



MANN+HUMMEL Oil Filters and Fuel Filters

MANN+HUMMEL Oil Filters: optimally designed



Compressor oil is a very expensive machine oil. High quality oil filters are recommended to conserve this oil and also to protect other parts of the compressed air system.

MANN+HUMMEL oil filters are particularly designed to handle the aggressive running conditions of the compressor.

Just as with air cleaners and air/oil separators, the oil filters in a compressed air system are also part of a process chain in which the weakest link can seriously lessen the performance of the whole system. If the oil filter does not work properly, the dirt deposits will negatively affect the air/oil separators, fine filters and machine components. The result is a considerable shortening of the filter service life and increased maintenance costs for the compressor.

Design

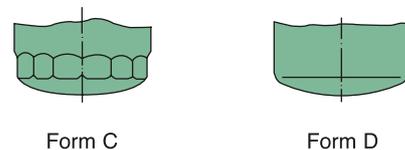
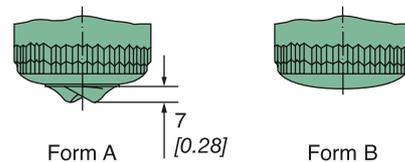
The spin-on filter consists of a robust metal housing with a filter element fitted inside. Depending on the application, the spin-on filter can be equipped with various components such as a different filter medium, a non-return valve, a bypass valve, etc.. The liquid to be filtered flows into the cover plate through concentric openings, flows through the filter element and finally the cleaned liquid exits through the central connection. An undetachable seal integrated in the cover plate ensures optimum sealing to the outside under all operating conditions.

Advantages at a glance:

- High dirt holding capacity
- Reliable function at cold start thanks to the bypass valve
- High mechanical stability of the whole filter and filter medium

Types of spin-on filters

The dimension tables refer to these forms.

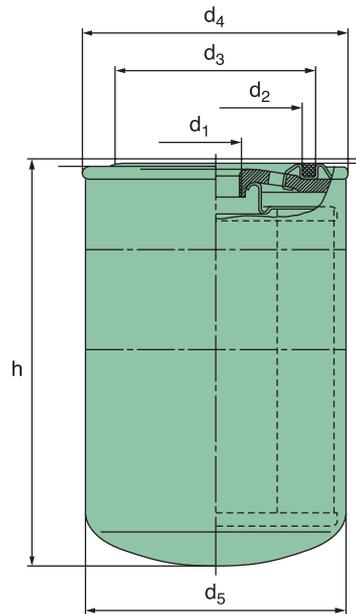


Our MANN+HUMMEL filters are made with high performance filtration media and elastomers which are specially designed for use with compressors. They can withstand continuous high running temperatures with a safety reserve.

Further information is available in the MANN+HUMMEL catalogue for Liquid Filters (Order No. 19 942 10 101).

MANN+HUMMEL Oil Filters

Oil filters used with compressors have to be free of silicon to enable use of the compressors on paint-spray lines. Furthermore, compressors have different requirements for oil filters in comparison to engines. Firstly, the life of the oil and the oil filter is considerably longer in a compressor than in an engine. Secondly, the compressor oil and oil filter are not exposed to combustion residues and in addition are subjected to a lower temperature level.



MANN-FILTER	Nominal flow rate [l/min] [gpm]	Dimensions in mm (<i>dimensions in inches</i>)						Filter fineness acc. to ISO 16 889 [μm (c)] * with 50% separation efficiency		Non-return valve [bar]	By-pass valve [bar]	Permissible operating pressure		Type (see page 42)
		d ₁	d ₂	d ₃	d ₄	d ₅	h	99%	[bar]			[MPa]		
W 712/65	20 [5.28]	3/4" - 16 UNF	62 [2.44]	71 [2.80]	80 [3.15]	76 [2.99]	93 [3.66]	20	> 50	0.12	2.5	14	1.4	C
W 719/37	30 [7.93]	3/4" - 16 UNF	62 [2.44]	71 [2.80]	80 [3.15]	76 [2.99]	123 [4.84]	20	> 50	0.12	2.5	14	1.4	C
W 920/51	30 [7.93]	3/4" - 16 UNF	62 [2.44]	71 [2.80]	96 [3.78]	93 [3.66]	95 [3.74]	20	> 50	0.12	2.5	14	1.4	A
W 920/40	35 [9.25]	3/4" - 16 UNF	62 [2.44]	71 [2.80]	96 [3.78]	93 [3.66]	95 [3.74]	14	38	0.12	1.2	14	1.4	B
W 930/35	40 [10.57]	3/4" - 16 UNF	62 [2.44]	71 [2.80]	96 [3.78]	93 [3.66]	114 [4.49]	20	> 50	0.12	2.5	14	1.4	A
W 940/55	55 [14.53]	3/4" - 16 UNF	62 [2.44]	71 [2.80]	96 [3.78]	93 [3.66]	142 [5.59]	20	> 50	0.12	2.5	14	1.4	A
W 950/24	70 [18.49]	1" - 12 UNF	62 [2.44]	71 [2.80]	96 [3.78]	93 [3.66]	170 [6.69]	14	38	0.12	1.6	14	1.4	B
W 962/14	75 [19.82]	1" - 12 UNF	62 [2.44]	71 [2.80]	96 [3.78]	108 [4.25]	210 [8.27]	14	38	–	2.5	14	1.4	B
W 962/18	100 [26.42]	1" - 12 UNF	62 [2.44]	71 [2.80]	96 [3.78]	108 [4.25]	210 [8.27]	5	19	0.12	2.5	14	1.4	B
W 1170	70 [18.49]	1" - 12 UNF	93 [3.66]	104 [4.09]	110 [4.33]	108 [4.25]	227 [8.94]	14	38	0.12	1.2	14	1.4	C
W 11 102	100 [26.42]	1 1/8" - 16 UN	93 [3.66]	104 [4.09]	110 [4.33]	108 [4.25]	260 [10.24]	20	> 50	0.12	2.5	14	1.4	C
WD 13 145/8	190 [50.20]	1 1/2" - 16 UN	100 [3.94]	111 [4.37]	140 [5.51]	136 [5.35]	302 [11.89]	15	38	–	2.5	20	2.0	D
WD 13 145/10	190 [50.20]	1 1/2" - 16 UN	100 [3.94]	111 [4.37]	140 [5.51]	136 [5.35]	302 [11.89]	< 3	7	–	2.5	20	2.0	D

* In comparison to the previously used calibration, the new calibration with the same filter results in a lower filter fineness with small particles.

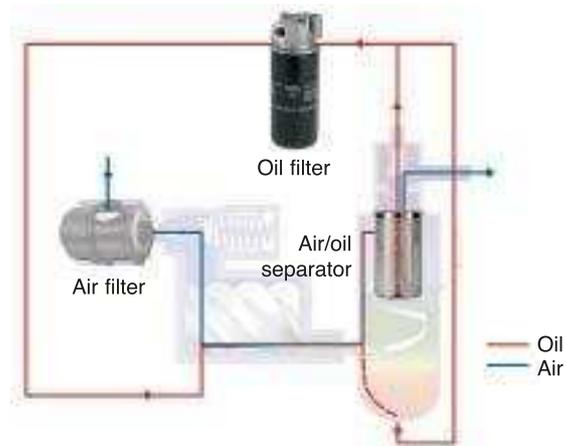
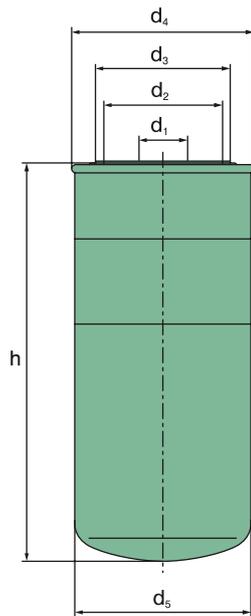
Fine high performance – long-life oil filters

The oil filter is an important component for the reliable operation of a compressor. It prevents the unfiltered oil from entering the oil circuit. In particular, the oil filter protects the compressor screw against premature wear and extends the service life of the air/oil separator.

MANN+HUMMEL oil filters are designed to perform difficult operating conditions found in compressors. The

selected materials, e.g. metal, filter media and seals, are configured especially for this application and the aggressive oil in the system.

MANN+HUMMEL offers cellulose media for standard applications. Long-life oil filters with fibre-glass media are a better choice for the finest filter fineness of 10 µm absolute and a filter service life of several thousand operating hours.



The finest filtration with MANN+HUMMEL long-life oil filters takes the load off the air/oil separators installed downstream and protects the screw.

MANN-FILTER	Nominal flow rate [l/min] [gpm]	Dimensions in mm (<i>dimensions in inches</i>)						Filter fineness acc. to ISO 16 889 [µm (c)] * with 50% 99% separation efficiency		Non- return valve [bar]	By- pass valve [bar]	Permissible operating pressure [bar] [MPa]		Type (see page 42)
		d ₁	d ₂	d ₃	d ₄	d ₅	h							
WD 962/21	65 [17.17]	1" - 12 UNF	62 [2.44]	71 [2.80]	96 [3.78]	93 [3.66]	212 [8.34]	4	10	–	2.5	25	2.5	D
WD 1374/6	110 [29.06]	1 1/2" - 16 UN	100 [3.94]	111 [4.37]	140 [5.51]	136 [5.35]	177 [6.97]	4	10	–	2.5	20	2.0	D
WD 13 145/14	210 [55.48]	1 1/2" - 16 UN	100 [3.94]	111 [4.37]	140 [5.51]	136 [5.35]	302 [11.89]	4	10	–	2.5	20	2.0	D

* In comparison to the previously used calibration, the new calibration with the same filter results in a lower filter fineness with small particles.

MANN+HUMMEL Fuel filters

MANN+HUMMEL spin-on filters are used for the filtration of fuel in a number of applications. MANN+HUMMEL has been a leading manufacturer of spin-on filters worldwide for many years.

Advantages at a glance:

- Available with a range of filter media
- Efficient separation and high dirt holding capacity with low pressure drop



- Robust, anti-corrosion housing with high pulsation and pressure stability
- Geometry designed for optimum flow
- Undetachable seals
- Stable, non-collapsible central tube
- Non-return valve with low pressure drop

Further information is available in the MANN+HUMMEL catalogue for Liquid Filters (Order No. 19 942 10 101).

In-line fuel filters

PreLine® preliminary filter for the separation of water



Increasing pressures in injection systems have in turn considerably increased the requirements for fuel filtration with regard to the separation of water and particles. The injection pump manufacturers have therefore drawn up a list of requirements. MANN+HUMMEL filters more than completely fulfil the requirements.

Our PreLine® preliminary fuel filter series reliably meets the required water separation efficiency of at least 93% acc. to ISO 4020 thanks to the specially developed melt-blown medium.

The standard version has a manual pump and manual drain. Other versions are available with an electrical diesel heater and water sensor.

Advantages at a glance:

- Excellent water separation
- Design with highly integrated function
- High dynamic stiffness
- Optional: electrical heater in the inflow
- Increases the filter service life of the main filter
- Ideal as retrofit solution
- Protects modern injection systems against damage caused by corrosion and abrasion
- Reduces costs through longer engine life
- Reduces repair costs

Further information is available in the MANN+HUMMEL catalogue for Liquid Filters (Order No. 19 942 10 101).

MANN+HUMMEL