

COMPRESSED AIR REFRIGERATION DRYER



AD series compressed air refrigeration dryer

An investment which quickly pays dividends

It's clear that dry compressed air is economically efficient. But the AIRCRAFT AD goes one better. Because these advantages add up to ensure that you reach your cost-saving potential more quickly:

- ▶ Improved energy efficiency thanks to a particularly large heat exchanger surface area
- ▶ Avoidance of unfavourable compressed air flow deflection
- ▶ Avoidance of additional flow resistance through generously dimensioned compressed air connections – lower pressure loss
- ▶ Virtually 100 % droplet separation thanks to a smart design



No unnecessary loss of compressed air through built-in, level-controlled condensate drain

The AIRCRAFT AD's design and layout impress with clarity and accessibility. The only two maintenance points, the condenser and the BEKOMAT®, are accessible through large and easy-to-open covers. This makes maintenance work easy to handle.

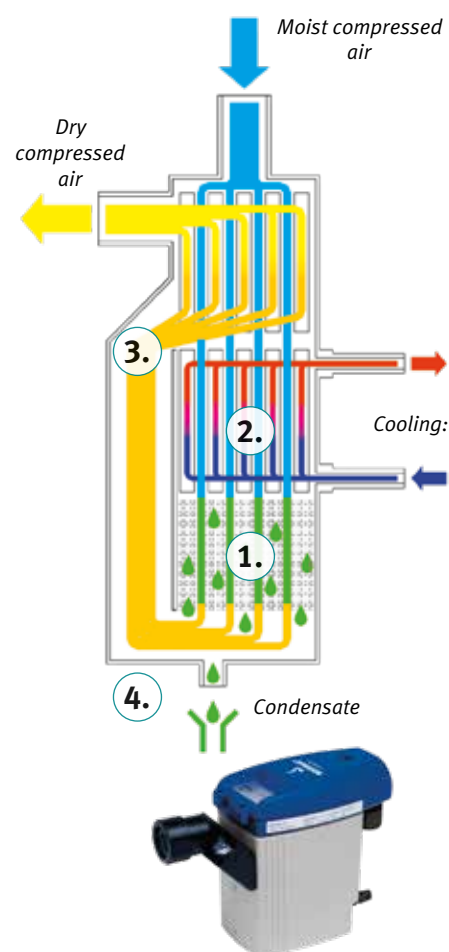
The difference is in the detail

1) Warm, moisture-saturated compressed air is cooled down to a temperature of +3 °C. The large heat exchanger not only promotes particularly effective cooling, the design also reduces flow resistance to an absolute minimum.

2) Unlike many common systems, the air flows through the heat exchanger in a downward motion. Gravity and the profile are used to achieve a particularly high droplet separation of almost 99 %. The flow speed is greatly reduced in the very large condensate collection chamber. This reliably prevents the entrainment of droplets that have already been separated.

3) Before exiting the dryer, the dried, cold compressed air is reheated in an air/air heat exchanger. The relative humidity is considerably reduced and up to 60 % of the cooling capacity used is recovered.

4) The condensate produced in this way is discharged from the AIRCRAFT AD refrigeration dryer by the level-controlled BEKOMAT® condensate trap, avoiding compressed air losses, and can be reliably treated with treatment systems such as the ÖWAMAT® oil/water separation system



Leverage potential savings – reduce maintenance costs

Compared to investment outlay, the energy costs are by far the biggest part of total cost of ownership. And this is naturally where the greatest savings potential exists.

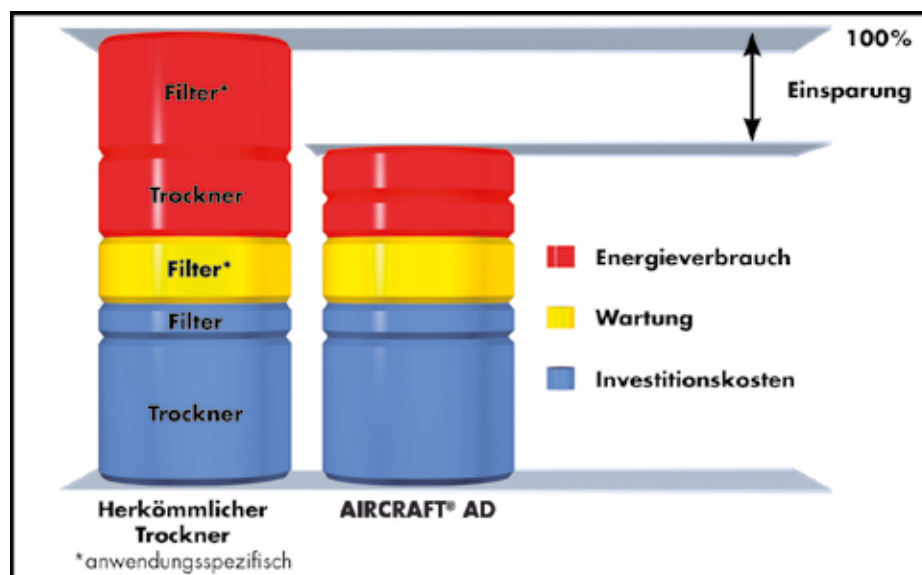
In addition to reducing the energy costs, the AIRCRAFT AD refrigeration dryer also permanently reduces maintenance costs.

It is well known that moisture is the greatest potential threat to all components that come into contact with it. It starts at a relative compressed air moisture content of around 70 %, for bacteria already start to form at this low moisture value. As of 40 % relative humidity, the corrosion process then grows disproportionately.

In the majority of all applications, the requirements for cooling and drying are simply "normal values": cooling to nearly 0 °C and thus close to 100 % condensing of the water vapour contained in the compressed air. The AIRCRAFT AD ensures effective separation of compressed

air and water vapour, as well as safe separation of the condensate.

A BEKOMAT® reliably handles condensate separation. The tried and trusted standard in this field of application.



Compressed air refrigeration dryer

AIRCRAFT compressed air refrigeration dryers - leverage potential savings, reduce maintenance costs

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Design data for compressed air dryers

Reference conditions as per DIN ISO 7183

Volume flow relative to 20 °C at 1 bar, operating pressure 7 bar, compressed air ingress temperature 35 °C, cooling air temperature 25 °C, pressure dew point 5 °C. All models equipped with an automatic condensate drain as a factory standard.

Conversion factors

Please adapt the performance data by multiplying by the appropriate correction factor.

Operating pressure bar	4	5	7	8	10	12	14
Correction factor AD and ASD	0.78	0.85	1	1.06	1.15	1.2	1.24

Compressed air inlet temperature °C	30	35	40	45	50	55
Correction factor AD and ASD	1.2	1	0.85	0.71	0.58	0.49

Ambient temperature °C	25	30	35	40	42	45
Correction factor AD and ASD	1	0.96	0.92	0.88	0.85	0.8

Pressure dew point °C	3	4	5	6	7	8	9	10
Correction factor AD	0.92	0.96	1	1.04	1.09	1.13	1.18	1.2
Correction factor ASD	1	1.04	1.09	1.14	1.18	1.25	1.3	1.33



Optimum protection for your refrigeration dryer from pollution can be achieved by use of a pre-filter

Refrigerated Air Dryer AD Series – the efficient solution for dry compressed air

- ▶ User-friendly operating concept
- ▶ Efficient design for low cost and safe operation
- ▶ Cooling fan speed controlled from 0 - 100 %, thus eliminating the typical pressure switch and the thermostat for fan control.
- ▶ Fewer wear parts at the same constant pressure dew point
- ▶ Control shows five different alarm conditions and keeps them in memory
- ▶ Refrigeration compressor switches off at below 15 °C ambient temperature, if there is no compressed air flow
- ▶ Visibility of and easy access to all serviceable components
- ▶ With built-in automatic condensate drain



The advantages at a glance

- ▶ Excellent economy
- ▶ Excellent price-performance ratio
- ▶ No unnecessary loss of compressed air through built-in automatic condensate drain
- ▶ Connected tools and machines are optimally protected
- ▶ User-friendly operating concept



Model	Air flow		Refrigerant type	Quantity in g	Maximum pressure	Air connection	Power consumption	Weight	Dimensions L x W x H	Art. no.
AD 36	600 l /min.	36 m³/h	R513a	170	16 bar	3/8"	0.12 kW	17 kg	305 x 360 x 404 mm	2041710
AD 54	900 l /min.	54 m³/h	R513a	210	16 bar	1/2"	0.18 kW	24 kg	325 x 430 x 445 mm	2041715
AD 72	1 200 l /min.	72 m³/h	R513a	280	16 bar	1/2"	0.2 kW	24 kg	325 x 430 x 445 mm	2041720
AD 108	1 800 l /min.	108 m³/h	R513a	230	16 bar	1/2"	0.2 kW	24 kg	325 x 430 x 445 mm	2041725
AD 144	2 400 l /min.	144 m³/h	R513a	240	16 bar	3/4"	0.41 kW	31 kg	395 x 486 x 565 mm	2041730
AD 180	3 000 l /min.	180 m³/h	R513a	400	16 bar	3/4"	0.47 kW	36 kg	395 x 486 x 565 mm	2041735
AD 216	3 600 l /min.	216 m³/h	R513a	360	16 bar	3/4"	0.61 kW	40 kg	395 x 486 x 565 mm	2041740
AD 280	4 666 l /min.	280 m³/h	R407C	510	16 bar	1"	0.6 kW	59 kg	485 x 595 x 614 mm	2041745
AD 340	5 666 l /min.	340 m³/h	R407C	700	16 bar	1"	0.6 kW	60 kg	485 x 595 x 614 mm	2041750

Art. no.	Designation
2041700	Bypass 1/2"
2041701	Bypass 3/4"



ASD Refrigerated Air Dryer Series – Energy-saving, patented and pioneering

Higher efficiency – lower costs

The innovative and highly efficient ASD Series uses a patented 3-circuit heat exchanger system. In combination with the glycol circuit, this achieves significant energy savings. The glycol acts as a cold-storage medium. ASD dryers are best suited for partial load operation and irregular compressed air requirements.

You can significantly save on operating costs by using ASD dryers.

Functional principle and advantages of the glycol-water circuit; the glycol mixture is cooled if not all of the cooling energy is required for cooling the compressed air. When the refrigerant compressor switches off in partial load operation, the compressed air is cooled by the cold stored in the glycol mass. The chiller is only switched back again when the mass is no longer cold enough. ASD dryers particularly realise saving potentials in partial load operation and where compressed air requirements are intermittent. When the air compressor starts up again after a break, and delivers compressed air into the network, ASD dryers immediately cool this compressed air to dew point because the glycol mass immediately provides the required temperature. In many other systems where the refrigeration compressor needs a ramp-up period to operating temperature before it can start cooling, moist air initially flows into the network, with all its negative effects.

The advantages at a glance

- ▶ Improved energy efficiency thanks to the patented 3-circuit heat exchanger system
- ▶ Energy savings and longer service life by switching off the refrigeration compressor in partial load operation
- ▶ Optimum dew point control with additional temperature sensor for glycol control
- ▶ Condensate drainage without pressure loss through integrated electronic, level-controlled condensate trap
- ▶ Optimal performance under all load and ambient conditions with variable fan speed control

- ▶ Use of premium components ensures longevity and considerably reduces service costs
- ▶ Reducing operating costs while actively protecting the environment



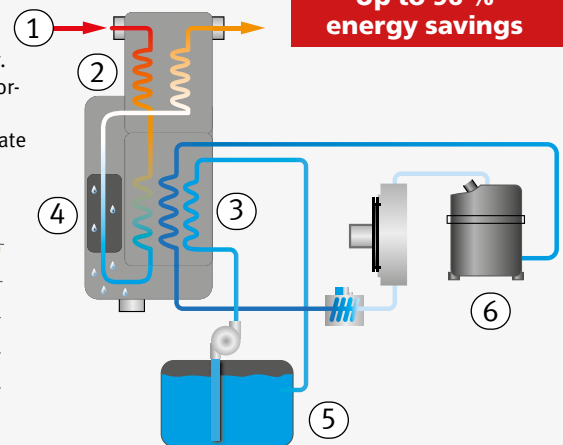
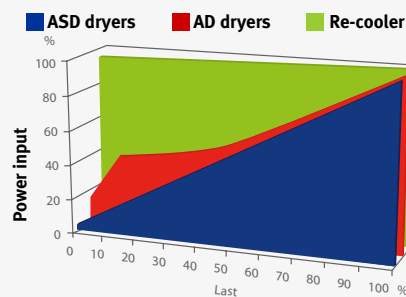
ASD 72



ASD 300

The functional principle of the patented 3-circuit heat exchanger system

1. Warm moisture-saturated air flows into the heat exchanger.
2. The intake air is pre-cooled by the counter flowing, cold outlet air from the heat exchanger.
3. The inlet air is brought to dew point temperature by the refrigerant circuit; condensate is formed.
4. Condensate is trapped and removed in the integrated electronic, level-controlled condensate trap.
5. Glycol circuit stores excess energy and cools the incoming air in partial load operation.
6. The refrigeration compressor shuts off at partial load, thus potentially doubling its service life. (See note on this page below functional principle and advantages of the glycol circuit)



**Up to 96 %
energy savings**

Model	Air flow		Refrigerant type	Quantity in g	Maximum pressure	Air connection	Power consumption	weight	Dimensions L x W x H	Art. no.
ASD 54	900 l/min	54 m³/h	R513a	160	16 bar	1/2"	0.24 kW	33 kg	386 x 500 x 651 mm	2041810
ASD 72	1 200 l/min	72 m³/h	R513a	160	16 bar	1/2"	0.29 kW	35 kg	386 x 500 x 651 mm	2041815
ASD 108	1,800 l/min	108 m³/h	R513a	230	16 bar	3/4"	0.45 kW	45 kg	386 x 500 x 651 mm	2041820
ASD 144	2,400 l/min	144 m³/h	R513a	210	16 bar	3/4"	0.51 kW	50 kg	386 x 500 x 651 mm	2041825
ASD 180	3 000 l/min	180 m³/h	R513a	260	16 bar	1"	0.65 kW	60 kg	420 x 567 x 771 mm	2041830
ASD 240	4 000 l/min	240 m³/h	R407C	400	16 bar	1"	0.64 kW	70 kg	420 x 567 x 771 mm	2041835
ASD 300	5 000 l/min	300 m³/h	R407C	800	16 bar	1 1/2"	0.94 kW	95 kg	500 x 730 x 980 mm	2041840
ASD 360	6 000 l/min	360 m³/h	R407C	800	16 bar	1 1/2"	0.94 kW	100 kg	500 x 730 x 980 mm	2041845
ASD 480	8 000 l/min	480 m³/h	R407C	1200	16 bar	1 1/2"	1.28 kW	130 kg	500 x 730 x 980 mm	2041850

Art. no.	Designation
2041700	Bypass 1/2"
2041701	Bypass 3/4"



Adsorption dryers

New

AAD cold regenerated adsorption dryer –

Economically efficient, easy to service, and flexible in terms of installation

All models:

- ▶ Reliable compressed air drying
- ▶ Electronic control with power display
- ▶ Maintenance-friendly design with anodised aluminium housing
- ▶ Low noise emission max. 75 dB

AAD 5 – 25

- ▶ Flexible connection option on the left or right side of the housing
- ▶ Easy-to-operate control
- ▶ Cycle time and cycle phase (drying/regenerating) display

AAD 40 – 300

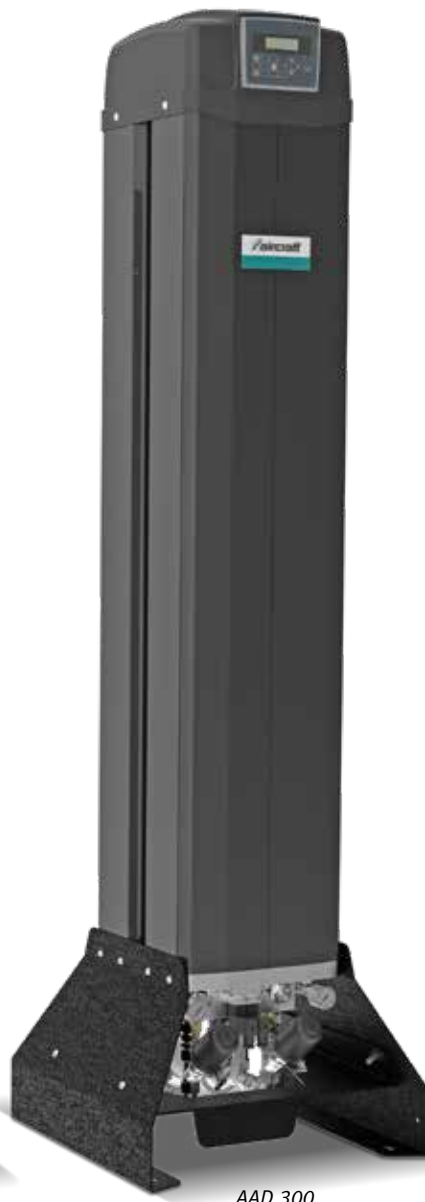
- ▶ All connections on the rear of the housing
- ▶ Features pressure gauges on the rear for easy checking of the input/output pressure
- ▶ Housing designed for transport with a forklift



AAD 15



AAD 120



AAD 300



Control (AAD 5 – 25)

AAD 15

- ▶ User-friendly
- ▶ Cycle time and cycle phase (drying/regenerating) display. Intuitive interface, easy navigation, user-friendly



AAD 15

Besides the standard, upright installation on a small footprint, the AAD 5 – 25 models can be:

- ▶ wall-mounted (feet rotate through 90 °)
- ▶ installed horizontally



AAD 120

Benefits of the electronic control:

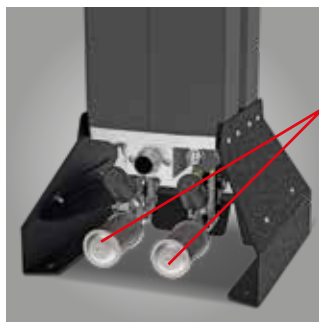
- ▶ Maintenance alert
- ▶ Running time alert
- ▶ Output-driven regeneration cycle, in other words: low compressed air requirement also means shorter flushing times
- ▶ Modbus compatible: Alarm displays on external device

Control (AAD 40 – 300)

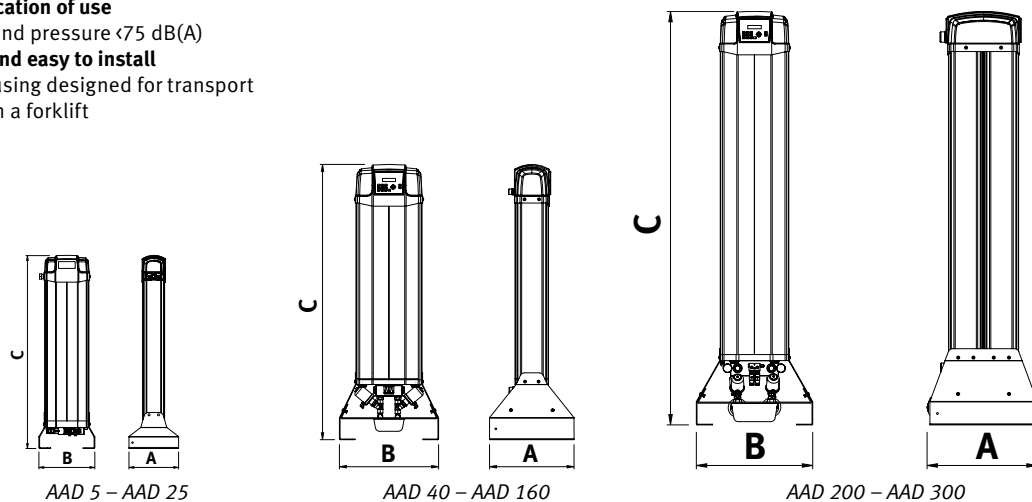
▶ Maintenance messages for:

- ▶ Filter element change
- ▶ Silencer replacement
- ▶ Valve change
- ▶ Desiccant change
- ▶ Operating hour-driven alerts

▶ **Proactive maintenance for reliable drying and customer satisfaction**



- Reliable, and long service life**
- ▶ Service every 3 years
 - ▶ Pneumatic cleaning valves
- Silencers for low noise emission at the location of use**
- ▶ Sound pressure <75 dB(A)
- Safe and easy to install**
- ▶ Housing designed for transport with a forklift



Adsorption dryers 4 – 14 bar

Model		AAD 5	AAD 15	AAD 25	AAD 40	AAD 55	AAD 80	AAD 120	AAD 160	AAD 200	AAD 250	AAD 300
Art. no.		2048501	2048502	2048503	2048504	2048505	2048506	2048507	2048508	2048509	2048510	2048511
Length (A)	mm	238	238	238	475	475	475	475	475	536	536	536
Width/depth (B)	mm	212	212	212	405	405	405	405	405	495	495	495
Height (C)	mm	423	823	1 073	968	1 118	1 318	1 673	1 873	1 705	1 905	1 905
Weight approx.	kg	9	16	21	46	55	62	82	86	160	180	180
Air flow	m³/h	5	15	25	40	55	80	120	160	200	250	300
Working pressure	bar	7	7	7	7	7	7	7	7	7	7	7
Min./max. pressure	bar	14	14	14	14	14	14	14	14	14	14	14
Air connection	"	T 3/8"	T 3/8"	T 3/8"	T 3/4"	T 3/4"	T 3/4"	T 1"	T 1"	T 1 1/2"	T 1 1/2"	T 1 1/2"
Pressure dew point tpd	°C	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40

Please specify when ordering: Operating pressure, volume flow, inlet temperature, pressure dew point outlet, volume flow specification for DTP -40 °C, -70°C on request

Operating pressure bar	4	5	6	7	8	9	10	11	12	13	14
Correction factor	0.62	0.75	0.87	1	1.12	1.25	1.38	1.50	1.62	1.75	1.87

Compressed air inlet temperature °C	°C	20	25	30	35	40	45	50
Correction factor	FC2	1.18	1.15	1.09	1	0.88	0.72	0.52

Accessories

Service kit 1

Model	AAD 5	AAD 15	AAD 25	AAD 40	AAD 55	AAD 80	AAD 120	AAD 160	AAD 200	AAD 250	AAD 300
Art. no.	2048600	2048605	2048610	2048615	2048625	2048635	2048645	2048655	2048665	2048675	2048685

Content	• 2 Sound absorber • 2 filter element sets • 2 automatic condensation drains										
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Service kit 2

Model	AAD 5	AAD 15	AAD 25	AAD 40	AAD 55	AAD 80	AAD 120	AAD 160	AAD 200	AAD 250	AAD 300
Art. no.	2048601	2048606	2048611	2048616	2048626	2048636	2048646	2048656	2048666	2048676	2048686

Content	• 2 Sound absorber • 2 filter element sets • 2 automatic condensation drains • 1 Solenoid valve • Adsorption agent:										
	1.4 kg	4.3 kg	6 kg	12.8 kg	16.7 kg	21.8 kg	30.8 kg	35.9 kg	61.6 kg	71.8 kg	71.8 kg

DRYPOINT® AC cold regenerated adsorption dryer – Economically efficient, easy to service, and flexible in terms of installation

- ▶ Very compact due to aluminium profiles, highly effective adsorbent and integrated dust filter
- ▶ Also ideal for mobile applications: the dryer can be operated with virtually any voltage, e.g., also with a car battery
- ▶ Preloaded adsorbent: thus horizontal operation is also possible and dryer is insensitive to vibrations
- ▶ Service and maintenance-friendly due to service indicator, desiccant cartridges, self-diagnostics, function display, PC interface
- ▶ Energy-saving due to standard memory function (compressor synchronisation control); optional additional programming option for performance adjustment

COMMISSIONING REQUIRED!



Adsorption dryer with prefilter



Adsorption dryer with prefilter and
BEKOMAT 20FM, 230VAC

Features:

Adsorption agent in replaceable cartridges

- ▶ Dust filter elements integrated in replacement cartridges
- ▶ Adsorption agent spring preloaded in cartridges
- ▶ Adsorption agent: Molecular screen

Display indicates:

- ▶ Power supply
- ▶ Valve function left/right
- ▶ Prepare for service (11 500 h and 23.500 h operating hours)
- ▶ Service required (12 000 h and 24 000 h operating hours)

- ▶ LED encoded error message for solenoid valve and electronics functions
- ▶ Condensate drain working

Electronic control:

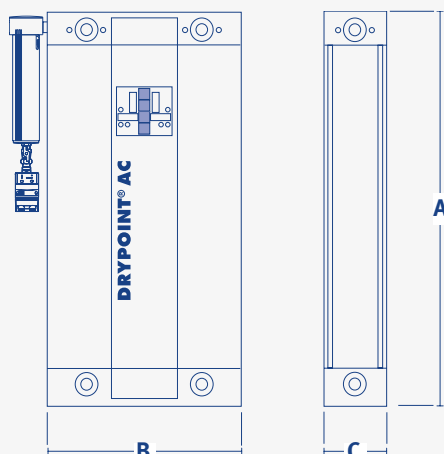
- ▶ Wideband power supply unit for 100 - 240 VAC; 50 - 60 Hz, 12 - 24 VDC
- ▶ Processor with CPU, self-diagnostics
- ▶ Service reset
- ▶ PC interface for program adaptation and error diagnostics, optional PC software
- ▶ Energy management; energy savings through synchronised run of compressor
- ▶ Potential-free error signalling contact

Filtration

- ▶ CLEARPOINT micro filters at dryer inlet
- ▶ Dust filter integrated in replacement cartridges

Condensate drain

- ▶ Integrated condensate drain (time-controlled solenoid valve) or alternatively: BEKOMAT 20 FM on the inlet filter



Horizontal installation

Installation at sides and front

Installation at rear



DRYPOINT Adsorption dryers 4 – 16 bar

		DRYPOINT Adsorption dryers with prefilter							
Model		AC 119	AC 122	AC 126	AC 136	AC 148	AC 171	AC 191	AC 196
Art. no.		2048200	2048201	2048202	2048203	2048204	2048205	2048206	2048207

		DRYPOINT Adsorption dryers with prefilter and BEKOMAT 20FM, 230VAC							
Art. no.		2048208	2048209	2048210	2048211	2048212	2048213	2048214	2048215

Length (B)	mm	281	281	281	281	281	281	281	281
Width/depth (C)	mm	92	92	92	92	92	92	184	184
Height (A)	mm	504	565	635	815	1065	1460	1065	1460
Weight approx.	kg	14	15	16.5	19.5	24	31	47	61
Air volume flow m³/h at 7 bar	m³/h	10.2	13.6	17	25.5	42.5	59.5	85	119
Maximum pressure	bar	16	16	16	16	16	16	16	16
Air connection	"	T 3/8"	T 3/8"	T 3/8"	T 3/8"	T 3/8"	T 3/8"	T 3/8"	T 3/8"
Pressure dew point tpd	°C	-40	-40	-40	-40	-40	-40	-40	-40

Please specify when ordering: Operating pressure, volume flow, inlet temperature, pressure dew point outlet, volume flow specification for DTP -40 °C, -70°C on request

Correction factor, depending on inlet temperature and positive operating pressure [bar]

Operating pressure (bar)	Inlet temperature	4	5	6	7	8	9	10	11	12	13	14	15	16
Pressure correction factor	35°C	0.63	0.75	0.88	1	1.13	1.25	1.38	1.5	1.63	1.75	1.88	2	2.12
Pressure correction factor	40°C	0.55	0.66	0.77	0.88	0.99	1.10	1.21	1.32	1.43	1.54	1.65	1.76	1.97
Pressure correction factor	45°C	0.42	0.50	0.59	0.67	0.76	0.84	0.92	1.01	1.09	1.17	1.26	1.34	1.42
Pressure correction factor	50°C	0.35	0.41	0.48	0.55	0.62	0.69	0.76	0.83	0.90	0.96	1.03	1.10	1.17

Accessories

		Wall mounting							
Model		AC 119	AC 122	AC 126	AC 136	AC 148	AC 171	AC 191	AC 196
Art. no.		2047017							
		Floor bracket							
Model		AC 119	AC 122	AC 126	AC 136	AC 148	AC 171	AC 191	AC 196
Art. no.		2048231							
		Input filter							
Model		AC 119	AC 122	AC 126	AC 136	AC 148	AC 171	AC 191	AC 196
Art. no.		2048232				2048233		2048234	2048235
		Filter element fine filter F (1µm)							
Model		AC 119	AC 122	AC 126	AC 136	AC 148	AC 171	AC 191	AC 196
Art. no.		2042069				2042102		2042152	2042302
		Filter element micro filter S (0.01µm)							
Model		AC 119	AC 122	AC 126	AC 136	AC 148	AC 171	AC 191	AC 196
Art. no.		2044069				2044102		2044152	2044302
		Service kit 1 (after 12 000 operating hours)*							
Model		AC 119	AC 122	AC 126	AC 136	AC 148	AC 171	AC 191	AC 196
Art. no.		2048244	2048245	2048246	2048247	2048248	2048249	2048250	2048251
		Service kit 2 (after 24 000 operating hours)*							
Model		AC 119	AC 122	AC 126	AC 136	AC 148	AC 171	AC 191	AC 196
Art. no.		2048252				2048253			

*Maintenance:

- 1x annually, filters
- After 2 years **Service kit 1** (desiccant cartridges)
- After 4 years **Service kit 2** (desiccant cartridges and valves, seals, etc.)
- Recommended: Silencer annually

DRYPOINT® M PLUS – Membrane dryer with integrated filter

- ▶ The ultimate membrane dryer technology with an integrated nanofilter
 - ▶ Filtration and drying in the same housing (easy filter element replacement)
 - ▶ Low flushing air requirement (Twist 60 technology)
 - ▶ Dry compressed air available immediately without run-up phase
 - ▶ Reliable drying thanks to high partial steam pressure gradient
 - ▶ No change to compressed air temperature and composition
 - ▶ Tried and trusted 100 000 times
 - ▶ Maintenance free (except filter element change)
 - ▶ For a wide range of applications, including breathing air treatment
 - ▶ Also perfect for use directly downstream of the compressor/recooler
 - ▶ Optionally also for higher loads
- ▶ The following requirements must be met for a reliable function of the DRYPOINT M - membrane dryer:
 - ▶ 1. The incoming compressed air must not contain liquid condensate
 - ▶ 2. Particles larger than 1 µm must be separated upstream of the membrane dryer
 - ▶ 3. The oil content of the compressed air must not exceed 0.01 mg/m³.
 - ▶ DRYPOINT M - membrane dryers have proved their value for years as an alternative to legacy compressed air drying methods.

COMMISSIONING REQUIRED!

DRYPOINT M PLUS Benefits

- ▶ Proven method, highest reliability and functional reliability
- ▶ Immediate availability of dried compressed air, also in non-continuous operations
- ▶ Low flushing air requirement, compressed air drying can be adapted to suit the application
- ▶ Compact and rugged, small space requirement thanks to low height
- ▶ Compressed air inlet and outlet at same level (filter version), easily combined with CLEARPOINT filters
- ▶ Maintenance and wear-free as there are no moving parts
- ▶ No reduction of the oxygen content, therefore also suitable for breathing air treatment
- ▶ No electrical connection, also suitable for areas with a risk of explosive atmosphere
- ▶ Long service life if CLEARPOINT filters are used
- ▶ Environmentally friendly, does not need refrigerants or adsorption agents containing CFCs / HFCs
- ▶ Complete solution: Filtration and dryer in a compact format, drain integrated
- ▶ Filtration at the point in the treatment chain where the highest efficiency is achieved
- ▶ Easy maintenance/exchange of filter elements like a single filter



DRYPOINT M PLUS

EXTREMELY

- ▶ Drying by means of partial vapour pressure equalisation of water vapour by diffusion in combination with a highly selective membrane
- ▶ No change in the compressed air composition – can therefore also be used for breathing air treatment

EFFICIENT

- ▶ Reaches the required pressure dew point with low energy input
- ▶ Very fast availability of the dried compressed air
- ▶ Filtration and drying in compact form in a single unit

ROBUST

- ▶ Housing made of sea water resistant aluminium
- ▶ Low-maintenance, voltage-free technology

SYSTEM-CAPABLE

- ▶ Combines with CLEARPOINT filter program in a modular way
- ▶ Can be used anywhere along the compressed air preparation chain – can also be integrated into plant technology

Filter element: N (nanofilter)

- ▶ The CLEARPOINT type N filter element is used for the separation of solid particles down to 0.01 micron, water and oil aerosols. The element has a multi-stage design for efficient and long-lasting filtration. In the first stage, coarse particles are retained by a pre-filter layer. Finer particles are picked up in the second stage by a deep filter bed made of high-performance borosilicate fibre fabric. A

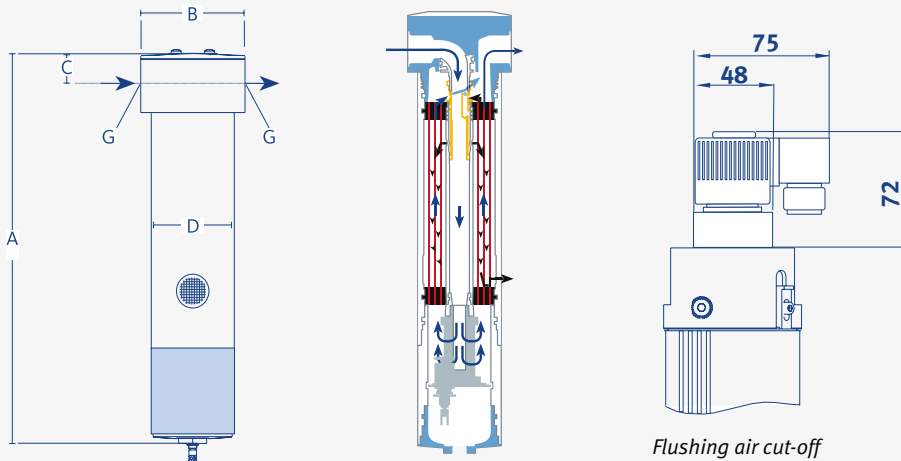
very high contamination retention capacity is achieved due to the very large cavity volume of the filter medium (96 %). The filter medium is specially impregnated to prevent swelling of the individual fibres restricting the cross-section.

Drain: Floatation drain

- ▶ The basic version contains a floatation drain.

Size 10 - 40

- ▶ This size is configured for demand-driven compressed air drying of medium volume flows. Different flushing air settings are used to achieve different degrees of drying of the compressed air.



DRYPOINT® M PLUS membrane dryer with integrated filter

Model		10-47 A	20-48 A	20-53 A	20-60 A	20-67 A	40-61 A
Art. no.		2048300	2048301	2048302	2048303	2048304	2048305
Input flow rate* (l/min) with DTP reduction from							
+ 35 °C to + 15 °C (+ 5 °C to – 7 °C)		400	600	800	1050	1350	1650
+ 35 °C to + 3 °C (+ 5 °C to – 17 °C)		266	399	532	765	910	1125
+ 35 °C to – 10 °C (+ 5 °C to – 26 °C)		198	297	396	590	700	860
+ 35 °C to – 20 °C (+ 5 °C to – 33 °C)		169	253	338	505	605	740
Flushing air (l/min)		40	60	80	120	150	180
Technical specifications							
Diameter (D)	mm	60	80	80	80	80	125
Width/depth (B)	mm	75	100	100	100	100	146
Height (A)	mm	565	587	637	707	777	795
Weight approx.	kg	2.3	3.5	3.8	4.1	4.4	9.1
Maximum pressure	bar	12.5	12.5	12.5	12.5	12.5	12.5
Air connection	"	T 3/8"	T 3/4"	T 3/4"	T 3/8"	T 3/4"	T 3/4"
Content		2 Wall mounts · Connecting fitting for filter (3/8" 3/8")		2 Wall mounts · Connecting fitting for filter 1/2" to 3/4"			2 Wall mounts · Connecting fitting for filter (1" 1")

*Drying outputs and DTP reductions are stated for a pressure of 7 bar [+]. | If the pressure changes, the correction factors must be noted.

DRYPOINT M PLUS membrane dryer with integrated filter and flushing air shut-off

Model		10-47AN	20-48AN	20-53AN	20-60AN	20-67AN	40-61AN
Art. no.		2048315	2048316	2048317	2048318	2048319	2048320
Input flow rate* (l/min) with DTP reduction from							
+ 35 °C to + 15 °C (+ 5 °C to – 7 °C)		400	600	800	1050	1350	1650
+ 35 °C to + 3 °C (+ 5 °C to – 17 °C)		266	399	532	765	910	1125
+ 35 °C to – 10 °C (+ 5 °C to – 26 °C)		198	297	396	590	700	860
+ 35 °C to – 20 °C (+ 5 °C to – 33 °C)		169	253	338	505	605	740
Flushing air (l/min)		40	60	80	120	150	180
Technical specifications							
Diameter (D)	mm	60	80	80	80	80	120
Width/depth (B)	mm	60	80	80	80	80	120
Height (A)	mm	572	593	643	713	783	773
Weight approx.	kg	2.3	3.5	3.8	4.1	4.4	9.1
Maximum pressure	bar	12.5	12.5	12.5	12.5	12.5	12.5
Air connection	"	T 1/2"	T 1/2"	T 1/2"	T 1/2"	T 1/2"	G 1
Content		2 Wall mounts · Connecting fitting for filter (1/2" 1/2")		2 Wall mounts · Connecting fitting for filter 1/2" to 1/2"			2 Wall mounts · Connecting fitting for filter (1" 1")

*Drying outputs and DTP reductions are stated for a pressure of 7 bar [+]. | If the pressure changes, the correction factors must be noted.

Output correction factors for other pressures

Pressure [bar]	4	5	6	7	8	9	10	11
Output correction factor	0.39	0.56	0.77	1	1.19	1.4	1.61	1.84
Flushing air correction factor	0.63	0.75	0.57	1	1.12	1.25	1.37	1.50

Accessories

DRYPOINT M PLUS with integrated filter	10-47 A	20-48 A	20-53 A	20-60 A	20-67 A	40-61 A	Art. no.	
DRYPOINT M PLUS with integrated filter and flushing air shut-off	10-47AN	20-48AN	20-53AN	20-60AN	20-67AN	40-61AN		
Membrane dryer nanofilter element 1	●						2048350	
Membrane dryer nanofilter element 2		●	●	●	●		2048351	
Membrane dryer nanofilter element 3						●	2048352	

Membrane dryers

New

DRYPOINT® M eco control – Membrane dryer with flushing air control

Benefits: DRYPOINT eco control

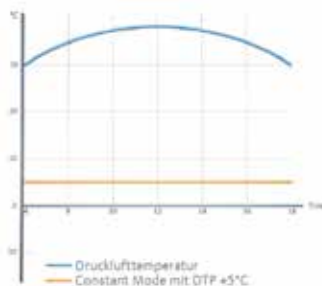
- ▶ Complete solution: DRYPOINTM Plus integrates filtration and dryer in a compact format, condensate drain also integrated
- ▶ Filtration at the point in the treatment chain where the highest efficiency is achieved
- ▶ Easy maintenance/exchange of filter elements like a single filter
- ▶ Application-specific degree of drying selectable
- ▶ Constant compressed air quality in fluctuating operating conditions
- ▶ Energy savings by minimising the flushing air consumption to match the actual airflow payload and degree of drying
- ▶ Output evaluation via LED, forwarding via current output 4 ... 20 mA possible
- ▶ User-friendly: Easy to operate, test functions, error messages
- ▶ Solution based on fail-safe principle, error messages can be accessed via zero-potential contact

COMMISSIONING REQUIRED!

DRYPOINT M eco control offers 2 different operating modes:

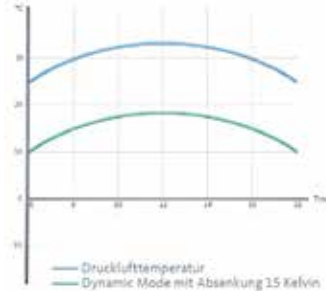
"Constant Mode":

- ▶ Set the DTP output to values between +10 °C and -26 °C (10 stages)
- ▶ The control keeps the DTP output stable



"Dynamic" mode:

- ▶ Set a DTP reduction of 10K to 55 K (10 stages) compared to the compressed air temperature
- ▶ The control keeps the delta between the compressed air temperature and DTP output stable



DRYPOINT® M eco control



DRYPOINT® M eco control functional principle

- ▶ Based on the measurement result from the sensor, the control software decides in defined cycles whether and for how long the full flushing air volume should be provided in order to achieve and stabilise the required degree of drying. This process is realised via a targeted clocking of a solenoid valve. In each cycle, the duration of the process steps "measuring gas flow" and "flushing air flow" varies in order to keep the degree of drying within the specified tolerance range.

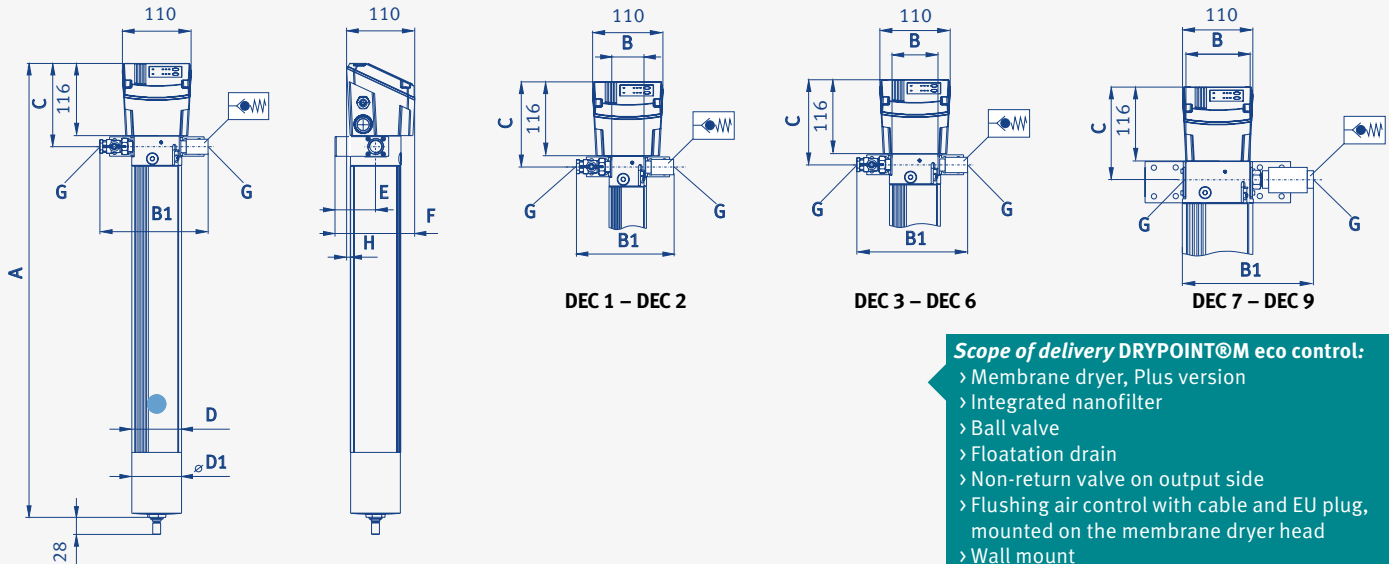
Function: Measuring gas flow

- ▶ A very small partial flow of the dried compressed air (measuring gas) flows continuously through the internal ducting past a temperature and humidity sensor (S) to the measuring gas nozzle (1). This sensor thus continuously determines the degree of dryness of the compressed air in the measuring gas and reports the result to the control

Function: Flushing air flow

- ▶ The control constantly compares the measured degree of dryness of the measuring gas with the setpoint individually configured on the DRYPOINT® M eco control. The valve unit is triggered in the event of deviations: the solenoid core (2) and piston (3) shut off the valve seat allowing compressed air to flow through the flushing air nozzle (4) to the membrane dryer. Drying immediately starts.




Scope of delivery DRYPOINT®M eco control:

- › Membrane dryer, Plus version
- › Integrated nanofilter
- › Ball valve
- › Floatation drain
- › Non-return valve on output side
- › Flushing air control with cable and EU plug, mounted on the membrane dryer head
- › Wall mount

DRYPOINT®M eco control membrane dryer

DTP input:			Max. volumetric flow input in l/min at 7 bar								
Model			DEC 1-30S	DEC 2-40S	DEC 3-60S	DEC 4-80S	DEC 5-115S	DEC 6-135S	DEC 7-165S	DEC 8-250S	DEC 9-330S
Art. no.			2048330	2048331	2048332	2048333	2048334	2048335	2048336	2048337	2048338
DTP output:											
Model			DEC 1-30S	DEC 2-40S	DEC 3-60S	DEC 4-80S	DEC 5-115S	DEC 6-135S	DEC 7-165S	DEC 8-250S	DEC 9-330S
Max. flushing air in l/min at 7 bar [+]*			30	40	60	80	115	135	165	250	330
Measuring gas in l/min at 7 bar [+]			approx. 5	approx. 5	approx. 5	approx. 5	approx. 5	approx. 5	approx. 5	approx. 5	approx. 5
A	mm		625	685	695	745	815	885	889	1029	1179
B	mm		52	52	72	72	72	72	104	104	104
B1	mm		about 195	about 195	about 215	about 215	about 215	about 215	about 210	about 210	about 210
C	mm		133	133	133	133	133	133	141	141	141
D/D1	Ø mm		60/60	60/60	80/80	80/80	80/80	80/80	120/120	120/120	120/120
E	mm		65	65	63	63	63	63	78	78	78
F	mm		128	128	126	126	126	126	141	141	141
G			1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1"	1"	1"
weight	kg		3.4	3.6	4.9	5.2	5.5	5.8	10.9	12.0	13.1
Content			· Wall holder · Ball valve · Non-return valve								

* The internal permeation rate is approx. 5 % relative to the maximum flushing air flow. If the pressure changes, the correction factors must be noted.

Output correction factors for other pressures

Pressure [bar]	4	5	6	7	8	9	10	11	12
Output correction factor	0.39	0.56	0.77	1	1.19	1.4	1.61	1.84	2.07
Flushing air correction factor	0.63	0.75	0.57	1	1.12	1.25	1.37	1.50	1.63

Accessories

DRYPOINT®M eco control	DEC 1-30S	DEC 2-40S	DEC 3-60S	DEC 4-80S	DEC 5-115S	DEC 6-135S	DEC 7-165S	DEC 8-250S	DEC 9-330S	Art. no.
Membrane dryer nanofilter element 1	●	●								2048350
Membrane dryer nanofilter element 2			●	●	●	●				2048351
Membrane dryer nanofilter element 3							●	●	●	2048352

COMPRESSED AIR DISTRIBUTION



AIRCRAFT PLUG-IN COMPRESSED AIR NETWORK SYSTEMS -

A SYSTEMATIC APPROACH TO COST-SAVINGS

YOUR BENEFITS

- ▶ CORROSION-FREE
- ▶ EASY INSTALLATION
- ▶ EASY AND FAST INSTALLATION
- ▶ CAN BE DISCONNECTED AND CONNECTED MULTIPLE TIMES
- ▶ PLASTIC AND ALUMINIUM PIPE



DO YOU HAVE QUESTIONS ABOUT PLANNING THE COMPRESSED AIR SYSTEM IN YOUR WORKSHOP OR PRODUCTION?

Ask your local specialist dealer. They will be happy to give you comprehensive advice, without any obligation, about your AIRCRAFT compressed air solution. We are also happy to advise you. This gives you the most economical and cost effective solution.

How AIRCRAFT the compressed air advisory service works...

Mail the floor plan of your building project to us, whether this is a new building, or you are expanding or refurbishing. State the number of workplaces and which tools you want to provide with compressed air. We will send you a plan specifically adapted to your operation.

**ASK US FOR
ADVICE!**

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Email: kompressoren@stuermer-maschinen.de
Phone: +49 (0) 9 51 - 96 555 - 630

AIRCRAFT Austria:
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Phone: + 43 - (0) 77 52 - 70 929 - 0



Compressed air pipe systems - Ø 15-32 mm

DETERMINING THE COMPRESSED AIR LINE DIAMETER

Compressed air distribution with a closed circular pipeline

To dimension the closed circular pipeline, you need to work with half the nominal length of the entire circuit and the entire compressed air requirement.

Example:

Compressed air consumption 1 000 l/min., operating pressure 7 bar, total pipeline length is 300 m, work with 150 m for a closed circular pipeline

Length	25 m	50 m	100 m	150 m	200 m	250 m	300 m
200 l/min	12	12	12	15	15	15	18
400 l/min	12	12	15	15	15	18	18
500 l/min	15	15	15	18	18	18	18
750 l/min	15	15	18	18	18	22	22
1 000 l/min	15	15	18	18	22	22	22
1 500 l/min	18	18	18	22	22	22	22
2 000 l/min	18	18	22	22	22	28	28
3 000 l/min	22	22	28	28	28	28	28
4 000 l/min	28	28	28	28	28	28	28

To determine the required pipe length for a main, supply and branch pipe, is recommended to design the supply line as a closed circular pipeline; in this case half the line length and the total supply volume can be assumed in dimensioning.

Compressed air distribution with branch lines

To dimension the branch, you need to work with the total nominal pipe length and the entire compressed air requirement.

Example:

Compressed air consumption 1 000 l/min, operating pressure 7 bar, total pipeline length 300 m

Length	25 m	50 m	100 m	150 m	200 m	250 m	300 m
200 l/min	12	12	12	15	15	15	18
400 l/min	12	12	15	15	15	18	18
500 l/min	15	15	15	18	18	18	18
750 l/min	15	15	18	18	18	22	22
1 000 l/min	15	15	18	18	22	22	22
1 500 l/min	18	18	18	22	22	22	22
2 000 l/min	18	18	22	22	22	28	28
3 000 l/min	22	22	28	28	28	28	28
4 000 l/min	28	28	28	28	28	28	28

Further technical details on request. **All values stated here are theoretical computations and are therefore not binding.** An individual pipe network must be precisely calculated and tailored to local conditions.

DETERMINATION OF THE PIPE NETWORK LENGTH; FLOW CHARACTERISTICS

The values of the substitute pipe lengths need to be added to the actual pipe length, to provide pipeline length L in terms of the flow characteristics:

Spare tube line length per item

	Outside Ø	15	18	22	28
	Inside Ø	12	14	18	23
Fittings	Comparable with	3/8"	1/2"	3/4"	1"
Ball valve		0.1 m	0.2 m	0.3 m	0.4 m
Bracket		0.7 m	1 m	1.3 m	1.5 m
T-piece		0.85 m	1 m	1.5 m	2 m
Reducer		0.4 m	0.45 m	0.5 m	0.6 m

Arithmetic example for determining the effective pipeline length L:

Planned components	Spare tube line length	Nominal length
2 x T-piece Ø 18 mm	1 m	2 m
3 x bend Ø 18 mm	1 m	3 m
1 x ball valve Ø 18 mm	0.2 m	0.2 m
Total		5.2 m

Effective pipeline length: planned length + total nominal length

FLOW RATES FOR PLASTIC TUBES AND ALUMINIUM PIPES

Pipe Ø mm	Plastic pipe Main line 6 m/sec. at 8 bar	Plastic pipe Main line 15 m/sec. at 8 bar	Aluminium pipe Main line 6 m/sec. at 8 bar	Aluminium pipe Main line 15 m/sec. at 8 bar
15	365 l/min	916 l/min	430 l/min	1 004 l/min
18	498 l/min	1 248 l/min	650 l/min	1 548 l/min
22	823 l/min	2 057 l/min	1 018 l/min	2 442 l/min
28	1 344 l/min	3 367 l/min	1 720 l/min	4 160 l/min

The indicated valves for the flow rate in the main pipe can change in case of flow in both directions. Other values for larger pipe diameters are available upon request.

TECHNICAL PROPERTIES OF CONNECTORS WITH Ø 15-32 MM

Working pressure and temperature range

Working temperatures* air	Working pressure*
- 20 °C	10 bar
+ 1 °C	10 bar
+ 23 °C	10 bar
+ 70 °C	7 bar

* The pressure values depend on the pipe material. Please contact us in case of applications with liquids or vacuum.

Depending on the hoses used, it may be possible to use connectors for **higher pressures and temperatures** under certain conditions. Please feel free to contact us.

SUITABLE HOSE MATERIALS/TYPES

Plastic pipes	PE, PA, or PUR pipe materials that match the tolerances (see below). For soft and thin-walled pipes, we generally recommend the use of support sleeves and verification of the pressure ranges of the pipe material used. (Please do not hesitate to contact us).
Metal pipes (soft)	Brass, copper, aluminium pipes that match the tolerances (see below).
Metal pipes (hard) or surface-treated	Please check the suitability of the connectors in advance. Please do not hesitate to contact us.

It is absolutely essential that the outer diameter of the pipe is free from damage or longitudinal grooves.

INSTALLATION

All pipes and connectors must be clean and undamaged before use. Make sure that the pipe surface is free from longitudinal grooves, dents, or similar signs of damage.

PIPE TOLERANCES

Our connectors can be used with the following tube diameters and tolerances.

Pipe outer diameter	Ø 15 mm - 28 mm
Tolerances	+0.05/-0.10 mm

Installation and system test

All pipes and connectors must be clean and intact before use. After the installation, all hose and connector installations must be pressure tested to ensure that the system is pressure-tight before it is delivered to the customer.

Please also refer to: "Connecting".

Testing the system

No matter whether you are working on a new or an existing system, we recommend testing the system as follows before use:

- ▶ Test the system at an operating pressure of 10 bar for a period of 10 minutes.
- ▶ Relieve the pressure on the system to 0 bar.
- ▶ Then, subsequently test the system at a working pressure of 2 bar for a period of 10 minutes.

LIQUID CHEMICALS

If you will be using chemicals or other potentially aggressive liquids, please contact us.

Caution: Our connectors are not designed for use with explosive gas, paraffin and other fuels.

PROTECTIVE CAPS

Protective caps are available as an additional safeguard against the hose slipping out or for protection (marking) for differentiation by colour (see accessories on the following pages).

FOOD RESISTANCE

All connectors illustrated in this catalogue comply with foodstuff directives and can thus be used in food applications without any problems.

Maximum torque values for metal threads BSP, BSPT & NPT

Thread size	1/8" – 1/4"	3/8" – 1/2"	3/4"	1"
Max. torque Plastic thread	1.5 Nm	3.0 Nm	4.0 Nm	4.0 Nm
Max. torque Metal thread		4.0 Nm	5.0 Nm	5.0 Nm

*These values can vary.

The values depend on the thread sealing material.

We recommend testing all installations before use to ensure that the installation has been correctly completed. Leak tightness must also be tested.

The maximum torque is geared to the use of our connectors and refers to types used in this catalogue in line with international specifications.

WARRANTY

Although we provide a warranty against manufacturing errors and material defects, it is the user's responsibility to ensure that connectors and similar products are suitable for the application in question. The installation must be performed according to our recommendations and pertinent approvals; national standards must be observed.

No leakages must occur at the joints during this period. Sealing plugs and end caps can be useful here to shut off the drain openings and create a tight connection. When our products are integrated into complete systems, we recommend separate tests (functional checks, flow rate checks, chemical resistance, etc.). For safety checks, we additionally recommend documenting the test results in writing.

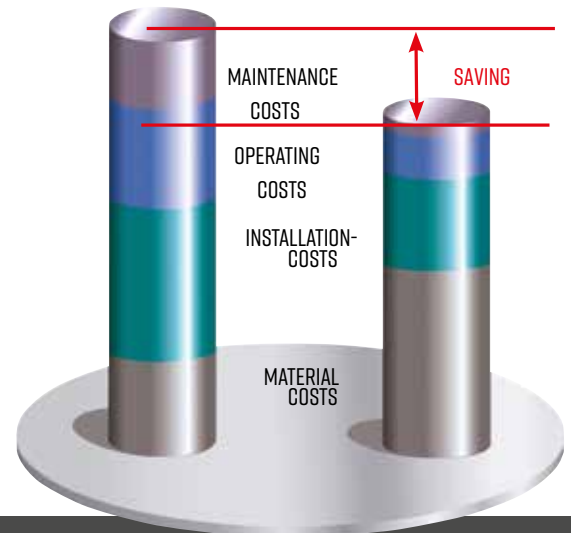
Compressed air pipe systems - Ø 15-32 mm

AIRCRAFT COMPRESSED AIR LINE PLUG-IN SYSTEM - THE HIGHER MATERIAL PRICE IMMEDIATELY PAYS FOR ITSELF AND GIVES YOU PERMANENT SAVINGS!

- ▶ Fast installation without tools - simply plug in to connect
- ▶ Reduces the installation time by up to 50 %
- ▶ No additional sealing material needed
- ▶ Suitable for use with various metal or plastic pipes
- ▶ Can be disconnected and connected multiple times
- ▶ Smooth interior surfaces, excellent flow properties
- ▶ Flexible modular system
- ▶ Virtually maintenance free
- ▶ Quality manufactured ISO 9001 (or EN 29001)

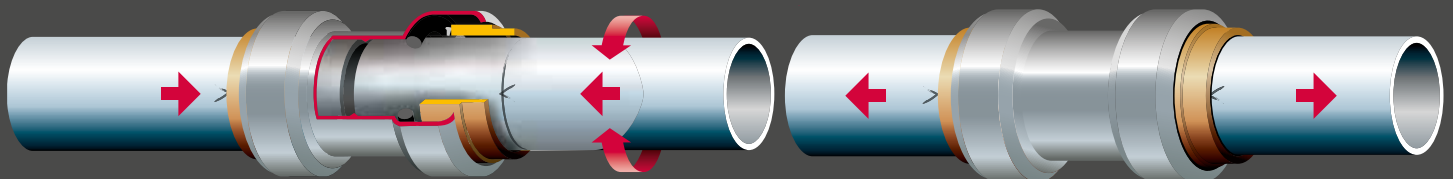
Due to the low installation costs and massive time savings during installation, the higher material costs immediately pay dividends

In the long-term lower operating and maintenance costs translate to savings.



CONNECTING

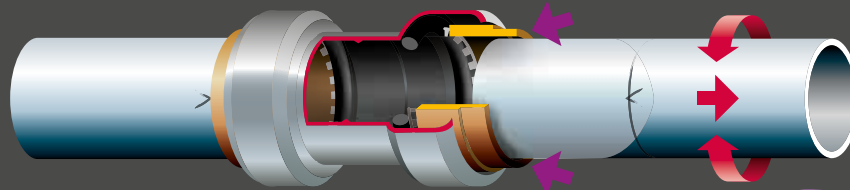
PUSH IN, TWIST AND PULL



Slightly turn the fitting or the pipe and simultaneously press it in axial direction until the marked insertion depth is reached

Check the connection by pulling in the opposite direction

DISCONNECTING



Push back the retaining element with the disassembly tool and remove the tube with a twisting motion

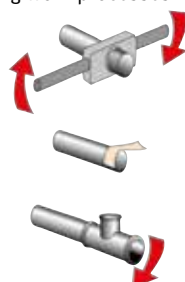


ADVANTAGES OF THE AIRCRAFT PLASTIC COMPRESSED AIR LINE SYSTEM COMPARED WITH A METAL SYSTEM

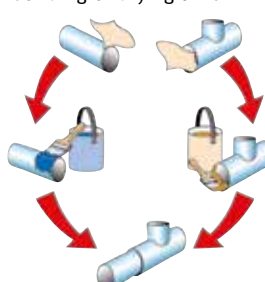
Benefits of AIRCRAFT plastic compressed air connectors

- ▶ Very lightweight due to plastic material
- ▶ Specifically designed for compressed air engineering, not hydro-engineering
- ▶ Easy to disconnect and rotate
- ▶ Uniform material in the compressed air line
- ▶ No metal in the cable duct thanks to the use of plastic pipes
- ▶ Tried and trusted for decades

Metal pipe screw-type system, time-consuming work processes



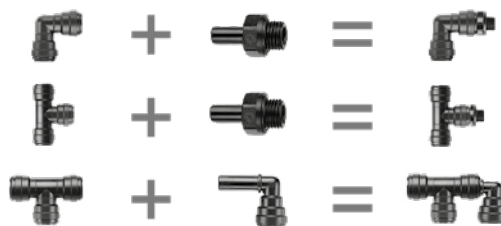
Adhesive systems, preparation overhead, and long bonding or drying time



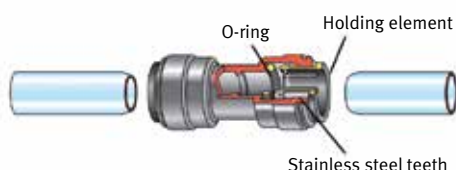
Although we generally recommend the use of plastic or aluminium pipes, it is also possible to use pipes made of other materials (copper, brass, etc.) with our connectors. Thus, existing pipe networks systems can be modified or extended using AIRCRAFT connectors.

CREATING CONNECTIONS WITHOUT TOOLS

The pluggable connectors ensure a durable, safe and tight connection between the pipe and the connecting element. They are ideal for use in complex pipe networks, as well as in training and testing institutes where systems are frequently disconnected and reconnected. Various interface options mean that existing pipe systems can be modified or refurbished easily.

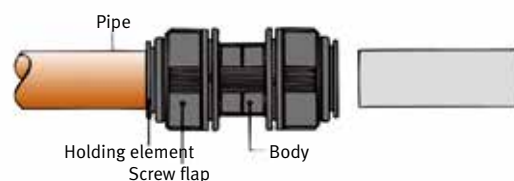


CONNECTING Ø 15 - Ø 22 MM



The product range is made of acetal copolymer (POM) and consists of the connector body, holding elements with stainless steel teeth and NBR o-rings for sealing. The connectors can be installed and removed without using tools. **The connection holds before it seals!**

CONNECTING Ø 28 MM

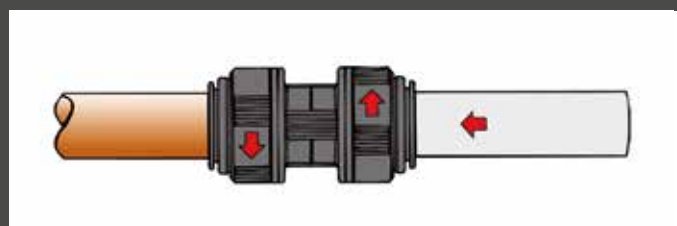


The 28 mm system consists of the connector body, holding elements with stainless steel teeth and NBR o-rings. Additional screw caps secure the retaining system and press the o-rings onto the pipe. The connectors can be installed and removed without using tools. **The connection holds before it seals!**



Connecting the Ø 15 - 22 mm system

Cut off the pipe square and burr-free. Make sure that the pipe has no sharp edges, longitudinal grooves or other damage. Insert the pipe up to the stop. The holding element fixes the tube in the connector. The o-ring ensures a permanently tight connection.



Connecting the Ø 28 mm system

Like with the other sizes a reliable connection can be made here simply by inserting the pipe. See the procedure on the left "Connecting". The retaining system is additionally secured with a 1/4 turn (two clicks) and the o-rings are pressed onto the surface of the pipe.



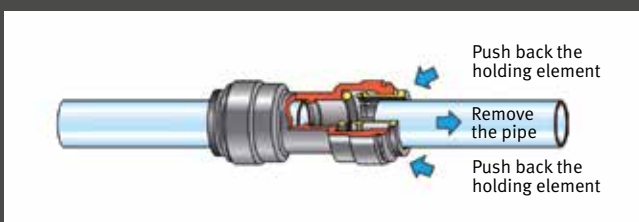
Check the connection by pulling in the opposite direction

Make sure that the pipe is safely inserted. You can easily do this by pulling.



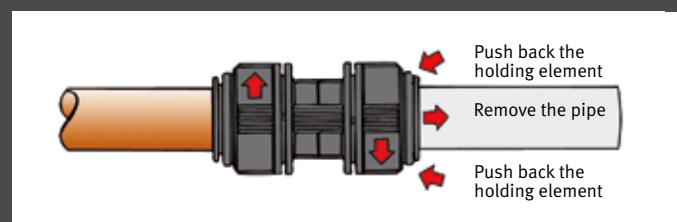
Check the connection by pulling in the opposite direction

Make sure that the pipe is safely inserted. You can easily do this by pulling.



Disconnecting the Ø 15 - 22 mm system

Make sure the system is depressurised. You can then release or remove the pipe by pushing back the holding element.



Disconnecting the Ø 28 mm system

To disconnect the pluggable pipe connection, turn the screw a 1/4 turn anti-clockwise. The connection is now unlocked and can be released by pushing the holding element. See the procedure on the left "Disconnecting".

Compressed air pipe systems - Ø 15-32 mm

INSTALLATION INSTRUCTIONS FOR PLASTIC PIPELINES

To ensure safe and thus correct installation, please observe the following items:

- ▶ Pipe clamps must be installed so as to give the pipe sufficient play to move back and forward
- ▶ The pipe ends must be deburred to avoid damage to the o-rings on the connector
- ▶ Chamfer the pipes to facilitate assembly
- ▶ Cut the pipes with pipe shears RS 28 (Art. no. 215 1528) in order to achieve an optimum cut (90°)
- ▶ To avoid loss of pressure in the system, ensure that pipes always inserted into the connector up to the stop (also note the mark on the connector)
- ▶ When installing a compressed air piping system around a column, please

also observe the longitudinal expansion of the pipes and connectors (the recommended distance from the wall is approx. 30 mm)

- ▶ When installing several vertical pipes we recommend first installing the pipe clamps on the horizontal lines, then pressurising the system, and installing the vertical clamps and connectors in a second step. This avoids the vertical pipes slanting after the installation.
- ▶ If there is no refrigeration dryer in the compressed air pipe network, we recommended using our T-connectors with integrated water traps (Art. no. 215 2222). This means that the condensed water can be collected at a defined point.
- ▶ When installing the compressed air pipe network, the thermal expansion must first be correctly computed in order to avoid pipes and connections buckling.

CORRECTION FACTORS FOR LINEAR EXPANSION

Correction factors for linear expansion of plastic pipes:

Pipe (soft)	Factor 1.5
Pipe (medium)	Factor 1.3
Pipe (hard)	Factor 1.0

Example calculation:

A compressed air line (hard pipe) of 150 m length installed in a factory shop at an ambient temperature of +15 to +40 °C

(ΔT is thus 25 °C) expands by:
 $\Delta L = 1.0 \times 10^{-4} / ^\circ\text{C} \times 150 \times 25 \text{ }^\circ\text{C}$
 $\Delta L = 0.375 \text{ m}$

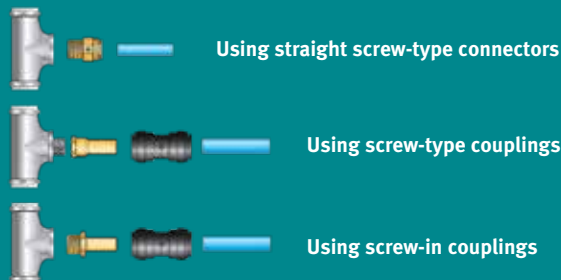
The specific linear expansion coefficient (LK) for polyamides = $10^{-4} / ^\circ\text{C}$ is equivalent to 0.1 mm/°C.

Formula for computing linear expansion:

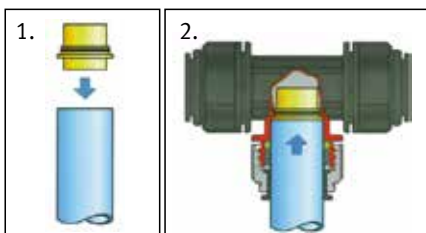
$\Delta L = \text{factor} \times L (10^{-4} / ^\circ\text{C}) \times \text{pipe length (L)} \times \text{temperature } (\Delta T)$

EASY EXTENSION OF EXISTING PIPE SYSTEMS

Plug type connectors and pipes tubes can be used to install an independent system or extend or modify an existing pipe network (see right-hand side).



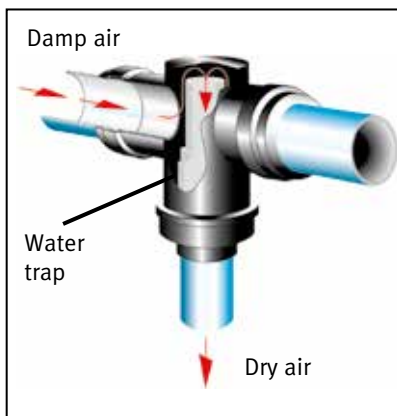
DESCRIPTION OF THE SYSTEM WATER TRAP



Water trap for 28 mm compressed air line systems

You can construct a water trap for a 28 mm compressed air network using a standard T-connector, Art. no. 215 2828 and brass insert Art. no. 215 2829.

1. Push the short part of the insert, Art. no. 2152829 into the plastic or copper pipe.
2. Push the pipe with the insert into the T-piece up to the stop
The retaining system is doubly secured by twisting the screw cap through a 1/4 turn. This prevents water penetrating into the branch pipes.

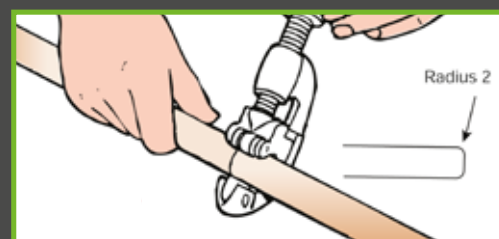
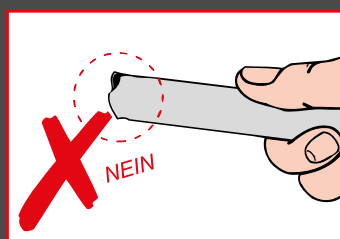
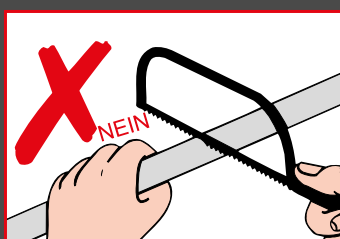


Water trap for 22 mm compressed air line systems

Water trap T-connectors remove the need for "goose necks" as this sophisticated technology prevents water penetrating into branch pipes.

When installing this connector, make sure its is routed horizontally. The connector is marked accordingly to prevent incorrect installation.

INSTALLATION NOTES FOR ALUMINIUM PIPES



The pipe must be cleanly cut with a pipe cutter! Do not use a saw!

After cutting, deburr the pipe and lightly chamfer. The cutting angle of the aluminium pipe cutter does this for you. This ensures easy insertion of the pipe into the connector.

COMPRESSED AIR STARTER KIT

Compressed air starter kit Plug connection system 15 mm	
Art. no.	
2159901	
25 m PA tube/blue	
15 x angled connectors 15 mm	
4 x T connectors 15 mm	
1 x wall bracket 90° / 15 mm x 1/2" IT	
1 x 3-way air distribution box 1/2"	
1 x screw-in connectors 15 mm x 1/2" OT	
50 x hose clamps 15 mm	
50 x circlip 15 mm	



Compressed air starter kit Plug connection system 22 mm	
Art. no.	
2159902	
25 m PA tube/blue	
15 x angled connectors 22 mm	
4 x T connectors 22 mm	
1 x wall bracket 90° / 22 mm x 3/4" IT	
1 x 3-way air distribution box 1/2"	
1 x screw-in connectors 22 mm x 3/4" OT	
50 x hose clamps 22 mm	
50 x circlip 22 mm	



Compressed air starter kit Plug connection system 22/15 mm	
Art. no.	
2159904	
25 m PA tube/blue	
15 x angled connectors 22 mm	
4 x T connectors 22 mm	
1 x wall bracket 90° / 15 mm x 1/2" IT	
2 x 3-way air distribution box 1/2"	
2 x screw-in connectors 15 mm x 1/2" OT	
30 x hose clamps 22 mm	
20 x hose clamps 15 mm	
10 x circlip 15 mm	
50 x circlip 22 mm	



Compressed air starter kit Plug connection system 28 mm	
Art. no.	
2159903	
50 m PA tube/blue	
5 x angled connectors 28 mm	
3 x T connectors 28 mm	
1 x screw-in connector 28 mm x 1" OT	
1 x 3-way air distribution box 1/2"	
20 x hose clamps 28 mm	



PLASTIC PIPES FOR COMPRESSED AIR SYSTEMS

- ▶ Very smooth inner surfaces, improved flow rate
- ▶ Tried and trusted for years
- ▶ Pressure- and temperature-resistant
- ▶ Vibration- and impact-resistant
- ▶ Corrosion-proof and non-ageing
- ▶ Low weight



ROLL STOCK SOFT

PU/roll	1 Roll 25 m	1 Roll 25 m	1 Roll 25 m	-
Art. no.	215151025	215181725	215221725	-
PU/roll ³⁾	1 pc 100 m	1 pc 100 m	1 pc 100 m	1 pc 50 m
Art. no.	2151510	2151817	2152217	2152824
Technical specifications				
OD	15 ¹⁾	18 ¹⁾	22	28
ID	12	14	18	23
Wall thickness	1.5 mm	2.0 mm	2.0 mm	2.5 mm
Max. operating pressure ²⁾ (20 °C)	15 bar	16 bar	14 bar	14 bar
Min. bending radius	90 mm	100 mm	140 mm	190 mm

PIPES HARD

PU/bar	3 m	3 m	3 m	3 m
Art. no.	2151511	2151815	2152218	2152823
PU/bunch ³⁾	10 x 3 m	10 x 3 m	10 x 3 m	10 x 3 m
Technical specifications				
OD	15 ¹⁾	18 ¹⁾	22	28
ID	12	14	18	23
Wall thickness	1.5 mm	2.0 mm	2.0 mm	2.5 mm
Max. operating pressure ²⁾ (20 °C)	25 bar	28 bar	22 bar	20 bar

1) as per DIN 73378 2) Operating pressure with 2.5x safety factor/colour blue

Purchase and delivery in PU only (roll/bunch)

Utilisation of the permissible operating pressures (sample computation):

Temperature range	+20 °C	+30 °C	+40 °C	+50 °C	+60 °C	+70 °C	+80 °C	+90 °C	+100 °C
Pipe smooth/hard	100 %	83 %	71 %	62 %	55 %	49 %	45 %	41 %	37 %

Example: Rolls Ø 15 mm (smooth) : Permissible working pressure at +50 °C: 62 % of 15 bar = 9.3 bar
Bars Ø 15 mm (hard): Permissible working pressure at +50 °C: 62 % of 25 bar = 15.5 bar

ALUMINIUM TUBES

AIRCRAFT aluminium pipe is made of aluminium grade ALMgSi 05. Six metre lengths of aluminium pipe are surface coated.
The pipes can be used for compressed air and vacuum.

Art. no.	Dim. in mm		Wall thickness in mm	Minimum order volume	Surface	€ plus VAT/rod	TVPAR	Max. pieces per packaging tube
	OD	ID						
2157315	15	12	1.5	10 rods	grey-coated			26
2157318	18	15	1.5	10 rods	grey-coated			18
2157322	22	19	1.5	10 rods	grey-coated			14
2157328	28	25	1.5	5 rods	grey-coated			8
New 2157332	32	29	1.5	5 rods	grey-coated			21
New 2157340	40	37	1.5	5 rods	grey-coated			13
New 2157350	50	46	2.0	5 rods	grey-coated			7
New 2157363	63	59	2.0	4 rods	grey-coated			4

Delivery in PU - 1 rod = 6 m

Temperature	Pressure
- 20 °C	15 bar
+ 1° C	15 bar
+ 23° C	15 bar
+ 70° C	15 bar

*Diameter Ø 15 mm to Ø 28 mm,
Pipe tolerance: ±0.10 mm

Explanation TVPAR:



TVPAR1:
1 – 5 units @ Ø 28 mm



Compressed air pipe systems - Ø 15-32 mm

PIPELINE BUILDING COMPONENTS Ø 15-32 MM

Delivery exclusively in the stated PUs!

Pipe OD	Art. no.	PU
Screw-in connector (parallel thread) up to 10 bar¹⁾		
15 1/2" OT	2151514	10
18 1/2" OT	2151814	10
22 3/4" OT	2152216	10
28 1" OT	2152818	10
32 1" OT	2153232	10
32 1 1/2" OT	2153233	10
Thread sealed by clamped o-ring		
Straight connectors up to 10 bar¹⁾		
15	2150415	10
18	2150418	10
22	2150422	10
28	2150428	5
32	2150432	5
Angled connectors up to 10 bar¹⁾		
15	2150315	5
18	2150318	5
22	2150322	5
28	2150328	5
32	2150332	5
Pluggable reducer/connector up to 10 bar¹⁾		
Fitting	Pipe	Outer diameter
18	15	2151805 10
22	15	2151503 10
22	18	2151804 10
28	22	2152203 10
32	22	2153222 10
32	28	2153228 10
Male connector (parallel thread) up to 10 bar¹⁾		
15 1/2" OT	2151512	10
18 1/2" OT	2151816	10
22 1/2" OT	2152212	10
22 3/4" OT	2152234	10
Thread sealed by clamped o-ring		
T-connector up to 10 bar¹⁾		
15	2150215	5
18	2150218	5
22	2150222	5
28	2152828	5
32	2150232	5
T-Reducing connectors up to 10 bar¹⁾		
Pipe OD	Pipe OD	
18 15	2153018	5
22 15	2153022	5
Plug for thread - Ø		
1/2"	2151901	1
Water trap for pipe OD		
22	2152222	1
Pluggable angled connector up to 10 bar¹⁾		
Pipe OD	Adapter OD	
15 15	2151515	10
18 18	2151818	10
22 22	2152322	10
32 32	2153332	10
Screw-in fitting (brass) up to 15 bar²⁾		
15 R 1/2" OT	2153415	10
22 R 3/4" OT	2153422	10
28 R 3/4" OT	2153428	10
28 T 1" OT	2153429	10
Wall plate brass up to 15 bar²⁾		
15 1/2" internal thread	2151500	1
22 3/4" internal thread	2152200	1
Straight screw-in coupling (brass) up to 15 bar²⁾		
15 R 1/2" OT	2151215	10
22 R 3/4" OT	2152243	10
28 R 1" OT	2152808	10
Screw-on fitting (brass) up to 15 bar²⁾		
15 1/2" internal thread	2151216	10
22 3/4" internal thread	2152244	10
Water trap brass for 28 mm T-connector		
Pipe outer diameter 28 mm	2152829	1

Designation	Art. no.	PU
Wall distribution box - 3 x 1/2" conn. on front for thread Ø		
top bottom		
3/4" Without	2150930	1
3/4" 3/4"	2150931	1
1/2" Without	2150934	1
1/2" 1/2"	2150935	1
Blind plug 1/2"	2150936	1
Material aluminium		
Air distribution box plastic - 4 x 1/2" BSP thread		
1/2"	2150212	1
Supplied with three plugs		
Air distribution box aluminium - 3 x 1/2" for thread Ø		
1/2" top	2151912	1
3/4" top	2151934	1
1" top	2151910	1
Supplied with two plugs		
Air distribution box aluminium insert^{New} for thread Ø		
PA G1/2 + 1 x G1/2	2150940	1
PA G1/2 + 2 x G1/2	2150941	1
PA G1/2 + 3 x G1/2	2150942	1
PA G3/4 + 1 x G1/2	2150945	1
PA G3/4 + 2 x G1/2	2150946	1
PA G3/4 + 3 x G1/2	2150947	1
PA G1/2 + 4 x G1/2	2150950	1
PA G3/4 + 4 x G1/2	2150951	1
Air distribution box complete polyam^{New} for thread Ø		
P T1/2 + 1 x T1/2	2150960	1
P T1/2 + 2 x T1/2	2150961	1
P T1/2 + 3 x T1/2	2150962	1
P T3/4 + 1 x T1/2	2150965	1
P T3/4 + 2 x T1/2	2150966	1
P T3/4 + 3 x T1/2	2150967	1
Condensate drain valve 1/4" thread^{New}		
With option to attach a condensate drain on the underside	2507307	
Pipe clamp for pipe OD		
15	2151520	100
18	2151820	100
22	2152220	100
28	2152820	100
32	2153220	100
Fastener for pipe		
15	2157115	1
18	2157118	1
22	2157122	1
28	2157128	1
Screw clamp with rubber inner belt		
15 - 18	2157218	1
22	2157222	1
28	2157228	1
Protective cap for pipe OD		
15	2150515	10
18	2150518	10
22	2150522	10
Cap for pipe OD		
15	2150815	10
18	2150818	10
22	2150822	10
28	2150828	10
32	2150832	10
Circlip for pipe OD		
15	2150115	10
18	2150118	10
22	2150122	10

FAST AND STRESS-FREE INSTALLATION WITHOUT TOOLS

- ▶ Permanently leak-tight without press-fitting
- ▶ Cost savings thanks to fast and easy installation
- ▶ Compatible with other standards-compliant pipes
- ▶ Installation also in cramped conditions
- ▶ Tightening forces well above the standards requirements
- ▶ O-rings included in scope of delivery

New

PIPE CONNECTOR

MADE IN ITALY

	Pipe OD	Art. no.	PU
	Straight screw-in coupling (brass) New		
	15 R1/2" OT	2150010	5
	18 R3/4" OT	2150011	5
	18 R1/2" OT	2150012	5
	22 R3/4" OT	2150013	5
	22 R1/2" OT	2150014	5
	Straight screw-on coupling (brass) New		
	15 T 1/2"	2150016	5
	18 T 1/2"	2150017	5
	18 T 3/4"	2150018	5
	22 T 1/2"	2150019	5
	22 T 3/4"	2150020	5
	Straight plug-in coupling (brass) New		
	15	2150025	5
	18	2150026	5
	22	2150027	5
	28	2150028	5
	Angled plug-in coupling 90° (brass) New		
	15	2150030	5
	18	2150031	5
	22	2150032	5
	28	2150033	5
	Angled plug-in coupling 45° (brass) New		
	15	2150035	2
	18	2150036	2
	22	2150037	2
	28	2150038	2
	Angled screw-in plug coupling 90° (brass) New		
	15 R 1/2"	2150040	2
	18 R 1/2"	2150041	2
	22 R 3/4"	2150042	2
	28 R1"	2150043	2
	T coupling (brass) New		
	15	2150050	5
	18	2150051	5
	22	2150052	5
	28	2150053	2
	T reduction coupling (brass) New		
	22 x 15 x 22	2150055	2
	22 x 18 x 22	2150056	2
	28 x 22 x 22	2150057	2
	28 x 18 x 28	2150058	2
	28 x 22 x 28	2150059	2
	Sliding sleeve (brass) New		
	15	2150065	2
	18	2150066	2
	22	2150067	2
	28	2150068	2
	Blind cap (brass) New		
	15	2150070	2
	18	2150071	2
	22	2150072	2
	28	2150073	2
	Clip removal New		
	15	2150080	5
	18	2150081	5
	22	2150082	5
	28	2150083	5
Stub OD	Pipe OD	Art. no.	PU
	Reducing plug-in coupling (brass) New		
	22 18	2150060	2
	28 18	2150061	2
	28 22	2150062	2

Pipe OD	Art. no.	PU
Straight screw-in coupling		
32 mm	R1a	2154035 12
40 mm	R1 1/4a	2154036 6
50 mm	R1 1/2a	2154037
63 mm	R2a	2154038
Straight screw-on coupling		
32 mm	G1i	2154030 12
40 mm	G1 1/4i	2154031 6
50 mm	G1 1/2i	2154032
63 mm	G2i	2154033
Straight plug-in coupling		
32 mm		2154040
40 mm		2154041
50 mm		2154042
63 mm		2154043
Angled plug-in coupling 90°		
32 mm		2154045
40 mm		2154046
50 mm		2154047
63 mm		2154048
Angled screw-in plug coupling 90°		
32 mm	R1a	2154050
40 mm	R1 1/4a	2154051
50 mm	R1 1/2a	2154052
63 mm	R2a	2154053
Angled screw-on coupling 90°		
32mm	G1i	2154055
40mm	G1 1/4i	2154056
50mm	G1 1/2i	2154057
63mm	G2i	2154058
T coupling		
32 mm		2154060
40 mm		2154061
50 mm		2154062
63 mm		2154063
T screw-on coupling		
32 mm x T1i x 32 mm		2154065
40 mm x T1 1/4i x 40mm		2154066
50 mm x T1 1/4i x 50mm		2154067
63 mm x T2i x 63 mm		2154068
Sliding sleeve		
32 mm		2154070
40 mm		2154071
50 mm		2154072
63 mm		2154073

Piston compressors

Screw-type compressors

System components

Compressed air maintenance units

Compressed air distribution

Tools

Compressed air pipe systems - Ø 15-32 mm



Designation	Art. no.	PU
Screw lock		
Medium tight for gap 0.05 - 0.25 mm		
10 g	2500022	25
50 g	2500023	10
250 g	2500024	10



Teflon sealing tape		
12 m length	2500020	10



Designation		Art. no.
Ball valves		
Type		
R 3/8" IT	3/8" IT	2507710
R 3/8" IT	3/8" OT	2507711
R 1/2" IT	1/2" IT	2507712
R 1/2" IT	1/2" OT with knob	2507714
R 3/4" IT	3/4" IT	2507715
R 3/4" IT	3/4" OT	2507716
R 1" IT	1" IT	2507720
R 1" IT	1" OT	2507721
R 1¼" IT	1¼" IT	2507725
R 1.1¼" IT	1¼" OT	2507726
R 1½" IT	1½" IT	2507730
R 1 1/2" IT	1 1/2" OT	2507731
R 2" IT	2" OT	2507741



Air shut-off cocks Ø 15-28 mm		
Comprising of 1 x ball valve and 2 x male threaded end pieces brass		
End piece		
Pipe OD	Customer	
15	1/2"	2507815
18	1/2"	2507818
22	3/4"	2507822
28	1"	2507828

Delivery exclusively in the stated PUs!

Designation	Art. no.
-------------	----------



Compressed air energy saver G1	
Opens and closes automatically, 115 V or 240 VAC operating voltage, 0 °C to +60 °C operating temperature, pressure range 0-16 bar.	
See page 147 for a detailed description	
Energy saver G1, connection: IT 1"	2150001



Compressed air energy saver G2	
Opens and closes automatically, 115 V or 240 VAC operating voltage, 0 °C to +60 °C operating temperature, pressure range 0-16 bar.	
See page 147 for a detailed description	
Energy saver G2, connection: IT 2"	2150003



Accessories for compressed air energy saver G1	
Remote control option with 5 m cable	2150002



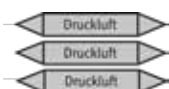
Aluminium pipe cutter for pipe OD	
4 - 30 mm	2151930



Exterior/interior pipe deburring tool:	
Pipe OD	
Ø 3- 35 mm	2155990



PA pipe shears	
RS 28	2151528
Replacement blade	2151527



Pipe markers (labels)	
Sheet = 3 labels	2156000

AIR DISTRIBUTION BOX

- Distribution box material: Polyamide
- Threaded insert material: Aluminium

New



Model		PA 1/2" + 1 x 1/2"	PA 1/2" + 2 x 1/2"	PA 1/2" + 3 x 1/2"	PA 3/4" + 1 x 1/2"	PA G3/4 + 2 x G1/2	PA 3/4" + 3 x 1/2"
Article no.		2150940	2150941	2150942	2150945	2150946	2150947
Input Ø Internal thread	"	1/2	1/2	1/2	3/4	3/4	3/4
Output Ø Internal thread	"	1/2	1/2	1/2	1/2	1/2	1/2
Number of outlets	St	1	2	3	1	2	3
Dimensions (L x W x H)	mm	86 x 60 x 55	86 x 60 x 55	86 x 60 x 55	86 x 60 x 55	86 x 60 x 55	86 x 60 x 55
Net weight approx.	g	108	134	151	108	134	151

AIR DISTRIBUTION BOX ALUMINIUM INSERT

Model		PA 1/2" + 4 x 1/2"	PA 3/4" + 4 x 1/2"
Article no.		2150950	2150951
Input Ø Internal thread	"	1/2	3/4
Output Ø Internal thread	"	1/2	1/2
Number of outlets	St	4	4
Dimensions (L x W x H)	mm	105 x 70 x 81.5	105 x 70 x 81.5
Net weight approx.	g	297	297



AIR DISTRIBUTION BOX COMPLETE POLYAMIDE

- Distribution box material: Polyamide



Model		P 1/2" + 1 x 1/2"	P 1/2" + 2 x 1/2"	P 1/2" + 3 x 1/2"	P 3/4" + 1 x 1/2"	P 3/4" + 2 x 1/2"	P 3/4" + 3 x 1/2"
Article no.		2150960	2150961	2150962	2150965	2150966	2150967
Input Ø Internal thread	"	1/2	1/2	1/2	3/4	3/4	3/4
Output Ø Internal thread	"	1/2	1/2	1/2	1/2	1/2	1/2
Number of outlets	St	1	2	3	1	2	3
Dimensions (L x W x H)	mm	86 x 60 x 55	86 x 60 x 55	86 x 60 x 55	86 x 60 x 55	86 x 60 x 55	86 x 60 x 55
Net weight approx.	g	88	88	88	88	88	88

ACCESSORIES

Designation	Art. no.
Condensate drain valve 1/4" thread With option to attach a condensate drain on the underside	2507307



Compressed air pipe systems - Ø 32 – 63 mm

SPACER PLATES



New



Model		Spacer plate thickness 10 mm for PA and P with 1/2/3 out- puts	Spacer plate thickness 13 mm for PA and P with 1/2/3 out- puts	Spacer plate thickness 20 mm for PA and P with 1/2/3 out- puts	Spacer plate thickness 10 mm for PA and P with 4 outputs
Article no.		2150970	2150971	2150972	2150955
Thickness	mm	10	13	20	10
Compatible with		PA and P	PA and P	PA and P	PA
Number of outlets	St	1 / 2 / 3	1 / 2 / 3	1 / 2 / 3	4

BRANCH FLANGE



Model		Branch flange 1/2" for Ø 32 mm	Branch flange 1/2" for Ø 40 mm	Branch flange 1" for Ø 50 mm	Branch flange 1" for Ø 63 mm
Article no.		2154090	2154091	2154092	2154093
Thread ø	mm	32	40	50	63
Thread	"	1/2	1/2	1	1
Dimensions (L x W x H)	mm	78 x 95 x 40	85 x 93 x 50	134 x 146.5 x 80	134 x 146.5 x 80
Net weight approx.	g	255	255	974	822

DRILLING TOOLS



Model		Drilling tool 1/2" for flange Ø 32/40 mm	Drilling tool 1" for flange Ø 50/63 mm
Article no.		2154095	2154096
Thread ø	"	1/2	1
Dimensions (L x W x H)	mm	280 x 40 x 73	410 x 55 x 84
Net weight approx.	g	676	2,262

FASTENERS



Model		Fastener for pipe 32 mm	Fastener for pipe 40 mm	Fastener for pipe 50 mm	Fastener for pipe 63 mm
Article no.		2157132	2157141	2157151	2157163
For pipe diameter	mm	32	40	50	63

SCREW CLAMP WITH RUBBER INNER TAPE



Model		Screw clamp with rubber inner tape 32 mm with plug	Screw clamp with rubber inner tape 40 mm with plug	Screw clamp with rubber inner tape 50 mm with plug	Screw clamp with rubber inner tape 63 mm with plug
Article no.		2157233	2157242	2157252	2157264
For pipe diameter	mm	32	40	50	63

SPACER PLATE FOR FASTENER



Model		Spacer plate for fastener
Article no.		2157190
For fastener Ø	mm	32/40/50/63
	mm	10

ADAPTERS FOR FASTENER PLUGS



Model		Adapter for plug
Article no.		2157191

EPDM INSERT FOR FASTENER Ø 32/40/50/63MM



Model		Spacer plate for fastener
Article no.		2157192
For fastener Ø	mm	32/40/50/63

SQUARE NUTS FOR FASTENERS



Model		Square nut for M6	Square nut for M8
Article no.		2157193	2157194
Thread Ø	mm	32/40/50/63	32/40/50/63
Thread		M6	M8

PLUG WITH SCREW



Model		Plug with screw
Article no.		2157195
Thread Ø	mm	6 x 45

PLUGS WITH EXTERNAL THREAD



Model		Plugs with external thread
Article no.		2157196
Thread		M8 x 90

INSIDE DEBURRING TOOL



Model		Inside deburring tool
Article no.		2157197

Compressed air line systems - aluminium profile

ALUMINIUM PROFILE- COMPRESSED AIR LINES 40/50/60/80 MM

The innovative, future-oriented piping system for compressed air and liquids.

- ▶ From the small distribution system to the large-scale industrial production system, Aircraft is the practical and functional solution for compressed air distribution.
- ▶ Aluminium tube combines all advantages of the conventional materials such as steel, plastic or copper, but avoids their disadvantages.
- ▶ On-going enhancements mean up to 50 % time savings compared with legacy systems.
- ▶ Our development target was to remove the need for at least half of the threaded joints for individual components. Only the outer profile shape remained.
- ▶ Diameters 40 mm, 50 mm and 60 mm are available from stock, and up to 80 mm on request.



Spot drilling device for fast, low-noise installation of connections. *Compressed air drill not included in scope of delivery*

Patented clamping technology

- ▶ Can be drilled into under pressure
- ▶ Low noise thanks to sound damping
- ▶ Compatible with all systems used worldwide
- ▶ All four sides can be used
- ▶ Rapid and safe installation of connections
- ▶ Easy, fast and cost-efficient installation
- ▶ Air take-off at any required position
- ▶ Variety of fasteners available for wall or ceiling mounting
- ▶ Retroactive changes possible at any time
- ▶ Absolute air tightness and reliability

Tools required for installation:

- ▶ Allen key
- ▶ Deburring knife
- ▶ Conical counterbore
- ▶ Saw (manual saw or electrical cross-cut saw)
- ▶ Grease (Klüber Microlube GL 261 recommended)
- ▶ Drill or cordless screw driver
- ▶ Spot drilling device (if you want to perform spot drilling under pressure in operating conditions)



Various dimensions with different internal diameters available, as well as a large range of connection pieces and accessories.



Pre-assembled compressed air connection with safety coupling and spiral hose.

YOUR BENEFITS

■ **Lightweight and easy to install**

■ **Very low pressure losses**

■ **No corrosion**

■ **Re-usable**

■ **Fire resistant**

■ **Resistant to ultra-violet radiation**

■ **High impact resistance**

■ **No welding during assembly**

■ Quality

The aluminium compressed air piping system sets new benchmarks in compressed air distribution.

■ Development

Our development focused on feedback from the market. This means that many processors will recognise their suggestions in the new system.

■ Flexibility

Air take-off is possible at any required position, even under pressure. Required changes can thus be easily performed within the shortest time.

■ System

Wherever you need a compressed air system, a single-source, turn-key solution is your guarantee for safety. We help you to implement your needs, from the planning through to commissioning.

■ Installation

Uncomplicated handling. You only need an Allen key to install.

■ Performance

Turn-key system - with matching components from A to Z in various sizes.

■ Results

Maximum compressed air quality, a high level of flexibility and time savings due to easy installation make this a forward looking system.

ALUMINIUM PROFILE COMPRESSED AIR LINES

40/50/60/80 MM

Dimensioning your compressed air lines

Correct dimensioning of a compressed air line is very important: A pressure drop from 6 bar to 5 bar costs approximately 25 % of a tool's performance. To compensate for this pressure drop, around 10 % more energy is needed.

Length in m	25	40	60	80	100	150	200	250	300	400	500	600	800	1000
Compressor delivery volume l/min														
750	20	20	20	22	22	25	28	28	28	30	30	30	40	40
1 200	20	20	20	22	22	25	28	28	28	30	30	30	40	40
1 500	22	22	25	28	28	30	30	30	40	40	40	40	40	50
2 000	25	28	30	30	40	40	40	40	40	50	50	50	50	50
3 000	30	30	40	40	40	40	50	50	50	50	50	60	60	60
4 800	40	40	40	50	50	50	50	60	60	60	80	80	80	80
7 200	40	50	50	50	60	60	60	80	80	80	80	80	80	80
10 800	50	60	60	60	80	80	80	80	80	80	80	*grey in figure = not in product range		

Caution: For closed circular pipelines, halve the total line length. Values are only theoretical and need to be precisely calculated and matched to the situation on site for an individual pipe circuit.

Technical data for aluminium profile piping systems

Application: Compressed air, vacuum, argon, carbon dioxide, hydrogen, petrol, alcohol.

Designations	Profile EL 40, 50, 60, 80
Material	ENAW 6060
Chemical composition	Si 0.3-0.6 % Mg 0.35-0.6 % Zc 0.1-0.3 %
Other designations	DIN: ALMgSi 0.5/F22/ENAW
Heat treatment	Quenching and tempering T66
Surface treatment (on request)	Chemical oxidation colour natural
Specific weight - density	270 kg/dm³
Electrical conductivity	53 % IACS
Heat conductivity	200 W/m, K
Specific heat	96 J/Kg.K
Expansion coefficient	0.024 mm/m. °C
Brinell hardness	70.4 HB
Tensile strength	215 N/mm²
Elongation break load	160 N/mm²
Elastic modulus	6 700 K/mm²
Elongation A 50 %	6 %
Screw material	Steel grade 8.8
Melt interspace	600 - 650 °C
Min./max. operating temperature	-40 / +120 °C
Test pressure	24 kg/cm²
Min./max. operating pressure	10 mbar / 15 bar
Material of o-ring seals	NBR 70 Standard
Operating temperature of O-rings	-20 / +100 °C

Pressure drop 0.1 bar at 7 bar working pressure.

Caution: For closed circular pipelines, halve the volume flow and the total length

Aluminium profile compressed air piping system ALS

- ▶ For workshops or smaller industrial enterprises with an air consumption up to max. 2 000 l/min.
- ▶ Perfectly supplements the simplyAir system for branch and delivery pipes. Again, you can benefit from the decisive advantages of our intelligent aluminium piping system
- ▶ Extremely fast and easy installation
- ▶ Aluminium is lightweight, corrosion resistant and supports the flow
- ▶ Air take-off is possible at any required position without interrupting operations
- ▶ Turn-key system with matching components from A to Z in various sizes.
- ▶ Fast modular routing
- ▶ Lines are routed by simply plugging in the pipes
- ▶ Fast installation and removal without any special tools
- ▶ Wide range of connection options and accessories allows for optimum accommodation of the pipe network to workshop conditions
- ▶ Based on a variety of pipe and connection sizes, complete with plates, brackets, or T-pieces

PLATE INSTALLATION



The brilliant design principle eases the assembly. The new pipe network can be easily and quickly installed.

All thanks to our superior, patent-registered clamping technology. This helps you make genuine savings in terms of both time and money.

The heart of this innovative piping system is a lightweight rectangular tube made of extruded aluminium.

Excellent corrosion resistance and flow support. Aluminium combines all the benefits of conventional materials such as steel, plastic or copper. At the same time it avoids their disadvantages such as a rough surface, sagging tubes, corrosion and the like.

Simply push on the plate, tighten with an Allen key - done!

Compressed air line systems - aluminium profile Ø 40 - 80 mm

ALUMINIUM PROFILE COMPRESSED AIR LINES 40/50/60/80 MM



Aluminium pipeline "Natural"					
Pipe Ø ID	Packaging unit PU	Weight per m	Art. no.		
40 mm	1 x 6 m	1.0 kg	2154140		
50 mm	1 x 6 m	1.4 kg	2154150		
60 mm	1 x 6 m	1.9 kg	2154160		
80 mm	1 x 6 m	2.6 kg	2154180		

PIPE NETWORK COMPONENTS Ø 40/50/60/80 MM



Fig. straight connector incl. plates made of stainless steel



Straight connectors - expansion joints complete with stainless steel plates		
Pipe Ø ID	Art. no.	
40 mm	2154240	
50 mm	2154250	
60 mm	2154260	
80 mm	2154280	

Rubber length compensator		
Pipe Ø ID	Art. no.	
40 mm	2157140	
50 mm	2157150	
60 mm	2157160	
80 mm	2157180	



Reducing connector, complete with plates		
Pipe Ø ID	Art. no.	
50-40 mm	2154350	
60-40 mm	2154359	
60-50 mm	2154360	
80-40 mm	2154379	
80-50 mm	2154380	
80-60 mm	2154381	



Bend 90°, complete with angle plates made of stainless steel		
Pipe Ø ID	Art. no.	
40 mm	2154440	
50 mm	2154450	
60 mm	2154460	
80 mm	2154480	



Bend 90°, open one side, complete with plates		
Pipe Ø ID	Art. no.	
40; 1 1/4" T	2154441	
50; 1 1/2" T	2154451	
60; 2" T	2154461	
80; 1 1/2" T	2154481	



Bend 45°, complete with angle plates made of stainless steel		
Pipe Ø ID	Art. no.	
40 mm	2155040	
50 mm	2155050	
60 mm	2155060	
80 mm	2155080	



T-connector, complete with plates		
Pipe Ø ID	Art. no.	
40 mm	2154540	
50 mm	2154550	
60 mm	2154560	
80 mm	2154580	



End piece with outer thread, complete with plates			
Pipe Ø ID	Pipe Ø OT	Art. no.	
40 mm	1"	2155340	
40 mm	1 1/4"	2155341	
50 mm	1 1/2"	2155350	
50 mm	2"	2155351	
60 mm	2"	2155360	
80 mm	2 1/2"	2155380	



Reducing plate complete EL			
Pipe Ø ID		Art. no.	
50 mm	40	2155450	
60 mm	40	2155460	
80 mm	40	2155480	
80 mm	50	2155481	



End piece closed, complete with plates		
Pipe Ø ID	Art. no.	
40 mm	2154940	
50 mm	2154950	
60 mm	2154960	
80 mm	2154980	



End piece with inside thread, complete with plates			
Pipe Ø ID	Rohr Ø IT	Art. no.	
40 mm	1/2"	2155140	
40 mm	1"	2155240	
50 mm	1/2"	2155150	
50 mm	1"	2155251	
50 mm	1 1/4"	2155250	
60 mm	1/2"	2155160	
60 mm	1"	2155261	
60 mm	1 1/2"	2155260	
80 mm	1/2"	2155180	
80 mm	1"	2155281	
80 mm	1 1/2"	2155282	
80 mm	2"	2155280	



Reducing plate complete ALS			
Pipe Ø ID		Art. no.	
40 mm	22	2154022	
40 mm	28	2154028	
50 mm	22	2155022	
50 mm	28	2155028	
60 mm	22	2156022	
60 mm	28	2156028	
80 mm	22	2158022	
80 mm	28	2158028	



T-connector, open one side			
Pipe Ø ID	Thread	Art. no.	
40 mm	1"	2154640	
50 mm	1 1/2"	2154650	
60 mm	2"	2154660	
80 mm	2 1/2"	2154680	



Cross connectors		
Pipe Ø ID	Art. no.	
40 mm	2154740	
50 mm	2154750	
60 mm	2154760	
80 mm	2154780	



Ball valve, complete with plates		
Pipe Ø ID	Art. no.	
40 mm	2154840	
50 mm	2154850	
60 mm	2154860	
80 mm	2154880	



Baseplate		
Pipe Ø ID	Art. no.	
40 mm	3/8"	2155539
40 mm	1/2"	2155540
40 mm	3/4"	2155541
40 mm	1"	2155542
50 mm	3/8"	2155549
50 mm	1/2"	2155550
50 mm	3/4"	2155551
50 mm	1"	2155552
60 mm	3/8"	2155559
60 mm	1/2"	2155560
60 mm	3/4"	2155561
60 mm	1"	2155562
80 mm	3/8"	2155579
80 mm	1/2"	2155580
80 mm	3/4"	2155583
80 mm	1"	2155581
80 mm	1 1/2"	2155582



Baseplate with ball valve 1/2"		
Pipe Ø ID	Art. no.	
40 mm	2155640	
50 mm	2155650	
60 mm	2155660	
80 mm	2155680	



Support clamp M10		
Thickness	Max. load	Art. no.
0-20 mm	2500 N	2157100



Universal holder complete with base plate		
Pipe Ø ID	Art. no.	
40 mm	2157240	
50 mm	2157250	
60 mm	2157260	
80 mm	2157280	



Wall and ceiling mount complete		
Pipe Ø ID	Art. no.	
40 mm	2155740	
50 mm	2155750	
60 mm	2155760	
80 mm	2155780	



Deburring knife complete		
	Art. no.	
150 mm	2155950	
Replacement blade	2155951	



Taper bore drill		
Drill bit	Art. no.	
8-20 mm	2155960	



Spot drilling device		
Pipe Ø ID	Art. no.	
1/2"	2155940	



Metal fixture		
Throat	Art. no.	
300 mm	2155930	
500 mm	2155935	



Hanger bolt		
Dimensions	Art. no.	
M8 x 50	2155958	
M8 x 60	2155959	
M8 x 80	2155961	
M8 x 100	2155962	
M10 x 100	2155963	

Screw insert attachment for electric driving tool		
Dimensions	Art. no.	
M10	2155966	

Sealing ring for profile		
Pipe Ø ID	Art. no.	
40 mm	2155970	
50 mm	2155971	
60 mm	2155972	
80 mm	2155973	



To make sure that the peripherals around your compressed air lines are exactly what you need, we offer a range of components that perfectly match your system.



Compressed air requirements mean individual requirements and an individual supply - to allow this to happen, the service portfolio must be organised in a smart and flexible way.



Pipes and connections in a variety of sizes form the basis, complete with plates, brackets, or T-pieces.

Compressed air line systems

Compressed air unit components



Model	A-K-MAX 7.5-10
Art. no.	2095404



Model	DB zinc plating 500/11 V
Art. no.	2500650

- Galvanised vessel**
- ▶ **Without fitting kit**
 - ▶ 500 l upright
 - ▶ Maximum pressure: 11 bar
 - ▶ 690 x 640 x 1 950 mm



Model	Fitting set for DB VZ 500/11 V
Art. no.	2500530

- ▶ 1 reducing nipple 1½" (OT) – ¾" (IT)
- ▶ 1 safety valve ¾" 10 bar
- ▶ 2 blind plugs 1¼"
- ▶ 1 reducing nipple 1" (OT) – ½" (IT)
- ▶ 2 bends 90° ½" IT/OT
- ▶ 1 pressure gauge ½" 0-16 bar
- ▶ 1 blind plug ½"
- ▶ 1 three-way ball valve ½"
- ▶ 2 ball valve 1¼" IT/OT
- ▶ 1 reducing nipple 1½" (OT) – ½" (IT)



Model	AMD	AIED
Art. no.	2059080	2059075



Model	ACKL 0155B
Art. no.	2053012

- ▶ Flow rate: 2 557 l/min.
- ▶ Air connection: ½"
- ▶ Max. working pressure: 16 bar



Model	AFF 0078
Art. no.	2053232

- AAF 0078 up to 0.1 µm**
- ▶ Flow rate: 1 300 l/min.
 - ▶ Air connection: ½"
 - ▶ Volume flow: 7 bar



Model	ANF 0078
Art. no.	2053432

- AAF 0078 up to 0.01 µm**
- ▶ Flow rate: 1 300 l/min.
 - ▶ Air connection: ½"
 - ▶ Volume flow: 7 bar



Model	AAF 0078
Art. no.	2053532

- AAF 0078 up to 0.005 mg/m³**
- ▶ Flow rate: 1 300 l/min.
 - ▶ Air connection: ½"
 - ▶ Volume flow: 7 bar





Condensate conditioner
for oil-water separation

Model	WOS 1
Art. no.	2058210

Model	WOS 2
Art. no.	2058220

Model	WOS 8
Art. no.	2058240

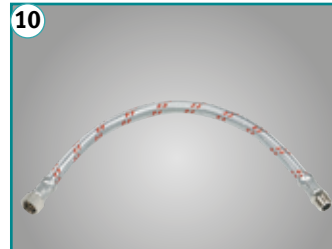


T 1 T 2
Compressed air energy saver

Model	T 1	T 2
Art. no.	2150001	2150003

Energy savers

► Opens and closes automatically,
pressure range 0-16 bar



Reinforced hose

Model	Reinforced hose 1/2"
Art. no.	1500 mm / 15 bar 2507617

Model	Reinforced hose 3/4"
Art. no.	1500 mm / 15 bar 2507625



Bypass

Model	Bypass 1/2"
Art. no.	2041701

Model	Bypass 3/4"
Art. no.	2041700



A water separator ① is also located directly downstream of the screw-type compressor ④ for 98 % water pre-separation.

The compressed air then reaches the pressure vessel ② which is equipped with a level-controlled condensate drain ③.

From the vessel, the flow is routed through a fine filter ① to the compressed air refrigerant type dryer ⑫.

Depending on the requirements, nanofilters ⑥, for separating micro particles, and/OR an activated carbon filterS ⑦, for separating oil vapours, odorants, and flavourings, then follow.

Screw-type and piston compressors can be combined in a single system to cope with peak loads.

Our matching auxiliary Airprofi BK series compressors are listed in this catalogue.



Compressed air refrigeration dryer

Model	Refrigeration dryer AD 54
Art. no.	2041715

Refrigeration dryer AD 54

► Flow rate
at 7 bar positive pressure: 54 m³/h

Model	Refrigeration dryer AD 72
Art. no.	2041720

Refrigeration dryer AD 72

► Flow rate at 7 bar positive pressure: 72 m³/h

Model	Refrigeration dryer AD 108
Art. no.	2041725

Refrigeration dryer AD 108

► Flow rate at 7 bar positive pressure: 108 m³/h

Compressed air maintenance units

Compressed air quality classes as per ISO8573-1:

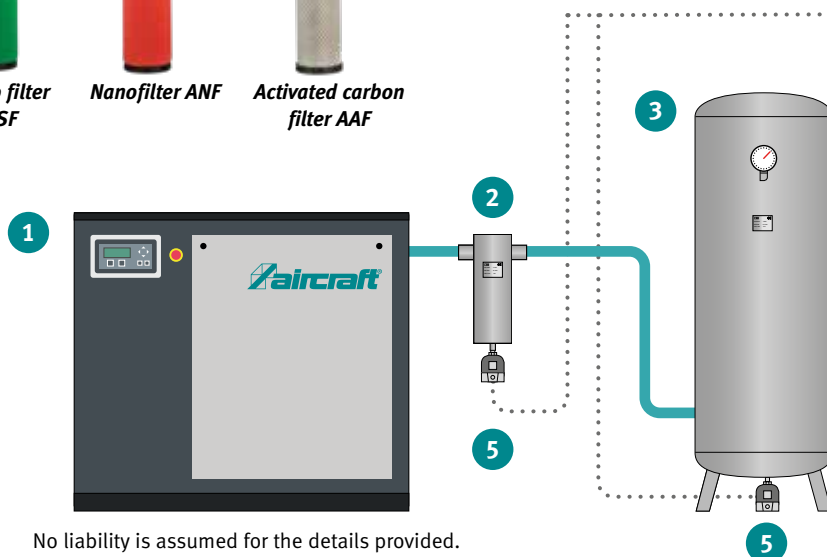
Class	Particulate matter			Moisture and liquid water	Oil
	Maximum number of particles per cubic meter as a function of the particle size ⁽¹⁾			Pressure dew point	Overall concentration oil ⁽¹⁾ (Liquid, aerosol and water vapour)
	0.1 µm < d ≤ 0.5 µm	0.5 µm < d ≤ 1.0 µm	1.0 µm < d ≤ 5.0 µm	°C	mg/m ³
0	As stated by the device user or supplier and stricter than class 1				
1	≤ 20 000	≤ 400	≤ 10	≤ -70	≤ 0.01
2	≤ 400 000	≤ 6 000	≤ 100	≤ -40	≤ 0.1
3	not defined	≤ 90 000	≤ 1 000	≤ -20	≤ 1
4	not defined	not defined	≤ 10 000	≤ +03	≤ 5
5	not defined	not defined	≤ 100 000	≤ +07	not defined
6				≤ ±10	
Mass concentration ⁽¹⁾ - C _p				Liquid water content ⁽¹⁾ - C _w	
	mg/m ³			g/m ³	
6	0 < C _p ≤ 5				not defined
7	5 < C _p ≤ 10			C _w ≤ 0.5	not defined
8	not defined			0.5 ≤ C _w ≤ 5	not defined
9	not defined				not defined
x	C _p > 10				> 5

To qualify for a class designation, each value range and each particle count within a class must be complied with.

(1) For reference conditions: Air temperature of 20 °C, absolute air pressure of 1 bar, relative water vapour pressure 0 bar.

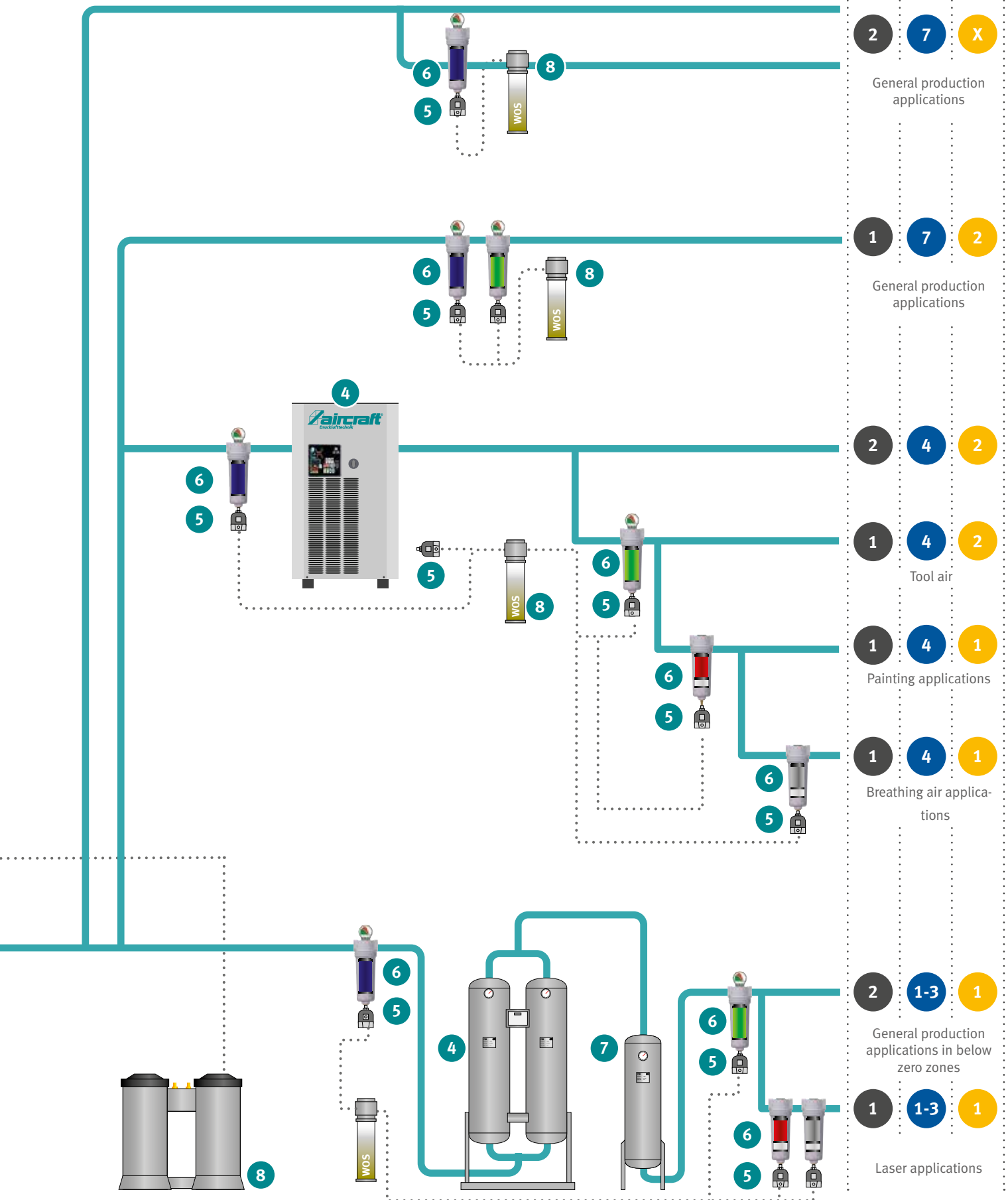
Key:

- 1** Compressor
- 2** Condensate trap
- 3** Pressure vessel
- 4** Refrigeration dryer/adsorption dryer
- 5** Condensate drain
- 6** Filter
- 7** Activated carbon adsorber
- 8** Oil-water separator



No liability is assumed for the details provided.

Compressed air quality classes



COMPRESSED AIR MAINTENANCE, COMPRESSED AIR FILTERS

COMPRESSED AIR QUALITY CLASSES AS PER DIN ISO 8573

The compressed air quality classes according to DIN ISO 8573-1 make it easier for users to define their requirements and select conditioning components. The standard is based on the manufacturer's specifications, which define permissible limits with respect to compressed air purity for plant and machinery.

The DIN ISO 8573-1 standard defines the classes of the air quality in terms of:

Oil content

Specification of the residual aerosols and hydrocarbons which may be present in the compressed air.

Particle size and density

Specification of the size and concentration of solid particles which may be contained in the compressed air.

Pressure dew point

Specification of the temperature to which it is possible to cool the compressed air without the water vapour contained in it condensing. The pressure dew point varies with the air pressure.



**Cyclone
separators**



**Pre-filters/
Microfilters**



Micro filter



Nanofilters



**Activated carbon
filter**

CLASS	PARTICLES (DIRT)		WATER (CONDENSATE)		OIL
	PARTICLE SIZE IN μM , MAX.	PARTICLE DENSITY IN MG/M^3 MAX.	PRESSURE DEW POINT IN $^{\circ}\text{C}$	WATER CONTENT IN G/M^3	RESIDUAL OIL CONTENT IN MG/M^3
0	< 0.1	< 0.1	< -70 $^{\circ}\text{C}$	< 0.003	< 0.01
1	0.1	0.1	-70 $^{\circ}\text{C}$	0.003	0.01
2	1	1	-40 $^{\circ}\text{C}$	0.11	0.1
3	5	5	-20 $^{\circ}\text{C}$	0.88	1
4	15	15	+3 $^{\circ}\text{C}$	6	5
5	40	40	+7 $^{\circ}\text{C}$	7.8	25
6	> 40	> 40	+10 $^{\circ}\text{C}$	9.4	> 25
7	-	-	> +10 $^{\circ}\text{C}$	> 9.4	-

AIRCRAFT air filters and water traps

Compressed air filters are used for highly efficient removal of solid particles, water, oil, aerosols, hydrocarbons, odours and vapours from compressed air systems.

In order to achieve the required quality of compressed air, filters that remove all types of solid and liquid contaminants from the compressed air in various stages, are installed in the compressed air line.

Your benefits thanks to improve compressed air quality:

- Reliable filtration of liquids such as water and aerosols as well as particles, dust and gases
- Better working and production conditions
- Optimum protection of connected equipment and tools
- Improved product quality due to substantial decrease in rejects
- Protects the compressed air system against contamination
- Increased productivity by reducing maintenance



Degrees of filtration

①



②



③

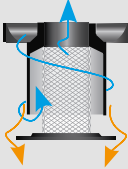
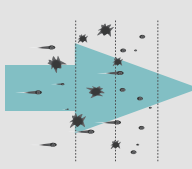
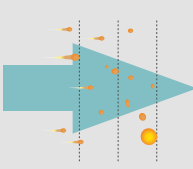
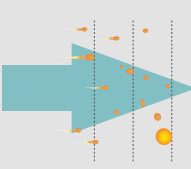
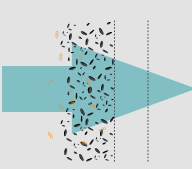


④



⑤



					
Designation	Water separator	Pre-filters/Microfilters	Micro filter	Nanofilters	Activated carbon filter element
Characteristic values	> 98 % separation (droplets)	<1µm Solid matter contamination	<0.1µm Solid matter contamination < 0.1 mg/m³ Residual aerosol content	<0.01µm Solid matter contamination < 0.01 mg/m³ Residual aerosol content	0.005mg/m³ Residual aerosol content
Filtration type	Water separation	Wet and dry filtration	Wet and dry filtration	Wet and dry filtration	Oil vapour adsorption
Application	Removal of larger amounts of liquids, e.g., downstream of coolers	Removal of moderate amounts of fine solid or liquid contaminants such as finer dust, smaller droplets and aerosols	Removal of small amounts of microscopic solid or liquid contaminants such as micro-dusts, oil mist, aerosols In case of an occurrence of dirt in conjunction with an upstream coarse or microfilter	Removal of small amounts of microscopic solid or liquid contaminants such as micro-dusts, oil mist, aerosols In case of an occurrence of dirt in conjunction with an upstream microfilter or nanofilter	Removal of small amounts of gaseous contaminants, especially oil vapour Upstream nanofilter required With integrated microfilter
Particles	Compressed air quality (ISO 8573-1)	Compressed air quality (ISO 8573-1)	Compressed air quality (ISO 8573-1)	Compressed air quality (ISO 8573-1)	Compressed air quality (ISO 8573-1)
	8	3	2	1	1
Oil	-	-	2	1	1
	Material	Material	Material	Material	Material
	Stainless steel	Acrylic fibre	Borosil. microfibre	Borosil. microfibre	Borosil. microfibre
	PA	Cellulose			Activated carbon

Compressed air filter

AIRCRAFT compressed air filters - optimal air quality for all applications

Compressed air filters are used for highly efficient removal of solid particles, water, oil, aerosols, hydrocarbons, odours and vapours from compressed air systems.

In order to achieve the required quality of compressed air, filters that remove all types of solid and liquid contaminants from the compressed air in various stages, are installed in the compressed air line.

Your benefits thanks to improve compressed air quality:

- ▶ Reliable filtration of liquids such as water and aerosols as well as particles, dust and gases
- ▶ Optimum protection of connected equipment and tools

- ▶ Improved product quality due to substantial decrease in rejects
- ▶ Better working and production conditions
- ▶ Protects the compressed air system against contamination
- ▶ Increased productivity by reducing maintenance

Pre-filter/Microfilter AFF Model Series

For separating solid impurities up to **1 µm**. Operating temperature 1.5 to 65 °C, absolute compressed air quality as per ISO 8573-1.

- ▶ For safe separation of condensate and particles
- ▶ Complete with filter element and float valve

Model	Volume flow 7 bar*		Air connection	height	Width	Filter complete	
						Art. no.	
AFF 0060	60 m³/h	990 l/min	3/8"	187 mm	88 mm	2053230	
AFF 0078	78 m³/h	1 300 l/min	1/2"	187 mm	88 mm	2053232	
AFF 0120	120 m³/h	1 980 l/min	3/4"	257 mm	88 mm	2053234	
AFF 0198	198 m³/h	3 280 l/min	1"	263 mm	125 mm	2053236	
AFF 0335	335 m³/h	5 580 l/min	1"	363 mm	125 mm	2053238	
AFF 0510	510 m³/h	8 500 l/min	1 1/2"	461 mm	125 mm	2053240	

* In case of deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor.



Spare filter element	
Art. no.	
2053231	
2053233	
2053235	
2053237	
2053239	
2053241	

ASF Microfilter Model Range

For separation of solid impurities up to **0.1 µm**. Residual oil aerosol content of up to **0.1 mg/m³** at 20 °C and 1 bar, operating temperature 1.5 to 65 °C, absolute compressed air quality as per ISO 8573-1.

- ▶ For safe separation of condensate and particles
- ▶ Complete with filter element and float valve

Model	Volume flow 7 bar*		Air connection	height	Width	Filter complete	
						Art. no.	
ASF 0060	60 m³/h	990 l/min	3/8"	187 mm	88 mm	2053330	
ASF 0078	78 m³/h	1 300 l/min	1/2"	187 mm	88 mm	2053332	
ASF 0120	120 m³/h	1 980 l/min	3/4"	257 mm	88 mm	2053334	
ASF 0198	198 m³/h	3 280 l/min	1"	263 mm	125 mm	2053336	
ASF 0335	335 m³/h	5 580 l/min	1"	363 mm	125 mm	2053338	
ASF 0510	510 m³/h	8 500 l/min	1 1/2"	461 mm	125 mm	2053340	

* In case of deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor.



Spare filter element	
Art. no.	
2053331	
2053333	
2053335	
2053337	
2053339	
2053341	

MDM 60

MDM 60 E

With LED alarm, battery operated

MDM 60 C

With zero-potential alarm contact

PD 16

Type	MDM 60	MDM 60E	MDM 60 C	Type	PD 16
Art. no.	2053062	2053064	2053066	Art. no.	2053060

Cyclone separators

Pre-filters/Microfilters

Micro filter

Nanofilters

Activated carbon filter

Correction factors for ACKL, AFF, ASF, ANF and AAF water traps and compressed air filters

In case of a deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor

Operating pressure bar	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Correction factors	0.38	0.50	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13

ANF Model Range Nanofilters

For separating solid impurities up to **0.01 µm**. Residual oil aerosol content of up to **0.01 mg/m³** at 20 °C and 1 bar, operating temperature 1.5 to 65 °C, absolute compressed air quality as per ISO 8573-1.

- ▶ For safe separation of condensate and particles
- ▶ Complete with filter element and float valve

Model	Volume flow 7 bar*		Air connection	height	Width	Art. no.	Filter complete
ANF 0060	60 m³/h	990 l/min	3/8"	187 mm	88 mm	2053430	
ANF 0078	78 m³/h	1 300 l/min	1/2"	187 mm	88 mm	2053432	
ANF 0120	120 m³/h	1 980 l/min	3/4"	257 mm	88 mm	2053434	
ANF 0198	198 m³/h	3 280 l/min	1"	263 mm	125 mm	2053436	
ANF 0335	335 m³/h	5 580 l/min	1"	363 mm	125 mm	2053438	
ANF 0510	510 m³/h	8 500 l/min	1 1/2"	461 mm	125 mm	2053440	

* In case of deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor.



Spare filter element	Art. no.
2053431	
2053433	
2053435	
2053437	
2053439	
2053441	

AAF model range activated carbon filters

For separating oil vapours, odours and flavours by adsorption, and solid particles in a second stage. Residual oil vapour content of up to **0.005 mg/m³** at 20 °C and 1 bar, operating temperature 1.5 to 45 °C, absolute compressed air quality as per ISO 8573-1.

- ▶ For highest quality compressed air, for example, breathing air, in analysis technology or beverage bottling
- ▶ Purest compressed air in conjunction with upstream microfilter
- ▶ With filter element and manual drain

Model	Volume flow 7 bar*		Air connection	height	Width	Art. no.	Filter complete
AAF 0060	60 m³/h	990 l/min	3/8"	187 mm	88 mm	2053530	
AAF 0078	78 m³/h	1 300 l/min	1/2"	187 mm	88 mm	2053532	
AAF 0120	120 m³/h	1 980 l/min	3/4"	257 mm	88 mm	2053534	
AAF 0198	198 m³/h	3 280 l/min	1"	263 mm	125 mm	2053536	
AAF 0335	335 m³/h	5 580 l/min	1"	363 mm	125 mm	2053538	
AAF 0510	510 m³/h	8 500 l/min	1 1/2"	461 mm	125 mm	2053540	

* In case of deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor.



Spare filter element	Art. no.
2053531	
2053533	
2053535	
2053537	
2053539	
2053541	



Type	MCD	AOK 16B	AOK 20B
Art. no.	2053070	2053072	2053074



Type	AIED	ZKA 16	AMD	BEKOMAT® 31	BEKOMAT® 32
Art. no.	2059075	2059070	2059080	2049049	2049053

Water trap/compressed air filter

CLEARPOINT® 3eco compressed air filters – an innovative solution with impressive details

- **Flow optimised air guidance** for up to 75 % less resistance
- Filter elements can be installed without diameter-restricting, interfering tension rods, **thus reducing the flow resistance and facilitating element replacement**, even in cramped conditions
- **Total cavity volume** of borosilicate filter material **96 %** ensures lowest possible pressure loss
- CLEARPOINT® **filter housing of water-resistant aluminium** and additionally **anodised on the inside** for increased operational reliability and reduced flow resistance thanks to permanently smooth inside surfaces
- 100 % assurance on opening the filter housing thanks to a **secure locking mechanism**; an audible warning signal is issued when opening under pressure
- With thermally highly-resistant (up to 120 °C), mechanically highly-resistant, chemically resistant and silicone-free **needle felt drainage layer** (in contrast foam material used by third-party filter brands)
- **Stable design of the filter element** - swelling or rupturing of the drainage layer ruled out, thus **ensuring permanent use of the entire filter surface**

FWF microfilter model range

For separation of solid contaminants of up to **1 µm**, residual aerosol content of up to **0.1 mg/m³** at 20 °C and 1 bar, absolute compressed air quality as per ISO 8573-1.

- For safe separation of condensate and particles
- Complete with filter element and float valve

Model	Volume flow 7 bar*		Air connection	height	Width	Filter complete	
						Art. no.	
S040 FWF	35 m³/h	580 l/min	3/8"	180 mm	75 mm	2042067	
S050 FWF	65 m³/h	1 080 l/min	1/2"	210 mm	75 mm	2042100	
S055 FWF	100 m³/h	1 670 l/min	1/2"	265 mm	75 mm	2042150	
S075 FWF	150 m³/h	2 500 l/min	3/4"	280 mm	100 mm	2042300	
M010 FWF	200 m³/h	3 340 l/min	1"	350 mm	100 mm	2042450	

* In case of deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor.



Spare filter element	
Art. no.	
2042069	
2042102	
2042152	
2042302	
2042452	

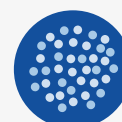
SWF Nanofilter model range

for separation of solid impurities up to **0.01 µm**. Residual oil aerosol content of up to **0.01 mg/m³** at 20 °C and 1 bar, absolute compressed air quality as per ISO 8573-1.

- For safe separation of condensate and particles
- Complete with filter element and float valve

Model	Volume flow 7 bar*		Air connection	height	Width	Filter complete	
						Art. no.	
S040 SWF	35 m³/h	580 l/min	3/8"	180 mm	75 mm	2044067	
S050 SWF	65 m³/h	1 080 l/min	1/2"	210 mm	75 mm	2044100	
S055 SWF	100 m³/h	1 670 l/min	1/2"	265 mm	75 mm	2044150	
S075 SWF	150 m³/h	2 500 l/min	3/4"	280 mm	100 mm	2044300	
M010 SWF	200 m³/h	3 340 l/min	1"	350 mm	100 mm	2044050	

* In case of deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor.

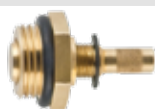


Spare filter element	
Art. no.	
2044069	
2044102	
2044152	
2044302	
2044452	

Condensate drain valve MCD (manual)

Condensate drain valve (manual) for installation in the filter housing

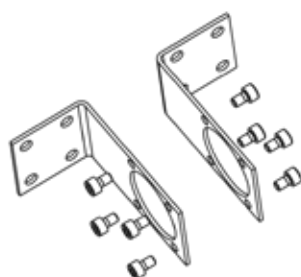
- For manual drainage of condensate or other non-aggressive liquids from the compressed air system
- Condensate feed T 1/2"
- Max. operating pressure 20 bar, operating temperature from 1.5 to 65 °C



Type	Art. no.
MCD	2053070

Wall-mounting kits for water separators and filters

- For mounting one or multiple connected filters on a wall



Type	Art. no.
Wall-mounting kit for S040, S050, S055	2047001
Wall-mounting kit for S075, M010	2047002

Automatic condensate drain AOK 16 B

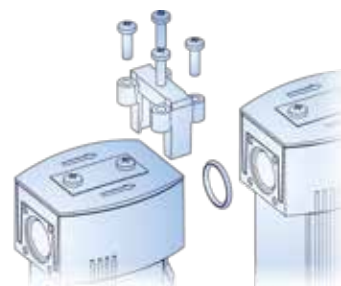
- For automatic, level-controlled drainage of condensate or other non-aggressive liquids from the compressed air system
- Compressed air temperature range: 1.5 - 65 °C
- For installation in the filter housing; max. working pressure: 16 bar
- Condensate feed T 1/2", condensate outlet Ø 8 mm



Type	Art. no.
AOK 16 B	2053072

Connecting kits for water separators and filters

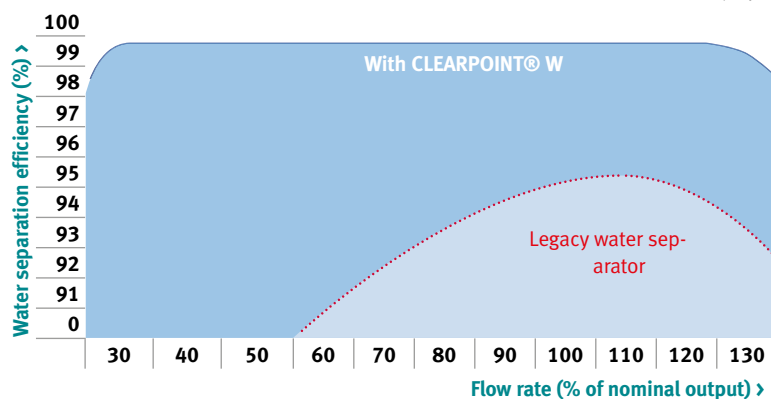
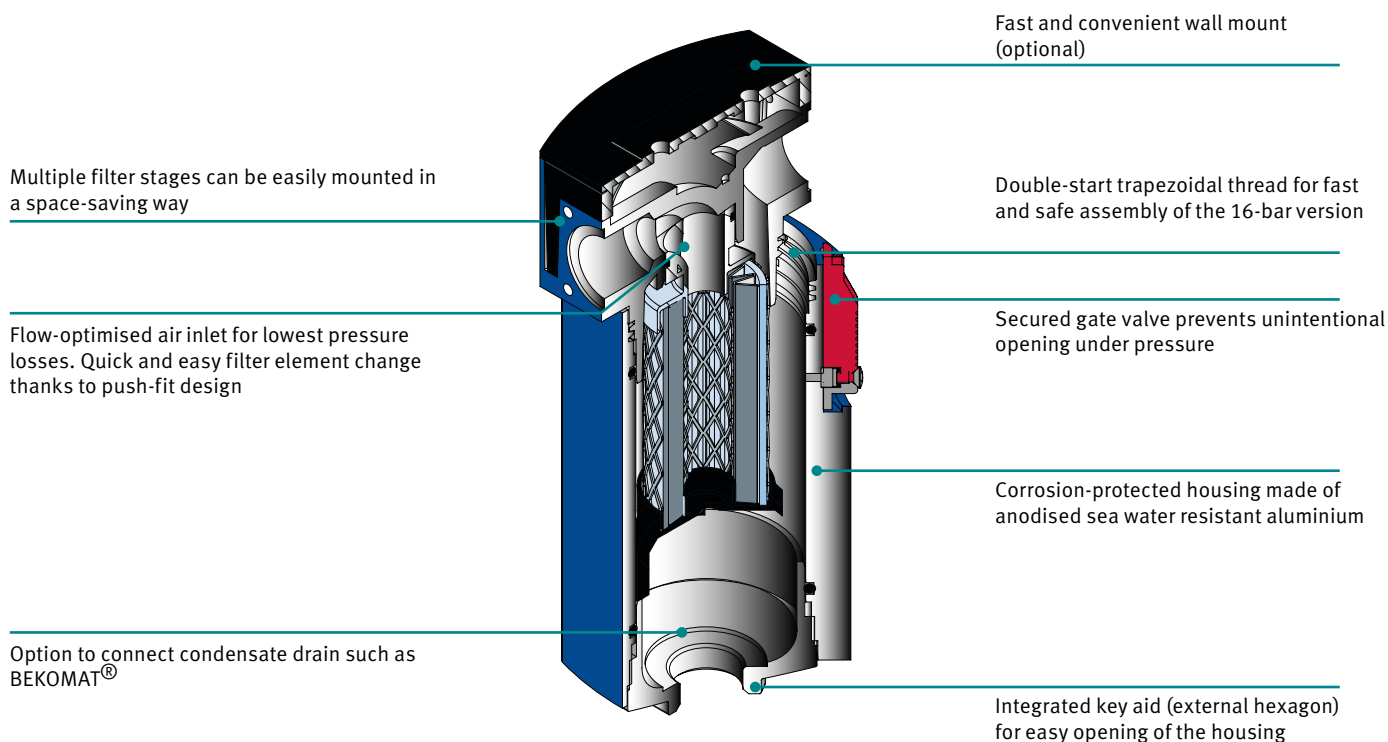
- For connecting two housings



Type	Art. no.
Connecting kit for S040, S050, S055	2047003
Connecting kit for S075, M010	2047004

Efficiency CLEARPOINT® water separators

- The flow-optimised design achieves an efficiency of up to 99 % across a wide performance range. This means maximum separation rates at a low cost.



Correction factors WWB water separator and Filter FWF, SWF, and NWF compressed air filters

In case of a deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor

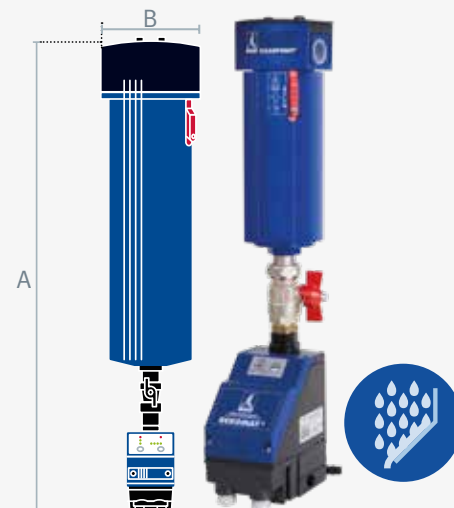
Operating pressure bar	0.3	0.6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Correction factors	0.21	0.29	0.38	0.53	0.65	0.76	0.84	0.92	1	1.070	1.13	1.19	1.25	1.31	1.36	1.41	1.46	1.51

CLEARPOINT® Model Range WB water trap

- 99 % separation of occurring condensate directly downstream of the compressor
- For separation of large volumes of condensate (water, oil) and dirt particles by centrifugal acceleration of the compressed air
- Used on re-coolers and refrigeration dryers
- Completely anodised for premium corrosion protection
- Flow-optimised housing made of salt water resistant aluminium
- Outside additionally powder coated
- Max. positive operating pressure 16 bar, differential pressure < 0.06 bar
- With BEKOMAT® condensate drain

Model	Volume flow 7 bar*		Air connection	Height (A)	Width (B)	Art. no.	Filter complete
S040 WWB	46 m³/h	580 l/min	3/8"	395 mm	75 mm	2048000	
S050 WWB	130 m³/h	1 670 l/min	1/2"	425 mm	75 mm	2048001	
S075 WWB	195 m³/h	2 500 l/min	3/4"	495 mm	100 mm	2048002	
M010 WWB	325 m³/h	3 340 l/min	1"	565 mm	100 mm	2048003	

* In case of deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor.
S040 to S050 with Bekomat® 20; S075 and M010 with Bekomat® Vario 20



CYCLONES AND WATER SEPARATORS, COMPRESSED AIR FITTINGS



AIRCRAFT cyclone separator ACKL

- For highly efficient separation of large quantities of condensate from compressed air and vacuum systems
- Installed between the compressor and pressure vessel
- Filter housing made of aluminium with anodised interior
- Separation of condensate (water, oil) and dirt particles by centrifugal acceleration of the compressed air
- The condensate is separated via the water trap through the standard condensate drain with float valve
- Electronic condensate drain retrofittable



Cyclone ACKL - max. operating pressure 16 bar, operating temperature from 1.5 to 65 °C

Model	Volume flow		Air connection	Height in mm	Width in mm	Filter cpl. Art. no.
	m³/h	l/min				
	7 bar*					
ACKL 0120B	120	1 980	3/8"	247	88	2053010
ACKL 0155B	155	2 557	1/2"	247	88	2053012
ACKL 0235B	235	3 877	3/4"	337	88	2053014
ACKL 0365B	365	6 022	1"	363	125	2053016
ACKL 0770B	770	12 705	1 1/2"	601	125	2053018

* In case of deviating operating pressure, please multiply the specified volume flow by the appropriate correction factor.

Accessories



You will find a large selection of condensate drains on pages 174 - 175 of this catalogue.

Differential pressure display PD 16

- For analysing the pressure drop caused by the filter element in the compressed air system; replace the filter element when the indicator shows red
- Max. operating pressure 16 bar, operating temperature from 1.5 to 65 °C



Type	Art. no.
PD 16	2053060

MDM 60 series differential pressure gauge

- Shows whether the filter element is still fully functional or needs to be replaced - replacement of the filter element is recommended in case of a pressure drop of 0.6 bar (start of red area on the display)
- For assembly on the top filter cover
- Max. operating pressure 16 bar, operating temperature from 1.5 to 65 °C



MDM 60



MDM 60 E



MDM 60 C

Type	Art. no.
MDM 60	2053062
MDM 60 E with LED alarm, battery-operated (battery included in scope of delivery)	2053064
MDM 60 C with zero-potential alarm contact	2053066

Wall-mounting kits for water separators and filters

- For mounting one or multiple connected filters on a wall



Fig. shows application

Type	Art. no.
Wall-mounting kit for filter AF0060-AF0120	2053080
Wall-mounting kit for filter AF0198-AF0510	2053082

Connecting kits AK for water separators and filters

- For connecting two housings
- Brackets for wall-mounting in scope of delivery
- Connecting kit can also be used for third-party housings



Type	Art. no.
AK 3/8"	2053090
AK 1/2"	2053091
AK 3/4"	2053092
AK 1"	2053093
AK 1 1/2"	2053094

CONDENSATE DRAIN



AIRCRAFT Electronic condensate drain AIED

- ▶ The AIED was designed for fully automatic drainage of condensate or other non-aggressive liquids mainly from filter housings.
- ▶ The condensate is collected in the catchment tank. When the level is high enough, the condensate is discharged without loss of air from the system
- ▶ The AIED is equipped with an LED indicator and a test button



Model	AIED
Art. no.	2059075
Max. filter capacity	55 m³/min
Operating pressure	0 - 16 bar
Voltage	230 V / 50-60 Hz
Output	10 W
Separation performance (at 7 bar)	8 l/h
Operating temperature	1.5 - 45 °C (max 65 °C) ¹⁾
Condensate feed	1/2" parallel thread
Degree of protection	IP54
Weight	0.3 kg

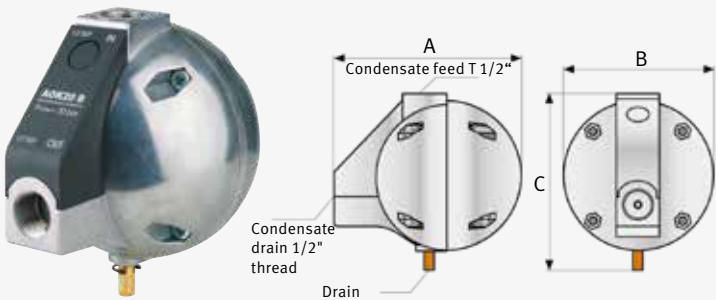
Timer-controlled condensate drain ZKA 16 Automatic condensate drain AOK 20 B

- ▶ For automatic, timer-controlled drainage of condensate or other non-aggressive liquids from the compressed air system
- ▶ Separation performance at 7 bar: 95 l/h, flow rate: 2.4 l/min
- ▶ Condensate feed T 1/2", condensate outlet T 1/4"
- ▶ Time ON / Time OFF: 0.5 - 10 s / 0.5 - 45 min
- ▶ Connection / IP degree of protection: 230 V / IP65
- ▶ Operating pressure: 16 bar, operating temperature range: 1.5 - 65 °C
- ▶ Dimensions: 77 x 79 x 93 mm



Type	Art. no.
ZKA 16	2059070

- ▶ For automatic, level-controlled drainage of condensate or other non-aggressive liquids from the compressed air system
- ▶ Compressed air temperature range: 1.5 - 65 °C
- ▶ For draining a higher volume of condensate from compressed air filters, pressure vessels and cyclone separators without air loss
- ▶ External drain with robust aluminium housing
- ▶ Separation performance at 7 bar: 167 l/h
- ▶ Condensate feed T 1/2", condensate outlet T 1/2"
- ▶ Additionally equipped with manual drain valve
- ▶ Max. working pressure: 20 bar
- ▶ Dimensions (A x B x C): 135 x 110 x 130 mm



Type	Art. no.
AOK 20 B	2053074

1) Operating temperature at max. 65 °C, but if temperature is above 45 °C, performance may be affected

Condensate drain

AIRCRAFT AMD electronic condensate drain - with patented valve technology

- ▶ For fully automatic drainage of condensate or other non-aggressive liquids from the compressed air system
- ▶ A capacitive sensor detects the condensate level. This is very accurate and requires no mechanical float and contacts.
- ▶ For installation as an external trap on piston or screw-type compressors, coolers, cyclone separators, compressed air vessels, air dryers and compressed air filters
- ▶ Equipped as factory standard with an operating alarm, LED indicator, test button and integral strainer
- ▶ A version with a service network for setting the diagnostic parameters and alarm output is available on request for quote

The advantages at a glance

- ▶ Integrated strainer (for easy access/cleaning)
- ▶ Compact design
- ▶ Patented valve technology - direct-action, self-cleaning valve
- ▶ Optimised for ease of service (service kit)
- ▶ Horizontal or vertical installation possible
- ▶ Robust PA housing
- ▶ Includes 2 meter connecting cable with safety plug

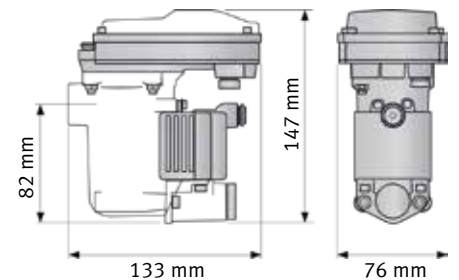
Functional description

- ▶ The condensate is collected in the catchment tank.
- ▶ When the level is high enough, the condensate is discharged without loss of air from the system
- ▶ The fluid level is precisely detected by a capacitive liquid level sensor
- ▶ The special, self-cleaning, direct-action valve ensures reliable operation.

Model	AMD
Art. no.	2059080
Separation performance 7 bar	12 l/h
Compressor output	7.4 m³/min
Dryer performance	14.9 m³/min
Filter performance	74.4 m³/min
Operating pressure	0 – 16 bar
Operating temperature	+1.5 to +65 °C
Connection	230 V
Condensate feed	T 1/2"
Condensate drain	Plug connection for hose Ø 8
Dimensions	133 x 76 x 147 mm
weight	550 g



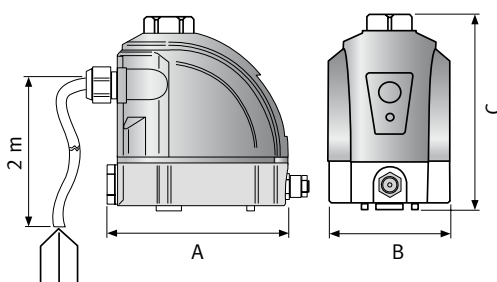
· Horizontal or vertical mounting possible



Designation	Art. no.
AMD assembly kit	9002715
AMD Maintenance kit	2059090

AIRCRAFT ACD Series electronic condensate drain - with patented valve technology

- ▶ The applications and function of the ACD series condensate drains are identical to the AMD series



Model	ACD 90
Art. no.	2059086
Separation performance 7 bar	90 l/h
Compressor output	48.5 m³/min
Dryer performance	97.0 m³/min
Filter performance	485.0 m³/min
Operating pressure	0 – 16 bar
Temperature	+1.5 to +65 °C
Connection	230 V
Condensate feed	R 1/2"
Condensate drain	R 1/8"
Dimensions (A x B x C)	120 x 82 x 135 mm
weight	1 050 g

The advantages at a glance

- ▶ Integrated microfilter
- ▶ Compact design
- ▶ Two connection options
- ▶ Robust anodised aluminium housing
- ▶ Contactless measurement
- ▶ Patented valve technology - direct-action, self-cleaning valve
- ▶ Operational monitoring
- ▶ LED warning light for "trap in operation" and "alarm"
- ▶ Includes 3 meter connecting cable with safety plug



Designation	Art. no.
ACD 90 Maintenance kit	2059094

Electronic condensate drain BEKOMAT® 31/32

In compressed air generation and treatment drops of condensate inevitably form; they contain oil and are frequently contaminated with dirt particles. As condensate accumulates irregularly depending on the season and time of day, or usage of the compressor, the BEKOMAT® often pays dividends within six months, thanks to its capacitive sensor, compared with timer-controlled drain valves.

The advantages at a glance

- ▶ No unnecessary loss of compressed air
- ▶ Discharge volume reflects occurrence volume
- ▶ Sensor detects any of condensate
- ▶ Less affected by dirt build-up
- ▶ Easy electrical installation (230 V)
- ▶ Low maintenance

Features and benefits:

- ▶ Usable and persistent with oil-based and oil-free, aggressive condensates
- ▶ Easily connected to a filter or vessel by adapting the inlet connector for vertical or horizontal condensate feed
- ▶ Improved drainage performance for oil/water separators with BEKOMAT®
- ▶ BEKOMAT® 32 with alarm and navigable fault messages

Functional description

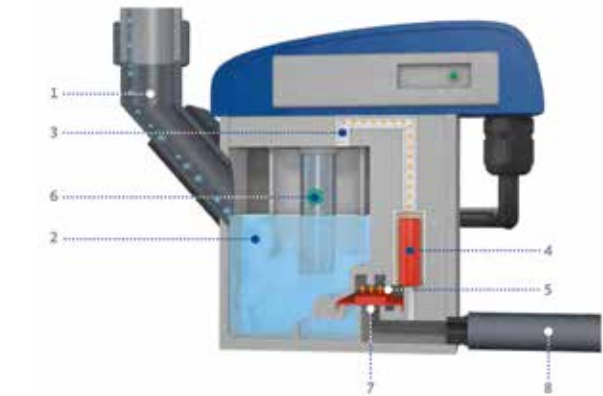
- ▶ Condensate collects in the drain's catchment tank.
- ▶ A capacitive sensor detects the condensate level. At max. level a membrane opens; the condensate is discharged by system pressure.
- ▶ The membrane is closed before compressed air can escape.



BEKOMAT® 31



BEKOMAT® 32



- 1 Supply line
- 2 Collector tank
- 3 Control air line
- 4 Pilot valve

- 5 Membranes
- 6 Capacitive sensor
- 7 Membrane holder
- 8 Drain pipe

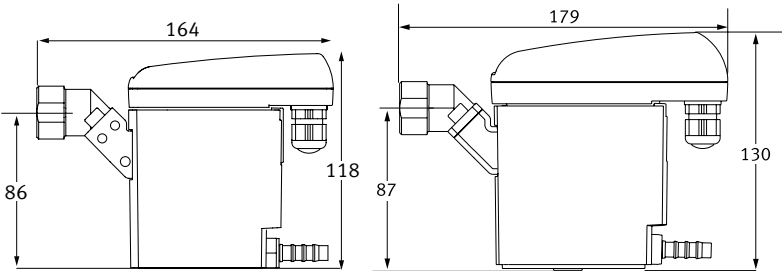
Model	BEKOMAT® 31	BEKOMAT® 32
Art. no.	2049049	2049053

Compressor output ¹⁾	2.5 m³/min	5 m³/min
Dryer performance	5 m³/min	10 m³/min
Filter performance	25 m³/min	50 m³/min
Operating pressure	0.8 – 16 bar	0.8 – 16 bar
Temperature	+1 to +60 °C	+1 to +60 °C
Connection	230 V	230 V
Weight	800 g	1 000 g

1) only with pre-separator

Including service unit
Economical: Complete replacement of all wear parts and pressure exposed parts in a single action.

- ▶ No electrical installation required for maintenance
- ▶ No installation of seals and parts
- ▶ Only one spare part, pressure and function tested at the factory



BEKOMAT® 31

BEKOMAT® 32

Art. no.	Designation
2049060	Service Unit Bekomat 31
2049061	Service Unit Bekomat 32

OIL-WATER SEPARATION SYSTEMS



ÖWAMAT® - Oil-water separation system

Functional description

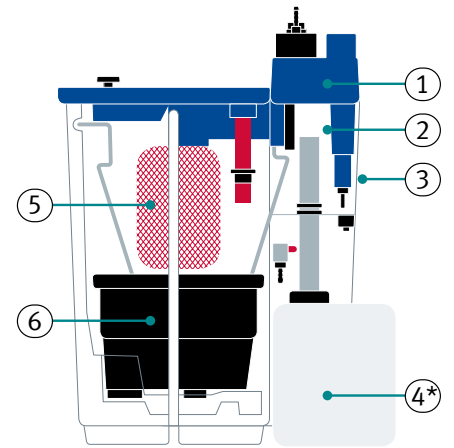
- ▶ The oily condensate first flows under pressure into the pressure relief chamber (1) for treatment.
- ▶ The excess pressure is relieved here without creating turbulence in the downstream separation tanks for oil separation (2).
- ▶ Entrained coarse dirt particles are retained in a removable strainer (3).
- ▶ In the separation tank, the oil settles on the surface through gravity separation and is directed into the overflow-proof oil catchment tank (version available on request) (4).
- ▶ The filter makes all the difference: the pre-treated condensate flows through the oleophilic filter (5), which has a large active filter surface.
- ▶ As the flow passes through it from the inside to the outside, it binds the remaining oil droplets and in the filter chamber additionally the

residual, on floating oil.:

- ▶ The OEKOSORB® main filter with cartridge technology (6) reliably retains the last oil fractions. The remaining water can be run off directly into the drains.

The advantages at a glance

- ▶ Right-sized for your equipment
- ▶ Wall-mounting of ÖWAMAT® 10 and ÖWAMAT® 11 possible
- ▶ Long service life of filter units
- ▶ Simple retrofitting of heating possible
- ▶ Easiest handling thanks to cartridge technology
- ▶ Type-approval with and without oil separation
- ▶ No energy costs



* Figure shows version with oil catchment tank - available on request



Öwamat 10



Öwamat 11



Öwamat 12 - models 14 and 16 similar



OEKOSORB® cartridge for quick and clean replacement



Variable connection in three directions

Accessories	Art. no.
Replacement filter set ÖWAMAT® 10	2049152
Replacement filter set ÖWAMAT® 11	2049153
Replacement filter set ÖWAMAT® 12	2049151
Replacement filter set ÖWAMAT® 14	2049154
Replacement filter set ÖWAMAT® 16	2049157
Bracket ÖWAMAT® 10	2047015
Bracket ÖWAMAT® 11	2047016

Model	ÖWAMAT® 10	ÖWAMAT® 11	ÖWAMAT® 12	ÖWAMAT® 14	ÖWAMAT® 16
Art. no.	2048010	2048011	2048012	2048014	2048016

Maximum compressor output ⁽¹⁾ screw-type compressors						
Turbine oil	m³/min	2.4	4.9	7.3	14.6	58.5
VDL oil	m³/min	2.4	4.9	7.3	14.6	58.5
VCL oil	m³/min	1.9	3.8	5.6	11.3	45.0
Synthetic oil: PAO	m³/min	1.9	3.5	5.6	11.3	45.0
Synthetic oil: Ester	m³/min	1.6	3.2	4.8	9.6	38.3
Piston compressors						
VDL oil	m³/min	1.7	2.9	5.1	10.1	40.5
Synthetic oil: PAO	m³/min	1.4	2.4	4.2	8.4	33.8
Synthetic oil: Ester	m³/min	1.6	2.8	4.9	9.7	38.8
Condensate feed		2 x T 1/2"	2 x T 1/2"	3 x T 1/2" 1 x T 1"	3 x T 1/2" 1 x T 1"	3 x T 1/2" 1 x T 1"
Water drain		T 1/2"	T 1/2"	T 1/2"	T 1"	T 1"
Dimensions max. (H x D x W)	mm	230 x 270 x 525	390 x 445 x 755	350 x 397 x 719	410 x 461 x 892	650 x 702 x 1 193

1) These performance data apply for temperate climates (e.g., Central and Southern Europe, Central America). If required, please request compressor output data for other climates.

Oil-water separation devices

AIRCRAFT oil-water separation devices - Economical and environmentally friendly

Oil-water separation devices are used for treatment of oily condensate. They represent an environmentally-friendly and cost-saving solution for separating condensate and allow the disposal of the water separated from oil into drains as per Para. 7 of the Federal Water Act.

The incident condensate is a waste and contami-

nated with oil content of up to 10 000 mg/l. AIRCRAFT oil-water separation systems have technical approval by the Institut für Bautechnik (Institute for Building Technology), Berlin. They allow for condensate treatment on site. This is typically cheaper than costly waste-disposal by specialist companies.

Simple gravity separators (oil traps) are not suit-

able for the treatment of condensate from compressed air systems.

According to the Federal Water Act, Paragraph 7a, compressed air condensate must not be discharged into drains without proper treatment in line with the state of the art.

AIRCRAFT Oil-water separators series WOS 1 and 2 - patented technology

- ▶ Regular service is possible in just 30 seconds and without complex cleaning thanks to patented technology
- ▶ Wall- and floor mounting possible
- ▶ Works reliably with any condensate drain
- ▶ Can be used with any popular compressor oil
- ▶ Operating media: Condensate (air, water, oil), non-aggressive, not suitable for emulsion
- ▶ Fast and clean replacement of the filter element
- ▶ No settling tank required (no formation of bacteria)
- ▶ Easy installation due to compact design and small footprint
- ▶ Connection via quick-action couplings

- ▶ Function description:
- ▶ Multiple stage oil-water separation through an oleophilic filter and activated carbon
- ▶ At the end of the filter element's service life, it is unbolted and disposed of
- ▶ The filter element is tightly sealed with a plastic cover so that remaining condensate can stay in it
- ▶ The sealed filter element can be disposed of in line with applicable regulations

- ▶ **Service interval**
(after one of the three following cases occurs):
- ▶ 4 000 hours of operation of the air compressor, or in case of compressor oil transmission of 2.5 mg/m³
- ▶ Discolouration of the polypropylene medium - analysis by simple visual inspection
- ▶ After twelve months at the latest (independently of the compressor's operating hours)

Model	WOS 1	WOS 2
Art. no.	2058210	2058220
Maximum compressor output*	1.08 m ³ /min	2.23 m ³ /min
Max. oil adsorption	650 g	1 340 g
Max. condensate flow	0.90 l/h	1.87 l/h
Residual oil content	< 20 ppm	< 20 ppm
Operating temperature	1.5 - 45 °C (max 65 °C)**	1.5 - 45 °C (max 65 °C)**
Condensate feed, connector	Ø 8 mm for hose	Ø 8 mm for hose
Water drain, connector	Ø 8 mm for hose	Ø 8 mm for hose
Dimensions max. (H x D x W)	483 x 146 x 106 mm	816 x 146 x 106 mm



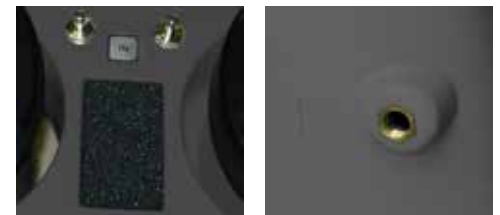
Replacement cartridge

Art. no.	Designation
2058212	Replacement cartridge for WOS 1
2058222	Replacement cartridge for WOS 2

AIRCRAFT Oil-water separator series WOS 4/8/20/35

The advantages at a glance

- ▶ Patented system allows for regular inspection without time-consuming cleaning
- ▶ Equipped with polypropylene and activated carbon filter
- ▶ Wall- and floor mounting possible
- ▶ Works reliably with any condensate drain
- ▶ Can be used with any popular compressor oil
- ▶ Fast and clean replacement of the filter element
- ▶ No settling tank required
- ▶ Easy installation thanks to compact design
- ▶ Connection via quick-action couplings



Replacement cartridge PP Replacement cartridge AK

Model	WOS 4	WOS 8	WOS 20	WOS 35
Art. no.	2058230	2058240	2058250	2058255
Max. delivery quantity ¹⁾	4.04 Nm ³ /min	8.4 Nm ³ /min	20.5 Nm ³ /min	35.5 Nm ³ /min
Max. oil adsorption	2.43 kg	5.04 kg	12.28 kg	21.31 kg
Max. condensate flow	3.4 l/h	7.1 l/h	17.2 l/h	29.8 l/h
Residual oil content	< 10 ppm	< 10 ppm	< 10 ppm	< 10 ppm
Operating temperature	1.5 - 45 °C (max 65 °C) ²⁾			
Condensate feed, connector	Ø 10 mm for hose			
Water drain, connector	Ø 10 mm for hose			
Dimensions (L x W x H) in mm	416 x 243 x 411	730 x 343 x 680	820 x 366 x 940	960 x 386 x 1 137

Accessories WOS 4	Art. no.
Replacement cartridge PP	2058232
Replacement cartridge AK	2058233
Accessories WOS 8	
Replacement cartridge PP	2058242
Replacement cartridge AK	2058243
Accessories WOS 20	
Replacement cartridge PP	2058252
Replacement cartridge AK	2058253
Accessories WOS 35	
Replacement cartridge PP	2058257
Replacement cartridge AK	2058258

¹⁾ These performance data apply for temperate climates (e.g., Central and Southern Europe, Central America). If required, please request compressor output data for other climates.

²⁾ Max. operating temperature at 65 °C, however, performance may be impaired at temperatures above 45 °C

WE SPELL SERVICE WITH A CAPITAL S

PROFESSIONAL AIRCRAFT SERVICE - FOUR BUILDING BLOCKS FOR YOUR BENEFIT

■ Professionally performed maintenance

Trained service staff performs maintenance, using only AIRCRAFT spare parts.

■ Operating capability you can rely on

Minimising repair costs and maintaining the operating safety through regular maintenance.

■ Reducing operating costs

Potential defects and wear are identified at an early stage. This protects our customers' investment against unnecessary, expensive repairs and avoidable downtime.

■ Cost transparency

Working time and travel are invoiced by maintenance interval at the agreed rate, plus the agreed material costs.

■ Optimising and protecting your investment

Regular maintenance of compressed air systems preserves their functionality, maximising efficiency and maintaining their value in the long term.

■ Minimising administrative overhead

Maintenance is coordinated by our service team at regular intervals.

Our professional Aircraft customer service gives every customer the ability to choose the performance they need from our comprehensive program of services at any time. Our services can be divided into the following four modules: inventory

and requirements analysis, plant design and advisory services, installation and commissioning, maintenance and after-sales service. The AIRCRAFT service field force, and our service partners, ensure reliable, nationwide, on-site service for our customers.

1 Inventory and requirements analysis

Determining your compressed air requirements
Engineering and safety check of your existing system
Energy efficiency measurements of the existing system
Leakage measurements and leak finding for existing systems

2 Advisory services and system planning

Planning of your compressed air system
Identifying savings and optimisation potentials
Creating installation drawings
Project management in all phases of the installation

3 Installation and commissioning

Installation of your compressed air system
Installing the complete pipe network
Commissioning your compressed air system
Training on site

4 Service and maintenance

On-site service for repairs and maintenance
Service hotline with professional advisory service
Reminder service for maintenance and testing deadline
Substitute compressor service

AIRCRAFT SERVICE CONTACTS:



**COMPRESSED AIR ADVISORY
SERVICE AIRCRAFT GERMANY:**

Tel. +49 (0) 951 - 96 555-630
Email kompressoren@stuermer-maschinen.de



**HOTLINE SPARE PARTS PROCUREMENT
AIRCRAFT GERMANY:**

Hotline: Tel. +49 (0)951/96 555 - 118
Email ersatzteile@stuermer-maschinen.de
Direct spare parts availability query: 24h via Partner Portal



**COMPRESSED AIR ADVISORY
SERVICE AIRCRAFT AUSTRIA**

Phone +49 7752 / 70 929 - 0
Email: info@aircraft-kompressoren.de



**HOTLINE SPARE PARTS PROCUREMENT
AIRCRAFT AUSTRIA:**

Tel. head office: +49 7752 / 70 929 - 0
Email ersatzteile@stuermer-maschinen.de
Direct spare parts availability query: 24h via Partner Portal



**SERVICE HOTLINE
(REPAIRS, WARRANTY CLAIMS)**

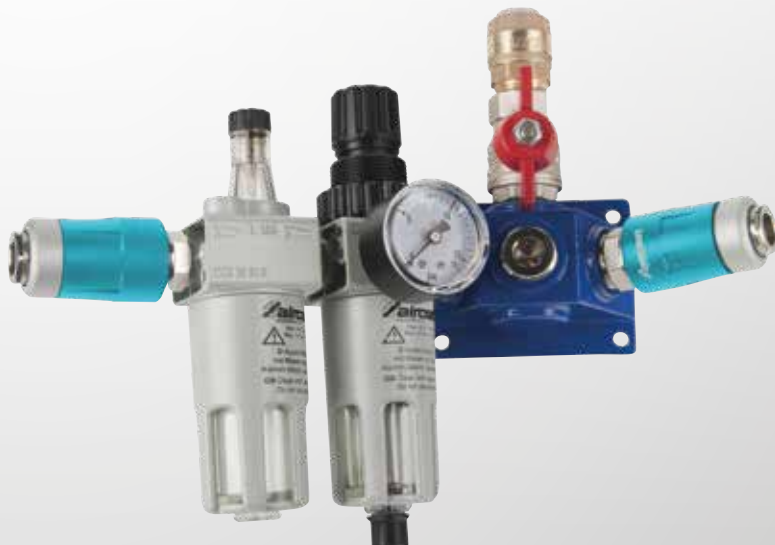
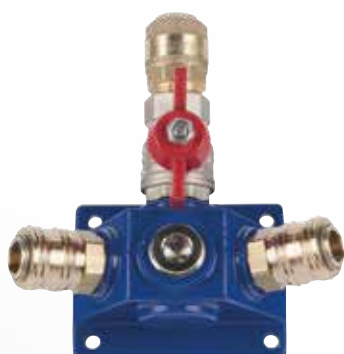
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Monday to Thursday: 7 am to 5 pm, Fridays 7 am to 4 pm



COMPRESSED AIR DISTRIBUTION BLOCKS



Air inlet socket with single-handed coupling Ø 15- 28 mm

Scope of supply:

1 x air distribution box, 2 x blind plugs 1/2"
1 x end piece OT brass, 1 x coupling 1/2" OT
1x Leak stop



Pipe OD	End piece	Art. no.
15 mm	1/2"	2158515
18 mm	1/2"	2158518
22 mm	3/4"	2158522
28 mm	3/4"	2158528

Distributor box 3 x 1/2" outside thread Ø 15- 22 mm

Scope of supply:

1 x air distributor box, 1 x end piece OT brass
1x Leak stop



Pipe OD	End piece	Art. no.
15 mm	1/2"	2158615
18 mm	1/2"	2158618
22 mm	3/4"	2158622

Distribution terminal box with two single-handed couplings Ø 15- 22 mm

Scope of supply:

1 x air distributor box, 1 x end piece OT brass
1 x plug 1/2", 2 x coupling 1/2" OT,
1x Leak stop



Pipe OD	End piece	Art. no.
15 mm	1/2"	2158715
18 mm	1/2"	2158718
22 mm	3/4"	2158722

Distribution terminal box with 2 safety couplings Ø 15- 22 mm

Scope of supply:

1 x air distributor box, 1 x end piece OT brass
1 x plug 1/2", 2 x coupling 1/2" OT,
1x Leak stop

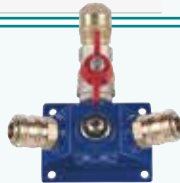


Pipe OD	End piece	Art. no.
15 mm	1/2"	2158815
18 mm	1/2"	2158818
22 mm	3/4"	2158822

Distribution terminal box with two single-handed couplings Ø 15- 22 mm

Scope of supply:

1 x air junction box, 1 x ball valve IT x 1/2" OT,
1 x end piece OT brass, 1 x blind plug 1/2",
2 x coupling 1/2" OT, 1x sealant

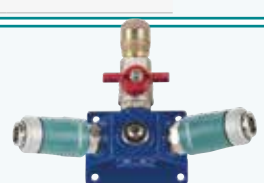


Pipe OD	End piece	Art. no.
15 mm	1/2"	2158915
18 mm	1/2"	2158918
22 mm	3/4"	2158922

Distribution terminal box with 2 safety couplings Ø 15- 22 mm

Scope of supply:

1 x air distributor box, 1 x end piece OT brass
1 x plug 1/2", 2 x coupling 1/2" OT,
1 x ball valve R 1/2" IT x 1/2" OT, 1x sealant



Pipe OD	End piece	Art. no.
15 mm	1/2"	2159015
18 mm	1/2"	2159018
22 mm	3/4"	2159022

Distribution box with two single-handed couplings, shut-off valve and pressure regulator 16 bar Ø 15 - 22 mm

Scope of supply:

1 x Air junction box, 1 x ball valve
1 x End-piece OT brass,
1 x Blind plug 1/2",
1 x coupling 1/2" OT, 1 x double nipple T 1/4 x T 1/2,
1 x Pressure regulator 1/4" 16 bar, 1 x Safety coupling 1/4" OT



Pipe OD	End piece	Art. no.
15 mm	1/2"	2159115
18 mm	1/2"	2159118
22 mm	3/4"	2159122

Distribution box with two safety couplings, shut-off valve and pressure regulator 16 bar Ø 15 - 22 mm

Scope of supply:

1 x Air junction box, 1 x ball valve
1 x End-piece OT brass,
1 x Blind plug 1/2",
1 x coupling 1/2" OT, 1 x double nipple T 1/4 x T 1/2,
1 x Pressure regulator 1/4" 16 bar, 1 x Safety coupling 1/4" OT



Pipe OD	End piece	Art. no.
15 mm	1/2"	2159215
18 mm	1/2"	2159218
22 mm	3/4"	2159222

Distribution terminal box with two single-handed couplings, shut-off valve and filter pressure regulator 16 bar Ø 15 - 22 mm

Scope of supply:

1 x Air junction box, 1 x ball valve
1 x End-piece OT brass,
1 x Blind plug 1/2",
1 x Coupling 1/2" OT,
1 x Double nipple T 1/4" x T 1/2",
1 x Filter pressure regulator 1/4", 1 x coupling 1/4" OT



Pipe OD	End piece	Art. no.
15 mm	1/2"	2159315
18 mm	1/2"	2159318
22 mm	3/4"	2159322

Distribution box with two safety couplings, shut-off valve and filter pressure regulator 16 bar Ø 15 - 22 mm

Scope of supply:

1 x Air junction box, 1 x ball valve
1 x End-piece OT brass, 1 x blind plug 1/2",
1 x Coupling 1/2" OT,
1 x Double nipple T 1/4" x T 1/2",
1 x Filter pressure regulator 1/4",
1 x safety coupling 1/4" OT



Pipe OD	End piece	Art. no.
15 mm	1/2"	2159415
18 mm	1/2"	2159418
22 mm	3/4"	2159422

Distribution box with two single-handed couplings, shut-off valve and filter pressure regulator and oil mist lubricator 16 bar Ø 15 - 22 mm

Scope of supply:

1 x Air distribution box,
1 x Ball valve
1 x End-piece OT brass,
1 x Blind plug 1/2",
1 x Coupling 1/2" OT,
1 x Double nipple T 1/4" x T 1/2",
1 x Filter pressure regulator 1/4",
1 x Mist lubricator 1/4",
1 x Coupling 1/4" OT,
1 x Double nipple T 1/4" x T 1/4",



Pipe OD	End piece	Art. no.
15 mm	1/2"	2159515
18 mm	1/2"	2159518
22 mm	3/4"	2159522

Distribution box with two safety couplings, shut-off valve and filter pressure regulator and oil mist lubricator 16 bar Ø 15 - 22 mm

Scope of supply:

1 x Air distribution box,
1 x Ball valve
1 x End-piece OT brass,
1 x Blind plug 1/2",
1 x Safety coupling 1/2" OT,
1 x Double nipple T 1/4" x T 1/2",
1 x Filter pressure regulator 1/4",
1 x Mist lubricator 1/4",
1 x Safety coupling 1/4" OT,
1 x Double nipple T 1/4" x T 1/4",



Pipe OD	End piece	Art. no.
15 mm	1/2"	2159615
18 mm	1/2"	2159618
22 mm	3/4"	2159622

FILTER PRESSURE REGULATORS / MAINTENANCE UNITS



Designation	Art. no.
	
Pressure regulator DR 1/4" 16 bar ³⁾	2316050
Pressure gauge Ø 40 mm, 1/8" thread rear	02506440
Pressure regulator DR 1/2" 16 bar ²⁾	2316250
Pressure gauge Ø 40 mm, 1/8" thread rear	2506440

Designation	Art. no.
	
Filter pressure regulator FDR 1/4" 16 bar ³⁾	2316000
Replacement vessel filter regulator 1/4"	2316001
Pressure gauge Ø 40 mm, 1/8" thread rear	2506440
Filter pressure regulator FDR 1/2" 16 bar ²⁾	2316200
Replacement vessel filter regulator 1/2"	2316201
Pressure gauge Ø 40 mm, 1/8" thread rear	2506440

Designation	Art. no.
	
Oil mist lubricator NÖ 1/4" 16 bar ³⁾	2316060
Replacement vessel lubricator 1/4"	2316061
Oil mist lubricator NÖ 1/2" 16 bar ²⁾	2316260
Replacement vessel lubricator 1/2"	2316261

Designation	Art. no.
	
Water trap WA 1/4" 16 bar ³⁾	2316070
Water trap WA 1/2" 16 bar ²⁾	2316270

Designation	Art. no.
	
Combined maintenance unit WE 1/4" 16 bar ³⁾	2316080
Combined maintenance unit WE 1/2" 16 bar ²⁾	2316280

Designation	Art. no.
	
Pressure regulator DR 1" 16 bar ¹⁾	2316350
Pressure gauge Ø 40 mm, 1/8" thread rear	2506440

Designation	Art. no.
	
Filter pressure regulator FDR 1" 16 bar ¹⁾	2316300
Replacement vessel filter regulator 1"	2316301
Pressure gauge Ø 40 mm, 1/8" thread rear	2506440

Designation	Art. no.
	
Oil mist lubricator NÖ 1" 16 bar ¹⁾	2316360
Replacement vessel lubricator 1/2"	2316361

Designation	Art. no.
	
Water trap WA 1" 16 bar ¹⁾	2316370

Designation	Art. no.
	
<i>Fig. shows the scope of delivery</i>	<i>Installation example with 1" connection block</i>
Connection block 1" with 2 x 1/2" thread ¹⁾	2316380
Plug for thread 1/2"	2151901

1) All 1" models:
Max. inlet pressure: 16 bar
Control range: 0.5 – 14 bar

2) All 1/2" models:
Max. inlet pressure: 16 bar
Control range: 0.5 – 16 bar

3) All 1/4" models:
Max. inlet pressure: 16 bar
Control range: 0.5 – 10 bar

Pressure regulators/maintenance units

New

PRESSURE CONTROLLER

- Design: Membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature range: -10 °C to +50 °C



Fig : Pressure regulator 1/4" 12bar

Designation	Art. no.
BG1: Pressure regulator 1/4" 12bar with pressure gauge	2317000
BG2: Pressure regulator 1/4" 16 bar with pressure gauge	2317010
BG3: Pressure regulator 1/2" 16 bar with pressure gauge	2317020
BG4: Pressure regulator 1" 16 bar with pressure gauge	2317030

FILTER PRESSURE REGULATOR

- Design: Sintered filter centrifugal principle; membrane pressure regulator with secondary venting
- Medium: Compressed air, neutral gases
- Temperature range: -10 °C to +50 °C
- Installation position: vertical
- Pore width 5 µm



Fig.: Filter pressure regulator 1/4" 12bar

Designation	Art. no.
BG1: Filter pressure regulator 1/4" 12 bar with pressure gauge	2317100
BG2: Filter pressure regulator 1/4" 16 bar with pressure gauge	2317110
BG3: Filter pressure regulator 1/2" 16 bar with pressure gauge	2317120
BG4: Filter pressure regulator 1" 16 bar with pressure gauge	2317130

ACCESSORIES BG1 (1/4" 12 BAR)

Accessories for 1/4" 12 bar	Art. no.
Coupling package 1/4" 12 bar	2317500



Accessories for 1/4" 12 bar	Art. no.
Coupling package 1/4" 12 bar for wall mounting	2317501



Accessories for 1/4" 12 bar	Art. no.
Wall console mounting set 1/4" 12 bar	2317502



Accessories for 1/4" 12 bar	Art. no.
Angle bracket 1/4" 12 bar	2317503



Accessories for 1/4" 12 bar	Art. no.
Mounting bracket 1/4" 12 bar for panel thread	2317504



Replacement glass	Art. no.
for Filter pressure regulator 1/4" 12bar	2317101
for Mist lubricator 1/4" 12bar	2317201

ACCESSORIES BG2 (1/4" 16 BAR)

Accessories for 1/4" 16 bar	Art. no.
Coupling package 1/4" 16 bar	2317510



Accessories for 1/4" 16 bar	Art. no.
Coupling package 1/4" 16 bar for wall mounting	2317511



Accessories for 1/4" 16 bar	Art. no.
Wall console mounting set 1/4" 16 bar	2317512



Accessories for 1/4" 16 bar	Art. no.
Angle bracket 1/4" 16 bar	2317513



Accessories for 1/4" 16 bar	Art. no.
Mounting bracket 1/4" 16 bar for panel thread	2317514



Replacement glass	Art. no.
for Filter pressure regulator 1/4" 16bar	2317111
for Mist lubricator 1/4" 16bar	2317211

MIST LUBRICATOR

- ▶ Design: Micro mist lubricator
- ▶ Medium: Compressed air, neutral gases
- ▶ Temperature range: -10 °C to +50 °C
- ▶ Installation position: vertical
- ▶ Oil grade: CL 32 according to DIN51517-ISO VG 32



Fig.:
Mist lubricator
1/4" 12bar

Designation	Art. no.
BG1: Mist lubricator 1/4" 12 bar; 35 cm ³	2317200
BG2: Mist lubricator 1/4" 16 bar; 40 cm ³	2317210
BG3: Mist lubricator 1/2" 16 bar; 80 cm ³	2317220
BG4: Mist lubricator 1" 16 bar; 181 cm ³	2317230

WATER SEPARATOR

- ▶ Design: Sintered filter centrifugal principle
- ▶ Medium: Compressed air, neutral gases
- ▶ Temperature range: -10 °C to +50 °C
- ▶ Installation position: vertical
- ▶ Pore width 5 µm



Fig.:
Water separator
1/4" 12bar

Designation	Art. no.
BG1: Water separator 1/4" 12 bar	2317300
BG2: Water separator 1/4" 16 bar	2317310
BG3: Water separator 1/2" 16 bar	2317320
BG4: Water separator 1" 16 bar	2317330

ACCESSORIES BG3 (1/2" 16 BAR)

Accessories for 1/2" 16 bar	Art. no.
Coupling package 1/2" 16 bar	2317520



Accessories for 1/2" 16 bar	Art. no.
Coupling package 1/2" 16 bar for wall mounting	2317521



Accessories for 1/2" 16 bar	Art. no.
Wall console mounting set 1/2" 16 bar	2317522



Accessories for 1/2" 16 bar	Art. no.
Angle bracket 1/2" 16 bar	2317523



Accessories for 1/2" 16 bar	Art. no.
Mounting bracket 1/2" 16 bar for panel thread	2317524



Replacement glass	Art. no.
for Filter pressure regulator 1/2" 16bar	2317121
for Mist lubricator	2317221

ACCESSORIES BG4 (1" 16 BAR)

Accessories for 1" 16 bar	Art. no.
Coupling package 1" 16 bar	2317530



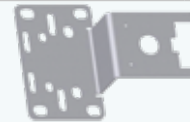
Accessories for 1" 16 bar	Art. no.
Coupling package 1" 16 bar for wall mounting	2317531



Accessories for 1" 16 bar	Art. no.
Wall console mounting set 1" 16 bar	2317532



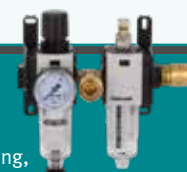
Accessories for 1" 16 bar	Art. no.
Angle bracket 1" 16 bar	2317533



COMBINATION MAINTENANCE UNIT

consisting of:

filter pressure regulator, mist lubricator, brass coupling, 1T-piece O-I-O, wall bracket mounting set



Designation	Art. no.
Combined maintenance unit 1/4" 12 bar	2317400
Combined maintenance unit 1/4" 16 bar	2317410
Combined maintenance unit 1/2" 16 bar	2317420

Replacement glass	Art. no.
for Filter pressure regulator 1" 16bar	2317131
for Mist lubricator 1" 16bar	2317231

COMPRESSED AIR HOSES & SPRING BALANCERS



FLEXAIR hose

- ▶ Extremely flexible compressed air hose also for low temperatures
- ▶ Especially resistant against oil-contaminated compressed air
- ▶ Operating pressure max: 15 bar
- ▶ With coupling and barb



Extremely flexible woven fabric compressed air hose even at low temperatures

Hose length	ID	OD	Art. no.
10 m	6 mm	10.7 mm	2105410
20 m	6 mm	10.7 mm	2105420
10 m	9 mm	14.5 mm	2105510
20 m	9 mm	14.5 mm	2105520

FLEXAIR hose

- ▶ Extremely flexible compressed air hose also for low temperatures
- ▶ Especially resistant against oil-contaminated compressed air
- ▶ Operating pressure max: 15 bar



Extremely flexible woven fabric compressed air hose even at low temperatures

Hose length	ID	OD	Art. no.
50 m	6 mm	11 mm	2105450
10 m	9 mm	14 mm	2105511
50 m	9 mm	14 mm	2105550
50 m	13 mm	19 mm	2105750

Quality compressed air hose PRO

- ▶ Highly flexible and abrasion-proof
- ▶ Temperature range from -40° to +75°
- ▶ Max. working pressure: 15 bar
- ▶ Made of polyurethane
- ▶ With fabric insert - fabric reinforced
- ▶ For professional use



PU hose 10 m
With coupling and barb

PU hose 50 m

Hose length	ID	OD	Art. no.
10 m	8 mm	12 mm	2106910
50 m	8 mm	12 mm	2106950
50 m	10 mm	15 mm	2106960
50 m	13 mm	19 mm	2106970

*With coupling and barb **On reel

Antistatic compressed air hose

- ▶ Guarantees electrostatic contact (106Ωm) when attaching the hose to couplings

Antistatic



Model		10 m with coupling and barb	50 m reel
Art. no.		2100110	2100101
Technical specifications			
Length	m	10	10
Hose Ø	mm	9 x 16	9 x 16
Working pressure at 20 °C	bar	16	16
Burst pressure at 20 °C	bar	60	60

Compressed air hose Hybrid SuperFlex – for professional use

- ▶ Hybrid polymer material with non-woven insert – extremely flexible even at low temperatures
- ▶ Abrasion resistant and high resistance to environmental influences, such as UV light, oil, ozone
- ▶ Max. working pressure up to 20 bar
- ▶ Significantly lower weight than rubber hoses
- ▶ Deployable in temperature range between -40 °C and 80 °C
- ▶ Features quick-release coupling and plug-in nozzle



Hybrid SuperFlex 10x16 mm, 50 m



Extremely flexible woven fabric compressed air hose even at low temperatures



Hybrid SuperFlex 10x16 mm, 10 m

Hybrid SuperFlex 10 x 16 mm	10 m	20 m	50 m
Art. no.	2105310	2105320	2105350
Tech.specifications			
ID	10 mm	10 mm	10 mm
OD	16 mm	16 mm	16 mm
Hose length	10 m	20 m	50 m
Operating pressure	20 bar	20 bar	20 bar
Operating temperature	-40 – 80 °C	-40 – 80 °C	-40 – 80 °C



Hybrid SuperFlex 10x16 mm, 20 m

Hoses/Hose reels

Standard spiral hose

- ▶ With quick-release coupling and barb
- ▶ Entry level

Spiral hose

- ▶ Made of polyurethane
- ▶ with standard quick-release coupling and barb



With standard quick-release coupling and barb

Hose length	Max. operating pressure:	ID	OD	Art. no.	€ plus VAT
5 m	8 bar	6 mm	8 mm	2115605	
7.5 m	8 bar	6 mm	8 mm	2115608	
10 m	8 bar	8 mm	12 mm	2115610	

Balancers FZ

- ▶ Essential tool for repetitive work on assembly lines, mass production packaging work
- ▶ Extremely resilient spring cable pull
- ▶ Made of high-quality die-cast aluminium
- ▶ Load setting and cable length selectable
- ▶ Three-point hitch



The following are recommended for connecting to the compressed air supply network:

1x quick coupling 6 mm with hose bar (2200021), pluggable barbs 6 mm (2200031) and 2x ear clamps (2105008)

Model		FZ 0.4 - 1.0 kg	FZ 1.0 - 2.0 kg	FZ 2.0 - 3.0 kg
Art. no.		2106001	2106002	2106003
Tech. specifications				
Load bearing range	kg	0.4 - 1	1 - 2	2 - 3
Cable length	m	1.6	1.6	1.6
Dimensions	mm	113 x 113 x 60	113 x 113 x 60	113 x 113 x 60
Weight	kg	0.63	0.63	0.63

Ear clamps PRO



For hose	Range	PU	Art. no.
12.3 mm	9.8 - 12.3 mm	4	2105006SB
12.3 mm	9.8 - 12.3 mm	100	2105006
13.3 mm	10.8 - 13.3 mm	4	2105008SB
13.3 mm	10.8 - 13.3 mm	100	2105008
15.7 mm	13.2 - 15.7 mm	4	2105009SB
15.7 mm	13.2 - 15.7 mm	100	2105009
17.8 mm	15.6 - 17.8 mm	100	2105011
19.8 mm	16.6 - 19.8 mm	100	2105012

Quality spiral hoses

- ▶ With quick-release coupling and barb
- ▶ Professional design

Quality spiral hose PRO

- ▶ Made of polyurethane
- ▶ Highly flexible and abrasion-proof
- ▶ Avoids permanent reduction of cross-section after kinking
- ▶ Small winding diameter
- ▶ Large temperature range
- ▶ The straight ends allow for convenient plugging and unplugging, and torsion-free work
- ▶ No hose torsion thanks to swivel joint
- ▶ With kink protection

With swivel joint - 360° rotatable



Quality spiral hose PRO 6 m, 5/8 mm ID/OD with particularly narrow winding

Highly flexible with swivel joint and kink protection including quality coupling and barb



Quality spiral hose 6m PRO 8/12 mm

Hose length	Max. operating pressure:	Connection thread	ID	OD	Art. no.	€ plus VAT
6 m	8 bar	1/4"	5 mm	8 mm	2105850	
6 m	8 bar	1/4"	6.5 mm	10 mm	2105852	
6 m	8 bar	3/8"	8 mm	12 mm	2105854	
10 m	8 bar	3/8"	8 mm	12 mm	2105856	

Spiral hose for balancers

- ▶ High-quality PA12 spiral hose for attachment to balancers FZ
- ▶ Keeps things tidy in the assembly line work area
- ▶ 1 m connecting hose for connecting to the compressed air network and tool
- ▶ Incl. all required parts for mounting on the balancer
- ▶ PA12 Spiral hose

The following are recommended for connecting to the compressed air supply network:

1x quick coupling 6 mm with hose bar (2200021), pluggable barbs 6 mm (2200031) and 2x ear clamps (2105008)



Fig. shows the use of the spiral hose. Spring balancer not included in scope of delivery

Model		Spiral hose for balancers
Art. no.		2106050
Technical specifications		
Useful length with spring balancer	m	1.6
ID	mm	8
OD	mm	10

Hose connection studs

Accessories Art. no.

8 mm hose connection ports, Y-shaped 020111045

