

Heavy Duty Filtration

High Temperature and High Pressure Solutions

The new line of heavy duty filtration offered by Ingersoll Rand will accommodate specific high temperature or high pressure application needs that standard filters cannot meet.

Conventional filtration operates in temperatures up to 80°C and pressures nearing 16 bar g, while heavy duty filtration can reach temperatures of 200°C or 40 bar g. Expect the same high quality air from the Ingersoll Rand heavy duty filters - offering high efficiency particulate filtration and a low pressure drop. The reinforced, durable housing of our heavy duty filters provide reliability in even the harshest industrial environments.

High Temperature Filtration

- Continuous operation at 150°C with intermittent capabilities at 200°C.
- Equipped with a differential pressure gauge to indicate element condition and float drain for proper condensate removal.
- Spiral copper tubing allows hot air to cool as it passes the pressure gauge providing instant and accurate reading.

High Pressure Filtration

- Fully functional, high efficiency filtration in high pressure applications of up to 40 bar g.
- Robust housing suitable for almost any high pressure environment.



Filters... Made specifically for your needs.

All of this great new technology provides value in precisely the type of filter you need. That is why we offer dust filters, general purpose filters, coalescing filters and activated carbon filters*.

Filter Grade A*, G, H, D	Port Size BSPT in	Flow Rates 40 bar g m ³ /min	Flow Rates		Dimensions					Weight kg
			7 bar g / 100 psig m ³ /min	cfm	A mm	B mm	C mm	D mm	E mm	
High Pressure										
F0150I(grade) HDP	1"	12.50	2.50	88	120	36	435	170	-	2.8
F0300I(grade) HDP	1"	25.00	5.00	177	120	36	435	170	-	2.8
F0500I(grade) HDP	1 1/2"	41.67	8.33	294	120	36	435	170	-	2.8
F0800I(grade) HDP	2"	66.67	13.33	471	170	52	705	170	-	7.5
F1000I(grade) HDP	2"	83.33	16.67	589	170	52	705	170	-	7.7
F1300I(grade) HDP	2 1/2"	108.33	21.67	765	200	68	755	170	-	12.2
F2000I(grade) HDP	3	166.67	33.33	1177	200	68	1035	170	-	15.7
F2700I(grade) HDP	3	225.00	45.00	1589	200	68	1035	170	-	15.8
High Temperature										
F0150I(grade) HDT	1"	-	2.50	88	120	36	700	170	-	4.3
F0300I(grade) HDT	1"	-	5.00	177	120	36	700	170	-	4.3
F0500I(grade) HDT	1 1/2"	-	8.33	294	120	36	700	170	-	4.3
F0800I(grade) HDT	2"	-	13.33	471	170	52	970	170	-	9.0
F1000I(grade) HDT	2"	-	16.67	589	170	52	970	170	-	9.2
F1300I(grade) HDT	2 1/2"	-	21.67	765	200	68	1020	170	-	13.7
F2000I(grade) HDT	3	-	33.33	1177	200	68	1300	170	-	17.2
F2700I(grade) HDT	3	-	45.00	1589	200	68	1300	170	-	17.2
High Temperature Flange Size										
F2800I(grade) HDT	DN 100	-	46.67	1648	485	255	1400	-	780	85
F4200I(grade) HDT	DN 125	-	70.00	2472	630	280	1400	-	670	130
F5700I(grade) HDT	DN 150	-	95.00	3355	630	300	1520	-	780	127
F7500I(grade) HDT	DN 150	-	125.00	4415	676	310	1560	-	780	160
F9300I(grade) HDT	DN 150	-	155.00	5475	724	320	1600	-	780	192
F11000I(grade) HDT	DN 200	-	183.33	6475	724	335	1610	-	780	192
F14200I(grade) HDT	DN 200	-	236.67	8359	885	435	1670	-	780	395
F19900I(grade) HDT	DN 250	-	331.67	11714	1050	435	1670	-	780	460
F31000I(grade) HDT	DN 300	-	516.67	18249	1200	525	1775	-	780	715

* High Temperature filters are not available in Grade A.

Grade A - Activated Carbon Filtration (High Pressure Only)

Oil vapour and hydrocarbon odour removal, providing a maximum remaining oil content of <0.003 mg/m³ (excluding methane) @ 21 °C (Precede with Grade H filter).

Grade G - General Purpose Protection

Particle removal down to 1 micron including coalesced liquid, water and oil, providing a maximum remaining oil aerosol content of 0.6 mg/m³ @ 21 °C.

High Temperature Filtration Operating Limitations

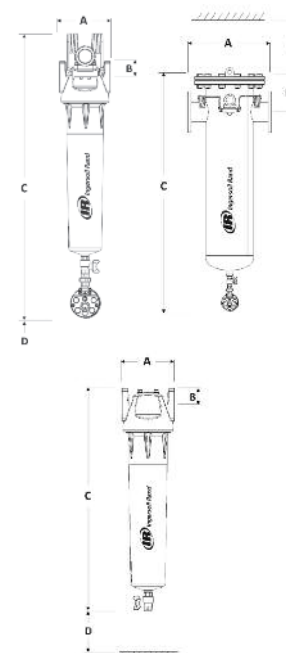
Maximum Operating Pressure (BSPT & Flanged Filters) = 16 bar g (232 psig).
Maximum Recommended Operating Temperature = 150 °C; 200 °C intermittent operation.
Maximum Recommended Operating Temperature = 1 °C.

Grade H - High Efficiency Oil Removal Filtration

Particle removal down to 0.01 micron including water and oil aerosols, providing a maximum remaining oil aerosol content of 0.01 mg/m³ @ 21 °C (Precede with Grade G filter).

Grade D - General Purpose Dust Filtration

Dust particle removal down to 1 micron.



High Temperature Correction Factors

Line pressure	bar g	1	2	3	5	7	9	11	13	15	16
	psig	15	29	44	73	100	131	160	189	218	232
Correction Factors		0.38	0.53	0.65	0.85	1.00	1.13	1.25	1.36	1.46	1.51

High Pressure Filtration Operating Limitations

Maximum Operating Pressure BSPT Filters = 40 bar g (580 psig)
Maximum Recommended Operating Temperature (Grade D, G, H) = 80 °C

Maximum Recommended Operating Temperature (Grade A) = 30 °C
Minimum Recommended Operating Temperature = 1 °C

High Pressure Correction Factors

Line pressure	bar g	7	16	20	25	30	35	40
	psig	100	232	290	363	435	508	580
Correction Factors		1	2.1	2.5	3	3.5	4	5

Capacity of F800I HDP at standard 7 bar conditions is 800 m³/h
- at 7 bar: 800 x 1 = 800 m³/h
- at 40 bar: 800 x 5 = 4000 m³/h

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