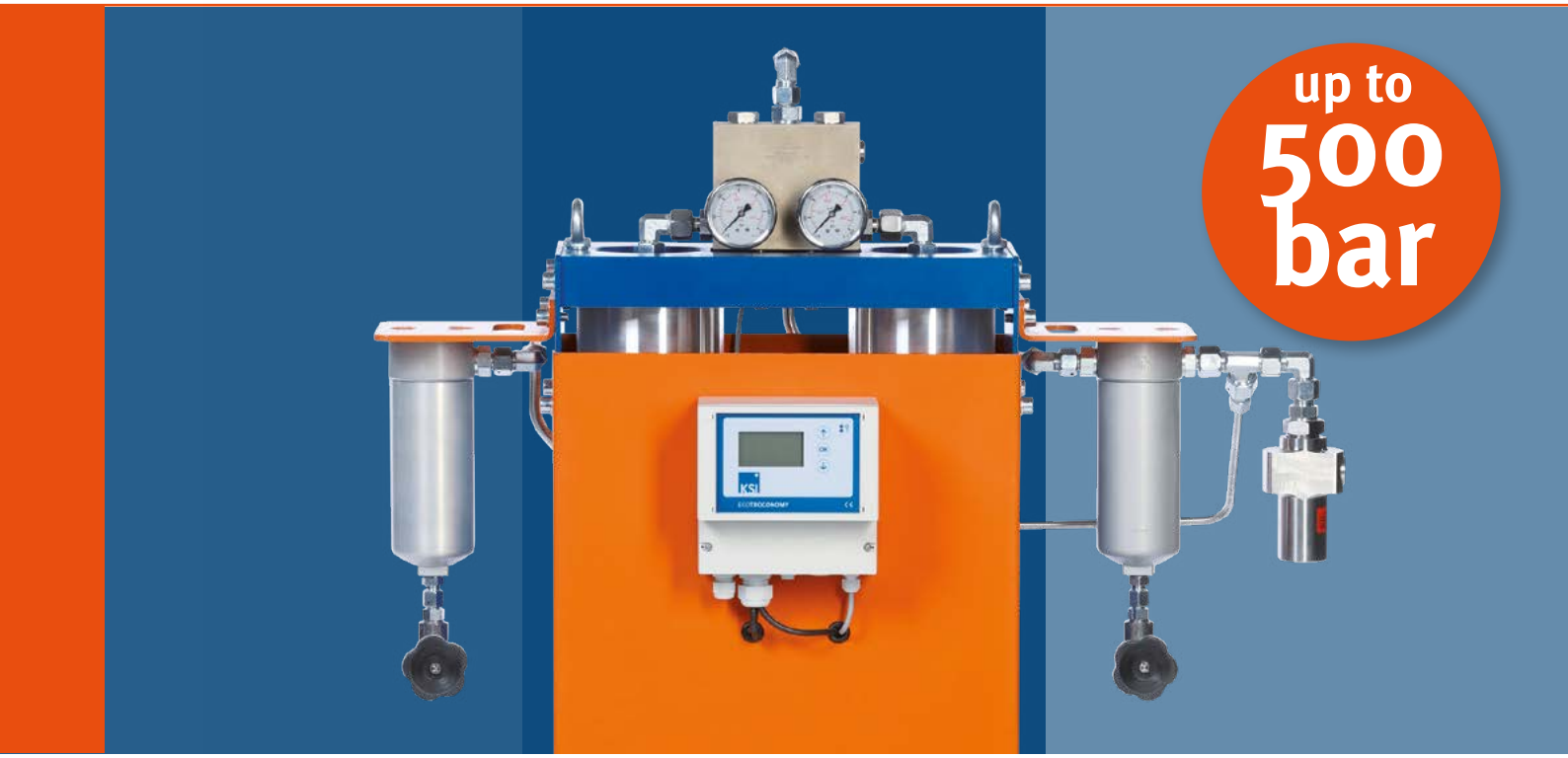
ECO**TROC**® AT-HP | **KSI** ECO**CLEAN**® HP

High-pressure Adsorption Dryer, Activated Carbon Adsorber and Filter

For economical processing through high-pressure compressed air applications

Rev 02_1021



Mechanical engineering competence „Made in Germany

Maximum mechanical engineering competence and production „Made in Germany“ guarantee a safe and reliable preparation of compressed air in the standard range from 50 bar to 500 bar.

The **ECOTROC® ATK-HP** series continues the globally successful **ECOTROC® ATK** adsorption dryer series. The design and the process engineering of the ATK-HP series are thus proven.

In addition to adsorption dryers, compressed air filters are also among the most important components in the high-pressure range, both for the simplest and the most complex installations. With housings made of aluminium and stainless steel as well as filters and filter elements for pressure stages up to 500 bar, the KSI also sets standards with the **KSI ECOCLEAN®** series.

The high-pressure components in industrial supplier quality provide a safe and compact system solution with the KSI-typical, excellent price/performance ratio.

The ECOTROC®ATKN-HP Plus-Effects +++

+ **the new benchmark in the cost-benefit ratio**
+ **compact design**
+ **premium high-pressure fittings**
+ **weld seam-free stainless steel containers**
+ **internal self-cleaning dust filter**
+ **stainless steel towers with 3-bed filling**
+ **preloaded desiccant bed**
+ **low-maintenance fittings**
+ **maximum service life and service life**
+ **robust, torsion-resistant construction and design**
+ **high-quality components ▸ long service life**
+ **intelligent control ▸ comfortable operability & operation**
+ **high service and maintenance friendliness ▸ minimized service costs**
+ **with compressor synchronisation control as standard**
+ **upper valve unit incl. variable purge air nozzle**

ECO**TROC**® AT-HP

High-pressure Adsorption Dryer and Activated Carbon Adsorber

Constant high compressed air quality

KSI high-pressure dryers of the **ECOTROC® ATK-HP**series are optimally designed for the treatment of compressed air and gaseous nitrogen in the high-pressure range up to 500 bar.

The concept of the entire series is unique in its compact design. It combines the vibration-resistant, torsion-resistant dryer unit consisting of high-precision turned container tubes and connecting blocks with a pre-stressed filling of highly active desiccant granules. The special 3-bed filling allows very high inlet temperatures.

The dryers of the **ECOTROC® ATK-HP** series as well as the attached filters of the FHP series with their filter elements fixed by means of tie rods offer hardly any contact surface for shear forces and abrasion. They allow safe, reliable and robust operation under the intermittent operation prevailing in the high pressure range and the associated pressure fluctuations and vibrations.

By using valve blocks, change-over and expansion valves made of corrosion-resistant stainless steel and seamless stainless steel vessels, the **ATK-HP** series dryers are particularly suitable for operation under extreme environmental conditions.

Unlike traditional designs, the dryers of the **ECOTROC® ATK-HP** series are extremely compact and technically leak-free. They therefore enable major energy savings and thus increased efficiency. Together with the dew point control and the demand-oriented adjustment of the regeneration gas, unnecessary and expensive losses of already highly compressed compressed air are avoided.

Due to the compact and robust design, the dryer is ideally suited for installation in confined spaces such as compressor skids, but also ship/platform and container installations.

ATKN-HP 500

- weld seam-free stainless steel vessels for working pressure stages up to PN500
- vessel closure with double O-ring
- preloaded and fixed desiccant bed
- internal, self-cleaning dust filter
- stainless steel vessels with 3-bed filling
- dew point sensor for pressure dew point measurement PN500
- start-up device PN500
- high performance silencer
- check valve unit with adjustable nozzle FHP60 B500
- pre- and afterfilter made of stainless steel (1.4401)
- automatic condensate drain up to 500bar
- detachable lifting lugs
- standard frame also available in shock-resistant design up to 15g
- frame with powder coating also available with seawater resistant design
- vibration damping machine feet

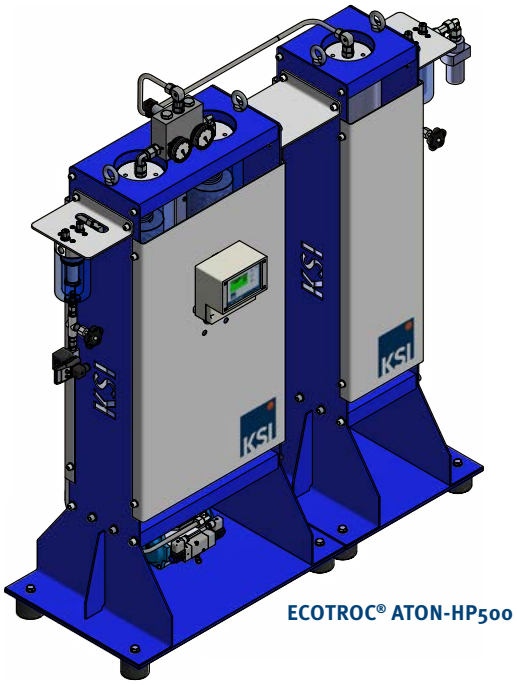
Upper valve unit incl. variable purge air nozzle

ECO**TROC**® AT-HP

High-pressure Adsorption Dryer and Activated Carbon Adsorber

Scope of supply AT-HP

Ready-to-operate high-pressure adsorption dryer with attached pre- and after-filter;
optionally with dew point control and start-up device as well as further filter equipment



ECOTROC® ATON-HP500

ATK-HP (heatless regenerated) and
ATO-HP (heatless regenerated, oilfree):
including:

- prefilter **KSI ECOCLEAN®** HP-SMA
- afterfilter **KSI ECOCLEAN®** HP-DMF
- electrical control **ECOMATIC**
  including compressor synchronizing circuit
- **ATO-HP**: residual oil content up to < 0,003 mg/m³ at 20°C

capacity dew point: -20°C up to -70°C
(-40°C standard)

ATC-HP activated carbon adsorber:
including:

- afterfilter **KSI ECOCLEAN®** HP-DMF
- residual oil content up to < 0,003 mg/m³ at 20°C

Delivery options*

- **ATK-HP** **heatless regenrated high-pressure adsorption dryer**
- **ATC-HP** **high-pressure activated carbon adsorber**
- **ATO-HP** **heatless high-pressure adsorption dryer with activated carbon adsorber**

*higher capacities and temperatures on request.

Accessories:

High-pressure filter

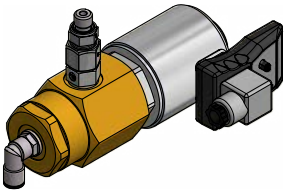
- in the pressure stages 50, 250, 350, 450 and 500 bar (more information below)

Pressure holding device

- different models for pressure ranges up to 450 bar and up to 500 bar

KONDRAIN® HP

- **KMT-HP**
  time-controlled condensate drain (various models up to 500 bar)



- **KN-HP**
  level-controlled condensate drain (up to 50 bar)

ECO**TROC**® AT-HP

High-pressure Adsorption Dryer and Activated Carbon Adsorber

The principle of operation

Prefiltration

In the flow-optimized **KSI ECOCLEAN®** SMA prefilter, solid and liquid components are already separated from the saturated compressed air. Compressor condensate that accumulates is reliably discharged without pressure losses via the electronic, level-controlled condensate drain **KONDRAIN®** N (optional).

Adsorption

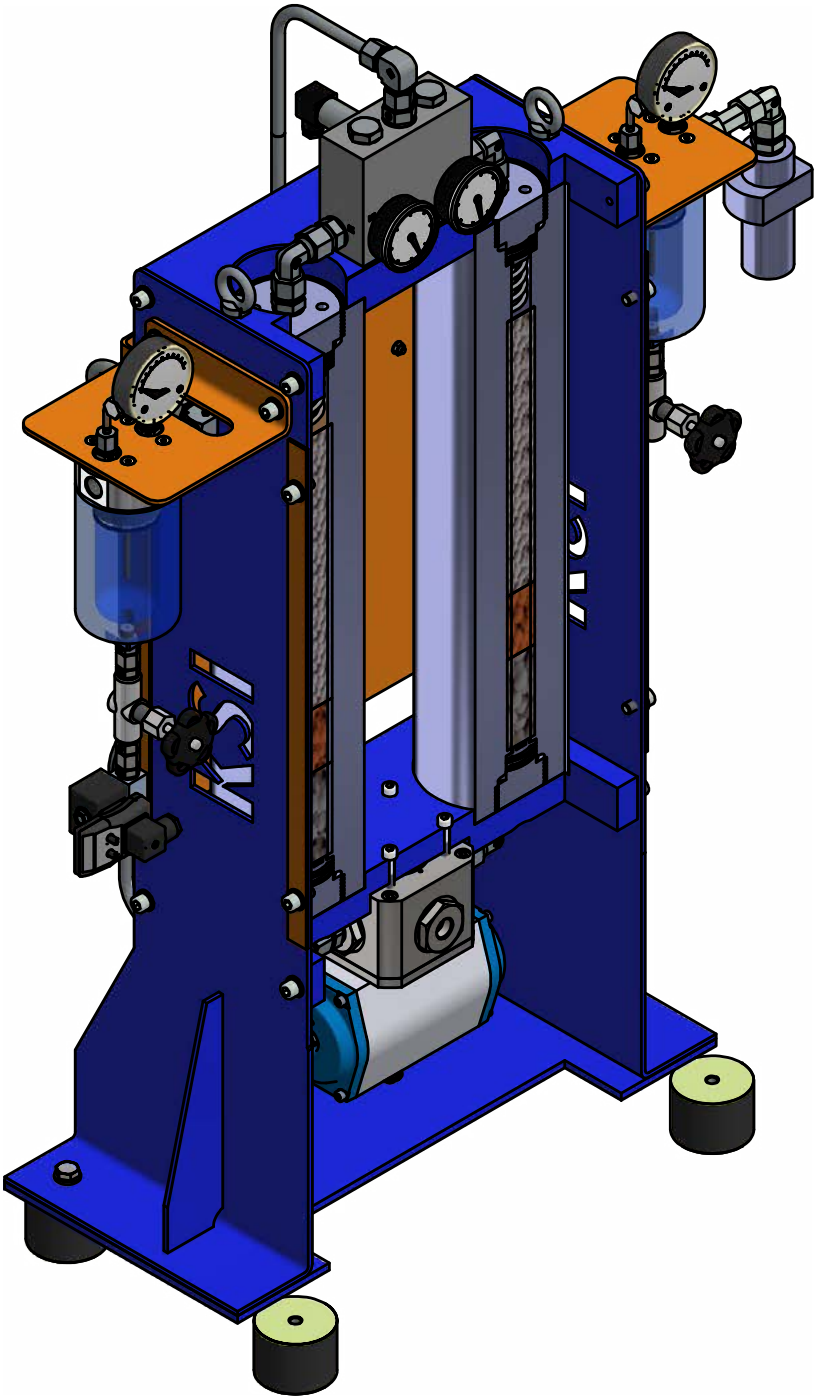
The pre-cleaned compressed air is distributed by the flow distributor from the lower end of the adsorption vessel over the desiccant bed for pre-drying via the so-called wet zone. Afterwards the actual adsorption process begins by attaching the water molecules to the high inner surface of the desiccant.

Post filtration

After flowing through the entire desiccant bed at the upper end of the adsorption vessel, the strongly dried compressed air passes through a flow optimizer and a shuttle valve into the **KSI ECOCLEAN®** DMF afterfilter for final dust filtration. High-purity compressed air is now available.

Regeneration / Desorption

Parallel to the adsorption in the first adsorption vessel, the desiccant is regenerated in the second vessel. For this purpose, a small partial flow of the already dried compressed air from adsorption vessel one is led through the desiccant of vessel two via a rinsing air nozzle in counterflow. By using the physical effect of pressure release to atmospheric pressure, the regeneration purge air can dry the moist desiccant particularly effectively. The moisture is released to the atmosphere via the blow-off valve and silencer.



Switchover

Pressure build-up begins after regeneration is complete in the container. After reaching the operating pressure, the system switches from the adsorbing tank to the now regenerated tank. Now the freshly regenerated vessel starts the adsorption, while the other vessel starts its regeneration cycle.

ECO**TROC**® AT-HP

High-pressure Adsorption Dryer and Activated Carbon Adsorber – up to 50 bar

The types

ECOTROC®
ATK-HP50

ECOTROC®
ATC-HP50

ECOTROC®
ATO-HP50

ECOTROC® AT-HP 50

50 bar · up to 1285 m³/h

Type	Type	Type	Capacity*
ATK-HP50	**ATC-HP50**	**ATO-HP50**	**m³/h**
ATK10-HP50	ATC10-HP50	ATO10-HP50	40
ATK20-HP50	ATC20-HP50	ATO20-HP50	81
ATK30-HP50	ATC30-HP50	ATO30-HP50	160
ATK40-HP50	ATC40-HP50	ATO40-HP50	213
ATK50-HP50	ATC50-HP50	ATO50-HP50	305
ATK60-HP50	ATC60-HP50	ATO60-HP50	410
ATK70-HP50	ATC70-HP50	ATO70-HP50	640
ATK80-HP50	ATC80-HP50	ATO80-HP50	900
ATK90-HP50	ATC90-HP50	ATO90-HP50	1285

*related to 1 bar (abs.) and 20°C at 50 bar g operating pressure

Correction factors for the complete series

Typ	bar	30°C	35°C	40°C	45°C	50°C
ATK-HP50						
	26	0,53	0,52	0,41	0,31	0,26
	38	0,78	0,76	0,59	0,46	0,36
	50	1,02	1,00	0,78	0,6	0,48
ATKN-						
	125	0,51	0,50	0,39	0,3	0,24
	185	0,77	0,75	0,59	0,45	0,36
	250	1,02	1,00	0,78	0,6	0,48
	140	0,41	0,40	0,31	0,24	0,19
	245	0,71	0,70	0,55	0,42	0,34
	350	1,02	1,00	0,78	0,6	0,48
	320	0,73	0,71	0,56	0,43	0,34
	390	0,87	0,86	0,67	0,51	0,41
	450	1,02	1,00	0,78	0,6	0,48
	500	1,02	1	0,78	0,6	0,48

ECO**TROC**® AT-HP

High-pressure Adsorption Dryer and Activated Carbon Adsorber – Pressure Stages 250 – 350 – 450 – 500 bar

ECOTROC® AT-HP 250

250 bar · up to 820 m³/h

Type	Type	Type	Capacity*
ATKN-HP250	ATCN-HP250	ATON-HP250	m³/h
ATKN15-HP250	ATCN15-HP250	ATON15-HP250	85
ATKN25-HP250	ATCN25-HP250	ATON25-HP250	115
ATKN35-HP250	ATCN35-HP250	ATON35-HP250	170
ATKN45-HP250	ATCN45-HP250	ATON45-HP250	225
ATKN55-HP250	ATCN55-HP250	ATON55-HP250	460
ATKN65-HP250	ATCN65-HP250	ATON65-HP250	620
ATKN75-HP250	ATCN75-HP250	ATON75-HP250	710
ATKN85-HP250	ATCN85-HP250	ATON85-HP250	820

*related to 1 bar (abs.) and 20°C at 250 bar g operating pressure

ECOTROC® ATKN-HP500

ECOTROC® AT-HP 350

350 bar · up to 1120 m³/h

Type	Type	Type	Capacity*
ATKN-HP350	ATCN-HP350	ATON-HP350	m³/h
ATKN15-HP350	ATCN15-HP350	ATON15-HP350	120
ATKN25-HP350	ATCN25-HP350	ATON25-HP350	155
ATKN35-HP350	ATCN35-HP350	ATON35-HP350	235
ATKN45-HP350	ATCN45-HP350	ATON45-HP350	315
ATKN55-HP350	ATCN55-HP350	ATON55-HP350	640
ATKN65-HP350	ATCN65-HP350	ATON65-HP350	840
ATKN75-HP350	ATCN75-HP350	ATON75-HP350	960
ATKN85-HP350	ATCN85-HP350	ATON85-HP350	1120

*related to 1 bar (abs.) and 20°C at 500 bar g operating pressure

ECOTROC® AT-HP 450

450 bar · up to 1380 m³/h

Type	Type	Type	Capacity*
ATKN-HP450	ATCN-HP450	ATON-HP450	m³/h
ATKN15-HP450	ATCN15-HP450	ATON15-HP450	155
ATKN25-HP450	ATCN25-HP450	ATON25-HP450	205
ATKN35-HP450	ATCN35-HP450	ATON35-HP450	305
ATKN45-HP450	ATCN45-HP450	ATON45-HP450	405
ATKN55-HP450	ATCN55-HP450	ATON55-HP450	780
ATKN65-HP450	ATCN65-HP450	ATON65-HP450	980
ATKN75-HP450	ATCN75-HP450	ATON75-HP450	1180
ATKN85-HP450	ATCN85-HP450	ATON85-HP450	1380

*related to 1 bar (abs.) and 20°C at 450 bar g operating pressure

ECOTROC® AT-HP 500

500 bar · up to 1400 m³/h

Type	Type	Type	Capacity*
ATKN-HP500	ATCN-HP500	ATON-HP500	m³/h
ATKN15-HP500	ATCN15-HP500	ATON15-HP500	165
ATKN25-HP500	ATCN25-HP500	ATON25-HP500	215
ATKN35-HP500	ATCN35-HP500	ATON35-HP500	315
ATKN45-HP500	ATCN45-HP500	ATON45-HP500	415
ATKN55-HP500	ATCN55-HP500	ATON55-HP500	800
ATKN65-HP500	ATCN65-HP500	ATON65-HP500	1000
ATKN75-HP500	ATCN75-HP500	ATON75-HP500	1200
ATKN85-HP500	ATCN85-HP500	ATON85-HP500	1400

*related to 1 bar (abs.) and 20°C at 500 bar g operating pressure

ECOTROC® AT-HP

High-pressure Adsorption Dryer

ATK-HP (heatless)

* Maßzeichnungen s. unten | *dimensional drawings see below*

Typ	Leistung*		Abmessungen (mm)*					Anschluss		Gewicht	Prod.
Type	*Capacity**		*Dimensions (mm)**					*Connection*		*Weight*	Grp.
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
50 bar											
ATK10-HP50	40	24	1022	625	625	603	550	½“	½“	68	350
ATK20-HP50	81	48	1102	725	725	614	550	½“	½“	93	350
ATK30-HP50	160	94	1302	805	805	664	550	½“	½“	120	350
ATK40-HP50	213	125	1502	905	905	722	550	½“	½“	201	350
ATK50-HP50	305	180	1602	1005	1005	722	550	½“	½“	213	350
ATK60-HP50	410	241	1690	1112	1112	1085	592	1“	1“	250	350
ATK70-HP50	640	377	1690	1112	1112	1136	592	1“	1“	284	350
ATK80-HP50	900	530	1659	1002	1002	1213	759	1“	1“	450	350
ATK90-HP50	1285	756	1760	1042	1042	1315	759	1“	1“	652	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
250 bar											
ATKN15-HP250	85	50	1149	857	758	946	606	½“	½“	210	350
ATKN25-HP250	115	68	1249	957	858	946	606	½“	½“	231	350
ATKN35-HP250	170	100	1449	1157	1058	946	606	½“	½“	272	350
ATKN45-HP250	225	132	1649	1357	1258	946	606	½“	½“	314	350
ATKN55-HP250	460	271	1639	1347	1248	1045	426	½“	½“	414	350
ATKN65-HP250	620	365	1949	1637	1538	1095	664	¾“	¾“	505	350
ATKN75-HP250	710	418	2149	1835	1736	1095	664	¾“	¾“	567	350
ATKN85-HP250	820	483	2339	1986	1886	1095	664	¾“	¾“	622	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
350 bar											
ATKN15-HP350	120	71	1149	857	758	946	606	½“	½“	210	350
ATKN25-HP350	155	91	1249	957	858	946	606	½“	½“	231	350
ATKN35-HP350	235	138	1449	1157	1058	946	606	½“	½“	272	350
ATKN45-HP350	315	185	1649	1357	1258	946	606	½“	½“	314	350
ATKN55-HP350	640	377	1639	1347	1248	1045	426	½“	½“	414	350
ATKN65-HP350	840	494	1949	1637	1538	1095	664	¾“	¾“	505	350
ATKN75-HP350	960	565	2149	1835	1736	1095	664	¾“	¾“	567	350
ATKN85-HP350	1120	659	2339	1986	1886	1095	664	¾“	¾“	622	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
450 bar											
ATKN15-HP450	155	91	1149	857	758	946	606	½“	½“	210	350
ATKN25-HP450	205	121	1249	957	858	946	606	½“	½“	231	350
ATKN35-HP450	305	180	1449	1157	1058	946	606	½“	½“	272	350
ATKN45-HP450	405	238	1649	1357	1258	946	606	½“	½“	314	350
ATKN55-HP450	780	459	1639	1347	1248	1045	426	½“	½“	414	350
ATKN65-HP450	980	577	1949	1637	1538	1095	664	¾“	¾“	505	350
ATKN75-HP450	1180	695	2149	1835	1736	1095	664	¾“	¾“	567	350
ATKN85-HP450	1380	812	2339	1986	1886	1095	664	¾“	¾“	622	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
500 bar											
ATKN15-HP500	165	97	1149	857	758	946	606	½“	½“	210	350
ATKN25-HP500	215	127	1249	957	858	946	606	½“	½“	231	350
ATKN35-HP500	315	185	1449	1157	1058	946	606	½“	½“	272	350
ATKN45-HP500	415	244	1649	1357	1258	946	606	½“	½“	314	350
ATKN55-HP500	800	471	1639	1347	1248	1045	426	½“	½“	414	350
ATKN65-HP500	1000	589	1949	1637	1538	1095	664	¾“	¾“	505	350
ATKN75-HP500	1200	706	2149	1835	1736	1095	664	¾“	¾“	567	350
ATKN85-HP500	1400	824	2339	1986	1886	1095	664	¾“	¾“	622	350

* in m³/h, bezogen auf 1 bar (abs.) und 20°C beim jeweiligen Betriebsdruck, Eintrittstemp. max. 35°C, dtp -40°C | ** in m³/h, calculated at 1 bar (abs.) and 20°C at the respective working pressure, inlet temp. max 35°C, pdp -40°C*

ECOTROC® AT-HP

High-pressure Activated Carbon Adsorber ATC-HP

* Maßzeichnungen s. unten | *dimensional drawings see below*

Typ	Leistung*		Abmessungen (mm)*					Anschluss		Gewicht	Prod.
Type	*Capacity**		*Dimensions (mm)**					*Connection*		*Weight*	Grp.
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
50 bar											
ATC10-HP50	40	24	1019	985	185	204	400	½“	½“	24	350
ATC20-HP50	81	48	1099	1065	165	229	400	½“	½“	33	350
ATC30-HP50	160	94	1299	1265	165	255	400	½“	½“	47	350
ATC40-HP50	213	125	1499	1465	165	283	400	½“	½“	85	350
ATC50-HP50	305	180	1599	1565	165	283	400	½“	½“	91	350
ATC60-HP50	410	241	1657	1623	204	366	500	1“	1“	109	350
ATC70-HP50	640	377	1657	1623	204	392	500	1“	1“	122	350
ATC80-HP50	900	530	1570	1536	117	448	500	1“	1“	192	350
ATC90-HP50	1285	756	1668	1634	117	499	500	1“	1“	293	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
250 bar											
ATCN15-HP250	85	50	1006	349	961	400	370	½“	½“	85	350
ATCN25-HP250	115	68	1106	349	1061	400	370	½“	½“	97	350
ATCN35-HP250	170	100	1306	349	1261	400	370	½“	½“	110	350
ATCN45-HP250	225	132	1506	349	1461	400	370	½“	½“	135	350
ATCN55-HP250	460	271	1506	339	1451	510	500	½“	½“	230	350
ATCN65-HP250	620	365	1809	339	1751	510	500	¾“	¾“	260	350
ATCN75-HP250	710	418	2006	339	1951	510	500	¾“	¾“	290	350
ATCN85-HP250	820	483	2206	339	2157	510	500	¾“	¾“	305	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
350 bar											
ATCN15-HP350	120	71	1006	349	961	400	370	½“	½“	85	350
ATCN25-HP350	155	91	1106	349	1061	400	370	½“	½“	97	350
ATCN35-HP350	235	138	1306	349	1261	400	370	½“	½“	110	350
ATCN45-HP350	315	185	1506	349	1461	400	370	½“	½“	135	350
ATCN55-HP350	640	377	1506	339	1451	510	500	½“	½“	230	350
ATCN65-HP350	840	494	1809	339	1751	510	500	¾“	¾“	260	350
ATCN75-HP350	960	565	2006	339	1951	510	500	¾“	¾“	290	350
ATCN85-HP350	1120	659	2206	339	2157	510	500	¾“	¾“	305	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
450 bar											
ATCN15-HP450	155	91	1006	349	961	400	370	½“	½“	85	350
ATCN25-HP450	205	121	1106	349	1061	400	370	½“	½“	97	350
ATCN35-HP450	305	180	1306	349	1261	400	370	½“	½“	110	350
ATCN45-HP450	405	238	1506	349	1461	400	370	½“	½“	135	350
ATCN55-HP450	780	459	1506	339	1451	510	500	½“	½“	230	350
ATCN65-HP450	980	577	1809	339	1751	510	500	¾“	¾“	260	350
ATCN75-HP450	1180	695	2006	339	1951	510	500	¾“	¾“	290	350
ATCN85-HP450	1380	812	2206	339	2157	510	500	¾“	¾“	305	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
500 bar											
ATCN15-HP500	165	97	1006	349	961	400	370	½“	½“	85	350
ATCN25-HP500	215	127	1106	349	1061	400	370	½“	½“	97	350
ATCN35-HP500	315	185	1306	349	1261	400	370	½“	½“	110	350
ATCN45-HP500	415	244	1506	349	1461	400	370	½“	½“	135	350
ATCN55-HP500	800	471	1506	339	1451	510	500	½“	½“	230	350
ATCN65-HP500	1000	589	1809	339	1751	510	500	¾“	¾“	260	350
ATCN75-HP500	1200	706	2006	339	1951	510	500	¾“	¾“	290	350
ATCN85-HP500	1400	824	2206	339	2157	510	500	¾“	¾“	305	350

* in m³/h, bezogen auf 1 bar (abs.) und 20°C beim jeweiligen Betriebsdruck, Eintrittstemp. max. 35°C, dtp -40°C | ** in m³/h, calculated at 1 bar (abs.) and 20°C at the respective working pressure, inlet temp. max 35°C, pdp -40°C*

ECOTROC® AT-HP

High-pressure Adsorption Dryer ATO-HP (heatless, oilfree)

* Maßzeichnungen s. unten | *dimensional drawings see below*

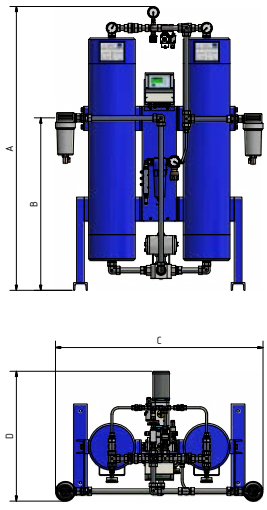
Typ	Leistung*		Abmessungen (mm)*					Anschluss		Gewicht	Prod.
Type	*Capacity**		*Dimensions (mm)**					*Connection*		*Weight*	Grp.
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
50 bar											
ATO10-HP50	40	24	1064	625	625	802	550	½“	½“	92	350
ATO20-HP50	81	48	1144	725	725	838	550	½“	½“	123	350
ATO30-HP50	160	94	1344	805	805	914	550	½“	½“	166	350
ATO40-HP50	213	125	1544	905	905	1000	550	½“	½“	283	350
ATO50-HP50	305	180	1644	1005	1005	1000	550	½“	½“	301	350
ATO60-HP50	410	241	1690	1112	1112	1424	592	1“	1“	372	350
ATO70-HP50	640	377	1690	1112	1112	1501	592	1“	1“	417	350
ATO80-HP50	900	530	1659	1002	1002	1636	759	1“	1“	623	350
ATO90-HP50	1285	756	1760	1042	1042	1789	759	1“	1“	937	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
250 bar											
ATON15-HP250	85	50	1149	857	758	1346	606	½“	½“	295	350
ATON25-HP250	115	68	1249	957	858	1346	606	½“	½“	328	350
ATON35-HP250	170	100	1449	1157	1058	1346	606	½“	½“	382	350
ATON45-HP250	225	132	1649	1357	1258	1346	606	½“	½“	449	350
ATON55-HP250	460	271	1639	1347	1248	1563	664	½“	½“	652	350
ATON65-HP250	620	365	1949	1637	1538	1613	664	¾“	¾“	765	350
ATON75-HP250	710	418	2149	1835	1736	1613	664	¾“	¾“	857	350
ATON85-HP250	820	483	2339	1986	1886	1613	664	¾“	¾“	927	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
350 bar											
ATON15-HP350	120	71	1149	857	758	1346	606	½“	½“	295	350
ATON25-HP350	155	91	1249	957	858	1346	606	½“	½“	328	350
ATON35-HP350	235	138	1449	1157	1058	1346	606	½“	½“	382	350
ATON45-HP350	315	185	1649	1357	1258	1346	606	½“	½“	449	350
ATON55-HP350	640	377	1639	1347	1248	1563	664	½“	½“	652	350
ATON65-HP350	840	494	1949	1637	1538	1613	664	¾“	¾“	765	350
ATON75-HP350	960	565	2149	1835	1736	1613	664	¾“	¾“	857	350
ATON85-HP350	1120	659	2339	1986	1886	1613	664	¾“	¾“	927	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
450 bar											
ATON15-HP450	155	91	1149	857	758	1346	606	½“	½“	295	350
ATON25-HP450	205	121	1249	957	858	1346	606	½“	½“	328	350
ATON35-HP450	305	180	1449	1157	1058	1346	606	½“	½“	382	350
ATON45-HP450	405	238	1649	1357	1258	1346	606	½“	½“	449	350
ATON55-HP450	780	459	1639	1347	1248	1563	664	½“	½“	652	350
ATON65-HP450	980	577	1949	1637	1538	1613	664	¾“	¾“	765	350
ATON75-HP450	1180	695	2149	1835	1736	1613	664	¾“	¾“	857	350
ATON85-HP450	1380	812	2339	1986	1886	1613	664	¾“	¾“	927	350
	m³/h	cfm	A	B1	B2	C	D	Eingang/Intlet	Ausgang/Outlet	kg	
500 bar											
ATON15-HP500	165	97	1149	857	758	1346	606	½“	½“	295	350
ATON25-HP500	215	127	1249	957	858	1346	606	½“	½“	328	350
ATON35-HP500	315	185	1449	1157	1058	1346	606	½“	½“	382	350
ATON45-HP500	415	244	1649	1357	1258	1346	606	½“	½“	449	350
ATON55-HP500	800	471	1639	1347	1248	1563	664	½“	½“	652	350
ATON65-HP500	1000	589	1949	1637	1538	1613	664	¾“	¾“	765	350
ATON75-HP500	1200	706	2149	1835	1736	1613	664	¾“	¾“	857	350
ATON85-HP500	1400	824	2339	1986	1886	1613	664	¾“	¾“	927	350

* in m³/h, bezogen auf 1 bar (abs.) und 20°C beim jeweiligen Betriebsdruck, Eintrittstemp. max. 35°C, dtp -40°C | ** in m³/h, calculated at 1 bar (abs.) and 20°C at the respective working pressure, inlet temp. max 35°C, pdp -40°C*

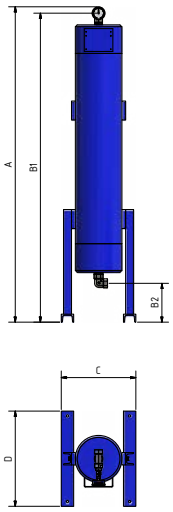
ECO**TROC**® AT-HP

High-pressure Adsorption Dryer and Activated Carbon Adsorber

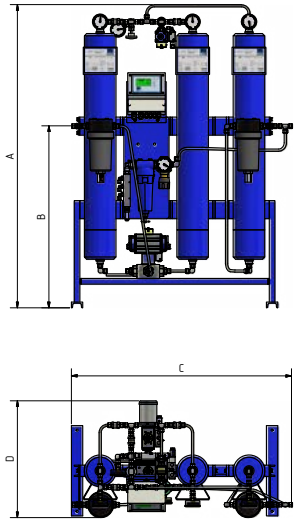
Maßzeichnungen | *Dimensional drawings*



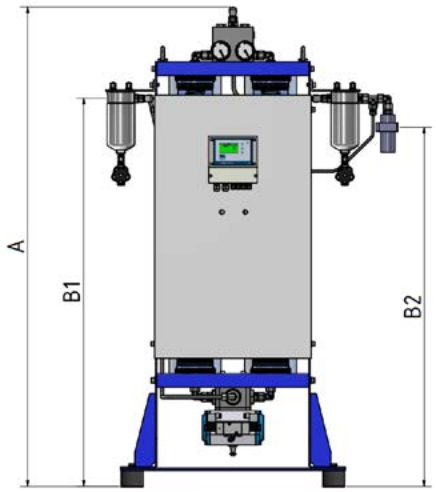
ECOTROC® ATK-HP50



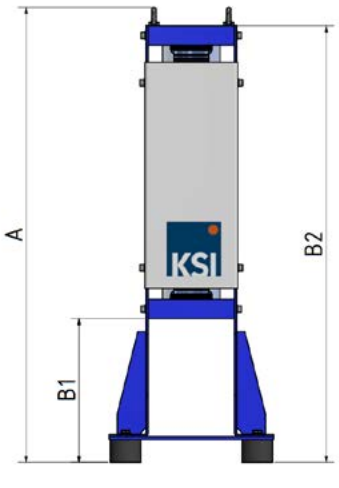
ECOTROC® ATC-HP50



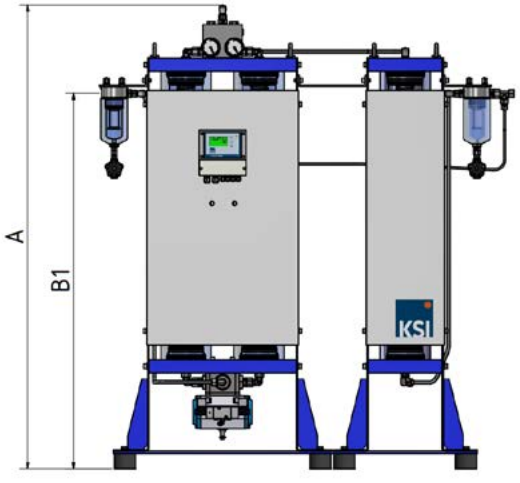
ECOTROC® ATO-HP50



ECOTROC® ATKN-HP250 - 500



ECOTROC® ATCN-HP250 - 500



ECOTROC® ATON-HP250 - 250

KSI ECOCLEAN® HP
High-pressure Filter

The KSI ECOCLEAN® HP Plus-Effects +++

+ extremely robust and durable
  - ▸ aluminum housing up to 50 bar
  - ▸ enclosures with higher pressure ratings up to 500 bar are available in stainless steel version

+ approved up to 500 bar
+ optional with differential pressure indicator up to 420 bar
+ optionally with electric condensate drain up to 500 bar
+ with double O-ring seal on the housing to protect the thread
  - ▸ more service friendliness

High-pressure filter up to 50 bar

aluminum housing

Scope of supply

Compressed air filter consisting of:

KSI ECOCLEAN® *aluminum filter housing incl. filter element*

ball valve - high pressure

Typ *Type*	Leistung* *Capacity**		Abmessungen (mm) *Dimensions (mm)*			Anschluss *Connection*	Prod. Grp.	Replacement element Element *Element*	Prod. Grp.
	m³/h	cfm	A	B	C				
FHP007 ▸	250	147	256	30	103	½“	014	**FE007HP** ▸	114
FHP010 ▸	490	288	256	30	103	¾“	014	**FE010HP** ▸	114
FHP018 ▸	710	418	256	30	103	1“	014	**FE018HP** ▸	114
FHP047 ▸	1090	642	536	45	142	1 ½“	014	**FE047HP** ▸	114
FHP070 ▸	1350	795	536	45	142	1 ½“	014	**FE070HP** ▸	114
FHP094 ▸	1790	1054	718	45	142	2“	014	**FE094HP** ▸	114
FHP150 ▸	2050	1207	718	45	142	2“	014	**FE150HP** ▸	114

▸ = Abscheidegrad | *filtration-grade:* Beispiel Bestellnummer für FHP018 mit 1 Mikron Abscheidung: FHP018MFO | *Example order code for FHP018 with 1 micron efficiency: FHP018MFO*

* bei 50 bar und 20°C | *at 50 bar and 20°C*

Korrekturfaktoren | *Correction factors*

**Korrekturfaktoren	*Correction factors* 50 bar**				
**Arbeitsdruck	*Working pressure*** bar ü	*g*	20	30	40	50
	Faktor	*factor*	0,65	0,77	0,9	1

Multiplizieren Sie bitte die Leistung des Filters mit dem Korrekturfaktor in den oberen Tabellen.

Beispiel: Leistung Typ FHP094-B50SMA bei 40 bar ü - Leistung nominal (1790 m³/h) x Faktor (0,9) = Leistung korrigiert (2837 m³/h)

Please multiply the capacity of the filter by the correction factor in the above table.

Example: Capacity type FHP094-B50 at 40 bar g - Capacity nominal (3152 m³/h) x Factor (0,9) = Capacity corrected (2837 m³/h)

KSI ECOCLEAN® HP

High-pressure Filter –
Pressure Stages 250 – 350 – 450 – 500 bar

stainless steel V4A

Scope of supply

Compressed air filter consisting of:

KSI ECOCLEAN® *stainless steel filter housing incl. filter element*

ball valve - high pressure

High-pressure filter up to 250 bar

Typ *Type*	Leistung* *Capacity**		Abmessungen (mm) *Dimensions (mm)*				Anschluss *Connection*	Prod. Grp.
	m³/h	cfm	A	B	C	D		
FHP50-B250 ▸	256	151	212	25	95	132	3/8“	014
FHP60-B250 ▸	448	264	212	25	95	95	1/2“	014
FHP80-B250 ▸	840	494	300	25	133	125	3/4“	014
FHP100-B250 ▸	1296	763	300	25	133	125	1“	014

Element *Element*	Prod. Grp.
FEHP3711 ▸	114
FEHP3711 ▸	114
FEHP5111 ▸	114
FEHP7111 ▸	114

▸ = Abscheidegrad | *filtration-grade*
Beispiel Bestellnummer für FHP50-B250 mit 1 Mikron Abscheidung: FHP50-B250MFO | *Example order code for FHP50-B250 with 1 micron efficiency: FHP50-B250MFO*

Korrekturfaktoren | *Correction factors* 250 bar

**Arbeitsdruck	*Working pressure***	bar ü	*g*	175	200	225	250
	Faktor	*factor*		0,92	0,95	0,97	1

Multiplizieren Sie bitte die Leistung des Filters mit dem Korrekturfaktor in den oberen Tabellen.
Beispiel: Leistung Typ FHP080-B250SMA bei 225 bar ü - Leistung nominal (840 m³/h) x Faktor (0,97) = Leistung korrigiert (815 m³/h)
Please multiply the capacity of the filter by the correction factor in the above table.
Example: Capacity type FHP080-B250 at 225 bar g - Capacity nominal (840 m³/h) x Factor (0,97) = Capacity corrected (815 m³/h)

High-pressure filter up to 350 bar

Replacement element

Typ *Type*	Leistung* *Capacity**		Abmessungen (mm) *Dimensions (mm)*				Anschluss *Connection*	Prod. Grp.
	m³/h	cfm	A	B	C	D		
FHP50-B350 ▸	288	170	212	25	95	132	3/8“	014
FHP60-B350 ▸	504	297	212	25	95	95	1/2“	014
FHP80-B350 ▸	945	556	300	25	133	125	3/4“	014
FHP100-B350 ▸	1458	858	300	25	133	125	1“	014

Element *Element*	Prod. Grp.
FEHP3711 ▸	114
FEHP3711 ▸	114
FEHP5111 ▸	114
FEHP7111 ▸	114

▸ = Abscheidegrad | *filtration-grade*
Beispiel Bestellnummer für FHP50-B350 mit 1 Mikron Abscheidung: FHP50-B350MFO | *Example order code for FHP50-B350 with 1 micron efficiency: FHP50-B350MFO*

Korrekturfaktoren | *Correction factors* 350 bar

**Arbeitsdruck	*Working pressure***	bar ü	*g*	275	300	325	350
	Faktor	*factor*		0,92	0,95	0,97	1

Multiplizieren Sie bitte die Leistung des Filters mit dem Korrekturfaktor in den oberen Tabellen.
Beispiel: Leistung Typ FHP080-B350SMA bei 325 bar ü - Leistung nominal (945 m³/h) x Faktor (0,97) = Leistung korrigiert (917 m³/h)
Please multiply the capacity of the filter by the correction factor in the above table.
Example: Capacity type FHP080-B530 at 325 bar g - Capacity nominal (945 m³/h) x Factor (0,97) = Capacity corrected (917 m³/h)

KSI ECOCLEAN® HP

High-pressure Filter –
Pressure Stages 250 – 350 – 450 – 500 bar

Lieferumfang

Druckluftfilter bestehend aus:

KSI ECOCLEAN® Filtergehäuse inklusive Filterelement

Kugelhahn - Hochdruck

stainless steel V4A

High-pressure filter up to 450 bar

Typ *Type*	Leistung* *Capacity**		Abmessungen (mm) *Dimensions (mm)*				Anschluss *Connection*	Prod. Grp.
	m³/h	cfm	A	B	C	D		
FHP50-B450 ▸	320	188	212	25	95	132	⅜“	014
FHP60-B450 ▸	560	330	212	25	95	95	½“	014
FHP80-B450 ▸	1050	618	300	25	133	125	¾“	014
FHP100-B450 ▸	1620	954	300	25	133	125	1“	014

Replacement element

Element *Element*	Prod. Grp.
FEHP3711 ▸	114
FEHP3711 ▸	114
FEHP5111 ▸	114
FEHP7111 ▸	114

▸ = Abscheidegrad | *filtration-grade*

Beispiel Bestellnummer für FHP80-B450 mit 1 Mikron Abscheidung: FHP80-B450MFO | *Example order code for FHP80-B450 with 1 micron efficiency: FHP80-B450MFO*

Korrekturfaktoren | *Correction factors* 450 bar

**Arbeitsdruck	*Working pressure*** bar ü	*g*	375	400	425	450
	Faktor	*factor*	0,92	0,95	0,97	1

Multiplizieren Sie bitte die Leistung des Filters mit dem Korrekturfaktor in den oberen Tabellen.

Beispiel: Leistung Typ FHP080-B450SMA bei 425 bar ü - Leistung nominal (1050 m³/h) x Faktor (0,97) = Leistung korrigiert (1019 m³/h)

Please multiply the capacity of the filter by the correction factor in the above table.

Example: Capacity type FHP080-B450 at 425 bar g - Capacity nominal (1050 m³/h) x Factor (0,97) = Capacity corrected (1019 m³/h)

High-pressure filter up to 500 bar

Typ *Type*	Leistung* *Capacity**		Abmessungen (mm) *Dimensions (mm)*				Anschluss *Connection*	Prod. Grp.
	m³/h	cfm	A	B	C	D		
FHP50-B500 ▸	335	197	212	25	95	132	⅜“	014
FHP60-B500 ▸	585	344	212	25	95	95	½“	014
FHP80-B500 ▸	1105	650	300	25	133	125	¾“	014
FHP100-B500 ▸	1710	1007	300	25	133	125	1“	014

Replacement element

Element *Element*	Prod. Grp.
FEHP3711 ▸	114
FEHP3711 ▸	114
FEHP5111 ▸	114
FEHP7111 ▸	114

▸ = Abscheidegrad | *filtration-grade*

Beispiel Bestellnummer für FHP80-B500 mit 1 Mikron Abscheidung: FHP80-B500MFO | *Example order code for FHP80-B500 with 1 micron efficiency: FHP80-B500MFO*

Korrekturfaktoren | *Correction factors* 500 bar

**Arbeitsdruck	*Working pressure*** bar ü	*g*	475	500
	Faktor	*factor*	0,97	1

Multiplizieren Sie bitte die Leistung des Filters mit dem Korrekturfaktor in den oberen Tabellen.

Beispiel: Leistung Typ FHP080-B500SMA bei 475 bar ü - Leistung nominal (1105 m³/h) x Faktor (0,97) = Leistung korrigiert (1072 m³/h)

Please multiply the capacity of the filter by the correction factor in the above table.

Example: Capacity type FHP080-B500 at 475 bar g - Capacity nominal (1105 m³/h) x Factor (0,97) = Capacity corrected (1072 m³/h)

KSI ECOCLEAN® HP

High-pressure Filters – Accessories

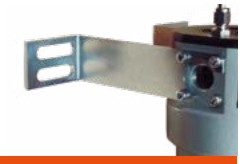
KSI ECOCLEAN® DPN-HP

Differenzdruckanzeiger Hochdruck
(bis 420 bar Betriebsdruck)
Differential pressure gauge high pressure
(up to 420 bar operating pressure)

Bestell-Nr.	für Filtertypen	Prod.
Order code	*for filter types*	Grp.
DPN-HP420	FHP50-B250 – FHP100-B450	099

KSI ECOCLEAN® WH-HP

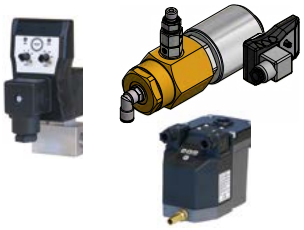
Wandhalterung Hochdruck
Wall mounting brackets - high pressure



Bestell-Nr.	für Filtertypen	Prod.
Order code	*for filter types*	Grp.
WH-HP50	FHP007 – FHP150	099
WH-HP250-450	FHP50-B(bar) – FHP100-B(bar)	099

KONDRAIN® HP

Zeitgesteuerter und niveaugeregelter Kondensatableiter · Hochdruck
Time controlled and level controlled condensate drains · high pressure



Bestell-Nr.	Typen	Prod.
Order code	*Types*	Grp.
KMT-HP	zeitgesteuert / *time controlled* bis 350 bar / *up to 350 bar*	510
KMT-HP 500	zeitgesteuert / *time controlled* bis 500 bar / *up to 500 bar*	510
KN-HP	niveaugeregelt / *level controlled* bis 50 bar/ *up to 50 bar*	510

Filterelemente auch als Wasserabscheider lieferbar | *filter elements also available as water separators*

FHP () WS

Spezifikationen	@ VF25	@ FF5	@ MFO	@ MF1	@ SMA	*Specifications*
Partikelfiltration	25 Mikron	5 Mikron	1 Mikron	0,1 Mikron	0,01 Mikron	***Particle removal***
Max. Restölgehalt bei 20°C	10 mg/m³	5 mg/m³	0,5 mg/m³	0,1 mg/m³	0,01 mg/m³	***Residual oil content at 20°C***
Temperaturbereich			1,5 °C – 65 °C			***Operating temperature range***
			@ CA			
Max. Restölgehalt bei 20°C			0,003 mg/m³			***Residual oil content at 20°C***
Temperaturbereich			30°C effekt.|*effect.*			***Operating temperature range***
Max. Arbeitsdruck			FHP007 – FHP150: 50 bar ü/g FHP50-B250 – FHP100-B250: 250 bar ü/g FHP50-B350 – FHP100-B350: 350 bar ü/g FHP50-B450 – FHP100-B450: 450 bar ü/g FHP50-B500 – FHP100-B500: 500 bar ü/g			***Max. working pressure***
Material Gehäuse			FHP007 – FHP150: Aluminium FHP50-B250 – FHP100-B500: Edelstahl | *stainless steel* (1.4404)			***Housing material***

Maßzeichnungen | *Dimensional drawings*