

## VACUUM PRODUCTS



456

PIAB  
Product Overview

New



460

PIAB  
Suction Cups – MX Range

New



462

PIAB  
piGRIP Suction Cups



463

PIAB  
Suction Cups – U, F, B,  
Duraflex OB &  
Duraflex OF Ranges



468

PIAB  
Friction Suction Cups – Duraflex  
DCF, Duraflex BFF, Duraflex OBF,  
Duraflex FCF, Duraflex OCF &  
Duraflex BFFT Ranges



470

PIAB  
FDA Approved Suction Cups  
– F-FDA, B-FDA Ranges



471

PIAB  
Suction Cups – B-BL, F-BX,  
F-OB & P-D Food Ranges



474

PIAB  
Value Line Brass Fittings



475

PIAB  
Value Line  
Vacuum Ejector Pumps

## VACUUM PRODUCTS



476

PIAB  
Value Line Suction Cups



479

PIAB  
piINLINE® Vacuum Ejectors



480

PIAB  
piCLASSIC® Classic Pumps



482

PIAB  
piCOMPACT® Micro  
Integrated Controls Ejectors



484

PIAB  
piCOMPACT®23 smart  
Vacuum Generators

New



487

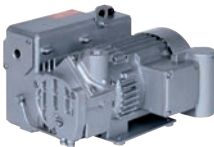
PIAB  
Vacuum Filters



488

PIAB  
End Of Arm Tooling  
Components (EOAT)

New  
Additions



492

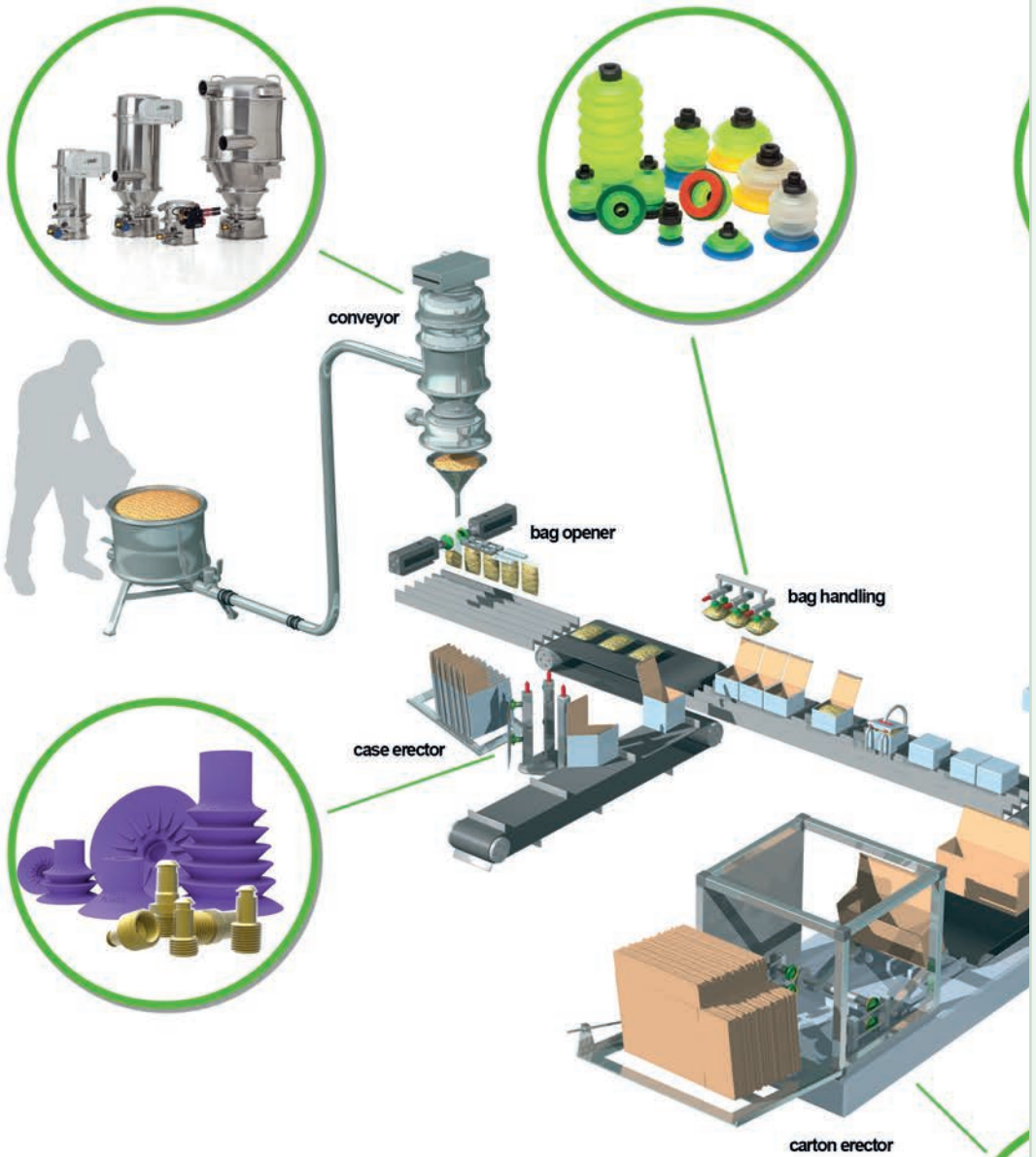
ELMO RIETSCHLE  
Rotary Vane Vacuum Pumps  
& Blowers



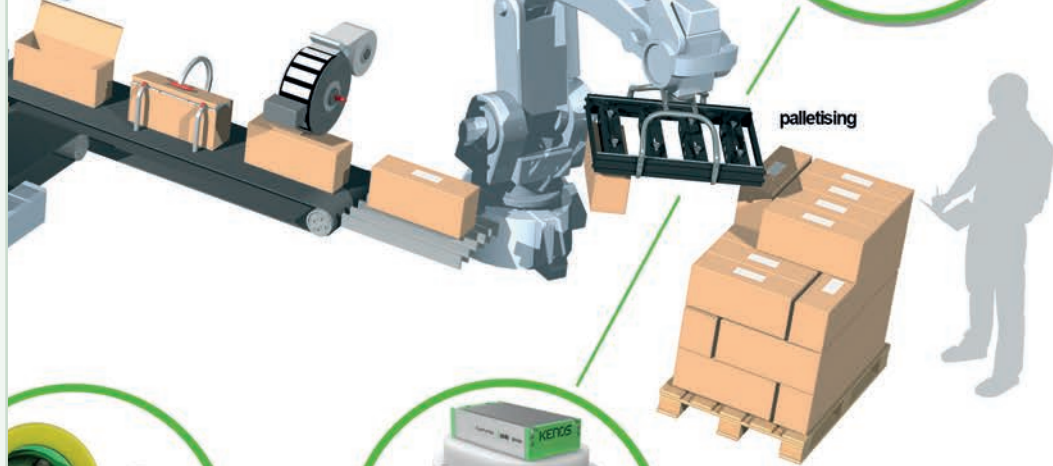
493

ELMO RIETSCHLE  
Vacuum Pumps & Accessories

WENZ



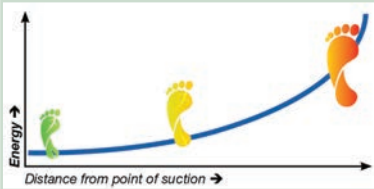
# Evolving automation



## AN ECO-FRIENDLY VACUUM SYSTEM



By never using more energy than absolutely necessary, companies can reduce their carbon footprint as well as their costs. Piab can work with you to achieve the lowest possible energy consumption.



### ENVIRONMENTAL INDEX

Your pump will require less compressed air when placed close to the point of suction, thus reducing CO<sub>2</sub> emissions and energy consumption.

The graph demonstrates the relationship between environmental impact and the distance of the pump from the point of suction.

### BEST TO USE A DECENTRALISED VACUUM SYSTEM

A decentralised system with the vacuum pump / cartridge placed directly at the point of suction eliminates the risk of loss in the vacuum piping and the need for expensive, oversized components. A centralised vacuum system is designed to have one vacuum source for multiple suction points.

- Lowest energy usage
- Fastest cycle time
- Safest product handling
- Most flexible design for zoning
- Easiest troubleshooting
- Independently working suction cups
- Most consistent / even performance



### IF NOT, DESIGN A CENTRALISED VACUUM SYSTEM




A centralised vacuum system is designed to have one vacuum source for multiple suction points.

- Easy installation
- Easy vacuum sensing and controls
- Light end-of-arm tooling
- Simple filtration options
- Some loss in system performance due to distance



Contact your distributor for further information

## SUCTION CUPS / GRIPPERS INTRODUCTION

SUCTION CUP CATEGORY	FEATURES	APPLICATIONS
 <p>piGRIP® Modular suction cups</p>	<ul style="list-style-type: none"> <li>• Unique modular suction cup concept with individually optimised lips and bellows for gripping, lifting and height compensation on almost any kind of object.</li> <li>• A large selection of fittings makes piGRIP cups ready to fit new machines and easy to retrofit.</li> <li>• The material is 100% recyclable.</li> <li>• Available in FDA approved qualities: silicone (PWIS) free and mark free versions.</li> <li>• The combination of firm bellows and soft lips will allow for high machine speeds.</li> <li>• There is also a fitting that has an ejector integrated, the COAX® in piGRIP for creating a decentralised pump.</li> </ul>	<p>Smooth, textured, uneven and also very rough surfaces on objects such as plastic pieces, wood, sheet metal (dry), glass, corrugated cardboard, carton, food, tiles, etc.</p>
 <p>DURAFLEX® Single durometer</p>	<ul style="list-style-type: none"> <li>• Manufactured in a material that features the elasticity of rubber and wear resistance of polyurethane.</li> <li>• The material is silicone free and mark free.</li> <li>• Has an exceptional elastic memory.</li> <li>• The single durometer DURAFLEX cups are extra wear resistant and long lasting.</li> </ul>	<p>Smooth surfaces on objects such as plastic pieces, furniture parts, sheet metal (dry), glass, solar panels, etc.</p>
 <p>DURAFLEX® Dual durometer</p>	<ul style="list-style-type: none"> <li>• Manufactured in a material that features the elasticity of rubber and wear resistance of polyurethane.</li> <li>• The material is silicone free and mark free.</li> <li>• Has an exceptional elastic memory.</li> <li>• The dual durometer DURAFLEX cups have firm bellows or body and a soft pliable lip.</li> <li>• The suction cup is then stable, durable and flexible with excellent sealing properties.</li> </ul>	<p>Textured, uneven and also very rough surfaces on objects such as plastic pieces, wood, sheet metal (dry), glass, corrugated cardboard, carton, tiles, etc.</p>



SUCTION CUP CATEGORY	FEATURES	APPLICATIONS
 <p><b>DURAFLEX® Friction</b></p>	<ul style="list-style-type: none"> <li>• Manufactured in a material that features the elasticity of rubber and wear resistance of polyurethane.</li> <li>• The material is silicone free and mark free.</li> <li>• Has an exceptional elastic memory.</li> <li>• Has an exceptional grip / shear force of oily surfaces.</li> <li>• Wear on the cups will not degrade the shear / grip performance; it will improve.</li> <li>• These cups are outstanding for handling oily metal sheets with high speed acceleration.</li> </ul>	Oily metal sheets and other lubricated surfaces.
 <p><b>DURAFLEX® Bag</b></p>	<ul style="list-style-type: none"> <li>• Manufactured in a material that features the elasticity of rubber and wear resistance of polyurethane.</li> <li>• The material is silicone free and mark free.</li> <li>• Has an exceptional elastic memory.</li> <li>• Specially designed for plastic bag handling.</li> <li>• The unique suction cup fitting allows the high initial flow needed for a secure grip.</li> <li>• The dual hardness suction cup with soft lip and firm bellows offers better sealing capabilities.</li> <li>• Stable and secure handling.</li> </ul>	Plastic bag handling.
 <p><b>FDA</b></p>	<ul style="list-style-type: none"> <li>• The material is free from colour pigments.</li> <li>• The silicone material complies with FDA (FDA 21 CFR 177.2600).</li> <li>• Meets EU's regulation EU 1935/2004.</li> <li>• Wide temperature range.</li> <li>• Available from very small sizes.</li> </ul>	Contact with food or FDA environments.
 <p><b>Silicone</b></p>	<ul style="list-style-type: none"> <li>• Durable silicone material.</li> <li>• Soft and pliable.</li> <li>• Possible to get a good grip on non-smooth surfaces.</li> <li>• Wide temperature range.</li> <li>• Available from very small sizes.</li> <li>• Options with detectable silicone material and conductive / anti-static silicone.</li> </ul>	Packages, pre-coloured plastic parts (high temperature), bakery (detectable), electronics / semiconductor (conductive / anti-static).
 <p><b>Silicone Bag</b></p>	<ul style="list-style-type: none"> <li>• Durable silicone material.</li> <li>• Soft and pliable.</li> <li>• Tailor-made for handling different types of bags and pouches with varying content.</li> <li>• The design is optimised for uneven, wrinkled bags and pouches.</li> <li>• It will minimise the "surface leakage" and maximise the grip.</li> <li>• The unique fitting allows the high initial flow needed for a secure grip.</li> </ul>	Bags with fragile contents and food, bags with liquids, viscous contents and frozen food, "easy" bags, open bags.
 <p><b>Nitrile-PVC and CR</b></p>	<ul style="list-style-type: none"> <li>• Oil, petrol and ozone resistant material.</li> <li>• Larger sizes are made of Nitrile-PVC and smaller sizes of CR (Chloroprene).</li> </ul>	Conventional suction cups material for general purposes.
 <p><b>TPU</b></p>	<ul style="list-style-type: none"> <li>• Probably the most mark-free suction cups on the market! (Almost all suction cups will leave detectable marks or traces on a "micro" level, some washable, others not. Tests have proven that these TPU cups are the best option when marks are not allowed.)</li> </ul>	Solar panels, glass, displays, screens.
 <p><b>HNBR</b></p>	<ul style="list-style-type: none"> <li>• High temperature applications where silicone or other paint-wetting impairment substances (PWIS) are not allowed.</li> <li>• Made of HNBR.</li> <li>• Very durable and wear resistant.</li> </ul>	Removing hot plastic parts from injection moulding equipment, glass handling.

## MX RANGE

### DESCRIPTION

Outstanding for picking different objects – For primarily logistics, warehousing, e-commerce and recycling applications. A multi-purpose suction cup with extreme gripping capabilities on any surface. Comes in sizes 35-65 mm in diameter. Very good for handling difficult bags, pouches, cardboard boxes, recycled objects and much more. A Trippel durometer cup design: soft thin lip giving exceptional vacuum sealing capabilities. Sturdy but easy folding bellows for great holding force in dynamic grips. Firm neck for safe and sturdy interface towards a variety of fitting options including aluminum clamp fittings. The suction cup is made of Duraflex® a material that features the elasticity of rubber and wear resistance of polyurethane. The material has a fantastic elastic memory and “mark free” capabilities. This gives a suction cup with high longevity even with the thin lip. This new suction cup family is compatible with all piGRIP® fittings and their features. Low vacuum flow design – exceptional sealing capabilities at lower vacuum levels. Forgiving for handling different types of objects, less vacuum flow needed, even on difficult objects. Energy saving – the exceptional vacuum sealing performance gives less need of high vacuum flows with a significant reduction of compressed air usage. Approx. diameter can vary depending on the surfaces to which the cup is applied to.

### FEATURES

- For logistics, warehousing, e-commerce and recycling applications
- Outstanding for picking different objects
- A multi-purpose suction cup with extreme gripping capabilities on any surface
- Very good for handling difficult bags, pouches, cardboard boxes and recycled objects
- The cup is made of Duraflex® a material that features the elasticity of rubber and wear resistance of polyurethane
- The material has a fantastic elastic memory and “mark free” capabilities
- Configure the cup by using Piab's suction cup configurator

### FITTING GUIDE

G – G Thread	18 – 1/8"
GC – G Thread Clamp Ring	14 – 1/4"
GL – G Thread Low	38 – 3/8"
M – M Thread	12 – 1/2"
NS – NPSF Thread	M5 – 5 mm
NT – NPT Thread	M6 – 6 mm
NTL – NPT Thread Low	M8 – 8 mm
P – Push-on (max 70.0 N)	M10 – 10 mm
MR – Male Replacement for NS518F	M12 – 12 mm
FM – Filter Mesh	D08 – 8 mm
	D10 – 10 mm
	D11 – 11 mm

New

### SUCTION CUP CUP ONLY



PART NUMBER	MODEL	FITTING	PRICE
VAC-9956829	MX35	–	£30.02

### CUP WITH FITTING

VAC-9956573	MX35	G18M	£33.17
VAC-9956641	MX35	G18M-FM	£33.60
VAC-9957297	MX35	G18F	£33.17
VAC-9958023	MX35	G18F-FM	£33.60
VAC-9958956	MX35	G18MR	£33.17
VAC-9959021	MX35	GC18M	£47.18
VAC-9959770	MX35	GC18M-FM	£47.61
VAC-9958359	MX35	GL18M	£33.17
VAC-9956576	MX35	G14M	£33.17
VAC-9956666	MX35	G14M-FM	£33.60
VAC-9957697	MX35	G14F	£33.17
VAC-9960177	MX35	G14F-FM	£33.60
VAC-9958250	MX35	GC14M	£47.18
VAC-9959024	MX35	GC14M-FM	£47.61
VAC-9959011	MX35	GL14M	£33.17
VAC-9956568	MX35	G38M	£33.17
VAC-9956754	MX35	G38M-FM	£33.60
VAC-9957071	MX35	G38F	£33.17
VAC-9957559	MX35	G38F-FM	£33.60
VAC-9957663	MX35	G12M	£33.17
VAC-9958086	MX35	MM5F	£33.17
VAC-9957220	MX35	MM6M	£33.17
VAC-9960037	MX35	MM6F	£33.17
VAC-9959927	MX35	MM6M-FM	£33.60
VAC-9959005	MX35	MM8F	£33.17
VAC-9958190	MX35	MM10M	£33.17
VAC-9957294	MX35	MM12M-FM	£33.60
VAC-9958652	MX35	NS18F-FM	£33.60
VAC-9957143	MX35	NT18M	£33.17
VAC-9956732	MX35	NT14M	£33.17
VAC-9957200	MX35	NT38M	£33.17
VAC-9959705	MX35	NT38F	£33.17
VAC-9958037	MX35	NTL18M	£33.17
VAC-9957511	MX35	PD08X	£33.17

New

### SUCTION CUP CUP ONLY



PART NUMBER	MODEL	FITTING	PRICE
VAC-9958602	MX42	–	£35.57

### CUP WITH FITTING

VAC-9958538	MX42	G18M	£38.72
VAC-9959019	MX42	G18M-FM	£39.15
VAC-9959049	MX42	G18F	£38.72
VAC-9958699	MX42	G18F-FM	£39.15
VAC-9958574	MX42	G14M	£38.72
VAC-9959340	MX42	G14M-FM	£39.15
VAC-9959172	MX42	G14F	£38.72
VAC-9959412	MX42	GC14M	£52.45
VAC-9959225	MX42	GC14M-FM	£52.88
VAC-9959569	MX42	GL14M	£38.72
VAC-9958539	MX42	G38M	£38.72
VAC-9958530	MX42	G38M-FM	£39.15
VAC-9958601	MX42	G38F-FM	£39.15
VAC-9958578	MX42	GC38M	£52.45
VAC-9958831	MX42	G12M	£38.72
VAC-9960233	MX42	MM6M	£38.72
VAC-9959679	MX42	NT14M	£38.72
VAC-9960390	MX42	PD11X	£38.72

## MX RANGE – CONTINUED



### SUCTION CUP CUP ONLY



5020

PART NUMBER	MODEL	FITTING	PRICE
VAC-9956830	MX50	–	£41.14

### CUP WITH FITTING

VAC-9956580	MX50	G18M	£44.29
VAC-9956578	MX50	G18M-FM	£44.71
VAC-9959050	MX50	G18F	£44.29
VAC-9956574	MX50	G14M	£44.29
VAC-9957539	MX50	G14M-FM	£44.71
VAC-9957805	MX50	G14F	£44.29
VAC-9956569	MX50	G38M	£44.29
VAC-9956755	MX50	G38M-FM	£44.71
VAC-9956994	MX50	G38F	£44.29
VAC-9957560	MX50	G38F-FM	£44.71
VAC-9956602	MX50	G12M	£44.29
VAC-9960424	MX50	G12F	£44.29
VAC-9958251	MX50	GC14M	£57.72
VAC-9958249	MX50	GC38M	£57.72
VAC-9957437	MX50	GL14M	£44.29
VAC-9958231	MX50	MM8F	£44.29
VAC-9957756	MX50	MM10M	£44.29
VAC-9958091	MX50	MM12M	£44.29
VAC-9958940	MX50	MM12M-FM	£44.71
VAC-9958137	MX50	MMF14M	£44.29
VAC-9957414	MX50	NS18F	£44.29
VAC-9959454	MX50	NT14F	£44.29
VAC-9956746	MX50	NT14M	£44.29
VAC-9958108	MX50	NT18M	£44.29



### SUCTION CUP CUP ONLY



5020

PART NUMBER	MODEL	FITTING	PRICE
VAC-9956949	MX65	–	£52.25

### CUP WITH FITTING

VAC-9956581	MX65	G18M	£55.40
VAC-9959052	MX65	G18F	£55.40
VAC-9959045	MX65	G18F-FM	£55.83
VAC-9956699	MX65	G14M	£55.40
VAC-9957779	MX65	G14M-FM	£55.83
VAC-9958042	MX65	G14F	£55.40
VAC-9958252	MX65	GC14M	£77.41
VAC-9956570	MX65	G38M	£55.40
VAC-9956756	MX65	G38M-FM	£55.83
VAC-9956637	MX65	G38F	£55.40
VAC-9957561	MX65	G38F-FM	£55.83
VAC-9958811	MX65	GC38M	£77.41
VAC-9956582	MX65	G12M	£55.40
VAC-9959639	MX65	G12M-FM	£55.83
VAC-9956638	MX65	G12F	£55.40
VAC-9960365	MX65	MMF8M	£55.40
VAC-9959574	MX65	MM10M	£55.40
VAC-9958191	MX65	MM12M	£55.40
VAC-9958038	MX65	NS12F	£55.40
VAC-9956747	MX65	NT14M	£55.40
VAC-9956961	MX65	NT38F	£55.40
VAC-9956939	MX65	PD08X	£55.40



### SUCTION CUP CUP ONLY



5020

PART NUMBER	MODEL	FITTING	PRICE
VAC-9958778	MX57	–	£46.69

### CUP WITH FITTING

VAC-9958583	MX57	G18M	£49.84
VAC-9959695	MX57	G18M-FM	£50.27
VAC-9959051	MX57	G18F	£49.84
VAC-9958767	MX57	G14M	£49.84
VAC-9959694	MX57	G14M-FM	£50.27
VAC-9959173	MX57	G14F	£49.84
VAC-9958832	MX57	G12M	£49.84
VAC-9960423	MX57	G12F	£49.84
VAC-9958541	MX57	G38M	£49.84
VAC-9958531	MX57	G38M-FM	£50.27
VAC-9960011	MX57	G38F	£49.84
VAC-9958579	MX57	GC38M	£72.36
VAC-9959678	MX57	NT14M	£49.84





## U RANGE

### U FEATURES

- 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

### UNIVERSAL SUCTION CUP

#### CHLOROPRENE

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-3150059	U4	M5 male	£3.65
VAC-3150003	U6	M5 male	£3.89
VAC-3150004	U8	M5 male	£4.03
VAC-3150005	U10	M5 male	£4.41
VAC-3150006	U15	M5 male	£4.84
VAC-0101373	U20	M5 female	£11.43

#### CHLOROPRENE WITH MESH FILTER

VAC-0101374	U20	1/8" BSPP male	£11.78
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#### SILICONE

VAC-3150059S	U4	M5 male	£5.33
VAC-3150003S	U6	M5 male	£5.73
VAC-3150004S	U8	M5 male	£6.01
VAC-3150005S	U10	M5 male	£6.56
VAC-3150006S	U15	M5 male	£7.34
VAC-0117947	U15-3	M5 male	£7.29

#### SILICONE WITH MESH FILTER

VAC-0101385	U20	1/8" BSPP male	£14.65
VAC-0101395	U30	M5 female	£15.67
VAC-0101396	U30	1/8" BSPP male	£16.01
VAC-0101610	U40-2	1/8" NPSF female	£20.69
VAC-0101605	U40-2	1/4" BSPP male	£20.69
VAC-0101810	U50-2	1/8" NPSF female	£24.65
VAC-0101805	U50-2	1/4" BSPP male	£24.65

#### SILICONE WITH DUAL FLOW CONTROL VALVE

VAC-0101390	U20	M5 female	£23.59
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### CONDUCTIVE SILICONE

PART NUMBER	MODEL	THREAD	PRICE
VAC-3250080SC	U2	M2.5 male	£10.67
VAC-3250081SC	U3	M2.5 male	£10.74

### HNBR

VAC-9906863	U10	M5 male	£5.29
VAC-9906864	U15	M5 male	£5.55
VAC-9906867	U20	M5 female	£11.71

### HNBR WITH MESH FILTER

VAC-9906869	U20	1/8" BSPP male	£12.05
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### NITRILE-PVC

VAC-0101406	U30	M5 female	£12.60
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### NITRILE-PVC WITH MESH FILTER

VAC-0101407	U30	1/8" BSPP male	£12.95
VAC-0101623	U40-2	1/8" NPSF female	£16.94
VAC-0101618	U40-2	1/4" BSPP male	£16.94
VAC-0101823	U50-2	1/8" NPSF female	£20.28
VAC-0101818	U50-2	1/4" BSPP male	£20.28

You may also need ... **Adhesives, cleaners and lubricators**



... on pages 1048 – 1065, section 21

## F RANGE

### F FEATURES

- 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

### FLAT SUCTION CUP WITH CLEATS CHLOROPRENE

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-3150014	F15	M5 male	£5.01
VAC-0101259	F20	M5 female	£11.67
VAC-0101260	F20	1/8" BSPP male	£12.01
VAC-0101292	F25	M5 female	£12.26
VAC-0101293	F25	1/8" BSPP male	£12.61
VAC-0101325	F30-2	M5 female	£12.85
VAC-0101326	F30-2	1/8" BSPP male	£13.20

### SILICONE

VAC-3150014S	F15	M5 male	£7.56
VAC-0101270	F20	M5 female	£14.74
VAC-0101271	F20	1/8" BSPP male	£15.09
VAC-0101303	F25	M5 female	£15.57
VAC-0101304	F25	1/8" BSPP male	£15.92
VAC-0101341	F30-2	M5 female	£16.11
VAC-0101342	F30-2	1/8" BSPP male	£16.45

### SILICONE WITH MESH FILTER

VAC-0101553	F40-2	1/8" NPSF female	£21.23
VAC-0101548	F40-2	1/4" BSPP male	£21.23
VAC-0101550	F40-2	3/8" BSPP male	£21.23
VAC-0101753	F50-2	1/8" NPSF female	£25.46
VAC-0101748	F50-2	1/4" BSPP male	£25.46
VAC-0101750	F50-2	3/8" BSPP male	£25.46
VAC-0101866	F75	1/8" NPSF female	£57.87
VAC-0101867	F75	3/8" BSPP female	£57.87
VAC-0101908	F110	3/8" BSPP female	£90.54
VAC-0101910	F110	1/2" BSPP female	£90.54
VAC-0101934	F150	1/2" BSPP female	£116.37
VAC-0101935	F150	3/4" BSPP female	£116.37



### HNBR WITH MESH FILTER

PART NUMBER	MODEL	THREAD	PRICE
VAC-0108181	F50-2	1/8" NPSF female	£36.28
VAC-0108182	F50-2	1/4" BSPP male	£37.12
VAC-0108183	F50-2	3/8" BSPP male	£37.12
VAC-0108184	F75	1/8" NPSF female	£79.56
VAC-0108185	F75	3/8" BSPP female	£79.56
VAC-0108188	F110	3/8" BSPP female	£121.93
VAC-0108190	F110	1/2" BSPP female	£121.93

### NITRILE-PVC WITH MESH FILTER

VAC-0101572	F40-2	1/8" NPSF female	£17.29
VAC-0101567	F40-2	1/4" BSPP male	£17.29
VAC-0101569	F40-2	3/8" BSPP male	£17.29
VAC-0101772	F50-2	1/8" NPSF female	£20.66
VAC-0101767	F50-2	1/4" BSPP male	£20.66
VAC-0101769	F50-2	3/8" BSPP male	£20.66
VAC-0101873	F75	1/8" NPSF female	£49.86
VAC-0101874	F75	3/8" BSPP female	£49.86
VAC-0101915	F110	3/8" BSPP female	£77.04
VAC-0101917	F110	1/2" BSPP female	£75.67
VAC-0101938	F150	1/2" BSPP female	£97.92
VAC-0101939	F150	3/4" BSPP female	£97.92

You may also need ...

**Personal  
protective equipment**



... on pages 1071 – 1075, section 21

## B RANGE

### B FEATURES

- 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 CUP WITH SHORT BELLOWS CHLOROPRENE

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-3250082	B5	M5 male	£3.73
VAC-3250083	B8	M5 male	£4.11
VAC-3150023	B10-2	M5 male	£4.56
VAC-3250037	B15-2	M5 male	£5.20
VAC-0101160	B20	M5 female	£12.29

### CHLOROPRENE WITH MESH FILTER

VAC-0101161	B20	1/8" BSPP male	£12.63
VAC-0101423	B30-2	1/8" NPSF female	£16.82
VAC-0101418	B30-2	1/4" BSPP male	£16.82
VAC-0101420	B30-2	3/8" BSPP male	£16.82
VAC-0101462	B40	1/8" NPSF female	£19.16
VAC-0101457	B40	1/4" BSPP male	£19.16
VAC-0101459	B40	3/8" BSPP male	£19.16
VAC-0101649	B50	1/8" NPSF female	£23.42
VAC-0101644	B50	1/4" BSPP male	£23.42
VAC-0101646	B50	3/8" BSPP male	£23.42
VAC-0101854	B75	1/8" NPSF female	£53.39
VAC-0101855	B75	3/8" BSPP female	£53.39
VAC-0101857	B75	1/2" BSPP female	£53.39

### SILICONE

VAC-3250082S	B5	M5 male	£6.99
VAC-3250083S	B8	M5 male	£7.75
VAC-3150023S	B10-2	M5 male	£8.81
VAC-3250037S	B15-2	M5 male	£9.65
VAC-0101171	B20	M5 female	£17.70

### SILICONE WITH MESH FILTER

VAC-0101172	B20	1/8" BSPP male	£18.05
VAC-0101436	B30-2	1/8" NPSF female	£23.46
VAC-0101431	B30-2	1/4" BSPP male	£23.46
VAC-0101433	B30-2	3/8" BSPP male	£23.46
VAC-0101475	B40	1/8" NPSF female	£29.04
VAC-0101470	B40	1/4" BSPP male	£29.04
VAC-0101472	B40	3/8" BSPP male	£29.04
VAC-0101636	B50	1/8" NPSF female	£34.70
VAC-0101631	B50	1/4" BSPP male	£34.70
VAC-0101633	B50	3/8" BSPP male	£34.70
VAC-0101850	B75	1/8" NPSF female	£71.15
VAC-0101851	B75	3/8" BSPP female	£71.15
VAC-0101853	B75	1/2" BSPP female	£71.15
VAC-0101884	B110	3/8" BSPP female	£113.99
VAC-0101886	B110	1/2" BSPP female	£113.99
VAC-0101928	B150	1/2" BSPP female	£156.56
VAC-0101929	B150	3/4" BSPP female	£156.56
VAC-0101662	B50-2	1/8" NPSF female	£37.34
VAC-0101657	B50-2	1/4" BSPP male	£37.34
VAC-0101659	B50-2	3/8" BSPP male	£37.34
VAC-0101858	B75-2	1/8" NPSF female	£74.15
VAC-0101859	B75-2	3/8" BSPP female	£74.15
VAC-0101861	B75-2	1/2" BSPP female	£74.15
VAC-0101896	B110-2	3/8" BSPP female	£118.10
VAC-0101898	B110-2	1/2" BSPP female	£118.10



### HNBR

PART NUMBER	MODEL	THREAD	PRICE
VAC-9906875	B20	M5 female	£13.67

### HNBR WITH MESH FILTER

VAC-9906877	B20	1/8" BSPP male	£14.02
VAC-0108078	B30-2	1/8" NPSF female	£34.23
VAC-0108167	B30-2	1/4" BSPP male	£34.23
VAC-0108168	B30-2	3/8" BSPP male	£34.23
VAC-0108082	B40	1/8" NPSF female	£38.75
VAC-0108169	B40	1/4" BSPP male	£38.75
VAC-0108170	B40	3/8" BSPP male	£38.75
VAC-0108171	B50	1/8" NPSF female	£49.47
VAC-0108172	B50	1/4" BSPP male	£49.47
VAC-0108173	B50	3/8" BSPP male	£49.47
VAC-0108174	B75	1/8" NPSF female	£84.55
VAC-0108175	B75	3/8" BSPP female	£84.55
VAC-0108177	B75	1/2" BSPP female	£84.55
VAC-0108178	B110	3/8" BSPP female	£139.65
VAC-0108180	B110	1/2" BSPP female	£139.65

### NITRILE-PVC WITH MESH FILTER

VAC-0101890	B110	3/8" BSPP female	£87.60
VAC-0101892	B110	1/2" BSPP female	£87.60
VAC-0101931	B150	1/2" BSPP female	£117.41
VAC-0101932	B150	3/4" BSPP female	£117.41
VAC-0101675	B50-2	1/8" NPSF female	£26.04
VAC-0101670	B50-2	1/4" BSPP male	£26.04
VAC-0101672	B50-2	3/8" BSPP male	£26.04
VAC-0101862	B75-2	1/8" NPSF female	£56.58
VAC-0101863	B75-2	3/8" BSPP female	£56.58
VAC-0101865	B75-2	1/2" BSPP female	£56.58
VAC-0101902	B110-2	3/8" BSPP female	£91.70
VAC-0101904	B110-2	1/2" BSPP female	£91.70

## BX FEATURES

Suitable for level adjustment and for uneven and porous surfaces, such as cardboard, plastic, glass, metals, etc. Polyurethane Yellow / Green offers a softer sealing lip, yet strong and stable bellows-unsealed media.

Specially formulated to offer elasticity of rubber with wear resistance of Polyurethane

Pliable suction cup with high stability and durability

Silicone and mark free

Hard wear resistance

## BL FEATURES

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

For direct food contact

Ideal for use with baked goods

Metal detectable

## DURAFLEX BX RANGE



## DURAFLEX BL RANGE



### SUCTION CUP WITH 2 1/2" BELLOWS

POLYURETHANE 30/60

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0122869	BX10P	M5 male	£10.41
VAC-0124344	BX15P	M5 male	£12.62
VAC-0125104	BX20P	M5 female	£21.03
VAC-0125108	BX20P	1/8" BSPP male	£21.38
VAC-0106293	BX75P	1/8" NPSF female	£46.85

### SUCTION CUP WITH LONG BELLOWS

CHLOROPRENE

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0101193	BL20-2	M5 female	£14.09

### POLYURETHANE 30/60 WITH FILTER

VAC-0109404	BX25P	M5 female	£28.71
VAC-0109402	BX25P	1/8" BSPP male / M5 female	£28.71
VAC-0106604	BX35P	1/8" NPSF female	£34.19
VAC-0104727	BX52P	1/8" NPSF female	£41.57
VAC-0107151	BX75P	3/8" BSPP male	£60.36
VAC-0108273	BX100P	3/8" BSPP male	£107.79

### CHLOROPRENE WITH MESH FILTER

VAC-0101194	BL20-2	1/8" BSPP male	£14.44
VAC-0101501	BL30-2	1/8" NPSF female	£19.45
VAC-0101496	BL30-2	1/4" BSPP male	£19.45
VAC-0101527	BL40-2	1/8" NPSF female	£22.75
VAC-0101522	BL40-2	1/4" BSPP male	£22.75
VAC-0101701	BL50-2	1/8" NPSF female	£27.78
VAC-0101696	BL50-2	1/4" BSPP male	£27.78

### SILICONE

VAC-0101204	BL20-2	M5 female	£19.11
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### SILICONE WITH MESH FILTER

VAC-0101205	BL20-2	1/8" BSPP male	£19.46
VAC-0101514	BL30-2	1/8" NPSF female	£25.69
VAC-0101509	BL30-2	1/4" BSPP male	£25.69
VAC-0101540	BL40-2	1/8" NPSF female	£31.27
VAC-0101535	BL40-2	1/4" BSPP male	£31.27
VAC-0101714	BL50-2	1/8" NPSF female	£38.38
VAC-0101709	BL50-2	1/4" BSPP male	£38.38

### POLYURETHANE 30/60 WITH MESH FILTER

VAC-0114449	BX35P	1/4" BSPP male	£34.74
VAC-0107377	BX35P	3/8" BSPP male	£34.74
VAC-0106045	BX52P	1/4" BSPP male	£42.41
VAC-0106740	BX52P	3/8" BSPP male	£42.41

### POLYURETHANE 60

VAC-0122967	BX10P	M5 male	£9.48
VAC-0124345	BX15P	M5 male	£11.45
VAC-0125109	BX20P	M5 female	£19.88
VAC-0125112	BX20P	1/8" BSPP male	£20.22

### POLYURETHANE 60 WITH FILTER

VAC-0109400	BX25P	M5 female	£26.70
VAC-0109398	BX25P	1/8" BSPP male / M5 female	£26.70
VAC-0107561	BX35P	1/8" NPSF female	£31.96
VAC-0107383	BX52P	1/8" NPSF female	£38.44
VAC-0107149	BX75P	3/8" BSPP male	£55.22
VAC-0108341	BX100P	3/8" BSPP male	£99.57

### POLYURETHANE 60 WITH MESH FILTER

VAC-0107379	BX35P	3/8" BSPP male	£32.52
VAC-0107385	BX52P	1/4" BSPP male	£39.28
VAC-0107387	BX52P	3/8" BSPP male	£39.28



## OB FEATURES

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.

## OF FEATURES

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 OB RANGE



## DURAFLEX OF RANGE



### SUCTION CUP WITH SHORT BELLOWS

#### POLYURETHANE 60

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0115291	OB20x60P	1/8" BSPP male	£40.10
VAC-0108672	OB35x90P	3/8" NPSF female	£48.06
VAC-0108674	OB50x140P	3/8" NPSF female	£71.43
VAC-0108676	OB65x170P	3/8" NPSF female	£102.14

#### POLYURETHANE 60 WITH MESH FILTER

VAC-0108673	OB35x90P	3/8" BSPP male	£48.06
VAC-0108675	OB50x140P	3/8" BSPP male	£71.43
VAC-0108677	OB65x170P	3/8" BSPP male	£102.14

#### POLYURETHANE 30/60

VAC-0109857	OB35x90P	3/8" NPSF female	£50.86
VAC-0109859	OB50x140P	3/8" NPSF female	£79.76
VAC-0109861	OB65x170P	3/8" NPSF female	£113.96

#### POLYURETHANE 30/60 WITH MESH FILTER

VAC-0109856	OB35x90P	3/8" BSPP male	£50.86
VAC-0109858	OB50x140P	3/8" BSPP male	£79.76
VAC-0109860	OB65x170P	3/8" BSPP male	£113.96

VAC-0115291 comes complete with swivel fitting

### FLAT CONCAVE SUCTION CUP WITH CLEATS

#### POLYURETHANE 40

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0115304	OF25x70P	3/8" BSPP male	£30.23
VAC-0109851	OF40x110P	3/8" NPSF female	£42.05
VAC-0109853	OF55x150P	3/8" NPSF female	£56.88
VAC-0109855	OF70x175P	3/8" NPSF female	£79.84

#### POLYURETHANE 40 WITH MESH FILTER

VAC-0109850	OF40x110P	3/8" BSPP male	£42.05
VAC-0109852	OF55x150P	3/8" BSPP male	£56.88
VAC-0109854	OF70x175P	3/8" BSPP male	£79.84

#### POLYURETHANE 50

VAC-0110084	OF10x30P	M5 male	£20.07
VAC-0115285	OF15x45P	1/8" BSPP male	£26.88

#### POLYURETHANE 60

VAC-0115311	OF25x70P	3/8" BSPP male	£30.23
VAC-0108265	OF40x110P	3/8" NPSF female	£42.05
VAC-0108036	OF55x150P	3/8" NPSF female	£55.27
VAC-0108264	OF70x175P	3/8" NPSF female	£77.58

#### POLYURETHANE 60 WITH MESH FILTER

VAC-0108263	OF40x110P	3/8" BSPP male	£42.05
VAC-0108030	OF55x150P	3/8" BSPP male	£55.27
VAC-0108671	OF70x175P	3/8" BSPP male	£77.58

VAC-0115304 comes complete with swivel fitting

## DESCRIPTION

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 and has a fantastic elastic memory.

## DCF FEATURES

Specially designed friction cups for oily surfaces, such as sheets in metal forming processes. 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 DCF design is suitable for flat, convex or concave surfaces, such as those encountered when handling metal sheets in later stages of a press line. The suction cups have a thin design that easily follows the curved metal sheet. A special inner pattern gives maximum shear force grip even on oily / slippery surfaces.

## OBF FEATURES

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.

## BFF FEATURES

The BFF design is suitable for uneven / curved surfaces or if level compensation is needed, such as de-stacking applications. The flat inner support gives stability during movement in any orientation.

## DURAFLEX DCF RANGE

### FRICION SUCTION CUP POLYURETHANE 60



5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0206538	DCF65P	3/8" BSPP female plastic	£25.13
VAC-0206543	DCF90P	3/8" BSPP female plastic	£32.90
VAC-0206548	DCF110P	3/8" BSPP female plastic	£37.26

### POLYURETHANE 60 WITH MESH FILTER

VAC-0206794	DCF65P	1/4" BSPP female	£25.13
VAC-0206537	DCF65P	3/8" BSPP female	£25.13
VAC-0206536	DCF65P	3/8" BSPP male / 1/8" NPSF female	£25.13
VAC-0206535	DCF65P	3/8" NPT female	£25.13
VAC-0206539	DCF65P	T-slot	£29.69
VAC-0206795	DCF90P	1/4" BSPP female	£32.90
VAC-0206542	DCF90P	3/8" BSPP female	£32.90
VAC-0206541	DCF90P	3/8" BSPP male / 1/8" NPSF female	£32.90
VAC-0206540	DCF90P	3/8" NPT female	£32.90
VAC-0206544	DCF90P	T-slot	£37.47
VAC-0206796	DCF110P	1/4" BSPP female	£37.26
VAC-0206547	DCF110P	3/8" BSPP female	£37.26
VAC-0206546	DCF110P	3/8" BSPP male / 1/8" NPSF female	£37.26
VAC-0206545	DCF110P	3/8" NPT female	£37.26
VAC-0206549	DCF110P	T-slot	£41.83

## DURAFLEX BFF RANGE

### FRICION SUCTION CUP POLYURETHANE 55/60



5020

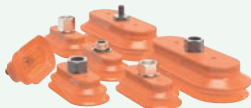
PART NUMBER	MODEL	THREAD	PRICE
VAC-0206918	BFF30P	1/4" BSPP female	£35.49
VAC-0206908	BFF30P	3/8" BSPP female	£35.49
VAC-0206599	BFF30P	3/8" BSPP female plastic	£35.49
VAC-0201821	BFF30P	3/8" BSPP male / 1/8" NPSF female	£35.49
VAC-0206915	BFF30P	3/8" NPT female	£35.49
VAC-0206924	BFF30P	T-slot	£40.07
VAC-0121427	BFF40P	M10 x 1.5 male	£37.54
VAC-0206940	BFF40P	1/4" BSPP female	£37.54
VAC-0118992	BFF40P	3/8" BSPP female	£37.54
VAC-0200697	BFF40P	3/8" BSPP female, 17 mm	£37.54
VAC-0122278	BFF40P	3/8" NPT female	£37.54
VAC-0121428	BFF60P	M10 x 1.5 male	£36.66
VAC-0206941	BFF60P	1/4" BSPP female	£36.66
VAC-0118995	BFF60P	3/8" BSPP female	£36.66
VAC-0124742	BFF60P	3/8" BSPP female plastic	£36.66
VAC-0200699	BFF60P	3/8" BSPP female, 17 mm	£36.66
VAC-0122279	BFF60P	3/8" NPT female	£36.66

### POLYURETHANE 55/60 WITH MESH FILTER

VAC-0118991	BFF40P	3/8" BSPP male	£37.54
VAC-0206925	BFF40P	T-slot	£42.12
VAC-0118994	BFF60P	3/8" BSPP male	£36.66
VAC-0206933	BFF60P	T-slot	£41.23

## DURAFLEX OBF RANGE

### FRICION SUCTION CUP POLYURETHANE 55/60



5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0121436	OBF35x90P	M10 x 1.5 male	£52.70
VAC-0119123	OBF35x90P	3/8" BSPP female	£52.70
VAC-0200694	OBF35x90P	3/8" BSPP female, 17 mm	£52.70
VAC-0122287	OBF35x90P	3/8" NPT female	£52.70
VAC-0121437	OBF50x140P	M10 x 1.5 male	£59.77
VAC-0119127	OBF50x140P	3/8" BSPP female	£59.77
VAC-0122288	OBF50x140P	3/8" NPT female	£59.77
VAC-0121438	OBF65x170P	M10 x 1.5 male	£74.28
VAC-0119131	OBF65x170P	3/8" BSPP female	£74.28
VAC-0122289	OBF65x170P	3/8" NPT female	£74.28

### POLYURETHANE 55/60 WITH MESH FILTER

VAC-0119121	OBF35x90P	3/8" BSPP male	£52.70
VAC-0119125	OBF50x140P	3/8" BSPP male	£59.77
VAC-0119129	OBF65x170P	3/8" BSPP male	£74.28

## FCF FEATURES

The FCF design is suitable for slightly domed and flat surfaces, such as those encountered when handling metal sheets in press lines. The suction cups have support cleats that prevent thin objects from being disfigured.

## OCF FEATURES

The OCF design is suitable for oblong objects with slightly domed and flat surfaces, such as those encountered with body parts in the automotive industry. The suction cups have support cleats that prevent thin objects from being disfigured.

## FEATURES

The BFFT design is the best choice for very thin metal sheets (0.6 – 0.8 mm) to avoid risk of dents. The cups work well on flat and uneven / curved surfaces or if level compensation is needed, such as de-stacking applications. The inner support, made of dual hardness to eliminate risk of dent marks, gives stability and good grip during movement in any direction.

## DURAFLEX FCF RANGE

### FRICION SUCTION CUP POLYURETHANE 55/60



5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0206919	FCF25P	1/4" BSPP female	£22.09
VAC-0206909	FCF25P	3/8" BSPP female	£22.09
VAC-0206895	FCF25P	3/8" BSPP female plastic	£22.09
VAC-0201827	FCF25P	3/8" BSPP male / 1/8" NPSF female	£22.09
VAC-0206916	FCF25P	3/8" NPT female	£22.09
VAC-0206926	FCF25P	T-slot	£26.67
VAC-0121431	FCF35P	M10 x 1.5 male	£23.90
VAC-0118981	FCF35P	3/8" BSPP female	£23.90
VAC-0206893	FCF35P	3/8" BSPP female plastic	£23.90
VAC-0200652	FCF35P	3/8" BSPP female, 17 mm	£23.90
VAC-0122282	FCF35P	3/8" NPT female	£23.90
VAC-0121432	FCF50P	M10 x 1.5 male	£20.72
VAC-0206936	FCF50P	1/4" BSPP female	£20.72
VAC-0118986	FCF50P	3/8" BSPP female	£20.72
VAC-0206606	FCF50P	3/8" BSPP female plastic	£20.72
VAC-0200685	FCF50P	3/8" BSPP female, 17 mm	£20.72
VAC-0122283	FCF50P	3/8" NPT female	£20.72
VAC-0121433	FCF75P	M10 x 1.5 male	£28.75
VAC-0206937	FCF75P	1/4" BSPP female	£28.75
VAC-0118429	FCF75P	3/8" BSPP female	£28.75
VAC-0124718	FCF75P	3/8" BSPP female plastic	£28.75
VAC-0200687	FCF75P	3/8" BSPP female, 17 mm	£28.75
VAC-0122284	FCF75P	3/8" NPT female	£28.75
VAC-0121385	FCF100P	M10 x 1.5 male	£33.05
VAC-0206938	FCF100P	1/4" BSPP female	£33.05
VAC-0124669	FCF100P	3/8" BSPP female plastic	£33.05
VAC-0200690	FCF100P	3/8" BSPP female, 17 mm	£33.05
VAC-0122285	FCF100P	3/8" NPT female	£30.81
VAC-0121435	FCF125P	M10 x 1.5 male	£39.12
VAC-0206939	FCF125P	1/4" BSPP female	£39.12
VAC-0118437	FCF125P	3/8" BSPP female	£39.12
VAC-0124787	FCF125P	3/8" BSPP female plastic	£39.12
VAC-0200693	FCF125P	3/8" BSPP female, 17 mm	£39.12
VAC-0122286	FCF125P	3/8" NPT female	£39.12

### POLYURETHANE 55/60 WITH MESH FILTER

VAC-0119913	FCF35P	3/8" BSPP male	£23.90
VAC-0206927	FCF35P	T-slot	£28.48
VAC-0118985	FCF50P	3/8" BSPP male	£20.72
VAC-0206929	FCF50P	T-slot	£25.22
VAC-0206930	FCF75P	T-slot	£33.32
VAC-0206931	FCF100P	T-slot	£37.63
VAC-0118435	FCF125P	3/8" BSPP male	£39.12
VAC-0206932	FCF125P	T-slot	£43.70

## DURAFLEX OCF RANGE

### FRICION SUCTION CUP POLYURETHANE 55/60



5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0121847	OCF20x80P	3/8" BSPP male	£34.80
VAC-0122455	OCF20x80P	3/8" BSPP female	£34.80
VAC-0121859	OCF20x80P	3/8" NPT female	£34.80
VAC-0122456	OCF30x90P	3/8" BSPP male	£39.55
VAC-0121786	OCF30x90P	3/8" BSPP female	£39.55
VAC-0122459	OCF30x90P	3/8" NPT female	£39.55
VAC-0122457	OCF40x110P	3/8" BSPP male	£43.79
VAC-0122860	OCF40x110P	3/8" BSPP female	£43.79
VAC-0121865	OCF40x110P	3/8" NPT female	£43.79

## DURAFLEX BFFT RANGE

### FRICION SUCTION CUP POLYURETHANE 60/60/30



5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0206523	BFFT50P	3/8" BSPP female plastic	£38.41
VAC-0206528	BFFT70P	3/8" BSPP female plastic	£39.98
VAC-0206533	BFFT90P	3/8" BSPP female plastic	£42.20

### POLYURETHANE 60/60/30 WITH MESH FILTER

VAC-0206791	BFFT50P	1/4" BSPP female	£38.41
VAC-0206522	BFFT50P	3/8" BSPP female	£38.41
VAC-0206521	BFFT50P	3/8" BSPP male / 1/8" NPSF female	£38.41
VAC-0206519	BFFT50P	3/8" NPT female	£38.41
VAC-0206524	BFFT50P	T-slot	£42.99
VAC-0206792	BFFT70P	1/4" BSPP female	£39.98
VAC-0206527	BFFT70P	3/8" BSPP female	£39.98
VAC-0206526	BFFT70P	3/8" BSPP male / 1/8" NPSF female	£39.98
VAC-0206525	BFFT70P	3/8" NPT female	£39.98
VAC-0206529	BFFT70P	T-slot	£44.55
VAC-0206793	BFFT90P	1/4" BSPP female	£42.20
VAC-0206532	BFFT90P	3/8" BSPP female	£42.20
VAC-0206531	BFFT90P	3/8" BSPP male / 1/8" NPSF female	£42.20
VAC-0206530	BFFT90P	3/8" NPT female	£42.20
VAC-0206534	BFFT90P	T-slot	£46.78

## FDA APPROVED – F-FDA RANGE

### F-FDA FEATURES

The material used is food grade silicone. It is free from colour pigments, approved by FDA (FDA 21 CFR 177.2600.) and meets EU's regulation EU 1935/2004. The cup is soft and pliable and can operate at a wide temperature range.



### FLAT SUCTION CUP SILICONE

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-9909623	F15FCM	M5 male	£7.56
VAC-0200263	F15FCM	-	£5.85
VAC-0200417	F20FCM	-	£7.51
VAC-0200439	F25FCM	-	£8.35
VAC-0200418	F30-2FCM	-	£8.87
VAC-0200437	F40-2FCM	-	£11.29
VAC-0200438	F50-2FCM	-	£13.32
VAC-0200264	F75FCM	-	£21.40
VAC-0200302	F110FCM	-	£36.27
VAC-0200265	F150FCM	-	£54.33
VAC-0201216	F26FCM	-	£5.96
VAC-0200328	F33FCM	-	£6.50

### SILICONE WITH MESH FILTER

VAC-9909710	F20FCM	1/8" BSPP male / M5 female	£15.09
VAC-9909624	F20FCM	1/8" BSPP male	£15.09
VAC-9909711	F25FCM	1/8" BSPP male / M5 female	£15.92
VAC-9909625	F25FCM	1/8" BSPP male	£15.92
VAC-9909627	F30-2FCM	1/8" BSPP male / M5 female	£16.45
VAC-9909626	F30-2FCM	1/8" BSPP male	£16.45
VAC-9909629	F40-2FCM	1/8" NPSF female	£21.23
VAC-9909628	F40-2FCM	1/4" BSPP male	£21.23
VAC-9909631	F50-2FCM	1/8" NPSF female	£25.46
VAC-9909630	F50-2FCM	1/4" BSPP male	£25.46
VAC-0200497	F75FCM	3/8" BSPP female	£57.87
VAC-0200504	F110FCM	1/2" BSPP female	£90.54
VAC-0200507	F150FCM	1/2" BSPP female	£116.37
VAC-9914251	F26FCM	1/8" NPSF female	£11.31
VAC-9914238	F26FCM	1/4" BSPP male	£11.98
VAC-9914252	F33FCM	1/8" NPSF female	£11.85
VAC-9914237	F33FCM	1/4" BSPP male	£12.53

## FDA APPROVED – B-FDA RANGE

### B-FDA FEATURES

The material is approved by FDA (FDA 21 CFR 177.2600.) and meets EU's regulation EU 1935/2004. Most of the cups are transparent with no addition of pigments.



### FLAT SUCTION CUP SILICONE

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-9909604	B5FCM	M5 male	£6.99
VAC-0200277	B5FCM	-	£5.44
VAC-9909605	B8FCM	M5 male	£7.75
VAC-0200278	B8FCM	-	£6.18
VAC-9909606	B10-2FCM	M5 male	£8.81
VAC-0200241	B10-2FCM	-	£7.11
VAC-9909607	B15-2FCM	M5 male	£9.65
VAC-0200271	B15-2FCM	-	£7.94
VAC-0200405	B20FCM	-	£10.48
VAC-0200407	B30-2FCM	-	£13.51
VAC-0200408	B40FCM	-	£19.11
VAC-0200409	B50FCM	-	£22.58
VAC-0200484	B50-2FCM	-	£25.20
VAC-0200245	B75FCM	-	£35.87
VAC-0200485	B75-2FCM	-	£38.87
VAC-0200246	B110FCM	-	£61.08
VAC-0200486	B110-2FCM	-	£65.21
VAC-0200247	B150FCM	-	£93.70

### SILICONE WITH MESH FILTER

VAC-9909700	B20FCM	1/8" BSPP male / M5 female	£18.05
VAC-9909608	B20FCM	1/8" BSPP male	£18.05
VAC-9909610	B30-2FCM	1/8" NPSF female	£23.46
VAC-9909609	B30-2FCM	1/4" BSPP male	£23.46
VAC-9909613	B40FCM	1/8" NPSF female	£29.04
VAC-9909611	B40FCM	1/4" BSPP male	£29.04
VAC-9909709	B50FCM	1/8" NPSF female	£34.70
VAC-9909614	B50FCM	1/4" BSPP male	£34.70
VAC-9909619	B50-2FCM	1/8" NPSF female	£37.34
VAC-9909618	B50-2FCM	1/4" BSPP male	£37.34
VAC-0200546	B75FCM	3/8" BSPP female	£71.15
VAC-0200531	B75-2FCM	3/8" BSPP female	£74.15
VAC-0200551	B110FCM	1/2" BSPP female	£113.99
VAC-0200536	B110-2FCM	1/2" BSPP female	£118.10
VAC-0200552	B150FCM	1/2" BSPP female	£155.17

## B-BL FEATURES

Cups of food contact materials (FCM), suitable for handling bread and pastries. In addition to threaded, separable stainless steel and plastic fittings, all cups are available with a retainer clip, which will fit standard bread depanners. The BBL cups can handle great differences in levels, due to the long bellows. The silicone material complies with FDA 21 CFR 177.2600 and EU 1935/2004. Not suitable for use with deep vacuum levels.

## B-BL FOOD RANGE



### FCM SUCTION CUP WITH 4 1/2 BELLWS SILICONE DETECTABLE

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0206373	B-BL30-2	Pad Only	£4.34
VAC-0202850	B-BL40-2	Pad Only	£4.95
VAC-0206374	B-BL60-2	Pad Only	£9.90

### SILICONE DETECTABLE / STAINLESS STEEL

VAC-0207092	B-BL30-2	3/8" BSPP male	£22.89
VAC-0207094	B-BL30-2	3/8" NPT male	£22.89
VAC-0207093	B-BL30-2	1/2" BSPP male	£22.89
VAC-0207095	B-BL30-2	1/2" NPT male	£22.89
VAC-0207101	B-BL40-2	3/8" BSPP male	£23.51
VAC-0207103	B-BL40-2	3/8" NPT male	£23.51
VAC-0207104	B-BL40-2	1/2" NPT male	£23.51
VAC-0207110	B-BL60-2	3/8" BSPP male	£28.47
VAC-0207112	B-BL60-2	3/8" NPT male	£28.47
VAC-0207111	B-BL60-2	1/2" BSPP male	£28.47
VAC-0207113	B-BL60-2	1/2" NPT male	£28.47

### SILICONE DETECTABLE / COMPOSITE

VAC-0207097	B-BL30-2	3/8" BSPP male	£16.71
VAC-0207099	B-BL30-2	3/8" NPT male	£16.71
VAC-0207096	B-BL30-2	1/2" BSPP male	£16.71
VAC-0207098	B-BL30-2	1/2" NPT male	£16.71
VAC-0207100	B-BL30-2	Retainer clip	£6.24
VAC-0207105	B-BL40-2	3/8" BSPP male	£17.33
VAC-0207107	B-BL40-2	3/8" NPT male	£17.33
VAC-0207106	B-BL40-2	1/2" BSPP male	£17.33
VAC-0207108	B-BL40-2	1/2" NPT male	£17.33
VAC-0207109	B-BL40-2	Retainer clip	£6.86
VAC-0207114	B-BL60-2	3/8" BSPP male	£22.28
VAC-0207117	B-BL60-2	3/8" NPT male	£22.28
VAC-0207115	B-BL60-2	1/2" BSPP male	£22.28
VAC-0207118	B-BL60-2	1/2" NPT male	£22.28
VAC-0207119	B-BL60-2	Retainer clip	£11.80

## F-BX FEATURES

The 2 1/2 bellows F-BX cups of food contact materials (FCM) have a "funnel" shape design with very thin lips, but with stable body/bellows. This allows for excellent grip on different food parts with irregular surfaces and different heights, even at fast speeds and accelerations. F-BX is suitable for frozen food as well as raw food. The silicone material complies with FDA 21 CFR 177.2600 and EU 1935/2004.

## F-BX FOOD RANGE



### FCM SUCTION CUP WITH 2 1/2 BELLWS SILICONE DETECTABLE

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0206202	F-BX10	Pad Only	£7.42
VAC-0206203	F-BX15	Pad Only	£8.04
VAC-0206204	F-BX20	Pad Only	£8.66
VAC-0206205	F-BX25	Pad Only	£9.28
VAC-0206206	F-BX35	Pad Only	£10.52

### SILICONE DETECTABLE / STAINLESS STEEL

VAC-0207049	F-BX10	M5 male	£21.24
VAC-0207050	F-BX10	1/8" BSPP male	£21.04
VAC-0207051	F-BX10	1/8" NPT male	£21.04
VAC-0207055	F-BX15	1/8" BSPP male	£21.66
VAC-0207057	F-BX15	1/8" NPT male	£21.66
VAC-0207056	F-BX15	1/4" BSPP male	£21.66
VAC-0207058	F-BX15	1/4" NPT male	£21.66
VAC-0207063	F-BX20	1/8" BSPP male	£22.28
VAC-0207065	F-BX20	1/8" NPT male	£22.28
VAC-0207064	F-BX20	1/4" BSPP male	£22.28
VAC-0207066	F-BX20	1/4" NPT male	£22.28
VAC-0207071	F-BX25	1/4" BSPP male	£22.89
VAC-0207073	F-BX25	1/4" NPT male	£22.89
VAC-0207072	F-BX25	3/8" BSPP male	£22.89
VAC-0207074	F-BX25	3/8" NPT male	£22.89
VAC-0207079	F-BX35	1/4" BSPP male	£24.13
VAC-0207081	F-BX35	1/4" NPT male	£24.13
VAC-0207080	F-BX35	3/8" BSPP male	£24.13
VAC-0207082	F-BX35	3/8" NPT male	£24.13

### SILICONE DETECTABLE / COMPOSITE

VAC-0207052	F-BX10	M5 male	£15.00
VAC-0207053	F-BX10	1/8" BSPP male	£14.85
VAC-0207054	F-BX10	1/8" NPT male	£14.85
VAC-0207059	F-BX15	1/8" BSPP male	£15.47
VAC-0207061	F-BX15	1/8" NPT male	£15.47
VAC-0207060	F-BX15	1/4" BSPP male	£15.47
VAC-0207062	F-BX15	1/4" NPT male	£15.47
VAC-0207067	F-BX20	1/8" BSPP male	£16.09
VAC-0207069	F-BX20	1/8" NPT male	£16.09
VAC-0207068	F-BX20	1/4" BSPP male	£16.09
VAC-0207070	F-BX20	1/4" NPT male	£16.09
VAC-0207075	F-BX25	1/4" BSPP male	£16.71
VAC-0207077	F-BX25	1/4" NPT male	£16.71
VAC-0207076	F-BX25	3/8" BSPP male	£16.71
VAC-0207078	F-BX25	3/8" NPT male	£16.71
VAC-0207083	F-BX35	1/4" BSPP male	£17.94
VAC-0207085	F-BX35	1/4" NPT male	£17.94
VAC-0207084	F-BX35	3/8" BSPP male	£17.94
VAC-0207086	F-BX35	3/8" NPT male	£17.94



## F-OB FEATURES

The small oval bellow cups of food contact material (FCM) are suitable for the handling of long and narrow food objects when maximum lifting force is desired. They are suitable for irregular surfaces and when level compensation is desired. This programme of oval cups has characteristics that are especially suited for food contact handling. The silicone material complies with FDA 21 CFR 177.2600 and EU 1935/2004.

## FEATURES

The deep cups of food contact materials (FCM) are suitable for handling pralines and confectionery, such as chocolate. The deep design with thin and long lip is excellent for curved and/or irregular surfaces, found on pralines. Can get a good grip over corners. Not suitable for flat surfaces. The silicone material complies with FDA 21 CFR 177.2600 and EU 1935/2004.

## F-OB FOOD RANGE



## P-D FOOD RANGE



### FCM SUCTION CUP WITH 1½ BELLOWS SILICONE DETECTABLE / STAINLESS STEEL

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0205912	F-OB 10x30	1/8" BSPP male	£43.74
VAC-0205920	F-OB 30x60	1/8" BSPP male	£56.24
VAC-0205923	F-OB 30x60	1/4" BSPP male	£56.24

### SILICONE / STAINLESS STEEL

VAC-0207044	F-OB 10x30	1/8" BSPP male	£37.50
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### SILICONE DETECTABLE / STAINLESS STEEL

VAC-0205918	F-OB 20x40	1/8" BSPP male	£49.99
VAC-0205915	F-OB 20x40	1/4" BSPP male	£49.99

### SILICONE NON-DETECTABLE / STAINLESS STEEL

VAC-0207046	F-OB 20x40	1/8" BSPP male	£43.74
VAC-0207045	F-OB 20x40	1/4" BSPP male	£43.74
VAC-0207047	F-OB 30x60	1/8" BSPP male	£49.99
VAC-0207048	F-OB 30x60	1/4" BSPP male	£49.99

### FCM SUCTION CUP WITH 1½ BELLOWS SILICONE DETECTABLE

5020

PART NUMBER	MODEL	THREAD	PRICE
VAC-0206371	P-D27	Pad Only	£9.28
VAC-0206372	P-D36	Pad Only	£10.52

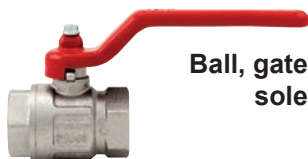
### SILICONE DETECTABLE / STAINLESS STEEL

VAC-0207022	P-D27	1/8" BSPP male	£22.89
VAC-0207024	P-D27	1/8" NPT male	£22.89
VAC-0207021	P-D27	1/4" BSPP male	£22.89
VAC-0207023	P-D27	1/4" NPT male	£22.89
VAC-0207030	P-D36	1/8" BSPP male	£24.13
VAC-0207032	P-D36	1/8" NPT male	£24.13
VAC-0207029	P-D36	1/4" BSPP male	£24.13
VAC-0207031	P-D36	1/4" NPT male	£24.13

### SILICONE DETECTABLE / COMPOSITE

VAC-0207026	P-D27	1/8" BSPP male	£16.71
VAC-0207028	P-D27	1/8" NPT male	£16.71
VAC-0207025	P-D27	1/4" BSPP male	£16.71
VAC-0207027	P-D27	1/4" NPT male	£16.71
VAC-0207034	P-D36	1/8" BSPP male	£17.94
VAC-0207036	P-D36	1/8" NPT male	£17.94
VAC-0207033	P-D36	1/4" BSPP male	£17.94
VAC-0207035	P-D36	1/4" NPT male	£17.94

You may also need ...



**Ball, gate, check and  
solenoid valves**

... on pages 788 – 835, section 15

## Value Line®

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

### VALUE LINE EJECTOR – INLINE DESIGN

Lightweight and compact ejector. Compressed air and vacuum ports are "inline" with integrated push-in style fittings. Easy installation, directly on the hose, achieves a close connection to the suction cup.



### VALUE LINE EJECTOR T-DESIGN

Lightweight and compact 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

Programme of seven flat-concave cups from 20 to 75 mm diameter. The design offers good stability, can handle curved surfaces and gives a small degree of level compensation, thanks to the slightly concave design.



### VALUE LINE CUPS – BELLOWS DESIGN

Programme of seven bellows cups from 20 to 75 mm diameter. The bellows design allows for more level compensation (less machine accuracy needed) and can handle curved areas and small radius. Limited capacity to handle forces parallel to the surface of the object.



### VALUE LINE CUPS – LONG BELLOWS DESIGN

Programme of seven long bellows cups from 20 to 75 mm diameter. The long bellows give extra level compensation (less machine accuracy needed) and a greater 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 the same fitting, for easy installation. An internal hexagon grip makes it easy to tighten and untighten the cup. Material – brass.



# Value Line®

## GOOD PERFORMANCE AT A VALUE PRICE

Piab has vast 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 moulding, 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 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](http://piab.com/valueline))

## TYPICAL APPLICATIONS FOR VALUE LINE

- Sheet metal loading
- Case erecting
- Injection moulding

## VALUE LINE BRASS FITTINGS FOR CUPS

### SPECIFICATIONS

Temperature	0-60/80° °C
Material	TPE-U
Colour	Purple

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

### FITS CUPS

VAC-0202096	VAC-0202100	VAC-0202102
VAC-0202097	VAC-0202101	VAC-0202103
VAC-0202099	VAC-0202113	VAC-0202115
VAC-0202109	VAC-0202114	VAC-0202116
VAC-0202110	VAC-0202120	VAC-0202122
VAC-0202111	VAC-0202121	VAC-0202123
VAC-0202117		
VAC-0202118		
VAC-0202119		

## BRASS FITTINGS FOR CUPS

### 6 MM



PART NUMBER	SIZE AND THREADS	DIM E	DIM F	DIM G	SW	PRICE
VAC-0202156	1/8" BSPP – M5 BSPP	11	23	3	3	£6.52
VAC-0202157	1/4" BSPP – 1/8" BSPP	14	26	3	3	£6.52
VAC-0202162	1/8" NPT – M5 NPSF	10	22	n/a	3	£8.15
VAC-0202163	1/4" NPT – 1/8" NPSF	15	27	n/a	3	£8.97

### 10 MM

VAC-0202158	1/4" BSPP – 1/8" BSPP	15	35	4	6	£8.15
VAC-0202160	3/8" BSPP – 1/4" BSPP	15	35	4	6	£6.52
VAC-0202164	1/4" NPT – 1/8" NPSF	15	35	n/a	6	£8.15
VAC-0202166	3/8" NPT – 1/4" NPSF	15	35	n/a	6	£8.15

### 12 MM

VAC-0202159	1/4" BSPP – 1/8" BSPP	15	40	4	6	£8.97
VAC-0202165	3/8" BSPP – 1/4" BSPP	15	40	4	6	£8.97
VAC-0202161	1/4" NPT – 1/8" NPSF	15	39	n/a	6	£6.52
VAC-0202167	3/8" NPT – 1/4" NPSF	15	39	n/a	6	£8.97

Please note:

Additional Piab items  
also available to  
order upon request

## VALUE LINE VACUUM EJECTOR-PUMPS

### FEATURES

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

### SPECIFICATIONS

Material	PA, NBR, SS, CuZn, Al*, Ni**
Temperature range	-10 to 80°C
Feed pressure max.	0.7 MPa
Optimal feed pressure	0.5 MPa
Air consumption	0.32 NI/s
Max. vacuum	70 -kPa
Evacuation time	2.6 s/l to 50 -kPa

\* VAC-0202360 \*\* VAC-0202187

### VALUE LINE EJECTORS INLINE VACUUM GENERATOR



5020

PART NUMBER	CONNECTION	DIM A	DIM B	NOISE LEVEL	PRICE
VAC-0202360	Inline 6 mm	70	66.2	70-83	£19.57

### VALUE LINE EJECTORS T-DESIGN VACUUM GENERATOR



5020

PART NUMBER	CONNECTION	DIM A	DIM B	NOISE LEVEL	PRICE
VAC-0202187	T-design 6 mm	14.2	31.55	72.78	£20.85

## TECHNICAL DATA

### VACUUM EJECTOR PUMPS IN SMALL AND LIGHTWEIGHT DESIGNS FOR EASY INSTALLATION

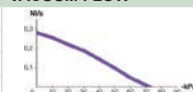
#### VALUE LINE EJECTORS

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

#### MATERIAL SPECIFICATION

Material	PA, NBR, SS, CuZn, Al*, Ni**
Temperature range	-10 to 80°C
Feed pressure, max.	0.7 MPa
Optimal feed pressure	0.5 MPa

#### VACUUM FLOW



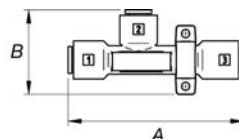
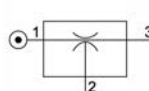
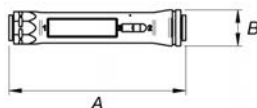
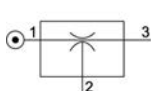
#### VACUUM PERFORMANCE

Description	Air consumption* NI/s	Max vacuum* -kPa	Evacuation time, s/l, to 50 -kPa*	Art. no.
Inline vacuum generator 6 mm	0.32	70	2.6	0202360
T-design vacuum generator 6 mm	0.32	70	2.6	0202187

\* At optimal feed pressure

#### TECHNICAL DATA, SPECIFIC

Description	Noise level dBA	Weight g	Connection, vacuum	Connection, compressed air	Dim. A mm	Dim. B mm	Art. no.
Inline vacuum generator 6 mm	70 – 83	12	Ø6 mm	Ø6 mm	70	14.2	0202360
T-design vacuum generator 6 mm	72 – 78	12	Ø6 mm	Ø6 mm	66.2	31.55	0202187



## A BROAD SELECTION OF NEW VALUE LINE SUCTION CUPS IN FLAT, BELLOWS AND LONG BELLOWS DESIGNS

### VALUE LINE CUPS

- Suction cup programme suitable for standard applications, such as carton and cardboard erecting (low to medium speed), metal / wood sheet loading and unloading, parts removal from injection moulding 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.

### MATERIAL SPECIFICATION

Material	TPE-U
Colour	Purple
Temperature Range	0 – 60/80°C Max. temperature short term contact, <10 sec and 50% intermittence, ambient temperature 15 – 30°C, mechanical properties will start to degrade.



5020



5020

### VALUE LINE CUPS FLAT CONCAVE

PART NUMBER	LIFTING FORCE	DIM A MM	DIM B MM	DIM C MM	DIM D MM	PRICE
VAC-0202096	10	20	15.0	6	9	£1.41
VAC-0202097	17	25	15.8	6	9	£1.81
VAC-0202099	23	30	17.5	6	9	£2.04
VAC-0202100	38	40	27.0	10	15	£2.33
VAC-0202101	58	50	29.0	10	15	£2.75
VAC-0202102	79	60	35.5	12	18	£3.02
VAC-0202103	113	75	38.3	12	18	£5.68

### VALUE LINE CUPS BELLOWS

PART NUMBER	LIFTING FORCE	DIM A MM	DIM B MM	DIM C MM	DIM D MM	PRICE
VAC-0202109	7	20	19.5	6	9	£2.81
VAC-0202110	12	25	22.3	6	9	£3.62
VAC-0202111	16	30	25.6	6	9	£4.06
VAC-0202113	29	40	36.3	10	15	£4.66
VAC-0202114	44	50	43.6	10	15	£5.51
VAC-0202115	60	60	52.2	12	18	£6.04
VAC-0202116	89	75	61.2	12	18	£11.35



5020

### VALUE LINE CUPS LONG BELLOWS

PART NUMBER	LIFTING FORCE	DIM A MM	DIM B MM	DIM C MM	DIM D MM	PRICE
VAC-0202117	6	20	27.9	6	9	£3.53
VAC-0202118	11	25	33.5	6	9	£4.54
VAC-0202119	15	30	37.1	6	9	£5.08
VAC-0202120	23	40	53.1	10	15	£5.84
VAC-0202121	35	50	62.5	10	15	£6.89
VAC-0202122	48	60	76.3	12	18	£7.55
VAC-0202123	76	75	92.7	12	18	£14.20

Please note:

Additional Piab items  
also available to  
order upon request



Type		Name	Lifting forces vertical to the surface, N, at vacuum level 50 -kPa	Dim. A mm	Dim. B mm	Dim. C mm	Dim. D mm	Art. no.
Flat Concave		VL20FC	10	Ø20	15	Ø6	9	0202096
		VL25FC	17	Ø25	15.8	Ø6	9	0202097
		VL30FC	23	Ø30	17.5	Ø6	9	0202099
		VL40FC	38	Ø40	27	Ø10	15	0202100
		VL50FC	58	Ø50	29	Ø10	15	0202101
		VL60FC	79	Ø60	35.5	Ø12	18	0202102
		VL75FC	113	Ø75	38.3	Ø12	18	0202103
Bellows		VL20BX	7	Ø20	19.5	Ø6	9	0202109
		VL25BX	12	Ø25	22.3	Ø6	9	0202110
		VL30BX	16	Ø30	25.6	Ø6	9	0202111
		VL40BX	29	Ø40	36.3	Ø10	15	0202113
		VL50BX	44	Ø50	43.6	Ø10	15	0202114
		VL60BX	60	Ø58	52.2	Ø12	18	0202115
		VL75BX	89	Ø71.7	61.2	Ø12	18	0202116
Long Bellows		VL20BL	6	Ø20	27.9	Ø6	9	0202117
		VL25BL	11	Ø25	33.5	Ø6	9	0202118
		VL30BL	15	Ø30	37.1	Ø6	9	0202119
		VL40BL	23	Ø40	53.1	Ø10	15	0202120
		VL50BL	35	Ø50	62.5	Ø10	15	0202121
		VL60BL	48	Ø60	76.3	Ø12	18	0202122
		VL75BL	76	Ø75	92.7	Ø12	18	0202123

Fittings (brass)							Fitting for cup		
							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 mm	Dim. E mm	Dim. F mm	Dim. G mm	SW	Art. no.			
G1/8" – M5 Diameter 6	Ø6	11	23	3	3	0202156	●		
G1/4" – G1/8" Diameter 6	Ø6	14	26	3	3	0202157	●		
G1/4" – G1/8" Diameter 10	Ø10	15	35	4	6	0202158		●	
G1/4" – G1/8" Diameter 12	Ø12	15	40	4	6	0202159			●
G3/8" – G1/4" Diameter 10	Ø10	15	35	4	6	0202164		●	
G3/8" – G1/4" Diameter 12	Ø12	15	40	4	6	0202165			●
NPT 1/8" – M5	Ø6	10	22	n/a	3	0202160	●		
NPT 1/4" – NPSF 1/8"	Ø6	15	27	n/a	3	0202161	●		
NPT 1/4" – NPSF 1/8"	Ø10	15	35	n/a	6	0202162		●	
NPT 1/4" – NPSF 1/8"	Ø12	15	39	n/a	6	0202163			●
NPT 3/8" – NPSF 1/4"	Ø10	15	35	n/a	6	0202166		●	
NPT 3/8" – NPSF 1/4"	Ø12	15	39	n/a	6	0202167			●

Build height, B+E

## VACUUM CARTRIDGES / INTEGRATION INTRODUCTION

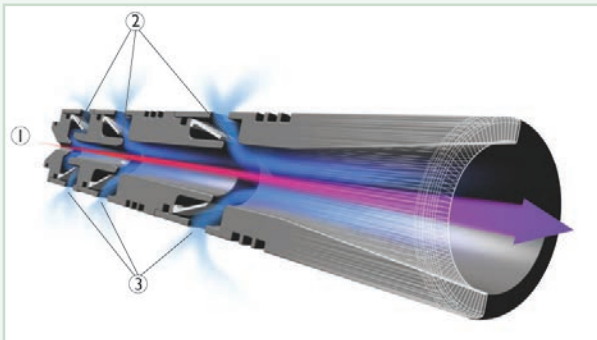
### PIAB VACUUM PUMPS ARE PREDOMINANTLY BASED ON THE PATENTED COAX® TECHNOLOGY

COAX cartridges exist in several sizes (MICRO, MINI & MIDI) and models (Bi, Ti, Pi, Si & Xi), making them suitable for every application. The technology ensures excellent performance at both low and high feed pressures – ideal for situations where compressed air lines deliver air at low or fluctuating pressures. Pumps based on COAX technology can operate within the range of 0.17 to 0.60 MPa.

Integrating COAX technology directly into the machine body allows you to position vacuum power exactly where needed, making maximum use of energy and increasing speed by eliminating line losses and inefficiencies. For more information, visit [www.coaxtechnology.com](http://www.coaxtechnology.com).







Piab's decentralised vacuum gripper system (VGS™) is a product solution integrating high quality DURAFLEX® suction cups with COAX based vacuum cartridges. The VGS makes selection, sizing and installation of a vacuum system easier. With a VGS, you will enjoy the benefits of a more cost efficient and reliable vacuum system.

Piab centralised pumps are also based on COAX technology. These are modularised pumps with COAX cartridges; the number of cartridges required depends on the vacuum flow need.



When compressed air (1) passes through the nozzles (2), air is pulled through with the stream of compressed air. "Suction" is thus created at the opening of each stage (3).

## VACUUM PUMPS / GENERATORS INTRODUCTION

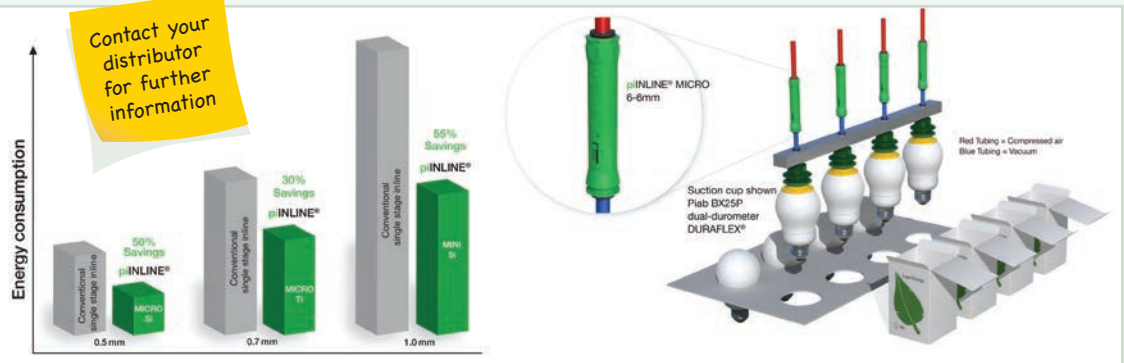
COMPACT DESIGN		APPLICATIONS
Powerful vacuum pumps with integrated functionality.	 piCOMPACT® MICRO, P3010, P5010	<ul style="list-style-type: none"> <li>Electronic and semiconductor machine equipment.</li> <li>Robot handling equipment in plastic, consumer, furniture and automotive industries.</li> <li>Suitable for fast and reliable evacuation in sealed systems.</li> </ul>
A large capacity pump (comparable up to 4kW [5 HP] electro mechanical pumps) that can still reduce energy costs by up to 40%.	 P6010, P6040	<ul style="list-style-type: none"> <li>Automatic material handling and other manufacturing processes in the automotive, robotic and packaging industries.</li> <li>Machine equipment for the graphic industry, eg. offset press, post press machines.</li> </ul>
CLASSIC DESIGN		APPLICATIONS
Now 22% improvement of energy efficiency compared to the previous model.	 piCLASSIC	<ul style="list-style-type: none"> <li>Robot handling equipment in plastic, consumer, furniture and automotive industries.</li> <li>Packaging machines.</li> </ul>
Maximum performance with minimum footprint.	 Chip pump	<ul style="list-style-type: none"> <li>Where a small footprint is needed.</li> </ul>
INLINE DESIGN		APPLICATIONS
40 – 50% energy reduction compared to other inline vacuum ejectors of corresponding size.	 piINLINE®	<ul style="list-style-type: none"> <li>Injection moulding automation equipment.</li> <li>Sheet metal handling equipment, such as laser cutting, bending and punching machines.</li> <li>Pick-and-place, such as labelling machines.</li> </ul>
Large capacity vacuum pump suitable for cramped areas or for environments with tough chemical conditions.	 Round pump	<ul style="list-style-type: none"> <li>For environments with tough chemical conditions.</li> <li>Vacuum forming, evacuation and filling of liquids, leak testing.</li> </ul>

Contact your distributor for further information

## piINLINE® Eco-friendly, energy saving, inline vacuum ejector

Introducing piINLINE® a range of eco-friendly, vacuum inline ejectors based on Piab's energy efficient COAX® technology.

- Superior vacuum performance even at low or fluctuating feed pressures.
- Dirt tolerant and durable design.
- Easy to retrofit existing energy wasting inline vacuum ejectors, thanks to generic "plug-and-play" design.
- Easy and simple installation with push in connections – low installation cost.
- Installs directly on the hose near the suction point.
- Eliminates flow losses and enhances the vacuum performance.



### TECHNICAL INFORMATION

piINLINE® vacuum ejector	Area of application	Dirt tolerant design	Optimum feed pressure	Air Consumption	Max. vacuum	Max. vacuum flow	Evacuation time, -50 kPa
			MPa	l/min	-kPa	l/min	s/l
	MICRO Si	Leaking applications	0.600	7.2	75	16.8	4.90
	MICRO Bi	Low or fluctuating compressed air	0.180	8.4	83	13.8	10.00
	MICRO Ti	Sealed applications	0.400	16.2	84	19.2	3.10
	MICRO Xi	Leaking applications	x 0.600	22.2	75	18.6	2.60
	MICRO Xi	Sealed applications	0.500	7.8	92	14.4	7.30
	MINI Si	Leaking applications	x 0.600	26.4	75	41.4	1.40
	MINI Pi	Low or fluctuating compressed air	x 0.314	26.4	90	34.2	1.80
	MINI Xi	Sealed applications	x 0.500	27.6	94	37.2	1.60
	MIDI Si	Leaking applications	x 0.600	105.0	75	186.0	0.40
	MIDI Pi	Low or fluctuating compressed air	x 0.300	120.0	90	162.0	0.48
	MIDI Xi	Sealed applications	x 0.450	110.0	95	168.0	0.44

### ORDERING INFORMATION

piINLINE® vacuum ejector	Connections for compressed air and vacuum				Accessories		
	4-4 mm	6-6 mm	8-8 mm	8-12 mm	Snap in mounting	Silencer	Snap in mounting for Silencer
	MICRO Si	0122882	-	-	5xMICRO 0123093	-	-
	MICRO Bi	0122880	0122883	-			
	MICRO Ti		0122022				
	MICRO Xi	0122881	0122884	-			
	MINI Si	-	0122025	0122896	4xMINI 0123094	0125466	1xMINI 0126009
	MINI Pi	-	0122894	0122897			
	MINI Xi	-	0122895	0122898			
	MIDI Si	-	-	0122032	1xMIDI 0123095	0123031	1xMIDI 0123096
	MIDI Pi	-	-	0122899			
	MIDI Xi	-	-	0122900			

Leaking applications include handling porous materials such as corrugated board.  
Sealed applications include handling electronics, plastic parts and other non-porous materials.

## piCLASSIC 40% more energy efficient compared to a rotary vane style pump

Our Classic pump series has been upgraded to piCLASSIC with COAX® cartridges, providing an improvement of up to 22% in energy efficiency.

- Available with 70% more vacuum flow capacity versus previous Classic models.
- High initial flow.
- No need for expensive vacuum tanks and vacuum valves on high-speed machines.
- Easy to control on/off for intermittent operation to save energy.
- Low weight (0.5-1 kg) and new modular design.
- Easy to install close to suction point for reduced energy costs (smaller size of pump).
- Few moving parts – virtually no cost for service and repair.
- New design is easy to dismount and clean.
- Performance can easily be upgraded by adding cartridges (up to a total of 6).
- Available with extra energy saving function for sealed systems.



### TECHNICAL INFORMATION

piCLASSIC vacuum cartridge	Area of application	Optimum feed pressure, MPa	Air consumption/ cartridge, NI/s	Max. vacuum, -kPa	Vacuum flow range, 1-6 cartridges, NI/s	Rec. operating vacuum range, -kPa
Midi Si32-3	Leaking applications	0.60	1.75	75	6-28.8	0-70
Midi Pi48-3	Low or fluctuating comp. air	0.30	2.00	90	5.6-26.9	0-90
Midi Xi40-3	Sealed applications	0.45	1.83	95	5.9-28.3	70-95

Leaking applications include handling porous materials, such as corrugated board.  
Sealed applications include handling non-porous materials, such as glass and metal.

### CONFIGURABLE PRODUCTS

Product Group	COAX® cartridge module		Number of COAX®		COAX® valve configuration		Sealing material	
Code	Code	Description	Code	Description	Code	Description	Code	Description
PCL	S	COAX® cartridge Si32-3, high vacuum flow	1	Single unit	B	Standard	N	Nitrile
	X	COAX® cartridge Xi40-3, extra vacuum level	2	x2 units	A	Non-return valve	V	Viton™
	P	COAX® cartridge Pi48-3, low feed pressure	3	x3 units				
			4	x4 units				
			5	x5 units				
			6	x6 units				

<b>PCL . S1BN . S . 10D . SV</b>	
<b>Function</b>	
Code	Description
S	No function
F	Energy saving system (ES)

<b>Compressed air connection</b>	
Code	Description
A	G1/4" female
E	1/4" NPT female
D	1/8" NPSF (G) female
08	Push in 8 mm (5/32") 1/4" female
10	Push in 10 mm -1/4" female
12	Push in 12 mm -1/4" female

<b>Vacuum connection</b>	
Code	Description
D	G3/4" female
E	3/4" NPT female
B	G1" female

<b>Accessories</b>	
Code	Description
X	No accessory
S	Silencer G1" male
V	Vacuum gauge
SV	Silencer G1" male & vacuum gauge



Gripping, lifting and  
moving solutions.

Evolving automation  
since 1951.





## piCOMPACT® MICRO

Amazing uptime with the world's fastest integrated controls ejector

- COAX® technology allows for supply pressure drops or pressure fluctuations without jeopardising vacuum performance.
- Vacuum response to 50–60 –kPa (15–18 –inHg) is typically 30–50% faster compared to single stage technology.
- Ultra high speed, direct operating valves, for vacuum on/off and part release, provide short cycle times and high reliability.
- Split unit is a unique feature where the pump and valve sections can be separated. Shorter cycle time as closer to point of suction. (Optional)
- Probably the most user-friendly GUI for the vacuum switch, compared to other ejectors.
- Extra-large cleanable vacuum filter area guarantees no pressure drops or reduced speed / performance.
- The only 10 mm wide compact ejector with a large 6 mm vacuum connection for maximum performance.

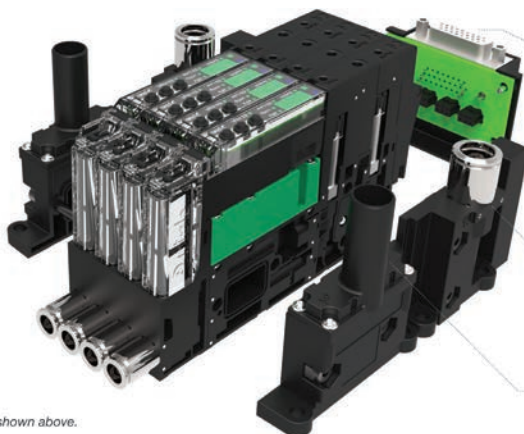
\* Conditions: Vacuum piping size  $\varnothing 4/2$  mm x 300 mm, small cup, total volume 5 ml, piCOMPACT™ MICRO Ti05x2 with filter filler.



Contact your distributor for further information

72.8 mm  
[2.87"]  
147 mm  
[5.77"]  
60.9 mm  
[2.40"]

Values are valid for the example shown above.



Common electrical connection

Common feed

Common exhaust

426 g  
[15 oz.]

### CONFIGURABLE PRODUCTS

Product Group	Ejector performance						Working environment	
piCOMPACT™							Chemical resistance	
Code	Vacuum characteristics		Nozzle model		Nozzle rows		Code	Description
PC	Code	Description	Code	Description	Code	Description	S	Standard
	L	Low feed pressure	MC	MICRO (14–19 Nl/min [0.50–0.67 scfm])	1	Single		
	S	High vacuum flow			2	Double		
	X	Extra vacuum level						
	T	Extra high vacuum flow						

PC . S . MC2 . S . AAA . S16 . 1X . 6 . EI . CCP6

Functionality			
Control functions		Vacuum sensing	
Code	Description	Code	Description
A	Electrical ES and blow off	B	Without non-return valve
B	Electrical ES and automatic blow off		
C	Blow off	A	Display, analog and digital output
D	Automatic blow off		
E	No addition		
		X	No vacuum sensing

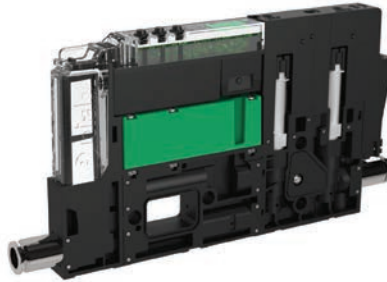
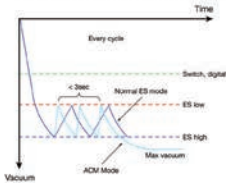
Vacuum connect module			
Vacuum filter		Vacuum port(s)/channel	
Code	Description	Code	Description
S	Vacuum filter 50 µm	1	1 vacuum port
X	No vacuum filter	2	2 vacuum ports
		3	3 vacuum ports
		4	Ø4 (5/32") push-in connector(s)
		6	Ø6 push-in connector(s)
		14	Ø1/4" push-in connector(s)

# piCOMPACT® MICRO

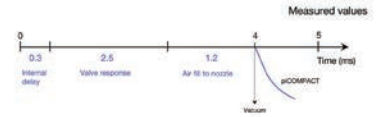
Amazing uptime with the world's fastest integrated controls ejector

## Special features for energy saving (ES) function

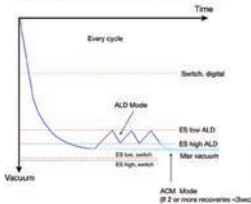
ACM - Automatic Condition Monitoring



## Valve pump speed

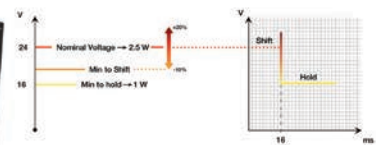


## ALD - Automatic level determination



## High speed valves with adaptive PWM

Adaptive Pulse Width Modulation



Adaptive PWM Gives

- Faster response with lower energy usage. Only use the high power when needed.
- More robust system with larger voltage input range that provides a safer shift.
- Better longevity with lower overall power and temperature.

Nine

## CONFIGURABLE PRODUCTS



### Single unit or manifold mount

Number of channels		Split control from vacuum	
Code	Description	Code	Description
1	1 channel	X	No split
2	2 channels	A	Split Ø4
3	3 channels	B	Split Ø6
4	4 channels	C	Split Ø1/4"
5	5 channels		
6	6 channels		
7	7 channels		
8	8 channels		



### Air supply

#### Air connections

Code	Description
4	Ø4 (5/32") push-in connector
6	Ø6 push-in connector
14	Ø1/4" push-in connector
8	Ø8 (5/16") push-in connector
26	2 x Ø6 push-in connectors
214	2 x Ø1/4" push-in connectors
28	2 x Ø8 (5/16") push-in connectors

Contact your distributor for further information.

PC . S . MC2 . S . AAA . S16 . 1X . 6 . EI . CCP6

### Mounting

#### Options

Code	Description
EC	Ejectors stacked with central exhaust
EI	Ejector(s) for individual mounts



### Electrical properties

Valve configuration		Electrical input / output		Electrical interface	
Code	Description	Code	Description	Code	Description
CC	NC vacuum + NC blow off	P	PNP	6	6 pole connector(s)
OC	NO vacuum + NC blow off	N	NPN	26	HD D-sub 26p connector
C	NC vacuum			44	HD D-sub 44p connector
O	NO vacuum				

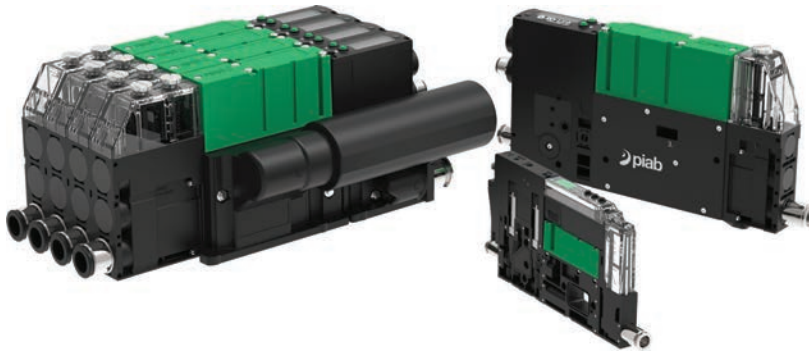
# piCOMPACT®23 smart

Innovative vacuum generators with fully integrated controls for smart Industry 4.0 manufacturing

## Generic communication link – new era of smart factories

The piCOMPACT®23 SMART is available with IO-Link, which fits any type of fieldbus. IO-Link is the first worldwide standard (IEC 61131-9) for IO technology used for sensor and actuator communication. The powerful point-to-point communication is based on 3-wire connection. Offering fieldbus-independence, IO-Link is really a further development of the existing, tried and tested connection technology for sensors and actuators.

- Configurable vacuum ejector based on COAX® technology with integrated controls, developed for robotic handling applications
- Optimised design for high reliability, flexibility, high vacuum flow and fast cycle times
- Energy Saving (ES) function with adjustable hysteresis, Automatic Condition Monitoring (ACM) and Automatic ES Level Determination (ALD)
- Additional features; Amplified Blow-Off (ABO), Automatic Timer Blow-Off (ATBO), Intelligent Blow-Off (IBO) and Self Adhesion Control (SAC) automatically removes "unwanted" vacuum adhesion with short blow puffs
- Option (piCOMPACT®23 SMART) with data communication through international standard system IO-Link
- piCOMPACT®23 SMART to be selected for medium or larger vacuum systems, such as palletising of boxes and loading, sorting, transfer and unloading of different sheet materials
- Available sensor data: temperature, voltage, acceleration, cycle analysis and more, to help predict maintenance. Sensor data communicated over IO-link but also visual in the display menu
- Prepared for quick connect / release, with common compressed air feed for 1-4 units (buy 1-4 channel pumps). Easy maintenance and easy installation. Quick connect plate ordered separately





Contact your distributor for further information

## CONFIGURABLE PRODUCTS

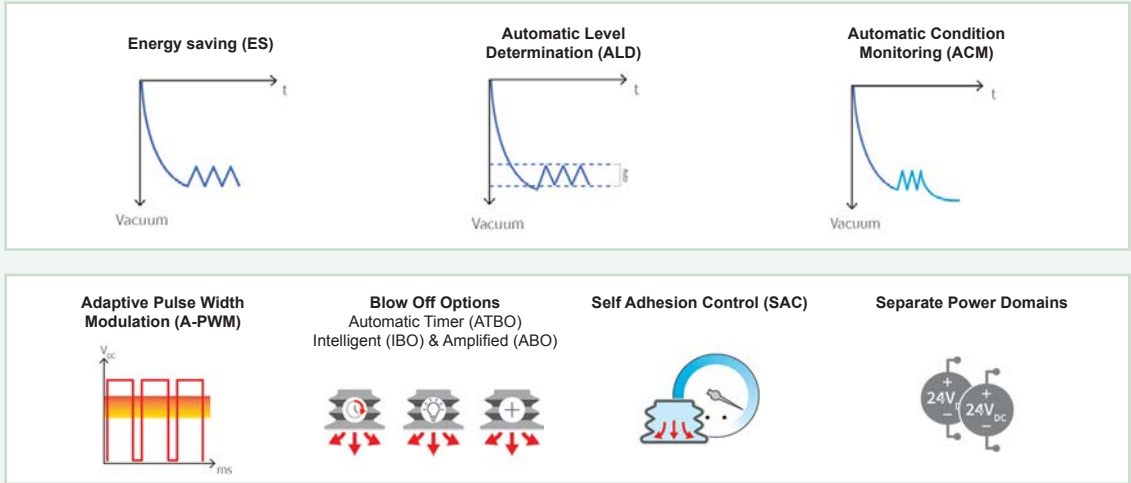
Product Group	Functionality		Functionality		Working environment		Functionality	
piCOMPACT	Code	Vacuum characteristics	Code	Nozzle model	Code	Chemical resistance	Code	Communication interface
PC	F	High vacuum performance	12	SX12 (2.59–5.18 scfm)	S	Standard	H	IO-Link pre-configured
			42	SX42 (7.33–14.6 scfm)			K	Standard input/output and IO-Link ready
			Code	Nozzle rows				
			1	Single				
			2	Double				

PC . F . 122 . S . H111AD . S1P1 . 1X . 8 . EJ . CCCC

									
Vacuum connect module					Single unit or manifold mount				
Vacuum filter		Vacuum port(s)/channel		Vacuum connection(s)		Number of channels		Split control from vacuum	
Code	Description	Code	Description	Code	Description	Code	Description	Code	Description
S	Vacuum filter 50 µm	1	1 vacuum port	8	Ø8 (5/16") push-in connector(s)	1	1 channel	X	No split
F	2 x Vacuum filter 50 µm	2	2 vacuum ports	P1	Ø10 push-in connector(s)	2	2 channels	B	Split Ø6
X	No vacuum filter	3	3 vacuum ports	P2	Ø3/8" push-in connector(s)	3	3 channels	C	Split Ø1/4"
Z	No vacuum filter incl. sensing port			P3	Ø12 push-in connector(s)	4	4 channels	D	Split Ø8
				P4	Ø1/2" push-in connector(s)			E	Split Ø10
				H1	12mm / 1/2" ID barb connector			F	Split Ø3/8"

# piCOMPACT®23 smart

## TECHNICAL FEATURES



## CONFIGURABLE PRODUCTS

Functionality		Code	IO-Link energy saving type
A	Electrical ES, vac and blow-off	1	ES pre-set on 22.1 -inHg
B	Electrical ES, vac and automatic timer based blow-off (ATBO)	2	ES Automatic level determination (ALD)
F	Electrical ES, vac, intelligent blow-off (IBO)	3	ES pre-set on 22.1 -inHg with ALD backup
C	Vac and blow-off	0	No ES
D	Vac, automatic timer based blow-off (ATBO)	Code IO-Link blow-off type	
G	Vac and intelligent blow off (IBO)	1	Automatic timer based blow-off (ATBO)
E	Vacuum on/off (vac)	2	Intelligent blow off (IBO)
IO-Link pre-configured		0	External control
		Code IO-Link additional functions	
		1	Self adhesion control (SAC)
		0	No IO-Link additional functions
		Code Additional vacuum functions	
		No extra vacuum control	
		Z Self adhesion control (SAC)	
		Code Internal check valves	
		B	Without non-return valve
		A	With non-return valve
		C	Amplified blow-off, without vacuum non-return valve (ABO)
		D	Amplified blow-off, with vacuum non-return valve (ABO)
		Code Vacuum sensing	
		A	Display, analog and digital output [-kPa]
		B	Display, 2x digital outputs [-kPa]
		C	Display, leakage warning and digital output [-kPa]
		D	IO-Link display [-kPa]
		E	Display, analog and digital output [-inHg]
		F	Display, 2x digital outputs [-inHg]
		G	Display, leakage warning and digital output [-inHg]
		H	IO-Link display [-inHg]
		X	No vacuum sensing

PC . F . 122 . S . H11AD . S1P1 . 1X . 8 . EJ . CCCC

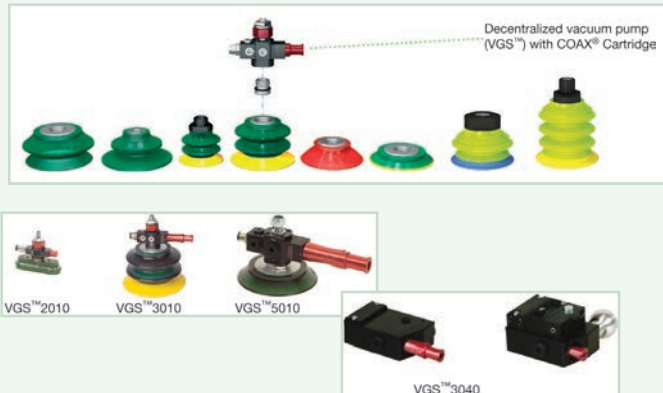
Air supply		Mounting		Electrical properties	
Air connections		Ejector options		Valve configuration	
Code	Description	EC	Ejectors stacked with central exhaust	CC	NC vacuum + NC blow off
6	Ø6 push-in connector	EN	Ejectors stacked with central silencer	OC	NO vacuum + NC blow off
14	Ø1/4" push-in connector	EJ	Ejector(s) for individual mounts, integrated silencer	C	NC vacuum
8	Ø8(5/16") push-in connector	EK	Ejector(s) for individual mounts, top mounted silencer	O	NO vacuum
P1	Ø10 push-in connector	EL	Ejector(s) for individual mounts, central exhaust	AC	Bi-stable vacuum valve + NC blow off
P2	Ø3/8" push-in connector	EM	Ejector(s) for individual mounts, central silencer	Code Electrical input/output	
P3	Ø12 push-in connector(s)			A	PNP/PNP or NPN/NPN
P4	Ø1/2" push-in connector(s)			B	Mixed mode
2P1	2x Ø12 push-in connector(s)			C	IO-Link
2P2	2x Ø3/8" push-in connector(s)			Code Electrical interface	
2P3	2x Ø12 push-in connector(s)			B	M12 8p connector(s)
2P4	2x Ø1/2" push-in connector(s)			C	M12 5p connector(s)
QC	Pre-configured for Quick connect plate			E	M12 5p connector(s), separate power domains
				F	2 x M12 4p connectors, separate power domains

## VACUUM GRIPPER SYSTEM – VGS™

### ENABLES EASY SELECTION AND ACCURATE DIMENSIONING

Piab's decentralised vacuum gripper system, VGS, is a product solution, integrating high quality suction cups with COAX cartridges.

- VGS makes selection, sizing and installation of a vacuum system much easier. Design and dimension errors will be avoided.
- You will enjoy the benefits of a more efficient and reliable vacuum system.
- Increased machine speeds can be achieved, thanks to faster response times, with the vacuum source right at the cup and better initial vacuum flow, which will grip the object faster.
- The decentralised approach provides safety with one vacuum source per suction point. It also eliminates flow losses in long vacuum hoses, making maximum use of energy.
- VGS 3040 with integrated energy saving functions, like Vacustat and AQR02 (Atmospheric Quik Release) is a pioneering product and the world's most energy efficient concept for vacuum handling of sealed parts, such as glass and metal sheets.



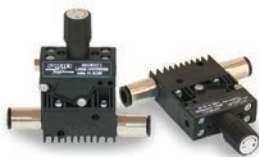
## energy savers

### piSAVE optimise



- Vacuum controlled proportional pressure regulator, a fully pneumatic device suitable for air driven ejectors / pumps.
- The feed pressure to the vacuum pump / ejector is automatically regulated and controlled to maintain the set vacuum level. Air / energy usage is kept to a minimum for the application (optimised).
- Recommended for leaking and sealed applications to save energy and secure the right vacuum level.
- Extra port for vacuum gauge.
- Air ventilation port with filter.
- Swivel compressed air connections.
- piSAVE optimise gives maximum feed pressure / flow to vacuum pump / ejector until vacuum level starts to build up.
- Separate mounting bracket kit.
- Upgrade kit – available as an integrated module for piCLASSIC and Classic vacuum pumps.

### piSAVE on/off



- Independent pneumatic air-saving device for vacuum pumps.
- Adjustable vacuum controlled 2/2 NO valve.
- Available with large hysteresis for object handling and small hysteresis for process applications.
- The Vacustat is recommended for vacuum pumps in non-leaking systems.
- The vacuum pump must be fitted with a non-return valve.

### piSAVE release



- Equalises pressure in the suction cups to provide fast release of the product.
- Extra fast release by accumulating and utilising the feed air pressure as a boost.
- ON / OFF activated simultaneously with the ejector.
- No additional controls required – use a single 3/2 control valve for the ejector and piSAVE release.

### piSAVE sense



- Vacuum check valves, which allow a few suction cups to miss the object(s) and still maintain enough vacuum level in the system with quick response and release times.
- The vacuum check valves shall be used in a centralised vacuum system, one for each suction cup.
- Designing with vacuum check valves will require a smaller vacuum pump and save energy.
- Suitable for handling different sized or a different number of leaking objects, such as MDF boards, corrugated cardboards, with a flexible handling device.
- Also suitable for objects with surface leakage around the lip of the suction cup.
- Available in three sizes with different flow performance / characteristics to suit different degrees of leakage.
- The valves are integrated in an AI-fitting with female and male threaded connections to facilitate installation.

## NYLON VACUUM FILTERS

### DESCRIPTION

To filter dust and other small particles from the vacuum flow. Reduces the risk of operation breakdown or stoppage in the pump.

### FEATURES

- To filter dust and other small particles from the vacuum flow
- Reduces the risk of operation breakdown or stoppage in the pump
- Replaceable filter element
- Available with special filter element with increased filter area
- Material: PA, PE, PP
- Temperature: -20°C to +80°C

### APPLICATIONS

- Case / carton erecting, case / carton opening closing
- Tray forming, tray unloading and loading
- Direct food contact



### VACUUM FILTERS NYLON



5020

PART NUMBER	SIZE	FILTRATION	MAX. FLOW RATE	PRICE
VAC-0110521	G1/2"	5 micron	5.8 nl/s	£124.95
VAC-0110522	3/4" cpl.	5 micron	5.8 nl/s	£124.95
VAC-0110523	G1 1/2"	5 micron	9.0 nl/s	£211.81
VAC-3116670	G1/8"	10 micron	1.4 nl/s	£54.59
VAC-3116671	G3/8"	10 micron	2.5 nl/s	£54.59
VAC-3116651	G1/2"	10 micron	15.0 nl/s	£67.88
VAC-3116652	G3/4"	10 micron	15.0 nl/s	£67.88
VAC-3116672	G1"	10 micron	42.0 nl/s	£104.93
VAC-3116653	G1 1/2"	10 micron	85.0 nl/s	£112.73
VAC-0128408	1/8" NPT	10 micron	1.4 nl/s	£54.59
VAC-0128409	1/4" NPT	10 micron	1.4 nl/s	£54.59
VAC-0128410	3/8" NPT	10 micron	2.5 nl/s	£54.59
VAC-0128413	1/2" NPT	10 micron	15.0 nl/s	£67.88
VAC-0128415	3/4" NPT	10 micron	15.0 nl/s	£67.88
VAC-0128418	1" NPT	10 micron	42.0 nl/s	£104.93
VAC-0128419	1 1/2" NPT	10 micron	85.0 nl/s	£112.73

## STEEL VACUUM FILTERS

### DESCRIPTION

To filter dust and other small particles from the vacuum flow. Reduces the risk of operation breakdown or stoppage in the pump.

### FEATURES

- To filter dust and other small particles from the vacuum flow
- Reduces the risk of operation breakdown or stoppage in the pump
- Material: BES, SS, NBR, PL
- Temperature: -30°C to +90°C

### APPLICATIONS

- Case / carton erecting, case / carton opening closing
- Tray forming, tray unloading and loading
- Direct food contact



### VACUUM FILTERS STEEL



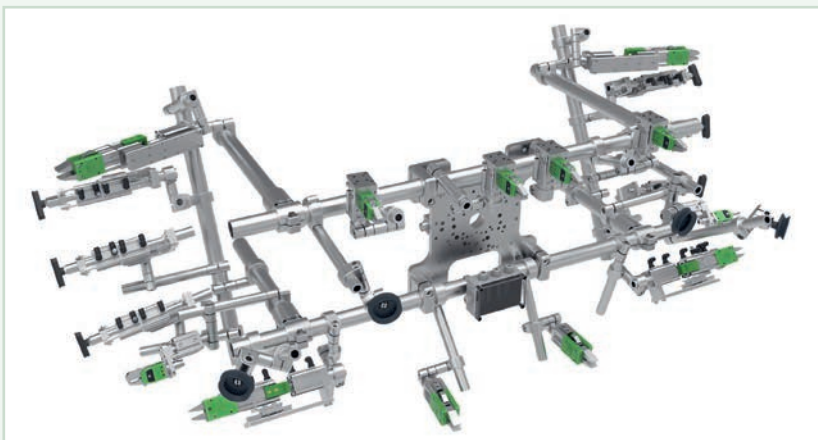
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PART NUMBER	SIZE	FILTRATION	MAX. FLOW RATE	PRICE
VAC-3116709	G1"	5 micron	16.5 nl/s	£360.23
VAC-3116654	G1 1/2"	5 micron	37.7 nl/s	£423.26
VAC-3116710	2"	5 micron	82.6 nl/s	£430.28
VAC-0211036	2 1/2"	5 micron	100.0 nl/s	£456.83



## DESCRIPTION

The EOAT and gripper systems are used to design robotic end-effector tools, ergonomic tools or fixture tools for use on all types of automation equipment. The tooling consists of connecting parts for welded frames or extruded profiles and swivel arm assemblies, grippers with a choice of various "function" attachments. Some function attachments include a vacuum ejector that is based on the latest COAX® technology. Piab provides both round and square EOAT as there are advantages with both options. To maximise the flexibility, our components are modular and adjustable and can be combined into a specific tool from the components. With our great expertise we can also provide tailor made solutions for various applications in the automotive, plastics and food industries.



## GRIPPER FINGERS

### FEATURES

- Pneumatically single acting, spring return function
- Extendable for longer reach, using VLR Arm Extensions
- Fully compatible with SAS's modular EOAT gripper system

### GRIPPER FINGERS

#### PNEUMATICALLY SINGLE ACTING SPRING RETURN FUNCTION



5020

PART NUMBER	MODEL	DEGREE	FORCE	PRICE
VAC-0213149	GRF 14-95	95° (E)	16 N	£155.60
VAC-0213152	GRF 20-95	95° (E)	16 N	£175.39

### GRIPPER FINGERS

#### PNEUMATICALLY SINGLE ACTING SPRING RETURN FUNCTION



5020

PART NUMBER	MODEL	DEGREE	FORCE	PRICE
VAC-0213159	GRF 20-35	35° (E)	55 N	£188.43
VAC-0213160	GRF 30-35	35° (E)	55 N	£216.11

### GRIPPER FINGERS

#### PNEUMATICALLY SINGLE ACTING SPRING RETURN FUNCTION



5020

PART NUMBER	MODEL	DEGREE	FORCE	PRICE
VAC-0213164	GRF 14-120	120° (E)	–	£201.53

### GRIPPER FINGERS

#### PNEUMATICALLY SINGLE ACTING SPRING RETURN FUNCTION



5020

PART NUMBER	MODEL	DEGREE	FORCE	PRICE
VAC-0213165	GRF 20-120	120° (E)	–	£214.06

## FIXING DEVICES FOR GRIPPER FINGERS

### FIXING DEVICES FOR GRIPPING FINGERS RUBBERISED AND SILICONE FREE LAYER



5020

PART NUMBER	MODEL	PRICE
VAC-0213400	GH-GF14D14	£15.91

### FIXING DEVICES FOR GRIPPING FINGERS RUBBERISED AND SILICONE FREE LAYER



5020

PART NUMBER	MODEL	PRICE
VAC-0213401	GH-GF20D20	£21.44

## KNURLED AND SAW TOOTH SPRUE / PART PLIERS

### FEATURES

- The standard-type jaws come with a knurled pattern on the jaw-face to better grip the sprue / part
- Single action spring return function
- Anodised finish
- Requirement: max. air pressure 87 psi (6 bar)
- Requirement: filtered dry air



**KNURLED SPRUE / PART PLIERS  
WITHOUT PNP SENSOR WITH PLUG**

5020



**SAW TOOTH SPRUE / PART PLIERS**

5020

PART NUMBER	MODEL	FORCE	SENSOR TYPE	PRICE
VAC-0213190	GRZ 10-10	20 N	N/A	£104.09
VAC-0213191	GRZ 10-12	20 N	N/A	£141.53

PART NUMBER	MODEL	FORCE	PRICE
VAC-0213196	GRZ 10-10 ST	20 N	£125.55
VAC-0213197	GRZ 10-12 ST	14.5 N	£125.55



**KNURLED SPRUE / PART PLIERS  
WITH PNP SENSOR WITH PLUG**

5020



**SAW TOOTH SPRUE / PART PLIERS**

5020

PART NUMBER	MODEL	FORCE	SENSOR TYPE	PRICE
VAC-0213353	GRZ 10-10 C-P8	20 N	SP1,5/SN1,5	£163.11
VAC-0213398	GRZ 10-12 C-P8	20 N	SP1,5/SN1,5	£163.11

PART NUMBER	MODEL	FORCE	PRICE
VAC-0213198	GRZ 20-16 ST	65 N	£159.88

## NITRILE PADDED SPRUE / PART PLIERS

### FEATURES

- The NP type jaws feature nitrile rubber padding to the jaws to prevent marring of finished parts
- Single action spring return function
- Anodised finish
- Requirement: Max. air pressure 87 psi (6 bar)
- Requirement: filtered dry air



**NITRILE PADDED SPRUE / PART PLIERS**

5020



**NITRILE PADDED SPRUE / PART PLIERS**

5020

PART NUMBER	MODEL	FORCE	PRICE
VAC-0213202	GRZ 10-10 NP	—	£142.55
VAC-0213203	GRZ 10-12 NP	14.5 N	£128.77

PART NUMBER	MODEL	FORCE	PRICE
VAC-0213204	GRZ 20-16 NP	65 N	£177.05

## SPRUE / PART PLIERS WITH JAW WITH HOLES

### FEATURES

- The standard-type jaws come with a knurled pattern on the jaw face to better grip the sprue / part
- Single action spring return function
- Anodised finish
- Requirement: max. air pressure 87 psi (6 bar)
- Requirement: filtered dry air



**SPRUE / PART PLIERS  
WITH JAW WITH HOLES**

**WITHOUT PNP SENSOR WITH PLUG**

5020

PART NUMBER	MODEL	FORCE	SENSOR TYPE	PRICE
VAC-0213192	GRZ 20-16	65 N	N/A	£183.57



**SPRUE / PART PLIERS  
WITH JAW WITH HOLES**

**WITH PNP SENSOR WITH PLUG**

5020

PART NUMBER	MODEL	FORCE	SENSOR TYPE	PRICE
VAC-0213462	GRZ 20-16 C-P8	65 N	SP1,5/SN1,5	£211.93

## GZ20 SPRUE / PART PLIERS

### FEATURES

- Movement of the jaws by two pistons
- No inside recuperating spring
- A wide range of jaws, which can be combined
- Compatible with other products
- Anodised components offer excellent gliding properties and wear protection
- Easy jaw change by loosening of the safety caps



**GZ20 SPRUE / PART PLIERS  
PADDED JAW**

5020

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213348	GZ20-AS50-60-60	Padded	£188.86



**GZ20 SPRUE / PART PLIERS  
WITHOUT SENSOR**

5020

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213345	GZ20-AS50-10-10	Knurled	£165.65



**GZ20 SPRUE / PART PLIERS  
KNURLED JAW WITH SENSOR**

5020

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213349	GZ20-AS50-10-95	Knurled with sensor	£267.30



**GZ20 SPRUE / PART PLIERS  
WITHOUT SENSOR**

5020

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213347	GZ20-AS50-50-50	Saw tooth	£176.75



**GZ20 SPRUE / PART PLIERS  
SHAPED JAW WITH SENSOR**

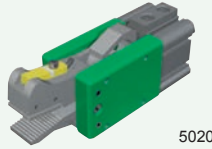
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PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213350	GZ20-AS50-40-95	Shaped with sensor	£271.29

## GZ32 SPRUE / PART PLIERS

### FEATURES

- Activity: double-acting

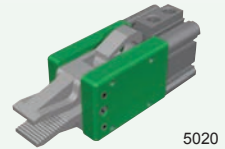


### GZ32 SPRUE / PART PLIERS KNURLED JAW WITH SENSOR

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213357	GZ32-AS50-10-95	Knurled with sensor	£366.06

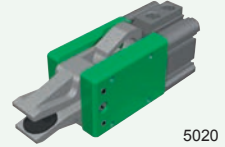
### GZ32 SPRUE / PART PLIERS WITHOUT SENSOR

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213355	GZ32-AS50-10-10	Knurled	£274.76



### GZ32 SPRUE / PART PLIERS WITHOUT SENSOR

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213356	GZ32-AS50-60-60	Padded	£317.78



## GRIPPING PLIERS

### FEATURES

- Movement of the jaws by two pistons
- No inside recuperating spring
- A wide range of jaws, which can be combined
- Compatible with other products
- Anodised components offer excellent gliding properties and wear protection
- Easy jaw change by loosening of the safety caps



### GZ25 GRIPPING PLIERS PLAIN JAW

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213404	GZ25-AS55-00-00	Plain	£259.69

### GZ25 GRIPPING PLIERS STANDARD JAW WITH SENSOR

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213406	GZ25-AS55-10-95	Standard with sensor	£355.12



### GZ25 GRIPPING PLIERS STANDARD JAW

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213405	GZ25-AS55-10-10	Standard	£261.27

### GZ25 GRIPPING PLIERS RUBBERISED JAW

PART NUMBER	MODEL	JAW TYPE	PRICE
VAC-0213407	GZ25-AS55-60-60	Rubberised	£285.06



## ELBOW ARMS

### FEATURES

- Angle adjustable elbow
- Useful for adjustment of GRZ gripper pliers and GRF gripper fingers



### GLA ELBOW ARMS

PART NUMBER	MODEL	PRICE
VAC-0213089	GLA 10-90	£16.58



### GLA ELBOW ARMS

PART NUMBER	MODEL	PRICE
VAC-0213090	GLA 14-120	£26.78



### GLA ELBOW ARMS

PART NUMBER	MODEL	PRICE
VAC-0213092	GLA 20-150	£30.16

## DRY RUNNING ROTARY VANE VACUUM PUMP

**V-VTN SERIES**  
WITH INTEGRAL  
SUCTION PAPER FILTER  
3 ph 50Hz 230/400 V MOTOR



5050

PART NUMBER	MODEL	MOTOR RATING (KW)	PRICE
GD-VTN16-0111	VTN16	0.55	£1126.08
GD-VTN26-0110	VTN26	0.75	£1421.88
GD-VTN41-0113	VTN41	1.50	£1982.88

1ph 50/60Hz 230 V MOTOR

GD-VTN16-0116	VTN16	0.55	£1268.88
GD-VTN26-0114	VTN26	0.75	£1554.48
GD-VTN41-0121	VTN41	1.50	£2380.68

## DRY RUNNING ROTARY VANE COMPRESSORS

**V-DTN SERIES**  
WITH INTEGRAL  
SUCTION PAPER FILTER  
3ph 50Hz 230/400 V MOTOR



5050

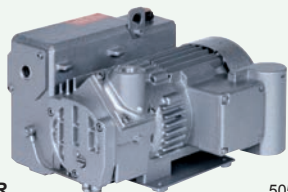
PART NUMBER	MODEL	MOTOR RATING (KW)	PRICE
GD-DTN16-0112	DTN16	0.55	£1187.28
GD-DTN26-0110	DTN26	0.75	£1493.28
GD-DTN41-0124	DTN41	1.50	£1982.88

1ph 50/60Hz 230 V MOTOR

GD-DTN16-0116	DTN16	0.75	£1391.28
GD-DTN26-0116	DTN26	0.75	£1574.88

## OIL FLOODED ROTARY VANE VACUUM PUMP

**V-VGD SERIES**  
3ph 50Hz 230/400 V MOTOR



5050

PART NUMBER	MODEL	MOTOR RATING (KW)	PRICE
GD-VGD10-0120	VGD10	0.37	£1268.88
GD-VGD15-0119	VGD15	0.55	£1401.48

1ph 50/60Hz 230 V MOTOR

GD-VGD10-0130	VGD10	0.37	£1370.88
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## SIDE CHANNEL BLOWERS

**2BH SERIES**  
1ph 50/60Hz 115/230 V MOTOR



5050

PART NUMBER	MODEL	MOTOR RATING (KW)	PRICE
GD-2BH13007AV15	2BH1300	0.37	£824.11
GD-2BH14007AV25	2BH1400	1.10	£997.51

3ph 50/60Hz 230/400 V MOTOR

GD-2BH16007AH16	2BH1600	2.20	£1580.95
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## OIL FLOODED ROTARY VANE VACUUM PUMP

**V-VC SERIES**  
3ph 50Hz 200/255 V MOTOR



5050

PART NUMBER	MODEL	MOTOR RATING (KW)	PRICE
GD-VC50-20GC	VC50	1.25	£2401.08
GD-VC75-20GE	VC75	1.85	£2615.28

3ph 50Hz 230 V MOTOR

GD-VC100-20GF	VC100	2.20	£3645.48
GD-VCS200-01GI-CD	VC200	6.50	£7103.28
GD-VCS300-01GI-CD	VC300	5.50	£8378.28

Please note:  
Accessories are  
available for  
all models

## CLAW VACUUM PUMP



### VLR SERIES

3ph 50Hz

5050

PART NUMBER	MOTOR RATING (KW)	RATED VOLTAGE	PRICE
GD-VLR100-01GF	2.2	230 / 400 V	£5450.88
GD-VLR150-01GG	3.0	230 / 400 V	£5920.08
GD-VLR301-01HI	5.5	400 / 690 V	£9479.88

## CLAW COMPRESSOR



### DLR SERIES

3ph 50Hz

5050

PART NUMBER	MOTOR RATING (KW)	RATED VOLTAGE	PRICE
GD-DLR100-01GG	3.0	230 / 400 V	£6001.68
GD-DLR150-01HL	7.5	400 / 690 V	£6409.68
GD-DLR301-03HO	15.0	400 / 690 V	£11657.58

## ACCESSORIES



### PAPER FILTER INSERT

5050

PART NUMBER	DESCRIPTION	PRICE
GD-2BX2100	To suit GD-2BH1300	£99.55
GD-2BX2107	To suit GD-2BH1400	£177.07
GD-2BX2102	To suit GD-2BH1600	£193.39



### INLET VACUUM FILTER

ZVF SERIES

5050

PART NUMBER	FLOW RATE	DESCRIPTION	PRICE
GD-ZVF32-54	100 m³/h*	To suit GD-VLR100	£180.02
GD-ZVF40-53	200 m³/h*	To suit GD-VLR150	£205.23
GD-ZVF50-53	320 m³/h*	To suit GD-VLR301	£324.03



### THREADED FLANGE

5050

PART NUMBER	TUBE OD	DESCRIPTION	PRICE
GD-2BX1038	G1 1/2"	GD-2BH1400	£25.13
GD-2BX1041	G2"	GD-2BH1600	£25.95



### INLET FILTER

ZAF SERIES

5050

PART NUMBER	FLOW RATE	DESCRIPTION	PRICE
GD-ZAF40-00	270 m³/h*	To suit GD-DLR100 / GD-DLR150	£190.82
GD-ZAF50-00	480 m³/h*	To suit GD-DLR300	£244.82



### INLINE VACUUM PAPER FILTER

5050

PART NUMBER	DESCRIPTION	PRICE
GD-2BX2060	To suit 2BH1300	£219.50
GD-2BX2064	To suit 2BH1400	£266.02
GD-2BX2061	To suit 2BH1600	£266.02

Many other machines  
and accessories  
available

Please ask for more  
details