

## 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 cm <sup>3</sup>	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

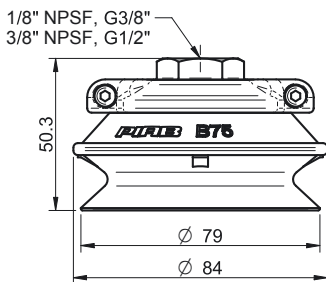
### Material resistance

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

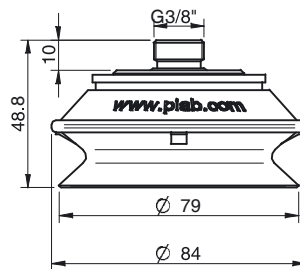
\*\*Please contact Piab.

## Ordering information

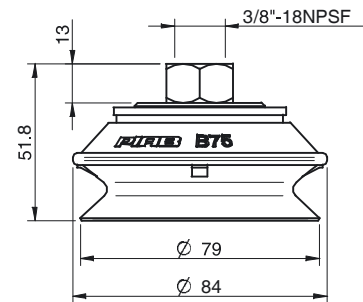
	Complete suction cups	Art. No
A	Suction cup B75P Polyurethane 30/60, 1/8" NPSF female, with mesh filter	0106345
A	Suction cup B75P Polyurethane 30/60, G3/8" female, with mesh filter	0106346
A	Suction cup B75P Polyurethane 30/60, 3/8" NPSF female, with mesh filter	0106347
A	Suction cup B75P Polyurethane 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

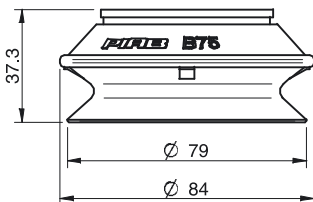


B

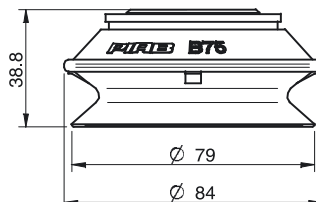


C

	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 <sup>3</sup>	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

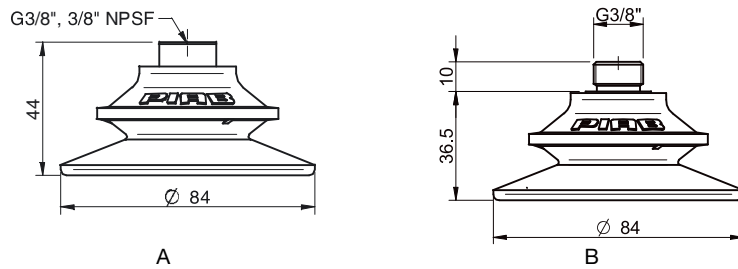
### Material resistance

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 cm <sup>3</sup>	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

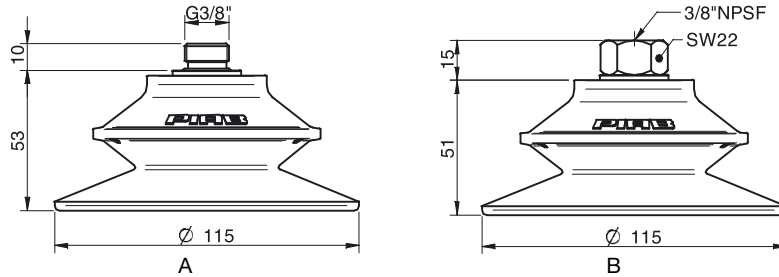
### Material resistance

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

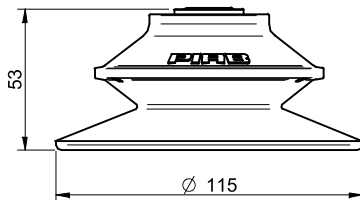
\*\*Please contact Piab.

## 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 cm <sup>3</sup>	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

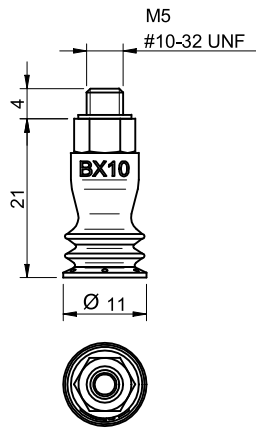
### Material resistance

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

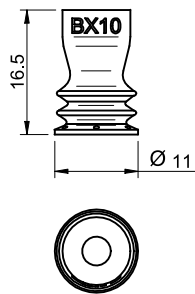
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

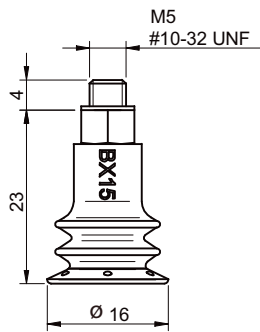
### Material resistance

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

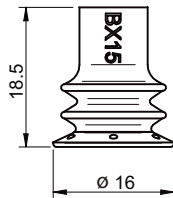
\*\*Please contact Piab.

## 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 cm <sup>3</sup>	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

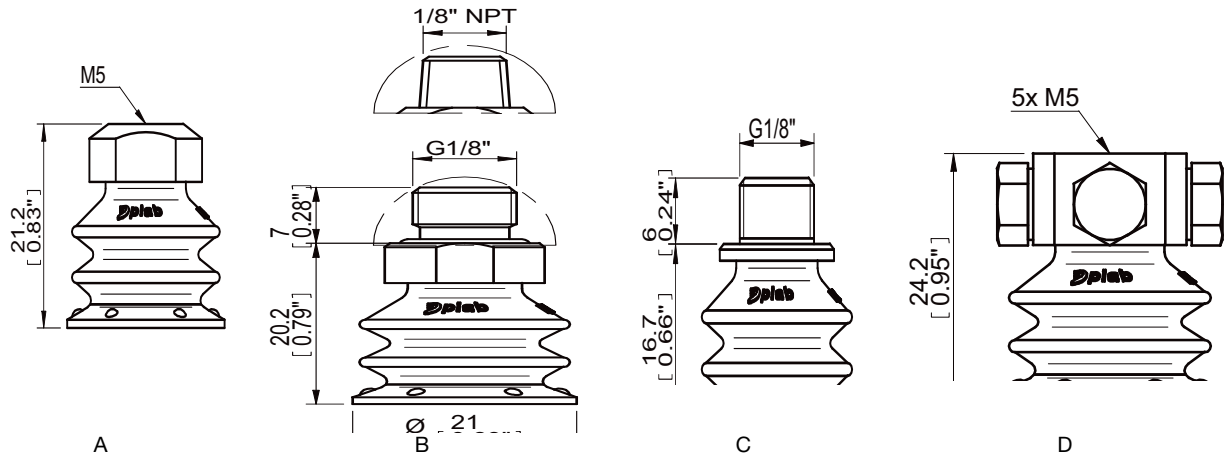
### Material resistance

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

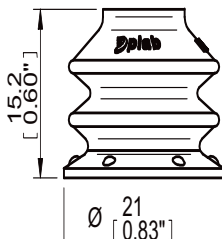
\*\*Please contact Piab.

## 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 cm <sup>3</sup>	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

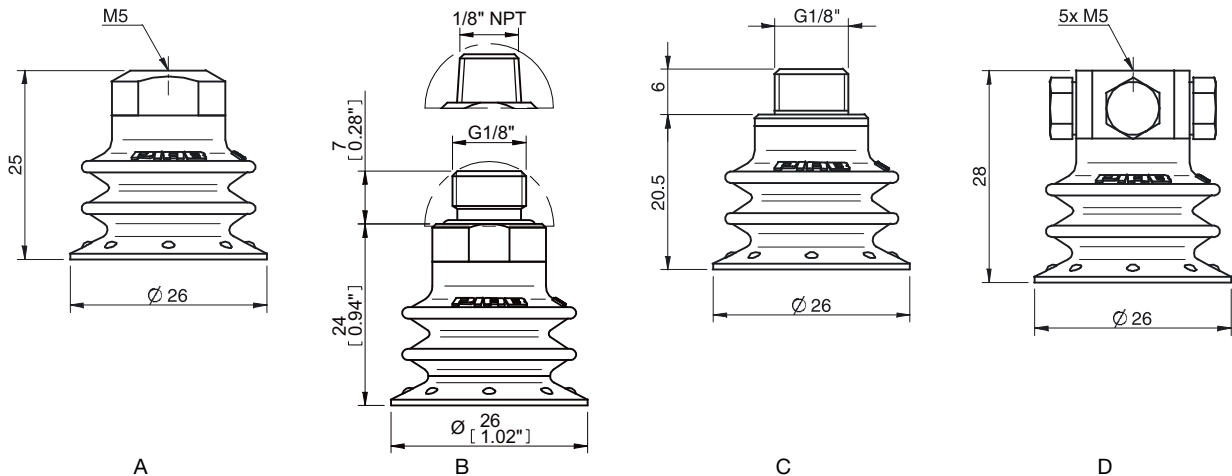
### Material resistance

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

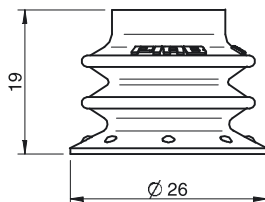
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

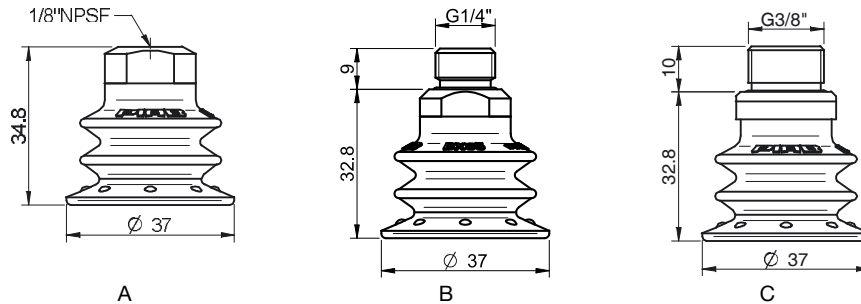
### Material resistance

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

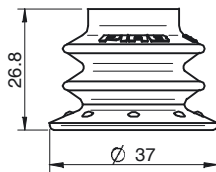
\*\*Please contact Piab.

## 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



	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 cm <sup>3</sup>	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

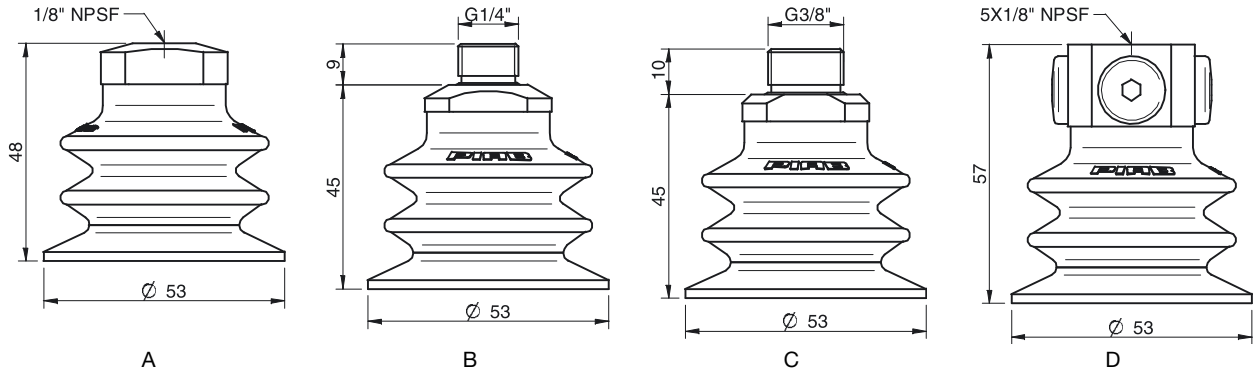
### Material resistance

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

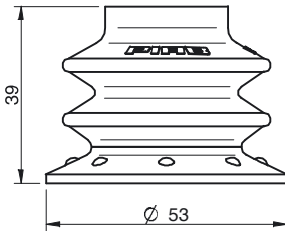
\*\*Please contact Piab.

### 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 cm <sup>3</sup>	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

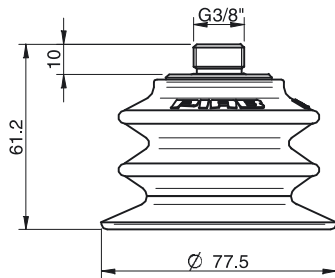
### Material resistance

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

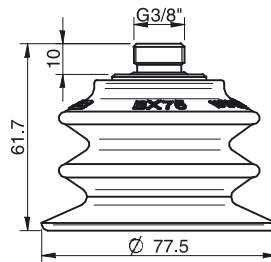
\*\*Please contact Piab.

## Ordering information

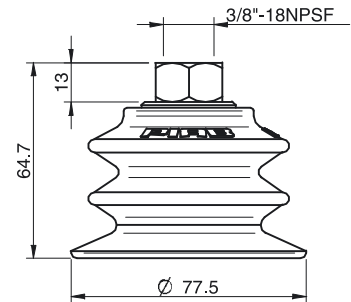
	Complete suction cups	Art. No.
A	Suction cup BX75P Polyurethane 30/60, G3/8" male / 1/8" NPSF female	0106293
A	Suction cup BX75P Polyurethane 30/60 with filter, G3/8" male / 1/8" NPSF female	0106606
B	Suction cup BX75P Polyurethane 30/60 with filter, thread insert G3/8" male	0107151
B	Suction cup BX75P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

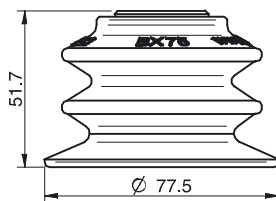


B



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 cm <sup>3</sup>	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

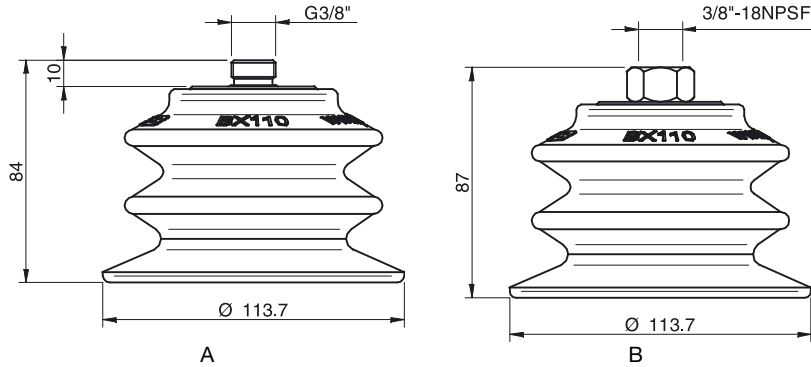
### Material resistance

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

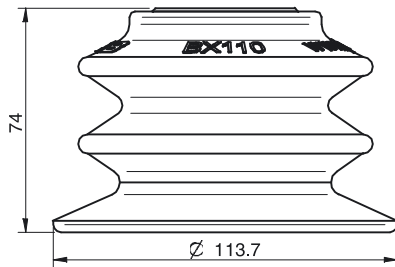
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

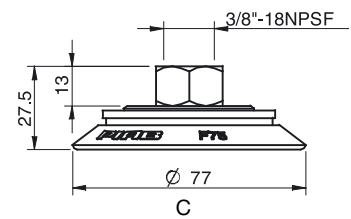
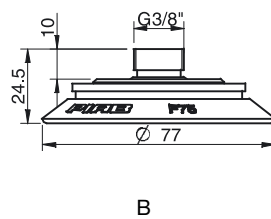
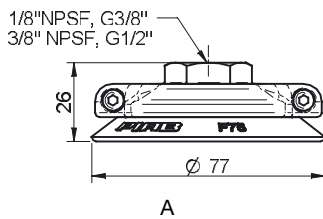
### Material resistance

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

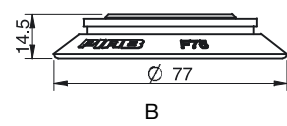
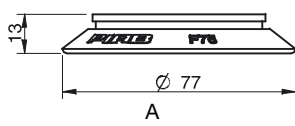
\*\*Please contact Piab.

## 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



	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



	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 <sup>3</sup>	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

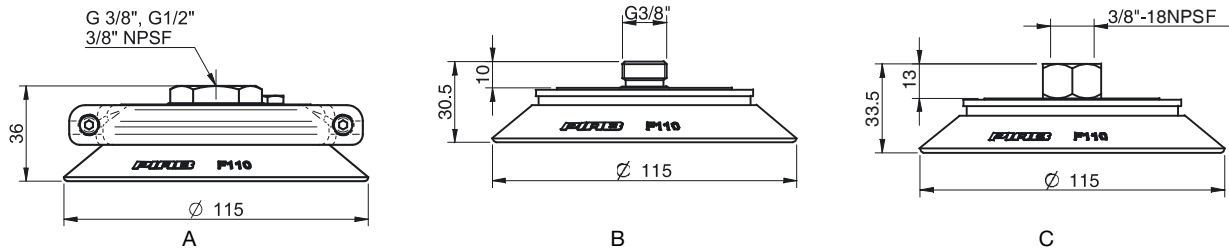
### Material resistance

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

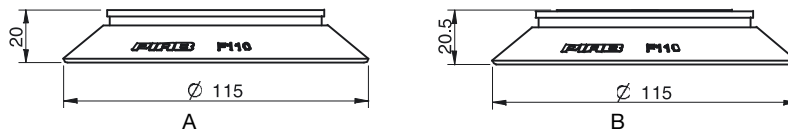
\*\*Please contact Piab.

## 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	cm <sup>3</sup>	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

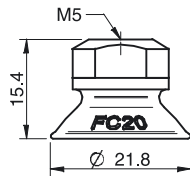
### Material resistance

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

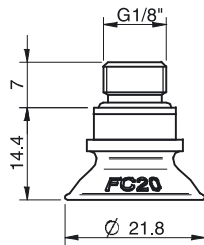
\*\*Please contact Piab.

## Ordering information

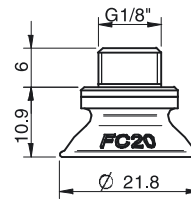
	Complete suction cups	Art. No.
A	Suction cup FC20P Polyurethane 50, M5 female	0106717
B	Suction cup FC20P Polyurethane 50, G1/8" male, with mesh filter	0106722
C	Suction cup FC20P Polyurethane 50, G1/8" male / M5 female, with mesh filter	0106718



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	cm <sup>3</sup>	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

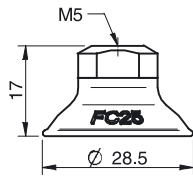
### Material resistance

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

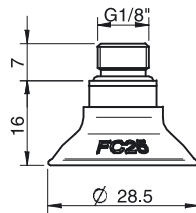
\*\*Please contact Piab.

## Ordering information

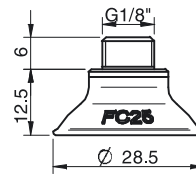
	Complete suction cups	Art. No.
A	Suction cup FC25P Polyurethane 50, M5 female	0106719
B	Suction cup FC25P Polyurethane 50, G1/8" male, with mesh filter	0106721
C	Suction cup FC25P Polyurethane 50, G1/8" male / M5 female, with mesh filter	0106720



A

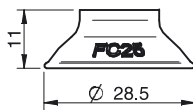


B



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 <sup>3</sup>	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

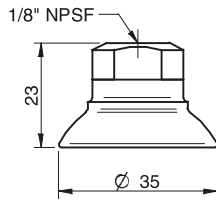
### Material resistance

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

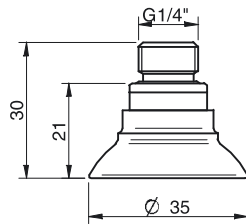
\*\*Please contact Piab.

## Ordering information

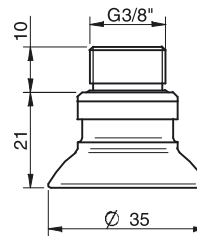
	Complete suction cups	Art. No.
A	Suction cup FC35P Polyurethane 50, 1/8" NPSF female, with mesh filter	0103705
A	Suction cup FC35P Polyurethane 50, 1/8" NPSF female, with dual flow control valve	0103709
B	Suction cup FC35P Polyurethane 50, G1/4" male, with mesh filter	0103711
B	Suction cup FC35P Polyurethane 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



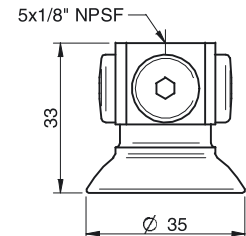
A



B

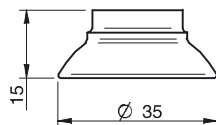


C



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 <sup>3</sup>	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

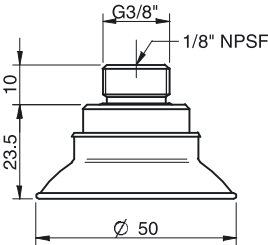
### Material resistance

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 <sup>3</sup>	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

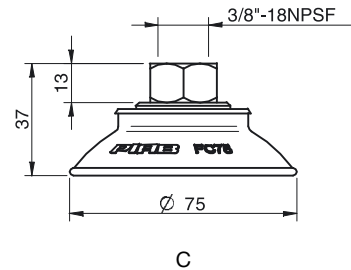
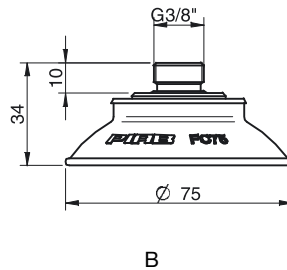
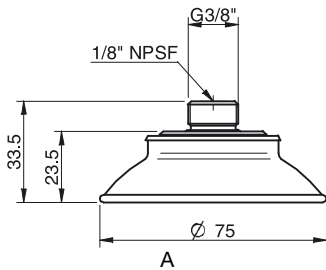
### Material resistance

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

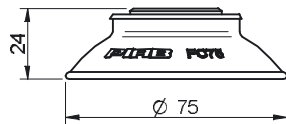
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

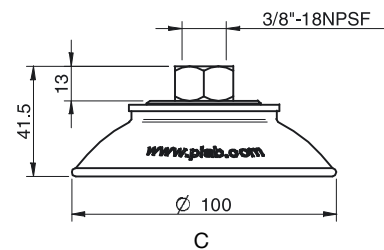
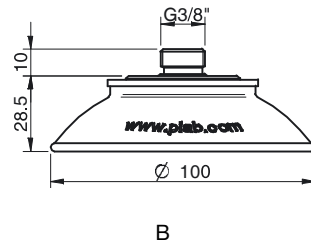
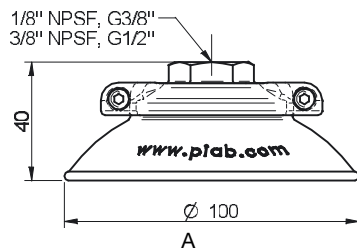
### Material resistance

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

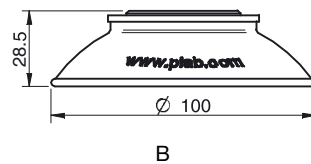
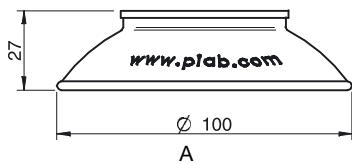
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

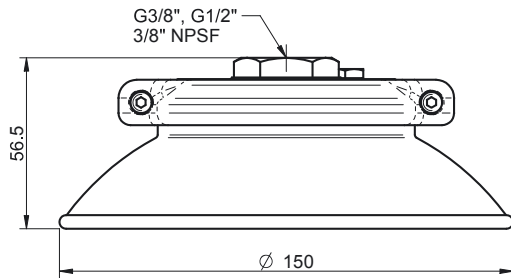
### Material resistance

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

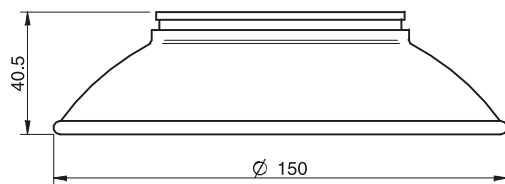
\*\*Please contact Piab.

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight with fitting g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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

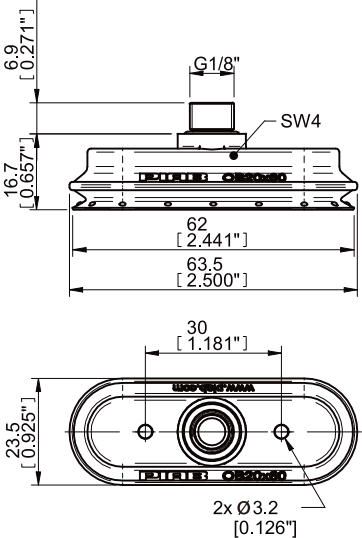
### Material resistance

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 <sup>3</sup>	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

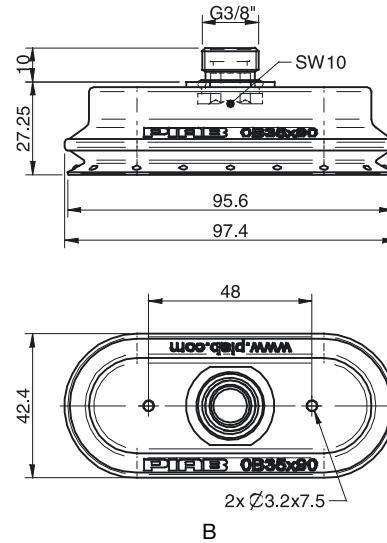
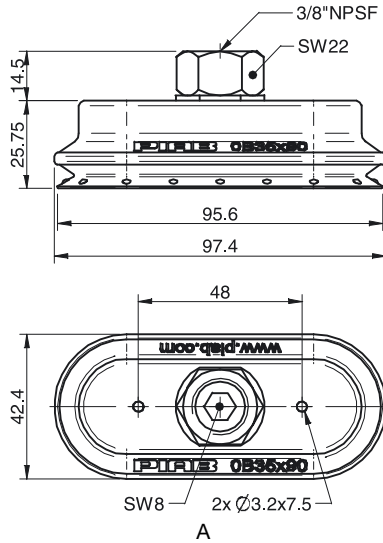
### Material resistance

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

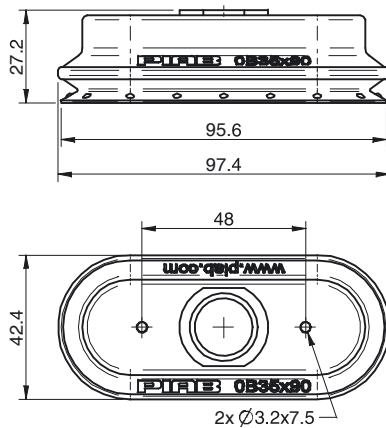
\*\*Please contact Piab.

## 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 cm <sup>3</sup>	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

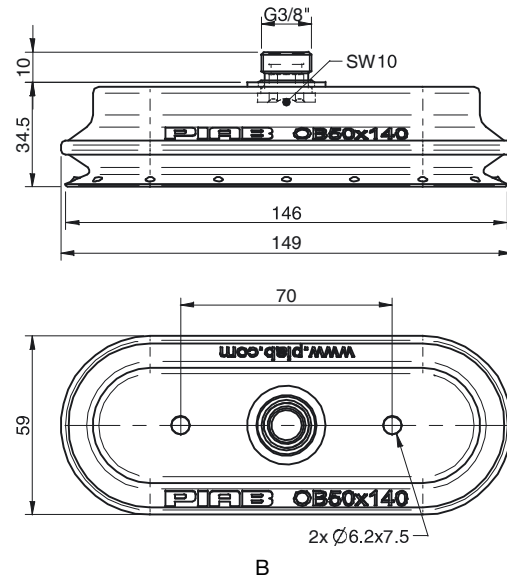
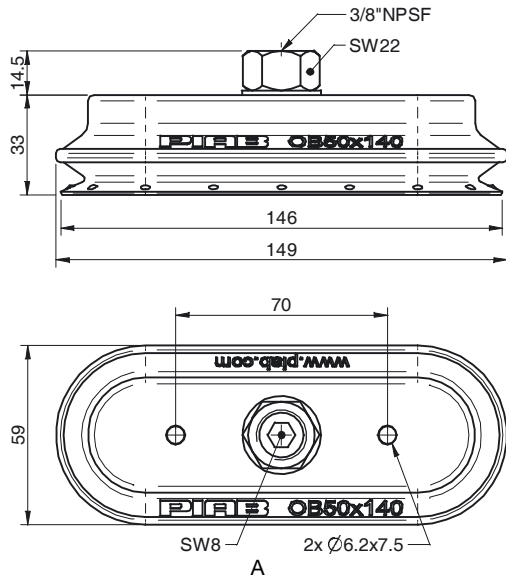
### Material resistance

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

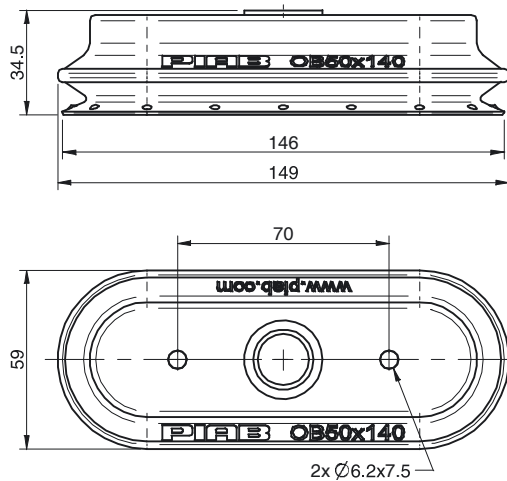
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

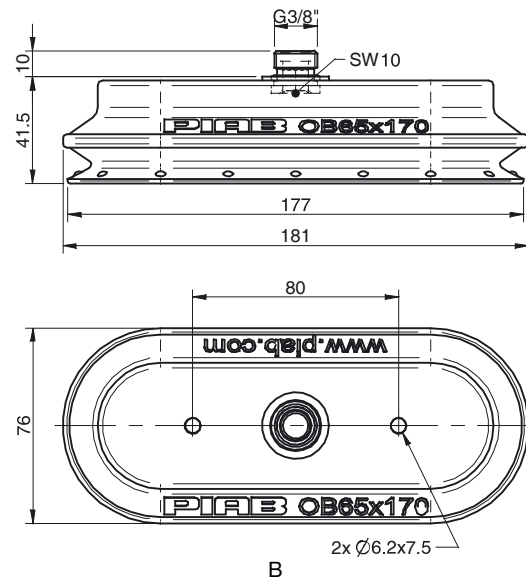
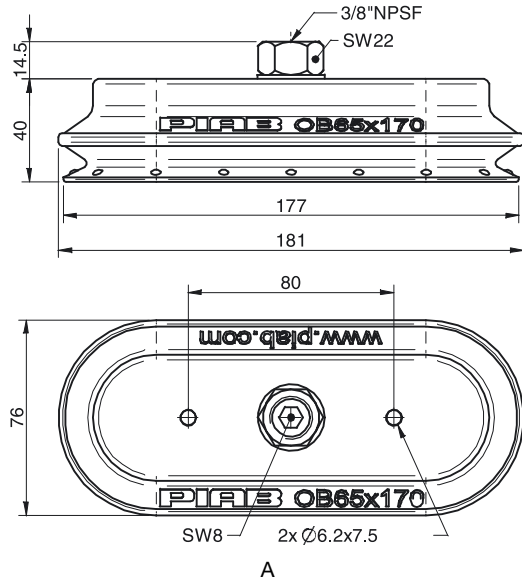
### Material resistance

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

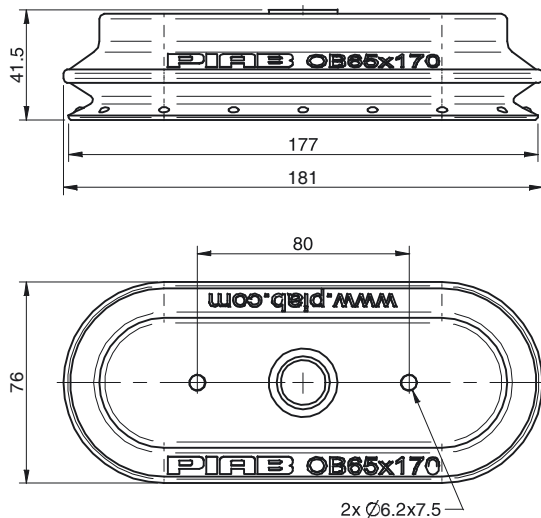
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

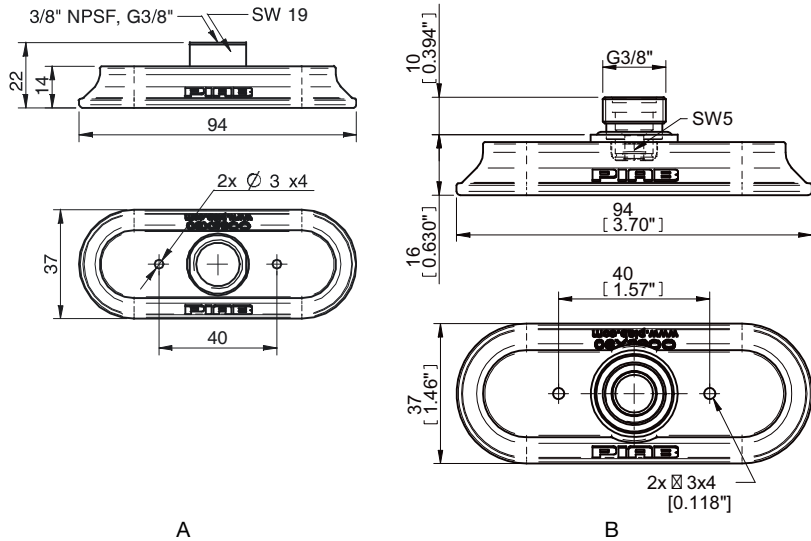
### Material resistance

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

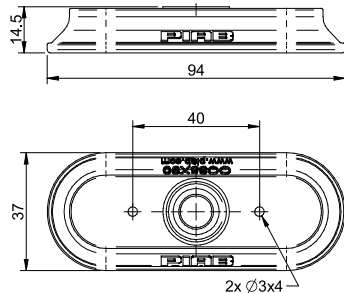
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

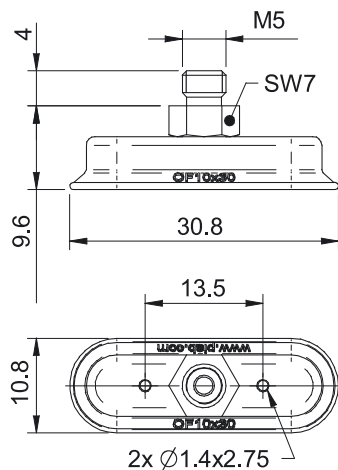
### Material resistance

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 <sup>3</sup>	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

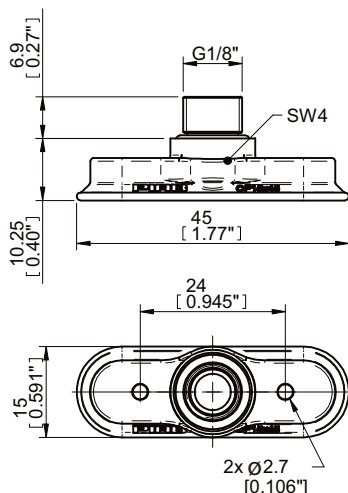
### Material resistance

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 cm <sup>3</sup>	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

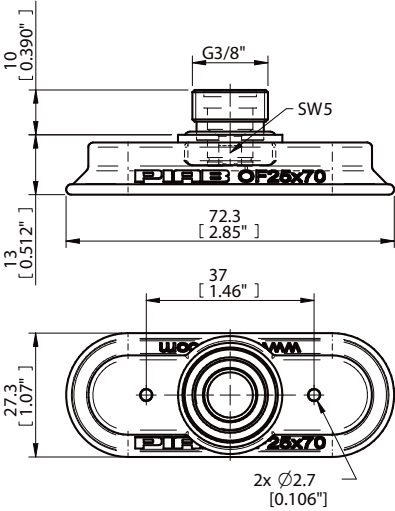
### Material resistance

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 <sup>3</sup>	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

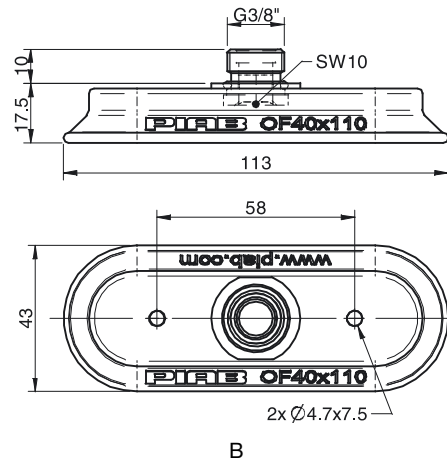
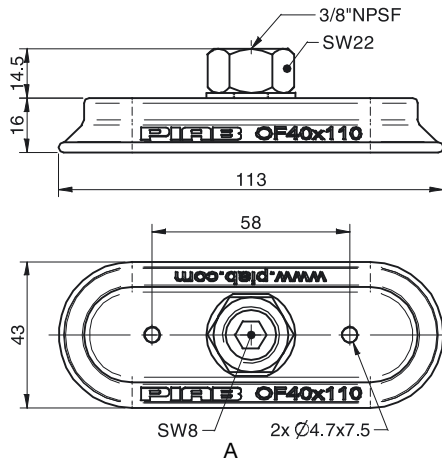
### Material resistance

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

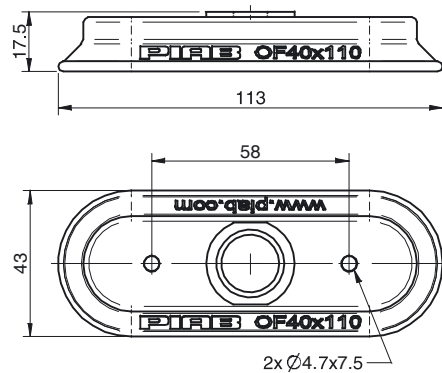
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

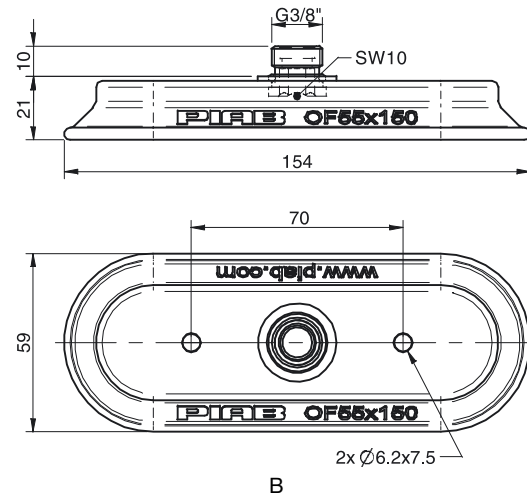
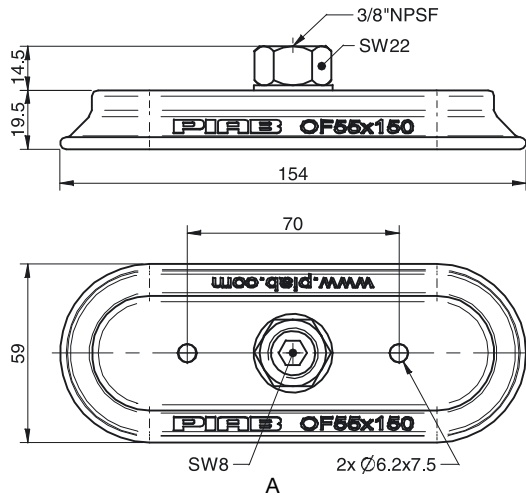
### Material resistance

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

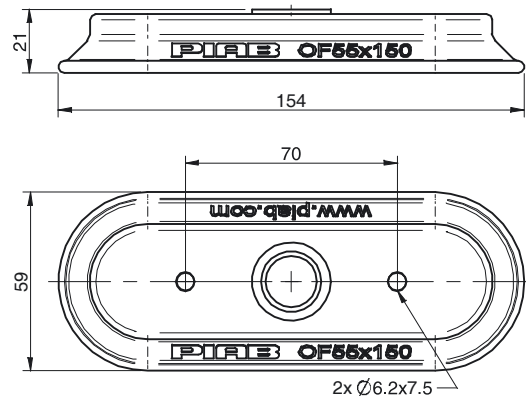
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

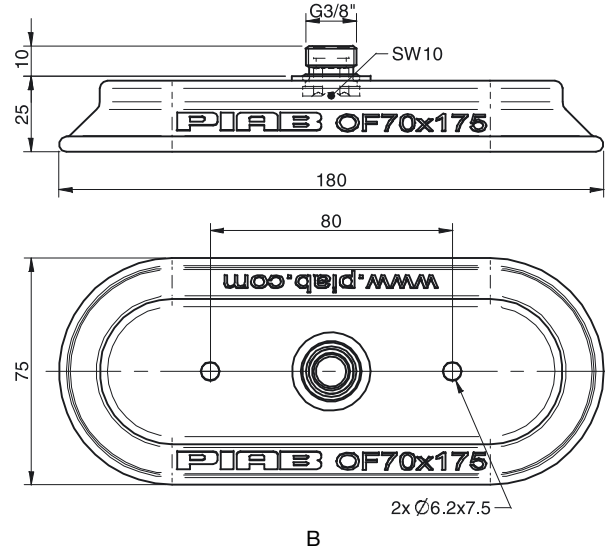
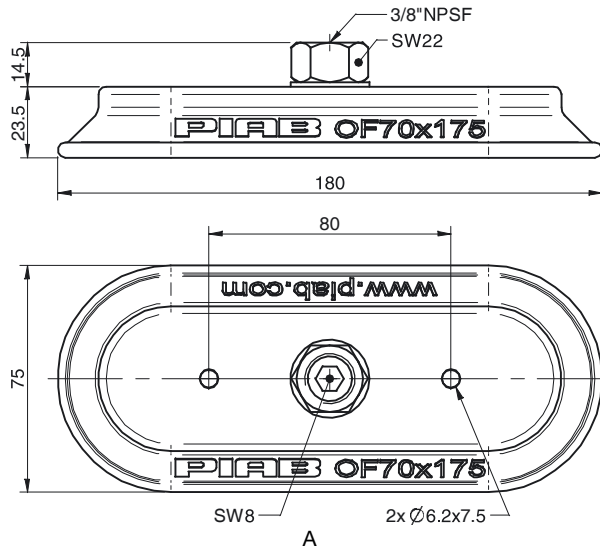
### Material resistance

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

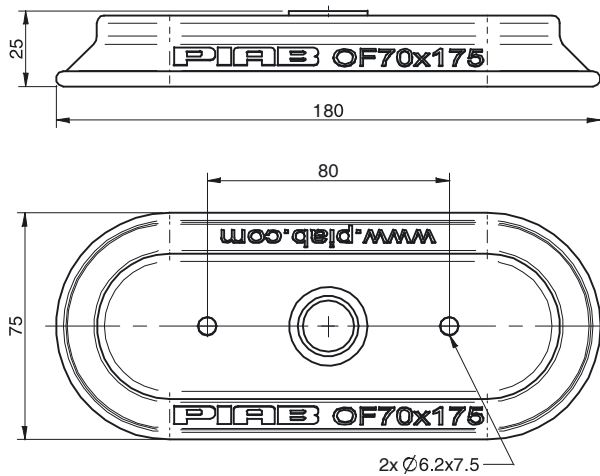
\*\*Please contact Piab.

## 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 <sup>3</sup>	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

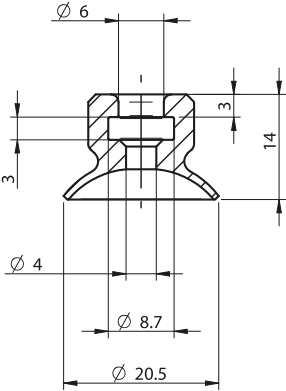
### Material resistance

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 <sup>3</sup>	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/m<sup>2</sup> 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

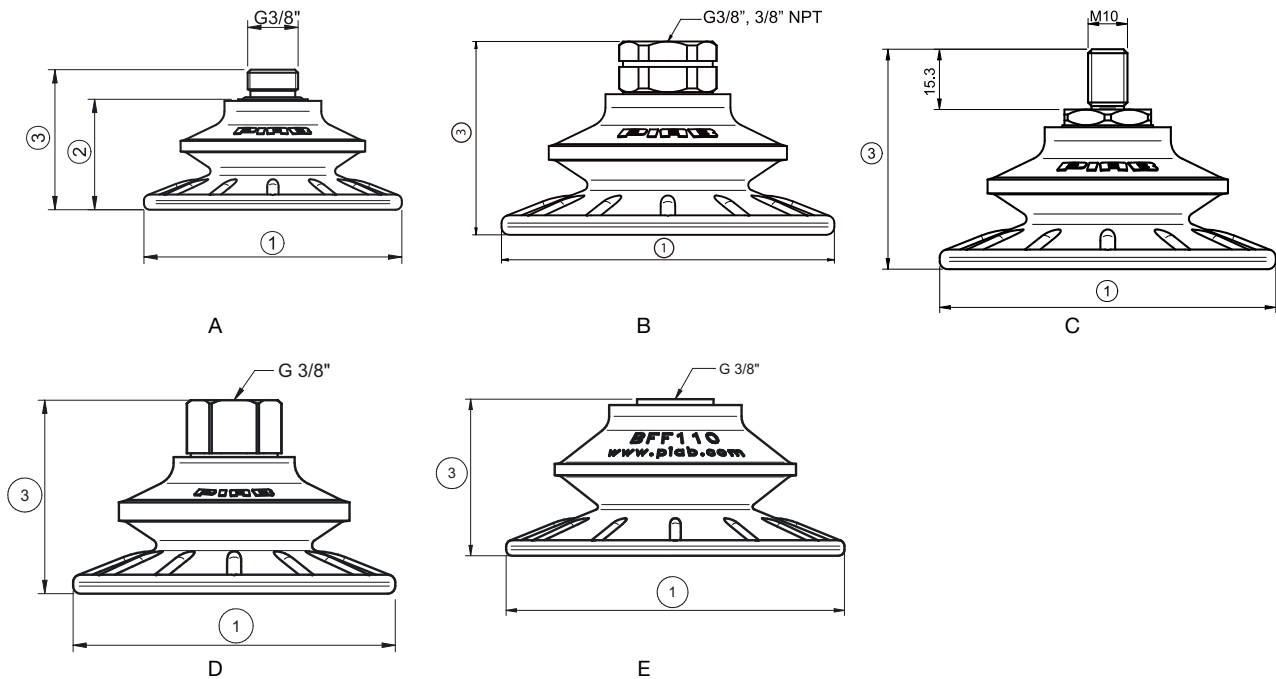
### Material resistance

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	0124734
		C	
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 <sup>3</sup>	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/m<sup>2</sup> 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

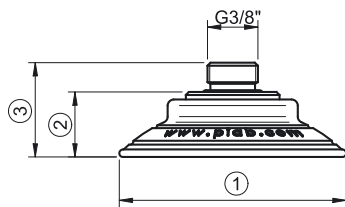
### Material resistance

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

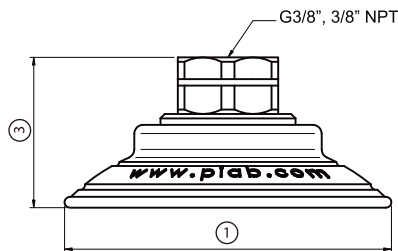
\*\*Please contact Piab.

## Ordering information

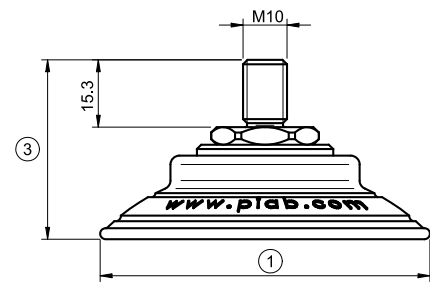
	Complete suction cups	Code	Art. No.
A	Suction cup FCF35P Polyurethane 55/60, G3/8" male, with mesh filter	FCF35P.4R.O4UF	0119913
B	Suction cup FCF35P Polyurethane 55/60, G3/8" female	FCF35P.4R.O4UA	0118981
B	Suction cup FCF35P Polyurethane 55/60, 3/8" NPT female	FCF35P.4R.O4UN	0122282
C	Suction cup FCF35P 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	0124669
		C	
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	0124787
		C	
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



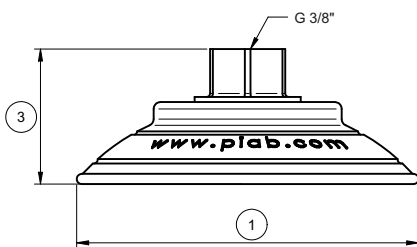
A



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  $> 0,1\text{g}/\text{m}^2$  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 <sup>3</sup>	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/m<sup>2</sup> 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

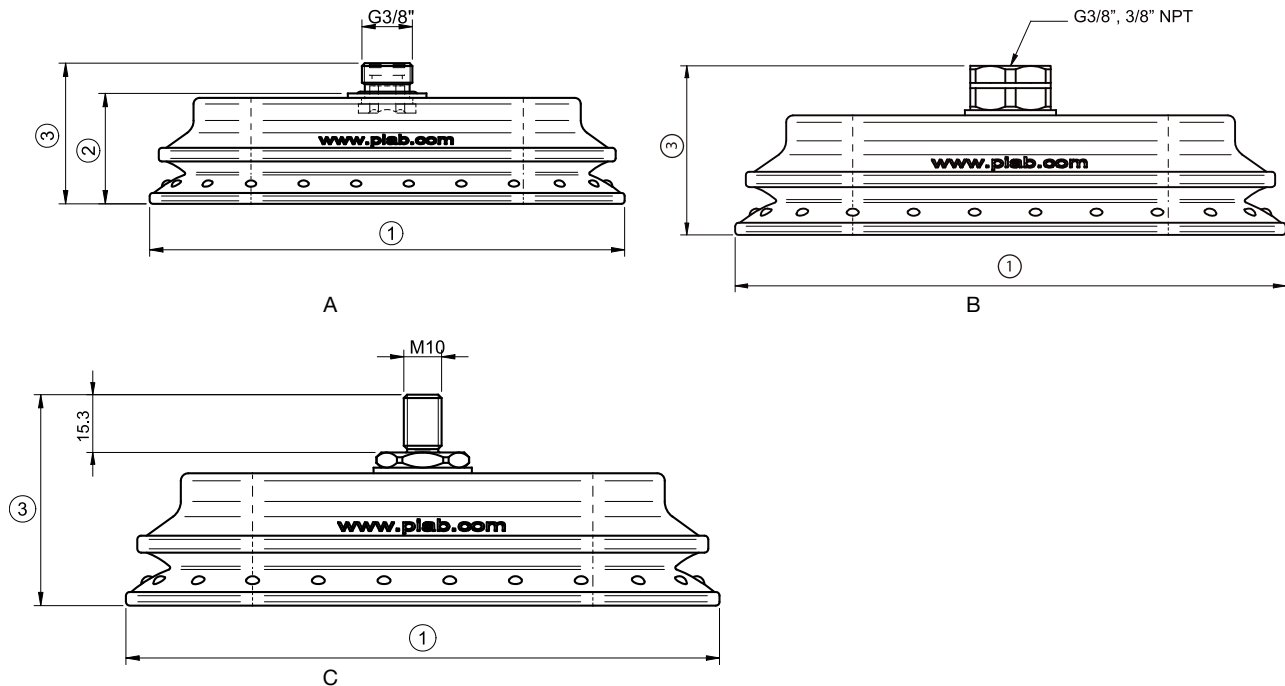
### Material resistance

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 <sup>3</sup>	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

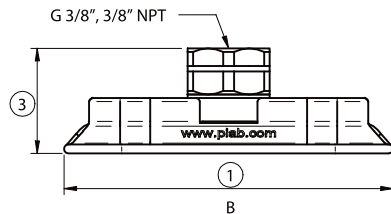
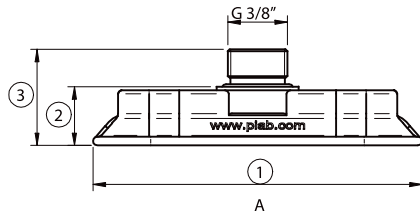
### Material resistance

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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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

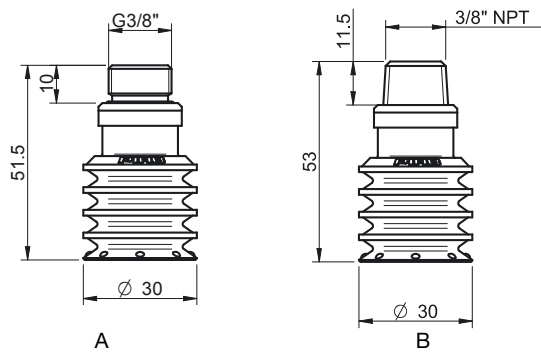
### Material resistance

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

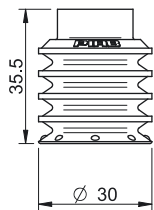
\*\*Please contact Piab.

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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

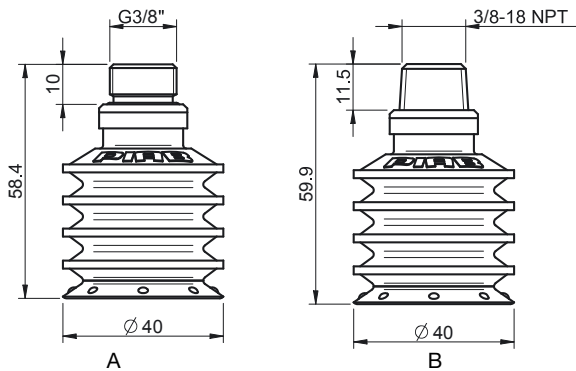
### Material resistance

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

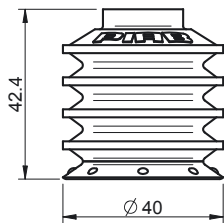
\*\*Please contact Piab.

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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

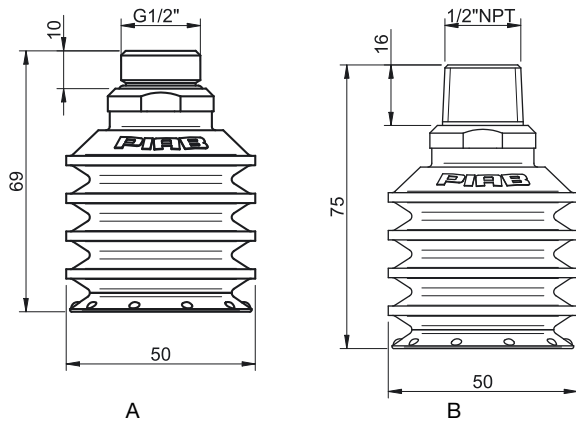
### Material resistance

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

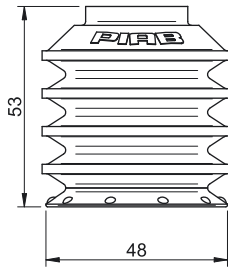
\*\*Please contact Piab.

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
0.32/3.2*	0.62/6.2*	—	—	—	—	4.0	4.0	13	3

\*Lifting force with reinforcement rings.

### Material specifications

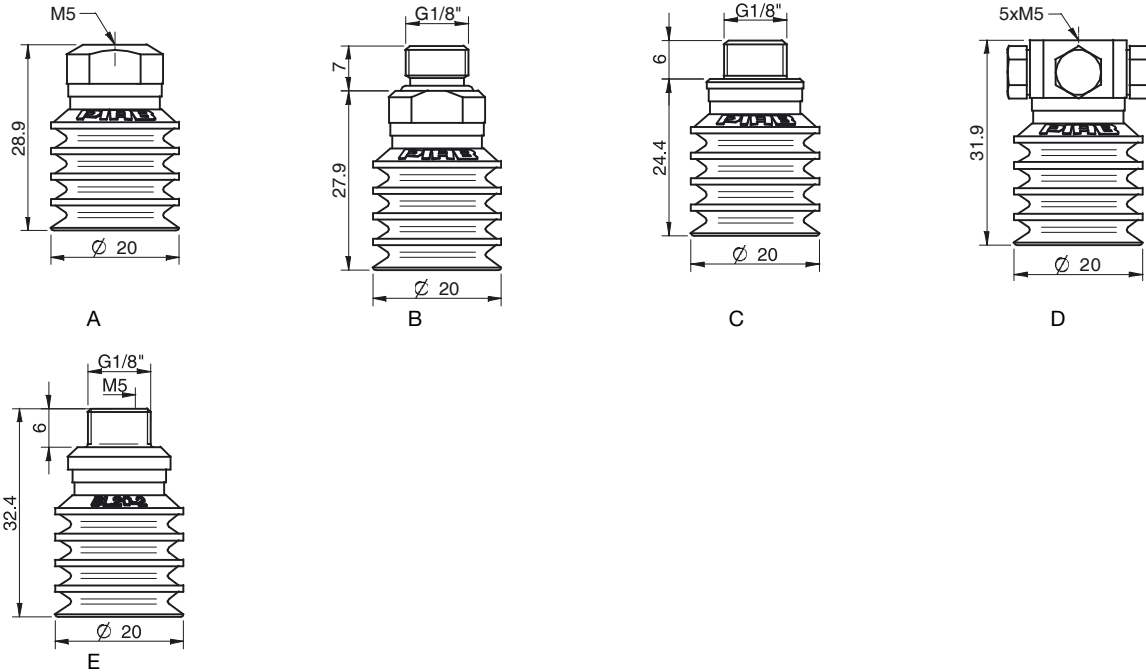
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200

### Material resistance

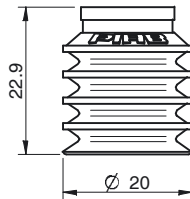
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
0.64/6.4*	1.6/16.0*	—	—	—	—	10	8	20	7

\*Lifting force with reinforcement rings.

### Material specifications

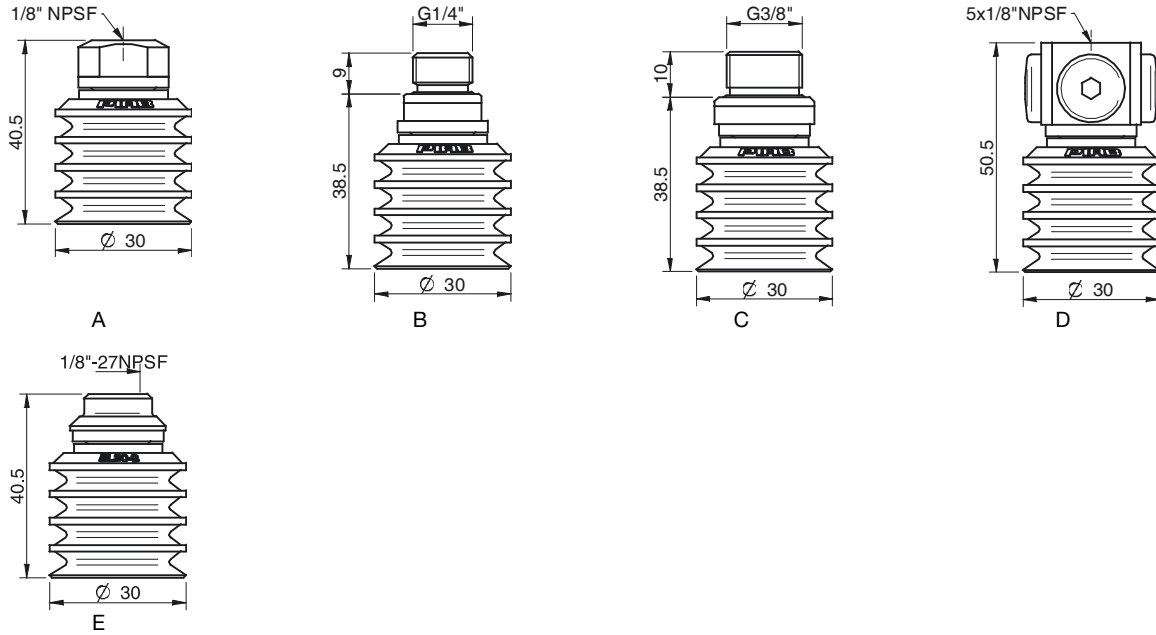
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200

### Material resistance

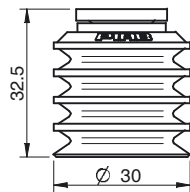
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
1.1/11.0*	2.2/22.0*	—	—	—	—	27	11	33	10

\*Lifting force with reinforcement rings.

### Material specifications

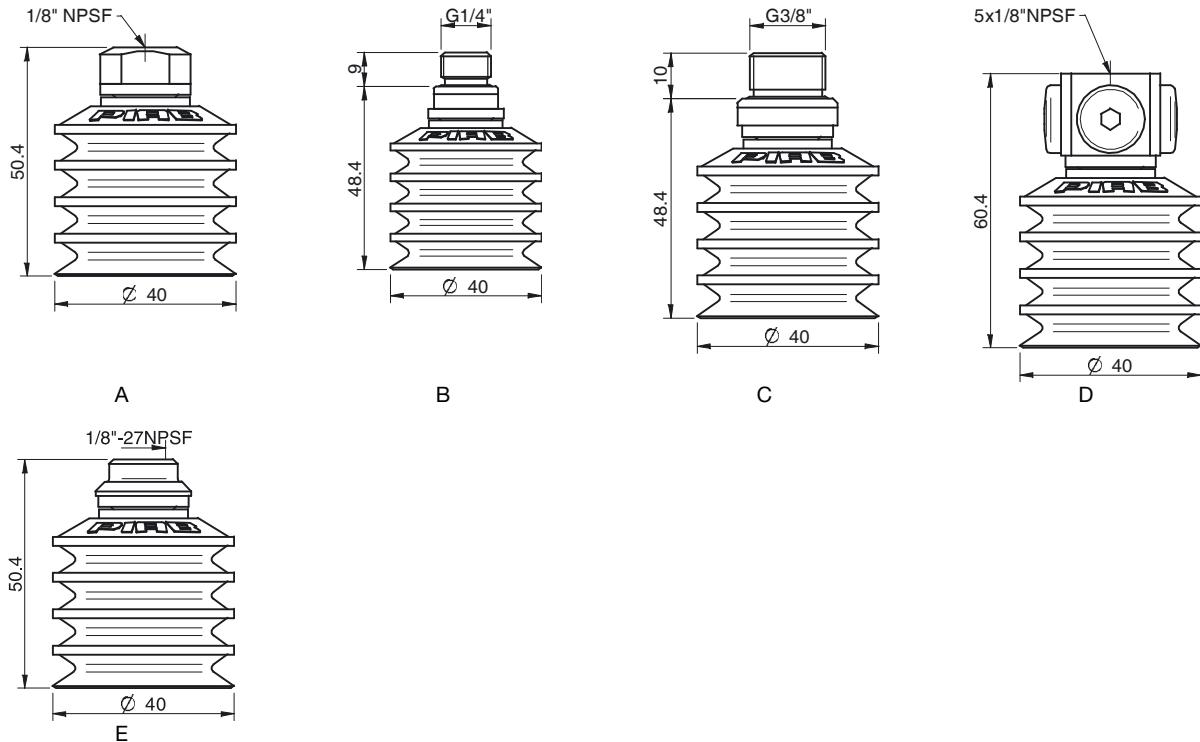
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40-110
Silicone, SIL	Red	50	-40-200

### Material resistance

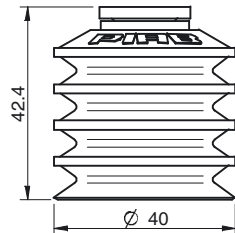
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
1.7/17.0*	4.3/43*	—	—	—	—	53	13	34	20.0

\*Lifting force with reinforcement rings.

### Material specifications

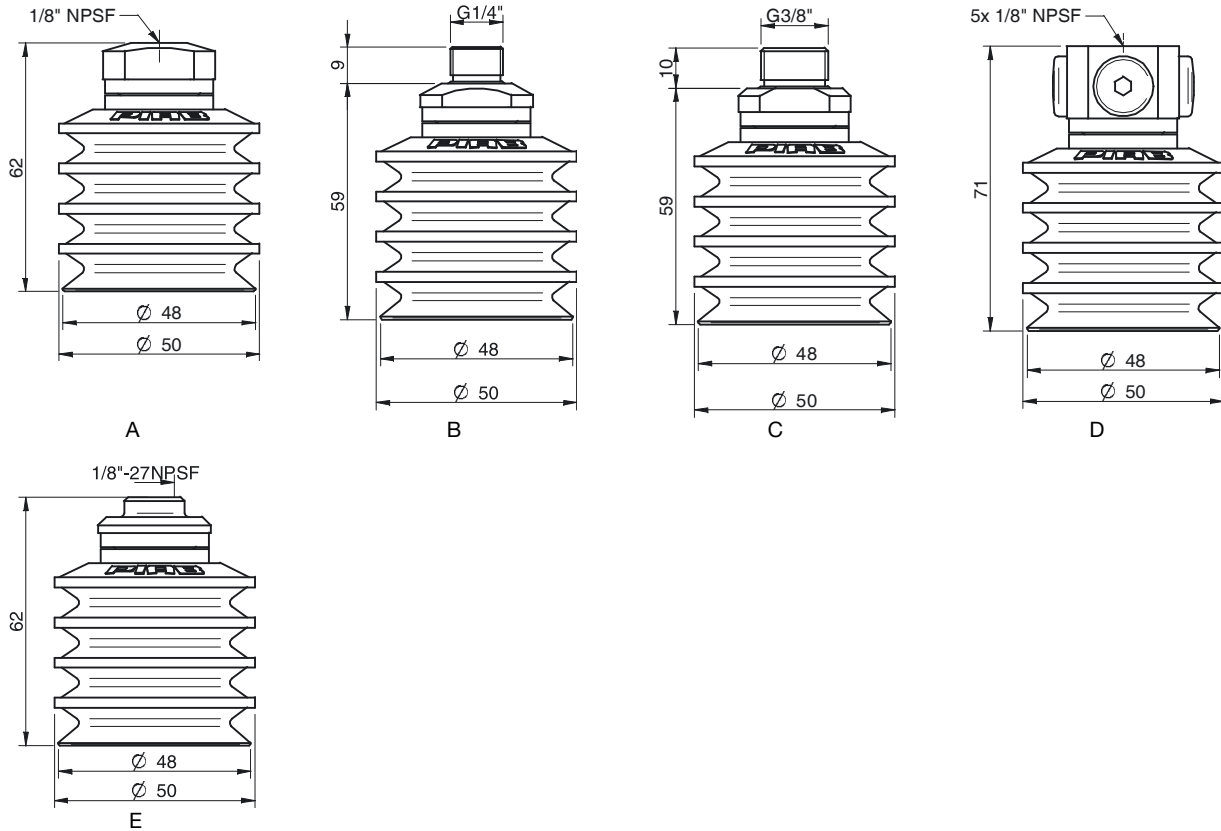
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	60	-40–110
Silicone, SIL	Red	50	-40–200

### Material resistance

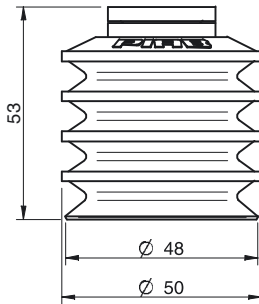
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
8.0	—	—	—	—	—	4.1	20	19	5

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

### Material specifications

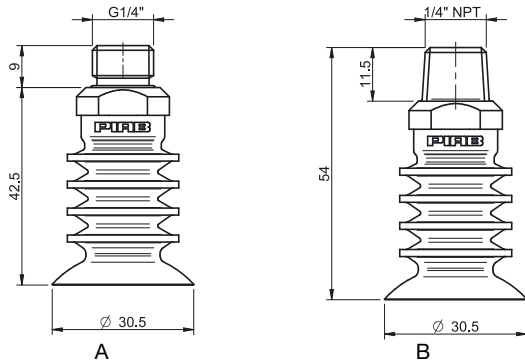
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40-200

### Material resistance

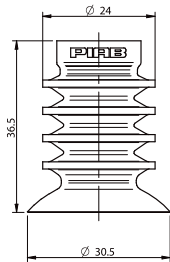
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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 <sup>3</sup>	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

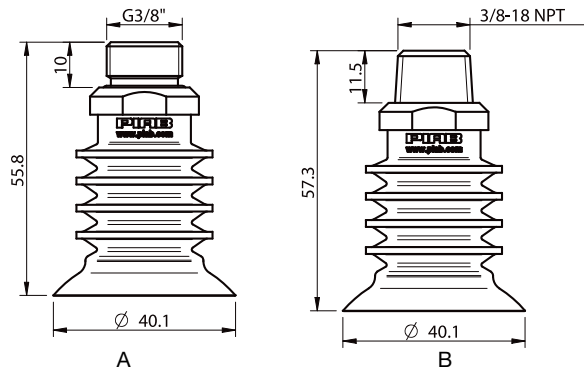
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40-200

### Material resistance

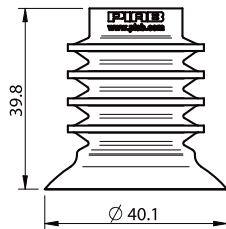
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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 <sup>3</sup>	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

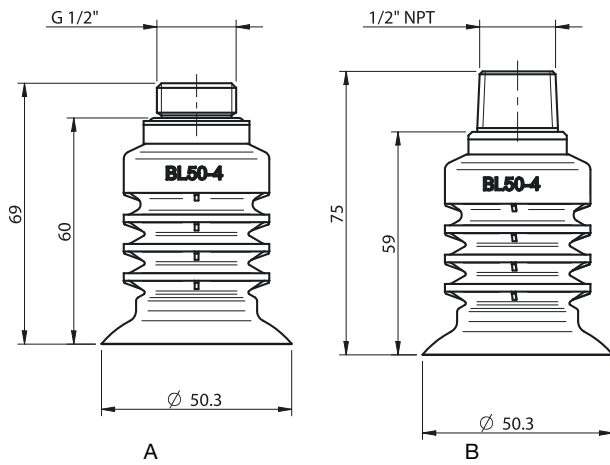
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40–200

### Material resistance

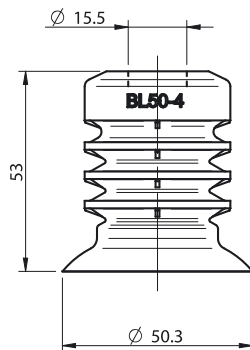
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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

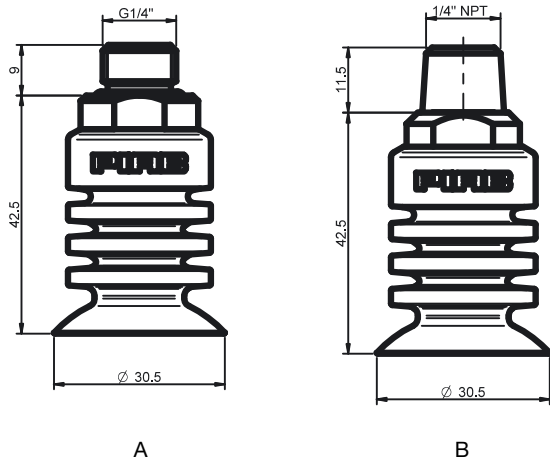
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40–200

### Material resistance

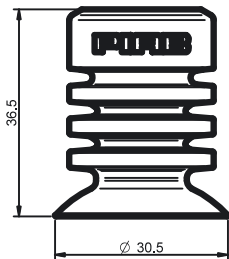
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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 <sup>3</sup>	mm	mm	g
13	15	14	22	20	10

### Material specifications

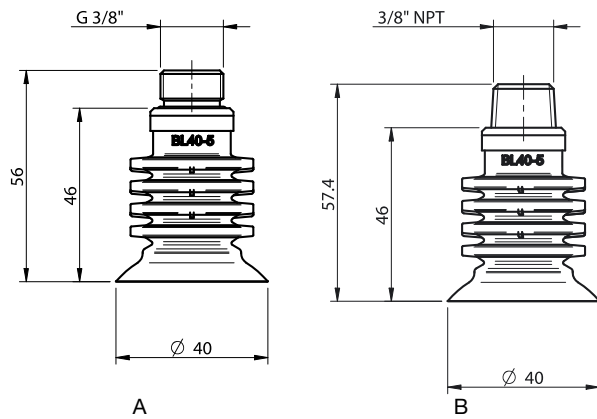
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40–200

### Material resistance

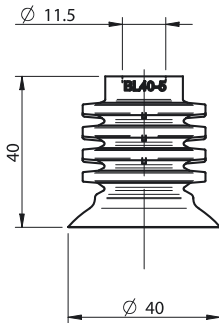
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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 <sup>3</sup>	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

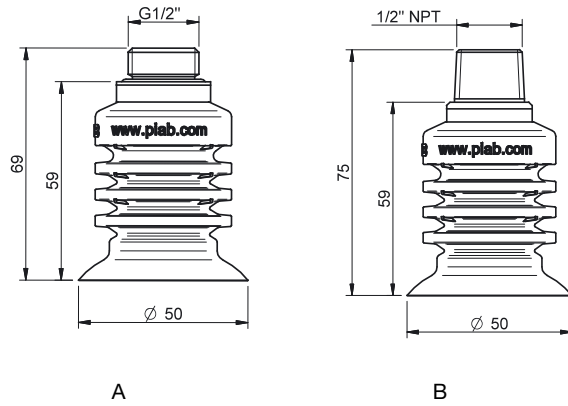
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40-200

### Material resistance

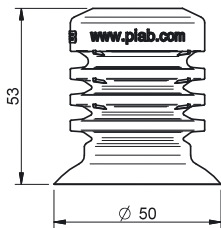
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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



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

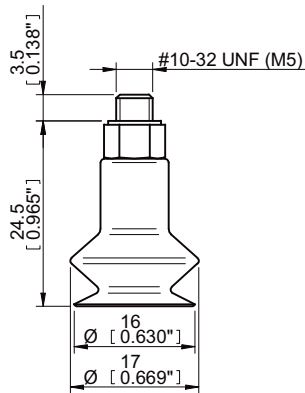
Material	Colour	Hardness °Shore A	Temperature range °C
Thermoelastic polyurethane, TPU	Transparent white	81	-20-80

### Material resistance

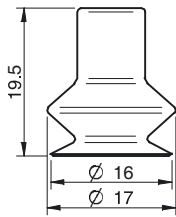
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Excellent	Excellent	Excellent	Poor	Poor	Poor	Good	Good

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
4.5	15.5	21.0	6.3	11.0	19.0	2.7	11	8.0	2.0

### Material specifications

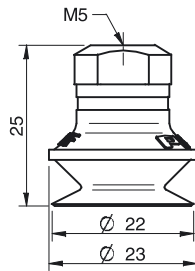
Material	Colour	Hardness °Shore A	Temperature range °C
Thermoelastic polyurethane, TPU	Transparent white	81	-20–80

### Material resistance

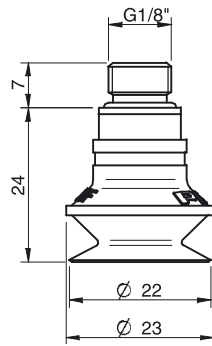
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Excellent	Excellent	Excellent	Poor	Poor	Poor	Good	Good

## Ordering information

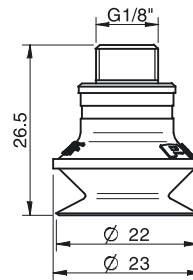
	Complete suction cups	Art. No.
A	Suction cup B20MF Thermoelastic polyurethane, M5 female	0101182
A	Suction cup B20MF Thermoelastic polyurethane, M5 female, with dual flow control valve	0101188
B	Suction cup B20MF Thermoelastic polyurethane, G1/8" male, with mesh filter	0101183
B	Suction cup B20MF Thermoelastic 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



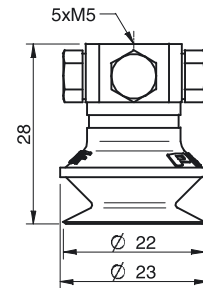
A



B

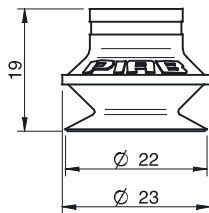


C



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

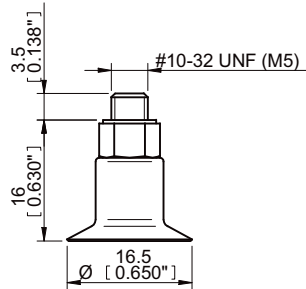
Material	Colour	Hardness °Shore A	Temperature range °C
Thermoelastic polyurethane, TPU	Transparent white	81	-20-80

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
3.6	14.5	22.0	8.0	14.5	21.0	1.0	18	2.0	1.2

### Material specifications

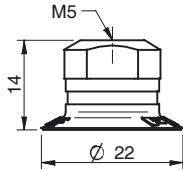
Material	Colour	Hardness °Shore A	Temperature range °C
Thermoelastic polyurethane, TPU	Transparent white	81	-20-80

### Material resistance

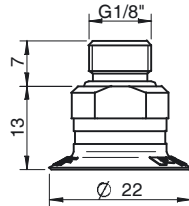
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Excellent	Excellent	Excellent	Poor	Poor	Poor	Good	Good

## Ordering information

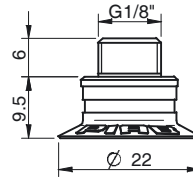
	Complete suction cups	Art. No.
A	Suction cup F20MF Thermoelastic polyurethane, M5 female	0101281
B	Suction cup F20MF Thermoelastic polyurethane, G1/8" male, with mesh filter	0101282
B	Suction cup F20MF Thermoelastic polyurethane, G1/8" male, with mesh filter and dual flow control valve	0101288
C	Suction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



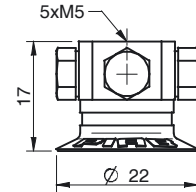
A



B

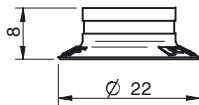


C



D

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

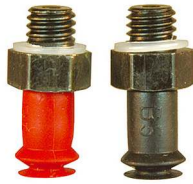


	Fittings	Art. No.
	Fitting M5 female	3250003
	Fitting M5 female, with dual flow control valve	3251001
	Fitting G1/8" male, with mesh filter	3250085
	Fitting G1/8" male, with mesh filter and dual flow control valve	3251002
	Fitting G1/8" male/M5 female, with mesh filter	0101152
	Fitting G1/8" male/M5 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 cm	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
0.30	0.80	1.0	—	—	—	0.05	1.5	1.5	0.11

### Material specifications

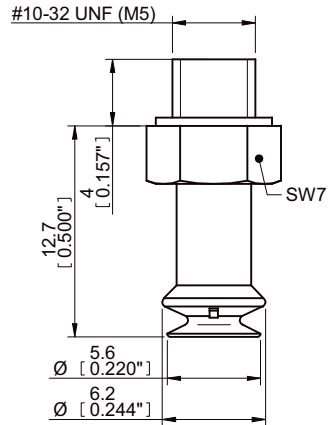
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200
Conductive silicone, CSIL	Black	50	-55-230

### Material resistance

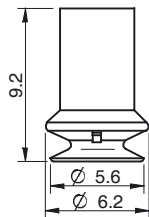
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
Conductive silicone, CSIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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 cm	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
0.80	1.6	2.5	—	—	—	0.15	1.9	3.5	0.3

### Material specifications

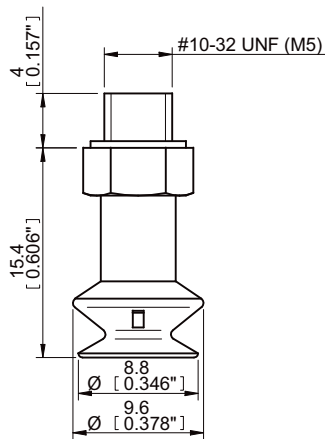
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200
Conductive silicone, CSIL	Black	50	-55-230

### Material resistance

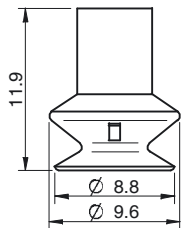
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
Conductive silicone, CSIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

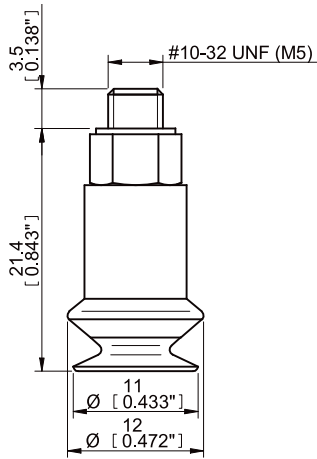
\*For a shorter period of time up to 160 °C

### Material resistance

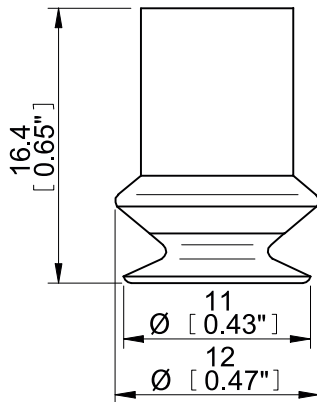
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

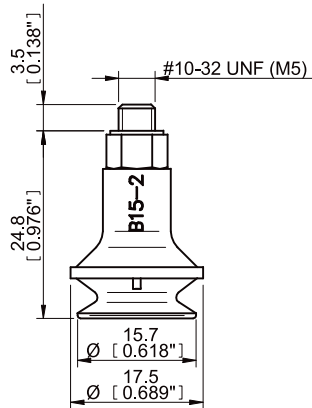
\*For a shorter period of time up to 160 °C

### Material resistance

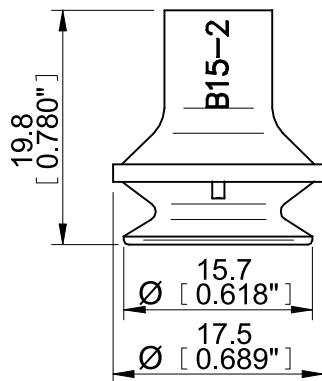
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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

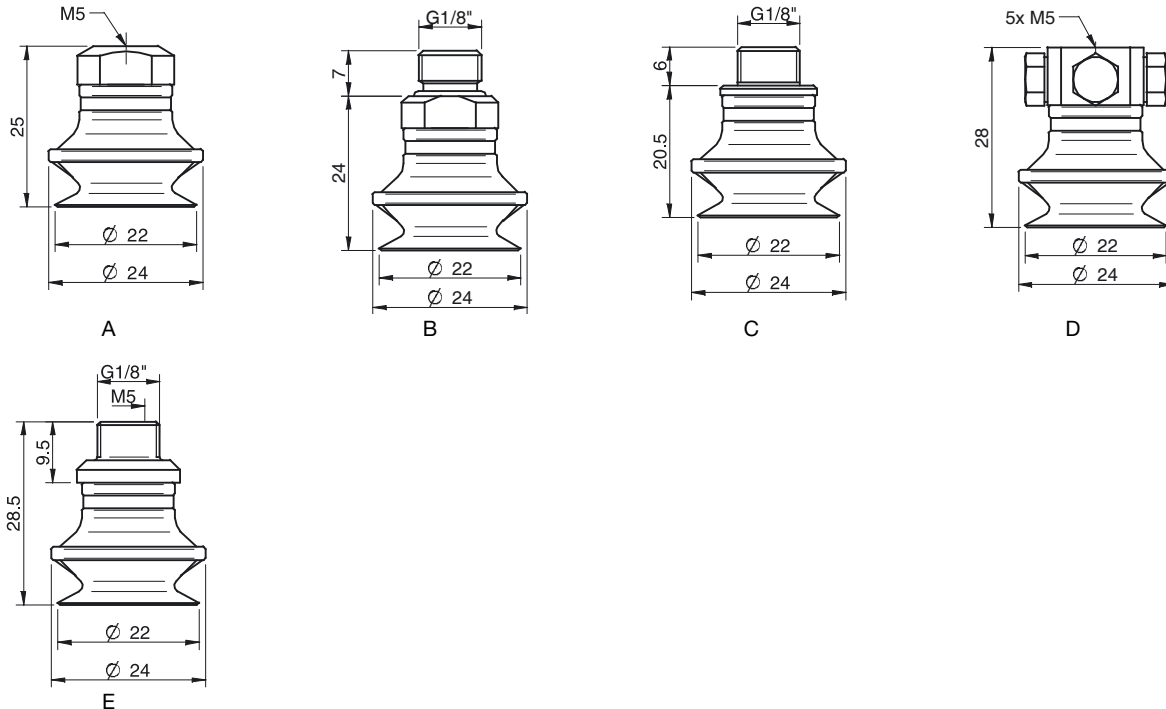
### Material resistance

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

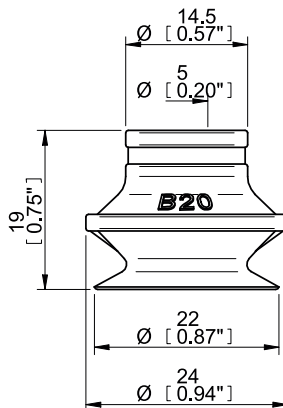
### Ordering information

	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



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 <sup>3</sup>	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.

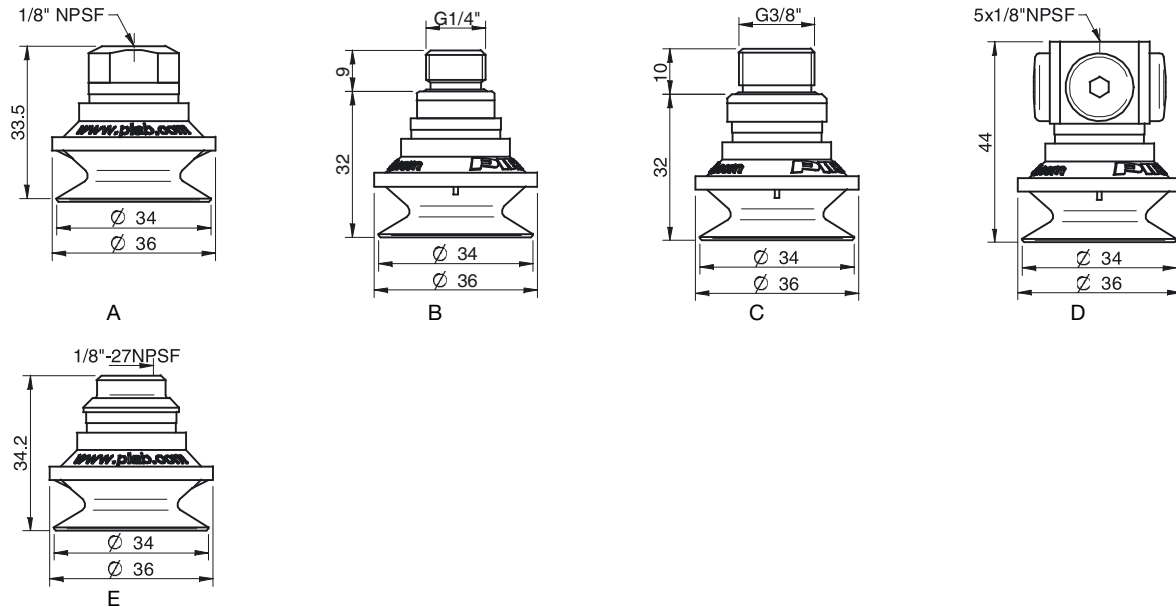
### Material resistance

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

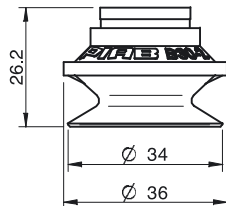
### Ordering information

	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



	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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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.

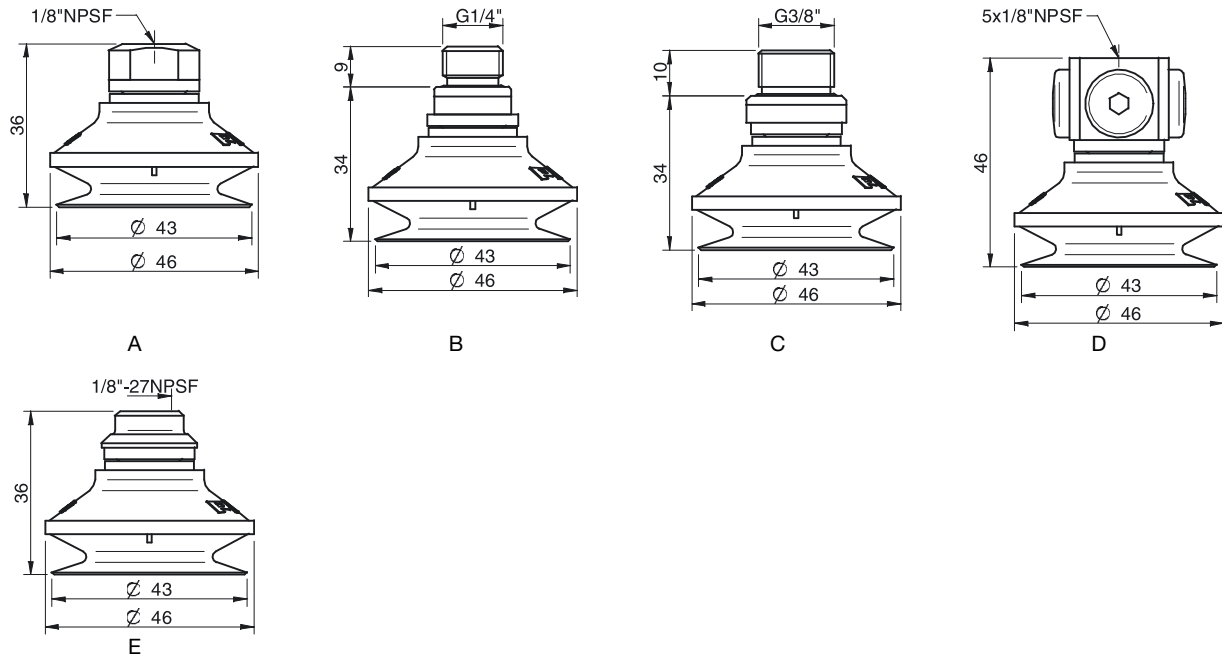
### Material resistance

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

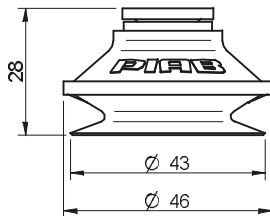
### Ordering information

	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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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

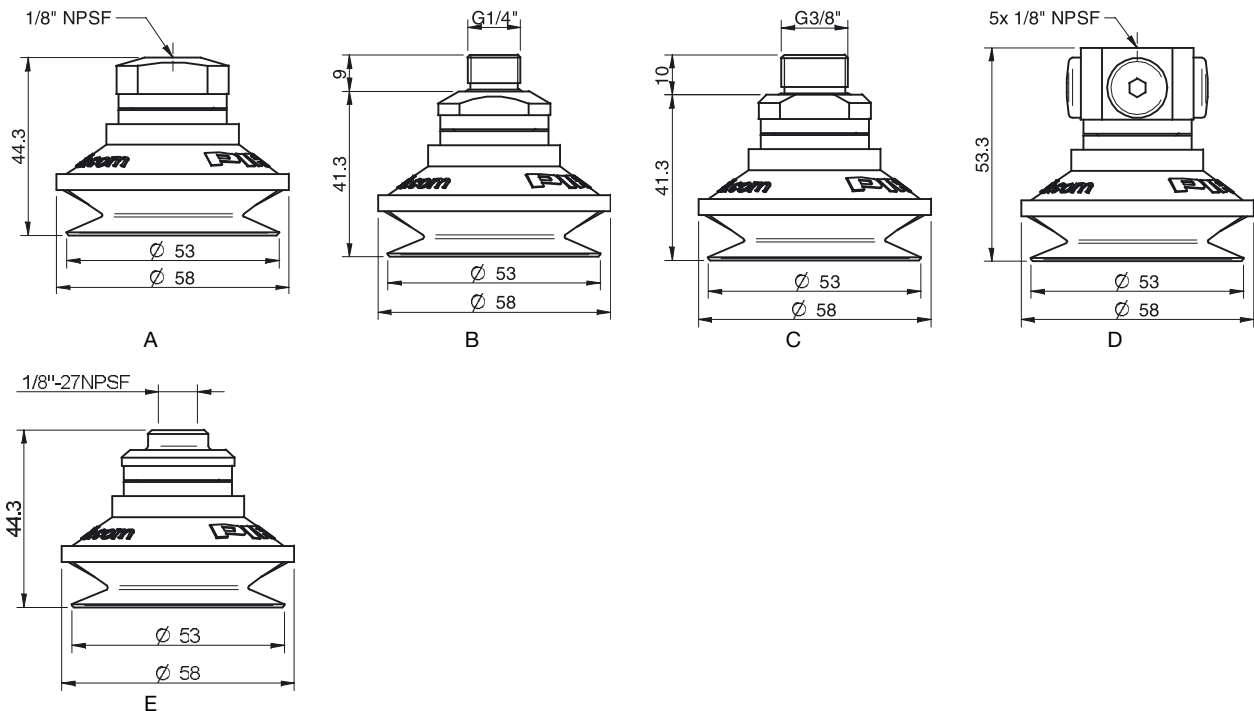
### Material resistance

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

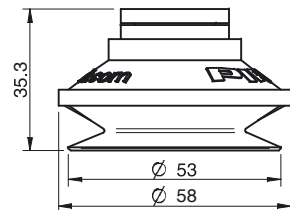
### Ordering information

	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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

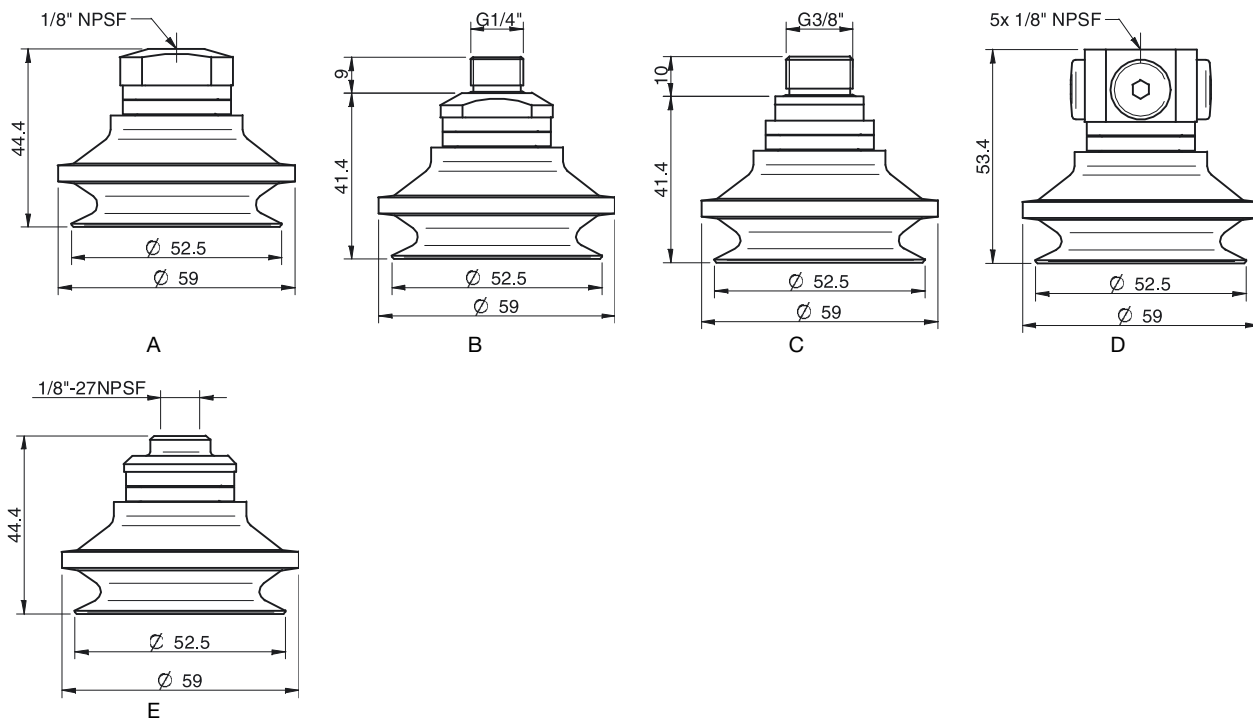
\* Filter disc max. 80 °C

### Material resistance

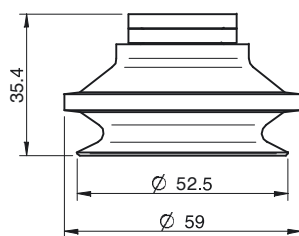
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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 <sup>3</sup>	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*

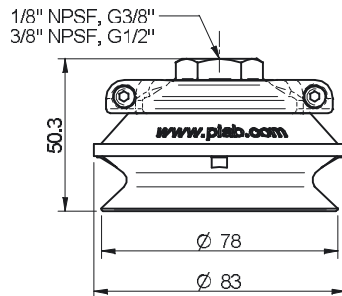
\* For a shorter period of time up to +160 °C

### Material resistance

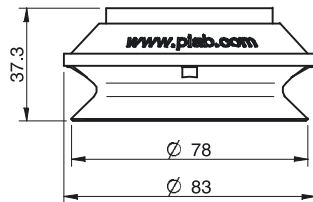
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

## 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 cm <sup>3</sup>	Min.curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

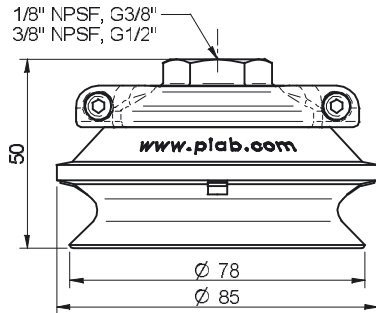
\* Filter disc max. 80 °C

### Material resistance

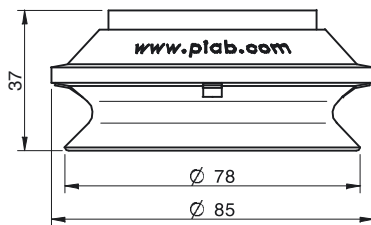
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

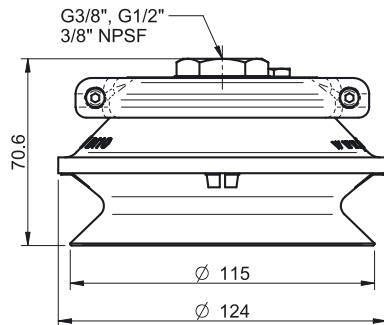
\* For a shorter period of time up to +160 °C

### Material resistance

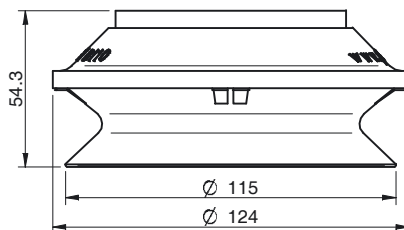
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

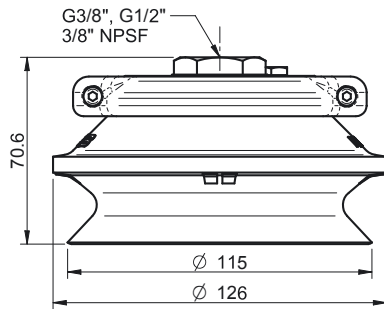
\* Filter disc max. 80 °C

### Material resistance

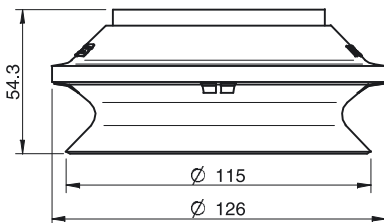
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
294	686	883	—	—	—	650	75	45	265

### Material specifications

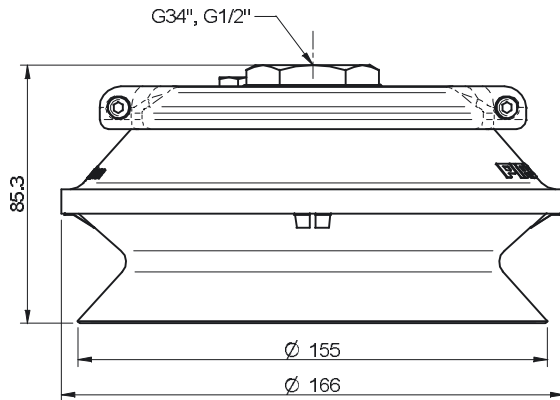
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

### Material resistance

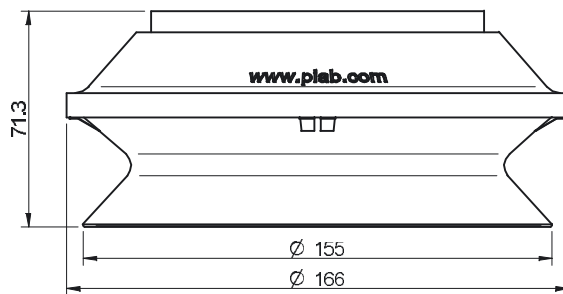
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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	cm <sup>3</sup>	mm	mm	g
1.1	2.2	—	—	—	—	27	11	33	10

### Material specifications

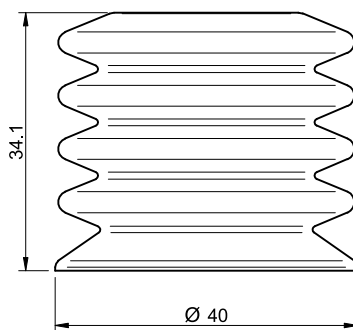
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	30	-40-200

### 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

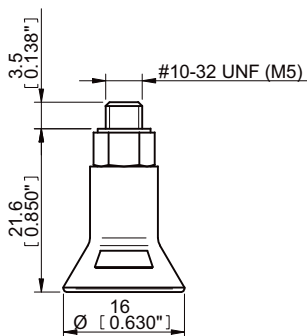
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200

### Material resistance

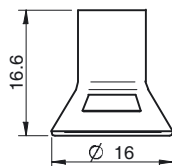
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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 <sup>3</sup>	mm	mm	g
5.9	15.0	18.0	—	—	—	2.5	8.0	4.5	2.2

### Material specifications

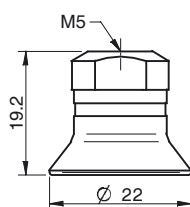
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

### Material resistance

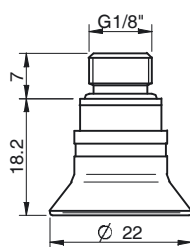
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### Ordering information

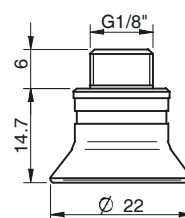
	Complete suction cups	Art. No.
A	Suction cup D20-2 Chloroprene, M5 female	0101215
B	Suction cup D20-2 Chloroprene, G1/8" male, with mesh filter	0101216
C	Suction cup D20-2 Chloroprene, G1/8" male/M5 female, with mesh filter	0101220
A	Suction cup D20-2 Silicone, M5 female	0101226
A	Suction cup D20-2 Silicone, 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



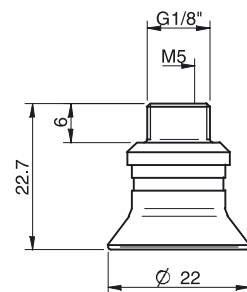
A



B

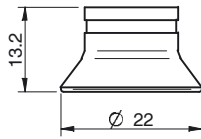


C



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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
14.0	26	31	—	—	—	5.0	13	5.0	4.0

### Material specifications

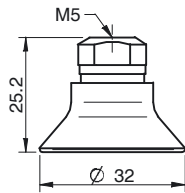
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200

### Material resistance

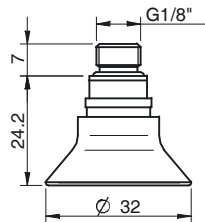
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## Ordering information

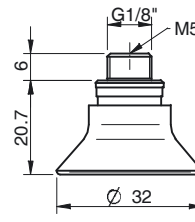
	Complete suction cups	Art. No.
A	Suction cup D30-2 Chloroprene, M5 female	0101237
B	Suction cup D30-2 Chloroprene, G1/8" male, with mesh filter	0101238
B	Suction cup D30-2 Chloroprene, G1/8" male, with mesh filter and dual flow control valve	0101244
C	Suction cup D30-2 Chloroprene, G1/8" male/M5 female, 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



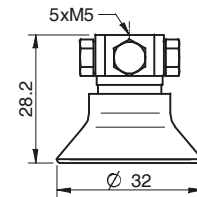
A



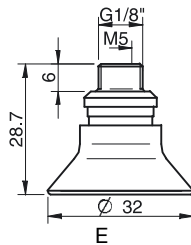
B



C

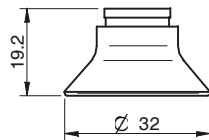


D



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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
36	78	98	—	—	—	15	25	10	18

### Material specifications

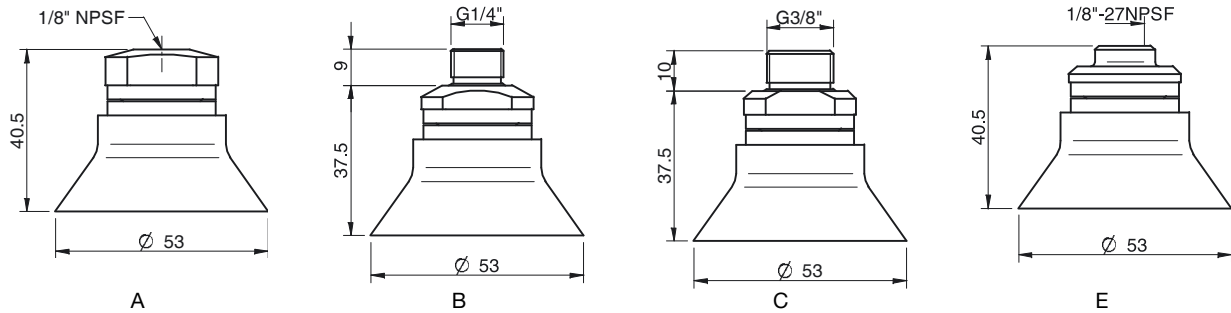
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200

### Material resistance

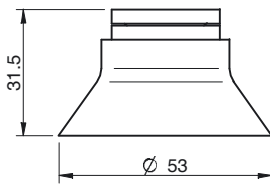
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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



	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 cm	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
3.5	8.5	11.0	3.5	6.5	7.5	0.37	13	1.0	0.9

### Material specifications

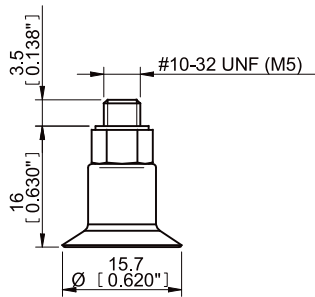
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

### Material resistance

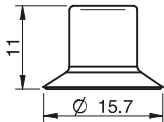
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
6.0	14.5	19.0	5.0	8.0	8.5	1.0	18	1.5	1.2

### Material specifications

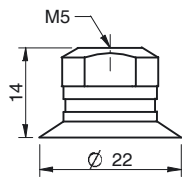
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200

### Material resistance

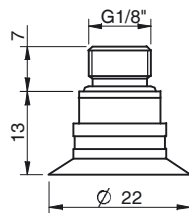
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## Ordering information

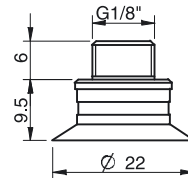
	Complete suction cups	Art. No.
A	Suction cup F20 Chloroprene, M5 female	0101259
A	Suction cup F20 Chloroprene, M5 female, with dual flow control valve	0101265
B	Suction cup F20 Chloroprene, G1/8" male, with mesh filter	0101260
B	Suction cup F20 Chloroprene, G1/8" male, with mesh filter and dual flow 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



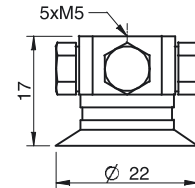
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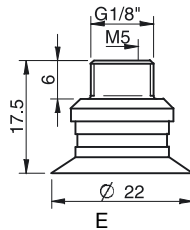
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C

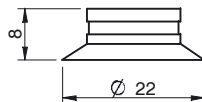


D



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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
9.0	19.5	25	8.0	9.0	10.0	1.1	22	1.5	1.8

### Material specifications

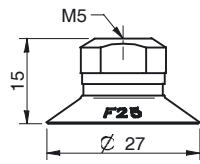
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200

### Material resistance

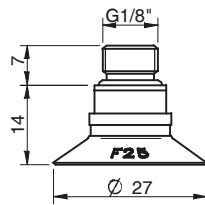
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## Ordering information

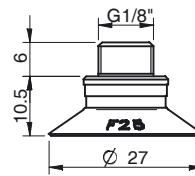
	Complete suction cups	Art. No.
A	Suction cup F25 Chloroprene, M5 female	0101292
B	Suction cup F25 Chloroprene, G1/8" male, with mesh filter	0101293
B	Suction cup F25 Chloroprene, G1/8" male, with mesh filter and dual flow control valve	0101299
C	Suction cup F25 Chloroprene, G1/8" male/M5 female, with 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



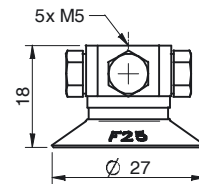
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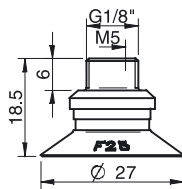
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C

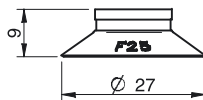


D



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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
12.0	25	31	11.0	16.0	20.0	2.0	25	2.0	2.2

### Material specifications

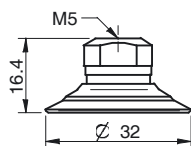
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

### Material resistance

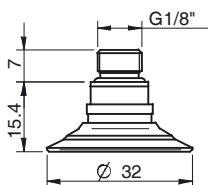
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## Ordering information

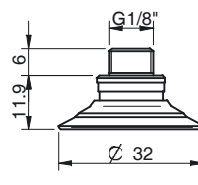
	Complete suction cups	Art. No.
A	Suction cup F30-2 Chloroprene, M5 female	0101325
A	Suction cup F30-2 Chloroprene, M5 female, with dual flow control valve	0101331
B	Suction cup F30-2 Chloroprene, G1/8" male, with mesh filter	0101326
B	Suction cup F30-2 Chloroprene, G1/8" male, with mesh filter and dual 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



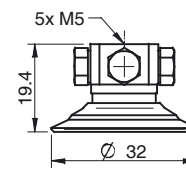
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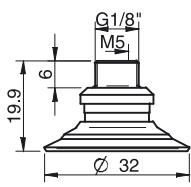
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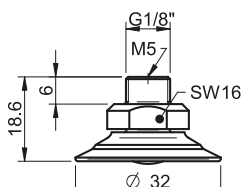
C



D

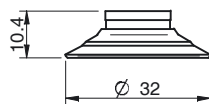


E



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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
20.0	40	50	15.0	25	30	4.8	52	2.5	5.5

### Material specifications

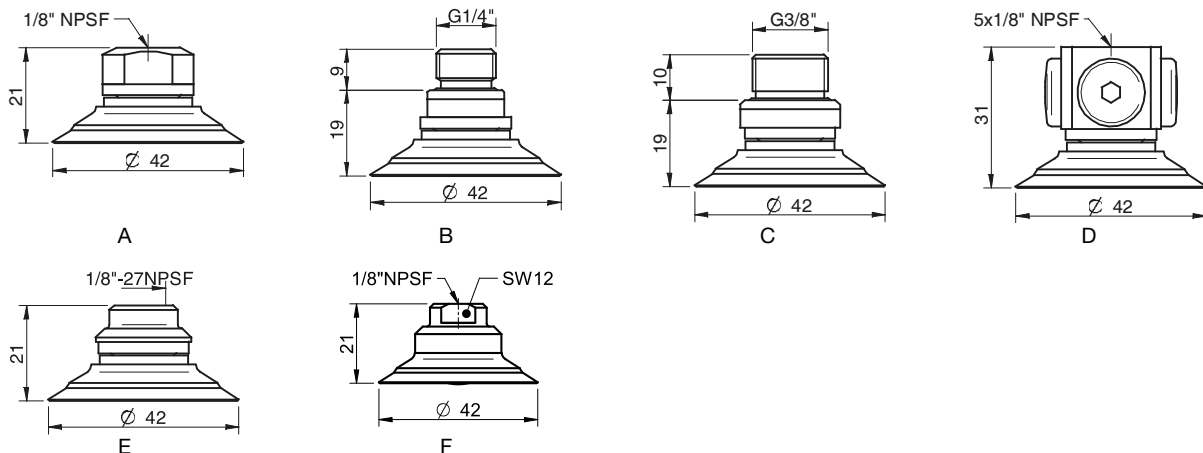
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

### Material resistance

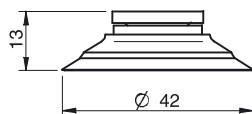
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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



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	Al/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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

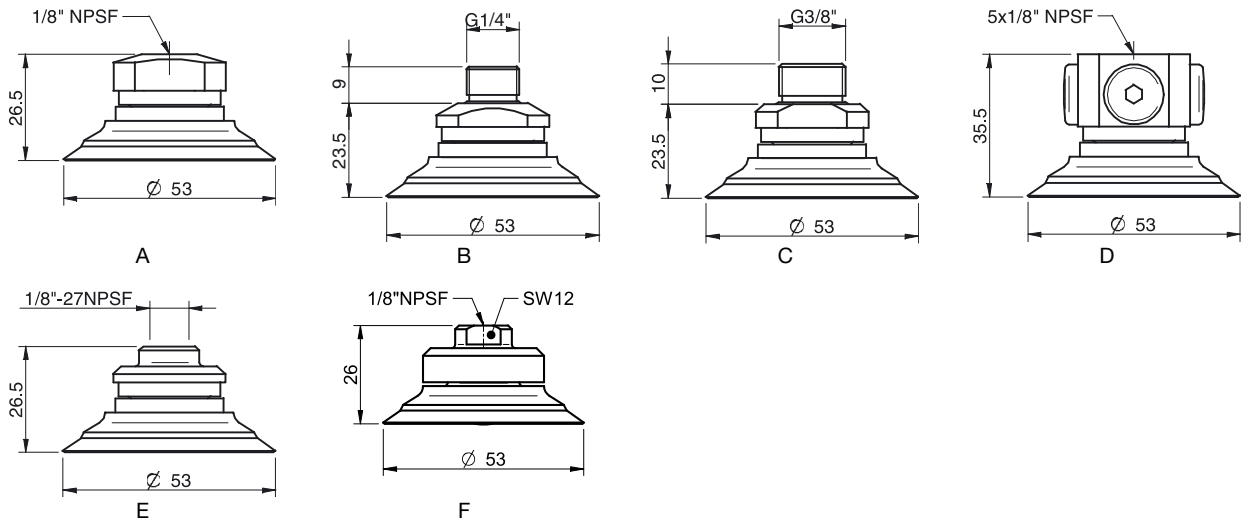
\* For a shorter period of time up to +160 °C

### Material resistance

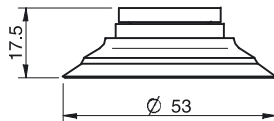
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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

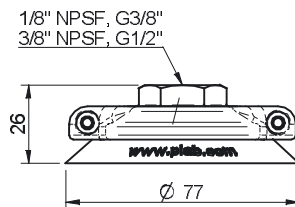
### Material resistance

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

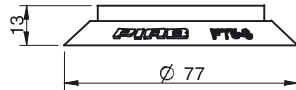
## Ordering information

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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

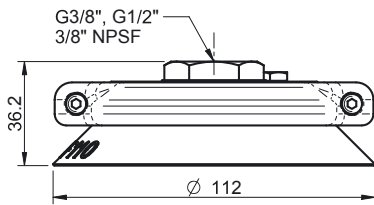
\* For a shorter period of time up to +160 °C

### Material resistance

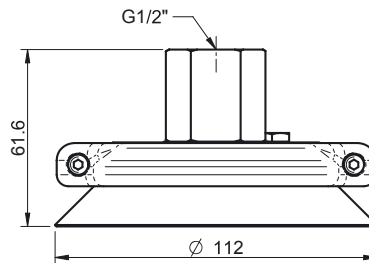
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

## 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

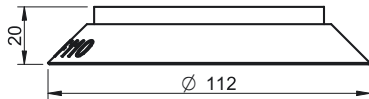


A



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 <sup>3</sup>	mm	mm	g
300	850	1100	250	600	800	160	500	6.0	200

### Material specifications

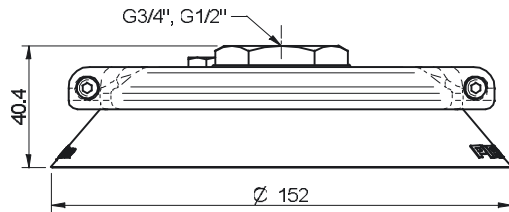
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

### Material resistance

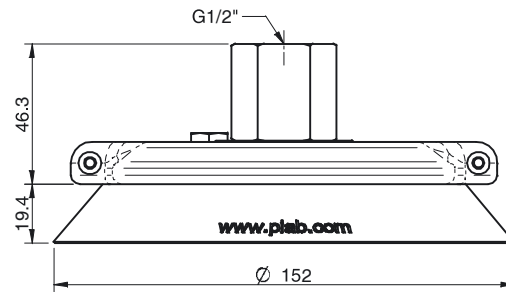
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## 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

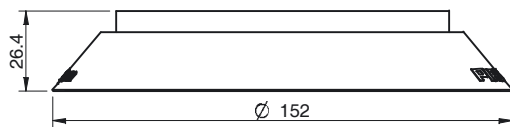


A



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 cm <sup>3</sup>	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

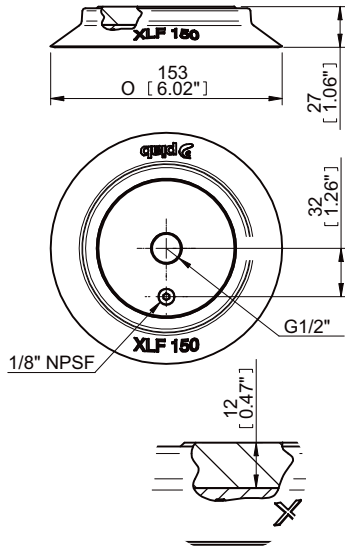
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	60	0-90

### Material resistance

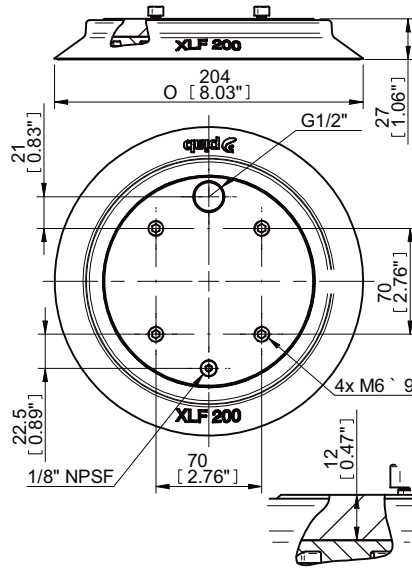
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good

### Ordering information

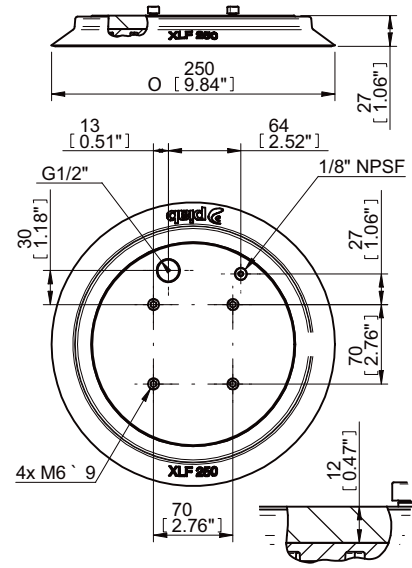
	Complete suction cups	Art. No.
A	XLF150 Extra Large Flat cup, G1/2" female	0127131
B	XLF200 Extra Large Flat cup, G1/2" female	0127132
C	XLF250 Extra Large Flat cup, G1/2" female	0127133
D	XLF300 Extra Large Flat cup, G1/2" female	0127134



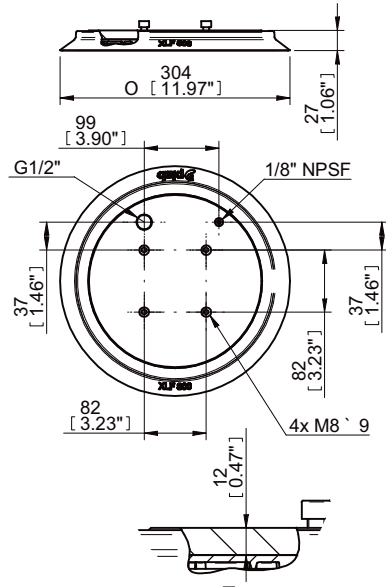
A



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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight with fitting g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
132	373	520	186	373	510	52	200	7.5	160

### Material specifications

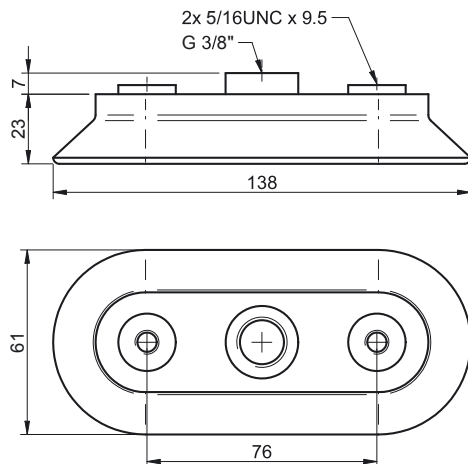
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile, NBR	Black	50	-20-100

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
0.03	0.10	0.15	—	—	—	0.003	4.0	0.10	0.012

### Material specifications

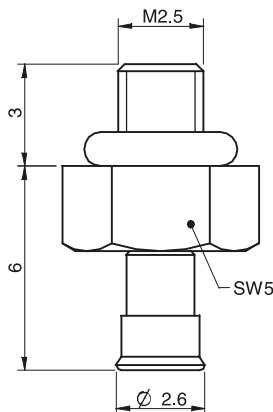
Material	Colour	Hardness °Shore A	Temperature range °C
Conductive silicone, CSIL	Black	50	-55–230

### Material resistance

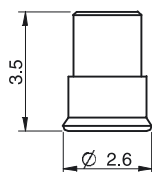
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
0.09	0.42	0.65	—	—	—	0.005	5.0	0.15	0.030

### Material specifications

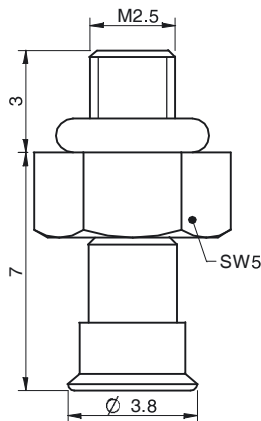
Material	Colour	Hardness °Shore A	Temperature range °C
Conductive silicone, CSIL	Black	50	-55–230

### Material resistance

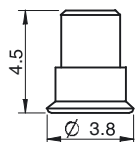
Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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

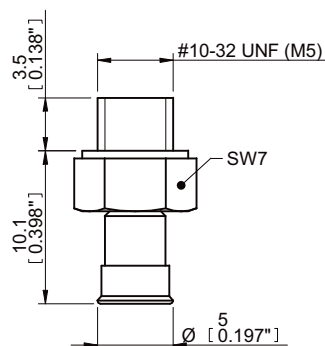
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40-110
Silicone, SIL	Red	50	-40-200

### Material resistance

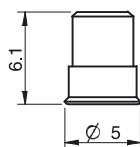
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### Ordering information

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



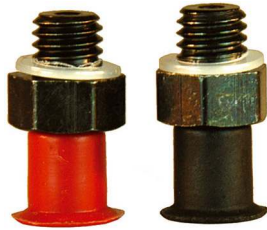
Rubber parts	Art. No.
Suction cup U4 Chloroprene	3150114
Suction cup U4 Silicone	3150114S



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

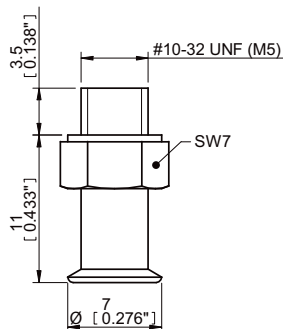
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

### Material resistance

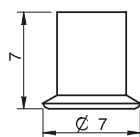
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### Ordering information

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



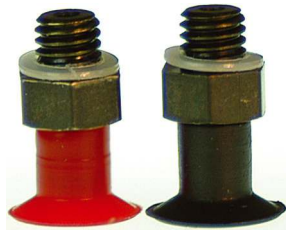
Rubber parts	Art. No.
Suction cup U6 Chloroprene	3150115
Suction cup U6 Silicone	3150115S



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 cm	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
1.0	2.9	3.9	1.0	2.9	3.4	0.10	6.0	0.50	0.16

### Material specifications

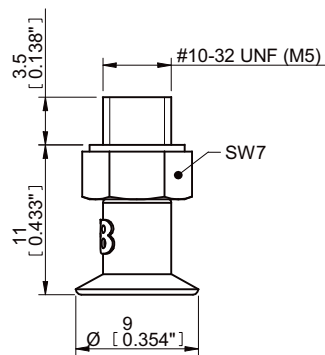
Material	Colour	Hardness °Shore A	Temperature range °C
Chloroprene, CR	Black	50	-40–110
Silicone, SIL	Red	50	-40–200

### Material resistance

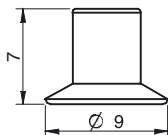
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

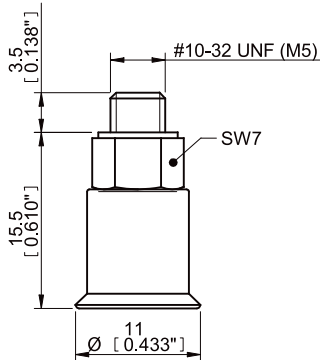
\*For a shorter period of time up to 160 °C

### Material resistance

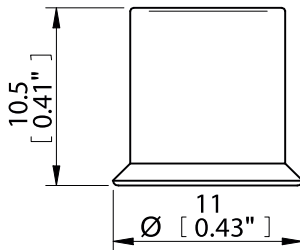
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

## 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

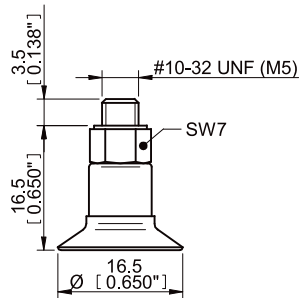
\*For a shorter period of time up to 160 °C

### Material resistance

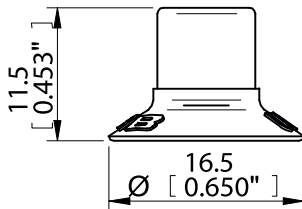
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

## 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 cm	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
3.5	8.4	11.0	3.5	5.4	5.9	0.50	8.0	1.5	0.70

### Material specifications

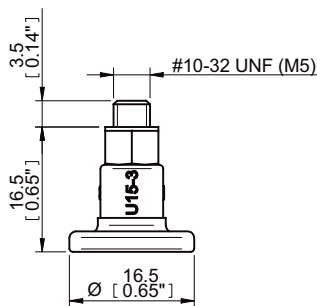
Material	Colour	Hardness °Shore A	Temperature range °C
Silicone, SIL	Red	40	-40-200

### Material resistance

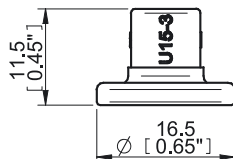
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

### 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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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*

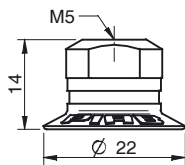
\*For a shorter period of time up to 160 °C

### Material resistance

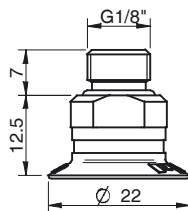
Material	Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Chloroprene, CR	Excellent	Fair	Good	Good	Fair	Poor	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent
HNBR	Excellent	Excellent	Excellent	Good	Excellent	Fair	Good	Excellent

## Ordering information

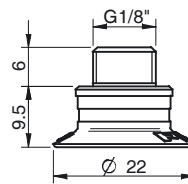
	Complete suction cups	Art. No.
A	Suction cup U20 Chloroprene, M5 female	0101373
A	Suction cup U20 Chloroprene, M5 female, with dual flow control valve	0101379
B	Suction cup U20 Chloroprene, G1/8" male, with mesh filter	0101374
B	Suction cup U20 Chloroprene, G1/8" male, with mesh filter and dual flow 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



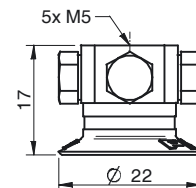
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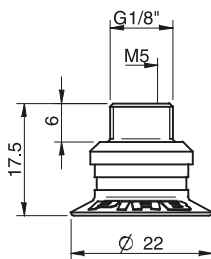
B



C

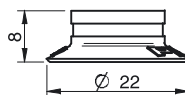


D



E

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



<b>Fittings</b>	<b>Art. No.</b>
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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
12.0	25.0	30	7.8	9.8	11.0	2.0	20.0	3.5	1.8

### Material specifications

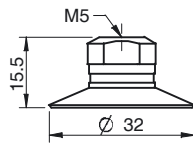
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

### Material resistance

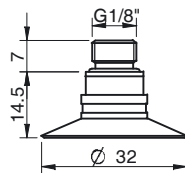
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## Ordering information

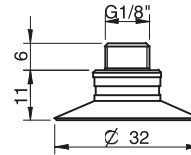
	Complete suction cups	Art. No.
A	Suction cup U30 Nitrile-PVC, M5 female	0101406
B	Suction cup U30 Nitrile-PVC, G1/8" male, with mesh filter	0101407
B	Suction cup U30 Nitrile-PVC, G1/8" male, with mesh filter and dual flow control valve	0101413
C	Suction cup U30 Nitrile-PVC, G1/8" male / M5 female, with 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



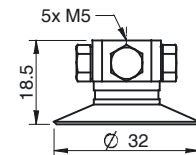
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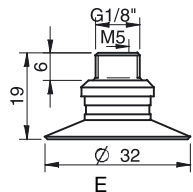
B



C

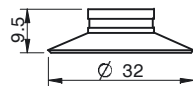


D



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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
20.0	39	49	14.0	22.0	27	5.5	30	4.5	4.0

### Material specifications

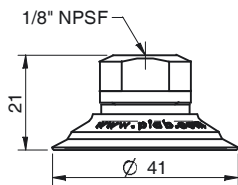
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

### Material resistance

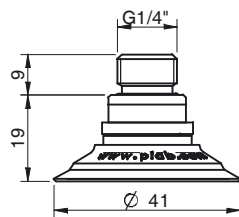
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## Ordering information

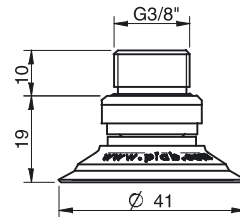
	Complete suction cups	Art. No.
A	Suction cup U40-2 Nitrile-PVC, 1/8" NPSF female, with mesh filter	0101623
B	Suction cup U40-2 Nitrile-PVC, G1/4" male, with mesh filter	0101618
B	Suction cup U40-2 Nitrile-PVC, G1/4" male, with mesh filter and dual flow control valve	0101625
C	Suction cup U40-2 Nitrile-PVC, 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



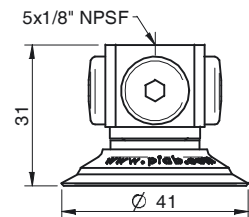
A



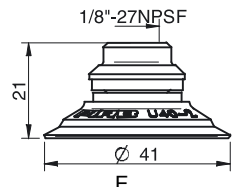
B



C

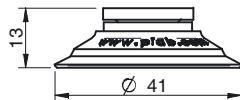


D



E

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 cm <sup>3</sup>	Min. curve radius mm	Max. vertical movement mm	Weight rubber part g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
35	73	92	20	37	44	12	35	6.0	10.0

### Material specifications

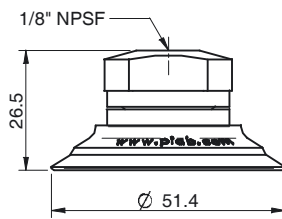
Material	Colour	Hardness °Shore A	Temperature range °C
Nitrile-PVC, NPV	Black	50	0-90
Silicone, SIL	Red	50	-40-200

### Material resistance

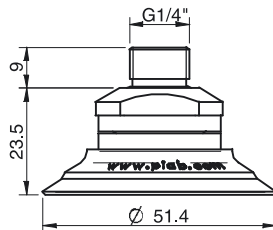
Material	Wear resistance	Oil	Weather & Ozone	Hydrolysis	Petrol	Concentrated acids	Alcohol	Oxidation
Nitrile-PVC, NPV	Excellent	Excellent	Good	Good	Excellent	Fair	Good	Good
Silicone, SIL	Good	Poor	Excellent	Fair	Poor	Poor	Good	Excellent

## Ordering information

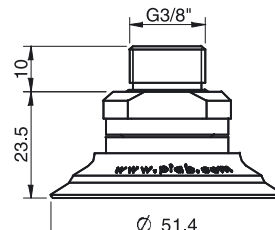
	Complete suction cups	Art. No
A	Suction cup U50-2 Nitrile-PVC, 1/8" NPSF female, with mesh filter	0101823
B	Suction cup U50-2 Nitrile-PVC, G1/4" male, with mesh filter	0101818
C	Suction cup U50-2 Nitrile-PVC, G3/8" male, with mesh filter	0101820
D	Suction cup U50-2 Nitrile-PVC, 5x1/8" NPSF female	0101822
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



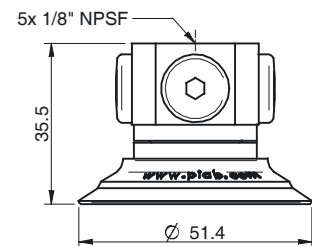
A



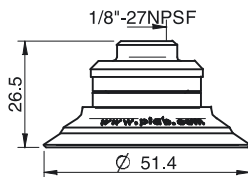
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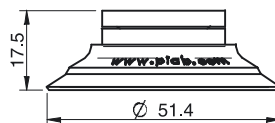


D



E

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.