

TASK

Keller plans, engineers and fabricates systems to maintain air quality in all industrial applications in which air pollutants are collected, transported and separated. Innovative filter technologies and a systematic equipment design ensure optimal separation results.

The PT Filter series is particularly suitable for separation of fine dust. Nearly all types of dust can be successfully separated, such as those created in metal processing, polymer processing, and in chemical, pharmaceutical and ceramic industries, as well as non-metallic minerals.

PT Filter units are modular in design in order to meet different requirements, such as dust characteristics or the volume of exhausted air. Sturdy and low-noise units allow for reliable 24-hour operation with constant air flow.



EXAMPLES OF APPLICATIONS

Mechanical and thermal processes during which dry, airborne dust is created.

Grinding	Painting
Drilling, Turning	Blasting
Brushing	Thermal Joining
Fettling	Thermal Cutting
Blending, Weighing	Thermal Spraying

ADVANTAGES

- Filter elements for a variety of material properties
- Modular design
- Disassembles into identical components
- Flexible installation options
- Simplified installation in hard-to-access area
- Access on the clean air side to the horizontally installed filter elements
- Vertically designed upward pressure relief is possible
- Suitable for explosion protection measures for indoor and outdoor installations



OPERATION

The PT series operates according to the down-flow principle. The dust-laden air enters via the air inlet into the upper section of the filter housing and flows around the filter elements from top down. The polluted air is sucked through the filter elements that are fixed to the slotted wall and the dust collects on the surface of the filter elements. Cleaning of the filter elements is achieved by means of compressed air pulses during filtration operation. Thus, the air volume of the fan remains nearly constant. The clean gas (cleaned air) exits through the top of the unit and in most cases can be recirculated into the work area or is ducted outdoors. The separated dust falls into the dust collector section.

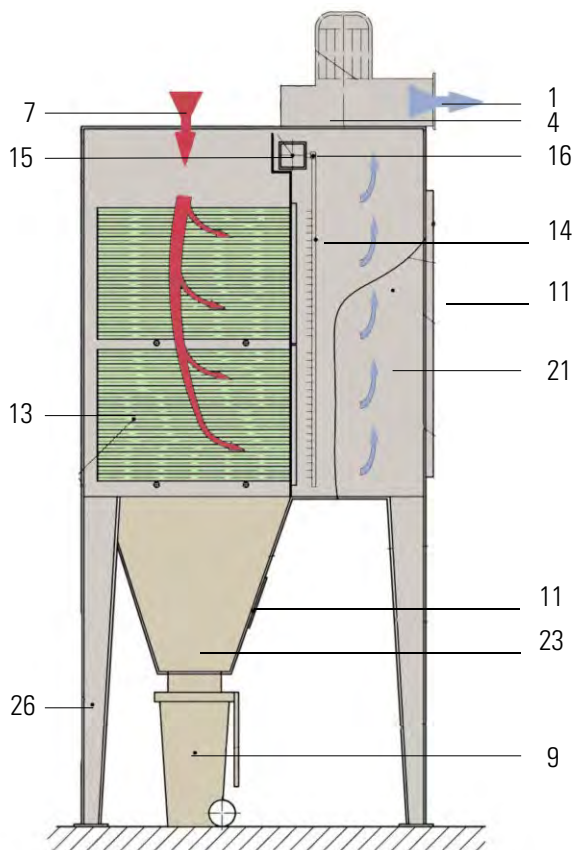
FILTER ELEMENTS

The filter elements are of high quality and are available in a variety of materials. Each filter element is selected depending on the specific application in order to achieve optimum filtration, separation efficiency, and length of service.

CLEANING THE FILTER ELEMENTS

The pulse cleaning cycle can be adjusted for each application by means of a control unit. The air flow of the fan remains nearly constant. The cleaning operation is activated either by a differential pressure regulator while in operation, or by a programmable downtime cleaning cycle.

DESCRIPTION



- 1 clean gas outlet (with top mounted fan)
- 4 radial fan
- 7 dirty air inlet
- 9 dust collection container 220 L
- 10 clean gas outlet (standard)
- 11 inspection door
- 13 Filter elements
- 14 blowing shoes
- 15 compressed air tank
- 16 electromagnetic diaphragm valves
- 21 clean gas room
- 23 hopper
- 26 substructure

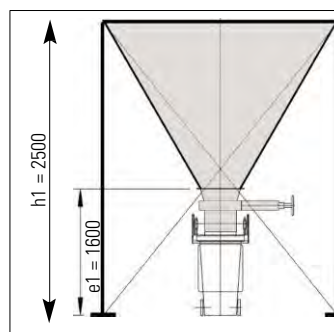
WASTE DISPOSAL

The air-tight and dust-tight disposal bins are connected to the filter's hopper with a clamping device, simplifying the exchange of dust collector containers.

For larger dust volumes or in 24-hour operations, the waste disposal is continuous via rotary valves, into disposal tanks or Big Bags.

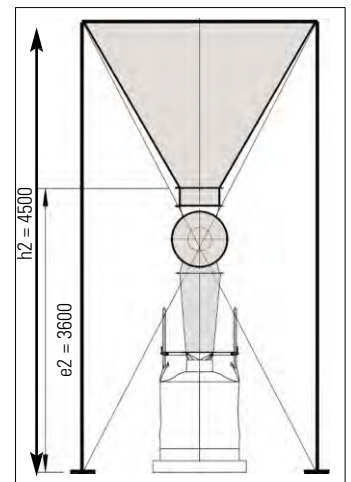
Waste disposal 1

- gate valve (optional)
- 220-liter container

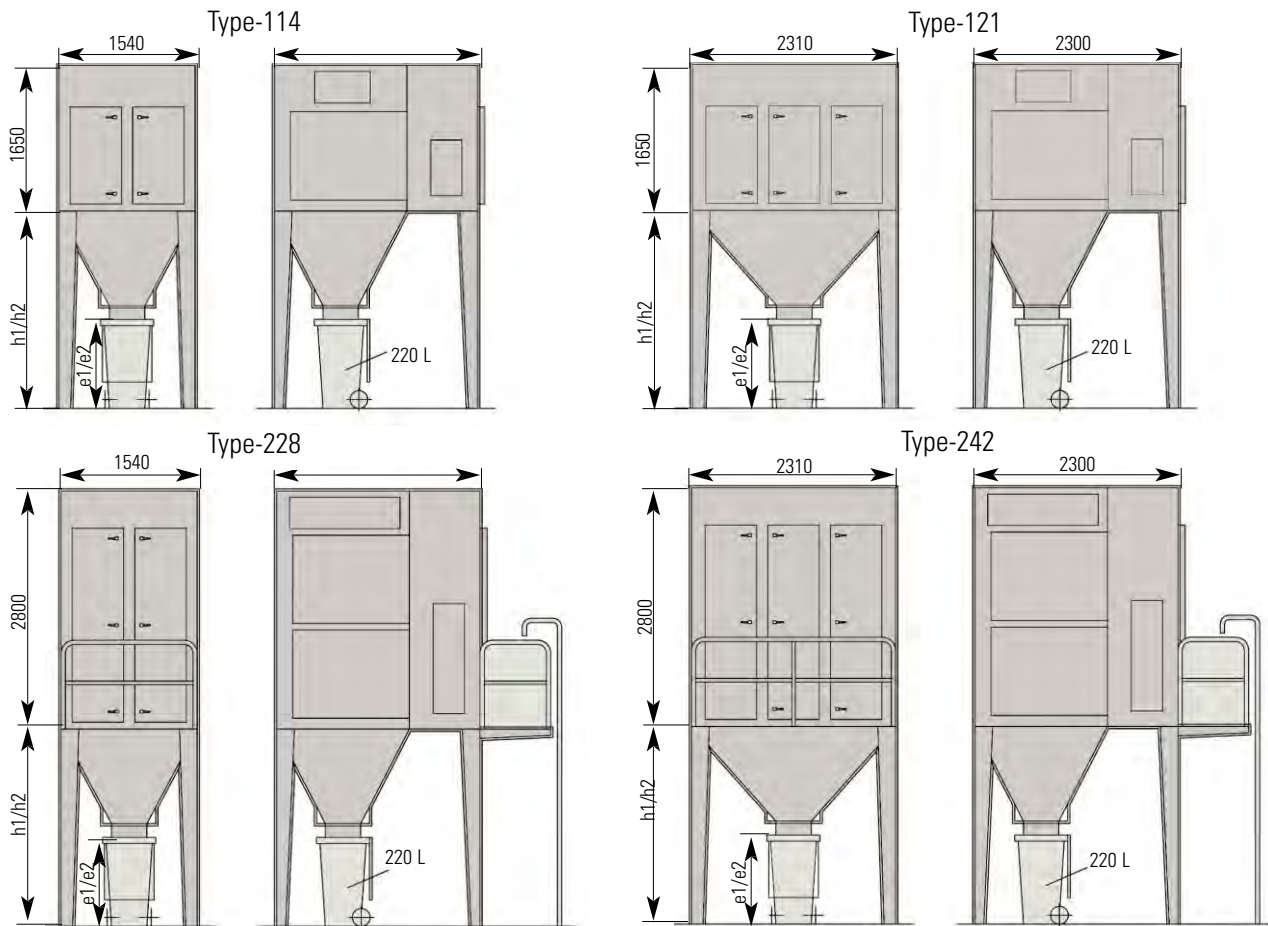


Waste disposal 2

- rotary lock
- Big-Bag/container



Technical data PT FILTER



Unit types			single storied		double storied	
			PT-114	PT-121	PT-228	PT-242
Filter elements	amount	pcs.	14	21	28	42
SINBRAN	filtration surface	m ²	60	90	119	180
	filter type	SINBRAN®	1500/18	1500/18	1500/18	1500/18
Multi-tube	filtration surface	m ²	60	90	119	180
	filter type	Multi-tube	1500/18	1500/18	1500/18	1500/18
Y-Filter	filtration surface	m ²	124,6	186,9	249,2	373,8
	filter type	Y-Filter	1500/18	1500/18	1500/18	1500/18
Tank	amount	Amount	2	3	2	3
	Valves	Amount	14	21	14	21
Double tank	amount	Amount			4	6
	Valves	Amount			28	42
Compressed air		NL/Impulse ¹⁾	110	120	110	120
Weight		kg	1300	2050	2350	2700

¹⁾ Only one valve is controlled, nominal pressure 6 bar
 Cleaning interval Standard PT-114/228 1,5 min
 Cleaning interval Standard PT-121/242 1 min

subject to modification

FAN SECTION

The direct-drive radial fan is very silent. Depending on the size of the filter unit, the fan is either integrated, top-mounted or placed next to it.

VENTING OUTDOORS OR RE-CIRCULATION

Air recirculation is often possible with the use of high-quality filter elements. The cleaned air can be ducted and channeled (even with heat exchangers) to the outdoors, or re-circulated back into the workplace. Alternate venting or recirculation can be accomplished by activating a switch within the exhaust duct.

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

SAFETY

It is possible to equip PT Filter systems with security technology if combustible or explosive dusts are created during the manufacturing process.

PLACEMENT

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



PT-FILTER with fluid hopper