Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Киргизия (996)312-96-26-47
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Казахстан (772)734-952-31
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Россия (495)268-04-70
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

http://beko.nt-rt.ru || bko@nt-rt.ru

CLEARPOINT®

THE WINNING COMBINATION FOR CLEAN COMPRESSED AIR

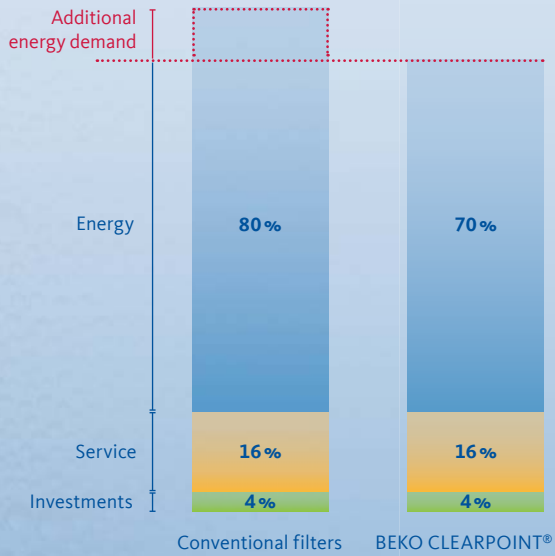
COST SAVINGS BASED ON ENERGY COST REDUCTION

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. The new CLEARPOINT® compressed air filters will help you save money.

Savings with 3E by lower differential pressure

A plus for productivity and the environment
(energy savings = CO_2 reduction)



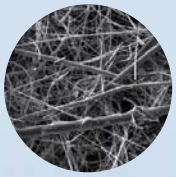
A FULL RANGE OF COMPRESSED AIR FILTRATION

Flanged and threaded filters with BEKOMAT®

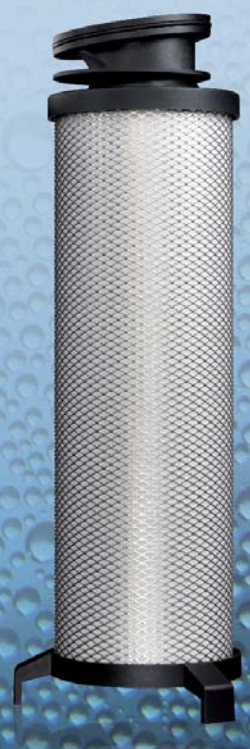
High-pressure filter up to 725 psig

High-pressure filter 1,450 to 7,250 psig

Water separator



	Old filter material	New filter material
Borosilicate fibres	2 ... 10 µm	‹ 2 µm
Separation area	100 %	400 ... 500 %
Cavity volume	95 %	98 %
Material volume	5 %	2 %
Max. temperature	248 °F	176 °F
Max. temperature (1 h)		212 °F
Mechanical stability through	Binding agents	Thermally fused boro-silicate and polyester fibres
Material emissions	Possible	Not possible



THREADED COALESCING FILTERS

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 can be equipped with the best condensate drain available on the market:

The electronically level controlled BEKOMAT®

In addition to the well known reliability of a BEKOMAT®, this combination offers additional advantages:

- Easy to read and informative display
- Free contact for relaying a fault signal to a control center
- Condensate discharge at the rear through a barbed hose connector, which is ideal for installations close to a wall

+1:

ENERGY EFFICIENT ELEMENTS

All NEW 3E element design made of sintered borosilicate fibers for ultra low differential pressure

+2:

FLOW OPTIMIZED HOUSING

The unique curved inlet design was engineered to provide the lowest possible differential pressure

+3:

MAXIMUM RELIABILITY

Double threaded filter head, extruded, fully anodized sea-water resistant housing, and zero loss drain option

+4:

COMPREHENSIVE LINE

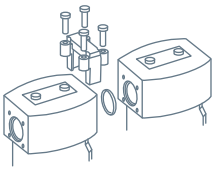
From 25 to 1,900 scfm, also available in high pressure, 725 psig versions

+5:

SIMPLIFIED MAINTENANCE

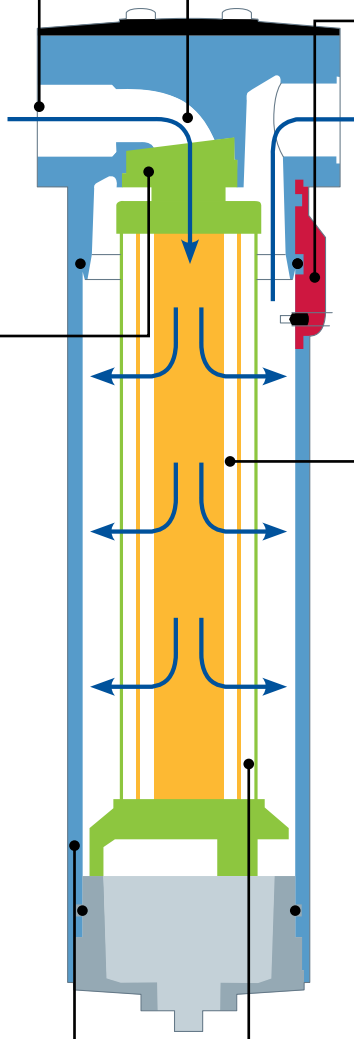
Simple, push-fit element design without the use of tie-rods and integrated housing safety latch with audible alarm

The threaded connections of the CLEARPOINT® compressed air filters are oversized 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 AT INLET
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



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.

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 leak tight 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 98%, the borosilicate 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. Compared to other filter elements, 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.

Condensate from compressed air filtration is nearly always aggressive, so that unprotected housings would be exposed to corrosion. CLEARPOINT® housings are made of seawater-resistant aluminum and are additionally anodized inside. This offers increased corrosion protection, while the permanently smooth surface also reduces the flow resistance.

Aluminum

Aluminum, chromatized

Aluminum, cathodic dip-coating

Salt waterproof aluminum, anodized

The standard integrated drainage layer, which does not require any additional outer layers (i.e. foam sock), does not release particles and has a higher thermostability compared with the foam 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 realized.

WATER SEPARATORS

More than 60% of all condensate accumulates in the water separator. Why cancel out the cost efficiency provided by CLEARPOINT® water separators through the use of inadequate float drains or energy consuming timer solenoid drains? Every model of water separator can be equipped with the best condensate drain available on the market:

The electronically level controlled BEKOMAT®

In addition to the well known reliability of a BEKOMAT®, this combination offers additional advantages:

- Easy to read and informative display
- Free contact for relaying a fault signal to a control center
- Condensate discharge at the rear through a barbed hose connector, which is ideal for installations close to a wall

+1:

99% REMOVAL RATE

Optimized design of separator turbine ensure maximum water removal and operational reliability

+2:

NO RE-ENTRAINMENT

The internal design blocks impurities from being reintroduced due to variable speeds and reduced flow rates

+3:

MAXIMUM RELIABILITY

Double threaded filter head, extruded, fully anodized sea-water resistant housing, and zero loss drain option

+4:

FLOW OPTIMIZED HOUSING

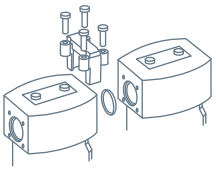
The unique curved inlet design was engineered to provide the lowest possible differential pressure

+5:

COMPREHENSIVE LINE

From 25 to 1,900 scfm, also available in high pressure, 725 psig versions

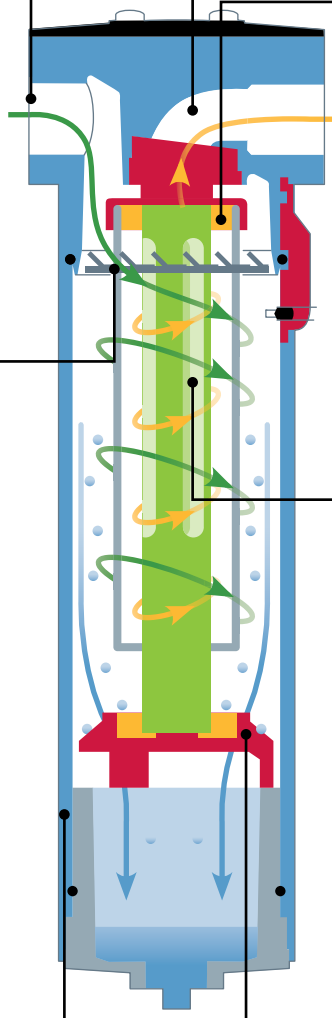
The threaded connections of the CLEARPOINT® compressed air water separators are oversized in comparison to other separators on the market. They are specially matched to the typical pipe diameters of various compressed air equipment, which eliminates energy consuming piping. No flow resistance is generated by unnecessary pipe unions or fittings thus enhancing performance.



FLOW RESISTANCE AT INLET
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

A riser that is a part of the immersion pipe prevents the re-entrainment of particles to the upward rotation of the condensate flow, which substantially increases the purity of the air and keeps downstream sources free and clear of liquid.



The combination of the flow optimized supply line with the specially designed turbine provide for a water removal rate of 99%. At the inlet of the CLEARPOINT® water separator, the compressed air encounters the turbine that puts the incoming air into a high speed rotary motion. The direct, outward rotational force sends the liquid content into the separator, where the droplets flow into the collection chamber.

The immersion pipe was engineered to specifically to guide the compressed air optimally to the outlet, and keep flow loss to an absolute minimum.

Condensate from compressed air filtration is nearly always aggressive, so that unprotected housings would be exposed to corrosion. CLEARPOINT® housings are made of seawater-resistant aluminum and are additionally anodized inside. This offers increased corrosion protection, while the permanently smooth surface also reduces the flow resistance.

Aluminum

Aluminum, chromatized

Aluminum, cathodic dip-coating

Salt waterproof aluminum, anodized

A shield was developed and integrated into the base of the separator that stabilizes the compressed air stream in the collection chamber. This engineered approach effectively prevents the stir up and sweeping effect of liquid that has already been separated.

FLANGED SERIES

The design of our flanged filters and water separators began with energy efficieny in mind. When considering the large volumes of compressed air being processed in relation to the energy output of the compressor, the conclusion was simple. Utilize the highest quality, most efficient filter medium available, and combine that with the energy saving benefits of the best condensate drain available on the market:

The electronically level controlled BEKOMAT®

The BEKOMAT® intelligent, zero air loss drain is standard on all flanged model sizes and offers additional advantages:

- Low maintenance with a 1,000,000 cycle rating
- Potential free contact for relaying a fault signal to a control center
- Sensor controlled operation that is safe for all condensate types

+1:

ENERGY EFFICIENT ELEMENTS

Large surface area of the filter elements coupled with the material void volume of 98% result in the lowest pressure loss

+2:

EASE OF MAINTENANCE

Convenient top-loading filter design using "twist and lock" element holders

+3:

MAXIMUM RELIABILITY

Special galvanizing and degreasing processes ensure the highest grade interior and exterior surface protection

+4:

WIDE PRODUCT RANGE

For large volume flow rates ranging from 1,900 to 21,000 scfm with flange sizes from 4" to 12" connections

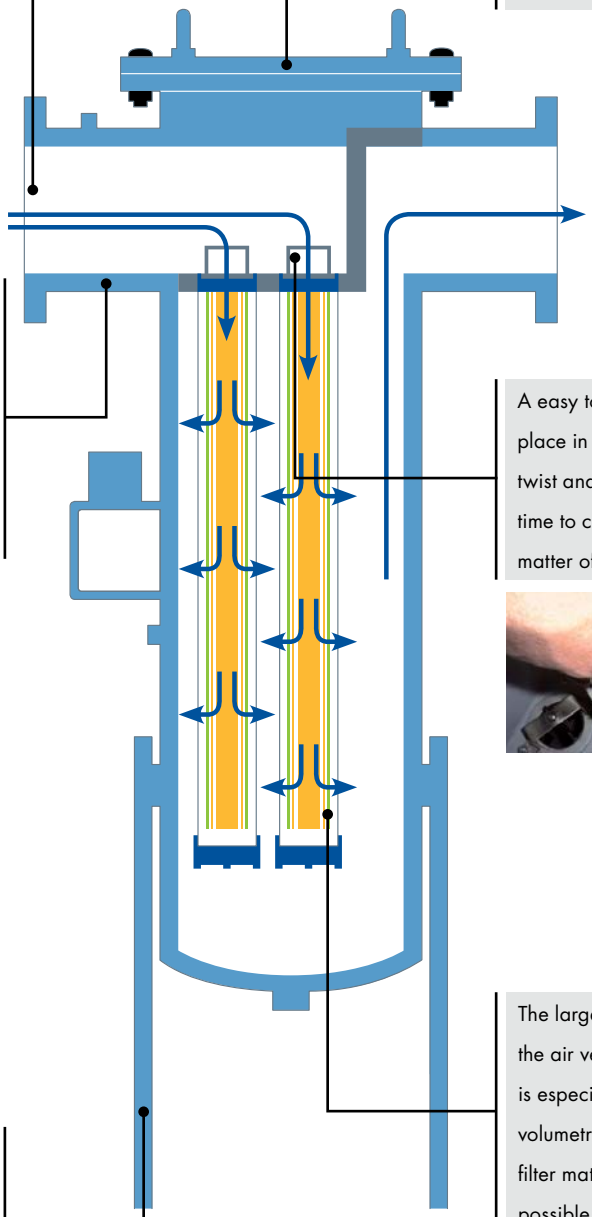
+5:

INSTALLATION FLEXIBILITY

The entire range of flange filters and water separators can be either suspension mounted or floor anchored

The flanged connections have two, one-level compressed air connections allowing for easy installation to existing systems. They are also dimensioned for optimum port matching in relation to system flow rates.

The replacement of filter elements is an easy task with the top-loading design. In addition, there are no tie-rods employed to hold the elements in place making maintenance quick and efficient with a minimal amount of dismantling of components. When the upper plate is loosened, a single bolt may be left in place to serve as a pivot joint, while in smaller model sizes the upper plate can easily be removed completely.



CLEARPOINT® flanged filter housings receive full bath galvanizing - The same method used when preparing metals for high temperature applications. Prior to the galvanizing process, the housings are subject to alkaline de-greasing and pickling, which results in a high grade interior and exterior surface finish with maximum protection.

A easy to use, filter holder keeps the elements in place in the base plate, while allowing for simple twist and lock element installation. When it comes time to change the filter elements, it is simply a matter of twist and pull.

The large surface area of the filter elements reduces the air velocity to more energy efficient values. This is especially important when considering large volumetric flows. The void volume of the polyfiber filter material is 98% and this ensures the lowest possible pressure loss across the filter media.

In order to keep installation options open and flexible, BEKO flanged housings can be mounted either by suspension or with optional mounting feet that can be anchored to the floor. This allows users to make the absolute best use of the facility space available.

TECHNICAL DATA

STANDARD COALESCING FILTERS AND WATER SEPARATORS*

Filter Model	Connection IN-OUT	Flow Rate scfm	Max. Operating Pressure	A	B	C2	D	Volume gal	Weight lbs
S040*	⅜″	25	232	2.95	1.10	7.09	5.91	0.07	1.65
S045*	½″	30	232	2.95	1.10	7.09	5.91	0.07	1.65
S050*	½″	50	232	2.95	1.10	8.27	5.91	0.08	1.87
S055	½″	80	232	2.95	1.10	10.43	5.91	0.11	2.65
S075*	¾″	100	232	3.94	1.34	11.02	5.91	0.23	3.75
S100*	1″	125	232	3.94	1.34	11.02	5.91	0.26	4.18
M010*	1″	160	232	3.94	1.34	13.78	5.91	0.30	4.63
M012	1″	200	232	3.94	1.34	15.16	5.91	0.33	4.85
M015*	1 ½″	250	232	5.75	1.89	14.37	6.30	0.67	9.04
M018	1 ½″	330	232	5.75	1.89	16.46	6.30	0.78	9.92
M019*	1 ½″	450	232	5.75	1.89	18.43	6.30	0.81	10.61
M020*	2″	500	232	5.75	1.89	18.43	6.30	.90	11.24
M022*	2″	600	232	5.75	1.89	22.24	6.30	1.12	13.45
M023	2″	800	232	5.75	1.89	26.89	6.30	1.38	15.65
M025*	2 ½″	1000	232	10.24	3.03	26.42	7.87	3.67	43.87
M027	2 ½″	1300	232	10.24	3.03	30.51	7.87	4.36	49.82
M030*	3″	1500	232	10.24	3.03	35.24	7.87	5.15	57.10
M032	3″	1900	232	10.24	3.03	41.14	7.87	6.14	65.92

HIGH PRESSURE COALESCING FILTERS AND WATER SEPARATORS*

Filter Model	Connection IN-OUT	Flow Rate scfm	Max. Operating Pressure	A	B	C2	D	Weight lbs
HP50S040*	⅜″	100	725	2.95	1.10	7.10	7.10	1.65
HP50S050*	½″	190	725	2.95	1.10	8.30	7.10	1.85
HP50S055	½″	300	725	2.95	1.10	10.40	7.10	2.65
HP50S075*	¾″	440	725	3.95	1.34	11.00	7.10	3.75
HP50M010*	1″	600	725	3.95	1.34	13.80	7.10	4.63
HP50M012	1″	710	725	3.95	1.34	15.20	7.10	4.85
HP50M015*	1 ½″	1000	725	5.75	1.89	14.40	7.10	9.04
HP50M018	1 ½″	1210	725	5.75	1.89	16.50	7.10	9.92
HP50M020*	2″	1720	725	5.75	1.89	18.40	7.10	11.24

***Indicates model sizes that are also available as water separators**

Correction Factors for Standard Water Separators and Coalescing Filters

Operating pressure psig	5	10	15	30	45	55	70	85	100	115	125	140	155	170	185	200	215	232
Correction factor	0.08	0.18	0.25	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

Correction Factors for High Pressure Water Separators and Coalescing Filters

Operating pressure psig	60	90	100	150	200	300	450	600	725
Correction factor	0.21	0.29	0.38	0.53	0.65	0.76	0.84	0.92	1.00

FLANGE WATER SEPARATORS

Filter Model	Connection IN-OUT	Flow Rate scfm	Max. Operating Pressure	A	B	C2	D	Weight lbs
L100	4″	1900	232	16.73	6.54	35.83	12.40	93
L102	4″	2800	232	18.90	7.80	38.19	18.90	117
L150	6″	3800	232	19.10	8.35	50.79	18.90	165
L156	6″	6500	232	21.06	8.74	51.58	18.50	209
L200	8″	7500	232	22.83	10.95	66.14	18.31	337
L204	8″	9300	232	24.80	11.34	66.93	17.72	366
L254	10″	13000	232	29.53	13.07	81.50	17.72	392
L304	12″	21000	232	34.25	14.57	95.28	16.93	549

FLANGE COALESCING AND PARTICULATE FILTERS

Filter Model	Connection IN-OUT	Flow Rate scfm	Max. Operating Pressure	A	B	C2	D	Weight lbs
L100	4″	1900	232	21.26	6.38	45.75	13.00	130
L102	4″	2800	232	23.62	6.46	46.22	18.00	185
L150	6″	3800	232	23.62	7.44	48.19	18.00	217
L156	6″	6500	232	25.60	7.24	48.58	18.00	232
L200	8″	7500	232	27.95	8.43	50.95	18.00	295
L204	8″	9300	232	30.31	8.43	51.34	18.00	378
L254	10″	13000	232	34.65	9.69	54.76	18.00	552
L304	12″	21000	232	38.98	10.87	57.91	18.00	776

FILTER ELEMENT TABLE

Element Grade	Element Type	Micron Rating	Oil Carryover	Oil Vapor Content	Pressure	Approvals
Grade W	Water Separator	-	-	-	0.87 psid	ASME Coded Vessel with 'U' Stamp as standard (CRN Optional) *Flange Filters Only*
Grade C	Coarse	25 µm	5 mg/m³ (ppm)	-	0.54 psid	
Grade G	General	5 µm	1 mg/m³ (ppm)	-	0.70 psid	
Grade F	Fine	1 µm	0.1 mg/m³ (ppm)	-	0.86 psid	
Grade S	Superfine	0.01 µm	0.01 mg/m³ (ppm)	-	1.04 psid	
Grade A	Activated Carbon	0.01 µm	-	0.003 mg/m³ (ppm)	0.70 psid	