

QPEC Duplex 24" x 36" Mineral Jig

### Design Basis-Applications

The Quinn "Selective Mineral Jig is designed for the recovery minerals and other heavy industrial products by employing the proven, inexpensive basic laws of gravity to effect concentration. The Quinn mineral jig operates on the principle of hindered settling and is effective where there is a differential in the settling rate of the solids treated. Typical applications include the recovery of gold and silver from placer or hard rock deposits, diamonds, other precious metals, zinc, lead, fluorspar, chrome, black sands, magnetite, ilmenite, etc.

It is ideal for installation in grinding circuits treating rod or ball mill discharge ahead of classification. In this application, the Quinn mineral jig removes the heavy mineral as soon as it is liberated and thus prevents losses due to overgrinding.

### Advantages

1. Designed to treat minus 3116" x 0" unclassified feed material. Available as a simplex or duplex unit.
2. The rotating water valve (illustrated above) results in a highly selective product. The principle of the rotating water valve is that water is added to the hutch only on the upstroke of the diaphragm. Thus, the jig bed is subjected to upward pulsations only. Therefore, gravity separation is effected by the true hindered settling principle as the "suction" effect on the material in the feed compartment is diminished. This results in a more selective higher grade hutch product.
3. Rotating water valve also reduces water requirements and thereby dilution. This is important from a water cost standpoint and from a dilution standpoint in applications where the unit is installed in a closed circuit grinding-classification circuit
4. Sum compartments are hydraulically sealed. This eliminates packing and cementation and allows for easy screen box removal and maintenance. This is important as screen boxes must be removed for cleaning.

Operations

1. Dilution control: variation in the amount of water added through the rotating valve is an important control of the volume of hutch product.
2. Diaphragm Stroke: Simple adjustment of the eccentric determines the length of the diaphragm stroke and thereby the degree of upward pulsation in the jig bed area.
3. Screens: An upper trash screen is provided. Lower bedding screen is tapered wedge bar of stainless steel to prevent rust. Screen opening determines the size of bedding and limits the size of material passing through the hutch.
4. Bedding material: Size, nature, quantity and depth of artificial bedding material determines size and number of particles that can be passed through as hutch product.
5. Speed: Varying the jig speed changes the frequency of pulsation in the bedding area and thereby the rate at which the material can settle.

Specifications

1. Units are available as simplex, duplex, right (as shown) or left hand.
2. Welded steel hutch with support legs to position hutch discharge approximately 12" from ground level.
3. Units are standard with removable, hydraulically sealed screen boxes. Quinn removable screen boxes are provided with integral feed, transition and discharge launders and sealed in tank on a rubber gasket. Thus, slurry cannot enter, compact or cement between the screen box and tank wall. Result: Boxes are easily removed.
4. 2mm and 3mm tapered wedge bar bedding screens are available.
5. Trash screen of mild steel is included.
6. Diaphragms are of rubber compound and are held in place by heavy steel clamp rings and bolts on close centers to prevent leakage.
7. Eccentric uses a heavy duty roller bearing and is adjustable between 0 to 1".
8. Drive bearings are heavy duty self aligning pillow block bearings.
9. Rocker arm bearings are bronze bushed, grease lubricated.
10. Rotating water valve is chain driven with an elastomeric chain tensioner and an adjustable position bronze bushed sprocket to allow for adjustment of timing. Piping to hutch compartments is included.
11. Balance flywheel is grooved for v-belt drive.
12. All units provided with variable pitch v-belt drive.
13. Units include OSHA type drive and rotating water valve chain guards.
14. All hutch compartments are fabricated in heavy steel plate to prevent the "oil can effect" in operation.
15. Unit is primed with Rustoleum and finished in green enamel.
16. Units are shipped completely assembled to minimize field installation costs.

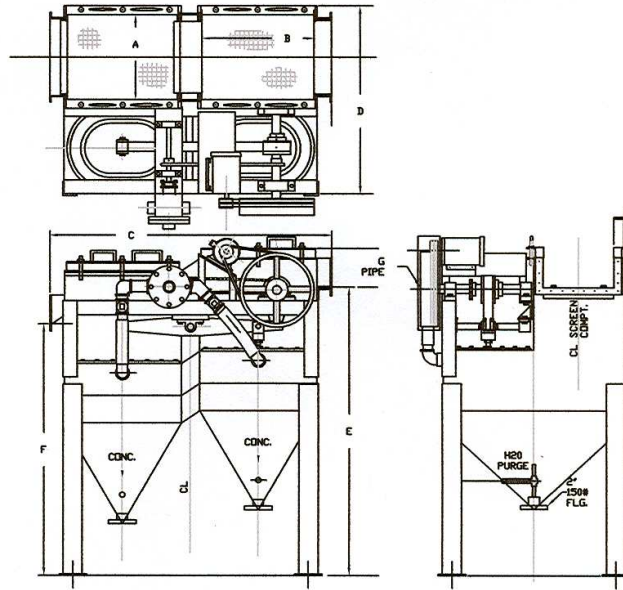
(Dimensions and specifications on reverse side.)



Jig Baskets for a 24" x 36" QPEC Mineral Jig



Jig Baskets for a 12" x 18" QPEC Mineral Jig



APPROXIMATE DIMENSIONS							SPECIFICATIONS				
A x B	C	D	E	F	G	MILL# CAPACITY	WATER gpm	MOTOR hp	rpm	WEIGHT lb.	
8 x 12	16"	30"	47"	43 3/4"	1-1/2"	7-35	2-3	3/4	275-325	520	
12 x 18	23	36	55	50 3/4"	1-1/2"	25-75	5-8	1	275-325	1130	
16 x 24	34	50	62	56	2	75-200	6-10	1 1/2	275-325	1450	
24 x 36	43	69	64	71	4	170-400	15-30	2	275-325	2800	
8 x 12	32	30	47	41 1/4"	1-1/2"	15-45	4-6	1	275-325	780	
12 x 18	45	36	55	48 3/4"	1-1/2"	50-150	9-15	1 1/2	275-325	1570	
16 x 24	61	50	62	53 3/4"	2	150-400	12-20	2	275-325	1985	
24 x 36	85	69	60	71	3	340-900	27-75	3	275-325	4700	

\* ESTIMATED PER DAY CAPACITY IN tph BASED ON CLOSED CIRCUIT OPERATION INCLUDING RECIRCULATING LOAD. ESTIMATED CAPACITY FOR PLACER OPERATIONS IS 2 tph/sq ft OF JIG BED AREA.