

# PNEUMATIC GUNITING & SHOT CRETING MACHINE

**GUNITE** is a process by which Plastering is sprayed at a high velocity. It is defined as mortar consisting of Cement and Sand, conveyed from the delivery equipment known as Gun through a hose and Pneumatically Forced through a nozzle where water is added at a high velocity onto a surface. The Force of the jet impacting on the surface compacts the material. A comparatively dry mix is generally used so that the material is capable of supporting itself without sagging for vertical and overhead applications.



#### Equipment:

- Cement Gun with Rubber Hose and Nozzle.
- Twin Pressure water tank and water hose.
- Accessories.

#### Uses:

- New Construction of thin sections such as shells.
- Construction of thin walls.
- 3. Canal and Tunnel lining.
- Swimming Pool linings.
- 5. Repairing deteriorated Concrete and Concrete damaged by fire, chemicals or earthquake.
- 6. Strengthening weak concrete structure such as Buildings, Bridges, Jetties.
- Stabilizing rock and earth slopes.
- Refractory linings.
- 9. Encasing steel for fire proofing.
- 10. Protective coating over prestressed wires and steel pipes.
- 11. Repairs of Hydraulic Structures such as water tank, dam walls.
- To give rough surface texture where such is desired.

#### Advantage:

- 1. Due to the low water ratio and perfect compaction resulting from the high velocity of placement, Gunned Concrete have a greater density and because of the extreme density, it has proved to be an impervious Protective surface for concrete and steel structures.
- 2. Gunned concrete bonds perfectly to properly prepared surfaces of other material such as concrete, brick, rock or steel.
- 3. Gunned concrete cures to a product of extreme hardness and abrasive resistance and approx. 60% of maximum strength is attained in seven days. The following strength is attained in 28 days by using ordinary washed sand with an approx. fineness mdules from 2.415 to 2.90.

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1: 31/2	600	lbs	Per square Inch.
1:4	5500	lbs	Per square Inch.
1: 41/2	4500	lbs	Per square Inch.
1:5	4000		Per square Inch.





## PNEUMATIC CONCRETE PLACER

"JB" Pneumatic Concrete Placer: Portable or Stationary type, capable of throwing concrete upto 100 mtr. horizontally and 30 mtr. vertically at an air pressure of 6 to 7 kg/cm² (90-100 psi) complete with air lines, valves and pressure gauge - with an outlet of 6" (150 mm) dia for concrete discharge with quick action coupling. The placer can be supplied either on a Fixed frame, on wheels for rail 24", 36" or 42" gauge, on solid steel wheels / castor wheels or Rubber tyred wheels.



#### CAPACITY

- 1. ¼ cu. yd. (7 cft) 2. ½ cu. yd. (13.5 cft) 3. ¾ cu. yd. (20 cft)
- 4. 1 cu. yd. (27 cft)

#### OPTIONAL ACCESSORIES

- 1. M.S. Steel pipe 150 mm dia with quick action coupling in length of 6 mtr., 3 mtr., 1 mtr.
- 2. Large Radious bends of 90°, 45°, 30°.
- 3. Rubber Rings for quick action coupling.
- 4. Air receiver Tank.
- 5. Quick action coupling.
- 6. Flexible Rubber Hose pipe with both end flange connection.
- 7. Discharge Box.
- 8. Automatic Loader.

#### **USES**

- Tunnel Linings.
- 2. Piers.
- 3. Silos.
- 4. Chimneys.
- 5. Cooling Towers.
- 6. River Valley Projects.
- 7. Repairing of Arch Bridges and other such structures.

'JB' Pneumatic Concrete Placer are robustly built, simple in working, stronger, durable and has been improved with the aid of new ideas and suggestions by its actual user and our research work and engineering skill.

### **PERFORMANCE CHART**

Model	1/4 cu.yd.	½ cu. yd.	³/₄ cu. yd.	1 cu. yd.
Capacity in Itrs.	200 ltrs.	400 ltrs.	600 ltrs.	760 ltrs.
Capacity in cu. ft.	7 cu.ft.	13.5 cu. ft.	20 cu. ft.	27 cu. ft.
Rated Hourly Capacity in m <sup>3</sup>	11 M3	23 m3	34 m3	44 m3
Maximum size of aggregate in mm	40	45	45	45
Air Receiver Tank Capacity required in m³	1.1	1.7	2	2.3
Air Compressor Output requirement in m³/min.	1.7 M3/Minute	2.55 m3/minute	3 m3/minute	3.4 m3/minute

NOTE: Actual Hourly concrete output depends on the amount of concrete delivered to the placer and horizontal & vertical length of delivery pipe to forms. Records show that 50% higher output than above rated capacity can be obtained. Normally the placer transports concrete at a speed of 1.83 to 3 mtr./ sec. upto distance of 15 mtr. vertical or 65 mtr. horizontal.

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