

Damp spraying

X-FLOC
Pneumatic Insulation Technology



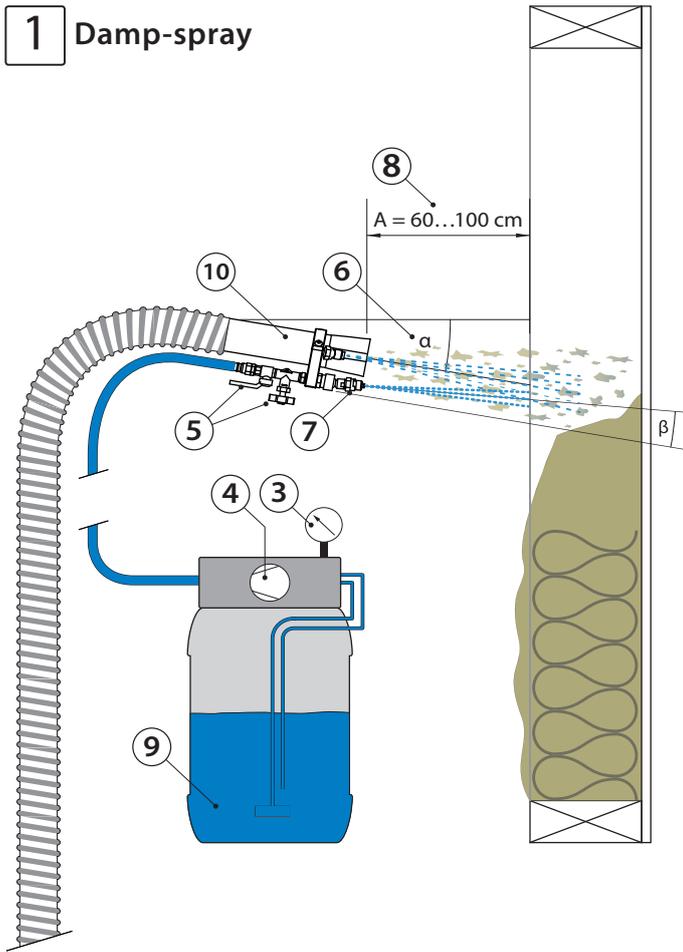
The Damp-Spray Principle

The damp spraying method works using water; the insulation material is dampened with water as it leaves the hose. The humidity causes a loosening of the Lignin in the insulation material and a conglutination of the material. The damp insulation material can thereafter be applied permanently on walls and roofs. This isn't possible with dry material. Spray heads or pipes with multiple spray nozzles are used for dampening the material.

The insulation material stream can be flawlessly imbrued and bunched by using two or more spray nozzles. This stream can be built up to the desired thickness. When glue is added to the water, the binding effect increases. Higher thicknesses are no longer an obstacle and processing the thermal-insulation material is a lot easier.



1 Damp-spray



Machine settings:

- ① Air power (1 blower, 20-50%) 
- ② Material flow
(Feed gate 15-30%, M=6...10) ^{***}_{***}
- ③ Pressure (15...30 bar)
- ④ Pump
- ⑤ Valve position, amount of liquid
Moisture addition typical

Example:

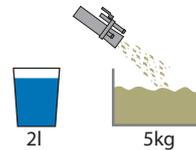
f: moisture content [%]

m_L : mass liquid [kg]

m_{DS} : mass insulating material [kg]

$m_L = 2 \text{ kg}$

$m_{DS} = 5 \text{ kg}$

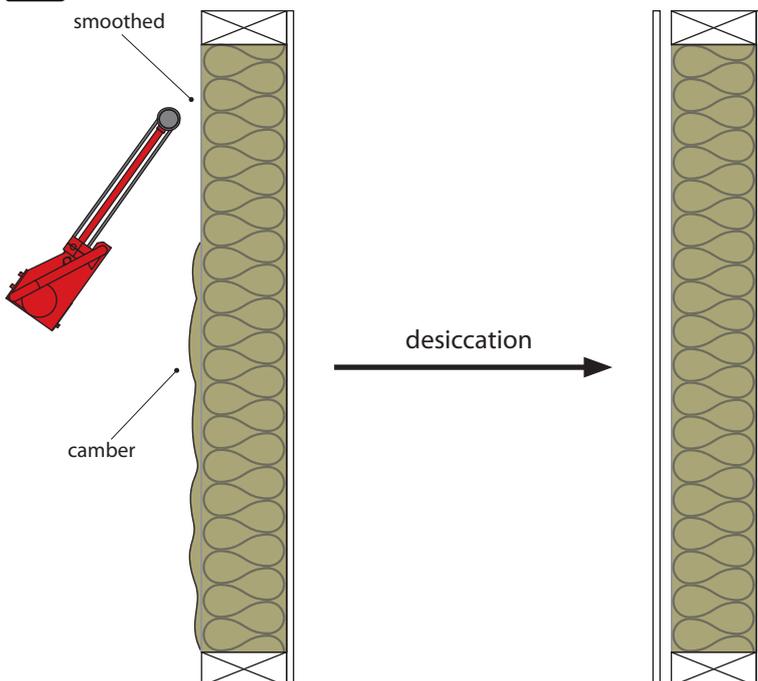


$$f = \frac{m_L}{m_L + m_{DS}} = \frac{2}{5 + 2} = 29\%$$

Recommended: 22%...40%

- ⑥ Angle of inclination spray head α
- ⑦ Angle of inclination nozzle β
- ⑧ Distance to wall A
- ⑨ Liquid optional with glue
- ⑩ Guiding spray head: Slow horizontal movements; building from bottom to top

2



With the wall scrubber smooth the excess insulation material.

Closed after desiccation.

Comparison Spray Heads and Pipes

The two different main applications in damp spraying:

- ▶ Wall coating and ceiling elements adding water or water-glue-mix
- ▶ Open blowing with water

Smaller spray heads with up to two spray nozzles are especially suitable for wall and ceiling coatings. Mostly only water without glue is used (cellulose). Spray heads with three and more spray nozzles can be used for wall coatings because of the precise adjustment options. In practice, these tools are mainly used for open blowing.

Spray pipes (Terminators) have further advantages compared to spray heads:

- ▶ Improved accuracy by coating with insulation material with high distance
- ▶ Easier and more comfortable handling thanks to the handles and rotary connector

	Spray heads				
Type	NW63 compressed air with 4 spray nozzles	NW50 inline (aluminium)	NW50 inline (Stainless steel)*	NW50 inline (plastic)	NW63 inline (plastic)
Product number	3196	4781	3535	5099	7841
Image					
Hose connection	NW63 (2 1/2")	NW50 (2")	NW50 (2")	NW50 (2")	NW63 (2 1/2")
Nozzles	6 piece drilled	4 piece drilled	1 piece screwed	1 piece integrate	1 piece integrate
Pressure range	< 6 bar	< 50 bar	< 25 bar	< 20 bar	< 20 bar
Water output	< 10l/min	< 5l/min	< 1,6l/min	< 2,5l/min	< 2,5l/min
Adjustment	2 adjusting valves	1 valve	Ball valve and needle valve for fine regulation	Ball valve	Ball valve
Typical application areas	Mineral fibre spray insulation	Mineral fibre spray insulation	Cover rating, thin wall coatings and acoustics	Cover rating, thin wall coatings, acoustics and cover fire protection	Cover rating, thin wall coatings, acoustics and cover fire protection
Weight	1,22 kg	0,52 kg	1,42 kg	0,235 kg	0,235 kg
Overall length	300 mm	230 mm	300 mm	130 mm	130 mm
Material	Aluminium / plastic	Aluminium	Stainless steel	Plastic	Plastic
Exchange nozzles	-	-	On request	-	-

All values are approximate.

* NW50 inline (Stainless steel): order-based storage, thereby possibly extended delivery times



				Spray pipes	
NW75 inline (plastic)	NW50 with 2 spray nozzles	NW63 with 3 spray nozzles	NW63 with 4-8 spray nozzles	NW63 with 4 spray nozzles	NW75 with 4 spray nozzles
7842	1983	3169	5824	1494	1720
					
NW75 (3")	NW50 (2")	NW63 (2 1/2")	NW63 (2 1/2")	NW63 (2 1/2")	NW75 (3")
1 piece integrate	2 piece exchangeable	3 piece exchangeable with ball joint	6 piece screwed (optionally 4-8 piece)	4 piece exchangeable with ball joint	4 piece exchangeable with ball joint
< 10 bar	< 50 bar	< 50 bar	< 10 bar	< 50 bar	< 50 bar
< 3,05l/min	< 1,25l/min	< 1,9l/min	< 10l/min	< 2,5l/min	< 2,5l/min
Ball valve	Ball valve and needle valve for fine regulation	Ball valve and needle valve for fine regulation	Ball valve and needle valve for fine regulation	Ball valve and needle valve for fine regulation	Ball valve and needle valve for fine regulation
Cover rating, thin wall coatings , acoustics and cover fire protection	Cover rating, thin wall coatings and acoustics	Cover rating, thin wall coatings and acoustics	Cover rating, thin wall coatings and acoustics	Open blowing and wall coatings	Open blowing
0,235 kg	0,96 kg	1,22 kg	0,98 kg	1,22 kg	1,5 kg
200 mm	250 mm	260 mm	180 mm	750 mm	400 mm
Plastic	Aluminium	Aluminium	Aluminium	Aluminium / plastic	Aluminium / plastic
-	Many sizes available	Many sizes available	Auf On request	Many sizes available	Many sizes available

Pumps

Piston pump

The piston pump needs a water-connection making refilling unnecessary. The working pressure can be fine-tuned using the adjustment wheel and a manometer.

Portable high-pressure piston pump consisting of motor:

- High pressure pump, alternating current motor 230V~ / 1.5 kW including thumb wheel
- Manometer
- Hose fitting on the pressure side with spray gun and lance
- Pump screwed on support bracket

Technical data:

- p_{max} : approx. 80 bar
- Weight: approx. 20 kg
- Dimensions (L x W x H): 450 x 300 x 300 mm
- L/min: 9.4

Prod. No. 1577



Diaphragm pump

Using this type of pump, water can be pumped out of a tank (bucket/drum), thus enabling you to work with your own water-glycol-mixes. The working pressure can be fine-tuned using the adjustment wheel and a manometer.

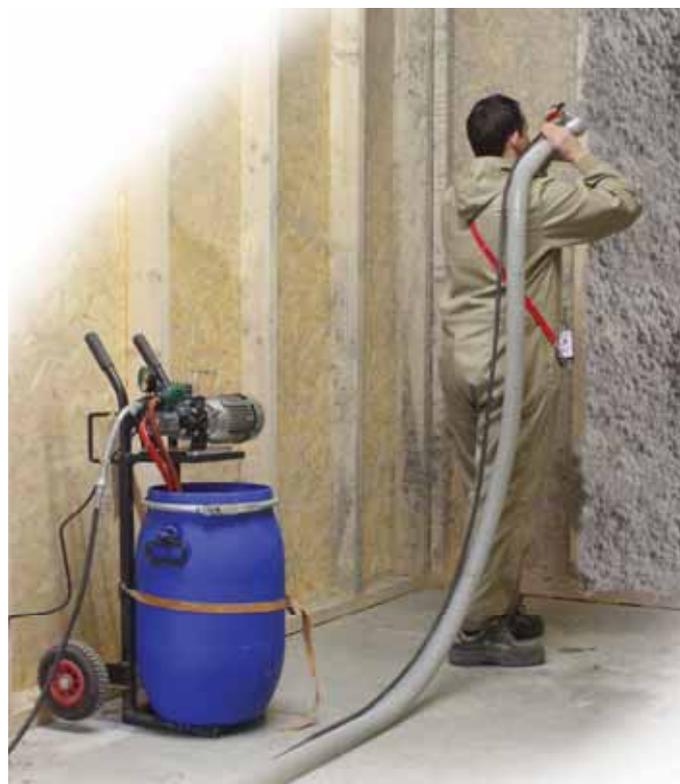
Portable vacuum pump with motor consisting of :

- High pressure pump, alternating current motor 230V~ / 1.5 kW including thumb wheel
- Manometer
- Hose fitting on the pressure side with spray gun and lance
- Pump screwed on support bracket

Technical data:

- p_{max} : approx. 20 bar
- Weight: approx. 14 kg
- Dimensions (L x W x H): 400 x 200 x 220 mm
- L/min: 17.2

Prod. No. 206



High pressure hoses

→ Use 2 high pressure hoses as maximum!



Length	Prod.No.
15m	715
30m	5054
50m	5055





Wall Scrubber M05

Advantages:

- ▶ With cable connection
- ▶ Low weight
- ▶ Easy and effort-saving operable
- ▶ Roll extension approx. 150 mm on both sides possible
- ▶ Available in 2 lengths

Our classic, the wall scrubber M05, is available two widths – 690 mm and 1000 mm. The M05 model w=690 mm can also be extended to 990 mm width by using the optional extension set (prod. no. 2438).

If the friction lining is worn off due to intensive use with the wall scrubber, it can be renewed relatively easily by yourself.

Designation	Broad brush	Gear	Gear
Wall scrubber M05 with 4 m cable	690 mm	230V	2364
ExtensionsSet	+ 150 mm on both side	230V	2438
Wall scrubber M05 with 4 m cable	1000 mm	230V	4246

Battery Wall Scrubber

Advantages:

- ▶ Without cable connection
- ▶ Ultra light-weight
- ▶ Easy and effort-saving operable
- ▶ Two batteries, quick charger
- ▶ Roll extension approx. 710 mm possible

The lightweight battery wall scrubber is particularly suitable for the work hard to reach areas or in constrained posture (e.g. when working overhead). This wall scrubber is driven by cordless angle drill machine. Almost uninterrupted work is possible by the included additional battery and the quick charge function. For wider compartments the battery wall scrubber can be extended with the included roll extension to approximately 710 mm. If the friction lining is worn off by intensive use of the wall scrubber, it can be renewed relatively easily by yourself.

Designation	Broad brush	Gear	Gear
Battery wakk scrubber	400 mm	12V=	3803



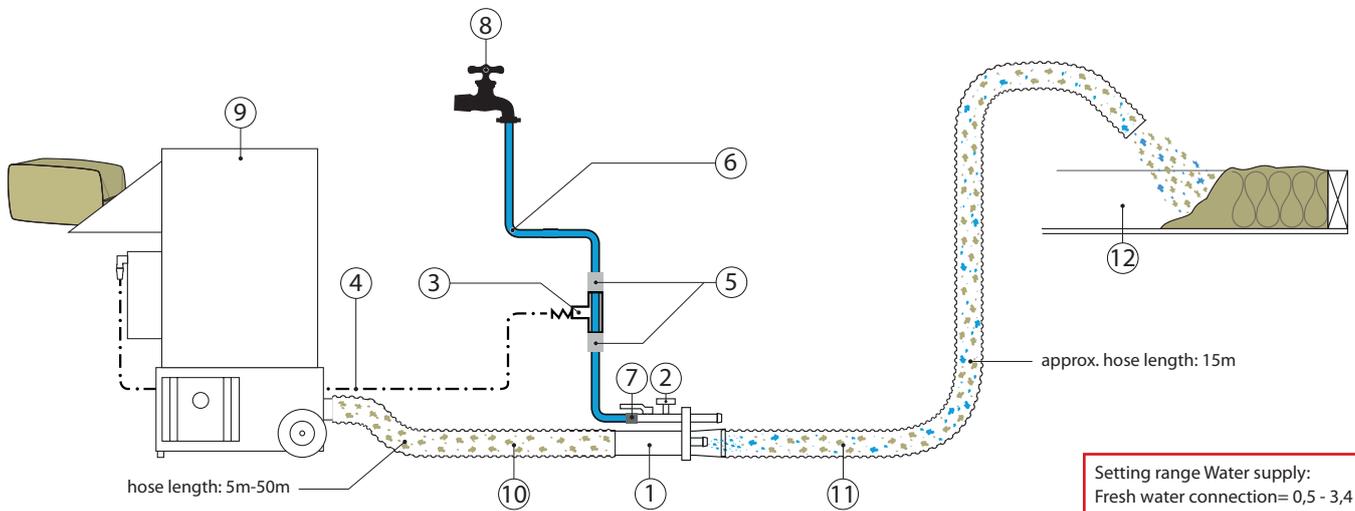
Dust reduction

Dust reduction with X-Floc Spray Heads/Inline-Humidifier

When processing loose insulation material, disagreeable dust formation can be determined depending on the respective insulation material and application. In particular, dust formation may be disturbing especially when open blowing with cellulose and wood fibre. By using the Inline-humidifier, a hose connector with internal spray nozzle, fine dust particles inside the material flow will be bound by liquid mist. This way, when the material is leaving the nozzle, less dust will arise.



Inline-Humidifier with Fresh Water Connection



- ⑧ Water Tap
- ⑨ Insulation Blowing Machine
- ⑩ Conveyor- or Injection Hoses
- ⑪ Conveyor- or Injection Hoses
- ⑫ Element

Setting range Water supply:
 Fresh water connection= 0,5 - 3,4 L/min
 Example:
 f: moisture content [%]
 m_L : mass liquid [kg] = 1,8 kg
 m_{DS} : mass insulating material [kg] = 10 kg

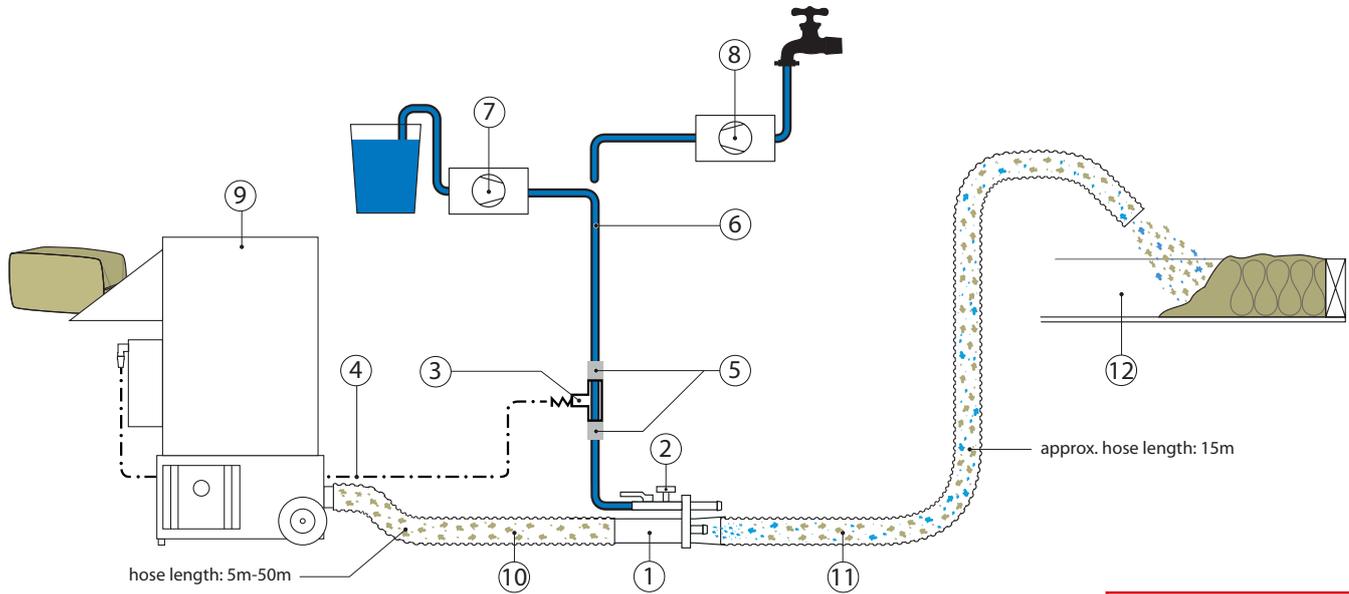
$$f = \frac{m_L}{m_L + m_{DS}} = \frac{1,8}{1,8 + 10} = 15\%$$

Recommended: 15 %

No.	Amount	Designation	Image	Prod.no.
①	1x	Inline-Humidifier	NW50 NW63 NW75	5099/7841/7842
② ③	1x	Needle shut-off valve 9 mm/1/4" and double nipple 2x1/4" AG with hexagon SW 22 (Optional for better adjustment possibilities)		5199+3478
④	1x	Magnetic Valve 2/2 ways* + Connecting Control Cable (2.5 m, 5 m, 25 m oder 50 m)		8334 + 1856/1351/1193/1192
⑤	2x	Threaded Nozzle 9 mm/1/4"		6261
⑥	1x	Fresh Water Tube 9 mm/3/8" (L=25 m)		6540
⑦	1x	Kombination Threaded Nozzle 9 mm/1/4" and Single-hand-Coupling 9 mm/1/4"		6261+576

* When the material feed is switched on, the magnetic valve opens and the insulation material is moistened. Note: If the air flow is active, the magnetic valve is open. For this reason, we recommend to start/stop the air- and material flow always at the same time.

Inline-Humidifier with Pump Technology



- ⑨ Insulation Blowing Machine ⑪ Conveyor- or Injection Hoses
 ⑩ Conveyor- or Injection Hoses ⑫ Element

Setting range Water supply:
 pump technology = 0,5 L/min - 8 L/min
 Example:
 f: moisture content [%]
 m_L : mass liquid [kg] = 1,8 kg
 m_{DS} : mass insulating material [kg] = 10 kg

$$f = \frac{m_L}{m_L + m_{DS}} = \frac{1,8}{1,8 + 10} = 15\%$$
Recommended: 15%

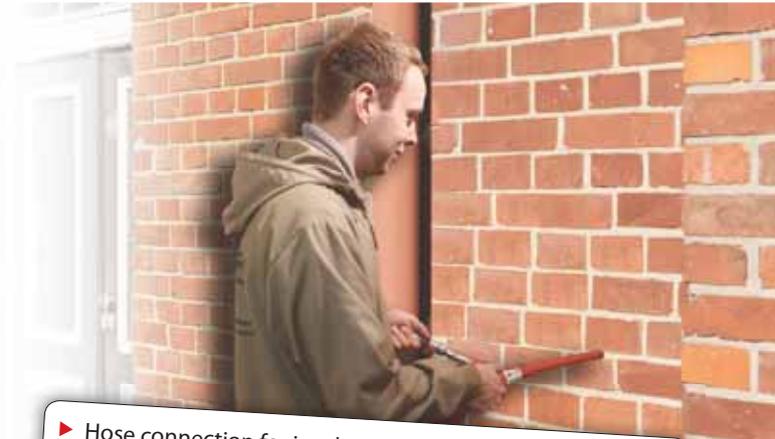
No.	Amount	Designation	Bild	Prod.no.
①	1x	Inline-Humidifier		5099/7841/7842
②	1x	Needle shut-off valve 9 mm/1/4" and double nipple 2x1/4" AG with hexagon SW 22 (Optional for better adjustment possibilities)		5199+3478
③	1x	Magnetic Valve 2/2 ways* + Connecting Control Cable (2.5 m, 5 m, 25 m oder 50 m)		8334 + 1856/1351/1193/1192
④				577
⑤	2x	Single-hand-Connector 9 mm/1/4"		577
⑥	2x	High pressure hoses 9 mm/1/4" (L=15 m, 30 m oder 50 m)		715/5054/5055
⑦	1x	Diaphragm pump		206
⑧	1x	Piston pump		1577

* When the material feed is switched on, the magnetic valve opens and the insulation material is moistened. Note: If the air flow is active, the magnetic valve is open. For this reason, we recommend to start/stop the air- and material flow always at the same time..

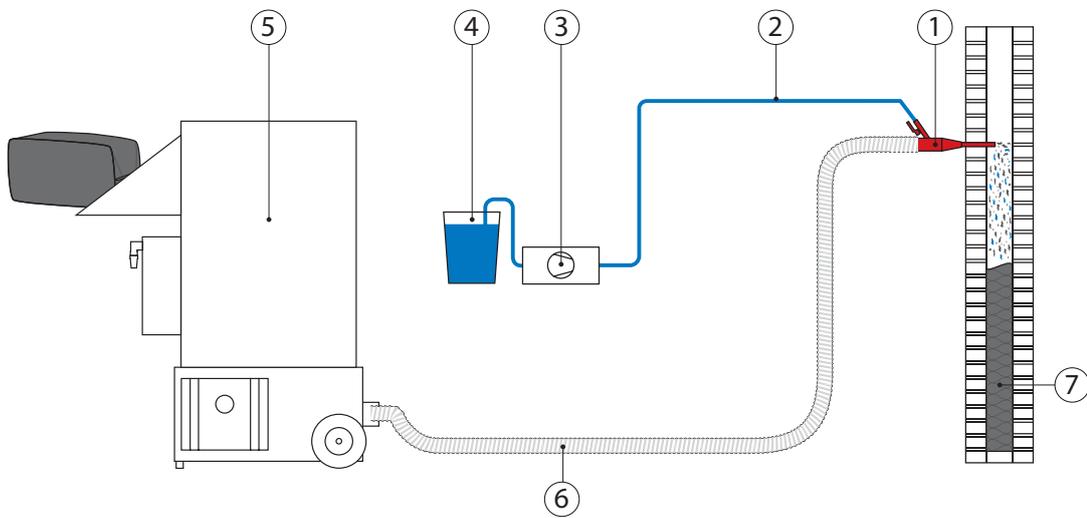
Spray head, Inline/adhesive NW50>24



Spray head with inline nozzle for injection and adhesion of EPS granules. A complete wetting of the EPS beads enables a permanent solidification of the hollow layers insulation after the adhesive has been hardened. Settlements, material trickling out through gaps and cracks or subsequent changes can therefore not occur. The thin-walled nozzle pipe with its special shaped outlet enables a high processing speed at a relatively small bore diameter.



- ▶ Hose connection for insulation material: NW50 (2")
- ▶ Nozzle pipe: outer diameter D=24mm, insertion depth approx. 260mm, spoon shaped outlet
- ▶ Easy to change nozzle pipe insert
- ▶ Connection for liquid adhesive: single-lever coupling (1/4") with shut-off valve (max. pressure 20bar)
- ▶ Material throughput: approx. 0,25l/min. at 10ba
- ▶ Weight: approx. 0,95kg



- ⑤ Insulation Blowing Machine
- ⑥ Conveyor- or Injection Hoses
- ⑦ Element

No..	Amount	Designation	Image	Prod.no.
①	1x	Spray head, Inline / adhesive- NW50>24	see above	7881
②	1x	High pressure hoses 9 mm/1/4" (L=15 m, 30 m oder 50 m)		715/5054/5055
③	1x	Diaphragm pump		206
④	1x	Adhesive XF10 for gluing EPS granules		7976

„X-Floc Dämmtechnik-Maschinen GmbH, the brand for quality and innovation in the field of insulation technology.“

Since its founding in 1994, X-Floc Dämmtechnik Maschinen GmbH has been developing, manufacturing and selling insulation blowing machines and insulation accessories. Our typical customers are craft and assembly companies, such as carpentry and roofing companies, drywall builder and similar. Since 2014, we are manufacturing and supplying complete filling systems for prefabricators, which enable an efficient, industrial production of elements with injection insulation.

Since we develop our technology from the beginning together with our customers and the manufacturers of loose insulation materials, our products are compatible with almost all available injection products. This great innovative capacity, our variety of products and our much praised service have made us a worldwide recognized specialist in pneumatic conveying, especially for loose insulation material. This, our high quality standards and the lived „Made in Germany“ are the most important decision criteria of our customers.



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