

B-TEK Thermoplastic Preheaters



Technology

B-TEK preheaters use Liquefied Petroleum Gas (LPG) to heat the thermoplastic material and provide high melting capacity. Propane is the preferred choice of LPG gas as it is less prone to freezing at low temperatures in harsh climates.

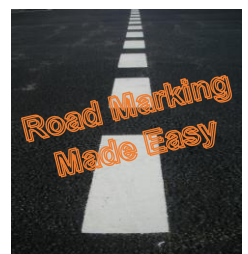
The heating system includes thermostatic temperature control, flame failure device, pilot burner and main burner features.

Agitation of the thermoplastic material is through a diesel powered hydraulic drive system. The agitator is controlled by a directional control valve which can be set in neutral, forward (clockwise) and reverse (counter clockwise) positions.

B-TEK FABRICATION

"Road marking equipment experts"

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B-TEK Thermoplastic Preheaters

Construction

The preheaters and diesel hydraulic agitation system are mounted onto heavy section 102 mm x 51 mm channel or 50 mm x 38 mm for small twin sets.

The material holding tanks are clad in stainless steel to provide easy cleaning.

The preheater system is subjected to rigorous quality control inspection, fully tested and supplied ready for operation.

The preheater is protected from the elements with durable enamel paint, and supplied as standard in Adheron Black colour. Other colours are available upon request.

Material Tank

Sides: 5 mm.

Base: 12 mm.

Inner Casing: 3 mm.

Lid: 5 mm.

Cladding: 0.7 mm Stainless Steel.

Insulation: 30 mm mineral fibre RWA 45.

Agitators: 10 mm steel profiles with 5 mm blades welded onto a steel drive shaft, supported by a bottom bearing and cup bearing.

Diesel Power Packs and Hydraulics

Diesel Engine: Lombardini / Kohler 15 LD 225 or 15 LD 315 or 15 LD 440 (depending on the material tank capacity), single cylinder air cooled engine, fitted with electric start, auxiliary hand start and 13 Amp recharge system.

Hydraulic Pump: Direct coupled gear, tandem pump.

Hydraulic Agitator Motors: Orbit type high torque, low speed motors.

Directional Control Valve: Detent Spool Valves, forward and reverse with pressure relief.

Hydraulic Oil Tank and Filter: Reservoir filled with 181 litre nominal capacity SAE 46 hydraulic oil fitted with filler, breather cap and cartridge type suction filter.

Gas System

Fuel: LPG Propane gas @ 2 bar working pressure.

Temp Control: Danfoss RT 123 Capillary type.

Gas Solenoid: Danfoss EVI 3 12 volt DC.

Flame Fail Valve: Cavagnia Eng Type 50.

Thermocouple: Heavy Duty Tip.

Main Burner: Impact Burner HB 175.

Pilot Burners: Pilot Burners JB 50.



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Dimensions and Capacity

Type	Capacity gals (litres)	Overall Dimensions L x W x H mm	Weight dry Kg	Burner Output kW (BTU)
T20	40 (182)	1900 x 850 x 1150	450	All units 36 (122,500) @ 2 bar
T40	80 (364)	2000 x 1000 x 1200	500	
T60	120 (516)	2000 x 1000 x 1300	550	

80 gal and 100 gal units can be supplied upon request

Maintenance

Caution

Do not attempt to heat any vessel containing water as this can cause foaming.
Engage agitators as soon as melting starts to prevent local overheating.

Maintenance

The diesel engine should be maintained in accordance with the manufacturer's instruction manual.

Before operation check for loose bolts and fittings, and gas and hydraulic leaks.

Clean gas jets and adjust air wheels if blockage is suspected.

The hydraulic control system is designed to give a long life with minimum maintenance. To ensure maximum life the hydraulic oil should be drained and refilled to cover the level indicator in the bottom of the filler / strainer using high quality SAE 46 hydraulic oil.

The hydraulic oil filter should be replaced after 2 weeks operation and thereafter every 6 months.

Drain and refill the hydraulic oil at 6 month intervals and replace the filter cartridge. Reduce the interval if there is a high risk of contamination.

Drain the pre-heater and inspect the paddle, drive shafts, gland packing and adjusters at 3 month intervals.



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