



CAT[®] SDX SCREED PLATE SYSTEM

INCREASE DENSITY AND SMOOTHNESS FOR LONGER
LASTING ROADS

» DYNAMIC COMPACTION TECHNOLOGY

CAT[®]

INFLUENCE THE OUTCOME

IMPROVE ROAD QUALITY WITH BETTER CONSISTENCY AND HIGHER RELIABILITY

Project planning, base preparation, mix design, reliable equipment, and proper paving techniques are keys to producing quality pavements. Ideal placement of the asphalt and reaching target densities are also extremely important factors that help pavements last longer.

Compacting asphalt at its highest temperature helps maximize density and deliver smoother results. In doing so, air void reduction must occur through manipulation and

compaction techniques to ensure that targeted results are being met.

Since the inception of the asphalt paver, screed plates have been manufactured with a flat surface. However, a recent design utilizes a three-dimensional angular plate. This innovative design provides dynamic flow through the screed plate in order to reduce air voids and increase density behind the screed.

» HOW THEY WORK

The Cat® SDX screed plate design consists of a three-dimensional angular surface on the front of the plates with a tapering smooth surface near the back. A kneading action occurs as the plates manipulate the mix as it passes through the angular grooves. This unique innovation enhances the structural integrity of the asphalt, lessens compactor shoving, strengthens unconfined edges, and promotes better surface temperature uniformity.

In addition to the angular plates, the system utilizes a revolutionary new fastening design that consists of an

insulated conductor plate that retains the heating elements and attaches to the screed frame. The screed plates are equipped with integrated tapered blocks that fit over the front and rear of the conductor plate. High-temperature silicone locking bands apply tension to the plates to keep them in position for excellent reliability and performance. This unique design significantly reduces standard hardware and can lessen screed plate replacement time by up to 80%.



» ENHANCED MAT QUALITY, MORE UPTIME

Increased Density and Smoothness

- Cat® SDX screed plates provide a kneading action for enhanced compaction behind the screed
- Dynamic material flow helps increase density and reduce IRI (International Roughness Index) scores
- Increased stiffness promotes better edge profiles for improved joint matching capability

Advanced Screed Plate Design

- Kinetic mixing action helps increase the bond interface between the asphalt binder and aggregate
- Mixing action of the angular plates promote better thermal uniformity for improved compaction characteristics
- Increased density enables compaction to take place on a hotter surface shortening the compaction train

Innovative Fastening System

- One-time conductor plate installation
- Screed plate changes reduced to as little as 4 hours
- Unique screed plate locking system eliminates hardware, simplifies removal and installation



» SYSTEM COMPONENTS

Innovative Cat® SDX Screed Plate System utilizes an aluminum conductor plate with beveled edges that retains the heating element and supports the screed plates. A unique screed plate locking system eliminates hardware for simplified removal and installation.



Conductor Plate

- Utilizes existing structural design for easy retrofit from standard screed plates
- Heating elements are retained by the aluminum conductor plate
- Screed plate leveling and angle of attack adjustment occurs on the conductor plates



Cat SDX Screed Plates

- Main and extender sections are comprised of multiple plates that simplify installation
- Cast plates made of high strength chromium carbide provide durability
- Plates run flatter, providing extended wear qualities



Fastening System

- Eliminates hardware for faster screed plate replacement
- Tapered blocks integrated into the screed plates fit over the beveled edge of the conductor plates
- High-temperature silicone retainers maintain tension for reliable performance

» WHAT CONTRACTORS ARE SAYING

"The screed does a really good job of orienting materials and optimizing their structure as much as possible behind the paver, leaving less for the rollers to do when the viscosity is low and taking advantage of the high temperature region."

~ Consulting Engineer

"I've been testing the screed plates for 2 seasons, I currently have 265,000 tons under the screed plates and that consists of 8 jobs. In all 8 of the jobs, we've had 50% or greater density bonuses and all 8 have received ride bonuses. It's my belief that the screed plates have allowed us to be more profitable."

~ Paving Contractor

"When you walk across the mat that's been laid with this screed, you can see right away that there is something different. The mat has a very high quality that can compete with any smoothness requirement of any State."

"Traditional screed plate changes take about 2 days, these, in and out the door in 4 hours."

~ Paving Contractor

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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