



DRY PROCESSING PLANTS



THE MOST PRACTICAL, EFFICIENT & ECONOMICAL MEANS OF METALS & MINERALS RECOVERY

- Available in fourteen models, With processing capacities of 50 Tons/hour to 450 Tons/hour of dry ore, for placer (alluvial), or primary (hard rock) applications.
- Produces higher grade dry product concentrate, with less loss than wet concentration.
- Effective & Efficient Classification, Concentration of difficult ores which are not amendable to wet concentration.
- In most cases lower cost of Production than wet Processing methods.
- Greater sensitivity to particles density differences, than wet Processing Gravity Separation Method.

APPLICATION

DOVE Dry Processing Plants are designed and configured for classification, concentration, separation and recovery of metals and minerals concentrate in dry mode and without the use of water. Dry concentration has many advantages over wet concentrating methods, except when water is actually required as a solvent or when wet processing is required prior to concentration and separation.

DOVE Dry-Processing plants (DPP™), and (DPH™) are designed and configured for concentration, separation & recovery of Diamonds, Color Gemstones, Gold, other precious metals, Base metals, Ferrous metals, Light metals and other heavy minerals, either from placer/alluvial deposits, or primary (hard rock) applications.



ADVANTAGES

- **The Dry Processing Plants Produces higher grade products with less concentrate loss than wet concentration methods.**
- **DOVE Dry Processing plants may be located anywhere, regardless of water supply. There are no water to pump or bring from a distance, there by eliminating the cost of pipes, pump sand related overheads.**
- **In most cases SDP™ Processing Plants Increases capacity, cuts down number of units and space necessary, resulting in smaller and less expensive plants with lower power costs.**
- **Due to the greater sensitivity to slight differences in density of the particles, SDP™ Processing Plants will successfully treat ores which are not amenable to wet concentration, in the Gravity Separation methods.**
- **Dry Ore may be efficiently separated at the economical releasing point of the minerals, thus making possible the treatment of an ore at the much more finely ground stage, which greatly reduces the cost of the production. The resulting products are dry and are handled, shipped and marketed at less cost than wet Processing methods.**
- **Since no water is needed to produce separation, climatic conditions not affect efficient operation.**



OPERATING PRINCIPLES

DOVE DRY PROCESSING Plants are designed in order to classify, screen, concentrate and effect separation of metals & minerals, composed of particles of different specific gravities.

The main component of (DPP™) consist of **DOVE Dry Trommel (classifier), Dry Vibrating Screen** and number of **Dry Concentrators**. The plant is **Continuous Processing Plant**, where by the main components are connected via **conveyer assembly**. The feeding is accomplished by **Earth Moving Equipment**. The **Dry Trommel** screen mesh, as well as the **Dry Screener** screen Mesh sizes and number of decks are all adjustable in relation to the application, type of the ore and production particulars.

The **Dry Concentration** is influenced by the specific gravity of the feed material, as well as the size characteristics. For effective operation the specific gravity of the feed material should be in excess of (2.8 ratio) difference. The **Dry Concentrator** effects dilation by a combination of **Eccentric movement of Vibrating-Deck**, as well as a continuous stream of air through the Deck, in a controlled configuration.

The ideal feed size for the **Dry Concentrator** is bellow (-2 mm) and the feed size should be close in range of sizing, which can be accomplished by utilizing "DOVE Vibrating Sieves", or Screens. The near size uniformity of the particle size is essential as an effective operating factor.

The **Fluidity of the Deck** depends up on the size of the feed, as well as the **Air-Flow** and the eccentric action of the dry concentrator. The **Dry Concentrator** is configured with various controls, which allows the control of the fluidity of the Deck, by adjusting the **Air-Flow, Stroke-Length, Speed, Deck's longitudinal-Tilt, and the Feed-Rate**.



CAPACITIES & PLANT CONFIGURATION

- The Ore Throughput capacity of Dry Processing Plants can vary depending upon bulk density, nature of the feed, the grade of final products required and operating considerations.
- The Dry Processing Plants are supplied either as portable/mobile or semi-stationary plants. The ore feeding is accomplished by earth moving equipment (i.e. excavator or loader), directly into the hopper of the Dry Trommel component of the (DPP™) range, or continuously by conveyer from the crushing plant to the Dry Screener of the (DPH™) Dry Processing Plants.
- Dry Processing Plants are supplied in two different range of (DPP™), configured for dry processing of placer/alluvial deposits, or the (DPH™) range, configured for dry processing of primary deposits/hard rock. In the event of placer (alluvial) deposits, the (DPP™) is installed as is in the event of primary deposits, the Dry Trommel is removed and the (DPH™) is installed, after the (Crushing/Screening/Grinding) Plant. The crushed ore is feed into the (DPH™) screener module, directly by the conveyer system.
- The Effective Particle size for the Dry Concentrating module consists of the free flowing material finer than 2 mm (10 mesh B.S.), which is suitable for final concentration and separation. For difficult separation the material should be sieved into several sizes, and each size fraction treated independently on the Dry concentrator. DOVE Vibrating-Sieves Separators offer an Effective & Economical Solution for further sizing the material prior to dry concentration.
- The number of units of Dry Concentrator required per dry plant could fluctuate and depends on the volume of screened ore below (-2 mm), required to be concentrated.
- The Screen mesh size of the Dry Trommel, as well as the Dry Screener Modules shall be set at the time of order, based on the ore specifications, bulk density, grain size and the nature of the feed material.

TECHNICAL SPECIFICATIONS

COMPONENT	UNIT	DRY PROCESSING PLANTS (SDP™) MODEL						
		DPP-50	DPP-100	DPP-150	DPP-200	DPP-300	DPP-400	DPP-500
SDP™ PROCESSING CAPACITIES	TON/HR	50-80	100-150	150-180	180-200	250-300	350-400	400-450
DRY TROMMEL (CLASSIFIER)	TON/HR	60-100	120-180	160-220	180-240	300-360	400-450	440-500
	MODEL	TMC-300	TMC-400	TMC-500	TMC-600	TMC-800	TMC-1000	TMC-1100
	HP(kw)	30	60	80	100	125	180	220
DRY SCREENER	TON/HR (@3mm)	45+	68+	90+	150+	180+	300+	450+
	MODEL	VDS-1236D3	VDS-1830D3	VDS-1840D3	VDS-2461D3	(2x) VDS-2461D3	(2x) VSD-2461D3	(3x) VSD-2461D3
	HP(kw)	25(21)	30(25)	40(34)	50(42)	2x40(34)	2x50(42)	3x50(42)
DRY CONCENTRATOR (MODEL DC-425)	KG/HR	425	425	425	425	425	425	425
	HP(kw) /UNIT	3(2.4)	3(2.4)	3(2.4)	3(2.4)	3(2.4)	3(2.4)	3(2.4)

* The Processing Capacity could Fluctuate, Depending on Bulk Density, Grain Size, Nature of the Feed material, and the Operating Considerations.

* Specifications could change, without notice.



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