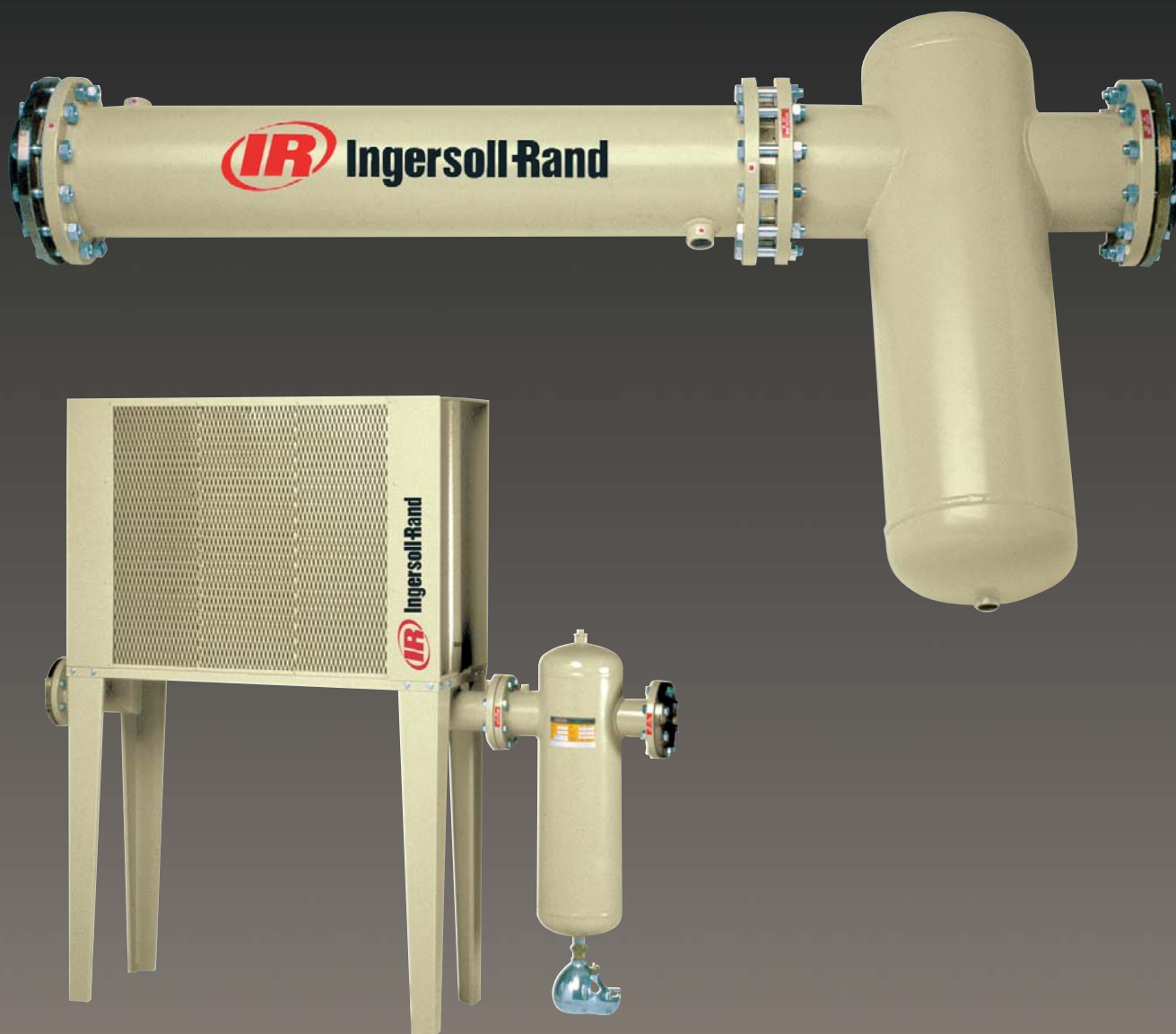


# Ingersoll-Rand®

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## Air and Water Cooled Aftercoolers



# Aftercoolers

Creating the finest quality products is one way to keep you ahead of your competition. Because superior products are made with superior equipment, it is necessary for you to keep that equipment running smoothly.

Take compressed air equipment for example. There are certain quantities of water and solid particles found in ambient air and when this air is compressed, the contaminants remain. If not removed, the water and solid contaminants can be harmful to your pneumatically operated equipment.

Also, through the compression process, the air becomes hot – too hot for standard filtration. The end result is poor product quality.

Ingersoll-Rand can alleviate this problem with the ABC/WBC Series of Aircooled, Watercooled Aftercoolers.

Through the action of cooling the air, water condenses and drains away, taking many of the other contaminants with it.

The result is cleaner, cooler air that, combined with further filtering and drying, will provide the best quality air and maximises the performance of your air operated processes.

## Operation

Compressed air flows into the heat exchanger. Cooling media flows over the exchanger and as the air cools, the moisture condenses. When the air reaches the coolers separator, centrifugal motion causes the condensed water and other contaminants to hit the cylinder walls and drip away to the drain.



WBC500RH



ABC280

# Features & Benefits

## Versatile Watercooled Design

The unit can be mounted in a vertical or horizontal configuration. Standard models are with copper tubes and steel shells, while there are options available from cupronickel for sea water and stainless steel for high pressure gases. The hot compressed air flows through the tubes while the cooling water flows in the opposite direction around the tubes. The result is cooler air with limited pressure drop.

## Reduced Water Consumption

The cooling water consumption can be adapted to your needs and the removable tube bundle design (WBC) makes for easy inspection and maintenance of the heat exchanger.



## Reduced Approach Temperature

The superior design of the ABC/WBC aftercoolers ensures that the compressed air will be cooled to 10°C above the cooling media temperature. This outstanding heat exchanger performance, combined with the high efficiency of the separator, ensures the maximum removal of moisture from the compressed air.

## Resistant to Thermal Expansion

ABC/WBC aftercoolers are designed to withstand high temperatures. This ensures problem-free service under all operating conditions.

Ease of Installation and Maintenance – The compact size ensures easy installation even in the most crowded of compressor housings.

## High Efficiency Separator

Installed at the base of the aftercooler, it will remove the liquid condensate.

## Automatic Condensate Drains

Condensate drips down the walls of the separator into the automatic condensate drain. As the drain fills, a float rises, opening a valve which empties the condensate. This automatic action ensures that condensate and other contaminants do not build up in the cooler to pollute the compressed air supply.

## Technical Specifications

Model	Capacity m <sup>3</sup> /min FAD*	Dimension mm			Weight kg	Air/water connection		Max Pressure (bar g)
		A	B	C		Air Inlet/Outlet	Water	
WBC-12FH	1.2	827	430		4	3/4" BSP	3/8" BSP	16
WBC-35FH	3.5	1110	525		8	1-1/2" BSP	1/2" BSP	16
WBC-65FH	6.5	1130	533		11	1-1/2" BSP	3/4" BSP	16
WBC-90FH	9.0	1191	713		15	2" BSP	3/4" BSP	16
WBC-135FH	13.5	1221	720		20	2" BSP	3/4" BSP	16
WBC-180FH	18.0	1409	885		50	DIN 80/80	1" BSP	12
WBC-270FH	27.0	1473	885		96	DIN 100/80	1-1/4" BSP	12
WBC-360FH	36.0	1473	885		102	DIN 100/80	1-1/4" BSP	12
WBC-500FH	50.0	1969	1145		139	DIN 125/125	1-1/4" BSP	12
WBC-600FH	60.0	1969	1215		187	DIN 150/125	1-1/4" BSP	12
WBC-900FH	90.0	2093	1315		269	DIN 200/150	1-1/4" BSP	12
WBC-30RH	3.0	1133	590		27	1-1/2" BSP	1/2" BSP	16
WBC-70RH	7.0	1133	590		29	1-1/2" BSP	1/2" BSP	16
WBC-110RH	11.0	1652	758		39	2" BSP	3/4" BSP	16
WBC-160RH	16.0	1654	775		51	2" BSP	3/4" BSP	16
WBC-220RH	22.0	1873	1045		108	DIN 100/100	1" BSP	12
WBC-280RH	28.0	1873	1045		112	DIN 100/100	1" BSP	12
WBC-380RH	38.0	1969	1145		137	DIN 125/125	1-1/4" BSP	12
WBC-500RH	50.0	1969	1145		139	DIN 125/125	1-1/4" BSP	12
WBC-600RH	60.0	1989	1225		190	DIN 150/150	1-1/4" BSP	12
WBC-900RH	90.0	2093	1325		309	DIN 200/200	1-1/4" BSP	12
WBC-1300RH	130.0	2083	1420		372	DIN 250/200	1-1/2" BSP	10
WBC-1700RH	170.0	2153	1620		440	DIN 300/200	2" BSP	10
WBC-2000RH	200.0	2233	1820		575	DIN 350/200	2" BSP	10
WBC-2500RH	250.0	2603	1995		640	DIN 350/200	DIN 65	10
WBC-3500RH	350.0	2809	2415		985	DIN 450/250	DIN 80	10
WBC-4500RH	450.0	3545	2615		1290	DIN 500/300	DIN 100	10
WBC-5500RH	550.0	3705	3045		1815	DIN 600/300	DIN 100	10

ABC-6	0.6	475	794	216	14	3/4"		16
ABC-12	1.2	545	895	277	17	3/4"		16
ABC-25	2.5	715	1140	403	31	1 1/2"		16
ABC-35	3.5	715	1140	403	37	1 1/2"		16
ABC-60	6	775	1336	453	39	1 1/2"		16
ABC-90	9	908	1361	445	55	2"		16
ABC-140	14	1075	1523	500	80	2"		16
ABC-180	18	1516	1857	560	120	DN 80/80		12
ABC-280	28	1880	1807	560	190	DN 100/100		12
ABC-360	36	1980	2075	560	245	DN 100/100		12
ABC-400	40	2000	1983	1035	405	DN 150/150		9
ABC-480	48	3128	1983	1032	560	DN 150/150		9
ABC-640	64	3218	1983	1040	620	DN 200/200		9
ABC-750	75	3218	1983	1040	640	DN 200/200		9

### Model No. Key

WBC - Watercooled

ABC - Aircooled

FH - Fixed tube bundle, horizontal configuration

RH - Removable tube bundle, horizontal configuration

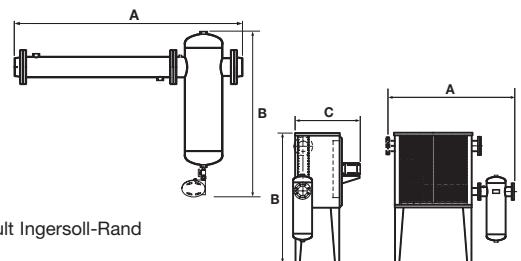
\*Standard cooler material only  
(for stainless steel and copper nickle consult  
Ingersoll-Rand.)

### Reference Conditions

Ambient 1.013 bar @ 25°C & 60% RH  
Air Inlet 7 bar g @ 120°C

### Operating Limitations

Minimum operating pressure 0.5 bar g  
WBC Maximum inlet temperature 200°C  
ABC Maximum inlet temperature 150°C  
(For higher temperatures up to 200°C consult Ingersoll-Rand)  
Minimum water temperature 1°C  
Maximum water temperature 90°C



Ingersoll-Rand air compressors are not designed, intended, or approved for breathing air. Compressed air should not be used for breathing air applications unless treated in accordance with all applicable codes and regulations.

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