

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

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

FITTING & FLOW RESTRICTORS

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

BELLOWS

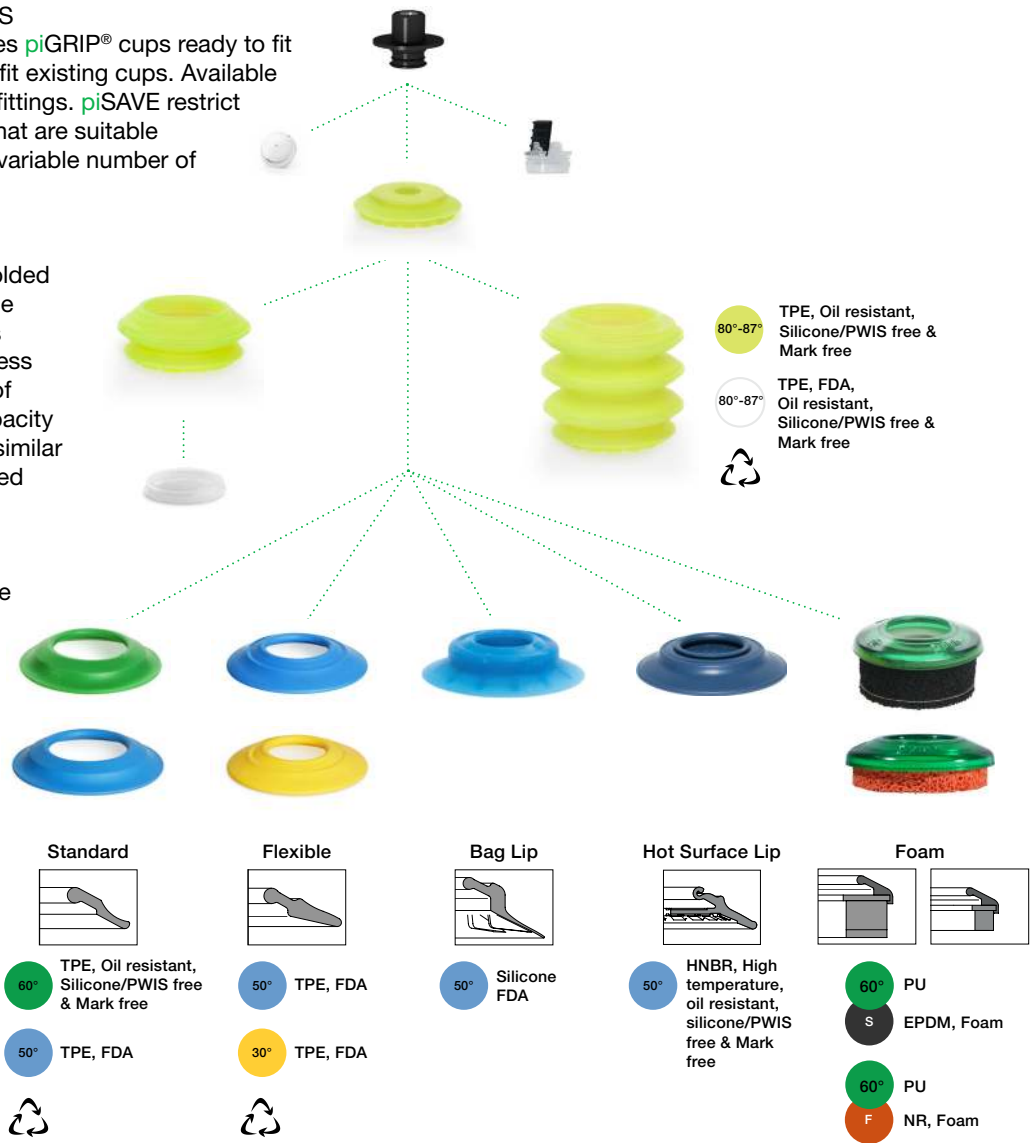
Firm and Stable 1-, 3- and 6- folded bellows allows for faster machine speeds. Thin-wall design makes them faster to compress using less force and energy. The strength of the material increases lifting capacity between 30-50% compared to similar conventional cups. FDA-approved material available (transparent).




FILTERS

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

LIPS


Get an excellent grip on almost anything with the right lip for your application. Choose standard lips from 60° shore to extremely flexible, soft lips in 30° shore. Tailor-made Bag lips for handling bags and pouches. Foam lips for objects which are difficult to grip with traditional cups. High temperature lips are also available when so needed.



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

Lips are available as spare parts.


G . S50T60 . B3 . S1 .



Fitting

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

Option



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



FDA approved option includes material certificate

Code	Description
	No*
FDA	US Food and Drug Administration

*) Leave blank for no certificate.

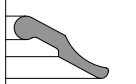
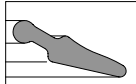
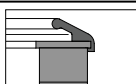

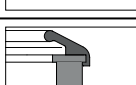
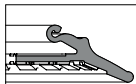
*) Steel material.
Push-on fitting sold separately.

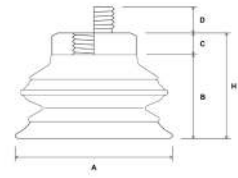
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Option
Fitting
Support
Bellows
Lip



Suction cup dimensions, mm

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



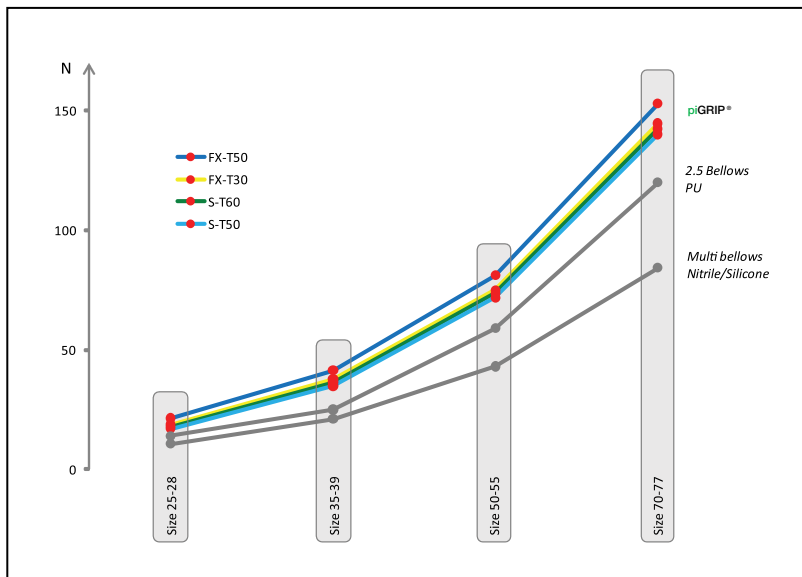
Build height:

$$B + C = H$$

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

piGRIP® Material Data

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



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





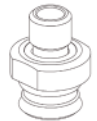



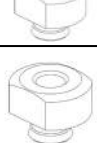

Material Specifications

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

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

**) FDA approved option in transparent material.

Fitting dimensions, mm

Type	Code	Dim. C	Dim. D	Description	Recommended fitting size for best performance*			
					S25 FX28 FLI25 BG34 HS29	S35 FX39 FLI35 BG48 HS39	S50 FX55 FLI50 BG63 HS58	S70 FX77 FLI70 HS79
	G18M	5	6	Fitting G1/8" male	x	x	x	
	G14M	6	9	Fitting G1/4" male	x	x	x	x
	G38M	6	10	Fitting G3/8" male		x	x	x
	G12M	6	10	Fitting G1/2" male			x	x
	GL18M	1.5	6	Fitting G1/8" low male	x	x	x	
	GL14M	1.5	9	Fitting G1/4" low male	x	x	x	x
	GL38M	1.5	10	Fitting G3/8" low male		x	x	x
	NT18M	5	7	Fitting 1/8" NPT male	x	x	x	
	NT14M	6	11	Fitting 1/4" NPT male	x	x	x	x
	NT38M	6	11.5	Fitting 3/8" NPT male		x	x	x
	NT12M	6	15	Fitting 1/2" NPT male			x	x
	NTL18M	1.5	7	Fitting 1/8" NPT low male	x	x	x	
	NTL14M	1.5	11	Fitting 1/4" NPT low male	x	x	x	x
	NTL38M	1.5	11.5	Fitting 3/8" NPT low male		x	x	x
	MM6M	5	6	Fitting M6 male	x	x		
	MMF8M	5	6	Fitting M8 x 1 male	x	x	x	
	MM10M	6	10	Fitting M10 male	x	x	x	
	MM12M	6	10	Fitting M12 male	x	x	x	
	MMF14M	6	12	Fitting M14 x 1 male	x	x	x	x
	MMF16M	6	12	Fitting M16 x 1.5 male		x	x	x
	G14F	10	-	Fitting G1/4" fem	x	x	x	
	G38F	13	-	Fitting G3/8" fem		x	x	x
	G12F	14	-	Fitting G1/2" fem			x	x
	NS18F**	7	-	Fitting 1/8" NPSF fem	x	x	x	
	NS14F	10	-	Fitting 1/4" NPSF fem	x	x	x	x
	NS38F	13	-	Fitting 3/8" NPSF fem		x	x	x
	NS12F	14	-	Fitting 1/2" NPSF fem			x	x
	NS518F**	18	-	Fitting 5x1/8" NPSF fem	x	x	x	
	NT14F	12	-	Fitting 1/4" NPT fem	x	x	x	x
	NT38F	13	-	Fitting 3/8" NPT fem		x	x	x
	U12F	12	-	Fitting 1/2" UNC fem			x	x
	MM5F	6	-	Fitting M5 fem	x	x		
	MM6F	6	-	Fitting M6 fem	x	x		
	MM8F	7	-	Fitting M8 fem	x	x	x	
	MM10F	7	-	Fitting M10 fem	x	x	x	
	MM12F	12	-	Fitting M12 fem	x	x	x	
	MMF16F	13	-	Fitting M16 x 1.5 fem		x	x	x

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

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

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

Specifications subject to change without notice.