

NordicGEO Grout Pump – Rockcreter C70A

General Description



Versatile and easy to use and maintain grout pump. The Rockcreter C70A is a machine offering advantages of both grouting and plastering applications as well as low output shotcrete. The pump as a direct drive and good mixing times are ensured.

Typical applications:

- High strength, non-shrink grouts
- Grouting of rock bolts
- Grouting of tendons
- Backfilling
- Structural repairs
- Floor coatings and toppings
- Special linings

Technical Specifications

Rockcreter C70A	
Data	
Aggregate size	Up to 8mm
Mixer	Pan Mixer.; 180L
Dimensions	
Length	1400mm
Width	800mm
Loading Height	1200mm
Weight	500kg
Output	Up to 2m ³ /Hr
Aggregate size	Up to 8mm
Outlet	38mm/50mm
Conveying Distance	
Horizontally	Up to 60m – material dependant
Vertically	Up to 30m
Air Requirements	
Pressure/flow	4 to 6 bar @ 100 cfm. for nozzle
Options	
Air motor drive	10hp on pump and 7hp on mixer
Electric drive	4kW 380 or 525 volts or 1000 volts Flameproof
Variable Speed	
Hydraulic drive	

Materials

1. Among the commercially manufactured materials available in today's market are materials for structural repairs, floor toppings, high strength non-shrink grouts, special linings and other specialty materials.
2. Each of these materials has unique characteristics, which must be well understood to insure a successful application.

Flow

1. In general, most materials need to be a flowable or pourable consistency for successful pumping. This means that if the material can be poured out of a pail or bucket, it can likely be pumped.
2. The exception to this requirement is repair mortars, which tend to be mixed in a thicker consistency and require special pumping techniques.
3. Materials that contain aggregates pump best and perform best when the consistency is kept to the lower range of pourable, that is, not too wet.

Setting Time

1. Some materials contain accelerating admixtures to reduce the setting time. This is particularly true of repair mortars and other spray applied materials so that strength gain can be fairly rapid. It is important to keep moving when using these types of materials.
2. Once the material is mixed, it must be pumped immediately and kept in motion and subsequent batches must be mixed and pumped as rapidly as possible. Any delays in the application process could result in plugged hoses and equipment.
3. Temperature also has an effect upon these materials to the extent that exposure of the hose to the sun on a hot day will accelerate the set time even more, therefore this should be avoided. It may even be necessary in some cases to cool the material, the mix water, or even the hose itself

Pumping Distance

1. Pumping distances should always be kept to a minimum, and hoses should run as straight as possible no matter what material is being used.
2. Sometimes circumstances require longer than usual hose lengths, when this occurs, every effort should be made to use every advantage possible to insure a successful application. Some materials simply cannot be pumped for long distances, so it is best to know the proposed material characteristics before attempting a production procedure.

General Procedures

1. Before attempting to mix and pump production materials, it is important to rinse the mixer and charge the pump hopper with sufficient water to thoroughly flush the pump and all grout lines. This is to purge the grouting system of any residual materials or scale that may exist.
2. Once that is completed, remove the grout hose from the pump and drain out all water by elevating one end, or by progressively elevating the entire hose, at one end and proceeding to the other.
3. Mix slurry composed of Portland cement in approximate proportions of 25 litres of water to ½ a bag of cement, and pump this through the grouting system. This is to remove any residual water from the hose, lubricating it for the production material to follow. Now the production grout may be mixed and pumped immediately behind the slurry mix.
4. The slurry mix may be retrieved in a bucket.