

FILAMOS

Construction and Mining Technology

C 120



7,5 kW worm pump



Field of application

CONSTRUCTION

Technology of shotcreting (sprayed concrete) by so called wet method with powerful screw pumps is being used in **foundation engineering** when reinforcing and aligning of pile walls by sprayed concrete, in **transportation constructions** for reinforcing of slopes and tunnel portals, in **underground constructions** when spraying primary lining of tunnels and collectors and also in **concrete structures construction**, such as building of skate parks, swimming pools, etc. This technology is also appropriate for the transport and placement of concrete in residential construction industry, i.e for placing concrete into formworks, rim casting, floor casting with concrete, or anhydrite mixtures, etc.

Wet shotcrete

For proper wet method application, certain level of liquidity and plasticity (Consistency level S4) of transported mixture is required. The stone grain size mustn't be exceeding 8 mm. River sand recommended (pebble).

Before pumping the concrete mixture, it is required to lubricate transport system by so-called starter. Concrete mixture is then filled from mobile truck mixer into the tank of the pump. The mixture is then being transported by rotary mechanism into transport hoses, which end with a spraying nozzle. Compressed air is being led into the nozzle simultaneously. The air ensures equal acceleration of transported mixture throughout whole profile of the hose. In case faster hardening of concrete is required, it is possible to apply liquid hardening accelerator by second inlet of the nozzle.

Main advantages

- Homogeneous mixture thanks to accurate preparation in concrete plant
- Minimal losses of fall-out of material
- Possibility of additional adjustment of the surface to align - face concrete (in case hardening accelerator is not used)
- Lower investment and operating costs comparing to concrete piston pumps
- Low demands for operation (Electric engine 7,5 kW/400V)
- Simple operation and low maintenance (working part consisting from feeding and transporting screw)
- Simple manipulation



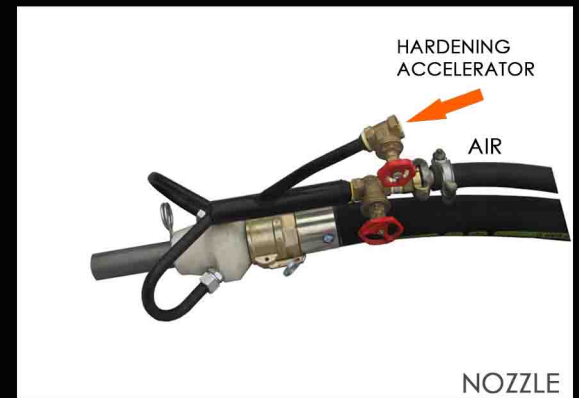
Filling the tank with ready-made mixture



Floor casting



Wet method shotcreting



For practical demonstration of the machine, visit FILAMOS Youtube channel by clicking on Youtube picture, or [here](#).



Tank



Feeding screw



Transport screw
(Stator / Rotor system)



Outlet

TECHNOLOGY

Machine description



Electric vibrator
with a smooth vibration it allows fluent flow of the mixture into the tank



Control manometer



Transport screw Stator / rotor system



Tightening bolt



Built-in safety screen



Control box with robust cable plug.



High volume tank (205 l)

Powerful 7,5 kW engine

Main technical parameters

Electric engine output	[kW]	7,5/400V
Max. Output	[m ³ /hod]	5
Max. transport distance - horizontally	[m]	50
Max. transport distance - vertically	[m]	10
Max. grain size	[mm]	8
Inner diameter of transport hoses	[mm]	DN50, DN65
Tank volume	[l]	205
Air consumption	[m ³ /min]	3 - 5

Main dimensions

Length	[mm]	2.250
Width	[mm]	833
Height	[mm]	893
Weight	[kg]	288



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