

# INTELLIGENT THE CHOICE

for **RAPID, ACCURATE**  
**MOISTURE/SOLIDS**  
**ANALYSIS**

***SMART***  
***Turbo***



**CEM**

*Discovering the Future*

**Fast  
Accurate  
Easy to**

1



**SELECT YOUR METHOD**

2



**WEIGH YOUR SAMPLE**

3



**PRESS "START"**

**IT'S THAT SIMPLE!**  
ACCURATE RESULTS IN  
MINUTES FOR A WIDE  
VARIETY OF SAMPLE TYPES!



# INNOVATIVE THINKING INTELLIGENT DESIGN IMPRESSIVE RESULTS

For more than 30 years, CEM's award-winning line of moisture/solids analyzers have been the instruments of choice for companies around the world who depend on our fast, accurate results for their process and quality control.

The SMART Turbo takes all of the popular features of the SMART System<sup>5</sup> to the next level. Redesigned for higher performance standards, the SMART Turbo is 40% faster than its predecessor. Enhanced technology improvements ensure decreased analysis time while maintaining precise temperature control for the most accurate results.

## TURBO TECHNOLOGY



The **SMART Turbo** is the fastest microwave drying system available. Samples reach optimal drying temperature in less than 5 seconds.

- Fast! Moisture/solids analysis with turbo power
- SMART Turbo is now up to 40% faster
- Improve Process Control
- Increase Profits



SMART Turbo decreases the energy needed for conventional drying by 95%!

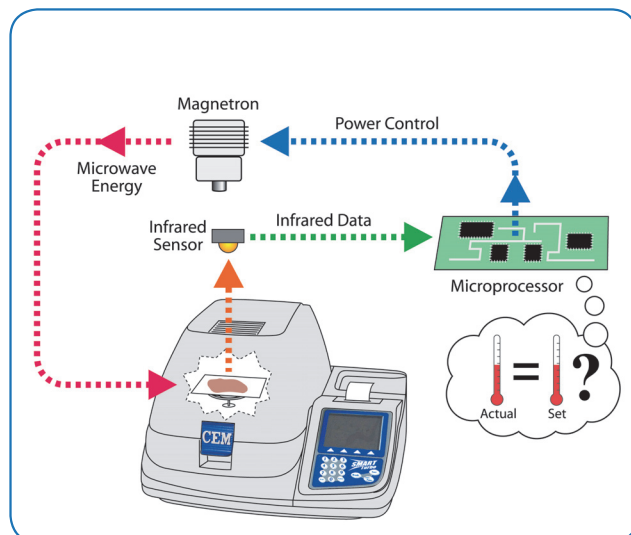
### IntelliTemp

Accurate Weight Monitoring and Precise Temperature Measurement for Results You Can Depend On

The **SMART Turbo** is the only microwave moisture/solids analyzer that provides high precision and accuracy by:

- Constantly monitors weight loss
- Continuously monitors sample temperature
- Adjusts microwave power in real time

## THE IntelliTemp™ ADVANTAGE



WITH **IntelliTemp** YOU GET CONSISTENT RESULTS  
EVEN IF SAMPLES ARE ANALYZED BY DIFFERENT  
OPERATORS IN DIFFERENT LOCATIONS.



# RELIABLE & EASY-TO-USE

## SIMPLE

The **SMART Turbo** features easy-to-use software available in 5 languages — English, Spanish, French, Italian and German — enabling multinational companies to standardize testing procedures at all facilities. Up to 300 results can be stored to perform statistical analysis. Software can be interfaced with corporate information technology systems.

## STABLE

Calibration is sample independent. Once calibrated, there is never a need to update the calibration model

## VERSATILE

Compact and rugged, the **SMART Turbo** can be utilized on the production floor or in the laboratory. It accurately analyzes a variety of sample types including solids, powders or slurries (0.1 - 99.9% moisture) in a wide range of applications including difficult or temperature-sensitive samples.

- Pharmaceuticals
- Dairy
- Meat
- Chemicals
- Water



ISO 9001:2000 certifies that the CEM quality management system meets internationally accepted standards.

# SMART ACCESSORIES

## CEM Communicator™ Data Management Software



- Automatic data collection
- Advanced charting features
- Method specific data storage

## CEM SAMPLE PADS

For optimum results with the **SMART Turbo**, use genuine CEM sample pads. These high-quality, glass fiber pads are manufactured in an ISO-approved facility in a controlled environment to avoid excess moisture, which can cause inconsistent results.



# UPGRADES

## UPGRADE TO SMART Trac II For all types of products

AOAC-compliant moisture and fat analysis in minutes without solvents or costly calibrations!



Ideal for all types of fat, oil, lipid and surfactant analysis in dairy, meats, pet foods and chemicals.

## UPGRADE TO SMART ProFat For raw meat

Analyze raw meat and poultry and pre-blends for moisture, as well as calculated fat and protein content.



## GMP AND GLP COMPLIANCE... CEM has all the tools to simplify your work

- NIST temperature traceable reference
- NIST traceable weight
- Periodic maintenance programs
- Monitor reference standard programs







# ENHANCED TECHNOLOGY SUPERIOR RESULTS

**OctaWave™ CAVITY**  
patented design for uniform heating

**IntelliTemp**  
measures sample temperature  
for accurate, reproducible results

**TURBO TECHNOLOGY**  
40% faster!

**PRINTER**  
durable, built-in, impact printer

**LIMS READY**  
serial port

**EASY ACCESS**  
to balance pan

**LARGE VIEWSCREEN**  
easily seen from across  
the room

**COMPACT SIZE**  
fits in most laboratories

**RUGGED CONSTRUCTION**  
use in the lab or on the production floor

**AOAC-APPROVED METHODS**  
also complies with other standard methods

**ACCURATE**  
test precision to 0.01%

**BUILT-IN MEMORY**  
Stores 100 methods & 300 test results

**TRANSFERRABLE METHODS**  
can be sent to other **SMART** units across  
the laboratory or around the world



FOR OVER 30 YEARS, CHEMISTS HAVE DEPENDED ON CEM TO CREATE  
PROGRESSIVE AND INNOVATIVE TECHNOLOGIES THAT PROVIDE ADVANCED  
SOLUTIONS FOR CRITICAL LABORATORY APPLICATIONS.

## SMART TURBO SYSTEM SPECIFICATIONS

Instrument Dimensions	22.0 in (w) x 23.3 in (d) x 14.5 in (h) 55.9 cm (w) x 59.1 cm (d) x 36.8 cm (h)
Weight	55 lbs, 25 kg
Moisture/Solids Range	0.01% to 99.9%, 0.01% resolution
Balance	Capacity: 50 grams, 0.1 mg readability
Program/Data Storage	100 methods, 300 results
Standard Software	Constant Weight & Time, Fat, Moisture, TS, TSS, TVSS, Dilutions, Syringe Weighing
Data Entry	Keypad with menu-driven software
Display	Black and white VGA (320 x 240)
Accessory Ports	Two serial, RS232 nine-pin ports for external balance, computer or barcode, one parallel port, 25 pin, for external printer
Standard Printer	Internal impact printer
Electrical Requirements	110-127 VAC, 60Hz, 10 Amps; 220-240 VAC, 50/60 HZ, 5 Amps 100 VAC, 50/60Hz, 10 Amps; 200-208 VAC, 50/60 HZ, 5 Amps
Patents	CEM SMART Turbo System is covered by the following US patents: 6,227,041 6,320,170 6,521,876 6,268,570. Other US patents pending.

### Innovative R&D

- Over 300 patents
- Award winning engineering & design
- Over 25,000 systems placed worldwide
- 10 R&D 100 Awards

### Expert Global Support & Service

- Experienced application support
- Worldwide network of factory-trained field service technicians
- Online and telephone technical support available 24/7

*"Our commitment to you doesn't end when your system is shipped:  
it begins."*

~Michael Collins, President CEM

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