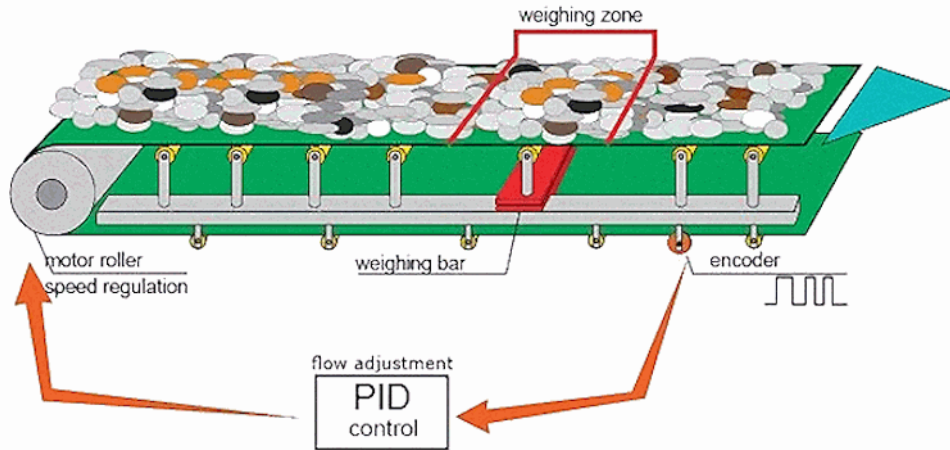# Firmware for Dynamic Conveyor Belt Weighing FW-BD

Special firmware for OEM-systemen for industrial automation.

Dynamic weighing and determination of the flow of material transitioning on the weighing belt, with memorisation of the quantity of dosed material.

Features

Dosage functions

- 2 selectable operation modes:
  - instantaneous reading of the flow, in kg/h or t/h with displaying of the status of the system and of the dosed total
  - adjustment of the dosage hourly flow, in function of the presetted target, with PID algorithm
- visualisation of the hourly flow graph and wide range of data showed on the display
- calibration of the flow reading function, for controlling the dosage performances
- reading filter of the hourly flow with configurable incidence and speed depending on the system
- programmable dosage target upon weight or upon time, with relative contact
- programmable start dosage delay, for synchronisation of various systems in the dosage of material mixtures
- management of the slow flow with programmable activation threshold, for more precise dosages
- management of the dosage total under way and general total of dosages, printable and clearable independently from each other
- management of the automatic dosage from remote master or through Profibus DP or Modbus RTU protocol
- printing of the dosage data and the total
- completely programmable printouts, for compatibility with any ASCII printer manageable through the serial port

Databases
- database of 100 products with: 5 lines of alphanumeric description, hourly flow target, weight dosage target and initial value analog output
- manual programming of the products or throught optional PC software

I/O-functions
- activation cycle, start / restart dosage, pause / reset cycle and unloading of the belt out of the cycle, through external inputs
- impulse counter of the accumulated quantity through relay contact, for direct communication with PLC or external devices
- relay contacts dedicated for the complete management of the alarms and the blocks for off weight, off flow and belt side-slipping
- input and output with programmable functions
- 16 bit analog input (optional) for programming the hourly flow target
- 16 bit analog output (optional) proportional to the hourly flow (reading mode) or programamble for regulating the dosage speed (regulator mode)
- serial communication protocol for programming the products and reading the cycle status
- Sysway and Modbus communication protocol for programming the dosage data and managing the cycle

Sysway, Modbus, Profibus Functions
- data reading: net weight, instantaneous capacity, instantanous PID value, partial total, general total, status of the optoisolated inputs, status of the optoisolated outputs, flow target (for the controller modes), minimum flow, maximum flow, dosage time, target to be dosed, set point enabling/disabling value, scale status
- available commands: dosage start/stop/reset, programming of flow target, target to be dosed, dosage time, print format, reset of the totals accumulated, programming of setpoint

- this firmware applies to our weight indicators of the types **HP(R)-Ultra**, **HP(R)-Touch**, **VPI-U** and **VPI-U-Advanced**
- see also the details of the respective weighing indicator

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Principle diagram