

# EM400 Insulation Blowing Machine



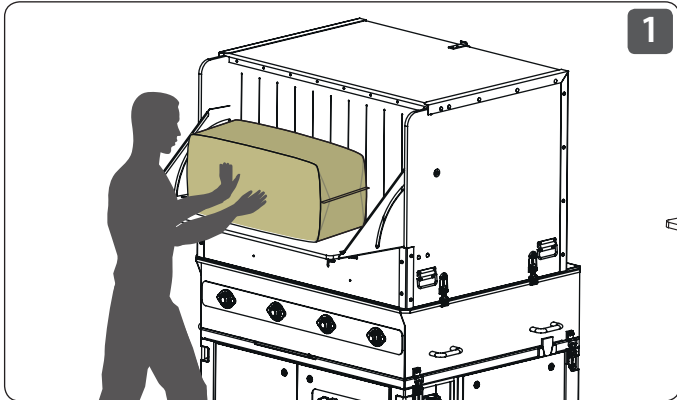
- ▶ High-performance insulation blowing machine
- ▶ Precise controlling options
- ▶ Dust-free filling with vacuum connection
- ▶ All blowing injection methods possible
- ▶ Compatible with all insulation blowing materials
- ▶ Mobile or stationary use possible



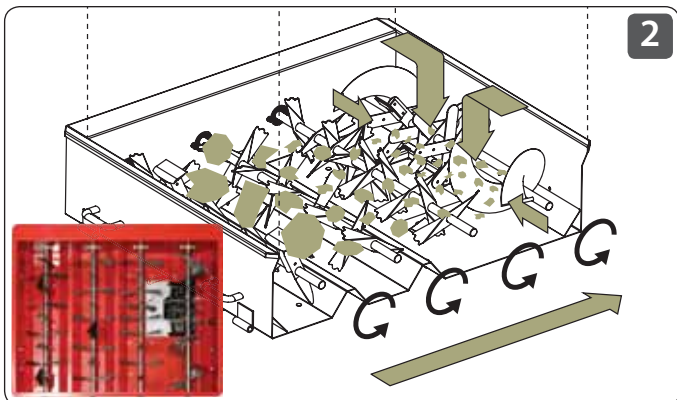
Air generation with high-powered radial compressor and/or turbine



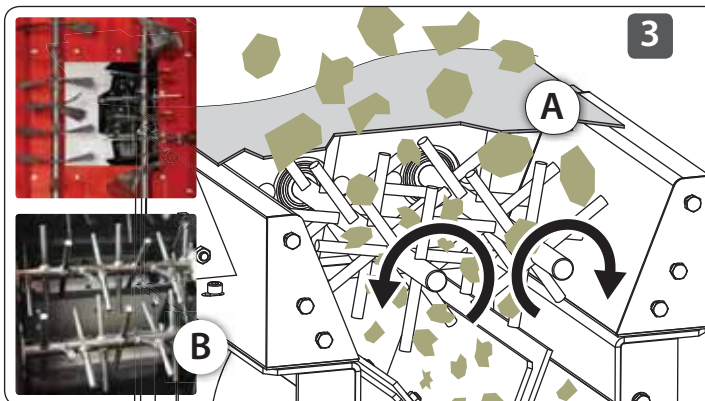
## Functional Principle and Standard Equipment



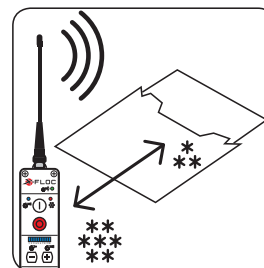
The insulation bales are laid onto the sack support, opened and pushed through the strip curtains into the filling hopper.



Four rotating crusher shafts break the material into smaller pieces and transport the material to the airlock intake.

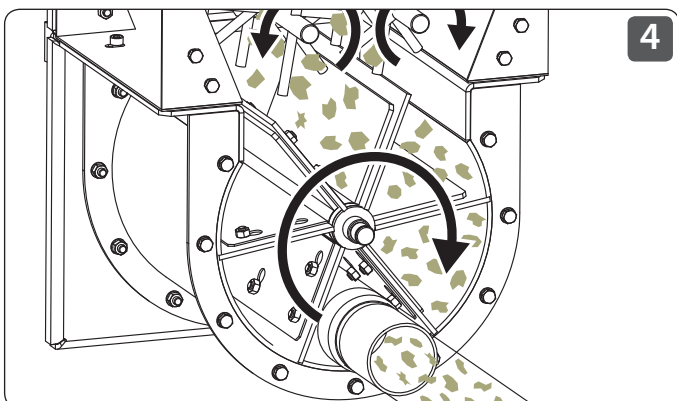


The electrical airlock feed gate (A) doses the material volume into the shredder (B) which ensures the material's fine conditioning.



### Remote Controlled Airlock Feed Gate

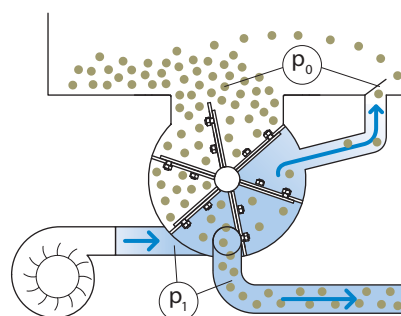
The electrical airlock feed gate (A) enables an accurate material dosing. The airlock feed gate can be controlled with the remote control during or between the blowing injection processes.



The cellular wheel transports the material in the lower part of the airlock. The high-powered turbine's air flow accelerates the material and transports it to the airlock outlet in the conveyor line.

### Airlock Ventilation

Increases significantly the airlock's efficiency and prevents actively from dust turbulences in the filling hopper.





## Filling Hopper

The filling hopper has a hopper volume of 1000 litres which is sufficient for approx. 5-6 bags of insulation material.

A foldable support for bags enables an easy positioning, opening and filling. The transparent strip curtain reduces the dust emissions. The dust extraction connector on the side enables an active dust extraction. The cover plate can be removed for filling the machine from the top.



## Machine Control

- ▶ Robust casing, clear LED indicator and simple controls
- ▶ Toggle function for conveying with and without material
- ▶ Material- and air volume regulation
- ▶ Activation of pressure control programs
- ▶ Warning signals



## Maintenance

The machine can be easily opened and enables access for all maintenance jobs. With low vehicles, the filling hopper must be taken off before.



## Airlock Outlet

The EM400 series is available with an NW75 (3") or an NW90 (3 1/2") airlock outlet. A direct reduction to NW63 (2 1/2") or NW50 (2") is optionally available.

The EM440 comes with an additional outlet connection NW63 (2 1/2") for the integrated amplifier unit.



## Electrical Switchboard

Clear, simple and easy to understand controls as well as high-quality components.



## Incoming Air Filter

Fast removable suction hood with snap-fit closing and easy cleanable air filter insert.



## EM400: Powerful All-Rounder

### Mobility

The EM400 can be used mobile on a vehicle, on a trailer or stationary. It's easy to move with its heavy duty wheels with low rolling resistance.



### Dust Extraction

The dust extraction connector at the filling attachment enables an active dust extraction. For this purpose, an external amplifier station or the EM440's amplifier unit and a suction drum is required.



## Configuration Options



### EM440 with 230 V or 400 V Power Supply

The EM440 is optionally available with a 400 V or 230 V power supply. This way, an alternative machine with 230 V is available even in the high-performance range.

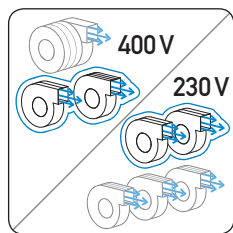
See technical data last page...



### FFB2000-Pro

The radio remote control FFB2000-Pro in a robust casing increases the free moving space. It has bidirectional radio technology with a high transmission reliability and four radio channels. When required, it can also be used with a cable connection.

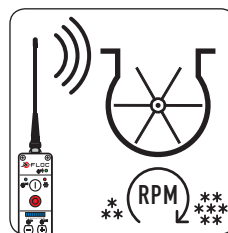
Prod. no. 5154



### Integrated Amplifier Unit

The EM440 comes with two additional radial compressors for increasing the air power (see characteristic curves rear page). The additional compressors are necessary for processing heavy or long fibre insulation materials.

Prod. no. 6253 (230 V) / 4662 (400 V)



### DS Add-on: Remote Controlled Airlock Rotational Speed

This additional option enables the remote controlled adjustment of the airlock rotor's and the shredder's speed. In combination with a remote controlled airlock feed gate's position, the optimal material flow volume can be chosen directly from the injection point.

Prod. no. 5060

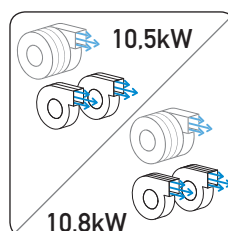


### Pressure Relief Valve

Component parts can be damaged if the blowing injection pressure is too high or the permitted installation density is exceeded.

With different weight plates you can adjust the pressure at which the unit de-aerates. This happens in a split second.

Prod. no. 4038



### EM440-10,8kW

With this version, the additional air feet unit can still provide air up to a counter-pressure of approx. 360mbar in addition to the 5-stage turbine's air. This can be an advantage especially in situations where a dry injection through relatively small diameters is necessary.

Prod. no. 8126

## Cleaning

The EM400 enables a cleaning of the workspace in combination with a suction drum as collection container. The suction drum will be connected at the EM400's suction hood.



## Blowing/Aspiration

In combination with a fibre switch, a quick toggling between aspiration and blowing is possible.

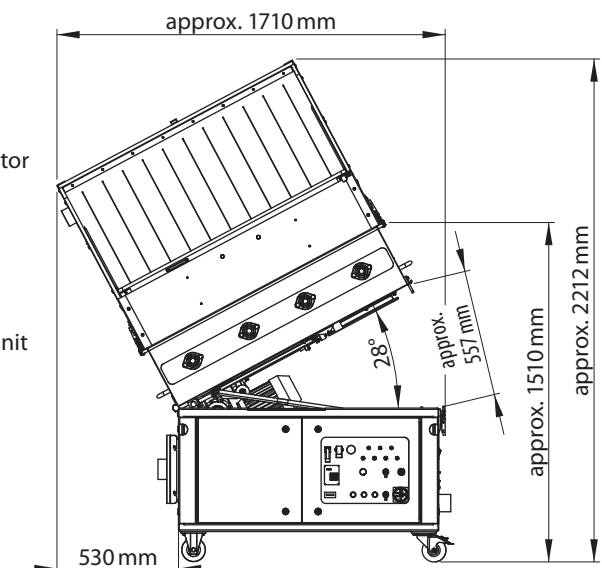
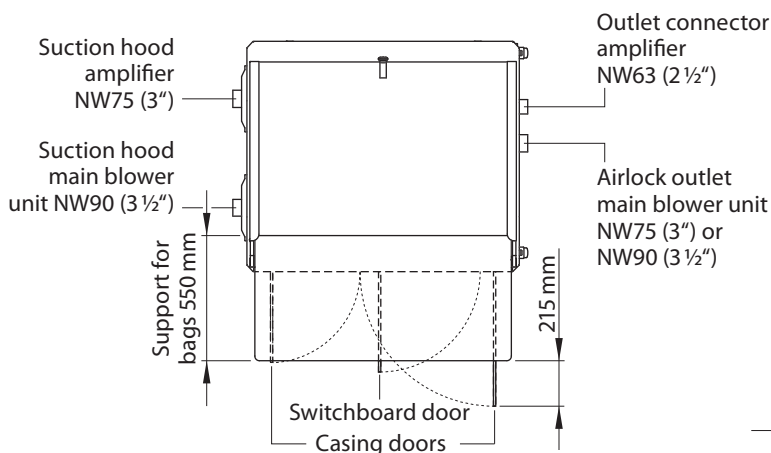
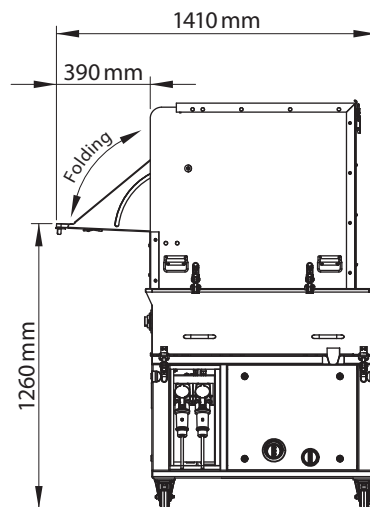
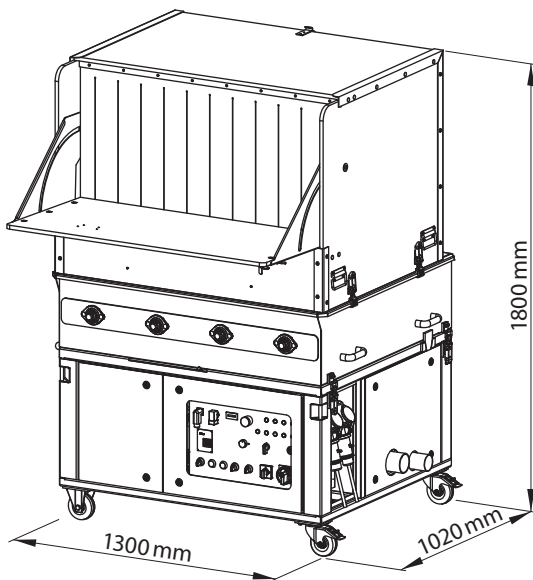


## Stationary Use

The EM400's full potential can be experienced during a stationary filling. In conjunction with the GBF1050 bale conditioning system or other systems, the EM400 becomes part of a production line for off-site construction.



## Dimensions



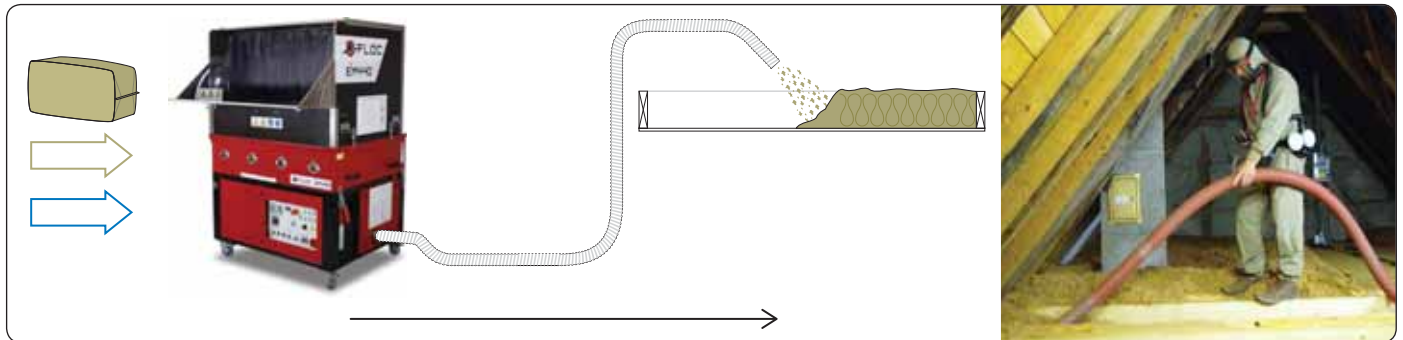


## Blowing Injection Processes

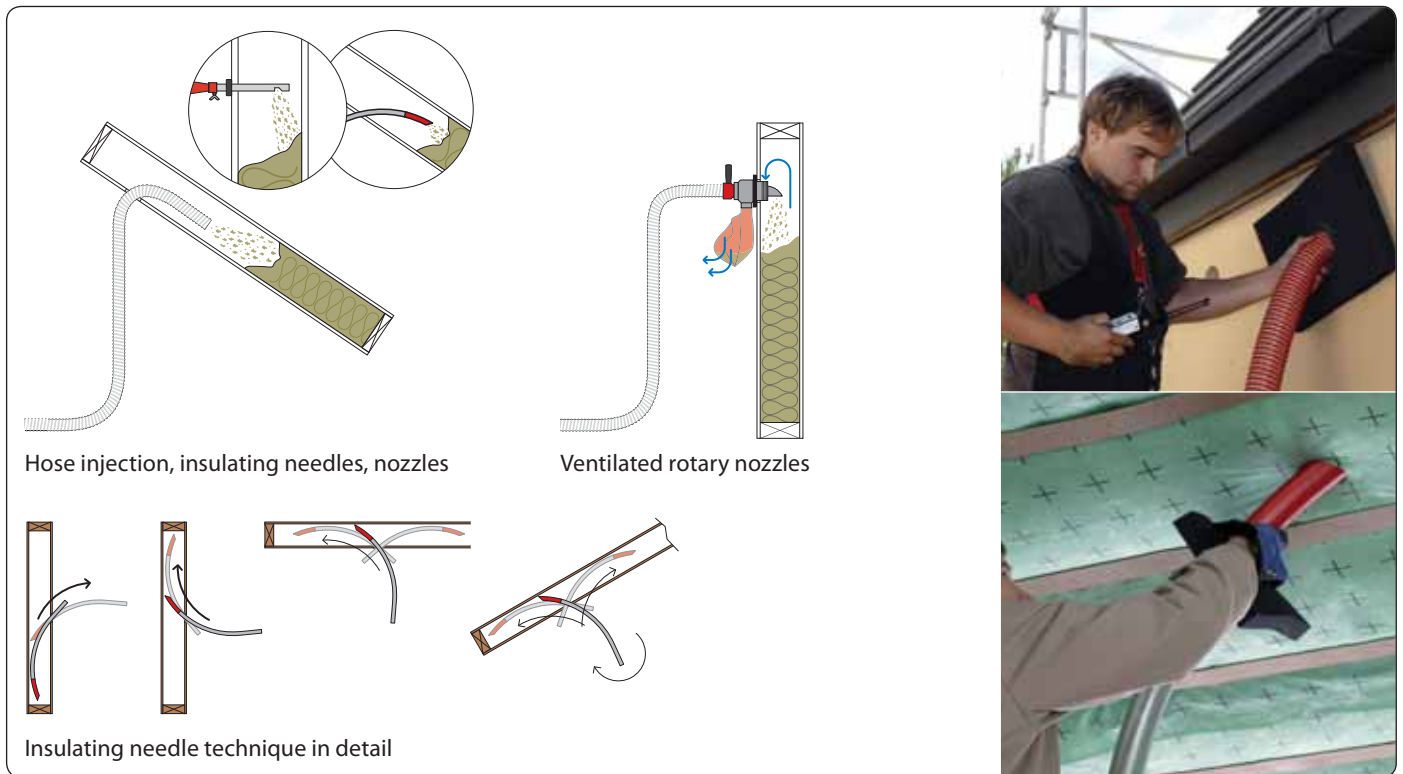
Different architectural styles and construction designs require variable methods in the blowing injection processes. We distinguish four different methods. The EM400 is an all-round solution. There are almost no limits when processing loose

insulation materials. In the following we show the various blowing injection methods and give an overview of the recommended applications in our comparison matrix.

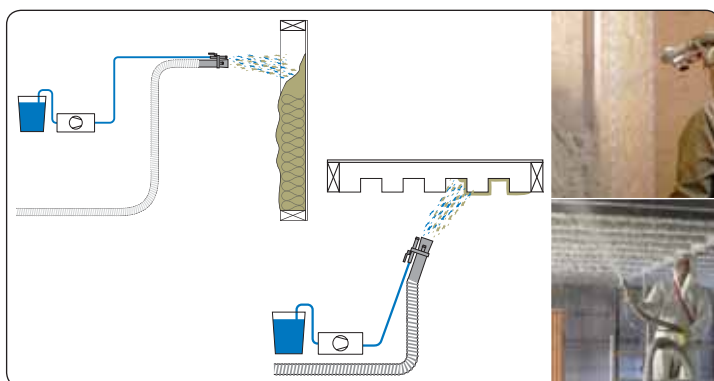
### Open Blowing



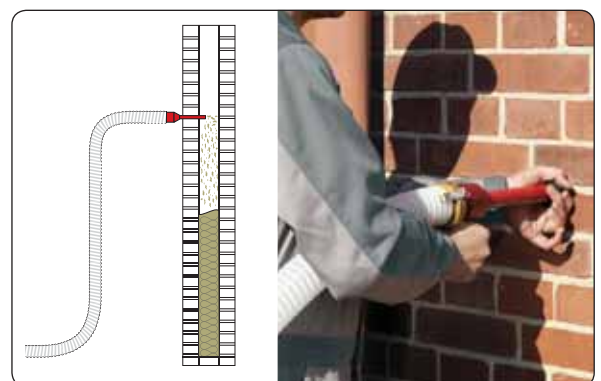
### Dry Injection



### Damp Spray / CSO / Fire protection



### Cavity Wall Insulation



## Comparison Matrix



EM400

EM430

EM440



		EM400 / EM430						EM440-400V / EM440-230V					
Cellulose	Applications	A	B	C	D	E	F	A	B	C	D	E	F
	Suitability	1	1	1	2	1		1	1	1	2	1	

Examples <sup>\*1)</sup>

Advanced Fibre cellulose, AislaNat, Applegate, Arbocel Climasafe, Arctic Fiber, Austrozell, Bellouate, Biocell, Biofib Isolation, Cellaouate, Cell Floc, Cellisol, Cel-Pak, Climacell, Climacell pure, Climacell S, Clima Ouate, Clima-Super, Climatizer Plus, Dämmstatt, Dobry Ekovilla, Dolcea, EC cellulose, Ecocel, Ekofiber, Ecovata, Fiberlite, Finefloc, Flocomobil, Floci-Cell, Forest Wool, Franceouate, Greenfiber, iCell, Igloo, Iglu, Isocell, Isodan CI 040, Isofiber, Isofloc eco, Isofloc F, Isofloc L/LM, Isofloc LW, Isofloc neo, Isol+, Isoprof, Isol'quate, i3-Cellulose, Just Been Green, Klima-Tec-Flock, Klima-Tec-Schütt, Mono-Therm, Nesocell, Northern Fiber, Nu-Wool, Ouateco, Pavafloc, Poesis-Floc, Quateco, Quateco Premium, Quateco Nature, Renocell, Selluvilla, Steicofloc, Swissfloc, Termex, Thermocel 040, Thermofloc, United Fibers, Unifloc, Univercell, Warmcel Thermal, Wolfinger Dämmzellulose, Zimicell etc.

Wood fibre	Applications	A	B	C	D	E	F	A	B	C	D	E	F
	Suitability	1 <sup>*2)</sup>	1 <sup>*2)</sup>	1 <sup>*2)</sup>		2 <sup>*2)</sup>		1	1	1		3	

Examples <sup>\*1)</sup>

Agricell, Airflex, Hoiz, KKS Woodfiber, KKS Woodfiber Granulate, Lignozell, Jasmin, Neptutherm, Steicozell, Thermofibre, Thermocell, Termoträ, Woodycell etc.

Mineral fibre	Applications	A	B	C	D	E	F	A	B	C	D	E	F
	Suitability	1	1	1	3	2		1	1	1	3	1	

Examples <sup>\*1)</sup>

Astratherm, Climastone, Comblissimo, Ecofibre (BLT3 – BLT5 – BLT9), Ecofibre KD, Fibrexpan, Greenguard, Indi-Flock, Insulsafe, Insulsafe Plus, Insuver, ISG, Isolene 4, Isomat, Paroc BLT7, Projiso, Rathiflock, Rockwool, Supafil cavity wall, Supafil loft, Supafil timber frame, Thermacoustic TC-417, Teko-Flock etc.

Mineral granules	Applications	A	B	C	D	E	F	A	B	C	D	E	F
	Suitability	2				3	2	2				3	2

Examples <sup>\*1)</sup>

Bachl Perlit HY, Extraperl, Fillrock KD/RG, Hyperdämm, Hyperlite KD, Liapor F2B/3/4, Perli-Fill F, Perli-Fill, Schacoulite Roof Top, SLS20, Thermofill S/S40, Thermo-Floor, Thermoperl, Thermo-Plan, Thermo-Roof etc.

EPS granules	Applications	A	B	C	D	E	F	A	B	C	D	E	F
	Suitability					2						2	

Examples <sup>\*1)</sup>

Bodiflock XPS, Dämmperl 035, Duroperl 35, Easy-Fill 034/033, Granublow 033/035, HK35, HK33, H2 Wall, Isofloc Pearl, Jomaperl, Neopor, Rigi bead 035/033, Rathipur KD, Styrodämm 033 etc.

### Legend Suitability

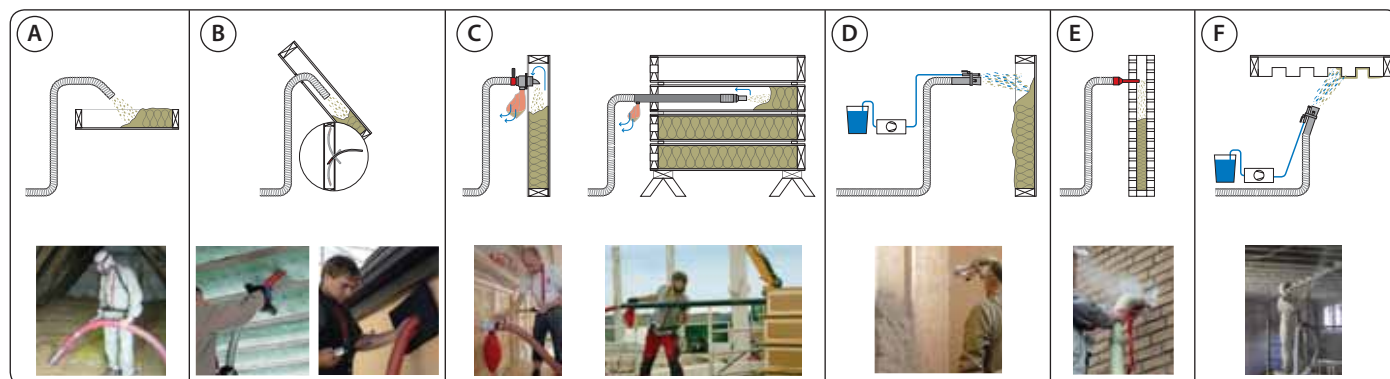
1 Extremely well suited / Best machine choice    2 Well suited    3 Recommended with limitations    4 Not recommended

<sup>\*1)</sup> These examples do not lay any claim to being complete. Is your product listed? If not, please contact us.





<sup>\*2)</sup> Amplifier recommended.

### Applications

A: Open/attic blowing · B: Dry injection · C: Dry Injection with ventilation · D: Damp spray/CSO · E: Cavity wall insulation · F: Fire protection



## Technical Data

Model	EM400-400V/7.5kW	EM430-400V/9.5kW	EM440-3×230V/10.0kW	EM440-400V/10.5kW
Image				
Product number	3316	5802	6253	4662
Power/material processing speed <sup>*1)</sup>	2210kg/h	2400kg/h	2250 kg/h	2300 kg/h
Hopper	1.0 m <sup>3</sup>			
Airlock outlet Ø	NW75 (3") or NW90 (3 ½") <sup>*2)</sup>		NW75 (3") or NW90 (3 ½") <sup>*2)</sup>	
Outlet amplifier Ø	NW63 (2 ½")			
Dimensions (L×W×H)	1300×1020×1800 mm			
Unladen weight	410 kg	427 kg	390 kg	460 kg
Filling height	1260 mm			
Airlock ventilation	✓			
Dust removal/support for bags	✓ Passive (strip curtains) / active with extraction			
Machine control	KFB2000/FFB2000-Pro			
Material conditioning	4 Crusher shafts and a shredder with 2 shafts			
Shredder	✓			
Airlock material	Steel			
Airlock feed gate	✓ 10 levels (KFB2000)   ✓ 19 levels (FFB2000-Pro)   ✓ manual steplessly			
Adjustable airlock rotational speed (optional)	✓ 10 levels (KFB2000)   ✓ 19 levels (FFB2000-Pro)			
Automatic blowing	✓			
Pressure relief valve	✓ (Optional)			
Air feed unit	5-step high-powered turbine		5 high-powered radial compressor	5-step turbine and 2 high-powered radial compressors
Air feed amplification	External amplifier optional		Integrated	
Air flow volume (nominal/measured)	450/410 m <sup>3</sup> /h	490/420 m <sup>3</sup> /h	975/850 m <sup>3</sup> /h	800/650 m <sup>3</sup> /h
Conveying height <sup>*1)</sup> without/with amplifier	35/50 m			
Hose length max.	150 m	150 m	180 m	180 m
Adjust. conveying pressure (max.)	520 mbar	520 mbar	380 mbar	580 mbar
Installed air flow power	5.5 kW	7.5 kW	2 × 1.8 + 3 × 1.45 kW	5.5 + 2 × 1.45 kW
Installed motor power	2.0 kW			
Power rating	7.5 kW	9.5 kW	10.0 kW	10.5 kW
Power supply	400 V / 50 Hz / 3 × 16 A / N / PE		3 × 230 V~ / 50 Hz / 16 A <sup>*3)</sup>	400 V / 50 Hz / 3 × 16 A / N / PE und 1 × 230 V~ / 16 A
Material packing density	200 kg/m <sup>3</sup>			

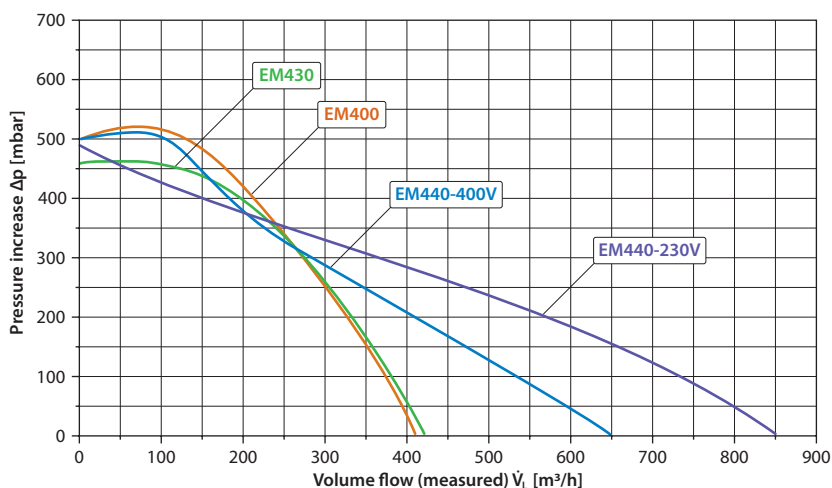
All values approximate.

<sup>\*1)</sup> Maximal values, pending on insulation material and injection method.  
Specifications based on average cellulose insulation material.

<sup>\*2)</sup> Direct reduction from NW75 (3") to NW63 (2 ½") or NW50 (2") possible.

<sup>\*3)</sup> Operation with 2×230 V / 50 Hz / 16 A or 1×230 V / 50 Hz / 16 A with reduced air power possible.

## Characteristic Curves at 50 Hz





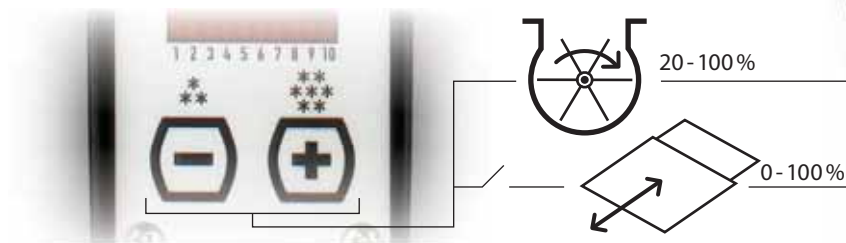


- Contents**
- ▶ One remote with carrying strap
  - ▶ One charger
  - ▶ One receiver with magnet
  - ▶ Two antennas
  - ▶ Quick start guide
  - ▶ Complete foam lined case



The FFB2000-Pro combines the possibilities and advantages of modern digital technology for the insulation pro. All important machine settings for the insulation blowing process can be controlled by the radio remote control.

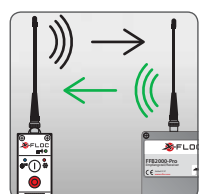
Die FFB2000-Pro is compatible with the insulation blowing machines M99-DS-Pro, M95, EM300, EM400/440 and EM500.



Material flow volume control: Optional airlock rotational speed or electrical airlock feed gate (as from EM300 type possible)

## Features:

- ▶ High transmission reliability
- ▶ Individual adjustments
- ▶ Bright adjustment display
- ▶ Light but robust remote control
- ▶ Air power adjustable in 19 levels (20...100 %)
- ▶ Material flow with airlock feed gate adjustable in 19 levels (0...100 %)
- ▶ Material flow with airlock speed adjustable in 19 levels (20...100 %)
- ▶ Dynamic shutdown and dynamic pressure
- ▶ Supplied in a practical suitcase



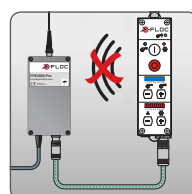
Bidirectional digital radio technology



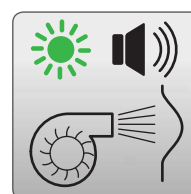
Four radio channels for interferences on building sites



Compatible with X-Floc and other machines



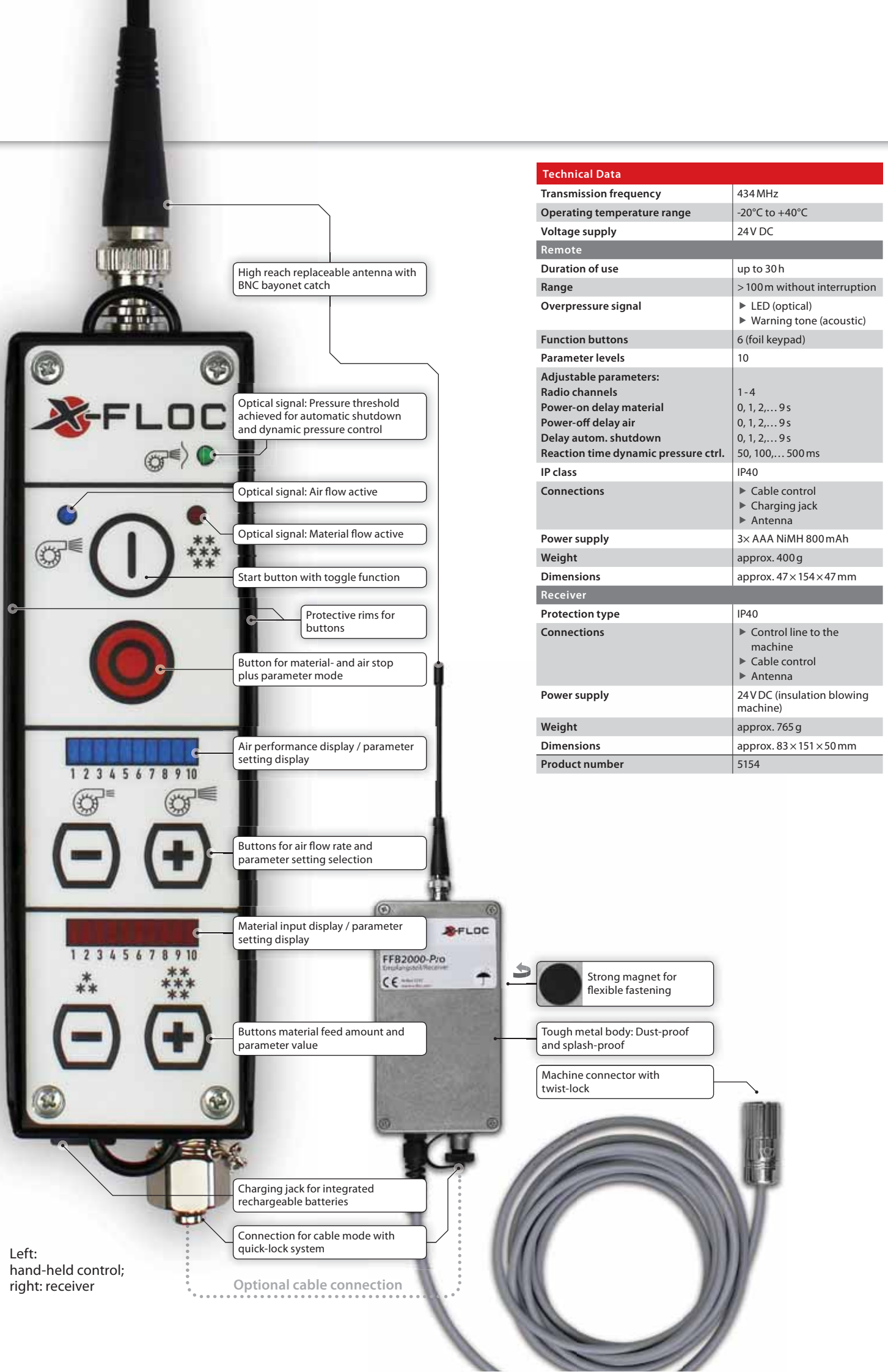
Cable connection possible



Optical and acoustic alarm for overpressure



Standard rechargeable batteries in the remote control



#### Technical Data

Transmission frequency	434 MHz
Operating temperature range	-20°C to +40°C
Voltage supply	24V DC
<b>Remote</b>	
Duration of use	up to 30 h
Range	> 100 m without interruption
Overpressure signal	<ul style="list-style-type: none"> <li>► LED (optical)</li> <li>► Warning tone (acoustic)</li> </ul>
Function buttons	6 (foil keypad)
Parameter levels	10
Adjustable parameters:	
Radio channels	1 - 4
Power-on delay material	0, 1, 2,... 9 s
Power-off delay air	0, 1, 2,... 9 s
Delay autom. shutdown	0, 1, 2,... 9 s
Reaction time dynamic pressure ctrl.	50, 100,... 500 ms
IP class	IP40
Connections	<ul style="list-style-type: none"> <li>► Cable control</li> <li>► Charging jack</li> <li>► Antenna</li> </ul>
Power supply	3× AAA NiMH 800mAh
Weight	approx. 400 g
Dimensions	approx. 47 × 154 × 47 mm
<b>Receiver</b>	
Protection type	IP40
Connections	<ul style="list-style-type: none"> <li>► Control line to the machine</li> <li>► Cable control</li> <li>► Antenna</li> </ul>
Power supply	24V DC (insulation blowing machine)
Weight	approx. 765 g
Dimensions	approx. 83 × 151 × 50 mm
Product number	5154

Left:  
hand-held control;  
right: receiver

Optional cable connection

Some insulation materials require a particularly high amount of air in order to perform the insulation properly. Some isolated installation situations require the overcoming high conveying heights or the use of long conveyor lines. Meanwhile, loose insulation materials have to be occasionally removed again.

By using the X-Floc amplifier/vacuum station technique, you can easily supplement the existing insulation blowing machine to the amplification system or you can use the machine as part of the suctioning process. The devices available range from mobile amplifiers for on-site use (VS28) to stationary solutions, suitable for factory fillings (VS55). All amplifier/vacuum stations available can significantly increase the insulation blowing machines' overall power or, in combination with suitable accessories, can suction small or large amounts of solid materials in a short amount of time. For optimal harmonization, please refer to the notes "Amplification of the insulation blowing machines' air performances".

- Complete separation of working and cooling air
- Suction function: Suitable for a number of materials



**VS28**



**VS33**



**VS40**



**VS55**

Amplifier-/Vacuum station				
Type	VS28	VS33	VS40	VS55
Product number	2711	5855	8336	6348
Amplification/Cleaning	✓ / ✓	✓ / ✓	✓ / ✓	✓ / ✓
Active dust removal	✓	✓	✓	✓
Stepless performance regulation	✓	✓	✓	✓
Synchronisation with machine	✓	✓	✓	✓
Remote Control	✓	✓	✓	✓
Power	2,8 kW	3,3 kW	4,0 kW	5,5 kW
Max. overpressure	330 mbar	370 mbar	430 mbar	550 mbar
Max. negative pressure	300 mbar	340 mbar	380 mbar	500 mbar
Max. air blow volume (nom./measured)	440 / 400 m³/h	620 / 580 m³/h	430 / 390 m³/h	390 / 350 m³/h
Air feed unit	High-powered radial compressors	High-powered radial compressors	Turbine	Turbine
Suitability Insulation Blowing Machine*	Outlet pressure ≤ 320 mbar	Outlet pressure ≤ 400 mbar	Outlet pressure ≤ 420 mbar	Outlet pressure ≤ 520 mbar
Noise pressure level	80 dB(A)	78 dB(A)	90 dB(A)	95 dB(A)
Outlet connection/intake socket	NW63 (2½") / NW75 (3")	NW63 (2½") / NW75 (3")	NW63 (2½") / NW75 (3")	NW63 (2½") / NW75 (3")
Operating hours meter	○	✓	○	○
Dimensions (L×W×H)	482 × 358 × 418 mm	482 × 358 × 418 mm	600 × 650 × 600 mm	785 × 700 × 580 mm
Weight	23 kg	23 kg	60 kg	100 kg

\* Required minimum outlet pressure at the blowing machine.

○ Optional available with operating hours meter.

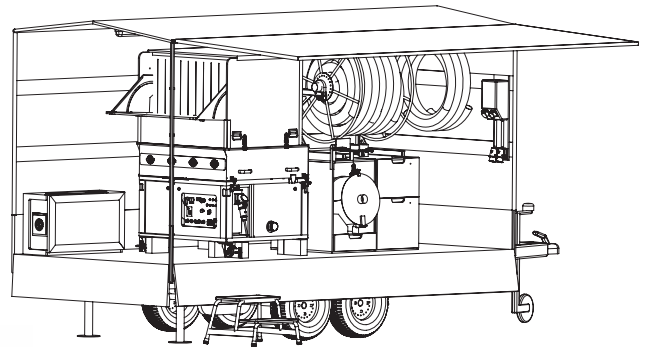






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- ▶ Customized vehicle construction
- ▶ Handcrafted and longlasting products
- ▶ Individual planning
- ▶ Integration listed equipment as well as foreign systems
- ▶ Suitable for long and short distances
- ▶ Can be delivered with your adverts



Container



Tarpaulin Cover



1-axel Box Trailer



2-axel Box Trailer

#### X-Floc partner

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