KAKIT microfiltration

Datasheet

@2021 v.1.0

› Description

KingAir® separators are designed exclusively to remove solid impurities, water, aerosols, hydrocarbons, odors from the compressed air system and non-aggressive technical gases such as argon, nitrogen and mixtures thereof. It must not be used for cleaning liquids and aggressive gases such as acetylene.

› Applications

Automotive, chemical and petrochemical industries, plastics, electronics, food and beverages, painting, etc.

› Installation:

Separators are designed to protect terminal equipment. Placing in front of equipment with compressed air consumption is best. The device can also be used to clean the entire backbone. Behind the condensation air dryer, it creates a set of full equipment to drain water, oil, solids and water vapor. It guarantees the efficiency of the device according to the parameters of the manufacturer of condensing dryers. **For safety reasons, the ball valve must always be installed under the separator, even if the device is equipped with an automatic trap. In case of installation without ball valve, the device is considered incomplete and must not be used.**

› Maintenace:

The device is maintenance-free. In the event of a problem, contact CMP Trade Service. Disposed condensate must be disposed of in accordance with the Waste Material Directive. The condensate must not be drained freely into the public sewer or the surrounding environment.

› Technical specification and a certification:

Pressure drop: see table below
Water removal: 99.9999%
Filtration of impurities: 0.01 µm
Working pressure: 1 to 10 bar
Operating temperature: 1 ° C to 55 ° C
Material: aluminum, AISI 316 stainless steel, ABS, inner material: ABS
Separation: water, impurities, oil, bacteria
Condensate drain: manual (ball valve)

ISO 12500-1 IUTA (oil aerosol):
0,0004 mg/m³ at 99,996%

Test parameters Inlet pressure Air flow Test inlet oil concentration Compressor oil viscosity	7 bar (e) 18 Sm³/h (ANR) = 100% nominal flow rate 10 mg/m³ ISO VG 46 (Corena S3 R46)			
Test results	Cartridge 1	Cartridge 2	Cartridge 3	**Average**
Dry pressure drop* (mbar]	446	445	447	**446**
Saturated pressure drop* (mbar]	445	445	447	**446**
Mean outlet oil concentration [mg/m³ (ANR)]**	0.0003	0.0002	0.0006	**0.0004**
Filtration efficiency (The calculation is based on the data shown in the test report)				**99,996 %**

ISO 12500-3 IUTA (particles for first item). Last at 0.01 µm.
2,0 µm 100%
1,0 µm 99%
0,2 µm 90%

Test parameter: Inlet pressure Air flow Flow direction Test aerosol Particle size range Aerosol Spectrometer		7 bar (e) [8 bar (a)] 48 Nm³/h = 100 % nominal flow rate from inside to outside DEHS (0.19 – 2.74) µm PCS 2100 (Palas GmbH)						
Test results:								
Particle-size range [µm]	lower upper	0.19 0.24	0.24 0.36	0.36 0.52	0.52 0.81	0.81 1.15	1.15 1.78	1.78 2.74
Average efficiency² [%]		**90.11**	**91.51**	**93.71**	**96.45**	**99**	**99.81**	**100**

ISO 12500-4 IUTA (water):
99,9999% in range 1-16 bar

Test parameters					
Inlet pressure	7 bar (e) [8 bar (a)]				
Air flow for testing	25%, 50%, 75%, 100%, 125% of rated flow (48 Nm³/h)				
Injected water per L/s air flow	2 ml/min				
Test results	25%	50%	75%	100%	125%
Pressure drop [mbar] at each flow rate	22	83	184	334	520
Water-removal efficiency (%)	>99.9999%	>99.9999%	>99.9999%	>99.9999%	>99.999%

The combination of AISI316 stainless steel separator material and the PERMA-CEMET 901.902 epoxy adhesive used is suitable for contact with foodstuffs according to 90/128 / EEC and Directive 97/48 / EEC (amendment 90/128 / EEC) and 2005/79 / EC .

Staphylococcus aureus test: 99.998%

Brevundimonas diminuta ATCC 19146 test: 99,993%

Označení *Product code*	Materiálové provedení *Product material*		Nominální průtok při 7 bar *Referenced flowrate at 7 bar*		Vstup / Výstup *Inlet/Outlet*	Odtok výstup * *Drain*	Šířka Width	Výška Height	Hloubka Depth	Váha Weight
			[L/min]	[m3/hod]	BSPT	BSPT	[mm]	[mm]	[mm]	[kg]
KAKIT4R -300P	KA300PA - abs a plast KA300C - uhlík a plast KA300D - aktivovaný oxid hlinitý a plast KA300M - dutá vlákna a plast	*KA300PA - abs and plastic* *KAC300C - carbon and plast* *KA300D - activated alumina and plastic* *KA300M - hollow fiber and plastic*	300	18	1/2"	1/8"	430	110	410	3,35
KAKIT3R -300P	KA300PA - abs a plast KA300C - uhlík a plast KA300M - dutá vlákna a plast	*KA300PA - abs and plastic* *KAC300C - carbon and plast* *KA300M - hollow fiber and plastic*	300	18	1/2"	1/8"	307	110	410	2,51
KAKIT3R-600A4	KA600AF (SF) KA600C - uhlík a plast KA600M - mikrofiltr a plast KA600AF (SF)	*KA600AF (SF) - Al, SS (304,316)* *KAC600C - carbon and plastic* *KA600M - microfilter and plastic* *KA600AF (SF) - Al, SS (304,316)*	600	36	1"	1/2"	541	420	160	10,9
KAKIT3R-1000S4	KA1000SF KA1000C - uhlík a plast KA1000F - mikrofiltr a plast KA1000SF	*KA1000SF - SS (304,316)* *KA1000C - carbon and plastic* *KA1000M - microfilter and plastic* *KA1000SF - SS (304,316)*	1000	60	1"	1/2"	575	786,5	180	23,5

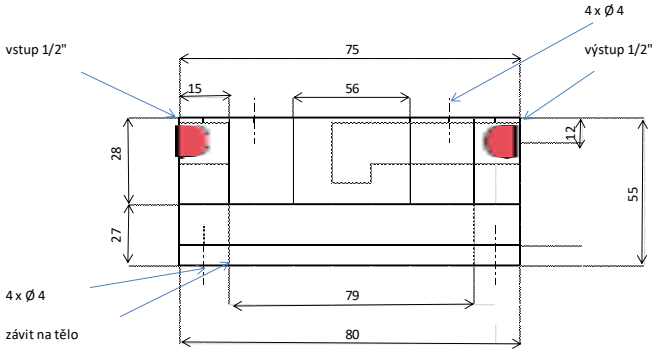
The flow rates indicated correspond to a reference pressure of 7 bar (102 psi) and a temperature of 20 ° C. * Length with ball valve installed, manual condensate drain.

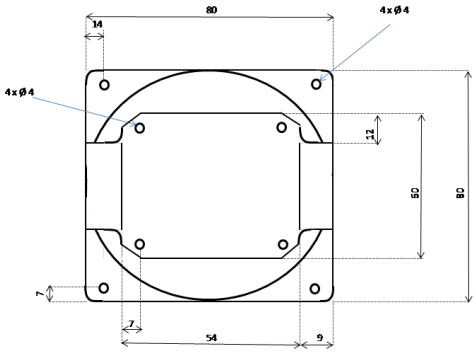
Tlakové ztráty (pressure drop data) KAKIT:

		separátor vody (water remover)	uhlíkový filtr (carbon filter)	adsorpční filtr (adsorption filter)	mikrofiltr (membrane filter)	KAKIT 3	KAKIT 4
							
Vstupní tlak (pressure inlet) [bars]	Průtok (flow rate) [L/min]	KA-300PA [bars]	KA-300PC [bars]	KA-300PD [bars]	KA-300PM [bars]	KAKIT3R-300P [bars]	KAKIT4R-300P [bars]
5 bars	200	0,2	0,4	0	0,2	0,7	0,8
	250	0,3	0,4	0,1	0,4	1	1,3
	300	0,35	0,6	0,1	0,4	1,4	1,7
	350	0,4	0,7	0,1	0,6	1,8	2,3
	400	0,6	0,8	0,1	0,8	2,4	3,2
7 bars	200	0,2	0,3	0,1	0,2	0,6	0,6
	250	0,2	0,4	0,1	0,3	0,8	0,9
	300	0,38	0,5	0,1	0,4	1	1,3
	350	0,5	0,6	0,1	0,5	1,3	1,6
	400	0,7	0,6	0,1	0,6	1,7	2
9 bars	200		0,2	0,1	0,1	0,4	0,5
	250		0,3	0,1	0,2	0,6	0,7
	300	0,1	0,3	0,1	0,3	0,8	1
	350	0,2	0,4	0,1	0,4	1	1,2
	400	0,3	0,5	0,1	0,5	1,3	1,6

Korekční faktor při jiném tlaku než referenčním (7 bar). *Correction factor for another pressure than the reference (7 bar).*															
Tlak v rozvodu *Line pressure*	**1 bar** *14,5 psi*	**2 bar** *29 psi*	**3 bar** *43,5 psi*	**4 bar** *58 psi*	**5 bar** *72,5 psi*	**6 bar** *87 psi*	**7 bar** *101,5 psi*	**8 bar** *116 psi*	**9 bar** *130,5 psi*	**10 bar** *145 psi*	**11 bar** *159,5 psi*	**12 bar** *174 psi*	**13 bar** *188,5 psi*	**14 bar** *203,1 psi*	**15 bar** *217,6 psi*
Korekční faktor *Correction factor*	**0,53**	**0,63**	**0,73**	**0,79**	**0,89**	**0,94**	**1**	**1,09**	**1,17**	**1,25**	**1,33**	**1,4**	**1,48**	**1,56**	**1,64**

The new flow rate is calculated = correction factor to the real pressure x flow at the reference pressure



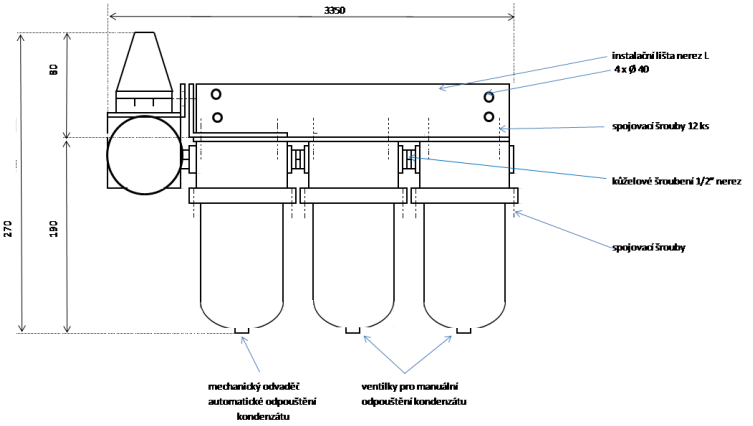


Classification under Pressure Equipment Directive (PED) 2014/68 / EU for Group 2 fluids:

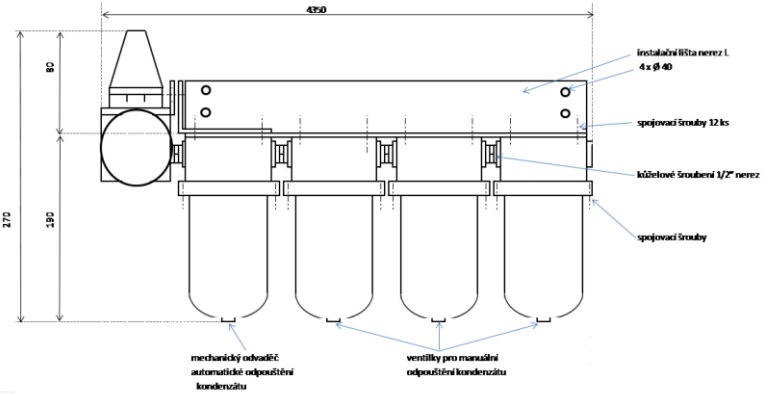
PED
PRESSURE EQUIPMENT

Product code Označení	Volume Objem	Category Kategorie	
	[L]	[16 bar]	[70 bar]
KA300PA	0,76	SEP	---

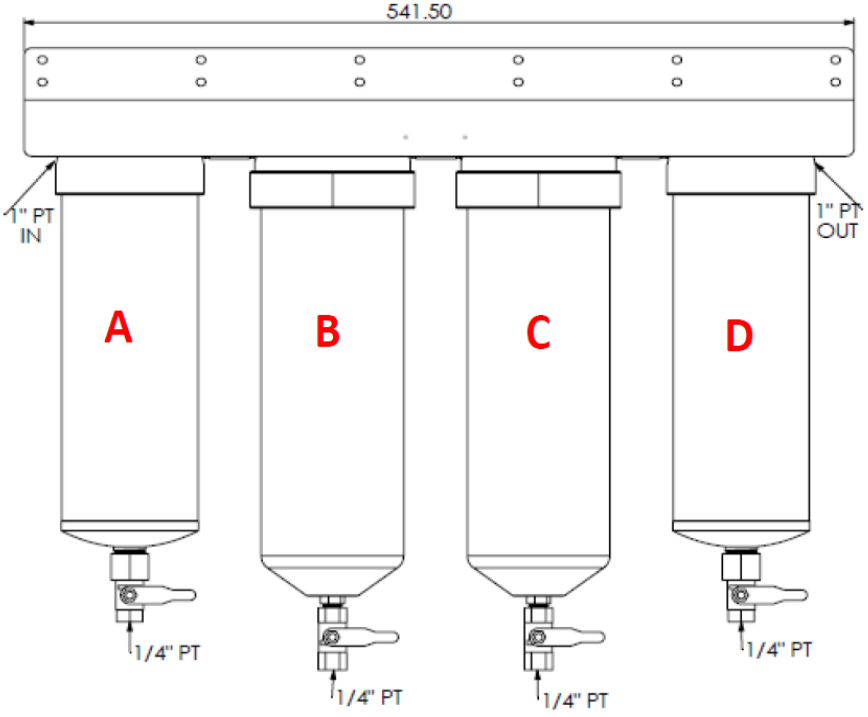
KAIKT3R-300

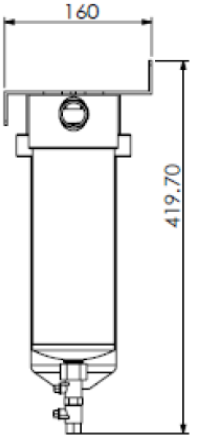


KAIKT4R-300

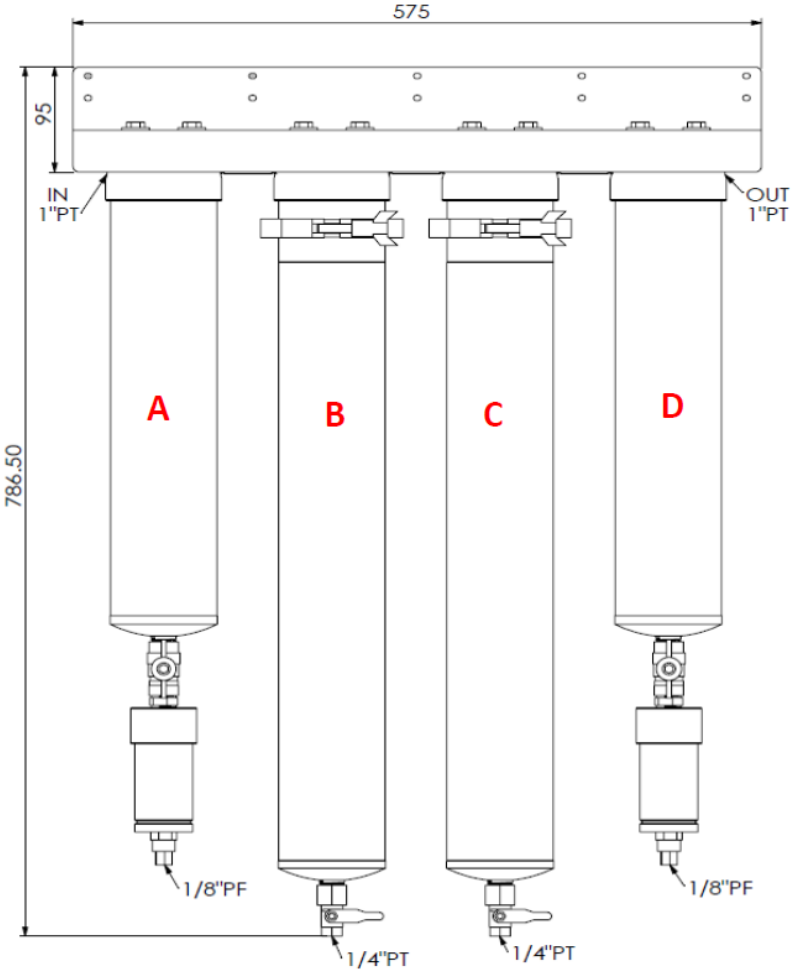


KAIKT3R-600AF





KAIKT3R-10004S



www.cmptrade.cz

CMP TRADE

Pro více informací nás prosím kontaktujte info@cmptrade.cz