

# INLINE MOISTURE MEASUREMENT IN FLUID BED PROCESSES



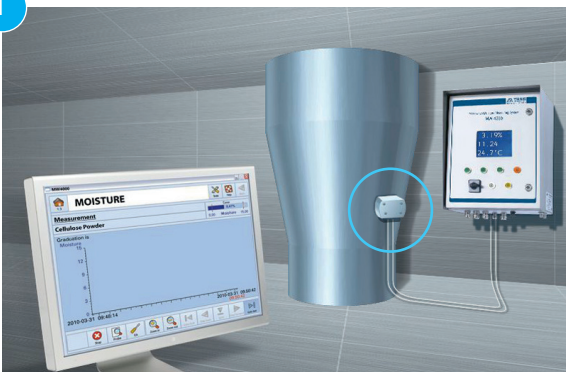
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## EASY MONITORING OF MOISTURE WITH BUILT-IN SENSOR

TEWS Elektronik provides a moisture sensor for direct installation in fluid bed dryers and granulators. The sensor makes use of a low-energy microwave field which penetrates the granules and detects the water molecules inside as well as at the surface. Continuous measurement is performed during the drying process. The measuring values are independent of varying bulk density, varying particle size distribution and color.

1



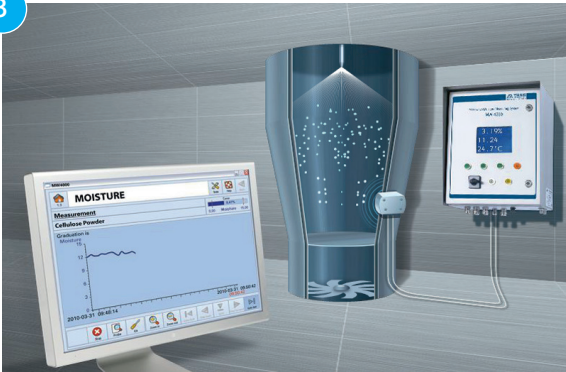
1. The moisture of the granules can be monitored during the drying process - without taking samples and without waiting for results.

2



2. During the granulation and drying process a part of the fluidized granular material constantly runs down over the sensor's front surface.

3



- On the sensor's front surface a low-energy microwave field is generated which penetrates the granules. The instrument measures and analyzes the field's interaction with the water molecules.

4



- The instrument continuously calculates and displays the actual moisture values. Readings can be monitored online via an attached PC and also are available e.g. for a PLC.

5



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## MONITOR YOUR DRYING PROCESS

### CONVENIENCE OF INLINE MEASUREMENT

- Real-time monitoring of moisture
  - Measurement directly in the granules
  - High accuracy, independent of varying granule size, density, color
  - No manual sampling
- 
- No interruption, no restarting of process
  - Avoiding of overdried batches
  - Better processibility of granular material
  - Longer shelf life of final product
  - Saving of processing time
  - Saving of energy

### BENEFITS

Continuous automatic measurement of moisture allows for close monitoring and control of drying processes. Termination of the process at the right moment reduces the risk of spoiling a product batch by overdrying.

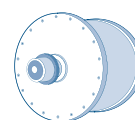
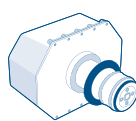
The built-in moisture sensor doesn't require time consuming interruption and restarting of the drying process in order to take samples.





## TECHNICAL DATA

The measuring systems are designed for industrial environments. Configuration for standalone operation is possible as well as integration in a PLC or in a network.



### DESCRIPTION

	MW 4260-EX	MW 4210-EX
Integrated sensor	No	Yes
Materials with pharmaceutical approval	Yes	Yes
Power supply	24 V DC +/- 5%, 4,2 A	24 V DC +/- 5%, 4,2 A
Display	5.7" screen	–
Interfaces	Ethernet, others on request	Ethernet
Analogous outputs	3 outputs 4 – 20 mA	2 outputs 4 – 20 mA
Digital outputs	8	–
Digital inputs	8	1
Protection class	IP 65, ATEX Zone 21	IP 65, ATEX Zone 21
Mounting	Welded flange + Tri Clamp	Welded flange + Tri Clamp
Protection class	IP 65 ATEX Zone 1 / 20 (sensor surface) ATEX Zone 21 (sensor housing)	IP 65 ATEX Zone 1 / 20 (sensor surface) ATEX Zone 21 (sensor housing)
Data storage CFR part 11 conform	Yes	Yes
Dimensions sensor	162 x 128 x 68 mm	D = 235 mm, L = 216 mm
Weight sensor	2.8 kg	11.3 kg
Weight	22.7 kg	9.2 kg
Housing	410 x 530 x 245 mm	370 x 250 x 160 mm



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