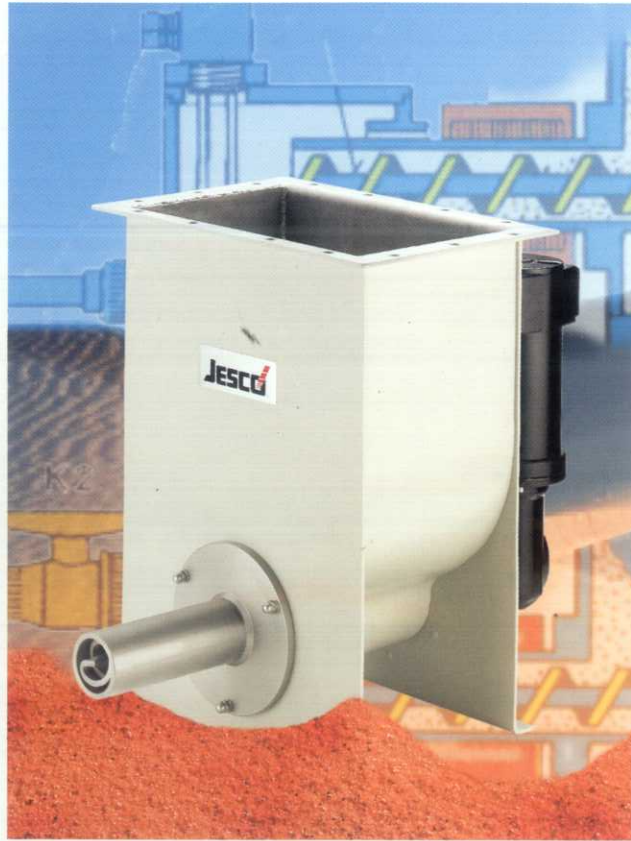


Metering & Control Technology

for Liquids, Gases and Solids



DRY FEEDER

JESCO ®

DRY FEEDER

Reliable. Economical.

Two criteria which have played a considerable role in ensuring that JESCO dosage systems for dry materials are at the fore when it comes to water treatment and process technology.

Burnt lime, polyelectrolytes or activated carbon are proportioned economically, reliably and precisely. JESCO's dosage machines for dry materials dispense materials volumetrically, i.e. irrespective of the type of material to be dosed.

Construction

JESCO's dosage machines for dry materials are self-supporting welded constructions made from stainless steel plate. The motor and gear are fitted to the outside of the funnel, and the shaft duct leading from the transmission to the bulk material features elastomer seals to prevent dust from entering. At the customer's request, the machines can be supplied either with a hollow worm or one or two solid worms. The solid worms rotate in the same direction one inside the other, thus offering self-cleaning properties. An agitator blade ensures that the dosage worms are filled evenly and prevents bridge formation. The tops of the funnels are equipped with rectangular flanges with holes drilled into them. These permit containers holding supplies or fittings - such as slide valves or cellular wheel sluices - to be attached to the units.

If this powder feeder is used without other hoppers on top please add the safety-lattice 31.589 on top.

Adaptor bases are also available to adjust the height of the unit when it is being installed.

Motor and regulation facilities

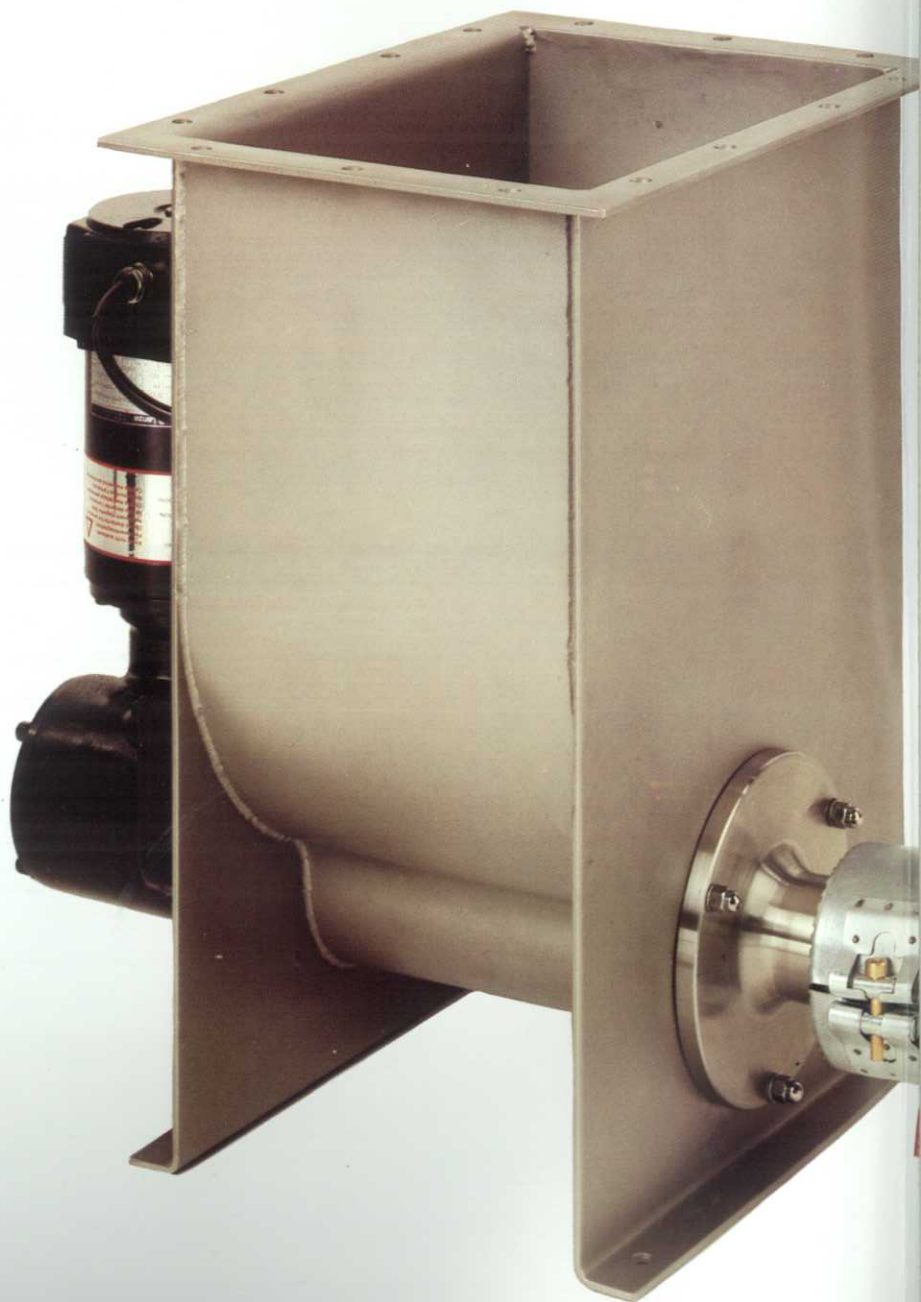
JESCO's dosage machines for bulk materials can be supplied either with threephase or direct-current motors.

The direct-current motor can be fitted with a continuous thyristor control system with a turn down ratio of over 1:50. In addition, remote control with 0(4)...20 mA is also possible.

The threephase motor can operate either continuously or in intervals using a time-lag relay connection. With a special percentage switching device it is possible to pre-select dosage in terms of percentage. This is done by setting the on/off time with a switch featuring different percentages ranging from 20 to 100% portions of a 60 second interval. With all worm types the maximum rotational speed is 150⁻¹ rpm. Dosage performance depends primarily on the following factors:

- worm diameter
- worm pitch
- rotational speed of worm
- worm design
- flowability of the material to be dosed

The max. column height of the hopper is depending on specific gravity, grain dimension and floating characteristics of your grain, powder or pellets. For example with media like fine quartz sand the column height should not extend 1,5 m! Larger hoppers must be separated by revolving gates with flexible connections!



Function and performance in perfect harmony

Fittings

In many cases, additional fittings are required to make full use of the JESCO dosage system for dry materials as a complete unit providing economical, reliable and precise processing, and these fittings are supplied by us. Thus, to give one example, the dry material, frequently supplied in highly concentrated form, can be diluted to suit the purpose for which it is intended.

Suspensomat

Many bulk materials are difficult to suspend or dissolve in liquids. The reason for this is frequently to be found in the water-repulsive characteristics of the particles or the fact that the material in question is not as dense as the liquid. This means that the material simply floats on the surface of the liquid. Suspensomats, i. e. funnels for flushing the material with water, can therefore be very helpful in alleviating this problem. The material dispensed by the dosing machine is thoroughly moistened with water sprayed from all directions, thereby improving flow into the deposit container. The rapidly rotating film of water in the cone-shaped collector prevents clogging from occurring.

The water necessary to operate the Suspensomat is drawn in a bypass fashion from the water supply which the machine requires for normal operational purposes in any case.

Nozzle heating

Hygroscopic material can become lumpy and adhere to the sides of the nozzle if it comes into contact with moisture. This impairs the even flow of the material with the result that malfunctioning may occur. However, by attaching a heated nozzle, it is possible to prevent the ambient air, which always

contains a certain amount of moisture, from entering the deposit container.

Mixing units

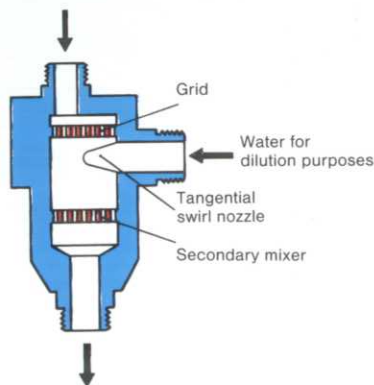
For reasons of economy, dosage systems for dry materials are frequently designed to ensure that the deposit is relatively highly concentrated. Polyelectrolytes are prepared with a concentration of approximately 2...2,5% and are highly viscous.

With in-line operations, water is

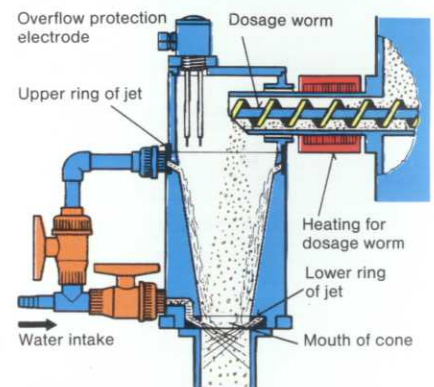
added before the material is processed and the diluted solution then conveyed to the place where it is required.

If mixing facilities are used, dilution after the dosing procedure is very effective in in-line processes: The medium to be diluted passes through a grid where it is split into a multitude of small jets and swirled and mixed intensively by a traverse jet of water. The solution then leaves the mixing unit via a secondary mixer.

Mixing unit for diluting medium after dosage procedure



Suspensomat



Technical data:

Type	max. capacity* dm ³ /h	diameter of worm (mm)	r.p.m min ⁻¹	Permissible granulat. (mm)
TEH feeder with simple hollow worm	from 0...4 to 0...2650	20 90	150 150	1 4

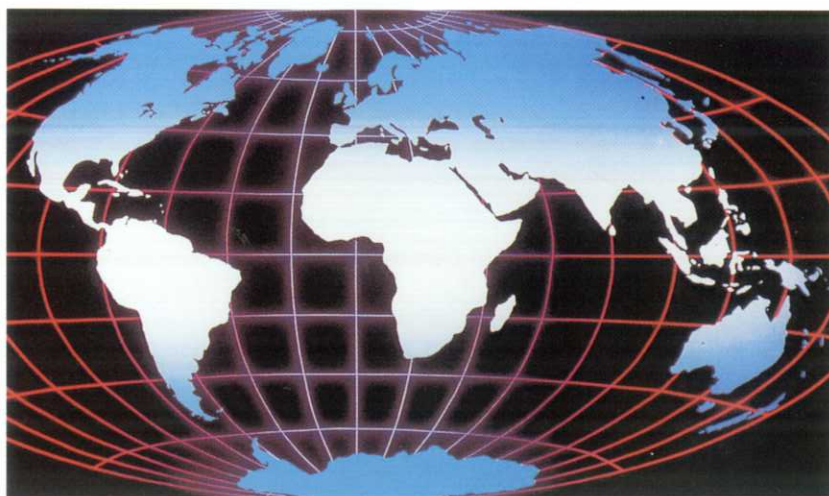
* the capacity figures indicated refer to glass sand with an evenly filled funnel (i. e. not protruding over top)

Motor	Direct current, controller	Threephase, Motor
Mains supply	220...240 V, 50/60 Hz	230/400 V, 50 Hz
Funnel volume dm ³	15	15



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JESCO has a worldwide network of partners who are specialists in application consulting and offer customer-oriented service.

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