



CLEARPOINT®

THE WINNING COMBINATION

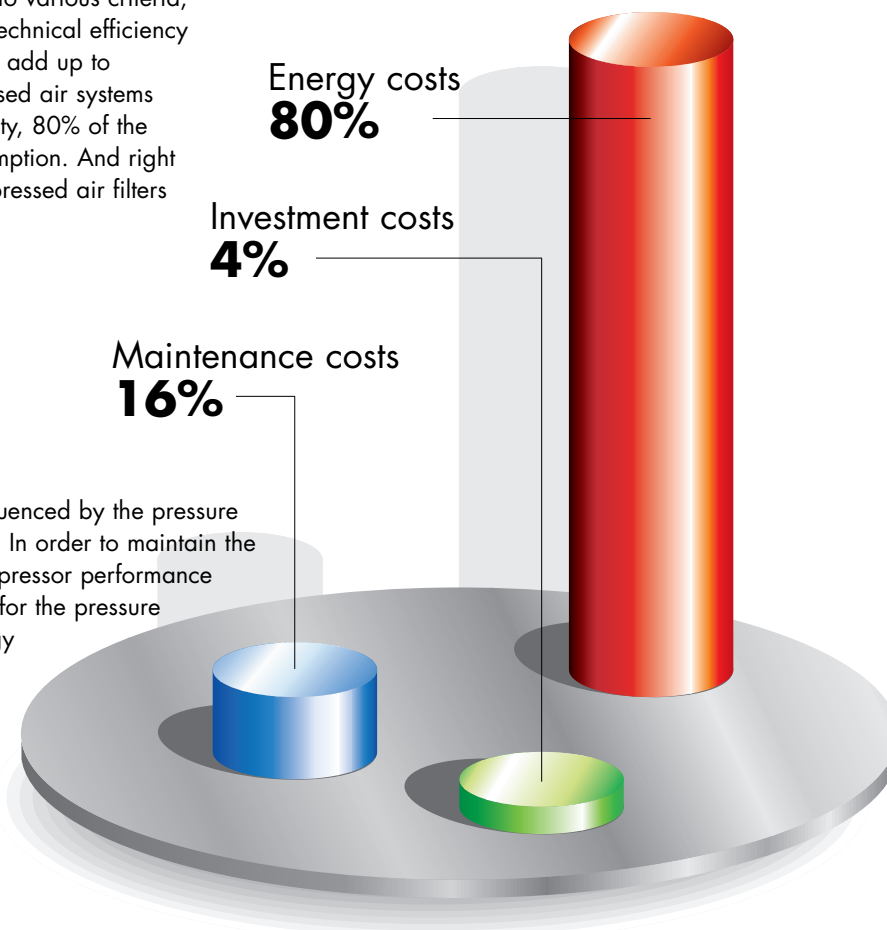
FOR CLEAN COMPRESSED AIR

THE QUALITY OF YOUR COMPRESSED AIR

The biggest potential for savings is in the reduction of your energy- and maintenance costs.

Compressed air filtration is assessed to various criteria, such as type, quality, reliability and technical efficiency of compressed air filters. All this must add up to economical efficiency: With compressed air systems working to more or less at full capacity, 80% of the running costs is due to energy consumption. And right here, the new **CLEARPOINT®** compressed air filters will help you save money.

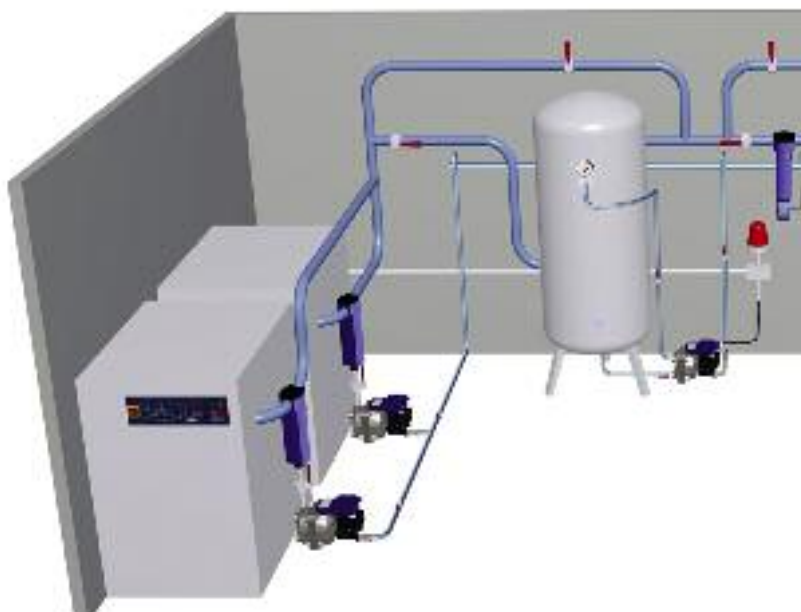
The highest potential of cost savings is based on the reduction of energy costs



The energy costs are significantly influenced by the pressure drop during compressed air filtration. In order to maintain the required operating pressure, the compressor performance has to be stepped up to compensate for the pressure drop. The consequence: higher energy consumption, increased compressor wear....resulting in higher running costs. The better solution: **CLEARPOINT®** compressed air filters from **BEKO**.

The new CLEARPOINT® compressed air filters offer you a number of important advantages

- Low, optimised operating costs, economic operation
- Reliable removal of liquids (such as water or oil), dust, gases or aerosols
- Longer filter service life and a higher quality compressed air
- Increased compressor lifecycle
- Improved product quality, lower spoilage rate
- Reduced maintenance, increased productivity
- Better service and working conditions



AN INNOVATIVE CONCEPT ...



The threaded connections of the **CLEARPOINT®** compressed air filters are generously dimensioned in comparison to other filters on the market. They are specially matched to the typical pipe diameters of various compressed air equipment, thus eliminating energy consuming pipe reductions. When combining two or more **CLEARPOINT®** filters, the innovative connection maintains the full diameter flow.

Flow resistance of a pipe bend at same pipe length

Connection	3/8"	1/2"	3/4"
Bend, R=d	0.2	0.3	0.3
Angle, 90°	0.8	1.0	1.2



Highly economical!
The flow optimised inlet into the filter element reduces flow resistance up to 75%.



CLEARPOINT® filter elements are installed without tie-rods so that the cross-sectional area is fully available. This reduces the flow resistance, while the space required for element replacement is only about one third compared with other designs – a great advantage under spatially restricted conditions.

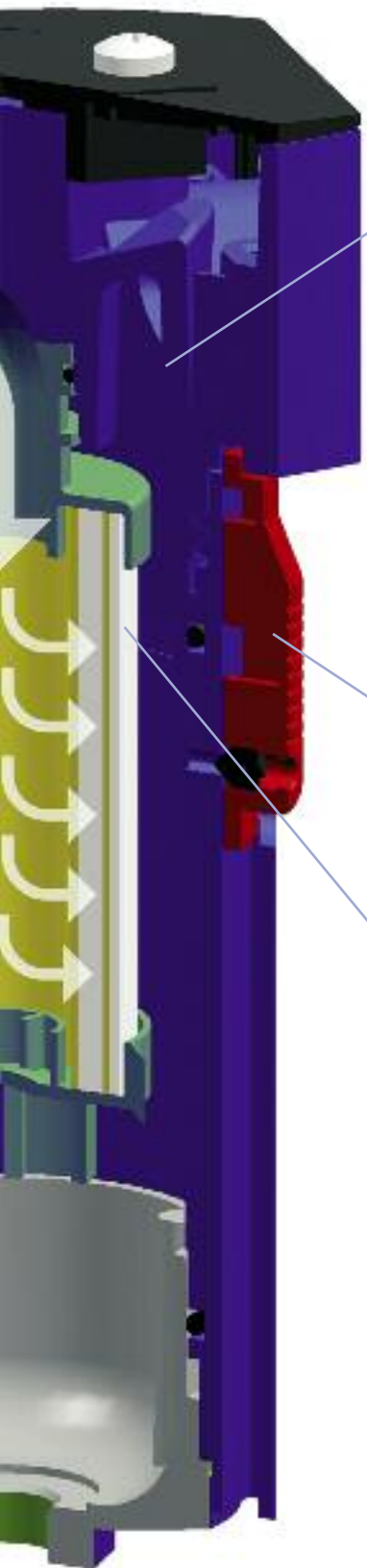
Thanks to the innovative push-fit design of the filter elements, replacement is very fast and simple. The element is held securely in a leaktight position by an O-ring seal at the top cap and three supports at the bottom of the housing.

With an extremely high void volume of 96%, the bor silicate filter material ensures that the pressure loss is kept to a minimum. Conventional filter material of sintered polyethylene only has a void volume of 45%. With **CLEARPOINT®** filters, the cross-sectional area available for flow is therefore more than twice as large.

Conventional filter media are often hydrophilic, so that the fibres will swell up and reduce the void volume. The filter then becomes clogged, the pressure loss increases, and so do the operating costs. By contrast, the material of **CLEARPOINT®** filter elements is impregnated as a standard. This prevents swelling up of the filter material, permits a steady differential pressure, and avoids unnecessary expenditure.



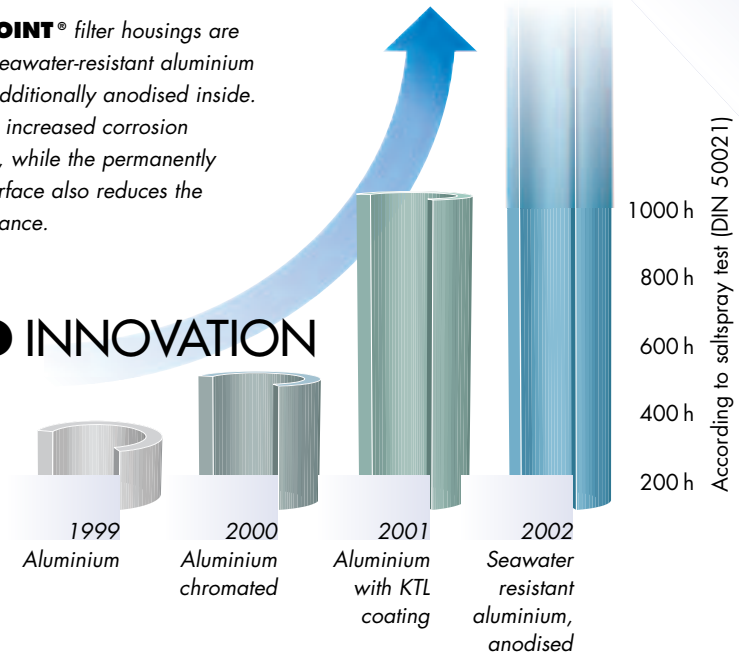
... CONVINCING IN DETAIL



Condensate from compressed-air filtration is nearly always aggressive, so that unprotected housings would be exposed to corrosion.

CLEARPOINT® filter housings are made of seawater-resistant aluminium and are additionally anodised inside. This offers increased corrosion protection, while the permanently smooth surface also reduces the flow resistance.

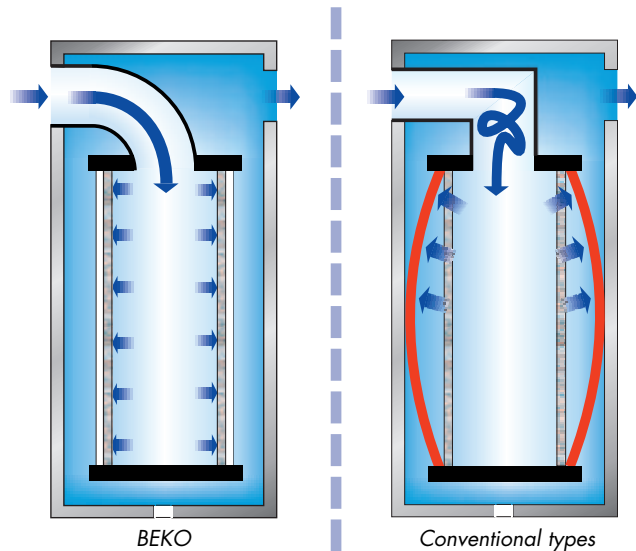
BEKO INNOVATION



The closing mechanism is a safety feature that allows 100 % control during opening of the filter housing. If the housing is opened while still under pressure, an audible warning signal will be given.



The standard needlefelt drainage layer has a high thermostability (up to 120 °C) compared with the foamed plastic used in other filter products. It is also chemically and mechanically highly resistant and free of silicone. Combined with the reliable construction, the filter element is absolutely safe against an expansion or damage to the drainage layer. A continual use of the whole filter surface is thus realised.



QUALITY DOUBLED

The condensate drain plays an important role in ensuring optimum filtration. What is the use of a high class filter, if the drain attached to the filter gives poor performance or is simply not suited for the job? In order to prevent this, **CLEARPOINT®** filters are equipped with the best condensate drain available: The electronically level controlled **BEKOMAT® 20 FM**. In addition to the well known reliable functions of a **BEKOMAT®**, this unit was developed especially for the use with filters and offers additional advantages:

- Integrated monitoring of the useful lifetime of the filter element to automatically indicate the optimal time of element change
- Easily readable, informative display
- Potential free contact for relaying a fault signal to a control centre
- Condensate discharge at the rear through elbow connector, ideal for installation close to a wall

For stationary and mobile applications from industry to medical: **CLEARPOINT®** filters are your guarantee for economic and top quality compressed air filtration.



Filter and drain must perform their duty in unity, otherwise condensate could be carried over, which lowers the quality of the treated compressed air and causes poor results at the down-stream compressed air points of use.



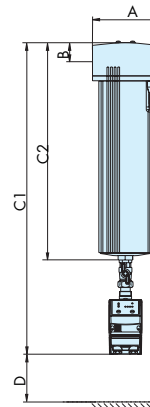
TECHNICAL DATA

Filter Model	Connection IN-OUT	Volume flow [m³/h]	Number of filter elements						Volume L	Weight kg	Classification acc. to PED 97/23/EG Category
				A	B	C1	C2	D			
S040	3/8"	35	1	75	28	395	180	150	0.32	0.75	-
S050	1/2"	65	1	75	28	425	210	150	0.37	0.85	-
S055	1/2"	100	1	75	28	480	265	150	0.44	1.2	-
S075	3/4"	150	1	100	34	495	280	150	1.03	1.7	-
M010	1"	200	1	100	34	565	350	150	1.22	2.1	-
M012	1"	250	1	100	34	600	385	150	1.41	2.2	-
M015	1 1/2"	320	1	146	48	580	365	160	2.92	4.1	-
M018	1 1/2"	420	1	146	48	633	418	160	3.42	4.5	-
M020	2"	600	1	146	48	683	468	160	3.92	5.1	1
M022	2"	780	1	146	48	780	565	160	5.02	6.1	1
M023	2"	1020	1	146	48	898	683	160	5.7	7.1	1
M025	2 1/2"	1300	1	260	77	886	671	200	16	19.9	2
M027	2 1/2"	1620	1	260	77	990	775	200	18	22.6	2
M030	3"	1940	1	260	77	1010	895	200	22	25.9	2
M032	3"	2400	1	260	77	1260	1045	200	24	29.9	2

Flanged filters are available for volume flows from 1420 up to 36920 m³/min., with connection sizes from DN 80 to DN 300.

Specifications of filter housings (model S040 to M032):

- Flow optimised housing made of seawater resistant aluminium
- Highly corrosion resistant, completely anodised
- Powder paint finish outside
- Max. operating pressure 16 bar
- Filter type C, G, F, S are equipped with BEKOMAT 20 FM (incl. filter time management and potential free contact) as standard or with a float drain
- Filter type A only with manual drain valve
- Scaled dP-gauge available on request



In the case of a different operating pressure, the above volumetric flow should be multiplied by the relevant 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 factor	0.21	0.29	0.38	0.53	0.65	0.76	0.84	0.92	1	1.07	1.13	1.19	1.25	1.31	1.36	1.41	1.46	1.51

Specification of filter elements:

- Corrosion resistant end caps
- Stainless steel support sleeve
- Coarse fleece
- 6 layers of filter media
- Coarse drainage layer
- 2. stainless steel support sleeves
- Fine needlefelt drainage layer
- High chemical and thermal resistance

Quality classification according to DIN ISO 8573.1

Max. oil carryover						Particle filtration
0.01 mg/m³ Class 1						S N A
0.1 mg/m³ Class 2						F
1 mg/m³ Class 3						
5 mg/m³ Class 4						G
25 mg/m³ Class 5						C
	25 µm Class 5	15 µm Class 4	5 µm Class 3	1 µm Class 2	0.1 µm Class 1	

Filtration grade

- C = Coarse filter
- G = general purpose filter
- F = Fine filter
- S = Super fine filter
- A = Activated carbon filter
- N = Nanofilter