



CALIBRATED LEAK STANDARDS

Reservoir | Open-Style | Sniffer | Air | Calibration Services



CALMASTER™ LEAK STANDARDS

LACO has been a trusted and accredited provider of calibrated leak standards since 1998. With over 26,000 CalMaster leak standards manufactured, we have the experience and technology to ensure your leak testing success. Our leak standards are NIST traceable and our labs holds A2LA accreditation to both ISO 17025:2017 and ANSI/NCSL Z540-1-1994 standards. Our leak standards utilize micro-tube capillary technology and stand as the foremost leader in the industry for its unparalleled stability and reliability.

FEATURES

- Stable and reliable leak standards
- Standard and custom design options
- Broadest range of leak rates (10^{-10} to 84 atm-cc/sec) and gases offered
- Easily refillable reservoirs
- Standard designs available in 3 weeks. Expedited options available.
- High quality stainless steel welded construction
- Lifetime product warranty
- Responsive technical staff

Custom Designs: Within each category of leak standards, LACO offers custom design options to meet your process needs. We specialize in high pressure leak standards and small open style leaks that imitate actual part geometry. These leaks are used for system calibration and validation by replacing the actual test parts.



CALMASTER LEAK STANDARD FAMILIES

	RESERVOIR LEAK STANDARD	OPEN STYLE LEAK STANDARD	SNIFFER LEAK STANDARDS	AIR LEAK STANDARDS
				
LEAK EXHAUST CONDITION	Vacuum	Vacuum	Atmosphere	Atmosphere
GAS	Any Gas, but primarily helium	Any Gas, but primarily helium	Helium, hydrogen or refrigerant gases	Air or N2
LEAK RATE RANGES	10^{-10} to 10^{-3} atm-cc/sec	10^{-10} to 84 atm-cc/sec	$1e^{-6}$ to $1e^{-1}$ atm-cc/sec	0.05 to 5,000 sccm
FEATURES / OPTIONS	<ul style="list-style-type: none"> • Reservoir sizes from 115 cc to 1000 cc • All metal, welded design options • Manual or automated isolation valve options • Multiple design and outlet connection options • Internal leak standards for calibrating helium leak detector (LACO, Alcatel / Pfeiffer and Inficon) 	<ul style="list-style-type: none"> • Customer supplies regulated gas to leak standard • Multiple outlet and inlet connection options • Small footprint design with ability to customize 	<ul style="list-style-type: none"> • Reservoir sizes from 115 cc to 1000 cc • High accuracy, customized sniffer probe outlets • Open style design options 	<ul style="list-style-type: none"> • Multiple inlet and outlet connection options • High pressure options
APPLICATIONS	<ul style="list-style-type: none"> • Calibrate helium leak detectors • Calibrate leak test system / process • Calibrate RGA 	<ul style="list-style-type: none"> • Calibrate leak test system / process • Leak test process verification 	<ul style="list-style-type: none"> • Calibrate sniffer leak detectors • Calibrate sniffer leak testing systems / process • Calibrate refrigerant leak detectors 	<ul style="list-style-type: none"> • Calibrate air leak testers • Calibrate or validate any air leak testing system / process

LEAK STANDARD CALIBRATION SERVICES

LACO offers calibration services for leak standards for all brands. Our calibration services are NIST traceable and our lab holds A2LA accreditation to both ISO 17025:2017 and ANSI/NCSL Z540-1-1994 standards. With a comprehensive range of primary and comparison calibration methods, along with our attentive technical support, you can have confidence in LACO for all your leak standard calibration requirements.

FEATURES

- Helium leak standards down to $2e^{-10}$ atmcc/sec
- Other gases down to $1e^{-9}$ atmcc/sec
- Calibrate all leak standard brands
- Typical turnaround time 3 weeks, expedited options available
- Responsive technical staff
- Multiple calibration points available
- Repair services:
 - Leak standard repair and refill services
 - Replacement of leak element

CALIBRATION REQUESTS

Start the calibration process by submitting a Return Material Authorization (RMA) form to LACO, found on our website. LACO will provide RMA information. Include the RMA form in your shipment to LACO.



LACO CALIBRATION HISTORY

- A2LA accreditation since 1998
- Performed over 75,000 leak standard calibrations
- Calibration systems subject to many years of proficiency testing to ensure accuracy and repeatability



COMMON CALIBRATION OPTIONS AND ADDERS	
REFILL OF NON-HELIUM GAS	LSLA03
REFILL OF MIXED GAS	LSLA04
ALTERNATE GAS CALIBRATION	LSLA01
ADDITIONAL CAL POINTS	LSLA02
LEAK STANDARD REPAIR EVALUATION FEE	LSLE01
LEAK STANDARD REPAIR SERVICE	LSLR01
MEDIUM URGENCY EXPEDITED CALIBRATION	LSLA05
HIGH URGENCY EXPEDITED CALIBRATION	LSLA06
LEAK STANDARD DISPOSAL, RESERVOIR	LSLA08-R
LEAK STANDARD DISPOSAL, OPEN-STYLE	LSLA08-P

LEAK CALIBRATION SERVICE OPTIONS

	BASE CALIBRATION PART NUMBER (INCLUDES REFILL)	CALIBRATION EQUIPMENT TYPE	LEAK RATE RANGE	LEAK RATE PRECISION OPTIONS	PRECISION P/N SUFFIX	MULTIPLE CAL POINTS OPTION	NO REFILL OPTION
STANDARD	LSLC01	Comparison and Primary	10^{-10} to 84 atmcc/sec	Standard	(null)	LSLC02	LSLC01N
				Precision	M		
				High Precision	H		
PRIMARY RATE OF RISE	LSLC04M	Primary	$1e^{-6}$ to $3e^{-9}$ atmcc/sec	None	None	None	LSLC04

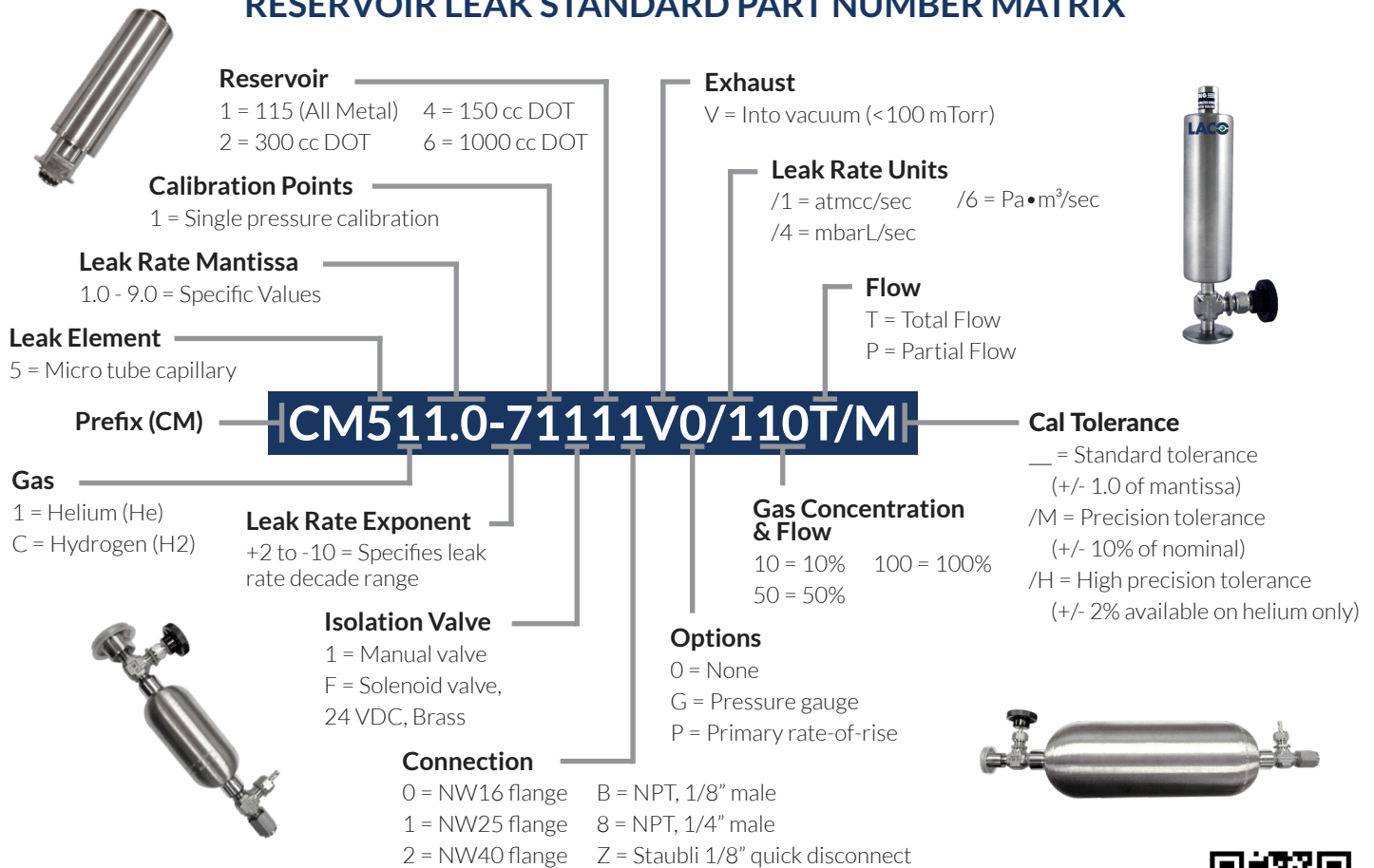
RESERVOIR LEAK STANDARDS

Applications: LACO's reservoir leak standards are widely employed for the calibration of helium leak detectors, leak test systems or processes, and RGA systems.

FEATURES

- Leak exhaust condition: vacuum
- Any gas, primarily helium
- Reservoir sizes from 115 cc to 1000 cc
- All metal, welded design options
- Manual or automated isolation valve options
- Multiple design and outlet connection options
- Internal leak standards for calibrating helium leak detector (LACO, Pfeiffer and Inficon)

RESERVOIR LEAK STANDARD PART NUMBER MATRIX



This matrix includes standard options for our reservoir leak standards. LACO offers many custom designs. Contact us with your requirements.



MORE INFO

CUSTOM DESIGNS



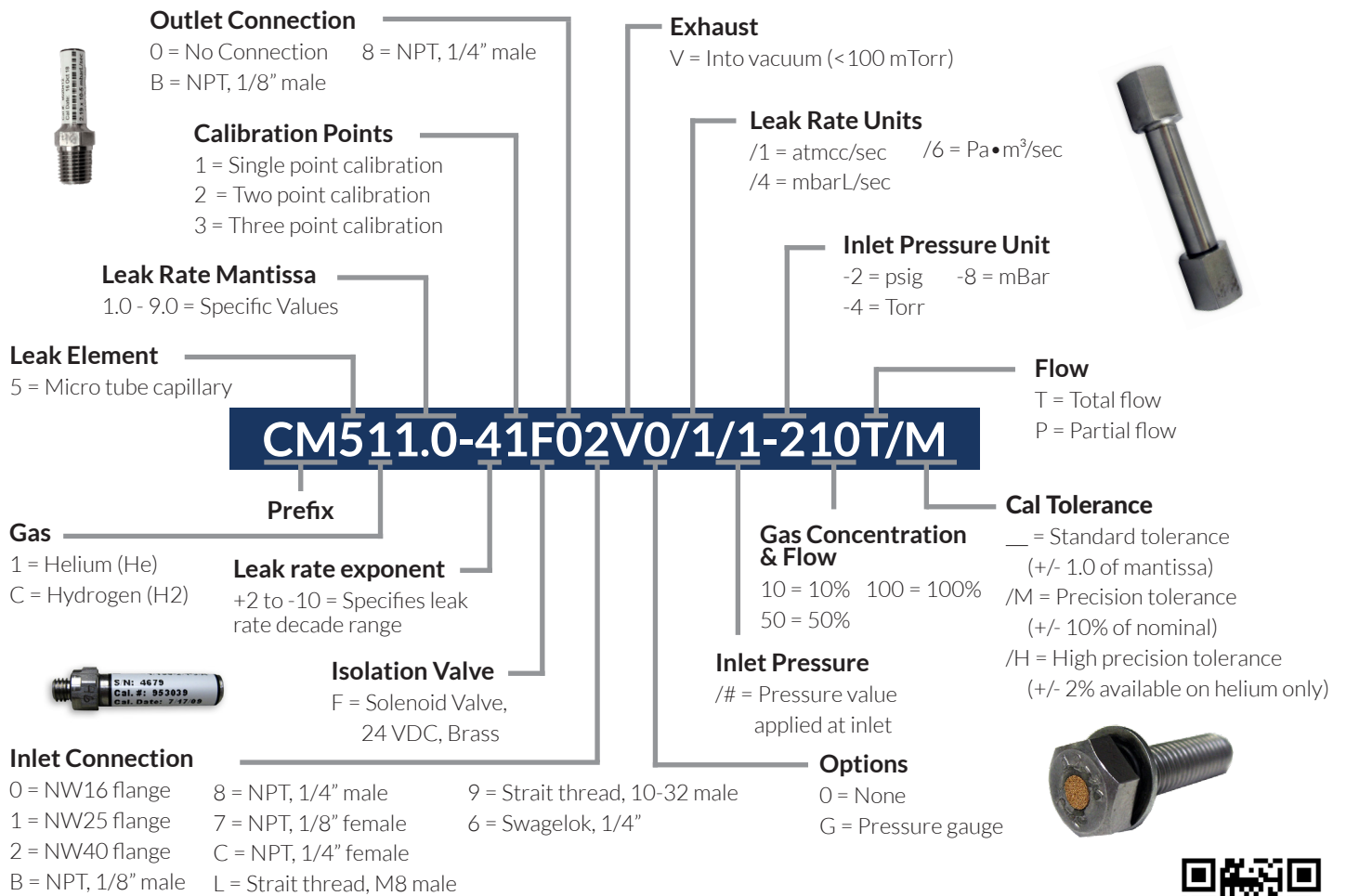
OPEN-STYLE LEAK STANDARDS

Applications: LACO's open-style leak standards are widely employed for the calibration of helium leak test systems and processes, and for leak test process verification.

FEATURES

- Leak exhaust condition: vacuum
- Any gas, primarily helium
- Customer supplies regulated gas to leak standard
- Multiple outlet and inlet connection options
- Small footprint design with ability to customize

OPEN-STYLE LEAK STANDARD PART NUMBER MATRIX



This matrix includes standard options for our reservoir leak standards. LACO offers many custom designs. Contact us with your requirements.



CUSTOM DESIGNS



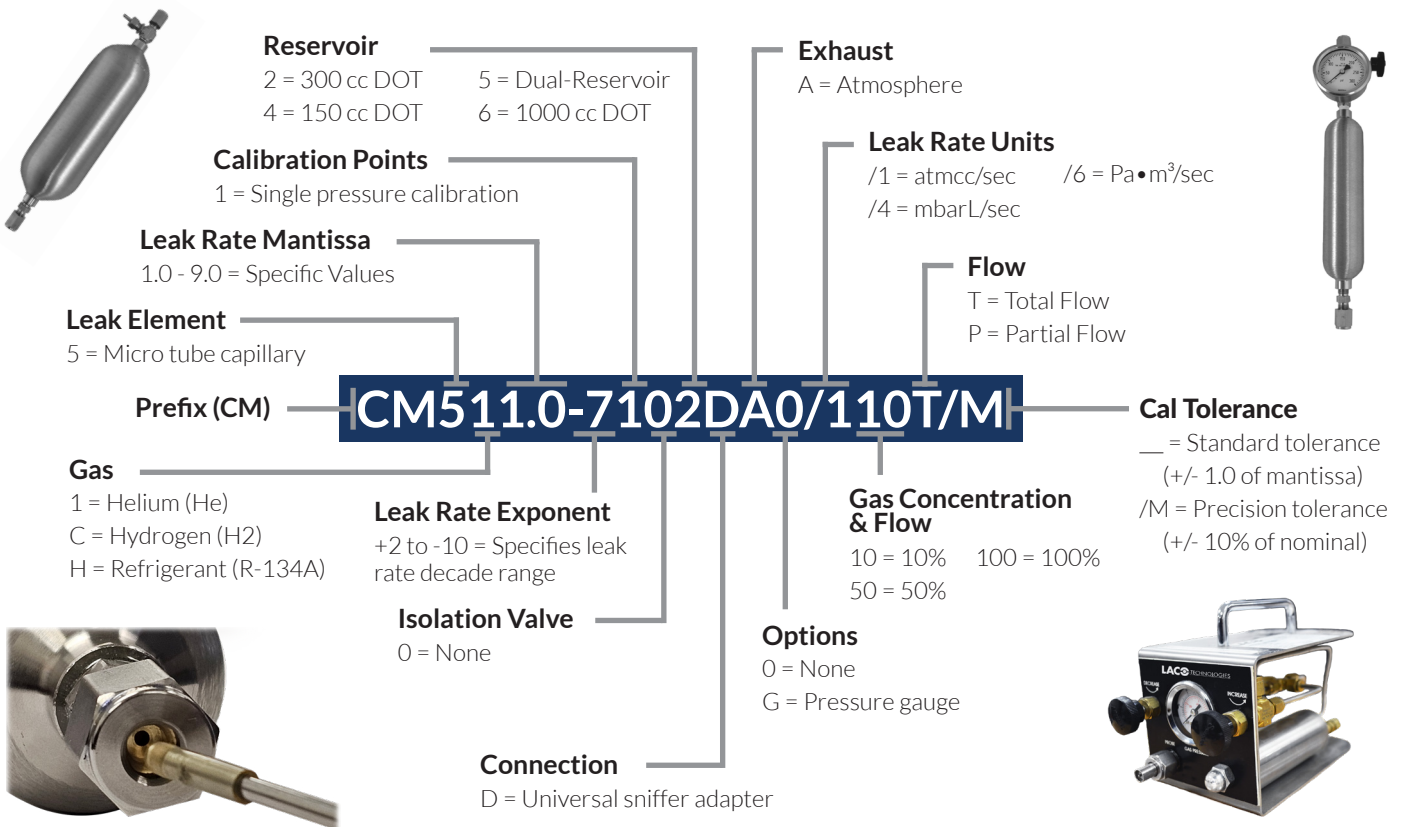
SNIFFER LEAK STANDARDS

Applications: LACO's sniffer leak standards are widely employed for the calibration of sniffer leak detectors, sniffer leak testing systems/processes, and refrigerant leak detectors.

FEATURES

- Leak exhaust condition: atmosphere
- Helium, hydrogen, or refrigerant gases
- Reservoir sizes from 115 cc to 1000 cc
- High accuracy, customized sniffer probe outlets
- Open style design options

SNIFFER LEAK STANDARD PART NUMBER MATRIX



This matrix includes standard options for our reservoir leak standards. LACO offers many custom designs. Contact us with your requirements.



CUSTOM DESIGNS



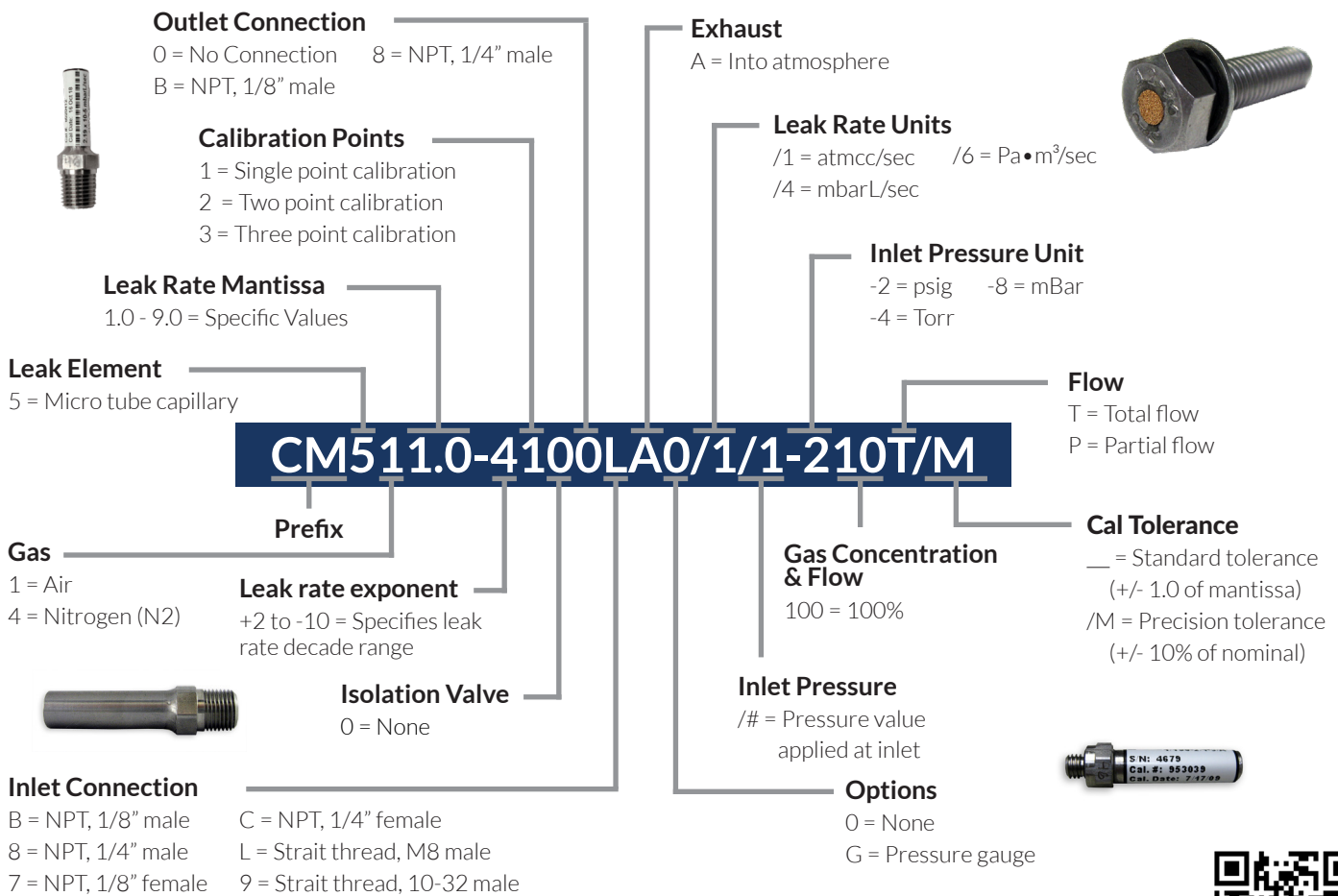
AIR LEAK STANDARDS

Applications: LACO's air leak standards are widely employed for the calibration of air leak testers, and air leak testing systems or processes.

FEATURES

- Leak exhaust condition: atmosphere
- Air or N2 gases
- Multiple inlet and outlet connection options
- High pressure options

AIR LEAK STANDARD PART NUMBER MATRIX



This matrix includes standard options for our reservoir leak standards. LACO offers many custom designs. Contact us with your requirements.



CUSTOM DESIGNS



CUSTOM LEAK STANDARDS

Within each category of leak standards, LACO offers custom design options to meet your process needs. We specialize in high pressure leak standards and small open style leaks that imitate actual part geometry. These leaks are used for system calibration and validation by replacing the actual test parts. We can use almost any gas to calibrate your leak standard and meet your strict criteria.

SIMULATED PART LEAK STANDARDS

LACO will custom design a leak standard to one of your parts or design a reservoir to mimic it, resulting in a simulated part. We can make your simulated parts “pass” or “fail” your pre-defined criteria. This allows you to:

- Test your part on various leak test systems
- Validate your testing procedures
- Increase confidence in your testing capabilities



CUSTOM SIZE LEAK STANDARDS

LACO will use your specifications to create custom size and/or shape leak standards expertly engineered for your unique application.



HIGH PRESSURE LEAK STANDARDS

LACO's high pressure leak standards allow you to calibrate high pressure systems ranging from 500 psi to 5000 psi or higher. These high pressure leak standards are critical for the following applications:

- Fuel injectors
- Aerospace
- Oil and gas pipelines
- Hydraulic systems
- High-pressure vessels



CUSTOM CONNECTION FITTINGS

LACO has many options for connection fittings on your calibrated leak standard. These connections allow you to integrate your leak into your system for easy calibration. Connection options include:

- NW flanges (16, 25, or 40)
- NPT (1/8" or 1/4" male or female)
- Staubli 1/8" quick disconnect
- Straight thread (M8 male or 10-32 male)
- Swagelok (1/4")
- Sniffer adapter
- Any custom or unique fitting requested



MORE INFO