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**API GRAVITY & DENSITY CALCULATORS**  
**BULLETIN 100 (3-04)**

## API GRAVITY AND DENSITY CALCULATORS

### API GRAVITY CALCULATOR GTP-3012-1A

- Corrects API hydrometer readings at any temperature (°F) to API degrees at 60°F.
- Corrects relative density hydrometer readings at any temperature (°F) to relative density at 60°F
- Converts API gravity to relative density\*
- Converts API gravity to metric density ( $\text{kg}/\text{m}^3$ )
- Converts API gravity to weight (lbs/gal)



### DENSITY CALCULATOR GTP-2727EF

- Converts density readings taken with a hydrometer to corrected density at 15°C
  - Separate scales for 3 different types of fuel:
- |                                                 |                                 |                                         |
|-------------------------------------------------|---------------------------------|-----------------------------------------|
| <b>KEROSENE</b><br>JetA<br>JetA-1<br>JP5<br>JP8 | <b>WIDE CUT</b><br>JP4<br>Jet B | <b>AVGAS</b><br>Jet A-1<br>JP-5<br>JP-8 |
|-------------------------------------------------|---------------------------------|-----------------------------------------|
- Scales read in  $\text{kg}/\text{m}^3$

\* "Relative density" is now the accepted term for "specific gravity."

This circle represents the actual diameter of both calculators.

## INSTRUCTIONS FOR API CALCULATOR [GTP-3012-1A](#)

1. Rotate the disk until the observed hydrometer reading ( $^{\circ}$ API) is aligned with observed temperature ( $^{\circ}$ F).
2. Read the corrected  $^{\circ}$ API at the 60 $^{\circ}$ F arrow.

**NOTE:** If a relative density or specific gravity hydrometer is used, set the hydrometer reading opposite the observed temperature. Then read the corrected relative density at the 60 $^{\circ}$ F arrow.



## INSTRUCTIONS FOR DENSITY CALCULATOR [GTP-2727EF](#)

(also printed in French)

1. Rotate the disk until the observed hydrometer reading is aligned with observed temperature.
2. Read the corrected density at the 15 $^{\circ}$ C arrow.

### **NOTE ON [GTP-3012-1A](#)**

Results obtained with this calculator in the API gravity range from 48 to 51 (or a correction that goes through this range) cannot be compared to the printed tables because we have avoided error created by this transition zone (see Volume X of Petroleum Measurement Tables (D1250-80/IP200), pages X-73 to X-79). For jet fuels, we extended the curve upward using the original equation without entering the transition zone. For avgas, we extended the gasoline curve downward in the same manner. From a technical standpoint, our scales will yield more accurate results than the printed tables.

### **NOTE ON [GTP-2727EF](#)**

Results obtained with this calculator in the density range from 770 to 784 kg/m<sup>3</sup> (or a correction that goes through this range) cannot be compared to the printed tables because we have avoided error created by this transition zone (see Volume X of Petroleum Measurement Tables (D1250-80/IP200), pages X-73 to X-79). For jet fuels, we extended the curve upward using the original equation without entering the transition zone. For avgas, we extended the gasoline curve downward in the same manner. From a technical standpoint, our scales will yield more accurate results than the printed tables.