

# **SUPERCritical SCCO<sub>2</sub>**

PRESSURE REGULATORS, VALVES,  
AND GAS DELIVERY SYSTEMS

PREMIER  INDUSTRIES





**AMERICAN MADE.  
INNOVATIVE.  
RELIABLE.  
ECONOMICAL.  
PREMIER.**

PREMIER  INDUSTRIES



# PREMIER REGULATORS, VALVES, & GAS DELIVERY SYSTEMS FOR USE WITH SUPERCRITICAL SCCO<sub>2</sub>

## INNOVATIVE DESIGNS FORMULATED FOR SUPERCRITICAL SCCO<sub>2</sub>.

We have been working in conversation with supercritical systems engineers to optimize a new series of regulators and valves for use in supercritical SCCO<sub>2</sub> applications.

Premier Industries SCF Series regulators and valves are elastomer free, designed to stand up to the aggressive, solvent-like qualities of supercritical fluids like SCCO<sub>2</sub>, while providing reliable and precise pressure regulation in the most demanding application conditions.

## WE'RE EXPERIENCED AND RESPONSIVE.

We manufacture and test all our equipment to meet rigid industry specifications while keeping in mind the distinctive needs and expectations of our customers.

Our customers know, if they have a question, they can pick up the phone and give us a call. No automated messaging systems here. We have a team of engineers with over 100 years of regulator design experience ready to assist you. We are always pushing for more sophisticated processes, working on leading-edge designs, while striving to remain personable and responsive.

## PROPRIETARY SEALS DESIGNED FOR USE WITH SUPERCRITICAL SCCO<sub>2</sub>.

Supercritical processes are tough on seals. That's why we developed a proprietary sealing system that uses elastomer-free polymers, specially formulated for use in dynamic conditions.

Our unique sealing system allows us to fit a variety of Premier Industries regulators and valves for use in supercritical applications. So, whether you are looking for a pressure reducing or a back pressure regulator, a high pressure or a low pressure regulator, our team here at Premier would be happy to work with you to find a Premier SCF Series regulator for your application.

## FINDING A PRODUCT TO SUIT YOUR APPLICATION.

Premier SCF regulators are offered in a variety of materials (with varying weights, strengths, degrees of corrosion resistance, etc.), flow capacities, and inlet/outlet pressure ranges. With the flexibility of optional port alignments, port sizes/types, relief and shut off valves, etc. Premier SCF regulators provide maximum versatility and compatibility for your application.

Contact a Premier Industries representative to configure a regulator to suit the demands of your application.



## PROPRIETARY SEALS & ELASTOMER FREE DESIGNS

**SUITED FOR THE  
AGRESSIVE, SOLVENT-  
LIKE QUALITIES OF  
SUPERCRITICAL SCCO<sub>2</sub>**

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Products for pressure ratings up to  
to 15000 PSIG (1034.21 BAR).

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Optional laser etched parts.

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Elastomer free designs

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Proprietary seals suited for  
supercritical SCCO<sub>2</sub> applications

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A variety of mounting options to  
integrate seamlessly into your  
desired application: surface  
mounting, panel nuts, panel  
mounting brackets, flanges etc.

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Optional laminar flow clean bench  
assembly, testing, and packaging.

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Dome and air-loaded regulators  
for use with electro-pneumatic  
controllers for precision and  
automation.

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Optional material certifications.





# PRODUCTS FOR SUPERCRITICAL SCCO<sub>2</sub> APPLICATIONS

THIS IS A SMALL SELECTION FROM  
OUR PRODUCT LINE.


PLEASE CONTACT US WITH INTEREST OR  
VISIT OUR WEBSITE FOR A BROADER  
PRODUCT SELECTION.


**WWW.PREMIERIND.US**


**763.786.4020**


*We answer the phone,  
your call won't go into a black hole!*




SCF 3100 SERIES	FEATURES	MAX INLET PRESSURE	FLOW CAPACITY	BODY MATERIAL
	<ul style="list-style-type: none"> <li>Back pressure regulator</li> <li>Piston sensed</li> <li>Optional heater core holes</li> <li>P/N: 30 -10066SCMB</li> </ul>	10000 psig / 689.5 bar	Cv: 0.03 Cv: 0.06 Cv: 0.14 Cv: 0.20	316 Stainless Steel

SCF AO SERIES	FEATURES	MAX INLET PRESSURE	FLOW CAPACITY	BODY MATERIAL
	<ul style="list-style-type: none"> <li>Air operated</li> <li>Normally closed</li> <li>100 -150 PSIG (6.89-10.34 BAR) actuation pressure</li> <li>P/N: 70 - 00316</li> </ul>	10000 psig / 689.5 bar	Cv: 0.80	316 Stainless Steel

SCF 3100AL SERIES	FEATURES	MAX INLET PRESSURE	FLOW CAPACITY	BODY MATERIAL
	<ul style="list-style-type: none"> <li>Back pressure regulator</li> <li>Piston sensed</li> <li>Compatible with electro-pneumatic controllers</li> <li>P/N: 30 -10205SC</li> </ul>	10000 psig / 689.5 bar	Cv: 0.03 Cv: 0.06 Cv: 0.14 Cv: 0.20	316 Stainless Steel

SCF 3123 SERIES	FEATURES	MAX INLET PRESSURE	FLOW CAPACITY	BODY MATERIAL
	<ul style="list-style-type: none"> <li>Back pressure regulator</li> <li>Piston Sensed</li> <li>Low-torque hand knob</li> <li>P/N: 30 -10223SC</li> </ul>	15000 psig / 1034.2 bar	Cv: 0.06	316 Stainless Steel

SCF 3123AL SERIES	FEATURES	MAX INLET PRESSURE	FLOW CAPACITY	BODY MATERIAL
	<ul style="list-style-type: none"> <li>Back pressure regulator</li> <li>Piston sensed</li> <li>Compatible with electro-pneumatic controllers</li> <li>P/N: 30 -10223SCAL</li> </ul>	15000 psig / 1034.2 bar	Cv: 0.06	316 Stainless Steel



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