Oil-Water Separator

ecosep S mini + standard
ecosep S compact
ecosep S plus

New!
Series extended

Proven security

The new Oil-Water Separators of the extended ecosep S series provide the prerequisites for the economic and reliable processing of compressor condensate.

The problem solved by the ecosep S Oil-Water Separators is well-known: in compressed air systems, condensates form that contain not only water but also dirt, oil, and other impurities. The condensate is removed from the supply network by drains. It may not be piped into the sewage system because of the high oil content, and disposal by external companies is expensive.

Processing technology provides a remedy for this: modern Oil-Water Separators enable the separation of the condensates into clean water and retained oil content. The water can be piped legally and without further ado into the sewage system.

Parker Zander offer the Oil-Water Separators in three versions: ecosep S compact, ecosep S standard, ecosep S plus and in eighteen output sizes. This corresponds to compressor capacities of around 72 to 6,000 m³/h.

The legal provisions and environmental objectives are unambiguous: condensate from a compressed air network contains mineral oils. Therefore it may only be piped into waste water if the remaining oil content is below 20 mg/l.

Some regions even demand values ≤ 10 mg/l. This is to protect both our environment and ultimately our own health.

The Oil-Water Separators ecosep S offer more security than is required by German law.

They have been constructed especially for the processing of compressed air condensate, have been produced in their thousands and have proven themselves in use where safe separation of condensates into their oil and water parts is required.

The result: the ecosep S series, the ‘S-class“ of Oil-Water separation:

ecosep S compact
ecosep S mini and standard
ecosep S plus +

Parker Zander

ENGINEERING YOUR SUCCESS.

ecosep S

Oil-Water Separator

Throughout development, emphasis has been placed on user-friendliness and economic efficiency.

The advantages of the ecosep S speak for themselves

- General technical approval from the German Institute for Construction Technology in Berlin.
- A two-phase test to ensure the safe checking of the cleaned condensate (test valve) is standard.
- Flow-optimized layout and enlarged tank volumes increase the degree of separation.
- A range of sizes for every possible use and outputs up to 100 m^3/min.
- Generous dimensions ensure contingency reserves.
- Effective combination of pre-filter and activated carbon filter ensures long service life and prevents overloading of the activated carbon.
- A special document compartment keeps the maintenance log and operating instructions clean and to hand.
- An oil leakage sump is available for most models.
- 3 or 4 possible connections 1/2” for the condensate intake.

ecosep S

Oil-Water Separator

Reduce costs

It goes without saying that in daily use the Oil-Water Separators of the ecosep S series save operational costs: their service life is long and maintenance is simple; expensive external disposal of the condensate is unnecessary. But there are even cost advantages when purchasing as the modular construction of the ecosep S separator enables series production of the components. So the costs of purchase remain manageable and they pay off within a very short time.

Self-processing is more economic

Usually, the oil content in non-processed compressed air condensate stands between 200 and 500 mg/l. The user has two options. He can have the condensate disposed of by an external company, which is expensive.

Or , he can process the condensate himself - the more economic solution. The main part, the 'water', can be piped into the sewage system without further ado. Here, the German Water Act prescribes in § 62 a treatment that follows 'recognized technical regulations'.

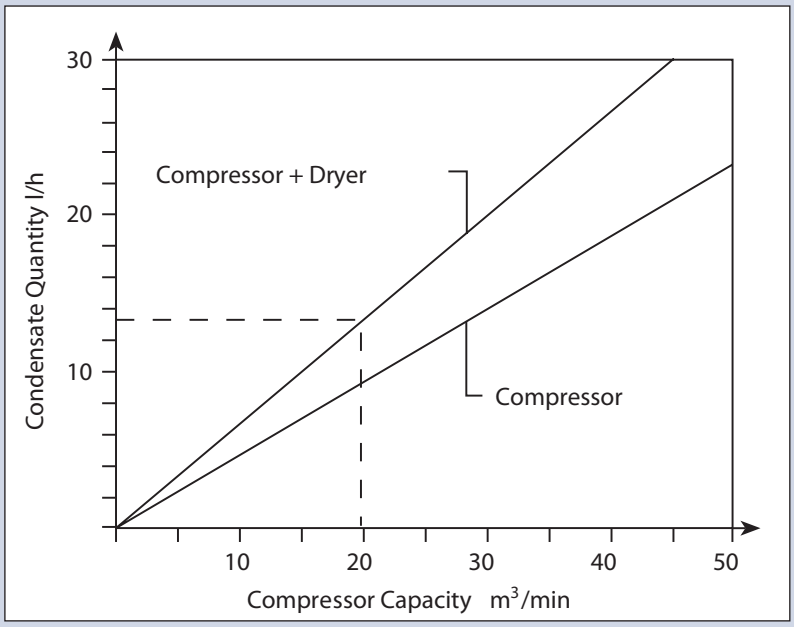
Which condensate quantities arise

For Example:
Condensate quantities at 20°C, intake temperature and 70 % relative humidity, discharge pressure 8 bar.

Compressor output:
20 m^3/min.

Full-load operation:
10 h/Day, 20 Days/Month

Condensate quantities:
13.5 l/Std., 135 l/Day, 2700 l/Month



ecosep S compact

Oil-Water Separator

ecosep S compact: highly economic condensate processing in a compact format:

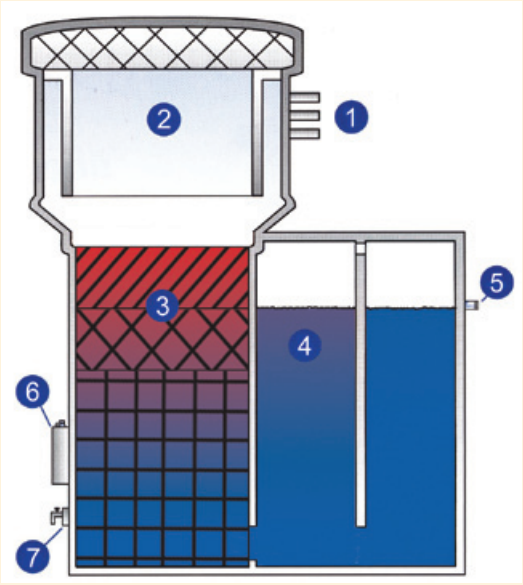
The ecosep S compact reliably removes the oil - through a combination of different filter materials - from the arising condensate. If sizes of the ecosep S compact are correct, the water retains an oil content of < 2mg/l and can be piped directly into the sewage system.

- General technical approval from the German Institute for Construc tion Technology in Berlin.
- 3-4 possible connections for the condensate intake.
- 3-stage combi-filter
- A two-phase test to ensure the safe checking of the cleaned condensate (test valve) is standard.
- Secure wall and floor mounting
- A special document compartment keeps the maintenance log and operating instructions clean and to hand.
- Six sizes for outputs to 12 m³/min.

Effective separation

The functional principle of the ecosep S compact is simple and effective. The condensate flows through an expansion and ventilation chamber, which is equipped with an exhaust air filter to retain aerosols. The condensate runs directly from the expansion chamber into the 3-stage combi-filter. One stage serves as a coalescence stage, another binds free-floating oil, then the condensate passes through the activated carbon, which undertakes the finer separation. A subsequent safety chamber prevents oil overflow into the water outlet in case of filter breakage.

This three-stage separation is safe and has proven itself to be very reliable: if sizes are correct, the water retains an oil content of <10 mg/l and can be piped directly into the sewage system.

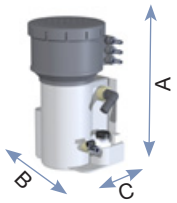


ecosep S compact

Oil-Water Separator

Technical Specifications

Type Stock No.	Compr. Output max.	Tank weight empty	Overall dimensions			Connection thread with hose barb	
			A	B	C		
	m³/min*	kg	mm	mm	mm	Intake	Outlet
ECOSEP-S1-COMPACT	1.8	5	445	251	240	3 x G 1/2“	G 1“
ECOSEP-S2-COMPACT	2.5	7	545	251	240	3 x G 1/2“	G 1“
ECOSEP-S3-COMPACT	3.5	12	613	373	254	3 x G 1/2“	G 1“
ECOSEP-S6-COMPACT	6	18	908	330	330	4 x G 1/2“	G 1“
ECOSEP-S8-COMPACT	10	22	962	595	375	4 x G 1/2“	G 1“
ECOSEP-S10-COMPACT	12	25	965	621	513	4 x G 1/2“	G 1“



* Output ratings for rotary screw air compressors in use for non-emulsifying oils. Output must be adjusted for other compressor types and other compressor oils (see below).

SepaKit contents: Air filter and 3-stage water filter, sturdy disposal sack, extra long gloves

Stock No.	ecosep S 1 compact	ecosep S 2 compact	ecosep S 3 compact	ecosep S 6 compact	ecosep S 8 compact	ecosep S 10 compact
SEPAKIT-S1-COMPACT	1					
SEPAKIT-S2-COMPACT		1				
SEPAKIT-S3-COMPACT			1			
SEPAKIT-S6-COMPACT				1		
SEPAKIT-S8-COMPACT					1	
SEPAKIT-S10-COMPACT						1

Loose accessories

Stock No.	Function	suitable for
ECOSEP-S-EHT 230	230 V heater	ecosep S6 compact to ecosep S10 compact
ECOSEP-S-CONTACT-B	Alarm contact (external)	ecosep S6 compact to ecosep S10 compact
ECOSEP-S-OTP	Oil test paper	all sizes
ET-TRUBUNGSREFERENZ	Opacity reference glass	all sizes

From ecosep S 6 compact a 115 V heater is available on request.

	max. Compressor output in m³/min																	
Compr. type	Rotary screw air compressor						Rotation compressor oil-flooded						Reciprocating compressor 1 and 2 stage					
ecosep S	1	2	3	6	8	10	1	2	3	6	8	10	1	2	3	6	8	10
Turbine oil	1.8	2.5	3.5	6	8	10	1.8	2.5	3.5	6	8	10	1	1.2	1.8	3	4	6
VCL oil	1.2	1.7	2.4	4	5	8	0.9	1.3	1.8	3	4	6	0.6	0.9	1.2	2	2.7	4
VDL oil	1.2	1.7	2.4	4	5	8	0.9	1.3	1.8	3	4	6	0.6	0.9	1.2	2	2.7	4
Synthetic oil	1.2	1.7	2.4	4	5	8	0.9	1.3	1.8	3	4	6	0.6	0.9	1.2	2	2.7	4

Oil-Water Separators cannot process any stable emulsions or water-soluble oils.

ecosep S mini and standard

Oil-Water Separator

Advantages of the ecosep S mini + standard:

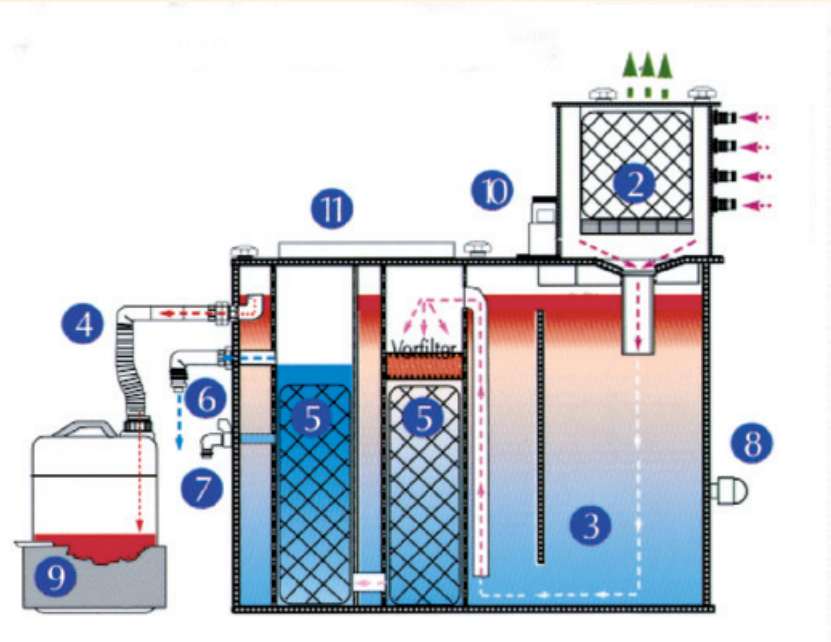
This standard production range has proven itself a thousand times over and features:

- General technical approval from the German Institute for Construction Technology in Berlin.
- Four possible connections 1/2” for the condensate intake.
- Effective combination of pre-filter and activated carbon filter ensures long service life and prevents overloading of the activated carbon.
- Flow-optimized layout and enlarged tank volumes increase the degree of separation.
- Generous dimensions ensure contingency reserves.
- Identical filters for all models (from ecosep S 2) ensure simple stock control, no confusion, and cost-effective purchasing.
- A two-phase test to ensure the safe checking of the cleaned con densate (test valve) is standard.
- An oil leakage sump keeps the compressor station clean.
- A special document compartment keeps the maintenance log and operating instructions clean and to hand.
- Eight sizes for outputs to 70 m³/min.

Effective separation

The functional principle of the ecosep S standard is simple and effective. The condensate flows through an expansion and ventilation chamber, which is equipped with an exhaust air filter to retain aerosols. In the first processing stage, the settling chamber, mechanical pre-separation takes place:

the oil content of the condensate in the chamber floats to the surface. A pre-filter made of special plastic retains larger oil droplets. The subsequent activated carbon filter undertakes finer separation. This three-stage separation is safe and has proven itself to be very reliable: if sizes of the ecosep S are correct, the water retains an oil content of <10 mg/l and can be piped directly into the sewage system.

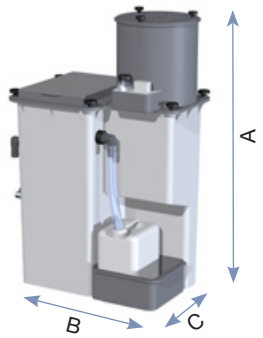


ecosep S mini and standard

Oil-Water Separator

Technical Specifications

Type Stock No.	Compr. Output max.	Tank contents	Weight empty	Overall dimensions			Connection thread with hose barb	
	m³/min*	l	kg	A mm	B mm	C mm	Intake	Outlet
ECOSEP-S-MINI	1.2	14	9	610	285	285	4 x G 1/2“	G 1“
ECOSEP-S1	2	22	15	650	430	325	4 x G 1/2“	G 1“
ECOSEP-S2	3	40	15	908	437	325	4 x G 1/2“	G 1“
ECOSEP-S4	5	74	22	965	600	380	4 x G 1/2“	G 1“
ECOSEP-S8	8	120	25	965	620	520	4 x G 1/2“	G 1“
ECOSEP-S15	15	160	28	1,160	620	520	4 x G 1/2“	G 1“
ECOSEP-S30	30	230	55	1,160	850	520	4 x G 1/2“	G 1“
ECOSEP-S61	70	790	90	1,450	1,300	1,000	4 x G 1/2“	G 2“



* Output ratings for rotary screw air compressors in use for non-emulsifying oils. Output must be adjusted for other compressor types and other compressor oils (see below).

SepaKit contents: Air and water filters (activated carbon), sturdy disposal sack, extra long gloves

Stock No.	ecosep S mini	ecosep S 1 standard	ecosep S 2 standard	ecosep S 4 standard	ecosep S 8 standard	ecosep S 15 standard	ecosep S 30 standard	ecosep S 61 standard
SEPAKIT 12A	1	1						
SEPAKIT 12B			1	1	1			
SEPAKIT 12E						1		
SEPAKIT 12C							1	
SEPAKIT 12D								1

Loose accessories

Stock No.	Function	Amount	suitable for
ECOSEP-S-EHT 230	230 V heater	1	ecosep S 2 to ecosep S 31
	230 V heater	2	ecosep S 61
ECOSEP-S-CONTACT-A	Alarm contact (internal)		ecosep S 61
ECOSEP-S-OTP	Oil test paper		all sizes
ET-TRUBUNGSREFERENZ	Opacity reference glass		all sizes

From ecosep S 2 a 115 V heater is available on request. 2 heaters are required for ecosep S 61.

Compr. type	max. Compressor output in m³/min Rotary screw air compressor								Rotation compressor oil-flooded								Reciprocating compressor 1 and 2 stage							
ecosep S	mini	1	2	4	8	15	30	61	mini	1	2	4	8	15	30	61	mini	1	2	4	8	15	30	61
Turbine oil	1.2	2.0	3.0	5.0	8.0	15.0	30.0	70.0	1.2	2.0	3.0	4.0	6.0	11.0	25.0	60.0	0.6	1.0	1.5	2.0	4.0	9.0	20.0	30.0
VCL oil	0.8	1.6	2.0	3.0	4.5	8.0	20.0	50.0	0.6	1.0	2.0	2.0	2.0	5.0	15.0	50.0	0.4	0.7	1.0	-	-	-	-	-
VDL oil	0.8	1.6	2.0	3.0	6.0	10.0	25.0	60.0	0.6	1.0	2.0	3.0	2.5	8.0	18.0	50.0	0.4	0.7	1.0	2.0	3.0	6.0	11.0	30.0
Synthetic oil	0.8	1.6	2.0	3.0	3.0	4.0	18.0	40.0	0.8	1.0	2.0	3.0	1.8	2.0	10.0	40.0	0.4	0.7	1.0	2.0	2.5	3.5	7.0	30.0

Oil-Water Separators cannot process any stable emulsions or water-soluble oils.

ecosep S plus

Oil-Water Separator

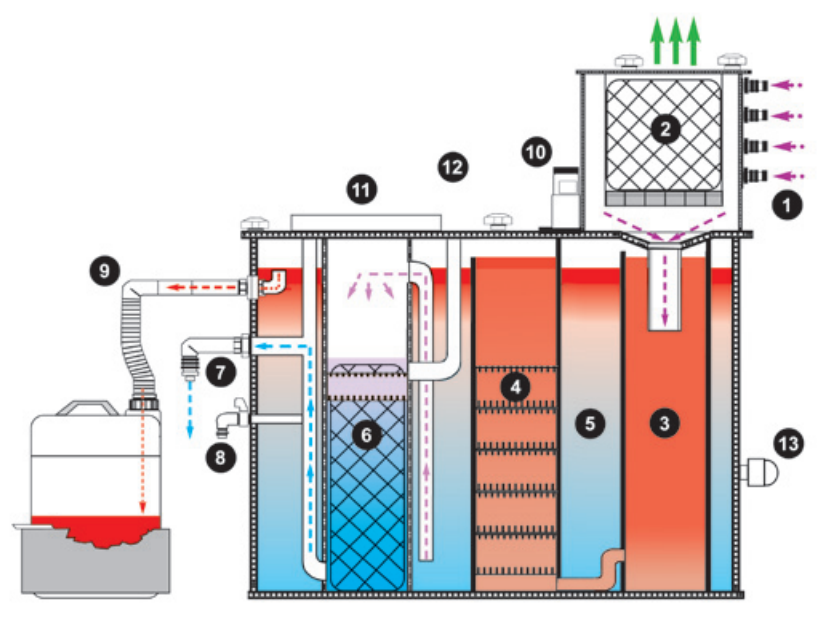
Advantages of the ecosep S plus. Improved design for large output:

Throughout further development, emphasis has been placed on greater efficiency at higher output levels. This is achieved through the use of a special flow filter. Ecosep S plus is particularly suited for use with problematic condensates.

- General technical approval from the German Institute for Construction Technology in Berlin.
- Four possible connections 1/2” for the condensate intake.
- Effective combination of pre-filter and activated carbon filter ensures long service life and prevents overloading of the activated carbon.
- Generous dimensions ensure contingency reserves.
- Fluidic layout and enlarged tank volumes increase the degree of separation.
- A two-phase test to ensure the safe checking of the cleaned condensate (test valve) is standard.
- An oil leakage sump keeps the compressor station clean.
- A special document compartment keeps the maintenance log and operating instructions clean and to hand.
- Thermostatically controlled heater (optional).
- Four sizes for outputs to 100 m³/min.

Effective separation

The functional principle of the ecosep S plus is simple and effective. The condensate flows through an expansion and ventilation chamber, which is equipped with an exhaust air filter to retain aerosols. In the first processing stage, the settling chamber, mechanical pre-separation takes place: the oil content of the condensate in the chamber floats to the surface. A pre-filter made of special plastic retains larger oil droplets. The subsequent activated carbon filter undertakes finer separation. This three-stage separation is safe and has proven itself to be very reliable: if sizes are correct, the water retains an oil content of <10 mg/l and can be piped directly into the sewage system.

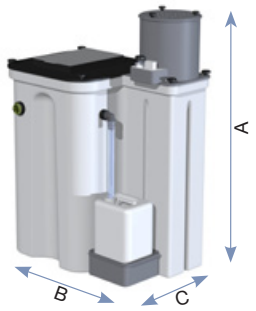


ecosep S plus

Oil-Water Separator

Technical Specifications

Type Stock No.	Compr. Output max. m³/min*	Tank weight empty kg	Overall dimensions A mm	B mm	C mm	Connection thread with hose barb Intake	Outlet
ECOSEP-S15-PLUS	15-25	45	1160	620	520	4 x G 1/2“	G 1“
ECOSEP-S30-PLUS	30-50	65	1160	850	520	4 x G 1/2“	G 1“
ECOSEP-S31-PLUS	40-60	70	1160	850	520	4 x G 1/2“	G 1“
ECOSEP-S61-PLUS	60-100	100	1450	1300	1000	4 x G 1/2“	G 2“



* Output ratings for rotary screw air compressors in use for non-emulsifying oils. Output must be adjusted for other compressor types and other compressor oils (see below).

SepaKit contents: Air filter, pre-filter, and water filter (activated carbon), sturdy disposal sack, long gloves

Stock No.	ecosep S 15 plus	ecosep S 30 plus	ecosep S 31 plus	ecosep S 61 plus
SEPAKIT-S15-PLUS	1			
SEPAKIT-S30-PLUS		1		
SEPAKIT-S31-PLUS			1	
SEPAKIT-S61-PLUS				1

Loose accessories

Stock No.	Function	Amount	suitable for
ECOSEP-S-EHT 230	230 V heater	1	ecosep S 15 plus to ecosep S 31 plus
	230 V heaters	2	ecosep S 61 plus
ECOSEP-S-CONTACT-A	Alarm contact (internal) S 61 plus		ecosep S 61 plus
ECOSEP-S-CONTACT-B	Alarm contact (external) S15-S31 plus		ecosep S 15 plus - S 31 plus
ECOSEP-S-OTP	Oil test paper		all sizes
ET-TRUBUNGSREFERENZ	Opacity reference glass		all sizes

A 115 V heater is available on request. 2 heaters are required for ecosep S 61 plus.

Compr. type	max. Compressor output in m³/min Rotary screw air compressor				Rotation compressor oil-flooded				Reciprocating compressor 1 and 2 stage			
ecosep S	15	30	31	61	15	30	31	61	15	30	31	61
Turbine oil	15-25	30-50	40-60	60-100	15-25	30-50	40-60	60-100	6-12	15-25	20-30	30-50
VCL oil	10-17	20-35	25-40	40-70	6-12	15-25	20-30	30-50	5-9	10-17	12-20	20-35
VDL oil	10-17	20-35	25-40	40-70	6-12	15-25	20-30	30-50	5-9	10-17	12-20	20-35
Synthetic oil	10-17	20-35	25-40	40-70	6-12	15-25	20-30	30-50	5-9	10-17	12-20	20-35

Oil-Water Separators cannot process any stable emulsions or water-soluble oils.

Supplementary products
Condensate drain ecodrain ED 3000

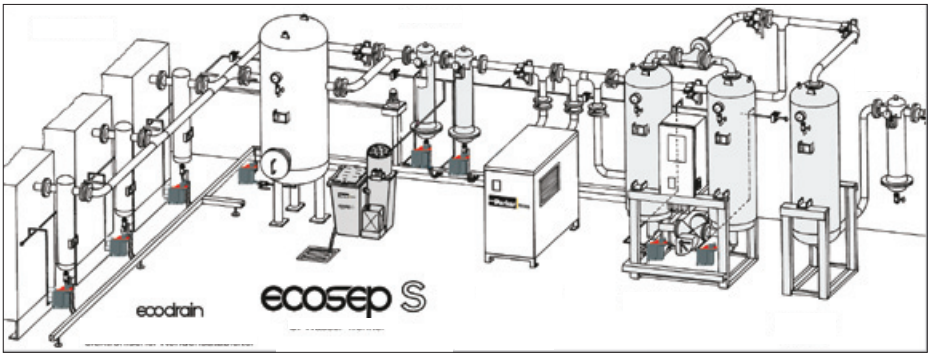
Short description

Electronic condensate drains from the ecodrain ED3000 series are distinguished by the following features:

- Wear and tear resistant magnetic core level regulation for optimum and loss-free draining of condensate.
- Integrated dirt filter between fill-level indicator and drain valve to protect the diaphragm valve during continual alarm monitoring.
- Generous diaphragm valve with condensate pre-activation for a long lifespan.
- Dry alarm contact (exceptions ED3002, ED3004)

Application: Compressed air to 16 bar – normal condensates

Model/Order no.	Output *1 Compressor After Cooler	Refrigeration dryers	Filter *2	Max. Operating pressure	Temperature range	Connections
ED3002-G230	---	---	720 m^3/h	16 bar	1 – 60 °C	G 3/8
ED3004-G230	240 m^3/h	480 m^3/h	2,400 m^3/h	16 bar	1 – 60 °C	1 x G 1/2, G 1/8
ED3007-G230	420 m^3/h	840 m^3/h	4,200 m^3/h	16 bar	1 – 60 °C	2 x G 1/2, G 1/8
ED3030-G230	1,800 m^3/h	3,600 m^3/h	18,000 m^3/h	16 bar	1 – 60 °C	2 x G 1/2, G 1/8
ED3100-G230	6,000 m^3/h	12,000 m^3/h	60,000 m^3/h	16 bar	1 – 60 °C	2 x G 1/2, G 1/8



Supplementary products
Condensate drain ecodrain ED 2000

Short description

Electronic condensate drains from the ecodrain ED2000 series are distinguished by the following features:

- Wear and tear resistant magnetic core level regulation for optimum and loss-free draining of condensate.
- Sturdy and high-pressure resistant design in compacted and sealed metal, additionally protected both inside and out by a powder coating.
- Generous diaphragm valve for a long lifespan.
- Dry alarm contact.
- Versions to 50 bar.

Applications: Compressed air and (certain) technical gases to 50 bar normal and problem condensates

Model/Order no.	Output [*1]					
	Compressor After Cooler	Refrigeration dryers	Filter [*2]	Max. Operating pressure	Temperature range	Connections
ED2010-G230	1,290 m³/h	2,580 m³/h	12,900 m³/h	16 bar	1 – 60 °C	2 x G ½
ED2020-G230	6,000 m³/h	12,000 m³/h	60,000 m³/h	16 bar	1 – 60 °C	3 x G ¾
ED2060-G230	66,000 m³/h	132,000 m³/h	660,000 m³/h	16 bar	1 – 60 °C	3 x G ¾
ED2010/25-G230	1,290 m³/h	2,580 m³/h	12,900 m³/h	25 bar	1 – 60 °C	2 x G ½
ED2020/25-G230	6,000 m³/h	12,000 m³/h	60,000 m³/h	25 bar	1 – 60 °C	3 x G ¾
ED2060/25-G230	66,000 m³/h	132,000 m³/h	660,000 m³/h	25 bar	1 – 60 °C	3 x G ¾
ED2010/40-G230	1,290 m³/h	2,580 m³/h	12,900 m³/h	40 bar	1 – 60 °C	2 x G ½
ED2020/40-G230	6,000 m³/h	12,000 m³/h	60,000 m³/h	40 bar	1 – 60 °C	3 x G ¾
ED2060/40-G230	66,000 m³/h	132,000 m³/h	660,000 m³/h	40 bar	1 – 60 °C	3 x G ¾
ED2010/50-G230	1,290 m³/h	2,580 m³/h	12,900 m³/h	50 bar	1 – 60 °C	2 x G ½
ED2010/25-G230/CO_2	1,290 m³/h	2,580 m³/h	12,900 m³/h	25 bar	1 – 60 °C	2 x G ½
ED2020/25-G230/CO_2	6,000 m³/h	12,000 m³/h	60,000 m³/h	25 bar	1 – 60 °C	3 x G ¾
ED2060/25-G230/CO_2	66,000 m³/h	132,000 m³/h	660,000 m³/h	25 bar	1 – 60 °C	3 x G ¾

Supplementary products
Water separator WS2 - WS19
Efficient fluids separator for compressed air networks

Short description

Parker Zander Separators from the WS series are designed to be efficient liquid separators and to remove large quantities of fluids from compressed air.

Water separators from the WS series remove fluids in the form of droplets and as wall flow, where it occurs for example on chillers and refrigeration dryers, over a wide nominal output range of 25 to 125 % with a high degree of efficiency of 92 - 99 % and are also suitable for use with frequency controlled condensing.

Innovative construction features of the casing as well as of the separator applications provide optimum flow management with the lowest possible pressure drag in relation to the required throughput rate: This enables a cost reduction during operation with reliable separation performance. To do this, the water separators are equipped with electronically controlled condensate drains from the ED3000 series, which reliably separate even large condensate volumes without loss of compressed air.

Preventive annual maintenance of the condensate drain is recommended; the water separator itself requires no maintenance.

Output overview by pressure drag

	Volume flow rate in m^3/h (1 bar_a, 20 °C, compressed to 7 bar_e)			
Stock No.	**< 50 mbar**	**< 70 mbar**	**< 100 mbar**	**< 120 mbar**
WS2K3	26	31	37	41
WS3K3	55	64	76	83
WS5K3	83	98	116	127
WS7K3	117	137	162	176
WS9K3	216	250	294	319
WS11K3	374	434	509	552
WS12K3	670	780	916	994
WS13K3	822	957	1125	1222
WS14K3	1096	1276	1500	1629
WS19K3	1711	2014	2404	2615

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