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SCS Prover®

The patented **SCS Prover®** achieves the highest performance and most accurate results from liquid meters. A uniquely designed Straight Calibrated Section allows the sphere to move smoothly through the calibrated section without disrupting the flow. Expert design meets precise fabrication. The **SCS Prover®** is cost-efficient and easy to service. WFMS is synonymous with quality, accuracy, and repeatability in every prove with the **SCS Prover®**.



The SCS Prover® is ideal for manufactured pulse meters like Coriolis and Ultrasonic, and low pulse output meters like the Helical Turbine because the flow rate is consistent as the ball passes from one sphere detector to the other.

In the field, prover repeatabilities of 0.01% have been achieved at full flow on a Coriolis Meter, in five consecutive round trips of the sphere.

U.S. PATENT NUMBERS
8,505,355
9,316,527
9,581,486
and other patents pending

On launchers tipped 2 degrees or more, bleeding out the air for proving is easier as it accumulates at the high point.

WFMS® sizes the launchers to limit the velocity around the sphere so the sphere is not damaged while it is in the launching chamber.

Prover Spheres last longer because the lower inflation of the sphere, which is possible in a straight calibrated section, causing less ball to piping friction.

Tipping the launcher insures a tight seal on the sphere to the calibrated section opening, giving the advantage of vertical launchers in a horizontal orientation.

The Straight Calibrated Section can be honed easily and precisely for use with non-lubricating fluids, or fluids that are not compatible with internal coatings.

Long concentric reducers are used on the larger size SCS Prover® to insure sphere launch at low flows including water draws.



Machined flanges and/or alignment pins are not needed to align the flanges on an SCS Prover®. This maintains the ASME integrity on all flanges.

The minimum flow of the SCS Prover® is unlimited for lubricating fluids, and improved for non-lubricating fluids.

Tipping the launchers eliminates the need to completely drain the Prover for inspection of the sphere. A tattletale valve can be installed to verify the liquid level is below the launcher opening.

A borescope can be used to inspect the entire calibrated section of the SCS Prover® from either or both ends of the calibrated section.

The Straight Calibrated Section can be internally inspected without performing a water draw, saving time and water draw cost.

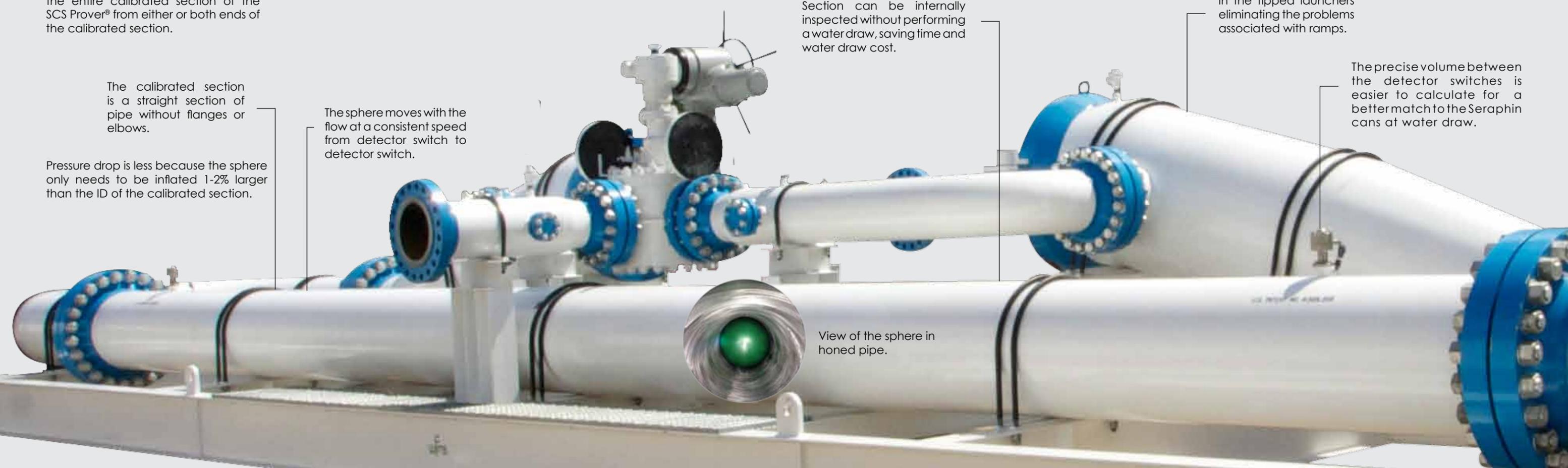
Ramps are not needed in the tipped launchers eliminating the problems associated with ramps.

The calibrated section is a straight section of pipe without flanges or elbows.

The sphere moves with the flow at a consistent speed from detector switch to detector switch.

The precise volume between the detector switches is easier to calculate for a better match to the Seraphin cans at water draw.

Pressure drop is less because the sphere only needs to be inflated 1-2% larger than the ID of the calibrated section.



View of the sphere in honed pipe.

TECHNICAL SPECIFICATIONS:

CONNECTIONS

- 4" through 42" calibrated section
- ANSI Class 150 through 900 flanged

MAXIMUM WORKING PRESSURE

- To 2,220 psi (15,307 kPa) at 120°F (38°C)

TEMPERATURE RANGE

- Standard: -20°F to 200°F (-31°C to 94°C)
- Optional: Consult factory

STANDARDS:

- API Chapter 4 - Manual of Petroleum Measurement Standards Proving Systems
- API Chapter 5 - Manual of Petroleum Measurement Standards
- API Chapter 12 - Calculation of Base Prover Volumes by Waterdraw Method
- NEC National Electric Code Class 1, Division 1 and Division 2
- ISO 9001: 2008
- NIST Traceable
- ASME B31.4
- ASME B31.3
- ATEX
- ISO 7278
- NACE
- ASME Section VIII, Div. 1

PORTABLE SCS PROVER®



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