

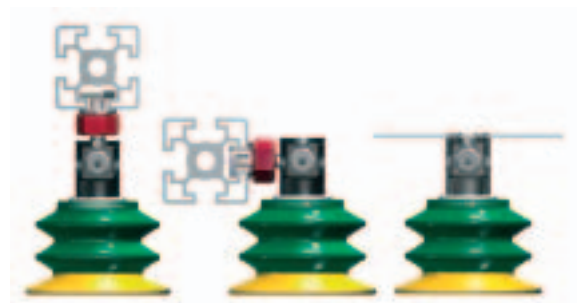
EFFICIENT MATERIAL HANDLING

INCREASE YOUR PRODUCTIVITY AND REDUCE YOUR COSTS WITH VGS™

- ▶ **Shorter response time**
- ▶ **Lower energy cost**
- ▶ **Higher operation reliability**
- ▶ **Easy selection and sizing** — Knowledge about your specific vacuum flow, level or volume requirements are not required. Only feed pressure and the material being handled determine the optimal VGS™ for your application.
- ▶ **Improved grip, lifting capacity and wear resistance with DURAFLEX® cups** — Provides up to 50% higher frictional grip as compared to conventional cups.

SIMPLE INSTALLATION AND MAINTENANCE

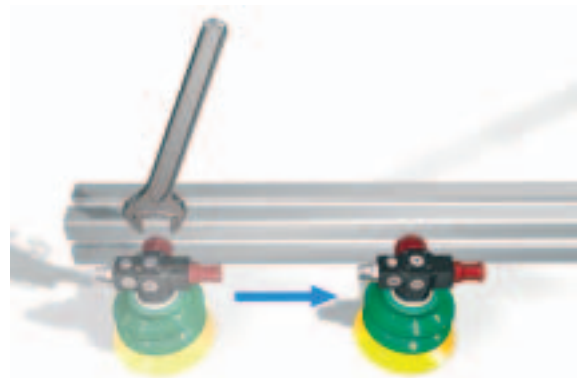
The vacuum grippers mount easily to most extrusion and profile systems.



Mounting kit for profiles

FLEXIBLE POSITIONING

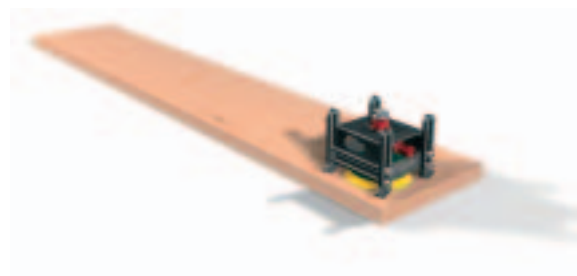
Once installed, the position of the VGS™ can be adjusted to accommodate changing handling conditions.



EXCEPTIONAL HANDLING STABILITY WITH STABILIZER

Use a VGS™3010 with Stabilizer and eliminate the need for multiple suction cups.

The Stabilizer reduces the need for using many suction cups for safe and stable lifting. It is used with suction cup models BX52P and BX75P. Adjustable supports create exceptional stability when handling items such as corrugated boxes, boards and sheets. The Stabilizer is also an excellent aid for handling objects that are hard to grip.



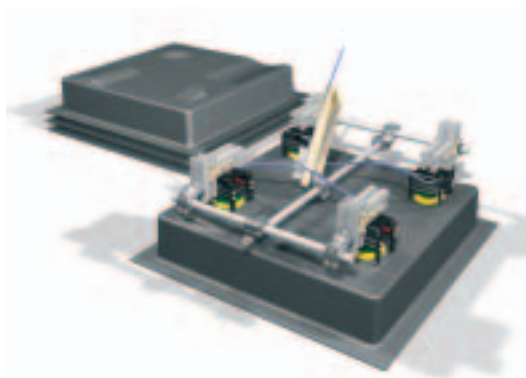
Exceptional handling stability with stabilizer

VGS™ APPLICATION EXAMPLES

VGS™ with DURAFLEX® suction cups can handle these materials more effectively than conventional cup and pump solutions.

- ▶ Corrugated boxes/containers
- ▶ Sheet metal
- ▶ Glass
- ▶ Wood
- ▶ Plastic
- ▶ Small parts assembly and more...

Using a VGS™3010 with Stabilizer increases the ability to handle sheets with sharp convex and concave surfaces and reduces the quantity of cups needed.

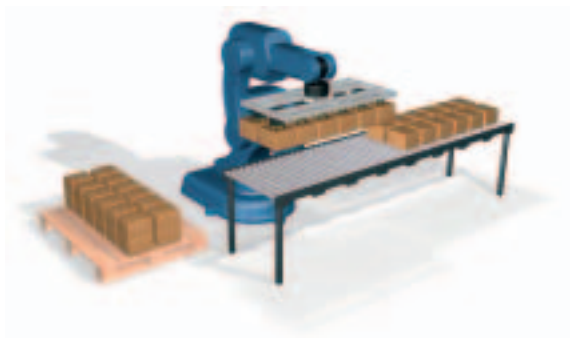


Handling bottles with one individual VGS™3010 OBL40x90 per bottle will increase the operational reliability.

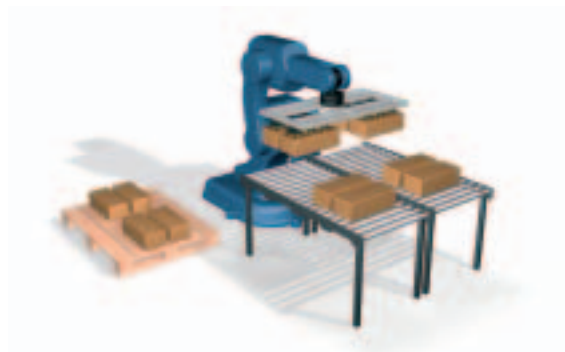


Vacuum grippers

VGS™ used for palletizing or depalletizing means flexible, quick and easy changeover. The VGS™ eliminates the need to use multiple end-effectors to handle material that changes size or position.



Handling configuration 1.



Handling configuration 2.

AID TO SELECTION

Build a VGS™ according to your needs.

A – CHOOSE SUCTION CUP DESIGN

Choose from very small to big sizes of DURAFLEX® suction cups, available as flat, bellows, multi-bellows and oval cups.

The DURAFLEX® suction cups are manufactured in a specially developed polyurethane. DURAFLEX® combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane whilst also being non-marking.



B – CHOOSE THE HARDNESS OF THE SUCTION CUP

Many of the cups are available in a version where the body and the sealing surface are of different hardness (dual durometer). This gives the cup both strength and stability as well as flexibility to adapt itself to uneven surfaces. Lower or dual durometer cups should be used for maximum friction/grip and sealing capability (reduced micro-leakage). Higher durometer cups should be used for maximum wear resistance and for longer cup life.

Molded fitting with removable thread insert. Reduce cost by recycling the insert when changing the suction cup. The suction cup can be locked into place from under the cup with a socket-head wrench.



SUCTION CUP MATERIAL KEY

Yellow	30° Shore A
Red	40° Shore A
Blue	50° Shore A
Green	60° Shore A
Black	70° Shore A

SUCTION CUP OPTION FOR VGS™3010 – CHOOSE A CUP WITH STABILIZER

For increased stability and flexibility to handle objects that are hard to grip with vacuum, a stabilizer should be used. The supports are height-adjustable for different types of objects.

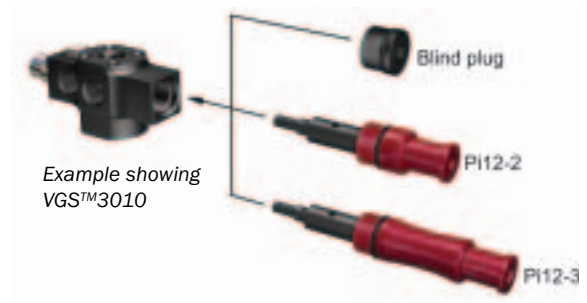
- ▶ Stabilizer 50 fits suction cup BX52P
- ▶ Stabilizer 75 fits suction cup BX75P



C — CHOOSE COAX® CARTRIDGE

- ▶ Choose a 2-stage ejector for minimum mounting dimensions when handling non-porous material such as sheet metal or when using smaller suction cups.
- ▶ Choose a 3-stage ejector for faster response when handling porous material such as corrugated cardboard or when using large suction cups.
- ▶ If the unit is to work as a “slave”, i.e. vacuum is generated by another VGS™ unit in the system, choose a blind plug.

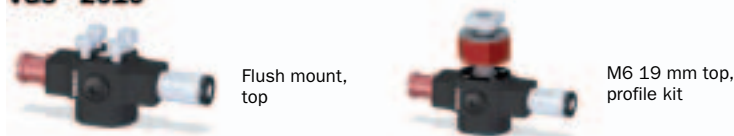
A non-return valve in the COAX® cartridge should be used to maintain vacuum in a sealed system for a short period of time to increase safety during interruptions of air supply.



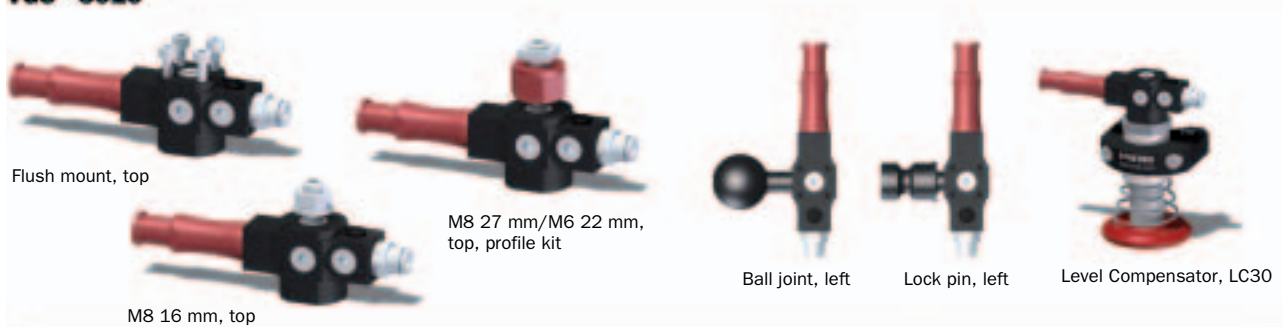
D — CHOOSE MOUNTING INTERFACE AND MOUNTING ORIENTATION

There are different mounting interfaces available which makes the VGS very flexible. There is also a possibility to choose mounting orientation.

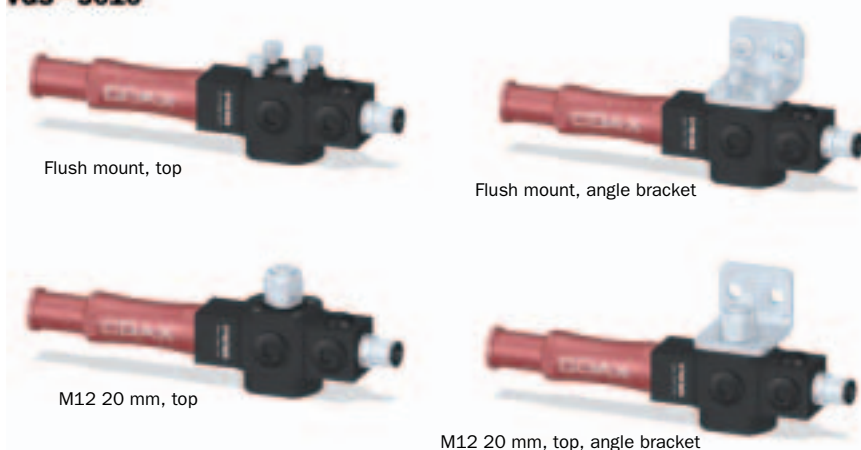
VGS™2010



VGS™3010

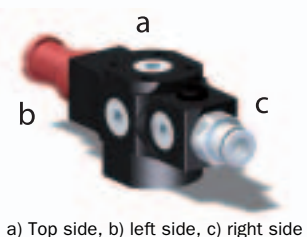


VGS™5010



MOUNTING ORIENTATION

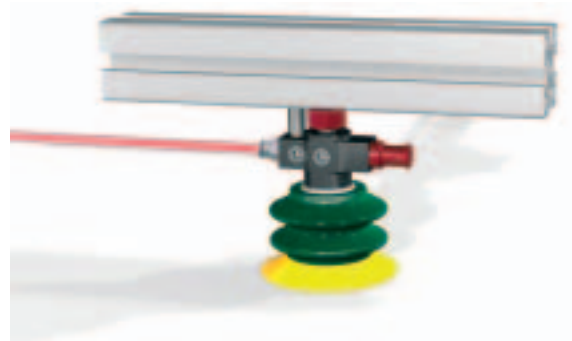
For several of the different mounting options there is a possibility to choose mounting orientation.



VGS™3010 SYSTEM SOLUTION EXAMPLES

A profile-mounted VGS™3010 can be made non-rotating by inserting a guide pin in the profile slot. Use the M5 threaded connection on the VGS™3010 housing.

(Guide pin not supplied by PIAB.)



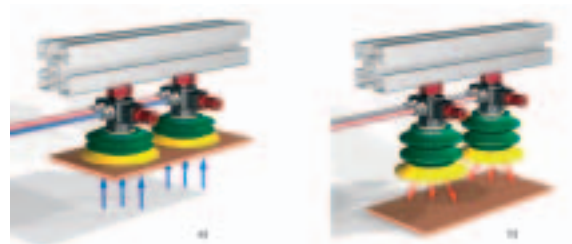
Non-rotating guide pin

When the need for vacuum flow is small, for example in air-tight systems with small cups, a VGS™3010 with a vacuum cartridge could provide one or a few other “slave units”.



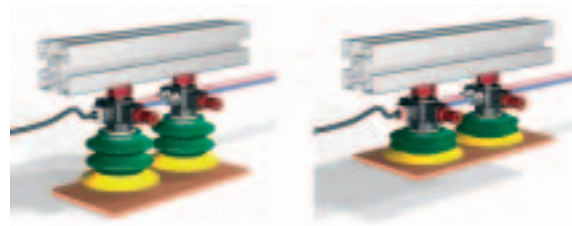
Suction cups No. 1, 3 and 4 are "slave units" (no vacuum cartridge).

In order to have efficient cleaning of suction cup filters and blow-off for quickly releasing parts, compressed air should be connected to one of the extra vacuum ports on the VGS™3010.



Quick release of parts – a) Vacuum, b) Blow-off

For increased safety and control of the vacuum system, a PIAB mini-vacuum switch can easily be connected to a VGS™3010. The switches are available as pre-set or with adjustable signal level. Pre-set is recommended to avoid unwanted signal level changes (adjustment-proof). You can find part numbers. and technical data for the switches in PIAB’s main catalogue or P3010 Vacuum Pumps brochure.



Vacuum sensing

EXPLANATION OF VGS™2010 ORDERING NUMBER

COAX® CARTRIDGE

1. COAX® cartridge	VGS code
No COAX® cartridge (slave unit)	AA
COAX® cartridge MICRO BiO3-2	AB
COAX® cartridge MICRO SiO2-2	AF

MOUNTING ORIENTATION

2. Mounting/orientation	VGS code
4x M3 top, flush mount	00
M6 19 mm top, profile kit	01
M6 19 mm right, profile kit	02
M6 19 mm left, profile kit	03

SUCTION CUP WITH FITTING

3. Suction cup	VGS code
No suction cup	BA
BX25P 30/60° Shore A	DA
BX25P 60° Shore A	DB
FC20P 50° Shore A	DC
FC25P 50° Shore A	DD
OB20x60P 60° Shore A	DE
OF10x30P 50° Shore A	DF
OF15x45P 50° Shore A	DG

Example	Ordering number			
		From table 1.	From table 2.	From table 3.
VGS™2010, BiO3-2, M6 19 mm top, profile kit, FC25P 50° Shore A	VGS2010	AB	01	DD

EXPLANATION OF VGS™3010 ORDERING NUMBER

1. COAX® cartridge	VGS code
No COAX® cartridge (slave unit with blind plug M14x1)	AA
COAX® cartridge Pi12-2	AB
COAX® cartridge Pi12-3	AC
COAX® cartridge Pi12-2, non-return valve	AD
COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation	VGS code
4x M4 & 1x plug G1/8" top, flush mount	00
M8 16 mm top	01
M8 16 mm right	02
M8 16 mm left	03
M8 27 mm top, profile kit	04
M8 27 mm right, profile kit	05
M8 27 mm left, profile kit	06
M6 22 mm top, profile kit	07
M6 22 mm right, profile kit	08
M6 22 mm left, profile kit	09
Ball joint VGS™3010. right	11
Ball joint VGS™3010. left	12
Lock-pin VGS™3010, right	13
Lock-pin VGS™3010, left	14
Level Compensator LC30	15

3. Suction cup with fitting /suction cup with fitting and stabilizer	VGS code
No suction cup	BA
B75P 30/60° Shore A	BB
B75P 60° Shore A	BC
BF80P 30/50° Shore A	BD
BF80P 60° Shore A	BE
BF110P 30/60° Shore A	CO
BF110P 60° Shore A	CP
BX35P 30/60° Shore A	BF
BX35P 60° Shore A	BG
BX52P 30/60° Shore A	BH
BX52P 60° Shore A	BI
BX75P 30/60° Shore A	BJ
BX75P 60° Shore A	BK
BX110P 30/60° Shore A	CQ
BX110P 60° Shore A	CR
F75P 30/60° Shore A	BL
F75P 60° Shore A	BM
F110P 30/60° Shore A	BN
F110P 60° Shore A	BO
FC50P 40° Shore A	BP
FC50P 60° Shore A	BQ
FC75P 40° Shore A	BR
FC75P 60° Shore A	BS
FC100P 40° Shore A	BT
FC100P 60° Shore A	BU
OBL40x90P 70° Shore A	BV
BX52P 30/60° Shore A with Stabilizer 50	BW
BX52P 60° Shore A with Stabilizer 50	BX
BX75P 30/60° Shore A with Stabilizer 75	BY
BX75P 60° Shore A with Stabilizer 75	BZ
OB35X90P PU30/60° Shore A	CA
OB35X90P PU60° Shore A	CB
OB50X140P PU30/60° Shore A	CC
OB50X140P PU60° Shore A	CD
OB65X170P PU30/60° Shore A	CE
OB65X170P PU60° Shore A	CF
OF25X70P PU40° Shore A	CG
OF25X70P PU60° Shore A	CH
OF40X110P PU40° Shore A	CI
OF40X110P PU60° Shore A	CJ
OF55X150P PU40° Shore A	CK
OF55X150P PU60° Shore A	CL
OF70X175P PU40° Shore A	CM
OF70X175P PU60° Shore A	CN

BW, BX, BY and BZ are not possible to combine with mounting/orientation 00, 02, 03, 05, 06, 08, 09, 11, 12, 13 or 14.

Example	Ordering number		
	From table 1.	From table 2.	From table 3.
VGS™3010, Pi12-3, M8 27 mm top, profile kit, B75P 30/60° Shore A	VGS3010	AC	04
			BB

EXPLANATION OF VGS™5010 ORDERING NUMBER

COAX® CARTRIDGE

1. COAX® cartridge	VGS code
No COAX® cartridge (slave unit)	AA
COAX® cartridge MIDI Pi48-2	AB
COAX® cartridge MIDI Pi48-3	AC
COAX® cartridge MIDI Pi48-2, non-return valve	AD
COAX® cartridge MIDI Pi48-3, non-return valve	AE
COAX® cartridge MIDI Si32-2	AF
COAX® cartridge MIDI Si32-3	AG
COAX® cartridge MIDI Si32-2, non-return valve	AH
COAX® cartridge MIDI Si32-3, non-return valve	AI

MOUNTING ORIENTATION

2. Mounting/orientation	VGS code
4x M6 top, flush mount	00
4x M6 top, angle bracket	01
M12 20 mm top	02
M12 20 mm right	03
M12 20 mm left	04
M12 20 mm top, angle bracket	05
M12 20 mm right, angle bracket	06
M12 20 mm left, angle bracket	07

SUCTION CUP WITH FITTING

3. Suction cup	VGS code
No suction cup	BA
BF110P 30/60° Shore A	CO
BF110P 60° Shore A	CP
BL50-3P 30/70° Shore A	CX
BX75P 30/60° Shore A	CY
BX75P 60° Shore A	CZ
BX110P 30/60° Shore A	CQ
BX110P 60° Shore A	CR
F110P 30/60° Shore A	CS
F110P 60° Shore A	CT
OB65x170P 30/60° Shore A	CU
OB65x170P 60° Shore A	CV

Example	Ordering number			
		From table 1.	From table 2.	From table 3.
VGS™5010, Pi48-2, M12 20 mm top, BF110P 30/60° Shore A	VGS5010	AB	02	CO

VGS™2010 BX25P



- ▶ Patented COAX® technology.
- ▶ Suitable for level adjustment and for uneven and porous materials such as cardboard, etc.
- ▶ In the two-coloured version the bellows and the sealing lip are of different hardness, which makes the suction cup strong and, at the same time, soft and flexible with good sealing capability.
- ▶ A filter disk inside the cup keeps dust out of the system.
- ▶ Available with a two-stage COAX® cartridge MICRO. Choose an Si cartridge for extra vacuum flow or a Bi cartridge for high performance at extremely low feed pressure.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	55–61
Temperature range	°C	10–50
Weight	g	25–36
Material		Al, SS, NBR, PA, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2 N	Recommended parallel (shear) load with safety factor 2 N	Response time to 50 -kPa with Bi03-2 s	
Si	0.60	0.12 NI/s, 40W	Plywood	8	6*	Response time varies based on quality and porosity of handled material	
Si	0.60	0.12 NI/s, 40W	Corrugated	7	5*		
Bi	0.18	0.14 NI/s, 46W	Dry steel	9	6*		0.028
Bi	0.18	0.14 NI/s, 46W	Oily steel	8	2*		0.028

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2 N	Recommended parallel (shear) load with safety factor 2 N	Response time to 50 -kPa with Bi03-2 s
Si	0.60	0.12 NI/s, 40W	Plywood	8	6*	Response time varies based on quality and porosity of handled material
Si	0.60	0.12 NI/s, 40W	Corrugated	8	4*	
Bi	0.18	0.14 NI/s, 46W	Dry steel	9	7*	0.028
Bi	0.18	0.14 NI/s, 46W	Oily steel	8	3*	0.028

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

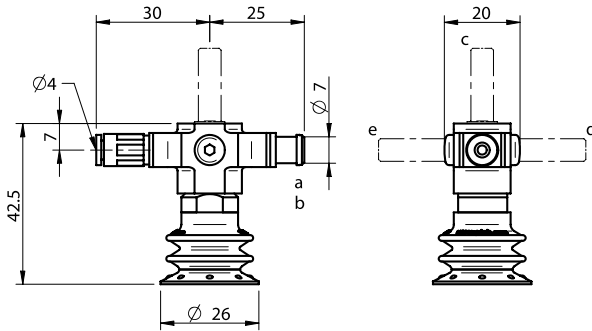
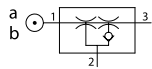
Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

1. COAX® cartridge		VGS Code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MICRO Bi03-2	AB
b	COAX® cartridge MICRO Si02-2	AF
2. Mounting / orientation		VGS code
	4x M3 top, flush mount	00
c	M6 19 mm top, profile kit	01
d	M6 19 mm right, profile kit	02
e	M6 19 mm left, profile kit	03
3. Suction cup with fitting		VGS code
	No suction cup	BA
	BX25P 30/60° Shore A	DA
	BX25P 60° Shore A	DB

Example	Ordering number
VGS™2010 BX25P – Bi03-2, M6 19 mm top, profile kit, BX25P 30/60° Shore A	VGS2010 AB 01 DA



VGS™2010 FC20P



- ▶ Patented COAX® technology
- ▶ Suitable for lifting small objects and narrow parts as well as slightly domed surfaces.
- ▶ Thanks to good friction of the rubber material the cups can withstand high shear forces at rapid accelerations.
- ▶ The suction cups have cleats that prevent thin objects from being disfigured.
- ▶ Available with a two-stage COAX® cartridge MICRO. Choose an Si cartridge for extra vacuum flow or a Bi cartridge for high performance at extremely low feed pressure.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	55–61
Temperature range	°C	10–50
Weight	g	23–34
Material		Al, SS, NBR, PA, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 50° SHORE

COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Bi03-2
				N	N	s
Si	0.60	0.12 NI/s, 40W	Plywood	7	6	Response time varies based on quality and porosity of handled material
Si	0.60	0.12 NI/s, 40W	Corrugated	7	5	
Bi	0.18	0.14 NI/s, 46W	Dry steel	8	6	0.009
Bi	0.18	0.14 NI/s, 46W	Oily steel	7	3	0.009

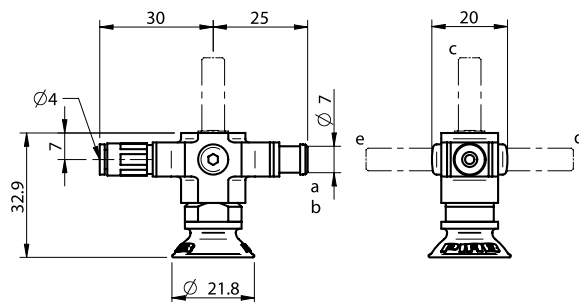
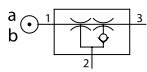
Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

1. COAX® cartridge		VGS Code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MICRO Bi03-2	AB
b	COAX® cartridge MICRO Si02-2	AF
2. Mounting / orientation		VGS code
	4x M3 top, flush mount	00
c	M6 19 mm top, profile kit	01
d	M6 19 mm right, profile kit	02
e	M6 19 mm left, profile kit	03
3. Suction cup with fitting		VGS code
	No suction cup	BA
	FC20P 50° Shore A	DC

Example	Ordering number
VGS™2010 FC20P – Bi03-2, M6 19 mm top, profile kit, FC20P 50° Shore A	VGS2010 AB 01 DC



VGS™2010 FC25P



- ▶ Patented COAX® technology.
- ▶ Suitable for lifting small objects and narrow parts as well as also slightly domed surfaces.
- ▶ Thanks to good friction of the rubber material the cups can withstand high shear forces at rapid acceleration.
- ▶ The suction cups have cleats that prevent thin objects from being disfigured.
- ▶ Available with a two-stage COAX® cartridge MICRO. Choose an Si cartridge for extra vacuum flow or a Bi cartridge for high performance at extremely low feed pressure.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	55–61
Temperature range	°C	10–50
Weight	g	24–35
Material		Al, SS, NBR, PA, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 50° SHORE

COAX® cartridge	Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Bi03-2
	MPa			N	N	s
Si	0.60	0.12 NI/s, 40W	Plywood	11	10	Response time varies based on quality and porosity of handled material
Si	0.60	0.12 NI/s, 40W	Corrugated	10	8	
Bi	0.18	0.14 NI/s, 46W	Dry steel	13	9	0.029
Bi	0.18	0.14 NI/s, 46W	Oily steel	11	5	0.029

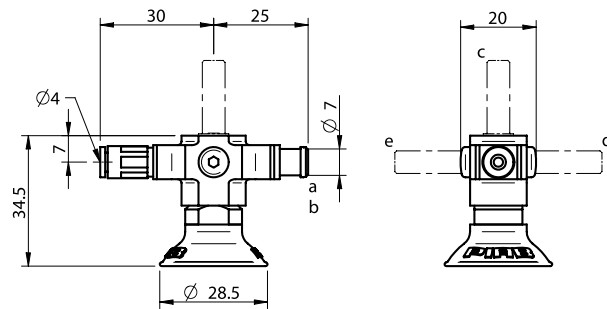
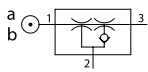
Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

1. COAX® cartridge		VGS Code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MICRO Bi03-2	AB
b	COAX® cartridge MICRO Si02-2	AF
2. Mounting / orientation		VGS code
	4x M3 top, flush mount	00
c	M6 19 mm top, profile kit	01
d	M6 19 mm right, profile kit	02
e	M6 19 mm left, profile kit	03
3. Suction cup with fitting		VGS code
	No suction cup	BA
	FC25P 50° Shore A	DD

Example	Ordering number
VGS™2010 FC25P – Bi03-2, M6 19 mm top, profile kit, FC25P 50° Shore A	VGS2010 AB 01 DD



VGS™2010 OB20X60P



- ▶ Patented COAX® technology.
- ▶ Suitable for handling small, oblong objects and for level adjustment. Can handle objects with height differences and varying shapes.
- ▶ Lifting movement to separate small and thin objects.
- ▶ Available with a two-stage COAX® cartridge MICRO. Choose an Si cartridge for extra vacuum flow or a Bi cartridge for high performance at extremely low feed pressure.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	55–61
Temperature range	°C	10–50
Weight	g	27–38
Material		Al, SS, NBR, PA, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

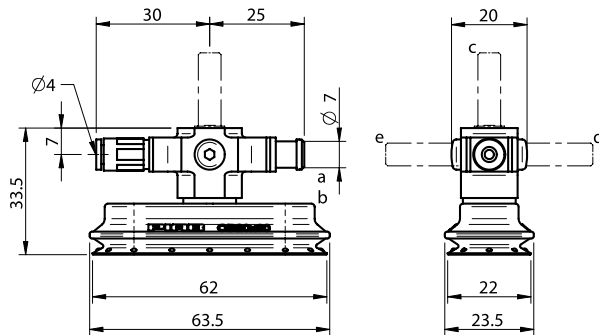
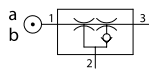
COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Bi03-2
				N	N	s
Si	0.60	0.12 NI/s, 40W	Plywood	22	26	Response time varies based on quality and porosity of handled material
Si	0.60	0.12 NI/s, 40W	Corrugated	10	13	
Bi	0.18	0.14 NI/s, 46W	Dry steel	27	23	0.228
Bi	0.18	0.14 NI/s, 46W	Oily steel	18	10	0.228

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

1. COAX® cartridge		VGS Code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MICRO Bi03-2	AB
b	COAX® cartridge MICRO Si02-2	AF
2. Mounting / orientation		VGS code
	4x M3 top, flush mount	00
c	M6 19 mm top, profile kit	01
d	M6 19 mm right, profile kit	02
e	M6 19 mm left, profile kit	03
3. Suction cup with fitting		VGS code
	No suction cup	BA
	OB20x60P 60° Shore A	DE
Example		Ordering number
VGS™2010 OB20x60P – Bi03-2, M6 19 mm top, profile kit, OB20x60P 60° Shore A		VGS2010 AB 01 DE



VGS™2010 OF10X30P



- ▶ Patented COAX® technology.
- ▶ Suitable for small, oblong objects with flat surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Thanks to good friction of the rubber material the cups can withstand high shear forces at rapid acceleration.
- ▶ The suction cups have cleats that prevent thin objects from being disfigured.
- ▶ Available with a two-stage COAX® cartridge MICRO. Choose an Si cartridge for extra vacuum flow or a Bi cartridge for high performance at extremely low feed pressure.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	55-61
Temperature range	°C	10-50
Weight	g	28-39
Material		Al, SS, NBR, PA, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 50° SHORE

COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Bi03-2
				N	N	s
Si	0.60	0.12 NI/s, 40W	Plywood	4	6	Response time varies based on quality and porosity of handled material
Si	0.60	0.12 NI/s, 40W	Corrugated	3	6	
Bi	0.18	0.14 NI/s, 46W	Dry steel	7	5	0.004
Bi	0.18	0.14 NI/s, 46W	Oily steel	7	2	0.004

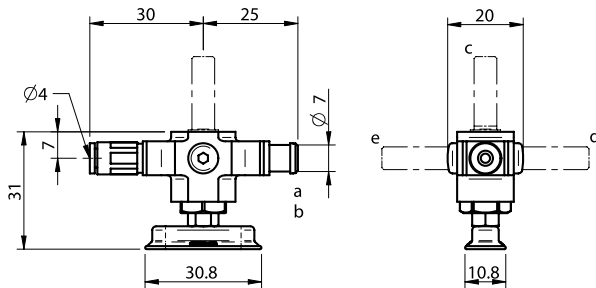
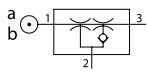
Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

1. COAX® cartridge		VGS Code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MICRO Bi03-2	AB
b	COAX® cartridge MICRO Si02-2	AF
2. Mounting / orientation		VGS code
	4x M3 top, flush mount	00
c	M6 19 mm top, profile kit	01
d	M6 19 mm right, profile kit	02
e	M6 19 mm left, profile kit	03
3. Suction cup with fitting		VGS code
	No suction cup	BA
	OF10x30P 50° Shore A	DF

Example	Ordering number
VGS™2010 OF10x30P – Bi03-2, M6 19 mm top, profile kit, OF10x30P 50° Shore A	VGS2010 AB 01 DF



VGS™2010 OF15X45P



- ▶ Patented COAX® technology.
- ▶ Suitable for small, oblong objects with flat surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Thanks to good friction of the rubber material the cups can withstand high shear forces at rapid acceleration.
- ▶ The suction cups have cleats that prevent thin objects from being disfigured.
- ▶ Available with a two-stage COAX® cartridge MICRO. Choose an Si cartridge for extra vacuum flow or a Bi cartridge for high performance at extremely low feed pressure.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	55–61
Temperature range	°C	10–50
Weight	g	24–35
Material		Al, SS, NBR, PA, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 50° SHORE

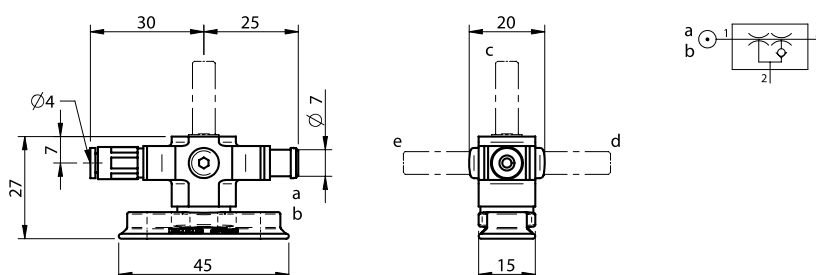
COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2 N	Recommended parallel (shear) load with safety factor 2 N	Response time to 50 -kPa with Bi03-2 s
Si	0.60	0.12 NI/s, 40W	Plywood	8	13	Response time varies based on quality and porosity of handled material
Si	0.60	0.12 NI/s, 40W	Corrugated	6	10	
Bi	0.18	0.14 NI/s, 46W	Dry steel	14	10	0.009
Bi	0.18	0.14 NI/s, 46W	Oily steel	13	5	0.009

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

1. COAX® cartridge		VGS Code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MICRO Bi03-2	AB
b	COAX® cartridge MICRO Si02-2	AF
2. Mounting / orientation		VGS code
	4x M3 top, flush mount	00
c	M6 19 mm top, profile kit	01
d	M6 19 mm right, profile kit	02
e	M6 19 mm left, profile kit	03
3. Suction cup with fitting		VGS code
	No suction cup	BA
	Suction cup OF15x45P Polyurethane 50, G1/8" male	DG
Example		Ordering number
VGS™2010 OF15x45P – Bi03-2, M6 19 mm top, profile kit, OF15x45P 50° Shore A		VGS2010 AB 01 DG



VGS™2010 MOUNTING-KITS



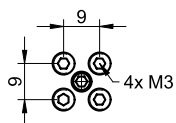
- ▶ Easy attachment to standard extrusion and profile systems
- ▶ Flexible positioning
- ▶ Quick setup and change-over
- ▶ Durable and non-rotating installation

TECHNICAL DATA

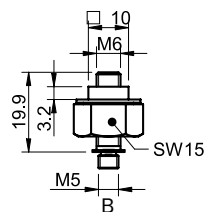
Description	Unit	Value	
		0114097	0114098
Material		SS, PA, NBR	Al, SS, Steel, PA, NBR
Weight	g	4.1	13.1

ORDERING INFORMATION

	Description	Art. No.
A	4x M3 top, flush mount	0114097
B	M6 19 mm top, profile kit	0114098



A



B

VGS™3010 B75P



SUCTION CUP WITH SHORT BELLOWS

- ▶ Patented COAX® technology
- ▶ Suitable for level adjustment and for uneven or porous surfaces such as corrugated boxes/containers.
- ▶ The bellows and sealing surface are available in different durometers. This gives the cup both strength and stability as well as the flexibility to conform to uneven surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ The suction cups have a molded fitting with removable G3/8" male thread insert.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	145-167
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	128	64	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	56	43		
0.314	0.47 NI/s, 155 W	Dry steel	92	64	0.195	0.187
0.314	0.47 NI/s, 155 W	Oily steel	94	23	0.195	0.187

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	113	113	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	64	64		
0.314	0.47 NI/s, 155 W	Dry steel	128	149	0.195	0.187
0.314	0.47 NI/s, 155 W	Oily steel	118	37	0.195	0.187

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

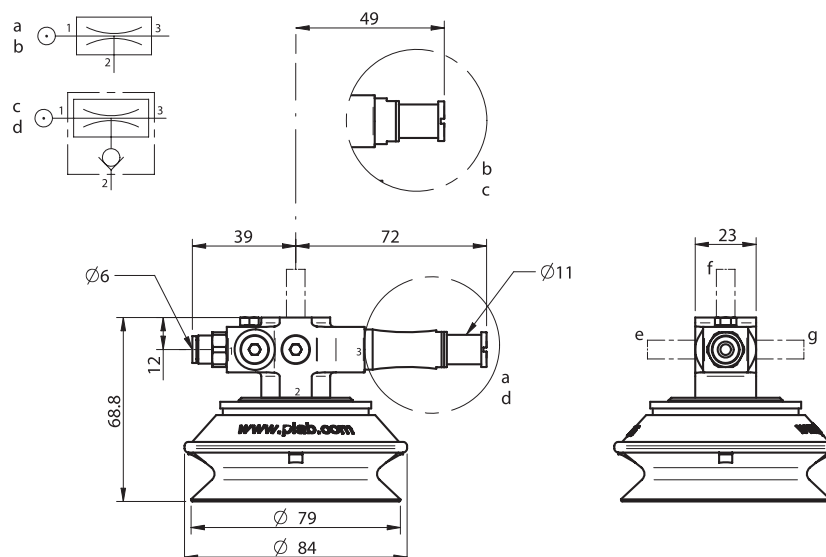
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	B75P 30/60° Shore A	BB
	B75P 60° Shore A	BC

Example	Ordering number
VGS™3010 B75P – Pi12-3, M8 27 mm top including profile kit, B75P 30/60° Shore A	VGS3010 AC 04 BB



VGS™3010 BF80P



SUCTION CUP WITH SHORT BELLOWS

- ▶ Patented COAX® technology
- ▶ The dual durometer BF80P is suitable for level adjustment and for uneven and porous surfaces, such as corrugated boxes/containers. The bellows and the sealing surface have two different durometers. This gives the cup both strength and stability as well as the flexibility to conform to uneven surfaces.
- ▶ The green BF80P is suitable for picking up heavier items, such as sheet metal that has a oily surface.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ The suction cup has a molded G3/8" male fitting.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	125-147
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/50° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	51	75	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	54	39		
0.314	0.47 NI/s, 155 W	Dry steel	50	69	0.071	0.068
0.314	0.47 NI/s, 155 W	Oily steel	44	44	0.071	0.068

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	111	78	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	61	55		
0.314	0.47 NI/s, 155 W	Dry steel	131	68	0.071	0.068
0.314	0.47 NI/s, 155 W	Oily steel	116	40	0.071	0.068

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

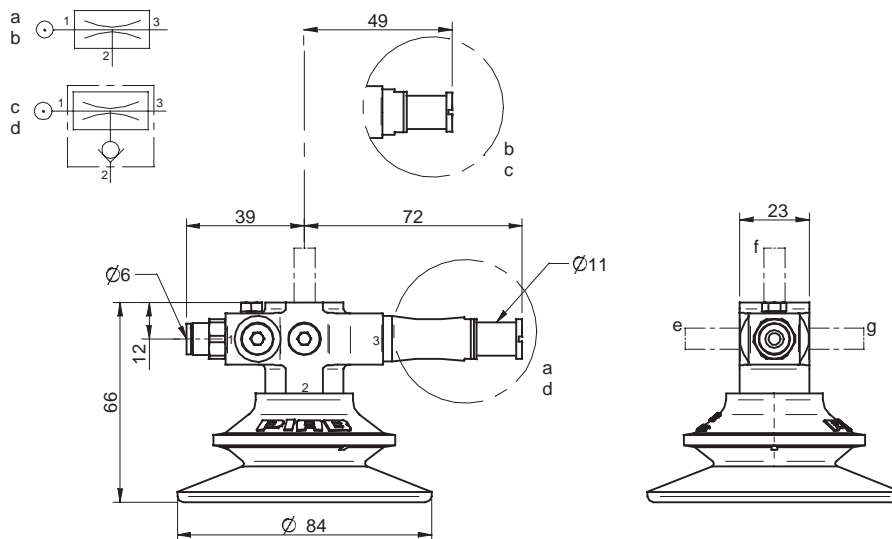
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BF80P 30/50° Shore A	BD
	BF80P 60° Shore A	BE

Example	Ordering number
VGS™3010 BF80P – Pi12-3, M8 27 mm top including profile kit, BF80P 30/50° Shore A	VGS3010 AC 04 BD



VGS™3010 BF110P



SUCTION CUP WITH SHORT BELLOWS

- ▶ Patented COAX® technology
- ▶ The dual durometer BF110P, is suitable for level adjustment and for uneven and porous surfaces, such as corrugated boxes/containers. The bellows and the sealing surface have two different durometers. This gives the cup both strength and stability as well as the flexibility to conform to uneven surfaces.
- ▶ The green BF110P, is suitable for picking up heavier items, such as sheet metal that has a oily surface.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ Molded suction cup fitting with removable thread insert, male G3/8".

TECHNICAL DATA

Description	Unit	Value
Feed pressure max.	MPa	0.7
Noise level	dB(A)	65-74
Temperature range	°C	10-50
Weight	g	92-299
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	103	90	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	78	62		
0.314	0.47 NI/s, 155 W	Dry steel	106	115	0.20	0.19
0.314	0.47 NI/s, 155 W	Oily steel	105	51	0.20	0.19

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	107	86	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	59	40		
0.314	0.47 NI/s, 155 W	Dry steel	128	138	0.20	0.19
0.314	0.47 NI/s, 155 W	Oily steel	128	55	0.20	0.19

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

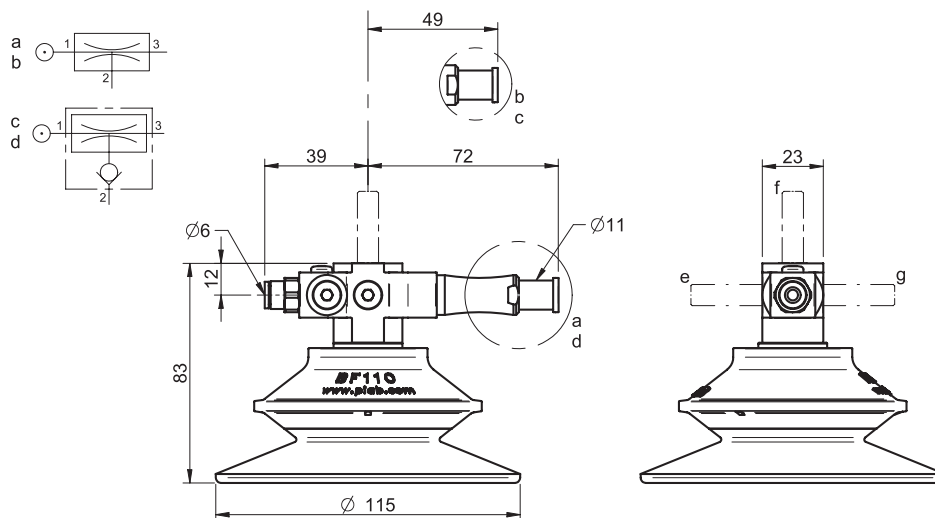
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BF110P 30/60° Shore A	CO
	BF110P 60° Shore A	CP

Example	Ordering number
VGS™3010 BF110P – Pi12-3, M8 27 mm top including profile kit, BF110P 30/60° Shore A	VGS3010 AC 04 CO



Vacuum grippers
VGS™3010

VGS™3010 BX35P



SUCTION CUP WITH 2 ½ BELLOWS

- ▶ Patented COAX® technology
- ▶ Suitable for level adjustment and for uneven and porous surfaces, such as corrugated boxes/containers.
- ▶ The bellows and sealing surface are available in different durometers. This gives the cup both strength and stability as well as the flexibility to conform to uneven surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ Separate G3/8" male suction cup fitting.
- ▶ A filter support ring in the cup keeps dust out of the system. The filter's materials are polyester (PES41/14) and thermo-plastic-urethane (TPE).

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBa	65-74
Temperature range	°C	10-50
Weight	g	88-111
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	a
0.314	0.47 NI/s, 155 W	Plywood	16	17*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	16	13*	0.016	0.015
0.314	0.47 NI/s, 155 W	Dry steel	16	17*	0.016	0.015
0.314	0.47 NI/s, 155 W	Oily steel	17	5*	0.016	0.015

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	16	15*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	15	12*	0.016	0.015
0.314	0.47 NI/s, 155 W	Dry steel	15	18*	0.016	0.015
0.314	0.47 NI/s, 155 W	Oily steel	16	6*	0.016	0.015

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

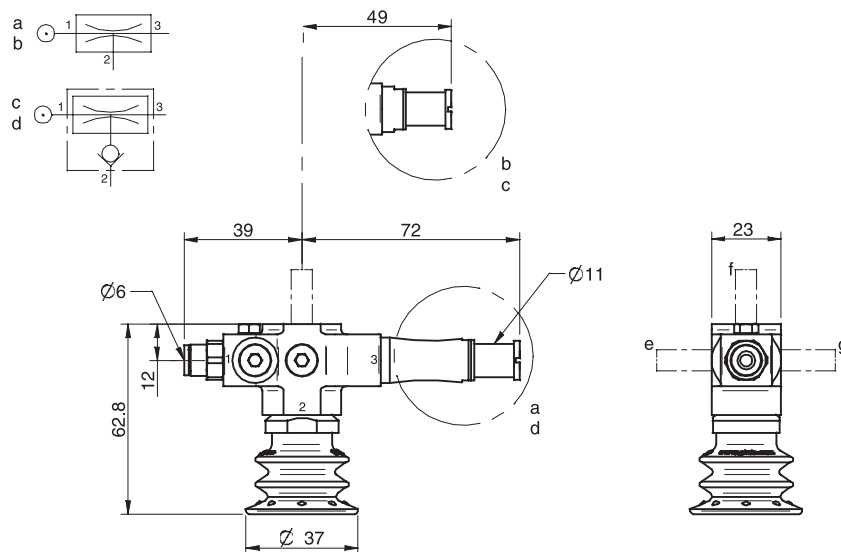
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BX35P 30/60° Shore A	BF
	BX35P 60° Shore A	BG

Example	Ordering number
VGS™3010 BX35P – Pi12-3, M8 27 mm top including profile kit, BX35P 30/60° Shore A	VGS3010 AC 04 BF



VGS™3010 BX52P



SUCTION CUP WITH 2 ½ BELLOWS

- ▶ Patented COAX® technology
- ▶ Suitable for level adjustment and for uneven and porous surfaces, such as corrugated boxes/containers.
- ▶ The bellows and sealing surface are available in different durometers. This gives the cup both strength and stability as well as the flexibility to conform to uneven surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ Separate G3/8” male suction cup fitting.
- ▶ A filter support ring in the cup keeps dust out of the system. The filter’s materials are polyester (PES41/14) and thermo-plastic-urethane (TPE).

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBa	65–74
Temperature range	°C	10–50
Weight	g	108–130
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	36	23*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	30	20*	0.053	0.051
0.314	0.47 NI/s, 155 W	Dry steel	37	27*	0.053	0.051
0.314	0.47 NI/s, 155 W	Oily steel	34	13*	0.053	0.051

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	33	29*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	37	19*	0.053	0.051
0.314	0.47 NI/s, 155 W	Dry steel	40	26*	0.053	0.051
0.314	0.47 NI/s, 155 W	Oily steel	40	14*	0.053	0.051

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

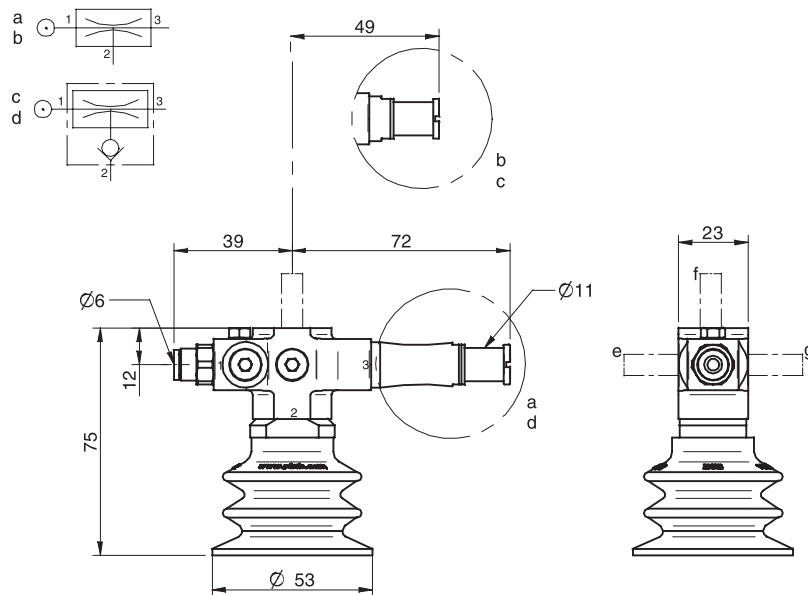
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BX52P 30/60° Shore A	BH
	BX52P 60° Shore A	BI

Example	Ordering number
VGS™3010 BX52P – Pi12-3, M8 27 mm top including profile kit, BX52P 30/60° Shore A	VGS3010 AC 04 BH



VGS™3010 BX75P



SUCTION CUP WITH 2½ BELLOWS

- ▶ Patented COAX® technology
- ▶ Suitable for level adjustment and for uneven and porous surfaces, such as corrugated boxes/containers.
- ▶ The bellows and sealing surface are available in different durometers. This gives the cup both strength and stability as well as the flexibility to conform to uneven surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ Molded suction cup fitting with removable thread insert, male G3/8".
- ▶ A filter support ring in the cup keeps dust out of the system. The filter's materials are polyester (PES41/14) and thermo-plastic-urethane (TPE).

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65–74
Temperature range	°C	10–50
Weight	g	150–173
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	72	54*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	56	35*	0.115	0.111
0.314	0.47 NI/s, 155 W	Dry steel	74	58*	0.115	0.111
0.314	0.47 NI/s, 155 W	Oily steel	74	32*	0.115	0.111

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	85	56*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	62	28*	0.115	0.111
0.314	0.47 NI/s, 155 W	Dry steel	83	75*	0.115	0.111
0.314	0.47 NI/s, 155 W	Oily steel	85	48*	0.115	0.111

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

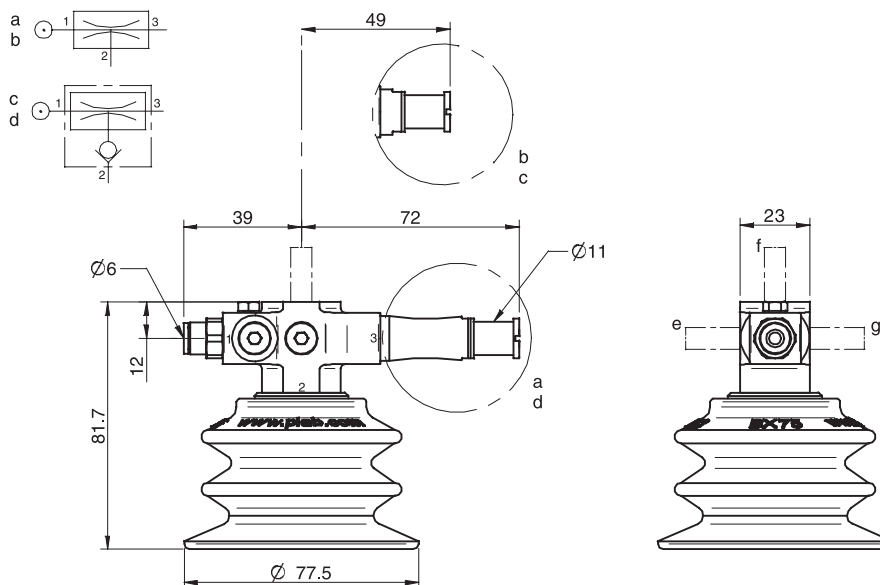
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BX75P 30/60° Shore A	BJ
	BX75P 60° Shore A	BK

Example	Ordering number
VGS™3010 BX75P – Pi12-3, M8 27 mm top including profile kit, BX75P 30/60° Shore A	VGS3010 AC 04 BJ



Vacuum grippers
VGS™3010

VGS™3010 BX110P



SUCTION CUP WITH 2½ BELLOWS

- ▶ Patented COAX® technology
- ▶ Suitable for level adjustment and for uneven and porous surfaces, such as corrugated boxes/containers.
- ▶ The bellows and sealing surface are available in different durometers. This gives the cup both strength and stability as well as the flexibility to conform to uneven surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ Molded suction cup fitting with removable thread insert, male G3/8".
- ▶ A filter support ring in the cup keeps dust out of the system. The filter's materials are polyester (PES41/14) and thermo-plastic-urethane (TPE).

TECHNICAL DATA

Description	Unit	Value
Feed pressure max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	105-312
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	151	80*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	68	65*		
0.314	0.47 NI/s, 155 W	Dry steel	145	90*	0.41	0.39
0.314	0.47 NI/s, 155 W	Oily steel	140	47*	0.41	0.39

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	140	95*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	98	68*		
0.314	0.47 NI/s, 155 W	Dry steel	147	116*	0.41	0.39
0.314	0.47 NI/s, 155 W	Oily steel	149	63*	0.41	0.39

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

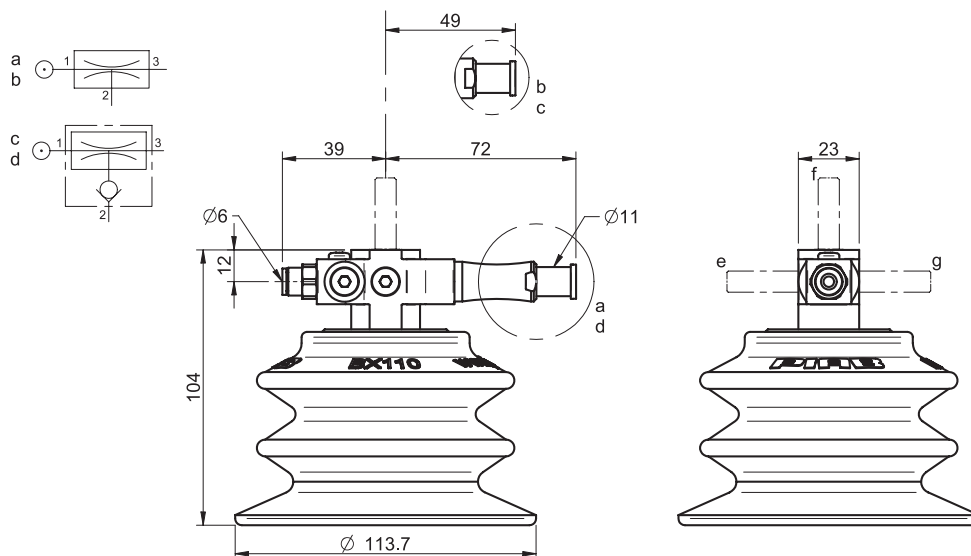
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BX110P 30/60° Shore A	CQ
	BX110P 60° Shore A	CR

Example	Ordering number
VGS™3010 BX110P – Pi12-3, M8 27 mm top including profile kit, BX110P 30/60° Shore A	VGS3010 AC 04 CQ



Vacuum grippers
VGS™3010

VGS™3010 BX52P WITH STABILIZER



SUCTION CUPS WITH 2 1/2 BELLOWS INCLUDING STABILIZER

- ▶ Patented COAX® technology
- ▶ Suitable for extra stability when handling plates, sheets or boxes. Reduces the need for extra suction cups to create stability.
- ▶ The supports are adjustable in order to help handle difficult-to-grasp objects with vacuum. Rubber pads included for the legs in order to prevent scratches.
- ▶ A filter support ring in the cup keeps dust out of the system. The filter's materials are polyester (PES41/14) and thermo-plastic-urethane (TPE).
- ▶ Separate G3/8" male suction cup fitting.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65–74
Temperature range	°C	10–50
Weight	g	201–224
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE WITH STABILIZER

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	32	23*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	23	20*		
0.314	0.47 NI/s, 155 W	Dry steel	33	27*	0.053	0.051
0.314	0.47 NI/s, 155 W	Oily steel	33	13*	0.053	0.051

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE WITH STABILIZER

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	32	29*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	21	19*		
0.314	0.47 NI/s, 155 W	Dry steel	33	26*	0.053	0.051
0.314	0.47 NI/s, 155 W	Oily steel	33	14*	0.053	0.051

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normal sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

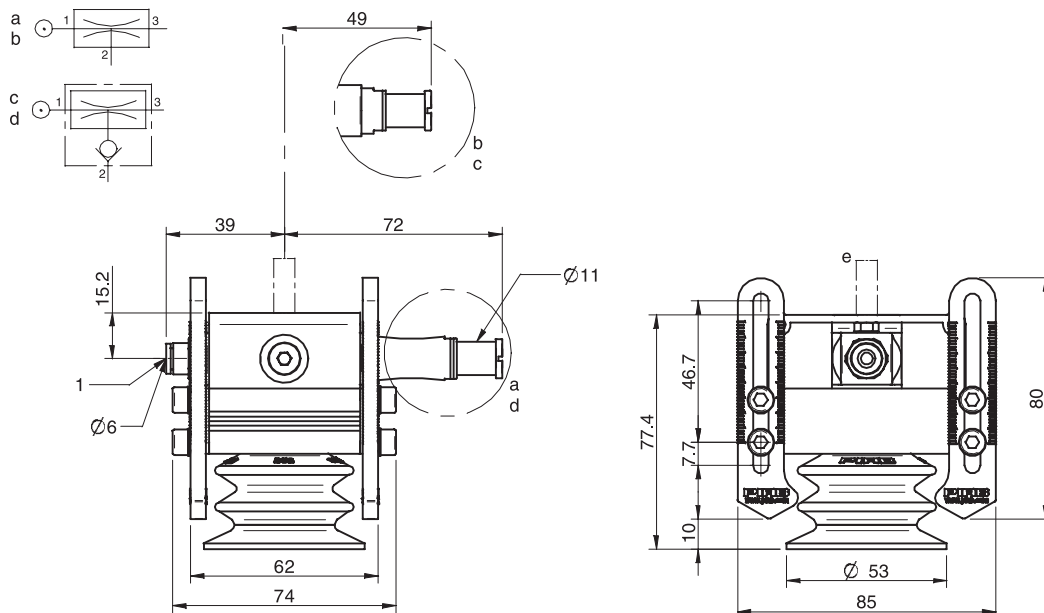
ORDERING INFORMATION

1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	M8 16 mm top	01
	M8 27 mm top, profile kit	04
	M6 22 mm top, profile kit	07

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BX52P 30/60° Shore A with Stabilizer 50	BW
	BX52P 60° Shore A with Stabilizer 50	BX

Example	Ordering number
VGS™3010 BX52P – Pi12-3, M8 27 mm top including profile kit, BX52P 30/60° Shore A with stabilizer 50	VGS3010 AC 04 BW



VGS™3010 BX75P WITH STABILIZER



SUCTION CUPS WITH 2 1/2 BELLOWS INCLUDING STABILIZER

- ▶ Patented COAX® technology
- ▶ Suitable for extra stability when handling plates, sheets or boxes. Reduces the need for extra suction cups to create stability.
- ▶ The supports are adjustable in order to help handle difficult-to-grasp objects with vacuum. Rubber pads included for the legs in order to prevent scratches.
- ▶ A filter support ring in the cup keeps dust out of the system. The filter's materials are polyester (PES41/14) and thermo-plastic-urethane (TPE).
- ▶ Molded suction cup fitting with removable G3/8" male thread insert.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65–74
Temperature range	°C	10–50
Weight	g	269–292
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE WITH STABILIZER

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	70	54*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	37	35*		
0.314	0.47 NI/s, 155 W	Dry steel	73	58*	0.115	0.111
0.314	0.47 NI/s, 155 W	Oily steel	75	32*	0.115	0.111

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE WITH STABILIZER

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	65	56*	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	28	28*		
0.314	0.47 NI/s, 155 W	Dry steel	64	75*	0.115	0.111
0.314	0.47 NI/s, 155 W	Oily steel	66	48*	0.115	0.111

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normal sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

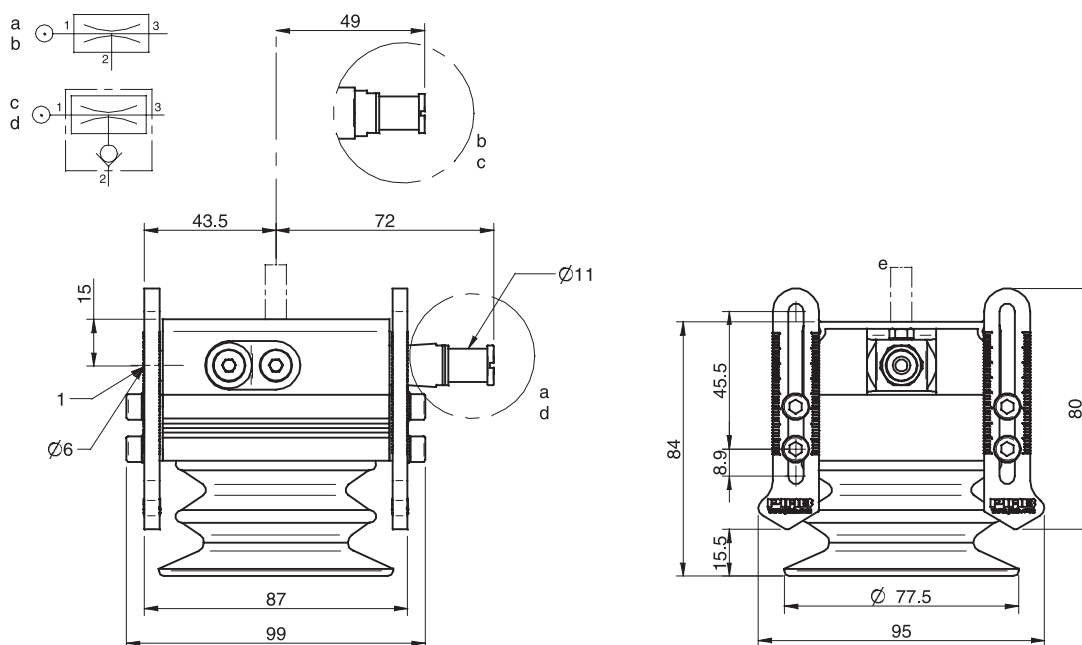
ORDERING INFORMATION

1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	M8 16 mm top	01
	M8 27 mm top, profile kit	04
	M6 22 mm top, profile kit	07

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BX75P 30/60° Shore A with Stabilizer 75	BY
	BX75P 60° Shore A with Stabilizer 75	BZ

Example	Ordering number
VGS™3010 BX75P – Pi12-3, M8 27 mm top including profile kit, BX75P 30/60° Shore A with stabilizer 75	VGS3010 AC 04 BY



VGS™3010 FC50P



FLAT, CONCAVE SUCTION CUPS WITH CLEATS

- ▶ Patented COAX® technology
- ▶ Suitable for slightly domed and flat oily surfaces, i.e. handling steel or aluminium sheets in press process.
- ▶ Due to high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ Molded G3/8" male suction cup fitting.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	96-119
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 40° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	50	53	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	36	42		
0.314	0.47 NI/s, 155 W	Dry steel	55	58	0.018	0.017
0.314	0.47 NI/s, 155 W	Oily steel	51	44	0.018	0.017

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	50	61	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	34	45		
0.314	0.47 NI/s, 155 W	Dry steel	57	70	0.018	0.017
0.314	0.47 NI/s, 155 W	Oily steel	46	16	0.018	0.017

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

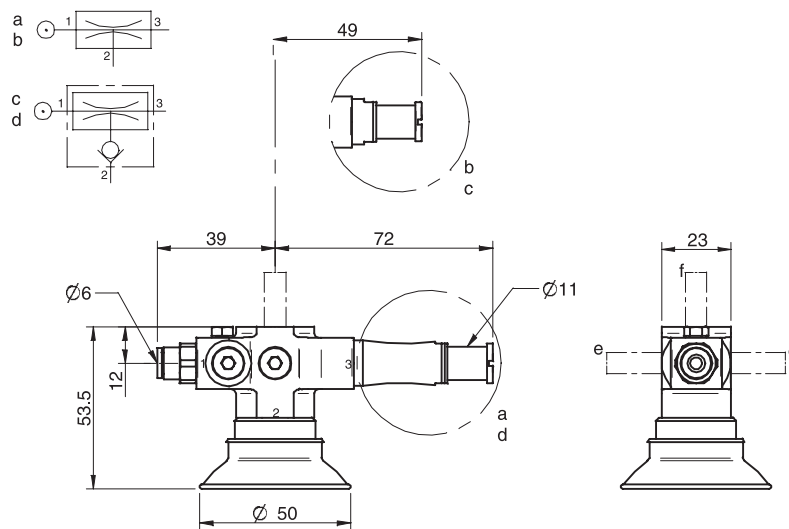
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	FC50P 40° Shore A	BP
	FC50P 60° Shore A	BQ

Example	Ordering number
VGS™3010 FC50P – Pi12-3, M8 27 mm top including profile kit, FC50P 40° Shore A	VGS3010 AC 04 BP



VGS™3010 FC75P



FLAT, CONCAVE SUCTION CUPS WITH CLEATS

- ▶ Patented COAX® technology
- ▶ Suitable for slightly domed and flat oily surfaces, i.e. handling steel or aluminium sheets in press process.
- ▶ Due to high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ Molded suction cup fitting with removable G3/8" male thread insert.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	111-133
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 40° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	102	117	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	57	71		
0.314	0.47 NI/s, 155 W	Dry steel	100	131	0.053	0.051
0.314	0.47 NI/s, 155 W	Oily steel	100	63	0.053	0.051

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	117	121	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	59	58		
0.314	0.47 NI/s, 155 W	Dry steel	123	90	0.053	0.051
0.314	0.47 NI/s, 155 W	Oily steel	113	34	0.053	0.051

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

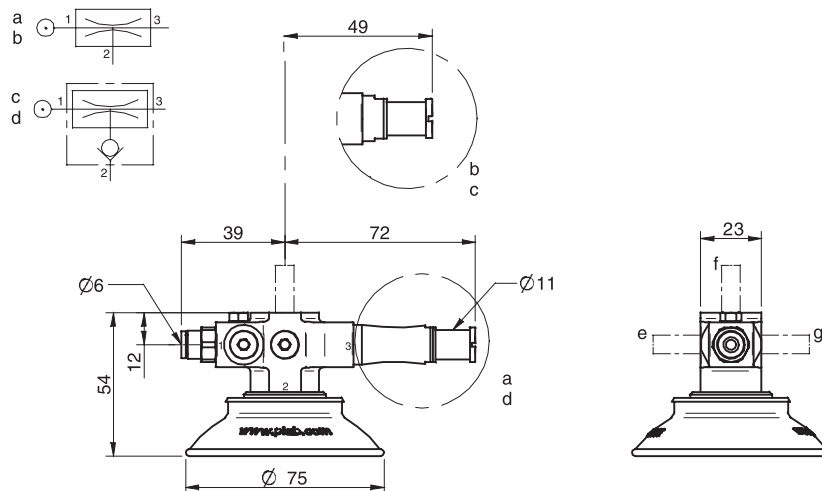
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	FC75P 40° Shore A	BR
	FC75P 60° Shore A	BS

Example	Ordering number
VGS™3010 FC75P – Pi12-3, M8 27 mm top including profile kit, FC75P 40° Shore A	VGS3010 AC 04 BR



VGS™3010 FC100P



FLAT, CONCAVE SUCTION CUPS WITH CLEATS

- ▶ Patented COAX® technology
- ▶ Suitable for slightly domed and flat oily surfaces, i.e. handling steel or aluminium sheets in press process.
- ▶ Due to high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ Molded suction cup fitting with removable G3/8" male thread insert.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	162-184
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 40° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	189	215	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	60	100		
0.314	0.47 NI/s, 155 W	Dry steel	208	230	0.142	0.136
0.314	0.47 NI/s, 155 W	Oily steel	174	56	0.142	0.136

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	221	178	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	71	87		
0.314	0.47 NI/s, 155 W	Dry steel	255	238	0.142	0.136
0.314	0.47 NI/s, 155 W	Oily steel	217	52	0.142	0.136

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

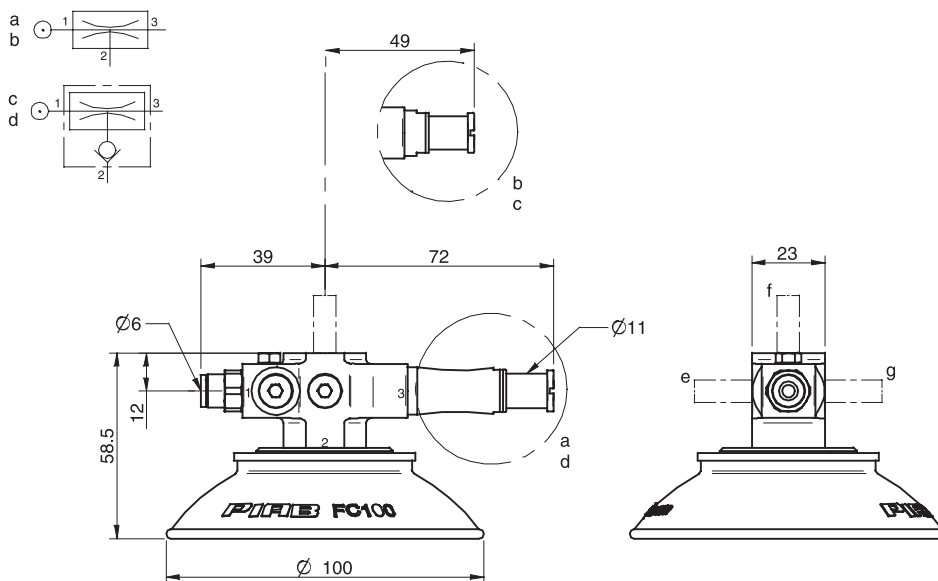
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	FC100P 40° Shore A	BT
	FC100P 60° Shore A	BU

Example	Ordering number
VGS™3010 FC100P – Pi12-3, M8 27 mm top including profile kit, FC100P 40° Shore A	VGS3010 AC 04 BT



VGS™3010 F75P



FLAT SUCTION CUPS WITH CLEATS

- ▶ Patented COAX® technology
- ▶ Suitable for all flat and rough surfaces.
- ▶ Good stability and little inherent movement due to the high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ The suction cups are available in different durometers. This gives the cup both strength and stability as well as the flexibility to conform to rough surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ The suction cups have a molded fitting with removable G3/8" male thread insert.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65–74
Temperature range	°C	10–50
Weight	g	128–150
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	144	151	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	64	62	0.034	0.032
0.314	0.47 NI/s, 155 W	Dry steel	160	74	0.034	0.032
0.314	0.47 NI/s, 155 W	Oily steel	142	33	0.034	0.032

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	140	111	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	61	33	0.034	0.032
0.314	0.47 NI/s, 155 W	Dry steel	165	85	0.034	0.032
0.314	0.47 NI/s, 155 W	Oily steel	163	33	0.034	0.032

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor

NOTE: The response times are not valid for Level Compensator LC30

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

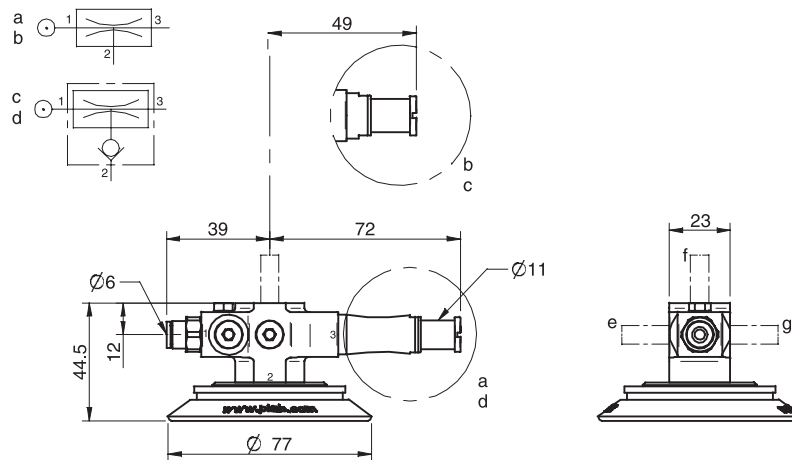
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	F75P 30/60° Shore A	BL
	F75P 60° Shore A	BM

Example	Ordering number
VGS™3010 F75P – Pi12-3, M8 27 mm top including profile kit, F75P 30/60° Shore A	VGS3010 AC 04 BL



VGS™3010 F110P



FLAT SUCTION CUPS WITH CLEATS

- ▶ Patented COAX® technology
- ▶ Suitable for all flat and rough surfaces.
- ▶ Good stability and little inherent movement due to the high friction of the rubber material, the suction cups can withstand high forces at rapid accelerations in horizontal directions, even on oily surfaces.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ The suction cups are available in different durometers. This gives the cup both strength and stability as well as the flexibility to conform to rough surfaces.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ The suction cups have a molded fitting with removable G3/8" male thread insert.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65–74
Temperature range	°C	10–50
Weight	g	210–232
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	317	274	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	107	105	0.106	0.102
0.314	0.47 NI/s, 155 W	Dry steel	335	308	0.106	0.102
0.314	0.47 NI/s, 155 W	Oily steel	304	95	0.106	0.102

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	310	300	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	114	110	0.106	0.102
0.314	0.47 NI/s, 155 W	Dry steel	352	332	0.106	0.102
0.314	0.47 NI/s, 155 W	Oily steel	304	161	0.106	0.102

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

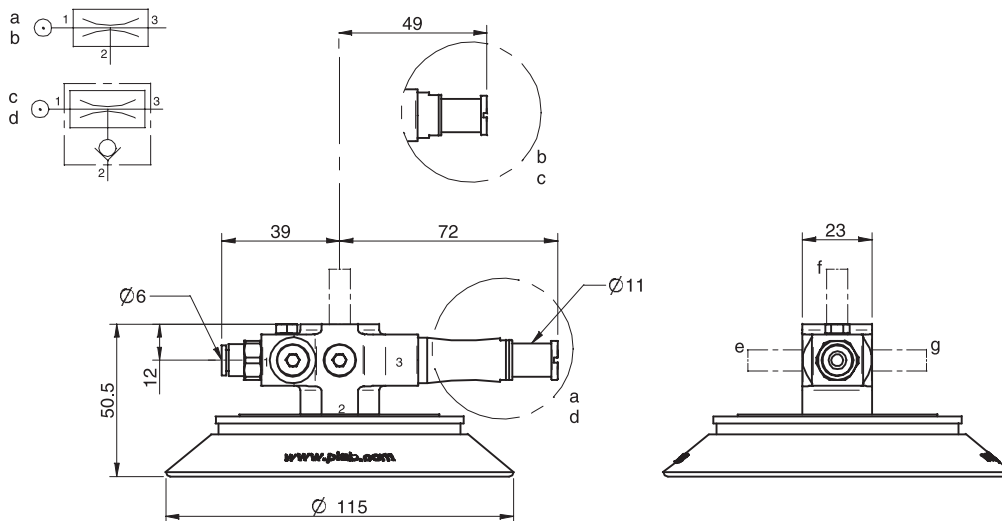
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cup with fitting		VGS code
	No suction cup	BA
	F110P 30/60° Shore A	BN
	F110P 60° Shore A	BO

Example	Ordering number
VGS™3010 F110P – Pi12-3, M8 27 mm top including profile kit, F110P 30/60° Shore A	VGS3010 AC 04 BN



VGS™3010 OB35X90P



FEATURES

- ▶ Patented COAX® technology
- ▶ Suitable for level adjustment. Can handle object with height differences and varying shapes, for example embossed or corrugated plates.
- ▶ Lifting movement to separate small and thin objects.
- ▶ In the two colored suction cup, the bellows and the sealing lip are of different hardness, which makes the suction cup strong and stable and, at the same time, soft and flexible
- ▶ DURAFLEX® are Suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- ▶ Separate G3/8" male suction cup fitting.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	151-355
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	67	86	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	44	61		
0.314	0.47 NI/s, 155W	Dry steel	78	106	0.064	0.061
0.314	0.47 NI/s, 155W	Oily steel	51	30	0.064	0.061

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	56	71	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	39	52		
0.314	0.47 NI/s, 155W	Dry steel	78	106	0.064	0.061
0.314	0.47 NI/s, 155W	Oily steel	63	39	0.064	0.061

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

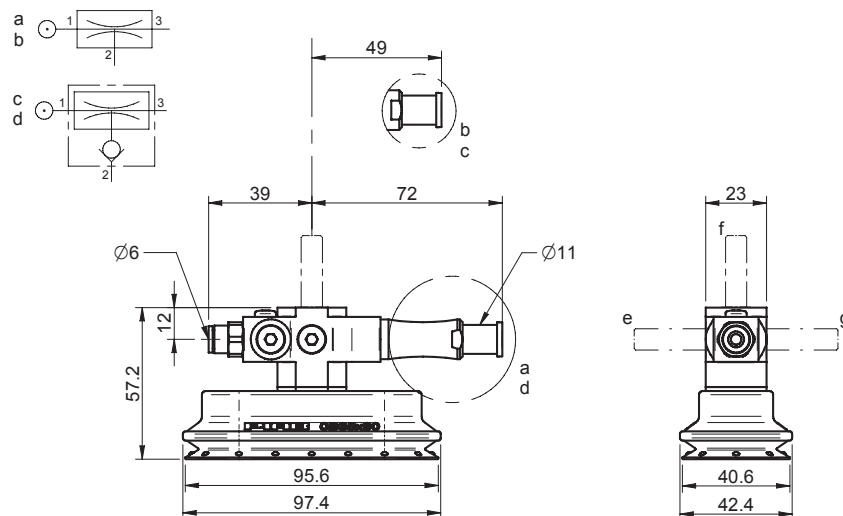
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cups with fitting		VGS code
	No suction cup	BA
	OB35X90P PU30/60° Shore A	CA
	OB35X90P PU60° Shore A	CB

Example	Ordering number
VGS™3010 OB35x90P – Pi12-3, M8 27 mm top including profile kit, OB35x90P 30/60° Shore A	VGS3010 AC 04 CA



VGS™3010 OB50X140P



- ▶ Patented COAX® technology
- ▶ Suitable for level adjustment. Can handle object with height differences and varying shapes, for example embossed or corrugated plates.
- ▶ Lifting movement to separate small and thin objects.
- ▶ In the two colored suction cup, the bellows and the sealing lip are of different hardness, which makes the suction cup strong and stable and, at the same time, soft and flexible
- ▶ DURAFLEX® are Suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- ▶ Separate G3/8" male suction cup fitting

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65–74
Temperature range	°C	10–50
Weight	g	236-440
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	150	175	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	67	83		
0.314	0.47 NI/s, 155W	Dry steel	182	173	0.168	0.162
0.314	0.47 NI/s, 155W	Oily steel	153	169	0.168	0.162

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	141	168	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	56	103		
0.314	0.47 NI/s, 155W	Dry steel	183	196	0.168	0.162
0.314	0.47 NI/s, 155W	Oily steel	182	136	0.168	0.162

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

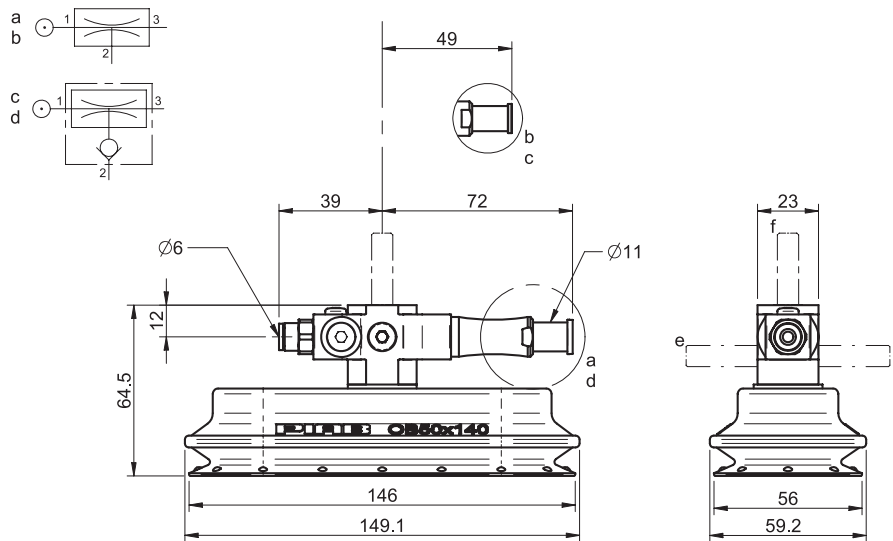
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

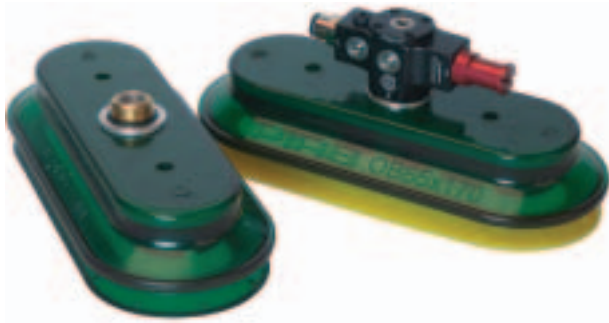
For more information about LC30 see separate data sheet.

3. Suction cups with fitting		VGS code
	No suction cup	BA
	OB50X140P PU30/60° Shore A	CC
	OB50X140P PU60° Shore A	CD

Example	Ordering number
VGS™3010 OB50x140P – Pi12-3, M8 27 mm top including profile kit, OB50x140P 30/60° Shore A	VGS3010 AC 04 CC



VGS™3010 OB65X170P



- ▶ Patented COAX® technology
- ▶ Suitable for level adjustment. Can handle object with height differences and varying shapes, for example embossed or corrugated plates.
- ▶ Lifting movement to separate small and thin objects.
- ▶ In the two colored suction cup, the bellows and the sealing lip are of different hardness, which makes the suction cup strong and stable and, at the same time, soft and flexible
- ▶ DURAFLEX® are Suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- ▶ Separate G3/8" male suction cup fitting

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	346-550
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	230	266	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	79	100		
0.314	0.47 NI/s, 155W	Dry steel	265	259	0.310	0.298
0.314	0.47 NI/s, 155W	Oily steel	239	146	0.310	0.298

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	180	195	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	78	130		
0.314	0.47 NI/s, 155W	Dry steel	272	300	0.310	0.289
0.314	0.47 NI/s, 155W	Oily steel	260	200	0.310	0.289

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

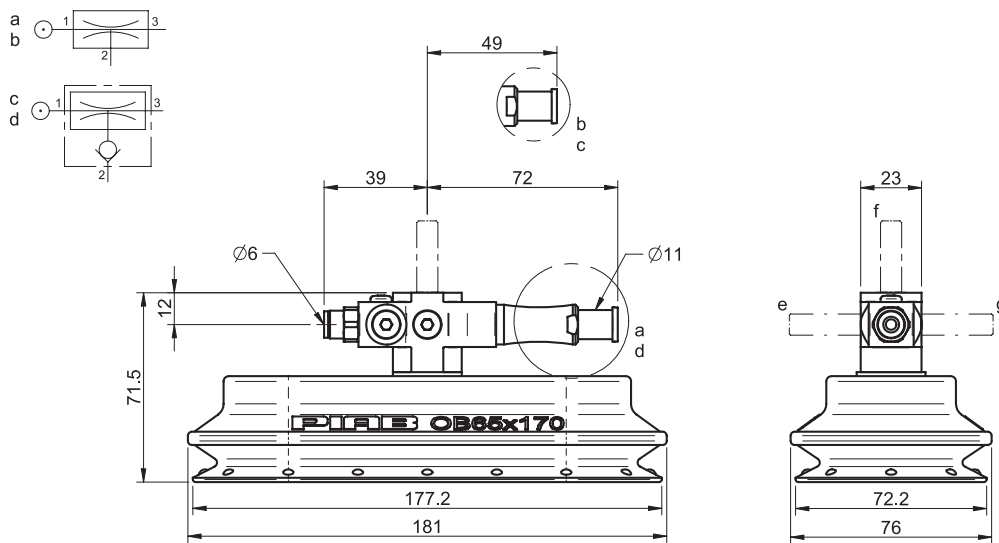
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cups with fitting		VGS code
	No suction cup	BA
	OB65X170P PU30/60° Shore A	CE
	OB65X170P PU60° Shore A	CF

Example	Ordering number
VGS™3010 OB65x170P – Pi12-3, M8 27 mm top including profile kit, OB65x170P 30/60° Shore A	VGS3010 AC 04 CE



Vacuum grippers
VGS™3010

VGS™3010 OBL40X90P



OVAL SUCTION CUP WITH 4 BELLOWS

- ▶ Patented COAX® technology
- ▶ Suitable for handling elongated and sharp curved surfaces, such as bottles and other cylindrical parts.
- ▶ Strengthening rings make the suction cup stable.
- ▶ DURAFLEX® cups are made of a revolutionary polyurethane material that combines the soft elasticity of rubber with the exceptional wear resistance of polyurethane.
- ▶ The DURAFLEX® material is non-marking.
- ▶ The suction cups have a molded fitting with removable G3/8" male thread insert.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dB(A)	65–74
Temperature range	°C	10–50
Weight	g	181–204
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 70° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155 W	Plywood	74	69	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155 W	Corrugated	51	47	0.186	0.179
0.314	0.47 NI/s, 155 W	Dry steel	91	70	0.186	0.179
0.314	0.47 NI/s, 155 W	Oily steel	74	19	0.186	0.179

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

VGS™3010 OF25X70P



- ▶ Patented COAX® technology
- ▶ Suitable for all flat and rough surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- ▶ DURAFLEX® are Suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- ▶ Molded G3/8" male suction cup fitting.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65–74
Temperature range	°C	10–50
Weight	g	105-310
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 40° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	46	44.5	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	35.5	37		
0.314	0.47 NI/s, 155W	Dry steel	54	52.5	0.010	0.010
0.314	0.47 NI/s, 155W	Oily steel	50	27	0.011	0.010

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	44	48.5	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	35.5	37.5		
0.314	0.47 NI/s, 155W	Dry steel	59	81	0.011	0.010
0.314	0.47 NI/s, 155W	Oily steel	52.5	28.5	0.011	0.010

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

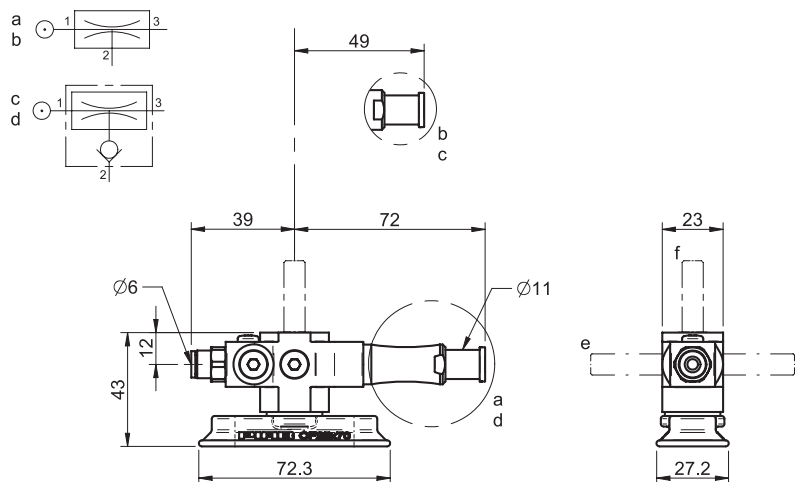
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cups with fitting		VGS code
	No suction cup	BA
	OF25X70P PU40° Shore A	CG
	OF25X70P PU60° Shore A	CH

Example	Ordering number
VGS™3010 OF25x70P – Pi12-3, M8 27 mm top including profile kit, OF25x70P 40° Shore A	VGS3010 AC 04 CG



VGS™3010 OF40X110P



- ▶ Patented COAX® technology
- ▶ Suitable for all flat and rough surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- ▶ DURAFLEX® are Suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- ▶ Molded G3/8" male suction cup fitting.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	151-355
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 40° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	123	119.5	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	62	50.5		
0.314	0.47 NI/s, 155W	Dry steel	145.5	148.5	0.037	0.036
0.314	0.47 NI/s, 155W	Oily steel	123.5	36	0.037	0.036

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	129.5	131.5	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	45.5	77		
0.314	0.47 NI/s, 155W	Dry steel	151.5	205.5	0.037	0.036
0.314	0.47 NI/s, 155W	Oily steel	139.5	58.5	0.037	0.036

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

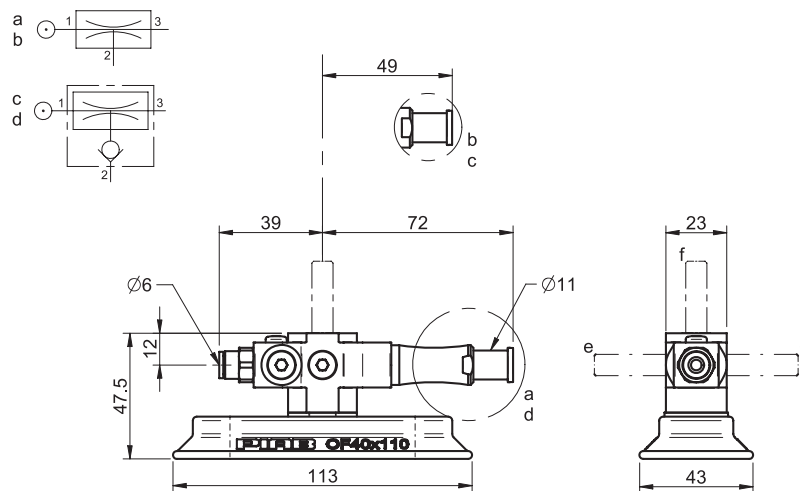
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cups with fitting		VGS code
	No suction cup	BA
	OF40X110P PU40° Shore A	CI
	OF40X110P PU60° Shore A	CJ

Example	Ordering number
VGS™3010 OF40x110P – Pi12-3, M8 27 mm top including profile kit, OF40x110P 40° Shore A	VGS3010 AC 04 CI



VGS™3010 OF55X150P



- ▶ Patented COAX® technology
- ▶ Suitable for all flat and rough surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- ▶ DURAFLEX® are Suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- ▶ Molded G3/8" male suction cup fitting.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	216-420
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 40° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	214	213.5	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	87.5	115.5		
0.314	0.47 NI/s, 155W	Dry steel	258	241	0.065	0.063
0.314	0.47 NI/s, 155W	Oily steel	247	160	0.065	0.063

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	208	231.5	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	90.5	113		
0.314	0.47 NI/s, 155W	Dry steel	279	238	0.065	0.063
0.314	0.47 NI/s, 155W	Oily steel	270	175.5	0.065	0.063

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

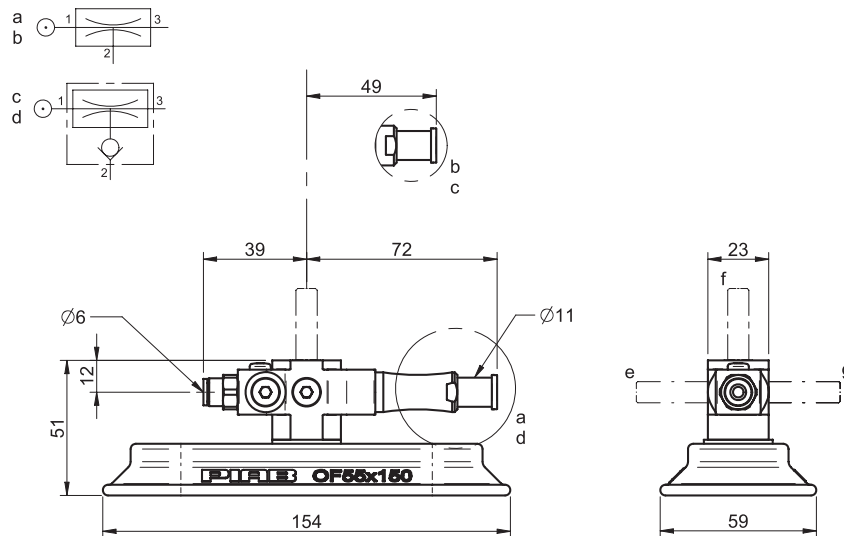
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cups with fitting		VGS code
	No suction cup	BA
	OF55X150P 40° Shore A	CK
	OF55X150P 60° Shore A	CL

Example	Ordering number
VGS™3010 OF55x150P – Pi12-3, M8 27 mm top including profile kit, OF55x150P 40° Shore A	VGS3010 AC 04 CK



VGS™3010 OF70X175P



- ▶ Patented COAX® technology
- ▶ Suitable for all flat and rough surfaces.
- ▶ Fair stability and little inherent movement.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Cleats prevent thin, sensitive objects from being deformed and give extra friction when the lifting force is parallel to the surface of the object.
- ▶ DURAFLEX® are Suction cups manufactured in a specially developed material that features the elasticity of rubber and wear resistance of polyurethane. The material does not leave any marks on the objects handled.
- ▶ Molded G3/8" male suction cup fitting.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65-74
Temperature range	°C	10-50
Weight	g	285-490
Material		PP, PA, NBR, AL, SS, PU

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 40° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	320	350	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	117.5	125		
0.314	0.47 NI/s, 155W	Dry steel	387.5	340	0.142	0.136
0.314	0.47 NI/s, 155W	Oily steel	360	200	0.142	0.136

RECOMMENDED LOAD WITH BUILT IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi12-2	Response time to 50 -kPa with Pi12-3
MPa			N	N	s	s
0.314	0.47 NI/s, 155W	Plywood	317	285	Response time varies based on quality and porosity of handled material.	
0.314	0.47 NI/s, 155W	Corrugated	72	125		
0.314	0.47 NI/s, 155W	Dry steel	435	392.5	0.142	0.136
0.314	0.47 NI/s, 155W	Oily steel	405	252.5	0.142	0.136

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

NOTE: The response times are not valid for Level Compensator LC30.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

ORDERING INFORMATION

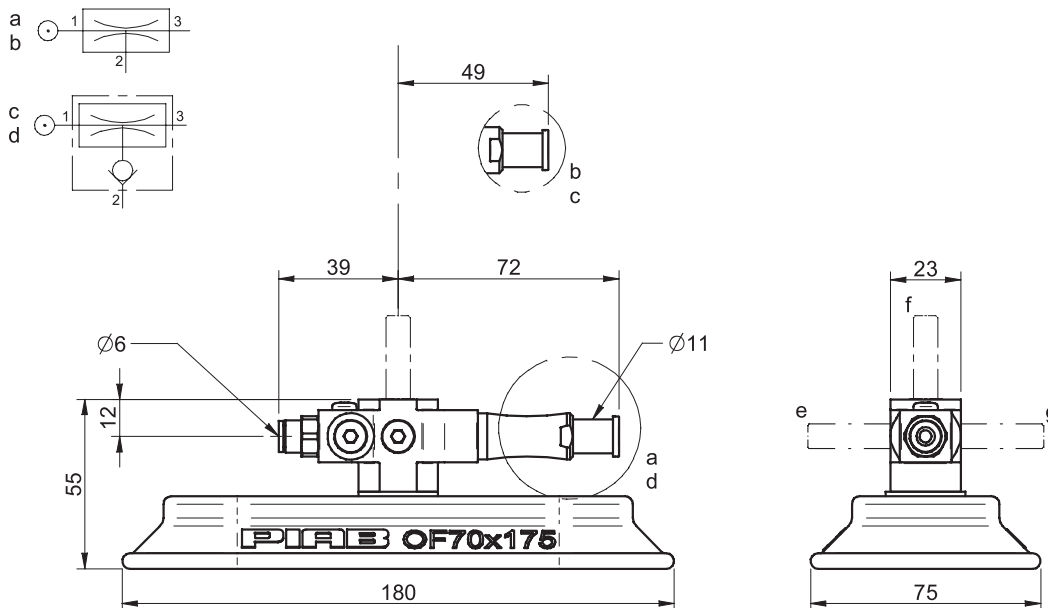
1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit with blind plug M14x1)	AA
b	COAX® cartridge Pi12-2	AB
a	COAX® cartridge Pi12-3	AC
c	COAX® cartridge Pi12-2, non-return valve	AD
d	COAX® cartridge Pi12-3, non-return valve	AE

2. Mounting / orientation		VGS code
	4x M4 & 1x plug G1/8" top, flush mount	00
f	M8 16 mm top	01
g	M8 16 mm right	02
e	M8 16 mm left	03
f	M8 27 mm top, profile kit	04
g	M8 27 mm right, profile kit	05
e	M8 27 mm left, profile kit	06
f	M6 22 mm top, profile kit	07
g	M6 22 mm right, profile kit	08
e	M6 22 mm left, profile kit	09
g	Ball joint VGS™3010, right	11
e	Ball joint VGS™3010, left	12
g	Lock-pin VGS™3010, right	13
e	Lock-pin VGS™3010, left	14
	Level Compensator LC30	15

For more information about LC30 see separate data sheet.

3. Suction cups with fitting		VGS code
	No suction cup	BA
	OF70X175P 40° Shore A	CM
	OF70X175P 60° Shore A	CN

Example	Ordering number
VGS™3010 OF70x175P – Pi12-3, M8 27 mm top including profile kit, OF70x175P 40° Shore A	VGS3010 AC 04 CM



Vacuum grippers
VGS™3010

VGS™3010 LC30



- ▶ Patented COAX® technology
- ▶ The LC30 is tailor made as a mounting option for the Vacuum Gripper System, VGS™3010
- ▶ Developed for use with standard profile systems.
- ▶ Easy installation with the option of fine adjustments and positioning of the suction cup.
- ▶ Non-rotational for use with, for example, oval suction cups.
- ▶ Quiet and reliable level compensation with load protection and shock absorption.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	65–74
Temperature range	°C	10–50
Weight range	g	299–578
Material		PP, PA, NBR, AL, SS, PU
Spring force	N	5–42
Stroke	mm	30
Volume LC30, internal	cm ³	5
Maximum load, vertical	N	700
Adjustable in height	mm	12
Adjustable in rotational direction	°	0–360

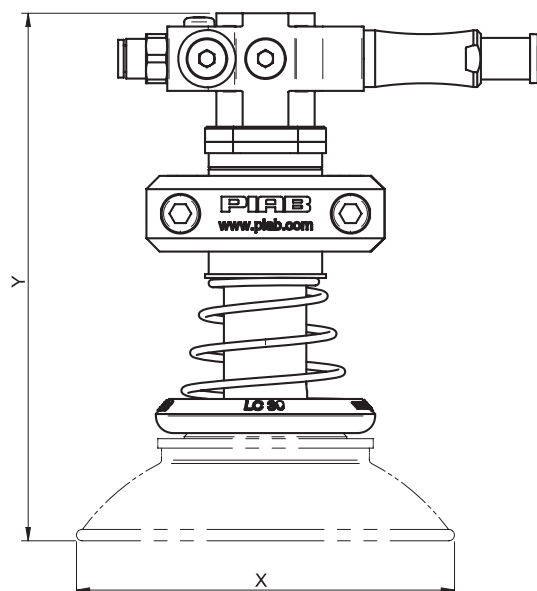
ORDERING INFORMATION

1. COAX® cartridge	VGS code
No COAX® cartridge (slave unit with blind plug M14x1)	AA
COAX® cartridge Pi12-2	AB
COAX® cartridge Pi12-3	AC
COAX® cartridge Pi12-2, non-return valve	AD
COAX® cartridge Pi12-3, non-return valve	AE

2. LC30	VGS code
Level Compensator LC30	15

LC 30 is delivered with two MC6S M6x45 fzb screws.

3. Suction cups with fitting	Y	X	VGS Code
No suction cup	111	—	BA
B75P 30/60° Shore A	149.8	Ø79	BB
B75P 60° Shore A	149.8	Ø79	BC
BF80P 30/50° Shore A	147.5	Ø84	BD
BF80P 60° Shore A	147.5	Ø84	BE
BX35P 30/60° Shore A	143.8	Ø37	BF
BX35P 60° Shore A	143.8	Ø37	BG
BX52P 30/60° Shore A	156	Ø53	BH
BX52P 60° Shore A	156	Ø53	BI
BX75P 30/60° Shore A	162.7	Ø77.5	BJ
BX75P 60° Shore A	162.7	Ø77.5	BK
F75P 30/60° Shore A	125.5	Ø77	BL
F75P 60° Shore A	125.5	Ø77	BM
F110P 30/60° Shore A	131.5	Ø115	BN
F110P 60° Shore A	131.5	Ø115	BO
FC50P 40° Shore A	134.5	Ø50	BP
FC50P 60° Shore A	134.5	Ø50	BQ
FC75P 40° Shore A	135	Ø75	BR
FC75P 60° Shore A	135	Ø75	BS
FC100P 40° Shore A	139.5	Ø100	BT
FC100P 60° Shore A	139.5	Ø100	BU
OBL40x90P 70° Shore A	175	45x95	BV
OB35X90P PU30/60° Shore A	138.25	42.4x97.4	CA
OB35X90P PU60° Shore A	138.25	42.4x97.4	CB
OB50X140P PU30/60° Shore A	145.5	59x149	CC
OB50X140P PU60° Shore A	145.5	59x149	CD
OB65X170P PU30/60° Shore A	152.5	76x181	CE
OB65X170P PU60° Shore A	152.5	76x181	CF
OF25X70P PU40° Shore A	124	27.3x72.3	CG
OF25X70P PU60° Shore A	124	27.3x72.3	CH
OF40X110P PU40° Shore A	128.5	43x113	CI
OF40X110P PU60° Shore A	128.5	43x113	CJ
OF55X150P PU40° Shore A	132	59x154	CK
OF55X150P PU60° Shore A	132	59x154	CL
OF70X175P PU40° Shore A	136	75x180	CM
OF70X175P PU60° Shore A	136	75x180	CN



For more information about LC30, see separate data sheet in SUCTION CUPS ACCESSORIES chapter.

ATMOSPHERIC QUICK-RELEASE VALVE – AQR



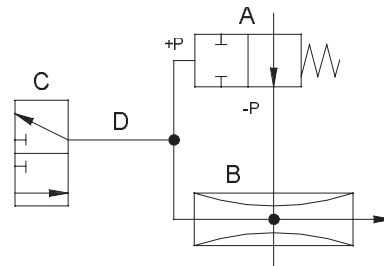
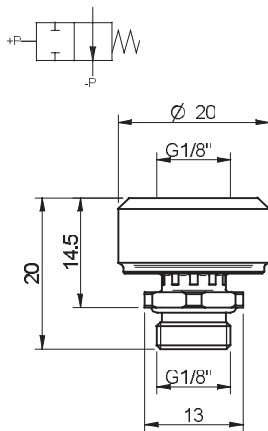
- ▶ Equalizes pressure in vacuum gripper systems to provide fast release of product
- ▶ Consumes no additional compressed air
- ▶ ON/OFF activated simultaneously with the Vacuum Gripper System (VGS™)
- ▶ Simple installation to the vacuum chamber of the VGS™ pump
- ▶ No additional controls required — use single 3/2 control valve for VGS™ and AQR

TECHNICAL DATA

Description	Unit	Value
Feed pressure	MPa	0.3–0.7
Temperature range	°C	10–50
Weight	g	20
Atmospheric flow, average	Nl/s	3.3
Material		CuZn, PUR, NBR
Recommended max. distance between AQR and control valve for optimal performance	m	1.5

ORDERING INFORMATION

Description	Art. No.
Atmospheric quick-release valve – AQR	0111236



A=AQR, B=Vacuum pump, C=Control valve, D=Rec. max. 1.5m

CHECK VALVE VGS™3010



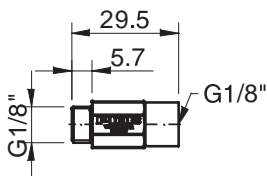
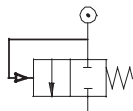
- ▶ Simple installation to any 1/8" VGS™ accessory port
- ▶ Prevents vacuum from being pulled through blow-off lines, which means faster response and completely independent VGS units.
- ▶ Suitable in applications where cleaning of the lines or suction cup filter is necessary

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Feed pressure, min., breakaway blow-off	MPa	0.25
Material		AL, NBR, PA
Temperature range	°C	-10-80
Weight	g	6.25
Flow, max.	NI/s	7

ORDERING INFORMATION

Description	Art. No.
Check valve VGS™3010	0110457



VGS™3010 MOUNTING-KITS



- ▶ Fits standard robot end-of-arm tooling interfaces
- ▶ Easy attachment to standard extrusion and profile systems
- ▶ Flexible positioning
- ▶ Quick setup and change-over
- ▶ Durable and non-rotating installation

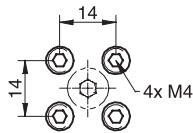
TECHNICAL DATA, SPECIFIC

Description	Unit	Value					
		0106915	0106927	0106949	0108488	0108731	0108734
Material		SS, NBR	SS, PA, NBR	Al, SS, Steel, NBR	Al, SS, Steel, NBR	AL, SS, NBR	SS, NBR
Weight	g	24	24	36	22	46	70

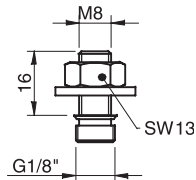
ORDERING INFORMATION

	Description	Art. No.
A	4x M4 & 1x plug G1/8" top, flush mount	00
B	M8 16 mm	0106927
C	M8 27 mm, profile kit	0106949
D	M6 22 mm, profile kit	0108488
E	Ball joint VGS™3010	0108731
F	Lock pin VGS™3010	0108734

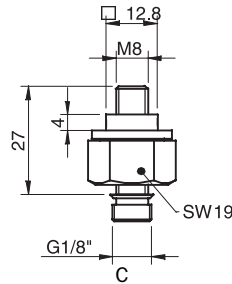
B-D 4x plug G1/8" included.



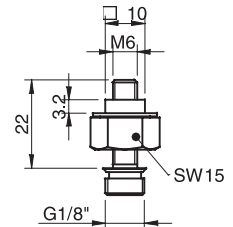
A



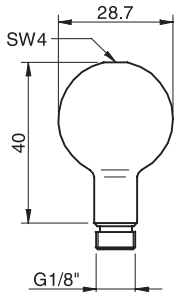
B



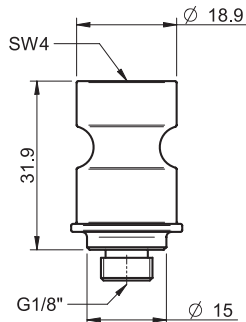
C



D



E



F

VGS™5010 BF110P



- ▶ Patented COAX® technology.
- ▶ The suction cups are specially designed for handling larger parts, such as car body sheets.
- ▶ The soft, flexible lip makes the cup suitable for curved or uneven surfaces and the dual hardness version, PU30/60, is also recommended for rough or rugged surfaces to prevent micro-leakage, which can occur on plastic or composite work pieces.
- ▶ Available with a two or three-stage COAX® cartridge MIDI. Choose an Si cartridge for extra vacuum flow or a Pi cartridge for high performance at low feed pressure.
- ▶ The three-stage cartridge will give extra high initial vacuum flow, suitable in high speed applications.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	73–83
Temperature range	°C	10–50
Weight	g	373–548
Material		Al, SS, NBR, PA, PP, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

COAX® cartridge	Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
	MPa			N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	94	81	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	99	81		
Pi	0.314	2.0 NI/s, 660W	Dry steel	106	115	0.048	0.046
Pi	0.314	2.0 NI/s, 660W	Oily steel	105	51	0.048	0.046

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

COAX® cartridge	Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
	MPa			N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	106	84	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	109	80		
Pi	0.314	2.0 NI/s, 660W	Dry steel	128	138	0.048	0.046
Pi	0.314	2.0 NI/s, 660W	Oily steel	128	55	0.048	0.046

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

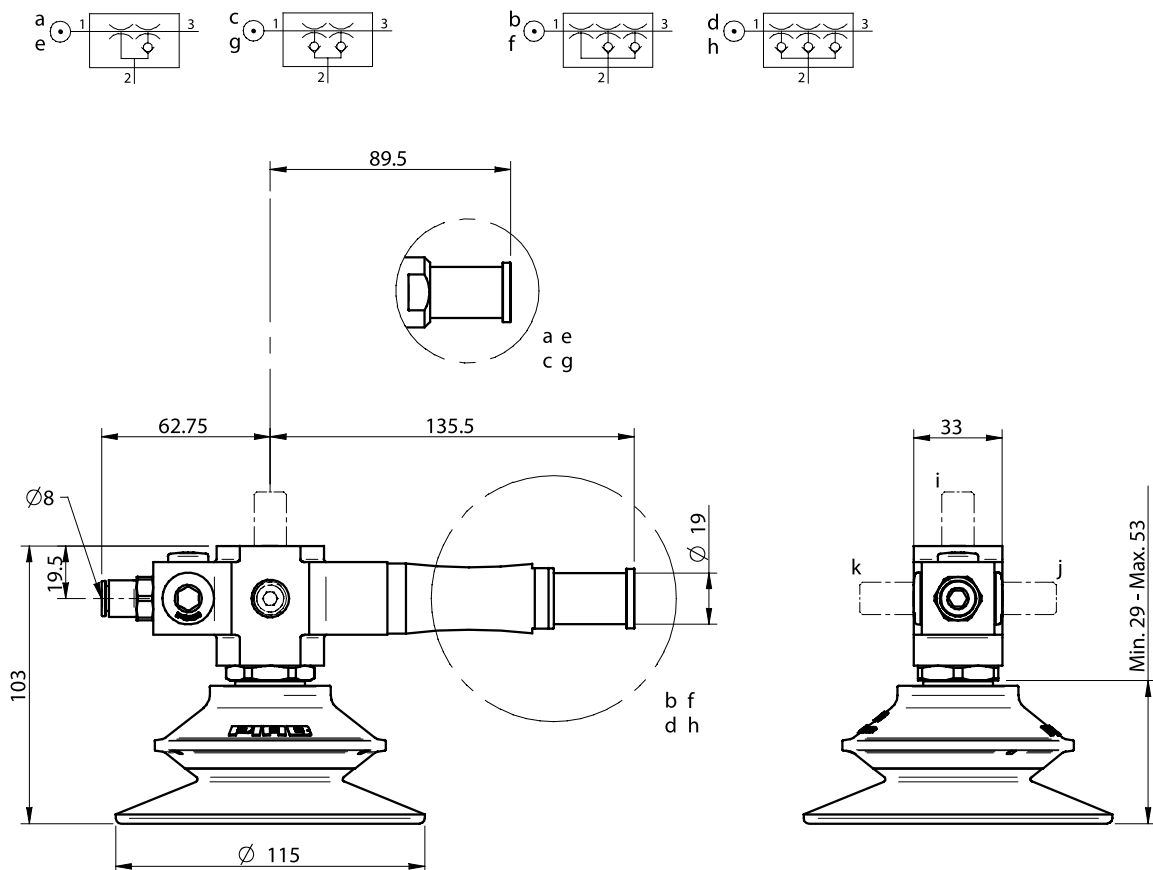
ORDERING INFORMATION

1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MIDI Pi48-2	AB
b	COAX® cartridge MIDI Pi48-3	AC
c	COAX® cartridge MIDI Pi48-2, non-return valve	AD
d	COAX® cartridge MIDI Pi48-3, non-return valve	AE
e	COAX® cartridge MIDI Si32-2	AF
f	COAX® cartridge MIDI Si32-3	AG
g	COAX® cartridge MIDI Si32-2, non-return valve	AH
h	COAX® cartridge MIDI Si32-3, non-return valve	AI

2. Mounting/orientation		VGS code
	4x M6 top, flush mount	00
	4x M6 top, angle bracket	01
i	M12 20 mm top	02
j	M12 20 mm right	03
k	M12 20 mm left	04
i	M12 20 mm top, angle bracket	05
j	M12 20 mm right, angle bracket	06
k	M12 20 mm left, angle bracket	07

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BF110P 30/60° Shore A	CO
	BF110P 60° Shore A	CP

Example	Ordering number
VGS™5010 BF110P – Pi48-2, M12 20 mm top, BF110P 30/60° Shore A	VGS5010 AB 02 CO



VGS™5010 BL50-3P



- ▶ Patented COAX® technology.
- ▶ Suitable for high flow applications such as plastic bag handling.
- ▶ The design provides enough strength and stability when handling plastic bags, while providing the softness and flexibility required to seal on uneven surfaces.
- ▶ This suction cup is made of DURAFLEX® material and the bellows and sealing lip are of different hardness.
- ▶ The suction cup has a special high-flow fitting.
- ▶ Available with a two or three-stage COAX® cartridge MIDI. Choose an Si cartridge for extra vacuum flow or a Pi cartridge for high performance at low feed pressure.
- ▶ The three-stage cartridge will give extra high initial vacuum flow, suitable in high speed applications.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	73–83
Temperature range	°C	10–50
Weight	g	246–421
Material		Al, SS, NBR, PA, PP, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/70° SHORE

COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
				N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	33	26*	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	33	24*		
Pi	0.314	2.0 NI/s, 660W	Dry steel	43	19*	0.020	0.019
Pi	0.314	2.0 NI/s, 660W	Oily steel	N/A	N/A	N/A	N/A

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

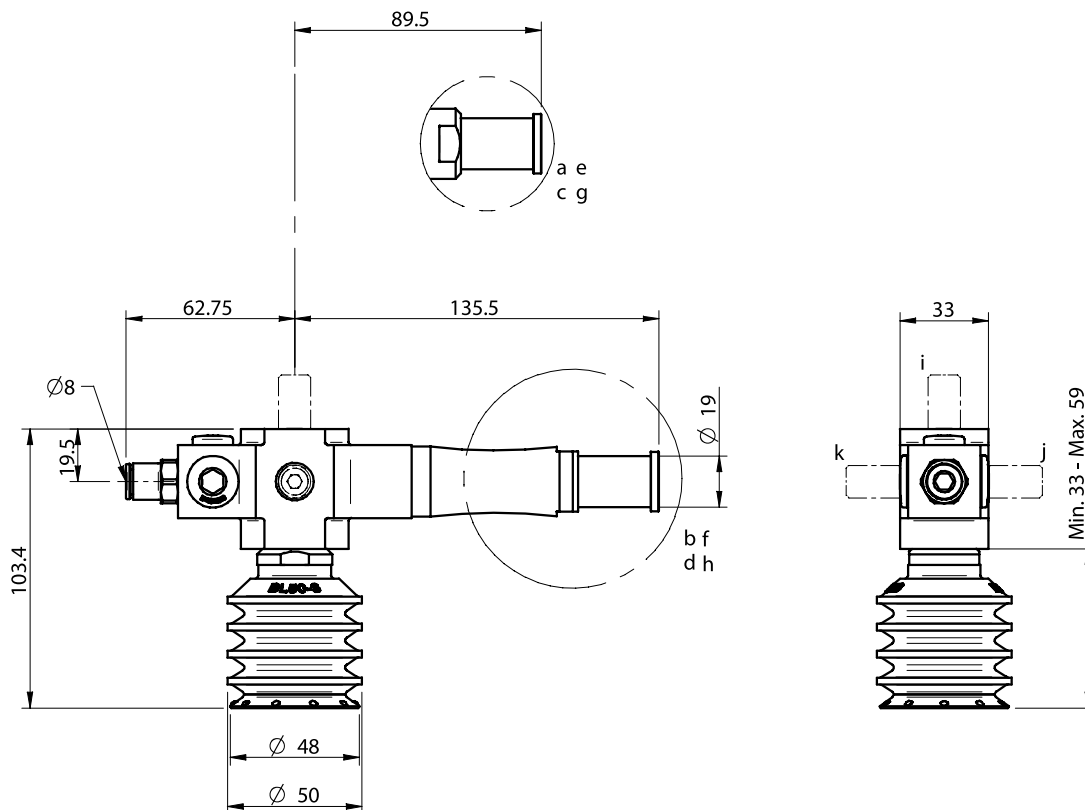
ORDERING INFORMATION

1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MIDI Pi48-2	AB
b	COAX® cartridge MIDI Pi48-3	AC
c	COAX® cartridge MIDI Pi48-2, non-return valve	AD
d	COAX® cartridge MIDI Pi48-3, non-return valve	AE
e	COAX® cartridge MIDI Si32-2	AF
f	COAX® cartridge MIDI Si32-3	AG
g	COAX® cartridge MIDI Si32-2, non-return valve	AH
h	COAX® cartridge MIDI Si32-3, non-return valve	AI

2. Mounting/orientation		VGS code
	4x M6 top, flush mount	00
	4x M6 top, angle bracket	01
i	M12 20 mm top	02
j	M12 20 mm right	03
k	M12 20 mm left	04
i	M12 20 mm top, angle bracket	05
j	M12 20 mm right, angle bracket	06
k	M12 20 mm left, angle bracket	07

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BL50-3P 30/70° Shore A	CX

Example	Ordering number
VGS™5010 BL50-3P – Pi48-2, M12 20 mm top, BL50-3P 30/70° Shore A	VGS5010 AB 02 CX



VGS™5010 BX75P



- ▶ Patented COAX® technology.
- ▶ Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- ▶ In the two-colored version the bellows and the sealing lip are of different hardness, which makes the suction cup strong and, at the same time, soft and flexible with good sealing capability.
- ▶ A filter disk inside the cup keeps dust out of the system.
- ▶ Available with a two or three-stage COAX® cartridge MIDI. Choose an Si cartridge for extra vacuum flow or a Pi cartridge for high performance at low feed pressure.
- ▶ The three-stage cartridge will give extra high initial vacuum flow, suitable in high speed applications.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	73–83
Temperature range	°C	10–50
Weight	g	333–508
Material		Al, SS, NBR, PA, PP, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
				N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	62	47*	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	62	48*		
Pi	0.314	2.0 NI/s, 660W	Dry steel	74	58*	0.034	0.033
Pi	0.314	2.0 NI/s, 660W	Oily steel	74	32*	0.034	0.033

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
				N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	62	47*	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	62	48*		
Pi	0.314	2.0 NI/s, 660W	Dry steel	83	75*	0.034	0.033
Pi	0.314	2.0 NI/s, 660W	Oily steel	85	48*	0.034	0.033

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

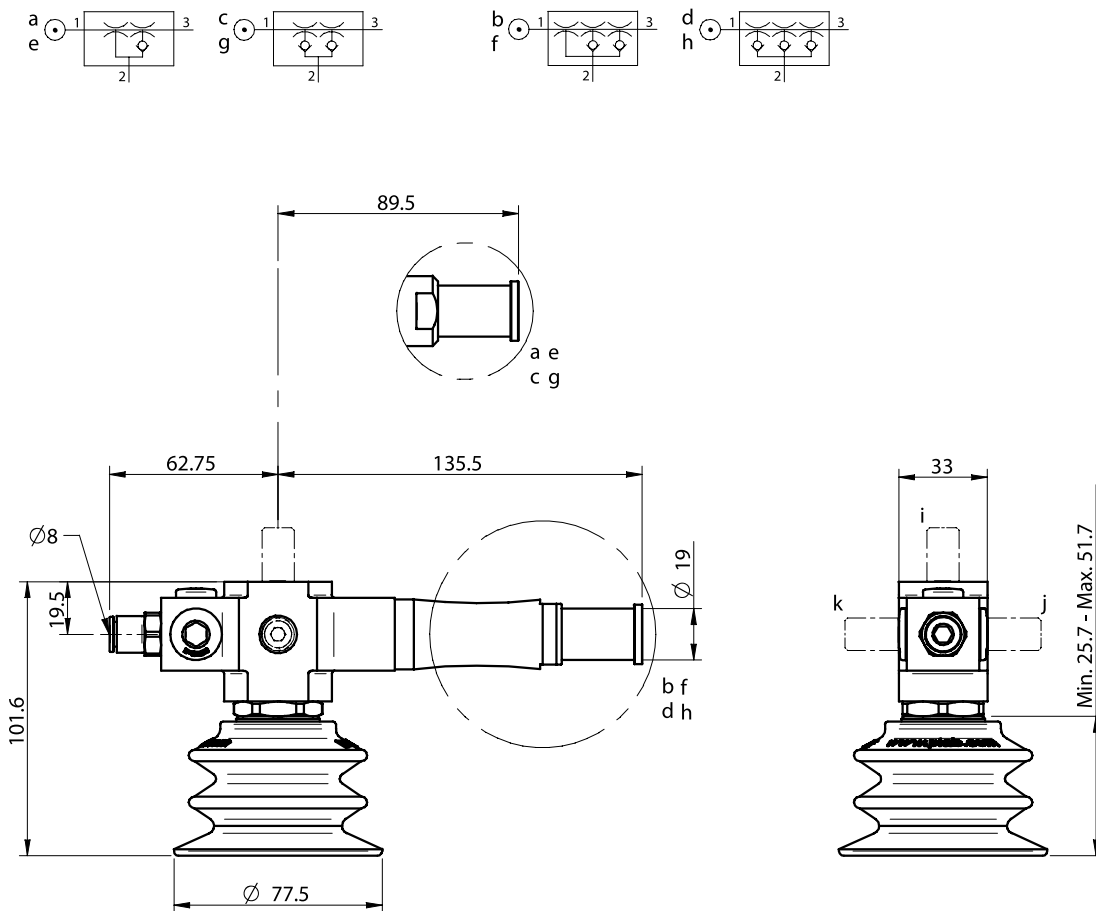
ORDERING INFORMATION

1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MIDI Pi48-2	AB
b	COAX® cartridge MIDI Pi48-3	AC
c	COAX® cartridge MIDI Pi48-2, non-return valve	AD
d	COAX® cartridge MIDI Pi48-3, non-return valve	AE
e	COAX® cartridge MIDI Si32-2	AF
f	COAX® cartridge MIDI Si32-3	AG
g	COAX® cartridge MIDI Si32-2, non-return valve	AH
h	COAX® cartridge MIDI Si32-3, non-return valve	AI

2. Mounting/orientation		VGS code
	4x M6 top, flush mount	00
	4x M6 top, angle bracket	01
i	M12 20 mm top	02
j	M12 20 mm right	03
k	M12 20 mm left	04
i	M12 20 mm top, angle bracket	05
j	M12 20 mm right, angle bracket	06
k	M12 20 mm left, angle bracket	07

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BX75P 30/60° Shore A	CY
	BX75P 60° Shore A	CZ

Example	Ordering number
VGS™5010 BX75P – Pi48-2, M12 20 mm top, BX75P 30/60° Shore A	VGS5010 AB 02 CY



Vacuum grippers
VGS™5010

VGS™5010 BX110P



- ▶ Patented COAX® technology.
- ▶ Suitable for level adjustment and for uneven and porous surfaces such as cardboard, etc.
- ▶ In the two-colored version the bellows and the sealing lip are of different hardness, which makes the suction cup strong and, at the same time, soft and flexible with good sealing capability.
- ▶ A filter disk inside the cup keeps dust out of the system.
- ▶ Available with a two or three-stage COAX® cartridge MIDI. Choose an Si cartridge for extra vacuum flow or a Pi cartridge for high performance at low feed pressure.
- ▶ The three-stage cartridge will give extra high initial vacuum flow, suitable in high speed applications.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	73–83
Temperature range	°C	10–50
Weight	g	498–673
Material		Al, SS, NBR, PA, PP, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

COAX® cartridge	Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
	MPa			N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	143	81*	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	131	77*		
Pi	0.314	2.0 NI/s, 660W	Dry steel	145	90*	0.100	0.096
Pi	0.314	2.0 NI/s, 660W	Oily steel	140	47*	0.100	0.096

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

COAX® cartridge	Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
	MPa			N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	139	83*	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	124	80*		
Pi	0.314	2.0 NI/s, 660W	Dry steel	147	116*	0.100	0.096
Pi	0.314	2.0 NI/s, 660W	Oily steel	149	63*	0.100	0.096

*The suction cup is not intended for handling shear lifts. The values are given as a dimensioning guide to be used when, e.g., the acceleration/retardation causes shear forces.

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

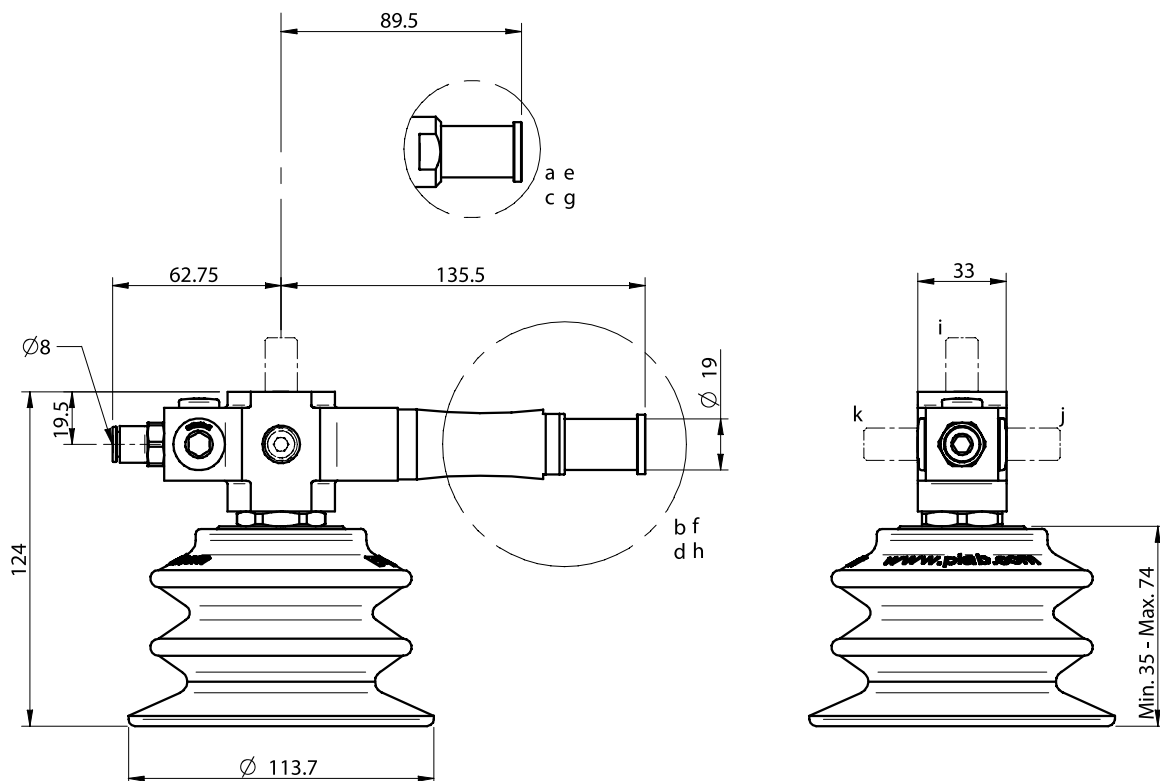
ORDERING INFORMATION

1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MIDI Pi48-2	AB
b	COAX® cartridge MIDI Pi48-3	AC
c	COAX® cartridge MIDI Pi48-2, non-return valve	AD
d	COAX® cartridge MIDI Pi48-3, non-return valve	AE
e	COAX® cartridge MIDI Si32-2	AF
f	COAX® cartridge MIDI Si32-3	AG
g	COAX® cartridge MIDI Si32-2, non-return valve	AH
h	COAX® cartridge MIDI Si32-3, non-return valve	AI

2. Mounting/orientation		VGS code
	4x M6 top, flush mount	00
	4x M6 top, angle bracket	01
i	M12 20 mm top	02
j	M12 20 mm right	03
k	M12 20 mm left	04
i	M12 20 mm top, angle bracket	05
j	M12 20 mm right, angle bracket	06
k	M12 20 mm left, angle bracket	07

3. Suction cup with fitting		VGS code
	No suction cup	BA
	BX110P 30/60° Shore A	CQ
	BX110P 60° Shore A	CR

Example	Ordering number
VGS™5010 BX110P – Pi48-2, M12 20 mm top, BX110P 30/60° Shore A	VGS5010 AB 02 CQ



Vacuum grippers
VGS™5010

VGS™5010 F110P



- ▶ Patented COAX® technology.
- ▶ Suitable for all flat and rough surfaces.
- ▶ Good stability and little inherent movement due to high friction of the rubber material.
- ▶ Recommended when the lifting force is parallel to the surface of the object.
- ▶ Available with a two or three-stage COAX® cartridge MIDI. Choose an Si cartridge for extra vacuum flow or a Pi cartridge for high performance at low feed pressure.
- ▶ The three-stage cartridge will give extra high initial vacuum flow, suitable in high speed applications.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	73–83
Temperature range	°C	10–50
Weight	g	400–576
Material		Al, SS, NBR, PA, PP, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

COAX® cartridge	Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
	MPa			N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	261	195	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	181	166		
Pi	0.314	2.0 NI/s, 660W	Dry steel	335	308	0.024	0.024
Pi	0.314	2.0 NI/s, 660W	Oily steel	304	95	0.024	0.024

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

COAX® cartridge	Feed pressure	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
	MPa			N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	261	145	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	154	149		
Pi	0.314	2.0 NI/s, 660W	Dry steel	352	332	0.024	0.024
Pi	0.314	2.0 NI/s, 660W	Oily steel	304	161	0.024	0.024

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

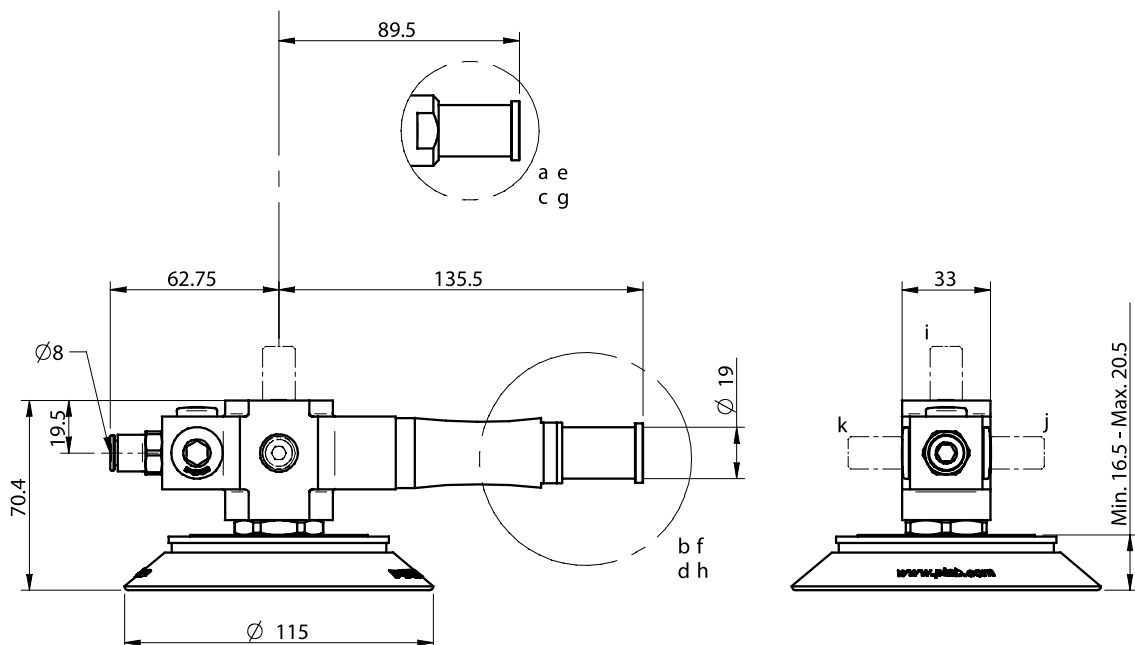
ORDERING INFORMATION

1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MIDI Pi48-2	AB
b	COAX® cartridge MIDI Pi48-3	AC
c	COAX® cartridge MIDI Pi48-2, non-return valve	AD
d	COAX® cartridge MIDI Pi48-3, non-return valve	AE
e	COAX® cartridge MIDI Si32-2	AF
f	COAX® cartridge MIDI Si32-3	AG
g	COAX® cartridge MIDI Si32-2, non-return valve	AH
h	COAX® cartridge MIDI Si32-3, non-return valve	AI

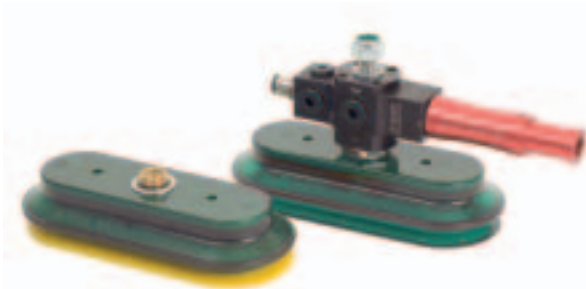
2. Mounting/orientation		VGS code
	4x M6 top, flush mount	00
	4x M6 top, angle bracket	01
i	M12 20 mm top	02
j	M12 20 mm right	03
k	M12 20 mm left	04
i	M12 20 mm top, angle bracket	05
j	M12 20 mm right, angle bracket	06
k	M12 20 mm left, angle bracket	07

3. Suction cup with fitting		VGS code
	No suction cup	BA
	F110P 30/60° Shore A	CS
	F110P 60° Shore A	CT

Example	Ordering number
VGS™5010 F110P – Pi48-2, M12 20 mm top, F110P 30/60° Shore A	VGS5010 AB 02 CS



VGS™5010 OB65X170P



- ▶ Patented COAX® technology.
- ▶ Suitable for level adjustment and for uneven, porous and oblong surfaces such as cardboard boxes. Can handle objects with height differences.
- ▶ Lifting movement to separate small and thin objects.
- ▶ In the two-colored version the bellows and the sealing lip are of different hardness, which makes the suction cup strong and, at the same time, soft and flexible with good sealing capability.
- ▶ Available with a two or three-stage COAX® cartridge MIDI. Choose an Si cartridge for extra vacuum flow or a Pi cartridge for high performance at low feed pressure.
- ▶ The three-stage cartridge will give extra high initial vacuum flow, suitable in high speed applications.
- ▶ Easy installation and flexible positioning with several mounting options.

TECHNICAL DATA

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	73–83
Temperature range	°C	10–50
Weight	g	503–679
Material		Al, SS, NBR, PA, PP, PU

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 30°/60° SHORE

COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
				N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	214	231	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	154	190		
Pi	0.314	2.0 NI/s, 660W	Dry steel	265	259	0.075	0.073
Pi	0.314	2.0 NI/s, 660W	Oily steel	239	146	0.075	0.073

RECOMMENDED LOAD WITH BUILT-IN SAFETY FACTOR OF 2 AND RESPONSE TIME, 60° SHORE

COAX® cartridge	Feed pressure MPa	Air consumption and compressor power, continuous operation	Material to be handled (see table below)	Recommended perpendicular load with safety factor 2	Recommended parallel (shear) load with safety factor 2	Response time to 50 -kPa with Pi48-2	Response time to 50 -kPa with Pi48-3
				N	N	s	s
Si	0.60	1.75 NI/s, 577W	Plywood	219	202	Response time varies based on quality and porosity of handled material	
Si	0.60	1.75 NI/s, 577W	Corrugated	100	186		
Pi	0.314	2.0 NI/s, 660W	Dry steel	272	300	0.075	0.073
Pi	0.314	2.0 NI/s, 660W	Oily steel	260	200	0.075	0.073

Remark: The compressor power is calculated according to: 5.5 W consumed electric power per produced NI/min compressed air, valid for a normally sized 7 bar compressor.

Material definition: Corrugated cardboard = B Flute 3 mm, 80 Gurley seconds.

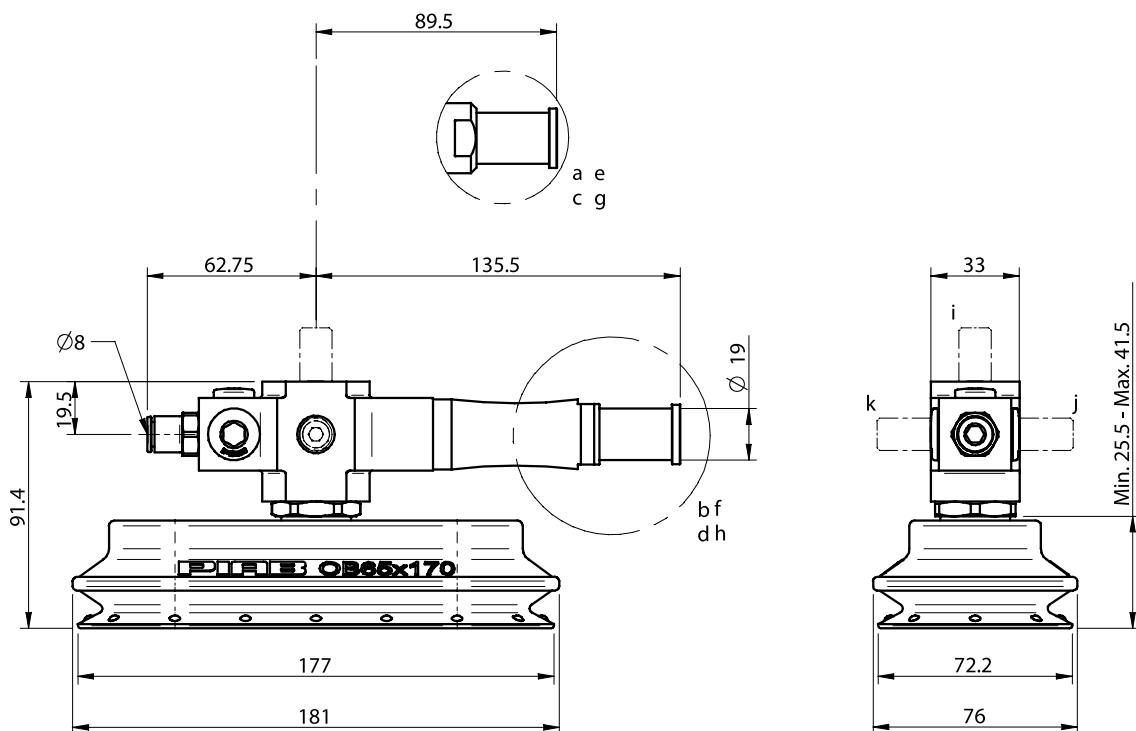
ORDERING INFORMATION

1. COAX® cartridge		VGS code
	No COAX® cartridge (slave unit)	AA
a	COAX® cartridge MIDI Pi48-2	AB
b	COAX® cartridge MIDI Pi48-3	AC
c	COAX® cartridge MIDI Pi48-2, non-return valve	AD
d	COAX® cartridge MIDI Pi48-3, non-return valve	AE
e	COAX® cartridge MIDI Si32-2	AF
f	COAX® cartridge MIDI Si32-3	AG
g	COAX® cartridge MIDI Si32-2, non-return valve	AH
h	COAX® cartridge MIDI Si32-3, non-return valve	AI

2. Mounting/orientation		VGS code
	4x M6 top, flush mount	00
	4x M6 top, angle bracket	01
i	M12 20 mm top	02
j	M12 20 mm right	03
k	M12 20 mm left	04
i	M12 20 mm top, angle bracket	05
j	M12 20 mm right, angle bracket	06
k	M12 20 mm left, angle bracket	07

3. Suction cup with fitting		VGS code
	No suction cup	BA
	OB65x170P 30/60° Shore A	CU
	OB65x170P 60° Shore A	CV

Example	Ordering number
VGS™5010 OB65x170P – Pi48-2, M12 20 mm top, OB65x170P 30/60° Shore A	VGS5010 AB 02 CU



VGS™5010 MOUNTING-KITS



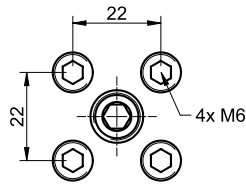
- ▶ Easy attachment to standard extrusion and profile systems
- ▶ Flexible positioning
- ▶ Quick setup and change-over
- ▶ Durable and non-rotating installation

TECHNICAL DATA

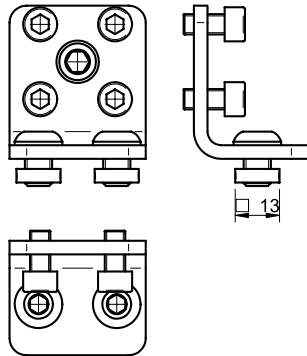
Description	Unit	Value			
		0114162	0114163	0114164	0114152
Material		Al, SS, PA, NBR	Al, SS, Steel, PA, NBR	SS, Steel, PA, NBR	SS, Steel, PA, NBR
Weight	g	34.8	133.1	58.7	154.1

ORDERING INFORMATION

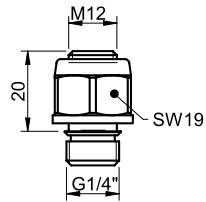
	Description	Art. No.
A	4x M6 top, flush mount	0114162
B	4x M6 top, angle bracket	0114163
C	M12 20 mm top	0114164
D	M12 20 mm top, angle bracket	0114152



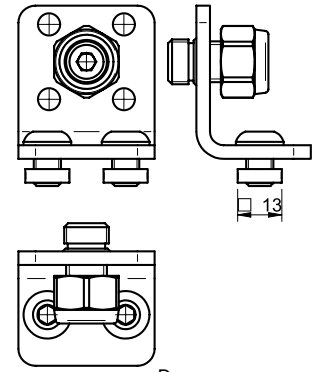
A



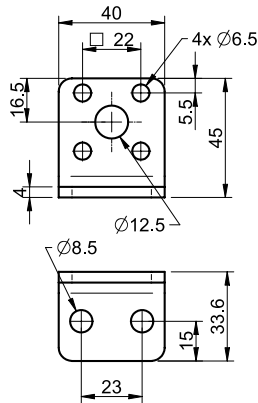
B



C



D



Angle bracket included in B & D