



Aftercoolers

Air-Cooled Aftercoolers

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Cool air and remove moisture

Atmospheric air entering a compressor contains water vapor that should be removed for many compressed air uses and to prevent corrosion, rust, and leaks in compressed air piping networks. While increased pressure helps condense that vapor, the heat of compression acts to keep it in a vapor state until the air is downstream where condensation can cause problems.

KAC aftercoolers are air-to-air heat exchangers with a wide range of capacities from 19 to 4800 cfm and pressures up to 250 psig. KAC series coolers are specifically designed for compressor air cooling and feature high efficiency internal turbulators that maximize the heat rejection and provide low pressure drop.

Ratings

Maximum operating pressure

250 psi

Maximum operating temperature

350°F

CRN available

235 psi at 250°F (121°C)

Materials

Cabinet Steel with baked enamel finish

Core Brazed aluminum bar and plate

Fan Aluminum hub, polypropylene blades

Shroud Painted steel

Motor TEFC

Fan Guard Steel with baked enamel finish

Electric Motor and Fan Data

Model	Fan (cfm)	Motor (hp)	Voltage	Phase	Full Load Amps	Hz	RPM	Nema Frame	Thermal Overload	Approx. Shipping Weight (lbs.)	Sound dB(A) at 3 ft			
KAC 50H	800	1/3	115/230	1	3.0	60	3450	48C	NO	40	80			
			208-230/460	3	1.4									
KAC 100H	800	1/3	115/230	1	3.0									
			208-230/460	3	1.4									
KAC 200H	1425	1/2	115/230	1	3.7									
			208-230/460	3	2.2									
KAC 400H	2200	1.0	115/208-230	1	6.0							60	3450	56C
	1825/2200		208-230/460	3	3.6/3.2							50/60	2850/3450	
KAC 725H	3600	1.5	115/208-230	1	8.5							60	3450	56C
	3025/2200		208-230/460	3	4.9-4.6/2.3							50/60	2850/3450	
KAC 950H	4700	1.5	115/208-230	1	8.6							60*	1740	145TC
			208-230/460	3	4.6									184TC
KAC 1200H	7000	5.0	230	1	23.0	182TC								
		3.0	208-230/460	3	8.8	184TC								
KAC 1600H	9700	5.0	208-230/460	3	13.4	213TC								
KAC 2000H	11,000	7.5	230/460		19.6	213TC								
KAC 2500V	14,000	7.5			19.6	213TC								
KAC 3000V	17,500	10.0			230/460	24.8	215TC							
KAC 3500V								750	102					

All motors shown are TEFC. Other motor options available upon request. Published electrical ratings are approximate, and may vary because of motor brand. Actual ratings are on motor nameplate. Fan motors must not be cycled. Outdoor applications must be protected from direct weather, consult factory. If ductwork or additional static resistance is added to the cooler airstream, an auxiliary air mover may be required.

*3 phase motors available in 50Hz. Reduce performance by 10%.

Performance Specifications

Flow Capacities (cfm)

Aftercooler Model Number	150				200				250				300				350			
	5	10	15	20	5	10	15	20	5	10	15	20	5	10	15	20	5	10	15	20
KAC 50H	29	61	87	101	26	56	69	82	24	45	62	74	21	37	51	61	19	34	45	54
KAC 100H	56	112	158	180	51	105	126	149	47	85	116	138	40	71	97	114	37	67	85	101
KAC 200H	109	216	296	337	97	204	241	280	90	166	223	265	77	138	189	220	72	130	166	196
KAC 400H	210	384	520	605	175	375	430	500	160	300	400	464	135	250	340	396	125	235	305	355
KAC 725H	355	650	890	1025	308	560	760	880	290	545	725	840	245	450	605	701	225	410	540	625
KAC 950H	480	871	1178	1360	415	754	1020	1180	390	712	950	1100	320	588	785	910	280	520	690	780
KAC 1200H	600	1090	1475	1710	520	950	1290	1460	490	900	1200	1380	405	735	980	1130	355	650	865	990
KAC 1600H	790	1440	1950	2260	710	1290	1720	1950	660	1200	1600	1860	530	965	1290	1480	460	840	1135	1300
KAC 2000H	980	1790	2420	2800	870	1580	2140	2460	820	1490	2000	2300	660	1210	1595	1840	572	1040	1400	1610
KAC 2500V	1220	2220	3000	3470	1090	1980	2680	3100	1035	1880	2500	2870	784	1426	1980	2270	705	1290	1725	1980
KAC 3000V	1450	2650	3580	4120	1296	2360	3200	3710	1243	2260	3000	3450	985	1794	2360	2715	840	1530	2040	2350
KAC 3500V	1680	3064	4140	4800	1530	2785	3760	4320	1460	2660	3500	4015	1150	2090	2760	3200	950	1740	2350	2700

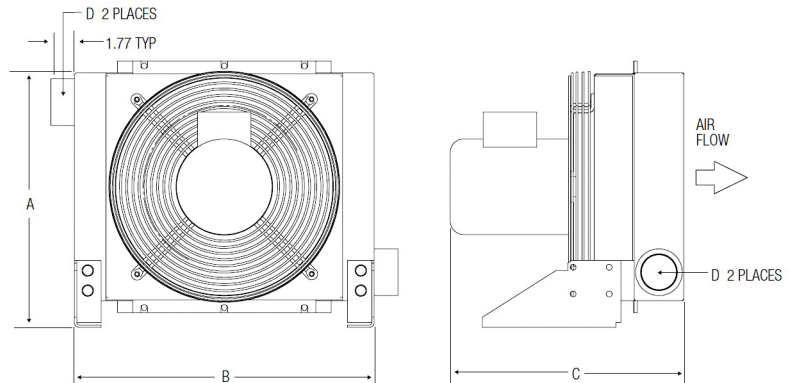
Above specifications are based on 80 to 125 psig operating pressures. Maximum pressure drop less than 3 psi. A flexible metal hose must be properly installed between the compressor and aftercooler to validate warranty.

Aftercoolers require a KC liquid separator with appropriate condensate drain. Select the KC for the operating pressure and air flow rate. See KAESER filter brochure for sizing criteria and rated capacities.

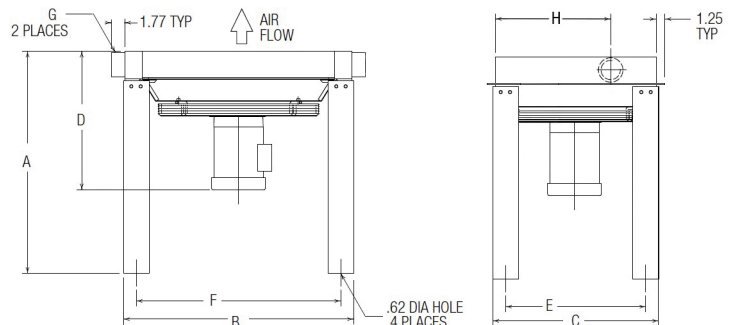
Sizing Example: Compressor flow rate is 200 cfm, outlet temperature is 200°F, and the ambient temperature is 90°F. The desired air temperature after the KAC is 100°F or lower. the inlet temperature to the KAC is 200°F and the approach temperature would be the difference between the desired air temperature and the ambient temperature (100°F - 90°F = 10°F). Look at the table columns for a 200°F inlet temperature, and 10°F approach temperature and match the compressor flow. The KAC 200H is the closest model that would meet the requirements.

Dimensions

Model	A (in.)	B (in.)	C (in.)	D (NPTF)
KAC 50H	12.8	15.9	13.7	1
KAC 100H	13.3		15.1	
KAC 200H	17.3	19.8	16.3	1-1/2
KAC 400H	18.0	22.6	18.0	
KAC 725H	22.4	30.6		
KAC 950H	26.8	27.3	22.8	3
KAC 1200H	26.8	41.2	25.1	
KAC 1600H	34.9		26.0	
KAC 2000H	37.9	51.1	27.6	4



Model	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H (in.)
KAC 2500V	36.1	49.1	43.7	28	39.7	47.1	4 NPT(F)	34.7
KAC 3000V			52.6	29.2	48.6			43.5
KAC 3500V			56.3	52.3	47.2			



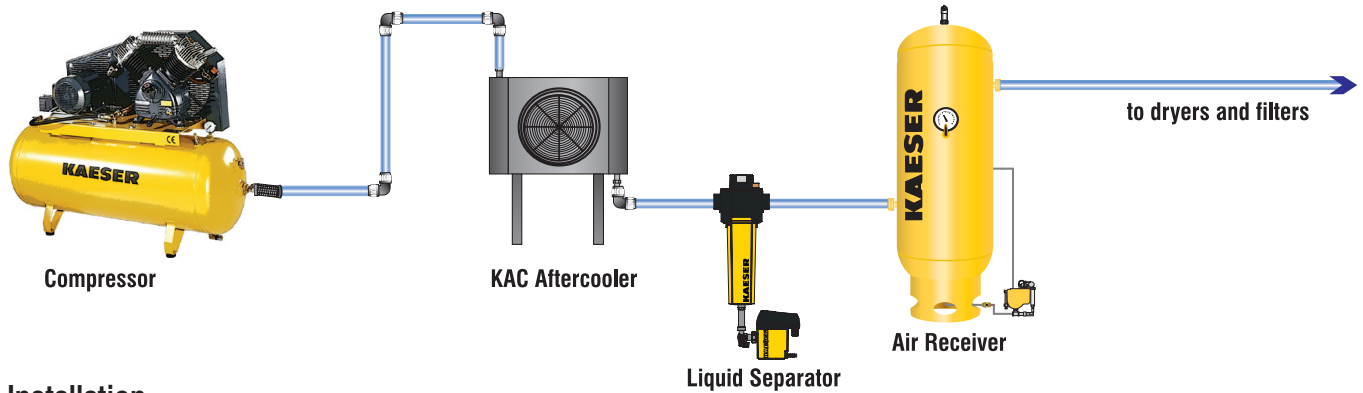
Specifications are subject to change without notice.

Purpose of Aftercoolers

The aftercooler is the very first air treatment component in a compressed air system. It may be integral to the compressor package or be installed immediately after the compressor. The aftercooler performs the first step in moisture removal by lowering the compressed air temperature so that much of the water vapor ingested by the air compressor condenses. Due to this bulk moisture

condensing, a liquid separator with an automatic condensate drain valve is needed at or near the discharge of the aftercooler. The aftercooler also protects downstream components from high compressed air temperatures that may cause failures or reduce performance.

Typical Aftercooler/Separator Installation



Installation

KAESER aftercoolers can be installed both indoors and outdoors as long as the ambient temperature is between 35°F and 104°F. A weatherproof electrical junction box is available.

A flexible hose connection between the compressor and aftercooler protects both units from vibration stress (and is required to validate the aftercooler warranty). Flexible hose is also available from your KAESER representative.

Pressure drop at maximum flow rates for inlet and approach temperatures

Inlet Temp (°F)	150				200				250				300				350			
Approach Temp (°F)	5	10	15	20	5	10	15	20	5	10	15	20	5	10	15	20	5	10	15	20
(psi)	1.1	1.9	2.6	3.0	1.0	2.0	2.5	2.9	1.1	1.9	2.5	2.9	0.9	1.6	2.2	2.6	0.9	1.6	2.1	2.4



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