

Oilfreepac OFP Type 0003-60 - 0600-60

Complete purification package with triple prefiltration, with level controlled electronic condensate drains, heatless adsorption dryer, activated carbon adsorber, automatic shut-off valve and afterfilter.



Compressed air is flowing through the inlet of the system (J) into a three stage prefiltration PE, MF, SMF (4, 5, and 6).

In these stages, the air is cleaned from particles and condensate down to a residual content of 0.01 ppm.

The condensate is removed by condensate drains (12).

Via a lower shuttle valve (8), the air for drying is lead into the adsorption vessel (1), in which the air is dried down to the required dewpoint.

After that, the air is lead through the upper shuttle valve (8) and into an activated carbon tower (2), in which oil vapor and hydrocarbons are retained.

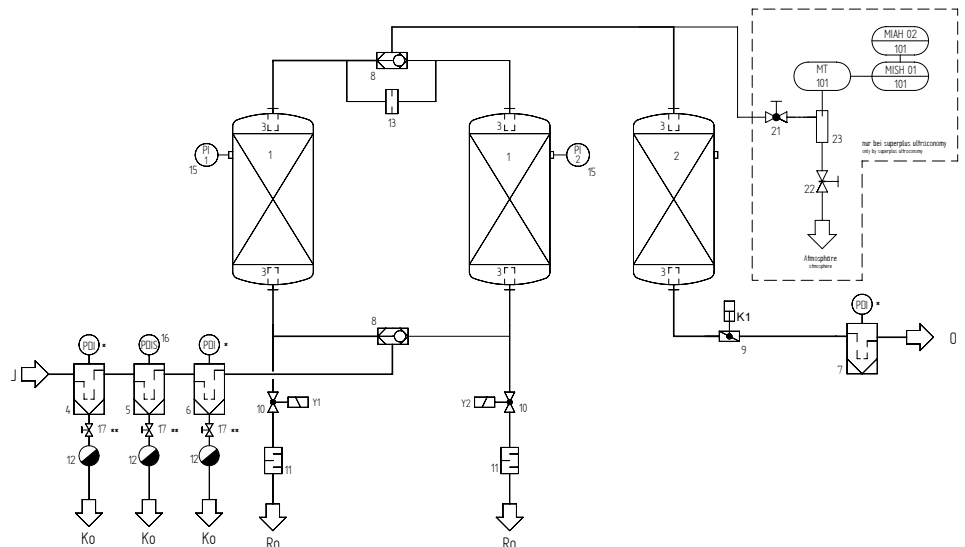
Via an afterfilter (7), in which possible abrasion from activated carbon is retained, the clean and oilfree air is led into the compressed air network to the point of use.

While one vessel is in the drying phase (adsorption), the other vessel is being dried again (regeneration).

A partial stream of dried air is expanded to atmospheric pressure via a nozzle (13), lead across the desiccant bed for regeneration and discharged to atmosphere via a solenoid valve (10) and a silencer (11). As a safety feature against contamination (e.g. oil breakthrough of the compressor), the differential pressure across the MF element is constantly monitored.

In case of an immediate increase in differential pressure, the differential pressure gauge triggers the control and a valve (9) is closed.

Purification package OFP



OFP	Volume flow in cfm*	Regeneration air losses (average) cfm*	Volume flow out (min.) cfm	Pressure loss initial psi	Prefilter (Afterfilter) PE, MF, SMF, (PE)
0003-60	3	0.47	2.37	0.48	03/05
0005-60	5	0.89	4.85	0.61	03/05
0010-60	10	1.36	7.22	1.02	03/05
0015-60	15	2.25	12.01	1.02	04/10
0020-60	20	3.14	16.86	1.22	04/10
0030-60	30	4.44	24.14	0.82	05/20
0050-60	50	7.10	38.46	1.29	05/20
0060-60	60	8.88	48.28	1.50	05/25
0185-60	85	13.61	72.01	2.18	05/25
0100-60	100	15.53	84.44	1.36	05/25
0125-60	125	20.12	108.40	1.50	07/30
0175-60	175	26.63	144.79	1.90	07/30
0200-60	200	33.14	181.12	2.72	07/30
0300-60	300	49.11	265.03	2.52	10/30
0400-60	400	57.99	313.31	3.06	10/30
0500-60	500	75.74	409.82	3.54	15/30
0600-60	600	88.76	482.54	2.52	20/30

*related to 14.7 psi (abs) and 68 °F at intake of compressor and system pressure and 95 °F inlet temperature 14.7psi 100 psig



Oilfreepac OFF 0003-60 - 0600-60

Features purification package OFF:	Benefits:
Purification package designed for use with oil lubricated compressors	No need to buy expensive and less energy efficient „oil-free“ compressors
Compressed air quality better than on any „oilfree“ installation	Use in highly sensitive production possible (food-, beverage-, electronic industry, etc.)
Purification package complete with pre-, afterfilter and condensate drain	Turnkey system, no additional installation required, all components from one hand, technically perfectly matched to each other
Prefilter with electronic, level controlled condensate drain UFM-T	No compressed air losses due to condensate removal, therefore reduction of operating cost
All dryers in cabinet construction	Optimum protection against mechanical damage and against dirt
Filters oversized	Large filtration surface, therefore lowest possible pressure drop and low operating cost
Safety feature against oil breakthrough, consisting of differential pressure measurement and shut-off valve	High operating safety in combination with use of oil lubricated compressors
Intermittent operation standard	Link between dryer and compressor possible on central applications, therefore saving of compressed air
17 sizes available, matched to the compressor flow	Custom made solutions possible, matching exactly customers' requirements; no oversizing of compressors necessary, since lowest possible regeneration air requirements
Comprehensive option package: Dewpoint depending control, start-up device, bypass, pneumatics control, changeover-control, etc.	Flexibility in application, well thought-o package for economical operation and safe system installation in the compressed air network

Product description:
Purification package Oilfreepac OFF: Complete purification package with triple prefiltration, with electronic, level controlled condensate drains, pressure-swing adsorption dryer, activated carbon adsorber for removal of oil vapors and hydrocarbons, afterfilter and shut-off device against oil breakthrough

Medium:
Compressed air/nitrogen

Pressure dewpoint:
-40 °F to -58 °F at 100% load

Operating pressure:
min. 60 psig, max. 225 psig

Medium temperature:
max. 122 °F

Ambient temperature:
min. 39 °F, max. 122 °F

Residual oil content:
< 0.003 ppm

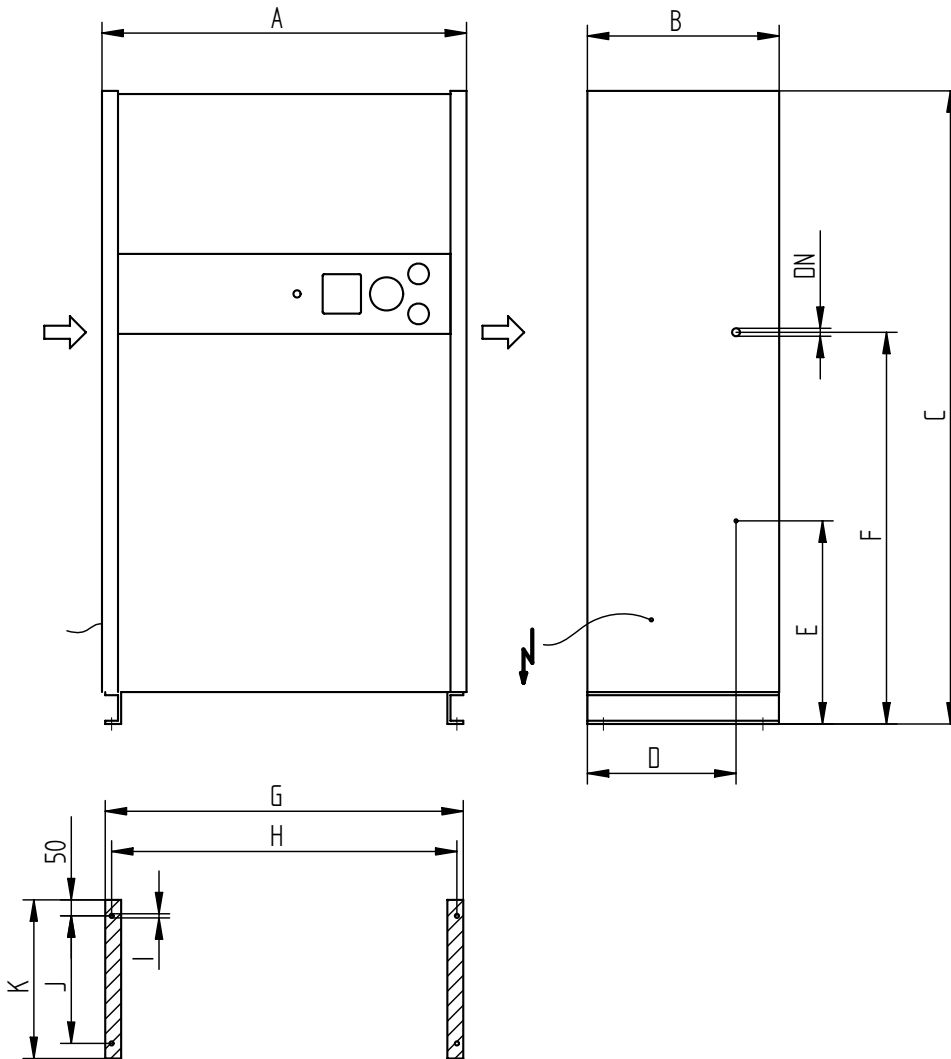
Power supply:
230 V/ 115 V/ 50 – 60 Hz, 24 V DC

Power consumption:
approx. 40 W

Vessel approval:
Types 0060-60 to 0600-60: ASME

Sizing:												
Operating pressure psig	60	75	90	100	115	130	150	160	175	190	200	225
Correction factor overpressure (f _p)	0.62	0.75	0.88	1.0	1.12	1.25	1.38	1.50	1.63	1.75	1.88	2
Inlet temperature °F	68	77	86	95	104	115	125					
Correction factor temperature (f _T)	1.0	1.0	1.0	1.0	0.8	0.7	0.5					
$\dot{V}_{corr} = \frac{\dot{V}_{nom}}{f_p \cdot f_T}$ <p>Example: $\dot{V}_{nom} = 117$ cfm, inlet temperature = 86°F, operating pressure = 150 psig, PDP -40°C</p> $\dot{V}_{corr} = \frac{117 \text{ cfm}}{1.38 \cdot 1.0} = 84.78 \text{ m}^3/\text{h}$ <p>Calculated dryer size: Oilfreepac OFF, type 0175-60</p>												

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OFP	DN "	A inch	B inch	C inch	D inch	E inch	F inch
0003-60	3/8	25.6	13.4	27.6	10.0	5.7	17.3
0005-60	3/8	25.6	13.4	27.6	10.0	5.7	17.3
0010-60	3/8	25.6	13.4	41.7	10.0	12.2	27.6
0015-60	1/2	25.6	13.4	41.7	10.0	12.2	27.6
0020-60	1/2	25.6	13.4	41.7	10.0	12.2	27.6
0030-60	3/4	37.0	17.7	63.4	12.4	16.3	35.4
0050-60	3/4	37.0	17.7	63.4	12.4	16.3	35.4
0060-60	1	37.0	17.7	63.4	12.4	16.3	35.4
0085-60	1	44.9	23.6	78.0	18.3	21.1	44.3
0100-60	1	44.9	23.6	78.0	18.3	21.1	44.3
0125-60	1 1/2	44.9	23.6	78.0	18.3	21.1	44.3
0175-60	1 1/2	44.9	23.6	78.0	18.3	21.1	44.3
0200-60	1 1/2	62.2	27.6	86.2	20.9	26.0	49.2
0300-60	2	62.2	27.6	86.2	20.9	26.0	49.2
0400-60	2	62.2	27.6	86.2	20.9	26.0	49.2
0500-60	2	63.0	31.5	92.5	25.6	25.6	59.1
0600-60	2 1/2	63.0	31.5	92.5	25.6	25.6	59.1