

Flow Measurement



The Canalta Dual Chamber Orifice Fitting

Exceptional Value means adding to your Bottom Line without sacrificing Quality, Service or Performance

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The Canalta Dual Chamber Orifice Fitting is a high quality, high

accuracy orifice fitting manufactured in a wide selection of sizes and materials. Proven measurement principles and field repairability make the Dual Chamber Orifice Fitting a reliable, cost-effective solution to your flow measurement needs. These units are built to meet or exceed ASME and ANSI specifications, as well as to comply with the requirements of the latest editions of AGA 3 / API 14.3 and ISO 5167-1. Available in Flangeneck, Flange x Flange and Weldneck configurations.

No matter the application, your process will benefit from Canalta's proven reliability, and you can improve your bottom line without sacrificing quality, service or performance.



Our comprehensive **Quality Management System** includes full function, hydrostatic and pneumatic pressure testing to prevent imperfect fittings from reaching service. Standard testing comes at no extra charge and includes verifiable pressurization to 150% of working pressure. Additional inspections, such as radiography, ultra sonic and liquid dye penetration - are also available.



Our unit-specific **Documentation** packages include hydrostatic, seal and function test results as well as material test reports. An AGA 2000 Inspection Report is submitted with every fitting and includes bore tolerance and roughness tests, orifice eccentricity, seal protrusion, plate sealing tests and other critical details.

Third party inspection and reporting is available upon request.



Canalta applies a standard coating to all Dual Chamber Orifice Fittings that includes a non-lift oxide primer and fast-drying enamel finish in Canalta Grey with burgundy top. Custom coatings for special environments - including maritime, humid, high temperature and others - custom colours and primer only applications are also available.

Custom-designed *Meter Runs* and *Flow Conditioning Solutions* that fulfill all of your metering needs can be fitted to any Dual Chamber Orifice Fitting model. Fabrication within the guidelines of ASME 16.34 and ASME 16.5 guarantees exceptional safety, accuracy and reliability. Options are available for:

- Flow Conditioning Accessories
- **Tube Ends**
- **Downstream Outlets**
- Flange Facings

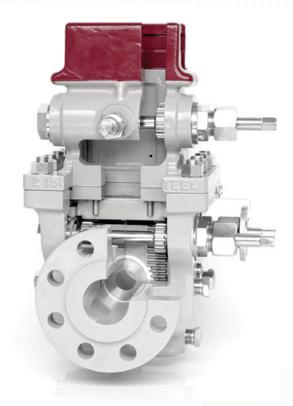
- Stress Relief & Special Testing
- **Paint & Special Coatings**
- Special Gaskets & Seals





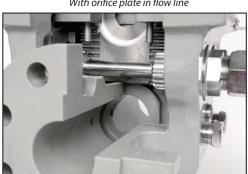
Each unit features fully accessible, field adjustable eccentricity of the orifice plate from the exterior of the fitting. Tamper-proof sealing is done on request.

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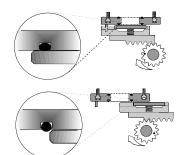




With orifice plate in flow line



With orifice plate out of flow line



The **Soft Seat Valve Seal** is available for all dual chamber models. Effective in all scenarios, but particularly suited to low pressure applications, this unique design enables a bubble-tight seal between the upper and lower chambers without the need for frequent lubrication. The specially machined seal channel helps prevent O-ring dislocation, and the O-ring seals incorporated are available in a wide variety of compositions.

HNBR O-ring Seals on both the body and seal bar come standard with all Canalta Dual Chamber Orifice Fittings. This feature eliminates nuisance gasket maintenance and clamping bar screw breakage, while providing superior sealing capability. The O-rings incorporated are standard shelf sizes and can be supplied in a wide variety of compositions. Gaskets are also available and can be used when preferred or required.



Parts matter, whatever your service environment.



Our standard zinc-plated 4130 carbon steel internals offer superior corrosion protection and resistance to sulfide or hydrogen induced cracking, providing reliability and performance over a long service life. These parts conform to NACE MR0175 / ISO 15156:2003 specifications

For extreme corrosive applications, such as wet H₂S service, 316 stainless steel internals are available to protect against general and localized corrosion.

Canalta has endeavoured to ensure that our parts and accessories offerings are interchangeable with the current industry standard orifice fitting brand, making Canalta Orifice Fitting internals suitable for re-builds and re-works of our competitors' product lines.



TECHNICAL SPECIFICATIONS

Design Orifice fittings supplied in Canada are built in accordance with the

ABSA Quality Control Program and carry a CRN registration number.

Industry Canada Approval Number AF-0014.

In compliance with ASME 16.34 and ASME 16.5, ASTM specifications,

AGA-3 Latest Edition and ISO-5167.

Internal Parts AISI 4130 Carbon Steel, 316 or A351 CF8M Stainless Steel

Sizes and ANSI Class 2" through 12" 150 through 2500 ANSI raised face flange

14" through 16", 150 through 1500 ANSI raised face flange 18" through 30", 150 through 600 ANSI raised face flange 600, 900, 1500 and 2500 flanges also available in RTJ face flange

U/S D/S Connections Flangeneck design (weldneck U/S, flange D/S)

Flange x flange Weldneck both ends

Sealing Compounds Seal bar - HNBR O-ring standard, gasket optional

Shafts - Teflon packing standard, HNBR O-ring optional Inner valve - Grease seal standard, HNBR O-ring optional

Orifice plate - Type "K" 2000 Edition formed HNBR seal on a 316 SS retainer ring Dual Ring HNBR O-rings standard on a 316 SS retainer ring assembly

Teflon Snap Seal two-piece virgin Teflon assembly

Line Bore I.D. Tolerance In conformance with AGA-3 and ISO-5167 Latest Editions

Eccentricity Repeatability In conformance with AGA-3 and ISO-5167 Latest Editions

Tap Connections Two 1/2" NPT per side standard, two 1/2" NPT additional per side optional (TT)

2" and 3" fitting sizes center bored to .375" inside diameter 4" and larger sizes center bored to .500" inside diameter

Tolerance +/- 1/64"

Orifice Plate Seal Gap 2" through 6" = 0.562", 8" through 14" = 0.688", 16" through 20" = 0.813",

24" through 30" = 0.875"

Operating Shaft Location Left hand mount standard on sizes 2" through 14"

Dual operation on sizes 16" and larger

Operating Temperature Standard at -20° to 100° F, optional -40° to 1200° F

Operating Position Vertical or horizontal

Conformance

All fittings come standard with a documentation package including hydro-test, function test, inner valve seal test, quality control inspection and material test reports. Trace ability is maintained in accordance with the ISO-9001 Quality Control Program. The fittings are manufactured within the guidelines of ASME 16.34 and ASME 16.5. When required, radiography, stress relief, ultra-sonic and liquid dye penetration tests can be performed with the relevant report submitted.

Reporting

An AGA 2000 inspection report is included with the purchase of every fitting. The documented tests include:

- I.D. Bore Tolerance
- Tap Communication
- Orifice Eccentricity
- Instrument Tap Diameter
- Plate Seal Test
- Bore Inside Diameter
- Instrument Tap Location
- Seal Protrusion
- Bore Roughness



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