

Compress equipment manufacturing
Transportation - Road Maintenance - urbane services



**Slurry seal and
microsurfacing**

Slurry Seal and Micro surfacing – Overview

- ✓ Slurry Surfacing system is the process and technique that make a thin emulsion cold mixed overlays on the Roadways, High ways , Airports...etc. (Roads)
- ✓ This system are recognized as cost – effective restorative and preventive maintenance techniques for Roadways of most traffic levels
- ✓ This system may be also used as wearing courses on the emulsion stabilized bases or recycled roadways, bond courses, crack fill or combined, with other techniques (Like chipseal)
- ✓ The system combine finely – graded aggregates , bitumen emulsion , water and mineral like cement or lime , polymers , pigments , fibers , chemical additives
- ✓ Bitumen emulsion used in slurry and surfacing are in two category Anionic or Cationic
- ✓ The bitumen content of the cured seals Form 5 to 16% by the weight of aggregate
- ✓ Slurry Surfacing is normally applied on High ways using a purpose – designed self –propelled Mix- paver
- ✓ The slurry ingredients are Dosed and MIXED in MIXER Then dis charged in to the Spreader BOX Named PAVER
- ✓ The paver distributes the material over the Roadway and maintains the profile and thickness of the seal
- ✓ Application rate range is from 3-14Kg / M2 for single pass on the Roadway
- ✓ Slurry product can be in Two different type (Slurry seal – Micro surfacing)
- ✓ Slurry Seal is normally laid no Thicker than 1/5 times of the Top Size of aggregate, which the range is from 3-10mm
- ✓ Mineral fillers like cement or Hydrated lime are commonly used. but not always
- ✓ Slurry seal make water proof the surface and provide the SKID Résistance of roads
- ✓ Typically, slurry seal can be Trafficked 1-4 Hours, quick set (CQS) Slurry seal can be opens the traffic within one hours
- ✓ Micro surfacing can be laid in multiple layers to correct significant deformations including rutting and it is suitable for higher traffic
- ✓ Micro surfacing usually has higher quality aggregate
- ✓ Mineral filler is almost always included in the mixture



Specification and advantages of Slurry and Microsurfacing

- ✓ Prevent water penetration
- ✓ Improve Skid resistance
- ✓ Improve surface Texture / Surface drainage
- ✓ RUT – filling (microsurfacing)
- ✓ Correct effect of raveling
- ✓ Fill Small cracks including alligator cracks
- ✓ Fill Small potholes
- ✓ Correct flushed Surfaces or stripped surface
- ✓ Seal base Courses
- ✓ Wearing surface on Stabilized base
- ✓ Bond coat
- ✓ Delineate bus lanes, cycle ways , ... (optionally with color)
- ✓ Provide good background for road marking
- ✓ Slurry surfacing provide a good combination of restorative and preventive maintenance for relatively LOW COST , in a quick process which minimizes traffic delays



Microsurfacing Machine Semi – Trailer

General

Micro – Machine Trailer consists of : Chassis , Axel , Tire and Rims (8 units)

Landing gear (Jost 24 Tons) , Hopper of Sand , water tank , Emulsion tank , independent Engine , Mixer , paver , operator table (consol) Cement Centianer , Hydraulic system Electrical system 24 Volt , With PLC

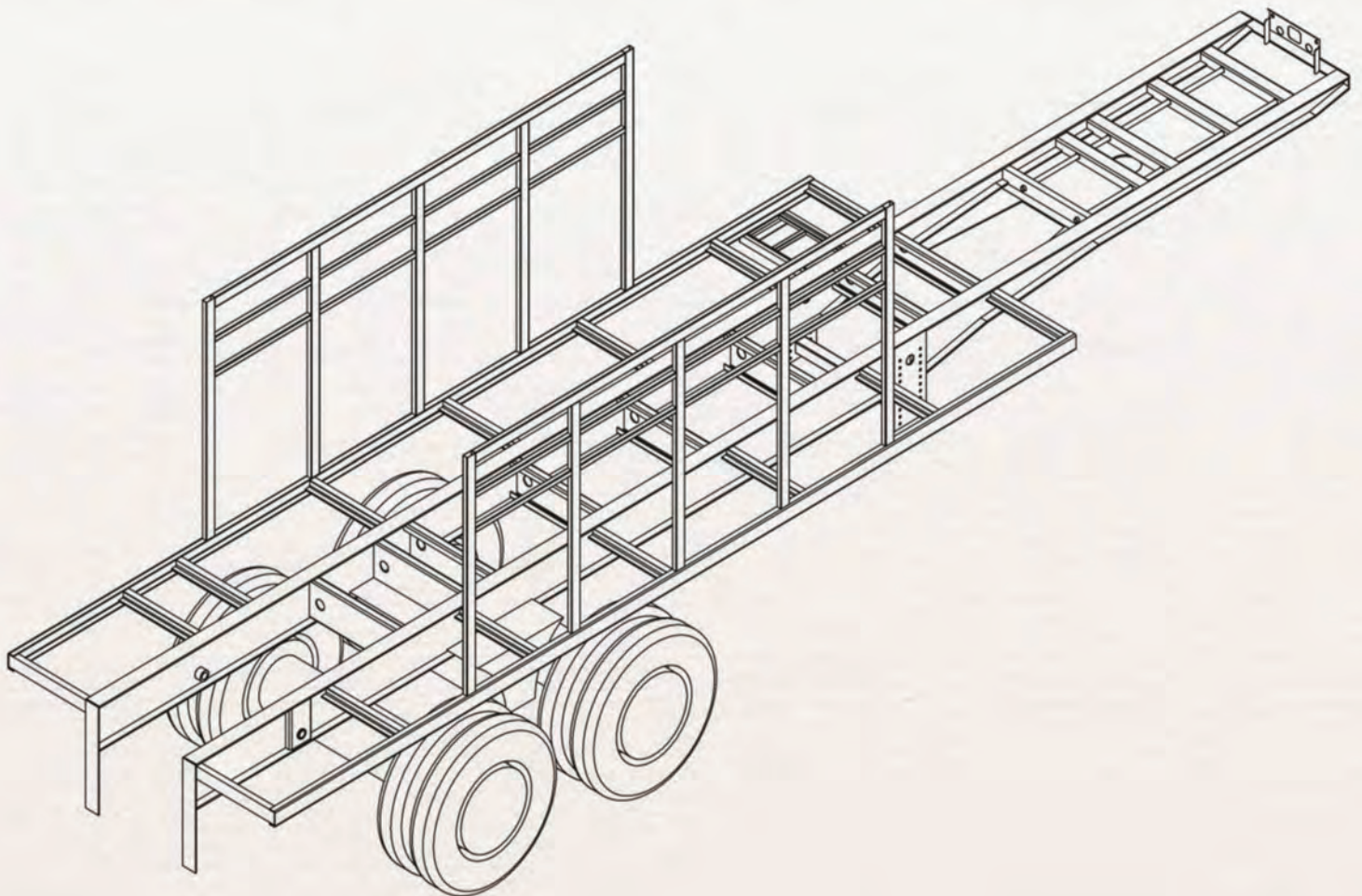
(all Equipment's are modular design)

1-Chassis

Produced from Steel grade ST-52 and ST-37 (thickens 8 , 12mm to increase the mechanical Strength of Frame

2-Axel , Tire

Axel is NURMEK with suspension and 8 tire with Rime (R 22/5) Landing gear (Jost type 24 Tons) two speed



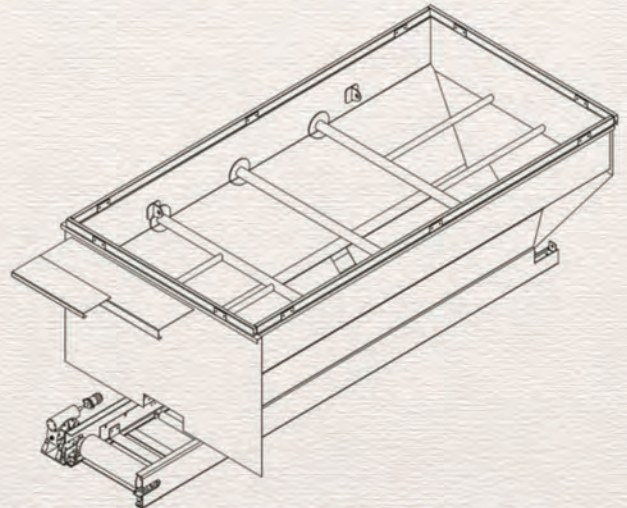
3-Hopper of Sand

Hopper is Trapezoidal shape and the capacity is 12 cubic meters

That reinforced with longitudinal and Transverse bracing and equipped with Hydraulic Vibrators for easy Transfer of sands

Hopper is equipped with belt conveyer system that is driven by Hydro motor and Reduction Gear Box to Transfer sand to Mixer

The capacity of delivering is about 1700Kg/Min



4-Galvanized water tank

The capacity of water tank is 4000 liters

The water tank has piping system to filling and delivering water to Mixer by one centrifugal pump with actuator system



5-Emulsion tank

The capacity is 4000 liters

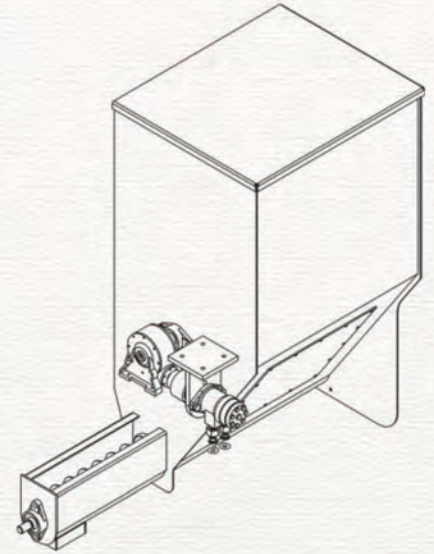
It is reinforce with bracing in side and equipped with cleaning Slrainer

Emulsion tank has piping system to filling and delivering bitumen Emulsion to Mixer by and especial gear pump (VGF :7 , 7.5 KW 700 R.P.M , 14 M3/h) and Actuator system

Microsurfacing Machine Semi – Trailer

6-Cement Container

the capacity of cement is 500 Kg , which has a cement guiding auger and Mixer inside (clump crusher)



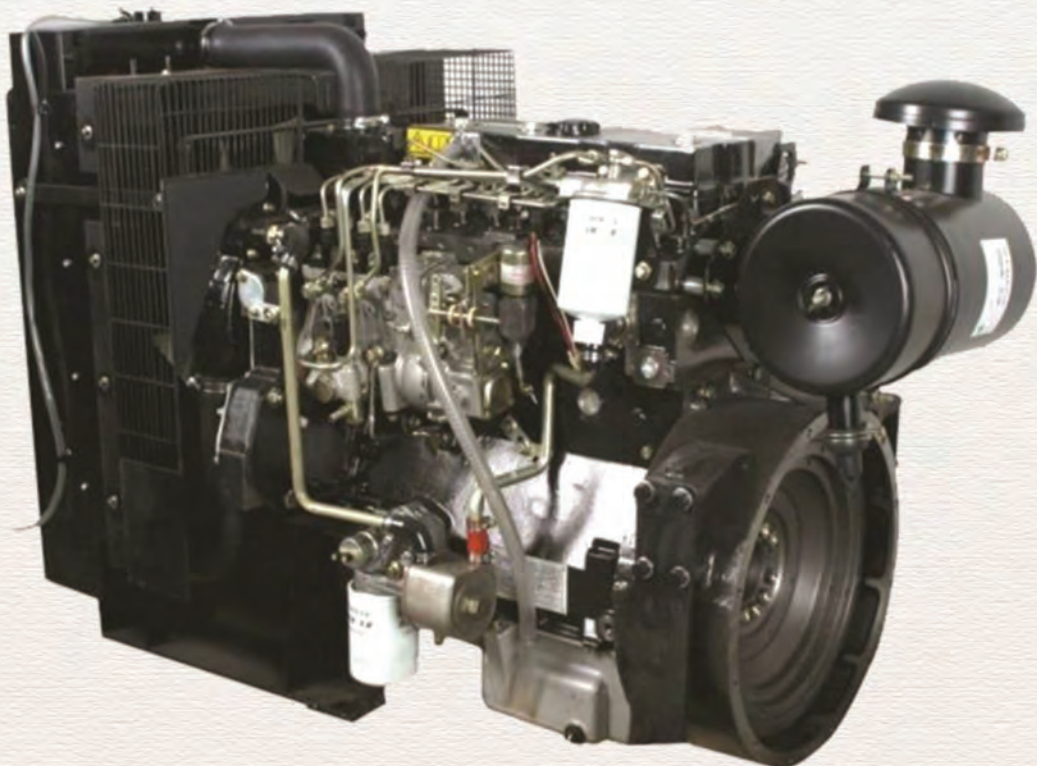
7-Engine

System has independent engine

6 cylinder with turbocharger

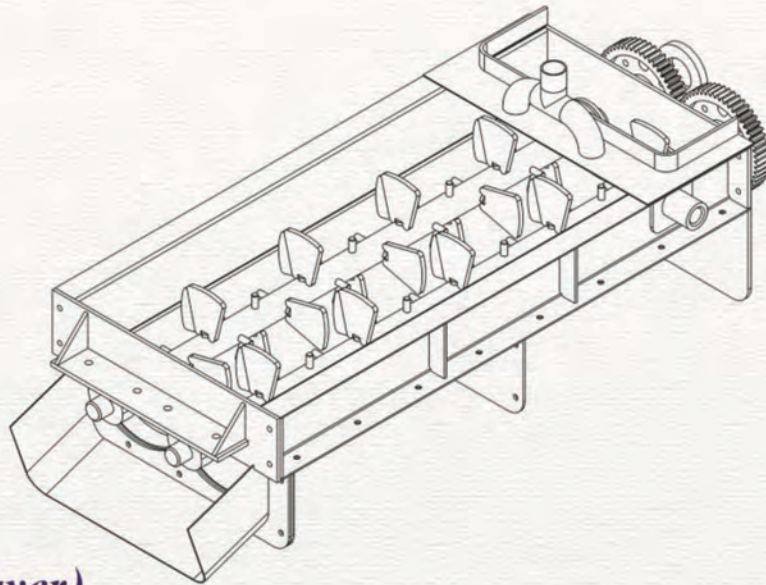
110 Horse power (H.P) at 1500 R.P.M

It is coupled with one splitter gear Box with two same rotation out put for installation the Hydraulic pumps



8-Mixer

One of the main devices of micro surfacing machine is MIXER for premixing of sand , water , Emulsion
It has two Rotating shafts with edge pads rotates by two gears in opposed
direction via high Torque Hydro motor



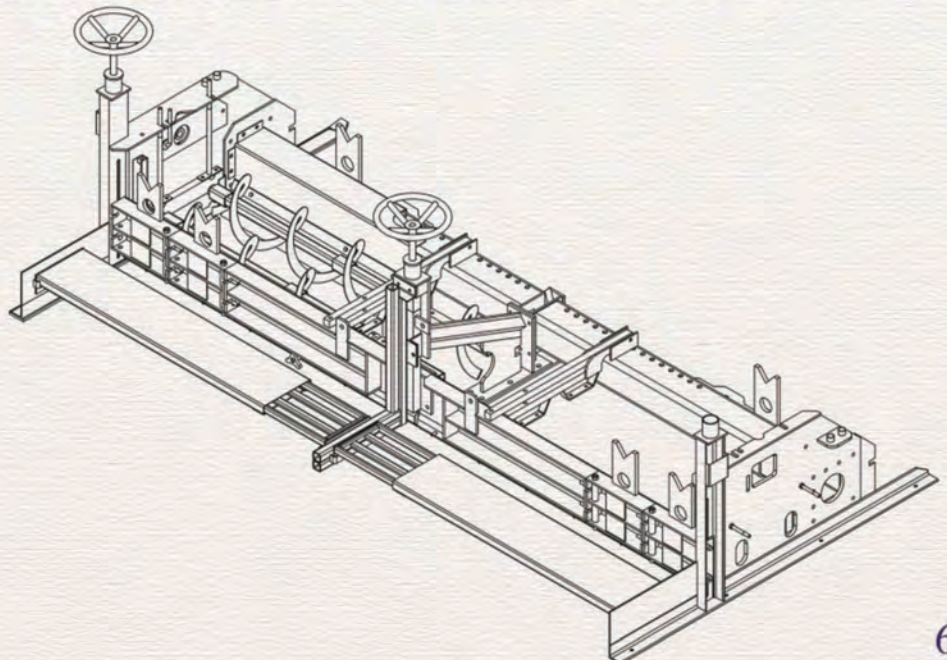
9-Spreader BOX (Paver)

The Hydraulic spreader BOX is designed especially for micro surfacing and
quick – set slurry seal mixes

Widths are Hydraulically adjustable from 2.5 m – 4.2 m

(15OR 20 OR 30 Cm) increments

The auger bearing are anti wearing polyethylene , providing low maintenance and economical replacement



10-Electrical System

Electrical System is 24 volt with control manually and automatically with PLC and monitor system
All operations can be seen and adjusted on the monitor and also operator can manage all operation in manually by the switch on the console

PLC is DETA brand , with touch L.C.D



11-Hydraulic System

Engine drive Hydraulic system

With 6 OR 4 GEAR PUMP 44c.c up to 20cc

Belt conveyer and carwash 44c.c

Mixer and water system 44c.c

Emulsion 37c.c

Paver 37c.c

Cement and vibrator 20c.c

Rear system (Hydraulic cylinders) 20c.c

All separate line has control relief valve

