

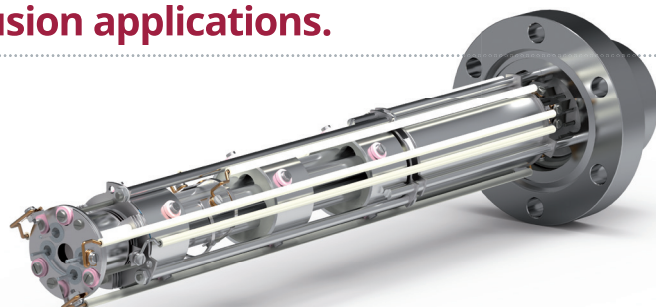
Mass Spectrometers for Fusion Research DLS Series



DLS-1

Mass spectrometer for real-time quantitative analysis of complex gas and vapour mixtures in fusion applications.

- ▶ 1-100 amu mass range
- ▶ Software driven recipes using threshold ionisation mass spectrometry (TIMS) for the real-time
- ▶ Quantification of hydrogen and helium isotopes and deuterated hydrocarbons
- ▶ Sensitivity of D_2 in He is 100 ppm



DLS-2 / DLS-2X

Dual-zone switching mass spectrometers for hydrogen and helium isotope analysis and other light gases.

- ▶ Two configurations available:
 - High Resolution Zone H up to 22.5 amu (0.02 amu real-time mass separation) + Standard Resolution Zone 1 up to 100 amu
 - Ultra-high Resolution Zone H up to 10 amu (0.0065 amu real-time mass separation) + Standard Resolution Zone 1 up to 44 amu
- ▶ Sensitivity of both He in D_2 and D_2 in He is 10 ppm
- ▶ DLS-2X: remote analyser mounting up to 140 m from sensitive electronics for fusion and harsh operating environments



DLS-20

Unique dual-zone ultra-high resolution mass spectrometer with ultra-high sensitivity for the analysis of hydrogen and helium isotopes and light gases.

- ▶ Industry first 20 mm rod diameter quadrupole mass filter for ultra-high mass resolution
- ▶ Software switchable dual-zone RF power supply for Zone H ultra-high resolution up to 22.5 amu and Zone 1 ultra-high stability to 200 amu
- ▶ 0.006 amu mass separation in real time
- ▶ Sensitivity of both He in D_2 and D_2 in He is 1 ppm
- ▶ Detection of ^3He in HD

