

CONCOA Calibration Regulator Innovation



About CONCOA

- CONCOA Founded 1987
 - Family owned
 - Gas people
- Largest Independent Manufacturer of Pressure Controls & Manifolds
 - Virginia Beach, VA USA
 - Utrecht, The Netherlands
 - Kuala Lumpur, Malaysia
 - Brazil and Australia
 - Taiwan
- Worldwide Support



420/430/515 SilcoNert 2000 Inert Coating



420/430/515 SilcoNert 2000 CONCOA ADVANTAGE

- All CONCOA SilcoNert 2000 coated regulators and manifolds are assembled and tested at the factory
 - Covered by the Factory Warranty
 - Not an aftermarket option
- CONCOA adjusts the tolerance stack up of all mating part dimension's to accommodate the coating
 - Ensures a consistent leak tight seal
- CONCOA has all whetted parts coated to include CGA fittings, hoses, regulator parts, diaphragm valves and compression fittings.
 - Maintains system inertness from the bottle to the sample lines.



420/430/515 SilcoNert 2000 Characteristics

- SilcoTek patented process yields 120-500 nm thick interstitial functionalized Si coating with an adhesive (Pull) strength of 400 psi
 - Excellent for tubing and diaphragms because it won't flake
 - 2 100,000ths of an inch thick
- Coating operating conditions
 - Temp range -196°C to 450°C
 - pH 0 to 8
- CVD process limitations
 - Can't coat copper, magnesium, Nickel, gold, silver
 - Max H 64" x W 30"



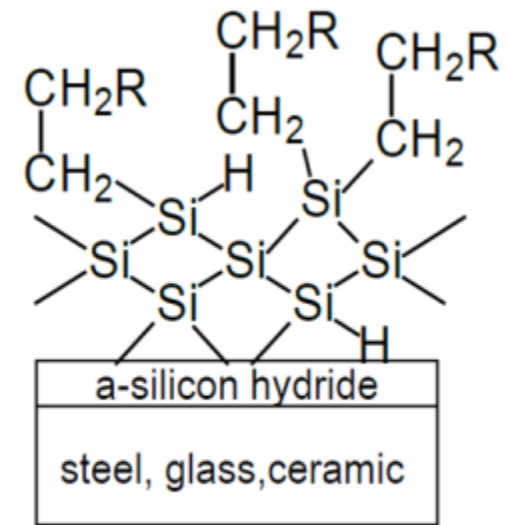
Where to Use It

- Compatibility
 - For Sulfur, mercury, ammonia compounds
 - Not for Bases or Hydrofluoric acid (HF)
 - Where low reactivity and chemical inertness is imperative
- Supply cylinder type
 - High pressure
- Typical applications
 - CEMS
 - Chemical processing
 - Stack & Flare emissions
 - Insertion tubes
 - Calibration gas tubing



How it Works

- Chemical Vapor Deposition (CVD) deposit of Si-H initial layer
 - 1020 single thin layer of amorphous Si
- 2000 has a functionalized Ethyl group covalent bonded to initial Si layer
 - Remove H from ethane
 - Second layer of Si-CH₂-CH₂-R
 - Carbon's valence electrons are tied up thereby less reactive
- Yields chemically inert surface



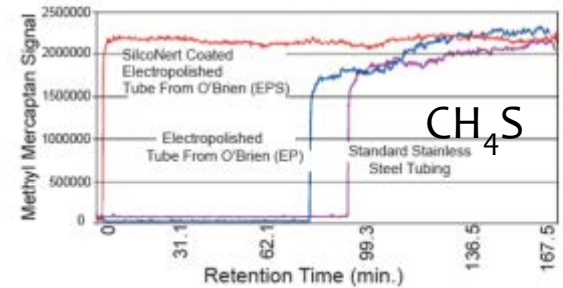
(SN2000)

Silconert Benefits

- Fast detector response
 - Real time analytical accuracy which improves in-process batch quality
 - CH₄S Methyl Mercaptan doesn't react
- Ensures EPA protocol gas component stability
 - Avoid relative accuracy test audit (RATA) related fines for out of calibration equipment
- It's hydrophobic
 - Enhances the performance of moisture analyzers
 - Easy to purge leads to less corrosion
 - Dry-down 100' of 2000 treated ss tubing wetted with 1ppm moisture in 35 minutes
 - Non-treated ss tubing took 175 minutes

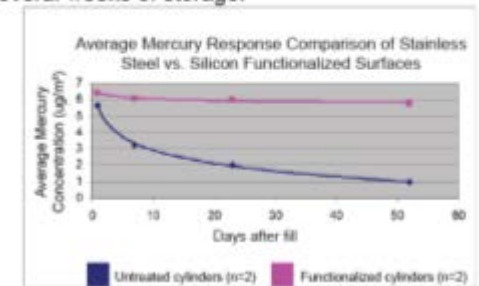
INERT TO SULFURS

Tubing coated by SilcoNert 2000® provides nearly instant sample response, requiring no "priming" of the analytical system.



INERT TO MERCURY

SilcoNert 2000® provides sample components excellent stability for mercury samples, even after several weeks of storage.



How To Order a Regulator

- 1. Select Regulator series 420 or 430
- 2. The part number begins with the series number
- 3. Choose configuration from each column
- 4. Select desired inlet connection
- 5. Add related option notations after inlet
- 6. Proceed to price booklet or call CONCOA



Ordering Information

420	A	B	C	D	-CON	Options	
Series 420	Outlet Pressure	Outlet Gauge	Inlet Gauge	Outlet Assemblies	Assembly/Gauges	Inlet Connections	Installed Options
	1: 0-15 PSIG (0-1 BAR)*	30"-0-30 PSIG/ -1-0-2 BAR)	0: None	0: 1/4" FPT port	0: Six-port bare body	000: 1/4" FPT	B: Protocol alarm station with pressure switch gauges
	2: 0-50 PSIG (0-3.5 BAR)	30"-0-100 PSIG/ -1-0-7 BAR)	3: 0-4000 PSIG/ 0-275 BAR	2: 1/4" tube fitting	1: Six-port cleanroom assembly (PSIG/kPa gauges)	TF2: 1/8" tube	C: Protocol switchover station*
	3: 0-100 PSIG (0-7 BAR)	30"-0-200 PSIG/ -1-0-14 BAR)	5: 0-1000 PSIG/ 0-70 BAR	3: Diaphragm valve 1/4" tube fitting	2: Six-port cleanroom assembly (BAR/PSIG gauges)	TF4: 1/4" tube	E: Protocol alarm station with intrinsically safe transducer for hazardous environments
	4: 0-250 PSIG (0-17 BAR)	0-400 PSIG/ 0-27 BAR)	6: 0-300 PSIG/ 0-21 BAR	6: 1/8" tube fitting	6: Six-port mirror image (PSIG/kPa gauges)	M06: 6mm tube	H: Protocol switchover alarm station with pressure switch gauges
	5: 0-500 PSIG (0-34 BAR)	0-1000 PSIG/ 0-70 BAR	7: 0-400 PSIG/ 0-27 BAR	8: Diaphragm valve 1/8" FPT	7: Six-port mirror image (BAR/PSIG gauges)	CGA DIN 477 BS 341 and others available	J: Protocol alarm station with standard transducer for non hazardous environments
	7: 0-150 PSIG (0-10 BAR)	30"-0-200 PSIG/ -1-0-14 BAR)	8: 0-6000 PSIG/ 0-415 BAR*	9: Diaphragm valve 1/4" FPT	A: Four-port bare body		K: Protocol switchover alarm station with standard transducer for non hazardous environments
	<i>*Not available with 4500 PSIG (310 BAR) maximum inlet pressure</i>	<i>*Maximum inlet pressure 4500 PSIG (310 BAR) with PCTFE Seat CAPSULE®</i>		M: 6mm tube fitting	B: Four-port cleanroom assembly (PSIG/kPa gauges)		M: Protocol station
S: Diaphragm valve 6mm tube fitting				C: Four-port cleanroom assembly (BAR/PSIG)	Q: Protocol purge station*		
				D: Four-port mirror image (PSIG/kPa gauges)	<i>*Not available with 4500 PSIG (310 BAR) max inlet pressure</i>		
				E: Four-port mirror image (BAR/PSIG gauges)			

420

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-660

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CONCOA Quality Recognitions

- * ISO 9001:2008 – Quality System Registration
- * EN 46001:1996 – Medical Device Annex
- * CRN – OH5216.56342 – Pressure Devices
- * UL 252 – Compressed Gas Regulators
- * UL 913 – Intrinsically Safe Apparatus
- * EN 738 – Pressure Regulators
- * Cleanroom Certifications



Discussion



CONCOA Sampling Regulator Innovation

