

**RADIAN**  
ASAP

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## Unique Features

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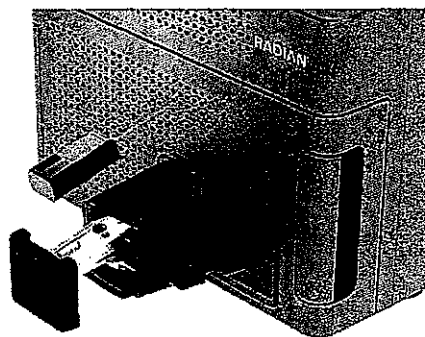


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## 1. Integrated ASAP Ion Source

A horizontal loading, preoptimized Atmospheric pressure Solids Analysis Probe (ASAP) ion source which requires no user adjustment.

*Link:* Stated in [spec sheet](#), horizontal loading mechanism shown in product videos and product photos such as the one displayed to the right.



The horizontal loading source geometry developed for Radian ASAP was found to be best to enable rapid sampling and transference into the ionization region, reducing the loss of volatile sample components. The Radian ASAP source design ensures no accidental source contamination from excess sample on the glass capillary, and the sample loading mechanism allows the sample to be transported to the optimum location for ionisation quickly, simply and repeatably.

## 2. Support for real-time library matching results

The system must be able to provide library matching results to the user in real-time, during the sample analysis and as a post-acquisition processing step.

*Link:* Stated in [spec sheet](#), LiveID supports real time library matching on Radian ASAP.

## 3. Support for real-time sample classification against a statistical model

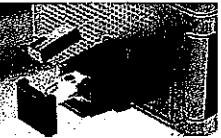
The system must be able to carry out sample classification against a pre-built statistical model and present the results to the user in real-time, during the sample analysis and as a post-acquisition processing step.

*Link:* Stated in [spec sheet](#), LiveID supports real time sample classification against a pre-built statistical model on Radian ASAP.

## 4. Temperature control

The system must be capable of performing ASAP analyses with user defined isothermal, ballistic ramp or stepped temperature profiles up to a maximum temperature of 600°C.

*Link:* Stated in [spec sheet](#)

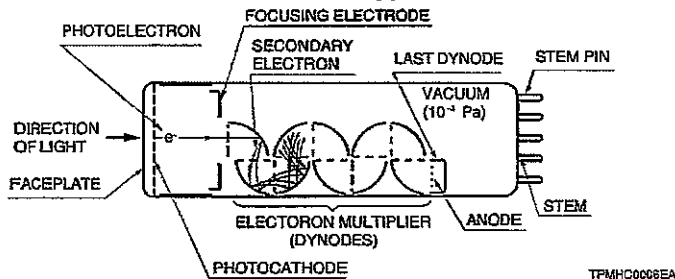


### 5. Detector

The ion detection system must be within its own vacuum envelope for long life. The detector should typically last for the lifetime of the instrument, not require regular gain adjustment and operate in both positive and negative ion modes.

*Link:* We use a photomultiplier tube (PMT) as stated in the spec sheet. Hamamatsu manufacture these PMT products and their document "Photomultiplier tubes and related products" (p5 left hand side) shows a diagram of a PMT with its own vacuum envelope at  $10^{-4}$  Pa, reproduced below:

Figure 1: Cross-section of head-on type PMT



The full Hamamatsu document can be downloaded from [this link](#).

### 6. Size

The instrument footprint (not including external accessories) must be less than 35cm wide, 28cm tall and 85cm deep.

*Link:* Stated in spec sheet, dimensions of the two RADIAN ASAP instruments are as below for reference.

	Width	Height	Depth
RADIAN ASAP Standard	34.4 cm (11.5 inches)	27.1 cm (10.7 inches)	84.5 cm (33.3 inches)
RADIAN ASAP Performance	34.4 cm (11.5 inches)	27.1 cm (10.7 inches)	73.0 cm (28.7 inches)

### 7. Weight

The instrument weight (not including external accessories) must be less than 35kg (77lbs).

*Link:* Stated in spec sheet, weights of the two RADIAN ASAP instruments are below for reference:

	Weight
RADIAN ASAP Standard	34 kg (75lbs)
RADIAN ASAP Performance	29 kg (64lbs)