METERING BINS

BCD

FOR WET PARTICLES

The machine is designed for the gravimetric dosing of material flows to feed, for example, drying or resin machines. The material is fed into a bunker of adequate capacity in which, thanks to a synchronized series of comb rollers and to the movement of a belt, it is fluidized until it forms a mattress of constant volume. Subsequently a weighing bridge with a high-precision load cell placed under the belt weighs the dosed material.

TECHNICAL FEATURES

• Metering of wet particles to the Dryers or dry particles to the Glue Blenders • Belt conveyor fitted with weighing bridge and precision load cell • Weighing belt automatic tensioning system • Self-centering system for the weighing belt • Dosing bin provided with levelling combs • Drive systems • Encoder for measuring speed of weighing belt • Calibration chain • Microprocessor.

BENEFITS

• Very high weighing-metering accuracy higher than +/- 0,5% relating to instant flow • Accuracy is guaranteed for all throughput values and not related to the full scale value as in conventional systems • Employment range from 10 to 100% of full scale value • Full scale value, freely settable • Easy testing by calibrating chain • High efficiency and reliability • Very low maintenance.

BEST IN CLASS FOR:

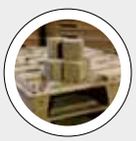
WOOD BASED PANELS:

MDF/HDF

PB/SPB

OSB/LSB/FOSB

INSULATION BOARDS



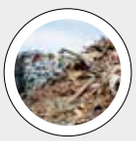
PRESSED WOOD PACKAGING:

PALLET BLOCKS

PELLETS & ENERGY:

WOOD PELLETS AND BLACK PELLETS

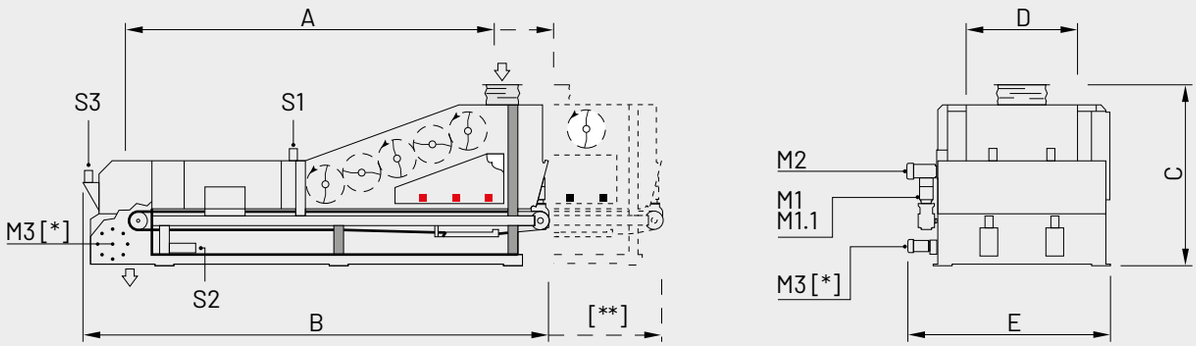
THERMAL AND ELECTRIC ENERGY



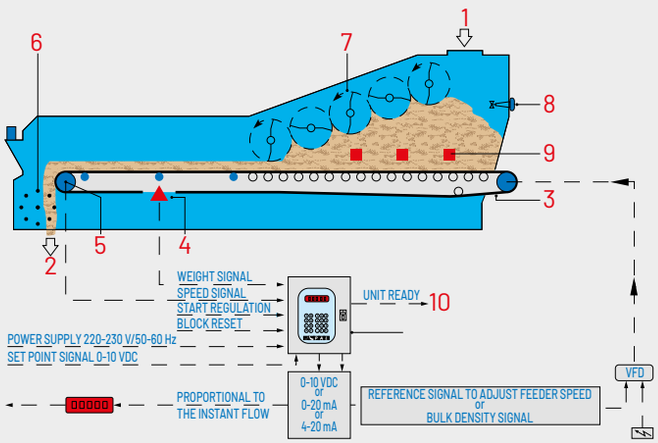
WOOD RECYCLING AND WASTE TREATMENT:

CUSTOMIZED SOLUTIONS FOR RECYCLING

PAL Srl - Via delle Industrie, 6/B - 31047 Ponte di Piave (TV) - Italy
Ph.: +39 0422 852 300 - Fax: +39 0422 853 444 - info@pal.it



[*] Option [**] BCD 21/30



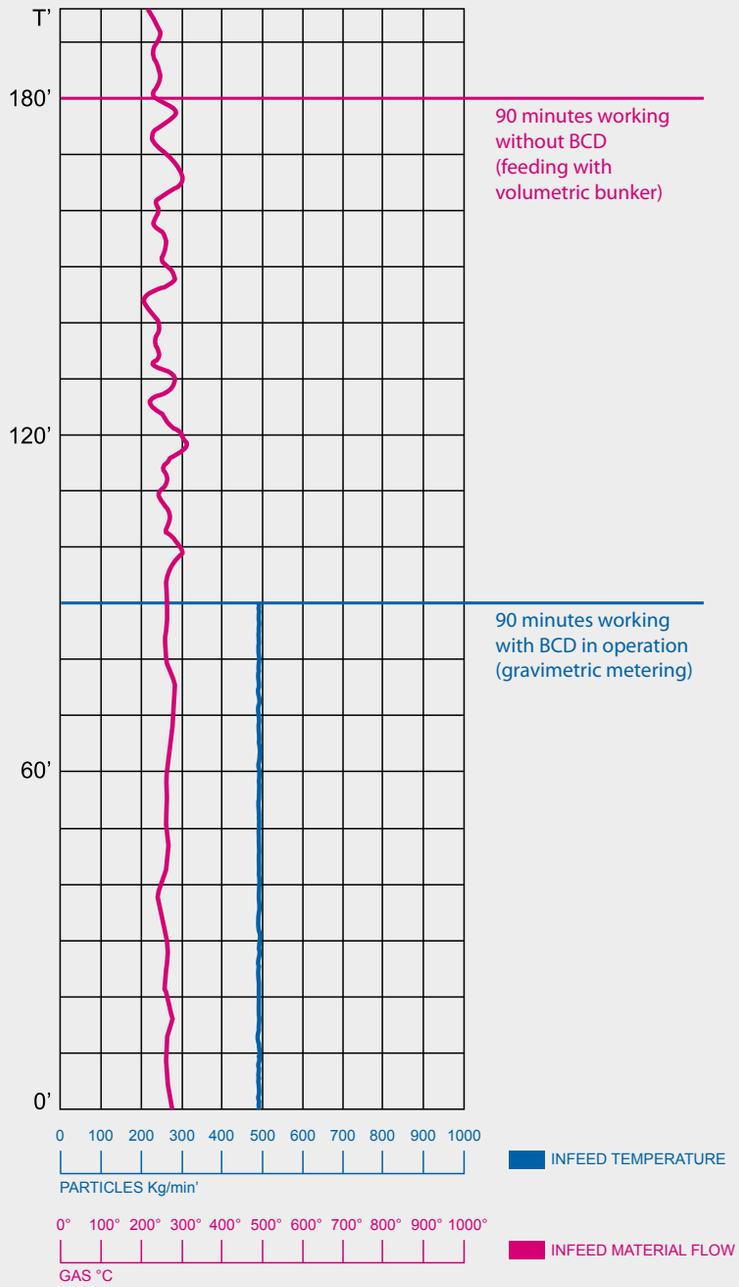
1 = FEEDING
2 = DISCHARGE
3 = WEIGHING BELT
4 = LOAD CELL
5 = ENCODER
6 = NEODYMIUM (OPTION) UNIT TO REMOVE FERROUS METALS
7 = LEVELLING COMBS
8 = EMERGENCY LEVEL
9 = OPERATIONG LEVELES
10 = MICROPROCESSOR
M1 = DOSING BELT DRIVE
M1.1 = FAN FOR COOLING
M2 = LEVELLING COMBS DRIVE
M3 = NEODYMIUM STAND DRIVE
S1-S2-S3 = SUCTION

MODEL	OVERALL DIMENSIONS mm					INSTALLED POWER kW			
	A	B	C	D	E	M1	M1.1	M2	M3*
BCD 4	3240	4270	1810	750	1745	0,37 ÷ 1,1	0,078	1,5	2,2
BCD 12	4688	5800	2250	900	2125	0,37 ÷ 1,5	0,078	2,2	2,2
BCD 21	5344	8022	2400	1300	2600	0,37 ÷ 1,5	0,078	4,0	2,2
BCD 30	5785	8886	2600	1500	2800	0,37 ÷ 2,2	0,078	7,5	2,2

*Option

BCD TO GET A BETTER DRYING

The diagram records the working conditions of a particles drier feeded with and without our BCD metering scale. It evidences that the BCD system gives better stability to the drying operations increasing the performances (10-15%) and consequently reducing costs.



PREMISE

• Drying process takes long time to accomodate new parameter inputs and heat requirement variation capacity is extremely limited • Conventional but, mainly continuous pressing processes, require stable mixtures-moisture of particles.

STATE OF THE ART DRYING

The most common dryer metering technique consists of infeeding volumetrically controlled wet particle flow/s, for instance, by means of silo extractors. The above system is not precision guaranteed as real flows and heat demand are influenced by several factors, such as silo levels, high compressibility of wet particles, extractor ineffectiveness, moisture contained in particles, etc. causing: • Unstable particle mixtures (± 15-20%) • Too fast variation of heat requirement (± 15-20%) • Unstable final moisture (over under thickness and blown boards).

DRIERCON

DRIERCON is an integrated system for drying optimization which controls-analizes-compares:
– formulation-gravimetric metering of particle mixtures (scales) – particles moisture (moisture detectors or pre-set values) – available heating capacity from drier.

PLC-linked DRIERCON offers

• Constant-gravimetric metering of wet particle mixtures • Constant-gravimetric metering of particle mixtures based on pre-set dry formulations • Constant-gravimetric metering of particle mixtures based on stable heat requirement.

BENEFITS

• Constant particle mixing • Stable final moisture • Up to 10-15% increase in drier efficiency • Prompt and reliable process cost analysis • Improved pressing cycle.

BCD continuous metering scales & MAMMUTH in drying operations

The working conditions in the drying field are particularly affected by external variables such as humidity, temperature, etc. These years have seen a widespread general trend towards the improvement of combustion control (understood as control of the quantity of thermal energy delivered) on the basis of the testing of the final state of humidity of the product. The systems based on testing the humidity and subsequent adjustment of the drier to bring the values into the preset field have not been successful. Such systems may be compared to bolting the stable door immediately after the horse has left. The inertias are such a handicap that they eliminate the advantages or create greater damage. The favourable experiences achieved with the installation of BCD continuous metering scales in the field of adhesive application have been extended almost at once, owing to likeness, to the drying field, in which: – we operate to meter "thermal energy" not "adhesive" in a flow of particles – humidity is the main variable. The first installations of the BCD scale for gravimetric metering of constant flows of damp particles in the driers gave exceptionally good results and showed at once that the old volumetric systems should be pensioned off quickly. The diagram has been recorded owing to the kind permission of the S.I.L.L.A (Mauro Saviola Group) and is an eloquent confirmation of our statements. The BCD continuous metering scale reduces the maximum range of the input temperature from 50°C recorded with good volumetric metering to only 18°C recorded with the BCD scale at work. In proportion to the nominal 280° a good 11% of efficiency is recovered by the use of the BCD scale alone. This represents just a first step in economics wich can be readily achieved by the mere installation of a BCD metering scale. A second step can be taken by use of the integrated control system of the DRIERCON drying process.