate small and thin objects.
- Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
33	65	82	—	—	—	32	30	19	20.0

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90
Silicone, SIL	Red	50	–40–200
HNBR	Grey-blue	75	–30–140*

* For a shorter period of time up to +160 °C

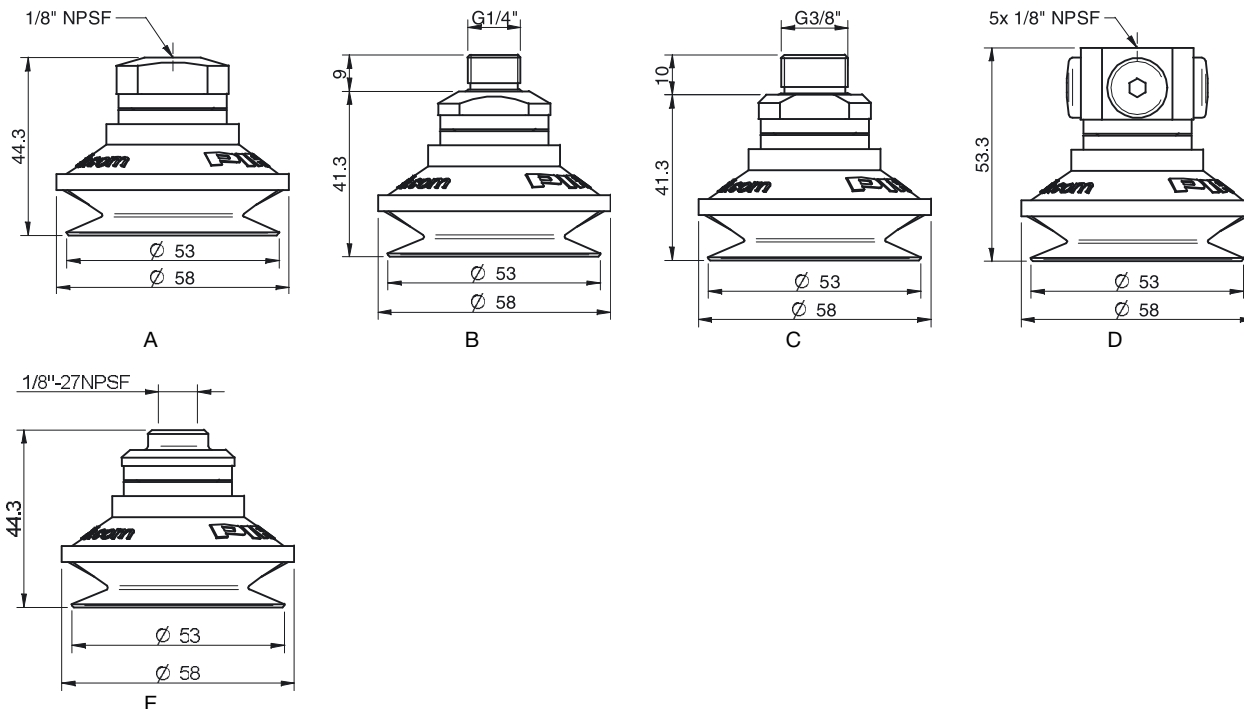
Material resistance

Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

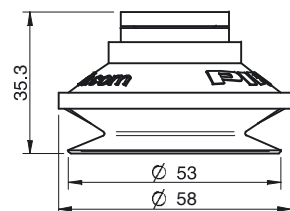
Ordering information

	Complete suction cups	Art. No.
A	Suction cup B50 Nitrile-PVC, 1/8" NPSF female, with mesh filter	0101649
A	Suction cup B50 Nitrile-PVC, 1/8" NPSF female, with dual flow control valve	0101650
B	Suction cup B50 Nitrile-PVC, G1/4" male, with mesh filter	0101644
B	Suction cup B50 Nitrile-PVC, G1/4" male, with mesh filter and dual flow control valve	0101651
C	Suction cup B50 Nitrile-PVC, G3/8" male, with mesh filter	0101646
C	Suction cup B50 Nitrile-PVC, G3/8" male, with mesh filter and dual flow control valve	0101653
D	Suction cup B50 Nitrile-PVC, 5x1/8" NPSF female	0101648
A	Suction cup B50 Silicone, 1/8" NPSF female, with mesh filter	0101636
A	Suction cup B50 Silicone, 1/8" NPSF female, with dual flow control valve	0101637
B	Suction cup B50 Silicone, G1/4" male, with mesh filter	0101631
B	Suction cup B50 Silicone, G1/4" male, with mesh filter and dual flow control valve	0101638
C	Suction cup B50 Silicone, G3/8" male, with mesh filter	0101633
C	Suction cup B50 Silicone, G3/8" male, with mesh filter and dual flow control valve	0101640
D	Suction cup B50 Silicone, 5x1/8" NPSF female	0101635
A	Suction cup B50 HNBR, 1/8" NPSF female, with mesh filter	0108171

	Complete suction cups	Art. No.
B	Suction cup B50 HNBR, G1/4" male, with mesh filter	0108172
C	Suction cup B50 HNBR, G3/8" male, with mesh filter	0108173
E	Suction cup B50 Nitrile-PVC, 1/8" NPSF female, PA	0111063



Rubber parts	Art. No.
Suction cup B50 Silicone	0101108
Suction cup B50 Nitrile-PVC	0101107
Suction cup B50 HNBR	0108165



Fittings	Art. No
Fitting 1/8" NPSF female, 50, with mesh filter	0101154
Fitting 1/8" NPSF female, 50, with dual flow control valve	3251012
Fitting G1/4" male, 50, with mesh filter	3250092
Fitting G1/4" male, with mesh filter and dual flow control valve	3251013
Fitting G3/8" male, 50, with mesh filter	3250087
Fitting G3/8" male, 50, with mesh filter and dual flow control valve	3251015
Fitting 5x1/8" NPSF female, 50	0100262
Fitting 5x1/8" NPSF female, 50, with dual flow control valve	3251017
Fitting 1/8" NPSF female, 50, PA	3150198

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B50-2



Suction cup with short bellows and filter

- ▶ Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
33	65	82	—	—	—	32	30	19	20.0

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90*
Silicone, SIL	Red	50	–40–200*

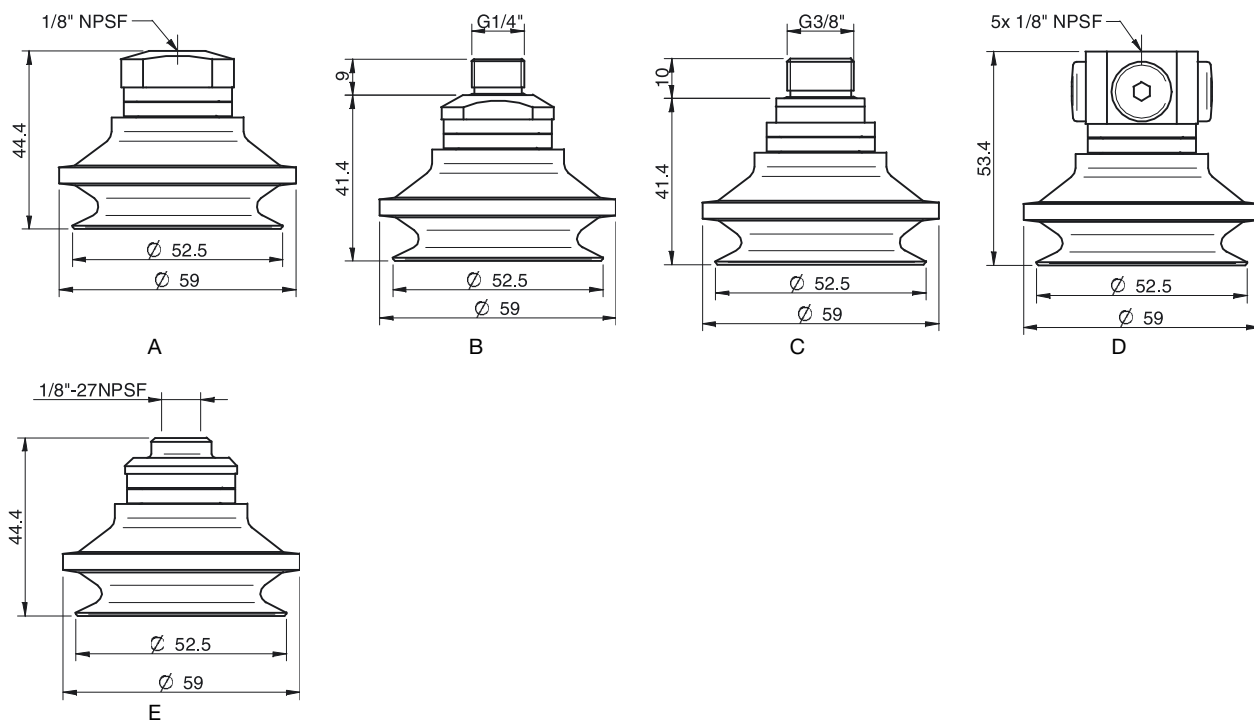
* Filter disc max. 80 °C

Material resistance

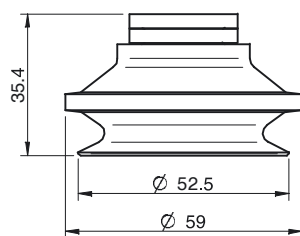
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No
A	Suction cup B50-2 Nitrile-PVC with filter, 1/8" NPSF female, with mesh filter	0101675
A	Suction cup B50-2 Nitrile-PVC with filter, 1/8" NPSF female, with dual flow control valve	0101676
B	Suction cup B50-2 Nitrile-PVC with filter, G1/4" male, with mesh filter	0101670
B	Suction cup B50-2 Nitrile-PVC with filter, G1/4" male, with dual flow control valve and mesh filter	0101677
C	Suction cup B50-2 Nitrile-PVC with filter, G3/8" male, with mesh filter	0101672
D	Suction cup B50-2 Nitrile-PVC with filter, 5x1/8" NPSF female	0101674
A	Suction cup B50-2 Silicone with filter, 1/8" NPSF female, with mesh filter	0101662
A	Suction cup B50-2 Silicone with filter, 1/8" NPSF female, with dual flow control valve	0101663
B	Suction cup B50-2 Silicone with filter, G1/4" male, with mesh filter	0101657
C	Suction cup B50-2 Silicone with filter, G3/8" male, with mesh filter	0101659
D	Suction cup B50-2 Silicone with filter, 5x1/8" NPSF female	0101661
E	Suction cup B50-2 Nitrile-PVC with filter, 1/8" NPSF female, PA	0110957
E	Suction cup B50-2 Silicone with filter, 1/8" NPSF female, PA	0110347



Rubber parts	Art. No.
Suction cup B50-2 Nitrile-PVC with filter	0101109
Suction cup B50-2 Silicone with filter	0101110



Fittings	Art. No
Fitting 1/8" NPSF female, 50, with mesh filter	0101154
Fitting 1/8" NPSF female, 50, with dual flow control valve	3251012
Fitting G1/4" male, 50, with mesh filter	3250092
Fitting G1/4" male, with mesh filter and dual flow control valve	3251013
Fitting G3/8" male, 50, with mesh filter	3250087
Fitting G3/8" male, 50, with mesh filter and dual flow control valve	3251015
Fitting 5x1/8" NPSF female, 50	0100262
Fitting 5x1/8" NPSF female, 50, with dual flow control valve	3251017
Fitting 1/8" NPSF female, 50, PA	3150198

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Filter for B50-2	Polyethylene, PE	-40-80	3150243

B75



Suction cup with short bellows

- Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- The lifting movement can be used to separate small and thin objects.
- Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min.curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
74	167	226	—	—	—	110	40	24	35

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90
Silicone, SIL	Red	50	–40–200
HNBR	Grey-blue	75	–30–140*

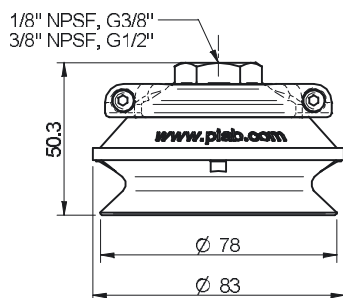
* For a shorter period of time up to +160 °C

Material resistance

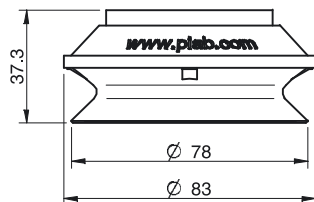
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup B75 Nitrile-PVC, 1/8" NPSF female, with mesh filter	0101854
Suction cup B75 Nitrile-PVC, G3/8" female, with mesh filter	0101855
Suction cup B75 Nitrile-PVC, 3/8" NPSF female, with mesh filter	0101856
Suction cup B75 Nitrile-PVC, G1/2" female, with mesh filter	0101857
Suction cup B75 Silicone, 1/8" NPSF female, with mesh filter	0101850
Suction cup B75 Silicone, G3/8" female, with mesh filter	0101851
Suction cup B75 Silicone, 3/8" NPSF female, with mesh filter	0101852
Suction cup B75 Silicone, G1/2" female, with mesh filter	0101853
Suction cup B75 HNBR, 1/8" NPSF female, with mesh filter	0108174
Suction cup B75 HNBR, G3/8" female, with mesh filter	0108175
Suction cup B75 HNBR, 3/8" NPSF female, with mesh filter	0108176
Suction cup B75 HNBR, G1/2" female, with mesh filter	0108177



Rubber parts	Art. No.
Suction cup B75 Nitrile-PVC	3150107P
Suction cup B75 Silicone	3150107S
Suction cup B75 HNBR	3150107T



Fittings	Art. No.
Fitting 75, 1/8" NPSF female, with mesh filter	0100548
Fitting 75, G3/8" female, with mesh filter	0100551
Fitting 75, 3/8" NPSF female, with mesh filter	0100553
Fitting 75, G1/2" female, with mesh filter	0100555

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B75-2



Suction cup with short bellows and filter

- Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- Lifting movement to separate small and thin objects.
- Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min.curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
74	167	226	—	—	—	110	40	24	35

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90*
Silicone, SIL	Red	50	–40–200*

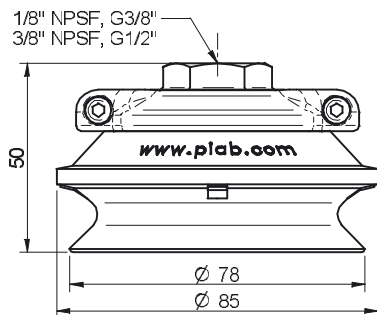
* Filter disc max. 80 °C

Material resistance

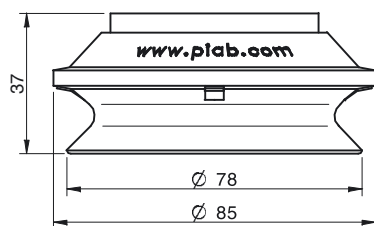
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup B75-2 Nitrile-PVC with filter, 1/8" NPSF female, with mesh filter	0101862
Suction cup B75-2 Nitrile-PVC with filter, G3/8" female, with mesh filter	0101863
Suction cup B75-2 Nitrile-PVC with filter, 3/8" NPSF female, with mesh filter	0101864
Suction cup B75-2 Nitrile-PVC with filter, G1/2" female, with mesh filter	0101865
Suction cup B75-2 Silicone with filter, 1/8" NPSF female, with mesh filter	0101858
Suction cup B75-2 Silicone with filter, G3/8" female, with mesh filter	0101859
Suction cup B75-2 Silicone with filter, 3/8" NPSF female, with mesh filter	0101860
Suction cup B75-2 Silicone, G1/2" female, with mesh filter	0101861



Rubber parts	Art. No.
Suction cup B75-2 Nitrile-PVC with filter	0101942
Suction cup B75-2 Silicone with filter	0101943



Fittings	Art. No.
Fitting 75, 1/8" NPSF female, with mesh filter	0100548
Fitting 75, G3/8" female, with mesh filter	0100551
Fitting 75, 3/8" NPSF female, with mesh filter	0100553
Fitting 75, G1/2" female, with mesh filter	0100555

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare part	Material	Temperature range °C	Art. No.
Filter for B75-2	Polyethylene, PE	-40–80	3150244

B110



Suction cup with short bellows

- Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- The lifting movement can be used to separate small and thin objects.
- Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
137	343	461	—	—	—	310	60	35	120

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90
Silicone, SIL	Red	50	–40–200
HNBR	Grey-blue	75	–30–140*

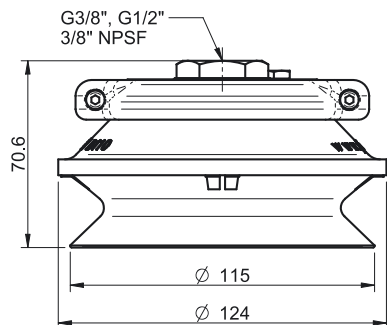
* For a shorter period of time up to +160 °C

Material resistance

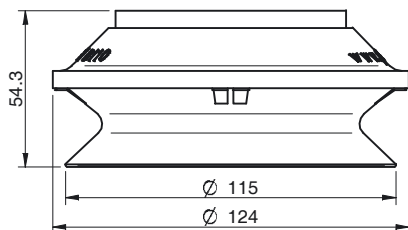
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup B110 Nitrile-PVC, G3/8" female, with mesh filter	0101890
Suction cup B110 Nitrile-PVC, 3/8" NPSF female, with mesh filter	0101891
Suction cup B110 Nitrile-PVC, G1/2" female, with mesh filter	0101892
Suction cup B110 Silicone, G3/8" female, with mesh filter	0101884
Suction cup B110 Silicone, 3/8" NPSF female, with mesh filter	0101885
Suction cup B110 Silicone, G1/2" female, with mesh filter	0101886
Suction cup B110 HNBR, G3/8" female, with mesh filter	0108178
Suction cup B110 HNBR, G1/2" female, with mesh filter	0108180
Suction cup B110 HNBR, 3/8" NPSF female, with mesh filter	0108179



Rubber parts	Art. No.
Suction cup B110 Nitrile-PVC	3150108P
Suction cup B110 Silicone	3150108S
Suction cup B110 HNBR	3150108T



Fittings	Art. No.
Fitting 110 G3/8" female, with mesh filter	0100557
Fitting 110, G1/2" female, with mesh filter	0100561
Fitting 110, 3/8" NPSF female, with mesh filter	0100559

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B110-2



Suction cup with short bellows and filter

- Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- Lifting movement to separate small and thin objects.
- Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
137	343	461	—	—	—	310	60	35	120

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90*
Silicone, SIL	Red	50	–40–200*

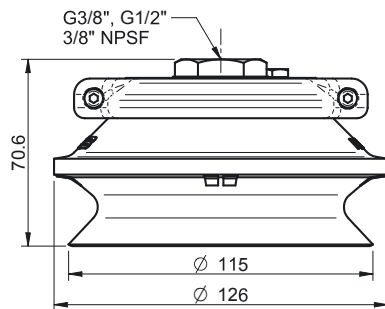
* Filter disc max. 80 °C

Material resistance

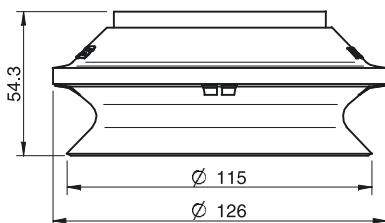
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup B110-2 Nitrile-PVC with filter, G3/8" female, with mesh filter	0101902
Suction cup B110-2 Nitrile-PVC with filter, 3/8" NPSF female, with mesh filter	0101903
Suction cup B110-2 Nitrile-PVC with filter, G1/2" female, with mesh filter	0101904
Suction cup B110-2 Silicone with filter, G3/8" female, with mesh filter	0101896
Suction cup B110-2 Silicone with filter, 3/8" NPSF female, with mesh filter	0101897
Suction cup B110-2 Silicone with filter, G1/2" female, with mesh filter	0101898



Rubber parts	Art. No.
Suction cup B110-2 Nitrile-PVC with filter	0101944
Suction cup B110-2 Silicone with filter	0101945



Fittings	Art. No.
Fitting 110 G3/8" female, with mesh filter	0100557
Fitting 110, G1/2" female, with mesh filter	0100561
Fitting 110, 3/8" NPSF female, with mesh filter	0100559

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Filter for B110-2	Polyethylene, PE	-40–80	3150249

B150



Suction cup with short bellows

- Suitable for level adjustment. Several short bellows in one lifting device can handle objects with height differences and varying shapes, for example embossed or corrugated plates.
- The lifting movement can be used to separate small and thin objects.
- Only lightweight objects should be handled when the lifting force is parallel to the surface of the object, in order to achieve good precision and safe lifting movement.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
294	686	883	—	—	—	650	75	45	265

Material specifications

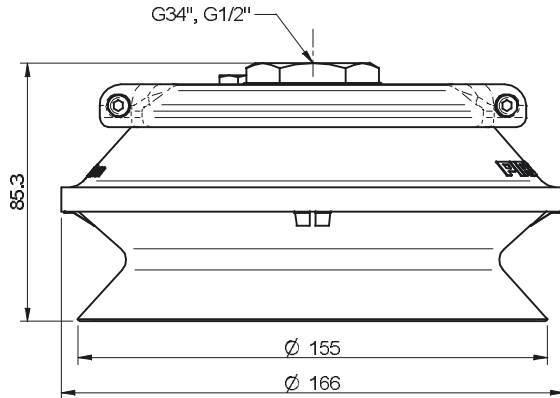
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90
Silicone, SIL	Red	50	–40–200

Material resistance

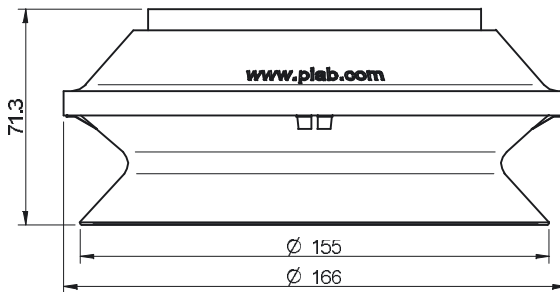
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup B150 Nitrile-PVC, G1/2" female, with mesh filter	0101931
Suction cup B150 Nitrile-PVC, G3/4" female, with mesh filter	0101932
Suction cup B150 Silicone, G1/2" female, with mesh filter	0101928
Suction cup B150 Silicone, G3/4" female, with mesh filter	0101929



Rubber parts	Art. No.
Suction cup B150 Nitrile-PVC	3150109P
Suction cup B150 Silicone	3150109S



Fittings	Art. No.
Fitting 150, G1/2" female, with mesh filter	0100564
Fitting 150, G3/4" female, with mesh filter	0100567

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

B-BL40-2, detectable



Suction cup with long bellows

- Suitable for bakeries for use with handling seeded product.
- A low percentage metal additive is mixed with the rubber material to make it detectable.
- FDA-grade silicone material.
- Suitable for level adjustment.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm³	mm	mm	g
1.1	2.2	—	—	—	—	27	11	33	10

Material specifications

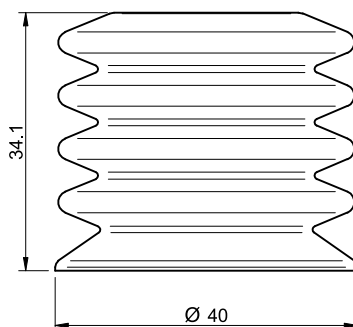
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	30	-40-200

Material resistance

Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Description	Art. No.
Suction cup B-BL40-2, detectable	0121630
Retainer clip B-BL40-2, detectable	0121660



D15-2



Deep suction cup

- ▶ Suitable for objects with curved or irregular surfaces.
- ▶ Grips around corners and edges.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
2.9	7.8	11.0	—	—	—	0.9	6.0	3.0	1.2

Material specifications

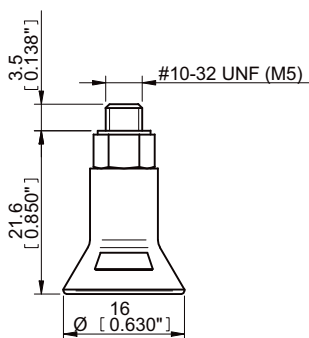
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200

Material resistance

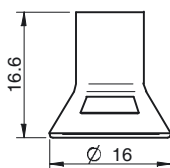
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup D15-2 Chloroprene, M5 male	3150010
Suction cup D15-2 Silicone, M5 male	3150010S



Rubber parts	Art. No.
Suction cup D15-2 Chloroprene	3150135
Suction cup D15-2 Silicone	3150135S



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

D20-2



Deep suction cup

- ▶ Suitable for objects with curved or irregular surfaces.
- ▶ Grips around corners and edges.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
5.9	15.0	18.0	—	—	—	2.5	8.0	4.5	2.2

Material specifications

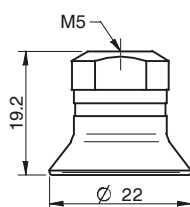
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

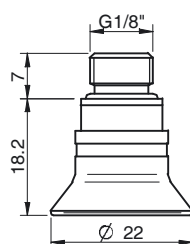
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

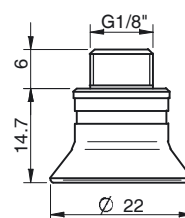
Complete suction cups		Art. No.
A	Suction cup D20-2 Chloroprene, M5 female	0101215
B	Suction cup D20-2 Chloroprene, G1/8" male, with mesh filter	0101216
C	Suction cup D20-2 Chloroprene, G1/8" male/M5 female, with mesh filter	0101220
A	Suction cup D20-2 Silicone, M5 female	0101226
A	Suction cup D20-2 Silicone, M5 female, with dual flow control valve	0101232
B	Suction cup D20-2 Silicone, G1/8" male, with mesh filter	0101227
C	Suction cup D20-2 Silicone, G1/8" male/M5 female, with mesh filter	0101231
E	Suction cup D20-2 Silicone, G1/8" male/M5 female, PA	0110331



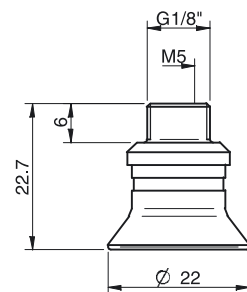
A



B

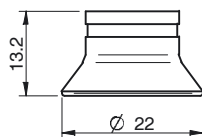


C



E

Rubber parts	Art. No.
Suction cup D20-2 Chloroprene	0101123
Suction cup D20-2 Silicone	0101124



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005
Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

D30-2



Deep suction cup

- ▶ Suitable for objects with curved or irregular surfaces.
- ▶ Grips around corners and edges.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
14.0	26	31	—	—	—	5.0	13	5.0	4.0

Material specifications

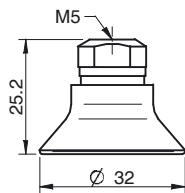
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

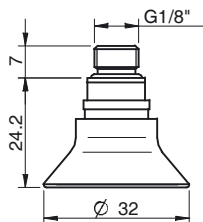
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

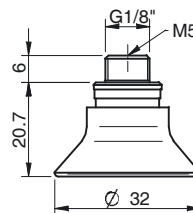
	Complete suction cups	Art. No.
A	Suction cup D30-2 Chloroprene, M5 female	0101237
B	Suction cup D30-2 Chloroprene, G1/8" male, with mesh filter	0101238
B	Suction cup D30-2 Chloroprene, G1/8" male, with mesh filter and dual flow control valve	0101244
C	Suction cup D30-2 Chloroprene, G1/8" male/M5 female, with mesh filter	0101242
C	Suction cup D30-2 Chloroprene, G1/8" male/M5 female, with dual flow control valve	0101246
A	Suction cup D30-2 Silicone, M5 female	0101248
B	Suction cup D30-2 Silicone, G1/8" male, with mesh filter	0101249
C	Suction cup D30-2 Silicone, G1/8" male/M5 female, with mesh filter	0101253
D	Suction cup D30-2 Silicone, 5xM5 female	0101252
E	Suction cup D30-2 Silicone, G1/8" male/M5 female, PA	0110332



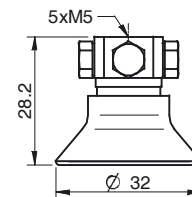
A



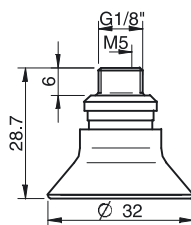
B



C

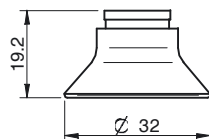


D



E

Rubber parts	Art. No.
Suction cup D30-2 Chloroprene	0101125
Suction cup D30-2 Silicone	0101126



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005
Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

D50



Deep suction cup

- ▶ Suitable for objects with curved or irregular surfaces.
- ▶ Grips around corners and edges.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
36	78	98	—	—	—	15	25	10	18

Material specifications

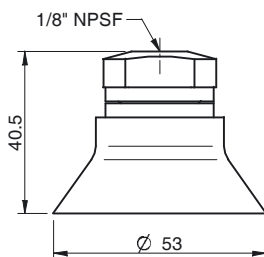
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

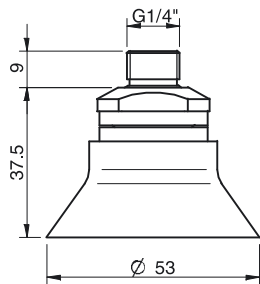
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

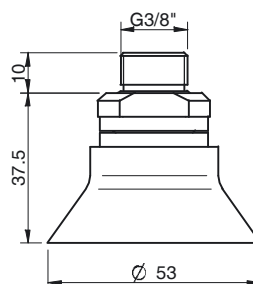
	Complete suction cups	Art. No.
A	Suction cup D50 Chloroprene, 1/8" NPSF female, with mesh filter	0101727
B	Suction cup D50 Chloroprene, G1/4" male, with mesh filter	0101722
C	Suction cup D50 Chloroprene, G3/8" male, with mesh filter	0101724
A	Suction cup D50 Silicone, 1/8" NPSF female, with mesh filter	0101740
B	Suction cup D50 Silicone, G1/4" male, with mesh filter	0101735
C	Suction cup D50 Silicone, G3/8" male, with mesh filter	0101737
E	Suction cup D50 Chloroprene, 1/8" NPSF female, PA	0109841



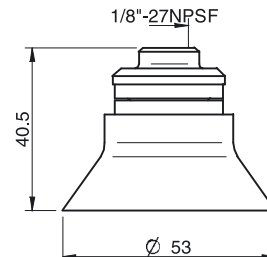
A



B

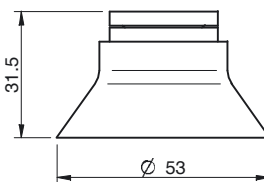


C



E

Rubber parts	Art. No.
Suction cup D50 Chloroprene	0101127
Suction cup D50 Silicone	0101128



Fittings	Art. No.
Fitting 1/8" NPSF female, 50, with mesh filter	0101154
Fitting 1/8" NPSF female, 50, with dual flow control valve	3251012
Fitting G1/4" male, 50, with mesh filter	3250092
Fitting G1/4" male, with mesh filter and dual flow control valve	3251013
Fitting G3/8" male, 50, with mesh filter	3250087
Fitting G3/8" male, 50, with mesh filter and dual flow control valve	3251015
Fitting 5x1/8" NPSF female, 50	0100262
Fitting 5x1/8" NPSF female, 50, with dual flow control valve	3251017
Fitting 1/8" NPSF female, 50, PA	3150198

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

F15



Flat suction cup with cleats

- ▶ Suitable for flat objects.
- ▶ Good stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and gives extra friction when the lifting force is parallel.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
3.5	8.5	11.0	3.5	6.5	7.5	0.37	13	1.0	0.9

Material specifications

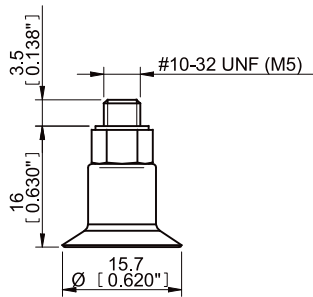
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

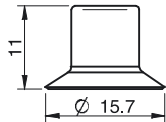
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup F15 Chloroprene, M5 male	3150014
Suction cup F15 Silicone, M5 male	3150014S



Rubber parts	Art. No.
Suction cup F15 Chloroprene	3150125
Suction cup F15 Silicone	3150125S



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

For further information and dimensioned drawings, see section *Suction cups/grippers Fittings*.

F20



Flat suction cup with cleats

- ▶ Suitable for flat objects.
- ▶ Good stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and gives extra friction when the lifting force is parallel.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
6.0	14.5	19.0	5.0	8.0	8.5	1.0	18	1.5	1.2

Material specifications

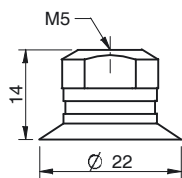
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

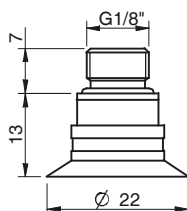
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

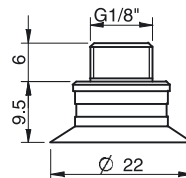
	Complete suction cups	Art. No.
A	Suction cup F20 Chloroprene, M5 female	0101259
A	Suction cup F20 Chloroprene, M5 female, with dual flow control valve	0101265
B	Suction cup F20 Chloroprene, G1/8" male, with mesh filter	0101260
B	Suction cup F20 Chloroprene, G1/8" male, with mesh filter and dual flow control valve	0101266
C	Suction cup F20 Chloroprene, G1/8" male/M5 female, with mesh filter	0101264
C	Suction cup F20 Chloroprene, G1/8" male/M5 female, with dual flow control valve	0101268
D	Suction cup F20 Chloroprene, 5xM5 female	0101263
A	Suction cup F20 Silicone, M5 female	0101270
B	Suction cup F20 Silicone, G1/8" male, with mesh filter	0101271
B	Suction cup F20 Silicone, G1/8" male, with mesh filter and dual flow control valve	0101277
C	Suction cup F20 Silicone, G1/8" male/M5 female, with mesh filter	0101275
D	Suction cup F20 Silicone, 5xM5 female	0101274
E	Suction cup F20 Chloroprene, G1/8" male/M5 female, PA	0110950
E	Suction cup F20 Silicone, G1/8" male/M5 female, PA	0110334



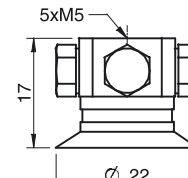
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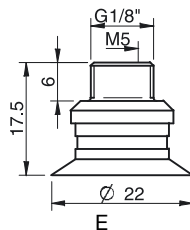
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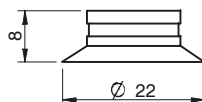


D



E

Rubber parts	Art. No.
Suction cup F20 Chloroprene	0101129
Suction cup F20 Silicone	0101130



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005
Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

F25



Flat suction cup with cleats

- ▶ Suitable for flat objects.
- ▶ Good stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and gives extra friction when the lifting force is parallel.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
9.0	19.5	25	8.0	9.0	10.0	1.1	22	1.5	1.8

Material specifications

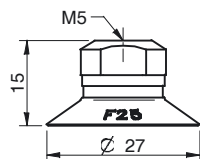
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

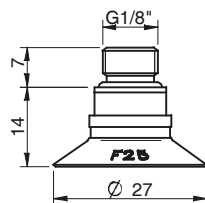
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

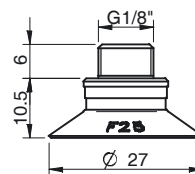
	Complete suction cups	Art. No.
A	Suction cup F25 Chloroprene, M5 female	0101292
B	Suction cup F25 Chloroprene, G1/8" male, with mesh filter	0101293
B	Suction cup F25 Chloroprene, G1/8" male, with mesh filter and dual flow control valve	0101299
C	Suction cup F25 Chloroprene, G1/8" male/M5 female, with mesh filter	0101297
C	Suction cup F25 Chloroprene, G1/8" male/M5 female, with dual flow control valve	0101301
D	Suction cup F25 Chloroprene, 5xM5 female	0101296
A	Suction cup F25 Silicone, M5 female	0101303
B	Suction cup F25 Silicone, G1/8" male, with mesh filter	0101304
C	Suction cup F25 Silicone, G1/8" male/M5 female, with mesh filter	0101308
C	Suction cup F25 Silicone, G1/8" male/M5 female, with dual flow control valve	0101312
D	Suction cup F25 Silicone, 5xM5 female	0101307
E	Suction cup F25 Chloroprene, G1/8" male/M5 female, PA	0109842
E	Suction cup F25 Silicone, G1/8" male/M5 female, PA	0110335



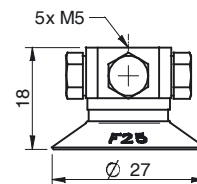
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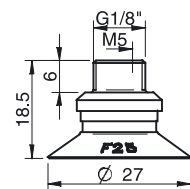
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C

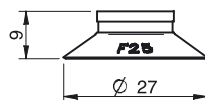


D



E

Rubber parts	Art. No.
Suction cup F25 Chloroprene	0101131
Suction cup F25 Silicone	0101132



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005
Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

F30-2



Flat suction cup with cleats

- ▶ Suitable for flat objects.
- ▶ Good stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and gives extra friction when the lifting force is parallel.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
12.0	25	31	11.0	16.0	20.0	2.0	25	2.0	2.2

Material specifications

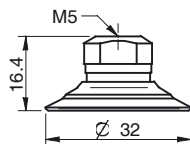
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

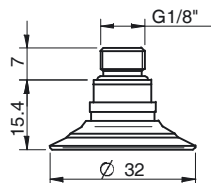
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

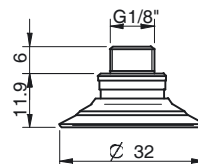
	Complete suction cups	Art. No.
A	Suction cup F30-2 Chloroprene, M5 female	0101325
A	Suction cup F30-2 Chloroprene, M5 female, with dual flow control valve	0101331
B	Suction cup F30-2 Chloroprene, G1/8" male, with mesh filter	0101326
B	Suction cup F30-2 Chloroprene, G1/8" male, with mesh filter and dual flow control valve	0101332
C	Suction cup F30-2 Chloroprene, G1/8" male/M5 female, with mesh filter	0101330
C	Suction cup F30-2 Chloroprene, G1/8" male/M5 female, with dual flow control valve	0101334
E	Suction cup F30-2 Chloroprene, G1/8" male/M5 female PA	0109846
F	Suction cup F30-2 Chloroprene, G1/8" male/M5 female, with cone valve	3250039
D	Suction cup F30-2 Chloroprene, 5xM5 female	0101329
A	Suction cup F30-2 Silicone, M5 female	0101341
B	Suction cup F30-2 Silicone, G1/8" male, with mesh filter	0101342
B	Suction cup F30-2 Silicone, G1/8" male, with mesh filter and dual flow control valve	0101348
C	Suction cup F30-2 Silicone, G1/8" male/M5 female, with mesh filter	0101346
C	Suction cup F30-2 Silicone, G1/8" male/M5 female, with dual flow control valve	0101350
D	Suction cup F30-2 Silicone, 5xM5 female	0101345
E	Suction cup F30-2 Silicone, G1/8" male/M5 female PA	0110344
F	Suction cup F30-2 Silicone, G1/8" male/M5 female, with cone valve	3250039S



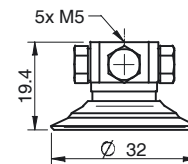
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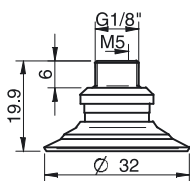
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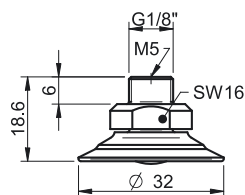
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D

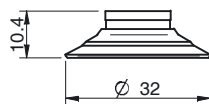


E



F

Rubber parts	Art. No.
Suction cup F30-2 Chloroprene	0101133
Suction cup F30-2 Chloroprene, for fitting with cone valve	3150239
Suction cup F30-2 Silicone	0101134



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting G1/8" male/M5 female, with cone valve	0101155
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005
Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Cone valve for F30-2	Al/SS/NBR	-40-110	3150055

F40-2



Flat suction cup with cleats

- ▶ Suitable for flat objects.
- ▶ Good stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and gives extra friction when the lifting force is parallel.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
20.0	40	50	15.0	25	30	4.8	52	2.5	5.5

Material specifications

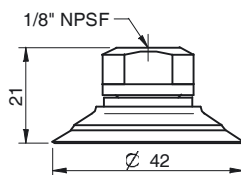
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

Material resistance

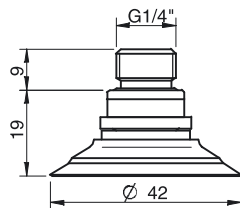
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

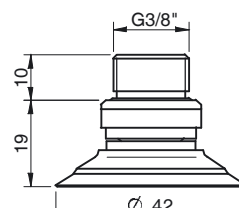
	Complete suction cups	Art. No.
A	Suction cup F40-2 Nitrile-PVC, 1/8" NPSF female, with mesh filter	0101572
A	Suction cup F40-2 Nitrile-PVC, 1/8" NPSF female, with dual flow control valve	0101573
B	Suction cup F40-2 Nitrile-PVC, G1/4" male, with mesh filter	0101567
B	Suction cup F40-2 Nitrile-PVC, G1/4" male, with mesh filter and dual flow control valve	0101574
C	Suction cup F40-2 Nitrile-PVC, G3/8" male, with mesh filter	0101569
C	Suction cup F40-2 Nitrile-PVC, G3/8" male, with mesh filter and dual flow control valve	0101576
D	Suction cup F40-2 Nitrile-PVC, 5x1/8" NPSF female	0101571
E	Suction cup F40-2 Nitrile-PVC, 1/8" NPSF female PA	0109847
F	Suction cup F40-2 Nitrile-PVC, 1/8" NPSF female, with cone valve	3150050P
A	Suction cup F40-2 Silicone, 1/8" NPSF female, with mesh filter	0101553
A	Suction cup F40-2 Silicone, 1/8" NPSF female, with dual flow control valve	0101554
B	Suction cup F40-2 Silicone, G1/4" male, with mesh filter	0101548
C	Suction cup F40-2 Silicone, G3/8" male, with mesh filter	0101550
D	Suction cup F40-2 Silicone, 5x1/8" NPSF female	0101552
E	Suction cup F40-2 Silicone, 1/8" NPSF female PA	0110345
F	Suction cup F40-2 Silicone, 1/8" NPSF female, with cone valve	3150050S



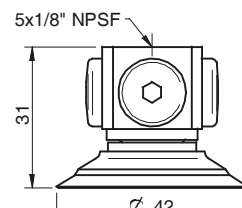
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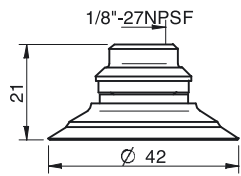
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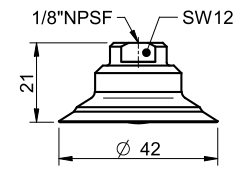
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D

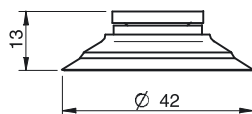


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F

Rubber parts	Art. No.
Suction cup F40-2 Nitrile-PVC	0101135
Suction cup F40-2 Nitrile-PVC, for fitting with cone valve	3150240P
Suction cup F40-2 Silicone	0101136
Suction cup F40-2 Silicone, for fitting with cone valve	3150240S



Fittings	Art. No
Fitting 1/8" NPSF female, 30–40, with mesh filter	0101153
Fitting 1/8" NPSF female, 30–40, with dual flow control valve	3251006
Fitting 1/8" NPSF female, 30–40, with cone valve	0101156
Fitting G1/4" male, 30–40, with mesh filter	3250091
Fitting G1/4" male, 30–40, with mesh filter and dual flow control valve	3251007
Fitting G3/8" male, 30–40, with mesh filter	3250086
Fitting G3/8" male, 30–40, with mesh and dual flow control valve	3251009
Fitting 5x1/8" NPSF female, 30–40	0100261
Fitting 5x1/8" NPSF female, 30–40, with dual flow control valve	3251011
Fitting 1/8" NPSF female, 30–40, PA	3150197

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare Part	Material	Temperature range °C	Art. No.
Cone valve for F40-2	AI/SS/NBR	-40–110	3150056

F50-2



Flat suction cup with cleats

- ▶ Suitable for flat objects.
- ▶ Good stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and gives extra friction when the lifting force is parallel.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
36	74	96	24.0	40	50	10	55	3.0	14

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90
Silicone, SIL	Red	50	-40–200
HNBR	Grey-blue	75	-30–140*

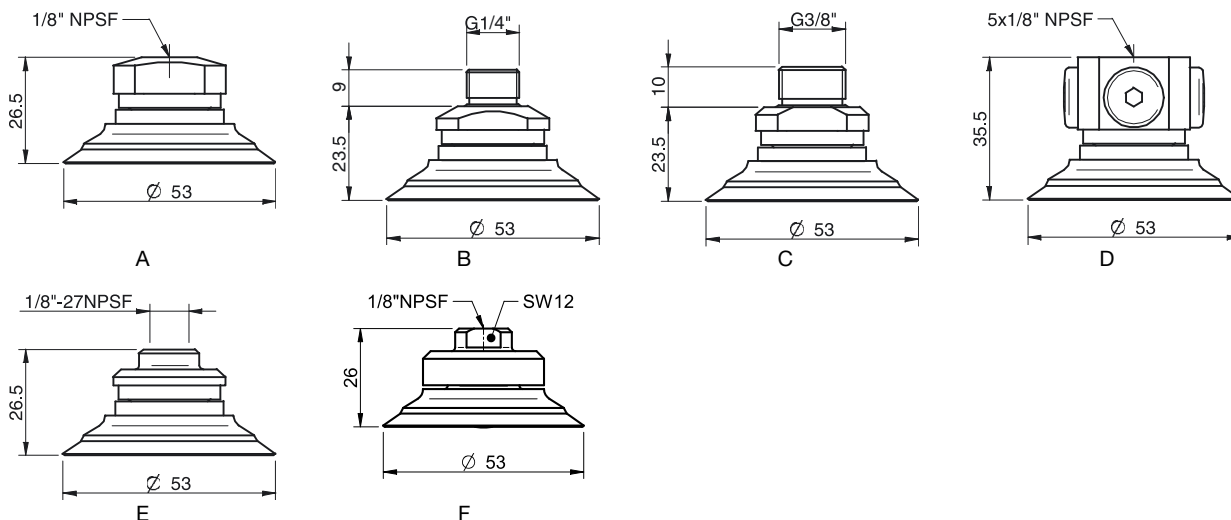
* For a shorter period of time up to +160 °C

Material resistance

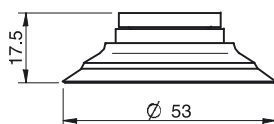
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup F50-2 Nitrile-PVC, 1/8" NPSF female, with mesh filter	0101772
A	Suction cup F50-2 Nitrile-PVC, 1/8" NPSF female, with dual flow control valve	0101773
B	Suction cup F50-2 Nitrile-PVC, G1/4" male, with mesh filter	0101767
B	Suction cup F50-2 Nitrile-PVC, G1/4" male, with mesh filter and dual flow control valve	0101774
C	Suction cup F50-2 Nitrile-PVC, G3/8" male, with mesh filter	0101769
C	Suction cup F50-2 Nitrile-PVC, G3/8" male, with mesh filter and dual flow control valve	0101776
D	Suction cup F50-2 Nitrile-PVC, 5x1/8" NPSF female	0101771
D	Suction cup F50-2 Nitrile-PVC, 5x1/8" NPSF female, with dual flow control valve	0101778
E	Suction cup F50-2 Nitrile-PVC, 1/8" NPSF female, PA	0110952
F	Suction cup F50-2 Nitrile-PVC, 1/8" NPSF female, with cone valve	3150051P
A	Suction cup F50-2 Silicone, 1/8" NPSF female, with mesh filter	0101753
A	Suction cup F50-2 Silicone, 1/8" NPSF female, with dual flow control valve	0101754
B	Suction cup F50-2 Silicone, G1/4" male, with mesh filter	0101748
C	Suction cup F50-2 Silicone, G3/8" male, with mesh filter	0101750
D	Suction cup F50-2 Silicone, 5x1/8" NPSF female	0101752
E	Suction cup F50-2 Silicone, 1/8" NPSF female, PA	0110346
F	Suction cup F50-2 Silicone, 1/8" NPSF female, with cone valve	3150051S
A	Suction cup F50-2 HNBR, 1/8" NPSF female	0108181
B	Suction cup F50-2 HNBR, G1/4" male, with mesh filter	0108182
C	Suction cup F50-2 HNBR, G3/8" male, with mesh filter	0108183



Rubber parts	Art. No.
Suction cup F50-2 Nitrile-PVC	0101137
Suction cup F50-2 Nitrile-PVC, for fitting with cone valve	3150241P
Suction cup F50-2 Silicone	0101138
Suction cup F50-2 Silicone, for fitting with cone valve	3150241S
Suction cup F50-2 HNBR	0108166



Fittings	Art. No
Fitting 1/8" NPSF female, 50	3250017
Fitting 1/8" NPSF female, 50, with mesh filter	0101154
Fitting 1/8" NPSF female, 50, with dual flow control valve	3251012
Fitting 1/8" NPSF female, 50, with cone valve	0101157
Fitting G1/4" male, 50, with mesh filter	3250092
Fitting G1/4" male, with mesh filter and dual flow control valve	3251013
Fitting G3/8" male, 50, with mesh filter	3250087
Fitting G3/8" male, 50, with mesh filter and dual flow control valve	3251015
Fitting 5x1/8" NPSF female, 50	0100262
Fitting 5x1/8" NPSF female, 50, with dual flow control valve	3251017
Fitting 1/8" NPSF female, 50, PA	3150198

For further information and dimensioned drawings, see section *Suction cups/grippers Fittings*.

Spare Part	Material	Temperature range °C	Art. No.
Cone valve for F50-2	Al/SS/NBR	-40–110	3150057

F75



Flat suction cup with cleats

- Suitable for flat objects.
- Good stability and little inherent movement.
- Recommended when the lifting force is parallel to the surface of the object.
- Cleats prevent thin, sensitive objects from being deformed and gives extra friction when the lifting force is parallel.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
80	200	270	60	110	140	20	150	3.0	23

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200
HNBR	Grey-blue	75	-30-140*

* For a shorter period of time up to +160 °C

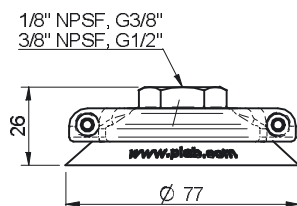
Material resistance

Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

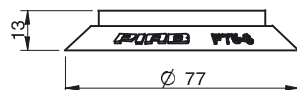
Ordering information

Complete suction cups	Art. No.
Suction cup F75 Nitrile-PVC, 1/8" NPSF female, with mesh filter	0101873
Suction cup F75 Nitrile-PVC, G3/8" female, with mesh filter	0101874
Suction cup F75 Nitrile-PVC, G3/8" female, with cone valve	0101877
Suction cup F75 Nitrile-PVC, 3/8" NPSF female, with mesh filter	0101875
Suction cup F75 Nitrile-PVC, G1/2" female, with mesh filter	0101876
Suction cup F75 Nitrile-PVC, G1/2" female, with cone valve	0101879
Suction cup F75 Silicone, 1/8" NPSF female, with mesh filter	0101866
Suction cup F75 Silicone, G3/8" female, with mesh filter	0101867
Suction cup F75 Silicone, G3/8" female, with cone valve	0101870
Suction cup F75 Silicone, 3/8" NPSF female, with mesh filter	0101868
Suction cup F75 Silicone, G1/2" female, with mesh filter	0101869
Suction cup F75 Silicone, G1/2" female, with cone valve	0101872
Suction cup F75 HNBR, 1/8" NPSF female, with mesh filter	0108184
Suction cup F75 HNBR, G3/8" female, with mesh filter	0108185
Suction cup F75 HNBR, 3/8" NPSF female, with mesh filter	0108186
Suction cup F75 HNBR, G1/2" female, with mesh filter	0108187

When using F75 G1/2" female with cone valve (0101879 and 0101872) with Level compensator G1/2" (3350071 and 0114291) or Ball joint G1/2" (3350066), a Connector G1/2" (3107757) must be used.



Rubber parts	Art. No.
Suction cup F75 Nitrile-PVC	3150131P
Suction cup F75 Silicone	3150131S
Suction cup F75 HNBR	3150131T



Fittings	Art. No.
Fitting 75, 1/8" NPSF female, with mesh filter	0100548
Fitting 75, G3/8" female, with mesh filter	0100551
Fitting 75, G3/8" female, with cone valve	0100552
Fitting 75, 3/8" NPSF female, with mesh filter	0100553
Fitting 75, G1/2" female, with mesh filter	0100555
Fitting 75, G1/2" female, with cone valve	0100556

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

F110



Flat suction cup with cleats

- ▶ Suitable for flat objects.
- ▶ Good stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and gives extra friction when the lifting force is parallel.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
140	420	560	140	250	300	70	250	4.0	66

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90
Silicone, SIL	Red	50	–40–200
HNBR	Grey-blue	75	–30–140*

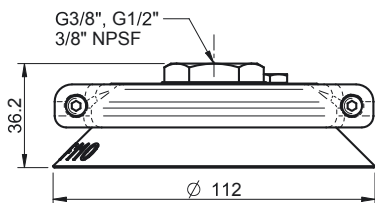
* For a shorter period of time up to +160 °C

Material resistance

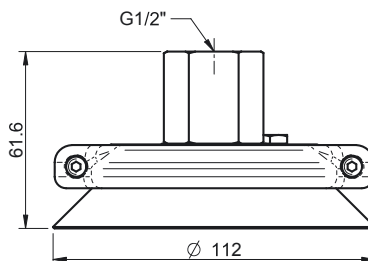
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup F110 Nitrile-PVC, G3/8" female, with mesh filter	0101915
A	Suction cup F110 Nitrile-PVC, 3/8" NPSF female, with mesh filter	0101916
A	Suction cup F110 Nitrile-PVC, G1/2" female, with mesh filter	0101917
B	Suction cup F110 Nitrile-PVC, G1/2" female, with cone valve	0101921
A	Suction cup F110 Silicone, G3/8" female, with mesh filter	0101908
A	Suction cup F110 Silicone, 3/8" NPSF female, with mesh filter	0101909
A	Suction cup F110 Silicone, G1/2" female, with mesh filter	0101910
B	Suction cup F110 Silicone, G1/2" female, with cone valve	0101914
A	Suction cup F110 HNBR, G3/8" female, with mesh filter	0108188
A	Suction cup F110 HNBR, 3/8" NPSF female, with mesh filter	0108189
A	Suction cup F110 HNBR, G1/2" female, with mesh filter	0108190

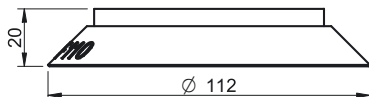


A



B

Rubber part	Art. No.
Suction cup F110 Nitrile-PVC	3150132P
Suction cup F110 Silicone	3150132S
Suction cup F110 HNBR	3150132T



Fittings	Art. No.
Fitting 110 G3/8" female, with mesh filter	0100557
Fitting 110, G1/2" female, with mesh filter	0100561
Fitting 110, 3/8" NPSF female, with mesh filter	0100559
Fitting 110, G1/2" female, with cone valve	0100563

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare part	Material	Temperature range °C	Art. No.
Cone valve for Fitting 110 & 150	Al/SS/NBR	-40-110	3350034

F150



Flat suction cup with cleats

- Suitable for flat objects.
- Good stability and little inherent movement.
- Recommended when the lifting force is parallel to the surface of the object.
- Cleats prevent thin, sensitive objects from being deformed and gives extra friction when the lifting force is parallel.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
300	850	1100	250	600	800	160	500	6.0	200

Material specifications

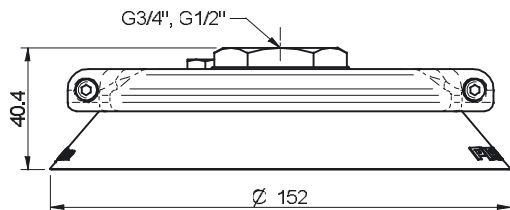
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

Material resistance

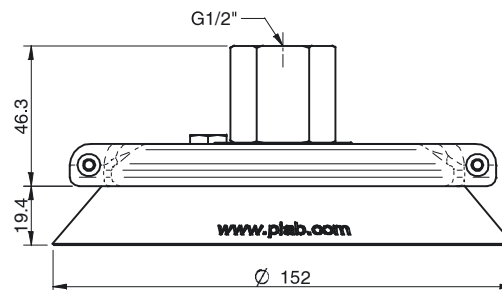
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup F150 Nitrile-PVC, G3/4" female, with mesh filter	0101939
A	Suction cup F150 Nitrile-PVC, G1/2" female, with mesh filter	0101938
B	Suction cup F150 Nitrile-PVC, G1/2" female, with cone valve	0101941
A	Suction cup F150 Silicone, G3/4" female, with mesh filter	0101935
A	Suction cup F150 Silicone, G1/2" female, with mesh filter	0101934
B	Suction cup F150 Silicone, G1/2" female, with cone valve	0101937

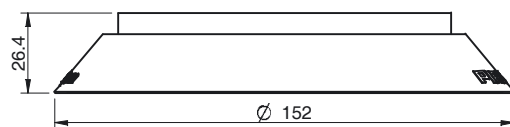


A



B

	Rubber parts	Art. No.
	Suction cup F150 Nitrile-PVC	3150133P
	Suction cup F150 Silicone	3150133S



	Fittings	Art. No.
	Fitting 150, G1/2" female, with mesh filter	0100564
	Fitting 150, G3/4" female, with mesh filter	0100567
	Fitting 150, G1/2" female, with cone valve	0100566

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Spare part	Material	Temperature range °C	Art. No.
Cone valve for Fitting 110 & 150	Al/SS/NBR	-40–110	3350034

XLF



- Suitable for handling large and heavy sheets, such as glass and metal, with a flat or slightly concave surface.
- Friction pattern increases safety and capability to handle tilted or standing glass/metal sheets.
- Double lip design increases safety against overload or tear on the outer lip.
- Durable and abrasive resistant material reduces the risk for marks.
- Flat mounting plate facilitates customized mounting interfaces.
- Auxiliary port, suitable for vacuum sensing or efficient blow-off/release.

Lifting forces & technical data

Model	Lifting force* vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume cm³	Min. curve radius mm	Max. vertical movement mm	Weight g
	40 -kPa	60 -kPa	90 -kPa	40 -kPa	60 -kPa	90 -kPa				
XLF150	330/520	500/770	780/1130	281	425	663	145	500	8	362
XLF200	760/1030	1130/1510	1720/2200	646	961	1462	275	800	8	792
XLF250	1310/1640	1950/2460	2870/3540	1114	1658	2440	435	1300	8	1280
XLF300	2150/2620	3200/3760	4630/5450	1828	2720	3936	666	1900	8	2035

*Inner/Outer lip

Material specifications

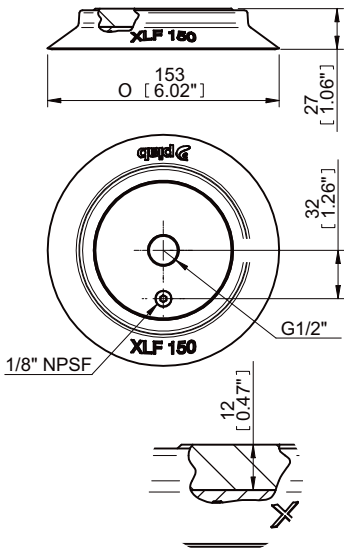
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	60	0-90

Material resistance

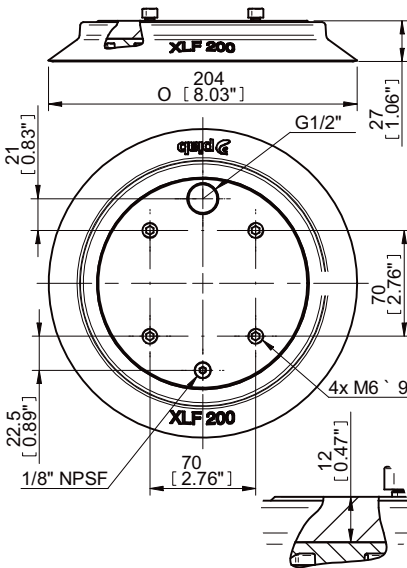
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good

Ordering information

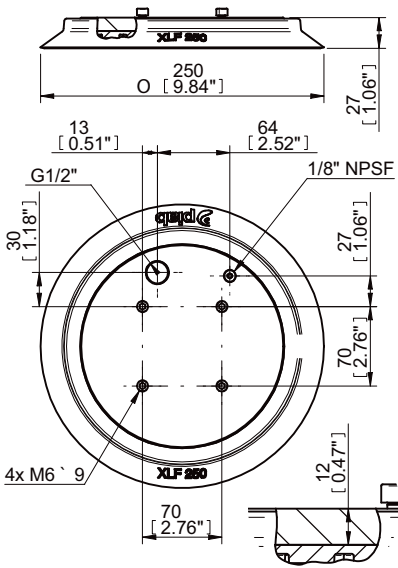
	Complete suction cups	Art. No.
A	XLF150 Extra Large Flat cup, G1/2" female	0127131
B	XLF200 Extra Large Flat cup, G1/2" female	0127132
C	XLF250 Extra Large Flat cup, G1/2" female	0127133
D	XLF300 Extra Large Flat cup, G1/2" female	0127134



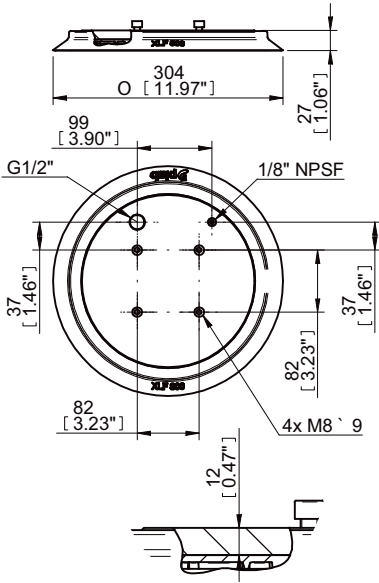
A



B



C



D

OC60x140



Oval, concave suction cup

- Suitable for handling oblong objects with flat or curved surface.
- Good stability and little inherent movement.
- Thick, durable lip.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight with fitting
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
132	373	520	186	373	510	52	200	7.5	160

Material specifications

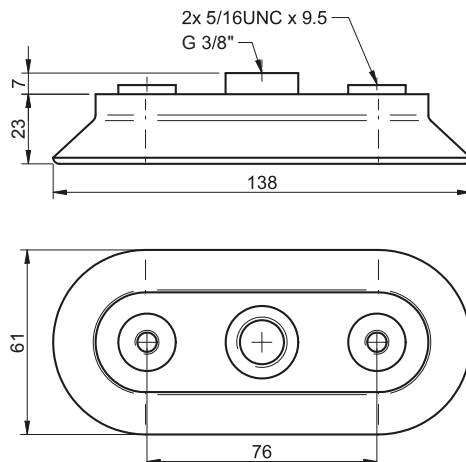
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile, NBR	Black	50	-20-100

Material resistance

Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Excellent	Excellent	Fair	Good	Good	Fair	Good	Good

Ordering information

Complete suction cups	Art. No.
Suction cup OC60x140 Nitrile, G3/8" female	3350011



U2



Universal suction cup

- Suitable for objects with flat or slightly curved surfaces.
- Also used for concave objects.
- Suction cups of conductive silicone are suitable for objects with sensitivity to static electricity.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
0.03	0.10	0.15	—	—	—	0.003	4.0	0.10	0.012

Material specifications

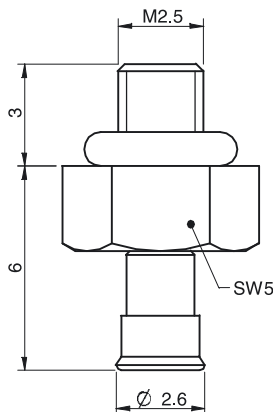
Material	Colour	Hardness °Shore A	Temperature range °C
Conductive silicone, CSIL	Black	50	-55–230

Material resistance

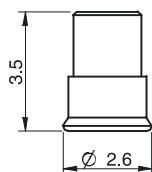
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup U2 Conductive silicone, M2.5 male	3250080SC



Rubber parts	Art. No.
Suction cup U2 Conductive silicone	3150284SC



Fittings	Art. No.
Fitting M2.5 male	3250084

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U3



Universal suction cup

- Suitable for objects with flat or slightly curved surfaces.
- Also used for concave objects.
- Suction cups of conductive silicone are suitable for objects with sensitivity to static electricity.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
0.09	0.42	0.65	—	—	—	0.005	5.0	0.15	0.030

Material specifications

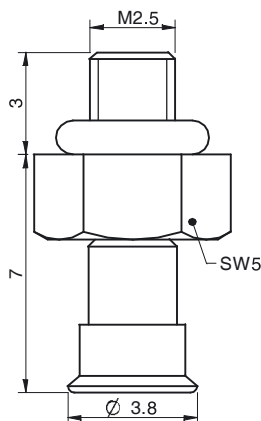
Material	Colour	Hardness °Shore A	Temperature range °C
Conductive silicone, CSIL	Black	50	-55–230

Material resistance

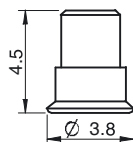
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup U3 Conductive silicone, M2.5 male	3250081SC



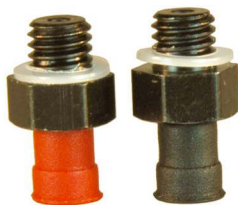
Rubber parts	Art. No.
Suction cup U3 Conductive silicone	3150285SC



Fittings	Art. No.
Fitting M2.5 male	3250084

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U4



Universal suction cup

- Suitable for objects with flat or slightly curved surfaces.
- Also used for concave objects.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
0.20	0.90	1.3	0.20	0.80	1.0	0.03	3.0	0.20	0.08

Material specifications

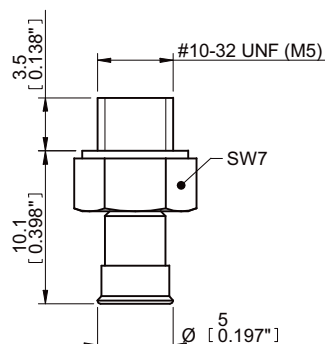
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

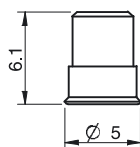
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup U4 Chloroprene, M5 male	3150059
Suction cup U4 Silicone, M5 male	3150059S



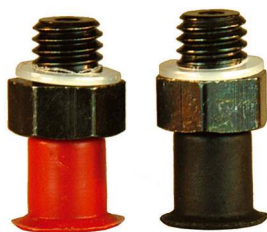
Rubber parts	Art. No.
Suction cup U4 Chloroprene	3150114
Suction cup U4 Silicone	3150114S



Fittings	Art. No.
Fitting M5 male, 5–8	3107031

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U6



Universal suction cup

- ▶ Suitable for objects with flat or slightly curved surfaces.
- ▶ Also used for concave objects.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
0.50	1.7	2.5	0.50	1.5	2.0	0.05	5.0	0.30	0.14

Material specifications

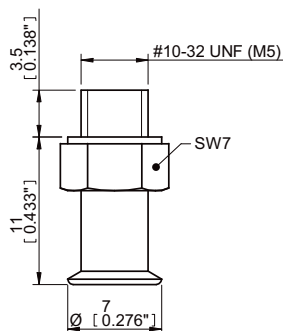
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

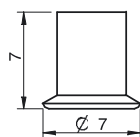
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup U6 Chloroprene, M5 male	3150003
Suction cup U6 Silicone, M5 male	3150003S



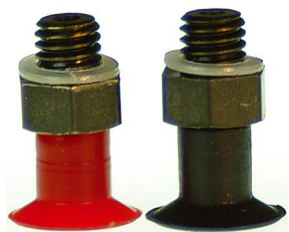
Rubber parts	Art. No.
Suction cup U6 Chloroprene	3150115
Suction cup U6 Silicone	3150115S



Fittings	Art. No.
Fitting M5 male, 5–8	3107031

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U8



Universal suction cup

- Suitable for objects with flat or slightly curved surfaces.
- Also used for concave objects.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
1.0	2.9	3.9	1.0	2.9	3.4	0.10	6.0	0.50	0.16

Material specifications

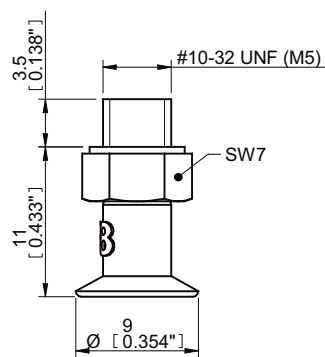
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

Material resistance

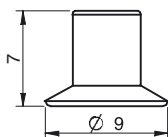
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup U8 Chloroprene, M5 male	3150004
Suction cup U8 Silicone, M5 male	3150004S



Rubber parts	Art. No.
Suction cup U8 Chloroprene	3150116
Suction cup U8 Silicone	3150116S



Fittings	Art. No.
Fitting M5 male, 5–8	3107031

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U10



Universal suction cup

- ▶ Suitable for objects with flat or slightly curved surfaces.
- ▶ Also used for concave objects.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
1.5	4.4	6.9	1.5	4.4	4.9	0.18	8.0	0.50	0.65

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200
HNBR	Blue	50	-30-140*

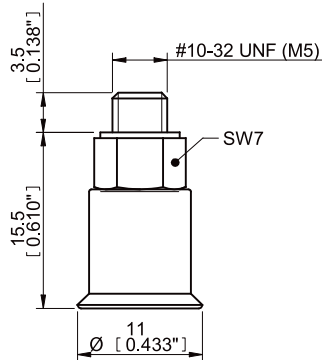
*For a shorter period of time up to 160 °C

Material resistance

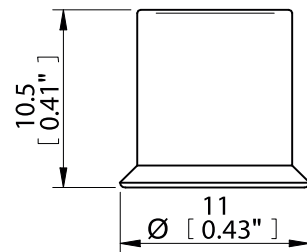
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup U10 Chloroprene, M5 male	3150005
Suction cup U10 Silicone, M5 male	3150005S
Suction cup U10 HNBR, M5 male	9906863



Rubber parts	Art. No.
Suction cup U10 Chloroprene	3150117
Suction cup U10 Silicone	3150117S
Suction cup U10 HNBR	0128689



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U15

Universal suction cup

- ▶ Suitable for objects with flat or slightly curved surfaces.
- ▶ Also used for concave objects.



Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm³	mm	mm	g
3.5	8.4	11.0	3.5	5.4	5.9	0.50	8.0	1.5	0.70

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200
HNBR	Blue	50	-30–140*

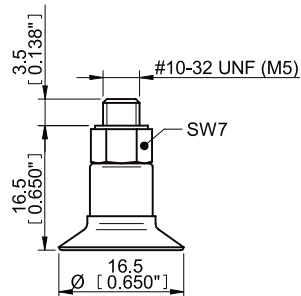
*For a shorter period of time up to 160 °C

Material resistance

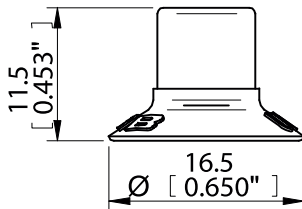
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Ordering information

Complete suction cups	Art. No.
Suction cup U15 Chloroprene, M5 male	3150006
Suction cup U15 Silicone, M5 male	3150006S
Suction cup U15 HNBR, M5 male	9906864



Rubber parts	Art. No.
Suction cup U15 Chloroprene	3150118
Suction cup U15 Silicone	3150118S
Suction cup U15 HNBR	0128690



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

For further information and dimensioned drawings, see section *Suction cups/grippers Fittings*.

U15-3



Universal suction cup with reinforced lip

- ▶ Wide temperature range (-60°C to +200°C)
- ▶ The silicone material complies with FDA 21 CFR 177.2600
- ▶ Reinforced lip

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm	mm	mm	g
3.5	8.4	11.0	3.5	5.4	5.9	0.50	8.0	1.5	0.70

Material specifications

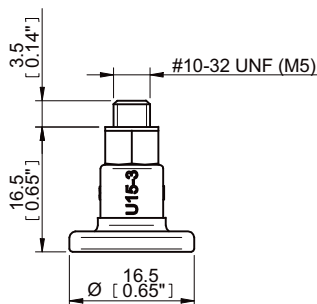
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40-200

Material resistance

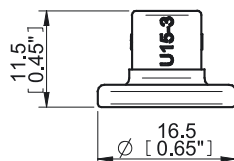
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

Complete suction cup	Art. No.
Suction cup U15-3 Silicone, M5 male	0117947



Rubber part	Art. No.
Suction cup U15-3 Silicone	0114981



Fittings	Art. No.
Fitting M5 male, 10-15	3107030

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U20



Universal suction cup

- ▶ Suitable for objects with flat or slightly curved surfaces.
- ▶ Also used for concave objects.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
5.9	12.0	16.0	5.9	8.8	9.8	1.0	13.0	2.5	1.2

Material specifications

Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200
HNBR	Blue	50	-30-140*

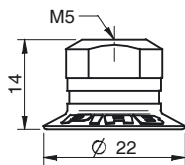
*For a shorter period of time up to 160 °C

Material resistance

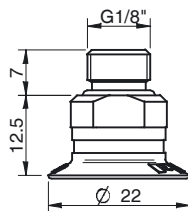
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

Ordering information

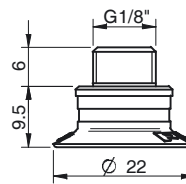
	Complete suction cups	Art. No.
A	Suction cup U20 Chloroprene, M5 female	0101373
A	Suction cup U20 Chloroprene, M5 female, with dual flow control valve	0101379
B	Suction cup U20 Chloroprene, G1/8" male, with mesh filter	0101374
B	Suction cup U20 Chloroprene, G1/8" male, with mesh filter and dual flow control valve	0101380
C	Suction cup U20 Chloroprene, G1/8" male/M5 female, with mesh filter	0101378
C	Suction cup U20 Chloroprene, G1/8" male/M5 female, with dual flow control valve	0101382
D	Suction cup U20 Chloroprene, 5xM5 female	0101377
A	Suction cup U20 Silicone, M5 female, with dual flow control valve	0101390
B	Suction cup U20 Silicone, G1/8" male, with mesh filter	0101385
B	Suction cup U20 Silicone, G1/8" male, with mesh filter and dual flow control valve	0101391
C	Suction cup U20 Silicone, G1/8" male/M5 female, with mesh filter	0101389
D	Suction cup U20 Silicone, 5xM5 female	0101388
D	Suction cup U20 Silicone, 5xM5 female, with dual flow control valve	0101394
A	Suction cup U20 HNBR, M5 female	9906867
A	Suction cup U20 HNBR, M5 female, with dual flow control valve	9906868
B	Suction cup U20 HNBR, G1/8" male, with mesh filter	9906869
B	Suction cup U20 HNBR, G1/8" male, with mesh filter and dual flow control valve	9906870
C	Suction cup U20 HNBR, G1/8" male/M5 female, with mesh filter	9907052
C	Suction cup U20 HNBR, G1/8" male/M5 female, with dual flow control valve	9906872
D	Suction cup U20 HNBR, 5xM5 female	9906890
D	Suction cup U20 HNBR, 5xM5 female, with dual flow control valve	9906891
E	Suction cup U20 Chloroprene, G1/8" male/M5 female, PA	0110956
E	Suction cup U20 Silicone, G1/8" male/M5 female, PA	0110328



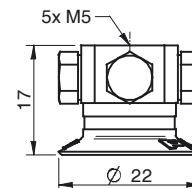
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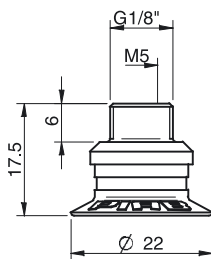
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C

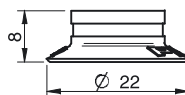


D



E

Rubber parts	Art. No.
Suction cup U20 Chloroprene	0101144
Suction cup U20 Silicone	0101145
Suction cup U20 HNBR	0128711



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005
Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U30



Universal suction cup

- ▶ Suitable for objects with flat or slightly curved surfaces.
- ▶ Also used for concave objects.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
12.0	25.0	30	7.8	9.8	11.0	2.0	20.0	3.5	1.8

Material specifications

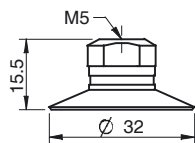
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

Material resistance

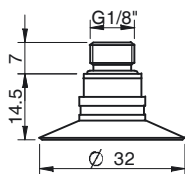
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

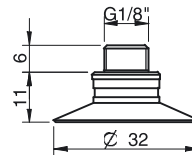
	Complete suction cups	Art. No.
A	Suction cup U30 Nitrile-PVC, M5 female	0101406
B	Suction cup U30 Nitrile-PVC, G1/8" male, with mesh filter	0101407
B	Suction cup U30 Nitrile-PVC, G1/8" male, with mesh filter and dual flow control valve	0101413
C	Suction cup U30 Nitrile-PVC, G1/8" male / M5 female, with mesh filter	0101411
C	Suction cup U30 Nitrile-PVC, G1/8" male / M5 female, with dual flow control valve	0101415
A	Suction cup U30 Silicone, M5 female, with mesh filter	0101395
B	Suction cup U30 Silicone, G1/8" male, with mesh filter	0101396
B	Suction cup U30 Silicone, G1/8" male, with mesh filter and dual flow control valve	0101402
C	Suction cup U30 Silicone, G1/8" male / M5 female, with mesh filter	0101400
D	Suction cup U30 Silicone, 5xM5 female, with mesh filter	0101399
E	Suction cup U30 Nitrile-PVC, G1/8" male / M5 female, PA	0109839



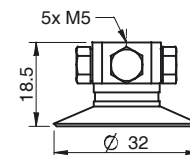
A



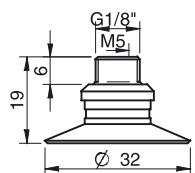
B



C

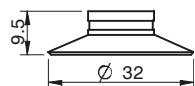


D



E

Rubber parts	Art. No.
Suction cup U30 Nitrile-PVC	0101146
Suction cup U30 Silicone	0101147



Fittings	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
Fitting G1/8" male/M5 female, with mesh filter	0101152
Fitting G1/8" male/M5 female, with dual flow control valve	3251004
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005
Fitting G1/8" male/M5 female, PA	3150196

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U40-2



Universal suction cup

- ▶ Suitable for objects with flat or slightly curved surfaces.
- ▶ Also used for concave objects.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
20.0	39	49	14.0	22.0	27	5.5	30	4.5	4.0

Material specifications

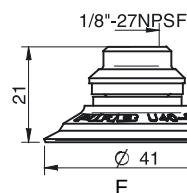
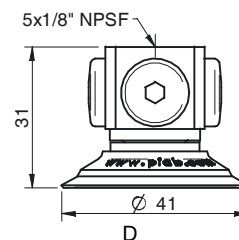
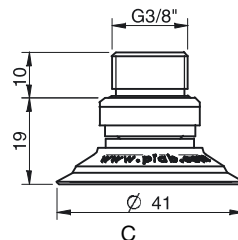
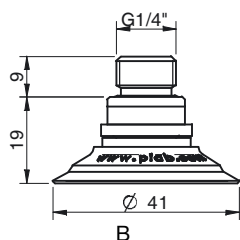
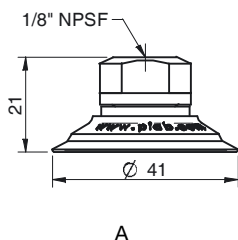
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0–90
Silicone, SIL	Red	50	-40–200

Material resistance

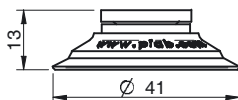
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No.
A	Suction cup U40-2 Nitrile-PVC, 1/8" NPSF female, with mesh filter	0101623
B	Suction cup U40-2 Nitrile-PVC, G1/4" male, with mesh filter	0101618
B	Suction cup U40-2 Nitrile-PVC, G1/4" male, with mesh filter and dual flow control valve	0101625
C	Suction cup U40-2 Nitrile-PVC, G3/8" male, with dual flow control valve	0101627
A	Suction cup U40-2 Silicone, 1/8" NPSF female, with mesh filter	0101610
B	Suction cup U40-2 Silicone, G1/4" male, with mesh filter	0101605
C	Suction cup U40-2 Silicone, G3/8" male, with mesh filter	0101607
D	Suction cup U40-2 Silicone, 5x1/8" NPSF female	0101609
E	Suction cup U40-2 Silicone, 1/8" NPSF female, PA	0110338



Rubber parts	Art. No.
Suction cup U40-2 Nitrile-PVC	0101148
Suction cup U40-2 Silicone	0101149



Fittings	Art. No
Fitting 1/8" NPSF female, 30–40, with mesh filter	0101153
Fitting 1/8" NPSF female, 30–40, with dual flow control valve	3251006
Fitting G1/4" male, 30–40, with mesh filter	3250091
Fitting G1/4" male, 30–40, with mesh filter and dual flow control valve	3251007
Fitting G3/8" male, 30–40, with mesh filter	3250086
Fitting G3/8" male, 30–40, with mesh and dual flow control valve	3251009
Fitting 5x1/8" NPSF female, 30–40	0100261
Fitting 5x1/8" NPSF female, 30–40, with dual flow control valve	3251011
Fitting 1/8" NPSF female, 30–40, PA	3150197

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

U50-2



Universal suction cup

- Suitable for objects with flat or slightly curved surfaces.
- Also used for concave objects.

Lifting forces & Technical data

Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level			Volume	Min. curve radius	Max. vertical movement	Weight rubber part
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa	cm ³	mm	mm	g
35	73	92	20	37	44	12	35	6.0	10.0

Material specifications

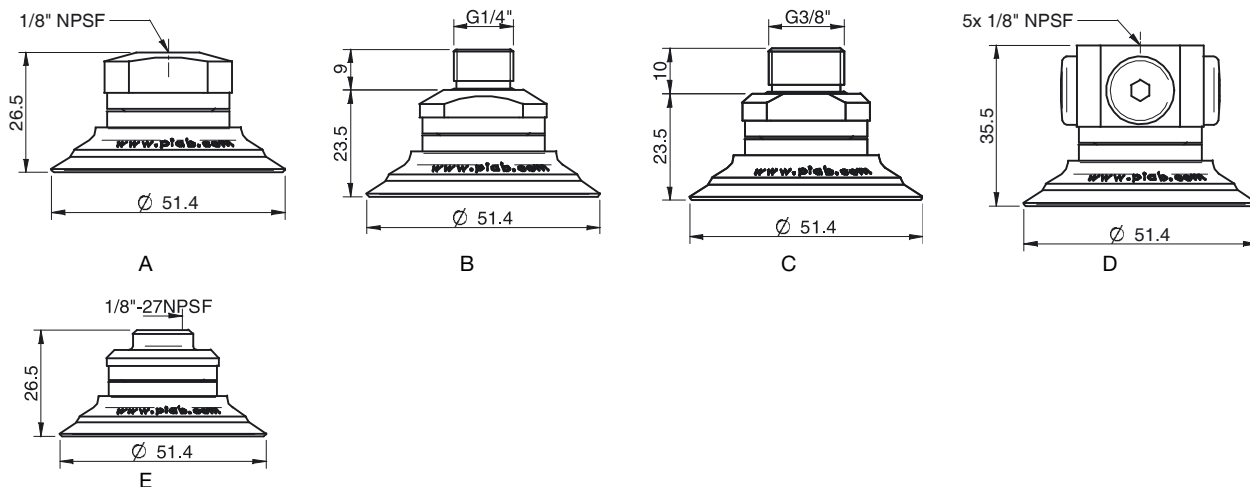
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

Material resistance

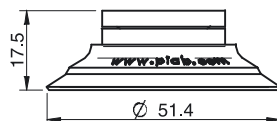
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

Ordering information

	Complete suction cups	Art. No
A	Suction cup U50-2 Nitrile-PVC, 1/8" NPSF female, with mesh filter	0101823
B	Suction cup U50-2 Nitrile-PVC, G1/4" male, with mesh filter	0101818
C	Suction cup U50-2 Nitrile-PVC, G3/8" male, with mesh filter	0101820
D	Suction cup U50-2 Nitrile-PVC, 5x1/8" NPSF female	0101822
A	Suction cup U50-2 Silicone, 1/8" NPSF female, with mesh filter	0101810
A	Suction cup U50-2 Silicone, 1/8" NPSF female, with dual flow control valve	0101811
B	Suction cup U50-2 Silicone, G1/4" male, with mesh filter	0101805
C	Suction cup U50-2 Silicone, G3/8" male, with mesh filter	0101807
C	Suction cup U50-2 Silicone, G3/8" male, with mesh filter and dual flow control valve	0101814
E	Suction cup U50-2 Silicone, 1/8" NPSF female, PA	0110330



Rubber parts	Art. No.
Suction cup U50-2 Silicone	0101151
Suction cup U50-2 Nitrile-PVC	0101150



Fittings	Art. No
Fitting 1/8" NPSF female, 50, with mesh filter	0101154
Fitting 1/8" NPSF female, 50, with dual flow control valve	3251012
Fitting G1/4" male, 50, with mesh filter	3250092
Fitting G1/4" male, with mesh filter and dual flow control valve	3251013
Fitting G3/8" male, 50, with mesh filter	3250087
Fitting G3/8" male, 50, with mesh filter and dual flow control valve	3251015
Fitting 5x1/8" NPSF female, 50	0100262
Fitting 5x1/8" NPSF female, 50, with dual flow control valve	3251017
Fitting 1/8" NPSF female, 50, PA	3150198

For further information and dimensioned drawings, see section Suction cups/grippers Fittings.

Level compensator LC



- ▶ Adjust differences in levels, for example on lifting devices with several suction cups.
- ▶ Less demand for exact positioning of vacuum handling device.
- ▶ Provides a certain degree of shock and vibration absorption.
- ▶ Allows for soft placement of cups on sensitive or thin objects.
- ▶ Non-rotational design, suitable for use with oval suction cups.
- ▶ Wide range of thread connections and stroke lengths.

Technical data

Description	Unit	Value
Material		Al, SS
Temperature range	°C	0-60

Technical data, specific

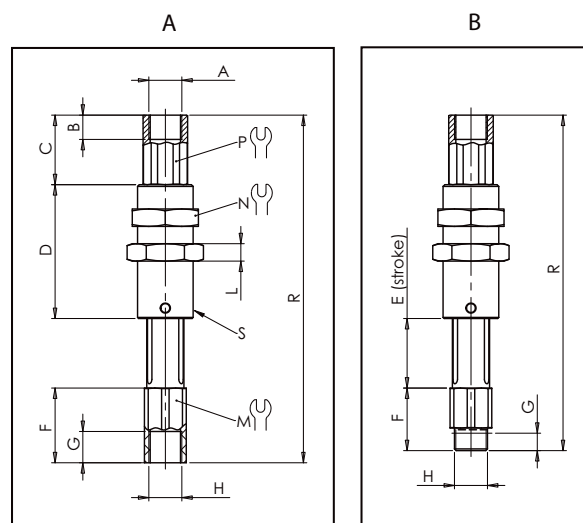
Art. No.	Spring force N/mm	Internal force N	End force N	Weight g	Volume cm ³	Connection	Action range/ Stroke mm	Max. recommended suction cup
0127103	0.21	1.9	4.1	17	0.22	M5	10	Ø30mm (Area: 700mm ²)
0127104	0.21	1.9	4.1	17	0.22	M5	10	Ø30mm (Area: 700mm ²)
0127105	0.12	2	5	23	0.22	M5	25	Ø30mm (Area: 700mm ²)
0127106	0.12	2	5	23	0.22	M5	25	Ø30mm (Area: 700mm ²)
0124951	0.27	3.6	9.0	36	1.14	G1/8"	20	Ø50mm (Area: 2000mm ²)
0124952	0.27	3.6	9.0	36	1.14	G1/8"	20	Ø50mm (Area: 2000mm ²)
0124953	0.15	4.3	9.5	46	1.63	G1/8"	35	Ø50mm (Area: 2000mm ²)
0124954	0.15	4.3	9.5	46	1.83	G1/8"	35	Ø50mm (Area: 2000mm ²)
0124955	0.27	4.1	11	64	2.47	G1/4"	25	Ø80mm (Area: 5000mm ²)
0124956	0.27	4.1	11	64	2.8	G1/4"	25	Ø80mm (Area: 5000mm ²)
0124957	0.14	4.3	11.4	90	4.1	G1/4"	50	Ø80mm (Area: 5000mm ²)
0124958	0.14	4.3	11.4	90	4.4	G1/4"	50	Ø80mm (Area: 5000mm ²)
0124959	0.27	5.6	16.5	164	6.6	G3/8"	40	Ø125mm (Area: 12000mm ²)
0124960	0.27	5.6	16.5	164	7.4	G3/8"	40	Ø125mm (Area: 12000mm ²)
0124961	0.14	6	17	231	11.16	G3/8"	80	Ø125mm (Area: 12000mm ²)
0124962	0.14	6	17	231	11.96	G3/8"	80	Ø125mm (Area: 12000mm ²)

Ordering information

Description	Art. No.
Level compensator LC12-F0510	0127103
Level compensator LC12-M0510	0127104
Level compensator LC12-F0525	0127105
Level compensator LC12-M0525	0127106
Level compensator LC16-F1820	0124951
Level compensator LC16-M1820	0124952
Level compensator LC16-F1835	0124953
Level compensator LC16-M1835	0124954
Level compensator LC20-F1425	0124955
Level compensator LC20-M1425	0124956
Level compensator LC20-F1450	0124957
Level compensator LC20-M1450	0124958
Level compensator LC25-F3840	0124959
Level compensator LC25-M3840	0124960
Level compensator LC25-F3880	0124961
Level compensator LC25-M3880	0124962

Dimensions mm

	Art. No.	A	B	C	D	E	F	G	H	L	M	N	P	R	S
A	0127103	M5	5.5	17	25	10	8	5.5	M5	4	10	15	10	60	M12x1
B	0127104	M5	5.5	17	25	10	9.5	4.5	M5	4	10	15	10	61.5	M12x1
A	0127105	M5	5.5	17	44	25	8	5.5	M5	4	10	15	10	94	M12x1
B	0127106	M5	5.5	17	44	25	9.5	4.5	M5	4	10	15	10	95.5	M12x1
A	0124951	G1/8"	7	20	38.5	20	21.5	9	G1/8"	5	12	19	12	100	M16x1
B	0124952	G1/8"	7	20	38.5	20	18	5	G1/8"	5	12	19	12	96.5	M16x1
A	0124953	G1/8"	7	20	58.5	35	21.5	9	G1/8"	5	12	19	12	135	M16x1
B	0124954	G1/8"	7	20	58.5	35	18	5	G1/8"	5	12	19	12	131.5	M16x1
A	0124955	G1/4"	10	23	50	25	15	10	G1/4"	6	16	24	16	113	M20x1.5
B	0124956	G1/4"	10	23	50	25	14	6.5	G1/4"	6	16	24	16	112	M20x1.5
A	0124957	G1/4"	10	23	82.5	50	15	10	G1/4"	6	16	24	16	170.5	M20x1.5
B	0124958	G1/4"	10	23	82.5	50	14	6.5	G1/4"	6	16	24	16	169.5	M20x1.5
A	0124959	G3/8"	11	33	71	40	15	11	G3/8"	8	22	32	22	159	M25x1.5
B	0124960	G3/8"	11	33	71	40	18	9.5	G3/8"	8	22	32	22	162	M25x1.5
A	0124961	G3/8"	11	33	121	80	15	11	G3/8"	8	22	32	22	249	M25x1.5
B	0124962	G3/8"	11	33	121	80	18	9.5	G3/8"	8	22	32	22	252	M25x1.5



Level compensators



- ▶ Adjust differences in levels, for example on lifting devices with several suction cups on a frame.
- ▶ A level compensator is often advantageous since it places less demand on exact vertical positioning, for example on a handling robot.
- ▶ The level compensator provides a certain degree of shock absorption.
- ▶ Level Compensator G1/2" with stiffer spring is identical to standard level compensator G1/2" except for thicker spring material. Suits e.g. robot vision systems in applications such as auto-racking.

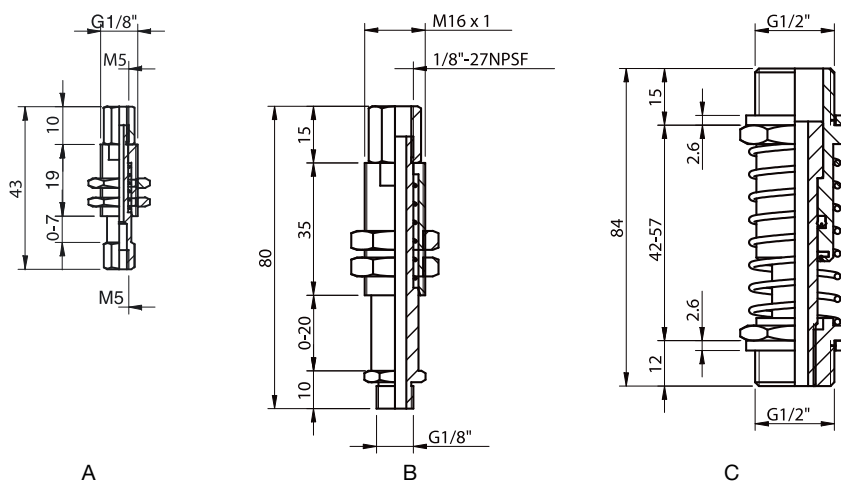
Technical data

Description	Unit	Value			
		M5	G1/8"	G1/2"	G1/2" with stiffer spring
Weight	g	10	70	160	196
Temperature range	°C	-20–120	-20–120	-20–90	-20–90
Stroke	mm	0–7	0–20	0–15	0–15
Max. Load	kg	3.0	25	50	50
Material		Steel/CuZn	Steel/CuZn	Steel	Steel

Ordering information

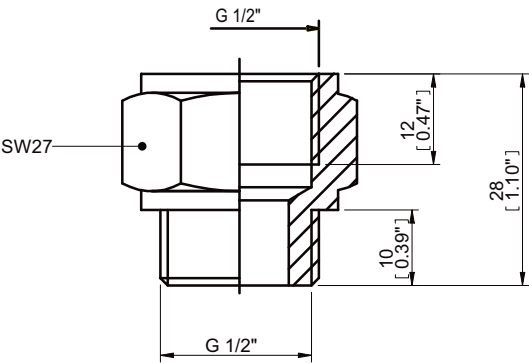
	Description	Art. No.
A	Level compensator M5	3350068
B	Level compensator G1/8"	3350069
C	Level compensator G1/2"	3350071
C	Level compensator G1/2" with stiffer spring	0114291

When using Level compensator G1/2" (3350071 and 0114291) with Suction cup F75 G1/2" female with cone valve (0101872 and 0101879), a Connector G1/2" (3107757) must be used.



Ordering information, accessories

Description	Art. No.
Connector ext-int G1/2"	3107757



Level compensator LC30



- ▶ Tailor made for the Vacuum Gripper System, VGS™, but can also be used together with other Piab products.
- ▶ Developed for use with standard profile systems.
- ▶ Easy installation with the option of fine adjustments and positioning of the suction cup.
- ▶ Non-rotational for use with, for example, oval suction cups. Can easily be made rotational.
- ▶ Quiet and reliable level compensation with load protection and shock absorption.

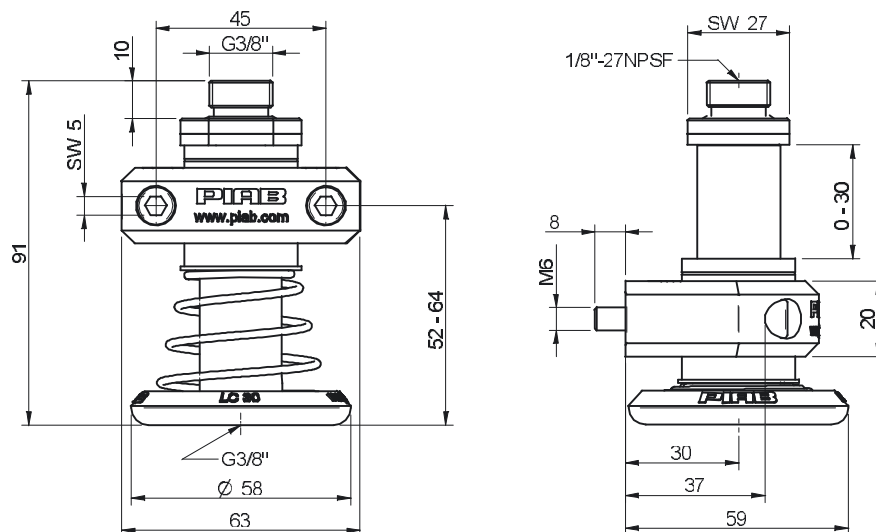
Technical data

Description	Unit	Value
Spring force	N	5–42
Stroke	mm	30
Weight	g	220
Volume, internal	cm ³	5
Maximum load, vertical	N	700
Temperature range	°C	10–50
Adjustable in height	mm	12
Adjustable in rotational direction	°	0–360
Material		Al, NBR, PA, POM, PUR, SS

Ordering information

Description	Art. No.
Level compensator LC30	0111552

LC 30 is delivered with two MC6S M6x45 fzb screws.



Ball joints



- ▶ Ball joint fittings could be used when lifting sheet metal with a device using several suction cups.
- ▶ To avoid bending stress a suction cup can be fitted with a balljoint.

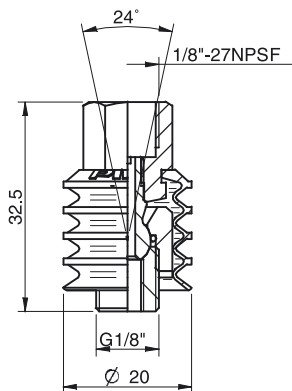
Technical data

Description	Unit	Value		
		G1/8"	G1/2"	G3/4"
Weight	g	20	110	200
Temperature range	°C	-40-110	-40-110	-40-110
Angle	°	±12	±12	±12
Max. Load	kg	25	50	150
Material		Steel/CR/PA/NBR	Steel/CR/PA/NBR	Steel/CR/PA/NBR

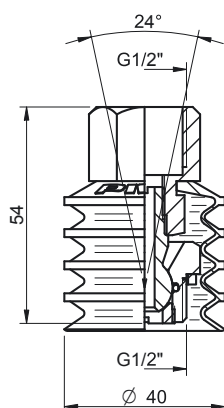
Ordering information

	Description	Art. No.
A	Ball joint G1/8"	3350065
B	Ball joint G1/2"	3350066
C	Ball joint G3/4"	3350067

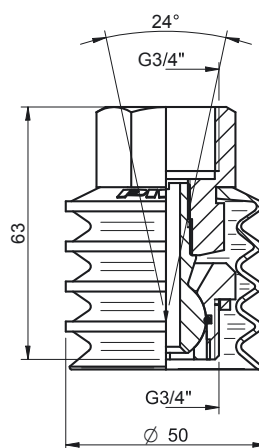
When using Ball joint G1/2" (3350066) with Suction cup F75 G1/2" with cone valve (0101872 and 0101879), a Connector G1/2" (3107757) must be used.



A



B



C

Ordering information, accessories

Description	Art. No.
Connector ext-int G1/2"	3107757

Angle adaptors



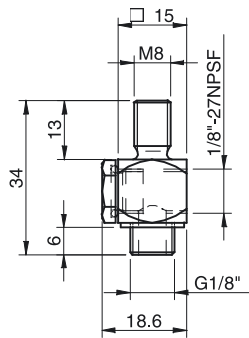
- ▶ Angle adaptors facilitate vacuum connections when space and headroom are limited.
- ▶ Can also be used as T-connectors.

Technical data

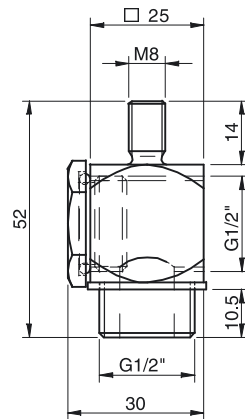
Description	Unit	Value	
		G1/8" – M8	G1/2" – M8
Weight	g	20	120
Temperature range	°C	-40–110	-40–110
Material		CuZn/NBR/PA	SS/NBR/PA

Ordering information

	Description	Art. No.
A	Angle adapter G1/8"–M8	3150053
B	Angle adapter G1/2"–M8	3150054



A



B

T-slot adapters



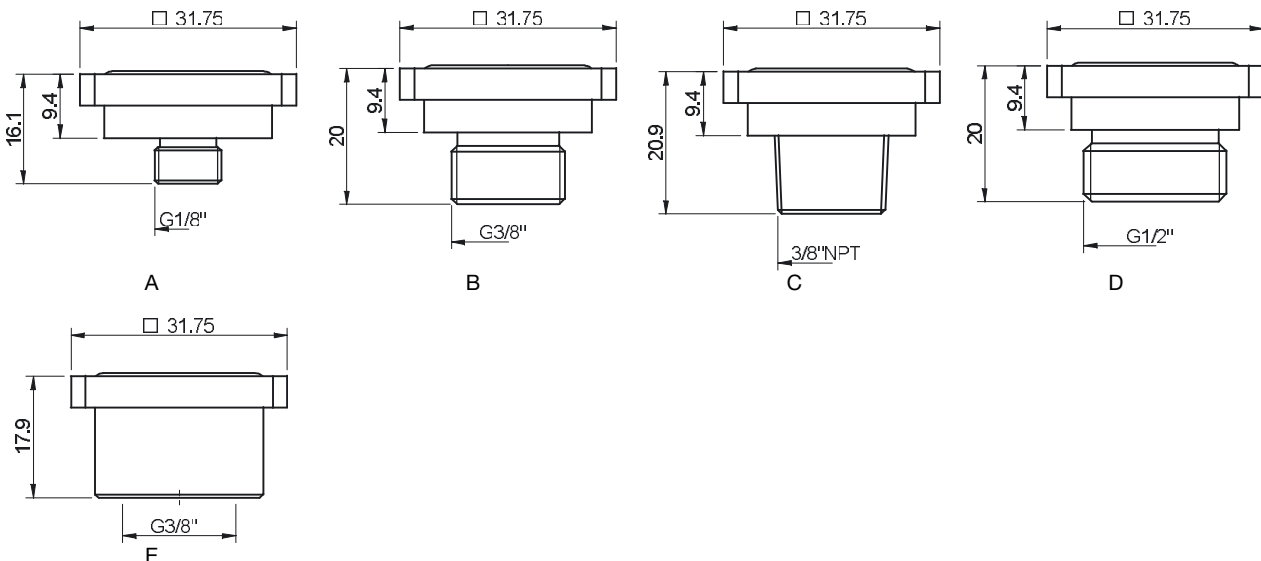
- ▶ The Piab T-slot adapter enables Piab suction cups to mount to existing boom assemblies and end-of-arm tooling used in the automotive industry. The T-slot adapter threads into the Piab cup fitting and can then be mounted accordingly.
- ▶ The suction cups can be changed quickly and with great ease.
- ▶ Non-rotating feature — good when using oval suction cups.

Technical data

Description	Unit	Value
Weight	g	17–22
Working temperature	°C	-20–90
Material		Al/NBR

Ordering information

	Description	Art. No.
A	T-slot adapter G1/8" male	0104108
B	T-slot adapter G3/8" male	0104110
C	T-slot adapter 3/8" NPT	0104111
D	T-slot adapter G1/2" male	0104112
E	T-slot adapter G3/8" female	0107942



Ball joint fitting



- ▶ Fitted to a suction cup to avoid bending stress.
- ▶ Non-leaking design to work with Vacuum Check Valve and Vacustat.
- ▶ Available in a loose-fit, a locking version or one with 5° movement.

Technical data

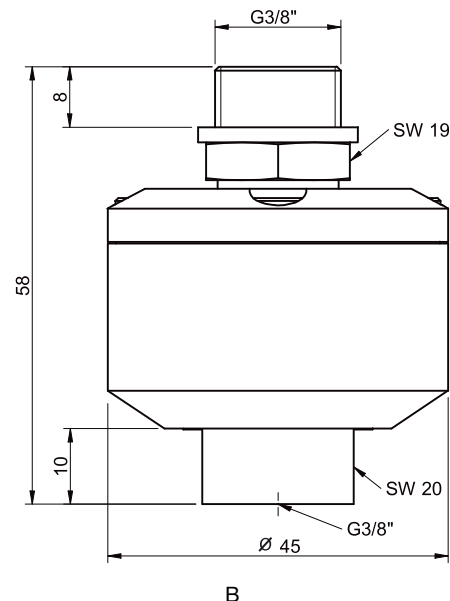
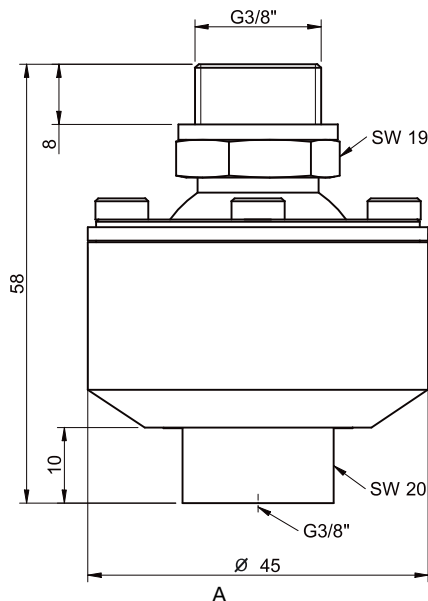
Description	Unit	Value
Material		SS, Zn, CuZn, NBR
Temperature range	°C	-30-70
Weight	g	348-393

Technical data, specific

Description	Unit	0110636	0121177	0110635
Angular movement	°	±20	±5	±20

Ordering information

	Description	PMAT No.	Art. No.
A	Ball joint fitting G3/8"	X7016	0110635
A	Ball joint fitting G3/8", locking	X7018	0110636
B	Ball joint fitting G3/8", limited movement	X7026	0121177



Ordering information, accessories

Description	Art. No.
Adapter fitting G3/8" male x 3/8" NPT male	0121240

Height adjuster



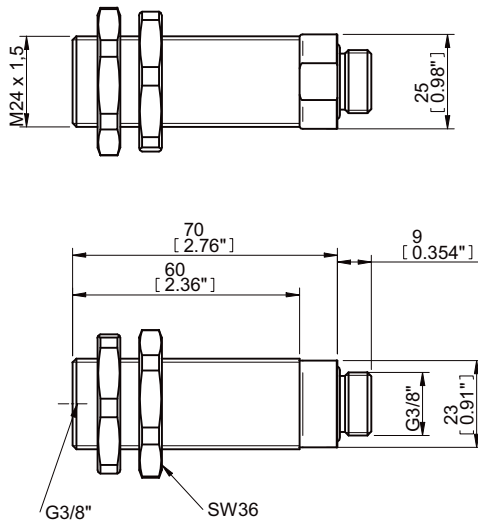
- Provides a height extension between the tooling and the suction cup.
- Adjustable in height.
- Can be used with Suction cup extension.
- Key handle to avoid rotation when connecting vacuum ports.

Technical data

Description	Unit	Value
Material		Al, NBR, Steel
Temperature range	°C	-30-70
Weight	g	130
Volume, internal	cm ³	32
Action range, adjustable length	mm	48

Ordering information

Description	Art. No.
Height adjuster G3/8" male x G3/8" female	0121122



Ordering information, accessories

Description	Art. No.
Adapter fitting G3/8" male x 3/8" NPT male	0121240

Suction cup extension



- ▶ Solid extension for mounting a suction cup.
- ▶ Several heights available.
- ▶ Can be used with Height adjuster.

Technical data

Description	Unit	Value
Material		AL, NBR
Temperature range	°C	-30-70
Max. load, radial	N	400
Max. load, axial	N	700
Radial deflection at 400 N	mm	<1

Operational lifetime: 10,000,000 cycles at max. load

Technical data, specific - G threads

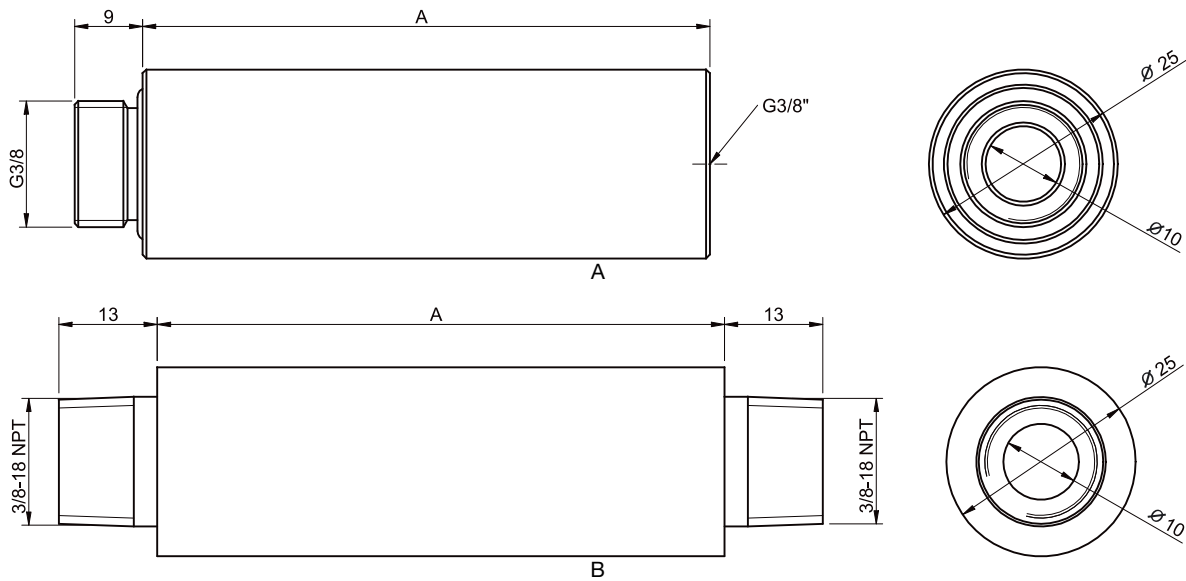
Description	Unit	Value					
		0110653	0110655	0110657	0110659	0110661	0110663
Weight	g	29	56	84	123	168	223
Volume, internal	cm ³	3	5	7	9	12	16

Technical data, specific - NPT threads

Description	Unit	Value					
		0121138	0121139	0121140	0121141	0121142	0121143
Weight	g	39	66	94	133	178	233
Volume, internal	cm ³	3	5	7	9	12	16

Ordering information

	Description	PMAT No.	Art. No.
A	Suction cup extension 25, G3/8" male x G3/8" female	X7044	0110653
A	Suction cup extension 50, G3/8" male x G3/8" female	X7046	0110655
A	Suction cup extension 75, G3/8" male x G3/8" female	X7051	0110657
A	Suction cup extension 110, G3/8" male x G3/8" female	X7054	0110659
A	Suction cup extension 150, G3/8" male x G3/8" female	X7058	0110661
A	Suction cup extension 200, G3/8" male x G3/8" female	X7062	0110663
B	Suction cup extension 25, 3/8" NPT male x 3/8" NPT male	--	0121138
B	Suction cup extension 50, 3/8" NPT male x 3/8" NPT male	--	0121139
B	Suction cup extension 75, 3/8" NPT male x 3/8" NPT male	--	0121140
B	Suction cup extension 110, 3/8" NPT male x 3/8" NPT male	--	0121141
B	Suction cup extension 150, 3/8" NPT male x 3/8" NPT male	--	0121142
B	Suction cup extension 200, 3/8" NPT male x 3/8" NPT male	--	0121143



Dimensions

Description	A mm
Suction cup extension 25	25
Suction cup extension 50	50
Suction cup extension 75	75
Suction cup extension 110	110
Suction cup extension 150	150
Suction cup extension 200	200

Ordering information, accessories

Description	Art. No.
Height adjuster G3/8" male x G3/8" female	0121122

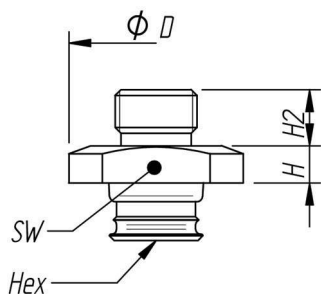
piGRIP® fittings



- ▶ All fittings are possible to use for all piGRIP® configurations.
- ▶ All fittings are also suitable for suction cups B50, B50-2, B50MF, BL50-2, BX52P, D50, F50-2, F50MF, U50-2.
- ▶ Integrated mesh filter as an option, keeps particles away.
- ▶ O-ring seal on straight threads to avoid leakage.
- ▶ Internal and external key handle on most fittings.

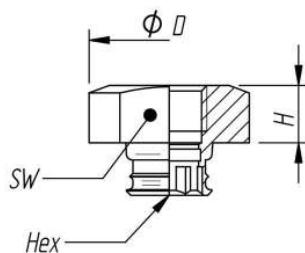
Technical data male thread G and M

Art. No.	Code	Description	Material	Weight g	Volume cm³	Temp. range C°	Dimensions (mm)				
							H	H2	D	SW	HEX
9902441	G18M.00	piGRIP® Fitting G1/8" male	Al, NBR	5.0	1.2		5	6	19	17	10
9902442	G18M.01	piGRIP® Fitting G1/8" male, with mesh filter	Al, SS, NBR	5.1	1.2		5	6	19	17	10
9902447	G14M.00	piGRIP® Fitting G1/4" male	Al, NBR	12.3	1.6		6	9	28	22	10
9902448	G14M.01	piGRIP® Fitting G1/4" male, with mesh filter	Al, SS, NBR	12.4	1.6		6	9	28	22	10
9902451	G38M.00	piGRIP® Fitting G3/8" male	Al, NBR	13.4	2.1		6	10	28	22	10
9902452	G38M.01	piGRIP® Fitting G3/8" male, with mesh filter	Al, SS, NBR	13.5	2.1		6	10	28	22	10
9902455	G12M.00	piGRIP® Fitting G1/2" male	Al, NBR	16.9	2.2		6	10	28	22	10
9902456	G12M.01	piGRIP® Fitting G1/2" male, with mesh filter	Al, SS, NBR	17.0	2.2		6	10	28	22	10
9902487	MM6M.00	piGRIP® Fitting M6 male	Steel, NBR	14.1	0.9		5	6	19	17	10
9902488	MM6M.01	piGRIP® Fitting M6 male, with mesh filter	Steel, SS, NBR	14.2	0.9		5	6	19	17	10
9902493	MMF8M.00	piGRIP® Fitting M8 x 1 male	Steel, NBR	14.1	1.1		5	6	19	17	10
9902494	MMF8M.01	piGRIP® Fitting M8 x 1 male, with mesh filter	Steel, SS, NBR	14.2	1.1		5	6	19	17	10
9902497	MM10M.00	piGRIP® Fitting M10 male	Al, NBR	6.1	1.4	-20-90	6	10	19	17	10
9902498	MM10M.01	piGRIP® Fitting M10 male, with mesh filter	Al, SS, NBR	6.2	1.4		6	10	19	17	10
9905743	MM12M.00	piGRIP® Fitting M12 male	Al, NBR	10.2	1.4		6	10	28	10	22
9905744	MM12M.01	piGRIP® Fitting M12 male, with mesh filter	Al, SS, NBR	10.3	1.4		6	10	28	10	22
9902501	MMF14M.00	piGRIP® Fitting M14 x 1 male	Al, NBR	10.3	2.3		6	12	28	22	10
9902502	MMF14M.01	piGRIP® Fitting M14 x 1 male, with mesh filter	Al, SS, NBR	10.4	2.3		6	12	28	22	10
9902505	MMF16M.00	piGRIP® Fitting M16 x 1.5 male	Al, NBR	13.6	2.3		6	12	28	22	10
9902506	MMF16M.01	piGRIP® Fitting M16 x 1.5 male, with mesh filter	Al, SS, NBR	13.7	2.3		6	12	28	22	10



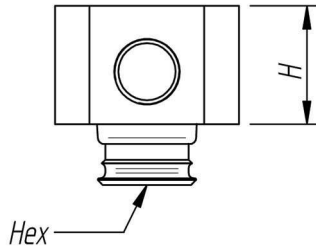
Technical data female thread

Art. No.	Code	Description	Material	Weight g	Volume cm ³	Temp. range C°	Dimensions (mm)			
							H	D	SW	HEX
9902445	G14F.00	piGRIP® Fitting G1/4" female	Al	11.7	1.9	-20-120	10	28	22	10
9902446	G14F.01	piGRIP® Fitting G1/4" female, with mesh filter	Al, SS	11.8	1.9		10	28	22	10
9902449	G38F.00	piGRIP® Fitting G3/8" female	Al	13	3.1		13	28	22	10
9902450	G38F.01	piGRIP® Fitting G3/8" female, with mesh filter	Al, SS	13.1	3.1		13	28	22	10
9902453	G12F.00	piGRIP® Fitting G1/2" female	Al	13.6	4.6		14	28	22	10
9902454	G12F.01	piGRIP® Fitting G1/2" female, with mesh filter	Al, SS	13.7	4.6		14	28	22	10
9902485	MM5F.00	piGRIP® Fitting M5 female	Al	5.3	0.9		6	19	17	10
9902486	MM5F.01	piGRIP® Fitting M5 female, with mesh filter	Al, SS	5.4	0.9		6	19	17	10
9902489	MM6F.00	piGRIP® Fitting M6 female	Al	5.3	1.0		7	19	17	10
9902490	MM6F.01	piGRIP® Fitting M6 female, with mesh filter	Al, SS	5.4	1.0		7	19	17	10
9902491	MM8F.00	piGRIP® Fitting M8 female	Al	5.7	1.1		7	19	17	10
9902492	MM8F.01	piGRIP® Fitting M8 female, with mesh filter	Al, SS	5.8	1.1		7	19	17	10
9902495	MM10F.00	piGRIP® Fitting M10 female	Al	5.7	1.2		7	19	17	10
9902496	MM10F.01	piGRIP® Fitting M10 x 1 female, with mesh filter	Al, SS	5.8	1.2		7	19	17	10
9902499	MM12F.00	piGRIP® Fitting M12 female	Al	16.1	1.8		12	22	10	10
9902500	MM12F.01	piGRIP® Fitting M12 female, with mesh filter	Al, SS	16.2	1.8		12	22	10	10
9902503	MMF16F.00	piGRIP® Fitting M16 x 1.5 female	Al	13.6	2.9		13	22	10	10
9902504	MMF16F.01	piGRIP® Fitting M16 x 1.5 female, with mesh filter	Al, SS	13.7	2.9		13	22	10	10
9902439	NS18F.00	piGRIP® Fitting 1/8" NPSF female	Al	5.2	1.2		7	19	17	10
9902440	NS18F.01	piGRIP® Fitting 1/8" NPSF female, with mesh filter	Al, SS	5.3	1.2		7	19	17	10
9902479	NS14F.00	piGRIP® Fitting 1/4" NPSF female	Al	11.9	1.8		10	28	22	10
9902480	NS14F.01	piGRIP® Fitting 1/4" NPSF female, with mesh filter	Al, SS	12.0	1.8		10	28	22	10
9902481	NS38F.00	piGRIP® Fitting 3/8" NPSF female	Al	13.3	3.0		13	28	22	10
9902482	NS38F.01	piGRIP® Fitting 3/8" NPSF female, with mesh filter	Al, SS	13.4	3.0		13	28	22	10
9902483	NS12F.00	piGRIP® Fitting 1/2" NPSF female	Al	14.3	4.3		14	28	22	10
9902484	NS12F.01	piGRIP® Fitting 1/2" NPSF female, with mesh filter	Al, SS	14.4	4.3		14	28	22	10
9902463	NT14F.00	piGRIP® Fitting 1/4" NPT female	Al	15.6	2.0		12	28	22	10
9902464	NT14F.01	piGRIP® Fitting 1/4" NPT female, with mesh filter	Al, SS	15.7	2.0		12	28	22	10
9902467	NT38F.00	piGRIP® Fitting 3/8" NPT female	Al	13.4	3.0		13	28	22	10
9902468	NT38F.01	piGRIP® Fitting 3/8" NPT female, with mesh filter	Al, SS	13.5	3.0		13	28	22	10
9902507	U12F.00	piGRIP® Fitting 1/2" UNC female	Al	15.9	1.9		12	28	22	10
9902508	U12F.01	piGRIP® Fitting 1/2" UNC female, with mesh filter	Al, SS	16.0	1.9		12	28	22	10



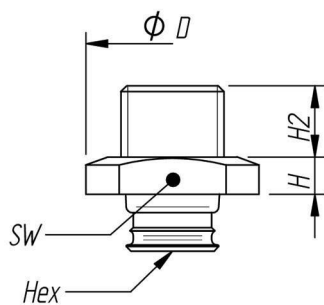
Technical data female thread 5x

Art. No.	Code	Description	Material	Weight g	Volume cm ³	Temp. range C°	Dimensions (mm)	
							H	HEX
9902443	NS518F.00	piGRIP® Fitting 5x1/8" NPSF female	Al	27.6	4.3	-20-120	18	10
9902444	NS518F.01	piGRIP® Fitting 5x1/8" NPSF female, with mesh filter	Al, SS	27.7	4.3		18	10



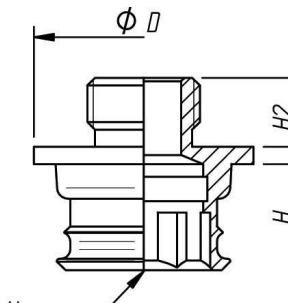
Technical data male thread NPT

Art. No.	Code	Description	Material	Weight g	Volume cm ³	Temp. range C°	Dimensions (mm)				
							H	H2	D	SW	HEX
9902465	NT18M.00	piGRIP® Fitting 1/8" NPT male	Al	5.2	1.2	-20-120	5	7	19	17	10
9902513	NT18M.01	piGRIP® Fitting 1/8" NPT male, with mesh filter	Al, SS	5.3	1.2		5	7	19	17	10
9902512	NT14M.00	piGRIP® Fitting 1/4" NPT male	Al	11.6	1.7		6	11	28	22	10
9902466	NT14M.01	piGRIP® Fitting 1/4" NPT male, with mesh filter	Al, SS	11.7	1.7		6	11	28	22	10
9902469	NT38M.00	piGRIP® Fitting 3/8" NPT male	Al	12.7	2.3		6	11.5	28	22	10
9902470	NT38M.01	piGRIP® Fitting 3/8" NPT male, with mesh filter	Al, SS	12.8	2.3		6	11.5	28	22	10
9902471	NT12M.00	piGRIP® Fitting 1/2" NPT male	Al	19.3	2.6		6	15	28	22	10
9902472	NT12M.01	piGRIP® Fitting 1/2" NPT male, with mesh filter	Al, SS	19.4	2.6		6	15	28	22	10



Technical data male thread low G and NPT

Art. No.	Code	Description	Material	Weight g	Volume cm ³	Temp. range C°	Dimensions (mm)			
							H	H2	D	HEX
9902457	GL18M.00	piGRIP® Fitting G1/8" low male	Al	3	1.1	-20- 120	1.5	6	19	10
9902458	GL18M.01	piGRIP® Fitting G1/8" low male, with mesh filter	Al, SS	3.1	1.1		1.5	6	19	10
9902459	GL14M.00	piGRIP® Fitting G1/4" low male	Al	5.5	1.3		1.5	9	28	10
9902460	GL14M.01	piGRIP® Fitting G1/4" low male, with mesh filter	Al, SS	5.6	1.3		1.5	9	28	10
9902461	GL38M.00	piGRIP® Fitting G3/8" low male	Al	6.9	1.8		1.5	10	28	10
9902462	GL38M.01	piGRIP® Fitting G3/8" low male, with mesh filter	Al, SS	7.0	1.8		1.5	10	28	10
9902473	NTL18M.00	piGRIP® Fitting 1/8" NPT low male	Al	3.2	1.1		1.5	7	19	10
9902474	NTL18M.01	piGRIP® Fitting 1/8" NPT low male, with mesh filter	Al, SS	3.3	1.1		1.5	7	19	10
9902475	NTL14M.00	piGRIP® Fitting 1/4" NPT low male	Al	6.2	1.4		1.5	11	28	10
9902476	NTL14M.01	piGRIP® Fitting 1/4" NPT low male, with mesh filter	Al, SS	6.3	1.4		1.5	11	28	10
9902477	NTL38M.00	piGRIP® Fitting 3/8" NPT low male	Al	7.7	1.9		1.5	11.5	28	10
9902478	NTL38M.01	piGRIP® Fitting 3/8" NPT low male, with mesh filter	Al, SS	7.8	1.9		1.5	11.5	28	10



Push-on fitting



- Push-on style fittings most suitable for size 25-55 piGRIP® cups. For size 70-77 piGRIP® cups, contact Piab.
- Available in three sizes for tubes/pipes with diameter 8mm, 10mm and 11mm.
- Allow a few +/- tenths of a tolerance deviation of the tube/pipe.
- Purchased and installed once. After installation, replace only the piGRIP® cup.
- Easy installation with the possibility of minor height adjustment.
- Adds virtually no build-height to the piGRIP® cup.

Technical data

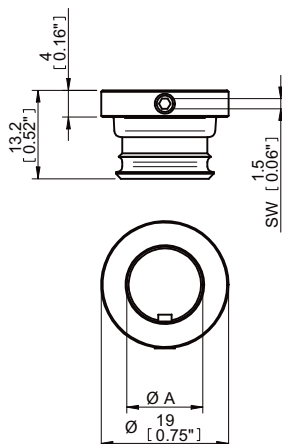
Description	Unit	Value
Material		Al, SS, NBR
Temperature range	°C	-20-90

Technical data, specific

Description	Unit	Value		
		0125933	0125932	0125931
Weight	g	4.8	3.7	3.1
Volume, internal	cm³	0.67	1.03	1.23
Connection (A), push-on tube size	mm	ø8	ø10	ø11

Ordering information

Description	Art. No.
Fitting CAT3-5 Push on retrofit 8	0125933
Fitting CAT3-5 Push on retrofit 10	0125932
Fitting CAT3-5 Push on retrofit 11	0125931



Fitting 75



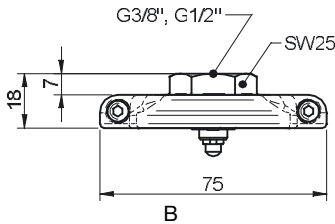
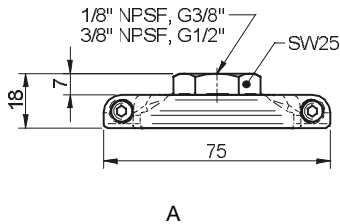
- Suits suction cups:
B75, B75P, B75-2, F75, F75P, FC100P
- With cone valve only for:
F75

Technical data

Description	Unit	Value	
		With mesh filter	With cone valve
Weight	g	70	75
Working temperature	°C	-20–120	-20–90
Material		Al/SS	Al/SS/NBR

Ordering information

	Description	Art. No.
A	Fitting 75, G3/8" female, with mesh filter	0100551
B	Fitting 75, G3/8" female, with cone valve	0100552
A	Fitting 75, G1/2" female, with mesh filter	0100555
B	Fitting 75, G1/2" female, with cone valve	0100556
A	Fitting 75, 3/8" NPSF female, with mesh filter	0100553
A	Fitting 75, 1/8" NPSF female, with mesh filter	0100548



Fitting 110



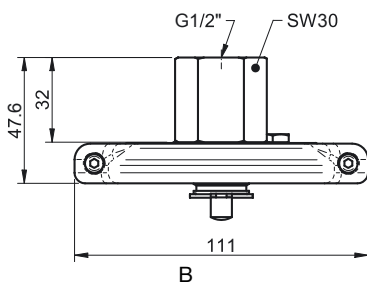
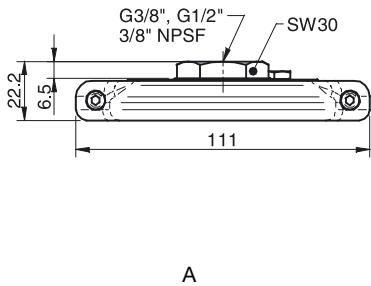
- Suits suction cups:
B110, B110-2, F110P, F110, FC150P
- With cone valve only for:
F110

Technical data

Description	Unit	Value	
		With mesh filter	With cone valve
Weight	g	240	290
Working temperature	°C	-20-90	-20-90
Material		Al/SS/CuZn/NBR	Al/SS/CuZn/NBR

Ordering information

	Description	Art. No.
A	Fitting 110 G3/8" female, with mesh filter	0100557
A	Fitting 110, G1/2" female, with mesh filter	0100561
B	Fitting 110, G1/2" female, with cone valve	0100563
A	Fitting 110, 3/8" NPSF female, with mesh filter	0100559



Fitting 150



Features

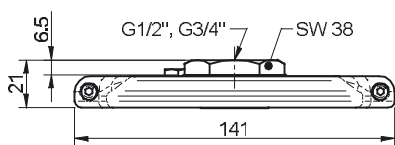
- Suits suction cups:
B150, F150
- With cone valve only for:
F150

Technical data

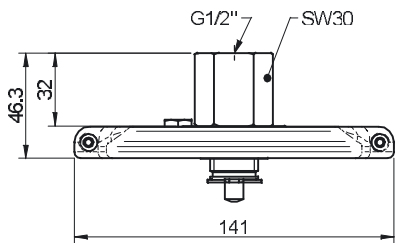
Description	Unit	Value	
		With mesh filter	With cone valve
Weight	g	355	415
Working temperature	°C	-20-90	-20-90
Material		Al/SS/CuZn/NBR	Al/SS/CuZn/NBR

Ordering information

	Description	Art. No.
A	Fitting 150, G1/2" female, with mesh filter	0100564
B	Fitting 150, G1/2" female, with cone valve	0100566
A	Fitting 150, G3/4" female, with mesh filter	0100567



A



B

M2.5 male



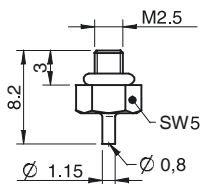
► Suits suction cups:
U2, U3

Technical data

Description	Unit	Value
Weight	g	0.5
Working temperature	°C	-20–90
Material		CuZn/NBR

Ordering information

Description	Art. No.
Fitting M2.5 male	3250084



M5 male



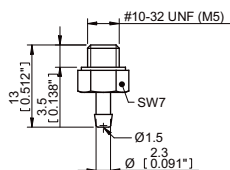
► Suits suction cups:
B5, B8, U4, U6, U8

Technical data

Description	Unit	Value
Weight	g	3
Working temperature	°C	-40–110
Material		CuZn/PA

Ordering information

Description	Art. No.
Fitting M5 male, 5–8	3107031



M5 male



► Suits suction cups:

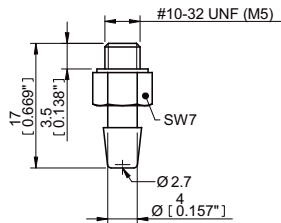
B10-2, B15-2, B15MF, D15-2, F15, F15MF, U10, U15

Technical data

Description	Unit	Value
Weight	g	4
Working temperature	°C	-40-110
Material		CuZn/PA

Ordering information

Description	Art. No.
Fitting M5 male, 10-15	3107030



M5 female



► Suits suction cups:

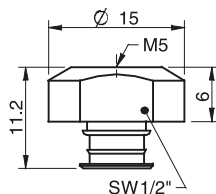
B20, B20MF, BL20-2, D20-2, F20, F20MF, U20, F25, FC20P, FC25P, D30-2, F30-2, U30

Technical data

Description	Unit	Value	
		Without valve	With dual flow control valve
Weight	g	3	3
Working temperature	°C	-20-120	0-80
Material		Al	Al/PUR

Ordering information

Description	Art. No.
Fitting M5 female	3250003
Fitting M5 female, with dual flow control valve	3251001



G1/8" male



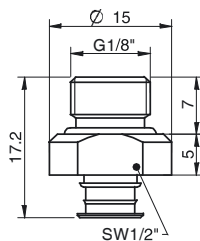
- **Suits suction cups:**
B20, B20MF, D20-2, F20, F20MF,
U20, F25, FC20P, FC25P,
D30-2, F30-2, U30

Technical data

Description	Unit	Value	
		With mesh filter	With dual flow control valve
Weight	g	3	3
Working temperature	°C	-20-90	0-80
Material		Al/SS/NBR	Al/SS/NBR/PUR

Ordering information

Description	Art. No.
Fitting G1/8" male, with mesh filter	3250085
Fitting G1/8" male, with mesh filter and dual flow control valve	3251002



G1/8" male / M5 female



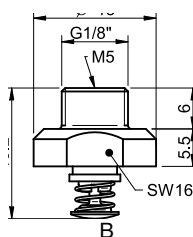
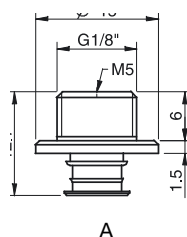
- **Suits suction cups:**
B20, B20MF, BL20-2, D20-2, F20,
F20MF, U20, F25, FC20P,
FC25P, D30-2, F30-2, U30
- **With cone valve only for:**
F30-2

Technical data

Description	Unit	Value		
		With mesh filter	With dual flow control valve	With cone valve
Weight	g	2	2	4
Working temperature	°C	-20-120	0-80	-20-90
Material		Al/SS	Al/PUR	Al/SS/NBR

Ordering information

	Description	Art. No.
A	Fitting G1/8" male/M5 female, with mesh filter	0101152
A	Fitting G1/8" male/M5 female, with dual flow control valve	3251004
B	Fitting G1/8" male/M5 female, with cone valve	0101155



G1/8" male / M5 female – Composite



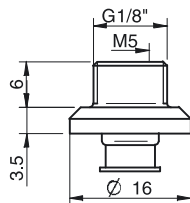
- ▶ Made of PA (Polyamide).
- ▶ Can be used on a number of Piab's suction cups in sizes from 20 to 50 mm.
- ▶ The weight of the composite fittings is approximately half the weight of corresponding fittings of aluminium.
- ▶ The fittings are durable and resistant to the most common acids and chemicals. They can be used in applications where aluminium cannot be used due to environmental issues, for example, in the chemical industry and the food industry.
- ▶ **Suits suction cups:** B20, BL20-2, D20-2, D30-2, F20, F25, F30-2, U20, U30

Technical data

Description	Unit	Value
Weight	g	1.7
Working temperature	°C	-20–110
Material		PA composite

Ordering information

Description	Art. No.
Fitting G1/8" male/M5 female, PA	3150196



1/8" NPSF female



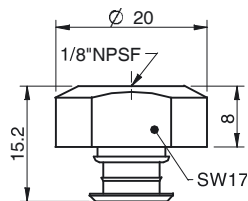
- **Suits suction cups:**
B30-2, BL30-2, B40,
BL40-2, F40-2, U40-2, FC35P
- **With cone valve only for:**
F40-2
- **Without mesh filter for:**
BX35P

Technical data

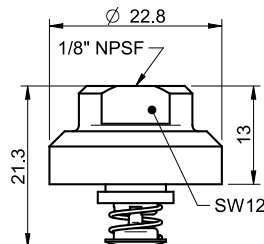
Description	Unit	Value			
		Without mesh filter	With mesh filter	With dual flow control valve	With cone valve
Weight	g	6	6	6	7
Working temperature	°C	-20-120	-20-120	0-80	-20-90
Material		Al	Al/SS	Al/PUR	Al/SS/NBR

Ordering information

	Description	Art. No.
A	Fitting 1/8" NPSF female, 30-40	3250005
A	Fitting 1/8" NPSF female, 30-40, with mesh filter	0101153
A	Fitting 1/8" NPSF female, 30-40, with dual flow control valve	3251006
B	Fitting 1/8" NPSF female, 30-40, with cone valve	0101156



A



B

1/8" NPSF female



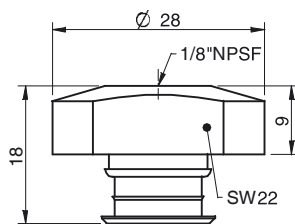
- ▶ **Suits suction cups:**
B50, B50-2, BX52P, BL50-2, D50, F50-2, U50-2
- ▶ **With cone valve only for:**
F50-2
- ▶ **Without mesh filter for:**
BX52P

Technical data

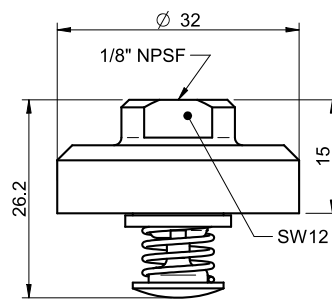
Description	Unit	Value			
		Without mesh filter	With mesh filter	With dual flow control valve	With cone valve
Weight	g	10	10	10	15
Working temperature	°C	-20-120	-20-120	0-80	-20-90
Material		Al	Al/SS	Al/PUR	Al/SS/NBR

Ordering information

	Description	Art. No.
A	Fitting 1/8" NPSF female, 50	3250017
A	Fitting 1/8" NPSF female, 50, with mesh filter	0101154
A	Fitting 1/8" NPSF female, 50, with dual flow control valve	3251012
B	Fitting 1/8" NPSF female, 50, with cone valve	0101157



A



B

1/8" NPSF female – Composite



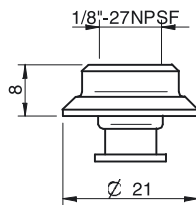
- ▶ Made of PA (Polyamide).
- ▶ Can be used on a number of Piab's suction cups in sizes from 20 to 50 mm.
- ▶ The weight of the composite fittings is approximately half the weight of corresponding fittings of aluminium.
- ▶ The fittings are durable and resistant to the most common acids and chemicals. They can be used in applications where aluminium cannot be used due to environmental issues, for example, in the chemical industry and the food industry.
- ▶ **Suits suction cups:** B30-2, B40, BL30-2, BL40-2, F40-2, U40-2

Technical data

Description	Unit	Value
Weight	g	2.4
Working temperature	°C	-20–110
Material		PA composite

Ordering information

Description	Art. No.
Fitting 1/8" NPSF female, 30–40, PA	3150197



1/8" NPSF female – Composite



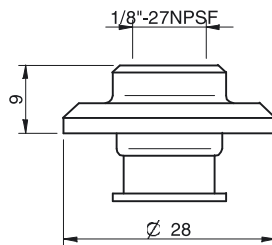
- ▶ Made of PA (Polyamide).
- ▶ Can be used on a number of Piab's suction cups in sizes from 20 to 50 mm.
- ▶ The weight of the composite fittings is approximately half the weight of corresponding fittings of aluminium.
- ▶ The fittings are durable and resistant to the most common acids and chemicals. They can be used in applications where aluminium cannot be used due to environmental issues, for example, in the chemical industry and the food industry.
- ▶ **Suits suction cups:** B50, B50-2, BL50-2, B50MF, D50, F50-2, U50-2

Technical data

Description	Unit	Value
Weight	g	5.6
Working temperature	°C	-20–110
Material		PA composite

Ordering information

Description	Art. No.
Fitting 1/8" NPSF female, 50, PA	3150198



G1/4" male with mesh filter



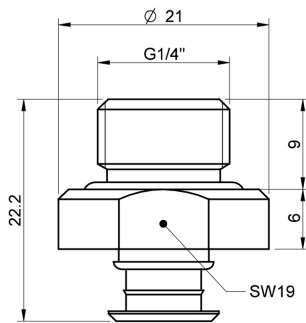
- Suits suction cups:
B30-2, BL30-2, B40,
BX35P, BL40-2, F40-2,
U40-2, FC35P

Technical data

Description	Unit	Value	
		With mesh filter	With dual flow control valve
Weight	g	7	7
Working temperature	°C	-20-90	0-80
Material		Al/SS/NBR	Al/SS/NBR/PUR

Ordering information

Description	Art. No.
Fitting G1/4" male, 30-40, with mesh filter	3250091
Fitting G1/4" male, 30-40, with mesh filter and dual flow control valve	3251007



G1/4" male with mesh filter



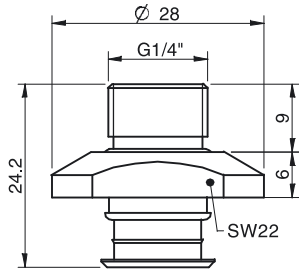
- Suits suction cups:
B50, B50-2, BX52P,
BL50-2, D50, F50-2, U50-2

Technical data

Description	Unit	Value	
		With mesh filter	With dual flow control valve
Weight	g	10	10
Working temperature	°C	-20-90	0-80
Material		Al/SS/NBR	Al/SS/NBR/PUR

Ordering information

Description	Art. No.
Fitting G1/4" male, 50, with mesh filter	3250092
Fitting G1/4" male, with mesh filter and dual flow control valve	3251013



G1/2" male



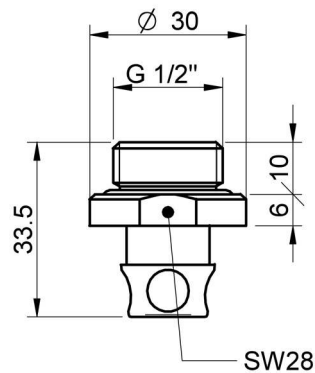
► Suits suction cup:
BL50-3P

Technical data

Description	Unit	Value
Weight	g	14
Working temperature	°C	-20-90
Material		Al/NBR

Ordering information

Description	Art. No.
Fitting G1/2" male, bag	0113117



1/2" NPT male



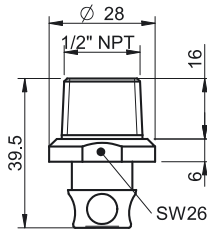
► Suits suction cup:
BL50-3P

Technical data

Description	Unit	Value
Weight	g	17
Working temperature	°C	-20–90
Material		Al

Ordering information

Description	Art. No.
Fitting 1/2" NPT male, bag	0113140



G3/8" male with mesh filter



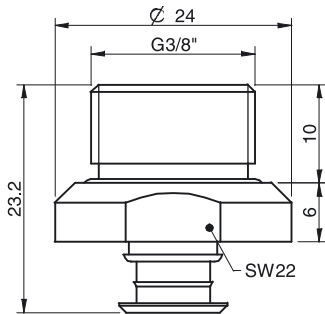
- Suits suction cups:
B30-2, BL30-2, B40,
BX35P, BL40-2, F40-2,
U40-2, FC35P

Technical data

Description	Unit	Value	
		With mesh filter	With dual flow control valve
Weight	g	10	10
Working temperature	°C	-20-90	0-80
Material		Al/SS/NBR	Al/SS/NBR/PUR

Ordering information

Description	Art. No.
Fitting G3/8" male, 30-40, with mesh filter	3250086
Fitting G3/8" male, 30-40, with mesh and dual flow control valve	3251009



G3/8" male with mesh filter



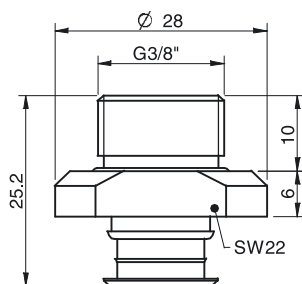
- **Suits suction cups:**
B50, B50-2, BL50-2, D50,
F50-2, U50-2

Technical data

Description	Unit	Value	
		With mesh filter	With dual flow control valve
Weight	g	10	10
Working temperature	°C	-20-90	0-80
Material		Al/SS/NBR	Al/SS/NBR/PUR

Ordering information

Description	Art. No.
Fitting G3/8" male, 50, with mesh filter	3250087
Fitting G3/8" male, 50, with mesh filter and dual flow control valve	3251015



G3/8" male



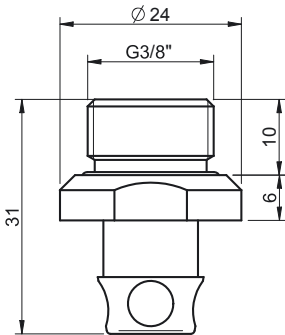
► Suits suction cup:
BL30-3P, BL40-3P

Technical data

Description	Unit	Value
Weight	g	12
Working temperature	°C	-20-90
Material		Al/NBR

Ordering information

Description	Art. No.
Fitting G3/8" male, bag	0112662



3/8" NPT male



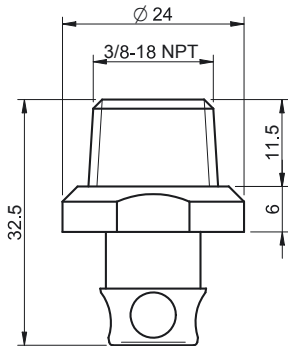
► Suits suction cup:
BL30-3P, BL40-3P

Technical data

Description	Unit	Value
Weight	g	12
Working temperature	°C	-20–120
Material		Al

Ordering information

Description	Art. No.
Fitting 3/8" NPT male, bag	0112692



5xM5 female



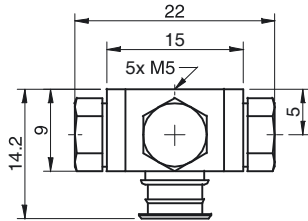
- **Suits suction cups:**
B20, B20MF, BL20-2, D20-2, F20,
F20MF, U20, F25, FC20P,
FC25P, D30-2, F30-2, U30

Technical data

Description	Unit	Value	
		With mesh filter	With dual flow control valve
Weight	g	10	10
Working temperature	°C	-20–120	0–80
Material		Al/CuZn/PA	Al/CuZn/PA/PUR

Ordering information

Description	Art. No.
Fitting 5xM5 female	0100260
Fitting 5xM5 female, with dual flow control valve	3251005



5x1/8" NPSF female



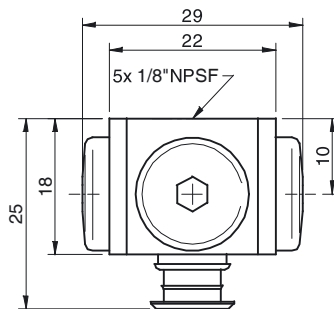
- **Suits suction cups:**
 B30-2, BL30-2, B40,
 BX35P, BL40-2, F40-2,
 U40-2, FC35P

Technical data

Description	Unit	Value	
		With mesh filter	With dual flow control valve
Weight	g	20	20
Working temperature	°C	-20–90	0–80
Material		Al/PPS/NBR	Al/PPS/NBR/PUR

Ordering information

Description	Art. No.
Fitting 5x1/8" NPSF female, 30–40	0100261
Fitting 5x1/8" NPSF female, 30–40, with dual flow control valve	3251011



5x1/8" NPSF female

- Suits suction cups:
B50, B50-2, BX52P,
BL50-2, D50, F50-2, U50-2



Technical data

Description	Unit	Value	
		With mesh filter	With dual flow control valve
Weight	g	30	30
Working temperature	°C	-20-90	0-80
Material		AI/PPS/NBR	AI/PPS/NBR/PUR

Ordering information

Description	Art. No.
Fitting 5x1/8" NPSF female, 50	0100262
Fitting 5x1/8" NPSF female, 50, with dual flow control valve	3251017

