
AIR TREATMENT

AIR TREATMENT



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Introduction

As time goes on, compressed air has affirmed itself in the industrial environment as an important source of energy which is extremely reliable and versatile. The quality of compressed air is very important for the correct operation and long-term efficiency of the machinery and systems in which it is applied.

Depending on the industry or field of application, the required quality level can foresee different treatments.

In fact compressed air can be dry, clean, medical, filtered. This is why Adicomp makes its long time experience available to offer air treatment modules and accessories, even sized and customised according to specific requirements.

This catalogue provides the reference standards regarding air purity, an overlook of the most common complete installations according to the field of application and a detailed presentation of the air treatment components.

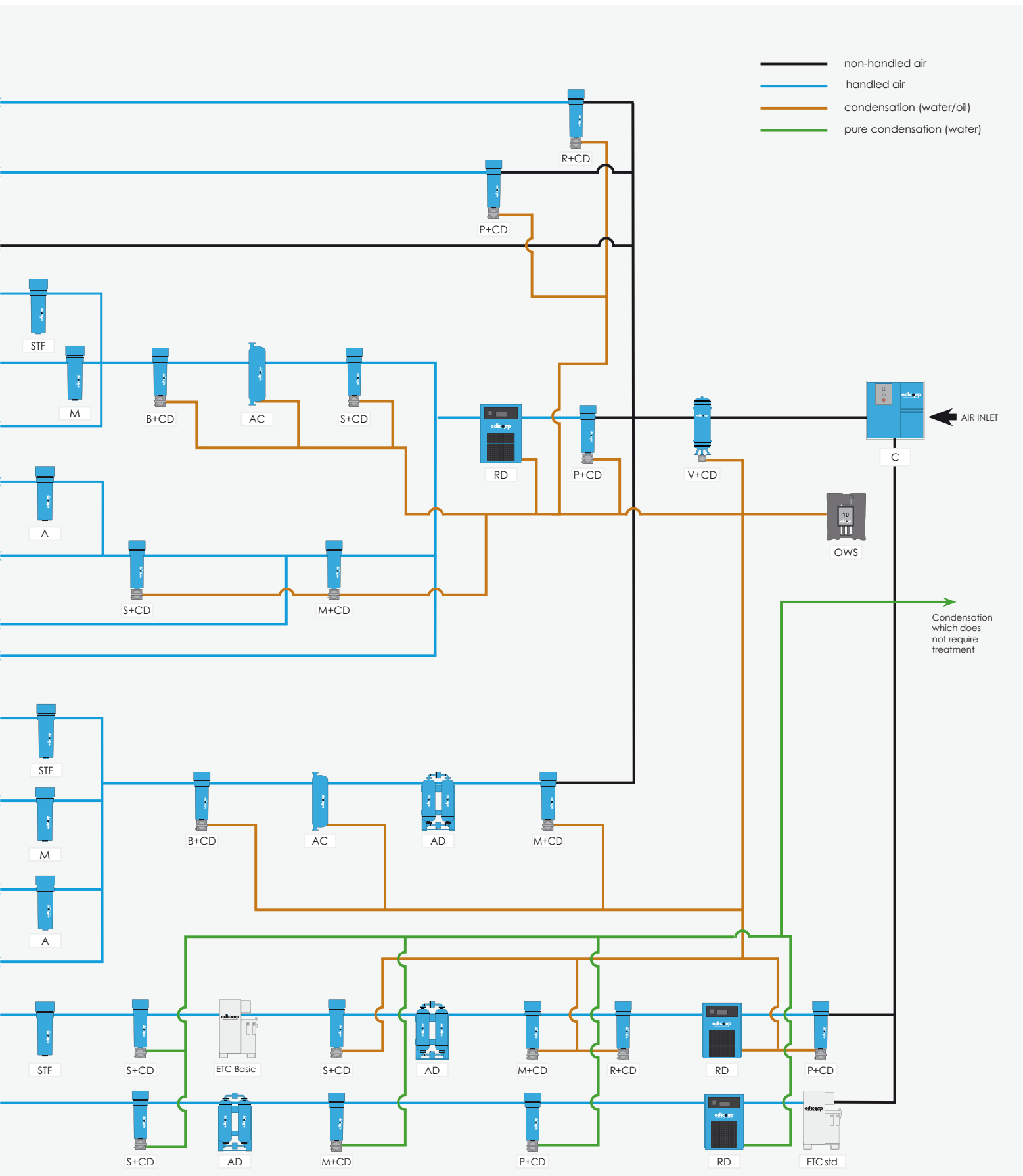
Compressed air generally contains water, oil, dust and other impurities which jeopardise operation and damage the machines on which it is used, thus increasing maintenance costs.

To this purpose, the standard ISO 8573-1 establishes and lays down parameters to classify compressed air quality.

Class ISO 8573-1: 2010	SOLID PARTICULES			Content mg/m ³	Water Vapor °C	Oil Total Hydrocarbons (aerosol, liquid and vapor) mg/m ³
	(Max concentration of particules for m ³)					
	0,1 - 0,5 micron	0,5 - 1 micron	1 - 5 micron			
0	più restrittivo della Classe 1					
1	≤ 20.000	≤ 400	≤ 10	-	-70	0,01
2	≤ 400.000	≤ 6.000	≤ 100	-	-40	0,1
3	-	≤ 90.000	≤ 1.000	-	-20	1
4	-	-	≤ 10.000	-	3	5
5	-	-	≤ 100.000	-	7	-
6	-	-	≤ 5	10	-	-
7	-	-	5-10	-	-	-
8	-	-	-	-	-	-
9	-	-	-	-	-	-
x	-	-	>10	-	-	>5

- C COMPRESSOR
- STF STERILE FILTER
- AC CARBON COLUMNS
- B DUST FILTER
- S S FILTER
- M M FILTER
- A A FILTER
- P P FILTER
- R R FILTER
- RD REFRIGERATION DRYER
- AD ADSORPTION DRYER
- V TANK
- CD CONDENSATE DISCHARGER
- OWS WATER OIL SEPARATOR
- ETC Basic CATALYST OIL CONVERTER WITHOUT SPLASH PROTECTION
- ETC Std CATALYST OIL CONVERTER WITH SPLASH PROTECTION AND FINAL FILTER

	AIR QUALITY CLASSIFICATION			
	Solid particles	Residual water	Residual oil	Bacteria elimination
GENERAL USE AIR, WITHOUT REQUIREMENTS				
Sand blasting	4	7	3	no
Low quality sand blasting	5	7	4	no
No requirement	8	9	5	no
WITH REFRIGERATION DRYER				
Cheese factories, breweries, pharmaceutical plants	1	4	1	yes
Food systems	2	4	1	no
Very clean air, chemical systems	3	4	1	no
Weaving machines, photographic laboratories, pneumatic controls, air conditioning, dentist laboratories, process control equipment	1	4	1	no
Spray paint and powder paint	1	4	2	no
Packaging, instruments and control	2	4	2	no
Generic use air, high-quality sand blasting, simple painting	2	4	3	no
WITH ADSORPTION DRYER				
Cheese factories, breweries, pharmaceutical plants	1	1-3	1	yes
Microchip, optics, high-quality food systems	2	1-3	1	no
Photographic laboratories	2	1-3	1	no
Spray painting	3	1-3	1	no
AIR IN CLASS OR CERTIFIED OIL AND SILICON-FREE				
Clean air, sterile chamber technologies, top quality food industry, cheese factories, breweries, sterile air	1	1-2	0	yes
Pharmaceutical and chemical plants, photographic laboratories, high-quality painting, mineral water production, wine production, PET industry	1	1-2	0	yes



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Compressed air drying

Aside from dust and oil, a certain amount of humidity is present in compressed air coming from the external environment, which, inside the plant, can be transformed into condensation. Therefore the humidity level in the compressed air must be reduced as far as possible to guarantee correct operation of the equipment.

To make this all possible Adicomp offers its centrifugal condensate separators, the refrigeration cycle dryers and the adsorption dryers.

CENTRIFUGAL CONDENSATE SEPARATORS

They exploit centrifugal and gravitational force to separate water from air.

REFRIGERATION CYCLE DRYERS

They separate water by lowering the compressed air temperature to the dew point of +3 °C.

ADSORPTION DRYERS

The adsorption dryers exploit the hygroscopic characteristics derived from minerals, the zeolites, which manage to capture in their crystalline structure an enormous amount of water vapor.

Their porous structure is open and allows complete reversibility (regeneration takes place during the "desorption" phase) that enables the desiccant to return always ready for the next cycle of adsorption.

This achieves a drying method which is simple as it is static, environmental friendly, given the non-polluting nature of zeolites, and with performance well above those physiologically limited of the refrigeration. In fact with the adsorption dryers you can reach dew points up to -70°.

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“ANF” aluminium cyclone condensate separators

An efficient water removal system and therefore of the condensation contained in the compressed air is implemented by means of centrifugal separators.

The air inside the separator undergoes acceleration and a thrust towards the walls of the separator so that, by effect of the centrifugal force, the condensation particles adhere and slip to the bottom of the separator.

The built up condensation is then ejected by the discharger. This process is advantageous in enhancing the duration and efficiency of the dryers and of the filters, which are normally installed downstream of the chillers, tanks and refrigeration dryers, as well in strategic points of the system.

Aside from the separator, the standard supply includes the OAOK 16B automatic condensate discharger

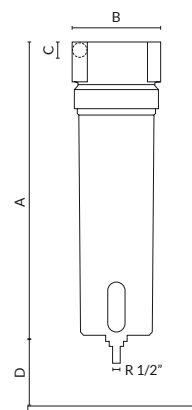


REFERENCE CONDITIONS

Air pressure limit 16 bar.

Working temperature from 1.5 °C to 65°C.

Model	Code	Connection	Flow rate	Weight	Dimensions (mm)			
		inch	Nm³/h	kg	A	B	C	D
ANF005CKL-B	3021.0022	3/8"	120	0,7	187	88	21	60
ANF007CKL-B	3021.0012	1/2"	155	0,7	187	88	21	60
ANF010CKL-B	3021.0014	3/4"	235	0,8	257	88	21	60
ANF018CKL-B	3021.0013	1"	365	1,9	262	125	33	100
ANF047CKL-B	3021.0010	1 1/2"	770	2,8	452	125	33	140
ANF094CKL-B	3021.0015	2"	1280	5,3	695	163	43	520
ANF150CKL-B	3021.0025	2 1/2"	2460	9,2	695	163	43	520
ANF200CKL-B	3021.0037	3"	2850	13,4	795	240	59	630



Separators optional equipment



Model	Code	Max pressure bar
OMCD	5750.0006	20
OAOK 16B	5750.0003	16
OAOK 20B	5750.0036	20
OAOK 20B Nipple	5750.0037	20
OTD 16	5750.0038	16
OTD 16M	5750.0039	16
OTD 16S	5750.0040	16
OCDI 16B	5750.0041	16
OECD 15B	5750.0042	16
OECD 40B	5750.0043	16
OECD 90B	5750.0044	16

CORRECTION FACTORS

Operating pressure (bar)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Operating pressure (psi)	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction factor	0,53	0,65	0,76	0,84	0,92	1,00	1,07	1,13	1,19	1,25	1,31	1,36	1,41	1,46	1,51

“DRM” series refrigeration dryers

The DRM dryer guarantees excellent operation even in adverse environmental conditions or in case of very high inlet air temperatures.

This range of dryers is equipped with an aluminium ultracompact modular heat exchanger. Its high level efficiency allows it to work properly even with ambient temperatures up to 45°C and inlet temperatures at 55°C, with extremely low pressure drops of the compressed air in transit.

The materials used to manufacture DRM dryers, such as the refrigerant, are all environmental friendly and have a high recycling capacity.



REFERENCE CONDITIONS

- Nominal ambient temperature of 25°C
- Inlet air at 35° C with nominal pressure of 7 bar
- Pressurised dew point temperature 5°C

LIMIT CONDITIONS

- Maximum ambient temperature of 45°C
- Maximum inlet air at 55°C and 14 bar.
Only for DRM3, DRM6, DRM9, DRM12 and DRM18 the maximum pressure is 16 bar

Model	Refrigerant type	Pressure bar	Power Ph/V/Hz	Connection inch	Flow rate m ³ /h	Weight kg	Width mm	Depth mm	Height mm
DRM3	R134A.a	0,15	1/230/50-60	3/8"	21	21	310	345	435
DRM6	R134A.a	0,04	1/230/50-60	1/2"	36	25	370	515	475
DRM9	R134A.a	0,09	1/230/50-60	1/2"	57	26	370	515	475
DRM12	R134A.a	0,14	1/230/50-60	1/2"	72	28	370	515	475
DRM18	R134A.a	0,32	1/230/50-60	1/2"	108	32	370	515	475
DRM25	R134A.a	0,24	1/230/50-60	1"	150	34	345	420	740
DRM32	R134A.a	0,16	1/230/50	1.1/4"	192	39	345	445	740
DRM43	R407C	0,24	1/230/50	1.1/4"	258	40	345	445	740
DRM52	R407C	0,34	1/230/50	1.1/4"	312	41	345	445	740
DRM61	R407C	0,19	1/230/50	1.1/2"	366	54	555	580	885
DRM75	R407C	0,25	1/230/50	1.1/2"	450	56	555	580	885
DRM105	R407C	0,14	1/230/50	2"	630	94	555	625	975
DRM130	R407C	0,2	1/230/50	2"	780	96	555	625	975
DRM168	R407C	0,15	1/230/50	2.1/2"	1008	144	665	725	1105

CORRECTION FACTOR AS OPERATING PRESSURE CHANGES											CORRECTION FACTOR AS DEW POINT CHANGES					
Inlet air pressure <i>bar</i> _g	4	5	6	7	8	10	12	14	15	16	Dew point °C		3	5	7	10
Factor	0,77	0,86	0,93	1,00	1,05	1,14	1,21	1,27	1,30	1,33	Factor		0,91	1,00	1,10	1,26

CORRECTION FACTOR AS AMBIENT TEMPERATURE CHANGES					
Ambient temperature °C	≤ 25	30	35	40	45
Factor	1,00	0,98	0,95	0,88	0,80

CORRECTION FACTOR AS INLET AIR TEMPERATURE CHANGES						
Air temperature °C	≤ 30	35	40	45	50	55
Factor	1,15	1,00	0,84	0,71	0,59	0,50

AIR TREATMENT

“DR” series refrigeration dryers

Adicomp proposes another range of dryers aimed at reducing energy consumption thanks to the reliability of the drying module and the limited pressure drops.

The main benefits are:

Limited pressure drops even with high loads.

Extremely constant dew point even as operating conditions change.

This series was designed with the purpose of protecting the environment, by using environmental friendly refrigerants and selecting recyclable materials.

The data displayed refer to the following nominal conditions:

Ambient temperature 25°C, inlet air at 7 bar and 35°C and pressurised dew point temperature of 3°C (Dew point at atmospheric pressure -22°C).

Max operating conditions: Ambient temperature 45°C, Air inlet temp 55°C and air inlet pressure 14 bar.



ALU-DRY DRYING MODULE

1 - Main feature of the ultracompact drying module is that of including the air-to-air, air-to-refrigerant heat exchangers and the “demister” condensate separator in a single element.

2 - The completely countercurrent flows of the air-to-air heat exchanger guarantee maximum efficiency in the heat exchange.

3 - The countercurrent flows of the air-to-refrigerant heat exchanger guarantee excellent performance. The refrigerant evaporates correctly and completely due to the large size of the exchange surface (preventing the liquid from returning to the compressor).

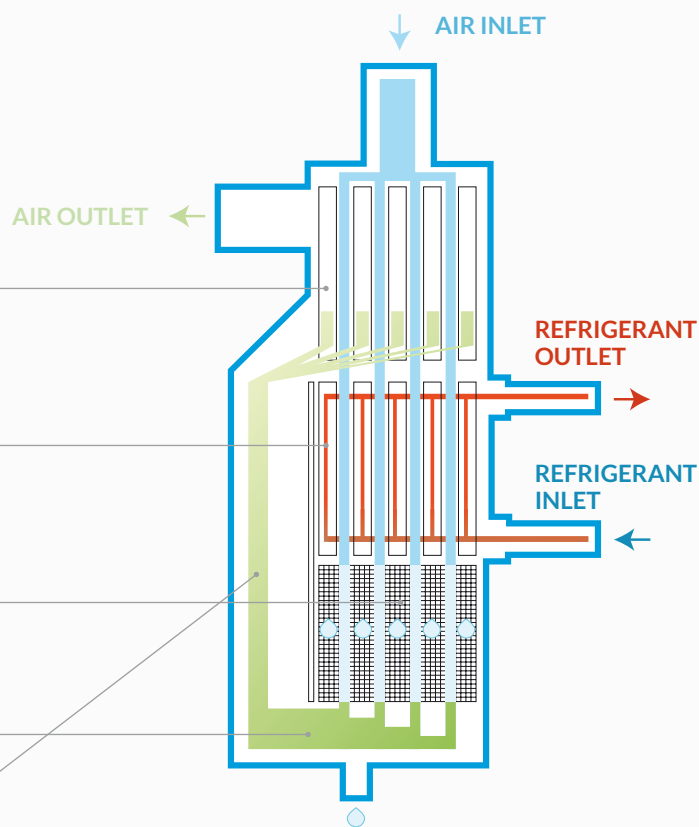
“Demister” condensate separator

4 - High efficiency separation device built into the drying module, requires no maintenance and provides the further advantage of creating a cold coalescence effect for optimal air drying.

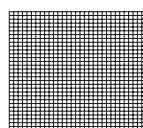
5 - Large storage capacity for correct operation of the dryer even with extremely moist inlet air.

6 - The large cross-section of the flow ducts assures reduced air speed thus limiting pressure drops.

⚠ - It is mandatory to always install a filter (with a filtering degree of at least 5 microns) on the inlet side of the dryer to prevent rust, slag and other polluting products from clogging the Alu-Dry drying module and condensate discharge.



CONDENSER



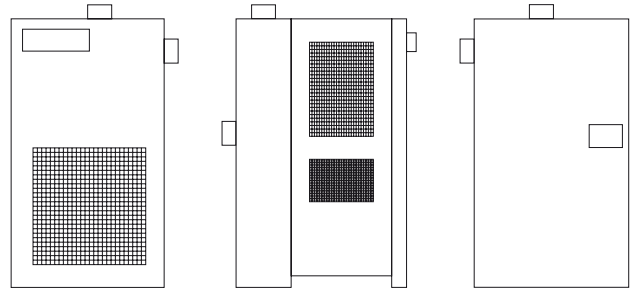
Its appropriate size guarantees maximum yield of the refrigerant circuit even with many fields of use or extremely variable ambient temperatures. Easily accessible for cleaning and maintenance.

REFERENCE CONDITIONS

- Ambient temperature of 25°C
- Inlet air at 7 bar and 35°C
- Dew point under pressure of 3°C

LIMIT CONDITIONS

- Max ambient temperature of 50°C
- Max inlet air at 14 bar and 70°C
Only for DR3, DR6, DR9
and DRM13 max inlet air pressure 16 bar



Model	Refrigerant	Pressure	Power	Connection	Flow rate	Weight	Width	Depth	Height
	type	bar	Ph/V/Hz	inch	m ³ /h	kg	mm	mm	mm
DR3	R134A.a	0,02	1/230/50-60	1/2"	21	28	345	420	740
DR6	R134A.a	0,03	1/230/50-60	1/2"	33	29	345	420	740
DR9	R134A.a	0,08	1/230/50-60	1/2"	51	31	345	420	740
DR13	R134A.a	0,11	1/230/50-60	1/2"	72	34	345	420	740
DR19	R134A.a	0,13	1/230/50-60	1"	108	36	345	420	740
DR24	R134A.a	0,17	1/230/50	1"	138	37	345	420	740
DR32	R407C	0,15	1/230/50	1.1/4"	186	46	485	455	825
DR42	R407C	0,2	1/230/50	1.1/4"	240	50	485	455	825
DR57	R407C	0,15	1/230/50	1.1/2"	330	55	555	580	885
DR65	R407C	0,18	1/230/50	1.1/2"	372	63	555	580	885
DR85	R407C	0,09	1/230/50	2"	486	92	555	625	975
DR110	R407C	0,13	1/230/50	2"	630	94	555	625	975
DR131	R407C	0,07	1/230/50	2.1/2"	750	141	665	725	1105
DR152	R407C	0,13	1/230/50	2.1/2"	870	150	665	725	1105
DR171	R407C	0,15	1/230/50	2.1/2"	960	161	665	725	1105
DR189	R407C	0,17	3/400/50	DN 80-PN 16	1080	240	790	1000	1465
DR210	R407C	0,21	3/400/50	DN 80-PN 16	1260	242	790	1000	1465
DR250	R407C	0,13	3/400/50	DN 80-PN 16	1500	275	790	1000	1465
DR300	R407C	0,19	3/400/50	DN 80-PN 16	1800	276	790	1000	1465
DR360	R407C	0,26	3/400/50	DN 80-PN 16	2208	311	790	1000	1465
DR400	R407C	0,21	3/400/50	DN 100-PN 16	2400	463	1135	1205	1750
DR500	R407C	0,14	3/400/50	DN 100-PN 16	3000	538	1135	1205	1750
DR600	R407C	0,2	3/400/50	DN 100-PN 16	3600	540	1135	1205	1750
DR720	R407C	0,26	3/400/50	DN 100-PN 16	4416	612	1135	1205	1750
DR900	R407C	0,2	3/400/50	DN 150-PN 16	5400	830	1300	1750	1810
DR1100	R407C	0,26	3/400/50	DN 150-PN 16	6624	940	1300	1750	1810
DR1200	R407C	0,2	3/400/50	DN 200-PN 16	7200	1055	1400	2200	1870
DR1500	R407C	0,26	3/400/50	DN 200-PN 16	8832	1200	1400	2200	1870

CORRECTION FACTOR AS OPERATING PRESSURE CHANGES								
Inlet air pressure barg	4	5	6	7	8	10	12	14
Factor	0,77	0,86	0,93	1,00	1,05	1,14	1,21	1,27

CORRECTION FACTOR AS INLET AIR TEMPERATURE CHANGES						
Air temperature °C	≤ 25	30	35	40	45	50
Factor	1,00	0,99	0,97	0,93	0,88	0,81

CORRECTION FACTOR AS AMBIENT TEMPERATURE CHANGES										
Ambient temperature °C	≤ 25	30	35	40	45	50	55	60	65	70
Factor	1,27	1,12	1,00	0,88	0,78	0,70	0,62	0,55	0,49	0,43

CORRECTION FACTOR AS DEW POINT CHANGES				
Dew point °C	3	5	7	10
Factor	1,00	1,09	1,19	1,37

AIR TREATMENT

“DRC” series refrigeration dryers





DRC dryers were designed to meet specific requirements in the industries used, such as that of special moulding of plastic materials in the food industry, where the compressed air temperature needs to be close to that of the dew point.

This series uses brazed plate heat exchangers specific for compressed air treatment, with a single air-refrigerant (or evaporator) thermal exchange circuit. This system allows the inlet air (hot and humid) to exchange heat with the backflow of the refrigerant fluid (freon). This quickly drops the temperature allowing the humidity it contains to condensate.



The outlet compressed air treated will have a temperature close to the dew point, as there is no second air-to-air thermal exchange circuit.



REFERENCE CONDITIONS

-  Nominal ambient temperature of 25°C.
-  Inlet air at 35° C with nominal pressure of 7 bar
-  Outlet air temperature ≤5°C
-  Pressurised dew point temperature ≤5°C

LIMIT CONDITIONS

-  Ambient temperature 50°C
-  Air inlet pressure at 15 bar and 55°C

Model	Code	Power Ph/V//Hz	Connection inch	Flow rate m³/h	Weight kg	Width mm	Depth mm	Height mm
DRC2	3000.0007	1/230-240/50	G 3/8" BSP-F	200	28	370	450	445
DRC6	3000.0008	1/230-240/50	G 3/8" BSP-F	600	29	370	450	445
DRC10	3000.0009	1/230-240/50	G 1/2" BSP-F	1000	37	510	625	930
DRC15	3000.0010	1/230-240/50	G 3/4" BSP-F	1500	59	510	625	930
DRC20	3000.0005	1/230-240/50	G 3/4" BSP-F	1930	61	510	625	870
DRC25	3000.0002	1/230-240/50	G 1" BSP-F	2500	81	560	725	870
DRC40	3000.0003	1/230-240/50	G 1" BSP-F	4000	122	560	655	1240
DRC60	3000.0001	1/230-240/50	G 1.1/2" BSP-F	6000	130	580	655	1240
DRC80	3000.0004	3/400-415/50	G 2" BSP-F	8000	218	610	1155	1700
DRC100	3000.0011	3/400-415/50	G 2" BSP-F	10000	235	610	1155	1700
DRC120	3000.0006	3/400-415/50	G 2" BSP-F	12000	245	610	1155	1700

CORRECTION FACTOR FOR OPERATING PRESSURE CHANGES										CORRECTION FACTOR FOR AMBIENT TEMPERATURE CHANGES								
Inlet air pressure <i>bar</i> g	2	4	5	6	7	8	10	12	14	15	Ambient temperature °C		≤ 25	30	35	40	45	50
Factor	0,49	0,77	0,86	0,93	1,00	1,05	1,14	1,21	1,27	1,30	Factor		1,00	0,98	0,95	0,88	0,80	0,68

CORRECTION FACTOR FOR INLET AIR TEMPERATURE CHANGES								CORRECTION FACTOR FOR DEWPOINT CHANGES							
Air temperature °C	≤ 25	30	35	40	45	50	55	DewPoint °C		4	5	7	10	15	20
Factor	1,27	1,12	1,00	0,88	0,78	0,70	0,62	Factor		0,83	1,00	1,26	1,54	1,85	2,07

“DRH” series refrigeration dryers

The DRH series is especially suited for high pressure compressed air plants up to 50 bar. Certified high pressure stainless steel plate heat exchangers are used.

The main features are:

- Simple layout for easy maintenance.
- Extremely constant dew point even as operating conditions change.



REFERENCE CONDITIONS

- Ambient temperature of 25°C
- Inlet air at 7 bar and 35°C
- Outlet air temperature of ≤ 5°C
- Dew point under pressure of ≤ 5°C

LIMIT CONDITIONS

- Max ambient temperature 50°C
- Max inlet air at 15 bar and 55°C

Model	Power	Connection	Flow rate	Weight	Width	Depth	Height
	Ph/V//Hz	inch	m ³ /h	kg	mm	mm	mm
DRH4C	1/230/50-60	G 3/8" BSP-F	25	28	370	515	475
DRH8C	1/230/50-60	G 3/8" BSP-F	45	29	370	515	475
DRH12C	1/230/50-60	G 3/8" BSP-F	72	32	370	515	475
DRH15	1/230/50-60	G 3/4" BSP-F	90	38	345	420	740
DRH22	1/230/50	G 3/4" BSP-F	135	39	345	420	740
DRH30	1/230/50	G 3/4" BSP-F	180	50	485	455	825
DRH40	1/230/50	G 3/4" BSP-F	240	53	485	455	825
DRH50	1/230/50	G 1" BSP-F	315	89	555	580	885
DRH75	1/230/50	G 1" BSP-F	450	101	555	580	885
DRH100	1/230/50	G 1" BSP-F	615	115	555	580	885
DRH130	1/230/50	G 1.1/2" BSP-F	810	156	725	665	1105
DRH160	1/230/50	G 1.1/2" BSP-F	1008	190	665	665	1105
DRH210	3/400/50	G 2" BSP-F	1260	252	790	1000	1465
DRH270	3/400/50	G 2" BSP-F	1620	265	790	1000	1465
DRH380	3/400/50	G 2" BSP-F	2280	391	790	1000	1465
DRH400	3/400/50	FL. ANSI 3"	2430	444	1135	1205	1745
DRH500	3/400/50	FL. ANSI 3"	3030	461	1135	1205	1745
DRH660	3/400/50	FL. ANSI 3"	4020	486	1135	1205	1745
DRH830	3/400/50	FL. ANSI 3"	5010	552	1135	1205	1745

CORRECTION FACTOR FOR OPERATING PRESSURE CHANGES

Inlet air pressure barg	15	20	25	30	35	40	45	50
Factor	0,74	0,82	0,87	0,92	0,96	1,00	1,03	1,06

CORRECTION FACTOR FOR AMBIENT TEMPERATURE CHANGES

Ambient temperature °C	≤ 25	30	35	40	45	50
Factor	1,00	0,99	0,97	0,93	0,88	0,81

CORRECTION FACTOR FOR INLET AIR TEMPERATURE CHANGES

Inlet air temperature °C	≤ 25	30	35	40	45	50	55	60	65
Factor	1,27	1,12	1,00	0,88	0,78	0,70	0,62	0,55	0,49

CORRECTION FACTOR FOR DEWPOINT CHANGES

DewPoint °C	3	5	7	10
Factor	1,00	1,09	1,19	1,37

AIR TREATMENT

ADSORPTION DRYERS

The adsorption dryers consist of two columns filled with mineral materials, zeolites, with special hygroscopic features. The operating cycle consists of two phases: adsorption and desorption. In the first phase, the zeolites capture a large quantity of aqueous vapour in their crystalline structure. In the next phase humidity is released by the regeneration of the drying material.

This process is performed alternately in each of the columns. This achieves a drying method which is simple as it is static, environmental friendly as it is based on natural minerals and with upgraded performance respect to refrigeration.

All adsorption systems consist of two columns (concentric for the TCP series and parallel for the DAE and DA series), a pair of switching valves and relative regeneration relief valves, a circuit board or else a pneumatic logic which manages the timing of the cycle.

Adicomp proposes 4 types of adsorption dryers:

- TCD
- DAE
- DA
- TCO

TCD

The TCD series is manufactured with concentric columns instead of parallel, achieving the same efficiency level but reducing space and weight.

The TCD model has been designed for traditional floor-mounted installation, but can also be installed on the wall or horizontally.

REFERENCE CONDITIONS

- ▶ Inlet air at 7 bar and 35°C
- ▶ Dew point under pressure -40°C
- ▶ TCD dryers are supplied as standard with an inlet filter (submicronic) and a final dust filter.



Model	Code	Pressure	Connection	Flow rate	Weight	Width	Depth	Height
		bar	inch	m ³ /h	kg	mm	mm	mm
TCD-0,5S	3000.3006	15	1/4"	3	12	354	240	520
TCD-1S	3000.3010	15	1/4"	6	14	354	240	880
TCD-1,5S	3000.3014	15	3/8"	12	17	354	240	1130
TCD-2S	3000.3018	15	3/8"	18	18	354	240	1235
TCD-3S	3000.3022	15	3/8"	24	20	354	240	1380
TCD-4S	3000.3005	15	1/2"	33	35	461	330	830
TCD-6S	3000.3004	15	1/2"	48	42	461	330	1035
TCD-8S	3000.3037	15	3/4"	65	47	549	330	1225
TCD-11S	3000.3003	15	3/4"	110	58	549	330	1575

Recommended filters	Inlet			outlet	
	pre-filter	microfilter	submicron filter	final dust filter	active carbons filter
	optional	optional	included	included	optional

DAE

DAE is the range of adsorption dryers specific for medium rates (150-480 Nm³/h). In this case the two columns are parallel, made in aluminium to reduce the overall weight.

REFERENCE CONDITIONS

- ▶ Inlet air temperature 35 °C, pressure 7 bar.
- ▶ Pressurised dew point temperature: -40 °C.
- ▶ For other temperature and pressure values, consult the correction factors.



Model	Pressure	Connection	Flow rate	Weight	Width	Depth	Height
	bar	inch	m ³ /h	kg	mm	mm	mm
DAE15S	15	1"	150	180	770	455	1265
DAE18S	15	1"	180	200	770	455	1465
DAE22S	15	1"	210	230	770	455	1665
DAE30S	15	1.1/4"	300	300	1010	580	1270
DAE37S	15	1.1/2"	360	340	1030	580	1420
DAE45S	15	1.1/2"	480	290	1030	580	1670

▶ The standard supply does not include the filters.

DA

The DA range offers the most traditional structure and is suited to high flow rates.

Model	Pressure	Connection	Flow rate	Weight	Width	Depth	Height
	bar	inch	m ³ /h	kg	mm	mm	mm
DA55S	15	2"	600		900	550	1810
DA75S	14	2"	820		1200	800	1970
DA90S	11	3"	1000	700	1200	800	2010
DA110S	11	3"	1200	810	1200	800	2260
DA132S	11	DN80	1500	990	1730	1210	2450
DA160S	11	DN100	1800	1100	1730	1210	2500
DA200S	11	DN100	2100	1450	1730	1210	2750
DA220S	11	DN100	2400	1520	1730	1210	2750
DA250S	11	DN100	2700	1620	1730	1210	3010
DA315S	11	DN100	3300	1700	1730	1210	3260
DA355S	11	DN150	3600	2800	2400	1800	2650
DA450S	11	DN150	4500	3400	2400	1800	2900

i The standard supply does not include the filters.



REFERENCE CONDITIONS

➡ Inlet air at 7 bar and 35°C

💧 Dew point under pressure -40°C

i TCD dryers are supplied as standard with an inlet filter (submicronic) and a final dust filter.

CORRECTION FACTORS

CORRECTION OF INLET FLOW RATE DEPENDING ON DEW POINT AT OUTLET PRESSURE [F _d]							
DewPoint °C	-10°	-20°	-30°	-40°	-50°	-60°	<60°
Factor [F _d]	1,12	1,10	1,04	1,00	0,87	0,70	consult Adicomp
Nominal purge air %	16%						

CORRECTION OF FLOW RATE DEPENDING ON DRYING INLET TEMPERATURE [F _t] (AT CONSTANT PRESSURE)									
Compressed air temperature °C	15°	20°	25°	30°	35°	40°	45°	50°	<50°
Factor [F _t]					1,00	0,80	0,75	0,60	consult Adicomp
Purge air correction factor	consult Adicomp				1,00	1,04	1,10	1,12	consult Adicomp

CORRECTION OF THE INLET FLOW RATE DEPENDING ON SUPPLY PRESSURE [F _p] (AT CONSTANT TEMPERATURE)													
Supply pressure bar _(e)	5,0	5,5	6,0	6,5	7,0	7,5	8,0	8,5	9,0	9,5	10,0	11,0	13,0
Flow rate adjustment factor	0,70	0,74	0,78	0,91	1,00	1,01	1,03	1,12	1,20	1,25	1,30	1,37	1,70
Purge air correction factor	1,35	1,25	1,15	1,09	1,00	0,95	0,89	0,86	0,84	0,82	0,81	0,70	0,65

OILLESS ADSORPTION DRYERS TCO

TCO is the range of oilless adsorption dryers, specific for those applications in which the compressed air must be extremely pure. In these cases the oilless units guarantee compressed air completely without particles, odours, humidity, oil or oily vapours, according to that foreseen by standard ISO 8573.1

i Parametri normativa ISO 8573.1:
 - Residual humidity ≤ 0,5%
 - Oil and oily vapours ≤ 0,003 mg/Nm³
 - Solid particles ≤ 0,1 µ

REFERENCE CONDITIONS

➡ Inlet air at 7 bar and 35°C

💧 Dew point under pressure -40°C

Model	Code	Pressure	Connection	Flow rate	Weight	Width	Depth	Height
		bar	inch	m ³ /h	kg	mm	mm	mm
TCO-0,5S	3000.3008	15	1/4"	3	12	624	240	520
TCO-1S	3000.3016	15	1/4"	6	14	624	240	880
TCO-1,5S	3000.3012	15	3/8"	12	17	624	240	1130
TCO-2S	3000.3020	15	3/8"	18	18	668	240	1235
TCO-3S	3000.3024	15	3/8"	24	20	668	240	1380
TCO-4S	3000.3027	15	1/2"	33	35	775	330	830
TCO-6S	3000.3030	15	1/2"	48	42	775	330	1035
TCO-8S	3000.3034	15	3/4"	65	47	951	330	1225

Recommended filters	Inlet			outlet	
	pre-filter	microfilter	submicron filter	final dust filter	active carbons filter
	optional	optional	included	included	optional



AIR TREATMENT

Catalytic Converter

“Oil free” compressed air is a fundamental requirement of many industrial processes and applications.

The quality of compressed air is determined by the absence of humidity, microorganisms, oil and solid particles.

The “EcoTec” concept surpasses the system for removing oil from compressed air using active carbons.

This new system uses a special converter which transforms the oil, hydrocarbons and other elements in the air into pure water and carbon dioxide.

This takes place by means of a physical-chemical process during which the hydrocarbon molecules are transformed in the “EcoTec” converter.

It also eliminates silicone monomers and reduces the presence of microbes and bacteria.

This renders the compressed air absolutely “oil free” and can be used in all those environments which require class “0” quality CERTIFIED in compliance with standards ISO 8573.1. These include: breathable air, blowers (PET), food and beverage industry, breweries, pharmaceutical industry, pneumatics, dairy industry, semiconductor industry, metalworker industry, mechanical engineering, plastic industry, chemical industry, industrial gases, tobacco processing, textile industry and the paint industry.

Among the advantages of this process, aside from the green aspect, is considerable economical saving as the catalyst material has a long life and waste disposal of the condensate does not require special measures as it is uncontaminated water.

The ETC catalyst converter has the following advantages over a dry compressor:

- Less maintenance required
- Transformation of intake air into compressed air absolutely pure and free of bacteria and microbes.

Dry compressors do not improve air quality which remains contaminated by the polluting substances normally present in the environment.

This type of compressors have formations of fungi and bacteria due to the stagnation of condensate which is normally formed.

AIR TREATMENT

“ETC” system

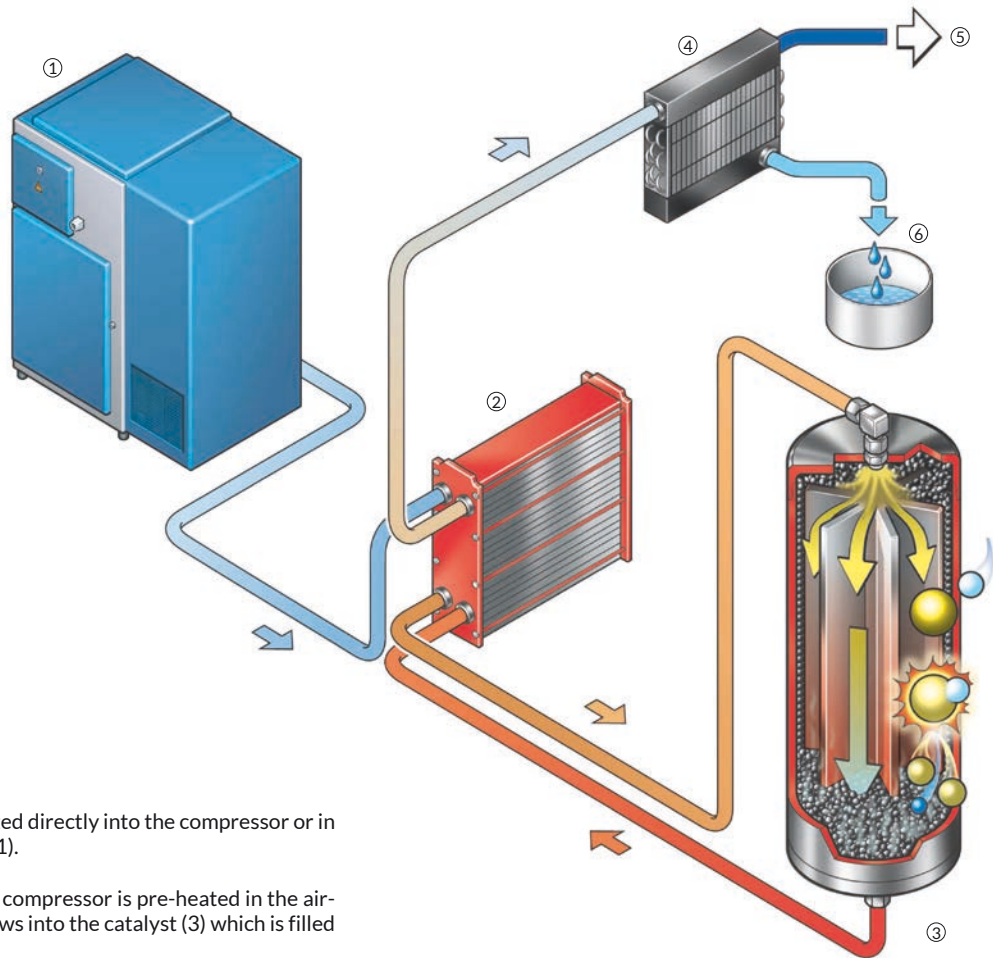


Model	Nominal flow rate at 7 bar Nm ³ /min	Pressure bar	Connection diameter*	Power supply V	Specific consumption during operation kWh/Nm ³	Consumption in reference to the nominal flow rate kWh	Power kW	Weight** kg	Width** mm	Depth** mm	Height** mm
ETC-SV04	0,4	16	15x1,5mm	230	0,01	0,2	1	60	700	340	1400
ETC-SV1	1	16	15x1,5mm	230	0,01	0,5	1,2	140	860	455	1455
ETC-SV2	2	16	28x2mm	230	0,01	1,1	2,5	160	860	4500	1655
ETC-SV5	5	16	35x2mm	400	0,01	2,1	5	360	1175	620	1890
ETC-SV7	7	16	42x2mm	400	0,01	2,5	5	410	1175	620	1890
ETC-SV10	10	16	42x2mm	400	0,01	3	10	590	1630	815	2100
ETC-SV15	15	16	DN 50	400	0,01	4,5	10	770	1630	880	2100
ETC-SV20	20	16	DN 65	400	0,01	6	15	900	1900	1140	2150
ETC-SV30	30	16	DN 65	400	0,01	9	21	1100	1900	1140	2150
ETC-S40	40	16	DN 80	400	0,01	12	28	1500	2200	900	2240
ETC-S50	50	16	DN 100	400	0,01	15	28	1700	2250	900	2240
ETC-MS6	6	45	SU RICHIESTA	230	0,01	SU RICHIESTA	2	220	965	400	1518
ETC-MS12	12	45	SU RICHIESTA	400	0,01	SU RICHIESTA	5	270	965	400	1518

* The connections depend on the options.

** The weight and sizes are intended without the pre-separator, the “VS” module and the particle filter.





- 1 Compressor
- 2 Air-to-air heat exchanger
- 3 Eco Tec converter
- 4 Dryer
- 5 Oil-Free compressed air
- 6 Pure water as condensate

The EcoTec converter can be integrated directly into the compressor or in the compressed air network after it (1).

The compressed air coming from the compressor is pre-heated in the air-to-air heat exchanger (2) and then flows into the catalyst (3) which is filled with granular material.

An electric heater keeps the catalyst at the operating temperature necessary to purify the compressed air.

While air passes through the catalyst, the hydrocarbons contained are catalytically oxidised.

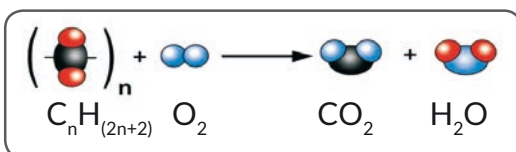
The "purified" compressed air is then cooled by means of the heat exchanger (2).

After the air has passed through the EcoTec converter, the quality of the compressed air (5) greatly exceeds the requirements in compliance with ISO8573.1 Class 1 for hydrocarbon residues (<0.0025 mg/m³).

This high standard level is maintained during the entire life cycle of the catalyst material.

This guarantees the reliability of the processes!

The condensate (6) coming from the dryer (4) is clean and free from oil residues.



AIR TREATMENT

Industrial air filters

Air filters have been introduced to guarantee a constant and appropriate level of purity during the entire air treatment cycle by removing solid particles, dust, water, oil and odours from compressed air in the various industrial applications.

Adicomp proposes two ranges of air filters, the ANF range for pressures up to 16 bar and the AHF range for high pressure.

AIR TREATMENT

ANF

Aluminium filters for compressed air up to 16 bar.

ANF filters are suitable for installations with operating pressure up to 16 bar.

The type of filter is determined by the flow rate, the type of compressed air and the level of purity required.

Six types of cartridges are proposed according to the required filtering degree (B, P, R, M, S and A).

The construction material is corrosion-proof and suitable for most applications.

The standard supply includes the filter body and the cartridge.

A wide range of pressure gauges and condensate dischargers are available optionally according to requirements.



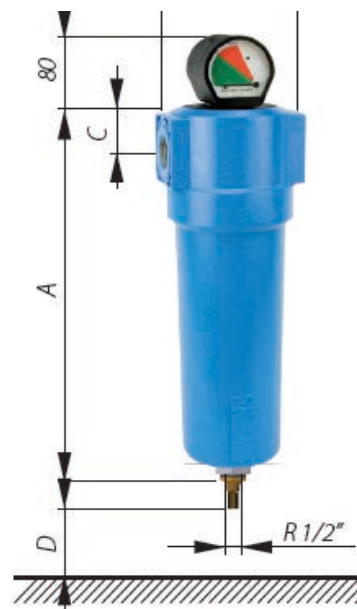
REFERENCE CONDITIONS



Air pressure limit at 16 Bar



Working temperature from 1.5 °C to 65°C



"B" series - sintered 15 µm

Model	Connection	Flow rate Nm ³ /h	Weight kg	Dimensions (mm)			
	inch			A	B	C	D
ANF005B	3/8"	60	0,7	187	88	20	60
ANF007B	1/2"	78	0,7	187	88	20	60
ANF010B	3/4"	120	0,8	257	88	20	80
ANF018B	1"	198	1,8	263	125	32	100
ANF030B	1"	335	2,5	363	125	32	120
ANF047B	1 1/2"	510	2,5	461	125	32	140
ANF070B	1 1/2"	780	3,2	640	125	32	160
ANF094B	2"	1000	5,1	684	163	43	520
ANF150B	2"	1500	7,1	935	163	43	770
ANF175B	2 1/2"	1680	6,9	935	163	43	770
ANF200B	3"	2160	12,9	795	240	59	630
ANF240B	3"	2760	14	1000	240	59	780

Cartridge number	Code
06050	4040.0012
07050	4040.0004
14050	4040.0014
12075	4040.0011
22075	4040.0007
32075	4040.0018
50075	4040.0024
51090	4040.0028
76090	4040.0033
76090	4040.0070
51140	4040.0123
75140	4040.0040

"P" series - prefilter 3 µm

Model	Connection	Flow rate Nm ³ /h	Weight kg	Dimensions (mm)			
	inch			A	B	C	D
ANF005P	3/8"	60	0,7	187	88	20	60
ANF007P	1/2"	78	0,7	187	88	20	60
ANF010P	3/4"	120	0,8	257	88	20	80
ANF018P	1"	198	1,8	263	125	32	100
ANF030P	1"	335	2,5	363	125	32	120
ANF047P	1 1/2"	510	2,5	461	125	32	140
ANF070P	1 1/2"	780	3,2	640	125	32	160
ANF094P	2"	1000	5,1	684	163	43	520
ANF150P	2"	1500	7,1	935	163	43	770
ANF175P	2 1/2"	1680	6,9	935	163	43	770
ANF200P	3"	2160	12,9	795	240	59	630
ANF240P	3"	2760	14	1000	240	59	780

Cartridge number	Code
06050	4040.0016
07050	4040.0003
14050	4040.0019
12075	4040.0010
22075	4040.0026
32075	4040.0017
50075	4040.0034
51090	4040.0027
76090	4040.0037
76090	4040.0072
51140	4040.0121
75140	4040.0051



"R" series - prefilter 1 µm

Model	Connection	Flow rate	Weight	Dimensions (mm)			
	inch	Nm ³ /h	kg	A	B	C	D
ANF005R	3/8"	60	0,7	187	88	20	60
ANF007R	1/2"	78	0,7	187	88	20	60
ANF010R	3/4"	120	0,8	257	88	20	80
ANF018R	1"	198	1,8	263	125	32	100
ANF030R	1"	335	2,5	363	125	32	120
ANF047R	1 1/2"	510	2,5	461	125	32	140
ANF070R	1 1/2"	780	3,2	640	125	32	160
ANF094R	2"	1000	5,1	684	163	43	520
ANF150R	2"	1500	7,1	935	163	43	770
ANF175R	2 1/2"	1680	6,9	935	163	43	770
ANF200R	3"	2160	12,9	795	240	59	630
ANF240R	3"	2760	14	1000	240	59	780

Cartridge number	Code
06050	4040.0131
07050	4040.0067
14050	4040.0075
12075	4040.0076
22075	4040.0058
32075	4040.0068
50075	4040.0087
51090	4040.0092
76090	4040.0130
76090	4040.0129
51140	4040.0122
75140	4040.0059

"M" series - microfilter 0,1 µm

Model	Connection	Flow rate	Weight	Dimensions (mm)			
	inch	Nm ³ /h	kg	A	B	C	D
ANF005M	3/8"	60	0,7	187	88	20	60
ANF007M	1/2"	78	0,7	187	88	20	60
ANF010M	3/4"	120	0,8	257	88	20	80
ANF018M	1"	198	1,8	263	125	32	100
ANF030M	1"	335	2,5	363	125	32	120
ANF047M	1 1/2"	510	2,5	461	125	32	140
ANF070M	1 1/2"	780	3,2	640	125	32	160
ANF094M	2"	1000	5,1	684	163	43	520
ANF150M	2"	1500	7,1	935	163	43	770
ANF175M	2 1/2"	1680	6,9	935	163	43	770
ANF200M	3"	2160	12,9	795	240	59	630
ANF240M	3"	2760	14	1000	240	59	780

Cartridge number	Code
06050	4040.0012
07050	4040.0004
14050	4040.0014
12075	4040.0011
22075	4040.0007
32075	4040.0018
50075	4040.0024
51090	4040.0028
76090	4040.0033
76090	4040.0070
51140	4040.0123
75140	4040.0040

"S" series - microfilter 0,01 µm

Model	Connection	Flow rate	Weight	Dimensions (mm)			
	inch	Nm ³ /h	kg	A	B	C	D
ANF005S	3/8"	60	0,7	187	88	20	60
ANF007S	1/2"	78	0,7	187	88	20	60
ANF010S	3/4"	120	0,8	257	88	20	80
ANF018S	1"	198	1,8	263	125	32	100
ANF030S	1"	335	2,5	363	125	32	120
ANF047S	1 1/2"	510	2,5	461	125	32	140
ANF070S	1 1/2"	780	3,2	640	125	32	160
ANF094S	2"	1000	5,1	684	163	43	520
ANF150S	2"	1500	7,1	935	163	43	770
ANF175S	2 1/2"	1680	6,9	935	163	43	770
ANF200S	3"	2160	12,9	795	240	59	630
ANF240S	3"	2760	14	1000	240	59	780

Cartridge number	Code
06050	4040.0012
07050	4040.0004
14050	4040.0014
12075	4040.0011
22075	4040.0007
32075	4040.0018
50075	4040.0024
51090	4040.0028
76090	4040.0033
76090	4040.0070
51140	4040.0123
75140	4040.0040

"A" series - active carbon

Model	Connection	Flow rate	Weight	Dimensions (mm)			
	inch	Nm ³ /h	kg	A	B	C	D
ANF005A	3/8"	60	0,7	187	88	20	60
ANF007A	1/2"	78	0,7	187	88	20	60
ANF010A	3/4"	120	0,8	257	88	20	80
ANF018A	1"	198	1,8	263	125	32	100
ANF030A	1"	335	2,5	363	125	32	120
ANF047A	1 1/2"	510	2,5	461	125	32	140
ANF070A	1 1/2"	780	3,2	640	125	32	160
ANF094A	2"	1000	5,1	684	163	43	520
ANF150A	2"	1500	7,1	935	163	43	770
ANF175A	2 1/2"	1680	6,9	935	163	43	770
ANF200A	3"	2160	12,9	795	240	59	630
ANF240A	3"	2760	14	1000	240	59	780

Cartridge number	Code
06050	4040.0012
07050	4040.0004
14050	4040.0014
12075	4040.0011
22075	4040.0007
32075	4040.0018
50075	4040.0024
51090	4040.0028
76090	4040.0033
76090	4040.0070
51140	4040.0123
75140	4040.0040

AIR TREATMENT

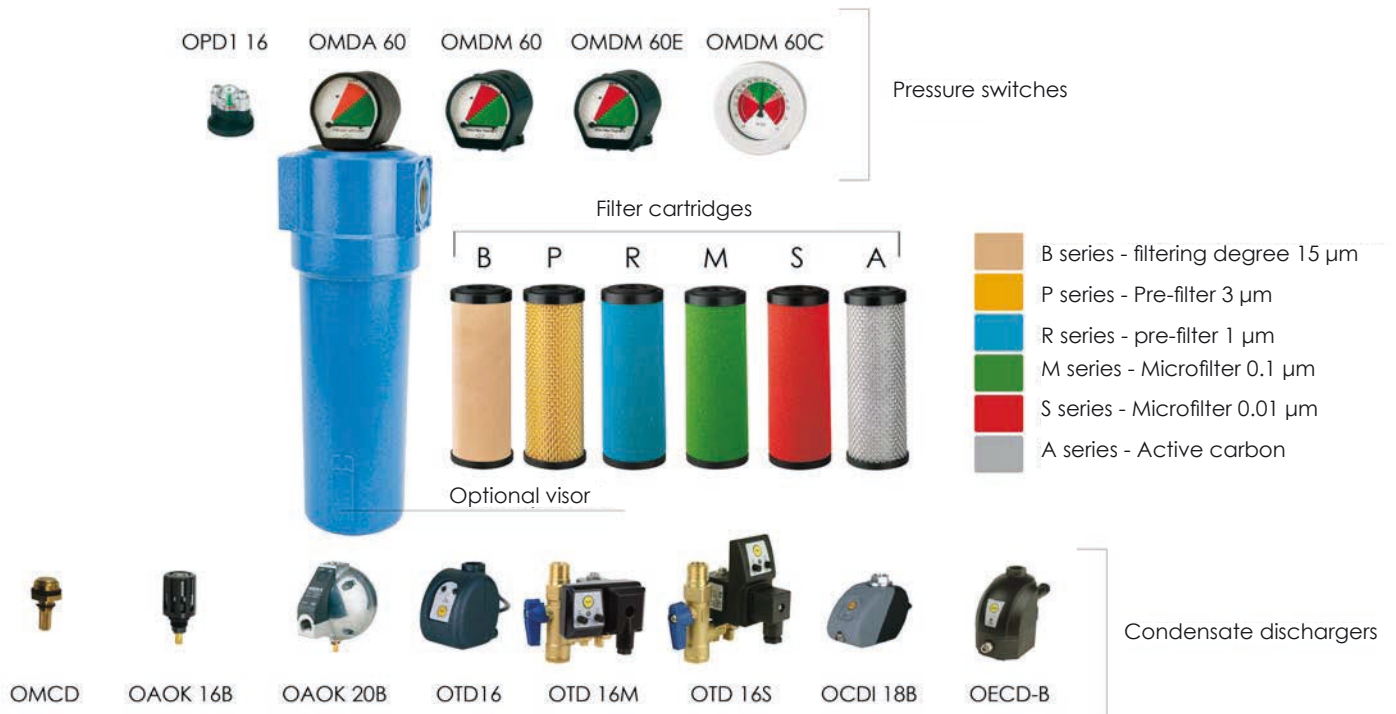
TECHNICAL REFERENCES

filter	B	P	R	M	S	A
solid particle size purification: down to	15 microns	3 microns	1 micron	0,1 micron	0,01 micron	-
quality class - solids (ISO 8573-1)	4	3	2	1	1	-
residual oil content [mg/m3 / ppm]	-	-	-	0,1/0,08	0,01/0,01	0,005/0,005
quality class - oils (ISO 8573-1)	-	-	-	2	1	1
pressure drop - new element [mbar / psi]	30/0,43	40/0,58	<50/0,72	<80/1,16	120/1,74	<90/1,3
change filter cartridge at pressure drop [mbar / psi]	600/8,7	600/8,7	600/8,7	600/8,7	600/8,7	*6 months
filter material	sintered brass	acrile fibres, cellulose		borosilicate micro fibres		active carbon
min. operating temperature (°C/°F)	1,5/35	1,5/35	1,5/35	1,5/35	1,5/35	1,5/35
max. operating temperature (°C/°F)	65/149	65/149	65/149	65/149	65/149	45/113

*Filter elements "A" must be changed periodically to suit application but at least every 6 months. Activated carbon filters must not operate in oil saturated conditions.

CORRECTION FACTORS

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Operating pressure (bar)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Operating pressure (psi)	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction factor	0,38	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13



DIFFERENTIAL PRESSURE INDICATORS & GAUGES

Model	Code	Description	Max pressure	Corresponding to filters
			bar	
OPDI 16	5730.0057	Red/green pressure drop indicator	16	ANF005 to ANF240
OMDA 60	5730.0001	Aluminium pressure drop indicator	20	ANF005 to ANF240
OMDM 60	5730.0034	Magnetic pressure drop indicator	16	ANF005 to ANF240
OMDM 60E	5730.0058	Magnetic pressure drop indicator with led	16	ANF005 to ANF240
OMDM 60C	5730.0059	Magnetic pressure drop indicator with led for remote alarm	16	ANF005 to ANF240

CONDENSATE DRAINERS

Model	Code	Description	Max pressure	Corresponding to filters
			bar	
OMCD	5750.0006	Mechanical volume controlled	20	ANF005 to ANF240
OAOK 16B	5750.0003	Machanical automatic	16	ANF005 to ANF240
OAOK 20B	5750.0036	Machanical automatic	20	ANF005 to ANF240
OTD 16	5750.0038	Electronic timer controlled	16	ANF005 to ANF240
OTD 16M	5750.0039	Electronic timer controlled	16	ANF005 to ANF240
OTD 16S	5750.0040	Electronic timer controlled	16	ANF005 to ANF240
OCDI 16B	5750.0041	Electronic volume controlled	16	ANF005 to ANF240
OECD 15B	5750.0042	Electronic volume controlled	16	ANF005 to ANF240
OECD 40B	5750.0043	Electronic volume controlled	16	ANF005 to ANF240
OECD 90B	5750.0044	Electronic volume controlled	16	ANF005 to ANF240

ACCESSORIES FOR CONDENSATE DRAINERS

Model	Code	Corresponding to filters
OAOK 20B Nipple	5750.0037	VENT NIPPLE FOR AOK20B
OSG - Sight Glass	5750.0046	ANF005 to ANF240
OWS - Wall Assembly Kit	5750.0047	ANF005 to ANF010
OWM - Wall Assembly Kit	5750.0048	ANF018 to ANF070
O2S - Assembled Kits	5750.0049	ANF005 to ANF010
O3S - Assembled Kits	5750.0050	ANF005 to ANF010
O2M - Assembled Kits	5750.0051	ANF018 to ANF070
O3M - Assembled Kits	5750.0052	ANF018 to ANF070
OAKS - Wall assembly kit	5750.0053	ANF018 to ANF070
OAKM - Wall assembly kit	5750.0054	ANF018 to ANF070
OAK Console	5750.0055	ANF018 to ANF070

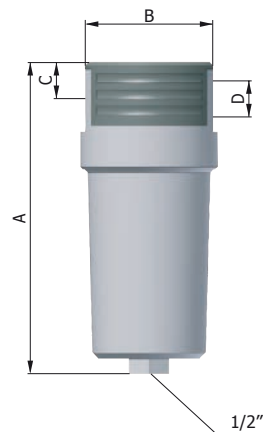
AIR TREATMENT

AHF

Aluminium filters for high pressure up to 50 bar.

AHF filters are used in all those industrial applications which operate at high pressure up to 50 bar. These filters are made of extremely resistant aluminium and the containers are painted with a special powder resistant to corrosion and abrasions. The type of filter and cartridge are determined by the flow rate, the type of compressed air and the level of purity required. Six types of cartridges are proposed according to the required filtering degree (B, P, R, M, S and A).

AHF filters are supplied with the body and cartridge. In addition, you may request a particular differential pressure switch (OMDH 50) and two different condensate discharger models (OTD 150M, OTD 150S).



REFERENCE CONDITIONS



Air pressure limit 50 bar.



Working temperature from 1.5 °C to 65 °C.

"B" series - sintered 15 µm

Model	Connection	Flow rate Nm ³ /h	Weight kg	Dimensions (mm)		
	inch			A	B	C
AHF007B	1/2"	71	2,1	250	110	30
AHF010B	3/4"	112	2,1	250	110	30
AHF018B	1"	204	2,1	250	110	30
AHF047B	1 1/2"	282	9,5	353	160	45
AHF070B	1 1/2"	400	9,5	353	160	45
AHF094B	2"	494	12,2	715	160	45
AHF150B	2"	799	12,2	715	160	45

Cartridge number	Code
HF6060	4040.3001
HF7060	4040.3002
HF12060	4040.3003
HF22090	4040.3004
HF32090	4040.3005
HF50090	4040.3006
HF51090	4040.3007

"P" series - prefilter 3 µm

Model	Connection	Flow rate Nm ³ /h	Weight kg	Dimensions (mm)		
	inch			A	B	C
AHF007P	1/2"	71	2,1	250	110	30
AHF010P	3/4"	112	2,1	250	110	30
AHF018P	1"	204	2,1	250	110	30
AHF047P	1 1/2"	282	9,5	353	160	45
AHF070P	1 1/2"	400	9,5	353	160	45
AHF094P	2"	494	12,2	715	160	45
AHF150P	2"	799	12,2	715	160	45

Cartridge number	Code
HF6060	4040.3001
HF7060	4040.3002
HF12060	4040.3003
HF22090	4040.3004
HF32090	4040.3005
HF50090	4040.3006
HF51090	4040.3007

"R" series - prefilter 1 µm

Model	Connection	Flow rate Nm ³ /h	Weight kg	Dimensions (mm)		
	inch			A	B	C
AHF007R	1/2"	71	2,1	250	110	30
AHF010R	3/4"	112	2,1	250	110	30
AHF018R	1"	204	2,1	250	110	30
AHF047R	1 1/2"	282	9,5	353	160	45
AHF070R	1 1/2"	400	9,5	353	160	45
AHF094R	2"	494	12,2	715	160	45
AHF150R	2"	799	12,2	715	160	45

Cartridge number	Code
HF6060	4040.3001
HF7060	4040.3002
HF12060	4040.3003
HF22090	4040.3004
HF32090	4040.3005
HF50090	4040.3006
HF51090	4040.3007

"M" series - microfilter 0,1 µm

Model	Connection	Flow rate Nm ³ /h	Weight kg	Dimensions (mm)		
	inch			A	B	C
AHF007M	1/2"	71	2,1	250	110	30
AHF010M	3/4"	112	2,1	250	110	30
AHF018M	1"	204	2,1	250	110	30
AHF047M	1 1/2"	282	9,5	353	160	45
AHF070M	1 1/2"	400	9,5	353	160	45
AHF094M	2"	494	12,2	715	160	45
AHF150M	2"	799	12,2	715	160	45

Cartridge number	Code
HF6060	4040.3001
HF7060	4040.3002
HF12060	4040.3003
HF22090	4040.3004
HF32090	4040.3005
HF50090	4040.3006
HF51090	4040.3007

"S" series - microprefilter 0,01 μ m

Model	Connection	Flow rate	Weight	Dimensions (mm)		
	inch	Nm ³ /h	kg	A	B	C
AHF007S	1/2"	71	2,1	250	110	30
AHF010S	3/4"	112	2,1	250	110	30
AHF018S	1"	204	2,1	250	110	30
AHF047S	1 1/2"	282	9,5	353	160	45
AHF070S	1 1/2"	400	9,5	353	160	45
AHF094S	2"	494	12,2	715	160	45
AHF150S	2"	799	12,2	715	160	45

Cartridge number	Code
HF6060	4040.3001
HF7060	4040.3002
HF12060	4040.3003
HF22090	4040.3004
HF32090	4040.3005
HF50090	4040.3006
HF51090	4040.3007

"A" series - active carbon

Model	Connection	Flow rate	Weight	Dimensions (mm)		
	inch	Nm ³ /h	kg	A	B	C
AHF007A	1/2"	71	2,1	250	110	30
AHF010A	3/4"	112	2,1	250	110	30
AHF018A	1"	204	2,1	250	110	30
AHF047A	1 1/2"	282	9,5	353	160	45
AHF070A	1 1/2"	400	9,5	353	160	45
AHF094A	2"	494	12,2	715	160	45
AHF150A	2"	799	12,2	715	160	45

Cartridge number	Code
HF6060	4040.3001
HF7060	4040.3002
HF12060	4040.3003
HF22090	4040.3004
HF32090	4040.3005
HF50090	4040.3006
HF51090	4040.3007

TECHNICAL FEATURES

Filter	B	P	R	M	S	A
Solid particules removal	15 microns	3 microns	1 micron	0,1 micron	0,01 micron	-
Class - solid (ISO 8573-1)	4	3	2	1	1	-
Residual oil content [mg/m ³ / ppm]	-	-	-	0,1/0,08	0,01/0,01	0,005/0,005
Class - oil (ISO 8573-1)	-	-	-	2	1	1
Pressure drop (new cartridge)	30/0,43	40/0,58	<50/0,72	<80/1,16	120/1,74	<90/1,3
Replace the filter cartridge at maximum pressure drop of [mbar / psi]	600/8,7	600/8,7	600/8,7	600/8,7	600/8,7	*6 months
Filter material	sintered brass	acrylic fibers		borosilicate microfibers		active carbon

*Filter elements "A" must be changed periodically to suit application but at least every 6 months. Activated carbon filters must not operate in oil saturated conditions.

CORRECTION FACTORS

Operating pressure (bar)	3	5	7	10	13	16	20	30	40	50
Operating pressure (psi)	44	72	100	145	189	232	290	435	580	725
Correction factor	0,50	0,75	1,00	1,38	1,75	2,13	2,63	3,88	5,13	6,38

OMDH 50



Pressure switch



DIFFERENTIAL PRESSURE GAUGES

Model	Code	Fit to filters
OMDH 50	5730.0056	AHF007 to AHF150



Condensate dischargers

CONDENSATE DRAINERS

Model	Code	Description	Fit to filters
OTD 150M	5750.0034	Electronic timer controlled	AHF007 to AHF150
OTD 150S	5750.0035	Electronic timer controlled	AHF007 to AHF150

AIR TREATMENT



Oil/water separators

As is known, the air compression process generates a large amount of condensation mixed with oily residue. Current standards establish that water drained into the sewer system must not contain more than 5 mg/l of oil.

Water-oil separators are used to limit the oil levels within the parameters intended by the standard and to obtain automatic separation of water and oil.

Oil/water separators

The separator 3.5 is suitable for all compressors with a flow rate up to 3.5 m³/min.

Features:

- Separation of all types of lubricants.
- Compatible with any condensate discharger model.
- Compact design

Advantages:

- Easy maintenance
- "Clothing kit" included
- "Test kit" included

For compressors of a higher flow rate, Adicomp proposes separators 10, 20 and 30 suitable for compressors with flow rate up to 10, 20 and 30 m³/min respectively.

The filtered oil from the condensate introduced into the separator passes through various filtering elements.

The first oil adsorption element is characterised by a smart saturation and operating status control system even at a distance. The parts were designed to combine the various types of adsorption in order to achieve an oil concentration level at the outlet of less than 10 ppm.

In particular, the final separation stage contains active carbons to eliminate residual contaminants.

Features:

- Separation of all types of lubricants and stable emulsifiers.
- Compatible with most condensate dischargers.

Advantages:

- Display of the state of wear.
- Maintenance parts easy to replace.
- Multiple inlets and outlets.
- 1" outlet.
- Alarm indicator.
- Simple maintenance and installation procedures.



Model	Code	Inlet connection inch	Outlet connection inch	Flow rate m ³ /min	Width mm	Depth mm	Height mm
OIL/WATER SEPARATOR 3,5	SAO3,5	1/2"	1/2"	3,5	395	210	385
OIL/WATER SEPARATOR 10	SAO10	1"	1/2"	10	970	240	750
OIL/WATER SEPARATOR 20	SAO20	1"	1/2"	20	780	305	900
OIL/WATER SEPARATOR 30	SAO30	1"	1/2"	30	970	380	900

Distributor block

The distributor block sends condensate to several oil/water separators. It is especially suited for large size compressors with a capacity beyond 30 m³/min.



i ACCESSORIES INCLUDED
 Wall fixing brackets.
 Fixing plugs and screws
 Level.

Model	Code	Inlet connection	Outlet connection	Flow rate	Width	Depth	Height
		inch	inch	m ³ /min	mm	mm	mm
DISTRIBUTOR 30	SAO D30	1/2"	1/2"	700	270	300	350,00

SERVICE PACKS FOR OIL / WATER SEPARATORS 3,5 - 10 - 20 - 30

Model	Code	Including
Service pack for the OIL/WATER SEPARATOR 3,5	SAO3,5 SP	Three elements Plastic waste bags for saturated elements Clothing kit (mouth mask, plastic gloves, plastic overall)
Service pack for the OIL/WATER SEPARATOR 10	SAO10 SP	Three elements Plastic waste bags for saturated elements Clothing kit (mouth mask, plastic gloves, plastic overall)
Service pack for the OIL/WATER SEPARATOR 20	SAO20 SP	Three elements Plastic waste bags for saturated elements Clothing kit (mouth mask, plastic gloves, plastic overall)
Service pack for the OIL/WATER SEPARATOR 30	SAO30 SP	Three elements Plastic waste bags for saturated elements Clothing kit (mouth mask, plastic gloves, plastic overall)

ACCESSORIES FOR OIL / WATER SEPARATORS 3,5 - 10 - 20 - 30



Model	Code
Multi inlet adapter allows for up to three additional condensate options (3xG1/2)	SAO IA
Test kit containing bottle and container	SAO TK
Clothing kit (includes: breathing mask, overall and gloves)	SAO CK
Wall mounting bracket set for the separator 3,5	SAO3,5 WM

AIR TREATMENT



Accessories

CONDENSATE DISCHARGERS

PRESSURE GAUGE

ACTIVE CARBON COLUMNS

Condensate dischargers

The separate condensate which accumulates downstream must be continuously eliminated to prevent the compressed air flow from flowing back into the pipes.

Adicomp proposes two types of condensate dischargers:

- Mechanical
- Capacitive

Knowing their relative features allows you to make the right choice based on the type of application.

MECHANICAL CONDENSATE DISCHARGERS

Mechanical condensate dischargers consist of an aluminium body containing a discharge system moved by a stainless steel flow. There is also a manual discharge valve.

The graph to the side in fig. 1 shows the discharge capacity.

With the orifice closed, the floating thrust less than the sum of the forces provided by the weight and pressure difference on the shutter. When the floating thrust increases, the float rises and opens the discharge orifice. The float can go back to the orifice closed position only when the condensate level decreases (fig. 2).

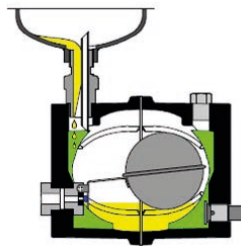


fig. 1

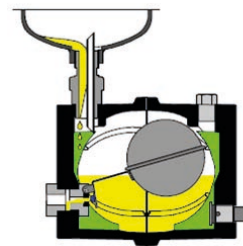
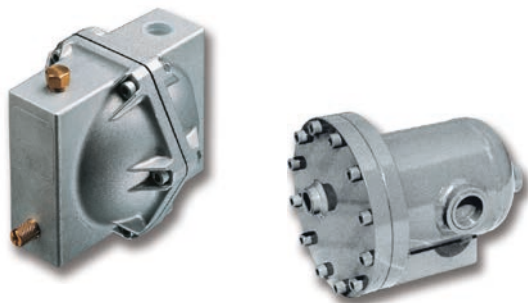


fig. 2



Model	Code	Pressure bar	Connections (inch)		Flow m ³ /h	Weight kg
			in	out		
CDF2050	5750.0001	20	1/2" BSP	3/8" F	17400	1,2
SCM40	5750.0007	40	1" BSP	1/2" BSP	90000	7,1

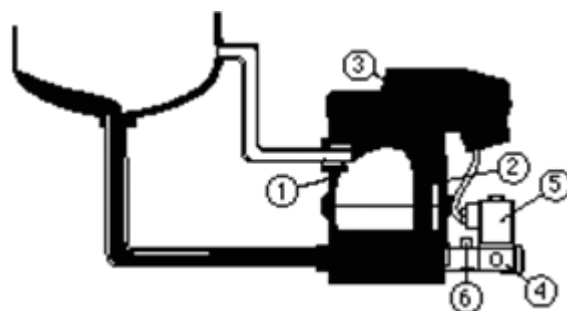
i The price of the discharger includes the nipple.
The single discharger, without nipple, is available on request.

CAPACITIVE CONDENSATE DISCHARGERS

This type of dischargers consists of an aluminium body (1), a capacitive level sensor (2) connected to an electronic controller (3) which continuously monitors the condensate level.

The discharger operates on two levels: when the level of the condensate reaches the limit, it passes through a stainless steel filter (4) and is discharged by a solenoid valve (5) which closes when the condensate reaches the minimum level.

The manual controller (6) quickly and periodically controls the filter. Furthermore, if any problems occur during the discharge cycle causing the condensate to remain at the maximum level, an alarm is triggered signalling the fault..



Model	Code	Note	Pressure bar	Power supply V/Ph/Hz	Connections (inch)		Flow m ³ /h	Weight kg
					in	out		
CDE2050/230	5750.0005	Materials: Aluminium	20	230/1/50-60	1/2" BSP	1/4" BSP	4500	1,8
CDE2050/115	5750.0009	Materials: Aluminium	20	115/1/50-60	1/2" BSP	1/4" BSP	4500	1,8
CDE2050/24	5750.0008	Materials: Aluminium	20	24/1/50-60	1/2" BSP	1/4" BSP	4500	1,8

Pressure gauge



STANDARD PRESSURE SWITCHES



PRESSURE SWITCHES FOR HIGH PRESSURE

Model	Description	€
5720.0008	4-way bi-pole pressure switch - 10 bar	38,79
5720.0021	1-way three-pole pressure switch - 10 bar	40,00
5720.0007	4-way three-pole pressure switch - 10 bar	43,64
5720.0006	Pressure switch 2,5 - 4 A - 10 bar	123,64
5720.0004	Pressure switch 4 - 6,3 A - 10 bar	123,64
5720.0002	Pressure switch 6,3 - 10 A - 10 bar	123,64
5720.0003	Pressure switch 10 - 16 A - 10 bar	123,64
5720.0009	Pressure switch 16 - 20 A - 10 bar	128,48
5720.0001	Danfoss pressure switch KP 36 - 14 bar	139,39

Model	Description	€
5720.0011	Danfoss pressure switch KP 5 - 31 bar	181,82
5720.0016	Danfoss pressure switch KPS 47 - 60 bar	549,09
5720.0021	1-way three-pole pressure switch - 16 bar	82,42
5720.0029	Condor pressure switch MDR3/16 - 20 bar 2,5-4 A	157,58
5720.0030	Condor pressure switch MDR3/16 - 20 bar 4-6,3 A	157,58
5720.0031	Condor pressure switch MDR3/16 - 20 bar 6,3-10 A	157,58
5720.0026	Condor pressure switch MDR3/16 - 20 bar 10-16 A	157,58
5720.0027	Condor pressure switch MDR3/16 - 20 bar 16-20 A	157,58
5720.0028	Condor pressure switch MDR3/16 - 20 bar 20-24 A	157,58

Active carbon columns

The function of the active carbon columns is to remove almost completely the oily vapor present in the compressed gas and air up to a residue value of oil and volatile hydrocarbons lower than 0.003 mg/m³ (at 20 °C), well below the class 1 parameters contemplated in regulation ISO8573-1.

All of the columns are equipped with an inlet coalescence submicrofilter to protect the carbon from the oily residues, while there is a dust filter at the outlet to eliminate any solid residues. This considerably extends the duration of the carbon load. Generally the application of active carbon columns involves the food, pharmaceutical, hospital, chemical and electronic industries.



REFERENCE CONDITIONS:

- ▶ Inlet air temperature at 35°C
- ▶ Inlet air pressure at 7.5 Bar
- ▶ Pressurised dew point temperature ≤ +3 °C



The inlet and outlet filters are supplied as per standard. The filters are necessary.

The carbons must be replaced periodically every 8000 hours of work.

Model	Power supply	Flow	Active carbon	Width	Depth	Height
	Ph/V//Hz	Sm ³ /h	kg	mm	mm	mm
AC1	1/4	6	2	354	240	880
AC1,5	3/8	12	3	354	240	1130
AC2	3/8	18	3,5	354	240	1235
AC3	3/8	24	4	354	240	1380
AC4	1/2	33	5	461	330	830
AC6	1/2	48	7	461	330	1035
AC8	3/4	65	10	549	330	1225
AC11	3/4	110	12	549	330	1575
AC15	1	150	13	546	313	1220
AC18	1	180	16	546	313	1323
AC22	1	210	19	546	313	1523
AC30	1 1/4	300	28	644	450	1099
AC37	1 1/2	360	33	644	450	1249
AC45	1 1/2	480	42	644	450	1499
AC55	2	600	52	730	490	1765
AC75	2 1/2	820	80	950	580	1945
AC90	3	1000	95	950	580	2345
AC110	3	1200	110	950	580	2345
AC132	3	1500	130	1010	580	2605

AIR TREATMENT

Compressed air tanks

The air tanks have the following functions:

- keep the pressure in the system constant;
- collect compressed air to compensate peaks which exceed the compressor flow rate;
- further cool the air and collect condensation and traces of oil, thus facilitating the downstream air treatment process;
- prevent the compressor from filling and emptying too frequently.
- Adicomp proposes tanks suitable to store standard or high pressure compressed air.

The tanks are available in horizontal epoxy powder painted versions (only for standard conditions) and upright versions, again with painted finish or hot-dipped galvanised according to requirements.

Kits are coupled to the tanks according to the type, including safety pressure valve, pressure gauge, manual discharge valve and pressure gauge carrier flange.

These ranges include tanks with capacities ranging from 50 l to 3000 l and refer to standards EC 105/2009, EC 87/400 and EC 97/23 PED.

Standard tanks

UPRIGHT PAINTED TANKS

Model	Tank lt	Pressure bar	Connections mm	Regulation	Accessory kit code	Weight kg	Height mm
SERB50/1	50	11	ON REQU.	CE 105/2009	8865.0024	19	ON REQU.
SERB100/1	100	11	370	CE 105/2009	8865.0024	29	1156
SERB150/1	150	11	396	CE 105/2009	8865.0024	44	1430
SERB200/1	200	11	446	CE 105/2009	8865.0024	55	1554
SERB270/1	270	11	500	CE 105/2009	8865.0024	67	1648
SERB500/1	500	11	600	CE 105/2009	8865.0024	115	2050
SERB700/1	725	10,8	790	CE 105/2009	8865.0003	167	1820
SERB1000/1P	1000	11,5	790	CE 97/23 PED	8865.0007	204	2310
3020.3054	1500	11,5	1000	CE 97/23 PED	8865.0007	278	2270
SERB2000/1P	2000	11,5	1000	CE 97/23 PED	8865.0007	352	2770
SERB3000/1P	3000	11,5	1200	CE 97/23 PED	8865.0007	537	2930



CE-PED

UPRIGHT GALVANISED TANKS

Model	Tank lt	Pressure bar	Connections mm	Regulation	Accessory kit code	Weight kg	Height mm
SERB200/1Z	200	11	446	CE 105/2009	8865.0024	57	1554
SERB270/1Z	270	11	500	CE 105/2009	8865.0024	70	1648
SERB500/1Z	500	11	600	CE 105/2009	8865.0024	130	2077
SERB700/1Z	725	10,8	790	CE 105/2009	8865.0003	167	1863
SERB1000/1Z	1000	11,5	790	CE 97/23 PED	8865.0007	204	2310
SERB1500/1PZ	1500	11,5	1000	CE 97/23 PED	8865.0007	278	2270
SERB2000/1PZ	2000	11,5	1000	CE 97/23 PED	8865.0007	352	2770
3020.3055	3000	11,5	1200	CE 97/23 PED	8865.0007	537	2930



CE-PED

HORIZONTAL PAINTED TANKS

Model	Tank lt	Pressure bar	Connections mm	Regulation	Accessory kit code	Weight kg	Height mm
3020.3118	270	11	500	CE 105/2009 and CE 97/23 PED	8865.0024	67	1458
SERB500/2 BP	500	11	600	CE 105/2009 and CE 97/23 PED	8865.0024	130	1858
SERB720/2 BP	720	11	750	CE 105/2009 and CE 97/23 PED	8865.0024	178	1850
SERB900/2 BP	900	11	800	CE 105/2009 and CE 97/23 PED	8865.0024	194	1960
SERB1000/2 BP	1000	12	800	CE 105/2009 and CE 97/23 PED	8865.0025	210	2158

i **Painted tanks:** inside unfinished, outside with sand-blasting treatment SA2,5 and painted blue RAL 5015.

Galvanised tanks: inside and outside galvanised

i All the tanks are supplied wrapped in protective nylon.



ACCESSORIES FOR STANDARD TANKS

Code	Pressure	Include
8865.0003	10,8 bar	Safety valve G 3/8" CE
		Manometer Ø 63 mm e G 1/4"
8865.0024	11 bar	Safety valve G 1/2" CE
		Manometer Ø 63 mm e G 1/4"
8865.0007	11,5 bar	Safety valve G 1" CE
		Manometer Ø 63 mm e G 1/4"
		Manual drain valve
		Manometer control flange
8865.0025	12 bar	Safety valve G 3/4" CE/PED
		Manometer Ø 63 mm e G 1/4"
		Ball valve 1/2"
		Flange for manometer G 1/2"

Painted tanks: inside unfinished, outside with sand-blasting treatment SA2,5 and painted blue RAL 5015.

Galvanised tanks: inside and outside galvanised.

The accessory kit includes: safety pressure valve, pressure gage, manual discharger and flange.

HIGH PRESSURE KIT

Code	Pressure
8865.0008	16 bar
8865.0009	21 bar
8865.0011	30 bar
8865.0010	32 bar
8865.0006	42 bar
8865.0026	48 bar

High pressure tanks

Painted version	Galvanised version	Tank	Pressure	Connections	Regulation	Weight	Height
Code	Code	lt	bar	inch		kg	mm
3020.3006	3020.3147	500	16	G 2"	CE 87/404	160	2120
3020.3005	3020.3012	1000	16	G 1"1/4	CE 97/23 PED	280	2365
3020.3127	3020.3148	1500	16	G 1"1/4	CE 97/23 PED	405	2430
3020.3051	3020.3062	2000	16	G 1"1/4	CE 97/23 PED	490	2810
3020.3122	3020.3149	3000	16	G 1"1/4	CE 97/23 PED	620	2930
3020.3128	3020.3150	4000	16	G 1"1/4	CE 97/23 PED	905	3110
3020.3129	3020.3151	5000	16	G 1"1/4	CE 97/23 PED	1055	3610
3020.3130	3020.3152	475	21	G 2"	CE 87/404	190	2135
3020.3003	3020.3068	1000	21	G 1"1/4	CE 97/23 PED	445	2385
3020.3131	3020.3153	1500	21	G 1"1/4	CE 105/2009	555	2470
3020.3069	3020.3070	2000	21	G 1"1/4	CE 97/23 PED	615	2810
3020.3132	3020.3154	3000	21	G 1"1/4	CE 97/23 PED	855	2950
3020.3098	3020.3155	4000	21	G 1"1/4	CE 97/23 PED	1310	3130
3020.3133	3020.3156	5000	21	G 1"1/4	CE 97/23 PED	1505	3630
3020.3119	3020.3157	3000	30	G 1"1/4	CE 97/23 PED	1170	2950
3020.3134	3020.3158	4000	30	G 1"1/4	CE 97/23 PED	1700	3130
3020.3135	3020.3159	5000	30	G 1"1/4	CE 97/23 PED	1950	3630
3020.3136	3020.3160	500	32	G 1"1/4	CE 97/23 PED	245	2140
3020.3137	3020.3161	1000	32	G 1"1/4	CE 97/23 PED	505	2385
3020.3138	3020.3162	1500	32	G 1"1/4	CE 97/23 PED	710	2470
3020.3139	3020.3163	2000	32	G 1"1/4	CE 97/23 PED	875	2810
3020.3140	3020.3076	500	42	G 1"1/4	CE 97/23 PED	340	2140
3020.3077	3020.3052	1000	42	G 1"1/4	CE 97/23 PED	605	2385
3020.3141	3020.3164	1500	42	G 1"1/4	CE 97/23 PED	850	2460
3020.3078	3020.3079	2000	42	G 1"1/4	CE 97/23 PED	1025	2810
3020.3049	3020.3050	3000	42	G 1"1/4	CE 97/23 PED	1450	2970
3020.3142	3020.3165	4000	42	G 1"1/4	CE 97/23 PED	2190	3160
3020.3143	3020.3166	5000	42	G 1"1/4	CE 97/23 PED	2515	3660
3020.3144	3020.3167	1000	48	G 1"1/4	CE 97/23 PED	725	2400
3020.3145	3020.3168	2000	48	G 1"1/4	CE 97/23 PED	1195	2810
3020.3146	3020.3169	3000	48	G 1"1/4	CE 97/23 PED	1685	2970

AIR TREATMENT

After air coolers

After air coolers are used in installations which require lowering the compressed air temperature leaving the compressor.

Proper cooling makes it possible to condensate most of the water and oil vapour contained in the compressed air.

AIR TREATMENT

“AF” series

From a structural point of view, after cooler consist of a copper pipe circuit crossed by compressed air emerged in an aluminium reed valve. Cooling is achieved by a high efficiency axial fan which channels the ambient air into the reed valve.

This way the compressed air is cooled to a temperature which can reach only 10°C higher than the ambient temperature of reference.

This cooling inevitably generates the condensation of a certain amount of humidity in the compressed air. A centrifugal separator is generally installed at the outlet of the cooler to favour its elimination.

Installation of a after cooler assures the maximum efficiency of all the downstream parts, such as the refrigeration dryers, adsorption dryers and filters.

The data displayed refer to the following nominal conditions



(Δt 10°C respect to the ambient temperature):

Ambient temperature: 25 °C

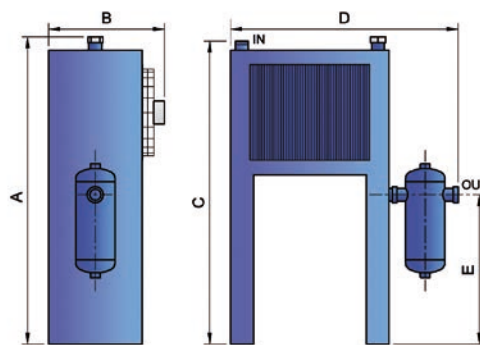
Air inlet temperature: 120 °C

Operating pressure: 7 bar

Air inlet relative humidity: 70%

Max working pressure: 15 bar

Max air inlet temperature: 170 °C



Model	Power supply Ph/V//Hz	Connections inch	Flow Nm ³ /h	Weight kg	Dimensions (mm)				
					A	B	C	D	E
AF011	1/230/50	G 1" BSP-F	66	19	850	300	815	595	430
AF021	1/230/50	G 1" BSP-F	126	20	850	300	815	595	430
AF037	3/400/50	G 1.1/2" BSP-F	222	27	990	310	945	765	415
AF049	3/400/50	G 1.1/2" BSP-F	294	29	990	310	945	765	415
AF065	3/400/50	G 2" BSP-F	390	44	1175	440	1130	1010	475
AF087	3/400/50	G 2" BSP-F	522	48	1175	440	1130	1010	475
AF129	3/400/50	G 2" BSP-F	774	61	1325	490	1280	1020	480
AF165	3/400/50	G 2.1/2" BSP-F	990	66	1325	490	1280	1020	480
AF210	3/400/50	DN100 PN16	1260	127	1800	660	1790	1980	810
AF260	3/400/50	DN100 PN16	1560	143	1800	660	1790	1980	810
AF315	3/400/50	DN100 PN16	1890	148	1800	660	1790	1980	800
AF420	3/400/50	DN100 PN16	2520	166	2000	795	1990	2080	800
AF515	3/400/50	DN100 PN16	3090	212	2090	830	2050	3030	800
AF750	3/400/50	DN125 PN16	4500	315	2300	850	2260	3030	800



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