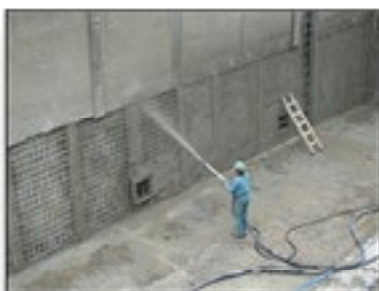


# CONCRETE SPRAYING MACHINE

**FILAMOS**  
Construction and Mining Technology

## SSB 05

COM-F  
DUO  
COM-V



Concrete spraying machine SSB05 is designed for spraying concrete and refractory mixtures in the so-called dry, eventually wet method. This machine finds its main applications in the spraying of refractory concrete mixtures during the lining of metallurgic and glassworks furnaces, heating plant boilers, coke-oven batteries, etc.; in the metallurgic, chemical and glass working industries. It is also used to maintain concrete structures (e.g. road and railroad bridges, abutment walls, cooling towers, water reservoirs, sewerage plants, etc.); during the construction and reconstruction of buildings and during the reinforcement and bracing of tunnel vaults and sewers.

The machine may be used in media with temperatures ranging from +5 to +40 °C.

## SSB 05 ALTERNATIVES



SSB 05 COM-F



SSB 05 DUO



SSB 05 COM-V

## WORKING PRINCIPLE

SSB machines work on the principle of pneumatic transport of concrete mixture.

### DRY METHOD

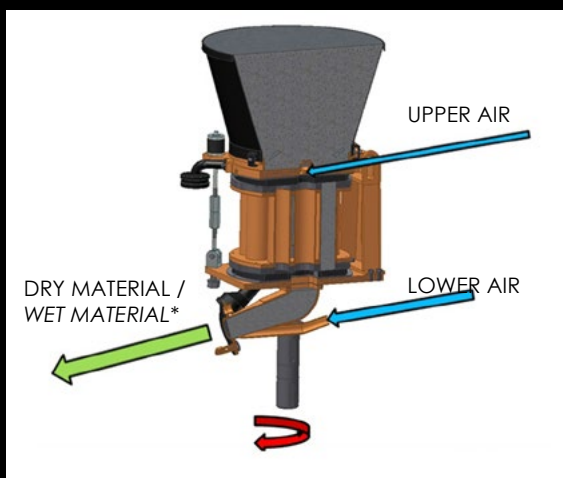
The dry mixture for spraying or transportation is poured in the machine and smoothly fills the cylinders of the rotor below the hopper. To fill a mixture into the rotor more easily, a vibrator and a rippling are fitted in the hopper. The rotating movement of the rotor moves the mixture along by 180° in the clockwise direction. The mixture is thus blown out from individual cylinders of the rotor into transport hoses. As the mix passes through the blower into the transport hoses, lower pressure air is added to enhance the continuous flow of the material in hoses. The hoses are equipped with the spraying nozzles at the end, into which the mixing water is fed at the same time to wet the transported mixture. The required wetting of the mixture is controlled with the supply cock.

### WET METHOD\*

When the concrete mixture is applied in so-called wet method, the hopper is filled in with the prepared wet mix. In principle, the mix passes through the machine in the same way as when spraying the dry mixture. A hose for addition of chemical additives (e. g. accelerating admixture) is taken from the external dosing pump DC 50/200 to the spraying nozzle instead of mixing water.



Visit FILAMOS Youtube channel for practical demonstration of the machine.



Feeding hopper - standard



Feeding hopper - skewed



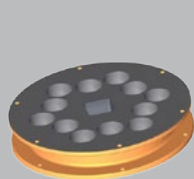
Air vibrator



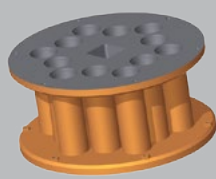
Rippling device

## OPTIONAL EQUIPMENT

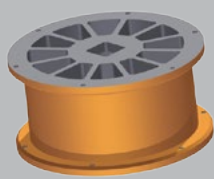
- different sizes of dosing rotor
- automatic central lubrication system for greasing of rotor and sealing plates
- cable remote control of the machine in the length of 40 meters
- water separator (to separate excess water from the air supplied)
- solid frame modification (standard delivery - wheel frame)



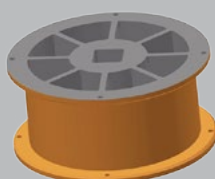
Rotor (1,9 l)  
rounded holes



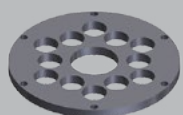
Rotor (3,9 l)  
rounded holes



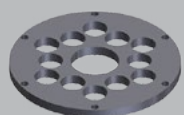
Rotor (6,9 l)  
trapezoidal holes



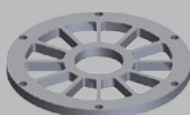
Rotor (7,9 l)  
wet spraying



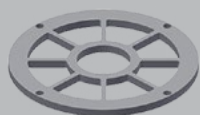
Wearing plate  
rounded holes



Wearing plate  
rounded holes



Wearing plate  
trapezoidal holes



Wearing plate  
wet spraying

The machine is delivered with optional accessories set corresponding with required output. Each type of accessories set differs from each other by an inner diameter of transport hose. Marking DN xx (e.g. DN40 = transport hose with an inner diameter 40 mm).

Recommended set of accessories consists of :

- End hose with the nozzle + coupling – 20 m
- Extension hose + coupling – 20 m
- Water hose – 20 m
- Upper sealing plate - 3 pcs
- Lower sealing plate - 3 pcs
- Nozzle ending (rubber) – 2 pcs

Above mentioned set is recommended when buying a new machine. It is possible to order individual components according to requirements (hoses, sealing plates, etc.) additionally.

Accessories set	Rotor 1,9 l	Rotor 3,9 l	Rotor 6,9 l	Rotor 7,9 l wet spraying
DN 25	X	---	---	---
DN 32	X	X	---	---
DN 40	X	X	X	---
DN 50	---	X	X	X



Automatic lubrication



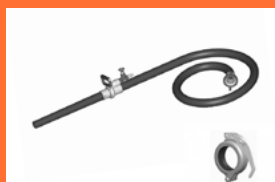
Water separator



Remote control



Solid frame modification



End hose with nozzle



Extension hose



Water hose



Sealing plate (upper)



Sealing plate (lower)

## SSB 05.2 DUO

**Large hopper** includes built-in sieve for safety (skewed alternatively)

**Air vibrator** with a smooth vibration, it allows fluent flow of the material into the rotor

**Automatic lubrication system** for lubrication of rubber sealing plates solved with **Automatic system**,

or by **Manual system**, with lever press

**Blower** is connected to a reduction referring required diameter of transport hoses (DN 32, DN 40). The blower is DN 50.

**Air inlet** with required air pressure of 0,5 - 0,6 MPa, air hose is connected either to **one DN40**,

**Eyes** for lifting-up with the crane

or **2 x DN25 air inlets**

Regulation of air vibrator

Solid steerable wheel

## SSB 05.2 COM-F

**Control box** equipped with frequency inverter allowing fluent change of machine output by lowering or increasing revolutions of the rotor.

Tightening bolts

**Electromagnetic valve** for remote control of the air

**Coupling for material hose**

**„Bypass“** enabling manual control of the air

**Filtration bag**

**Water separator** capturing impurities and residual moistness of the air

Upper air / Lower air

# TECHNICAL DATA/ (DRY / WET METHOD)

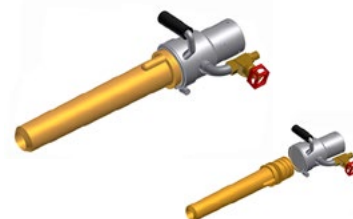
# NOZZLES

			COM-V	DUO	COM-F			
Drive motor			Electric motor (4 poles)	Electric motor (4/6 poles)	Electric motor (4 poles)			
Motor output		[kW]	3,0	2,6/1,87	3,0			
RPM of the rotor		[min-1]	2,2 - 13	6,6/10	5-13			
Type of regulation			smooth	two speed motor	smooth			
Means of regulation			variator	two output values (low/high output )	frequency inverter			
Output*			rpm MIN	rpm MAX	rpm MIN	rpm MAX	rpm MIN	rpm MAX
			Rotor (1,9 l)		Rotor (1,9 l)		Rotor (1,9 l)	
	[m3 x h-1]		0,25	1,5	0,8	1,1	0,6	1,5
			Rotor (3,9 l)		Rotor (3,9 l)		Rotor (3,9 l)	
	[m3 x h-1]		0,5	3,0	1,5	2,3	1,2	3,0
			Rotor (6,9 l)		Rotor (6,9 l)		Rotor (6,9 l)	
	[m3 x h-1]		0,9	5,4	2,7	4,1	2,1	5,4
		Rotor (7,9 l)		Rotor (7,9 l)		Rotor (7,9 l)		
[m3 x h-1]		2,3	7,1	2,7	4,1	2,3	7,1	
Transport distance	horizontal max	[m]	300 / (40)					
	vertical max	[m]	100 / (5 - 10)					
Ø of the hose / Granularity of transported material	DN25 / DN32	[mm]	8					
	DN40 / DN50	[mm]	16 / (4 - 8)					
Air consumption (distance 40 m)	DN32 / DN40 DN50	[m3 x min-1]	4 - 5 6 - 8 / (10 - 15)					
Air pressure		[MPa]	0,5 - 0,6					
Remote control	Motor - START / STOP		Optional	Optional	Optional	Optional	Optional	
	Motor rpm change + / -		N/A	N/A	N/A	N/A	Optional	
	Air - START / STOP		Optional	Optional	Optional	Optional		
Ø of water hose / (Dosing additives)		[mm]	DN 20					
Dimensions	Length	[mm]	1360	1550	1550	1550	1550	
	Width	[mm]	740	740	740	740	740	
	Height	[mm]	1220	1220	1220	1220	1220	
	Weight	[kg]	520	400	400	400	425	
Electric connection	Mains connection		3 NPE ~ 50 Hz ; 3 x 400/230 V/TN-S	3 NPE ~ 50 Hz ; 3 x 400/230 V/TN-S	3 NPE ~ 50 Hz ; 3 x 400/230 V/TN-S	3 NPE ~ 50 Hz ; 3 x 400/230 V/TN-S	3 NPE ~ 50 Hz ; 3 x 400/230 V/TN-S	
	Coverage		IP 55	IP 55	IP 55	IP 55	IP 55	



**Nozzle AL**

Nozzle built from aluminium body, water inlet and rubber ending is being standardly used with SSB 05. The nozzle is equipped with aluminium handle for easier manipulation. Construction of the nozzle allows perfect wetting of the mixture.



**Nozzle DN 40/50 POLY**

Complete one piece POLY nozzle made of polyurethane is used alternatively.



Depending on customers specific requirements, it is also possible to supply special types of nozzles according to the character of application.

\* The actual output depends on the design and moisture of transported mixture, the volume and pressure off the compressed air, the transport distance, the diameter of the transport hose and the way of filling the material.

## WORKPLACE PREPARATION

### MATERIAL

- granularity: max. 8 mm (hose DN 25 / DN 32) max. 16 mm (hose DN 40 / DN 50)
- moisture: max. 3 - 5 %



**WATER HOSE**  
- pressure min. 0,3 MPa



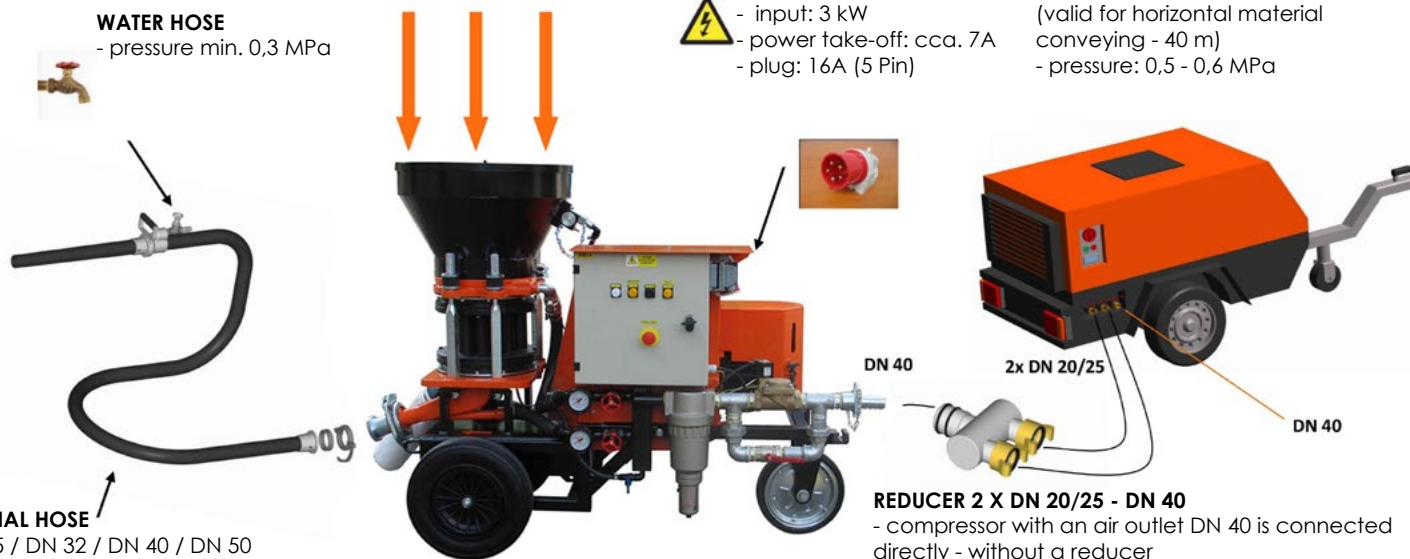
### MAINS CONNECTION

- 3xPEN 400, 50Hz
- input: 3 kW
- power take-off: cca. 7A
- plug: 16A (5 Pin)



### COMPRESSOR

- output - 5-8 cbm/min (valid for horizontal material conveying - 40 m)
- pressure: 0,5 - 0,6 MPa



**MATERIAL HOSE**  
- DN 25 / DN 32 / DN 40 / DN 50 (depending on rotor size)

**REDUCER 2 X DN 20/25 - DN 40**  
- compressor with an air outlet DN 40 is connected directly - without a reducer



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