

• Standard Reference Burner

- Laminar flame
- Highly repeatable
- Flexible operation with available water cooling

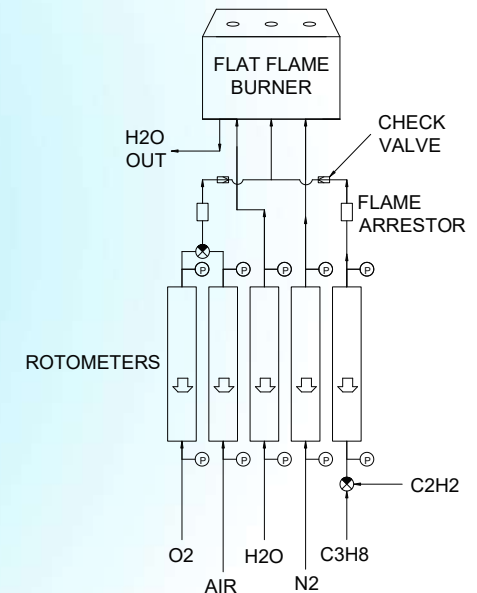
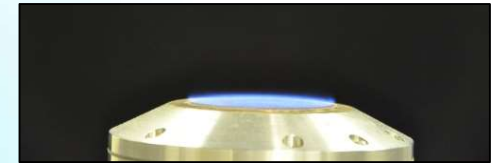
• Control Panel

- Ensures precise setting of fuel/oxidizer ratios
- Safety features incorporated
- Calibrations provided for common fuels

• Integration with Diagnostic Software

- Software utility allows quick interpretation of the results obtained
- Tabulated OH and T values provided for a wide range of flow settings
- Quick entry of calibration factors into PLIF software

Reference Flame for Combustion Diagnostics



Please inquire for pricing and availability!

Contact Info

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Overview

To obtain quantitative measurement of radicals or species in combustion, it is important to perform system calibration. The Flat flame burner system offered by TSI is designed to be a standard reference flame that will generate highly repeatable combustion conditions. As a result, it can be used to check that can be used to calibrate. Key function of the system are:

- Calibration of flame temperature with specific gases
- Control of species emission
- Laminar flame for system operation
- Obtain the adiabatic temperature to calculate the total heat transfer

A detailed instruction manual is provided with the system to allow easy and safe operation of the system. The user needs to provide the desired test gases as well as adequate ventilation of the exhaust gases.

Reference Data

Because the reference burner is a standard burner studied extensively both experimentally and numerically, a wide array of data for flame temperature and species profiles are available. In many cases, a combustion calculation code such as Cantera, STANJAN or CET can be used to well represent the flame profiles. Alternatively, several “benchmark data” sets are available in the literature. Either way, the key is to establish the precision conditions used in the simulation or experiments. As a result, having a robust, carefully calibrated flow control system is vital to ensuring the utility of the burner.

Key data sets are provided with the burner and can be integrated into the combustion diagnostic software to facilitate rapid calibration of the end user diagnostic

Components

While the burner itself is critical for generating the laminar flame conditions desired for high reproducibility, setting these conditions requires careful consideration of the associated components such as flow metering. The system provided comes fully calibrated and provides tables of flow settings and corresponding OH concentration levels. The full system is designed to be portable and easy to use.

