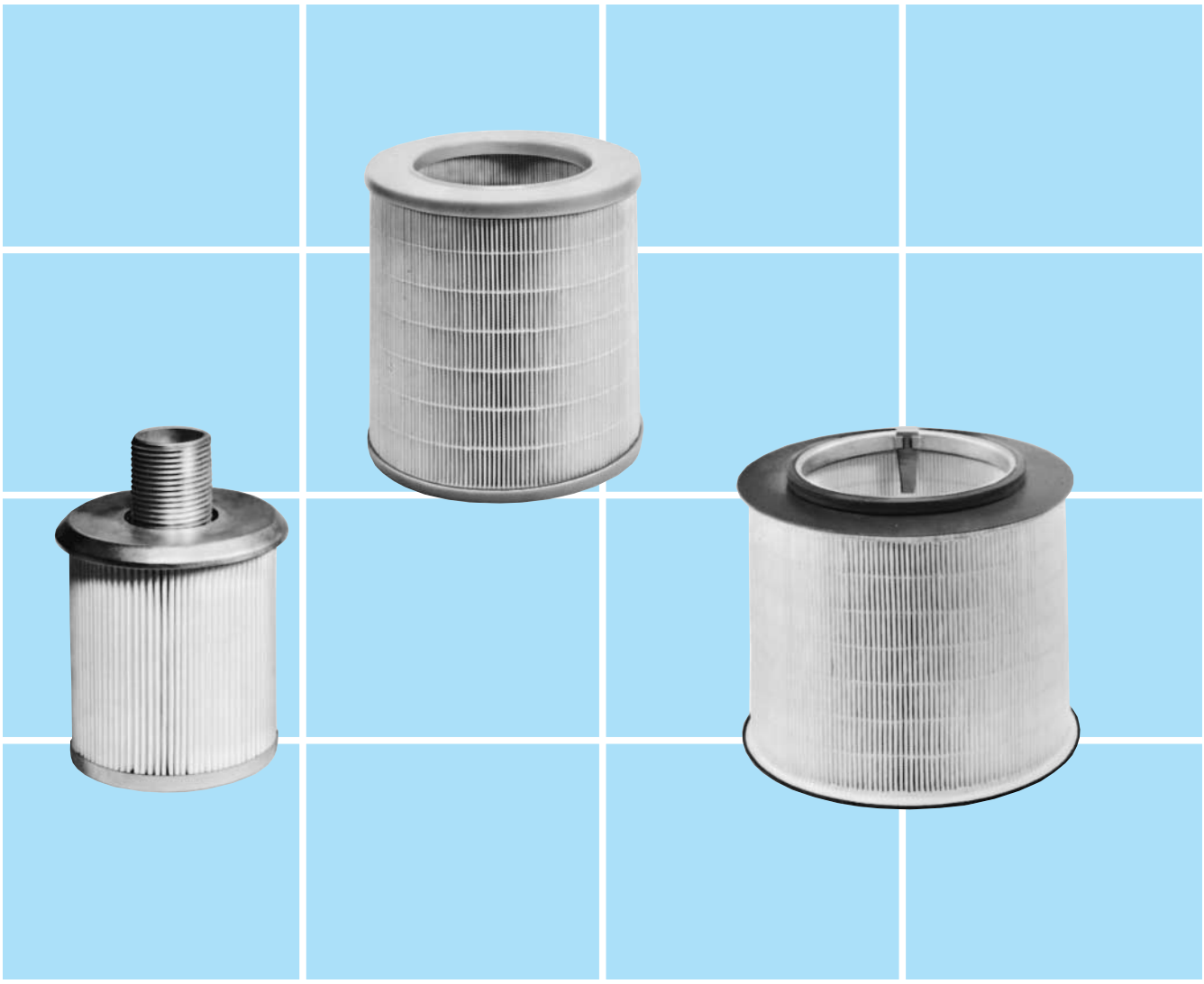
Luwa® JG, JK, JP Ultrafilter



High Efficiency Cylindrical Air Filters

- Compact space saving design
- Simple to install
- Low pressure drops
- Large filter medium area gives long life service
- Individually tested and leak-free
- Corrosion resistant (JK) with synthetic material casing (JKG)

Luwa

General technical data, Guide specifications

The Luwa JG, JK and JP are cylindrical filters designed to filter particles such as bacteria, viruses or general contaminants suspended in air, compressed air or gases. The JP is a fine dust filter and the JG and JK are HEPA filters.
A wide variety of sizes and casing types is available, makeing these filters usable in a vast field of applications such as medical technique, research and industry.
The media, casings, sealing compounds and gaskets are manufactured under close supervision. The filtration media are tested for separation efficiency, pressure drop, tensile strength, weight and water repellancy. Each completed JK and JG high efficiency filter must pass the DIN 24184 oil mist test after manufacture. JP fine dust filters are subjected to visual inspection after manufacture.

Filtering efficiencies/Quality classifications/Temperature ranges

	Filter type	JP	JG	JK
Initial efficiency[1)]	Medium	Cellulose	Glassfibre	Glassfibre
Oil mist test ∅ 0.3–0.5 µm[2)]	%	–	>99.99	>99.99
Sodium flame test B. S. 3928	%	–	>99.995	>99.995
DOP-Test, Mil-Std-282	%	–	99.99	99.99
Efficiency to ASHRAE 52–76/B.S. 6540/DIN 24185	%	95	–	–
Maximum relative humidity of air	%	<85	<100	<100
Classification to EUROVENT/SWKI 84	–	EU9	EU13	EU13
Classification to DIN 24185/184	–	EU9	S	S
Max. continuous temperature[3)]	°C	90	90	90
Max. final pressure drop	Pa	500	1000	1000

[1)] At nominal air flow

[2)] Test aerosol 1 to DIN 24184

[3)] For short period (approx. 1 h) max. 105 °C permissible

Guide specifications

Luwa JP Ultrafilter
Cylindrical fine dust filter classe EU9 (to EUROVENT 4/5 and SWKI resp. DIN 24185).
Filtermedia made of cellulose fibres.
Flanges made of elastic plastic material, serving as gaskets.

max. diameter 150 mm
total height 160 mm
weight per filter cell 0.3 kg
air volume/filter cell _____ m^3/h
initial pressure drop _____ Pa
max. admissible rel. humidity 85 %
max. continuous temperature 90 °C
separation efficiency 95 %
(ASHRAE 52–76/DIN 24185)

Luwa JG Ultrafilter
Cylindrical HEPA filters to classe EU13/S (to EUROVENT 4/4 and SWKI 84 resp. DIN 24184).
Filtermedia out of submicron glass fibres, metalparts of aluminium.
Connection threading 1" (brass).
a) execution without cover protective
b) execution with steel cover, gasproof lacquered, 1 connection
c) execution with stheet steel casing, gasproof lacquered, 2 connections

max. diameter _____ mm
total height _____ mm
air volume/filter cell _____ m^3/h
initial pressure drop _____ Pa
max. admissible rel. humidity 100 %
max. continuous temperature 90 °C
separation efficiency _____ %
(DOP-test/sodium flame test/paraffin oil mist test)
weight per cell _____ kg

Accessory
Locknut R1" incl. gasket for connection of filter.

Luwa JK Ultrafilter
Cylindrical HEPA filters to classe EU13/S (to EUROVENT 4/4 and SWKI resp. DIN 24184).
Filtermedia out of submicron glass fibres. Ring and bottom disc made of Resocel.

max. diameter _____ mm
total height _____ mm
air volume/filter cell _____ m^3/h
initial pressure drop _____ Pa
max. admissible rel. humidity 100 %
max. continuous temperature 90 °C
separation efficiency _____ %
(DOP-test/sodium flame test/paraffin oil mist test)

Accessories
Clamp for installation of the filter, consisting of: connecting ring, wedge (brass) and gasket made of EPR (ethylene propylene rubber).

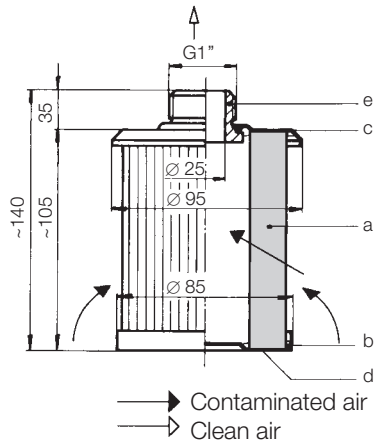
Luwa JKG Ultrafilter casing
PVC filter casing JKG 19/… for installation in air duct systems or for similar applications.
Connection diameter: 125 mm.
Casing to accommodate a Luwa Ultrafilter type JK 19/…
Direction of air flow horizontal/vertical, downward/upward.
Fitted with condensate drain, gasket and brackets for installation on wall or ceiling.

weight including filter cell _____ kg
length «L» _____ mm
diameter «D» 300 mm

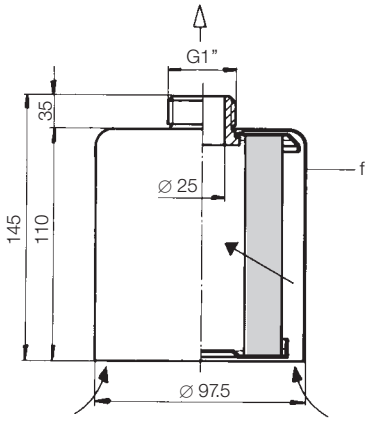
In view of continuous research and development we reserve the right to modify dimensions, specifications and equipment without previous notice.

Luwa JG Ultrafilter

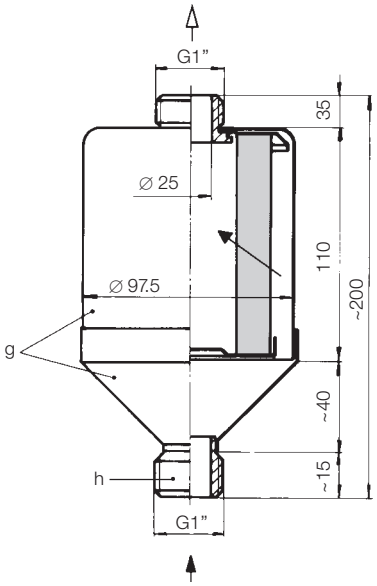
Dimensional sketch Dimensions in mm



Luwa JG Ultrafilter without protective cover

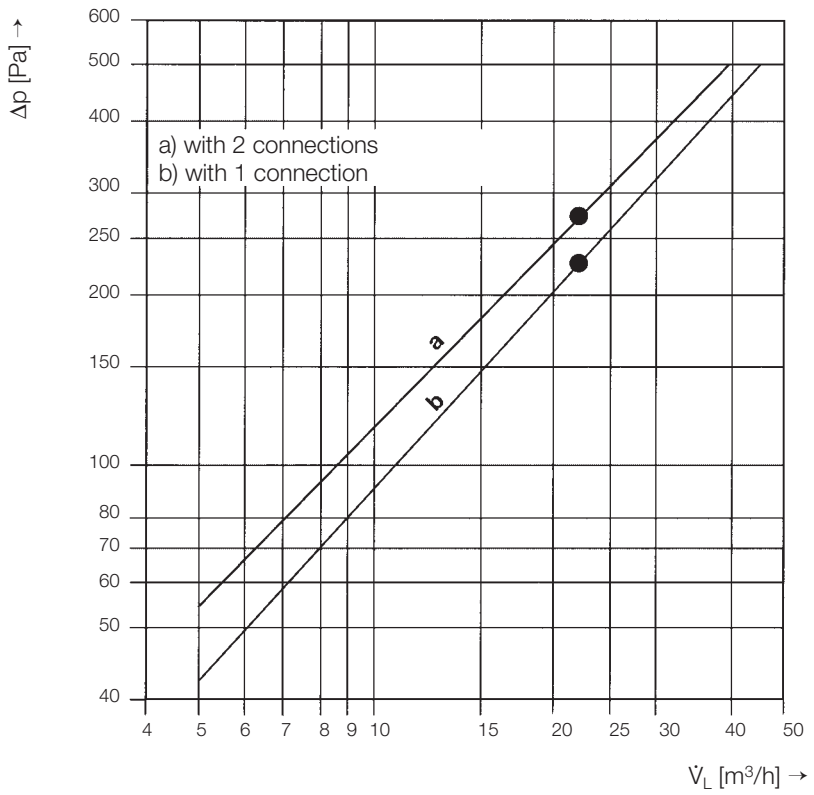


Luwa JG Ultrafilter with protective cover



Luwa JG Ultrafilter with casing

Initial pressure drop[1)] (Δp) as function of air flow ($\dot{V}_L$)



Assembly
The threaded connection on the clean air side “e” is to be inserted through a cut-out of min. 35 mm diameter and fastened by means of a gasket and locknut (see below – item Accessory).
Attention: the filter should not be screwed-in holding filterpart “c”, “f” and “g”.

Material specification[2)]
a = filter media: glassfibres
b = sealant: synthetic material
c = flange: aluminium
d = base: aluminium
e = connection socket: brass
f = protective cover: mild steel, gas proof laquered
g = casing (2 connections) mild steel, gasproof laquered
h = connection socket: brass

Remarks
[1)] Recommended final pressure drop approx. 3 times the initial pressure drop, but max. 1000 Pa.
[2)] For guide specifications see on page 2.
[3)] Max. differencial pressure at 20 °C: $P_{B\,(max.)}$ = 1.5 bar.

Technical data **Part number**	Air flow rating $\dot{V}_N$ [m³/h]	Δp[1)] at $\dot{V}_N$ [Pa]	Active filter surface [m²]	Weight [kg]	Part number
Filter type JG, without cover	22	230	0.3	0.30	421 10 1050
Filter type JG, with cover	22	230	0.3	0.40	421 10 1070
Filter type JG, with casing[3)]	22	280	0.3	0.68	421 10 1090
Accessory Lock nut G1” incl. gasket					421 10 1140

Luwa JK Ultrafilter

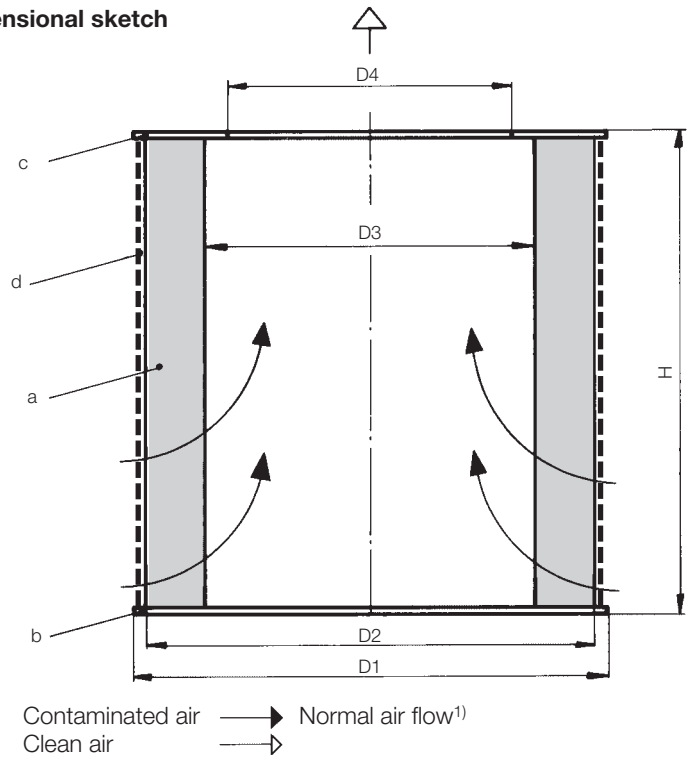
Luwa JK Ultrafilters are cylindrical HEPA filters available in heights from 50 to 400 mm and in diameters of 150 or 190 mm. Each filter is leak tested and leak free.

Mounting
With clamps in a cut-out of diameter "D4" (see on page 5) or by means of a special gasket in Luwa filter casing JKG (see on page 6).

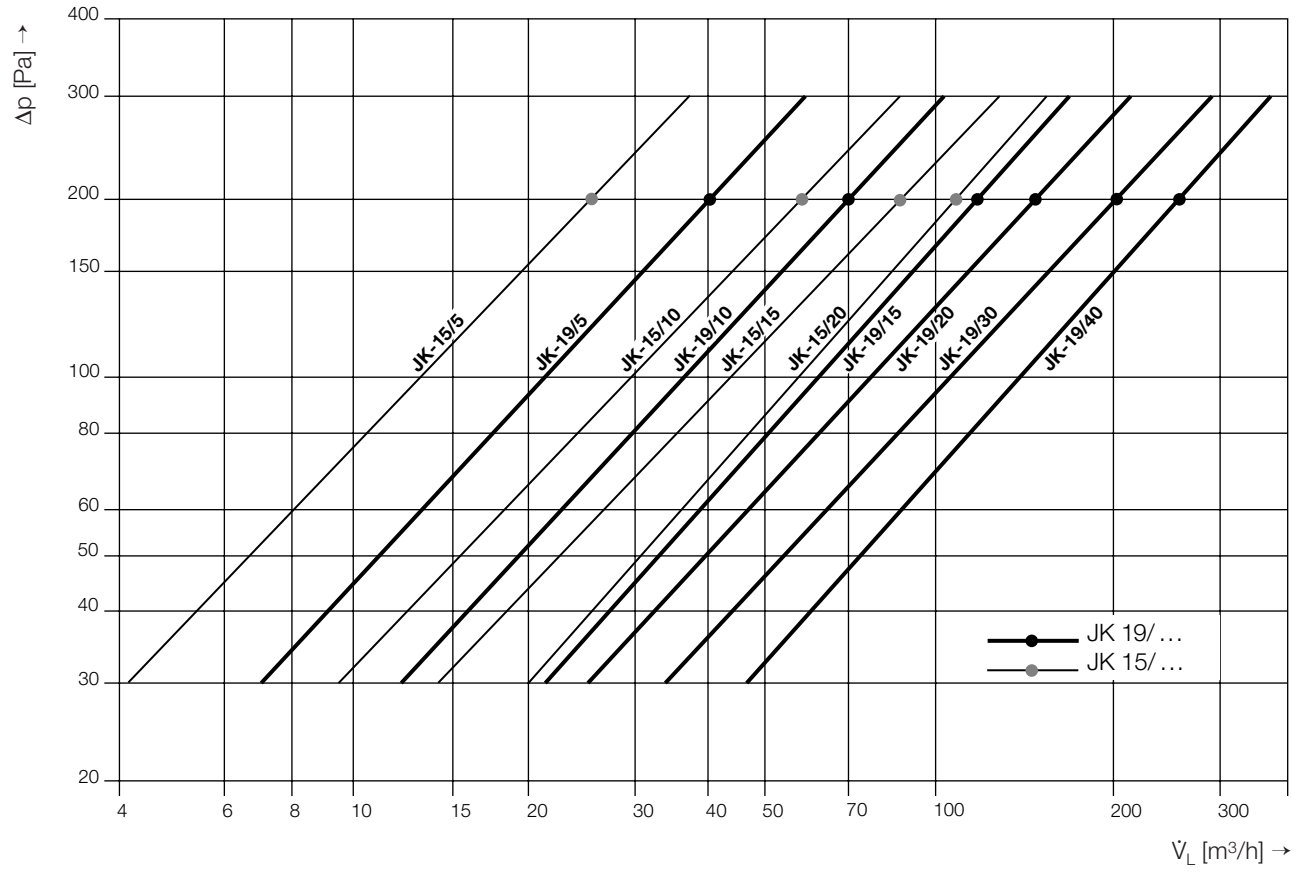
Filter Life
Depending on dust load and air flow. The filter should be changed if it has reached about 3 times the initial pressure drop, however latest at a final pressure drop of 1000 Pa.

Material specifications
a = filter media: glass paper
b = sealant: synthetic resin
c = ring and bottom disc: Resocel

Dimensional sketch



Initial pressure drop (Δp) as function of air flow ($\dot{V}_L$)



Technical data/part number

Type	Dimensions [mm] D1	D2	D3	D4	H	Rated air flow $\dot{V}_N$ [m³/h]	Δp at $\dot{V}_N$ [Pa]	Active filter surface [m²]	Filter weight [kg]	Part number
JK 15/5	155	150	110	95	50	25	200	0.2	0.11	422 20 2035
JK 15/10	155	150	110	95	100	55	200	0.5	0.16	422 20 2040
JK 15/15	155	150	110	95	150	80	200	0.8	0.21	422 20 2050
JK 15/20	155	150	110	95	200	110	200	1.1	0.25	422 20 2060
JK 19/5	200	190	150	130	50	40	200	0.3	0.20	422 20 2065
JK 19/10	200	190	150	130	100	70	200	0.6	0.24	422 20 2070
JK 19/15	200	190	150	130	150	115	200	1.0	0.33	422 20 2080
JK 19/20	200	190	150	130	200	150	200	1.3	0.39	422 20 2090
JK 19/30	200	190	150	130	300	200	200	1.9	0.55	422 20 2100
JK 19/35	200	190	150	130	350	225	200	2.2	0.62	422 20 2110
JK 19/40	200	190	150	130	400	250	200	2.5	0.70	422 20 2120

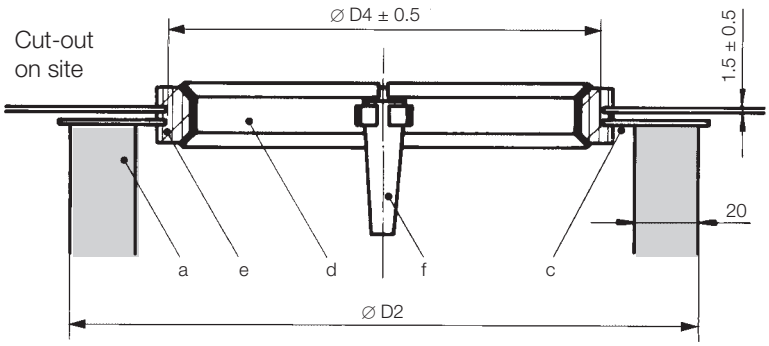
Accessories	
Clamp for JK 15 filter (incl. gasket)	422 20 2140
Clamp for JK 19 filter (incl. gasket)	422 20 2160
Tool for installation[2] of JK 19 clamp	422 20 2170

Clamp
for installation of JK filters in a cut-out of D4 ± 0.5 mm diameter.

Material specifications[3]
a = filter media: glass paper
c = flange: Resocel
d = connecting ring: brass
e = gasket: synthetic material
f = wedge: brass

Specials
At request JK-filter may also be supplied in other filter efficiencies, heights, diameters and with supporting grill.

Remarks
[1] Reverse airflow is permitted and may be an advantage when filtering toxic or radioactive dust (filter serves as a dust container).
[2] For fast and easy mounting of filters.
[3] Guide specifications see on page 2.



Luwa JKG Filter casing

Luwa JKG Ultrafilter casing is a cylindrical synthetic material casing for all Luwa JK19 filters (see on pages 4 + 5).

It can be installed directly into the piping system and is easy to mount on walls and ceilings.

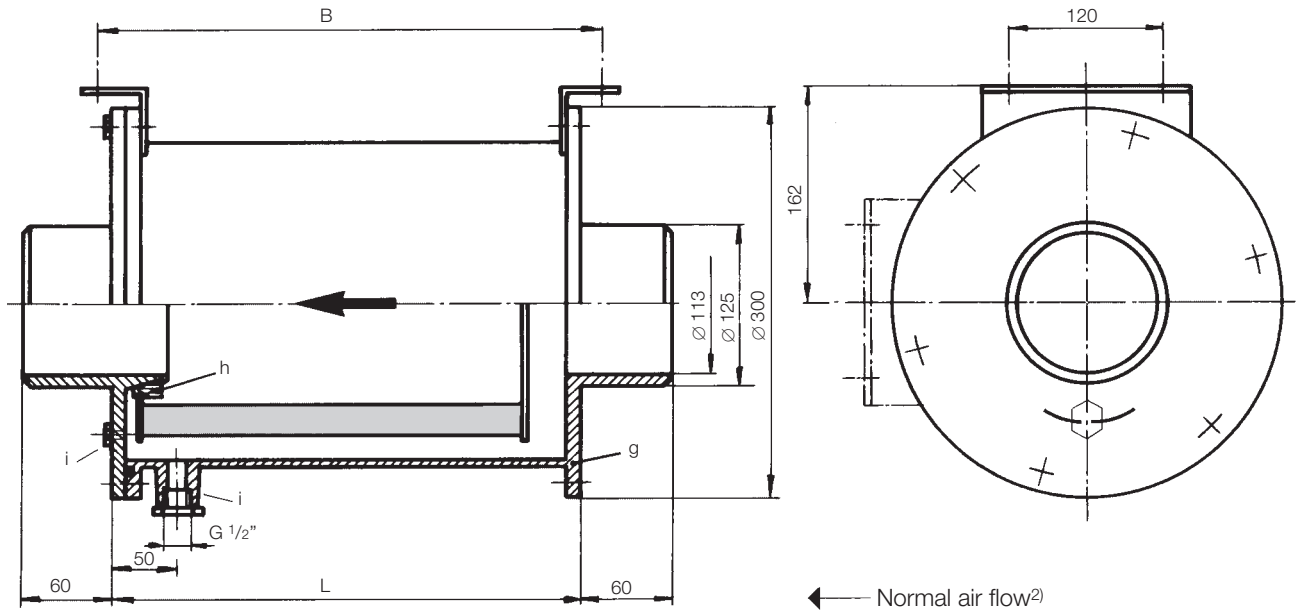
Application
Suitable for all systems where small quantities of air are to be effectively filtered, especially inlet- and outlet air of laboratories, water reservoirs, various containers, working places and as bleed filter.

Material specifications[1)]
g = casing: PVC (welded)
h = gasket: synthetic elastomer
i = connection for condensate extraction pipe

Extent of supply
Case equipped with gasket, condensate drain and brackets for installation on wall or ceiling.

Limits
Temperature: T (max.) = 50 °C
Differential pressure:
$P_{B\ (max.)}$ = ± 14 000 Pa
= ± 0.14 bar
} at 20 °C

Dimensional sketch Dimensions in mm



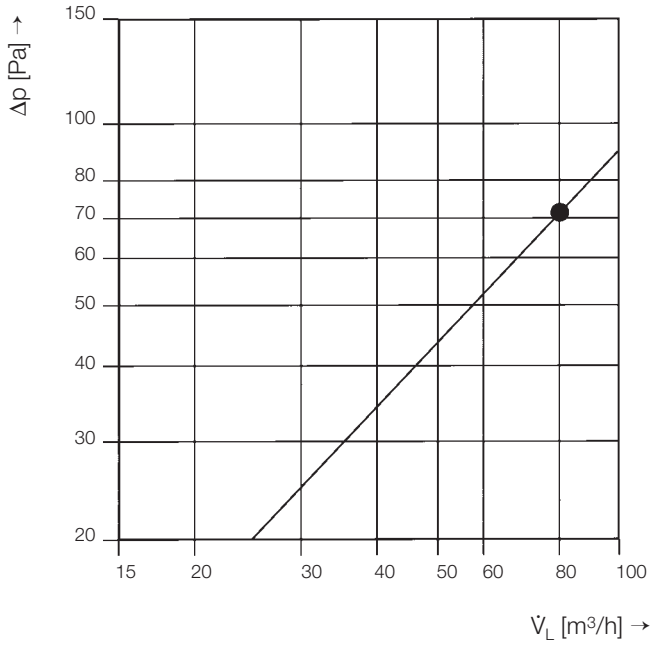
Combinations/dimensions/part number

Casing type	Matching filter type	Dimensions L [mm]	Dimensions B [mm]	Weight of casing [kg]	Part number
JKG 19/20	JK 19/15, JK 19/20	260	298	3.4	447 20 2220
JKG 19/30	JK 19/30	360	398	3.7	447 20 2230
JKG 19/40	JK 19/35, JK 19/40	460	498	4.0	447 20 2240
Spare gasket for filter casing JKG					447 20 2260
2 sleeves (∅ 125 mm) with 4 clips					447 20 2270
Filter assembly and leak tests at works					447 20 2290

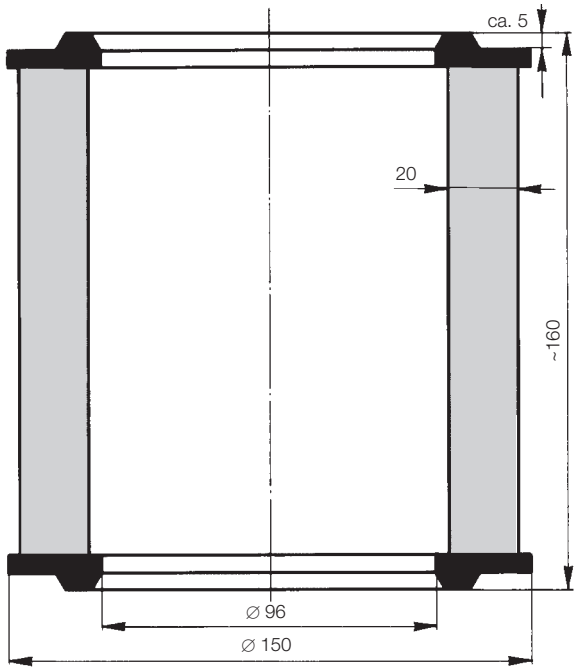
Remarks
[1)] For guide specifications see on page 2.
[2)] Reversed air flow permitted (see to remark 1 on page 5).

Luwa JP Ultrafilter

Initial pressure drop[1] (Δp) as function of air flow ($\dot{V}_L$)



Dimensional sketch Dimensions in mm

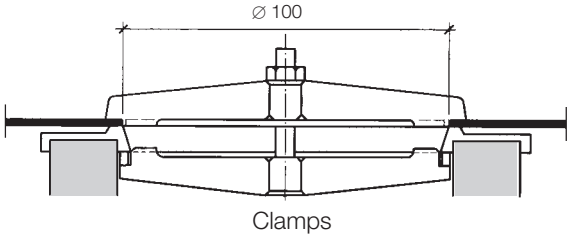


Luwa JP Ultrafilters are cylindrical fine dust filters with elastic, pliable flanges, serving simultaneouslg as a yasket.

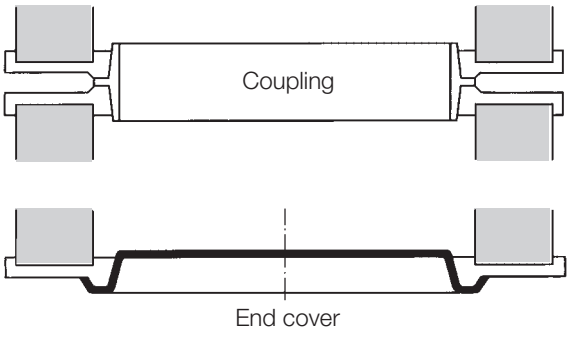
Material specifications[2]
Filter media: cellulose paper
Flanges: Elastomer (elastic and pliable)
Clamp: Aluminium
Coupling/End cover: galvanized steel

Technical data **Part number**	Air flow rating $\dot{V}_N$ [m³/h]	Δp[1] at $\dot{V}_N$ [Pa]	Active filter surface [m²]	Weight [kg]	Part number
Filter type JP-blue	80	70	1.3	0.3	423 30 3040
Accessories Clamp					423 30 3080
End cover					423 30 3090
Coupling					423 30 3100

Accessories



Clamps



End cover

Clamps
consisting of clamping cross for 96 mm diameter hole and spacing ring. Suitable for assembly of JP filter in a cut-out of 100 mm diameter.

Coupling
for the joining of two filter cells (series connection).

End cover
suitable for bottom aperture of 96 mm diameter.

Remarks
[1] Recommended final pressure drop approx. 3 times the initial pressure drop, however max. 500 Pa.
[2] For guide specifications see on page 2.