

## HKD Blue adapts its ski slope technology to the coal handling market

HKD Blue engineers, manufactures and services water-atomizing equipment for a variety of applications and industries. Parent company, HKD Snowmakers, was founded in 1991 bringing a revolutionary low-energy snow gun to the ski industry. HKD snowmakers continues to be a national leader in durable, efficient, and user friendly snowmaking technology sold at ski resorts worldwide. Snowmaking, like dust-suppression, requires pressurized water, water-atomization, long-throw, but most importantly, reliability on site.

Over the last decade, HKD has expanded its product line for environmental purposes. The company's HKD Blue technology is used primarily for dust control, but other uses have been found in evaporation, environmental snowmaking, and irrigation. The core industries include demolition, mining, metal recycling, agriculture, and dry bulk handling and storage.

HKD has corporate offices in the United States and Canada. The US office is in Natick, Massachusetts, and the Canadian office, based in Quebec City, is where all engineering, manufacturing, and assembly takes place.

HKD's dust control technology works by generating and projecting fine water droplets that are more likely to catch the dust than the oversized droplets from traditional dust suppression watering systems. Large droplets generate a small yet significant airstream around themselves which can cause dust to glide past the droplet and remain in the atmosphere. Smaller atomized droplets stay in the air longer to create a 'wall of water'; these smaller drops have more total surface area to catch and corral fugitive dust. This phenomenon is known as the 'slipstream effect'.



Over the last several years, emerging environmental and health concerns relating to fugitive dust emissions have made HKD's equipment an integral component for eco-friendly bulk handling systems. Coal can be dusty at different points in the supply-chain, it is most problematic at the ports, transfer stations, and storage piles because of their location in urban settings with increased regulations or public pressure.

Coal storage piles are very dusty in dry windy conditions. Excessive dust emissions can force stevedores to shut down loading operations to adhere to local air quality standards and regulations. For these fixed dust-emitting locations, HKD's tower-mounted V-500 FX is an excellent option for dust suppression and continuous operation. The unit boasts a 25HP fan motor, a 25HP booster pump, and is available on 15, 20, or 30ft steel towers. This machine can achieve 300ft (91m) of throw, and with 330 degrees of programmable oscillation, the unit provides 260,123ft<sup>2</sup> (24,166m<sup>2</sup>) of misting coverage. The largest installation of V-500 FX towers is at the Port of Quebec, Canada, where HKD Blue provided 19 fully automated V-500 FX units to control dust from nickel, iron ore, and coal. These machines are controlled in a centralized control room, and can calibrate their direction for optimal throw based on the current wind conditions.

HKD Blue stands apart from the competition with its proprietary dual-nozzle technology. All of its machines have

an outer misting ring of nozzles with fixed water flow and very small droplets for short range suppression. Additionally, unlike traditional dust control cannons,

HKD's machines have a variable flow central nozzle which allows the user to optimize water usage for the task at hand. With the central nozzle, it is possible — with a remote control —

to vary the flow from 5 to 100 gallons per minute. Additionally, this nozzle can

project water at different spray angles — a narrow spray angle is optimal for long throw or accurate suppression, while a wide angle makes it possible to catch dust closer to the machine. Being able to control water flow and spray angle is an excellent way for the operator to fully calibrate the machine to the current dust and wind conditions.

Ultimately, the goal of HKD Blue is to provide intuitive, safe and reliable equipment to allow its customers to operate continuously at full capacity. In today's competitive and regulated business climate, operators cannot afford to lose time and money due to environmental concerns. HKD Blue's advanced dust-suppression equipment and systems will not only keep its customers at the forefront of environmental stewardship, but are also efficient and profitable.

