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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°
- Converts API Gravity to Relative Density\*
- Converts API Gravity to metric density Kg/cubic meter
- Converts API Gravity to weight in lbs per gallon





### **DENSITY CALCULATOR - GTP-2727EF**

- Converts density reading taken with a hydrometer to corrected density at 15°c
- Separate Scales for 3 different types of fuel:

KEROSENE WIDE CUT AVGAS
Jet A JP4
Jet A-1 Jet B
JP 5
JP 8

Scales read in KG/m³

<sup>\*</sup>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 disk until the observed hydrometer reading (°API) is aligned with observed temperature, °F.
- 2. Read corrected Degrees API at the 60°F arrow.

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

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# **INSTRUCTIONS for DENSITY CALCULATOR - GTP-2727EF**

(Also printed in French)

- **1.** Rotate the disk until the observed hydrometer and temperature readings are aligned.
- 2. Read corrected density at 15°C at the arrow.

#### NOTE - Re 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 the transtition zone (See Volume X of Petroleum Measurement Tables (D1250-80), 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 Re GTP-2727EF**

Results obtained with this calculator in the Density range from 770 to 784 kg/m³ (or a correction that goes through this range) cannot be compared to the printed tables because we have avoided the error created by the transition zone (see Volume X of Petroleum Measurement Tables, 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