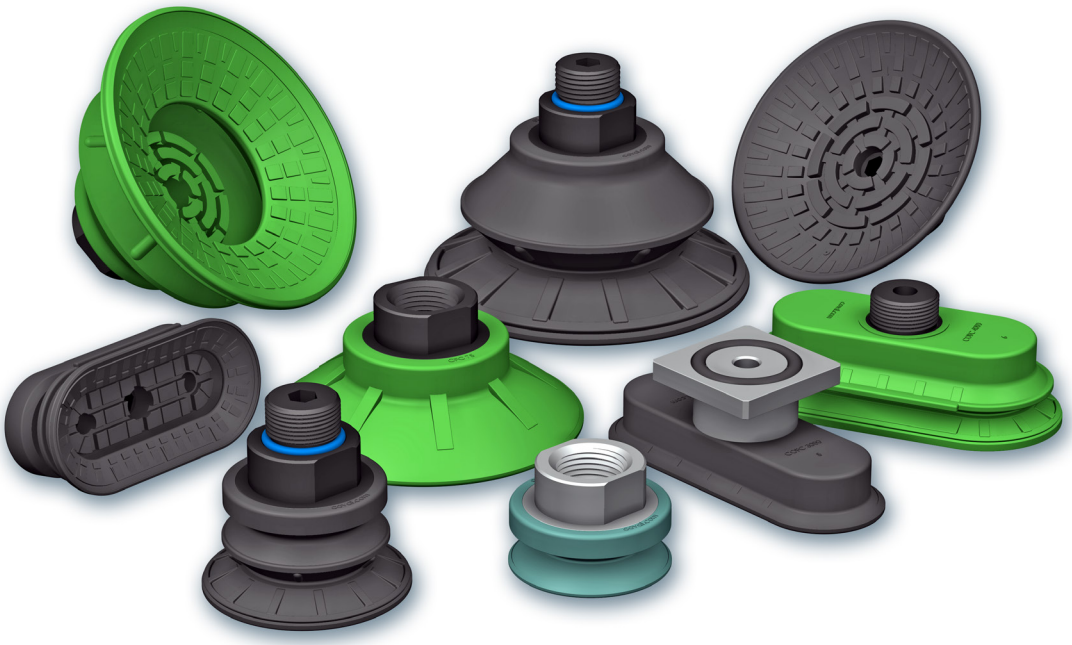
COVAL

vacuum managers

C SERIES

High-Performance Suction Cups



ADVANCED VACUUM SOLUTIONS

C

High-Performance Suction Cups
General Information

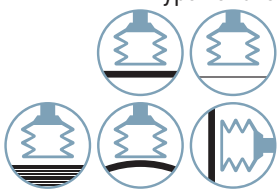


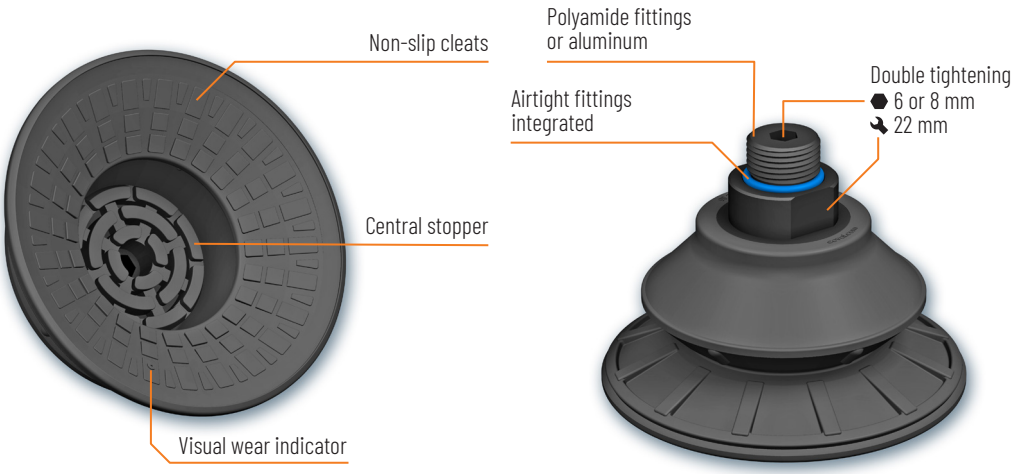
The **C Series high-performance suction cup** range has been designed to meet the requirements of the automotive sector.
The improved characteristics of the **C Series** range optimizes production tools in all branches of activity.

Industry-specific applications



Types of use





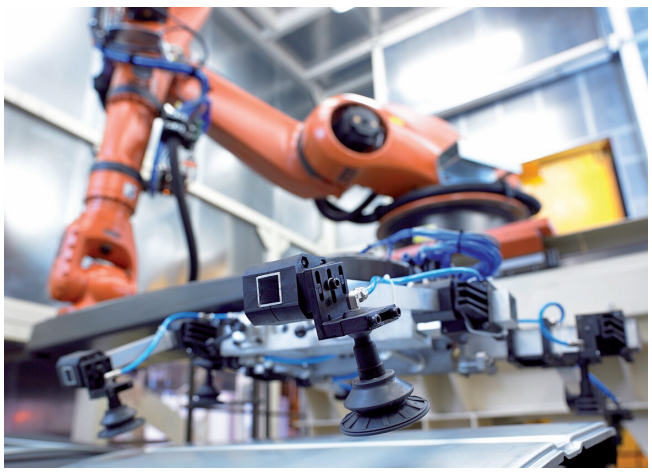
Advantages

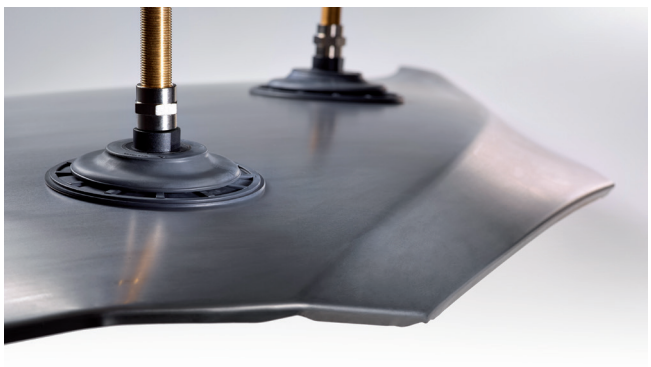
- Extreme resistance to slipping and acceleration.
- A full range of shapes and sizes to meet every requirement.
- 2 suction cup materials available depending on the model (Nitrile or Siton®).
- Non-slip cleats ensure optimum positioning of oily metal sheets.
- Ideal for automated applications.
- Rigid central stopper with integrated cleats allows gripping of thin sheet metal without any deformation.
- Lightweight polyamide fittings allow for better integration on end-of-arm tooling.
- Airtight sealing lips.
- Airtight fittings using:
  - O-rings on G3/8" male cylindrical suction cups and 32 square suction cups
  - Sealing ring on all oblong 3/8" male suction cups.
- Visual wear indicator.
- Double tightening: external with 22 mm wrench or internal with 6 or 8 mm hex key.

Application fields

The COVAL **C Series** vacuum cups have been specially designed for high speed robot applications due to their high resistance to slipping and acceleration, as well as their reduced weight.

The **C Series** vacuum cups are dedicated to handling sheet metal, glass, and plastics in operations such as Stamping, BIW, Glass, and Assembly.





C

High-Performance Suction Cups
General Information



Range

The COVAL **C Series** high performance vacuum cups are available in a complete range of shapes, sizes, materials, and connection types in order to meet all your needs in the most appropriate way.

MODELS

CFC
flat suction cup



CBC
1.5 bellows suction cup



COFC
flat oblong suction cup



COBC
oblong suction cup with 1.5 bellows



FITTINGS

M38G
male fitting G3/8" (polyamide fitting)



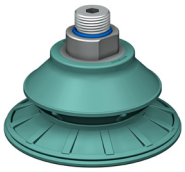
F38G
female fitting G3/8" (polyamide fitting)



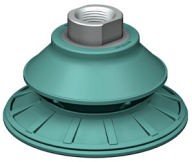
C32
square coupling 32 mm (polyamide fitting and 32mm square in aluminum)



M38GA
male fitting G3/8" (aluminum fitting)



F38GA
female fitting G3/8" (aluminum fitting)



- *Other fittings available on request.*

Materials

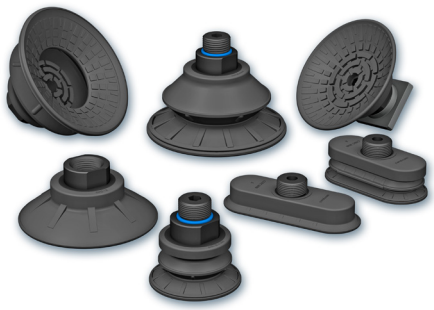
SUCTION CUPS

- **NBR nitrile 55 Shore A**
  - High resistance to oils and supports peak temperatures up to 100°C (212°F).
  - Colors: gray for suction cups with polyamide fittings, and blue-green for suction cups with aluminum fittings.
- **STNV6 Siton® 60 Shore A**
  - High resistance to oils, supports peak temperatures up to 160°C (320°F) and features excellent abrasion resistance.
  - Color: green.

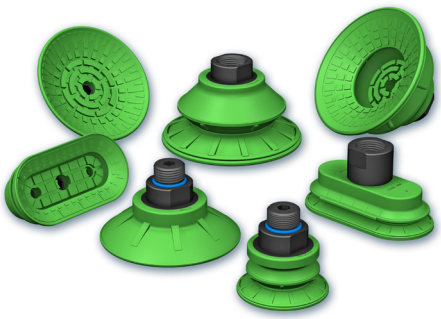
FITTINGS

- **PA**
  - Polyamide filled with fiberglass (PA 6.6 30% FG), ensures weight savings, avoids risk of deterioration of expensive tools, and facilitates suction cup recycling. (fitting M38G/F38G).
- **AL**
  - Aluminum (M38GA/F38GA/C32 Fitting).
- **O-ring:** NBR Nitrile Blue.

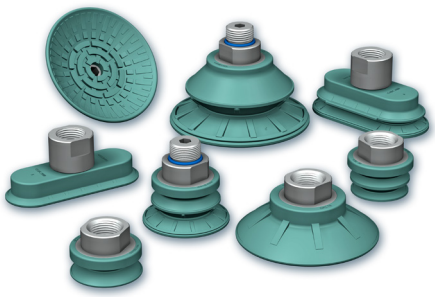
C Series high-performance suction cups made of nitrile (NBR) with polyamide fittings (versions M38G - F38G)



C Series high-performance suction cups made of Siton® (STNV6) with polyamide fittings (versions M38G - F38G)



C Series high-performance suction cups made of nitrile (NBR) with aluminum fittings (versions M38GA - F38GA)



High-Performance Suction Cups

References - Suction Cups



CFC Flat Suction Cup



	References for nitrile (NBR) suction cups according to the type of fitting					Part No. for Siton® (STNV6) suction cups according to the type of fitting	
	M38G	F38G	M38GA	F38GA	C32	M38G	F38G
CFC35	CFC35M38G	CFC35F38G	CFC35M38GA	CFC35F38GA	CFC35C32	on request	on request
CFC50	CFC50M38G	CFC50F38G	CFC50M38GA	CFC50F38GA	CFC50C32	on request	on request
CFC75	CFC75M38G	CFC75F38G	CFC75M38GA	CFC75F38GA	CFC75C32	CFC75STNV6M38G	CFC75STNV6F38G
CFC100	CFC100M38G	CFC100F38G	CFC100M38GA	CFC100F38GA	CFC100C32	CFC100STNV6M38G	CFC100STNV6F38G
CFC125	CFC125M38G	CFC125F38G	CFC125M38GA	CFC125F38GA	CFC125C32	on request	on request

CBC Suction Cup with 1.5 Bellows



	References for nitrile (NBR) suction cups according to the type of fitting					Part No. for Siton® (STNV6) suction cups according to the type of fitting	
	M38G	F38G	M38GA	F38GA	C32	M38G	F38G
CBC22	CBC22M38G	CBC22F38G	CBC22M38GA	CBC22F38GA	CBC22C32	on request	on request
CBC30	CBC30M38G	CBC30F38G	CBC30M38GA	CBC30F38GA	CBC30C32	on request	on request
CBC45	CBC45M38G	CBC45F38G	CBC45M38GA	CBC45F38GA	CBC45C32	CBC45STNV6M38G	CBC45STNV6F38G
CBC60	CBC60M38G	CBC60F38G	CBC60M38GA	CBC60F38GA	CBC60C32	CBC60STNV6M38G	CBC60STNV6F38G
CBC85	CBC85M38G	CBC85F38G	CBC85M38GA	CBC85F38GA	CBC85C32	CBC85STNV6M38G	CBC85STNV6F38G
CBC115	CBC115M38G	CBC115F38G	CBC115M38GA	CBC115F38GA	CBC115C32	CBC115STNV6M38G	CBC115STNV6F38G
CBC125	CBC125M38G	CBC125F38G	on request	on request	CBC125C32	on request	on request

COFC Flat Oblong Suction Cup



	References for nitrile (NBR) suction cups according to the type of fitting					Part No. for Siton® (STNV6) suction cups according to the type of fitting	
	M38G	F38G	M38GA	F38GA	C32	M38G	F38G
COFC2565	COFC2565M38G	COFC2565F38G	COFC2565M38GA	COFC2565F38GA	COFC2565C32	on request	on request
COFC3080	COFC3080M38G	COFC3080F38G	COFC3080M38GA	COFC3080F38GA	COFC3080C32	on request	on request
COFC4080	COFC4080M38G	COFC4080F38G	COFC4080M38GA	COFC4080F38GA	COFC4080C32	on request	on request
COFC50100	COFC50100M38G	COFC50100F38G	COFC50100M38GA	COFC50100F38GA	COFC50100C32	on request	on request

COBC Oblong Suction Cup with 1.5 Bellows



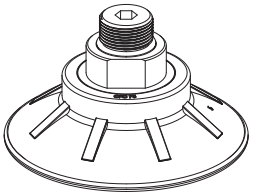
	References for nitrile (NBR) suction cups according to the type of fitting					Part No. for Siton® (STNV6) suction cups according to the type of fitting	
	M38G	F38G	M38GA	F38GA	C32	M38G	F38G
COBC3065	COBC3065M38G	COBC3065F38G	COBC3065M38GA	COBC3065F38GA	COBC3065C32	COBC3065STNV6M38G	COBC3065STNV6F38G
COBC4080	COBC4080M38G	COBC4080F38G	COBC4080M38GA	COBC4080F38GA	COBC4080C32	COBC4080STNV6M38G	COBC4080STNV6F38G
COBC55110	COBC55110M38G	COBC55110F38G	COBC55110M38GA	COBC55110F38GA	COBC55110C32	COBC55110STNV6M38G	COBC55110STNV6F38G
COBC70140	COBC70140M38G	COBC70140F38G	COBC70140M38GA	COBC70140F38GA	COBC70140C32	on request	on request

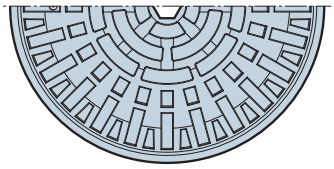
High-Performance Suction Cups

Suction Cup Properties



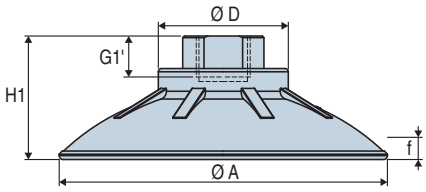
CFC Flat Suction Cup



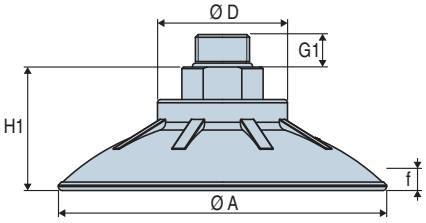


	ØA at rest	ØA gripping	(cm³)	(N)(1)	(N)(1)	Rmin	Rmin	Ø bore	tightening
CFC 35	37	38.5	2.46	60	56	58	50	6.3	w 22 + hk 6
CFC 50	51	54	8.37	107	110	66	52	6.3	w 22 + hk 6
CFC 75	76	80	25.03	210	225	100	58	6.3	w 22 + hk 6
CFC 100	101	105.7	57.61	350	470	120	90	6.3	w 22 + hk 6
CFC 125	127	132	119.7	600	600	160	115	6.3	w 22 + hk 8

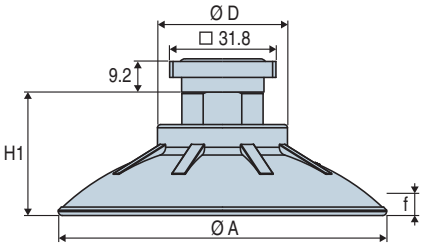
	H1	f(*)	G1	G1'	ØD	(g)				
						F38G	F38GA	M38G	M38GA	C32
CFC 35	25	3	10	12.6	37	14	25.7	18	33.7	36.2
CFC 50	30	5	10	12.6	38	25	34.9	29	42.9	47.2
CFC 75	33	8	10	12.6	41	40	48.9	45	56.9	62.2
CFC 100	38	10	10	12.6	41	67	75.3	72	83.3	89.2
CFC 125	44	14	10	12.6	55	119	146	124	154	141.2



F38G/F38GA Female fitting G3/8"

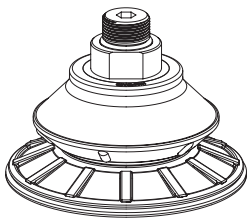


M38G/M38GA Male fitting G3/8"

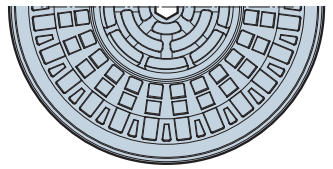


C32 Square coupling 32

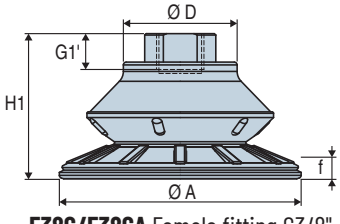
CBC Suction Cup with 1.5 Bellows



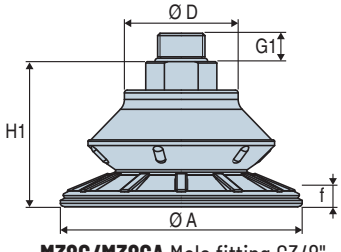
	ØA at rest	ØA gripping	(cm³)	(N)(1)(2)	(N)(1)(3)	(N)(1)	Rmin	Rmin	Ø bore	tightening
CBC 22	21.5	22	1.6	18	20	17	25	30	6.3	w 22 + hk 6
CBC 30	32	34	5	35	40	33	30	32	6.3	w 22 + hk 6
CBC 45	47	48.7	11.47	39	77	85	36	45	6.3	w 22 + hk 6
CBC 60	62	64.5	25.31	60	135	155	44	62	6.3	w 22 + hk 6
CBC 85	85	88	66.54	125	250	220	65	115	6.3	w 22 + hk 6
CBC 115	115	119	141.47	214	430	430	84	140	6.3	w 22 + hk 8
CBC 125	125	132	200.1	223	475	560	93	155	6.3	w 22 + hk 8



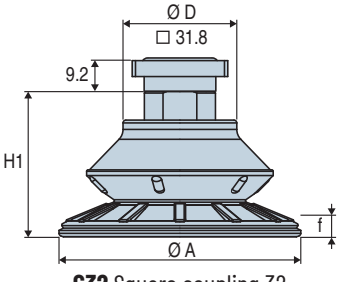
	H1	f(*)	G1	G1'	ØD	(g)				
						F38G	F38GA	M38G	M38GA	C32
CBC 22	32	6	10	12.6	37	10	23	14	31	32.2
CBC 30	31	8	10	12.6	37	14	26.3	19	34.3	36.2
CBC 45	36	11	10	12.6	37	22	31.5	26	39.5	44.2
CBC 60	41	14	10	12.6	39	32	42	37	50	54.2
CBC 85	51	21	10	12.6	41	64	71.2	69	79.2	86.2
CBC 115	53	23	10	12.6	55	103	131.1	107	139.1	125.2
CBC 125	51	24	10	12.6	55	159	/	163	/	181.2



F38G/F38GA Female fitting G3/8"



M38G/M38GA Male fitting G3/8"



C32 Square coupling 32

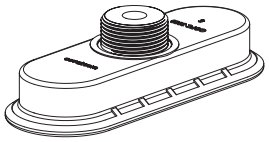
(1) Force measured at 65% on dry, smooth, flat sheet metal, without safety factor. The values may change according to the characteristics and the surface of the part. (2) Suction force. (3) Pull-off force.
(*) f: deflection of the suction cup. Note: All dimensions are in mm.

High-Performance Suction Cups

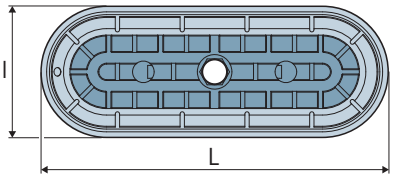
Suction Cup Properties



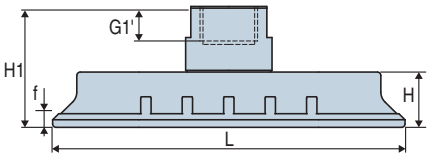
COFC Flat Oblong Suction Cup



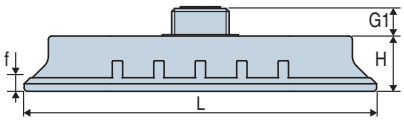
	I x L at rest	I x L gripping	(cm³)	(N)(1)	(N)(1)	Rmin	Rmin	Ø bore	tightening
COFC 2565	25x65	26.8x67	3.78	82	57	25	25	6	hk 6
COFC 3080	30x80	31.5x82	6.08	125	91	40	32	6	hk 6
COFC 4080	40x80	42x82	11.03	145	133	60	40	6	hk 6
COFC 50100	50x100	52.5x102.5	22.25	240	218	70	50	6	hk 6



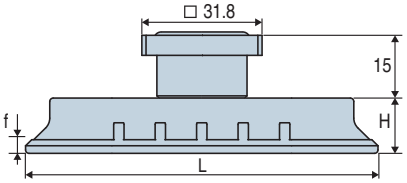
	H1	H	G1	G1'	f(*)	(g)				
						F38G	F38GA	M38G	M38GA	C32
COFC 2565	31.5	12.5	8	10	3	24	37.8	17	26.3	35
COFC 3080	32	13	8	10	3	29	42.7	22	31.2	40
COFC 4080	34	15	8	10	4.5	30	45.5	23	34	41
COFC 50100	35	16	8	10	6	43	72.3	36	60.8	54



F38G/F38GA Female fitting G3/8"

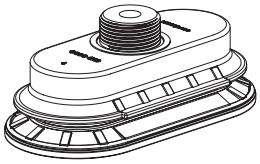


M38G/M38GA Male fitting G3/8"

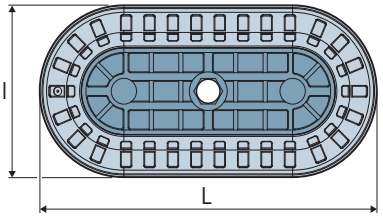


C32 Square coupling 32

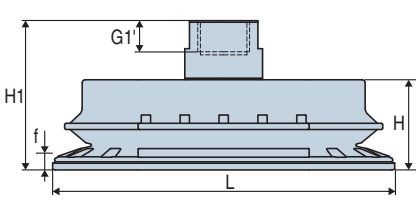
COBC Oblong Suction Cup with 1.5 Bellows



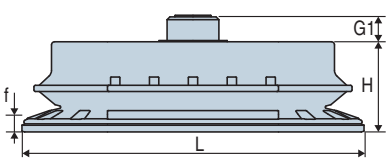
	I x L at rest	I x L gripping	(cm³)	(N)(1)(2)	(N)(1)(3)	(N)(1)	Rmin	Rmin	Ø bore	tightening
COBC 3065	31x65	32.3x67	9.98	50	75	87	25	30	6	hk 6
COBC 4080	40x80	41.5x82	19.44	116	130	155	38	37	6	hk 6
COBC 55110	55x110	57x112.5	49.25	170	210	265	58	57	6	hk 6
COBC 70140	70x140	72x143	93.57	270	350	410	72	68	6	hk 6



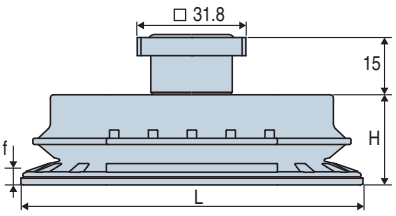
	H1	H	G1	G1'	f(*)	(g)				
						F38G	F38GA	M38G	M38GA	C32
COBC 3065	39	20	8	10	7	31	45.5	25	34	43
COBC 4080	41	22	8	10	9.5	37	52.1	31	40.6	49
COBC 55110	48	29	8	10	11.5	68	94.3	62	82.8	80
COBC 70140	49	30	8	10	14.5	103	120.9	97	109.4	115



F38G/F38GA Female fitting G3/8"



M38G/M38GA Male fitting G3/8"



C32 Square coupling 32

The values represent the average characteristics of our products.

(1) Force measured at 65% on dry, smooth, flat sheet metal, without safety factor. The values may change according to the characteristics and the surface of the part.
(2) Suction force. (3) Pull-off force. (*) f = deflection of the suction cup. Note: All dimensions are in mm.



Advanced Vacuum Solutions

COVAL, as a vacuum manager, guarantees optimum performance by offering a complete range of innovative components, integrating reliable and intelligent functions. These solutions ensure the vacuum network is airtight and adaptable to your industrial needs.

You will find our full product range in the COVAL general catalog, on our website, or by contacting your COVAL distributor.

VACUUM GENERATORS



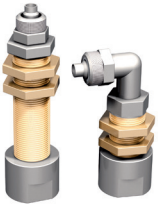
NFC

IO-Link

GVMAX HD series Heavy Duty communicating vacuum pumps

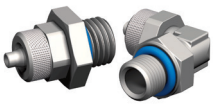
- Integration of command and control functions, high-visibility color display.
- Over 90% energy savings thanks to the ASC (Air Saving Control) intelligent vacuum control system.
- SIO or IO-Link Communication.

EXTENSIONS, L SERIES



Our extensions are available in different diameters, lengths and models, including the G3/8" female version for mounting the C series high performance vacuum cups.

VACUUM SCREWED FITTINGS, RDV/RCOV SERIES



Special vacuum fittings range, complete with a blue o-ring:

- 100% airtight,
- Easily disconnect and reconnect the vacuum network without modifying existing tubing,
- Swivel fittings for better vacuum distribution.

VACUUM FEEDERS, NV SERIES



Available in 2 versions:

- Screwed fittings 4 or 8 outputs, NVS series
- Aluminium body 4 outputs, NVA series.



COVAL
vacuum managers

vacuum components



A TECHNOLOGICAL PARTNER ON A GLOBAL SCALE

Located in the South of France, COVAL SAS designs, produces, and markets high-performance vacuum components and systems for industrial applications in all sectors worldwide.

An ISO 9001: V2015 certified company, COVAL innovates globally in vacuum handling. Our optimized components integrate intelligent and reliable functionalities, adapt to your industrial context, and safely improve your productivity.

With a strong spirit of innovation and technological advancements, the COVAL team is now recognized as an expert in developing reliable, economical, and productive custom solutions.

COVAL's references are found in major industrial sectors such as packaging, food processing, automotive, plastics, aerospace, and robotics, where vacuum handling is crucial for efficiency and productivity.

COVAL markets its products and services worldwide through its subsidiaries and authorized distributor network. Always attentive to its customers, COVAL supports the implementation of its solutions with a continuous and attentive relationship.

Visit the following section on COVAL's website:
contacts > commercial network
to view the most current list.

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Head Office

COVAL INC.

COVAL IBERICA

COVAL ITALIA

COVAL CHINA

Distributed by:

LLOYD'S REGISTER · LRQA
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