CHOOSING THE RIGHT ASPHALT MIXING PLANT

Purchasing an asphalt mixing plant is a capital intensive investment and a major decision for road contractors and hot-mix asphalt suppliers. Many factors other than cost need to be carefully evaluated in detail to decide the type and capacity of asphalt mixing plant to invest in. Understanding the different technology and make of asphalt mixing plants is vital to determine the best choice of plant that will produce quality hot mix asphalt and reap good returns on investment.

Generally, there are two types of asphalt mix production: drum-mix and batch-mix. Drum-mix plants function in a continuous system: no screening of raw aggregates, no individual weighing of raw materials and bitumen, and no separate mixing process, whereas in batch-mix plants, raw aggregates are screened before being mixed. Individual weighing of aggregates, filler and bitumen by load cells in batch-mix plants gives better accuracy and quality control than volumetric weighing in drum-mix plants. This reduces wastage of bitumen and poor quality hot-mix asphalt.

Portability and mobility of the asphalt plant should also be considered, especially by contractors undertaking projects in remote areas, where they may have to relocate the plant upon project completion. Commercial hot-mix asphalt suppliers using stationary plants should also consider the non-recoverable costs of foundation works and lifting equipment required for installation. The cost and ease of operating and maintaining the plant, after sales service and support, and availability of spare parts should also be key factors in the decision making process.

Linnhoff started manufacturing batch-mix asphalt plants in the 1900s. With the innovation of the Screen Drum technology in the 1960s, Linnhoff introduced a revolutionary, more efficient, and cost-effective asphalt mixing process. This patented technology is unique to Linnhoff and differentiates itself from other brands of asphalt plants. The Linnhoff Screen Drum combines the drying and screening processes of raw aggregates that eliminates the requirements for hot-elevator and vibrating-screens sections. The absence of these two sections means lower maintenance cost for wear-and-tear parts and ease of maintenance. With Linnhoff Screen Drum technology, the route taken by raw aggregates is shortened, hence less heat loss to convection and radiation, leading to lower fuel consumption. Better fuel savings coupled with easier and lower maintenance cost result in lower operating cost. Being a cost-efficient producer of hot mix asphalt generates better margin whilst maintaining competitiveness in the market.

Linnhoff Technologies is a German manufacturer based in Singapore producing a wide range of asphalt mixing plant solutions from fully mobile plants (TSD series), to portable containerised plants (CSD series), to compact stationary plants (TRX and CMX series), suitable for different projects and commercial requirements. Linnhoff Asphalt Plants have completed numerous airports, highways, ports, and other road maintenance projects in the Asia-Pacific and African regions over the years. The Linnhoff TSD series is a fully mobile batch-mix plant with four main modules on axles. Each module of the TSD conforms to common road haulage standards and is readily attachable to prime movers for fast and easy relocation. The TSD series is also a self-erecting plant using hydraulic power pack without the need for cranes and lifting equipment. Linnhoff TSD plants have completed airport projects in Phnom Penh and Siem Reap, toll roads and highway projects funded by JICA (Japan International Cooperation Agency) in Cambodia. To date, these TSD plants are still in active production, contributing to the growing infrastructure and better roads in Cambodia.