

The Dry Washer

Featuring Model 151 & Model 140

By James Klein

Dry washers are most popular in areas where water is not available, such as dry washes and desert areas.

A dry washer utilizes air, vibration and static electricity to very effectively separate gold from the waste gravel.

The use of vibration to move material through a sluice box is similar to the same movement created by water velocity. This method of dry recovery can be extremely effective when the proper balance of air separation and vibration is employed.

The concept of air separation is also vital to proper dry recovery, as vibration alone cannot create proper separation. Keene has employed an adjustable oscillation system that creates a balanced vibration and air flow. If air is induced properly it can create a static charge that will create a conductive field that will attract only heavy metals such as gold. This static charge is created when it is forced through a special fibrous material that lines the recovery trough of the dry washer.

The Keene Model 151 is equipped with a patented "Hot Air Induction Manifold" that pulls heat off the engine through the blower into the drywasher and raises the ambient temperature of the air by at least 50 degrees. The hot air induction allows the unit to work efficiently in areas where no other machines can operate.

You can purchase one that is manufactured or attempt to build your own. I have owned a "Keene Vibrostatic Concentrator" for several years. For my money, it is the best portable dry washer made. It works on a greater principal than a regular dry washer. The concentrator is driven by a high speed blower that forces air through a special plastic tray, and cloth where it obtains an electric static charge. Material is shoveled into the concentrator through a large classifying screen that automatically classifies the materi-



Model 151 Vibrostatic Concentrator (Dry Washer) with Hot Air Induction. The most advanced dry separator on the market today.

al, letting only gravel less than half an inch in diameter into the concentrator.

The material then works its way down through the recovery tray. Gold is non-magnetic, but it has an affinity for an electrostatic charge, and is attracted to the special cloth that lines the recovery tray. The concentrator also works like a regular dry washer and traps the gold behind riffles. I have been able to save extremely fine gold with this machine.

One of the more recent improvements in this machine is that it can be assembled and dismantled in a matter of minutes due to the new folding leg assembly feature. The new compact design can be easily mounted on a pack frame ease of transportation

Dry washing goes back to the earliest days of working the placers.

Where there is no water to separate the gold from the other materials miners have devised several methods utilizing the flow of air to concentrate materials.

In the past most dry concentration was slow and inefficient. Even today most dry washers will have trouble recovering gold after the top layer of dry sand has been removed and the moist sand and gravel reached. Always make it a practice to run your material through your dry washer more than once.

One of the earliest methods of dry washing was known as winnowing. In winnowing the coarse gravels are screened out and thrown away. Then the fines are placed on a blanket. The blanket is picked up by the corners and



Operating a Vibrostatic Concentrator (Dry Washer) with Hot Air Induction in a dry area of Los Angeles County

the fines tossed into the air in a strong wind. The lighter material is carried off by the wind and the heavier minerals fall back into the blanket. The weave of the blanket also helps to trap the flour gold.

Another method is dry panning the gravels, but unless you are very experienced one could easily allow the values to escape.

Another popular method of working dry placers is with a more simple type bellows dry washer. The gravels are shoveled onto a screen with a hopper underneath. The larger coarse gravels (normally a half inch or more) are separated from the finer material dropping off the lower end of the screen while the smaller material falls into the hopper. The smaller material is funneled down onto the riffle tray. The material flows down over the tray passing over the riffles where the gold is trapped. The flow

of the material is aided by air pushed upwards by the bellows. The bellows can be operated by hand. A small gasoline engine can also be used to power the dry washer.

Keene Engineering has introduced a smaller drywasher for remote areas weighing approximately 20 pounds. This new compact folding drywasher is also ideal for a one man operation.

The Model 140 mini drywasher is equipped with the same features as the 151 that includes vibrostatic concentration. Fits onto the Model #BP2 pack frame with one wing nut and a rubber stretch cord. The vac pack and drywasher combination is a perfect match.

Due to all the new improvements and fine gold recovery in dry washers of today, it has now possible to achieve the same fine gold recovery as a conventional water based system



Model 140 Drywasher



Model 140 shown with q VAC PAC



Model 140 or 151 mounted to a BP2 Back packFrame