



**Separators for perfect cleaning of
compressed air from condensate and
particles**



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KingAir® is a new and absolutely unique technology that significantly changes the industry-wide trend in the quality of compressed air. With its patented design, it meets the highest demands of compressed air quality according to ISO 8573 and ISO 12500 (compressed air filter test methods). The KingAir® separator design allows efficient water and oil removal **>99.9999%** independently on pressure and other impurities up to **0,2 micron** at **90%** efficiency.

No power

No cost of operation

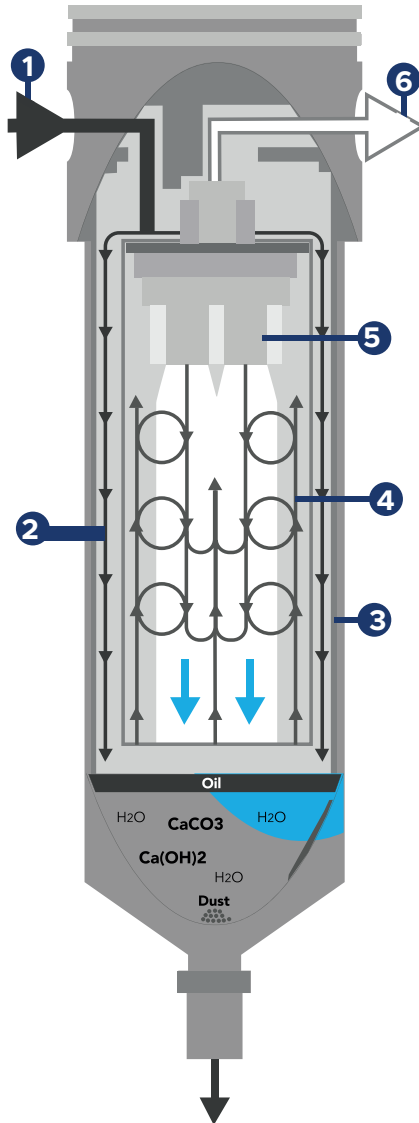
No need to replace filter inserts

No loss of efficiency depending on pressure



Current industry demands demand the purest compressed air and ideal conditions for machinery and equipment. Low media quality means costly repairs and wear - consequential investments, or downtime of equipment or technology. The standard solution is drying and cleaning the media at the production source. However, these facilities are costly not only for investment, but also for their subsequent maintenance. Since the cleaned medium passes through the distribution line and formation of condensate may already occur within a few meters, thereby decreasing the efficiency of the original treatment of the compressed medium. Separators that are capable of replacing these devices can be placed with a small size and weight just before the point of use to ensure maximum media cleaning performance.





How separator works with compressed air

- 1 Water contaminated air enters the inlet port and is directed through our primary chamber where directional changes of the flow cause cyclonic air rotation
- 2 The air then passes through small rings that will cause rapid expansion. At this stage 98% of the liquid water is removed.
- 3 The liquid water drops to the bottom of the filter unit where collected and drained (manually or automatically).
- 4 The air then passes through a precisely designed multistage separation chambers where particle aggregation and separation from the medium occurs.
- 5 The compressed air is then cleaned and the remaining aerosol particles are removed.
- 6 Clean and dry compressed air can already be used for the application.



STANDARD (aluminium)

Water removal: 99,9999 %

Particles: 0,2 μm (90%); 1 μm (99%)

Working pressure: 1 až 16 bar

Working temperature: 1°C až 55°C

Material: aluminium

Separation: water, particles, oil, bacteria

Condensate drain: manual (ball valve)

or automatic (mechanical floating system)

 **ATEX II 2G II C T6 Gb**

Technical parameters:

These flows correspond to a reference pressure of 7 bar (102 psi) and a temperature of 20°C.

Product code	Product material	Flowrate		Intlet/Outlet	Drain	Product dimension			Weight
		[L/min]	[m3/hod]			ø [mm] Body	ø [mm] Head	[mm] * Lenght	
KA300AF	aluminium	300	18	1/2"	1/2"	59	67	270	0,8
KA600AF	aluminium	600	36	3/4"	1/2"	59	67	310	0,82
KA900AF	aluminium	900	54	3/4"	1/2"	59	67	350	0,88
KA1500AF	aluminium	1 500	90	1"	1/2"	88	96	435	1,56
KA2000AF	aluminium	2 000	120	1"	1/2"	88	96	505	1,94
KA4000AF	aluminium	4 000	240	1"	1/2"	88	96	505	2,16

*Length with ball valve installed - manual autodrain. Part of the delivery.

Correction factor for another pressure than reference:

Correction factor for another pressure than the reference (7 bar)

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
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 calculate = multiplying the correction factor to the real pressure value X flow at the reference pressure

Note



STANDARD (stainless steel)

Water removal: 99,9999 %

Particles: 0,2 μm (90%); 1 μm (99%)

Working pressure: 1 až 16 bar

Working temperature: 1°C až 55°C

Material: stainless steel AISI 304 or AISI 316

Material: aluminium

Separation: water, particles, oil, bacteria

Condensate drain: manual (ball valve)
or automatic (mechanical floating system)

 ATEX II 2G II C T6 Gb

Technical parameters:

These flows correspond to a reference pressure of 7 bar (102 psi) and a temperature of 20°C.

Product code	Product material	Referenced flowrate at 7 bar		Intlet/Outlet	Drain	Product dimension			Weight
		[L/min]	[m3/hod]	BSPT	BSPT	ø [mm] Body	ø [mm] Head	[mm] * Lenght	[kg]
KA60AF (SF316)	stainless steel AISI 304 (AISI 316)	60	3,6	1/4"	1/2"	25	33	255	0,58
KA150AF (SF316)	stainless steel AISI 304 (AISI 316)	150	9	1/4"	1/2"	47	55	260	1,15
KA300AF (SF316)	stainless steel AISI 304 (AISI 316)	300	18	1/2"	1/2"	59	67	270	1,36
KA600AF (SF316)	stainless steel AISI 304 (AISI 316)	600	36	3/4"	1/2"	59	67	305	1,42
KA900AF (SF316)	stainless steel AISI 304 (AISI 316)	900	54	3/4"	1/2"	59	67	350	1,52
KA1500AF (SF316)	stainless steel AISI 304 (AISI 316)	1 500	90	1"	1/2"	88	96	435	1,96
KA2000AF (SF316)	stainless steel AISI 304 (AISI 316)	2 000	120	1"	1/2"	88	96	505	3,5
KA4000AF (SF316)	stainless steel AISI 304 (AISI 316)	4 000	240	1"	1/2"	88	96	505	3,5

*Length with ball valve installed - manual autodrain. Part of the delivery.

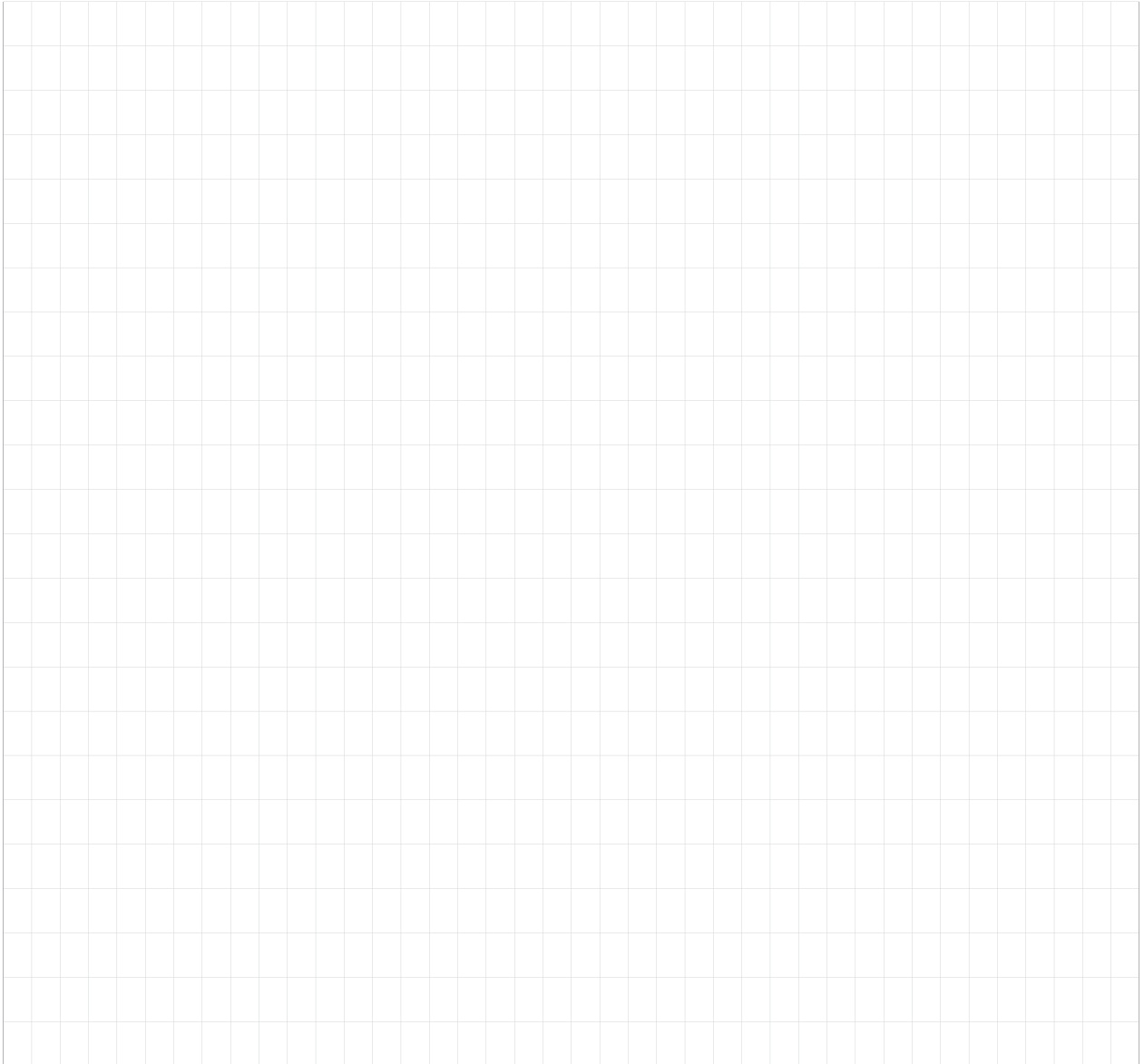
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Correction factor for another pressure than the reference (7 bar)

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
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 calculate = multiplying the correction factor to the real pressure value X flow at the reference pressure

Note





TITAN (applications for high flows)

Water removal: 99,9999 %

Particles: 0,2 μm (90%); 1 μm (99%)

Working pressure: 1 až 16 bar

Working temperature: 1°C až 55°C

Material of separator: aluminium or stainless steel AISI 304, 316

Material of cover: sheet steel with comaxite finish

Separation: water, particles, oil, bacteria

Condensate drain: automatic (mechanical floating system)

 **ATEX II 2G II C T6 Gb**

Technical parameters:

These flows correspond to a reference pressure of 7 bar (102 psi) and a temperature of 20°C.

Product code		Product material	Referenced flowrate at 7 bar		Inlet/Outlet	Product dimension			Weight
			[L/min]	[m3/hod]	BSPT	[mm] Wight	[mm] Height	[mm] Dept	[kg]
PORTABLE	KA300T8	aluminium or stainless steel (AISI 304, AISI316)	300	18	1/2"	320	520	235	9
	KA900T8/R	aluminium or stainless steel (AISI 304, AISI316)	900	54	1/2"	320	520	235	10
	KA2000T8	aluminium or stainless steel (AISI 304, AISI316)	2 000	120	1"	320	665	300	11
	KA4000T8	aluminium or stainless steel (AISI 304, AISI316)	4 000	240	1"	320	765	300	12
STATIONARY	KA8000T8	aluminium or stainless steel (AISI 304, AISI316)	8 000	480	2"	380	1000	445	27
	KA16000T8	aluminium or stainless steel (AISI 304, AISI316)	16 000	960	2"	490	1 450	61	79
	KA32000T8	aluminium or stainless steel (AISI 304, AISI316)	32 000	1 920	3"	490	1 450	113	1 131
	KA64000T8	aluminium or stainless steel (AISI 304, AISI316)	64 000	3 840	4" (10 bar) 3" (16 bar)	870	1 750	1 380	300

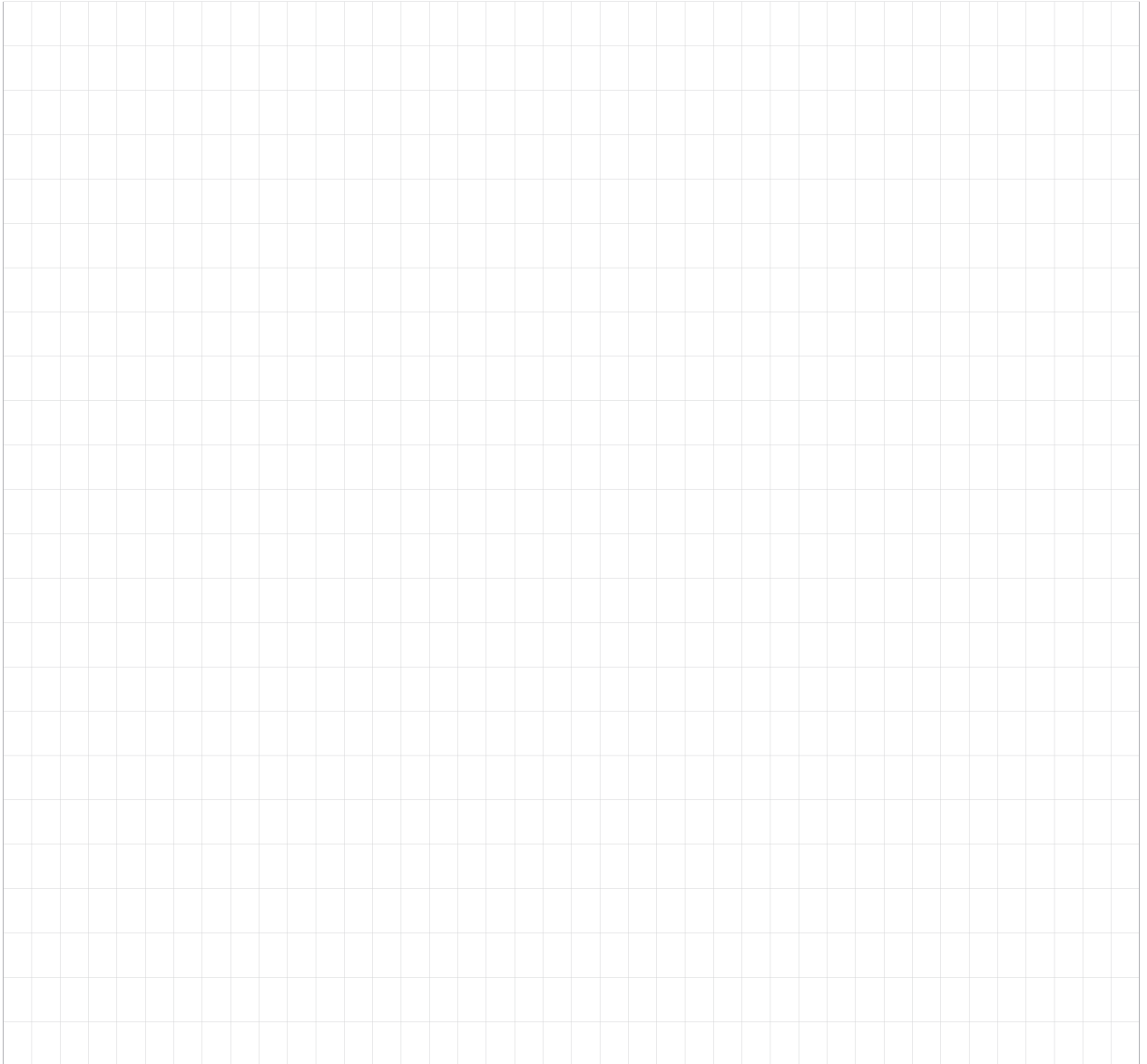
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The new flow rate is calculate = multiplying the correction factor to the real pressure value X flow at the reference pressure

Note





KA300PA

KA300C

KA300D

KA300M

MICROFILTRATION



KAKIT 4



KAKIT 3

KA300PA (separator) – **water removal: 99,9999 %, particles, oil, bacteria**

KA300C (oil filter) – **oil aerosols: 0,0004 mg/m³**

KA300D (adsorbtion filter) – **pressure dew point: -22°C**

KA300M (micro filter) – **particles: 0,01 µm**

Working pressure: 1 to 10 bar

Working temperature: 1°C to 55°C

Condensate drain: KA300PA integrated automatic (mechanical floating system), others manual valve

Technical parameters:

These flows correspond to a reference pressure of 7 bar (102 psi) and a temperature of 20°C.

Product code	Product material	Referenced FlowRate at 7 bar		Intlet/Outlet	Drain	Product dimension			Weight
		[L/min]	[m3/hod]	BSPT	BSPT	Šířka Width	Výška Hight	Hloubka Dept	[kg]
KAKIT4R-300P	KA300PA - abs and plastic KA300C - carbon oil aerosol KA300D - dessicant dryer moisture KA300M - hollow-fiber microfiltration	300	18	1/2"	1/8"	430	110	410	3,35
KAKIT3R-300P	KA300PA - abs and plastic KAC300C - carbon oil aerosol KA300M - hollow-fiber microfiltration	300	18	1/2"	1/8"	307	110	410	2,51

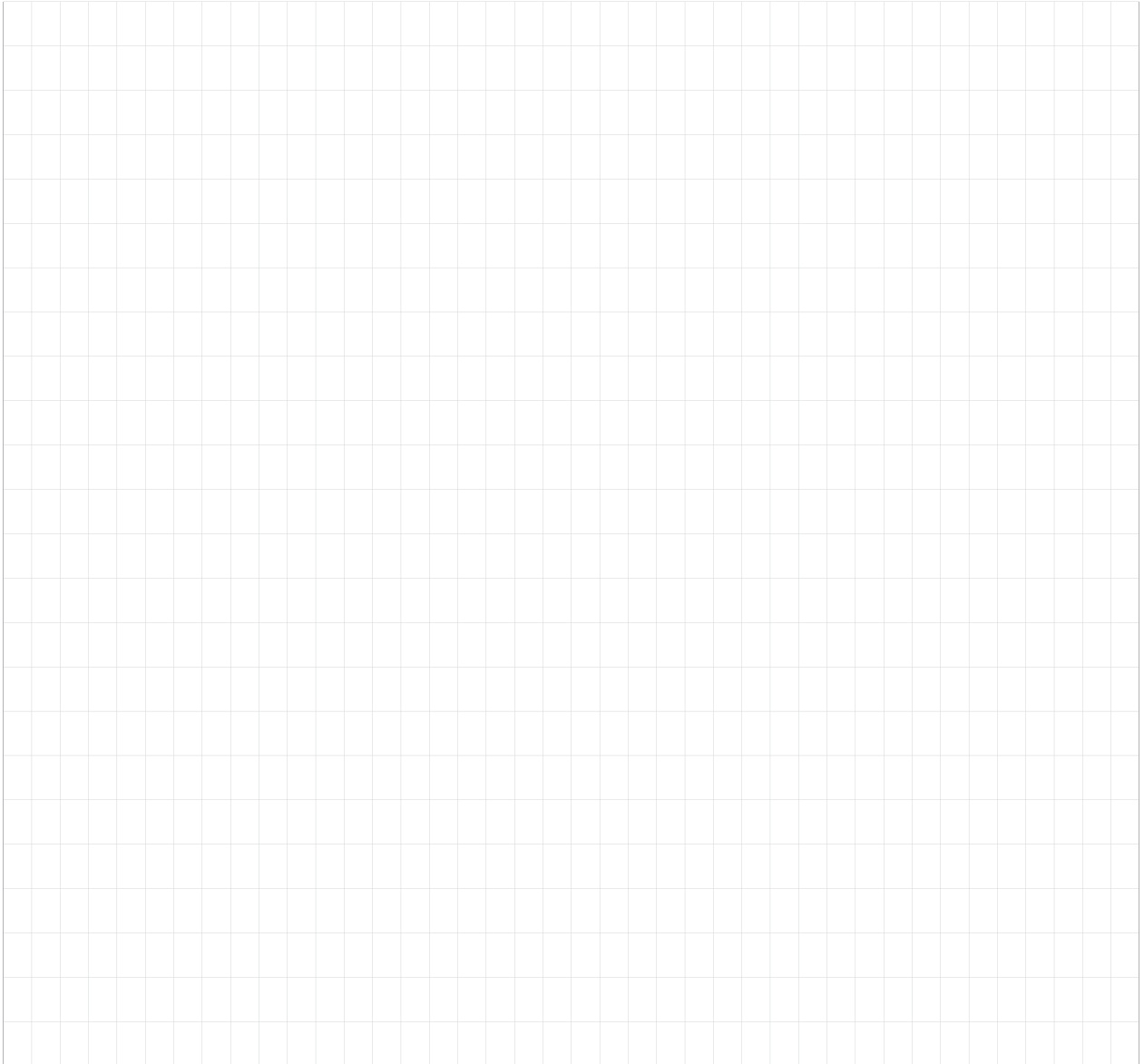
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Correction factor	0,53	0,63	0,73	0,79	0,89	0,94	1	1,09	1,17	1,25	1,33	1,4	1,48	1,56	1,64

The new flow rate is calculate = multiplying the correction factor to the real pressure value X flow at the reference pressure

Note





PLASTIC

Water removal: 99,9999 %

Particles: 0,2 μm (90%); 1 μm (99%)

Working pressure: 1 to 10 bar

Working temperature: 1°C to 55°C

Material: plastic, ABS

Separation: water, particles, oil, bacteria

Condensate drain: integrated automatic (mechanical floating system)

Technical parameters:

These flows correspond to a reference pressure of 7 bar (102 psi) and a temperature of 20°C.

Product code	Product material	Referenced flowrate at 7 bar		Intlet/Outlet	Drain	Product dimension			Weight
		[L/min]	[m3/hod]	BSPT	BSPT	ø [mm] Body	ø [mm] Head	[mm] Lenght	[kg]
KA300PA	plastic	300	18	1/8"	1/2"	80	80	185	0,48

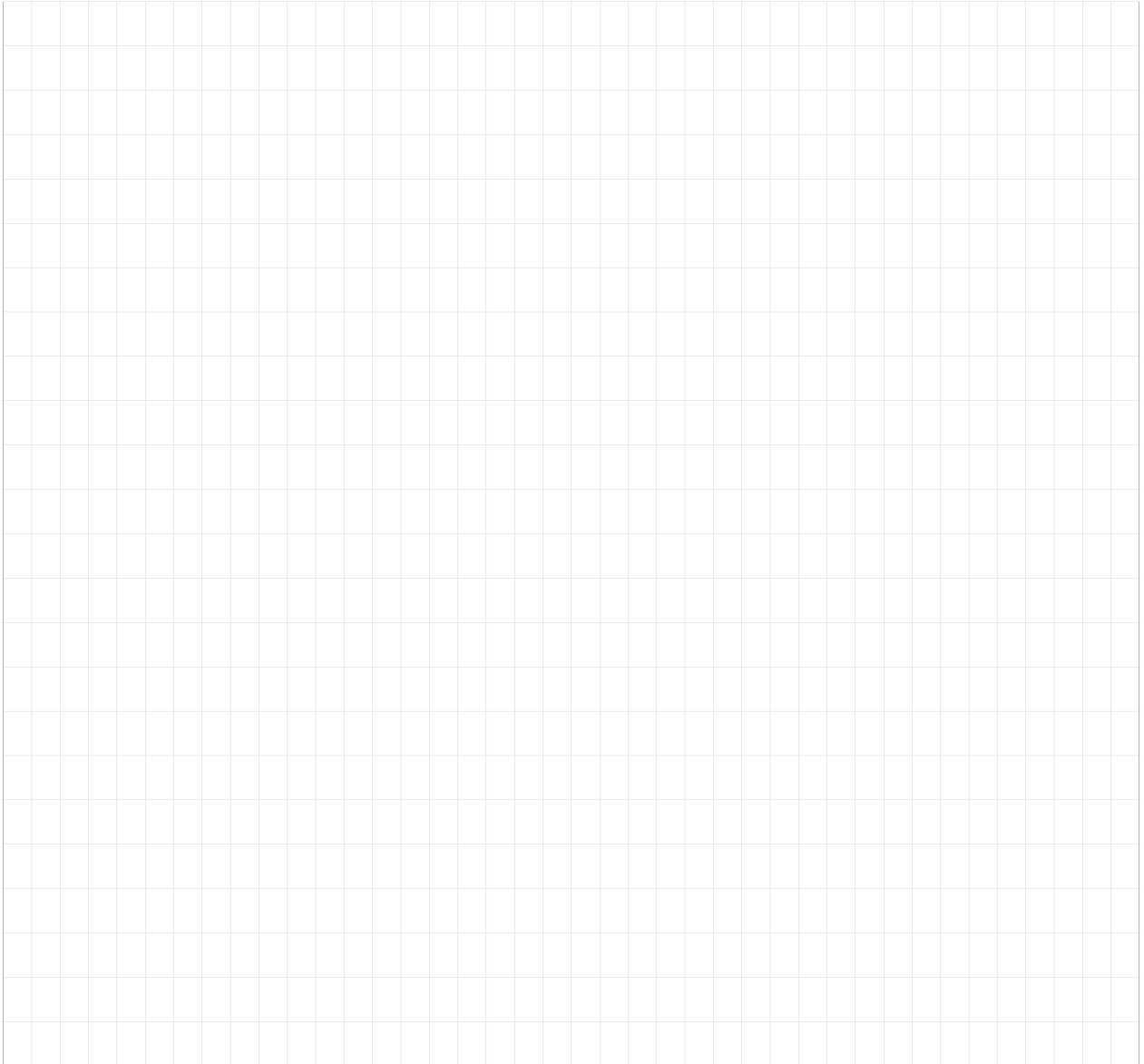
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Correction factor	0,53	0,63	0,73	0,79	0,89	0,94	1	1,09	1,17	1,25	1,33	1,4	1,48	1,56	1,64

The new flow rate is calculate = multiplying the correction factor to the real pressure value X flow at the reference pressure

Note





HIGH PRESSURE



Water removal: 99,9999 %

Particles: 0,2 μm (90%); 1 μm (99%)

Working pressure: 1 to 70 bar

Working temperature: 1°C to 55°C

Material: aluminium body and stainless steel head (AISI 304)

Separation: water, particles, oil, bacteria

Condensate drain: manual (ball valve)

 ATEX II 2G II C T6 Gb

Technical parameters:

Product code	Product material	Referenced flowrate		Intlet/Outlet	Drain	Product dimension			Weight
		[L/min]	[m3/hod]	BSPT	BSPT	ø [mm] Body	ø [mm] Head	[mm] Lenght	[kg]
KA300HP	aluminium & staines steel	850	51	3/4"	1/2"	59	67	280	1,16
KA600HP	aluminium & staines steel	1 700	102	3/4"	1/2"	59	67	315	1,22
KA900HP	aluminium & staines steel	2 550	153	3/4"	1/2"	59	67	355	1,28

Note



LOW TEMPERATURES



Water removal: 99,9999 %

Particles: 0,2 μm (90%); 1 μm (99%)

Working pressure: 1 to 16 bar

Working temperature: -40°C to 55°C

Material: aluminium

Separation: water, particles, oil, bacteria

Condensate drain: integrated automatic (mechanical floating system)

Power supply: 12 or 24 VDC

Technical parameters:

These flows correspond to a reference pressure of 7 bar (102 psi) and a temperature of 20°C.

Product code	Product material	Referenced flowrate at 7 bar		Inlet/Outlet	Drain	Product dimension			Weight
		[L/min]	[m3/hod]	BSPT	BSPT	ø [mm] Body	ø [mm] Head	[mm] Lenght	[kg]
KA300FZ	aluminium	300	18	1/2"	1/8"	98	60	350	2,14
KA900FZ	aluminium	900	54	1"	1/8"	95	60	410	2,32

Correction factor for another pressure than reference:

Correction factor for another pressure than the reference (7 bar)

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
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The new flow rate is calculate = multiplying the correction factor to the real pressure value X flow at the reference pressure

Note



KAAD148



KAAD158

KAAD (autodrain)



Working pressure: 1 to 16 bar

Working temperature: 1°C to 55°C

Material: aluminium or stainless steel AISI 304, 316

Material of floating part: plastic

Separation: water, particles, oil, bacteria

Condensate drain: automatic (mechanical floating system)

 **ATEX II 2G II C T6 Gb**

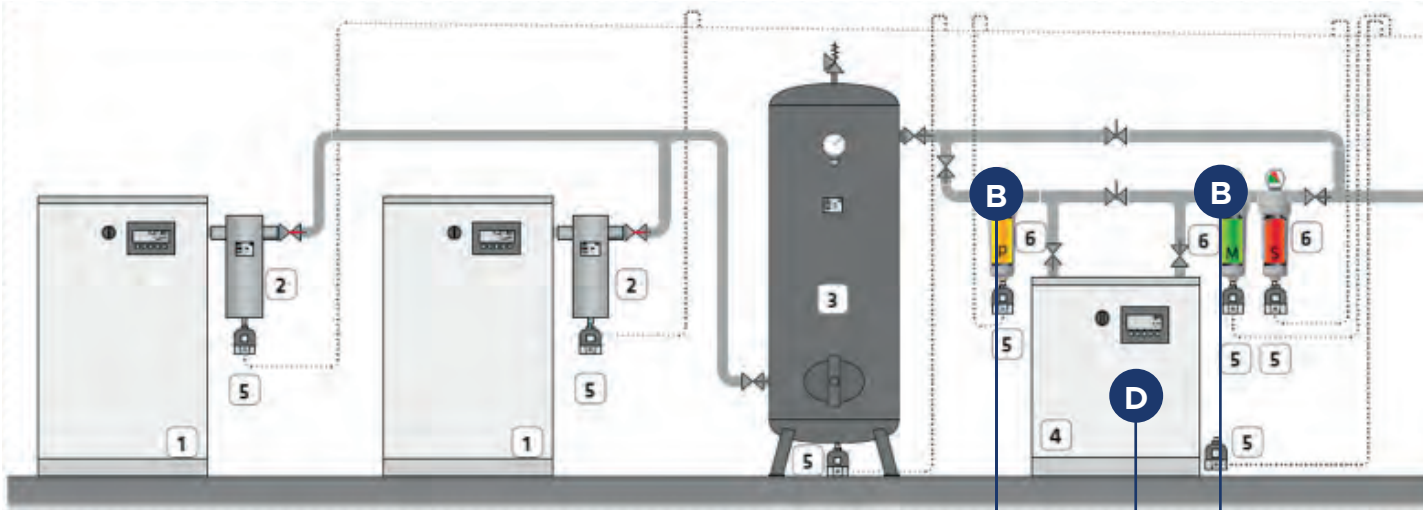
Technical parameters:

Product code	Product material	Intlet/Outlet	Drain	Water storage	Product dimension			Weight
		BSPT	BSPT	[ml]	[mm] width	[mm] height	[mm] depth	[kg]
KAAD128	zinc alloyed aluminium	1/2"	1/8"	25	46	55	140	0,38
KAAD228	stainless steel	1/2"	1/8"	25	46	55	142	0,76
KAAD328	aluminium	1/2"	1/8"	25	59	67	140	0,38
KAAD138	aluminium	1/2"	1/8"	25	59	67	193	0,52
KAAD148*	aluminium	3/4"	1/8"	25	59	67	495*	1,94
KAAD158*	aluminium	1"	1/8"	25	88	96	495*	2,32

*The autodrain consists of two parts. Base body KA900AF(SF) length 350mm and autodrain KAAD328 length 145mm.

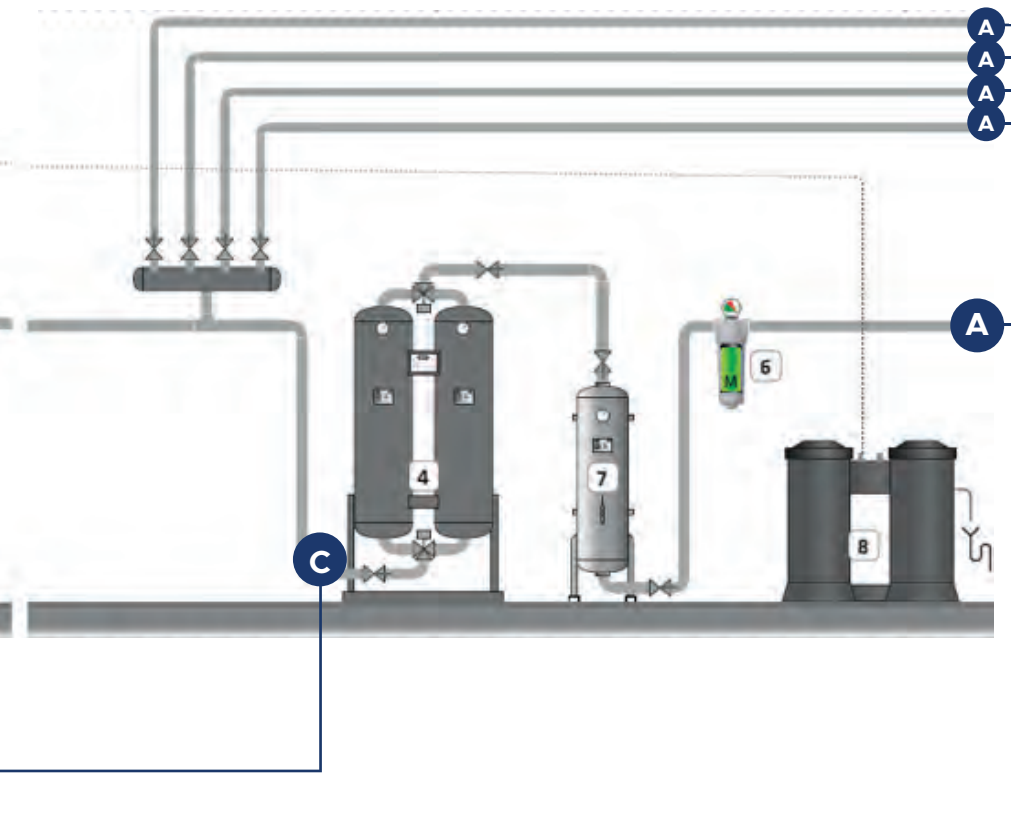
Note

Installations:



Proposal with KingAir:

- A** KingAir® before point of use (equipment protection).
- B** KingAir® after or before refrigerant dryer.
- C** KingAir® before adsorbtion dryer.
- D** Replacement of refrigerant dryer.



- 1 Compressor
- 2 Cyclon separator
- 3 Air tank
- 4 Dryer (refrigerant, adsorption)
- 5 Autodrain
- 6 Filters
- 7 Removing oil vapours
- 8 Separator (water-oil)

Certification



ISO8573-2 (oil aerosol): **0,01 mg/m3 >91%** (* SGS results below detection limits)

ISO12500-1 (oil aerosol): **0,0004 mg/m3 at 99,996%** (IUTA results for microfiltration KAKIT3)

ISO12500-3 (particles): **99% to 1µm, 90% to 0,2µm**

ISO12500-4 (water): **99,9999%** in range of 1-16 bar

Bacteria test **Staphylococcus aureus: 99,9998%**

SGS General test for epoxy adhesives / seals according plastic material for contact with food 90/128 / EEC and directive **97/48 / EEC** (Amendment 90/128 / EEC) and **2005/79/EC** (Amendment 2002/72 / EC) for the stimulant used (deionized water, 3% aqueous acetic acid, 10% ethanol, rectified olive oil).

Long life test of oil filters in the KAKIT assembly: min 5 times higher lifetime

ExVeritas **ATEX II 2G II C T6 Gb** file 15FILE0037

KingAir® products are classified under the Pressure Equipment Directive (PED) into the SEP category and therefore must not be marked with the CE symbol.

KingAir® is protected by patents and trade mark in more than 50 countries.

Audit of compressed air

We offer our existing and new customers services in the field of measuring the quality of compressed air and gases to provide background to audits of the energy management system **ISO50001** (a worldwide standard for the implementation and certification of energy management systems) that is compatible in the areas of deployment and operation energy management systems by organizations of any size or focus with **ISO14001** and **ISO9001**. Devices purchased under subsidies must be monitored and shown to benefit from energy savings or increased quality. We are able to offer an audit for companies that are considering buying devices through subsidy programs.

We have been working with the compressed air since 2018. We have experience with the basic issues of compressed air:

1. Air quality according to ISO8573
2. Technology for cleaning compressed air
3. Compressed air distribution
4. Quality Audit Document
5. Measurements to confirm the quality of compressed air under subsidies

Our measuring device is ISO-certified and calibrated every year in the factory to confirm the quality of the measurement. The output can be included in the production quality documentation. These are in particular measurement of flow, temperature, pressure and pressure dew point:

Flow sensors

for compressed air and gases

- Installation and removal under pressure via standard 1/2" ball valve
- A safety ring avoids the uncontrolled ejection in case of installation/removal under pressure
- Usable for different gases: compressed air, nitrogen, argon, CO₂, oxygen



Dew point sensors

- Extremely long-term stable
- Quick adaption time
- Large measuring range (-80° to +20° C/d)
- For all driers: Desiccant driers, membrane driers, refrigeration driers
- Easy installation under pressure via the standard measuring chamber with quick coupling



Pressure sensors

- Large selection of pressure sensors with different measuring ranges for each measuring purpose
- Quick installation under pressure by quick coupling
- Pressure sensors 0-10/15/40/100/250/400/800 bar overpressure
- Pressure sensors -1 to +15 bar (under-/overpressure)
- Differential pressure 1.5 mbar up to 4.2 bar
- Absolute pressure 0-1.6 bar (abs.)



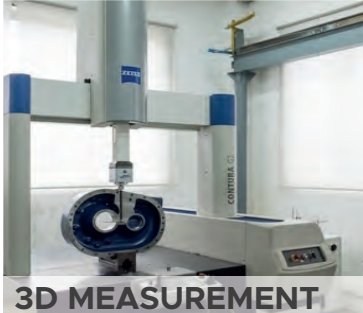
Temperature sensors

- Large selection of temperature sensors e.g. for measurement of the ambient temperature or gas temperature
- Pt100 (2-wire or 3-wire)
- Pt1000 (2-wire or 3-wire)
- KTY sensors
- Temperature sensors with measuring transducer (4-20 mA output)





KingAir® applications:

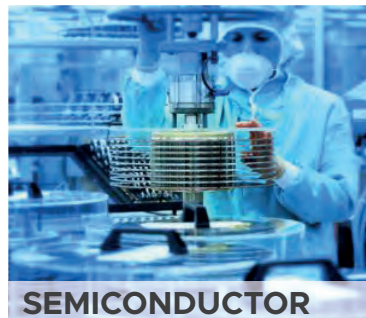




CAR WASH



PLASMA CUTTING



SEMICONDUCTOR



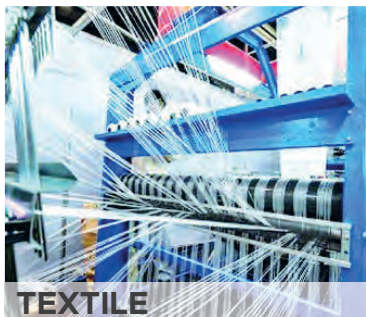
POWDER COATING



FOUNDRY



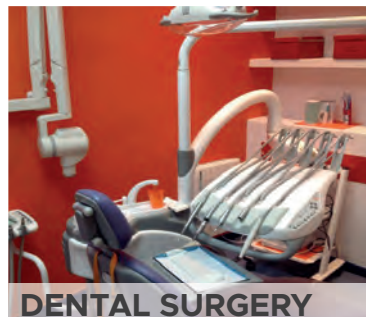
CAR CHECK



TEXTILE



BLASTING



DENTAL SURGERY



www.youtube.com/KingAirTechnology



www.facebook.com/CMP-Trade



www.instagram.com/cmptrade



www.linkedin.com/company/cmp-trade



www.cmptrade.cz



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