

Aftercoolers and Separators

Water-Cooled Aftercoolers



Cool, dry air

Hot compressed air can be cooled to safe, usable temperatures in a Kaeser aftercooler. Water-cooled aftercoolers can be sized as a single source cooler or as a trim cooler with an air-cooled aftercooler during extremely hot weather. Also, they cool the air to a maximum of 120°F before introducing it into a dryer or filter for further treatment.

Kaeser water-cooled aftercoolers consist of a shell-and-tube heat exchanger which cools the compressed air to within 15°F of the cooling water in

the shell. As the air cools, up to 70% of the water vapor present condenses to a liquid, which can then be removed by a separator.

Optional features include automatic water regulating valves and other construction materials.

Standard Features:

Single pass, counter-flow, shell-and-tube design provides close approach temperatures and maximum heat removal from expensive cooling water.

- Counter-flow design maximizes air to water temperature difference for high heat exchange efficiency
- Copper heat exchange surfaces provide excellent heat transfer rate
- Single pass design and smooth surface copper tubes minimize fouling and provide low pressure drops

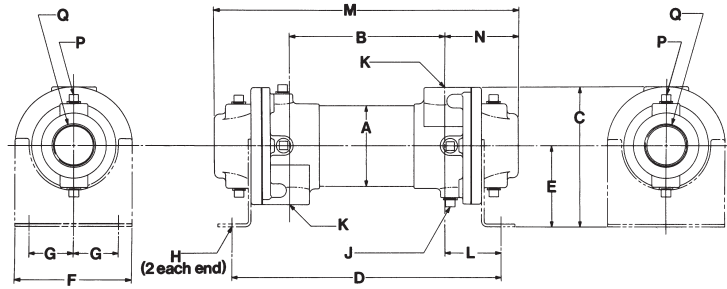
Premium materials and careful construction ensure long service life

- Heat exchanger made from nonferrous materials eliminates rust, galvanic corrosion, and reduces stress due to different rates of thermal expansion
- Seamless shells have maximum rupture strength and corrosion resistance
- Tubes rolled into tube sheet eliminates thermal stresses from brazing

Easy to Service and Install

- Removable end bonnets facilitate cleaning and servicing
- Models KWC-1250 and up have large 3/8" inch tubes that reduce fouling and are easy to clean
- Compact design
- Mounting brackets supplied as standard
- Can be mounted in vertical or horizontal positions

Technical Specifications



Models, Dimensions, and Weights

Model	A	B	C	D	E	F	G	H	J (NPT)	K (NPT)	L	M	N	P (NPT)	Q (NPT)	Wt. (lbs.)
KWC 40	2.12	25.62	3.5	29.06	1.94	2.62	0.88	.41 Dia.	—	.5	1.72	33.36	3.87	(4) .5	1.5	13
KWC 80		34.62		38.06								42.36				16
KWC 150		43.62		47.06								51.36				18
KWC 310	3.66	43	6.25	48.38	3.62	5.25	1.5	.44 x 1	(2) .38	1	2.69	50.4	3.7	(4) .5	2.5	40
KWC 440	5.12	51.5	7.38	57.62	4	6.75	2		(6) .38	1.5	3.06	59.6	4.05		80	
KWC 640	6.12	50.5	8.81	57.38	4.75	7.5	2.5	.44 x .88		2	3.44	60.25	4.88	(4) .5	3	130
KWC 1250		59.6		66.38								69.25				150
KWC 1600	8	49.6	12.13	58.38	6.5	8.62	3.5	.44 x 1	(6) .38	3	4.39	62.62	6.52	(4) .5	5	259
KWC 2100		58.6		67.38								71.62				270
KWC 2800		67.6		76.38								80.62				315

All dimensions in inches.

Specifications are subject to change without notice.

Capacity selection chart

Model	Capacity* in Tubes (scfm)	ΔP Rated Capacity (psi)
KWC 40	58	0.1
KWC 80	110	0.6
KWC 150	205	2.0
KWC 310	439	1.6
KWC 440	654	0.5
KWC 640	955	0.6
KWC 1250	1690	1.9
KWC 1600	2280	0.9
KWC 2100	3080	1.7
KWC 2800	3170	2.0

*Based on ambient air at 60°F, 14.7 psia, and 50% relative humidity. Compressed air cooled to within 15°F of inlet water temperature based on 200°F inlet air temperature. Water flow rate 3 gpm per 100 scfm air flow.

Automatic water regulating valves

Water regulating valves maintain a desired compressed air discharge temperature by regulating the water flow to the heat exchanger. No external power source is needed as the valve modulates automatically in response to temperature change at the sensing bulb. Not to be used with salt water. Water-cooled aftercoolers can be mounted as shown. Consult Kaeser Filter Literature for required separator.

Valve	Conn. Size	For use with Models
50070	½"	KWC 40 thru KWC 640
50080	¾"	KWC 1250
50090	1"	KWC 1600
50100	1¼"	KWC 2100
50110	1½"	KWC 2800



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