

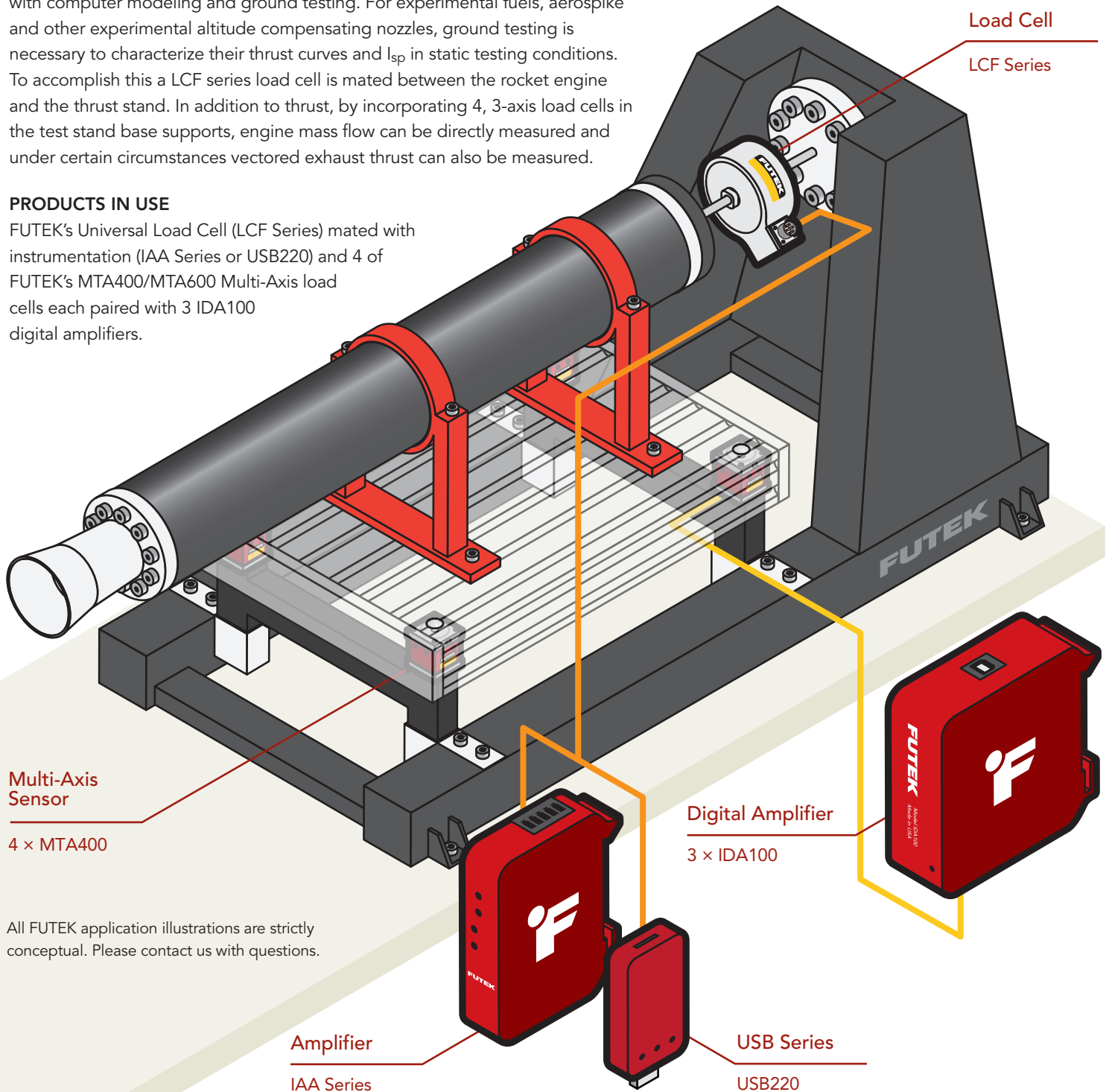


**APPLICATION SUMMARY**

Characterization of solid, liquid, and hybrid rocket engines is often performed with computer modeling and ground testing. For experimental fuels, aerospike and other experimental altitude compensating nozzles, ground testing is necessary to characterize their thrust curves and  $I_{sp}$  in static testing conditions. To accomplish this a LCF series load cell is mated between the rocket engine and the thrust stand. In addition to thrust, by incorporating 4, 3-axis load cells in the test stand base supports, engine mass flow can be directly measured and under certain circumstances vectored exhaust thrust can also be measured.

**PRODUCTS IN USE**

FUTEK's Universal Load Cell (LCF Series) mated with instrumentation (IAA Series or USB220) and 4 of FUTEK's MTA400/MTA600 Multi-Axis load cells each paired with 3 IDA100 digital amplifiers.



All FUTEK application illustrations are strictly conceptual. Please contact us with questions.

**Sensor Solution Source**

Load · Torque · Pressure · Multi Axis · Calibration · Instruments · Software

[www.futek.com](http://www.futek.com)



**SCIGATE AUTOMATION (S) PTE LTD**

No. 1 Bukit Batok Street 22 #01-01 Singapore 659592  
Tel: (65) 6561 0488 Fax: (65) 6562 0588  
Email: [sales@scigate.com.sg](mailto:sales@scigate.com.sg) Web: [www.scigate.com.sg](http://www.scigate.com.sg)

Business Hours: Monday - Friday 8.30am - 6.15pm



U.S. Manufacturer