

Supreme EnviroProcessor

Mixing Biosolids for Composting



The biosolids composting facility for the City of Kelowna uses two Supreme EnviroProcessor 900 stationary mixers to process up to 54 tonnes of a biosolids compost blend per hour with each mixer. The blended material is then composted on an outdoor aerated pad.



The mix includes two 6 yd buckets of woodchips (approximately 4000 kg) and one 6 yd bucket of biosolids (including some overs, and some ash (approximately 5000 kg), to provide a total batch weight of 9000 kg. The mixing process is less than 2 minutes. The material is discharged from the mixer in less than 2 minutes using a 4 ft wide by 30 ft stainless steel discharge conveyors. The cycle time on one batch for each mixer is 6 minutes. Hourly production is 54 tonnes of blend per hour per mixer.

The biosolids are received and mixed inside a large building. The blended biosolids are then moved outside and composted using an extended aerated static pile system. An excellent mix is crucial to the composting process as there is no turning or further mixing during the composting process.

City of Kelowna staff have observed that the mixing process using the Supreme EnviroProcessor has reduced odor emission during the composting process.





These stationary Supreme EnviroProcessors are powered by 200 hp Baldor severe duty electric motors, which allow them to start fully loaded if necessary. A soft start for the motor and the fluid coupler allow efficient motor starting.

The blended material is discharged from the mixer using a 48" wide by 30 ft long stainless steel discharge conveyor. The 9000 kg of blended material is discharged from the mixer in approximately 1.5 minutes using this conveyor.

The inside of the mixer is lined with a 1/4" AR 200 steel liner, which is addition to the 1/4 inch AR 200 steel sidewalls to give the EnviroProcessor many years of trouble free life. The augers are hard surfaced to provide longer life.



All functions of the mixer are controlled directly from the loader. A status light above the mixer indicates whether the augers are turning, and audible alarms indicate when the mixer and conveyors are being started.



The photo on the left shows biosolids blended with woodchips using a loader. Many biosolid lumps stay intact and are not exposed to aerobic bacteria for proper composting

The photo on the right shows biosolids blended with woodchips using the EnviroProcessor. The mix is a thorough blend of woodchips and biosolids – hence a better and faster composting process.

