



# Pneumatic Cement Grout Pump

Grout cement solution anywhere with zero  
complication.

Manufactured by-

**Metro Industries,**

Bangalore(India).

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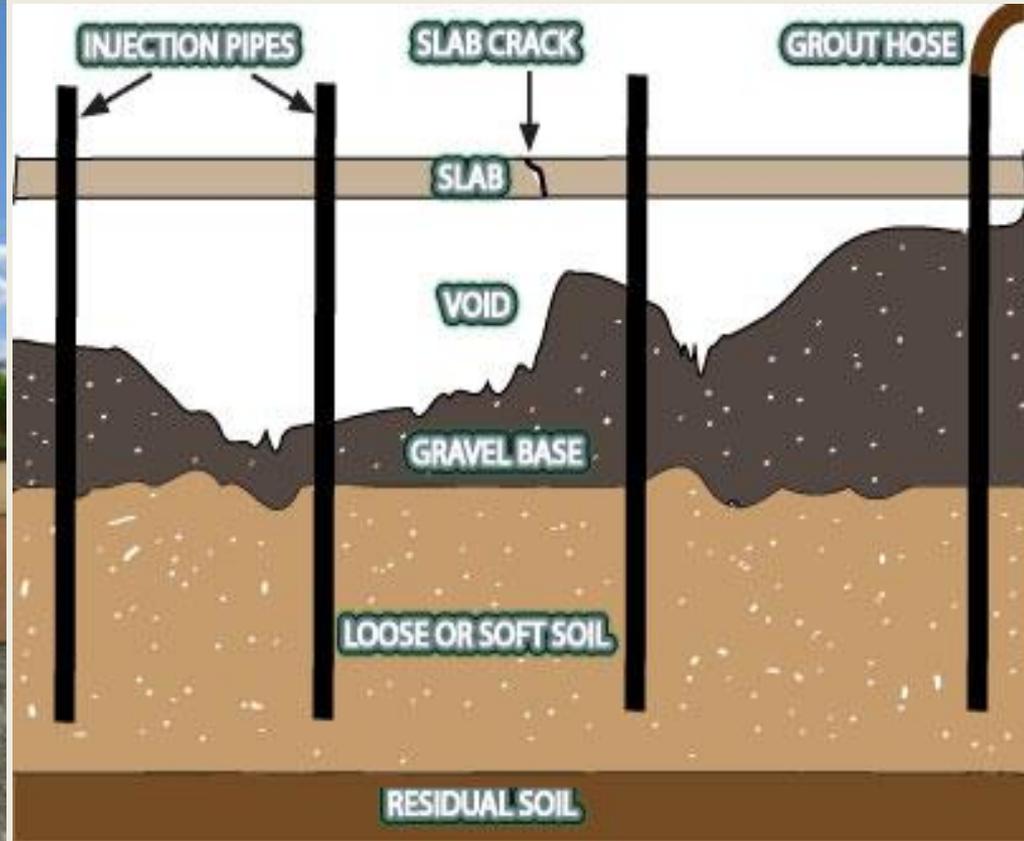
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# Cement grouting

- Cement grout is formed by mixing cement powder with water in which the ratio of cement and water is 50 kgs:22liters approximately (Ratio defined by applicators in general practice).
- Owing to the relatively high water content, the mixing of cement with water produces a fluid suspension which can be poured under base plates or into holes.
- When the amount of cement is high in the proportion the slurry becomes viscous.
- The viscous cement solution and long voids needs an equipment which can force the slurry with a high pressure for proper filling of voids and gaps.

# Grouting process



# Grouting with Air Cylinder

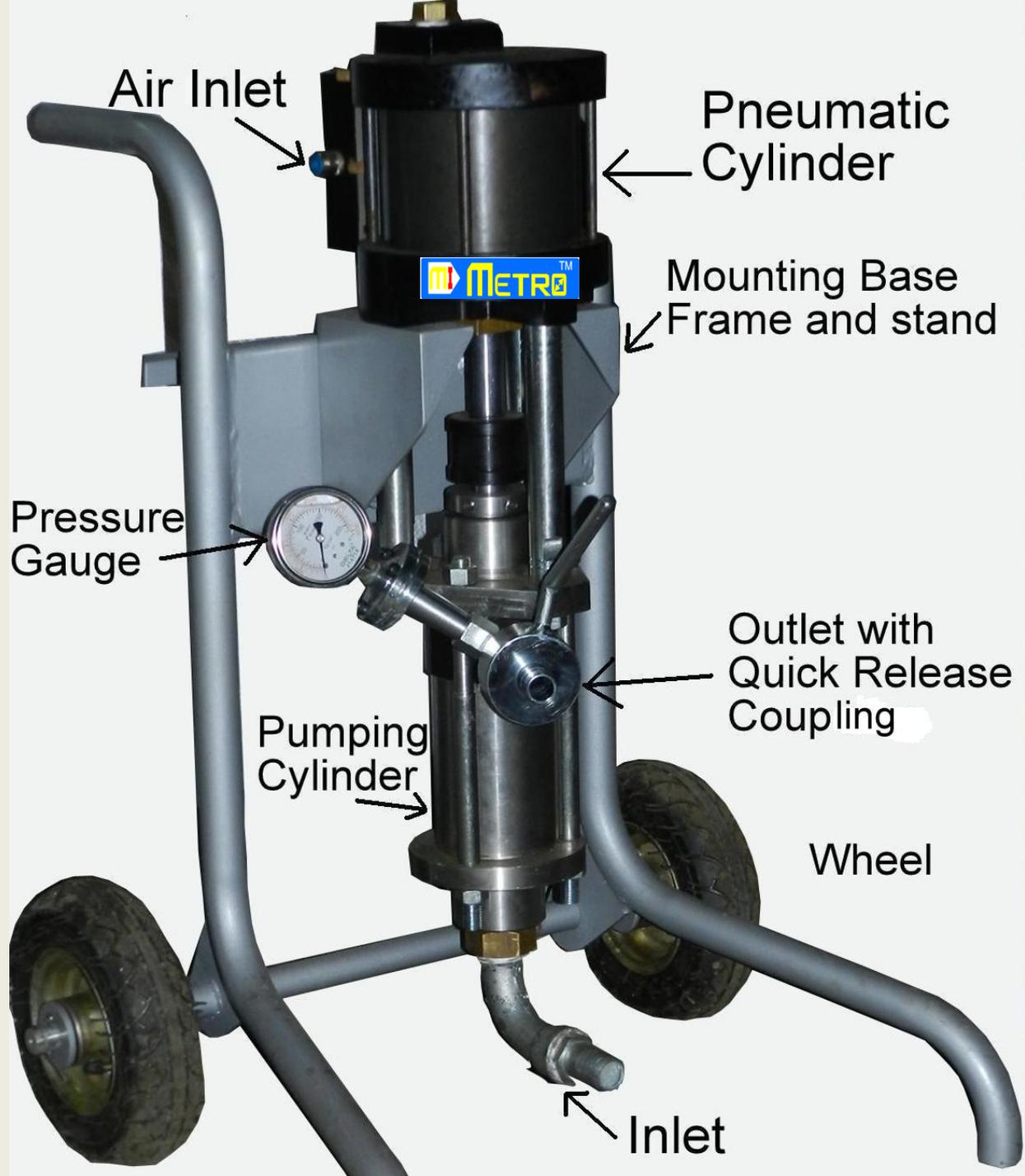
- **Without Electrical power** supply Grouting can be easily done even in remote areas by using engine driven compressor.
- Grouting in **Bridges and Dams** is always a challenge which can be easily done with this equipment.
- A firm pressure can be generated to grout cement slurry even in tiny holes with low time consumption.
- Automatic stopping of pump at completion of task at required pressure tends to no harm to the equipment and minimum wastage of material.
- A solution towards cement grouting with low mess and manpower.

# Pneumatic operated Cement Grout Pumping equipment

 Industries provides a complete solution to Grout cement solution anywhere with zero complication and with or without Electricity named as **pneumatic cement grout pump**.



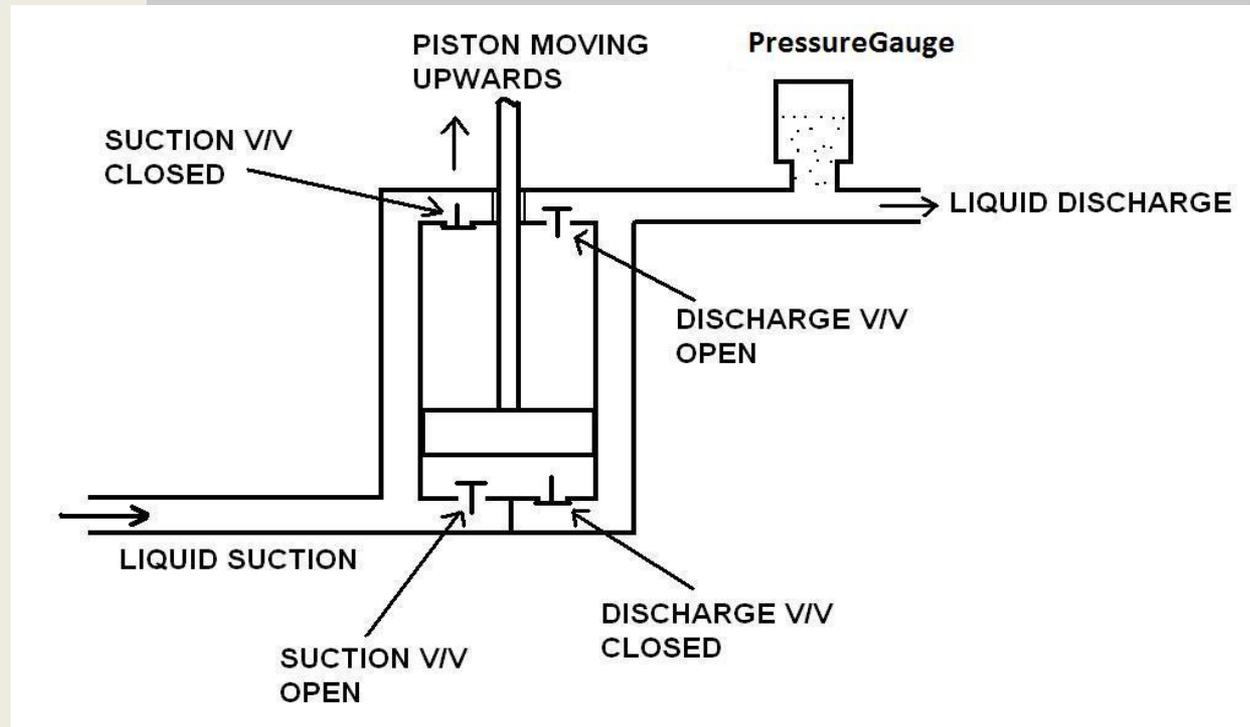
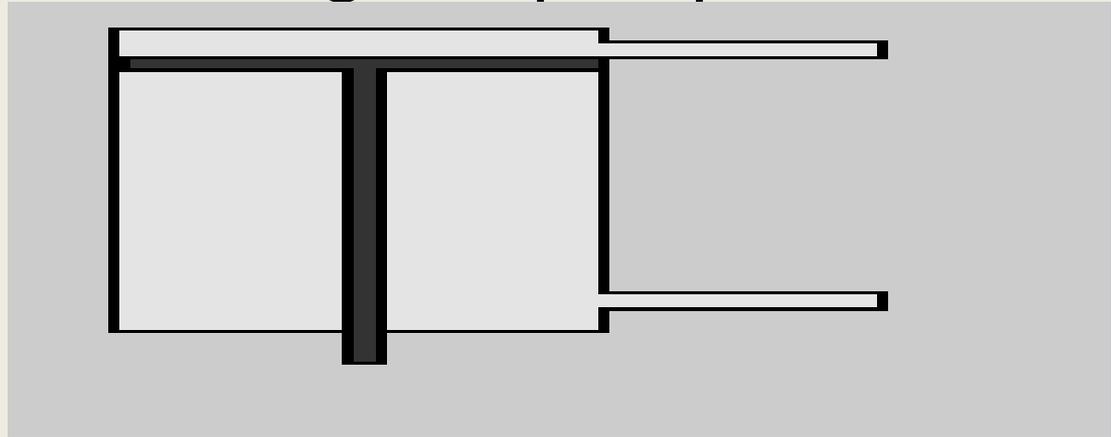
# Know how of Pneumatic Cement Grout Pump



# Working

- Pneumatic Cement Grout Pump is an air assisted plunger pump designed for cement grouting.
- Pneumatic pressure in the air cylinder exerts a high pressure on the grout mixture which leads to ejection of grout with a high pressure and velocity.
- The valves of the air cylinder function automatically to actuate the cylinder.
- The pneumatic cylinder moves the plunger up and down to complete the pumping cycle.

# An schematic diagram of Working of Pneumatic cement grout pump



# Technical Specifications:

<b>Grout Pressure</b>	<b>20-25 kgs / cms ( 300psi)</b>
<b>Air Pressure</b>	4-7 kgs / cms
<b>Output</b>	2-5 liters /min
<b>Plunger Diameter</b>	60mm
<b>Air cylinder Diameter</b>	125mm
<b>Stroke length</b>	50mm(+/-5mm)
<b>Inlet</b>	1" Bsp (25mm )
<b>Outlet</b>	3/4" Bsp ( 25mm)
<b>Bare Pump Weight</b>	40kgs approx.
<b>Dimension</b>	<u>    L    x    W    x    H    </u> 550      500      800
<b>Inlet hose</b>	2 meters
<b>Outlet hose</b>	5 meters

# Features and Benefits:

Item	Feature	Benefit
Pump	Output Pressure up-to 25 kg/cm <sup>2</sup> .	Suitable for heavy cement grouting jobs.
	Output discharge up-to 2 to 5 liters/min	Low grouting time and labor consumption.
	Suitable Material selection	Compatible with grout and weightless.
	Detachable	Easy to clean and maintain.
Pneumatic Driving Cylinder	Large diameter	Exerts High force on the grout.
	Pressure regulator	Can be controlled Easily.
	Low Weight	Can be carried easily.
	<b>No Electrical power requirement.</b>	<b>Can be Easily used even in remote areas.</b>
Stand	sturdy metal construction	Increases equipment life and resist from frequent breakdowns.
	Cleaning	Can be scrapped and cleaned.
	Durability	Highly durable.
	Fluid compatibility	Cement, solvents, water.
Fluid Hoses	Compatibility with materials	No changing hoses between applications.
	<b>Quick release coupling</b>	Easy to change hoses – saves time, Orientation at any angle.
	High Pressure capacity	Suitable for grouting job.
Pressure gauge	70 kg/cm <sup>2</sup>	Pressure can be regularly monitored and controlled.
Pneumatic valve	Automatic Functioning	Fast acting that saves time.

# Technical Advantages:

1. Designed compact to work in confined areas in construction sites, bridges, dams and mining sites.
2. Designed to work where access of Electricity is not possible.
3. Automatic functioning of valve makes the pump very compact and efficient.
4. Light weight and wheelie design can be carried easily.
5. Designed for easy operation and low maintenance.
6. Ease towards availability of spares parts.

# Applications

1. Stopping major water inflows in mines, tunnels, bridges, dams and underground structures in general.
2. Soil and rock grouting.
3. Unusual and Difficult Geotechnical and Structural Problems.
4. Environmental applications.
5. Rehabilitation of deteriorated, porous or leaking concrete or masonry structures.
6. Shoring and retaining systems.
7. Special foundations and retaining systems.
8. Soil Stabilization.
9. Mining Applications.
10. Chemical pumping with special cylinder.

# THANKS AND REGARDS



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