

## **GROUT INJECTION MODEL PILOT 2-6-15**

It would be designed to make water, cement and chemical additives grout injection if it will be necessary, and to inject in piles and micropiles as well as the consolidation of plot of land and in general like universal injector. The grout which is formed is uniform, without lumps, stable and of great quality.

It is very slight, of reduced dimensions, easy to transport, move and set up on Works, to clean and dismount. The only maintenance is to clean it when the work is finished. This task will take little time and is carried out in a simple way.



Equipment with water dosing pump

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#### **Full Equipment**



Side view showing suction

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#### **FEATURES**

#### Hight shear agitator- mixing:

Minimum effective volume	90-100 litres, equivalent to 107 kg of cement (3 sacks of 35 kg)
Maximum effective volumen	500 litres, equivalent to 536 kg of cement (15 sacks of 35 kg)
Relation water/cement	0, 6 without dispersant fluid chemical additives.

By using chemical additives the client will achieve lower relations. OPTIONALLY IT COULD ACHIEVE 0,34 RELATION WITH CHEMICAL ADDITIVES (34 l. of water and 100 Kg. of cement) and high power engine.

#### **Pumping Capacity**

The flow is variable, through mechanical regulator frequency:

Minimum	2000 l/h.
Maximum	6000 l/h
Maximum pressure	Upper 15 bars

It could be pumping in a discontinuous way, agitator to agitator, or in a continuous way when we have to fill up large volumes. Necessarily, with this option it will be used a water dosing pump. In this case the machine will add the prearrange quantity of water per every sack of cement that we added, this allows working all the time it would be necessary in a continuous way. The grout that we will obtain would be excellent.

Main supply line : 380 /420 V (III) without neuter

Current	14 A
Normal consumption	9-11 A
In case we use generator	15 KVA minimum



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### ALL THE ELEMENTS THAT WILL MAKE UP THE EQUIPMENT PILOT 2-6-15

#### On a resistance tubular chassis, we will find:

The injection pump with its engine and regulator Water dosing pump OPTIONALLY Electrical component box with its protection elements, control and remote control Protective bonnet for easily dismountable elements Pneumatic tyres for its displacement and guiding handle in addition of hooks which allow for lifting.

Finishes in yellow polyester painting RAL 1003 at the furnace. Weight 190 Kg. With water dosing pump option.

#### Hight shear agitator- Mixing:

Built in stainless steel, with the exception of the activation axis. With sack support in the form of the metal grid and lower filter which avoids the entrance of impurities to the pump. Engine and cable of 10 metres with a plug in order to connect it to the electrical component box. Lid for the protection of the engine, handle for its lifting, 3 pneumatic tyres for displacement; although it must not use with 500L load in an usual work place. Spherical mouth of quick connection for the exit of the grout.

#### Dimensiones

Diameter	950 mm
Working length	950 mm
Total lenght to the higher part of the engine	1370 mm
Weight	130 kg
Power	4 CV. Optionally other powers.



#### **Injection pump:**

The injection pump is of helical type design and trade mark *garcía fernández*<sup>®</sup> especially for this type of grout. Stainless steel alloyed rotor with a double harden layer, the lower down is under a nitride treatment and the external one of harden chrome which its hardness varies between 900 and 1000 Vickers.

Main chrome transmission axis in the area of the watertight seal. Watertight seal auto adjustable (without maintenance), self-cleaning in the case of the water dosing pump. All the internal elements are of stainless steel and of alloyed steel which are treated with a minimum hardness of 60 Rockwell.

#### **Electrical Component Box:**

Electrical Component Box with two doors (according to equipment), one of these are transparent which it will protect all the electrical controls in the second floor. Electric maneuvering of 24 Vca.

Red pilot light indicating overload in some of the engines, compressor stop- run push lock with rubber protection (IP 66). Electrical connection base for the Hight shear agitator and water pedal (optionally). Stop- push emergency.

Devices that impede the rotation of the engines in the opposite sense. It also protects against phase failure.

It has three- phase differential, three- phase magneto thermal and thermal for every single machine. All the installation is protected with ground and screws in order to place meshes for ground pikes.

According to equipment you will have:

Visual screen display in order to visualize the litres of water you would like to dosage in every single dose and the keys to program litre to litre variation.

Visual screen display to visualize the stop programming pressure and the pressure which is injecting, as well as the keys to vary stop pressure of 0,1 in 0,1 bar. Two positions selector "stop pressure" and "maintaining pressure".

Like accessories we will supply rotation sleeve investor and cleanliness accessories.



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#### Documentation

Instruction manual for working and maintenance Manufacturer conformity certificate document (EC). Warranty document

#### **Options**

#### Water dosing pump

It is mounted to the same chassis with spherical quick connections for uptake and outlet. The dosage is programming in the electrical component box litre by litre between 5-100 litres per dose, 6 m length uptake box with filters and antireturn valve and 7 m length outlet hose which is prepared in order to be connected to the Hight shear agitator. Caged tank 1000 l of capacity f/ water with level valve and 50 m length water inlet with quick connections and stopcock.

#### **Pressure Adjustment**

Adjustment through digital transducer and visual screen display which allows visualizing the work and stop pressure. The stop pressure it could adjust as in "stop pressure" (if the injection reaches the prearrange pressure, the machine will stop, but if the pressure low in 0,2 bar it will start maintaining the pressure in an indefinitive way till the pressure will stabilize or we will stop the injection).

#### **Electric Supply Hoses**

50m length 1 kv electric inlet hoses and  $4mm^2$  from the 4 section conductors (3 phases plus ground). With base for its connection to the machine and three- phase plug of 380V/32A/4P. It will supply with sleeve adapters: ground wire, 16-32 A reducing device, 32A/5P to 32A/4P adapter and 16A/5P to 32A/4P adapter.

#### **Injection Hoses**

40m length inner diameter of 35 mm, maximum pressure 40 bars and spherical connections.