



Concrete Batching Plants

Centro di Trasformazione Carpenteria Metallica – Cert. Nr. 743/10
In conformità al D.M. 14/01/2008 “Norme Tecniche per le Costruzioni”

FIBER DOSER OCL DVF

The **OCL DVF** dosing equipment are designed and manufactured to dose and distribute synthetic and metal fibers mainly used in concrete production.

Fibers are batched using **negative weighing method** by means of load cells.

The **OCL DVF** dosing system employs **vibratory techniques**, that helps to break up the agglomerates and promotes uniform dosing of fibers and better dispersion into concrete, reducing the mixing time.

This vibrating action allows to batch a wide range of feed rates with a **variety of fiber types and sizes** (steel, glass, polymer and carbon fibers..) in a precise, constant and uniform way.

DESCRIPTION

The fiber batcher consists of a cylindrical hopper mounted on a vibration unit.

Inside the **cylindrical hopper** there is a **spirally shaped** feeder coil, which rises and exits in the upper part forming a duct of rectangular section. This tank can be fix or **replaceable** with other tanks, to allow a quick change of fiber type.

Under the hopper it is applied the vibrating unit supplied with **two motor vibrators** with adjustable masses, to achieve the special throwing movement that transports and disperses the fibers.

The lower part of the machine is made by a welded **steel frame** fixed, rigid and sturdy.

Three load cells are installed on this support frame, above these cells there are mounted **three rubber shock absorbers** which support the vibrating hopper, prevent the equipment from damages due to vibration and ensure a quiet and vibration-free environment for other machines and workers.



The OCL dosing fibers are available in 2 different configurations:

- **STANDARD CONFIGURATION:** constituted by the cylindrical hopper (fixed or replaceable) mounted on the vibration unit, equipped with rubber dampers, load cells and electrical panel.

The **electrical panel** is equipped with: **manual - automatic - remote selector**, start and stop buttons, digital electronic control unit for setting and displaying the weight of the material to be extracted and the material lying in the hopper, emergency stop button.

The dosing machine is also prepared for connection to the **general automation** of concrete plant via junction box, for the total integration of the unit in the existing computer system, by treating the addition of the fibers in the same way as an additional component of the mixture.

The installed load cells, rubber dampers and electric-vibrators are sized according to the specific weight of the material to be extracted.

- **ADVANCED CONFIGURATION:** in place of the rubber dampers there are **three pneumatic shock absorbers** with variable adjustment and the vibrators are controlled by an **inverter** to change the frequency of vibration. A **PLC** manages the automatic extraction process by adjusting the shock absorbers stiffness and the vibration frequency as a function of the weight detected by the load cells. The PLC, complete with touch screen for data scanning and displaying, is installed in the electrical panel. The machine in addition to the **manual and automatic** operation is also prepared to be connected to the **general automation** of the concrete plant via junction box. This advanced configuration makes the DVF 200 dosing equipment **EXTREMELY FLEXIBLE**, allowing the use of the same machine to batch in automatic different materials (synthetic fibers or steel) regardless of specific weight, in a constant, accurate and uniform manner.

The OCL DVF equipment fulfill the directives of CE and EMC.

To meet the specific customers' requirements our production includes batchers with different flow rates and capacity, as well as integrated transport systems and storage or other additional customized equipment.

FUNCTION

The fibers, contained in big bags, small bags or boxes, are filled into the central space of the hopper.

The loading process of the tank must take place with still machine so that the equipment can detect the tare weight and make the correct dosage of the material by deduction.

The two electric vibrators impart vibrations to a large hopper, the motion causes the fibers to separate and move **up an inclined ramp**, producing an uniform discharge rate of fibers from the hopper exit.

The fibers can be discharged onto conveyor belts, into hoppers, into skip hoist, into mixers or directly into the truck mixer.



This dispenser can handle most types of steel- and synthetic fibers for concrete.

The capacity in kg/min varies depending on the fiber type as well as fiber level in the batcher.

The **fiber advancing speed is adjustable** to achieve optimum feeding and better accuracy depending on the used fiber type.

The dosage is carried out using **negative weighing method**, the integrated load cell system provides a real-time monitoring of the decreasing weight of fiber in the hopper.

The required weight of fibers is set directly by the operator in the weighing instrument, in the PLC or in the remote automation system of the concrete plant, depending on the position of the function selector.

When the desired quantity is reached, the vibrators receive a signal from the load indicator and the fibers batcher stops immediately.

The load cells provide high weighing accuracy with less than 1% tolerance (depending on fiber type).

The automatic system allows to maintains batch traceability records, helping to satisfy customers' quality requirements.

Choice of the weighing instrument and connection to the mixing computer must be done in cooperation with the supplier of existing automation.

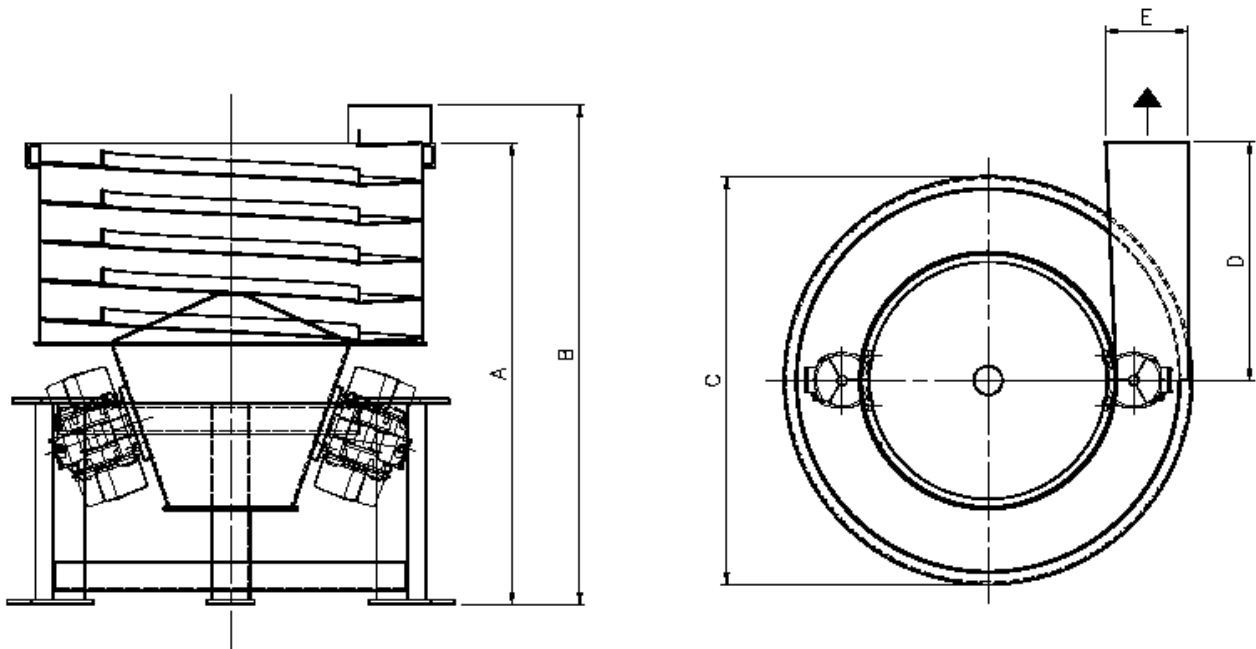
ELECTRICAL CONNECTION

The fiber batchers are designed for **3-phase connection, 50 Hz and 230-400 V.**

On demand we supply batchers adapt for other voltages and frequencies.

This equipment is delivered pre-wired ready for use and it can be installed very quickly.

TECHNICAL DATA



MOD.	A mm	B mm	C mm	D mm	E mm	Power kW	Weight Kg	Doser capacity litre
DVF200	967	1.047	856	500	170	0,32	222	200
DVF600	1.134	1.178	1.286	712	254	0,7	650	600