



DUST SOLUTIONS



I-CAT Dust Solutions provides customized dust suppression products and technologies for the mining and road construction sectors. The company manufactures its own products following sustainable best practices and sources raw materials from trusted suppliers. Environmental impact is a key consideration in all of I-CAT's product development.

WE OFFER A COMPREHENSIVE DUST MANAGEMENT SOLUTION TO OUR CLIENTS



DUST SOLUTIONS FOR:

- ☛ Primary haulage roads
- ☛ Secondary haulage roads
- ☛ Tailings facilities
- ☛ Stockpiles and overburden
- ☛ Materials handling plants
- ☛ Rural and agricultural gravel roads



ECO SUSTAINABLE PRODUCT
100% Environmentally friendly

I-CAT's DUST SUPPRESSION PRODUCT RANGE

RDC 20™

ROAD DUST CONTROL

RDC 20 is a sustainable and advanced blend of emulsified copolymers and ionic modifiers, specifically developed for use on secondary haul roads and pit roads.

GreenBit™

GreenBit is an SS60 emulsified bitumen-based product specifically developed for primary haul roads, offering both stabilizing effects and surface sealing performance.

SS60

Anionic Bitumen Emulsion

I-CAT operates its own emulsification facility, producing SS60, a versatile, low-viscosity anionic bitumen emulsion widely used in road construction and dust suppression.

BIOBASE

HAULAGE ROAD DUST PALLIATIVE

BioBASE is a cutting-edge, biologically derived soil stabilization solution developed to control dust while enhancing the strength, density, and durability of gravel roads.

GreenGrip™

GreenGrip is a natural surfactant formulated as a patented polymer blend. It provides an environmentally safe solution engineered to replace conventional bitumen-based products while maintaining cost efficiency.

TDS2000

TAILINGS DAMS SOLUTIONS

TDS2000 is a specialized formulation for the effective suppression of harmful dust emissions on tailings facilities. It is developed for application on tailings dams and exposed soil areas.

Misting SYSTEMS

I-CAT provides customized dust suppression solutions, engineered to control fugitive dust emissions at transfer points, crusher plants, and material handling operations.

"Progress is impossible without change, and those who cannot change their minds cannot change anything."

- George Bernard Shaw



RDC 20™

ROAD DUST CONTROL

"Dust suppression has become a 'must have' rather than a 'nice to have' in order to comply with safety and environmental and occupational guidelines set through new legislation. RDC 20 is an affordable and effective solution to achieve this."

– extract from article in **Mining Weekly** (September 2018)

RDC 20 IS AN EFFECTIVE, LOW-COST SOLUTION FOR HAUL ROAD DUST SUPPRESSION

RDC 20 FOR SECONDARY HAULAGE & PIT ROADS

RDC 20 is an environmentally friendly formulation composed of blended emulsified copolymers and ionic modifiers, engineered specifically for secondary haulage roads.

Effective across a wide range of soil types and climatic conditions, **RDC 20** is made entirely from natural ingredients and is 100% biodegradable. When applied to gravel road surfaces, it forms a durable cross-linked matrix that binds fine soil particles into larger, heavier aggregates, significantly reducing dust emissions and improving road stability.



The table below shows results of a study done at a prominent open pit mine, comparing RDC 20 use against water as dust suppression practice:

BENEFITS AND SAVINGS	
DESCRIPTION	OUTCOMES
APPLICATION FREQUENCY	50% REDUCTION
WATER USAGE	50.2% REDUCTION
DUST FALL	53.8% REDUCTION
pDR READINGS	47.3% REDUCTION
VEHICLE RUNNING COST	50% REDUCTION
FUEL USAGE	53.6% REDUCTION
CARBON FOOTPRINT	53.6% REDUCTION

RDC 20 is a lignosulphonate-based dust palliative with a proven track record of **over fifteen years** in the market. Widely applied across some of the largest mining operations in southern Africa, it was **first introduced to the industry by I-CAT**, pioneering the use of lignosulphonate-based dust suppression solutions in the mining industry. RDC 20 is specifically formulated to match the unique soil composition and operational conditions of each site, ensuring optimal performance.



CERTIFIED



ECO SUSTAINABLE PRODUCT
100% Environmentally Friendly

RDC 20 is fully water-soluble and simple to apply, enhancing tyre traction while reducing the frequency of grading and watering on haulage roads. This results in significant conservation of water resources and lower overall operational costs.

The cost of **RDC 20** is easily offset against savings in water, fuel, labour, vehicle maintenance, tyres, and road upkeep.

APPLICATIONS

- 🚚 **RDC 20** is diluted with water into a water bowser and applied as a surface spray.
- 🚚 The dilution ratio is site specific and depends on variables i.e. climate, traffic, etc.
- 🚚 The application frequency is also site-specific but usually not more than three times in a 24-hour cycle.
- 🚚 **RDC 20** can also be used as a subbase stabiliser and blended into the wearing course during road construction. It produces a solid and strong subbase prior to road surface maintenance and dust suppression.
- 🚚 **RDC 20** delivers superior dust suppression performance with substantial cost savings compared to water spraying, while simultaneously enhancing mine productivity and operational safety.

With over 15 years of proven performance, RDC 20 delivers reliable dust control and durability on all haulage and pit roads in mining operations.



GreenBit™

PERMANENT SOLUTION FOR PRIMARY HAULAGE ROADS

The Smarter, Greener Road Solution

GreenBit was developed for permanent mining and rural roads, delivering a smooth, durable, dust-free surface that drastically reduces the need for ongoing maintenance.

Easy to Apply, Big on Savings

Water-soluble and simple to apply, **GreenBit** enhances tyre grip, improves rolling resistance, and minimizes the need for constant grading and watering; helping you save water, fuel, and costs.

Naturally Strong, Environmentally Friendly

Formulated with 60% all-natural wood-derived binders and blended with I-CAT's anionic emulsified bitumen, **GreenBit** is significantly safer for the environment than conventional alternatives.

Proven Performance, Trusted Application

Extensively tested and successfully applied across public, agricultural, and mine haulage roads, **GreenBit** creates a stable wearing course with a smooth, long-lasting finish.

An I-CAT Exclusive

Produced at our facilities in Rayton (Gauteng) and Postmasburg (Northern Cape), **GreenBit** is exclusively available from I-CAT. **Beware of inferior imitations!**

BENEFITS

- ☞ Prodigious water saving
- ☞ Removes the need for constant grading and watering
- ☞ Dust free road surfaces
- ☞ Improves grip and rolling resistance
- ☞ Reduces road maintenance cost
- ☞ Environmentally safe
- ☞ Water soluble, easily applied





Mine Entrance Road
Before Treatment



Mine Entrance Road
After Treatment



Mine Entrance Road
After Treatment



ECO SUSTAINABLE PRODUCT
100% Environmentally Friendly
60% - 70% ALL
NATURAL INGREDIENTS

The Greener Standard for Haulage Roads

GreenBit is the industry-leading bitumen-based dust palliative, engineered specifically for primary haulage roads. Developed as a smarter, greener alternative to SS60, it delivers exceptional durability while reducing environmental impact.

Sustainable Innovation

Formulated with a patented natural binding agent, emulsified bitumen, and natural polymers, **GreenBit** contains 60% all-natural binders; giving it a negative carbon footprint and making it far safer than traditional chemical products.

Custom-Formulated for Every Site

Every road environment is different. That's why **GreenBit** is custom-formulated to suit each client's climate, soil composition, traffic load, and budget.

Proven Performance

Extensively tested and applied on public, mining, and residential roads, **GreenBit** delivers a stable, smooth, dust-free surface while reducing the need for constant maintenance.

Smarter Roads. Cleaner Air. Lower Costs.

With its blend of innovation and sustainability, **GreenBit** is the ultimate solution for road establishment and dust suppression on both primary and secondary haulage roads.

APPLICATIONS

- 🚚 **GreenBit** is diluted with water into a water bowser and applied as a surface spray.
- 🚚 The dilution ratio is site specific and depends on variables i.e. climate, traffic, soil type, etc.
- 🚚 The application frequency is also site-specific but usually not more than once in a 24-hour cycle.
- 🚚 **GreenBit** can also be used as a subbase stabiliser and blended into the wearing course during road construction. It produces a solid and strong subbase prior to road surface maintenance and dust suppression.
- 🚚 **GreenBit** is effective and results in significant cost savings when compared to spraying water as dust suppressant, while improving mine production and safety.



SS60

Anionic Bitumen Emulsion

I-CAT's SS60 IS AN ANIONIC BITUMEN EMULSION, PRODUCED USING THE HIGHEST QUALITY BITUMEN

I-CAT's **SS60** is a low viscosity, anionic, slow-set bitumen emulsion specifically formulated for slurry applications. The product is a brownish-black, water-dispersible liquid that allows for efficient mixing and ease of application, including hand-applied slurries.

🚚 **Conformance:** **SS60** meets the standards of SANS 4001-BT3 for anionic bitumen emulsions.

🚚 **Viscosity:** Low viscosity for improved workability.

🚚 **Application:** Suitable for slurry seals, surface treatments, and general road maintenance.

I-CAT Bitumen Emulsion Production Facility

I-CAT operates a state-of-the-art bitumen emulsifier mill with a production capacity of 10kL/hour. Commissioned in January 2021, the facility produces high-quality anionic emulsified bitumen (**SS60**) to standards.

🚚 **Technology:** Equipped with the latest emulsification systems, ensuring consistent and superior product quality.

🚚 **Quality Control:** Includes a fully equipped, on-site laboratory for continuous monitoring and verification of product performance.

🚚 **Location:** Strategically positioned east of Pretoria, with convenient access to major highways, enabling cost-effective distribution to nearby mining and construction sites.

This investment underscores I-CAT's commitment to delivering reliable, consistent, and high-performance emulsified bitumen solutions to the industry.



I-CAT's SS60 IS PRODUCED AT OUR OWN PRODUCTION FACILITY NEAR RAYTON, GAUTENG

I-CAT's **SS60** is a premium, slow-set bitumen emulsion developed for use across a wide range of road construction and maintenance needs.

- 🚧 **Road Surfacing:** Ideal as a binder for slow-set slurry mixtures, **SS60** can be batch mixed and applied manually, or laid using continuous mix-and-lay machines.
- 🚧 **Soil Stabilization:** Adaptable to different soil types, construction methods, and climatic conditions, ensuring strong and durable surfaces.
- 🚧 **Rejuvenation & Tack Coat:** Diluted with water, **SS60** restores aged seals as a rejuvenation spray or serves as a reliable tack coat for asphalt overlays.
- 🚧 **Green Innovation:** **SS60** is a key ingredient in I-CAT's **GreenBit** dust suppression solution, blended with natural binders and surfactants to deliver superior performance on primary haulage roads.

With its proven versatility and consistent quality, I-CAT's **SS60** provides cost-effective, reliable, and environmentally responsible solutions for both road infrastructure and mining operations.

SS60 USES

- 🚧 Road sealing
- 🚧 Dust suppression
- 🚧 Base Stabilisation
- 🚧 Tack coating
- 🚧 Slurry seals
- 🚧 Cold application binder
- 🚧 I-CAT's **SS60** is the active ingredient in our **GreenBit** product.

Innovation Meets Reliability

At I-CAT, quality is engineered into every batch. Our fully equipped laboratory allows us to conduct rigorous quality and consistency testing on all SS60 emulsions produced.

Beyond ensuring reliability, our team of expert chemists continuously develops and refines new formulations, driving innovation for future road construction and dust suppression solutions.

This commitment to research, development, and precision control guarantees that I-CAT's SS60 not only meets industry standards—but sets them.



BIOBASE IS A 100% BIOLOGICAL-BASED ROAD STABILISER AND DUST SUPPRESSION PALLIATIVE

BioBASE – The Future of Road Stabilization

BioBASE is an innovative, biological-based solution developed to revolutionize how we build and maintain gravel roads. Engineered in South Africa, **BioBASE** provides an eco-friendly alternative to traditional dust suppression and road stabilization methods.

This advanced, multi-enzymatic formulation enhances soil strength, density, and durability, delivering a cost-effective and sustainable approach to road construction. By binding soil particles more effectively, **BioBASE** not only prevents dust but also creates a stable road surface that withstands climatic challenges.

With **BioBASE**, roads last longer, require less maintenance, and reduce environmental impact, making it the smart choice for the future of infrastructure.

BioBASE provides a cost-effective and environmentally friendly alternative to conventional stabilizers such as cement or bitumen, making it particularly suitable for projects prioritizing sustainability and long-term performance.

With **BioBASE**, you're not just building roads - you're building a sustainable future.



BIOBASE WAS DEVELOPED THROUGH INNOVATIVE BIO-ENGINEERING TECHNIQUES

- 🚚 Significant cost savings compare to conventional methods
- 🚚 Minimal maintenance sprays
- 🚚 Developed for gravel and mine haulage roads (permanent and temporary)
- 🚚 Entirely non-toxic and completely environmentally friendly
- 🚚 Thoroughly researched and tested

BIOBASE ENZYMES HERALD IN A NEW ERA OF DUST SUPPRESSION INNOVATION, WHERE NATURE'S OWN BIO-CATALYSTS PAVE THE WAY FOR CLEANER, SAFER, AND MORE SUSTAINABLE ENVIRONMENTS.



ECO SUSTAINABLE PRODUCT
100% Environmentally Friendly

BIOBASE IS NON-TOXIC, NON-CORROSIVE AND MADE FROM 100% NATURAL RAW MATERIAL

BENEFITS

- ☛ Enhanced dust control efficiency
- ☛ Non-corrosive & non-toxic
- ☛ Promotes biodiversity
- ☛ Reduces in CO² emissions
- ☛ Reduces carbon footprint (both in production and use)
- ☛ Prolific water savings
- ☛ Environmentally safe
- ☛ Cost effective

BioBASE – Smarter, Stronger, Sustainable Roads

With **BioBASE**, you can transform any soil type into a strong, durable road base designed to last. Specially blended for your unique soil conditions, **BioBASE** doesn't just stabilize roads – it strengthens them.

Why Choose BioBASE?

- ☛ Builds durable gravel roads that resist water penetration and harsh weather.
- ☛ Reduces maintenance cycles and cuts labour costs.
- ☛ Boosts density and load-bearing capacity for heavy-duty use.
- ☛ Exclusive to I-CAT – guaranteed quality and performance.

BioBASE is the smarter, eco-friendly alternative that delivers stronger roads, lower costs, and longer-lasting results.





GREENGRIP™ IS A NATURAL SURFACTANT, BLENDED WITH A PATENTED POLYMER USED FOR DUST SUPPRESSION ON HAULAGE ROADS AS A VIABLE ALTERNATIVE FOR BITUMEN-BASED PRODUCTS

GreenGrip – The Eco-Smart Solution for Dust-Free Roads

GreenGrip is a next-generation gravel road sealant, designed with nature in mind. Made from natural surfactants and polymers, it offers a safe, sustainable alternative to harsh chemical products.

Perfect for mine haulage roads, permanent gravel roads, and residential areas, **GreenGrip** creates a durable, smooth, and dust-free surface that dramatically reduces the need for ongoing maintenance.

Because it's water-soluble and easy to apply, **GreenGrip** fits seamlessly into existing dust suppression routines. No special equipment. No complicated handling. Just reliable performance that's tough on dust, gentle on the environment.

- 🌀 Environmentally safe
- 🌀 Long-lasting, low-maintenance results
- 🌀 Easy to use with existing equipment
- 🌀 Ideal for mining, haulage, and community roads

GreenGrip – Cleaner Roads. Cleaner Air. Cleaner Future.

BENEFITS

- 🌀 Significant water saving
- 🌀 Removes the need for constant grading and watering
- 🌀 Dust free road surfaces
- 🌀 Improves grip and rolling resistance
- 🌀 Low road maintenance cost
- 🌀 Low cost, making it an economical alternative to bitumen
- 🌀 GreenGrip is environmentally safe
- 🌀 Water soluble (no problems with removing spatter from vehicles)



GREENGRIIP IS AN EVOLVEMENT OF I-CAT's SUCCESSFUL DEVELOPMENT OF ITS BIOBASE SECONDARY AND PIT ROAD PRODUCT. IT CONTAINS BIO-ENZYMES AND A PATENTED POLYMER (CLEAR OR BLACK) AND DELIVERS HIGH-QUALITY HAULAGE ROADS



ECO SUSTAINABLE PRODUCT
100% Environmentally Friendly

GREENGRIIP IS NON-TOXIC, NON-CORROSIVE AND MADE FROM NATURAL RAW MATERIAL

APPLICATIONS

- 🚚 **GreenGrip** is diluted with water into a water bowser and applied as a surface spray.
- 🚚 The dilution ratio is site specific and depends on variables i.e. climate, traffic, soil type, etc.
- 🚚 The application frequency is also site-specific but usually not more than once in a 24-hour cycle.
- 🚚 **GreenGrip** can also be used as a subbase stabiliser and blended into the wearing course during road construction. It produces a solid and strong subbase prior to road surface maintenance and dust suppression.
- 🚚 **GreenGrip** is effective and results in significant cost savings when compared to spraying water as dust suppressant, while improving mine production and safety.
- 🚚 **GreenGrip** is exclusively produced by I-CAT.

PRODUCT APPLICATION LONGEVITY

The following factors will influence the longevity of the surface and the intervals between maintenance sprays:

- 🚚 In-situ base material
- 🚚 Traffic type and traffic volumes
- 🚚 Ambient climatic conditions
- 🚚 Road surface conditions and sub-base quality



TAILINGS DAMS SOLUTIONS (TDS2000) IS A UNIQUE ENVIRONMENTALLY FRIENDLY POLYMER-BLEND, USED FOR THE SUPPRESSION OF DUST ON TAILINGS FACILITIES AND LARGE OPEN SOIL AREAS.

TDS2000 was originally developed in 2010 for the FIFA World Cup in South Africa. I-CAT was appointed to eliminate the dust on the active and inactive tailing facilities around Soccer City stadium. The product combined with windbreak netting proved successful, and I-CAT was appointed permanently at the client's sites around the Johannesburg metropolitan area.

The product has since been developed further to offer a cost-effective solution for dust suppression on both active and inactive tailings facilities.



THE PRODUCT

- 🚚 **TDS2000** effectively binds fine materials on tailings facilities to manage harmful dust emissions.
- 🚚 **TDS2000** is an acrylic copolymer combined with environmentally friendly binding agents.
- 🚚 **TDS2000** is easily applied by using spray-on application methods.
- 🚚 **TDS2000** penetrates the soil and forms a porous, durable crust prolonging its lifespan.
- 🚚 **TDS2000** is more effective when used in conjunction with windbreak netting.

TDS2000 IS IDEALLY SUITED FOR:

- 🚚 Open soil areas (un-trafficked).
- 🚚 Tailings facilities (slopes / sidewalls).
- 🚚 Fly-ash dumps.
- 🚚 Berms and road barriers.
- 🚚 Waste dumps.



TAILINGS DAMS ARE A MAJOR SOURCE OF FUGITIVE DUST AT MINING OPERATIONS

Dust on tailings dams is a significant environmental concern stemming from the wind erosion of fine, dry tailings material. These dust particles, potentially containing harmful substances, are carried by the wind, impacting air quality and posing health risks to workers and surrounding communities. Effective dust suppression is crucial for mitigating these environmental and health risks.



GENERAL SPECIFICATIONS

- 🚚 The product application ratio is dependent on the material (soil) and climatic conditions of area to be treated.
- 🚚 The product lifespan is determined by application frequency, climate and soil type.
- 🚚 Wind-break netting is installed in a zig-zag formation to increase the effectiveness of the product.

BENEFITS

- 🚚 Assists in erosion control
- 🚚 Minimizes sedimentation
- 🚚 Minimizes dust pollution
- 🚚 Mitigates health and environmental risks
- 🚚 Supports aspect stability and structural integrity

No Netting with dust

Netting with no dust



ZIG-ZAGGED 'WINDBREAK' NETTING

Windbreak nets reduce the wind velocity by approximately 35%, thus reducing dust generation, erosion and moisture evaporation. A windbreak netting system is used to reduce wind speeds and direct airflow, reducing the ability for winds to generate dust from open soil areas. It is usually made of polyethylene or polypropylene, a durable fabric reducing dust generation. The 'zig-zagged' pattern is effective to reduce wind speeds further.



ECO SUSTAINABLE PRODUCT
100% Environmentally Friendly

CUSTOM DESIGNED LOW-PRESSURE MISTING SYSTEMS FOR MATERIALS HANDLING



I-CAT DESIGNS, MANUFACTURES AND INSTALLS LOW-PRESSURE DUST MISTING SYSTEMS FOR ANY EVENTUALITY

I-CAT offers the market unique and patented dust suppression systems for fugitive dust generated at materials handling plants including transfer points and crusher plants.

The system offers an innovative way to reduce fugitive dust particles by using highly dispersed water in the form of water mist. The system supplies water mist at the point of dust origin (where the material is being moved, in chutes or transfer points). Properly aimed water mist stream "collects" or "scrubs" the dust suspended in mid-air, agglomerates it and makes the bigger particles rest on the conveyor.

The key element of the systems is the patented nozzles, which generate a stream of mist consisting of extremely small water droplets having high kinetic energy. This is achieved by injecting water between layers of air moving at supersonic speed. A full range of single fluid nozzles are also applied that atomizes water to very small droplets at low pressure.

Applying a combination of minute droplet size (10 microns) having high kinetic energy allows for high efficiency in dust reduction. The system, being low pressure, can be easily installed, eliminating the need for high pressure rated piping that makes installation difficult and costly.

MISTING SYSTEMS APPLICATIONS

- ✕ Crushers
- ✕ Push feeders
- ✕ Screens
- ✕ Transfer points (header boxes and discharge)
- ✕ Stockpiles
- ✕ Tipping bins / areas
- ✕ Specialised dust misting systems, custom designed including full turnkey solutions
- ✕ Fog cannons (for dust suppression on open areas and water evaporation)

AQUA COLLISION® TECHNOLOGY

The design of I-CAT's *Aqua Collision*® nozzle, found its concept behind the idea of Da Vinci's Vitruvian Man. This, together with the theory of the golden ratio, concludes simple unity and structuralism designed within the nozzle's functionality where the mist is created. It creates a perfect balance together with the accurate collision of the droplets. The nozzle functionality is physically, numerically and geometrically placed within the sphere of accuracy. *Aqua Collision*® technology was designed and engineered by I-CAT and used exclusively in our misting systems.

BENEFITS

- ✧ Easy installation
- ✧ Low water usage
- ✧ Increased safety due to low pressure system
- ✧ Maximum effectiveness in agglomeration of dust particles due to high level water dispersion
- ✧ Fast and uniform spreading of the water mist inside the chutes and covers
- ✧ Choice between manual or automated control panels

LOCALISED DUST MISTING SYSTEMS

I-CAT offers tailor-made solutions for suppression of fugitive dust, generated at transfer points and crusher plants.

The system offers an innovative way to reduce dust particles by using highly dispersed water in the form of water mist.

The key element is our revolutionary **Aqua Collision**® Technology in our nozzle systems which generate high kinetic energy water mist droplets that encapsules dust particles, preventing them from becoming airborne.

The unique misting system, with its specialised collector and strategic mounted nozzles, maximizes dust neutralization efficiency of both hydrophobic and hygroscopic particles.

Driving Efficiency Through Intelligent Automation

In today's mining industry, technology is no longer a luxury - it's a necessity. Rising operational costs and the risk of production losses demand smarter, more efficient solutions. That's why I-CAT has developed an advanced automation platform designed to monitor and control our wide range of misting systems.

Our system combines cutting-edge automation with custom-engineered designs, delivering optimal performance tailored to each client's unique requirements. By harnessing information and mechanization, operations achieve maximum productivity, improved efficiency, and optimized resource utilization.

Every I-CAT Misting System can be equipped with full automation for hands-free precision or supplied with a manual control option for flexible operation - ensuring the right solution for every application.



I-CAT's PATENTED RETRACTABLE STOCKPILE DUST RING (R-SDR)

EFFECTIVE STOCKPILE DUST SUPPRESSION THAT IS EASY TO INSTALL AND MAINTAIN

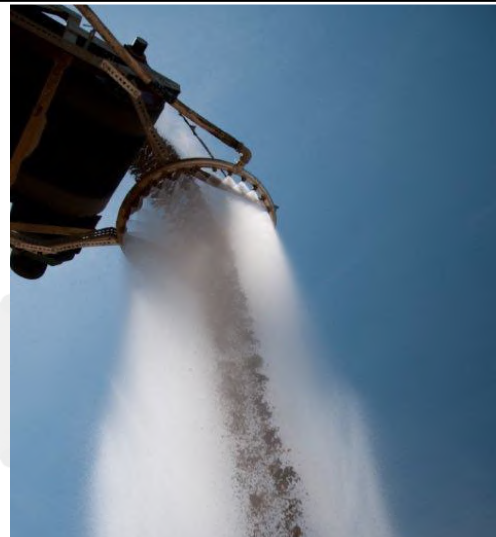
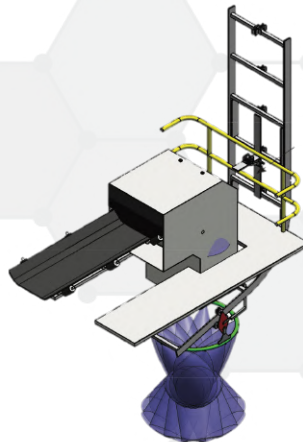
Engineered for industrial strength and longevity, the R-SDR surrounds the discharge flow on all sides, providing a simple, focused dust management solution that is perfect for continuous duty.

The system creates a virtual curtain around material flow for effective dust particle containment.

Variable design configuration allows nozzles to be added, removed or replaced with different sizes to suit the specific application.

GENERAL SPECIFICATIONS

- ✧ Stainless steel misting ring designed for mounting at the end of conveyor belts to aid in dust suppression at the discharge point.
- ✧ The system is PLC controlled and can either be operated manually or automatically.
- ✧ The system is retracted using a manual pulley system for easy access and maintenance.



BENEFITS

The R-SDR creates a virtual curtain of mist around the discharging material to contain particle flow, and provides:

- ✧ Simple, focused dust control.
- ✧ Continuous duty on radial stackers.
- ✧ Customizable options with Variable Particle Sizing (VPS) Technology.
- ✧ An intrinsically safe, mounted option.



I-CAT's WASTEWATER EVAPORATION & DUST CANNONS



DUAL PURPOSE MISTING CANNONS

I-CAT's dust cannons is designed for both dust suppression and wastewater evaporation. The mechanical design is identical on both; by swapping out the nozzle ring, the system is highly effective for both applications.

WASTEWATER EVAPORATION

I-CAT's I-VAP System offers an alternative process to several wastewater treatment applications such as reverse osmosis, chemical dosing or desalination. Evaporation cannons can rapidly increase the evaporation process, with up to 14 times more efficiency than evaporation ponds.

Evaporation types:

- Water fracturing evaporators. Water is fractured through a high-speed fan and propelled into the air. Best for smaller areas where wastewater contains high solids or particulates.
- Water atomizing evaporators. Air is compressed via a fan through a tapered barrel and propels controlled-size water droplets created via nozzles. Seen as best practice for larger areas where wastewater contains lower dissolved solids or smaller to no particles.

DUST SUPPRESSION

With its muscular 60 HP motor and user definable 359° oscillation, the system has a throw of more than 100 meters, giving the system a coverage area of an incredible 2.6 ha. To put that in perspective, one machine could cover five rugby fields with its dust trapping atomized mist! The design really is the sum of all its parts, in that every component is specifically engineered to maximize performance. A manifold of 30 nozzles that are specifically sized and positioned to deliver best results feeds the unit's fan. The system was developed specifically for large-scale opencast mining, coal operations, and bulk materials handling.



SPECIFICATIONS

- ✂ 32,000 square meters coverage.
- ✂ Custom automated oscillation up to 359° option.
- ✂ Adjustable angle of throw (7° - 45°).
- ✂ Integrated fan and nozzle design.
- ✂ Premium efficiency motor.
- ✂ Low energy-use to evaporation ratio.



'change that doesn't cost the earth'

ENVIRONMENTAL SOLUTIONS IN



FIRE



DUST



I-CAT IS A



ISO

9001:2015
MANAGEMENT
SYSTEM

COMPANY

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