

# The Technology of Modern Filtration

Filters Designed and Built for Today's Industries



**KELTEC**  
Technolab



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Compressed air and gas is essential in many industries for its use in equipment operation, instrumentation, refrigeration and a variety of industrial processes. Clean, oil-free air or gas is a requirement to reduce maintenance and replacement costs. Unfortunately, even atmospheric air contains objectionable contaminants, in both solid and liquid forms, that must be removed prior to the use of the compressed gas. Additionally, in many compressor and vacuum packages, oil is intentionally introduced as a coolant and sealant which must also be taken out prior to air use.

KELTEC Technolab manufactures a wide range of air-oil separators for air compressors and vacuum packages, as well as air inlet, oil and coalescing type filters, that when used together, provide the ultimate in system operation and protection.

KELTEC Technolab oil separators operate on the familiar principles of fine liquid droplet coalescence in a flowing gas stream. These processes have been refined and tailored into packages that meet the special high performance and physical requirements of the air/gas compressor industry.

Regardless of style (conventional, pleated or deep), KELTEC Technolab oil separators will provide for performance as shown here:

**Pressure drop (at load):** 2-3 psi / .20 bar

**Pressure resistance (against collapse):** 70 psi / 5.0 bar

**Efficiency (remaining oil in gas stream):** 2-3 ppm / 2-3 mg/m<sup>3</sup>

**Operating temperature:** (standard) 180° F / 82° C to 230° F / 110° C  
(Higher temperature models available)

**Materials:** A. Media—both wet laid and high loft solely or in combination  
B. Bonding compound—polyurethane or epoxy  
C. Body components—corrosion resistant steel

**Service life:** Dependent mainly upon the cleanliness of the oil and gas being compressed as well as the initial amount of oil contained in the gas stream; several thousands of hours of operation are possible in a well-functioning compressor or vacuum system.



The standard conventional oil separator is the original design for the removal of oil aerosols from the compressed air stream. This element design consists of a specific amount of a uniform grade of borosilicate glass fibers, “wrapped” onto a support tube. When properly sized to the cfm/m<sup>3</sup>/min flowrate and corresponding operating pressure of the machine, this element will provide consistent performance according to the following data:

**A. Pressure drop (initial)**

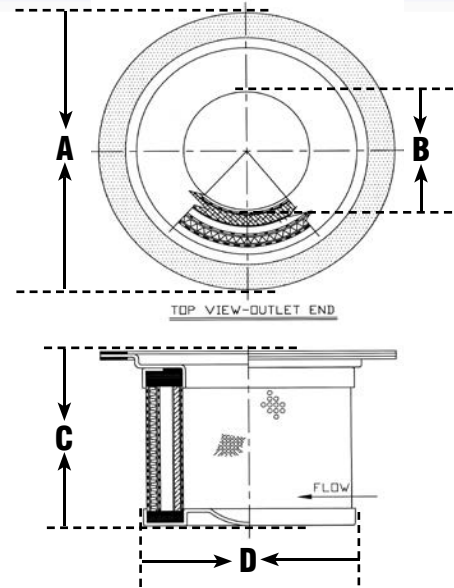
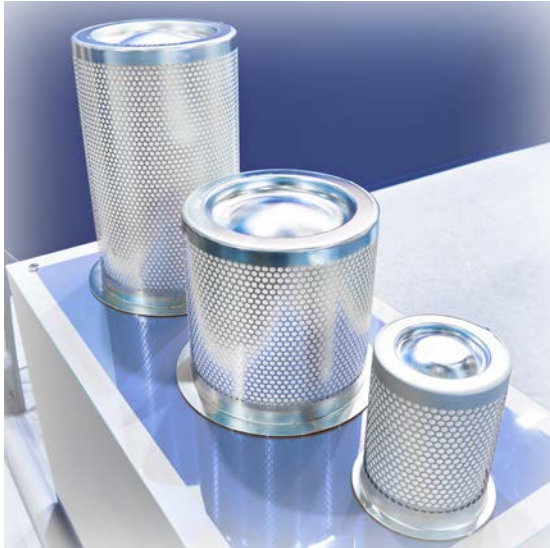
2–3 psi / .20 bar

**B. Pressure resistance**

70 psi / 5 bar

**C. Efficiency**

2–3 ppm / 2–3mg/m<sup>3</sup> residual oil

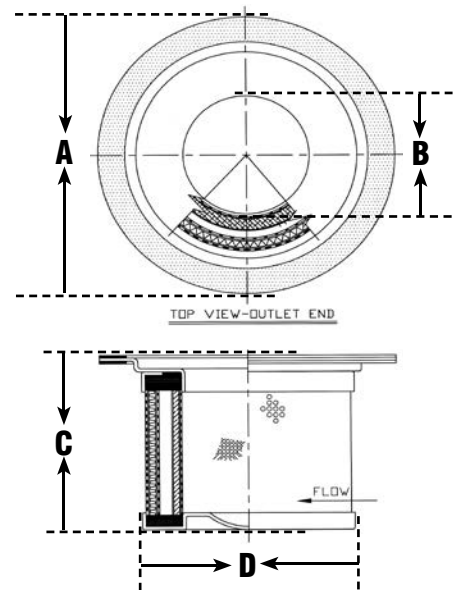


**Conventional Wrap Style Oil Separators**

Part No.	Capacity		A	B	C	D
	cfm	m <sup>3</sup> /m	Flange OD inches / mm	Flange ID inches / mm	Length inches / mm	Body OD inches / mm
KV70-032	70	2.00	6.69 / 170	3.46 / 88	8.35 / 212	5.31 / 135
KV110-010	124	3.50	6.69 / 170	3.46 / 88	12.48 / 317	5.31 / 135
KV200-042	124	3.50	7.87 / 200	4.84 / 123	9.53 / 242	6.69 / 170
KV150-019	159	4.50	7.87 / 200	4.84 / 123	12.48 / 317	6.69 / 170
KV210-009	230	6.50	7.78 / 200	4.84 / 123	17.60 / 447	6.69 / 170
KV240-007	282	8.00	12.60 / 328	8.66 / 220	12.48 / 317	10.82 / 275
KV280-010	318	9.00	10.79 / 274	6.50 / 165	16.60 / 447	8.66 / 220
KV425-003	424	12.00	12.91 / 328	8.66 / 220	18.19 / 462	10.83 / 275
KV400-006	424	12.00	10.79 / 274	6.50 / 165	24.09 / 612	8.66 / 220
KH500-016	495	14.00	13.98 / 355	9.65 / 245	20.16 / 512	11.81 / 300
KV600-019	600	17.00	13.98 / 355	9.65 / 245	24.09 / 612	11.81 / 300
KV670-004	671	19.00	13.98 / 355	9.65 / 245	26.46 / 672	11.81 / 300
KV610-002	706	20.00	12.76 / 324	8.66 / 220	30.00 / 762	10.83 / 275
KV880-001	848	24.00	13.98 / 355	9.65 / 245	32.76 / 832	11.81 / 300
KV1050-001	1024	29.00	13.98 / 355	9.66 / 245	39.84 / 1012	11.81 / 300
KV1300-019	1483	42.00	22.40 / 570	15.75 / 400	36.22 / 920	18.70 / 475



One common method of increasing the capacity of a given sized air-oil separator is through the use of pleated filter media. In this case, the filter media is processed through a machine whereby the normally flat surface is “pleated” or induced into a wave-like appearance. A separator configured in this manner can then be suited for approximately 2x the air flow capacity, as that of a standard air-oil separator, manufactured in the standard, wrapped method.



**Pleated Air-Oil Separators**

Part No.	Capacity		A	B	C	D
	cfm	m <sup>3</sup> /m	Flange OD inches / mm	Flange ID inches / mm	Length inches / mm	Body OD inches / mm
KV150-013P	150	4	7.88 / 200	3.88 / 99	6.81 / 173	6.75 / 171
KV210-004P	210	6	7.88 / 200	3.88 / 99	9.88 / 251	6.75 / 171
KV525-001P	525	15	10.66 / 271	5.25 / 133	16.00 / 406	8.38 / 213
KV820-001P	820	23	10.66 / 271	5.25 / 133	24.00 / 610	8.38 / 213
KV1970-001P	1970	56	23.75 / 603	15.00 / 381	22.25 / 565	19.00 / 483
KV3000-001P	3000	250	23.25 / 591	15.00 / 381	36.25 / 921	19.00 / 483



The Chicopee separator design utilizes a unique media configuration and innovative structural integrity components to achieve exceptionally efficient oil removal.

## **APPLICATIONS**

The patented Chicopee air/oil separator elements are designed for installation in the air receiver tanks of oil flooded rotary vane and screw compressors. The primary function of the element is to separate and capture the oil aerosols that are injected upstream into the air flow.

## **OIL / LUBRICANT**

All materials used in separator construction are compatible with both synthetic and mineral oils. Temperature and chemical resistant epoxy is used to bond endcaps. The coalescing medium contains no binders or resin that can be susceptible to degradation. All metal surfaces are plated to protect against corrosion.

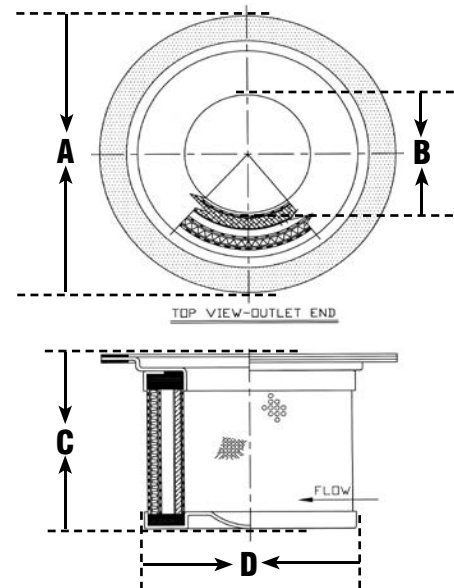
## **OPERATING PRESSURE RANGE**

Nominal operating pressure range is 6.9 BARS to 27.6 BARS (100 – 400 psig) with a minimum of 4.5 BARS gage (65 psig). The elements are designed to withstand pressure differential up to 7 BARS (101.5 psig).





Another common method of obtaining increased air flow capacity from a given size air-oil separator is to manufacture the element in so-called “deep filter” construction. This form of separator uses as many as three different grades of borosilicate glass, wrapped onto the support tube in larger than normal amounts. The finished product then achieves increased airflow capacity very similar to that of the pleated air-oil separator, while at the same time maintaining low initial pressure drop and residual oil content. Field testing of this element has demonstrated an improvement in oil separation especially in high “challenge rate” applications, in which more oil aerosol is contained in the compressed air than is normal.



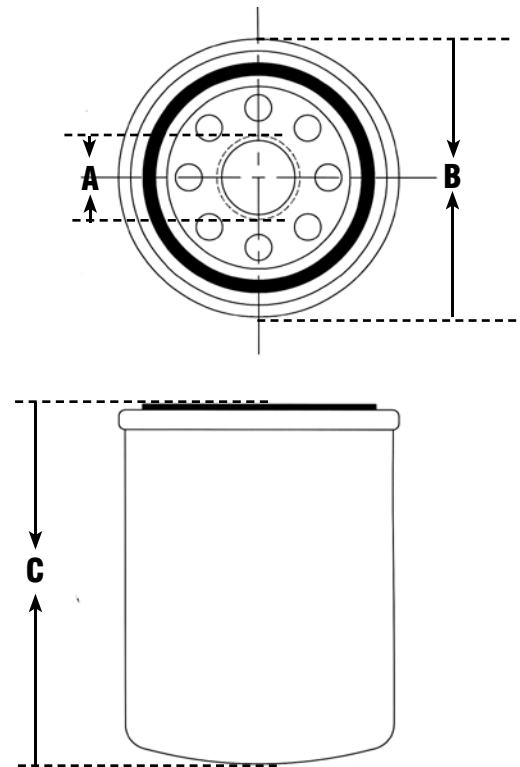
### Deep Filter Type Oil Separators

		A	B	C	D
Part No.	Capacity cfm / m3/min	Flange OD inches / mm	Flange ID inches / mm	Length inches / mm	Body OD inches / mm
KV61-011	125 / 3.54	8.66 / 220	2.95 / 75	6.30 / 160	5.31 / 135
KV66-012	160 / 4.53	6.69 / 170	2.95 / 75	7.87 / 200	5.31 / 135
KV100-027	230 / 6.51	7.87 / 200	4.29 / 109	9.06 / 230	6.69 / 170
KV150-034	320 / 9.06	7.87 / 200	4.29 / 109	12.00 / 305	6.69 / 170
KV265-018	565 / 16.00	13.98 / 355	8.66 / 220	12.00 / 305	11.81 / 300
KV335-006	705 / 19.97	12.91 / 328	8.23 / 209	15.75 / 400	10.83 / 275
KV350-022	775 / 21.95	13.98 / 355	8.66 / 220	15.75 / 400	11.81 / 300
KV440-013	990 / 28.04	13.98 / 355	8.66 / 220	19.69 / 500	11.81 / 300
KV535-003	1200 / 33.98	13.98 / 355	8.66 / 220	23.62 / 600	11.81 / 300
KV625-012	1425 / 40.36	13.98 / 355	8.66 / 220	27.56 / 700	11.81 / 300



This method of oil separation consists of a deep bed type oil separator element, placed inside of a pressure resistant body, or "can" similar to that of traditional oil filters.

Extremely easy to replace in comparison to standard oil-separators which are enclosed in a pressurized tank, this element design is somewhat limited in application due to restrictions of air flow capacity.



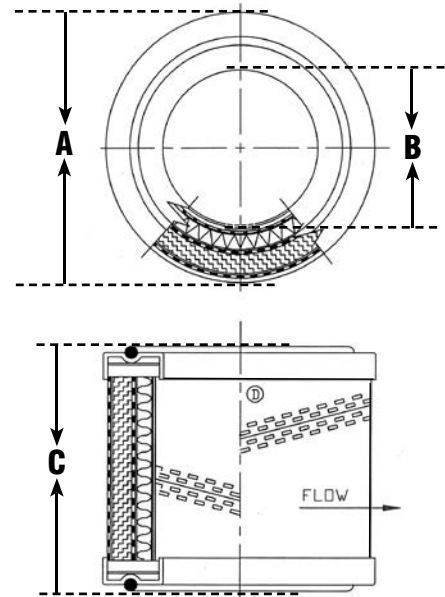
<b>Spin-on Type Oil Separators</b>				
		<b>A</b>	<b>B</b>	<b>C</b>
<b>Part No.</b>	<b>Flow Rate</b> cfm	<b>Thread</b> m3/m	<b>Body Diameter</b> inches / mm	<b>Length</b> inches / mm
KD490-006	35.00 / 1.00	m22 x 1.5	2.99 / 76	5.00 / 127
KD610-008	70.00 / 2.00	m24 x 1.5	3.66 / 93	8.35 / 212
KD710-009	106.00 / 3.00	m39 x 1.5	5.35 / 136	6.97 / 177
KD690-006	141.00 / 4.00	m32 x 1.5	4.25 / 108	10.24 / 260
KD900-018	194.00 / 5.50	m39 x 1.5	5.35 / 136	11.89 / 302



Special inorganic materials are required for the construction of properly functioning oil separators in refrigeration and natural gas compressor packages. In these units, gases other than air (such as Freon, ammonia or natural gas) are being compressed and mixed with lubricating oil which still must be removed prior to use of the gas. These types of gases, along with ancillary materials often contained in natural gas, are not suitable for typical oil separator construction, and care must be given to the proper selection of all materials in order to ensure proper functioning of the separator.

KELTEC Technolab has the longest history of successful oil separation technology for this field. From the coalescing materials to the sealing methods used, you can be confident in oil separators for refrigeration and natural gas purchased from KELTEC Technolab.

A wide range of standard sizes are available, as well as a broad capability to produce elements custom-suited for your specific application.



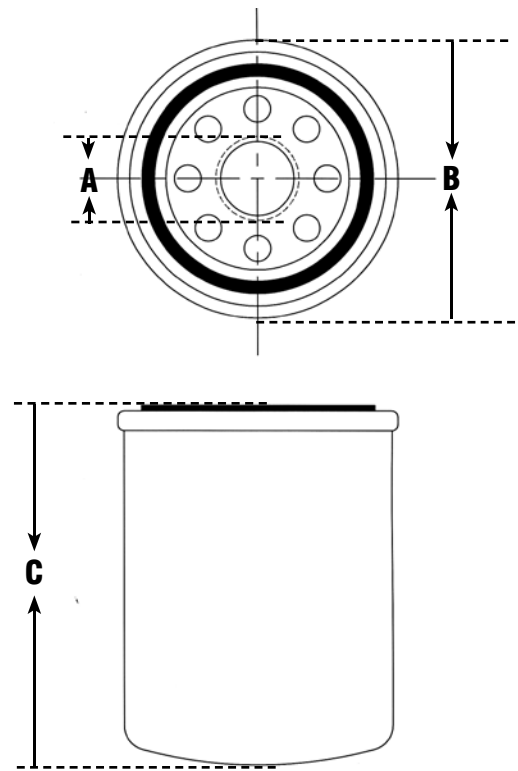
<b>Refrigeration &amp; Natural Gas Oil Separators</b>			
	<b>A</b>	<b>B</b>	<b>C</b>
<b>Part No.</b>	<b>OD</b>	<b>ID</b>	<b>Length</b>
	inches / mm	inches / mm	inches / mm
KR1100-005P	9.40 / 239	6.12 / 155	34.00 / 864
KR435-006P	9.40 / 239	6.12 / 155	28.00 / 711
KR770-008P	9.40 / 239	6.12 / 155	24.00 / 610
KR325-015P	9.40 / 239	6.12 / 155	18.00 / 457
KR500-018P	9.40 / 239	6.12 / 155	16.25 / 413
KR375-022P	7.00 / 179	4.00 / 102	18.00 / 457
KR385-014P	7.00 / 179	4.00 / 102	12.00 / 305



In the compressor system, the oil itself must be filtered on a regular cycle so as to remove contaminants that may enter the compressor and damage the unit. This is accomplished through the installation of a lube oil filter, either in cartridge, or spin-on form, which then ensures that all of the oil is cleaned as it moves through the filter.

Filtering in 5–25 micron range (depending upon application), it is again, the depositing of oil-borne contaminants over time (similar to the oil-separator), that causes the oil filter to continually increase in differential pressure to a point at which it must be replaced in order to continue proper filtration of the compressor oil.

Like all of our products, KELTEC Technolab oil filters are built of the highest quality materials and workmanship. Specific filtration levels are obtained through the exclusive use of high grade filter media and consistent surface area control, obtained by a strict maintenance of pleat quantity and depth. Leakages are prevented by the positive seals obtained with both plastisol and epoxy encapsulation. Viton seals are used where applications of synthetic oil are typical.



<b>Oil Filters</b>				
<b>Part No.</b>	<b>Capacity</b> (gallons/liters/min.)	<b>A</b> <b>Thread</b>	<b>B</b> <b>OD</b> inches / mm	<b>C</b> <b>Length</b> inches / mm
KL310-017	2.17 / 12.00	3/4-16	3.15 / 80.00	3.66 / 93.00
KL470-008	5.00 / 20.00	3/4-16	3.15 / 80.00	5.50 / 140.00
KL510-016	10.50 / 40.00	1-12	3.78 / 96.00	6.77 / 172.00
KL320-004	10.50 / 40.00	3/4-16	3.78 / 96.00	5.50 / 140.00
KL460-009	10.50 / 40.00	1-12	3.78 / 96.00	5.50 / 140.00
KL135-035	11.89 / 45.00	1-12	3.78 / 96.00	6.77 / 172.00
KL440-015	18.50 / 70.00	1-12	3.78 / 96.00	8.30 / 210.00
KL590-007	18.50 / 70.00	1-12	4.33 / 110.00	8.94 / 227.00
KL800-020	47.50 / 180.00	1-1/2-16	5.50 / 140.00	11.89 / 302.00





KELTEC Technolab offers a full range of PAO, diester and polyglycol based compressor lubricants, designed to match the most difficult compressor application. Continual testing and research combines to ensure that the most effective oil additives are used in order to virtually eliminate such common problems as foaming, oxidation, and deposit formation. Listed on the next page are some examples of available lubricants along with their typical properties.

## TYPICAL PROPERTIES OF COMMON LUBRICANTS

<b>SYNTHETIC LUBRICANTS</b>				
<b>KOA467C</b>	PAO Base Oil			
	ISO Grade			46
	Viscosity	SUS @	35° C / 100° F	49
		SUS @	100° C / 210° F	8
	ISO Viscosity Index			46
	Flash Point		230° C / 450° F	
	Pour Point		-3° C / -38° F	
<b>KOA680C</b>	Diester Base Oil			
	ISO Grade			68
	Viscosity	SUS @	35° C / 100° F	64
		SUS @	100° C / 210° F	8
	ISO Viscosity Index			86
	Flash Point		250° C / 480° F	
	Pour Point		-7° C / -45° F	
<b>KOPGRS</b>	Polyglycol / Ester Base Oil			
	ISO Grade			32
	Viscosity	SUS @	40° C / 100° F	36.3
		SUS @	100° C / 210° F	6.7
	ISO Viscosity Index			115
	Flash Point		252° C / 486° F	
	Pour Point		-39° C / -38° F	
<b>KOPGRI</b>	Polyglycol / Ester Base Oil			
	ISO Grade			46
	Viscosity	SUS @	40° C / 100° F	46.9
		SUS @	100° C / 210° F	7.3
	ISO Viscosity Index			126
	Flash Point		254° C / 489° F	
	Pour Point		-39° C / -38° F	



Once generated by the air compressor, (compressed) air often must be further filtered so as to meet the exacting needs of the industrial applications for which it is used. This is most effectively done through the use of a downstream coalescing filter, or series of filters. It

is a common misconception that “oil-free” air compressors do not require this precaution. However, atmospheric air typically contains a significant amount of water, oil vapor and other contaminants, especially in industrial areas.

Upon compression, therefore, these contaminants are concentrated into the compressed air, whether the machine is “oil-free” or oil-flooded. Accordingly, the use of fine, coalescing filters is essential for both types of compressors, so as to prevent an accumulation of such contaminants in pneumatic machinery.

KELTEC Technolab coalescing filters are the simple way to avoid such contamination in your expensive equipment. Our filters provide the highest level of clean, compressed air with a minimum loss of energy (pressure drop). Through the selection of the appropriate grade of borosilicate microglass filtration media, and maintaining the quantity, diameter, and direction of individual fibers, KELTEC Technolab coalescing filters guarantee your air compressor system will operate correctly with minimal operational upkeep.



**SOME STANDARD PART NO.'S  
(Coalescing Filters)**

<b>KELTEC Technolab PN</b>	<b>Length</b> inches / mm		<b>OD</b> inches / mm	
KPFEK06 *	2.64	67	1.38	35
KPFEK13 *	3.27	83	1.97	50
KPFEK25 *	4.72	120	1.97	50
KPFEK40 *	6.30	160	2.83	72
KPFEK85 *	10.24	260	2.83	72
KPFEK195 *	12.99	330	3.39	86
KPFEK295 *	24.92	633	3.39	86
KPFEK400 *	16.37	416	4.49	114
KPFEK500 *	25.08	637	4.49	114

\* The following grades are available:

AOVE-CBM 99.97% 1 micron

AAVE-CB 99.97% .01 micron

AC-AB oil vapor and odor removal

KELTEC Technolab water separators have been designed for the removal of bulk liquid water and a significant portion of particulate from compressed air and gases. Unique centrifugal action removes contaminants at low-pressure drop for maximum energy savings. KELTEC Technolab water separators are available from 1/4" - 3" pipe sizes and for flows up to 1294 scfm.



Note: While highly efficient, condensate separators will not remove 100% of the oil from the air stream additional coalescing and particulate filters downstream are typically required to remove the fine traces of oil, water and particles.

Note: Automatic drain valves are fitted as standard. All separator bodies are coated with electrostatic powder paint finish both inside and out.

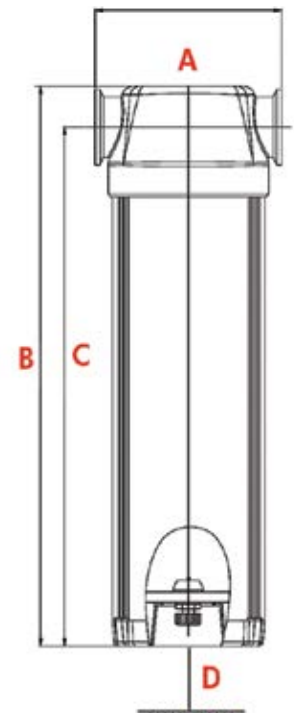


Correction Factor									
PSIG	15	44	73	100	131	160	189	218	247
Operating Pressure (barg)	1	3	5	7	9	11	13	15	16
Correction Factor	0,5	0,71	0,87	1	1,12	1,22	1,32	1,44	1,57

For maximum flow rate, multiply model flow rate show in the above table by the correction factor corresponding to the working pressure.

Technical Specifications							
Model	Connection Size	Flow Rate		Housing Dimensions (in)			
		(scfm)	(m <sup>3</sup> /h)	A	B	C	D
KWS14	1/4"	14	25	4.06	10.14	9.29	6.30
KWS58	1/2"	58	100	4.06	10.14	9.29	8.27
KWS117	3/4"	117	200	4.84	11.97	10.91	11.22
KWS176	1"	176	300	4.84	11.97	10.91	14.96
KWS353	1-1/2"	353	600	4.84	12.60	11.22	18.50
KWS706	2"	706	1200	6.30	19.06	17.44	22.05
KWS1294	3"	1294	2200	7.60	21.50	19.29	24.02

Maximum Recommended Operating Temperature	176° F
Minimum Recommended Operating Temperature	35° F
Typical Pressure Loss at Rated Flow	.7 psi
Maximum Working Pressure	235 psi



### 3 DRAIN OPTIONS

#### CAH-ED(NPT or BSP)-ASSY

Heavy duty external drain that can be easily attached to the CAH-BHF050F Bulkhead Fitting (shown) and housing.

1



2

#### #CAH-ADMD-WS

Auto/manual drain (included standard with every housing)



#### SDV115V-25AN and SDV220V-50AN

Solenoid operated electronic drain valves come COMPLETE WITH STRAINER AND BALL VALVE that can be easily attached to the CAH-BHF050F Bulkhead Fitting (shown) and housing.

3



1/4" ID and 1/2" OD DUAL THREADS  
USED CN SDV ELECTRONIC DRAINS



### **COMPRESSED AIR CONTAMINATION**

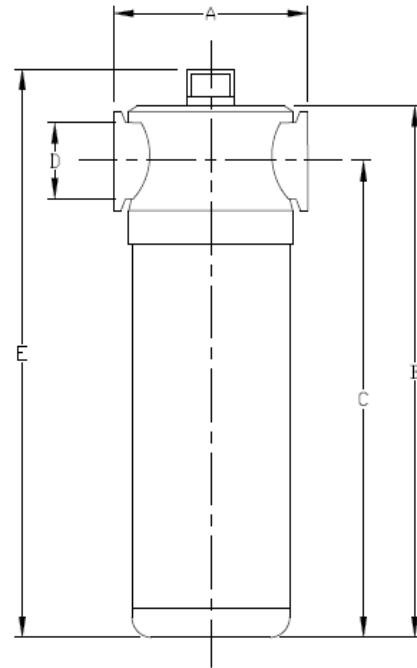
Even in today's high-tech world, compressed air remains the primary power source for industry. Because it has many advantages over other types of energy, an increasing number of applications for compressed air are still being discovered.

Unfortunately, compressed air is subject to contamination from the atmosphere and the compressor itself. This results in corrosion and other related problems, which inevitably lead to system and equipment failure.

### **THE KELTEC Technolab SOLUTION: *The Ultimate in Compressed Air Filtration***

When it comes to keeping compressed air clean and oil-free, no one fits the bill like KELTEC Technolab. KELTEC Technolab's advanced line of coalescing filters for compressed air systems offers a rare blend of exceptional performance, proven reliability and uncommon value.

The KELTEC Technolab compressed air filter product line covers a full range of products to handle virtually any flow rate and operating condition. Our array of high-efficiency coalescers, particulate/general purpose coalescers, and adsorptive carbon filters offers solutions to virtually all compressed air filtration applications.



### ELEMENT SPECIFICATIONS

Grade	P Prefilter	X General Purpose	Y Oil Removal	A Activated Carbon
Filter Efficiency (micron)	5 (micron)	1	.01	.01
Max. Oil Carryover (ppm)	5 (ppm)	.50	.01	.001

PART NUMBER	Connection Size	Flow Rate cfm(M <sup>3</sup> /h)	MAX PSI (BAR)	Element (P/X/Y/A)	Housing Dimensions								
					A INCHES / MM	B INCHES / MM	C INCHES / MM	D INCHES	E INCHES / MM				
CAH-0058-BSP/NPT	1/2"	58(100)	290(20)	KP0058	4.00	102	10.12	257.5	9.28	235.5	1/2"	11.98	304.5
CAH-0088-BSP/NPT	3/4"	88(150)	290(20)	KP0088	4.84	123	11.91	302.5	10.84	275.5	3/4"	13.75	349.5
CAH-0117-BSP/NPT	3/4"	117(200)	290(20)	KP0117	4.84	123	14.44	366.5	13.38	339.5	3/4"	16.28	413.5
CAH-0147-BSP/NPT	1"	147(250)	290(20)	KP0147	4.84	123	16.00	406.5	14.94	379.5	1"	17.86	453.5
CAH-0353-BSP/NPT	1 1/2"	353(600)	290(20)	KP0353	4.84	123	21.18	538	19.75	502.5	1-1/2"	23.03	585
CAH-0500-BSP/NPT	2"	500(851)	290(20)	KP0500	6.30	160	24.62	625.5	23.00	584	2"	26.48	672.5
CAH-0712-BSP/NPT	2"	710(1210)	290(20)	KP0712	6.30	160	27.38	695.5	25.75	654	2"	29.25	742.5
CAH-0930-BSP/NPT	2 1/2"	930(1550)	290(20)	KP0930	7.64	194	28.75	730	26.46	672	2-1/2"	30.62	777
CAH-1140-BSP/NPT	3"	1140(1900)	290(20)	KP1140	7.64	194	34.25	869.5	31.98	812.5	3"	36.08	916.5
CAH-1380-BSP/NPT	3"	1380(2300)	290(20)	KP1380	7.64	194	36.38	924	34.12	867	3"	38.25	971

NOTE: MAXIMUM OPERATING TEMPERATURE 176F/80C





**Housings can be fitted together with the use of Fixing clamps.**



Clamp Numbers	Housings
CAH-CL050	CAH-0058
CAH-CL075-125	CAH-0088
	CAH-0117
	CAH-0147
CAH-CL150	CAH-0353
CAH-CL200	CAH-0500
	CAH-0712
CAH-CL250-300	CAH-0930
	CAH-1140
	CAH-1380

### 3 DRAIN OPTIONS

**CAH-ED(NPT or BSP)-ASSY**

Heavy duty external drain that can be easily attached to the CAH-BHF050F Bulkhead Fitting (shown) and housing.

**1**



**SDV115V-25AN and SDV220V-50AN**

Solenoid operated electronic drain valves come COMPLETE WITH STRAINER AND BALL VALVE that can be easily attached to the CAH-BHF050F Bulkhead Fitting (shown) and housing.

**3**

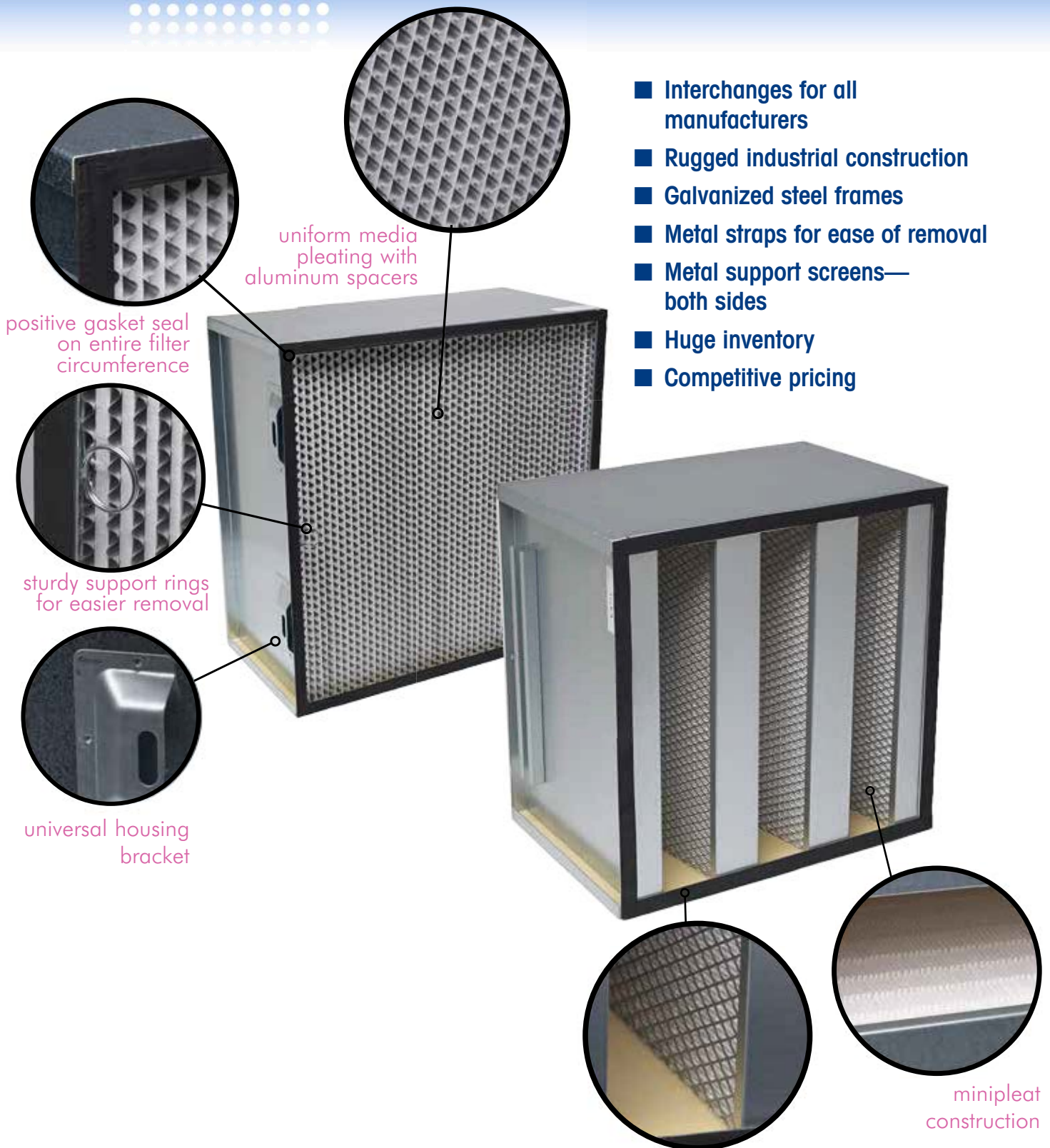


**2**

**#CAH-ADMD**

Auto/manual drain (included standard with every housing)

1/4" ID and 1/2" OD DUAL THREADS  
USED ON SDV ELECTRONIC DRAINS





**KA 093/509**

- 24" x 24" x 1.5" nominal
- 23.5" x 23.5" x 1.5" actual
- Galvanized frame
- Polyester felt media
- Washable
- 2500 SCFM
- .57" W.C. Δ P
- 10 micron—98% efficiency



**KA 005/005**

- 24" x 24" x 2" nominal
- 23.5" x 23.5" x 2" actual
- Galvanized frame
- Polyester felt media
- Washable
- 2500 SCFM
- 1.1" W.C. Δ P
- 10 micron—98% efficiency



**KS 099**

- 24" x 24" x 2" nominal
- 23.5" x 23.5" x 2" actual
- Galvanized frame
- Polyester felt media
- Washable
- 1250 SCFM
- .5" W.C. Δ P
- 4 micron—98% efficiency



**KA 176**

- 24" x 24" x 6" nominal
- 23.4" x 23.4" x 5-7/8" actual
- Galvanized frame
- Microglass media
- 1250 SCFM
- .5" W.C. Δ P
- 5 micron—98% efficiency



**KA 164**

- 24" x 24" x 12" nominal
- 23.4" x 23.4" x 11.5" actual
- Galvanized frame
- Microglass media
- 2500 SCFM
- .9" W.C. Δ P
- 2 micron—99.7% efficiency



**KA 166**

- 24" x 24" x 12" nominal
- 23.4" x 23.4" x 11.5" actual
- Galvanized frame
- Microglass media
- 1250 SCFM
- 1.0" W.C. Δ P
- .3 micron—99.97% efficiency



**KA 771**

- 18" x 18" x 12" nominal
- 17.5" x 17.5" x 11.62" actual
- Galvanized frame
- Microglass media
- 1250 SCFM
- .9" W.C. Δ P
- 2 micron—99.97% efficiency



**KA 770**

- 18" x 18" x 2" nominal
- 17.62" x 17.62" x 2" actual
- Galvanized frame
- Polyester felt media
- Washable
- 1250 SCFM
- .7" W.C. Δ P
- 10 micron—99% efficiency

KELTEC Technolab produces a wide range of additional filter products, including:

- **Air filters for compressors**
- **Air filters for vacuums**
- **Oil separators for vacuums**

Air filters are produced with either resin impregnated cellulose or synthetic polyester filter media, in either plastisol (rubber) or metal end construction, as well as the latest type, metal-free air intake filters.

Oil separators for vacuum packages are constructed similar to that of the standard oil separators used in air compressors, and thus, will offer the same type of oil removal performance (in the range of 1–3 ppm / 1–3 mg/m<sup>3</sup>). However, such separators are designed exclusively for flow direction from the outside to the inside of the separator, and are suitable only to a maximum pressure differential (collapse point) of 22 psi / 1.5 bar.





If your popular item isn't here, let us know, and we'll find it for you!

## THE TECHNOLOGY OF MODERN FILTRATION



**KRAD**

NON-CYCLING REFRIGERATED  
COMPRESSED AIR DRYER  
WITH INTEGRATED COMPRESSED AIR FILTERS

KELTEC Technolab was founded in 1982 by Ed Kaiser, Sr., formerly an engineer of the Air Maze Corporation for 20 years. With initial production of air-oil separators, KELTEC Technolab eventually added air-intake filters, oil filters, coalescing filters and synthetic compressor lubricants. KELTEC acquired Technolab (a former division of Flair Corporation), another air-oil separator manufacturer making the new KELTEC Technolab the largest manufacturer and supplier of air-oil separators in North America.

Today, KELTEC Technolab provides their products as original equipment to most of the major manufacturers of air compressors in North America.

## **WHY TREAT COMPRESSED AIR?**

The importance of compressed air as a provider of energy for modern industrial processes is widely known. What is often overlooked however is the need to provide quality treatment for this air.

In fact, the air entering the system contains moisture, in vapor form, along with environmental contaminants, which are concentrated during compression. When cooled, this moisture will turn into liquid water, causing extensive damage not only to

the compressed air network, but also to the finished product. Left alone, these materials would reduce the service life of downstream equipment and contribute to system corrosion. KELTEC Technolab refrigerated dryers actively remove this condensate and particulate contamination, and achieves extremely dry and clean, compressed air. The benefits are notable; less system down time, reduced maintenance costs and an improved, finish product.

## **HIGHLY ENGINEERED**

With a pressure drop of less than 3 psi, energy costs are greatly reduced.

## **DESIGNED FOR TROPICAL CONDITIONS**

KELTEC Technolab air dryers can effectively operate with 140 F inlet temperatures, due to their use of R134A refrigerant across the dryer range, and through the use of an over sized condenser.







**COMPACT DESIGN**

Every square inch inside the dryer is utilized.

**DIGITAL CONTROLLER,**

The multi-functional display provides an accurate digital dew point display as well as coded alarm monitoring of the refrigerant dryer.



**ALUMINUM PLATE HEAT EXCHANGER**

Very Low Pressure Drop (2psi)  
Very Efficient (38 F real pressure dew point)



**SCROLL COMPRESSORS**

The scroll compressors used are energy efficient and resistant to liquid shock; models 600 cfm and up



**PISTON COMPRESSORS**

on models up to 250 cfm

**INTEGRATED DUAL FILTER SYSTEM**

which filters the compressed air to .01 micron;  
on models up to KRAD-2600



## AIR DRYER

### ELECTRICAL WIRES ARE SEPARATED

#### FROM REFRIGERANT SIDE

There are no electrical wires inside the refrigerant side of the dryer. The electrical box has an external cover which has an access from the outside of the dryers. There is no need to open the dryer panels to enter the electrical box.



### ALL WIRES INSERTED INTO PLASTIC CABLE HOLDERS

Wires connected to the electrical box with conduits



### EXTRA BALL VALVES

Extra ball valves are brazed in to the refrigerant circuit in order to simplify parts replacement, without the chance of releasing refrigerant gas from the system.



### PRESSURE SWITCHES

Pressure fan switches are in discharge line for easy access. There is no need to interrupt the cooling loop in case of pressure switch failure.



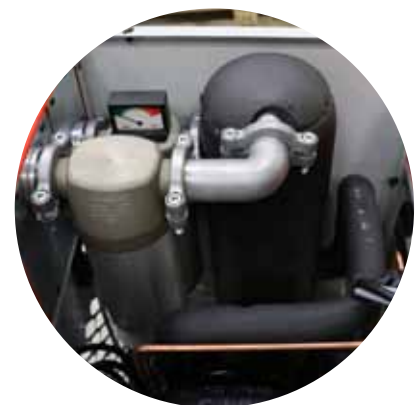
MODEL	Capacity (acfm)	Connection Size	Voltage	Length (in)	Width (in)	Height (in)	Weight (lb)	Refrigerant gas	Pressure drop (psi)	Maximum working pressure (psi)	Maximum ambient TEMP (°F)	Maximum inlet TEMP (°F)
KRAD-10	10	1/2"NPT	115/1/160	16.26	14.29	21.92	70.54	R134a	<3	230	122	140
KRAD-15	15	1/2"NPT	115/1/160	16.26	14.29	21.92	70.54	R134a	<3	230	122	140
KRAD-25	25	1/2"NPT	115/1/160	16.26	14.29	21.92	70.54	R134a	<3	230	122	140
KRAD-40	40	3/4"NPT	115/1/160	18.62	17.83	32.75	112.43	R134a	<3	230	122	140
KRAD-60	60	3/4"NPT	115/1/160	18.62	17.83	32.75	116.84	R134a	<3	230	122	140
KRAD-80	80	3/4"NPT	115/1/160	18.62	17.83	32.75	121.25	R134a	<3	230	122	140
KRAD-100	100	1 1/2"NPT	115/1/160	21.77	19.80	34.40	171.96	R134a	<3	230	122	140
KRAD-125	125	1 1/2"NPT	115/1/60	21.77	19.80	34.40	182.98	R134a	<3	230	122	140
KRAD-150	150	1 1/2"NPT	230/1/60	21.77	19.80	34.40	189.59	R134a	<3	230	122	140
KRAD-200	200	2"NPT	230/1/60	26.69	25.51	45.55	352.74	R134a	<3	230	122	140
KRAD-250	250	2"NPT	230/1/60	26.69	25.51	45.55	363.76	R134a	<3	230	122	140
KRAD-350	350	2"NPT	230/1/60	37.32	28.66	53.93	485.01	R134a	<3	230	122	140
KRAD-500	500	2"NPT	230/1/60	37.32	28.66	53.93	507.06	R134a	<3	230	122	140
KRAD-600	600	3"NPT	460/3/60	37.32	31.41	57.48	595.24	R134a	<3	230	122	140
KRAD-750	750	3"NPT	460/3/60	37.32	31.41	57.48	628.31	R134a	<3	230	122	140
KRAD-1000	1000	3"NPT	460/3/60	45.78	30.63	67.91	864.21	R134a	<3	230	122	140
KRAD-1200	1200	3"NPT	460/3/60	45.78	30.63	67.91	903.89	R134a	<3	230	122	140
KRAD-1500	1500	4"NPT	460/3/60	62.13	39.10	69.68	1,084.67	R134a	<3	230	122	140
KRAD-1750	1750	4"NPT	460/3/60	62.13	39.10	69.68	1,146.40	R134a	<3	230	122	140
KRAD-2250	2250	4"NPT	460/3/60	64.88	42.44	75.87	1,534.41	R134a	<3	230	122	140
KRAD-2600	2600	4"NPT	460/3/60	64.88	42.44	75.87	1,582.92	R134a	<3	230	122	140
KRAD-3000	3000	6"NPT	460/3/60	86.14	41.81	75.78	1,984.16	R134a	<3	230	122	140
KRAD-3500	3500	6"NPT	460/3/60	86.14	41.81	75.78	2,667.00	R134a	<3	230	122	140
KRAD-4000	4000	6"-NPT	460/3/60	106.18	35.31	77.75	2,646.00	R134a	<3	230	122	140
KRAD-4500	4500	8"-NPT	460/3/60	106.18	35.31	77.75	2,866.00	R134a	<3	230	122	140
KRAD-5500	5500	8"-NPT	460/3/60	100.39	61.02	82.67	3,527.39	R134a	<3	230	122	140

## EASY TO ACCESS

The cooling components can be easily reached in seconds via the removable panels.

## EASY DUCTING

Condensers are located at the side on smaller versions and on the top on larger versions for easy ducting



In order to properly size your dryer to the required task, you must take into account the specific conditions under which the dryer will be operating. CFM ratings of Keltec-Technolab dryers assume the following "Standard Conditions":

- a. 100 psi / 7 bar operating pressure,
- b. max ambient temperature 100 F / 38 C
- c. max inlet temperature 100 F / 38 C

For conditions OTHER than the above, please use the provided correction factors to properly size your dryer.

PRESSURE									
Psig	50	60	75	100	115	125	150	175	200
Bar	3.5	4.1	5	7	7.9	8.5	10	12	14
FACTOR PRESSURE: F1	0.75	0.77	0.85	1.00	1.06	1.10	1.16	1.25	1.30

AMBIENT TEMPERATURE FACTORS									
F	60	80	90	100	105	110	115	120	
C	16	26	32	38	40	43	46	49	
FACTOR AMBIENT: F2	1.12	1.08	1.06	1.00	0.96	0.90	0.80	0.65	

INLET TEMPERATURE FACTORS									
F	85	90	95	100	110	120	130	140	150
C	29	32	35	38	43	49	54	60	65
FACTOR INLET: F3	1.20	1.14	1.08	1.00	0.75	0.60	0.50	0.45	0.35

By way of example, let's assume that your customer requires a flow of 500 CFM, at an operating pressure of 75 psi, with an ambient temperature of 110 F, and an inlet temperature of 120 F.

Pressure Correction factor for 75psi is 0.85  
 Ambient temperature Correction factor for 110F is 0.90  
 Inlet temperature correction factor for 120F is 0.60

Required dryer capacity =  $500\text{CFM} / 0.85 / 0.90 / 0.60 = 1089\text{CFM}$   
 We need to choose the dryer that has a capacity that is nearest to 1089 cfm. In this case, we would chose the KRAD-1200 (1200 cfm dryer) so as to ensure that we would not have any difficulties during the hottest portion of the year.



Designed to remove the oil particles necessary for lubrication from the airstream produced by power generating equipment such as gas turbines and centrifugal compressors.

Construction : extremely efficient combination of high loft type fiberglass for optimal coalescence  
Carbon steel support tubes and end plate  
Positive seal o ring or gasket configuration  
99.97% efficiency on atomized oil particles measuring .30 micron in size  
Low pressure drop of 2-3 psi / .20 bar

<b>Nominal Dimensions</b>			
<b>Number</b>	<b>o.d.</b>	<b>length</b>	<b>capacity (@100 psi / 7 bar operating)</b>
KR1250-010P	11.50"/292 mm	21.60"/549mm	125 cfm/3.60 m3/min
KR1500-029P	11.50/292	26.00/660	200/5.70
KR3400-002P	21.00/533	35.00/899	500/14.30

## Low pressure/ downstream compressed air Oil Mist Eliminators



Designed to removed any residual oil or contaminant remaining in the compressed air downstream of the compressor and filtration system. Extremely low pressure drop of .5-1 psi providing for energy savings and essentially oil free air.

Construction : extremely efficient combination of high loft type fiberglass for optimal coalescence (99.97% @ .30 micron)

Max operating temperature 200 F

Max operating pressure 260 psi

Carbon steel support tubes and end plate  
Positive seal o ring or gasket configurations 99.97% efficiency on atomized oil particles measuring .30 micron in size  
Low pressure drop of 2-3 psi / .20 bar

### Normal dimensions

Number	o.d.	length	connection	capacity (@100 psi / 7 bar operating)
KD125-044	10.38"/264 mm	12.00"/305 mm	2"	250cfm/ 7.1 m3/ min
KD400-031	10.38"/ 264	24.00"/ 610	2 1/2"	500 / 14.30
KD790-007	11.88"/302	42.00"/1067	4"	1000/28.60
KD910-007	14.50"/368	42.00"/1067	4"	1500/42.90
KD1050-015	19.00"/483	32.00"/813	4"	2100/60.00
KD1750-005	19.00"/483	54.00"/1372	4"	3000/85.70

**KELTEC Technolab offers high quality Activated Aluminum Desiccant for the absorption of water vapor and other gases from compressed air.**



KELTEC Technolab Activated Alumina Desiccant is highly porous with a large surface area, which will not weaken or break when subjected to high liquid concentrations. High crush strength and strong, durable shipping bags, allow for easy transport.

<b>DESICCANT SIZING</b>	
<b>ITEM NUMBER</b>	<b>SIZE</b>
KAAD 12-50	1/8 dia, 50lb bag
KAAD 19-50	3/16 dia, 50lb bag
KAAD 25-50	1/4 dia, 50lb bag

KELTEC Technolab now offers a complete line of mufflers and filters, all-metal mufflers and filters, porous metal filter silencers and breather-vent-filters in stock & competitively priced. Keltec offers a range of purge exhaust mufflers for both air compressors and desiccant air dryers. When old desiccant causes a muffler restriction or becomes contaminated with lubricant, we offer replacement desiccant, mufflers and lubricant.



Part #	Standard Series / Relief Valve Series			
	end conn	diameter	length	max flow scfm @85psi
ADM/ AEM-25	1/4"	2.56"	4.50"	75
ADM/ AEM-38	3/8"	2.56"	5.50"	185
ADM/ AEM-50	1/2"	2.56"	5.50"	290
ADM/ AEM-75	3/4"	3.35"	6.88"	385
ADM/ AEM-1	1"	3.35"	9.25"	625
ADM/ AEM-125	1 1/4"	3.94"	10.25"	986
ADM/ AEM-150	1 1/2"	5.12"	14.19"	1200
ADM/ AEM-2	2"	5.12"	17.31"	2100



KELTEC Technolab Mufflers help to reduce noise levels and disperse a concentrated air stream to a lower pressure, wider surface area.

### Standard Series



#### Features

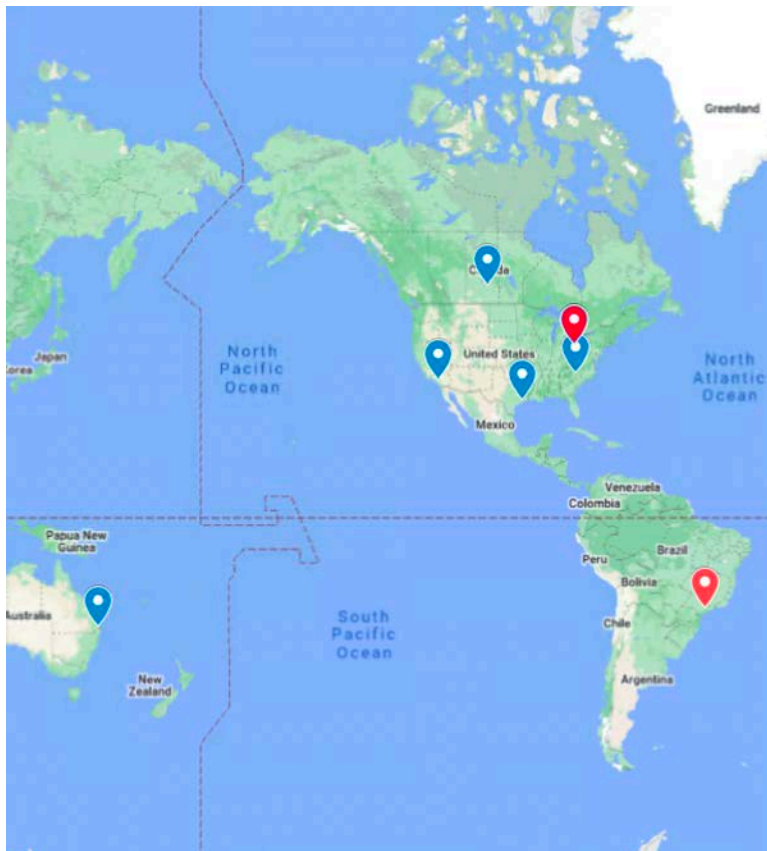
- Noise reduction up to 80 dB
- Pressure up to 220 psi
- Provided with hex head making it easy to fit
- Long life and maintenance free
- Available in multiple sizes
- Low cost high quality
- BSP / NPT threads
- Male / Female threads

#### Features

- All the outstanding features of the standard series
- Relief valve to release excess pressure
- Lower risk of industrial accidents
- Avoid downtime
- Pressure up to 230 psi or better

### Relief Valve Series





KELTEC Technolab is headquartered in Twinsburg, Ohio USA. Through a series of mergers (Technolab in 2002, Chicopee Engineering in 2016 and Air Supply Company in 2019), Keltec has grown to become the largest manufacturer of air-oil separators in North America. In 2011, KELTEC Technolab partnered with Sr.Luiz Ribeiro and his family, to establish a stocking warehouse of products in Indiatuba/Sao Paulo Brazil for South America customers. Today, KELTEC Technolab Brazil, is one of the largest wholesalers of compressor filters in this market.



## GUARANTEE

KELTEC Technolab guarantees that the filters which they produce are free of manufacturing defects in workmanship or materials. If the filters are used as intended by the equipment manufacturer and KELTEC Technolab, with the proper service intervals, KELTEC Technolab will guarantee the performance of their filters. Should a filter failure be the result of a manufacturing defect of KELTEC Technolab, it will be replaced and the customer returned to the original condition that existed prior to the use of the subject filter. Such claims must be reported to KELTEC Technolab within 30 days of observation, and KELTEC Technolab reserves the right to inspect and test the filter in question.

*Ed Kaiser, President  
KELTEC Technolab, Inc.*



Achieving ISO 9001:2015 certification is an important milestone in KELTEC Technolab's history. It demonstrates KELTEC Technolab's commitment to deliver a high level of products and services to our clients.



# KELTEC



## Technolab

KELTEC Technolab compressor filters and oil are suitable replacements for all major competitive interchanges. The technical characteristics of KELTEC Technolab products can be found within this guide. KELTEC Technolab filters have successfully replaced all other major brands of OEM and replacement filters in literally tens of thousands of applications.

KELTEC Technolab guarantees that its filters will meet or exceed the specifications and performance of the OEM, and further, that customers replacing OEM filters with KELTEC Technolab filters will experience no filter-related difficulty.

[www.keltecinc.com](http://www.keltecinc.com)

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