

CROSS
REFERENCE

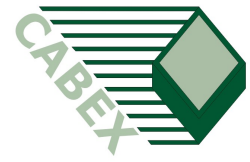
2017



SOTRAS



SOTRAS



SOTRAS HEADQUARTERS

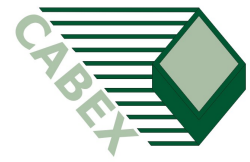


SOTRAS LOGISTICS



SOTRAS CHINA WAREHOUSE

SOTRAS



SOTRAS is an Italian firm which was born 40 years ago. Since then, SOTRAS has been striving for perfection in the quality of its product establishing itself as one of the main players in the industrial filtration industry.

Thanks to SOTRAS corporate strategy and investments, today SOTRAS is able to offer one of the most complete range of high-quality spare parts for compressors and vacuum pumps.



SOTRAS



SOTRAS supplies high quality industrial fi lters and is specialised in manufacturing fi lters for compressors and compressed air applications. SOTRAS produces original equipment directly for many compressor manufacturers (OEM's) around the world, and as a result the after market products are made to the same exacting standards of components, quality, control, and testing as those supplied to the OEM's.

We are very pleased to provide you with this catalogue containing technical and general information so as to enable you to quickly resolve queries for fi ltration relating to the compressed air industry. Whilst the contents has been produced with the greatest of care, it cannot be considered to be binding or guaranteed and the original references are to be intended only for information purposes. With a view to continuous product improvement, SOTRAS reserves the right to make changes without prior notice. Should you need any further assistance, information or support please do not hesitate to contact our customer service department on sales@sotras.com

Thanks to its experience gained from the many years dealing with fi ltration in the compressed air industry, SOTRAS has developed a fl exible product handling system allowing the logistic department to satisfy requirements in terms of variety, quality and speed.



	 Partner for progress			
	Reg. Numero	926-A		
	Data di rilascio	1999-04-14	Data di ultima modifica	2015-07-10
	Data di prossima rinnovo	2018-08-05	Setore	EA: 18

**Certificato del Sistema di Gestione per la qualità
ISO 9001:2008**

Si dichiara che il sistema di gestione per la Qualità dell'Organizzazione:
SOTRAS S.r.l.
è conforme alla norma UNI EN ISO 9001:2008 per i seguenti prodotti/servizi:
Sviluppo e costruzione di filtri industriali

Chief Operating Officer
Giampiero Belcredi



Il mantenimento della certificazione è soggetto a sorveglianza annuale e subordinato al rispetto dei requisiti contrattuali Kiwi Cermet Italia.

Il presente certificato è costituito da 1 pagina.

SOTRAS S.r.l.
Via Donatello, 15
10071 Borgero T.se TO Italia
SOTRAS LOGISTICA S.R.L. - Via Galvani, 12 10040 Loro (TO) Italia

			ISO N° 9024 UNI N° 9040 SGR N° 8100 FSN N° 0841 PND N° 9598
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SOTRAS



FILTERS & PRODUCTS



AIR-OIL SEPARATORS

During the last century compressed air became associated with many industrial applications and compressor manufacturers focused their attention on rotary screw and vane compressor whose compression systems use lubricating oil as a coolant. Hence the necessity of using air/oil separators. SOTRAS designs and manufactures separators specifically for installation in rotary screw and rotary vane compressors and they are available in vertical, horizontal and spin on configurations.

Their purpose is to separate the oil droplets from the compressed air, thereby producing cleaner air and allowing the oil to be scavenged and re-circulated in the compressor.



SOTRAS separators are manufactured to satisfy OEM's needs in terms of:

- Physical principle of air/oil separation
- Element dimensions according to the compressor's performance and tank dimensions.
- Oil consumption to ensure a correct functional performance
- Use of high grade filtration and separation media to ensure the best quality of clean air needed for industrial applications.

Additionally it is very important to highlight that SOTRAS separators can be used with all types of oils, whether standard, mineral based, synthetic or partially synthetic.

In order to decide which is the best separator to be used for a specific compressor, OEMs have to consider what level of separation needs to be achieved, in other words to target the minimum of parts per million of residual oil content required.

Then a technical solution is needed in order to reduce the oil concentration in the air.

Often OEMs need to consider a pre-separation system, which will reduce the PPM and increase the life of the air/oil separator.

Grafico 1

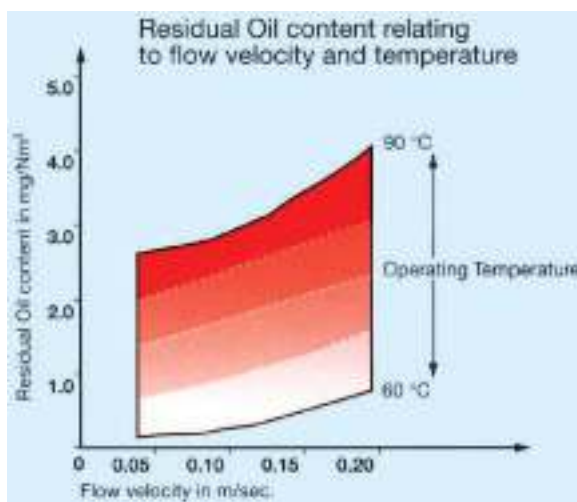
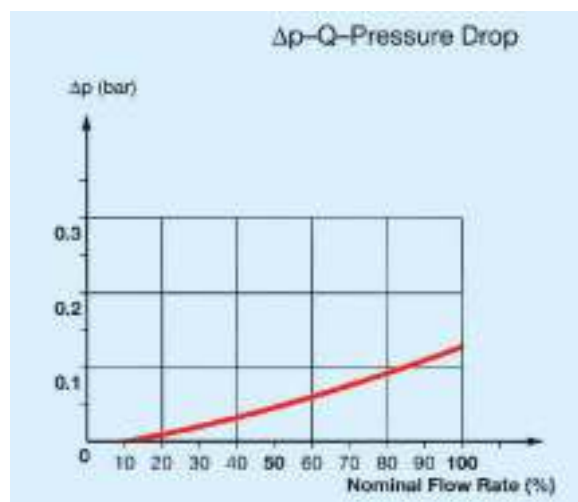


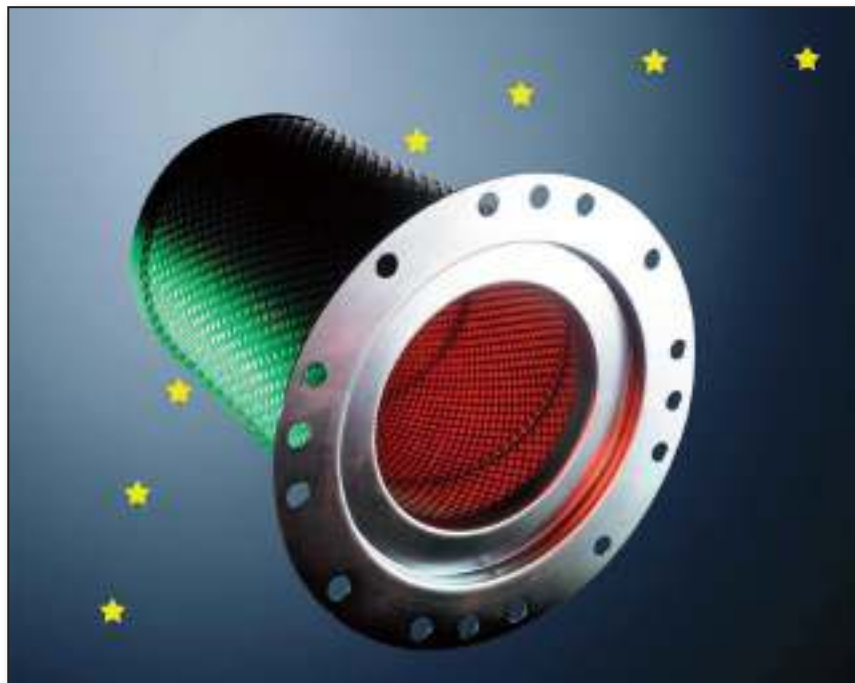
Grafico 2



CONSTRUCTION AND SEPARATION

Corrosive resistant materials are used in the construction of the air/ oil separators. Careful welding procedures and the use of the latest twin pack adhesive ensure that the element has high mechanical strength and can endure operating temperature up to 120°C.

Normally, the air and oil mixture passes from the outside to the inside of the separator and the coalescing effect is carried out through a multi stage separation process resulting in the recovery of the oil and producing clean air.



PRESSURE DROP – EFFICIENCY AND PERFORMANCE

At a nominal working pressure of 7 bar, the pressure drop on a new element varies between approximately 0.15 and 0.25 bar. At other working pressures, the pressure drop is proportional to the air velocity across the separator (graph 2)

By using our separators, the oil carryover after separation is limited to about 1 to 3 ppm. The life of the separator depends on many factors: the designs and regular maintenance of the compressor, clean environment, working temperature, quality of the air and oil filters. To ensure maximum separator efficiency, the joints must create a perfect seal. Experience has shown that through correct installation and also using the correct type of oil, SOTRAS separators can have a life expectancy of many thousands of hours.

TYPE	Pressure drop at nominal flow rate (bar)	GENERAL SPECIFICATIONS
Single wrapped	0,16	Low production costs, good performance and long life span
double wrapped	0,18	Excellent performance on small dimensions and long life span
pleated	0,15	Low pressure drop
pleated+wrapped	0,17	Low pressure drop and excellent separation levels
with pre-separation fleece	0,2	For applications showing high oil percentage before separation or under particular environmental conditions
spin on	0,25	For easy maintenance and small flow rates

STANDARD SEPARATORS

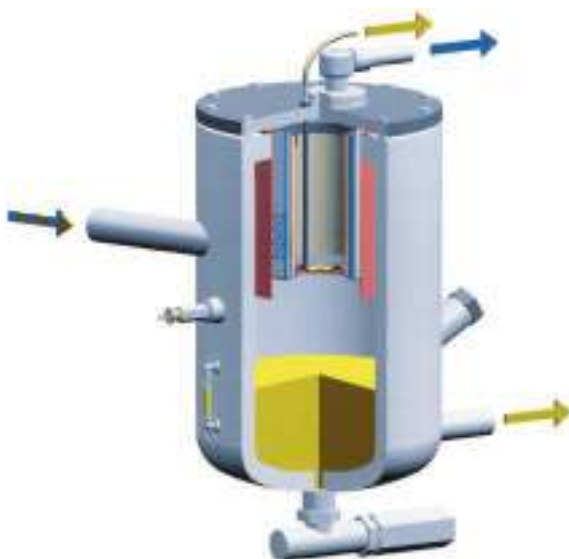
The table shows some of SOTRAS standard separators; special types are available on request.

SOTRAS Ref.	Nominal flow rate (m ³ /min)	Type	Drawing	d1 (mm)	d2 (mm)	d4 (mm)	h1 (mm)	h2 (mm)
DF 5010	1	ext	6	76	M22x1,5	62	123	0
DB 2001	1,5	int	1	135	88	165	1140	12
DB 2002	2	int	1	135	88	170	200	12
DF 5005	2	ext	6	96	M24x1,5	62	210	0
DF 5006	3	ext	6	136	M39x1,5	99	177	0
DB 2003	3,5	int	1	135	88	170	305	12
DB 2006	3,5	int	1	170	122	200	230	12
DB 2057	3,5	int	2	135	75	170	160	0
DF 5009	4	ext	6	108	M32x1,5	93	260	0
DB 2009	4,5	int	1	170	122	200	305	12
DB 2074	4,5	int	2	135	75	170	200	0
DB 2085	5	int	2	170	108	200	180	0
DF 5004	5,5	ext	6	136	M39x1,5	99	303	0
DB 2021	6,5	int	1	275	219	328	250	0
DB 2012	7	int	1	170	122	200	435	12
DB 2160	7	int	3	170	108	200	230	0
DB 2186	7	int	2	170	108	200	230	0
DB 2022	8	int	1	275	219	328	305	120
DB 2018	8,5	int	1	220	165	273	430	12
DB 2105	9	int	2	220	157	273	230	0
DB 2319	9	int	4	220	157	273	230	0
DB 2132	9,5	int	2	170	108	200	305	0
DB 2020	12	int	1	220	165	273	600	12
DB 2024	12	int	1	275	219	324	448	12
DB 2104	12	int	2	220	157	273	305	0
DB 2026	12,5	int	1	300	243	348	445	12
DB 2027	14	int	1	300	243	355	500	12
DB 2118	16	int	2	220	157	288	400	0
DB 2130	16,5	int	2	300	219	345	305	0
DB 2029	17	int	1	300	243	355	600	12
DB 2353	18	int	5	300	219	343	314	0
DB 2030	19	int	1	300	243	355	660	12
DB 2082	19,5	int	1	400	314	439	520	0
DB 2025	20	int	1	220	219	324	750	12
DB 2138	20	int	2	275	210	325	400	0
DB 2051	21,5	int	1	275	243	348	750	12
DB 2102	22	int	2	300	219	350	400	0
DB 2055	23,5	int	1	300	243	355	820	12
DB 2061	23,5	int	1	400	314	439	620	0
DB 2124	25	int	2	220	157	273	612	0
DB 2084	25,5	int	2	275	210	325	500	0
DB 2089	28	int	2	300	219	355	500	0
DB 2147	29	int	1	300	243	355	1000	12
DB 2090	34,5	int	2	300	219	355	600	0
DB 2382	39	int	5	393	304	439	510	5
DB 2167	40	int	2	300	219	355	700	0
DB 2126	43	int	2	400	314	439	600	0
DB 2129	44	int	1	475	398	740	900	19

I dati sono indicativi e si basano su una pressione di lavoro di 7 bar

TYPES AND DRAWINGS

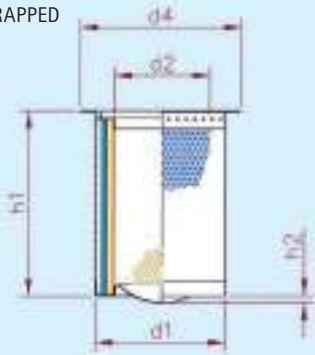
Int.



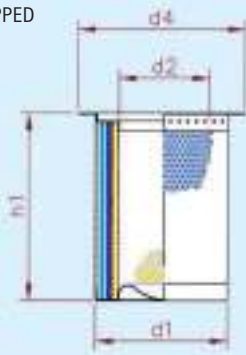
Ext.



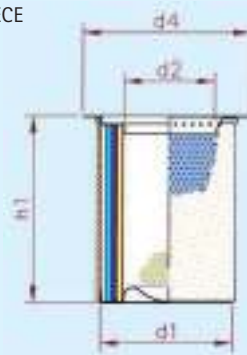
DRAW (1)
SINGLE
WRAPPED



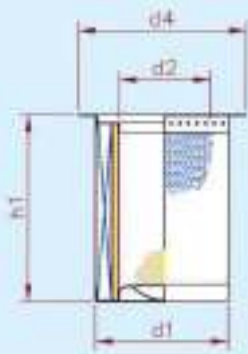
DRAW (2)
DOUBLE
WRAPPED



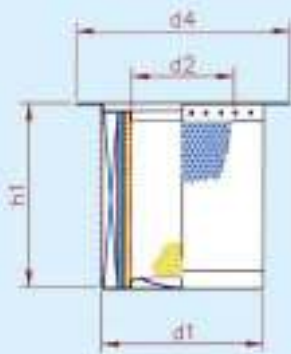
DRAW (3)
DOUBLE WRAPPED
+ FLEECE



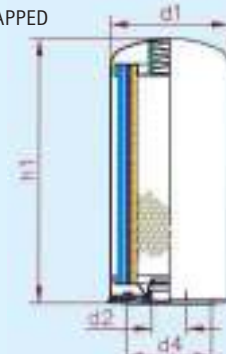
DRAW (4)
PLATED



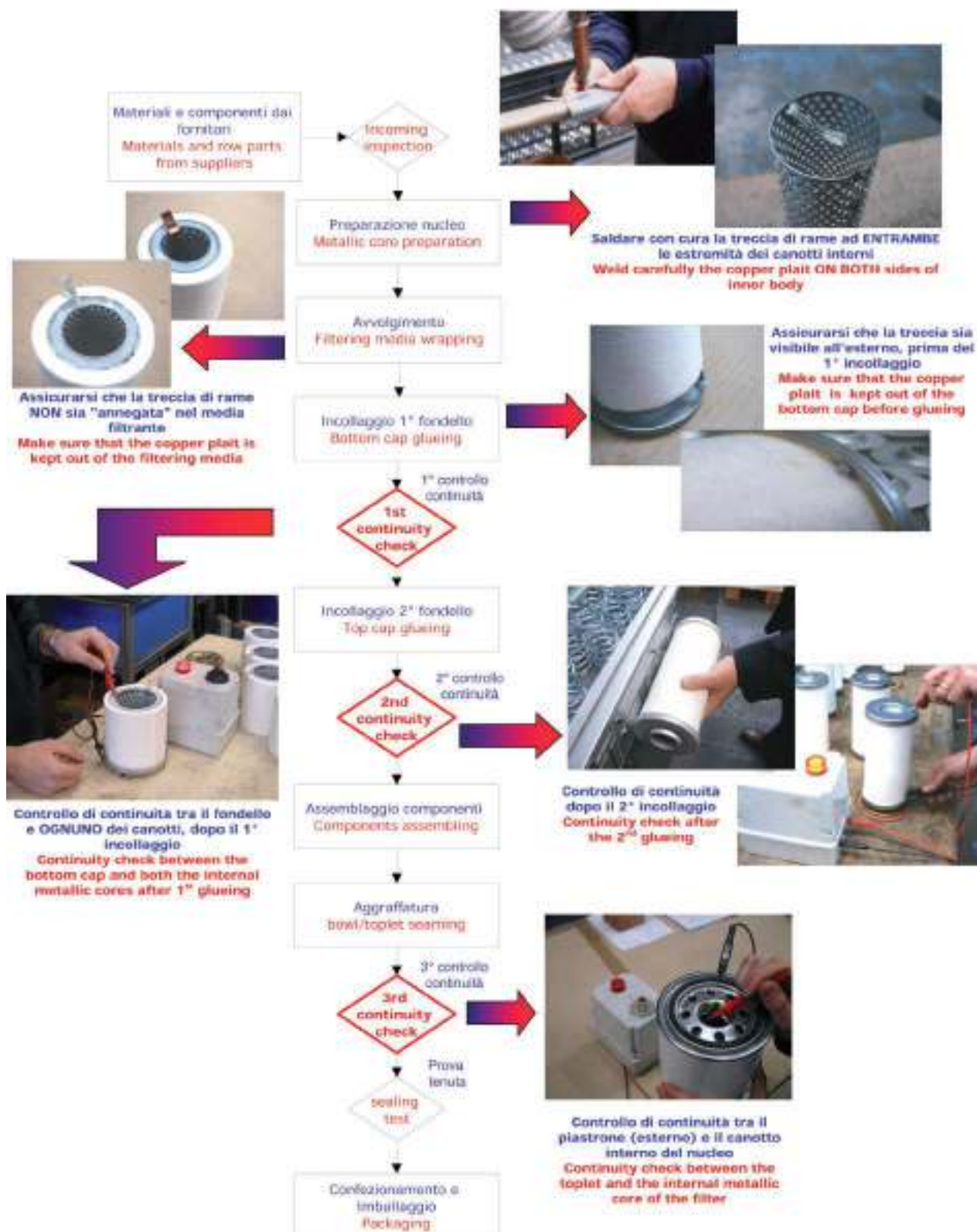
DRAW (4)
PLATED



DRAW (5)
PLATED
+ WRAPPED

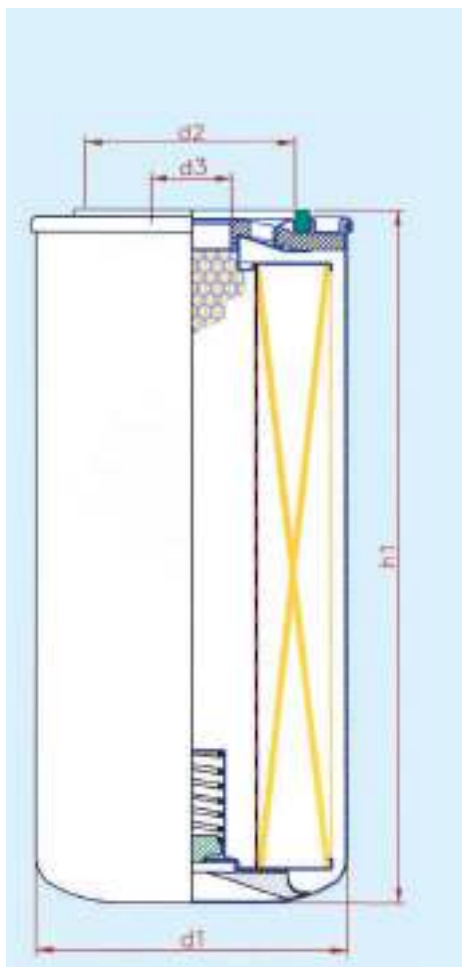


ISTRUZIONI PER IL CONTROLLO E LA GARANZIA DI CONTINUITA' ELETTRICA
DELLE PARTI METALLICHE DEI FILTRI
*INSTRUCTIONS TO CHECK AND WARRANT
ELECTRICAL CONTINUITY OF FILTERS' METALLIC PARTS*



SPIN-ON OIL FILTERS

Thanks to its experience in the hydraulic sector, SOTRAS has developed a range of oil filters, especially suitable for screw and vane compressor applications, "bearing in mind" that these filters will have to endure sudden changes and extreme limits in pressure and temperature. The oil filters that SOTRAS offers are usually of the spin-on type and can be provided with a by pass valve, if it is not already to be found on the heads or in the lubrication circuit. Generally the most commonly used filtering media is made of cellulose, however fibreglass and metallic mesh versions are available on request. Every batch undergoes stringent laboratory performance tests in terms of resistance to cyclic and maximum working pressure.



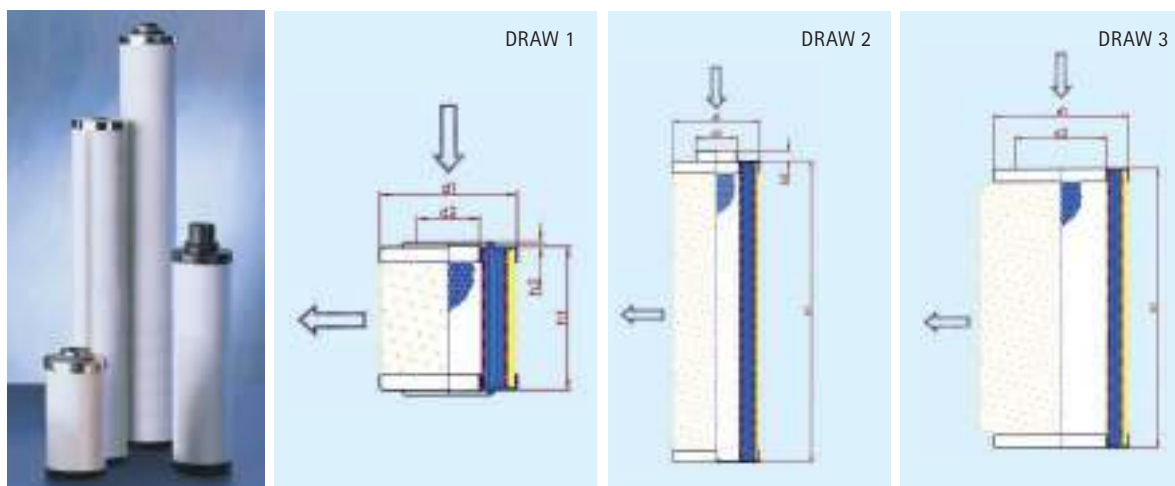
FILTERS TABLE

SOTRAS Ref.	d1 (mm)	d2 (mm)	d3	h1 (mm)	Non-return Valve-(bar)	by pass Valve-(bar)	Nominal flow rate (l/min)	Max. operating Pressure(bar)
SH 8118	76	62	3/4" 16-UNF	95	0,12	2,5	15	14
SH 8196	93	62	3/4" 16-UNF	58	0,12	0,8	15	14
SH 8113	76	62	3/4" 16-UNF	125	0,12	2,5	20	14
SH 8152	76	62	3/4" 16-UNF	140	-	3,5	20	35
SH 8153	93	62	3/4" 16-UNF	97	-	2,5	25	25
SH 8112	93	62	3/4" 16-UNF	143	0,12	2,5	40	14
SH 8119	93	62	1" 12-UNF	143	0,12	2,5	40	14
SH 8154	93	62	3/4" 16-UNF	144	-	2,5	40	25
SH 8155	93	62	1" 12-UNF	172	-	2,5	40	25
SH 8143	96	62	3/4" G	146	-	-	40	14
SH 8146	93	62	1" 12-UNF	170	0,12	2,5	45	14
SH 8130	96	62	3/4" G	193	-	-	55	14
SH 8147	93	62	1" 12-UNF	210	0,12	2,5	70	14
SH 8149	108	62	1" 12-UNF	210	0,12	1,2	70	14
SH 8107	93	62	1" 12-UNF	210	-	2,5	70	14
SH 8110	93	62	1" 12-UNF	212	-	2,5	70	25
SH 8150	93	62	M 20x1,5	212	-	2,5	70	30
SH 8144	127	98	1" 1/4 G	182	-	-	80	14
SH 8114	136	99	1" 1/2 16-UN	177	-	-	95	20
SH 8108	108	93	1" 1/8 16-UN	260	0,12	2,5	100	14
SH 8145	127	98	1" 1/4 G	228	-	-	150	12
SH 8109	136	100	1" 1/2 16-UN	302	-	2,5	180	20

DEMISTERS

The media used in our separators enables us to obtain excellent air/oil separation rates up to 1-3 mg/m³. All oil separators are manufactured using materials to withstand high pressures and temperatures and to minimise moisture induced deterioration.

In order to achieve the best possible separation efficiency and long working life of the element it is essential that regular maintenance procedures are followed and joints are applied correctly, as well as the use of good quality air and oil filters.



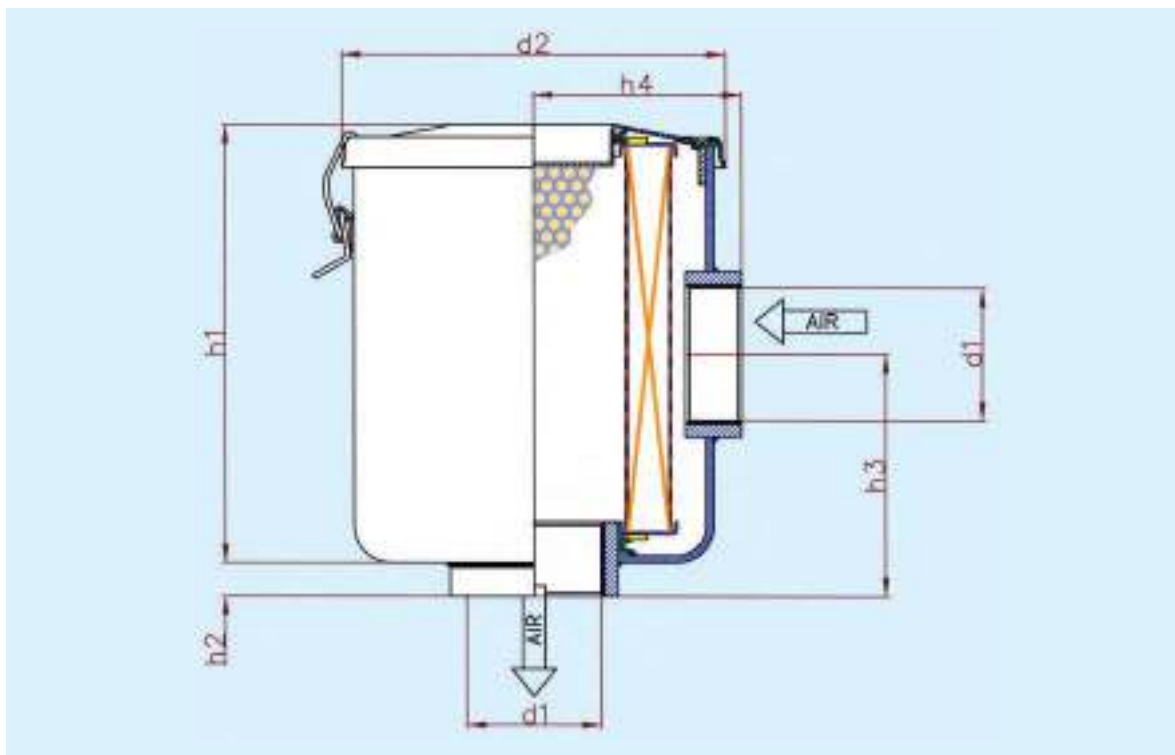
SOTRAS Ref.	d1 (mm)	d2 (mm)	h1 (mm)	h2 (mm)	Drawing	Flow rate (m ³ /min)
DA 1050	54,5	25,5	68	2,5	1	0,25
DA 1051	71,5	32,5	74	2,5	1	0,4
DA 1022	79,5	45	117,5	3,5	1	0,7
DA 1060	72	35	132	8	2	0,8
DA 1120	79	46	144	0	3	0,9
DA 1013	70	40	175	0	3	0,9
DA 1014	70	40	200	0	3	1,1
DA 1111	72	35	200	8	2	1,2
DA 1015	70	40	255	0	3	1,4
DA 1047	72	35	250	8	2	1,5
DA 1020	106	72	218	0	3	2,2
DA 1048	72	35	375	8	2	2,2
DA 1030	106	72	284	0	3	2,8
DA 1049	72	35	500	8	2	2,9

VACUUM AIR FILTERS

SOTRAS offers a wide range of filters to suit most requirements in this field and the elements are usually interchangeable with those produced by other leading manufacturers. Steel housings are treated with a special protective coating thereby guaranteeing a longer durability. They also undergo thorough tests to ensure the seals withstand high vacuum levels. The elements have high dust retention and are available with paper media (having a normal filtration rate of 5 microns) as well as glass fibre media for special applications.

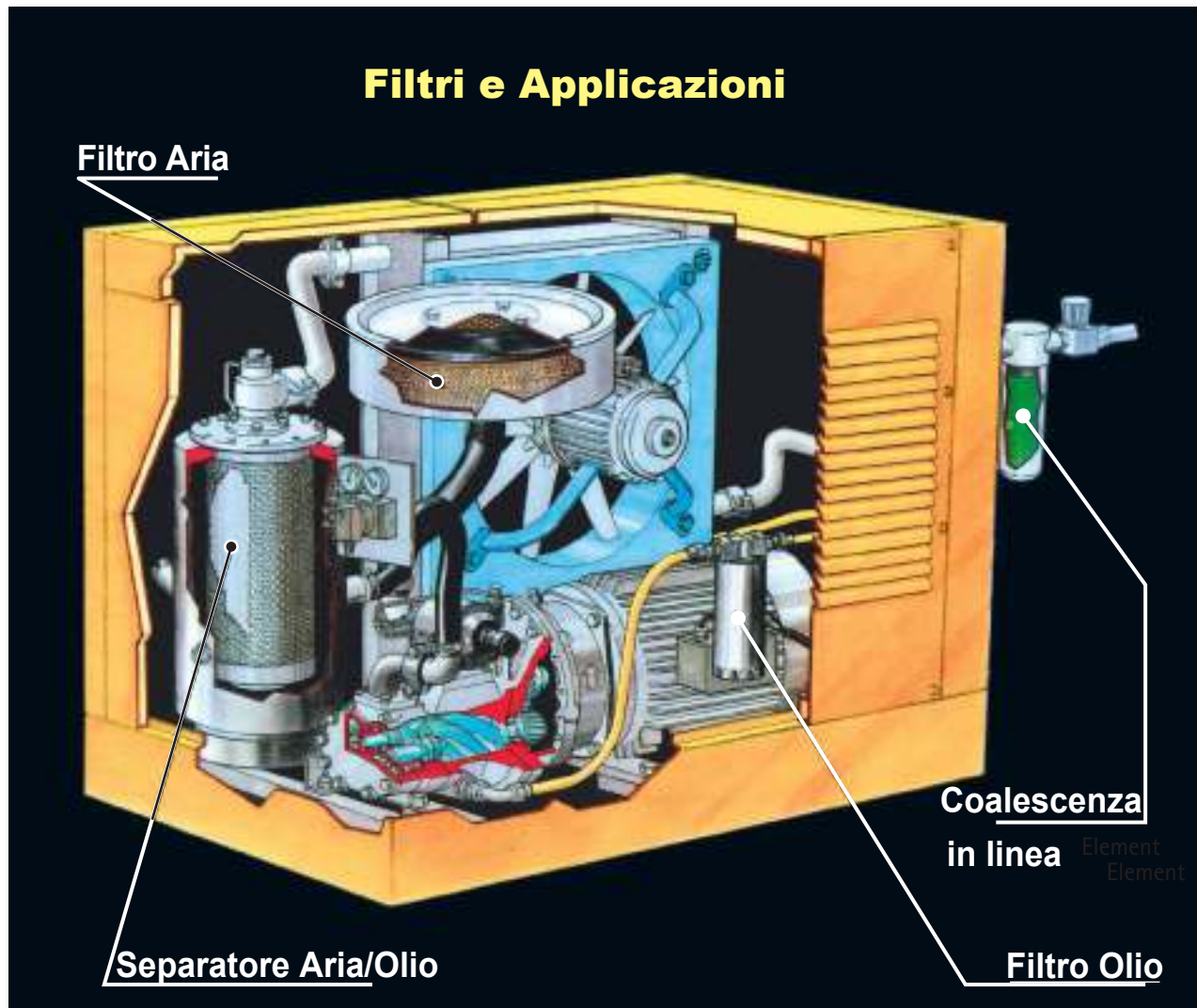


SOTRAS



SOTRAS Ref.	d1	MALE FEMALE	d2 (mm)	h1 (mm)	h2 (mm)	h3 (mm)	h4 (mm)	Flow rate (m3/h)	Element Ref.
SA 6654	G 3/8"	F	80	66	12	39	45	24	SA 6715
SA 6058	G 3/4"	F	110	76	14	53	54	42	SA 6091
SA 6647	G 1/2"	F	110	76	14	53	54	42	SA 6091
SA 6952	G 1"	F	133	85	17	53	78	85	SA 6120
SA 6059	G 1" 1/4	F	133	85	17	53	78	96	SA 6120
SA 6819	1" 1/4 NPT	F	133	85	17	53	78	96	SA 6120
SA 6061	G 1" 1/4	F	170	141	17	93	96	108	SA 6122
SA 6635	G 1" 1/4	M	170	141	17	93	96	108	SA 6122
SA 6820	1" 1/4 NPT	F	170	141	17	93	96	108	SA 6122
SA 6621	1" 1/2 NPT	F	170	141	17	93	96	108	SA 6122
SA 6648	G 1" 1/2	F	170	170	18	124	100	192	SA 6651
SA 6822	1" 1/2 NPT	F	170	170	18	124	100	192	SA 6651
SA 6649	G 2"	F	200	240	18	124	114	310	SA 6096
SA 6823	2" NPT	F	200	240	18	124	114	310	SA 6096
SA 6060	G 2" 1/2	F	200	240	18	124	114	360	SA 6096
SA 6824	2" 1/2 NPT	F	200	240	18	124	114	360	SA 6096
SA 6650	G 3"	F	270	180	50	145	165	550	SA 6095
SA 6652	G 4"	F	270	180	50	145	165	720	SA 6095
SA 6825	4" NPT	F	270	180	50	145	165	720	SA 6095
SA 6749	G 3"	F	280	395	50	330	190	1080	SA 6005
SA 6750	G 4"	F	360	590	50	400	230	1260	SA 6025

Filtri e Applicazioni

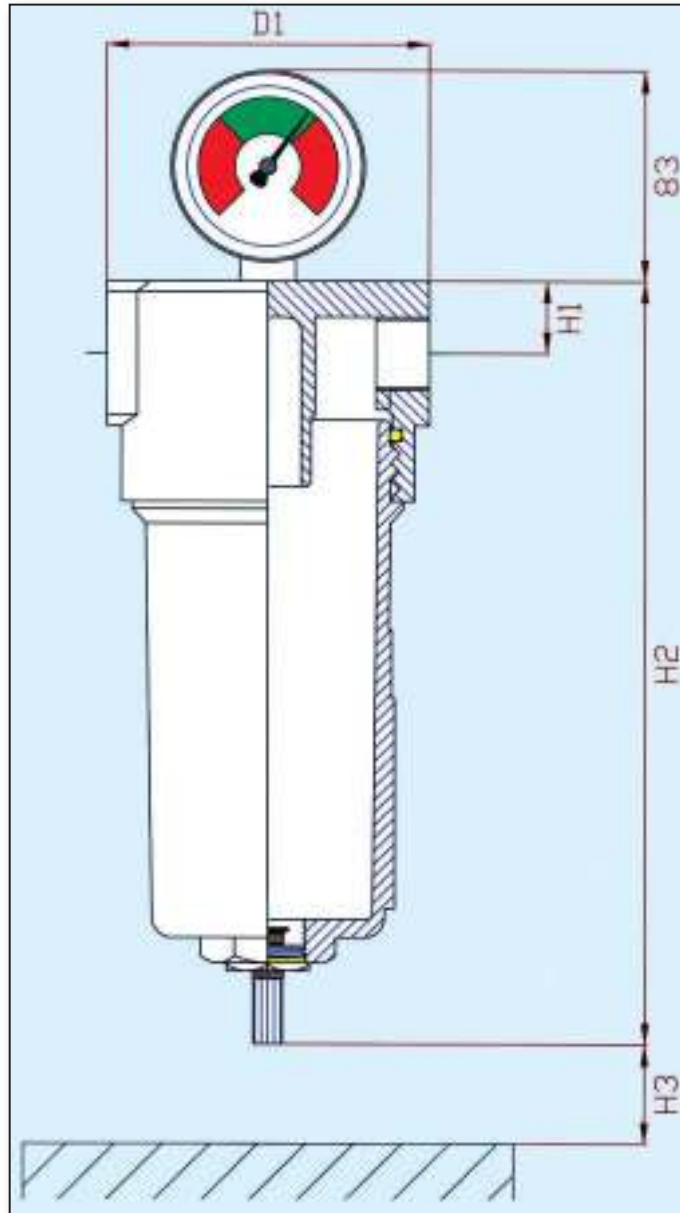


APPLICATIONS FOR COMPRESSOR MODELS

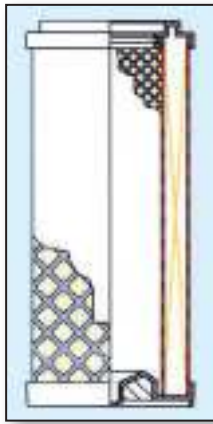
SOTRAS



**COMPRESSED AIR FILTERS
AND ACCESSORIES**

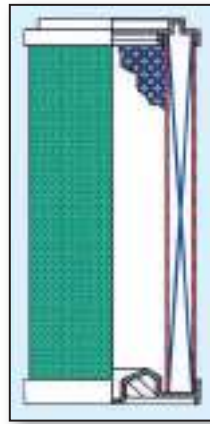


Rif. SOTRAS	Capacity (m ³ /h at 7 bar)	Connections	D1 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	Max operating pressure (bar)
SM 9001	60	3/8"	87	21	209	75	16
SM 9002	78	1/2"	87	21	209	75	16
SM 9003	120	3/4"	87	21	279	160	16
SM 9004	198	1"	130	43	315	135	16
SM 9005	335	1"	130	43	415	235	16
SM 9006	510	1 1/2"	130	43	515	335	16
SM 9007	780	1 1/2"	130	43	715	525	16
SM 9008	1000	2"	164	48	823	520	16
SM 9009	1500	2"	164	48	1073	770	16
SM 9010	2760	3"	250	74	1202	780	12



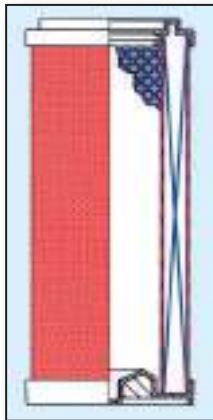
**PRE FILTERS
"SERIE 1"**

Coarse filtration and dust removal
Airflow through filter element-out to in



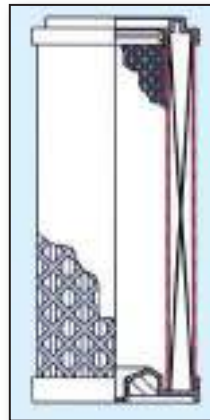
**FINE FILTERS
"SERIE 2"**

General-purpose protection.
Particle removal down to 0,1 micron. Maximum residual oil content down to 0,5 PPM. Air flow through filter element-out to in



**MICRO FILTERS
"SERIE 3"**

High efficiency filtration.
Particle removal down to 0,01 micron.
Maximum residual oil content down to 0,01 PPM. Airflow through filter element-out to in



**ACTIVED CARBON FILTERS
"SERIE 4"**

Oil vapour and odour removal.
Particle removal below 0,01 micron.
Maximum residual oil content down to 0,005 PPM
Air flow through filter element-out to in

SOTRAS REF.	ELEMENT			
	PREFILTER (series 1)	FINE FILTER (series 2)	MICROFILTER (series 3)	ACT. CARBON (series 4)
SM 9001	SM 9017	SM 9018	SM 9019	SM 9020
SM 9002	SM 9021	SM 9022	SM 9023	SM 9024
SM 9003	SM 9025	SM 9026	SM 9027	SM 9028
SM 9004	SM 9029	SM 9030	SM 9031	SM 9032
SM 9005	SM 9033	SM 9034	SM 9035	SM 9036
SM 9006	SM 9037	SM 9038	SM 9039	SM 9040
SM 9007	SM 9041	SM 9042	SM 9043	SM 9044
SM 9008	SM 9045	SM 9046	SM 9047	SM 9048
SM 9009	SM 9049	SM 9050	SM 9051	SM 9052
SM 9010	SM 9053	SM 9054	SM 9055	SM 9056



SM 9100
Automatic condense drain internal until SM 9007



SM 9200
Automatic condense drain external



SM 9210
Electronic automatic drain with timer



SM 9220
Electronic automatic drain



SM 9300
Manual condense drain until SM 9010



SM 9400
Cyclone kit for SM 9001-SM 9002-SM 9003



SM 9500
Cyclone kit for SM 9004-SM 9005

SM 9502
Cyclone kit for SM 9006-SM 9007



SM 9601
Cyclone kit for SM 9008-SM 9009

SM 9700
Differential pressure gauge



SM 9730
Differential pressure gauge

SOTRAS

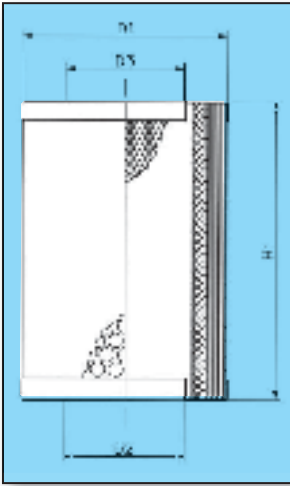


SPECIAL ENQUIRES

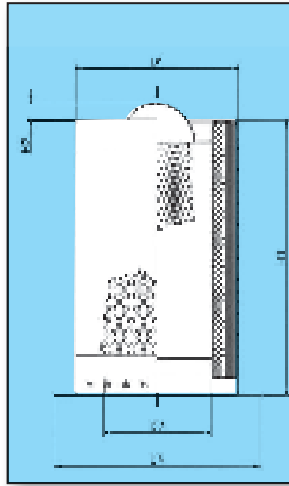
If you cannot find the information or part numbers you require in this or any previous Sotras publication, please try our web site on www.sotras.com and complete the form which is to be found under the product/technical section.



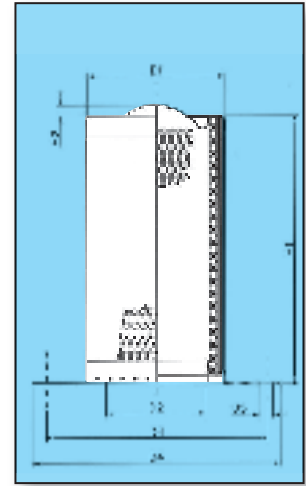
OIL SEPARATOR



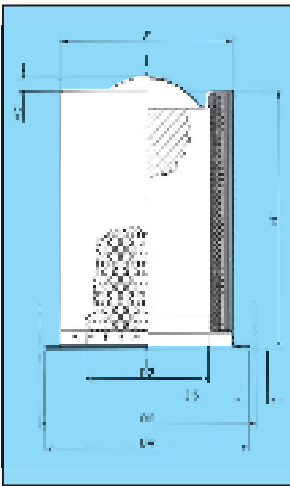
TYPE 1



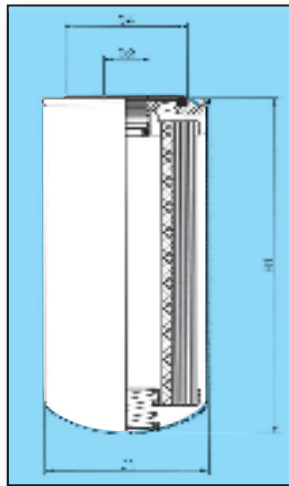
TYPE 2



TYPE 3

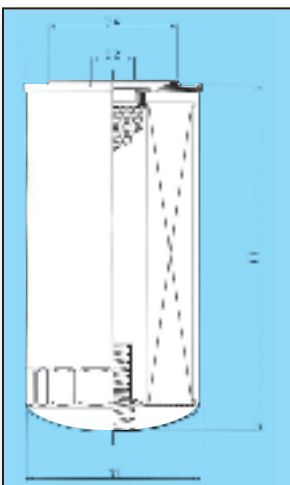


TYPE 4

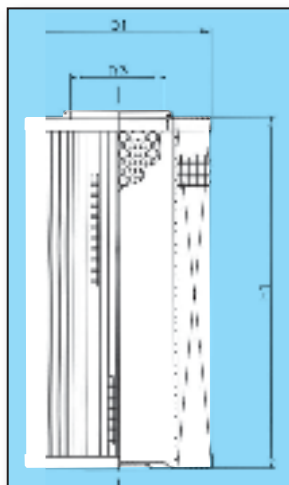


TYPE 5

OIL FILTERS

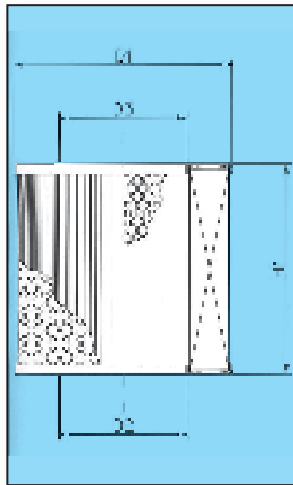


TYPE 6

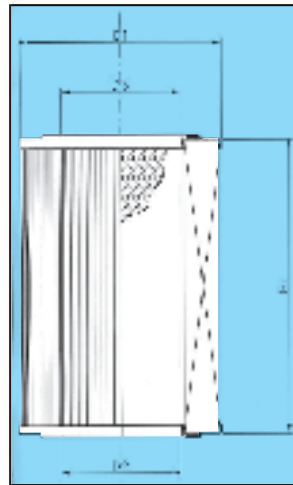


TYPE 7

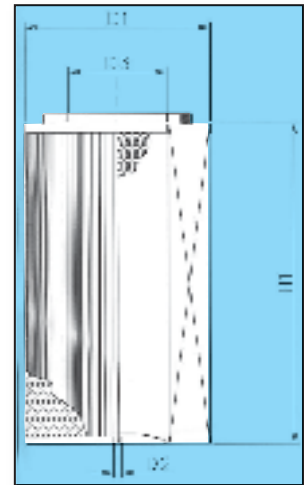
FILTRI ARIA



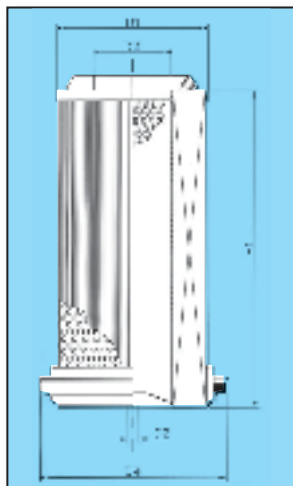
TYPE 1



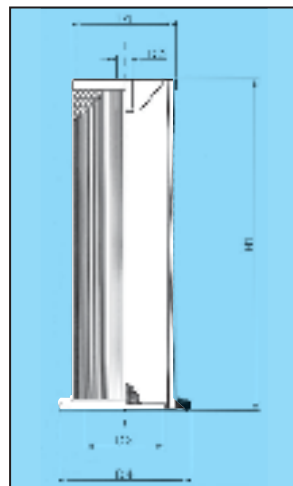
TYPE 2



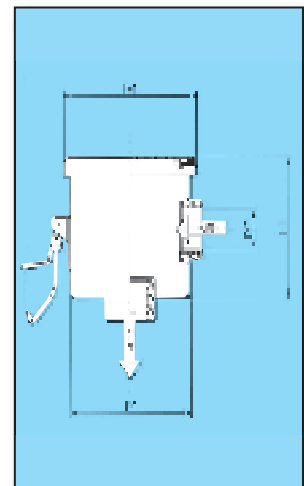
TYPE 3



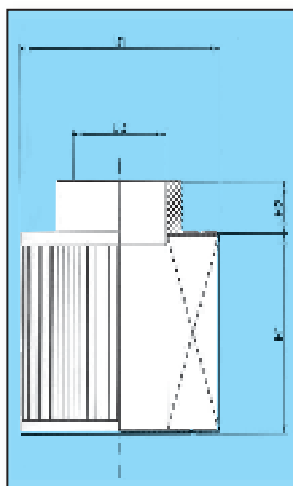
TYPE 4



TYPE 5



TYPE 6



TYPE 7

SOTRAS



WARRANTY AND RETURN POLICY

We guarantee that filters produced by Sotras are free from defects either in materials or construction, always provided that the machinery is maintained in accordance with manufacturers' recommendations and filters are correctly installed and changed.

Sotras will replace any item found to be defective, in this case we recommended that the form "Dissatisfaction report" (page 270 of our catalogue) is duly filled in and faxed to the number +39 011.262.41.41 in order to get a quick answer and solution to the issue.

Sotras will not be held responsible for any other replacement or contingencies or consequential loss.

