



BBMAX - Laboratory mixer -



The BBMAX mixer, which complies with NF-EN 12697-35, allows preparing in laboratory relatively large samples of all coated materials for submission to subsequent tests on compaction, rut tester, circular shear press, module measurement, fatigue testing.

Measurement principle

Mixing is epicyclic type.

The tool carrier arm is driven directly by the motor shaft, while the offset tool is driven by its own rotating, obtained using a satellite gear that meshes on a fixed crown. The tool is an Archimedean screw. A blade separate from the tool holding arm complements the mixing action by maintaining the material on the tool path.

Terms of use

The material is heated to its mixing temperature either in the mixing bowl or in an annex oven. It is introduced by a door when the mobile holder in elevation occupies its working position. He is evacuated in a container by tilting the bowl after elevation of the head.

Incidentally, the bowl can be removed from the heating jacket for cleaning or direct handling of small amounts of asphalt materials. The mixer design does not involve special handling means other than a lightweight dolly.

Description

The 80 kg mixer is comprised of a frame made of a base and two uprights. The flat-bottomed cylindrical bowl is removable. It is housed in an envelope containing the electric heating resistors and ceramic fiber insulating layer.

This envelope tips over around two horizontal pins driven by a gear manually controlled by a wheel. The bowl is capped by the mixing head consisting of a bell on which are fixed the electrical motor and planetary gear that drive the Archimedes screw and the scraper blade. A door in the wall of the bell to add constituents during mixing.

A safety system interrupts the rotation movement at the opening of the door. The entire mixing head slides along the uprights using two chains driven by an electric motor.

Contactors limit the race up and down. A cabinet contains control and regulation electrical appliances. A very similar design mixer for 25 kg (55 lbs) is also available. Its principle is identical to that of the 80 kg (176 lbs) mixer. A few changes have been made in the constructive provisions.

Features



The standard deviation on the dosage of the fines, which is the best test of mixing homogeneity, is very low. For example, it is less than 0.15% for a grave-bitumen containing 7% of fines.

The mixing time of a batch brought to the desired temperature is less than 3 minutes. Double bowl removable jacket with rocker.

Full sealing during the mixing.
Door and trap for introduction of materials, fines, binder.
Programmable PID controller.

Timer - Various safeties.

Complies with machine directives 89/392/C.E.E and 91/368/C.E.E .

BBMAX 80

Height max, head raised : 2,50 m
Width : 1,20 m
Depth : 1 m
Weight : 820 kg

MIXER	BBMAX80	BBMAX25
Usable capacity	80 kg	25 kg
Motor speed	750 to 1500 rpm	1500 to 3000 rpm
Speed of the tool holding arm	20 to 40 rpm	32 to 64 rpm
Tool speed	51,5 to 103 rpm	90 to 180 rpm
Motor power	2.2 and 3.3 kW (2,95 and 4,43 HP)	1.5 and 2.2 kW (2,0 and 2,95 HP)
Heating power	6 kW	3 kW
Control range	50 to 250°C (122 to 482°F)	50 to 250°C (122 to 482°F)
Control accuracy	± 5°C (9°F)	± 5°C (9°F)
Dimensions	H = 2.40 m (7,87 ft)	H = 2.05 m (7,78 ft)
	L = 1.20 m (3,9 ft)	L = 1.40 m (4,6 ft)
	P = 0.95 m (3,1 ft)	P = 0.80 m (2,6 ft)
Weight	820 kg (1808 lbs)	550 kg (1808 lbs)



The MLPC® materials for bituminous asphalt formulation studies are designed by IFSTAR and Cerema. These materials are distributed by Vectra Equipment, exclusive licensee for the manufacture and marketing.

