

Oval Flat family (OF)



Oval suction cups are specially suitable for long and narrow objects. This program of oval suction cups has characteristics that are specially suited for handling of metal-sheet material.

Lifting forces

	Lifting force vertical to the surface, N, at vacuum level			Lifting force parallel to the surface, N, at vacuum level		
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa
OF10x30P	4	11	17	6	12	17
OF15x45P	9	27	41	6	20	34
OF25x70P (PU40°)	24	66	107	46	90	105
OF25x70P (PU60°)	24	77	118	42	127	161
OF40x110P (PU40°)	69	203	293	120	230	296
OF40x110P (PU60°)	74	200	303	98	228	410
OF55x150P (PU40°)	131	366	527	155	350	455
OF55x150P (PU60°)	134	376	558	128	338	477
OF70x175P (PU40°)	190	530	785	170	440	630
OF70x175P (PU60°)	180	570	860	200	555	750

General specifications

	Outer diameter, mm	Height, mm	Min. curve radius, mm	Max. vertical movement, mm	Volume, cm ³
OF10x30P	30.8x10.8	14.6	15	1	0.5
OF15x45P	45x15	17.15	30	1	1
OF25x70P	72.3x27.3	23	50	1.9	6
OF40x110P	113x43	17.5	77	3.1	21
OF55x150P	154x59	21	150	3	37
OF70x175P	180x75	25	130	5.7	80

Available materials

	PU40°	PU50°	PU60°
OF10x30P		●	
OF15x45P		●	
OF25x70P	●		●
OF40x110P	●		●
OF55x150P	●		●
OF70x175P	●		●

Material resistance

For more material information go to page 23.

Applications

Table shows typical applications for the suction cup. For more detailed information, please visit piab.com.

	Dry sheet metal	Corrugated / cardboard	Mark Free	Plastic injection molded parts
OF10x30P			●	
OF15x45P			●	
OF25x70P	●	●	●	●
OF40x110P	●	●	●	●
OF55x150P	●	●	●	●
OF70x175P	●	●	●	●

Fittings

For a table of possible fittings to use go to page 80, for technical information on all fittings visit piab.com.

Ordering information

For a complete list of available cups and combinations with further information visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.

Suction cups/grippers DURAFLEX® Single and dual

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 cm ³	Min. curve radius mm	Max. vertical movement mm	Weight with fitting g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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

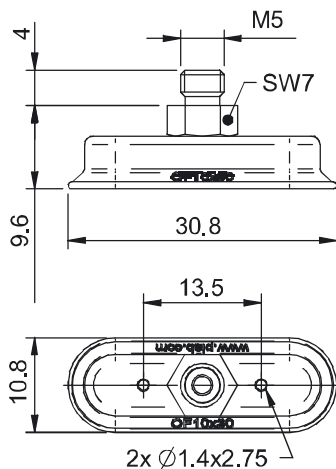
Material resistance

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 cm ³	Min. curve radius mm	Max. vertical movement mm	Weight with fitting g
20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
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

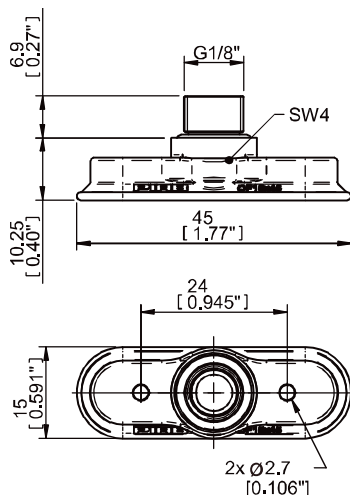
Material resistance

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 ³	Min. curve radius mm	Max. vertical movement mm	Weight with fitting g
	20 -kPa	60 -kPa	90 -kPa	20 -kPa	60 -kPa	90 -kPa				
PU40°	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

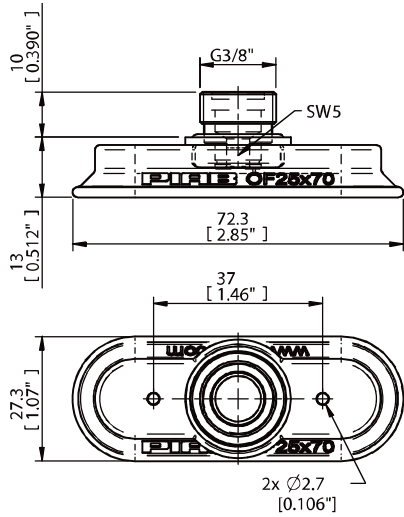
Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

Suction cups/grippers DURAFLEX® Single and dual

Ordering information

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



OF40x110P



Flat, oval suction cup with cleats

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

Lifting forces & Technical data

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

Material resistance

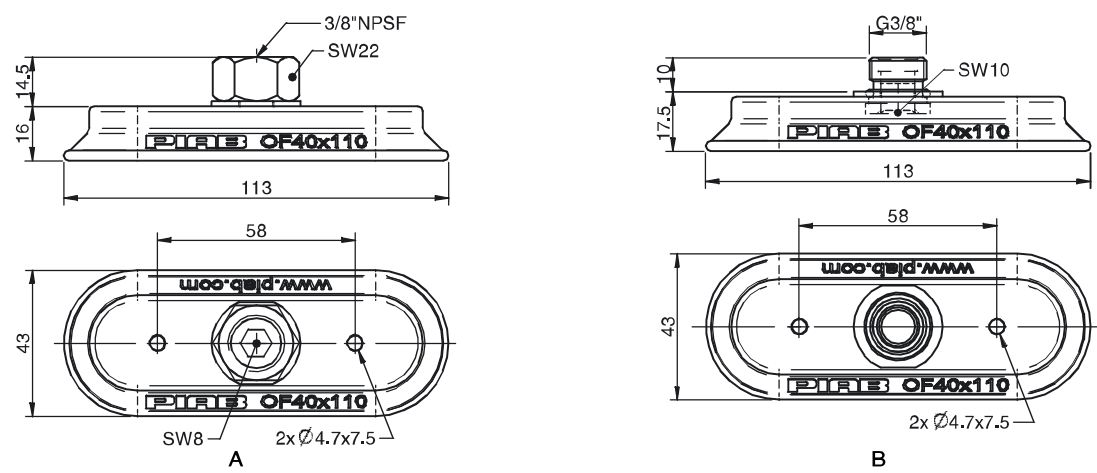
Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

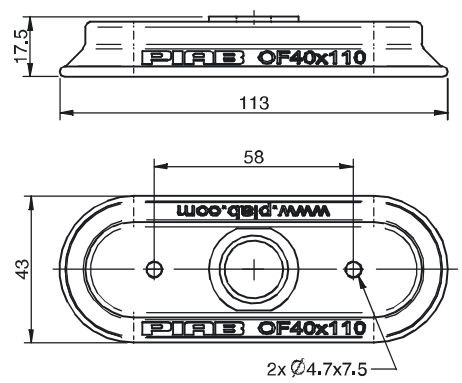
Suction cups/grippers DURAFLEX® Single and dual

Ordering information

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



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



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

OF55x150P



Flat, oval suction cup with cleats

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

Lifting forces & Technical data

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

Material resistance

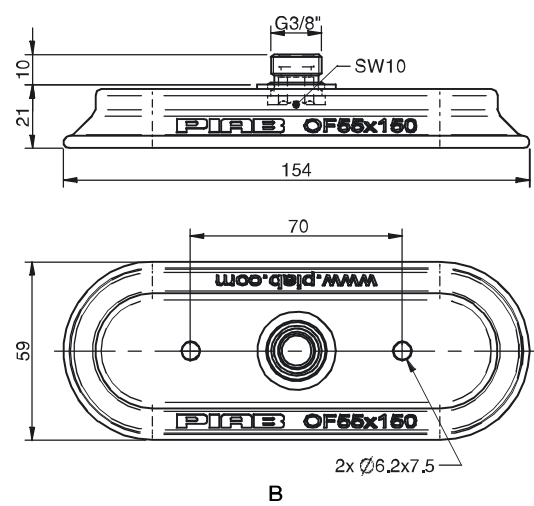
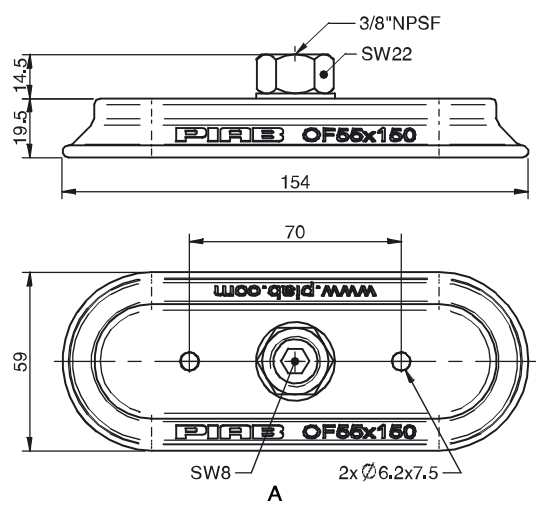
Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

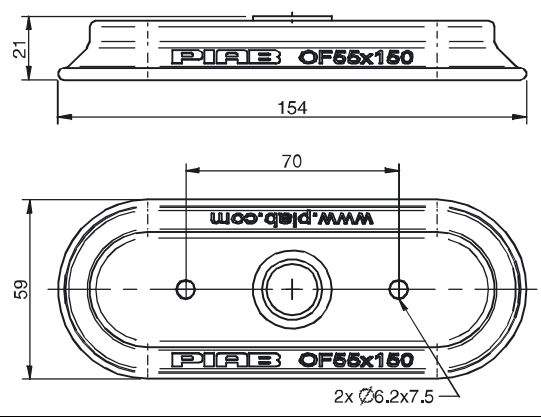
Suction cups/grippers DURAFLEX® Single and dual

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

Specifications subject to change without notice.

OF70x175P



Flat, oval suction cup with cleats

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

Lifting forces & Technical data

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

Material resistance

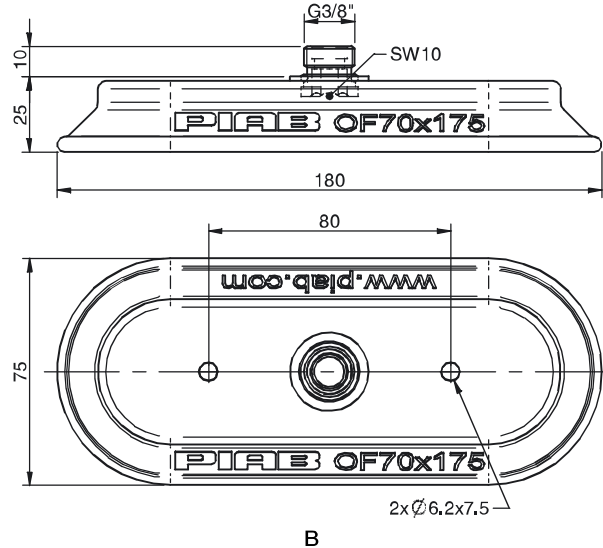
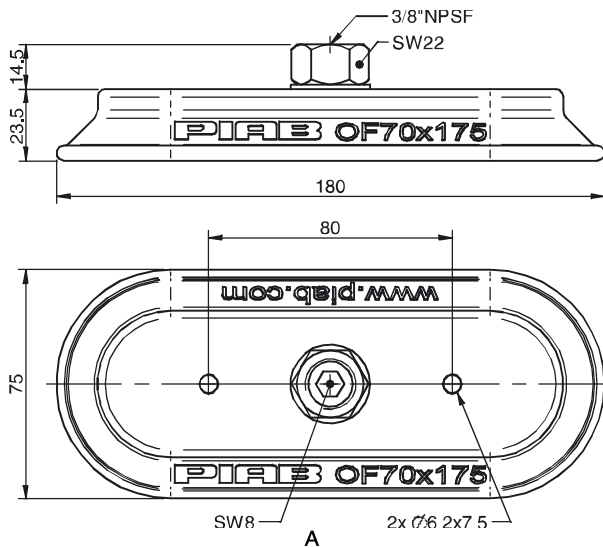
Wear resistance	Oil	Weather & ozone	Hydrolysis	Petrol	Concentrated acids	Ethanol	Methanol	Oxidation
Excellent	Excellent	Excellent	Fair**	Fair	Fair**	Fair	Poor	Poor

**Please contact Piab.

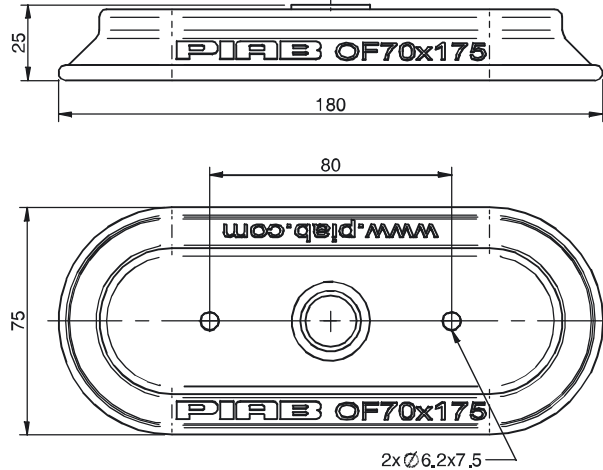
Suction cups/grippers DURAFLEX® Single and dual

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