



JM Stofftechnik AB

**A COMPANY WITHIN
THE ENVIRONMENT CONTROL AREA**

CATALOGUE No. 3

We are specialized in
FLUE GAS CLEANING EQUIPMENT
mainly for bio fuel firing.
Many of our products are also suitable
for industrial dust collecting plants.





JM Stofftechnik AB develops as well as manufactures equipment for dust collection, mainly flue gas cleaning.

FIELD OF OPERATION

- *Multi cyclones
- *Bag filter
- *Flue gas fans
- *Rotary locks
- *Conveying systems
- *Accessories for dust collection plants
- *Supply of flue gas cleaning plants

This catalogue shows our main products. If you cannot find the required product in our catalogue please contact us and we will try to customize the requested product.



CALL
JM

Phone

+46 33 10 40 02

Fax

+46 33 10 40 22

E-mail

jm.stofttechnik@swipnet.se
www.jmstofttechnik.com

Address

JM Stofftechnik AB
P.O. Box 22098
SE-504 11 BORÅS, Sweden

CONTENT

Page No.

Multi clones

4

Bag filter

5-7

Cyclones /Screw conveyors

8

Fans

Expansion bellows

9

Inspection covers

10

Rotary locks

11-13

Dust bins

14-15

Design criteria for JM products

16-17

Valves

18

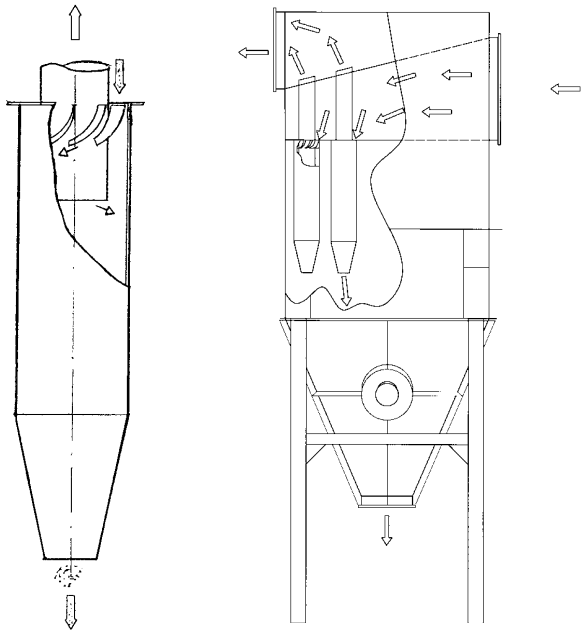
Flue gas dust

19

Design and dimensions

20

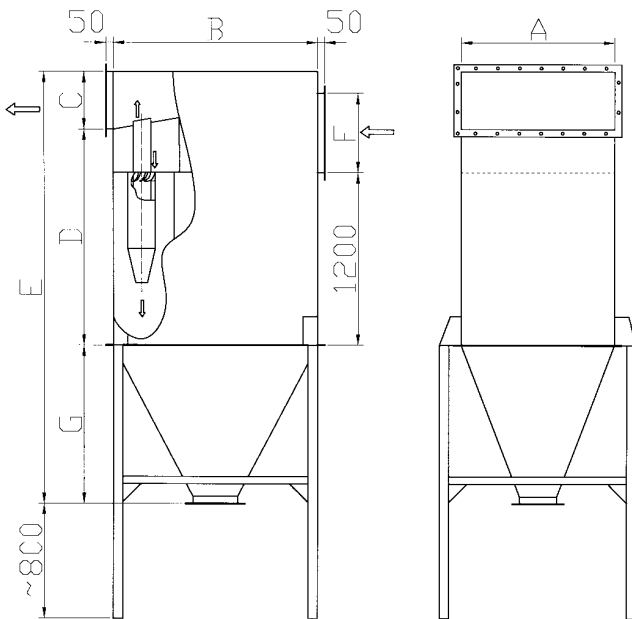
MULTI CYCLONE JM-250



Multi cyclone JM-250 is built of a number of small cyclones connected in parallel. The number of cyclones is adapted to the gas flow.

The multi cyclone is especially designed to clean fly ashes from solid fuel firing of bio fuels but is also suitable for other applications. The nominal gas flow is between 1200 – 60000 m³/h.

Art.no. 30056

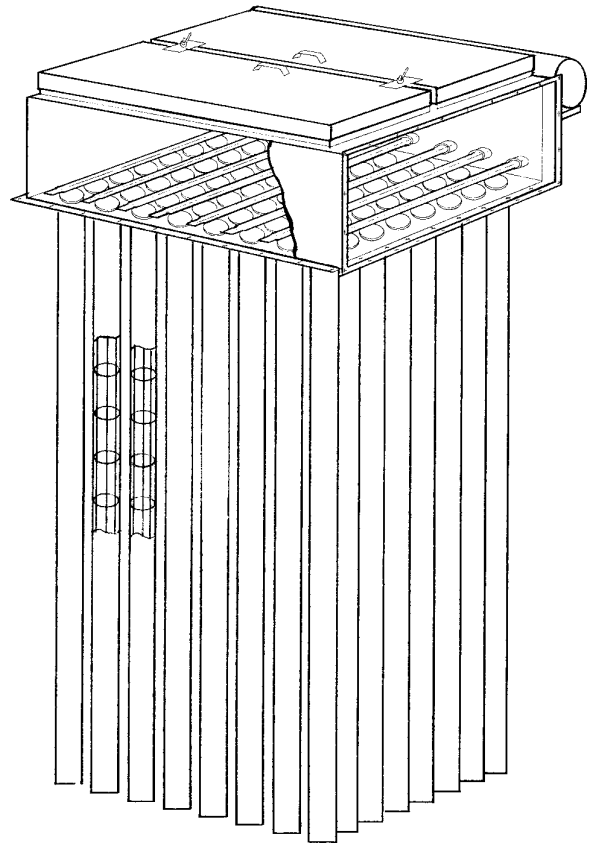


Size*	A	B	C	D	E	F	G	Art.no.**
2 x 2	708	708	250	1390	2190	315	550	30056
2 x 3	708	1058	315	1465	2630	450	850	30056
3 x 3	1058	1058	315	1465	2630	450	850	30056
3 x 4	1058	1408	400	1500	3000	550	1100	30056
4 x 4	1408	1408	400	1500	3000	550	1100	30056
4 x 5	1408	1758	450	1670	3520	780	1400	30056
5 x 5	1758	1758	450	1670	3520	780	1400	30056
5 x 6	1758	2108	550	1780	3980	950	1650	30056
6 x 6	2108	2108	550	1780	3980	950	1650	30056
6 x 7	2108	2458	630	1870	4450	1100	1950	30056
7 x 7	2458	2458	630	1870	4450	1100	1950	30056

*Size = Number of cyclones. Art. no + size

BAG FILTER

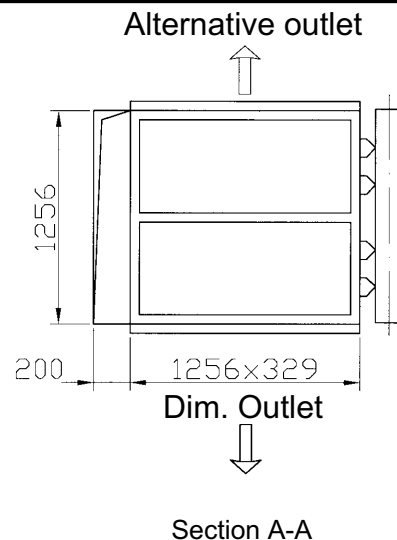
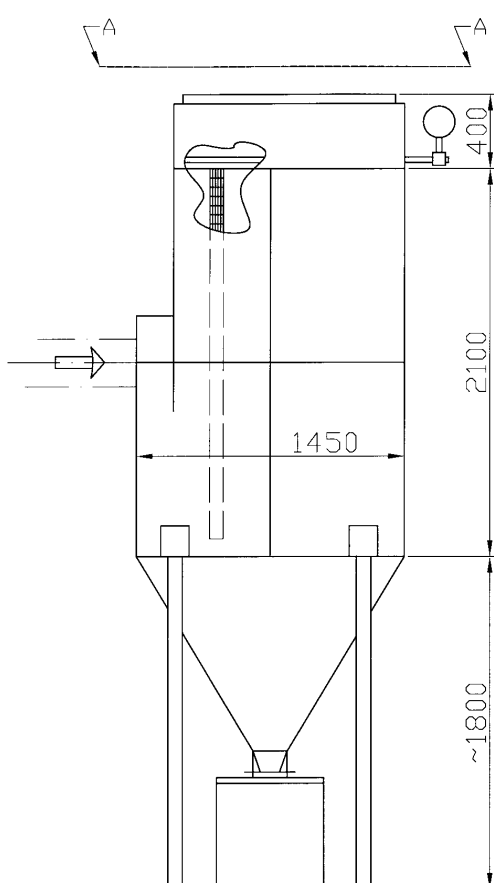
Bag filter JM-64 is manufactured of standardized modules with bag filters, cell partitions, compressed air cleaning equipment, cleaning device and service doors. These top parts can be installed within filter housings, which can be built for the requested number of modules. The filter housings are manufactured of 3 mm stay plate. The location of the dust inlet is adapted to the characteristics of the dust and the required ducting.



Technical data:

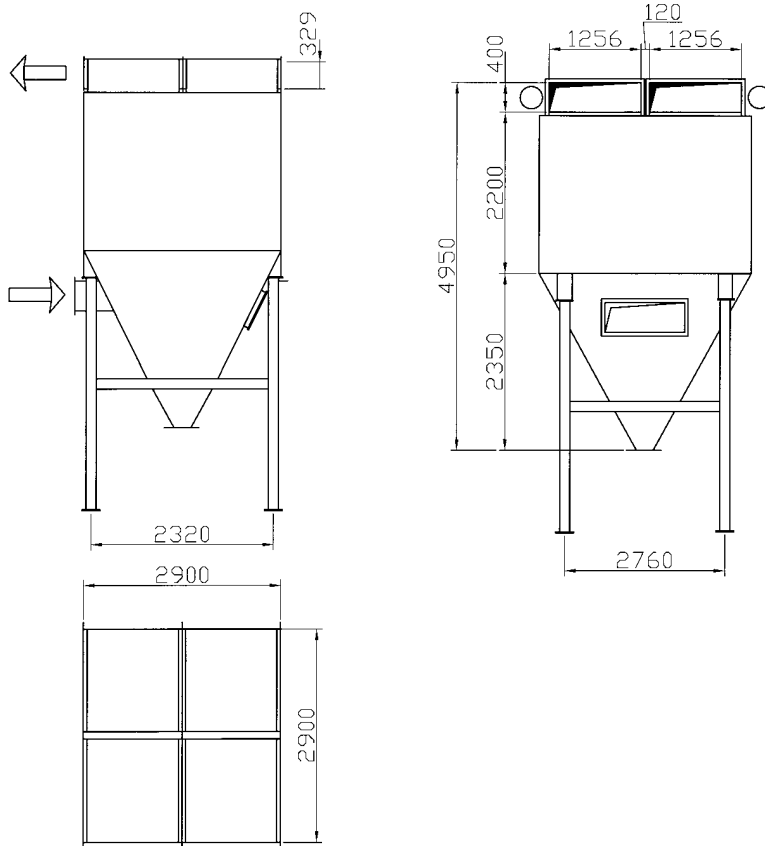
Number of filter bags/module: 64 pcs
Length of filter bag: 2000 mm
Filter surface/module: 46 m²

BAG FILTER, one module



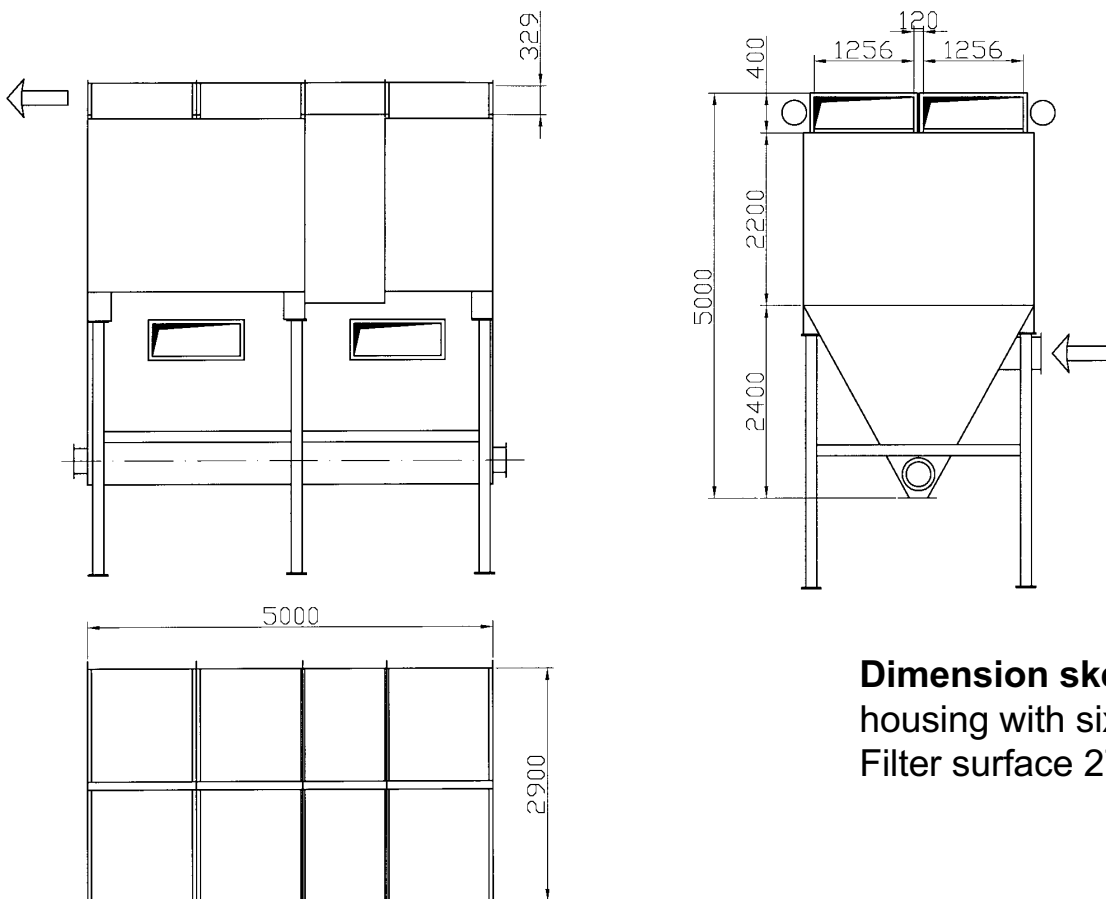
Dimension sketch of filter housing with one module.
Filter surface 46 m².

BAG FILTER, four (4) modules



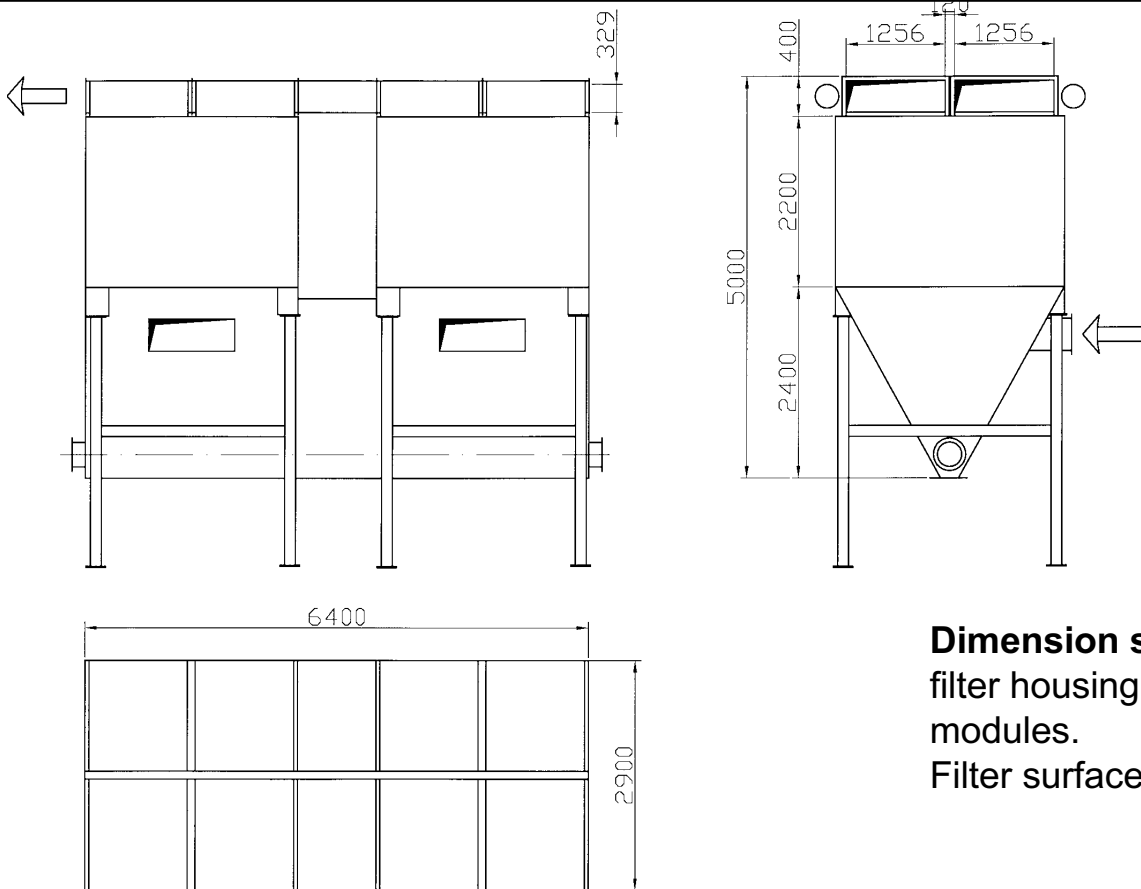
Dimension sketch for filter housing with four modules.
Filter surface: 184 m²

BAG FILTER, six (6) modules



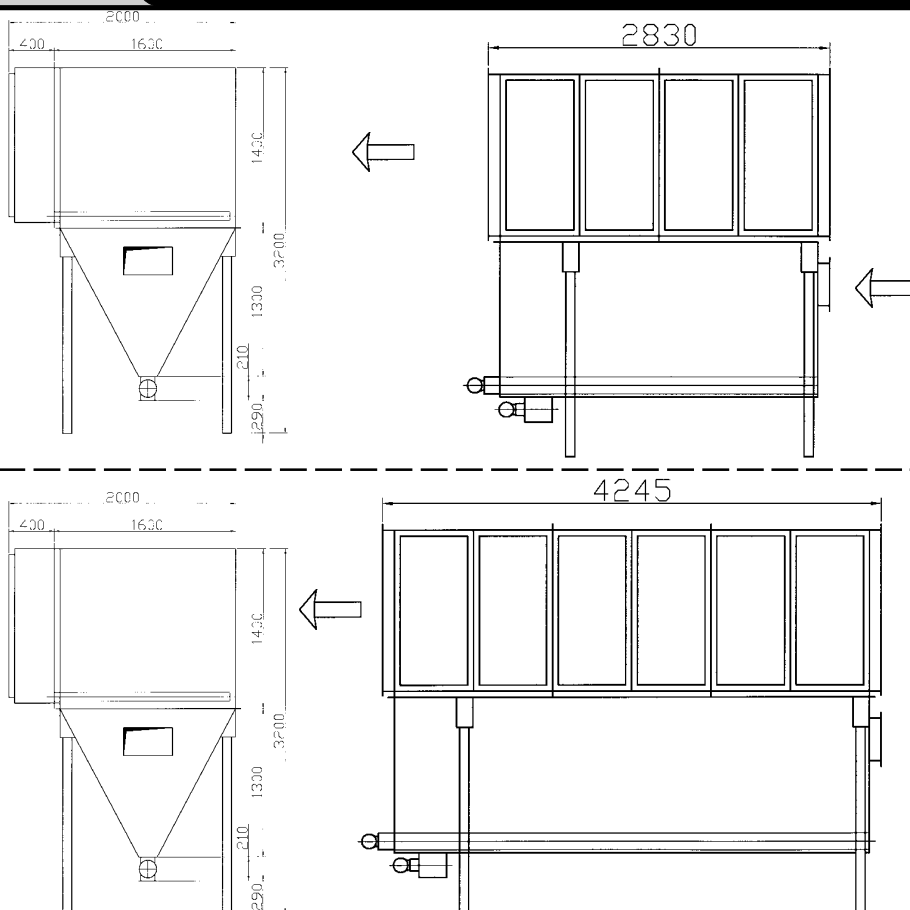
Dimension sketch for filter housing with six modules.
Filter surface 276 m².

BAG FILTER, eight (8) modules



Dimension sketch for filter housing with eight (8) modules.
Filter surface: 368 m²

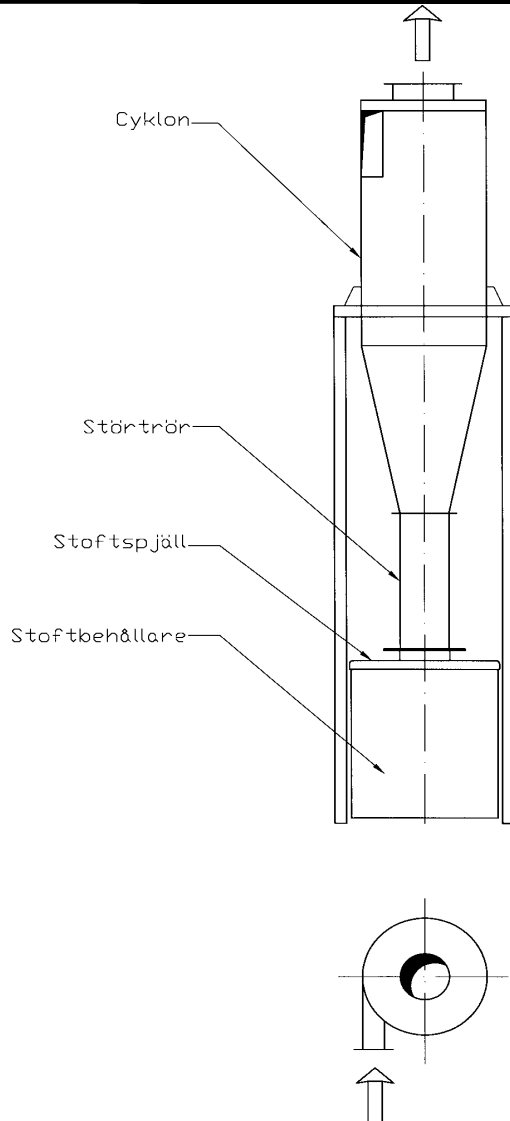
BAG FILTER, side accessed



Dimension sketch for filter housing with two (2) modules.
Filter surface: 69 m²

Dimension sketch for filter housing with three (3) modules
Filter surface: 104 m²

CYCLONES



Cyclones are available as follows:

- Primary cyclone
- Standard cyclone
- High efficiency cyclone

As standard manufactured of 3 mm plate and 6 mm heavy plate in parts exposed to wear.



SCREW CONVEYOR

Dust Screw conveyor



Cover: Ø 139,7 x 4,0 mm.
Screw: Ø120 mm pl.j. 35x6.
Motor: 0,25 kW, 9 r/m.
Art. no. 30090

FLUE GAS FANS



Flue gas fans.

Complete in all sizes

Manufactured in a robust design with low speed in order to withstand tough operating conditions and to minimize the sound level (dB).



EXPANSION BELLOW

Expansion bellows

with expander manufactured of stainless steel SS 2343.

Art. no. 30007

Available as: round
rectangular
square



INSPECTION COVERS



Inspection door, round

with a diameter of 530 mm.

Insulated door with quick acting lock and a frame of 150 mm.

Art.no. 10006

Inspection door square/ rectangular

Insulated door with quick acting lock and a frame of 60 or 100 mm (Size 40x40 is provided with twin lock).

Size:



(cm)	Art.no. 60 mm frame	Art.no. 100 mm frame
12x15	30023-51	30023-511
15x25	30023-52	30023-521
25x25	30023-53	30023-531
25x40	30023-54	30023-541
40x40	30023-55	30023-551

DUST VALVE JM-25G + JM-60 G



Dust valve JM-25G and JM-50 G
Manufactured of 3 mm plate. The dust valve has six blades and is provided with 8 mm Neopren rubber blades. The rubber blades are bolted to the plate profiles of the rotor shaft. The rotor has bearings in both ends. The driving device is direct-connected with low speed. (9 rpm)*

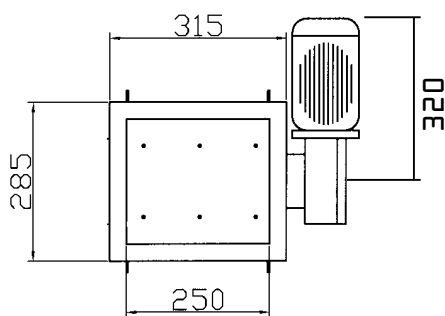
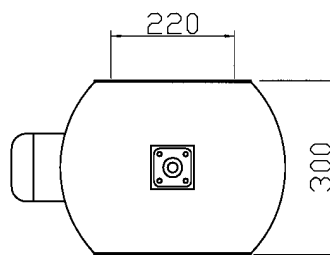
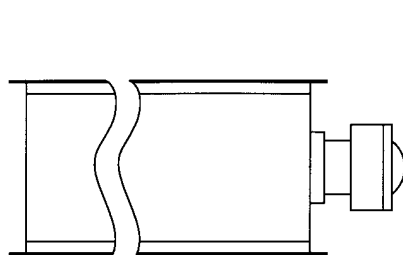
Range of application is mainly within the wood, paper and fodder industry.

*Also available for higher rpm.

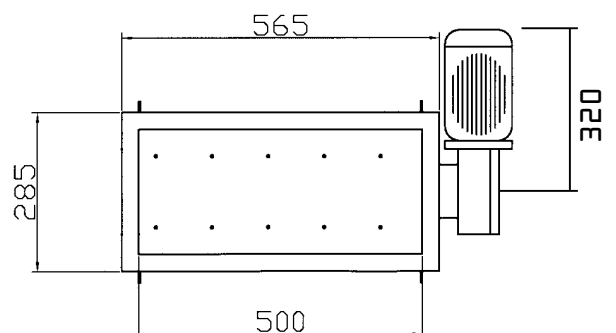
Designation	Motor power kW	Speed rpm	Capacity Design m ³ /h	Capacity Operating m ³ /h
JM-25	0,25	9	7,7	7,0
JM-50	0,25	9	15,4	14,0

JM-25G Art.no. 30179-25 (with rotor of stainless steel, Art.no. 30255-25 RF)

JM-50G Art.no. 30179-50 (with rotor of stainless steel, Art.no. 30255-50 RF)

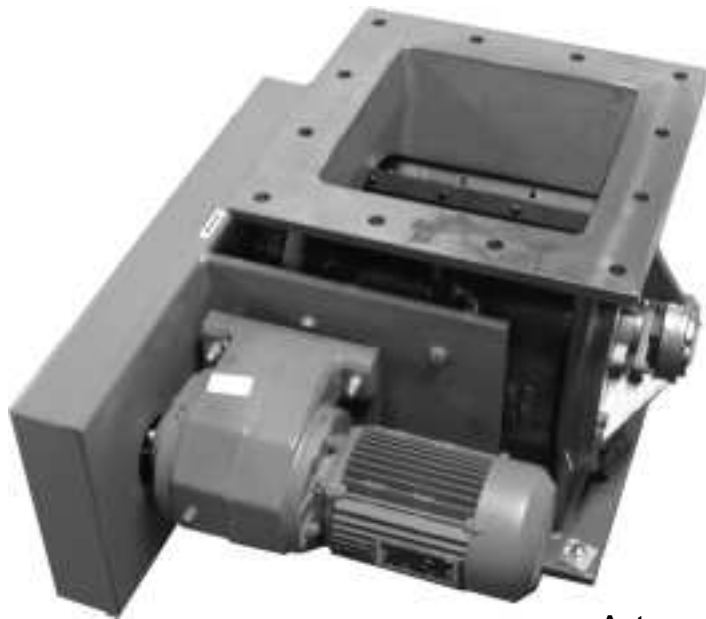


JM-25G



JM-50G

DUST VALVE ROTOLOK



The dust valve Rotolok is a robust construction, machined to required tolerances. The sides of the rotor are rotating why only the wings are exposed to wear. The wings are provided with 5 mm thick adjusting blades. The driving device is connected with chain drive. (Normal speed is 4 rpm). Adjustable shaft sealing is of teflon with external bearing.

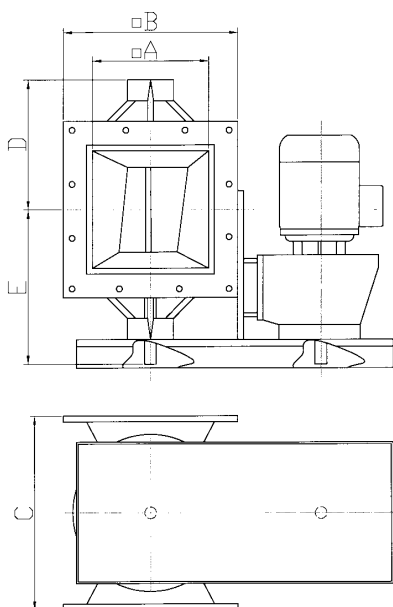
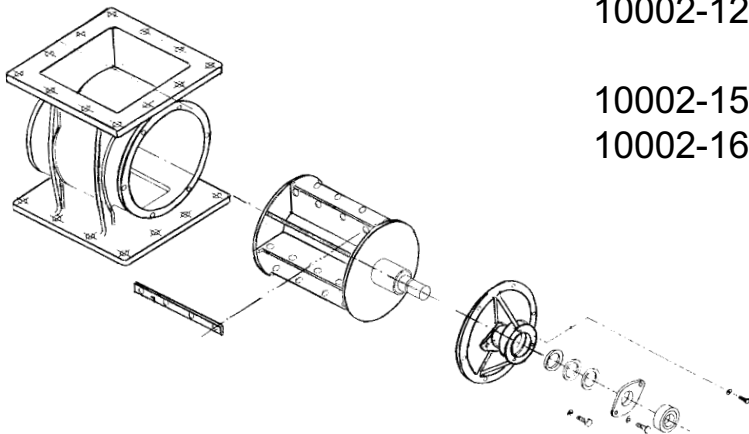
Art. no.

10002-11 Size 200 without driving device

10002-12 Size 200 with driving device

10002-15 Size 250 without driving device

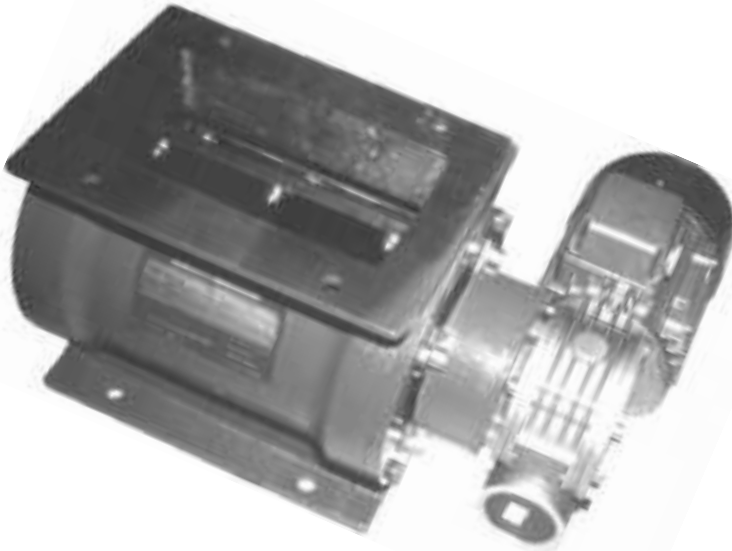
10002-16 Size 250 with driving device



Size	A	B	C	D	E
200	200	300	330	200	260
250	250	370	380	230	280
300	300	440	465	280	370

ROTOLOK is available in sizes up to 900 x 900 mm.

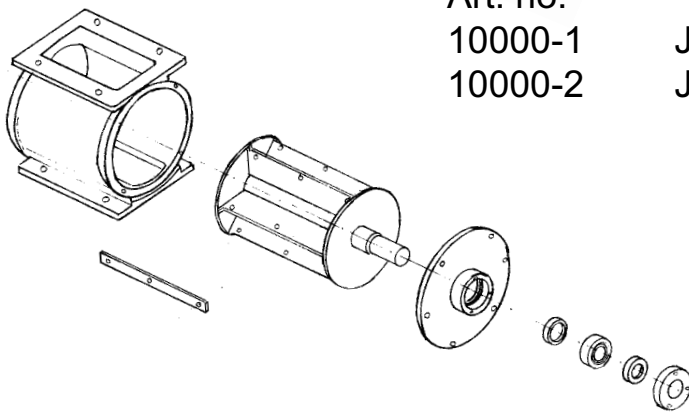
DUST VALVE JM-20



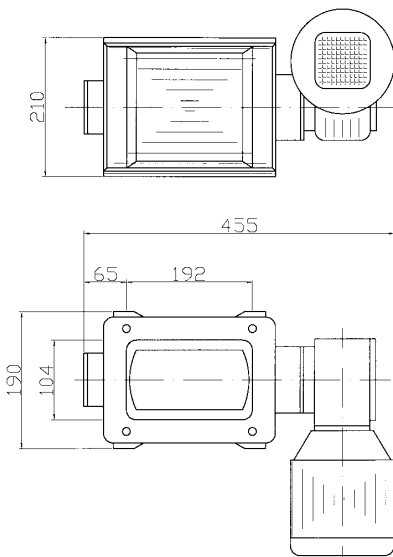
Dust valve JM-20 is a robust construction, machined to required tolerances. The sides of the rotor are rotating why only the wings are exposed to wear. The wings are provided with 5 mm thick adjusting blades. The driving device is direct-connected with low speed (9 rpm)*
Stuffing boxes of heat resistant VITON.

Art. no.
10000-1
10000-2

JM-20 with driving device, 0,25 kW
JM-20 without driving device



* Also available for higher speed.



Capacity at 9 rpm:
1,2 m³/h design capacity
1,1 m³/h, operating capacity

DUST VALVE JM-15/45
DUST BIN JM-45

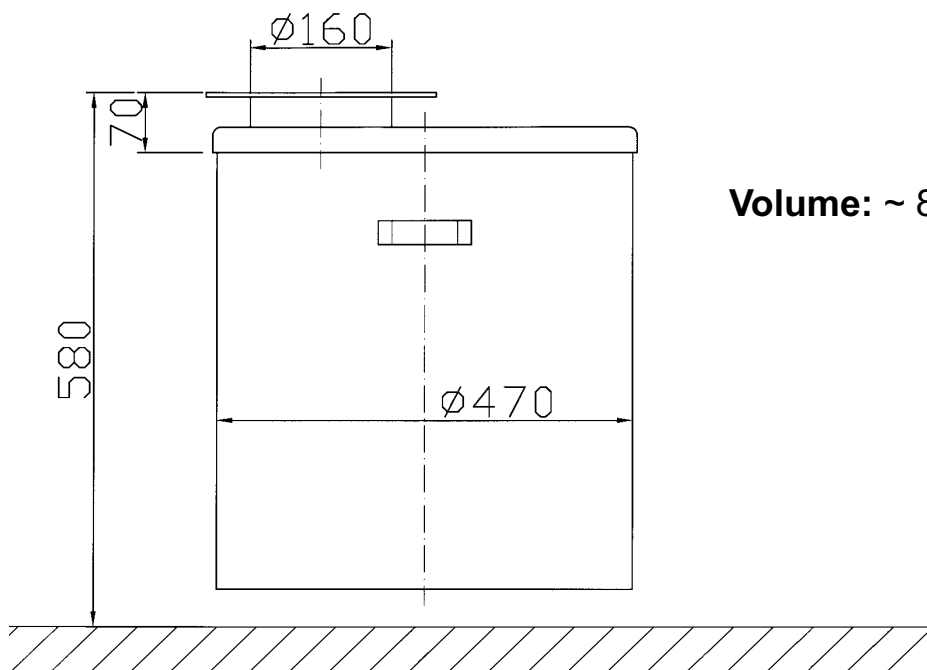


Dust valve, cover.
JM-15/45

Art.no. 10003

Dust bin
JM-45

Art.no 20004



Volume: ~ 84 litre

DUST VALVE JM-25/60
DUST BIN JM-60



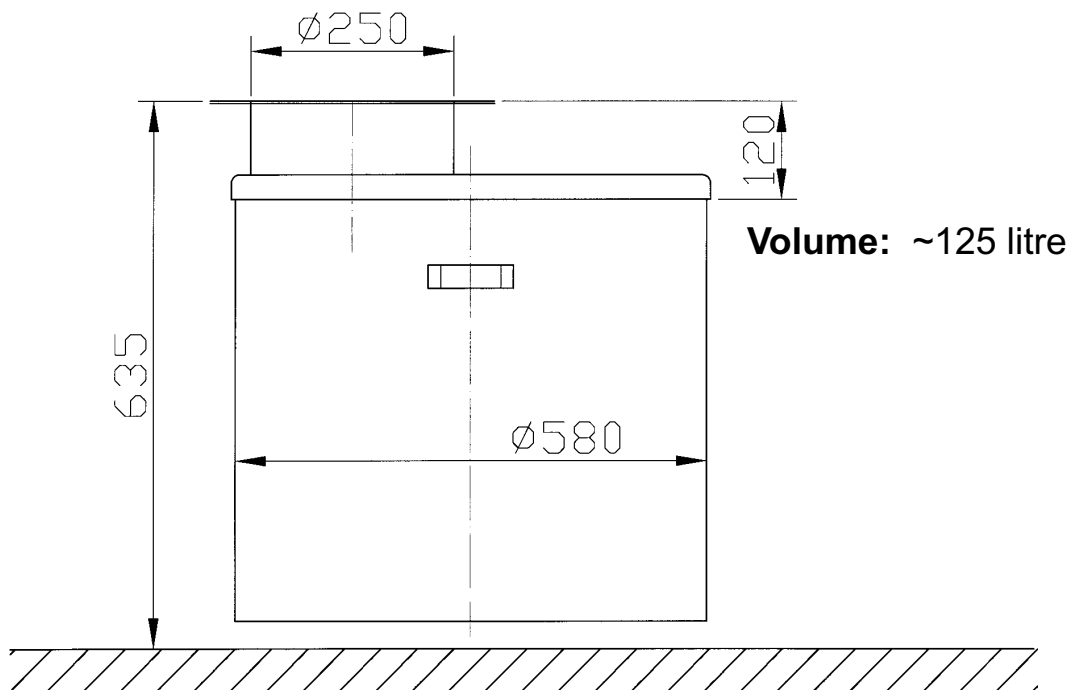
Dust valve, cover.
JM-25/60

Art.no. 10026



Dust bin
JM-60

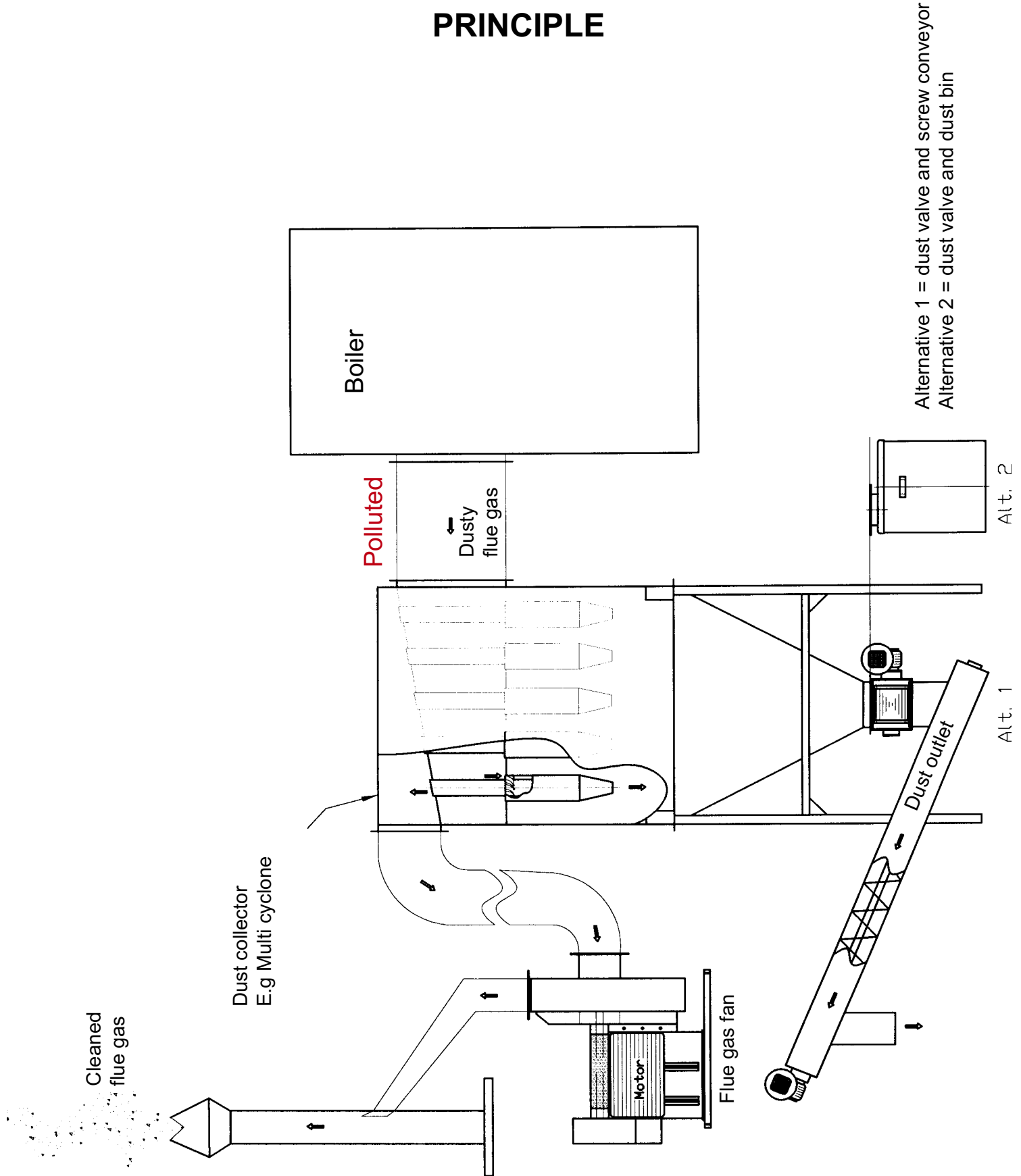
Art.no. 20014



DESIGN CRITERIA, FLUE GAS CLEANING

Application with components from JM Stofftechnik.

PRINCIPLE



Alternative 1 = dust valve and screw conveyor
Alternative 2 = dust valve and dust bin

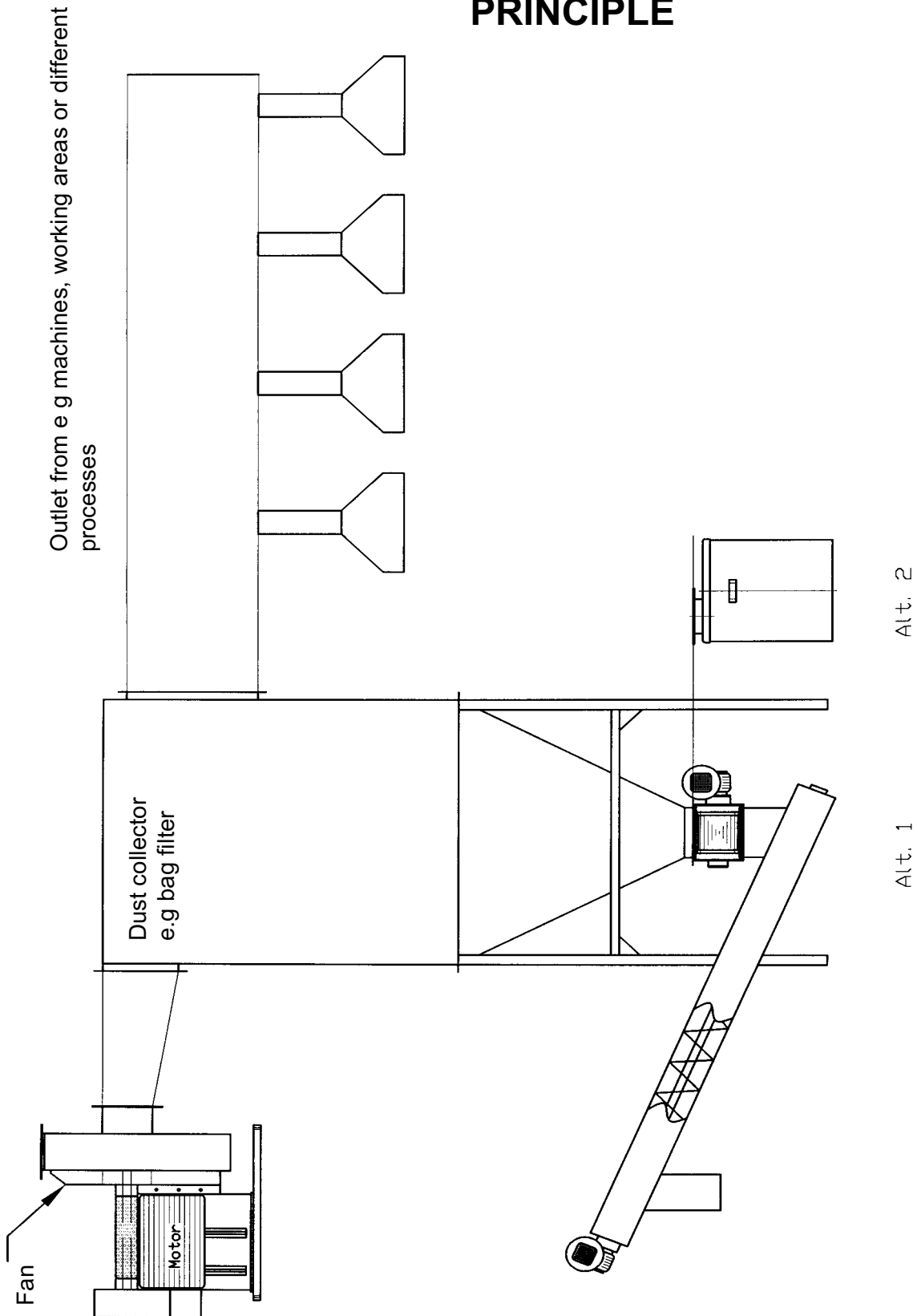
Alt. 2

Alt. 1

DESIGN CRITERIA, INDUSTRIAL PROCESSES

Application with components from JM Stofftechnik.

PRINCIPLE



Alternative 1 = dust valve and screw conveyor
Alternative 2 = dust valve and dust bin

VALVES



Radial vane damper in sizes from 400 mm to 1250 mm diameter. For temperatures up to 250 °C.

Art. no. 20022



Single blade valve with rest for improved sealing. Single bearing with bushing and adjustable shaft sealing. Manufactured as round and square. Maximum size 500 mm.

Art. no. 20019



Single blade valve with rest for improved sealing. Single bearing with bushing. Manufactured as round and square. Maximum size 500 mm.

Art. no. 40078

Flue gas dust

Flue gas dust can be divided into two basically different types with regard to the way in which it is formed.

Coarse particle fractions

These consist of fuel particles, ash and soot agglomerates being released during decarbonizing work. The particle dimensions usually exceed 1/1000 mm and the dust can be separated in dynamic dust collectors. Coarse particles are a major pollutant with regard to weight or volume but they discolor the flue gas only slightly. Coarse particles cause problems by settling and polluting the area round the flue.

Fine particle fractions

Gaseous hydrocarbon which have escaped secondary combustion, condense when the flue gases are cooled down in the convection section of the boiler and become fine soot. The particle dimensions are extremely small, less than 1/1000 mm. Owing to the small mass of the particles they cannot be made to deviate sufficiently from the flow lines of the gas to enable separation in dynamic separators. The finest particle fractions can be a major pollutant, as regards the number of particles. They discolour the flue gases considerably. Therefore, a dark flue gas exhaust indicates that the combustion needs to be improved.

Plants with pre-boiler

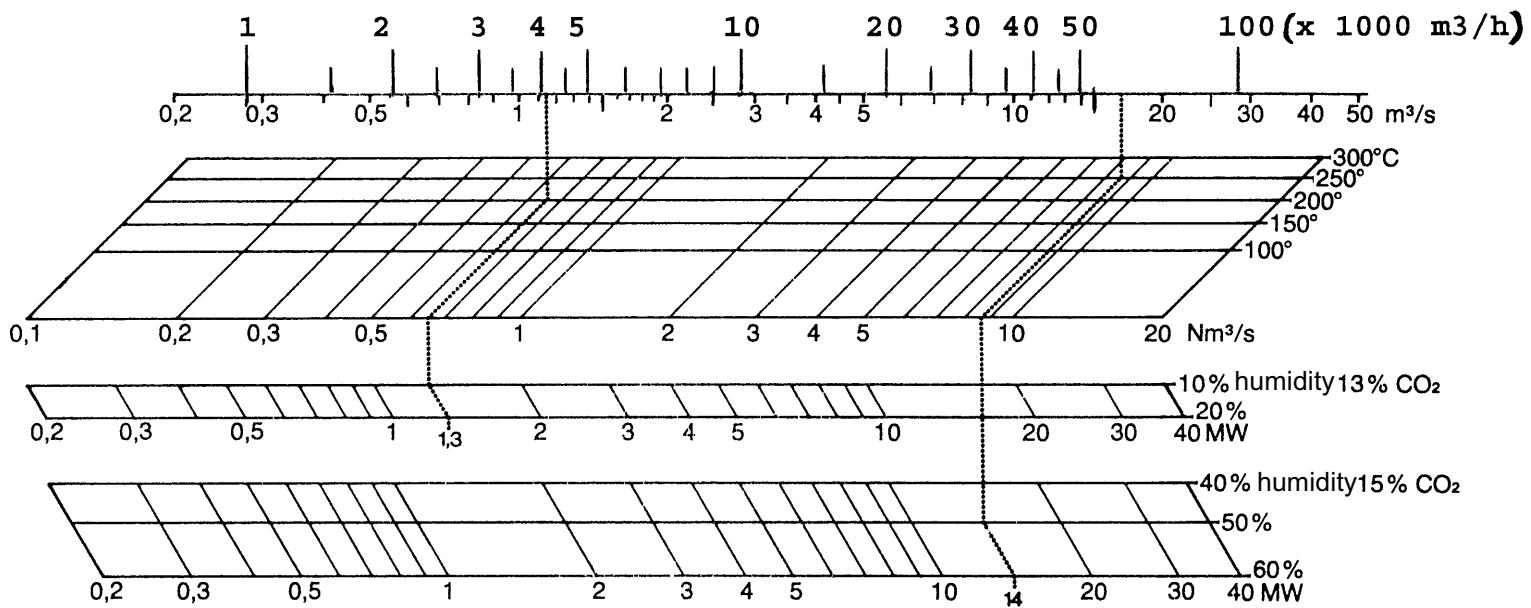
Some solid fuels, especially bio fuels contains a lot of water and the combustion therefore often is made in a ceramical insulated pre-boiler allowing high combustion temperature. Conventionally designed pre-boilers that are heavy loaded, emit high contents of dust which is a consequence of high gas transformation. When redoubling the load per m² rust surface the dust captivity may increase ten times or more.

To achieve a complete combustion it is important that the pre boiler is equipped with well designed arrangements for supply of primary and secondary air. Experiences show that the air should be supplied by fans and that the fuel injection, the burning air and the flue gas flow must be coordinated. When the working conditions of the flue gas cleaning system are affected by the efficiency of the combustion plant it is vital that the view-points above are taken into consideration.

High contents of unburned fuel particles results both in losses and unnecessary wear of the cleaning equipment. Unburned gaseous hydrocarbons also result in losses as well as they may condensate and cause pluggings.

DIMENSIONING

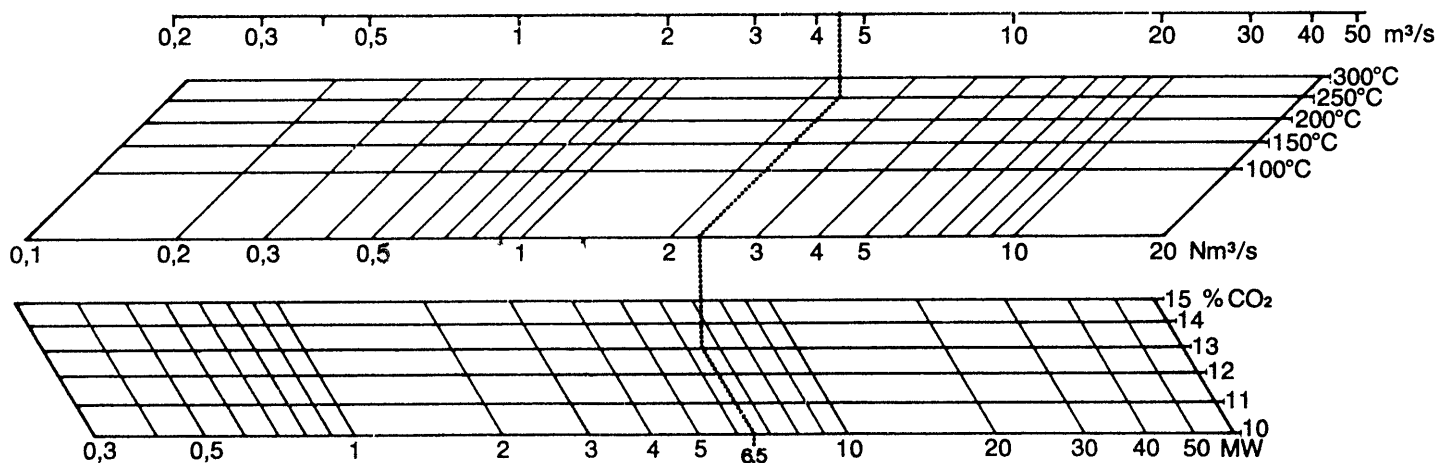
Solid fuel firing



Preliminary dimensioning for wood fuel firing

1. Find the boiler efficiency
2. Go diagonally upwards to the line for fuel humidity content
3. Go vertically to the line for gas flow in Nm^3/s
4. Go diagonally upwards to the relevant gas temperature
5. Go vertically upwards and read the actual gas flow

Oil fired boiler



Preliminary dimensioning for oil fired boiler

1. Find the boiler efficiency
2. Go diagonally upwards to the relevant CO_2 -content
3. Go vertically to the line for gas flow Nm^3/s
4. Go diagonally upwards to the relevant gas temperature
5. Go vertically upwards and read the actual gas flow

The three broken-dashed lines show examples of preliminary estimations of actual gas flow.

Solid fuel boiler 1: 1,3 Mw
Actual gas flow 4250 m^3/h

Solid fuel boiler 2: 14 Mw
Actual gas flow 63000 m^3/h

Oil fired boiler 1: 6,5 Mw
Actual gas flow 16000 m^3/h