

Jet-Set: Separation of Heavy Volume Fine Dust Particles



THE TASK

Keller plans, engineers, and manufactures air pollution control systems for the capture, separation and removal of airborne particles for all types of industry. High filtration efficiency is achieved with innovative filtration technology and efficient design. Suitable exhaust systems offer solutions to individual applications while maintaining high quality standards.

The JET-SET series is especially suitable for the separation of high-volume fine dust particles. Nearly all types of dust can be successfully separated, such as those created in metal processing, polymer processing, recycling industry, timber industry as well as non-metallic minerals.

The JET-SET units are modular in design in order to meet different requirements, such as dust characteristics, dust accumulation or the volume of exhausted air. The quiet units maintain a constant air flow, allowing for a trouble-free 24-hour operation. Short delivery times and competitive pricing are achieved through series production planning.

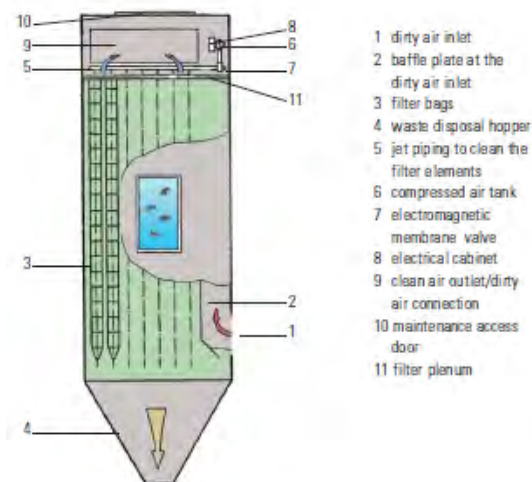
EXAMPLES OF APPLICATIONS

metal processing	plastics machining
wood based panel industry	wood products industry
chemical industry	pulp/paper industry
recycling industry	non-metallic mineral processing



OPERATION

The dust-laden air (dirty air) flows through the inlet opening (1) into the filter unit. A baffle plate (2) slows down and deflects the coarser dust particles to avoid direct impact on the filter. The dirty air is directed onto the filter plenum (11) and circulates from the top down around the filter elements (3), causing the settling of fine dust particles. The dust-laden air flows through the filter bags to the inside while the dust particles remain on the filter surface. The separated air (clean gas) flows from the separator through the clean gas outlet (9) and is either re-circulated into the workplace or vented outdoors.



ADVANTAGES

- high-quality filter bags
- minimal space required
- large filtration area
- low filter resistance
- universal applications

FILTER ELEMENTS

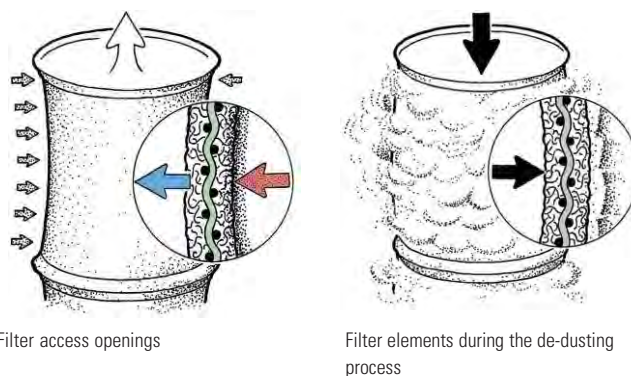
We primarily use filters consisting of polyester needle felt. Various alternatives are available, depending on the application.

With a few exceptions, the filter bags are installed by means of a built-in clamp and hang from a supporting frame in the filter plenum. They are mounted without a fixed support when collecting large volumes of particulate.

Sewn-in support rings maintain the cylindrical shape of the filters. There are no fixtures that could cause chafing of the filters

DEDUSTING OF THE FILTER ELEMENTS

Electromagnetic membrane valves can be operated by means of an independently programmable control (7), activated either by differential pressure or by a pre-set timer. The stored air in the compressed air tank (6) is released by the blast pipes (5) creating a reverse back pulse originating on the dirty air side. The surface-loaded dust on the filter elements is thereby continuously cleaned and falls through the waste disposal hopper (4) into the collection container.

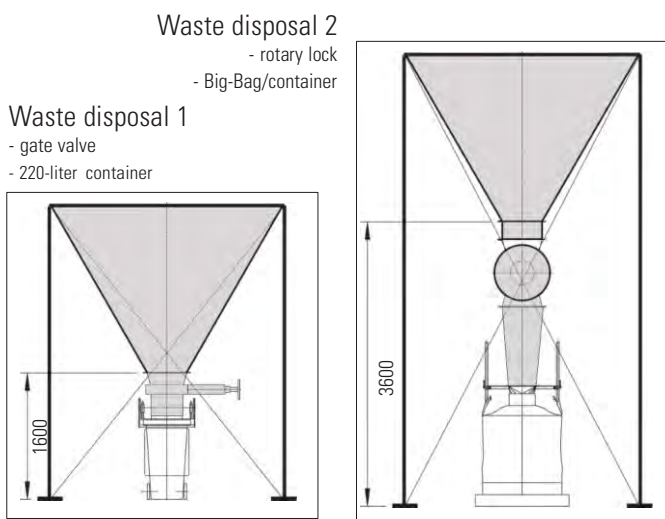


Jet-Set: Separation of Heavy Volume Fine Dust Particles



WASTE DISPOSAL

The air-tight and dust-tight disposal bins are connected to the filter hopper with a clamping device, simplifying the exchange of dust collector bins. For larger dust quantities or during 24-hour operation, continuous disposal is accomplished by means of a rotary lock in the waste disposal bin or by the use of Big-Bags.



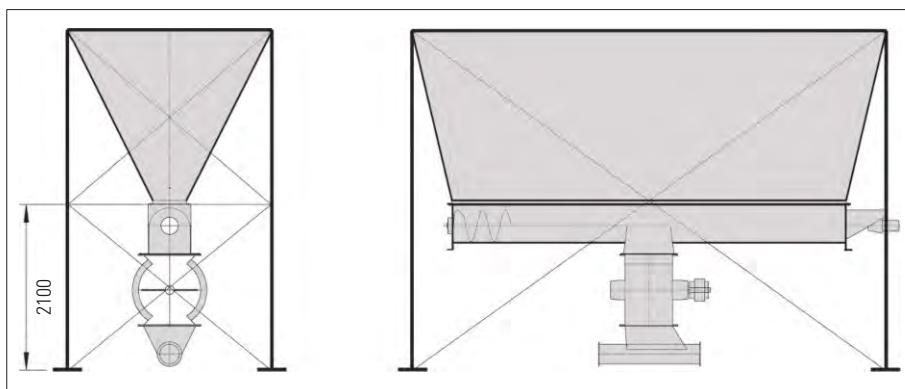
SAFETY

The JET-SET filter can be equipped with additional safety devices when processing combustible or explosive dusts. Regulations such as the ATEX, VDI 2263, VDI 3673 etc. are always taken into consideration.

VENTING OUTDOORS OR RE-CIRCULATION

Depending on the exhaust air quality, the cleaned air from the filter can be ducted and vented via ductwork and channels (even with heat exchangers) either to the outdoors or re-circulated back into the workplace. The selected form of venting can be accomplished by activating a switch inside the exhaust duct.

We will be pleased to provide you with detailed information regarding the feasibility of a recirculation system, ensuring compliance with your local environmental rules and regulations.



- Waste disposal 3
- filter vat with discharge screw
 - rotary lock (optional)
 - pneumatic conveyance (optional)

FAN SECTION

Depending on the size of the unit, the radial fans are either top-mounted or function as stand-alone. Top-mounted fans are either directly driven or by a coupling/V-belt drive and can be optionally equipped with spark protection measures.

PLACEMENT

Installation outdoors is possible if weather protection is provided and is within noise limit requirements.

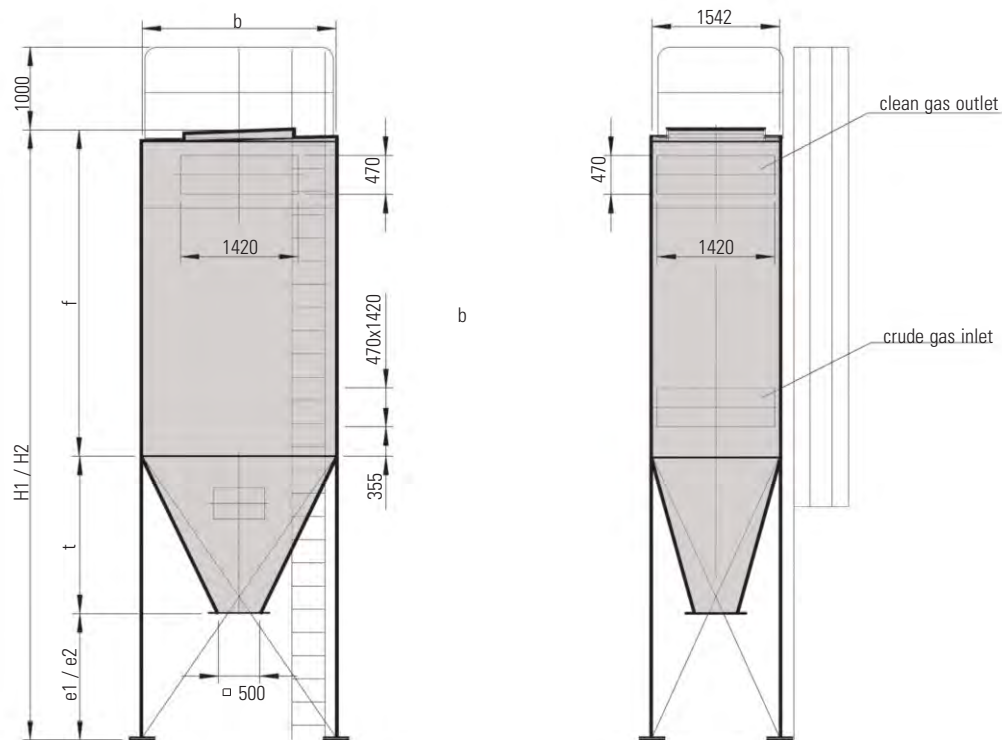
The deciding factor in selecting an appropriate system is the volume of air flow to be exhausted (m^3/hr), taking into consideration the dust characteristics as well as emission restrictions.

The JET-SET series is available in a variety of sizes and configurations.

Jet-Set: Separation of Heavy Volume Fine Dust Particles



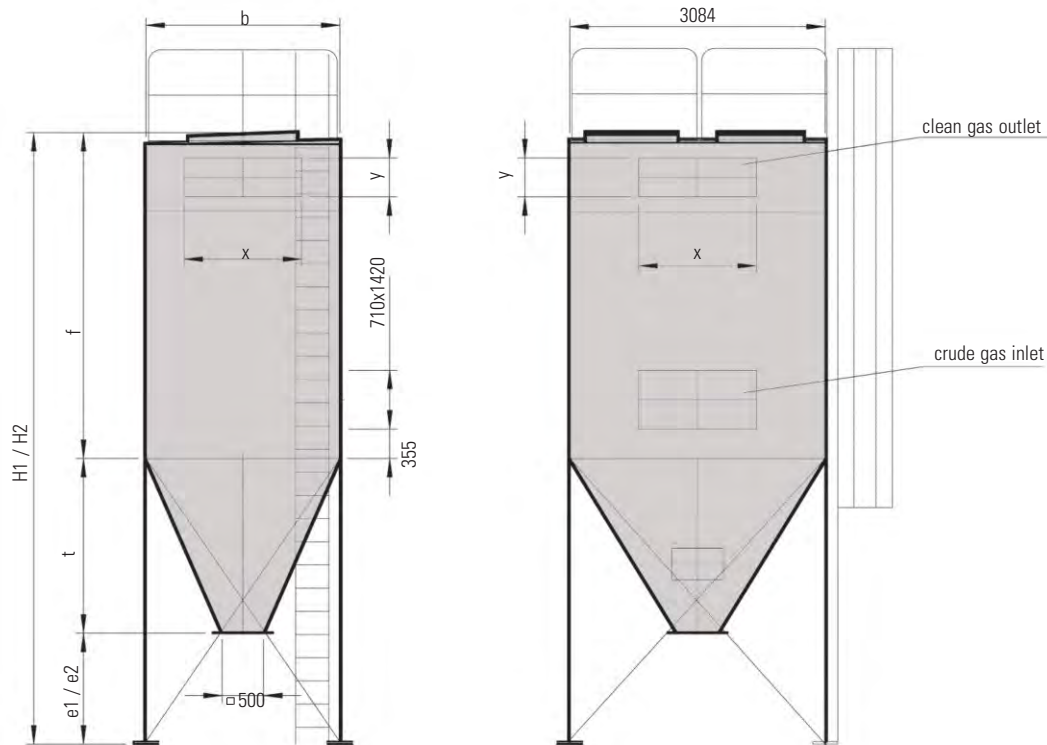
Technical data JET-SET single-cell model



JET-Set single-cell model	Tube length 2900 mm			Tube length 3900 mm			Tube length 4900 mm		
Installation size	127/49	127/63	127/77	137/49	137/63	137/77	147/49	147/63	147/77
Filter exterior (m ²)	71	91	112	96	123	149	121	155	189
Number of tubes (pcs)	49	63	77	49	63	77	49	63	77
Contents of the compressed air tank -small (NL) ^{*2}	14	14	14	14	14	14	14	14	14
Contents of the compressed air tank - large (NL) ²	26,7	26,7	26,7	26,7	26,7	26,7	26,7	26,7	26,7
Weight (kg)	2410	2520	3010	2730	2970	3510	3060	3360	3750
Dimensions (mm)									
H 1 (with e 1)	6600	7010	7420	7600	8010	8420	8600	9010	9420
H 2 (with e 2)	7600	9010	9420	8600	10010	10420	9600	11010	11420
f	3900	3910	3920	4900	4910	4920	5900	5910	5920
b	1945	2350	2760	1945	2350	2760	1945	2350	2760
t	1100	1500	1900	1100	1500	1900	1100	1500	1900
e 1 (disposal 1)	1600	1600	1600	1600	1600	1600	1600	1600	1600
e 2 (disposal 2)	3600	3600	3600	3600	3600	3600	3600	3600	3600

subject to modifications

Technical data JET-SET double-cell model



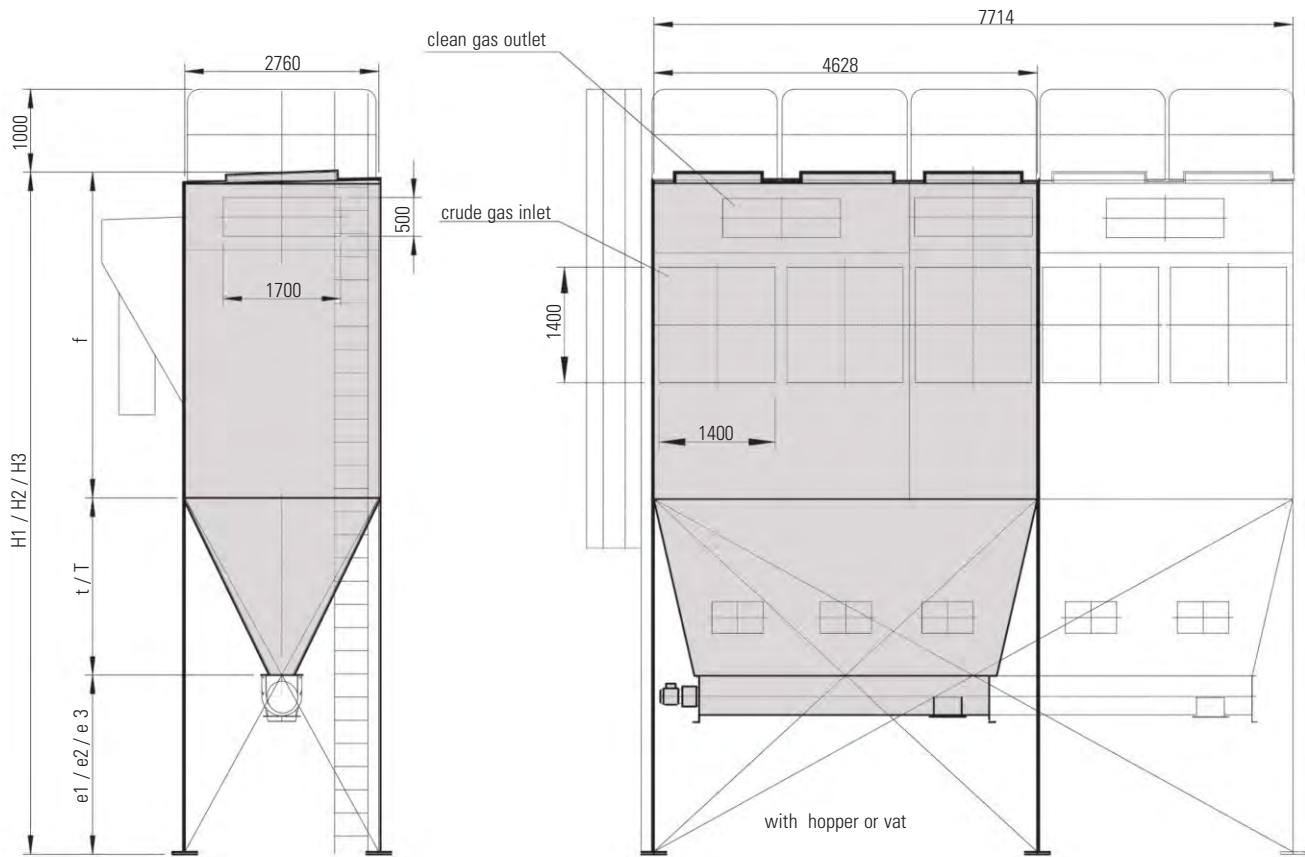
JET-Set double-cell model	Tube length 2900 mm			Tube length 3900 mm			Tube length 4900 mm		
Installation size	227/49	227/63	227/77	237/49	237/63	237/77	247/49	247/63	247/77
Filter exterior (m ²)	142	182	224	192	246	298	242	310	378
Number of tubes (pcs)	98	126	154	98	126	154	98	126	154
Contents of the compressed air tank -small (NL) ^{*2}	14	14	14	14	14	14	14	14	14
Contents of the compressed air tank - large (NL) ²	26,7	26,7	26,7	26,7	26,7	26,7	26,7	26,7	26,7
Weight (kg)	4370	4720	5070	4670	5020	5410	5020	5590	5950
Dimensions (mm)									
H 1 (with e 1)	7610	7620	7630	8610	8620	8630	9610	9620	9630
H 2 (with e 2)	9610	9620	9630	10610	10620	10630	11610	11620	11630
f	3900	3910	3920	4900	4910	4920	5900	5910	5920
b	1945	2350	2755	1945	2350	2755	1945	2350	2755
t	2110	2110	2110	2110	2110	2110	2110	2110	2110
e 1 (disposal 1)	1600	1600	1600	1600	1600	1600	1600	1600	1600
e 2 (disposal 2)	3600	3600	3600	3600	3600	3600	3600	3600	3600
x	1420	1420	1420	1700	1700	1700	1700	1700	1700
y	470	470	470	500	500	500	500	500	500

subject to modifications

Jet-Set: Separation of Heavy Volume Fine Dust Particles



Technical data JET-SET 3-cell and 5-cell model



JET-Set 3-cell model	Tube 2900 mm	Tube 3900 mm	Tube 4900 mm
Installation size	327/77	337/77	347/77
Filter exterior (m ²)	336	447	567
Number of tubes (pcs)	231	231	231
Contents of the compressed air tank -small (NL) ^{*2}	14	14	14
Contents of the compressed air tank - large (NL) ²	26,7	26,7	26,7
Weight (kg)	8080	8920	9700
Dimensions (mm)			
H 1 (with t+e1)	7630	8630	9630
H 2 (with t+e2)	9630	10630	11630
H 3 with T+e3)	8220	9220	10220
f	3920	4920	5920
t (hopper)	2110	2110	2110
T (vat)	2200	2200	2200
e 1 (disposal 1)	1600	1600	1600
e 2 (disposal 2)	3600	3600	3600
e 3 (disposal 3)	2100	2100	2100

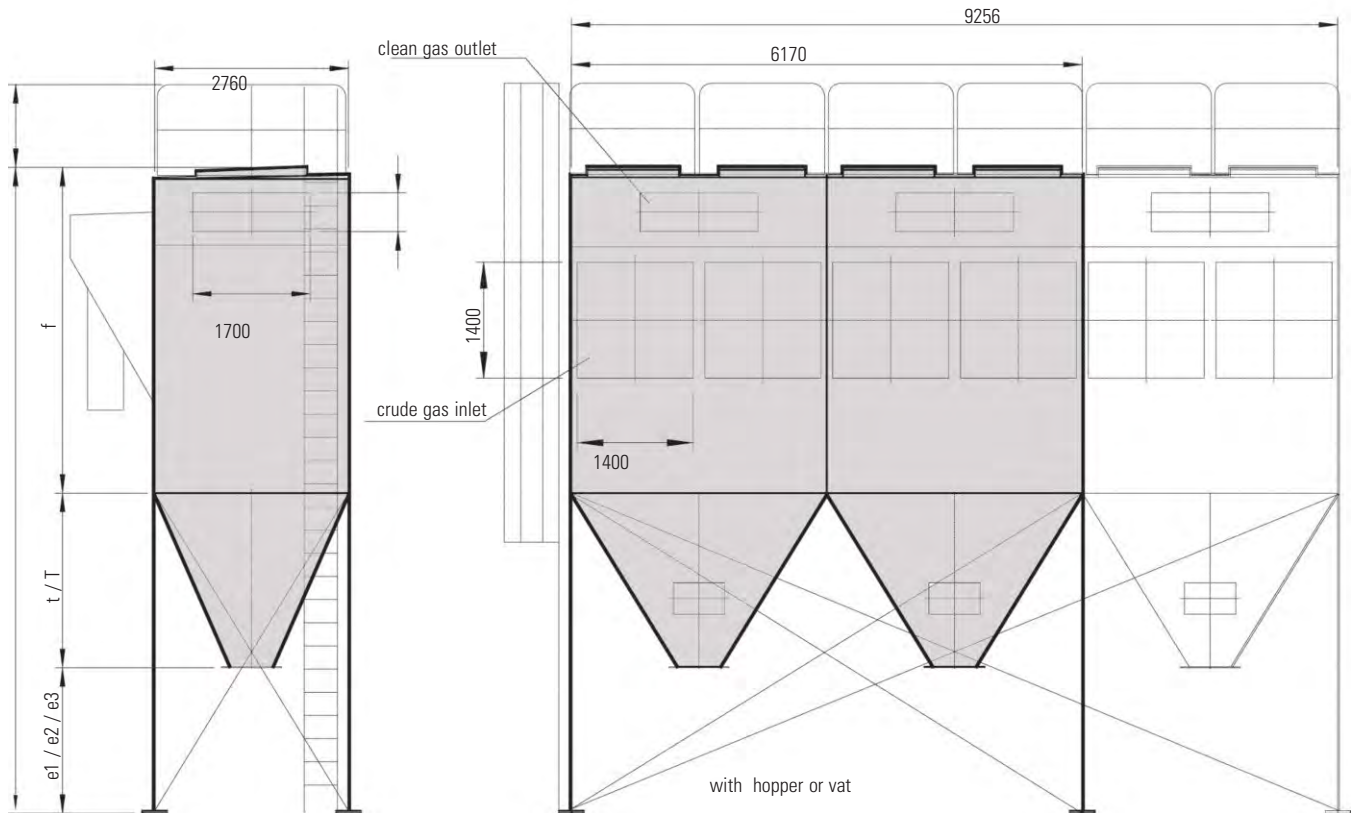
JET-Set 5-cell model	Tube 2900 mm	Tube 3900 mm	Tube 4900 mm
Installation size	527/77	537/77	547/77
Filter exterior (m ²)	560	745	945
Number of tubes (pcs)	385	385	395
Contents of the compressed air tank -small (NL) ^{*2}	14	14	14
Contents of the compressed air tank - large (NL) ²	26,7	26,7	26,7
Weight (kg)	13150	14330	15650
Dimensions (mm)			
H 1 (with t+e1)	7630	8630	9630
H 2 (with t+e2)	9630	10630	11630
H 3 (with T+e3)	8220	9220	10220
f	3920	4920	5920
t (hopper)	2110	2110	2110
T (vat)	2200	2200	2200
e 1 (disposal 1)	1600	1600	1600
e 2 (disposal 2)	3600	3600	3600
e 3 (disposal 3)	2100	2100	2100

subject to modifications

Jet-Set: Separation of Heavy Volume Fine Dust Particles



Technical data JET-SET 4-cell and 6-cell model



JET-Set4-cell model	Tube	Tube	Tube	JET-Set 6-cell model	Tube	Tube	Tube
	2900 mm	3900 mm	4900 mm		2900 mm	3900 mm	4900 mm
Installation size	427/77	437/77	447/77	Installation size	627/77	637/77	647/77
Filter exterior (m ²)	448	596	756	Filter exterior (m ²)	672	894	1134
Number of tubes (pcs)	308	308	308	Number of tubes (pcs)	308	308	308
Contents of the compressed air tank -small (NL)*2	14	14	14	Contents of the compressed air tank -small (NL)*2	14	14	14
Contents of the compressed air tank - large (NL) ²	26,7	26,7	26,7	Contents of the compressed air tank - large (NL) ²	26,7	26,7	26,7
Weight (kg)	10140	10820	11900	Weight (kg)	10140	10820	11900
Dimensions (mm)				Dimensions (mm)			
H 1 (with t+e1)	7630	8630	9630	H 1 (with t+e1)	7630	8630	9630
H 2 (with t+e2)	9630	10630	11630	H 2 (with t+e2)	9630	10630	11630
H 3 (with T+e3)	8220	9220	10220	H 3 (with T+e3)	8220	9220	10220
f	3920	4920	5920	f	3920	4920	5920
t (hopper)	2110	2110	2110	t (hopper)	2110	2110	2110
T (vat)	2200	2200	2200	T (vat)	2200	2200	2200
e 1 (disposal 1)	1600	1600	1600	e 1 (disposal 1)	1600	1600	1600
e 2 (disposal 2)	3600	3600	3600	e 2 (disposal 2)	3600	3600	3600
e 3 (disposal 3)	2100	2100	2100	e 3 (disposal 3)	2100	2100	2100

subject to modifications

Jet-Set: Separation of Heavy Volume Fine Dust Particles



© Keller Lufttechnik
reserved. Subject to modifications.



Keller USA, Inc.
2168 Carolina Place Drive
Fort Mill, SC 29708 USA
Phone (803) 396-2000 Fax (803) 396-2905
E-mail info@kellerusa.com
www.kellerusa.com