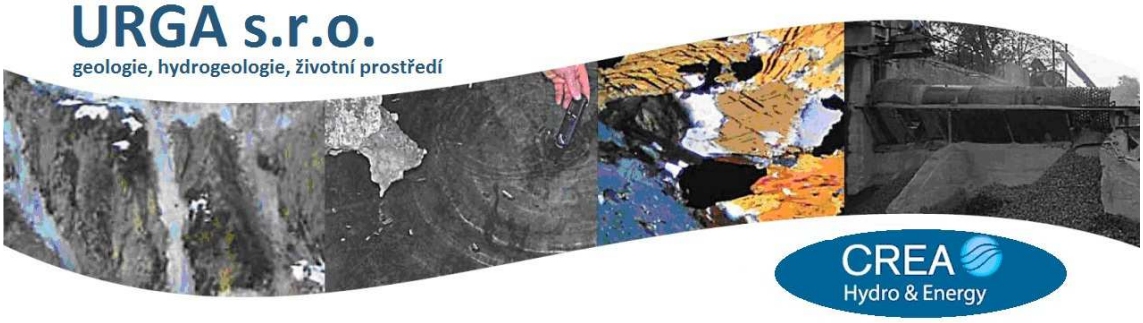
URGA s.r.o.
geologie, hydrogeologie, životní prostředí



VGS-1

VIBRATING TABLE CONCENTRATOR

Our vibrating table concentrator device is used for gravitational concentration of fine granular materials by means of water. The device is mainly intended for laboratory use in the fields of geology and mineral processing. The materials processed may include alluvial placer materials, pulverized ore materials and various secondary granulate materials.

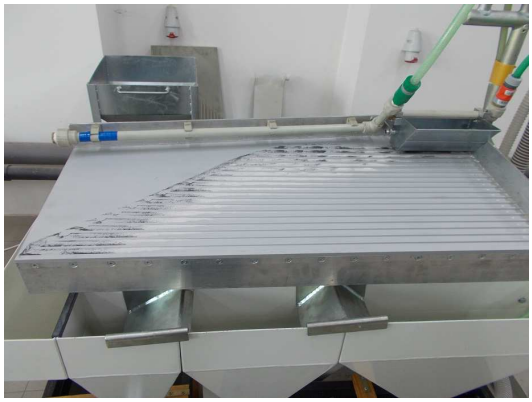
Aplications :

- **geological and geochemical survey and prospecting**
- **testing of placers with content of heavy metals (gold, platinum)**
- **testing of pulverized ores and other materials**
- **separation of secondary granulate materials**
- **extraction of heavy minerals for research purposes**

The vibrating table concentrator of Urga s.r.o. works on principle of a grooved table and water running over the grooves, which are made parallel to the length of the table and the vibration direction. While the granulate material is being shaken by the table's vibrations, water washes lighter particles over the grooves and into the waste product (light materials product). The material is fed into the hopper at the corner of the table and washed onto the table by a stream of water. Changeable parameters of the machine are the

frequency and amplitude of the vibrations, inclination of the table, volume of water and also granularity. All these parameters have a great influence on the efficiency of separation and a careful setting is necessary for a specific material.
The vibrations are designed with a special shape so as to facilitate movement of particles to the left side of the vibrating table.
The throughput of the concentrator is designed for up to 100 kg/hour, although for the laboratory purposes this amount is usually much smaller. A closed water system can be arranged so that the water is reused.

The electrical system consists of a 3-phase 400V asynchronous motor powered via frequency inverted Siemens Sinamics V20, through which the frequency of vibrations can be set.



Technical specifications :

Overall length	1640 mm
Table length	960 mm
Overall width	600 mm
Table width	450 mm
Input granularity	50 μm - 1 mm
Throughput (solids)	up to 100 kg/hod
Water consumption	20-40 l/min
Table material	aluminum

Electrical part:	
Electrical motor power	3 phase, 400 V, 0,75 kW
Frequency inverter	Sinamics V20
Vibration frequency (with non-sinusoidal characteristic)	0 - 10 1/sec.
Vibration amplitude	6 – 12 mm

VGS-1 is an excellent laboratory testing and diagnostic device, best suited for extraction of heavy minerals including gold or platinum under controlled conditions. Ideal grain size of processed material is 100 – 250 μm with high efficiency and recovery, but the working range is much wider and extends from about 50 μm to over 1 mm. To achieve the highest possible efficiency and recovery for laboratory purposes, the material should be pre-classified to a narrow range of grain sizes, see above. The device has been designed with the aim to promote technologies eliminating chemical methods from mineral processing as much as possible in tune with the requirements of BAT (Best available technology).

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