Donaldson
FILTRATION SOLUTIONS

Industrial Gases

Water-Cooled Aftercooler UFK-W

PRODUCT DESCRIPTION

The water- cooled shell and tube aftercooler range is designed for cooling compressed air or other fluids classified under PED 2014/68/EU group 2. It supports operating pressures up to 16 bar and temperatures from 0°C to 150°C. Carbon steel housing with epoxy coating.

With a durable carbon steel housing coated with epoxy, it is ideal for installations downstream of compressors, reducing gas temperatures to approximately +10°C above the cooling water temperature. The unit features flange connections at the inlet and outlet, with optional pipe reducers available for compatibility with separators or filters.

MAIN FEATURES & BENEFITS

- **High cooling efficiency & low pressure drop**

Optimized design provides excellent thermal efficiency with minimal pressure loss.

- **Robust design for demanding conditions**

Engineered for up to 16 bar operating pressure and temperatures up to +150°C.

- **Flange connections & optional pipe reducers**

Provides reliable sealing and connection flexibility.

- **Integrated drain ports**

Built-in water drain ports for easy servicing and maintenance..

INDUSTRIES

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Donaldson Filtration Deutschland GmbH
Büssingstraße 1
D-42781 Haan
Tel. +49 2129 569 0
CAP-de@donaldson.com
www.donaldson.com

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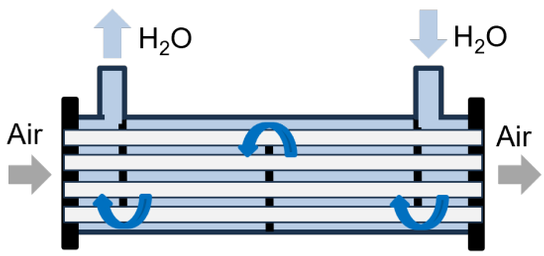
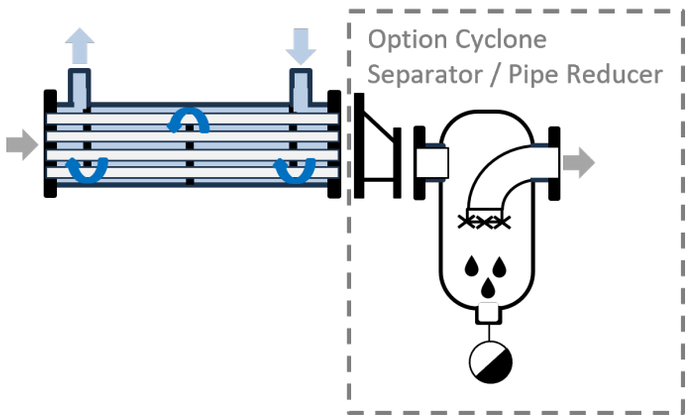
PRODUCT DESCRIPTION

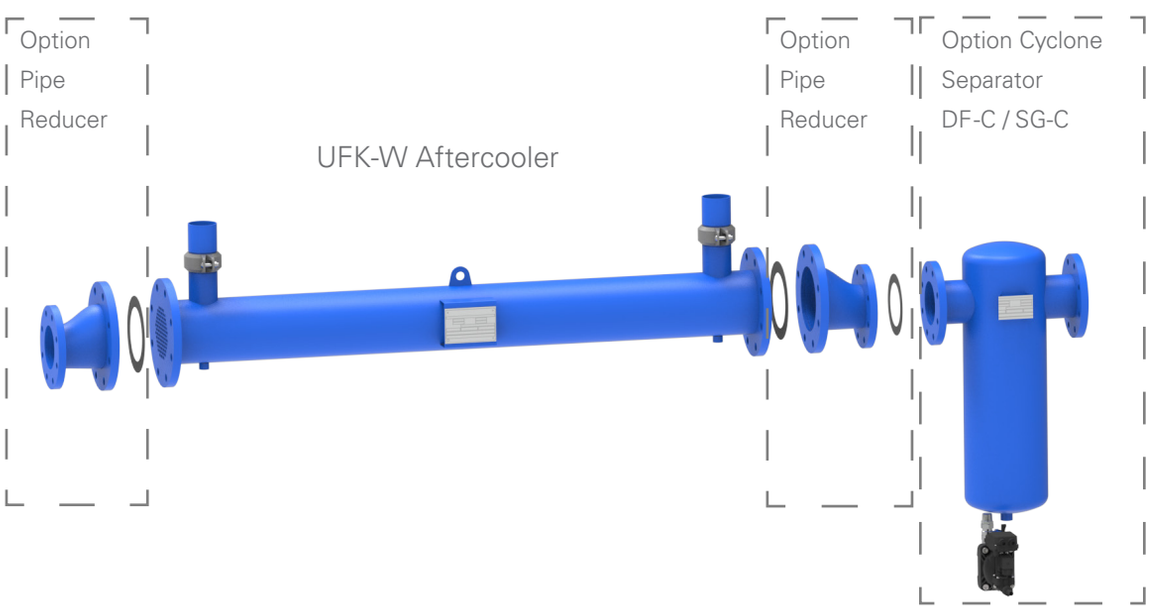
The UFK-W aftercooler series is a water - cooled heat exchanger. Compressed air or gas flows through copper pipes, which are submerged in cold water on the outer shell side. Cooling water moves in counter-durrent direction and is guided by diaphragms to enhance heat transfer efficiency.

As the cooling process causes moisture in the compressed air or gas to condense, it should be removed using a cyclone separator or coarse coalescing filter installed downstream of the UFK-W.

Optional accessories, such as cyclone separators, filter systems, and pipe reducers, can be added to the heat exchanger.







PRODUCT DESCRIPTION

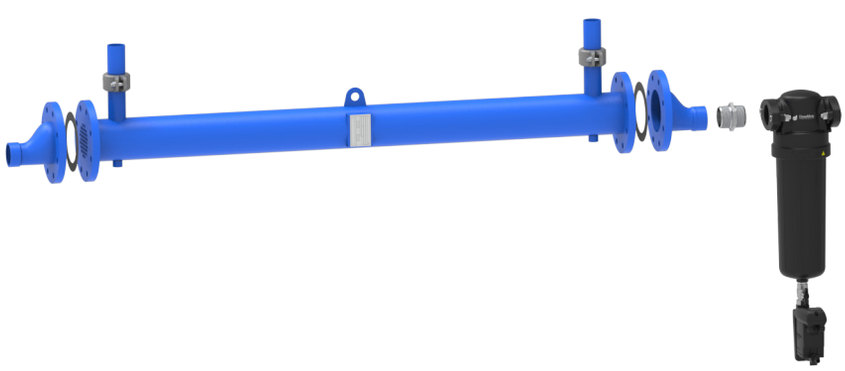
FEATURES	BENEFITS
High cooling efficiency and low pressure drop	Design and material selection of the heat-exchager support excellent thermal efficiency and low pressure drop
Designed for 16 bar operating pressure and up to +150°C operating temperature	Robust steel housing, designed for a wide range of even challenging cooling applications.
Flange connections + pipe reducers	Flange connection at inlet and outlet support proper sealing to leakages. Pipe reducers are available as option for installation of separators or filters at the outlet, matching to appropriate pipe connections for the flow at inlet and outlet
Drain ports included	Water drain ports are included on the heat-exchanger housing for service and maintenance purpose.

TECHNICAL DATA	
Heat-Exchanger	
Housing / internal tube material	Carbon steel, copper
Min./Max. Inlet Air Temperature	1...+150°C
Max. Inlet Air Pressure	16 bar
Min./Max. Inlet Water Temperature	1...+90°C
Max. Inlet Water Pressure	10 bar
Design, Manufacturing and Testing	PED 2014/68/EU

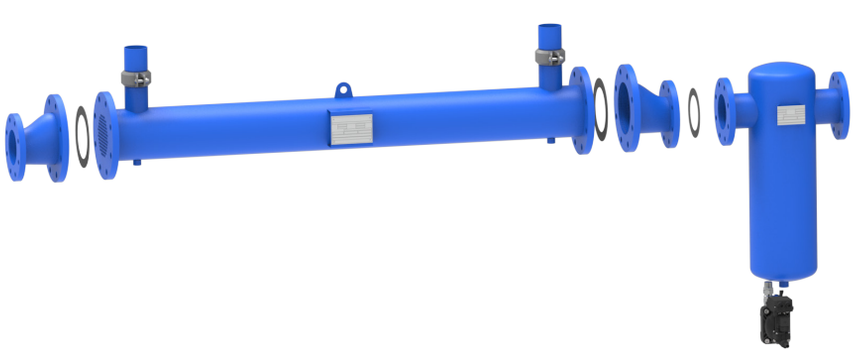
PRODUCT DESCRIPTION

TECHNICAL DATA					
UFK-W	Nominal Volume Flow (1 bar, 20°C) m^3/h[1)]	Compressed Air Connection Flange	Water Connection	Recommended Cyclone Separator	Recommended Pipe Reducer
0150	150	DN100	1“ BSP F	DF-C 0320	DN100 / 1“BSP F
0225	225	DN100	1“ BSP F	DF-C 0320	DN100 / 1“BSP F
0450	450	DN100	1“ BSP F	DF-C 0450	DN100 / 1 1/2“ BSP F
0750	750	DN100	D=48.3 mm	DF-C 0750	DN100 / 2“ BSP F
1000	1000	DN125	D=48.3 mm	DF-C 1450	DN125 / 2 ½“ BSP F
1650	1650	DN125	D=60.3 mm	DF-C 1650	DN125 / DN80
2250	2250	DN150	D=76.1 mm	SG-C 2250	DN150 / DN100
2750	2750	DN200	D=76.1 mm	SG-C 3500	DN200 / DN100
3500	3500	DN200	D=88.9 mm	SG-C 3500	DN200 / DN100
5000	5000	DN250	D=114.3 mm	SG-C 5000	DN250 / DN150
6000	6000	DN250	D=114.3 mm	SG-C 6000	DN250 / DN150
7500	7500	DN250	D=114.3 mm	SG-C 7500	DN250 / DN150
11000	11000	DN300	D=139.7 mm	SG-C 11000	DN300 7 DN200

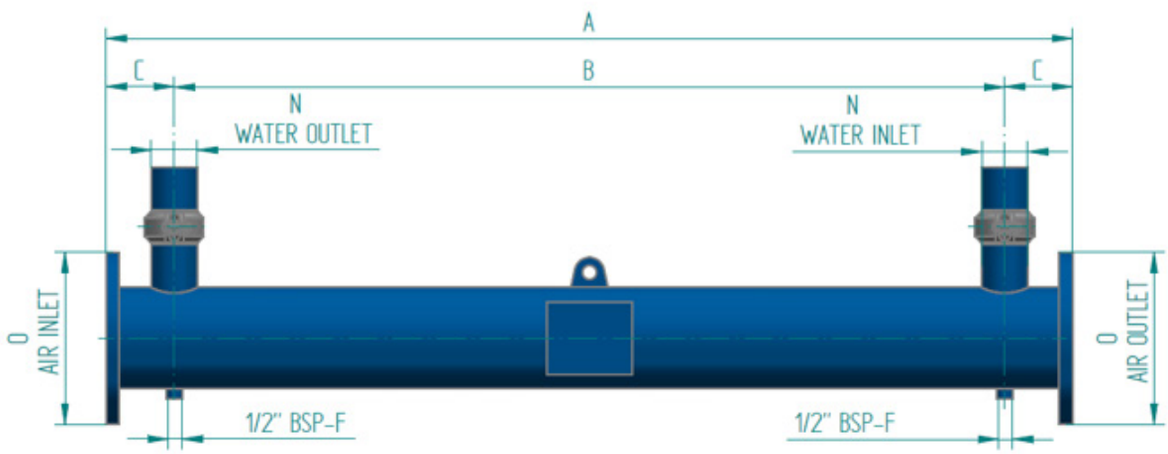
Configuration UFK-W 0150- 1000 + Cyclone Separator DF-C + Pipe Reducers



Configuration UFK-W 01650- 11000 + Cyclone Separator SG-C + Pipe Reducers



DIMENSIONS / WEIGHT



UFK-W	A mm	B mm	C mm	N mm	O mm	Weight kg
0150	1000	830	85	1" BSP-F	DN100 / PN16	27
0225	1150	980	85	1" BSP-F	DN100 / PN16	30
0450	1300	1130	85	1" BSP-F	DN100 / PN16	32
0750	1500	1315	92.5	Da=48.3	DN100 / PN16	37
1000	1500	1300	100	Da=48.3	DN125 / PN16	52
1650	1550	1340	105	Da=60.3	DN125 / PN16	55
2250	1600	1375	112.5	Da=76.1	DN150 / PN16	75
2750	1600	1375	112.5	Da=76.1	DN200 / PN16	98
3500	1600	1350	125	Da=88.9	DN200 / PN16	113
5000	1400	1125	137.5	Da=114.3	DN250 / PN16	154
6000	1400	1125	137.5	Da=114.3	DN250 / PN16	154
7500	1650	1375	137.5	Da=114.3	DN250 / PN16	172
11000	1650	1350	150	Da=139.7	DN300 / PN16	242