INTER AV INC.

106 EAST RHAPSODY DR.

SAN ANTONIO, TEXAS 78216

MODEL EDPT-228

ELECTROSTATIC DEHYDRATION AND PRECIPITATION TESTER

APPLICATION :

Utilized for the determination of water content of emulsions such as encountered in crude oil processing , by means of the application of high electrical potential across the fluid while under controlled temperature conditions and prior to centrifuging.

DESCRIPTION:

This tester is a fourth generation model and incorporates several design features which extend the capabilites beyond the earlier models. Eight samples can be tested simultaneously and current values (mill amp) for each test sample can be individually maintained and recorded. The maximum voltage has been extended along with the maximum operating temperature to 325° F (160 ° C) .

Basically, test samples are placed in special 7 in. (18 cm) long, 100 ml centrifuge tubes with special O-ring sealed electrode caps. Tubes are then placed in a temperature controlled aluminum block and allowed to stabilize. A unique cover assembly captures all eight electrode caps and automatically makes the electrical connection through spring loaded contact pins. High voltage is then applied from a separate power supply cabinet for a predetermined time period. The application of this high potential causes the water molecules to align and attract to one another, therefore forming water droplets which then precipitate out of the emulsion.

Following are the principal features of the subject Tester :

Test Cell Cabinet

1. Electrically heated aluminum block with eight precision contoured holes.

2. Miniature blower and screened vent openings to supply forced cooling and eliminate fumes.

3. Bimetallic over-temperature safety switch for aluminum block.

4. High voltage contact assembly cover plate with independent leads for each tube. (eight pairs)

5. Eight assemblies of 100 ml centrifuge tubes with heavy duty thread and matching electrode cap assemblies. Circular electrode positioned at 75 ml level and center electrode positioned at 6 ml level.

6. Safety switch assures that high voltage can only be applied when contact plate is in place.

7. Power requirement is 120 Volts, 8 Amp.

Control Cabinet

a) Switches. Circuit Breakers and Pilot Lights.

b) Variable Voltage Control.

c) Voltmeter, 0-4000 Volt.

d) Two Ampmeters; one to measure total current , and the other to measure individual current of each cell via selector switch.

e) Digital Interval Timer for High Voltage Duration.

f) Miniature blower to supply forced cooling for cabinet.

g) Digital Temperature Controller. Displays current Test Cell temperature and Preset Temperature.

Power Supply Cabinet

Qty (8) High Voltage Transformers with High Voltage Leads to Test Cell Cabinet

CAPABILITY:

Number of Samples	8
Normal Sample Temperatures	ambient -160° C
Maximum Operating Potential	4,000 Volt

INSTALLATION NEEDS:

Control Cabinet	120 Volt - 8 Amp. - 50/60 Hz
Transformer Cabinet	120 Volt - 5 Amp. - 50/60 Hz

Test Cell Cabinet

23 0 Volt SYSTEM AVAILABLE, Requires separate external step-down transformer.

Requires good and reliable electrical GROUND connections.

SIZE & WEIGHT:

Control Cabinet ,	9" tall x 9.5" deep x 18" wide ,	8.5 kg.
Transformer Cabinet ,	10.5" tall x 9.5" deep x 18" wide ,	19 kg.

Test Cell Cabinet , 10.5" tall x 9.5" deep x 18" wide , 18 kg., shield not measured

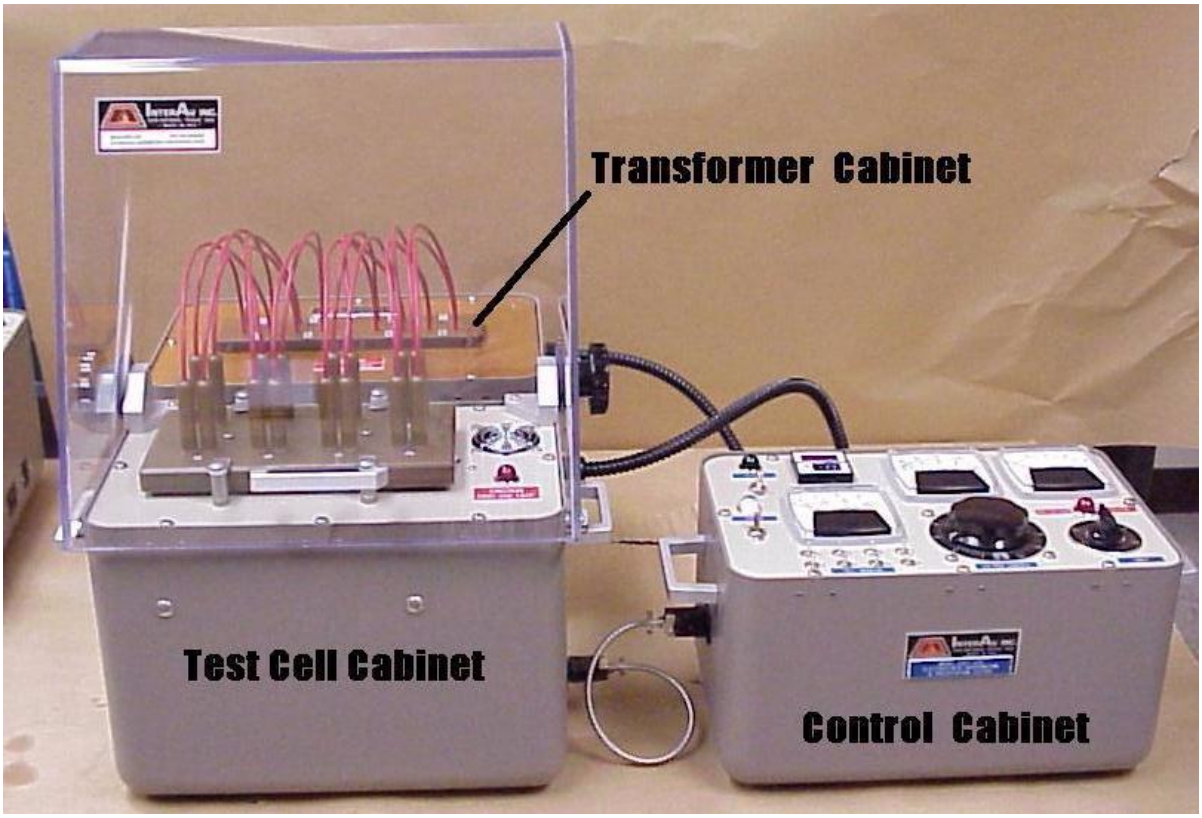
Net Wt. 46 Kg

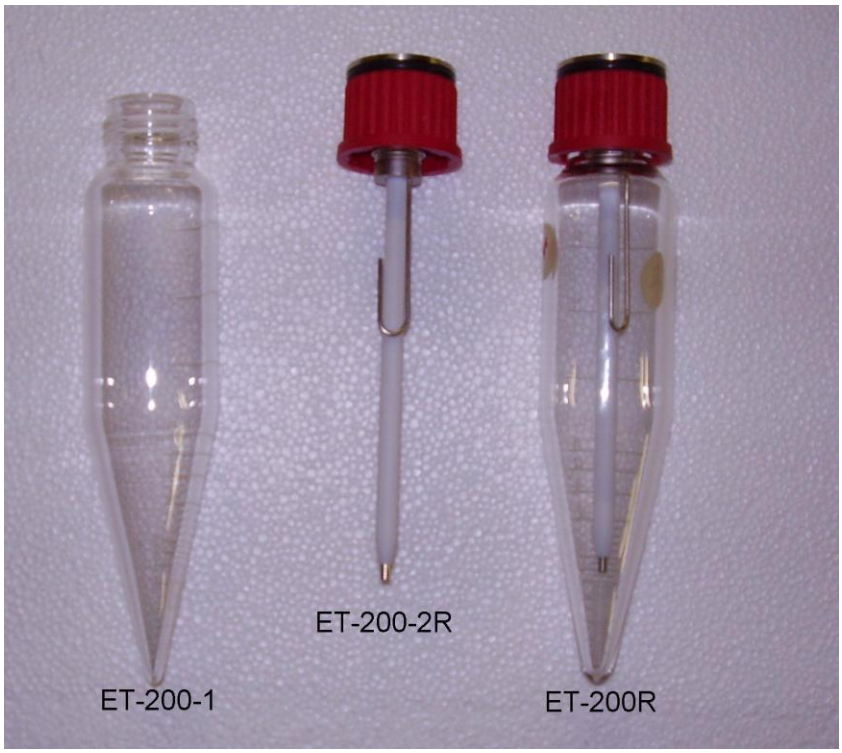
SHIPPING:

Four Volumes

Crated : 23” x 15” x 16”

Gross Wt. : Est. 75 kg


Transformer Cabinet
Test Cell Cabinet
Control Cabinet


ET-200-2R
ET-200-1
ET-200R