Automatic Changeover Regulators and Systems

Manifolds/Changeover Regulators

DCHOV1908X012

ACS012 - Low Flow Changeover Regulator

- Maximum inlet pressure: 400 or 3500 psig / 27.6 or 241 bar
- Four delivery pressures from 100 to 250 psig / 6.9 to 17.2 bar
- Designed to provide a continuous flow of gas for applications requiring stored gas supplies
- Available in 316 Stainless Steel, Brass, or Nickel-plated Brass
- Based on Tescom's field-proven 44-2200 Regulator
- Mounting bracket is standard

CS-2200 - Low Flow Changeover System

- Maximum inlet pressure: 3500 psig / 241 bar
- Four maximum delivery pressures from 25 to 150 psig / 1.7 to 10.3 bar
- Designed to provide a continuous flow of gas for applications requiring stored gas supplies
- Available in 316 Stainless Steel or Brass
- Based on Tescom's field-proven 44-2200 Regulator
- Mounting bracket is standard

ACS3200 - High Flow Changeover Regulator

- Maximum inlet pressure: 3000 psig / 207 bar
- Delivery pressure: 160/200 psig / 11.0/13.8 bar
- Available in 316 Stainless Steel or Brass
- Based on Tescom's field-proven 44-3200 Regulator
- Mounting bracket is standard

CR441800 - High Pressure Changeover System

- Maximum inlet pressure: 3500 or 6000 psig / 241 or 414 bar
- Seven maximum delivery pressures from 500 to 2000 psig / 34.5 to 138 bar
- Designed to provide a continuous flow of gas for applications requiring stored gas supplies
- Available in 316 Stainless Steel or Brass
- Based on Tescom's field-proven 44-1800 Regulator

ACS012

CS-2200

ACS3200

CR441800

Applications

- CO_2 for tissue and cell culture incubators supply
- Shielding and laser assist gases in metal fabrication (ACS3200 only)
- Analyzer carrier gas
- Laser cutting assist gas

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ACS3200 Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure
3000 psig / 207 bar

Outlet Pressure
160-200 psig / 11.0-13.8 bar

Design Proof Pressure
150% of maximum operating

Leak Rate
Internal: Bubble-tight
External: Designed to meet ≤ 2 x 10^{-8} atm cc/sec He

Operating Temperature
-40°F to 140°F / -40°C to 60°C

Flow Capacity
C_V = 1.2

MEDIA CONTACT MATERIALS

Body
316 Stainless Steel or Brass

Bonnet
Nickel-plated Brass

Valve Seat
PCTFE

Valve O-Ring
Viton®

Diaphragm
316 Stainless Steel

Spring
316 Stainless Steel

Remaining Parts
316 Stainless Steel

OTHERS

Gauges (3 standard)
316 Stainless Steel gauges with Stainless Steel regulators, Brass gauges with Brass regulators

Cleaning
CGA 4.1 and ASTM G93

Weight
10 lbs / 4.5 kg

Viton® is a registered trademark of E.I. du Pont de Nemours and Company.

TESCOM ACS3200 Series is a compact, lightweight high purity, high flow changeover system for specialty, corrosive, and pyrophoric gases. Diffusion-resistant metal diaphragm seal ensures gas purity and integrity. It provides continuous flow of gas from two pressure sources.

CS2200 Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure
3500 psig / 241 bar

Design Proof Pressure
150% of maximum rated

Leak Rate
Internal: Bubble-tight
External: Designed to meet ≤ 2 x 10^{-8} atm cc/sec He

Operating Temperature
-40°F to 165°F / -40°C to 74°C

Flow Capacity
C_V = 0.06

MEDIA CONTACT MATERIALS

Body
316 Stainless Steel or Brass

Bonnet
300 Series Stainless Steel or Brass

Valve Seat
PTFE

Diaphragm
316 Stainless Steel

Friction Sleeve
Inner: PTFE
Outer: 316 Stainless Steel

Spring
316 Stainless Steel

Remaining Parts
316 Stainless Steel (and Brass for Brass bodies)

OTHERS

Gauges (3 standard)
316 Stainless Steel gauges with Stainless Steel regulators, Brass gauges with Brass regulators

Connections
1/4" Female NPTF

Cleaning
CGA 4.1 and ASTM G93

Weight
5 lbs / 2.3 kg

TESCOM CS-2200 Series is a complete high purity changeover system which combines the changeover regulator and a line regulator into a compact wall mount system for specialty, corrosive, and pyrophoric gases. Diffusion-resistant metal diaphragm seal ensures gas purity and integrity. It provides continuous low flow of gas from two pressure sources.

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ACS012 Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure
400 or 3500 psig / 27.6 or 241 bar

Maximum Delivery Pressure
85/115, 135/165, 185/215, 235/265 psig
5.9/7.9, 9.3/11.4, 12.8/14.8, 16.2/18.3 bar

Design Proof Pressure
150% of maximum operating

Leak Rate
Internal: Bubble-tight
External: Designed to meet ≤ 2 x 10^{-8} atm cc/sec He

Operating Temperature
-40°F to 165°F / -40°C to 74°C

Flow Capacity
C_V = 0.06

MEDIA CONTACT MATERIALS

Body
316 Stainless Steel, Brass, or Nickel-plated Brass

Bonnet
300 Series Stainless Steel or Brass

Valve Seat
PTFE

Diaphragm
316 Stainless Steel

Friction Sleeve
Inner: PTFE
Outer: 316 Stainless Steel

Spring
316 Stainless Steel

Remaining Parts
316 Stainless Steel (and Brass for Brass bodies)

OTHERS

Gauges (3 standard)
316 Stainless Steel gauges with Stainless Steel regulators,
Brass gauges with Brass regulators

Connections
1/4" Female NPTF

Cleaning
CGA 4.1 and ASTM G93

Weight
5 lbs / 2.3 kg

Vespel® is a registered trademark of E.I. du Pont de Nemours and Company.

TESCOM ACS012 Series is a compact, lightweight high purity changeover system for specialty, corrosive, and pyrophoric gases. Diffusion-resistant metal diaphragm seal ensures gas purity and integrity. It provides continuous low flow of gas from two pressure sources.

CR441800 Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure
3500 or 6000 psig / 241 or 414 bar

Maximum Outlet Pressure Ranges
475/525, 575/625, 675/725, 775/825, 875/925, 975/1025, 1975/2025 psig
32.8/36.2, 39.6/43.1, 46.5/50.0. 53.4/56.9, 60.3/63.8, 67.2/70.7, 136/140 bar

Design Proof Pressure
150% of maximum operating

Leak Rate
Bubble-tight

Operating Temperature
-15°F to 165°F / -26°C to 74°C

Flow Capacity
C_V = 0.06

MEDIA CONTACT MATERIALS

Body
Brass, 316 Stainless Steel, or Nickel-plated Brass

Bonnet
300 Series Stainless Steel, Brass, or Nickel-plated Brass

Valve Seat
Vespel®

O-Ring
FKM

Remaining Parts
Brass and 300 Series Stainless Steel

OTHERS

Cleaning
CGA 4.1 and ASTM G93

Weight
3 lbs / 1.4 kg

TESCOM CR441800 Series is a compact, high pressure changeover system which combines the changeover regulator and a line regulator into a compact wall mount system for general purpose and industrial gases. It provides continuous low flow of gas from two high pressure sources.

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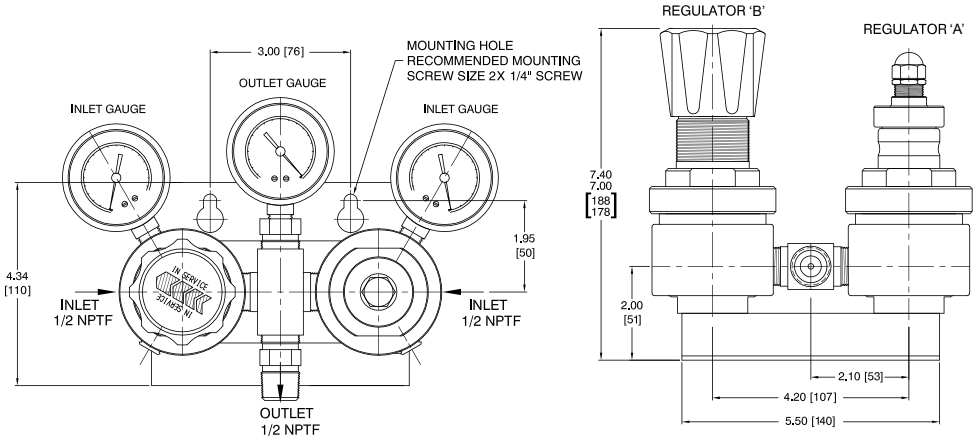
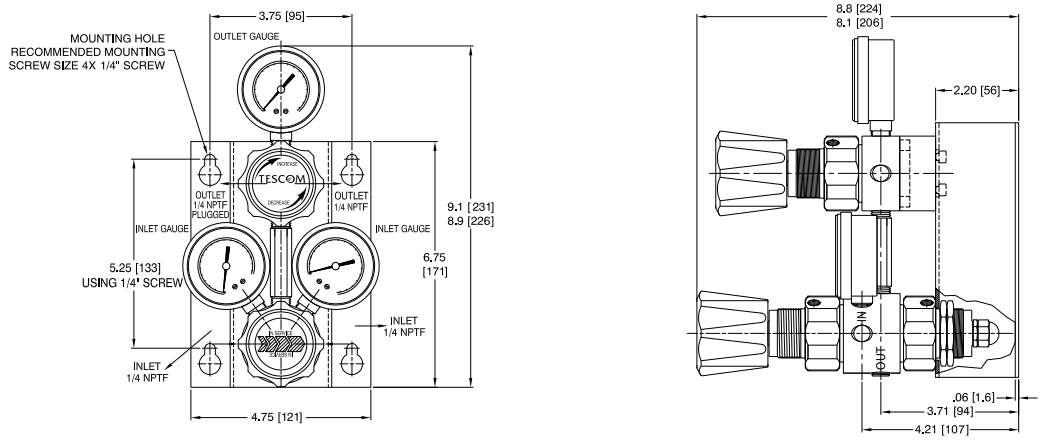
Automatic Changeover Regulators and Systems Drawings

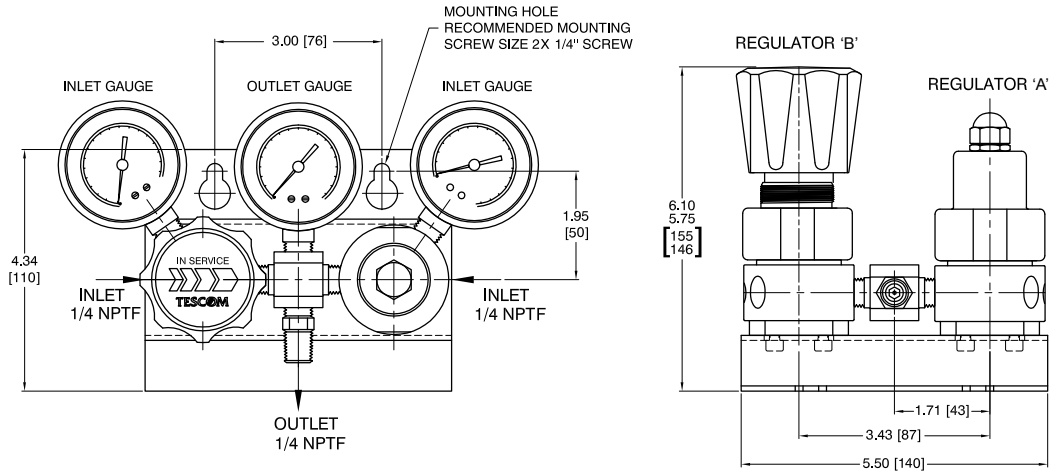
ACS3200 SERIES CHANGEOVER SYSTEMS (HIGH FLOW)



CS2200 SERIES CHANGEOVER SYSTEMS (LOW FLOW)



ACS012 SERIES CHANGEOVER SYSTEMS (LOW FLOW)



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

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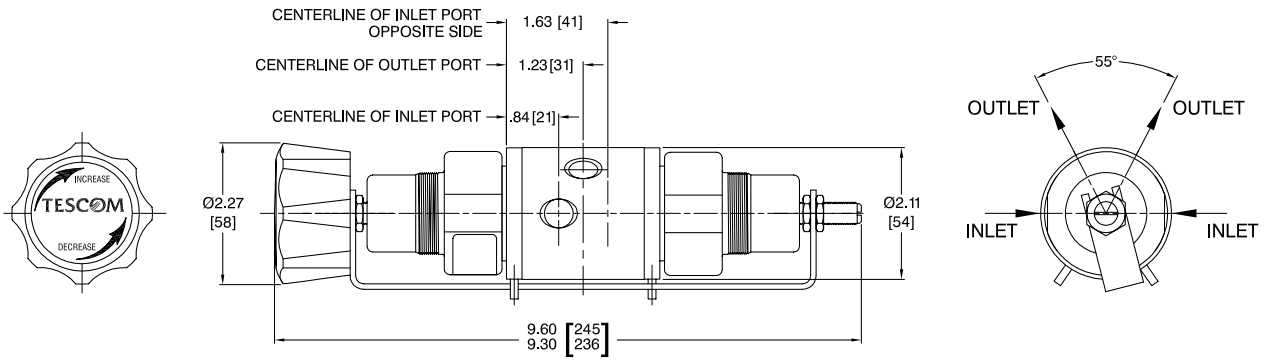
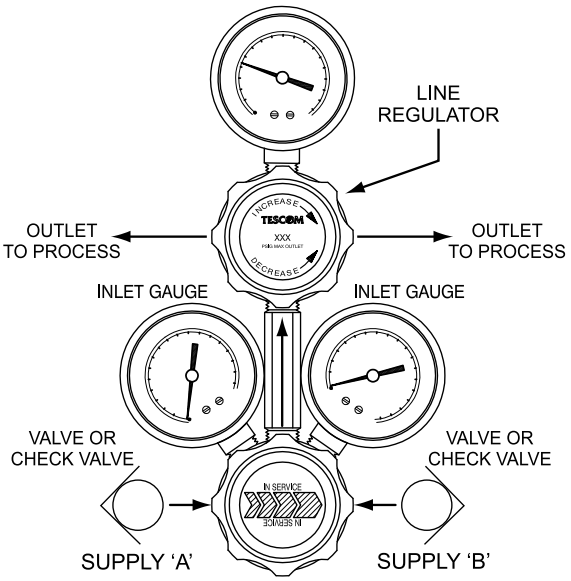
Automatic Changeover Regulators and Systems Drawings

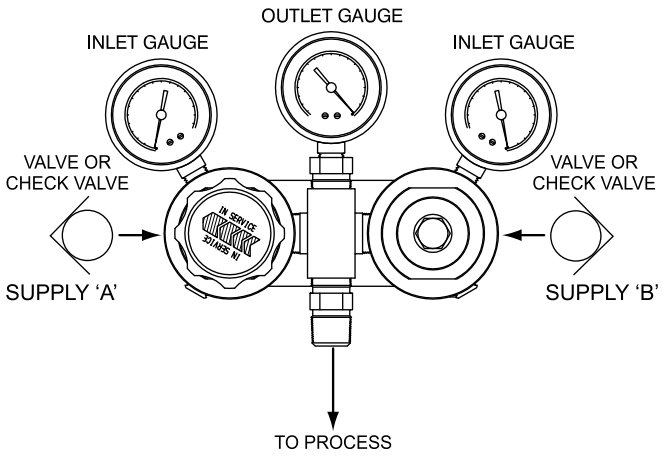
CR441800 SERIES CHANGEOVER SYSTEMS (HIGH PRESSURE)



BASIC FUNCTIONAL DESCRIPTION CHANGEOVER SYSTEMS



SINGLE BODY CHANGEOVER SYSTEM



TWO BODY CHANGEOVER SYSTEM

All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

When primary supply to the changeover regulator (supply 'A') is consumed, the secondary supply (supply 'B') feeds the line regulator and/or process. The line regulator supplies media to the process at the precise pressure required. By turning the changeover regulator handknob clockwise, supply 'A' can then be replenished. When supply 'B' is depleted, supply 'A' will then begin to feed the line regulator and/or process. With a counterclockwise turn of the changeover regulator handknob, supply 'B' can be replenished.

Automatic Changeover Regulators and Systems Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

ACS32 1 4 1 1

BASIC SERIES	BODY AND TRIM	OUTLET PRESSURE	GAUGE OPTION	MAXIMUM INLET PRESSURE
ACS32	**1 –** Brass **6 –** 316 Stainless Steel	**4 –** 160/200 psig 11.0/13.8 bar (optional 400 psig / 27.6 gauge)	**0 –** No gauges installed **1 –** Gauges installed	**1 –** 3000 psig 207 bar (optional 4000 psig / 276 bar gauge)

CS - 22 6 3 - 2 4 1

BASIC SERIES	BODY MATERIAL	OUTLET PRESSURE RANGES	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	MAXIMUM INLET PRESSURE
CS - 22	**1 –** Brass **6 –** 316 Stainless Steel	**0 –** 0-25 psig 0-1.7 bar **1 –** 0-50 psig 0-3.4 bar **2 –** 0-100 psig 0-6.9 bar **3 –** 0-150 psig 0-10.3 bar	**2 –** NPTF	**4 –** 1/4"	**1 –** 3500 psig 241 bar (with gauges) **2 –** 3500 psig 241 bar (no gauges)

ACS012 1 3 0 1

BASIC SERIES	BODY MATERIAL	PRESSURE SETTINGS	OUTLET GAUGE INSTALLED (OPTIONAL)	GAUGES	MAXIMUM INLET PRESSURE
ACS012	**1 –** Brass **6 –** 316 Stainless Steel **P –** Nickel-plated Brass	**0 –** 85/115 psig 5.9/7.9 bar **1 –** 135/165 psig 9.3/11.4 bar **2 –** 185/215 psig 12.8/14.8 bar **3 –** 235/265 psig 16.2/18.3 bar	200 psig 13.8 bar 200 psig 13.8 bar 300 psig 20.7 bar 300 psig 20.7 bar	**0 –** No Gauges **1 –** With Three Gauges[1] (installed)	**1 –** 3500 psig 241 bar (optional 4000 psig / 276 bar gauge) **2 –** 400 psig 27.6 bar (optional 600 psig / 41.4 bar gauge)

1. Brass gauges are provided with Brass regulators and Stainless Steel gauges are provided with Stainless Steel regulators.

CR4418 6 2 - 2 4 1

BASIC SERIES	BODY MATERIAL	OUTLET PRESSURE RANGES	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	MAXIMUM INLET PRESSURE
CR4418	**1 –** Brass **6 –** 316 Stainless Steel **P –** Nickel-plated Brass	**1 –** 475/525 psig 32.8/36.2 bar **2 –** 575/625 psig 39.6/43.1 bar **3 –** 675/725 psig 46.5/50.0 bar **4 –** 775/825 psig 53.4/56.9 bar **5 –** 875/925 psig 60.3/63.8 bar **6 –** 975/1025 psig 67.2/70.7 bar **7 –** 1975/2025 psig 136/140 bar	**2 –** NPTF	**4 –** 1/4"	**1 –** 3500 psig 241 bar **3 –** 6000 psig 414 bar

WARNING! Do not attempt to select, install, use or maintain this product until you have read and fully understood the *TESCOM Safety, Installation and Operation Precautions.*

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