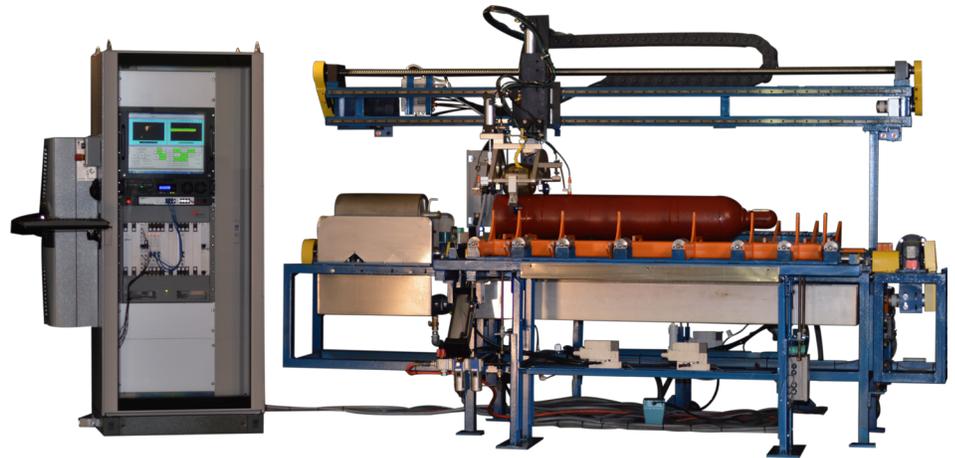


Cyl-Sonic Industrial Cylinder Inspection System

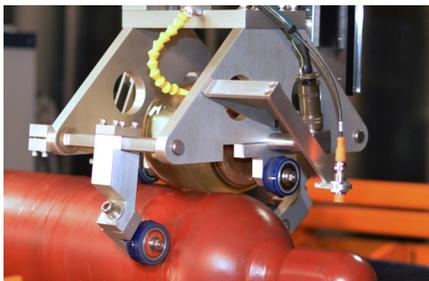


Key Features

- Ultrasound Examinations of Cylinders with 4" to 10" outside diameters up to 72" long
- Meets all Regulatory Requirements
- Nine channel Rolling Search Unit
- HD Digital Signal Processing Platform
- Stage for Calibration Cylinders
- Couplant Reclamation
- Length Test Verification
- Fully automated and integration with:
 - Database Bar-coding
 - Surface blasting
 - Painting
 - Marking



Nordco 9 Channel Inspection Wheel



Length Test Verification (LTV) Sensors ensure Ultrasonic Examination over the full cylinder length

Flaw Testing, flawlessly done

The Cyl-Sonic Digital Industrial System scans through paint and most clear coatings to detect potential pits, cracks, corrosion and gouges. In addition, the system measures and detects lost cylinder wall thickness as well as identifies undesirable moisture inside the cylinders.

Wheel Probe Technology

The ultrasonic wheel probe includes nine complementary high-frequency transducers - the most integrated transducers in one unit in the industry - that search for flaws in traverse, longitudinal and oblique directions. This ensures 100% coverage of required exam volume and area. The four oblique transducers excel in detecting any moisture droplets inside cylinders.

Safer for Operators and Environment

Unlike hydrostatic testing methods, ultrasonic examination eliminates the need to remove hazardous gases from cylinders, helping protect both your operators and the environment. The method does not require valve or O-ring removal, so there is less need for valve replacement as well as reduced cylinder neck thread damage.

Ultrasonic examination also eliminates the need to introduce water into the cylinders, helping prevent product contamination and elimination or minimizing the number of post-re-qualification cylinder treatment processing steps.

One Machine, Many Cylinder Types

The Cyl-Sonic Industrial system handles a wide range of outside diameters, lengths and materials which means you can inspect most cylinder types using a single machine. A built in calibration cylinder stage, which can be configured to the left or right side of the machine, allows for automated and efficient cal-in and cal-out procedures.

Estimated System Throughput

Cylinder Model	Outside Diameter	Length w/o Valve and Cap	Description
Medical E (3AL)	4.3" (109 mm)	25.75" (654 mm)	27 to 30 cylinders/hour (operator dependent)
20 (3AA)	5.25" (133 mm)	14" (356 mm)	48 to 60 cylinders/hour (operator dependent)
300 (3AA)	9.25" (235 mm)	55" (1397 mm)	27 to 30 cylinders/hour (operator dependent)

Product Specifications

Category	Specification	Value
General	Length	10' 10" (3302 mm)
	Width	3' 10" (1168 mm)
	Height	7' 1" (2159 mm)
	Weight	~4600 lbs (2087 kg), includes control cabinet but no cylinder tables
Cylinder Inspection	Tested Products	Steel (DOT 3A and 3AA), Aluminum (DOT 3AL) and other exemption steel cylinders per US DOT and ISO 4606 & 10461 specifications
	Regulatory Requirements	Complies with cylinder re-qualification requirements of US Department of Transportation (SP14920), Transport Canada (SU 10807) and ISO 10461 & 6406
	Diameter Range	4" to 10" (102 mm to 267 mm) outside diameter
	Wall Thickness	0.080" to 1.0" (2 mm to 25.4 mm)
	Length	11" to 72" (279 mm to 1524 mm)
	Exam Coverage	110% with a 0.25" (6 mm) helix
	System Performance	98%+ system uptime
Utilities	Configurations	Up-Enders/Down-Enders for loading/unloading, Staging Tables
	Electric	220/110 VAC, 60 Hz, 50A
Optional Equipment	Pneumatic	100 psi (6.9 bar)
	LTV	Length Test Verification sensors to ensure examination over the entire cylinder length

Saves Time, Lower Costs and Productivity through Automation

The Cyl-Sonic Industrial saves on personnel costs. Since operators don't need to spend time drying and re-valving the cylinders, daily production levels can be much higher. The cost per cylinder test is lower for UE testing than hydrostatic testing.

To meet your high-volume, high-productivity needs, the system includes optional decks or tables that allow staging and simultaneous loading/unloading of cylinders while the automated testing process continuously operates. Pneumatically operated up-enders and down-enders assist with the handling of large cylinders.

Calibration Standards ensure Accuracy

Each system uses calibration cylinder standards with simulated flaws. This allows accurate comparison testing against known simulated flaws.

Software Control and Record Retention

The Cyl-Sonic Cylinder Test application has been updated to support Nordco's high definition, digital control electronics. The software allows the operator to control all axis motion, including position, rotation, and sensitivity. Calibration setups are stored and reused. The software displays real-time scanning test results showing the locations of any detected flaws; the system also alerts the operator about a cylinder's pass/fail status.

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