5

SUCTION FILTRES

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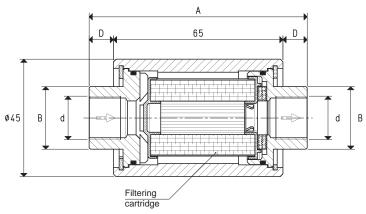
FCL IN-LINE SUCTION FILTRES WITH PAPER CARTRIDGE

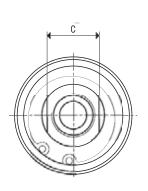


These small in-line filtres retain impurities and very fine dust, interfering with the capacity in a negligible manner. Thanks to their reduced size, they can be directly installed onto vacuum piping, close to the services (vacuum cups, vacuum clamping systems etc.) for a fractionated filtration and a better visual control of all the plant suction points. They are composed of a cylindrical transparent plexiglas body closed by two anodised aluminium flanges kept in place by seeger rings, where all the threaded male or female connections and seals are located. Inside there is a filtering cartridge with a filtering degree equal to 7 μ, which is made with a special treated paper that is pleated to increase the filtering surface. The filtres can be inspected by simply removing one of the flanges. Due to the paper filtering element, these filtres are not recommended in presence of water or oil vapours or condensations. Technical features

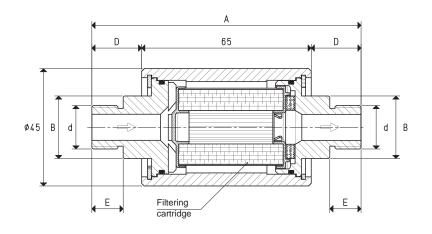
Working pressure: from 0.5 to 3000 mbar abs. Fluid temperature: from -20 to +60 °C

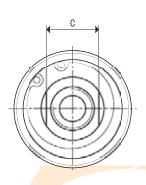
Filtering degree: 7 μ





Art.	d	А	В	С	D	Max capacity	Spare cartridge	Spare sealing kit	Weight
	Ø		Ø			cum/h	art.	art.	g
FCL 1	G1/4"	79.2	20.0	17	7.1	7.5	00 FCL 03	00 KIT FCL 1	120
FCL 2	G3/8"	83.6	24.0	20	9.3	20	00 FCL 03	00 KIT FCL 1	136
FCL 3	G1/2"	89.6	26.5	24	12.3	25	00 FCL 03	00 KIT FCL 1	152

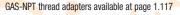




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		E		tering rtridge			•	E			÷
Art.		d	Α	В	С	D	E	Max capacity	Spare cartridge	Spare sealing kit	Weight
		Ø		Ø				cum/h	art.	art.	g g
FCL 1 M		G1/4"	103.2	20.0	17	19.1	12	7.5	00 FCL 03	00 KIT FCL 1	9 122 138
FCL 2 M		G3/8"	103.2	24.0	20	19.1	12	20	00 FCL 03	00 KIT FCL 1	138
FCL 3 M		G1/2"	113.6	26.5	24	24.3	15	25	00 FCL 03	00 KIT FCL 1	154















5.01

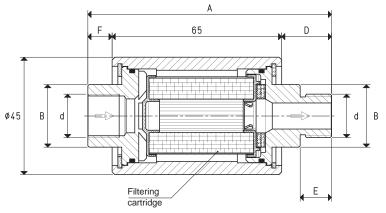


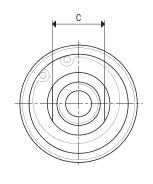




FCL IN-LINE SUCTION FILTRES WITH PAPER CARTRIDGE







Art.	d	A	В	С	D	Е	F	Max capacity	Spare cartridge	Spare sealing kit	Weight
	Ø		Ø					cum/h	art.	art.	g
FCL 1 MF	G1/4"	91.2	20.0	17	19.1	12	7.1	7.5	00 FCL 03	00 KIT FCL 1	120
FCL 2 MF	G3/8"	93.4	24.0	20	19.1	12	9.3	20	00 FCL 03	00 KIT FCL 1	136
FCL 3 MF	G1/2"	101.6	26.5	24	24.3	15	12.3	25	00 FCL 03	00 KIT FCL 1	152

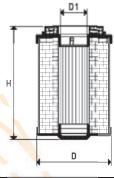
PAPER FILTERING CARTRIDGES FOR FCL FILTRES

The cartridges described below are suited for FCL filtres.

They are made with a special treated paper with a filtering degree equal to

7 μ , which is pleated in order to increase its surface and wrapped on two flanges in plastic material.

They are recommended for retaining impurities and fine dust, but not in presence of water or oil vapours or condensations.





Art.		Filtre	D	D1	Н	Filtering degree
7.1.4.		art.	Ø	Ø		micron
00 FCL 0	3	FCL 1 - FCL 2 - FCL 3	31	10	47	5 ÷ 7
		FCL 1 M - FCL 2 M - FCL 3 M				
		FCL 1 MF - FCL 2 MF - FCL 3 I	ИF			















Preventing impurities from reaching the vacuum pump is fundamental to guarantee the correct operation and long duration.

This range of filtres, to be placed on the vacuum pump suction inlet or on the plant pipeline, has been designed for this purpose. Their simple and rational structure features threaded connections for the installation and a lid, very easy to open, to allow easily cleaning the filtering cartridge. The lids are made with die-cast aluminium, as are the containers, except for the models FB 5, FB 10 e FB 20 which are in transparent plastic material (cellulose acetate), particularly resistant to shocks.

The standard filtering cartridges are in profiled stainless steel mesh, with a filtering degree equal to 44 μ. Upon request, they can be supplied with a filtering degree equal to 100 or 300 μ.

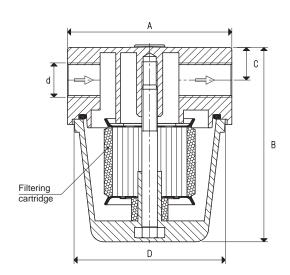
The capacity of these filtres ranges from 5 to 300 cum/h.

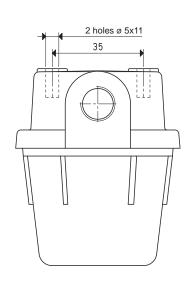
Technical features

Working pressure: from 0.5 to 3000 mbar abs.

Fluid temperature: from -20 to +90 °C for filtres with aluminium container from -20 to +50 °C for filtres with containers in transparent plastic material

Filtering degree: 44 μ

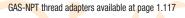




										ototecnica.net
										available at www.vuototecnica.net
Art.	d	A	В	С	D	Max capacity	Spare cartridge	Spare sealing kit	Weight	3D drawings
	Ø				Ø	cum/h	art.	art.	g	dra
FB 5	G1/4"	61	74.5	12.5	59	5	00 FB 03	00 KIT FB5	140	30







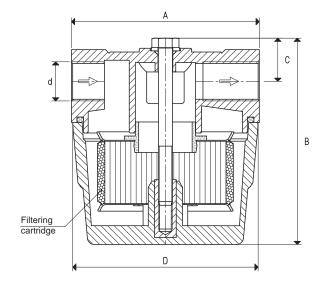


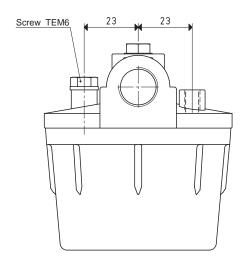


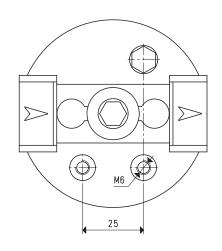














Art.	d	Α	В	С	D	Max capacity	Spare	Spare	Weight
							cartridge	sealing kit	
	Ø				Ø	cum/h	art.	art.	g
FB 10	G3/8"	81	87	17	79	10	00 FB 13	00 KIT FB10	258

5.04

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$





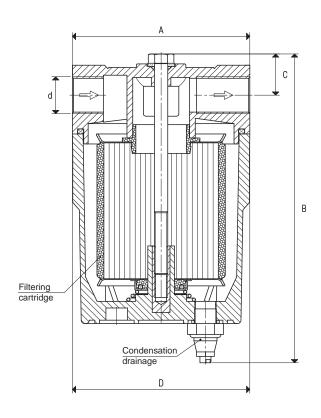


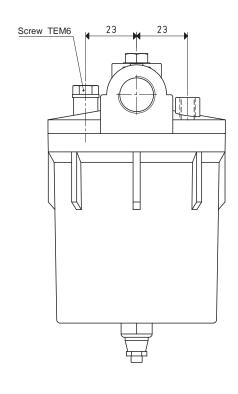


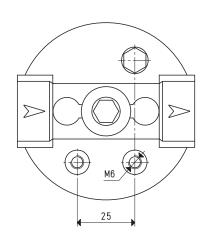














Art.	d	Α	В	С	D	Max capacity	Spare	Sealing kit	Weight
Aiu							cartridge	and small items	
	Ø				Ø	cum/h	art.	art.	g -
FB 20	G1/2"	81	116	17	79	20	00 FB 22	00 KIT FB20	312

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

5.05





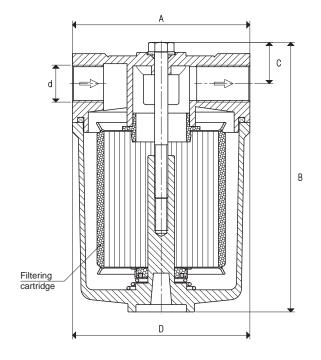


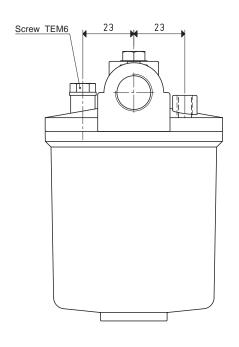


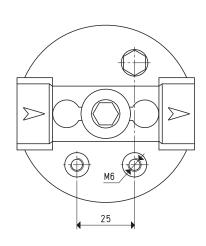










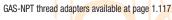




Art.	d	1	A	В	С	D	Max capacity	Spare cartridge	Sealing kit and small items	Weight
	Ø					Ø	cum/h	art.	art.	g
FB 20 A	G1/2"		81	121	17	81	20	00 FB 22	00 KIT FB20	394

5.06

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$







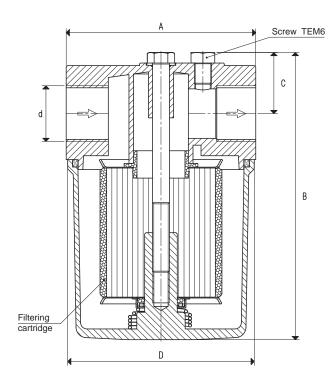


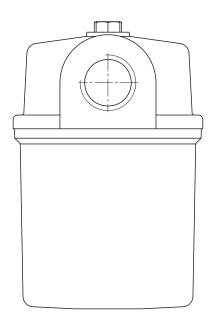


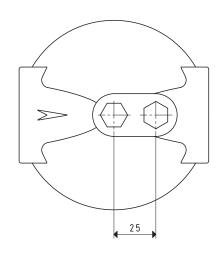














Λ =+	d	Α	В	С	D	Max capacity	Spare	Sealing kit	Weight
Art.							cartridge	and small items	
	Ø				Ø	cum/h	art.	art.	g
FB 25	G3/4"	96	144	31	90	40	00 FB 22	00 KIT FB 25	594

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

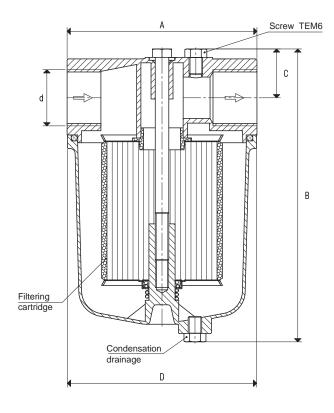


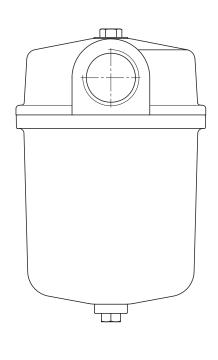


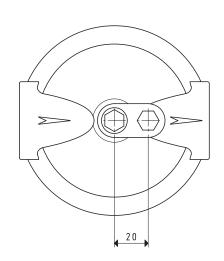














Art.	d	А	В	С	D	Max capacity	Spare cartridge	Sealing kit and small items	Weight
	Ø				Ø	cum/h	art.	art.	g
FB 30	G1"	120	181	31	112	70	00 FB 34	00 KIT FB 30	758

5.08

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$



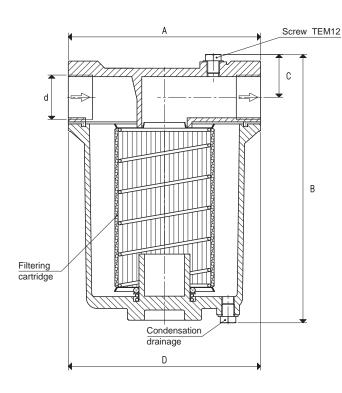


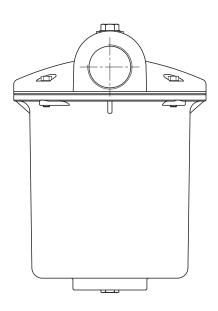


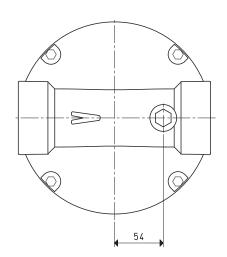














Art.	d	Α	В	С	D	Max capacity	Spare	Sealing kit	Weight
							cartridge	and small items	
	Ø				Ø	cum/h	art.	art.	Kg
FB 40	G1" 1/4	190	255	39	182	150	00 FB <mark>45</mark>	00 KIT FB 40	3.06
FB 50	G1" 1/2	190	255	39	182	200	00 FB 45	00 KIT FB 50	2.99

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

5.09





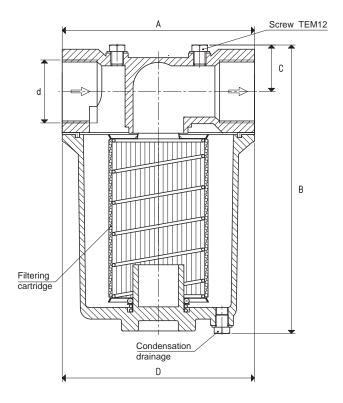


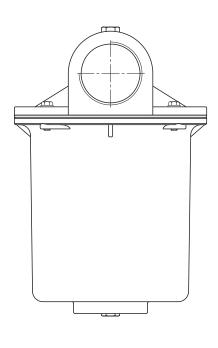


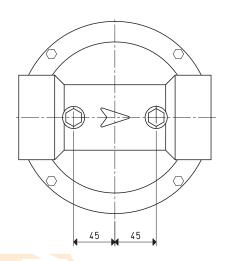














Art.	u	А	В	Ü	U	Max capacity	Spare cartridge	Sealing kit and small items	Weight
	Ø				Ø	cum/h	art.	art.	Kg
FB 60	G2"	182	260	42	182	300	00 FB 52	00 KIT FB 60	3.18

5.10











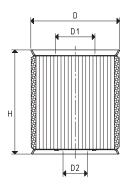




STAINLESS STEEL MESH FILTERING CARTRIDGES FOR FB FILTRES

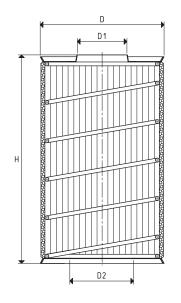
The cartridges described in this page are suited for FB suction filtres. The standard ones are made with profiled stainless steel mesh with a filtering degree equal to 44 μ . Upon request, the same cartridges can be supplied with a filtering degree equal to 100 or 300 μ .

They are recommended for retaining impurities even in presence of water and oil vapours or condensations, but not for retaining fine and impalpable





Art.	Filtre	D	D1	D2	Н	Filtering degree
Alu	art.	Ø	Ø	Ø		micron
00 FB 03	FB 5	35	6	10.0	34	44
00 FB 13	FB 10	58	16	25.5	34	44
00 FB 16	FB 20 - FB 25	58	16	25.5	67	44
00 FB 34	FB 30	74	16	25.5	67	44





Art.	Filtre	D	D1	D2	Н	Filtering degree
	art.	Ø	Ø	Ø		micron
00 FB 45	FB 40 - FB 50	95	39	49	160	44
00 FB 52	FB 60	95	49	49	160	44

Note: All the cartridges can be supplied with a 100 or 300 micron filtering degree, upon request.























These filtres have been designed to allow vacuum pumps to operate even in very dusty environments. Installed onto the pump suction inlet, they are able to retain fine and impalpable dust interfering with the capacity in a negligible manner.

The filtering cartridge is made with a special treated paper with a filtering degree equal to $5 \div 7 \mu$, which is pleated to increase its surface and is contained in a double perforated sheet steel enclosure. The filtering cartridge container, as well as the lid, is made with sheet steel and varnished with a special anti-oxidation paint.

A seal located between the lid and the container guarantees a perfect vacuum seal between the two elements. The release clamps applied onto the container allow a quick opening of the lid for the filtering cartridge inspection or replacement.

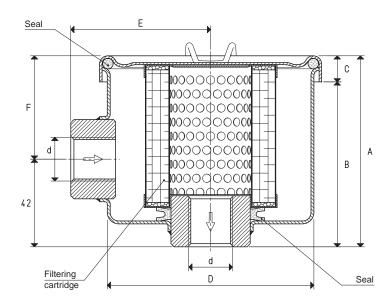
Due to their paper filtering element, these filtres are not recommended in case of water or oil vapours and condensation.

Technical features

Working pressure: from 0.5 to 2000 mbar abs. Fluid temperature: from -20 to +60 °C

Filtering degree: $5 \div 7 \mu$





Art.	d	A	В	С	D	Е	' '		Spare cartridge	Spare sealing kit	Weight
	Ø				Ø			cum/h	art.	art.	g
FC 10	G3/8"	79	70	9	72	49	37	15	00 FC 04	00 KIT FC 10	352
FC 20	G1/2"	93	80	13	96	67	51	30	00 FC 08	00 KIT FC 20	774
FC 25	G3/4"	93	80	13	96	67	51	50	00 FC 08	00 KIT FC 25	734

5.12

 $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$ Conversion ratio: inch =



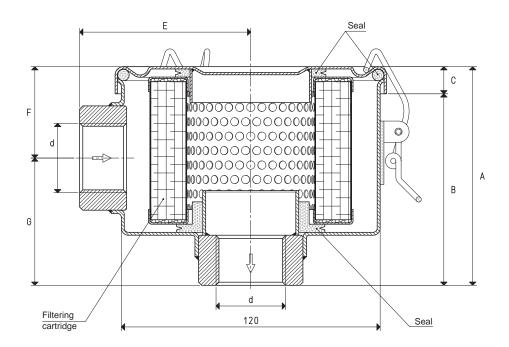












Art.	d	Α	В	С	Е	F	G	Max capacity	Spare	Spare	Weight
									cartridge	sealing kit	
	Ø							cum/h	art.	art.	Kg
FC 30	G1"	105	92	13	84	41	64	90	00 FC 15	00 KIT FC 30	1.17
FC 35	G1" 1/4	97	84	13	78	46	51	100	00 FC 15	00 KIT FC 35	1.02
FC 38	G1" 1/2	101	88	13	80	45	56	200	00 FC 15	00 KIT FC 38	0.95
FC 55	G2"	170	157	13	81	79	91	300	00 FC 33	00 KIT FC 55	1.29

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117







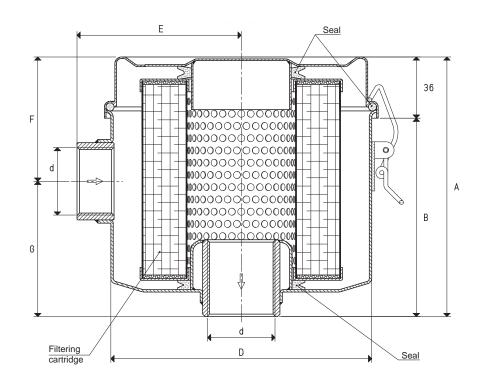












Art.	d	Α	В	D	E	F	G	Max capacity	Spare cartridge	Spare sealing kit	Weight
	Ø			Ø				cum/h	art.	art.	Kg
FC 40	G1" 1/4	161	125	162	102	77	84	150	00 FC 22	00 KIT FC 40	1.83
FC 50	G1" 1/2	197	161	160	100	85	112	200	00 FC 24	00 KIT FC 50	2.11

5.14







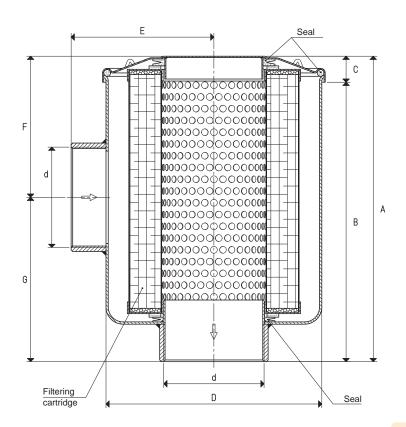






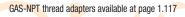






			Filteri cartrid				<u> </u>	d D		Seal			at www.vuototecnica.net
	d	Α	В	C	D	E	F	G	Max capacity	Spare	Spare	Weight	available at www.vuc
Art.		^	ь	Ū	Ø	L	'	u		cartridge	sealing kit		s avail
FC 60	Ø G2"	258	235	23	185	115	126	132	cum/h 300	00 FC 29	art. 00 KIT FC 60	Kg 4.62	drawings
FC 80	G2"	270	246	23	185	125	126	144	360	00 FC 29	00 KIT FC 80	3.45	raw
FC 100	G4"	336	311	24 25	295	166	134	202	540	00 FC 29 00 FC 34	00 KIT FC 100	5.56	3D d

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$













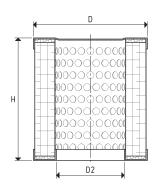




PAPER FILTERING CARTRIDGES FOR FC FILTRES

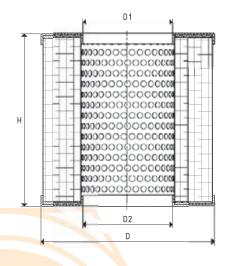
The cartridges described in this page are suited for FC suction filtres. They are made with a special treated paper, with a filtering degree equal to 5 \div 7 μ , which is pleated to increase its surface and contained into a double perforated sheet steel enclosure.

They are recommended for retaining fine and impalpable dust, but not in presence of water and oil vapours and condensation.





Art.	Filtre	D	D2	Н	Filtering degree
74.4	art.	Ø	Ø		micron
00 FC 04	FC 10	50	23	59	5 ÷ 7
00 FC 08	FC 20 - FC 25	64	38	69	5 ÷ 7





Art.		Filtre	D	D1	D2	Н	Filtering degree
7.1.1.		art.	Ø	Ø	Ø		micron
00 FC 15		FC 30 - FC 35 - FC 38	98	60	60	70	5 ÷ 7
00 FC 22	!	FC 40	126	64	64	125	5 ÷ 7
00 FC 24		FC 50	126	64	64	156	5 ÷ 7
00 FC 33		FC 55	98	60	60	140	5 ÷ 7

5.16





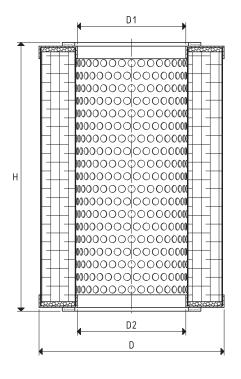








PAPER FILTERING CARTRIDGES FOR FC FILTRES





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Art.	Filtre	D	D1	D2	Н	Filtering degree
	art.	Ø	Ø	Ø		micron
00 FC 29	FC 60 - FC 80	152	89	89	215	5 ÷ 7
00 FC 34	FC 100	227	178	178	278	5 ÷ 7

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$













FO OIL-BATH SUCTION FILTRES

In presence of a a considerable amount of fine or impalpable dust, the traditional suction filtre would require a cartridge with a filtering degree so high that, along with reducing its operation autonomy, it would also reduce the vacuum pump suction capacity.

Oil-bath suction filters have been studied in order to overcome this

The main feature of these filtres is the ability to retain the smallest and most impalpable dust particles, without reducing the vacuum pump suction capacity.

Oil-bath filtres are composed of a sheet steel head and container coupled with an interposed seal and clamped by release clamps.

Inside, besides the oil bowl, there are two steel wool filtering cartridges, one of which is detachable and washable, while the other is fixed. The release clamps guarantee easy access for cleaning operations.

They can be used with any kind of oil, even drain oil, as long as it has a minimum viscosity degree. The ideal oil is the same one used for the

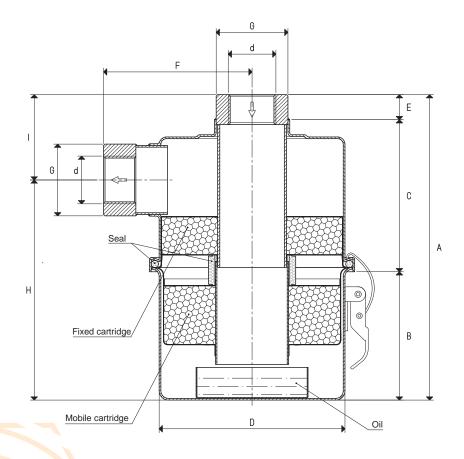
Oil-bath suction filtres are not recommended for dry vacuum pumps. They are currently available for capacities up to 300 cum/h.

Technical features

Working pressure: from 0.5 to 2000 mbar abs. Fluid temperature: from -20 to +90 °C

Filtering degree: ≤1 μ





Art.	d	Α	В	С	D	E	F	G	Н	I	Max capacity	Spare	Spare	Weight
												cartridge	sealing kit	
	Ø				Ø			Ø			cum/h	art.	art.	Kg
F0 20	G1/2"	205	85	112	106	8	100	40	156	49	30	00 F0 04	00 KIT FO 20	1.44
FO 30	G1"	210	88	106	129	16	106	50	151	59	90	00 FO 09	00 KIT FO 30	1.84
F0 50	G1" 1/2	305	110	135	160	60	128	60	199	106	200	00 FO 14	00 KIT FO 50	2.76
FO 60	G2"	340	140	140	185	60	142	67	217	123	300	00 FO 19	00 KIT FO 60	3.70

5.18

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$



GAS-NPT thread adapters available at page 1.117







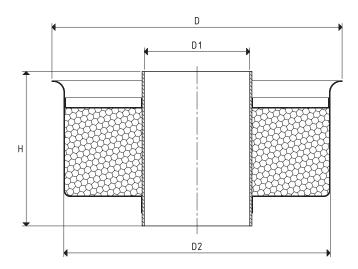


STEEL WOOL FILTERING CARTRIDGES FOR FO FILTRES

The cartridges described in this page are suited for FO oil-bath suction

They are made with pressed steel wool contained in a double perforated sheet steel enclosure. Their function is to retain fine or impalpable dust impregnated with the filtre oil.





					•	
Art.	Filtre	D	D1	D2	Н	Filtering degree (installed on the filtre)
	art.	Ø	Ø	Ø		micron
00 F0 04	F0 20	110	40	103	70	≤1
00 FO 09	F0 30	134	49	127	72	≤1
00 FO 14	F0 50	165	58	155	86	s1 s1 s1
00 F0 19						≤1

















FO LONG OPERATION AUTONOMY OIL-BATH SUCTION FILTRES

In presence of a a considerable amount of fine or impalpable dust, the traditional suction filtre would require a cartridge with a filtering degree so high that, along with reducing its operation autonomy, it would also reduce the vacuum pump suction capacity.

Oil-bath suction filters have been studied in order to overcome this

The main feature of these filtres is the ability to retain the smallest and most impalpable dust particles, without reducing the vacuum pump suction capacity.

Oil-bath filtres are composed of a sheet steel head and container coupled with an interposed seal and clamped by release clamps.

Inside, besides the oil bowl, there are two steel wool filtering cartridges, one of which is detachable and washable, while the other is fixed. The release clamps guarantee easy access for cleaning operations.

Two indicator lights allow monitoring the oil level and the degree of

They can be used with any kind of oil, even drain oil, as long as it has a minimum viscosity degree. The ideal oil is the same one used for the

Oil-bath suction filtres are not recommended for dry vacuum pumps. They are currently available for capacities of 200 and 300 cum/h.

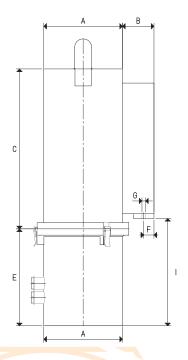
Technical features

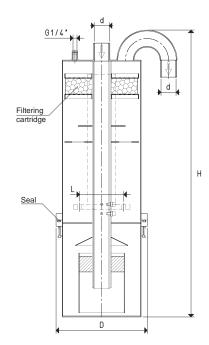
Working pressure: from 0.5 to 2000 mbar abs.

Fluid temperature: from -20 to +90 °C

Filtering degree: ≤1 μ









Art.	d	Α	В	С	D	E	F	G	Н	I	L	Max capacity	Spare	Weight
													seal	
	Ø	Ø			Ø			Ø				cum/h	art.	Kg
FO 160	G1" 1/2	250	100	508	290	308	32.5	12	910	356	140	200	00 FO 30	27
FO 300	G2"	350	80	508	390	308	32.5	12	920	356	200	300	00 FO 29	40

Note: The filtering cartridges are washable and, therefore, are not to be replaced.

5.20

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$



GAS-NPT thread adapters available at page 1.117







FS SYPHON SUCTION FILTRES

These filtres retain impurities and liquids extracted through vacuum cups or vacuum clamping systems, preventing them from entering into the vacuum pumps. They are composed of: - A transparent plexiglas cylindrical container with an extractable lid to allow inspection

- A check valve located on the suction inlet for preventing the air from returning in the filtre when the pump is idle.

- A stainless steel mesh filtering cartridge with a filtering degree equal to 44 μ, also located on the suction inlet to retain dust and solid impurities.

- A 2-way manual valve for service vacuum interception.

- A 2-way manual valve for restoring the atmospheric pressure inside the filtre.

- A radial vacuum gauge the direct reading of the vacuum level.

- A magnetic level switch that stops the pump when the sucked liquid exceeds the safety level. - A rigid pipe connected to the service to convey the air flow and the sucked liquid to the bottom of the container.

- A check valve at the bottom of the filtre to automatically drain the sucked liquid and impurities every time the atmospheric pressure is restored inside the filtre.

- A cock applied on the aforementioned check valve for manual liquid drainage.

- A sturdy metal bracket for fixing the filtre to the wall.

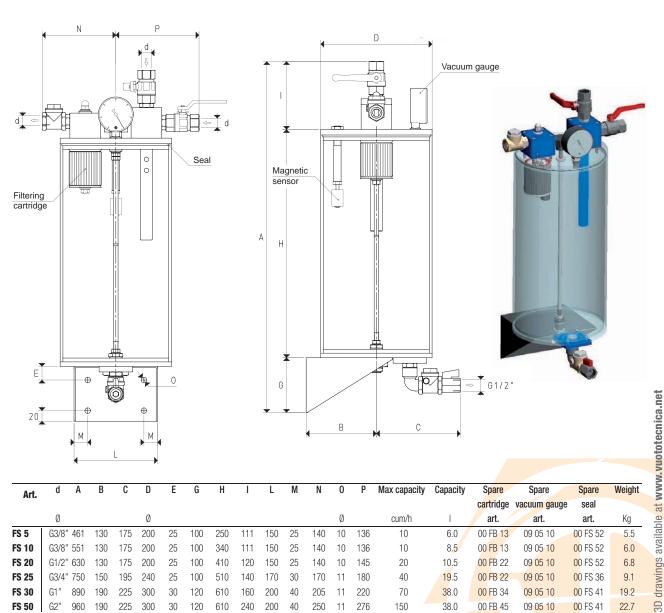
Technical features

Working pressure: from 0.5 to 2000 mbar abs.

Fluid temperature: from -5 to +50 °C

Filtering degree: 44 μ





Art.	d	Α	В	С	D	Е	G	Н	ı	L	M	N	0	Р	Max capacity	Capacity	Spare	Spare	Spare	Weight
																	cartridge	vacuum gauge	seal	
	Ø				Ø								Ø		cum/h	1	art.	art.	art.	Kg
FS 5	G3/8'	" 461	130	175	200	25	100	250	111	150	25	140	10	136	10	6.0	00 FB 13	09 05 10	00 FS 52	5.5
FS 10	G3/8'	" 551	130	175	200	25	100	340	111	150	25	140	10	136	10	8.5	00 FB 13	09 05 10	00 FS 52	6.0
FS 20	G1/2'	630	130	175	200	25	100	410	120	150	25	140	10	145	20	10.5	00 FB 22	09 05 10	00 FS 52	6.8
FS 25	G3/4'	750	150	195	240	25	100	510	140	170	30	170	11	180	40	19.5	00 FB 22	09 05 10	00 FS 36	9.1
FS 30	G1"	890	190	225	300	30	120	610	160	200	40	205	11	220	70	38.0	00 FB 34	09 05 10	00 FS 41	19.2
FS 50	G2"	960	190	225	300	30	120	610	240	200	40	250	11	276	150	38.0	00 FB 45	09 05 10	00 FS 41	22.7

















SYPHON FILTRE SYSTEM WITH AUTOMATIC BY-PASS FS 50 BP

This system is composed of two syphon filtres. It starts working with suction through filtre 1 while filtre 2 is excluded. When the sucked liquid reaches the level switch floater via the 1" 1/2 3-way vacuum interception solenoid valves, the suction is automatically commuted to filtre 2.

The inlet of atmospheric air in filtre 1, via the 1/2" 3-way solenoid valve installed on its lid allows automatically draining the liquid through the check valve with cock located at the bottom of the filtre. Once the liquid has been drained after a set time (this operation can be timed), the solenoid valve returns to its initial position. thus allowing the recreation of vacuum inside the filtre, through a small flexible pipe connected to the main

Thanks to this solution, there is no reduction of the vacuum level at the service when the suction exchange between the two filtres occurs. This exchange occurs when the liquid reaches the level switch floater in filtre 2 and from that moment on, the operations described above will be repeated. The filtre system is composed of:

- 2 plexiglas syphon filtres with aluminium lids and with accessories, with a capacity of 38 litres each.
- 2 1" 1/2 gas servo-controlled 3-way vacuum solenoid valves art. 07 06 11.
- 2 1/2" gas servo-controlled 3-way solenoid valves art. 07 03 11.
- 4 1" 1/2 gas 2-way manual valves for vacuum interception art. 13 07 10.
- 2 ½" gas 2-way manual valves for the inlet of atmospheric air art. 13 03 10.
- 1 switchgear enclosed in a watertight metal casing for Volt 230/50 Hz single-phase electric voltage.
- 1 frame in varnished steel profiles for the assembly of all the components described above.

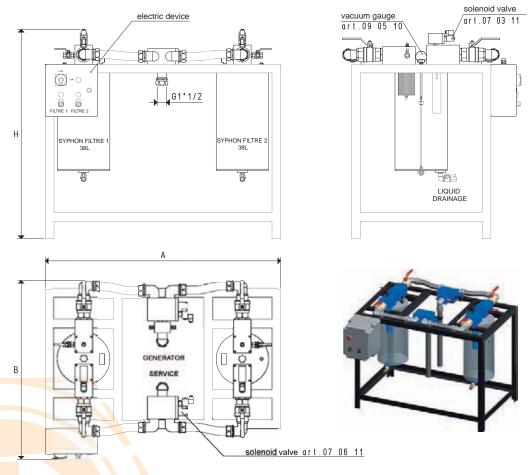
The syphon filtre system with automatic by-pass is recommended when there is a considerable presence of liquid in the sucked fluid and the machines cannot be stopped for draining the sucked liquid with traditional syphon filtres.

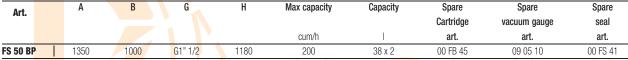
Technical features

Working pressure: from 0.5 to 2000 mbar abs.

Fluid temperature: from -5 to +50 °C

Filtering degree: 44 µ















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3D drawings available at







FP SERIES FILTERING CARTRIDGE CONTAINERS WITH COMPRESSION SEALING

The containers of the FP series are suited for the filtering cartridges with compression sealing and are composed of a transparent plastic container and a blue plastic head screwed together with an interposed seal. The number after the article indicates the length in inches of the filtering cartridge.

The cartridge can be chosen in various materials:

pleated paper, pleated polypropylene mesh and stainless steel mesh AISI 304. In the following page are described the filtering cartridges with compression

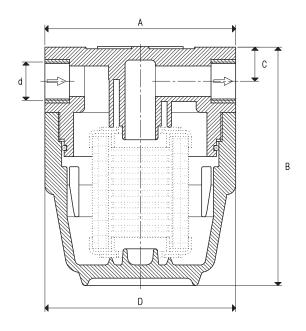
sealing, with all the indications regarding

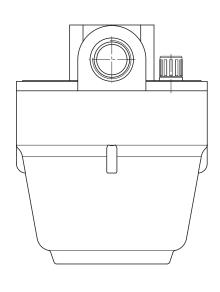
dimensions, materials and filtering degree of each one of them.

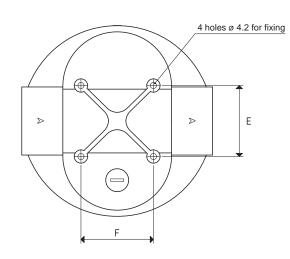
Technical features

Working pressure: from 0.5 to 9000 mbar abs.

Temperature of the sucked fluid: from -10 to 45 °C









Art.	d	Α	В	С	D	Е	F	Max capacity	Cartridge	Cartridge	Weight
AIL	Ø				Ø			cum/h	length	art.	Kg
FP 25/4	G3/4"	130	163	21	130	49	50	70	4"	SP/4 - SS/4 - SA/4	0.84
FP 30/4	G1"	143	169	24	130	50	51	100	4"	SP/4 - SS/4 - SA/4	0.91
NP	Key for	clamping the	e container								

Note: The filtering cartridge is not part of the filtre, therefore, it must be ordered separately.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117













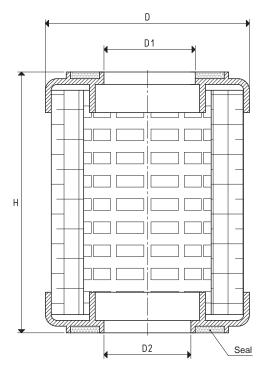


FILTERING CARTRIDGES WITH COMPRESSION SEALING

The filtering cartridges described in this page, once installed on their container, are able to retain the impurities and dust contained in the sucked fluid, interfering with the vacuum pump or generator capacity in a negligible manner. They are produced with different materials that can be identified with the following abbreviations:

- Series SP. Pleated paper filtering cartridge with compression sealing.
- Series SS. Pleated polypropylene mesh filtering cartridge with compression sealing.
- Series SA. AISI 304 stainless steel mesh filtering cartridge with compression sealing.

The number after the article indicates the length in inches of the filtering cartridge.





Art.	D	D1	D2	Н	Length	Container	Filtering degree
Aiti	Ø	Ø	Ø			art.	micron
SP/4	70	30	30	98	4"	FP 25/4 - FP 30/4	25
SS/4	70	30	30	98	4"	FP 25/4 - FP 30/4	50
SA/4	70	30	30	98	4"	FP 25/4 - FP 30/4	50

5.24

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

















FM SERIES QUICK COUPLING FILTERING CARTRIDGE CONTAINERS

The containers of the FM series are suited for quick coupling filtering cartridges and are composed of a transparent SAN (Styrene-acrylic nitrile) container and a head with a reinforced polypropylene ring nut, coupled together with an interposed seal.

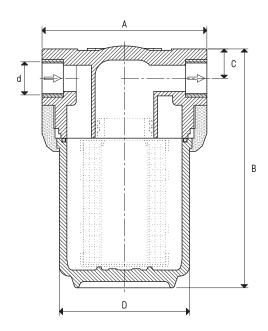
The number after the article indicates the length in inches of the filtering cartridge.

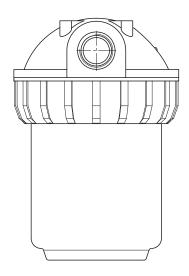
The cartridge can be chosen in various materials:

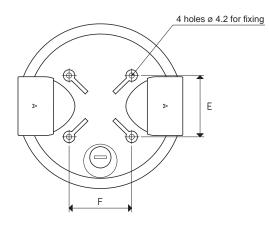
pleated paper, pleated polypropylene mesh and AISI 304 stainless steel mesh. The quick coupling filtering cartridges are described at page 5.27, with all the indications regarding dimensions, materials and filtering degree of each one of them.

Technical features

Working pressure: from 0.5 to 9000 mbar abs. Temperature of the sucked fluid: from -10 to 45 °C





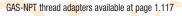




		4	F	—					Sec.		
Art.	d	Α	В	С	D	E	F	Max capacity	Cartridge	Cartridge	Weight
	Ø				Ø			cum/h	length	art.	Kg
FM 20/7	G1/2"	133	241	18	100	48	49	30	7"	RP/7 - RS/7 - RA/7	0.75
FM 25/7	G3/4"	133	241	21	100	49	50	70	7"	RP/7 - RS/7 - RA/7	0.87
FM 30/7	G1"	145	247	24	100	50	51	100	7"	RP/7 - RS/7 - RA/7	0.99
FM 25/10	G3/4"	133	315	21	100	49	50	70	10"	RP/10 - RS/10 - RA/10	1.05
FM 30/10	G1"	145	321	24	100	50	51	100	10"	RP/10 - RS/10 - RA/10	1.17
NF	Key for ti	ghtening the	e rina nut								



















FK SERIES QUICK COUPLING FILTERING CARTRIDGE CONTAINERS

The containers of the FK series are suited for quick coupling filtering cartridges and are composed of a transparent PET (Polyethylene terephthalate) container and a head with a brass ring nut coupled together with an interposed seal.

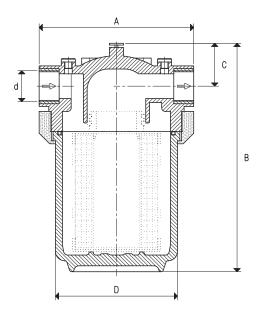
The number after the article indicates the length in inches of the filtering cartridge.

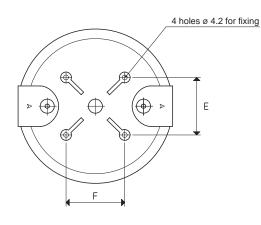
The cartridge can be chosen in various materials:

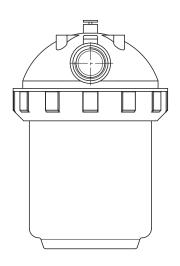
pleated paper, pleated polypropylene mesh and AISI 304 stainless steel mesh. The quick coupling filtering cartridges are described at page 5.27, with all the indications regarding dimensions, materials and filtering degree of each one of them.

Technical features

Working pressure: from 0.5 to 9000 mbar abs. Temperature of the sucked fluid: from -10 to 45 $^{\circ}\mathrm{C}$









Art.	d	Α	В	С	D	Е	F	Max capacity	Cartridge	Cartridge	Weight
Alti	Ø				Ø			cum/h	length	art.	Kg
FK 25/7	G3/4"	125	226	24	100	49	50	70	7"	RP/7 - RS/7 - RA/7	1.64
FK 30/7	G1"	130	232	27	100	50	51	100	7"	RP/7 - RS/7 - RA/7	1.88
FK 25/10	G3/4"	125	300	24	100	49	50	70	10"	RP/10 - RS/10 - RA/10	2.12
FK 30/10	G1"	130	306	27	100	50	51	100	10"	RP/10 - RS/10 - RA/10	2.35
FK 50/10	G1" 1/2	140	319	30	100	51	52	200	10"	RP/10 - RS/10 - RA/10	2.58
FK 60/10	G2"	140	336	33	100	52	53	300	10"	RP/10 - RS/10 - RA/10	2.69
FK 30/20	G1"	130	564	27	100	50	51	100	20"	RP/20 - RS/20 - RA/20	2.97
FK 50/2 <mark>0</mark>	G1" 1/2	140	576	30	100	51	52	200	20"	RP/20 - RS/20 - RA/20	3.20
FK 60/2 <mark>0</mark>	G2"	140	593	33	100	52	53	300	20"	RP/20 - RS/20 - RA/20	3.31
NK	Key for tigl	htenin <mark>g the</mark>	e ring nut								

Note: The filtering cartridge is not part of the filtre, therefore, it must be ordered separately.

















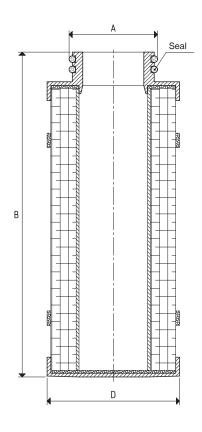
QUICK COUPLING FILTERING CARTRIDGES

The filtering cartridges described in this page, once installed on their container, are able to retain the impurities and dust contained in the sucked fluid, interfering with the vacuum pump or generator capacity in a negligible

They are produced with different materials that can be identified with the following abbreviations:

- Series RP. Pleated paper quick coupling filtering cartridge with double
- Series RS. Pleated polypropylene mesh quick coupling filtering cartridge with double O-ring.
- Series RA. AISI 304 stainless steel mesh quick coupling filtering cartridge with double O-ring.

The number after the article indicates the length in inches of the filtering cartridge.





Art.	Α	В	D	Length	Container	Filtering degree
Aiti	Ø		Ø		art.	micron
RP/7	45	173	70	7"	FM/7 - FK/7	25
RP/10	45	250	70	10"	FM/10 - FK/ <mark>10</mark>	25
RP/20	45	505	70	20"	FM/20 - FK <mark>/2</mark> 0	25
RS/7	45	173	70	7"	FM/7 <mark>-</mark> FK/7	50
RS/10	45	250	70	10"	FM/10 - FK/10	50
RS/20	45	505	70	20"	FM/20 - FK/20	50
RA/7	45	173	70	7"	FM/7 - FK/7	50
RA/10	45	250	70	10"	FM/1 <mark>0 - FK/1</mark> 0	50
RA/20	45	505	70	20"	FM/20 - FK/20	50















6

VACUUM FITTINGS AND HOSES

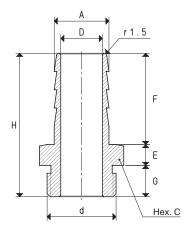
HOSE ENDS PAG. 6.01
FITTINGS AND CAPS PAG. 6.02 ÷ 6.03
ROTATING QUICK COUPLING FITTINGS PAG. 6.04
COMPRESSED AIR AND VACUUM FLEXIBLE HOSES PAG. 6.05
TPR FLEXIBLE HOSE FITTINGS PAG. 6.06



HOSE ENDS

Our hose ends are traditional barbed nickel-plated and brass They are suited for connecting smooth or reinforced flexible hoses with an internal diameter up to 76 mm.







Art.	d	A	С	D	E	F	G	Н	Material	Weight
	Ø	Ø		Ø						9
RS 1/4"	G1/4"	9	17	5	5	18	12	35	nickel-plated brass	20
RS 3/8"	G3/8"	13	19	9	5	20	8	33	nickel-plated brass	30
RS 1/2"	G1/2"	16	23	12	5	25	10	40	nickel-plated brass	50
RS 3/4"	G3/4"	21	28	16	8	35	12	55	nickel-plated brass	90
RS 1"	G1"	27	36	22	8	35	12	55	nickel-plated brass	130
RS 1" 1/4	G1" 1/4	35	44	28	10	42	15	67	nickel-plated brass	270
RS 1" 1/2	G1" 1/2	40	50	33	10	45	15	70	nickel-plated brass	320
RS 3"	G3"	76	100	66	10	60	30	100	nickel-plated brass	1450





















FITTINGS AND CAPS

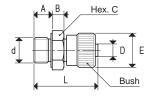
The fittings described in this page are particularly indicated for connecting vacuum cup holders to their manifolds and in all those cases that require a connection to vacuum sources via smooth flexible hoses with internal diameters of 4, 6 and 9 mm, which is the maximum allowed for a vacuum hose with no internal reinforcement.

These are semi-rapid fittings. The hose is fixed by manually screwing the reeded bush with no need for keys.

The threaded connections are male and female, according to the requirements. The range is completed by L and T-type fittings and caps with O-rings.

The fittings are a available in practical 10 or 50-piece packages and are supplied with their nylon seal.



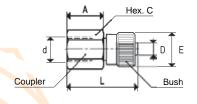




MALE FITTING

IVIAL	E FILLING									
Art.	d	Α	В	С	D	E	L	Fitting	Bush	Weight
7	Ø				hose int. Ø	Ø		material	material	g
RM M5	M5	5.0	3.5	10	4	10	19.5	tropicalised iron	anodised aluminium	6
RM 1/8"	G1/8"	7.0	4.5	14	4	13	24.5	anodised aluminium	anodised aluminium	6
RM 1/4"	G1/4"	8.5	5.0	17	6	15	27.0	anodised aluminium	anodised aluminium	10
RM 3/8"	G3/8"	10.5	5.0	19	9	20	32.5	anodised aluminium	anodised aluminium	18







FEMALE FITTING

Δ	rt.	d	A	C	D	E	L	Fitting	Bush	Weight
,		Ø			hose int. Ø	Ø		material	material	g
RF 1	/8"	G1/8"	14	14	4	13	27.0	anodised aluminium	anodised aluminium	8
RF 1	/4"	G1/4"	16	17	6	15	30.0	anodised aluminium	anodised aluminium	12
RF 3	/8"	G3/8"	20	19	9	20	32.5	anodised aluminium	anodised aluminium	16

6.02

3D drawings available at www.vuototecnica.net

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$









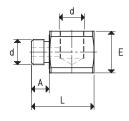






FITTINGS AND CAPS

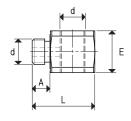






L-TYPE FITTINGS

	11100					
Art.	d	Α	E	L	Fitting	Weight
7	Ø				material	g
RL M5	M5	4.5	10	15.0	anodised aluminium	2
RL 1/8"	G1/8"	7.0	16	24.0	anodised aluminium	10
RL 1/4"	G1/4"	9.0	22	30.0	anodised aluminium	22
RL 3/8"	G3/8"	11.0	25	32.5	anodised aluminium	30

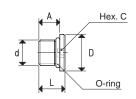




T-TYPE FITTINGS

A-4	d	Α	E	L	Fitting	Weight
Art.	Ø				material	g
RT M5	M5	4.5	10	15.0	anodised aluminium	1
RT 1/8"	G1/8"	7.0	16	24.0	anodised aluminium	9
RT 1/4"	G1/4"	9.0	22	30.0	anodised aluminium	21
RT 3/8"	G3/8"	11.0	25	32.5	anodised aluminium	29







CAP WITH O-RING

)	d	D O-ring		
-	TH O-RING d	A	C	D	L	Fitting	Weight g
Art.	Ø			Ø		material	9
00 15 291	M5	4	2.5	8	6.5	nickel-plated brass	1
00 11 44	G1/8"	7	3.0	15	9.5	nickel-plated brass	
00 11 06	G1/4"	8	6.0	18	11.0	nickel-plated brass	6 10 18
00 18 33	G3/8"	9	8.0	21	12.5	nickel-plated brass	18
00 15 273	G1/2"	11	10.0	26	14.5	nickel-plated brass	21















ROTATING QUICK COUPLING FITTINGS

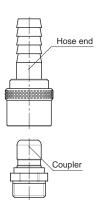
Quick coupling fittings are composed of a jack with hose end connector and a threaded male coupler which connects itself to the jack.

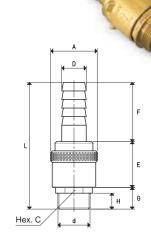
They are fixed by a ball ring pushed by a spring. A nitrile rubber seal guarantees a perfect vacuum seal.

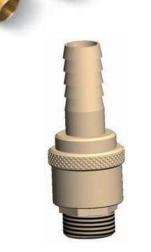
This type of fitting allows the two components to rotate freely at a low speed and to rapidly couple and disconnect by manually acting on the jack reeded ring nut.

These fittings are fully made with brass and are available in

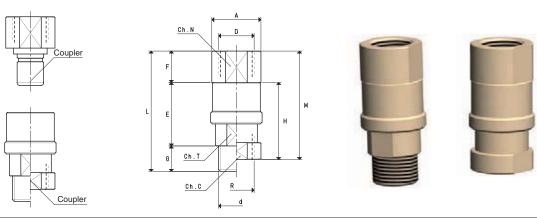








Art.	d	Α	С	D	E	F	G	Н	L	Material	Hose end	Hose end weight	Coupling	Coupling weight
	Ø	Ø		Ø							art.	g	art.	g
RR 3/8"	G3/8"	30	21	13	29.5	39.5	14	10.5	83.0	brass	00 RR 3/8 02	100	00 RR 3/8 01	38
RR 1/2"	G1/2"	30	21	16	30.5	38.5	14	10.5	83.0	brass	00 RR 1/2 02	104	00 RR 1/2 01	34
RR 3/4"	G3/4"	30	26	20	29.0	38.5	15	10.5	82.5	brass	00 RR 3/4 02	118	00 RR 3/4 01	50
RR 1"	G1"	38	34	25	30.0	40.0	17	12.0	87.0	brass	00 RR 1 02	166	00 RR 1 01	92
RR 1" 1/4	G1" 1/4	68	42	35	49.5	49.5	24	13.5	123.0	brass	00 RR 1 1/4 02	568	00 RR 1 1/4 01	210
RR 1" 1/2	G1" 1/2	68	48	40	49.0	54.0	25	17.0	128.0	brass	00 RR 1 1/2 02	710	00 RR 1 1/2 01	250



Art.		Α	С	D	d	E	F	G	Н	L	М	N	R	T	Material	Fitting	Fitting	Coupling	Coupling
													_				weight		weight
		Ø		Ø	Ø								Ø			art.	g	art.	g
RRF 3/8"		23.5		G3/8"	G3/8"	36.5	20.0	15		71.5		22		22	brass	00 RRF 3/8 02	77	00 RRF 3/8 01	58
RRF 1/2"		29.0		G1/2"	G1/2"	37.5	18.5	15		71.0		26		22	brass	00 RRF 1/2 02	79	00 RRF 1/2 01	72
RRF 3/4"		37.0		G3/4"	G3/4"	41.0	20.0	15		76.0		34		28	brass	00 RRF 3/4 02	149	00 RRF 3/4 01	132
RRF 1"		48.0		G1"	G1"	56.5	19.5	16		92.0		43		43	brass	00 RRF 1 02	369	00 RRF 1 01	355
RRFF 3/8	"	23.5	22	G3/8"			20.0		45		65	22	G3/8"		brass	00 RRFF 3/8 02	82	00 RRF 3/8 01	58
RRFF 1/2	155	29.0	26	G1/2"			18.5		46		64.5	26	G1/2"		brass	00 RRFF 1/2 02	80	00 RRF 1/2 01	72
RRFF 3/4	"	37.0	34	G3/4"		1-	20.0		57		77	34	G3/4"		brass	00 RRFF 3/4 02	199	00 RRF 3/4 01	132
RRFF 1"		48.0	43	G1"			19.5		67		86.5	43	G1"		brass	00 RRFF 1 02	409	00 RRF 1 01	355
								V		- //									

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$





GAS-NPT thread adapters available at page 1.117





COMPRESSED AIR AND VACUUM FLEXIBLE HOSES

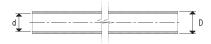


TPL flexible hoses are made with Polyamide 11 of vegetal derivation and are suited for compressed air and vacuum for internal diameters up to 9 mm, as well as for compressed air only.

They feature a good flexibility and lightness, a very low water absorption and excellent mechanical performance. They also feature an excellent resistance to low and high temperatures, chemical agents, pneumatic pressure and ageing.

Our TPR flexible hoses have been specially designed for vacuum and are composed of a single piece with plastic insulation and self-extinguishing materials, including the hose reinforcement core. Their excellent flexibility ensures minimal bending radius and are very light in relation to their great resistance to crushing.

Their smooth inside allows reducing harmful load losses to the minimum. The excellent functionality of these flexible hoses is associated with a high resistance to abrasion, to weather agents and most chemical products. TPL flexible hose connection is ensured by the previously described fittings. As for TPR hoses, we have created a brand new range of RTPR fittings. RTPR fittings from 3/8" to 1" are made with self-extinguishing polypropylene, while the larger ones are made with nickel-plated metal. All the fittings are very sturdy and ensure a perfect vacuum seal. Moreover, these fittings do not require unpleasant hose clamps and make the connection much quicker and safer. They are available in various sizes according to the diameter of the hose to be connected.

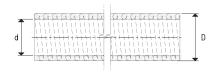




Art.	d	D	Bending	Weight	Package	Material	Standard
AIL	Ø int.	Ø ext.	radius	g/m	m		colour
TPL 2	2.5	4	20	8.0	100	polyamide 11	sky blue
TPL 4	4.0	6	30	19.5	100	polyamide 11	sky blue
TPL 6	6.0	8	40	20.5	100	polyamide 11	sky blue
TPL 8	8.0	10	60	24.0	100	polyamide 11	sky blue
TPL 9	9.0	12	70	28.0	50	polyamide 11	sky blue
TPL 12	12.0	15	95	67.0	50	polyamide 11	sky blue
TPL 16	16.0	18	130	56.0	50	polyamide 11	sky blue
TPL 18	18.0	22	300	133.0	50	polyamide 11	sky blue

Operating temperature: -40° / +70 °C

Other colours upon request





TPR HOSE

		d		D			
TPR HOS	SE						
Art.	d Ø int.	D Ø ext.	Bending radius	Weight g/m	Package m	Material	Standard colour
TPR 3/8"	12.7	17.8	64	150	30	pvc	grey
TPR 1/2"	16.2	21.1	81	170	30	pvc	grey
TPR 3/4"	21.3	26.4	107	230	30	pvc	grey
TPR 1"	27.0	33.1	135	370	30	pvc	grey
TPR 1" 1/4	35.7	41.8	179	500	30	pvc	grey
TPR 1" 1/2	40.6	47.8	203	630	30	pvc	grey
TPR 2"	51.9	59.8	260	900	30	pvc	grey

















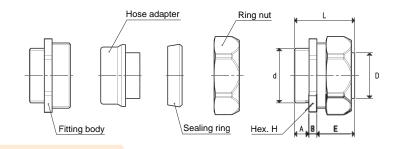
TPR FLEXIBLE HOSE FITTINGS



RTPR FITTINGS

Art.	d	Α	В	С	D	Е	G	Н	L	Material	Colour	Weight
AI L	Ø				Ø							g
RTPR 3/8"	G3/8"	14.5	8.5	26	12.0	23.5	6	28	46.5	polypropylene	grey	12
RTPR 1/2"	G1/2"	14.5	9.0	28	15.5	26.5	7	33	50.0	polypropylene	grey	18
RTPR 3/4"	G3/4"	14.0	10.5	35	20.8	26.5	9	38	51.0	polypropylene	grey	26
RTPR 1"	G1"	16.0	9.0	41	26.5	32.5	10	44	57.5	polypropylene	grey	36

Operating temperature: -10° / +60 °C





RT	PR	F	IΤΤ	IN	GS

Art.	d	A	В	D	E	Н	L	Material	Weight
Al ti	Ø			Ø					g
RTPR 1" 1/4	G1" 1/4	11	6	34.5	28.5	52	45.5	nickel-plated brass	340
RTPR 1" 1/2	G1" 1/2	14	7	39.5	34.0	60	55.0	nickel-plated brass	530
RTPR 2"	G2"	14	7	50.0	33.0	74	54.0	nickel-plated brass	596

Operating temperature: -20° / +60 °C



















