

Value Line

# VALUE LINE

Good performance at a value price



# Value Line

Piab has a wide experience in various applications and industries, from pick and placing small candies to handling large heavy boxes. We strive to increase productivity, thus reinforcing your edge in the market. We also aim to reduce your energy consumption and improve your working environment. Partnering with Piab means more than having a reliable supplier of vacuum solutions.

## Value Line

Piab has traditionally focused on developing products and being the market leader in applications that are challenging or demanding from a vacuum point of view.

We are now expanding our focus and looking into more basic applications where speed and surfaces to be gripped are less challenging, such as with case erectors, loading sheet metals, injection molding etc.

The new product line is called Value Line – Good performance at a value price.

However, for more challenging applications our other lines of suction cups such as piGRIP®, DURAFLEX® etc., are still available.

## Other benefits of Value Line

The Value Line is available globally and can be delivered to you for off the shelf delivery.

To simplify the buying, Value Line suction cups are available in single pieces and at a discounted price for big packs with breakpoints at 30 and 100.

(The recommended prices are available at [piab.com/valueline](https://piab.com/valueline))

## Typical applications for Value Line

- Sheet metal loading
- Case erecting
- Injection molding

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# Typical applications for Value Line

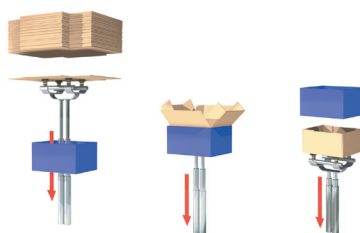
Piab's Value Line vacuum products are well suited to handle or clamp generic materials such as cardboard, smooth plastic (32 – 140/176\* °F) and dry metal sheets in applications with low/medium machine speed.

*\* Max Temperature short term contact, <10 sec and 50% intermittence, ambient temperature 59 – 86 °F, mechanical properties will start to degrade.*



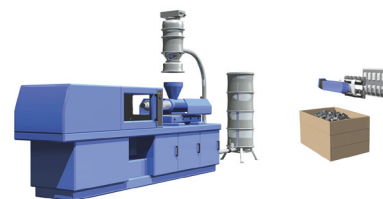
## Sheet metal loading and unloading

The Value Line Flat-Concave cups have stability and a low build height that fits gripper tools for metal forming machines, such as folding, bending and laser cutting machines. For light weight installations on grippers and a decentralized vacuum safety approach with high gripper flexibility, the Value Line ejectors are an appropriate choice.



## Case and carton erecting

To minimize case erectors jamming due to case-to-case variation and imperfections, the compliant and abrasion resistant Value Line cups with built in level compensation (even on the Flat-Concave style cups) are a good and reliable choice. A broad selection of sizes and models facilitates finding the correct cup for your application.



## Parts removal – injection molding automation

If picking temperature is below 176°F and the surface is smooth, the mark and silicone-free Value Line cups are suitable for plastic part removal of injection molds. The light weight Value Line ejectors, with basic functionality, is a cost-effective vacuum generator choice for gripper tools in injection mold automation.

# Vacuum ejector pumps & suction cups

Value Line is Piab's line of cost-effective vacuum automation components. Value Line products offer good performance at cost-effective pricing. For applications and machines where "value for the money" is mandatory, Piab's Value Line is the solution.



## **Value Line ejector – Inline design**

Light weight and small size ejector. Compressed air and vacuum ports are "inline" with integrated push-in style fittings. Easy installation directly on the hose makes for a close connection to the suction cup.



## **Value Line ejector T-design**

Light weight and small size ejector. Integrated push-in fitting for compressed air, vacuum and exhaust ports. Exhaust air can easily be piped away if needed. Mounting bracket is included.



## **Value Line cups – Flat Concave design**

Program of 7 flat-concave cups from 20 to 75mm [0.79 to 2.95 in] diameter. The design gives good stability, a possibility to handle curved surfaces and it gives a small degree of level compensation thanks to the slightly concave design.



## **Value Line cups – Bellows design**

Program of 7 bellows cups from 20 to 75mm [0.79 to 2.95 in] diameter. The bellows design allows for more level compensation (less machine accuracy needed) and a possibility to handle curved areas and small radius. Limited capacity to handle forces parallel to the surface of the object.



## **Value Line cups – Long Bellows design**

Program of 7 long bellows cups from 20 to 75mm [0.79 to 2.95 in] diameter. The long bellows gives extra level compensation (less machine accuracy needed) and better ability to grip on difficult geometries. The long stroke can be used to help separate thin sheets/objects. Not recommended when force is parallel to surface of the object.



## **Value Line – Cup fittings**

Optional push-on fittings with male and female threads in same fitting for easy installation. An internal hexagon grip makes it easy to tighten and untighten the cup. Material brass.

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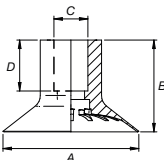
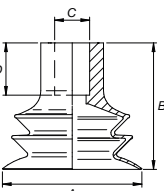
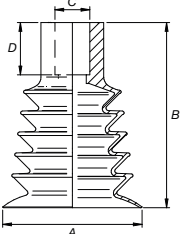
# Technical data

A broad selection of new Value Line suction cups in flat, bellows and long bellows designs.



## Value Line cups

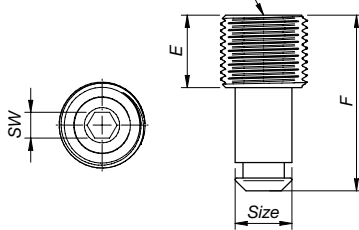
- ▶ Suction cup program suitable for standard applications, such as carton and cardboard erecting (low to medium speed), metal/wood sheet loading and unloading, parts removal from injection molding machines and clamping/holding.
- ▶ Durable material with good wear resistance.
- ▶ Thin sealing lip gives good grip even on slightly textured and corrugated surfaces.
- ▶ Available with metal fitting or push-on directly to a pipe.
- ▶ Every cup size has a few fitting options.

Type	Name	Lifting forces vertical to the surface, lbf, at vacuum level 15 -inHg	Dim. A in	Dim. B in	Dim. C in	Dim. D in	Part no.
Flat Concave 	VL20FC	2.25	Ø0.79	0.59	Ø0.24	0.35	02.02.096
	VL25FC	3.82	Ø0.98	0.62	Ø0.24	0.35	02.02.097
	VL30FC	5.17	Ø1.18	0.69	Ø0.24	0.35	02.02.099
	VL40FC	8.54	Ø1.57	1.06	Ø0.39	0.59	02.02.100
	VL50FC	13.0	Ø1.97	1.14	Ø0.39	0.59	02.02.101
	VL60FC	17.8	Ø2.36	1.40	Ø0.39	0.71	02.02.102
	VL75FC	25.4	Ø2.95	1.51	Ø0.47	0.71	02.02.103
Bellows 	VL20BX	1.57	Ø0.79	0.77	Ø0.24	0.35	02.02.109
	VL25BX	2.70	Ø0.98	0.88	Ø0.24	0.35	02.02.110
	VL30BX	3.60	Ø1.18	1.01	Ø0.24	0.35	02.02.111
	VL40BX	6.52	Ø1.57	1.43	Ø0.39	0.59	02.02.113
	VL50BX	9.89	Ø1.97	1.72	Ø0.39	0.59	02.02.114
	VL60BX	13.5	Ø2.28	2.06	Ø0.39	0.71	02.02.115
	VL75BX	20.0	Ø2.82	2.41	Ø0.47	0.71	02.02.116
Long Bellows 	VL20BL	1.35	Ø0.79	1.10	Ø0.24	0.35	02.02.117
	VL25BL	2.47	Ø0.98	1.32	Ø0.24	0.35	02.02.118
	VL30BL	3.37	Ø1.18	1.46	Ø0.24	0.35	02.02.119
	VL40BL	5.17	Ø1.57	2.09	Ø0.39	0.59	02.02.120
	VL50BL	7.87	Ø1.97	2.46	Ø0.39	0.59	02.02.121
	VL60BL	10.8	Ø2.36	3.00	Ø0.39	0.71	02.02.122
	VL75BL	17.1	Ø2.95	3.65	Ø0.47	0.71	02.02.123

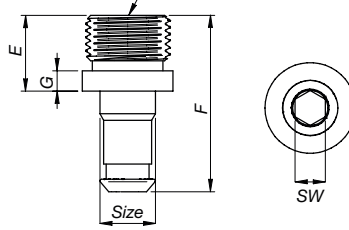
## Fittings (brass)

## Fitting for cup

Size External – Internal thread



Size External – Internal thread



VL20FC		
VL25FC		
VL30FC		
VL20BX	VL40FC	VL60FC
VL25BX	VL50FC	VL75FC
VL30BX	VL40BX	VL60BX
VL20BL	VL50BX	VL75BX
VL25BL	VL40BL	VL60BL
VL30BL	VL50BL	VL75BL

## Size and threads

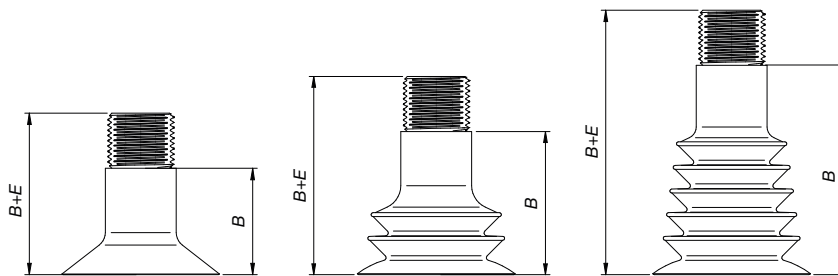
Size  
inDim. E  
inDim. F  
inDim. G  
in

SW

Part no.

G1/8" – M5 Diameter 6	Ø0.24	0.43	0.91	0.12	3	02.02.156	●		
G1/4" – G1/8" Diameter 6	Ø0.24	0.55	1.02	0.12	3	02.02.157	●		
G1/4" – G1/8" Diameter 10	Ø0.39	0.59	1.38	0.16	6	02.02.158		●	
G1/4" – G1/8" Diameter 12	Ø0.47	0.59	1.57	0.16	6	02.02.159			●
G3/8" – G1/4" Diameter 10	Ø0.39	0.59	1.38	0.16	6	02.02.164		●	
G3/8" – G1/4" Diameter 12	Ø0.47	0.59	1.57	0.16	6	02.02.165			●
NPT 1/8" – M5	Ø0.24	0.39	0.87	n/a	3	02.02.160	●		
NPT 1/4" – NPSF 1/8"	Ø0.24	0.59	1.06	n/a	3	02.02.161	●		
NPT 1/4" – NPSF 1/8"	Ø0.39	0.59	1.38	n/a	6	02.02.162		●	
NPT 1/4" – NPSF 1/8"	Ø0.47	0.59	1.54	n/a	6	02.02.163			●
NPT 3/8" – NPSF 1/4"	Ø0.39	0.59	1.38	n/a	6	02.02.166		●	
NPT 3/8" – NPSF 1/4"	Ø0.47	0.59	1.54	n/a	6	02.02.167			●

## Build height, B+E



## Material specification

Material	TPE-U
Color	Purple
Temperature	32 – 140/176* °F

\* Max Temperature short term contact, <10 sec and 50% intermittence, ambient temperature 59 – 86 °F, mechanical properties will start to degrade.

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# Technical data

Vacuum ejector-pumps in small and light weight designs for easy installation.



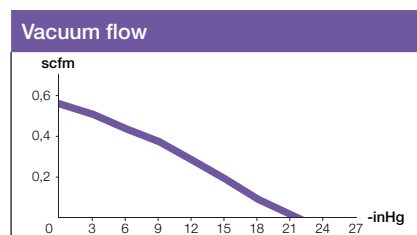
## Value Line ejectors

- ▶ Ejector cartridge with improved vacuum performance compared to corresponding size conventional single-stage ejector.
- ▶ Ejector cartridge without flap valves give high reliability in dirty and dusty environments. Virtually no clogging.
- ▶ Light weight body.
- ▶ Integrated push-in fittings for quick and low cost installation.
- ▶ Available in "inline" and "T-design" version. The T-design is suitable if exhaust air needs to be piped away.

## Technical data

Description	Unit	Value
Material		PA, NBR, SS, CuZn, Al*, Ni**
Temperature, range	°F	14 – 176
Feed pressure, max.	psi	101.5
Optimal feed pressure	psi	72.5

\* 02.02.360, \*\* 02.02.191.



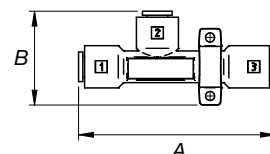
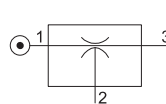
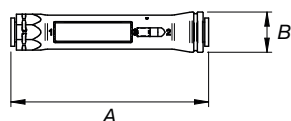
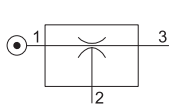
## Vacuum performance

Description	Air consumption* scfm	Max vacuum* -inHg	Evacuation time, s/cf, to 15 -inHg*	Part no.
Inline vacuum generator 6mm	0.68	21	73.7	02.02.360
T-design vacuum generator 6mm	0.68	21	73.7	02.02.187
T-design vacuum generator 1/4"	0.68	21	73.7	02.02.191

\* At optimal feed pressure.

## Technical data, specific

Description	Noise level dBA	Weight oz	Connection, vacuum	Connection, compressed air	Dim. A in	Dim. B in	Part no.
Inline vacuum generator 6mm	70 – 83	0.42	Ø6 mm	Ø6 mm	2.76	0.56	02.02.360
T-design vacuum generator 6mm	72 – 78	0.42	Ø6 mm	Ø6 mm	2.61	1.24	02.02.187
T-design vacuum generator 1/4"	72 – 78	0.42	Ø1/4"	Ø1/4"	2.61	1.24	02.02.191



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