345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel.: 416.734.3300
Fax: 416.231.1626
Toll Free: 1.877.682.8772

www.tssa.org

March 12, 2024

CONTROLS CORPORATION OF AMERICA
1501 HARPERS RD
VIRGINIA BEACH VA 23454

Workorder Type: Registration - Fitting(Conventional)
Workorder No: 14232040
Your Reference No.: FITTING RENEWAL 0H15806.5 - NATIONAL SERVICE
Registered to: CONTROLS CORPORATION OF AMERICA

Dear JOHN FRIEDRICHS,

Technical Standards and Safety Authority (TSSA) is pleased to inform you that your submission has been reviewed and registered as follows:

CRN : 0H15806.5R1
Main Design No.: 529007X, 5022XXX, 628, 631/633, 632, 629, 52B, 52C, 52S, 526/527/620 CRN Renewal (As Noted)
Expiry Date: Mar 12, 2034

Please be advised that a valid quality control system must be maintained for the fitting registration to remain valid until the expiry date.

1.Renewal of CRN only. Registration does not cover product additions, material or design changes 2. All CRNs for fittings presented on the product scope sheets shall be valid in Ontario for this registration to be considered valid 3. Registration excludes hose assemblies 4. Code of Construction is ASME B31.3

The stamped copy of the approved registration and the invoice are mailed separately (There will be no hard copies for electronic submissions). Should you have any questions or require further assistance, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. We will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Shreyas Madhuranath M.Eng, P.Eng

Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

Show facsimile of manufacturer's logo or trade mark that is to appear on the fitting, in the space below:

STATUTORY DECLARATION
Registration of Fittings

I, John Friedrichs
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of Controls Corporation of America
(Name of Manufacturer)

Located at 1501 Harpers Road, Virginia Beach, VA 23454 U.S.A. 757-422-8330 757-422-3125
(Plant Address) *(Telephone No.)* *(Fax No.)*

☐ do solemnly declare that the fittings listed hereunder, which are subject to the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, comply with all of the requirements of

(Title of recognized North American Standard)

which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service;

☑ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with 4x burst pressure as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001 which has been verified by the following authority, Perry Johnson Registrars.

The items covered by this declaration, for which I seek registration, are category Category H type fittings. In support of this application, the following information and/or test data are attached as follows:

Catalog Pages, Design Drawings and Test Reports
(drawings, calculations, test reports, etc.)

Declared before me at CONCOA **in the** city **of** VA BEACH

the 8th **day of** January **AD 20**24.

Miriam Duran
NOTARY PUBLIC
Commonwealth of Virginia
Reg. # 8026938
My Commission Expires 2/28/2026

Commissioner for Oaths:

MIRIAM DURAN
(Printed name)

Miriam Duran
(Signature)

(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the ***Technical Standards and Safety Act***, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category H.

CRN:

Registered by:

Dated:

1.Renewal of CRN only. Registration does not cover product additions, material or design changes
2. All CRNs for fittings presented on the product scope sheets shall be valid in Ontario for this registration to be considered valid
3. Registration excludes hose assemblies
4. Code of Construction is ASME B31.3

Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program

REGISTERED

C.R.N.: 0H15806.5R1
Signed:
Date: March 12, 2024.

NOTE: This registration expires on: Mar 12, 2034

**Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.*

CONCOA CRN Testing Summary Sheet

Package 2 - Type H
529007X

Scope: 529007X Station Drop Compressed Gas Systems

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	OA8728.5
2	OA8728.5
3	See 8350471 burst test data attached
4	OA8728.5
5	OA8728.5
6	OA8728.5
7	See 8030434 burst test data attached

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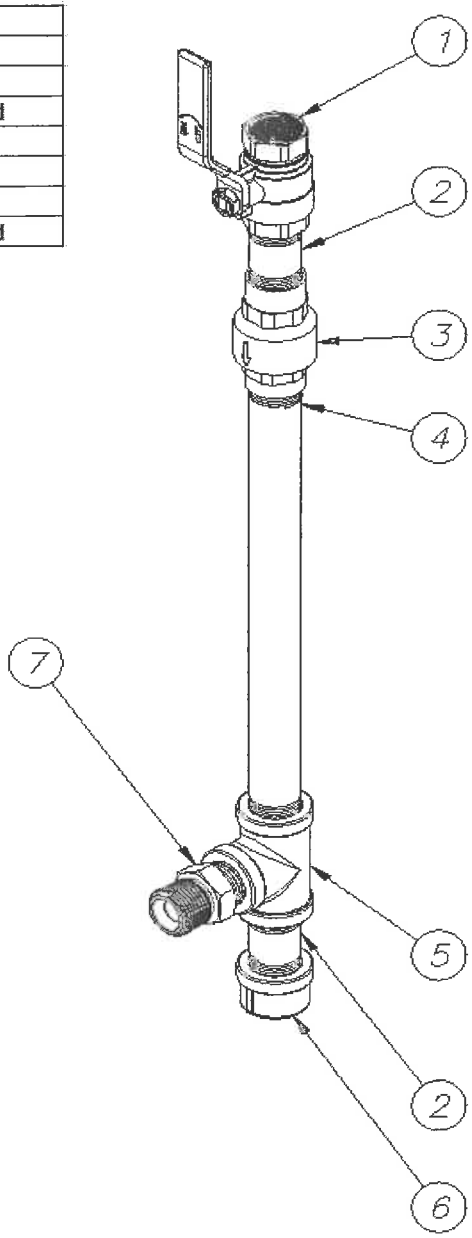
0H15806.5R1
Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program

Sketch:



Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

CONCOA CRN Testing Summary Sheet

Package 3 - Type H
5022XXX

Scope: 5022XXX Compressed Gas Tee Purge Systems

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	OC12577.5C
2	See 5534104 burst test data attached
3	OH5216.5R1
4	See 5022001 and 5022002 burst test data attached

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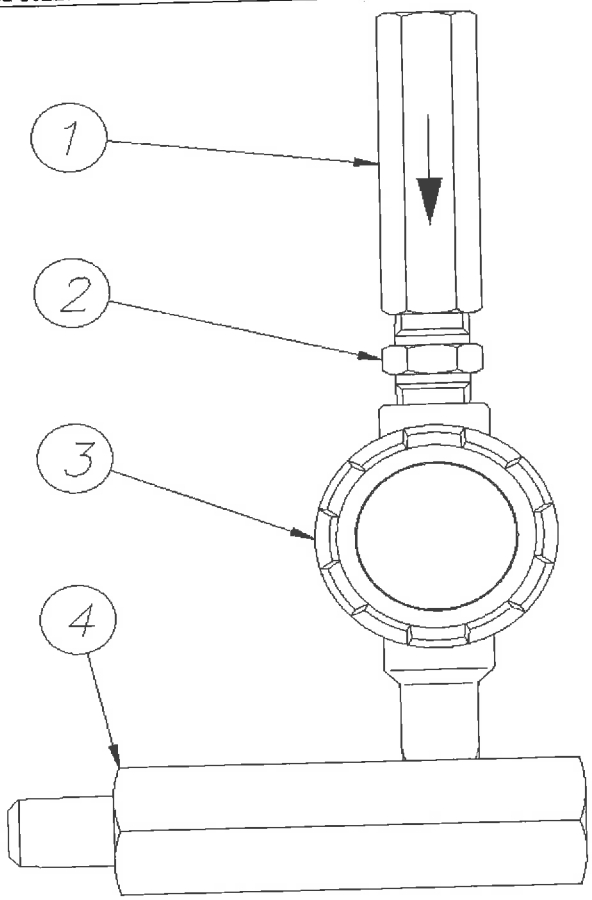
Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program

Sketch:



Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

CONCOA CRN Testing Summary Sheet

Package 4 - Type H
628

Scope: 628 Manifold Compressed Gas Systems (pigtails on some models shall require a separate valid CRN - Items 4 from sketch below is excluded from this listing)

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	See 8291849 burst test data attached
2	6" extension - See 8291851 burst test data attached
3	12" extension - See 8291847 burst test data attached
4	Excluded from this listing

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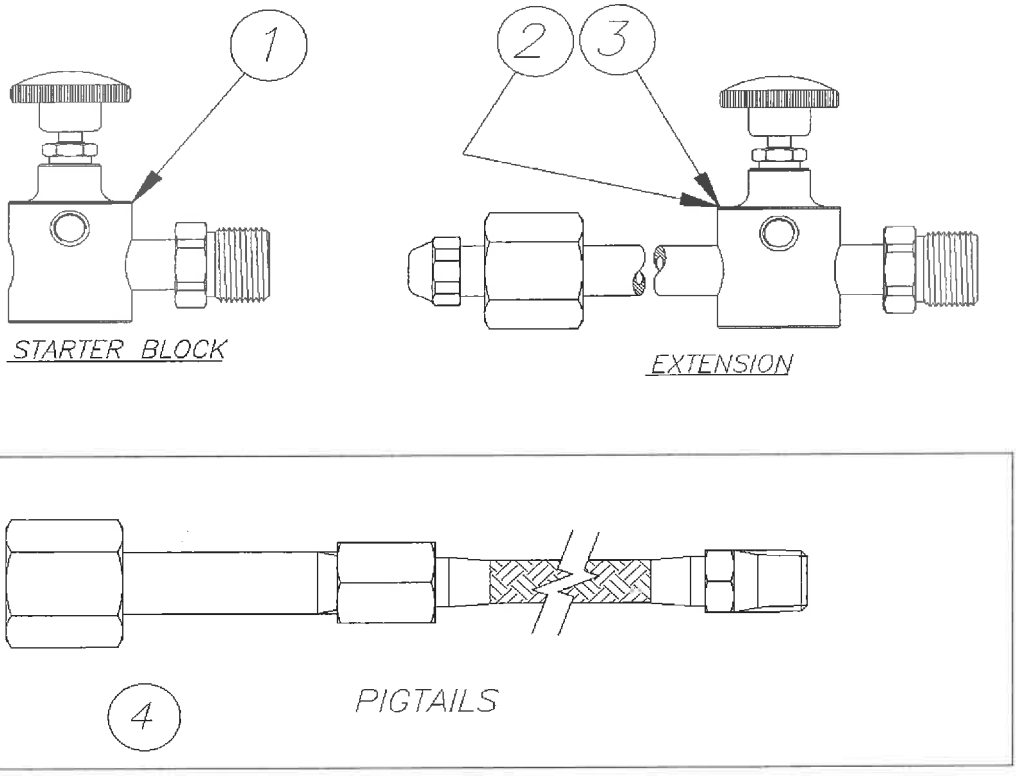
0H15806.5R1
Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program

Sketch:



Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

CONCOA CRN Testing Summary Sheet

Package 5 - Type H
631/633

Scope: 631/633 Series Compressed Gas Systems (manifolds on some models shall require a separate valid CRN - Items 8,9 and 10 from sketch below are excluded from this listing)

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	OF11809.2
2	OH7770.5R1
3	See 8306499 burst test attached
4	CRN OA4093.2
5	See 8291839 burst test attached
6	See 8291840 burst test attached
7	See 8306498 burst test attached
8	Excluded from this listing
9	Excluded from this listing
10	Excluded from this listing

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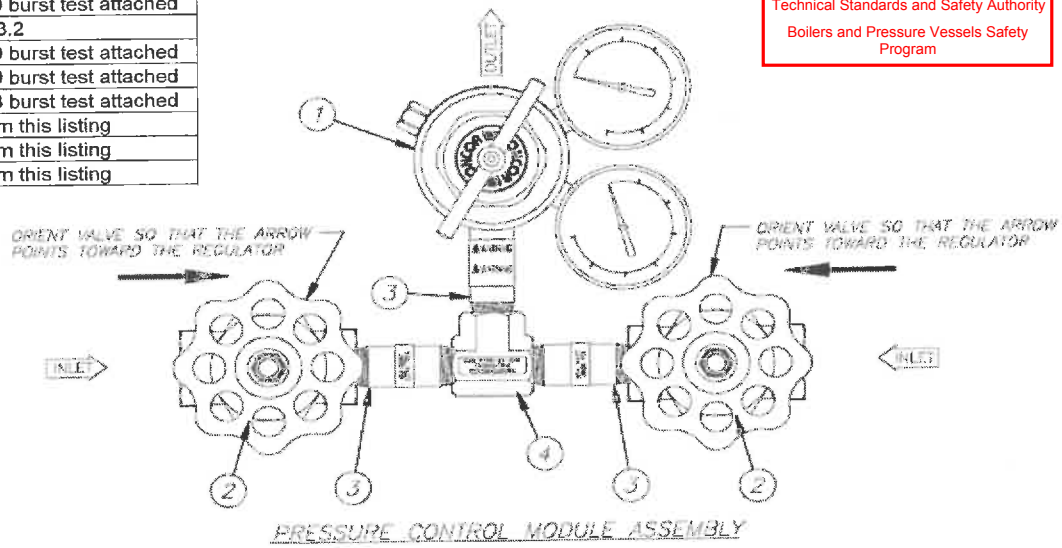
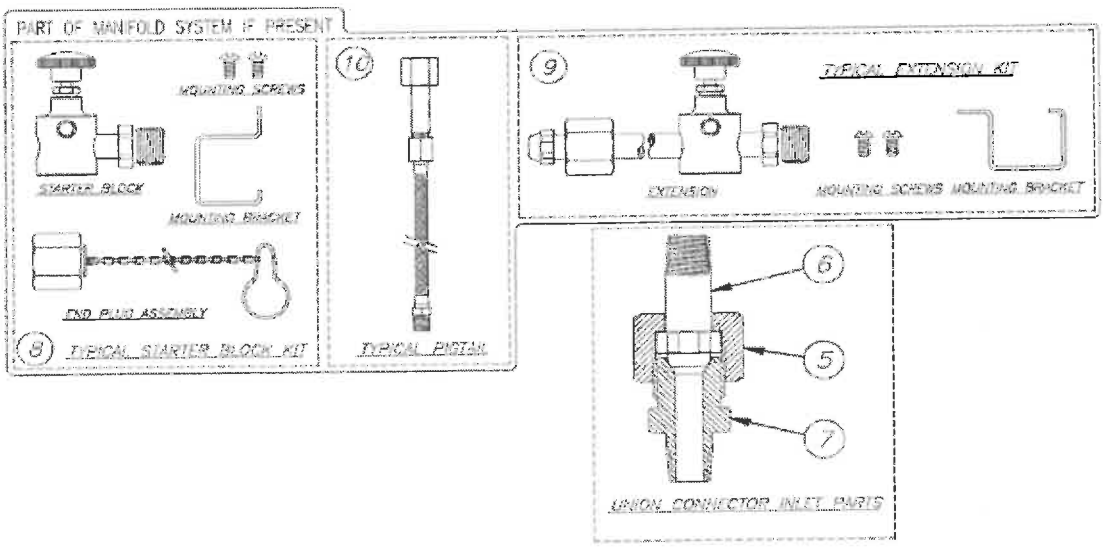
0H15806.5R1
Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program



Sketch:



Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

CONCOA CRN Testing Summary Sheet

Package 6 - Type H
632

Scope: 632 Series Compressed Gas Systems (manifolds and pigtails on some models shall require a separate valid CRN - Items 13 and 14 from sketch below are excluded from this listing)

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	OF8241.5 or OF2026.2
2	OF11809.2
3	See 8306230 burst test attached
4	See 632 Switch Reg burst test attached
5	See 8306499 burst test attached
6	OA12577.5C or OA4093.2
7	OA12577.5C
8	OA12577.5C, OA4093.2 or OA9866.5
9	OA12577.5C, OA4093.2 or OA9866.5
10	OA12577.5C
11	OA4093.2
12	OH7770.5R1
13	Excluded from this listing
14	Excluded from this listing

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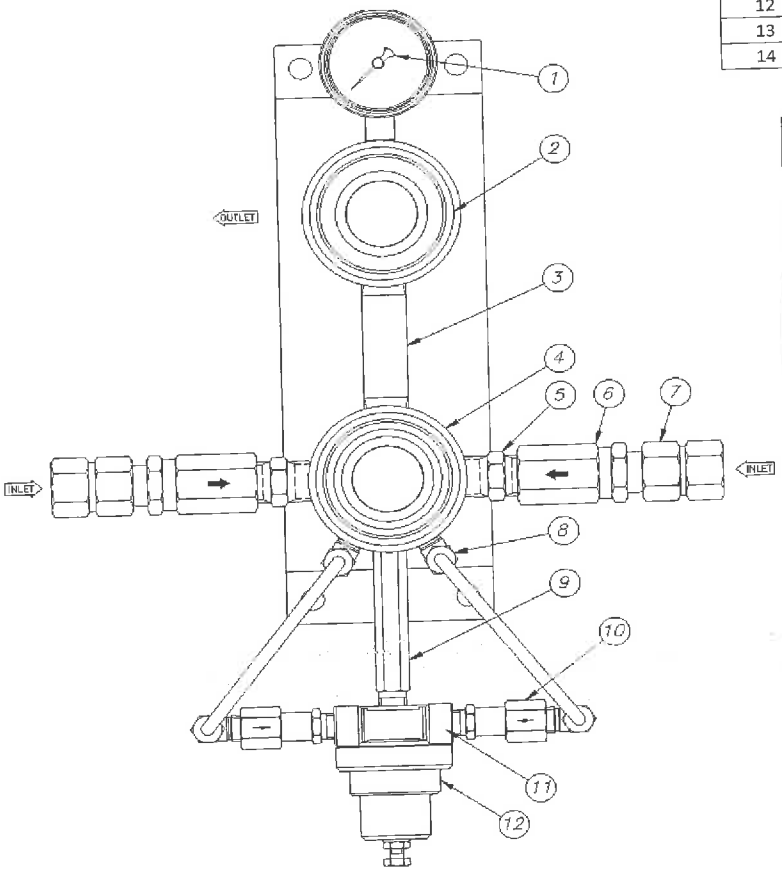
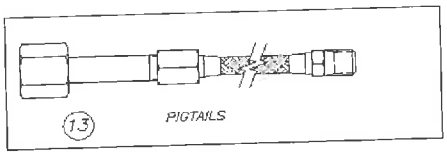
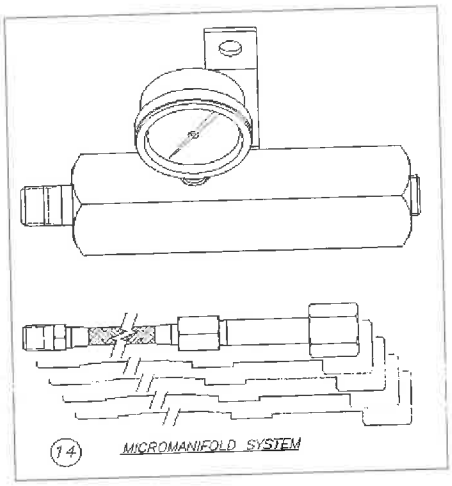
0H15806.5R1
Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program

Sketch:







Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

CONCOA CRN Testing Summary Sheet

Package 7 - Type H
629

Scope: 629 Series Micro Manifold Compressed Gas Systems

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	Excluded from this listing
2	See 8350080 burst test data attached
3	See 8309746 burst test data attached
4	Excluded from this listing
5	Excluded from this listing

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0H15806.5R1
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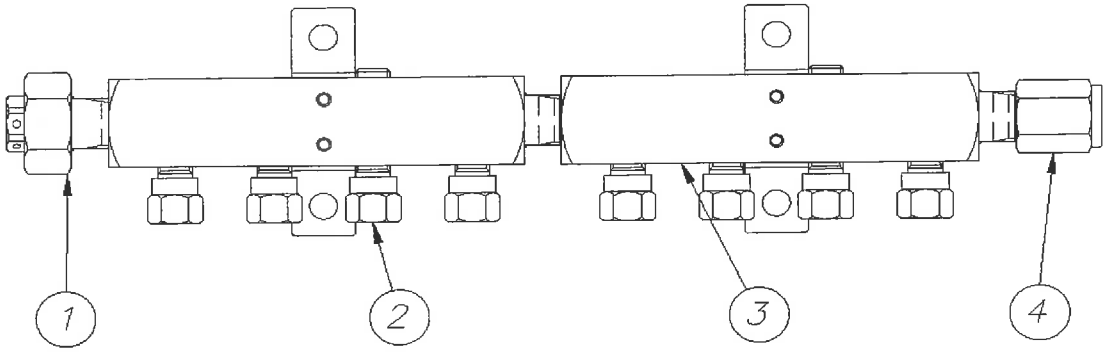
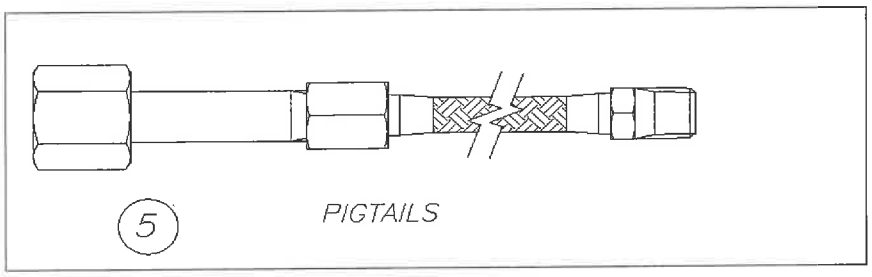
Boilers and Pressure Vessels Safety Program

Sketch:





Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

CONCOA CRN Testing Summary Sheet

Package 8 - Type H
52B, 52C, 52S

Scope: 52B, 52C and 52S Manifold Compressed Gas Systems (pigtails on some models shall require a separate valid CRN - Items 4 from sketch below is excluded from this listing)

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

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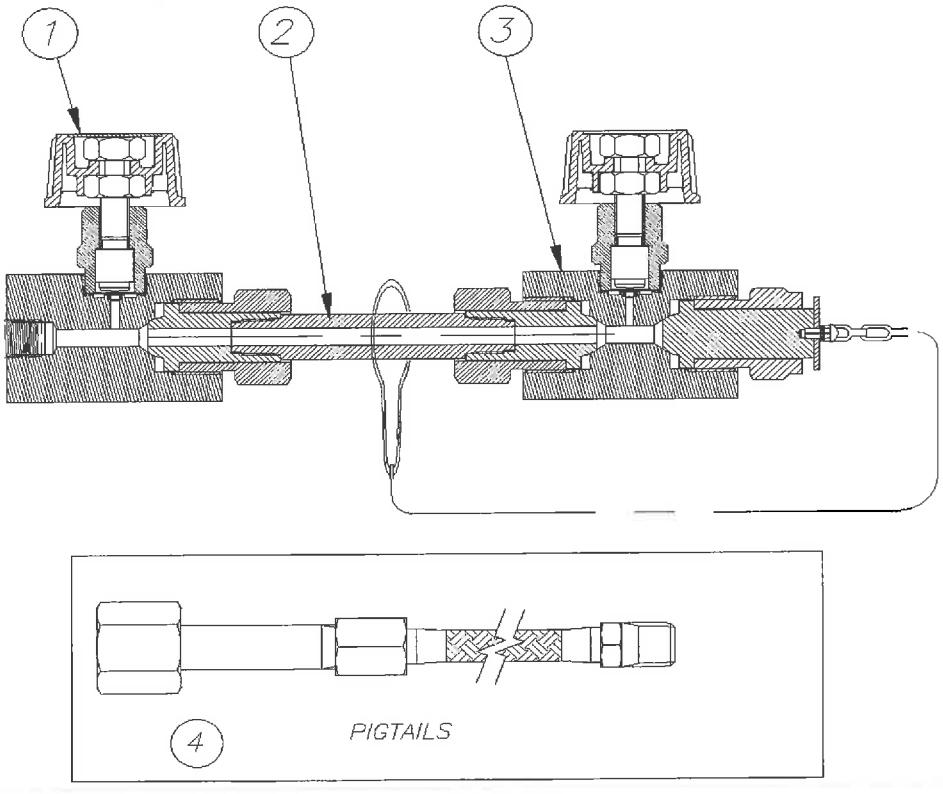
Item	CRN / Test Data / Exclusions
1	OH5216.5R1
2	6" brass - See 8292007 burst test attached
2	6" stainless - See 8294007 burst test attached
2	12" brass - See 8292008 burst test attached
2	12" stainless - See 8294008 burst test attached
3	OH5216.5R1
4	Excluded from this listing

Sketch:



Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

CONCOA CRN Testing Summary Sheet

Scope: 526/527/620 Series Compressed Gas Systems (manifold connectors and pigtails on some models shall require a separate valid CRN - Items 6 and 7 from sketch below are excluded from this listing)

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

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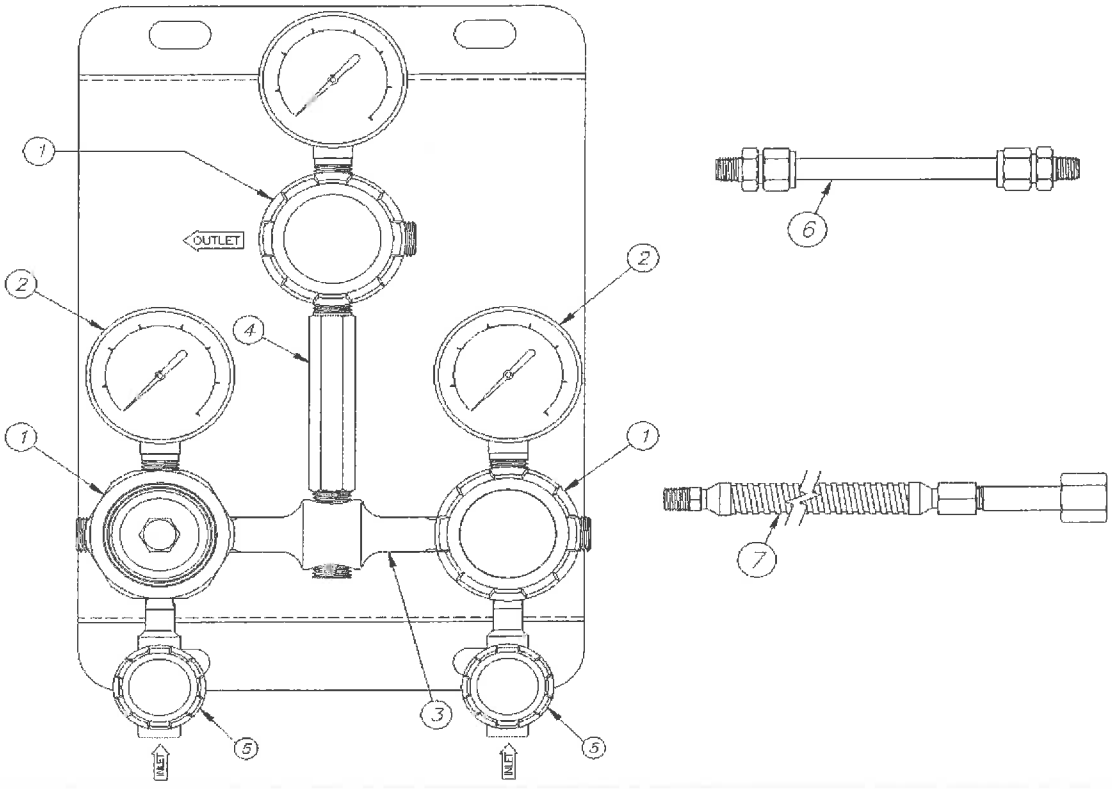
Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program

Item	CRN / Test Data / Exclusions
1	OH5216.5R1
2	OF2026.2 or OF8241.5
3	See 8307641 and 8307643 burst tests attached
4	See 8308014 and 8308015 burst tests attached
5	OH5216.5R1
6	Excluded from this listing
7	Excluded from this listing

Sketch:



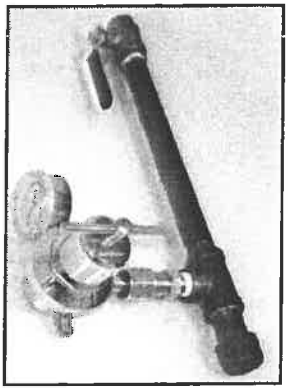
Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

POINT OF USE EQUIPMENT

Station Drop Kits

Station Drop Kits come completely assembled, ready to install out of the box with a regulator, flowmeter, or gas saver as a Point of Use option. In addition, station drops include a high flow capacity, 200 PSIG maximum operating pressure in-line station valve.

Stock No.	Gas Service	Point of Use Equipment	Outlet Connection	Inlet
801-6596	Oxygen	806-6596 (Regulator)	"B" 9/16"-18 RH Ext.	½" FNPT
801-6592	Fuel Gases (Acetylene, Propane, Natural Gas)	806-6592 (Regulator)	"B" 9/16"-18 LH Ext.	½" FNPT
801-6599		806-6599 (Regulator)	"B" 9/16"-18 LH Ext.	½" FNPT
801-6595	Inert	806-6595 (Regulator)	"B" ⅝"-18 RH Ext.	½" FNPT
801-6591	Ar/CO_2	806-6591 (Reg./Flowmeter)	"B" ⅝"-18 RH Ext.	½" FNPT
801-6597	Ar/He	806-6597 (Reg./Flowmeter)	"B" ⅝"-18 RH Ext.	½" FNPT
801-6590	Ar/He	806-6590 (Gas Saver)	"B" ⅝"-18 RH Ext.	½" FNPT
801-6594	Ar/CO_2	806-6594 (Reg./Dual Flowmeter)	"B" ⅝"-18 RH Ext.	½" FNPT
801-9720	Ar/CO_2	805-0720 (Flowmeter)	"B" ⅝"-18 RH Int.	½" FNPT
801-9721	Ar/He	805-0721 (Flowmeter)	"B" ⅝"-18 RH Int.	½" FNPT
801-9722	Ar/CO_2	805-0722 (Dual Flowmeter)	"B" ⅝"-18 RH Int.	½" FNPT
801-9723	Ar/He	805-0723 (Dual Flowmeter)	"B" ⅝"-18 RH Int.	½" FNPT



801-6592 Shown

Station Drops

Station Drops include a high flow capacity, 200 PSIG maximum operating pressure in-line valve and a CGA connection.

Stock No.	Gas Service	Point of Use Equipment	Outlet Connection
529-0072-01-001	Oxygen	Not Included	CGA 024
529-0073-01-001	Acetylene		CGA 025
529-0074-01-001	Nitrogen		CGA 034
529-0077-01-001	Inert		CGA 034
529-0076-01-001	Fuel		CGA 025

Station Valves

CONCOA station valves eliminate the need for a separate check valve by adding a non-return feature to the typical shut-off valve. With a high flow capacity and a 200 PSIG* maximum operating pressure, these valves are suitable for heavy-duty pipeline use. *Station valves have built in non-return valves to meet NFPA 51 and OSHA requirements.*

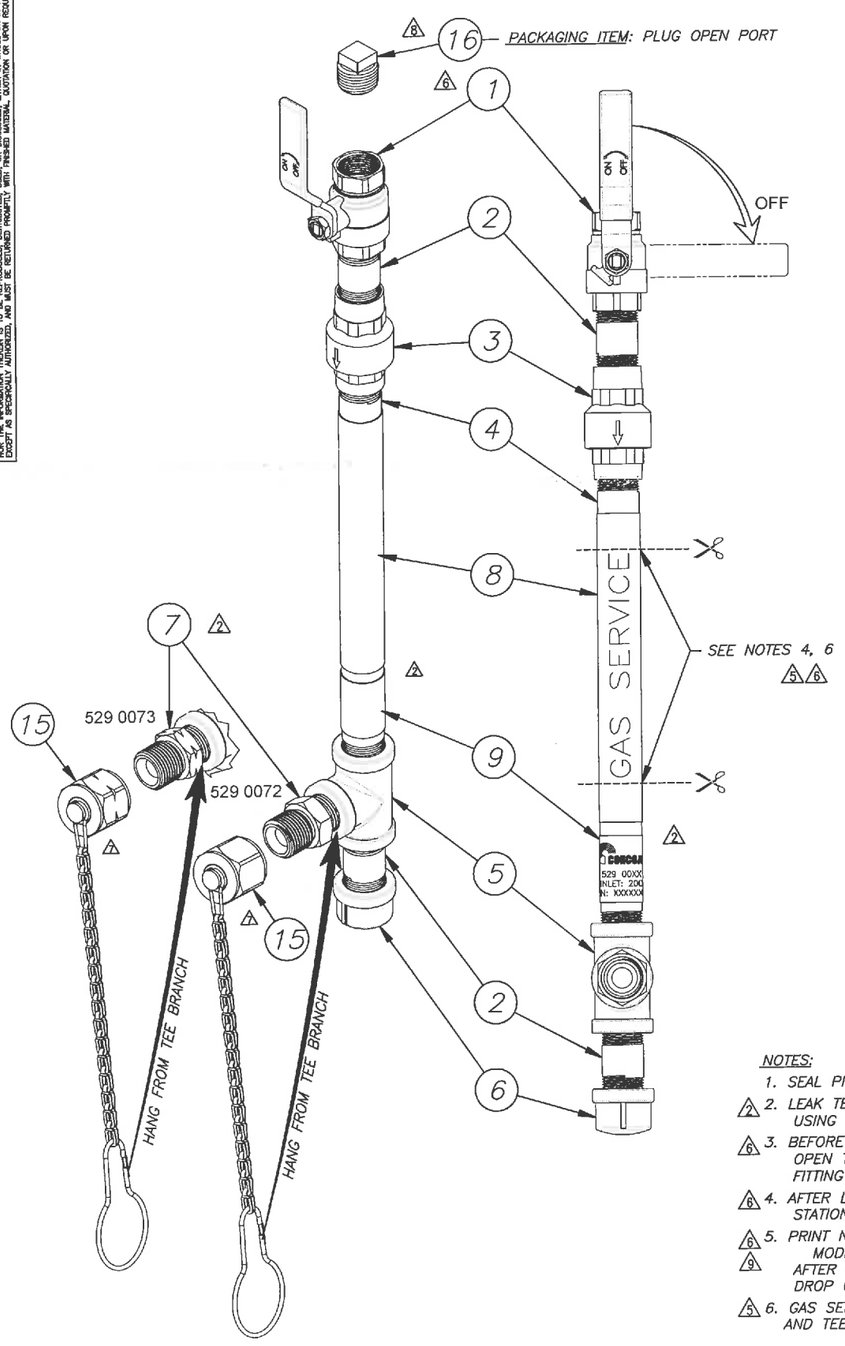
Stock No.	Gas Service	Inlet	Outlet	Plug and Chain Assembly
801-0034	Oil-Free Inerts	½" MPT	"C" 7/8-14 RH (CGA 034)	801-0734
801-0233	Oxygen		"C" 7/8-14 RH (CGA 024)	801-0237
801-0601	Fuel Gases		"C" 7/8-14 RH (CGA 025)	801-0236
801-8001	General Purpose		½" FPT	--

Half-Inch Valves

CONCOA quarter-turn valves are compact-designed with orifices precisely sized to maximize flow. The single piece brass stem inside the one-piece brass body eliminates backlash to improve alignment of ball and orifices. These valves do not require system pressure to make a seal, and are easily cleaned or purged. Bi-directional flow capable, its handle indicates valve position.

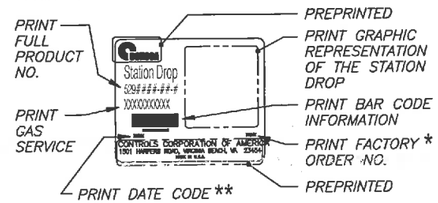
Stock No.	Description
801-7000	Quarter-Turn Valve (½" x ½" inlet and outlet)
529-0015	½" Diaphragm Valve (½" x ½" inlet and outlet)
529-0098	½" High Flow Master Valve, 4500 psi Max Inlet, Brass

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
5290072	Station Drop	8030231	pipe nipple	200 psig	200 psig	Western Enterprises CRN OA10473.5	200 psig	200 psig		
5290072	Station Drop	8350470	valve	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290072	Station Drop	8350471	valve	200 psig	200 psig				1/2 NPT female both ends	Brass, CW 617N UNI EN 12165
5290072	Station Drop	8350472	tee	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290072	Station Drop	8350473	cap	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290072	Station Drop	8350475	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290072	Station Drop	8350476	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290073	Station Drop	8030069	pipe nipple	200 psig	200 psig	Western Enterprises CRN OA10473.5	200 psig	200 psig		
5290073	Station Drop	8350470	valve	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290073	Station Drop	8350471	valve	200 psig	200 psig				1/2 NPT female both ends	Brass, CW 617N UNI EN 12165
5290073	Station Drop	8350472	tee	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290073	Station Drop	8350473	cap	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290073	Station Drop	8350475	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290073	Station Drop	8350476	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290074	Station Drop	8030434	pipe nipple	200 psig	200 psig				1/2 NPT x .425 hole	Brass, UNS C36000
5290074	Station Drop	8350470	valve	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290074	Station Drop	8350472	tee	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290074	Station Drop	8350473	cap	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290074	Station Drop	8350474	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290074	Station Drop	8350476	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290076	Station Drop	8030069	pipe nipple	200 psig	200 psig	Western Enterprises CRN OA10473.5	200 psig	200 psig		
5290076	Station Drop	8350470	valve	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290076	Station Drop	8350472	tee	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290076	Station Drop	8350473	cap	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290076	Station Drop	8350474	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290076	Station Drop	8350476	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290077	Station Drop	8030434	pipe nipple	200 psig	200 psig				1/2 NPT x .425 hole	Brass, UNS C36000
5290077	Station Drop	8350470	valve	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290077	Station Drop	8350472	tee	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290077	Station Drop	8350473	cap	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290077	Station Drop	8350474	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		
5290077	Station Drop	8350476	pipe nipple	200 psig	200 psig	Mueller CRN OA8728.5	300 psig	300 psig		



REVISIONS						PT NO
NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED	529 0072
1	04-093	MOVED 529 0074 TO DWG 529 0077, CHANGED GAS SVC LABEL (ITEM 3)	AEW	3/5/2004		
2	06-657	TEST PRESS WAS "230-250 PSI", MOVED NAMEPLATE UP, MAX INLET WAS 250 PSI	AEW	10/24/2006	J. Friedrichs 10/23/2006	
3	06-186	ADDED PKG & LABEL PARTS & INSTRUCTIONS	AEW	12/14/2006	D. Hujic 11/17/2006	
4	07-159	ADDED POLY TUBING FOR STATION DROP, UPDATED APPEARANCE OF THE DROP	AEW	4/13/2007	A. Whitaker 4/12/2007	
5	07-320	ADDED ALTERNATE VIEW OF DROP TOP END, ADDED TRIMMING NOTE	AEW	7/19/2007	J. Pearson 7/19/2007	
6	11-051	DROP WAS CONCOA-MODIFIED PURCHASED DROP 8308044	AEW	3/11/2011	A. Whitaker 3/10/2011	
7	12-145	ADDED PLUG AND CHAIN ASS'YS	AEW	6/19/2012	A. Whitaker 6/14/2012	
8	12-304	ADDED PLASTIC PLUG, ADDED ITEM NO. BUBBLES IN TABLE.	AEW	10/26/2012	A. Whitaker 10/24/2012	
9	12-371	Max inlet on NP was "230 PSI" (ck vlv changed for CRN)	AEW	12/6/2012	A. Whitaker 12/5/2012	

△3 BOX LABEL NOTES:
PRINT STATION DROP BOX LABEL AS SHOWN BELOW:



* FACTORY ORDER NO. OR OTHER REFERENCE NO. (i.e., RMA, REWORK, etc.).

** DATE CODE (DATE THE LABEL WAS PRINTED) IN THE FORM OF YYWW (YY IS THE 2 DIGIT YEAR, WW IS THE WEEK OF THE YEAR).

△3 PACKAGING NOTES:
△4
1. PLACE STATION DROP INTO POLY TUBING (ITEM 14), AND HEAT SEAL BOTH ENDS.
2. PLACE STATION DROP INTO INSERT (ITEM 11), AND PLACE INTO BOX (ITEM 10) WITH ADI (ITEM 13).
3. SEAL BOX WITH WHITE PACKING TAPE, AND APPLY BOX LABEL (ITEM 12).

CONCOA STATION DROPS CONSIST OF:

STATION DROP	GAS SERVICE	(8) △6 GAS LABEL	(7) △6 OUTLET FITTING	(15) △6 PLUG & CHAIN ASS'Y
△1 △4 529 0072-01-001	OXYGEN	830 8041	803 0231 △2	801 0237 △1
△1 △4 529 0073-01-001	ACETYLENE	830 8042	803 0069 △2	801 0236 △1
~~529 0074~~	~~NITROGEN~~	~~830 8043~~	~~801 0034~~	

△1 SUPERCEDED BY TABLE ENTRY ON DRAWING 529 0077 REV. 1

NOTES:
1. SEAL PIPE THREAD JOINTS WITH TEFLON TAPE.
△2 2. LEAK TEST ASSEMBLY IN ACCORDANCE WITH TEST PROCEDURE 1955 USING 210-230 PSI NITROGEN.
△6 3. BEFORE APPLYING NAMEPLATE AND LABELS, MASK THE BALL VALVE'S OPEN THREADS, THE BALL VALVE'S HANDLE, AND THE OUTLET FITTING OPEN THREADS. THEN, APPLY LACQUER TO ENTIRE ASSEMBLY.
△6 4. AFTER LACQUERING, APPLY GAS LABEL (ITEM 8) CENTERED ON TOP PIPE OF STATION DROP. ORIENT AS SHOWN WITH RESPECT TO THE VALVE HANDLE.
△6 △9 5. PRINT NAMEPLATE WITH CONCOA LOGO AND THE FOLLOWING INFORMATION: MODEL NUMBER, "MAX INLET: 200 PSI" & SERIAL NUMBER. △2 AFTER LACQUERING, APPLY NAMEPLATE TO LOWER PORTION OF STATION DROP ORIENTED AS SHOWN.
△5 6. GAS SERVICE LABEL CAN BE TRIMMED EQUALLY AT BOTH THE BALL VALVE AND TEE FITTING ENDS TO IMPROVE FIT ON PIPE.

ITEM	PART NO / SIZE	QTY	MATERIAL / DESCRIPTION
△6 16	9225 0026	1	PLASTIC PLUG, 1/2" NPT
△1 15	SEE TABLE	1	PLUG & CHAIN ASS'Y
△4 14	9905 1015	24"	POLY TUBING, 8" WIDE
△3 13	9906 1089	1	ADI
△3 12	9901 6289	1	BOX LABEL
△3 11	9903 9134	1	INSERT
△3 10	9903 9155	1	BOX
9	830 6466	1	NAMEPLATE, PRINTABLE
8	SEE TABLE	1	GAS SERVICE LABEL, PREPRINTED
7	SEE TABLE	1	OUTLET FITTING △2
△6 6	835 0473	1	PF, BLK 8NPTF/CAP
△6 5	835 0472	1	TEE, FEMAL BLK 8NPT
△6 4	835 0475	1	PIPE, BLK 1/2x10INx8NPTM
△6 3	835 0471	1	VALVE, CHECK BRS 8NPTFx8NPTF
△6 2	835 0476	2	PIPE, BLK 1/2x2INx8NPTM
1	△6 835 0470	1	VALVE, BALL BRS 8NPTFx8NPTF

SCALE: 1:2	THIRD ANGLE PROJECTION
TITLE BLOCK REVISION: #7	REVISION DATE: 1/31/2003
CAD FILENAME: 5290072.dwg	
WHERE USED: STATION DROPS	

TOLERANCE UNLESS OTHERWISE SPEC'D
DIMENSIONS ARE IN INCHES
DIM. & TOL. PER ANSI Y14.5
FINISH: ~~125~~
XXX DECIMALS: ±.005
XX DECIMALS: ±.010
FRACTIONS: ±1/64
ANGLES: ±2°
FILLET RADII: R 1/64
BREAK EDGES: .002-.010
CAGE NUMBER: ØA389

DRAWN BY	A. Whitaker 3/5/2004
DESIGN ENGINEERING	J.Friedrichs 3/2/2004
MANUFACTURING ENG	M. Wilson 3/4/2004
QUALITY ASSURANCE	E.Filomarino 3/6/2004

CONCOA CONTROLS CORPORATION OF AMERICA
PRODUCT ENGINEERING DEPARTMENT
VIRGINIA BEACH, VA 23454

TITLE: ASSY, _STATION_DROP__ XXXXXXXXX
(FOR "X"s IN TITLE, USE GAS SERVICE FROM TABLE) △1

PART NO. 529 0072 THRU 529 0073 △1

ISSUING REFERENCE DOCUMENT # #9908-001

SIZE C

CONCOA CRN Testing Summary Sheet

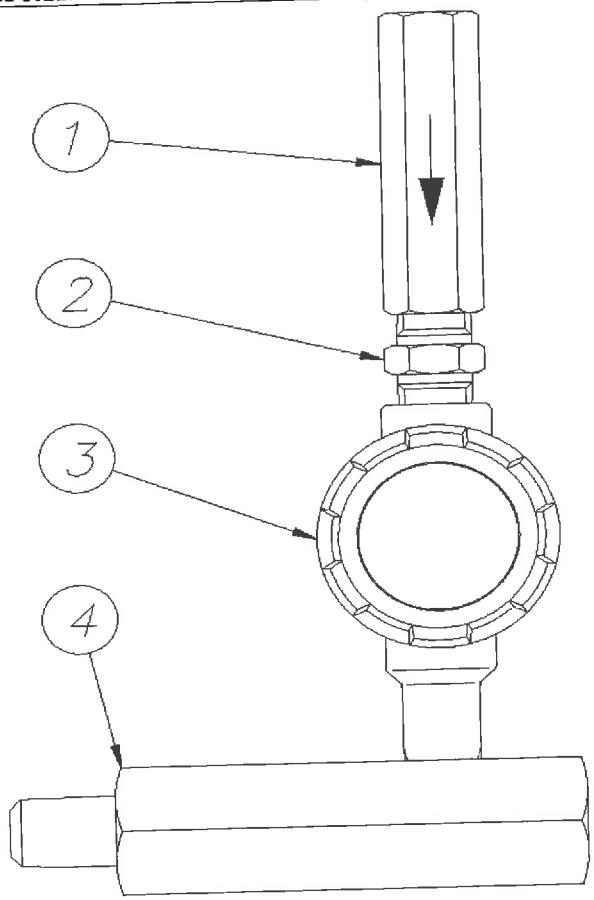
Package 3 - Type H
5022XXX

Scope: 5022XXX Compressed Gas Tee Purge Systems

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	OC12577.5C
2	See 5534104 burst test data attached
3	OH5216.5R1
4	See 5022001 and 5022002 burst test data attached

Sketch:

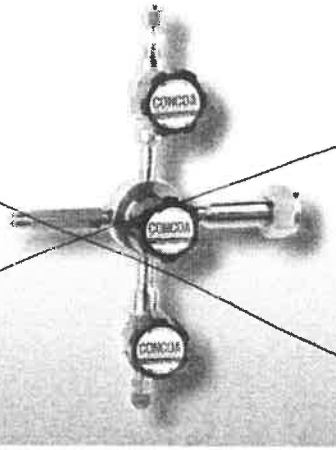


Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

CONCOA
PRECISION GAS CONTROLS

Deep Purges

The 502 Series Deep Purge is CONCOA's most effective purge device. It incorporates a unique snorkel tube design which forces the purge gas all the way back through the inlet connection to the cylinder valve cavity assuring virtual zero dead space purging. The Deep Purge may be used to purge the entire regulator body or just the cylinder connection at the time of cylinder change. The Deep Purge performs a positive displacement purge of the system.



Materials and Specifications

Seat
PCTFE
Diaphragms (Purge Valves)
Elgiloy®
Diaphragms (Center Valves)
Elgiloy®
Seals
Metal to metal
Cv
0.17
Maximum Pressure
3000 PSIG (210 BAR)

CRN OH 5216.5C

Ordering Information

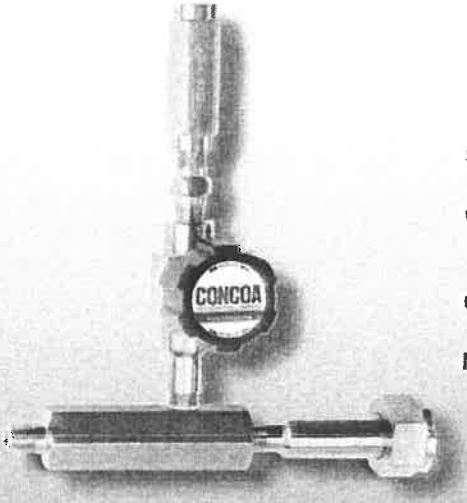
Order No.	Body Material	Purge Type	Weight
502 3009-CGA	316L Stainless Steel	Deep Purge	3.0 lbs. (1.35 kg)

Tee Purges

The 502 Series purges are designed for use with high purity gases to ensure system integrity upon breakdown of components or during gas source changes.

Purges provide safety by preventing the release of toxic or corrosive gases into the workplace when changing cylinders, corrosion resistance by preventing corrosive or halogen gases from coming into contact with atmospheric moisture, and purity by preventing air from infiltrating high purity systems at the time of cylinder change.

The Tee Purge, while more economical than the Deep Purge, is quite effective in purging the regulator cavity and downstream system. CONCOA recommends that a block and bleed system be installed downstream from the regulator to direct the vented gases to a safe location. This type of purge is best suited to pressure cycle or dilution purging.



Materials and Specifications

Seat
PCTFE
Diaphragm
Elgiloy®
Seals
Metal to Metal
Check Valve Seat
Viton® for brass
Ethylene propylene for stainless steel
Cv
0.17
Maximum Pressure
3000 PSIG (210 BAR)

CRN OH 5216.5C

Ordering Information

Order No.	Body Material	Purge Type	Weight
502 2003-CGA	Brass	Tee purge	2.5 lbs. (1.12 kg)
502 2005-CGA	316L stainless steel	Tee purge	2.5 lbs. (1.12 kg)
502 2010	Brass	Right inlet process purge	2.5 lbs. (1.12 kg)
502 2011	Brass	Left inlet process purge	2.5 lbs. (1.12 kg)
502 2015	316L stainless steel	Right inlet process purge	2.5 lbs. (1.12 kg)
502 2016	316L stainless steel	Left inlet process purge	2.5 lbs. (1.12 kg)

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
5022010	Tee Purge	5333029	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
5022011	Tee Purge	5333029	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
5022015	Tee Purge	5333049	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
5022016	Tee Purge	5333049	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
5022003	Tee Purge	5333229	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
5022004	Tee Purge	5333229	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
5022005	Tee Purge	5333249	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
5022003	Tee Purge	5323922	check valve	3000 psig	3000 psig	Swagelok CRN OC12577.5C	3000 psig	3000 psig		
5022004	Tee Purge	5323922	check valve	3000 psig	3000 psig	Swagelok CRN OC12577.5C	3000 psig	3000 psig		
5022010	Tee Purge	5323922	check valve	3000 psig	3000 psig	Swagelok CRN OC12577.5C	3000 psig	3000 psig		
5022011	Tee Purge	5323922	check valve	3000 psig	3000 psig	Swagelok CRN OC12577.5C	3000 psig	3000 psig		
5022005	Tee Purge	5323924	check valve	3000 psig	3000 psig	Swagelok CRN OC12577.5C	3000 psig	3000 psig		
5022015	Tee Purge	5323924	check valve	3000 psig	3000 psig	Swagelok CRN OC12577.5C	3000 psig	3000 psig		
5022016	Tee Purge	5323924	check valve	3000 psig	3000 psig	Swagelok CRN OC12577.5C	3000 psig	3000 psig		
5022003	Tee Purge	8034250	pipe nipple	3000 psig	3000 psig	Western Enterprises CRN OA10473.5	3000 psig	3000 psig		
5022004	Tee Purge	8034250	pipe nipple	3000 psig	3000 psig	Western Enterprises CRN OA10473.5	3000 psig	3000 psig		
5022010	Tee Purge	8034250	pipe nipple	3000 psig	3000 psig	Western Enterprises CRN OA10473.5	3000 psig	3000 psig		
5022011	Tee Purge	8034250	pipe nipple	3000 psig	3000 psig	Western Enterprises CRN OA10473.5	3000 psig	3000 psig		
5022003	Tee Purge	5022001	tee	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Brass, UNS C36000 per ASTM B-16
5022004	Tee Purge	5022001	tee	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Brass, UNS C36000 per ASTM B-16
5022010	Tee Purge	5022001	tee	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Brass, UNS C36000 per ASTM B-16
5022011	Tee Purge	5022001	tee	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Brass, UNS C36000 per ASTM B-16
5022005	Tee Purge	5022002	tee	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Stainless Steel, UNS S31603 (316L)
5022015	Tee Purge	5022002	tee	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Stainless Steel, UNS S31603 (316L)
5022016	Tee Purge	5022002	tee	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Stainless Steel, UNS S31603 (316L)
5022005	Tee Purge	5534104	pipe nipple	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Stainless Steel, UNS S31603 (316L)
5022015	Tee Purge	5534104	pipe nipple	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Stainless Steel, UNS S31603 (316L)
5022016	Tee Purge	5534104	pipe nipple	3000 psig	3000 psig				1/4NPT pipe fitting - .281 hole	Stainless Steel, UNS S31603 (316L)

REVISIONS						PT NO
NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED	502 2003
9	01-0223	EXTENSIVELY REVISED – MOVED TO CURRENT A-SIZE, CHANGED CGA PART NUMBERS (SAME PART, DIFF NO.)	AEW	5/11/2001	----------	
10	01-0803	INCORPORATED INTO THIS DRAWING THE CONTENTS OF DISCONTINUED SUBASS'Y 550 0119	AEW	12/13/2001	A. Whitaker 12/11/2001	
11	03-560	MOVED FROM A-SIZE, ADDED NOTES 4 & 5, UPDATED NOMENCLATURE	AEW	9/8/2003	R. Cooper 8/29/2003	
12	04-500	REMOVED THE CGA 330 OPTION FROM THE MATRIX	AEW	7/29/2004	R. Cooper 7/27/2004	
13	06-721	DOCUMENTED THE -94 MODEL, ADDED PACKAGING PART NUMBERS	AEW	12/11/2006	J. Friedrichs 11/29/2006	
14	07-362	DV WAS 533 3029 (MALE TO FEMALE)	AEW	10/15/2007	A. Whitaker 10/10/2007	
15	08-028	ADDED INLET TEST PRESS TP #1965, MISC CLARIFICATIONS, CHANGED APPEARANCE OF DV KNOB LABEL	AEW	2/7/2008	A. Whitaker 2/6/2008	

INLET CONNECTION OPTIONS

CGA CODE & INLET FITTINGS

-000	NO INLET CONN.	-350	830 1767 553 2018
	PLASTIC PIPE PLUG 9225 0025 ⚠11 ITEM MASTER DESCRIPTION (SEE NOTE 4): "4NPTF_"	-510	839 5581 830 3274
-296	553 2061 553 2062	-540	830 3322 830 4102
-300	830 0143 553 2006	-555	830 4896 830 4102
-320	830 6310 830 4130 597 0410	-580	830 1217 830 3274
-326	553 2045 553 2046	-590	553 2033 830 3274
-346	553 2049 553 2050	-660	553 2037 553 2038 501 0019

⚠12

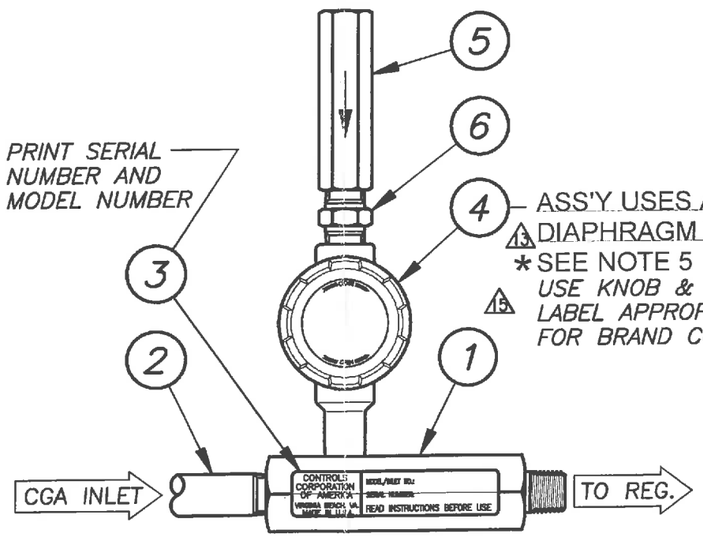
A_, B_, OR D_ ⚠11

FOREIGN INLETS, SEE DRAWING 550 0150

ITEM MASTER DESCRIPTION (SEE NOTE 4):

USE THE FOLLOWING CONVENTIONS WHERE THE Xs ARE REPLACED BY THE INLET NO. IF IT EXISTS, INLET CODE IF IT DOESN'T:

"ARGXXX" (i.e., ARGSAA)	ARGENTINE
"BS_XX_" (i.e., BS_01_)	BS 341
"DINXX_" (i.e., DIN01_)	DIN 477
"HV__XX" (i.e., HV__01)	HEVOS
"HVHTXX" (i.e., HVHT01)	HEVOS HAND-TIGHT
"JISXXX" (i.e., JIS22R)	JAPANESE
"SMSXXX" (i.e., SMSSTA)	SWEDISH
"SPAXXX" (i.e., SPASDC)	SPANISH



NOTES:

1. SEAL ALL PIPE THREADS WITH TEFLON TAPE.
2. INLET CONNECTION TO BE SPECIFIED BY CUSTOMER. SEE CUSTOMER ORDER.
3. ⚠15 TEST ACCORDING TO TP #1965 USING INLET TEST PRESSURE = 2000-2200 PSI.
4. ⚠11 FOR INFOFLO ITEM MASTER DESCRIPTION, USE:

   1st LINE: TPURG, _BRS__CGAXXX__

   FOR XXX IN 1st LINE, USE INLET CODE FROM CGA COLUMN OF MATRIX (SEE SPECIAL NOTE IN FOREIGN INLETS BLOCK)
   -OR-
   FOR NON-CGA INLETS, REPLACE "CGAXXX" WITH DESCRIPTION FROM CGA INLET COLUMN OF MATRIX

5. ⚠11 SEE DRAWING 850 0000-"XX" FOR APPROPRIATE INFORMATION REGARDING PRIVATE LABELING (ADIs, NAMEPLATES, KNOBS, ETC.).

PACKAGING

⚠13

5022003-##-94 — NO INLET FITTINGS ⚠15

9225 0025	PLASTIC PIPE PLUG
9905 1004	POLY BAG
9906 2105	ADI (UNLESS OTHERWISE SPECIFIED - SEE NOTE 5) ⚠15

5022003-##-###

USE "-94" PACKAGING SHOWN ABOVE PLUS:

9903 8120	CARTON (PLAIN WHITE)
9904 0155	BUBBLE WRAP ⚠15

ITEM	PART NO / SIZE	QTY	MATERIAL / DESCRIPTION
⚠10 6	803 4250	1	NIPPLE, BRASS, 1/4 MNPT
⚠10 5	532 3922	1	CHECK VALVE, BRASS, 1/4 FNPT
⚠13 ⚠10 * SEE NOTE 5 → 4	⚠14 533 3229 *	1	DIAPHRAGM VALVE, BRASS, F->M
3	830 6638-3	1	NAMEPLATE
2	SEE TABLE	-	CGA INLET PARTS
1	502 2001	1	ADAPTER, TEE PURGE, BRASS ⚠10

SCALE: 1:2	THIRD ANGLE PROJECTION	TOLERANCE UNLESS OTHERWISE SPEC'D DIMENSIONS ARE IN INCHES DIM. & TOL. PER ANSI Y14.5 FINISH: 63 XXX DECIMALS: ±.005 XX DECIMALS: ±.010 FRACTIONS: ±1/64 ANGLES: ±2° FILLET RADII: R 1/64 BREAK EDGES: .002-.010	DRAWN BY A. Whitaker 5/11/2001	CONCOA CONTROLS CORPORATION OF AMERICA PRODUCT ENGINEERING DEPARTMENT VIRGINIA BEACH, VA 23454	PART NO. 502 2003
TITLE BLOCK REVISION: #7	REVISION DATE: 1/31/2003		DESIGN ENGINEERING J.Friedrichs 4/26/2001		
CAD FILENAME: 5022003.dwg			MANUFACTURING ENG M. Wilson 5/3/2001	TPURG, _BRS__CGAXXX__ (FOR "X"s IN TITLE, SEE NOTE 4)	
WHERE USED:		CAGE NUMBER ØA389	QUALITY ASSURANCE E.Filomarino 5/3/2001	TITLE ⚠11	ISSUING REFERENCE DOCUMENT # ECO 01-0223 / SIZE B

CONCOA CRN Testing Summary Sheet

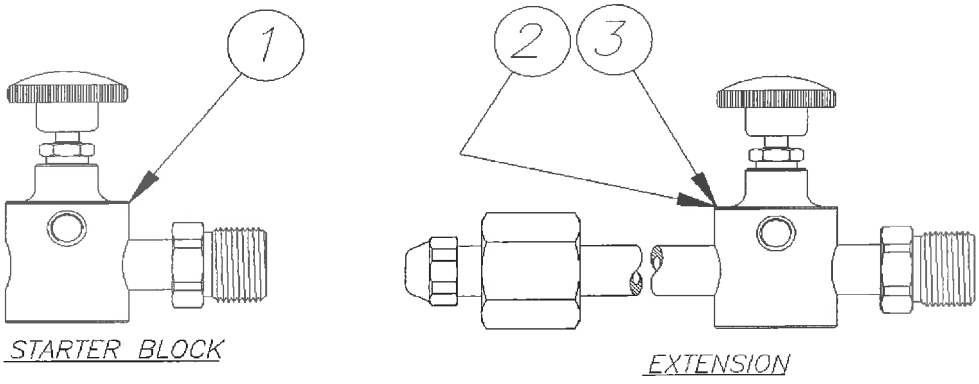
Package 4 - Type H
628

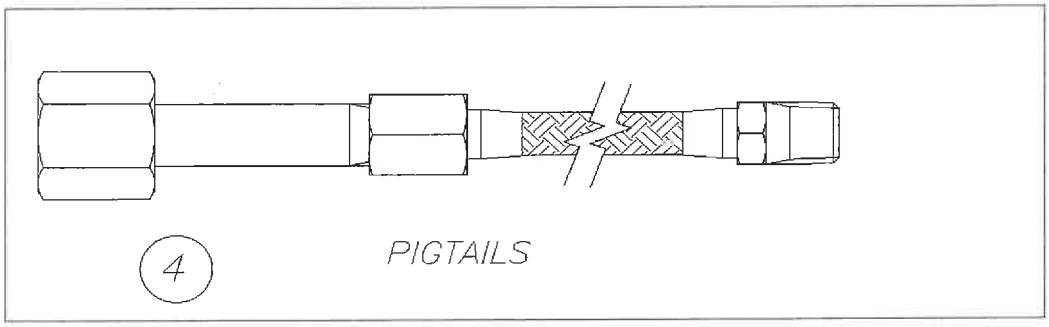
Scope: 628 Manifold Compressed Gas Systems (pigtails on some models shall require a separate valid CRN - Items 4 from sketch below is excluded from this listing)

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	See 8291849 burst test data attached
2	6" extension - See 8291851 burst test data attached
3	12" extension - See 8291847 burst test data attached
4	Excluded from this listing

Sketch:

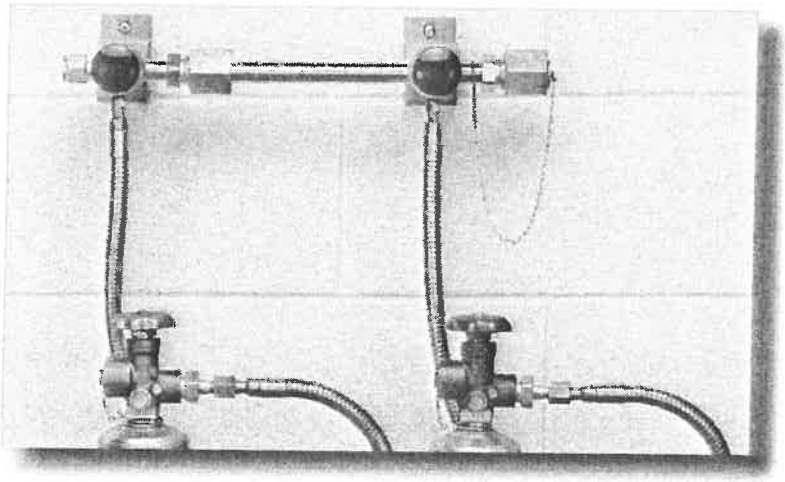




Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

628 Series Maniflex HF

Manual Modular Manifold High Flow



The 628 Series Maniflex Modular Gas Distribution System is a flexible modular system designed for centralized gas distribution, regardless of facility constraints. The modules contained in the header are available in standard, compact, or double-row versions, allowing many combinations which will adapt to any physical environment. For acetylene, pigtails with integral flashback arrestors are available to conform to OSHA requirements for manifolds. For other fuel gases, arrestors are required downstream to conform to OSHA requirements for manifolds.

Advanced Features

- Modular Design - Flexible field installation
- Integral Diaphragm Valves - Leak-tight integrity, no gas contamination
- Brass or Chrome-Plated Brass - No possibility of gas contamination
- Metal to Metal Field-Assembled Joints - Easy leak-tight field assembly, ease of transportation
- Silver-Brazed Modules - Contamination-free installation

Specifications

Maximum Inlet Pressure	3000 PSIG (210 BAR)
Temperature Range	-40°F to 140°F (-40°C to 60°C)
Inlet Connections	¼" FPT
Outlet Connections	½" FPT
Header	0.875 OD x 0.125 wall (Brass)

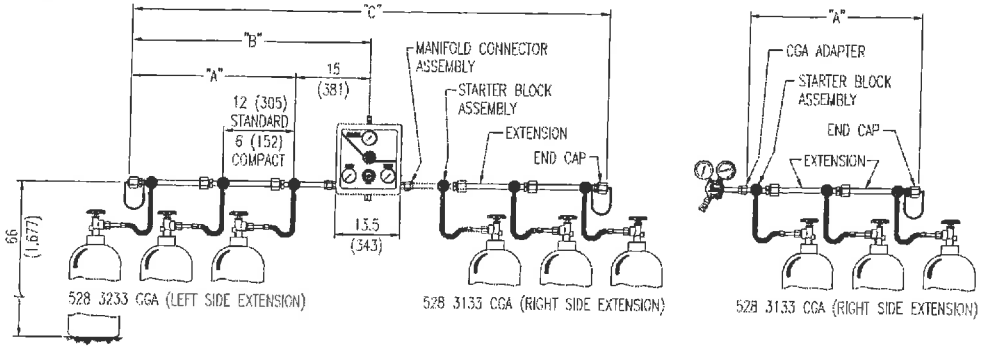
Diaphragm Valve
- Brass barstock (Body)
- PCTFE (Seat)
- 316 stainless steel (Stems)
- Elgiloy (Diaphragms)

Dimensions ("A", "B", and "C" refer to the lengths specified on following page.)

Cylinders Per Extension	1	2	3	4	5	6	7	8	9	10
"A" Standard (Single Row)	6"	18"	30"	42"	54"	66"	78"	90"	102"	114"
"B" Standard (Single Row)	15"	27"	39"	51"	63"	75"	87"	99"	111"	123"
"C" Standard (Single Row)	30"	54"	78"	102"	126"	150"	174"	198"	222"	246"
Weight Standard (Single Row)	5.7 lbs	11.8 lbs	17.9 lbs	24.0 lbs	31.1 lbs	36.2 lbs	42.3 lbs	48.4 lbs	54.5 lbs	60.6 lbs
"A" Compact (Single Row)	6"	12"	18"	24"	30"	36"	42"	48"	54"	60"
"B" Compact (Single Row)	15"	21"	27"	33"	39"	45"	51"	57"	63"	69"
"C" Compact (Single Row)	30"	42"	54"	66"	78"	90"	102"	114"	126"	138"
Weight Compact (Single Row)	5.7 lbs	11.2 lbs	16.7 lbs	22.2 lbs	27.7 lbs	33.2 lbs	38.7 lbs	44.2 lbs	49.7 lbs	55.2 lbs

MANIFOLDS

System Diagram



Ordering Information

628	A	B	C	D	Inlet	Options
Series	**Material**	**Orientation**	**Pigtail Style**	**Number of Stations**	**Pigtail Connection**	**Installed Options**
628	1: Brass	1:Standard Single Row (right)	0:None	1: One Station	Please specify inlet connection	F:Integral Pigtail Flash Arrestor
		2:Standard Single Row (left)	1:36" Rigid Brass	2: Two Stations		
		3:Standard Double Row	2:24" Rigid Copper	3: Three Stations	PTFE-lined pigtails for oxygen service include accumulator extensions to prevent ignition from adiabatic compression. Not for use with Helium or Hydrogen.	
		4:Compact Single Row (right)	3:72" Flexible Stainless Steel Core and Armor Cased	4: Four Stations		
		5:Compact Single Row (left)	4:24" Flexible Stainless Steel-braided with PTFE lining	5: Five Stations		
		6:Compact Double Row	5:36" Flexible Stainless Steel Core and Armor Cased	6: Six Stations		
			6:36" Flexible Stainless Steel-braided with PTFE lining	7: Seven Stations		
			7:24" Flexible Stainless Steel Core and Armor Cased	8: Eight Stations		
			8:36" Rigid Brass with Flash Arrestor (CGA 300 and 510 Acetylene)	9: Nine Stations		
			9:72" Flexible Stainless Steel-braided with PTFE lining	0: Ten Stations		
			A:36" Flexible Stainless Steel Armor with PTFE lining	A: Eleven Stations		
				B: Twelve Stations		
				C: Thirteen Stations		
				D: Fourteen Stations		
				E: Fifteen Stations		

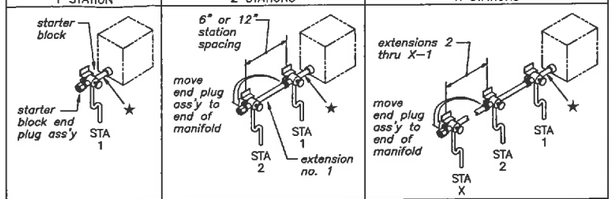
Maniflex Options

Option	Order Number	Description
Manifold Floor Stand	830-7437	Supports 2 standard length (12") manifold extensions installed consecutively
CGA Adapter for Regulators	529-0008-CGA	Brass (½" MPT x CGA)
Flashback Arrestors	801-8530	Use of Acetylene requires flashback arrestors and pigtails. Meets OSHA and NFPA Std. 51 requirements and complies with ISO 5175 (heavy class) DIN 8521, and BS 6158. See Page 44.
12" Extension Kit	829-9998	Brass mounting hardware with valve
Starter Kit	829-9997	Brass mounting hardware with valve
6" Extension Kit	829-9999	Brass mounting hardware with valve
End Cap	829-1830	End cap with chain

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
628	manifold	8291849	starter block	3000 psig	3000 psig				Various, see drawings on file	Brass, UNS C36000 for fittings, Extension tubes are Brass, UNS C33000
628	manifold	8291851	extension, 6 inch	3000 psig	3000 psig				Various, see drawings on file	Brass, UNS C36000 for fittings, Extension tubes are Brass, UNS C33000
628	manifold	8291847	extension, 12 inch	3000 psig	3000 psig				Various, see drawings on file	Brass, UNS C36000 for fittings, Extension tubes are Brass, UNS C33000

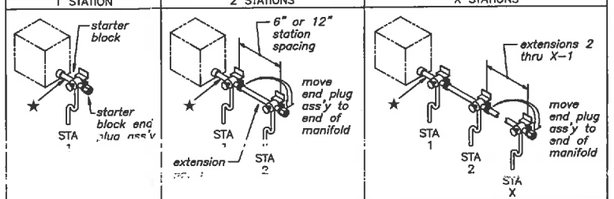
628 FIRST 3 DIGITS PRODUCT SERIES	X 4TH DIGIT MATERIAL	X 5TH DIGIT ORIENTATION	X 6TH DIGIT PIGTAIL STYLE	X 7TH DIGIT NUMBER OF STATIONS (SEE 5TH DIGIT COLUMN or BOM FOR PART NO.)	-01 "CONCOA" BRAND CODE	CGA CODE U/M	OPTIONS
	1 BRASS MANIFOLD	1 SINGLE ROW – 12" RIGHT ORIENTATION EXTENSION KIT 829 9998 (OBTAIN QTYS FROM 7th DIGIT COLUMN) STARTER BLOCK KIT 829 9997 QTY 1 ITEM MASTER DESCRIPTION (SEE NOTE 2): "12IN" (STATION SPACING) "SR" (SINGLE ROW)	0 NO PIGTAIL ASSEMBLY ITEM MASTER DESCRIPTION (SEE NOTE 2): "_NOPGTL"	0 9 EXTENSION KITS 10 PIGTAILS 2 MAIN CARTONS 2 MAIN CARTON LABELS SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "10ST" (NO. OF STATIONS)		000 NO INLET ITEM MASTER DESCRIPTION (SEE NOTE 2): "_NO_IN"	F FUEL GAS SYSTEMS WITH FLASHBACK ARRESTORS 'CH' PIGTAILS SEE DRAWING 628 1000F
		2 SINGLE ROW – 12" LEFT ORIENTATION EXTENSION KIT 829 9998 (OBTAIN QTYS FROM 7th DIGIT COLUMN) STARTER BLOCK KIT 829 9997 QTY 1 ITEM MASTER DESCRIPTION (SEE NOTE 2): "12IN" (STATION SPACING) "SR" (SINGLE ROW)	1 36" RIGID BRASS PIGTAIL ASSEMBLY PART 529 0028-01-□□□ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM NOT AVAILABLE WITH CGA 300, 410 OR 510 CONNECTION ITEM MASTER DESCRIPTION (SEE NOTE 2): "_RBPGTL"	1 0 EXTENSION KITS 1 PIGTAIL qty 0 MAIN CARTON 1 MAIN CARTON LABEL SHIP ALL ITEMS IN 1 BOX. SEE PACKAGING NOTES. ITEM MASTER DESCRIPTION (SEE NOTE 2): "_1ST" (NO. OF STATIONS)		XXX REFER TO SPECIFIED PIGTAIL DRAWING FOR LIST OF AVAILABLE INLET CONNECTIONS (SEE 6th DIGIT).	BLANK: NO OPTION SELECTED
		3 DOUBLE ROW – 12" SEE DRAWING 628 1300	2 24" RIGID COPPER PIGTAIL ASSEMBLY PART 529 0035-01-□□□ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM NOT AVAILABLE WITH CGA 300, 410 OR 510 CONNECTION ITEM MASTER DESCRIPTION (SEE NOTE 2): "_RBPGTL"	2 1 EXTENSION KIT 2 PIGTAILS 1 MAIN CARTON 1 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "_2ST" (NO. OF STATIONS)		300 ACETYLENE SERVICE – FLASHBACK ARRESTORS REQUIRED. SEE DRAWING 628 1000F.	
		4 SINGLE ROW – 6" RIGHT ORIENTATION EXTENSION KIT 829 9999 (OBTAIN QTYS FROM 7th DIGIT COLUMN) STARTER BLOCK KIT 829 9997 QTY 1 ITEM MASTER DESCRIPTION (SEE NOTE 2): "6IN" (STATION SPACING) "SR" (SINGLE ROW)	3 72" FLEXIBLE PIGTAIL ASSEMBLY, STAINLESS CORE, ARMOR CASED PART 529 0055-01-□□□ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM CGA 300, 410 & 510 ARE ONLY AVAILABLE WITH OPTION CODE "7" – SEE 628 1000F ITEM MASTER DESCRIPTION (SEE NOTE 2): "_72PGTL"	3 2 EXTENSION KITS 3 PIGTAILS 1 MAIN CARTON 1 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "_3ST" (NO. OF STATIONS)		410 ACETYLENE SERVICE – FLASHBACK ARRESTORS REQUIRED. SEE DRAWING 628 1000F.	
		5 SINGLE ROW – 6" LEFT ORIENTATION EXTENSION KIT 829 9999 (OBTAIN QTYS FROM 7th DIGIT COLUMN) STARTER BLOCK KIT 829 9997 QTY 1 ITEM MASTER DESCRIPTION (SEE NOTE 2): "6IN" (STATION SPACING) "SR" (SINGLE ROW)	4 24" TEFLON LINED, STAINLESS BRAID PIGTAIL ASSEMBLY PART 529 0036-01-□□□ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM IF FOREIGN INLET IS SPECIFIED, USE: PIGTAIL: 5290071-01-XXX (24" BRAIDED PIGTAIL ASS'Y, TETHERED) ITEM MASTER DESCRIPTION (SEE NOTE 2): "_24PGTL"	4 3 EXTENSION KITS 4 PIGTAILS 1 MAIN CARTON 1 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "_4ST" (NO. OF STATIONS)		510 FUEL GAS & OTHER GAS SERVICES – IF THIS CONNECTION IS DESIRED WITH FLASHBACK ARRESTORS, REFER TO DRAWING 628 1000F. REFER TO SPECIFIED PIGTAIL DRAWING FOR LIST OF AVAILABLE INLET CONNECTIONS (SEE 6th DIGIT).	
		6 DOUBLE ROW – 6" SEE DRAWING 628 1300	5 36" FLEXIBLE PIGTAIL ASSEMBLY, STAINLESS CORE, ARMOR CASED PART 529 0031-01-□□□ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM ITEM MASTER DESCRIPTION (SEE NOTE 2): "_36PGTL" CGA 300, 410 & 510 ARE ONLY AVAILABLE WITH OPTION CODE "7" – SEE 628 1000F	5 4 EXTENSION KITS 5 PIGTAILS 1 MAIN CARTON 1 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "_5ST" (NO. OF STATIONS)			
			6 36" TEFLON LINED, STAINLESS BRAID PIGTAIL ASSEMBLY PART 529 0044-01-□□□ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM IF FOREIGN INLET IS SPECIFIED, USE: PIGTAIL: 5290031-01-XXX (36" BRAIDED PIGTAIL ASS'Y, TETHERED) ITEM MASTER DESCRIPTION (SEE NOTE 2): "_36PGTL"	6 5 EXTENSION KITS 6 PIGTAILS 1 MAIN CARTON 1 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "_6ST" (NO. OF STATIONS)			
			7 24" FLEXIBLE PIGTAIL ASSEMBLY, STAINLESS CORE, ARMOR CASED PART 529 0071-01-□□□ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM ITEM MASTER DESCRIPTION (SEE NOTE 2): "_24PGTL" CGA 300, 410 & 510 ARE ONLY AVAILABLE WITH OPTION CODE "7" – SEE 628 1000F	7 6 EXTENSION KITS 7 PIGTAILS 1 MAIN CARTON 1 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "_7ST" (NO. OF STATIONS)			
			8 HOT VALID ~ 36" PIGID BRASS W/FLASHBACK ARRESTORS SEE DRAWINGS 628 1000F & 628 1300F 9 72" TEFLON LINED, STAINLESS BRAID PIGTAIL ASS'Y PART 529 0272-01-□□□ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM IF FOREIGN INLET IS SPECIFIED, USE: PIGTAIL: 5290055-01-XXX (72" BRAIDED PIGTAIL ASS'Y, TETHERED) ITEM MASTER DESCRIPTION (SEE NOTE 2): "_72PGTL"	8 7 EXTENSION KITS 8 PIGTAILS 1 MAIN CARTON 1 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "_8ST" (NO. OF STATIONS)			
			A 36" FLEXIBLE PIGTAIL ASS'Y, TEFLON CORE, ARMOR CASED PART 529 0047-01-□□□ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM IF FOREIGN INLET IS SPECIFIED, USE: PIGTAIL: 5290031-01-XXX (36" BRAIDED PIGTAIL ASS'Y, TETHERED) ITEM MASTER DESCRIPTION (SEE NOTE 2): "_36PGTL"	9 8 EXTENSION KITS 9 PIGTAILS 2 MAIN CARTONS 2 MAIN CARTON LABELS SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "_9ST" (NO. OF STATIONS)			
				A 10 EXTENSION KITS 11 PIGTAILS 2 MAIN CARTONS 2 MAIN CARTON LABELS SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "11ST" (NO. OF STATIONS)			
				B 11 EXTENSION KITS 12 PIGTAILS 2 MAIN CARTONS 2 MAIN CARTON LABELS SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "12ST" (NO. OF STATIONS)			
				C 12 EXTENSION KITS 13 PIGTAILS 2 MAIN CARTONS 2 MAIN CARTON LABELS SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "13ST" (NO. OF STATIONS)			
				D 13 EXTENSION KITS 14 PIGTAILS 2 MAIN CARTONS 2 MAIN CARTON LABELS SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "14ST" (NO. OF STATIONS)			
				E 14 EXTENSION KITS 15 PIGTAILS 2 MAIN CARTONS 2 MAIN CARTON LABELS SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "15ST" (NO. OF STATIONS)			

LEFT ORIENTATION MANIFOLD

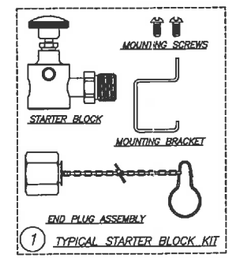


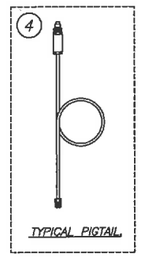
★ MANIFOLD CONNECTOR IS NOT INCLUDED. IT MUST BE SPECIFIED FOR SYSTEMS USING THIS MANIFOLD. THE 628 SERIES STARTER BLOCK HAS A 1/2" NPTF PORT.

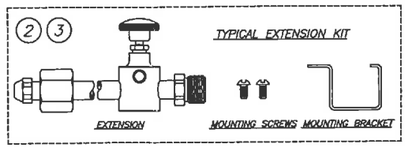
RIGHT ORIENTATION MANIFOLD



★ MANIFOLD CONNECTOR IS NOT INCLUDED. IT MUST BE SPECIFIED FOR SYSTEMS USING THIS MANIFOLD. THE 628 SERIES STARTER BLOCK HAS A 1/2" NPTF PORT.





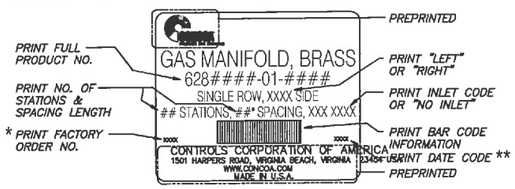


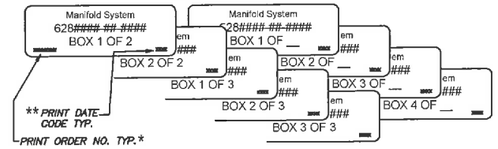
NOTES
1. 6th DIGIT "0" CAN ONLY BE SOLD WITH NO INLET ("000").
2. FOR INFOFLO ITEM MASTER DESCRIPTION, USE:

1st LINE: MFLDASSY,_BRS__XXST_
2nd LINE: XXIN_SRXXXPGTLXXXXXX

- FOR "XXST" IN 1st LINE, SEE 7th DIGIT COLUMN OF MATRIX (NO. OF STATIONS PER SIDE) 5
- FOR "XXIN" IN 2nd LINE, SEE 5th DIGIT COLUMN OF MATRIX (STATION SPACING)
- FOR "XXXPGTL" IN 2nd LINE, SEE 6th DIGIT COLUMN OF MATRIX (PIGTAIL LENGTH)
- FOR "XXXXX" IN 2nd LINE, USE CGA CODE FOR CYLINDER CONNECTIONS (i.e., "CGA540", "DIN06", etc.) –OR– USE DESCRIPTION FROM CGA 3 COLUMN OF MATRIX

BOX LABEL NOTES:
PRINT BOX LABEL (ITEM 6) AND BOX X OF Y LABELS (ITEM 7) AS SHOWN BELOW:





* FACTORY ORDER NO. OR OTHER REFERENCE NO. (i.e., RMA, REWORK, etc.).

** DATE CODE (DATE THE LABEL WAS PRINTED) IN THE FORM OF YYWW (YY IS THE 2 DIGIT YEAR, WW IS THE WEEK OF THE YEAR).

PACKAGING NOTES:
1. FOR MODELS WITH 7th DIGIT = "1", SELECT APPROPRIATELY SIZED BOX FROM TABLE "BOX OPTIONS FOR PERIPHERALS" TO HOLD ALL SYSTEM PARTS.
2. FOR MODELS WITH 7th DIGIT NOT = "1", USE MAIN CARTON QTY SPECIFIED IN 7th DIGIT.
3. ENCLOSE A MAXIMUM OF (8) STARTER BLOCK AND/OR EXTENSION KITS IN MAIN CARTON(s), AND INCLUDE THE PIGTAILS IF THEY WILL FIT.
4. IF THE PIGTAILS WON'T FIT IN MAIN CARTON(s), USE ADDITIONAL APPROPRIATELY SIZED CARTON SELECTED FROM TABLE "BOX OPTIONS FOR PERIPHERALS".
5. FOAM PACK ALL CARTONS, AND SEAL THEM.
6. APPLY MAIN CARTON LABEL(s) TO MAIN CARTON(s), AND USE THE BOX X OF Y LABELS AS NECESSARY. FOR MODELS REQUIRING MORE THAN (3) CARTONS, USE THE BOX # OF _ LABELS, AND FILL IN THE BLANKS.
7. DISCARD UNUSED BOX X OF Y LABELS.

BOX OPTIONS FOR PERIPHERALS		
SELECT APPROPRIATE BOX FROM THIS TABLE FOR SHIPPING OPTIONAL PERIPHERALS THAT COME WITH THE SYSTEM		
BOX PART NO.	SIZE	NOTES
9904 0038	3-1/4" x 4" x 22"	Use for Extra–Extra Small Qtys
9903 9188	8-9/16" x 10-1/4" x 13-11/16"	Use for Extra Small Qtys
9903 9232	10" x 13-3/8" x 15-3/4"	Use for Small Qtys
9904 7019	9" x 10-3/4" x 18"	Use for Medium Qtys
9904 8052	11-5/8" x 16-3/4" x 17-7/16"	Use for Large Qtys
9904 8045	16" x 20" x 22"	Use for Extra Large Qtys

ITEM	PART NO / SIZE	QTY	MATERIAL / DESCRIPTION
7	9901 6312	9	BOX X OF Y LABEL
6	9901 6289	SEE MATRIX	MAIN CARTON LABEL
5	9904 0106	SEE MATRIX	MAIN CARTON
4	SEE MATRIX		PIGTAILS
3	SEE MATRIX		EXTENSION KIT, 6" VALVE SPACING
2	SEE MATRIX		EXTENSION KIT, 12" VALVE SPACING
1	SEE MATRIX		STARTER BLOCK KIT
	SEE TABLE "BOX OPTIONS FOR PERIPHERALS"		

REVISIONS						PT NO 628 1000
NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED	
2	01–0240	EXTENSIVELY REVISED – MOVED TO CURRENT C–SIZE SHEET, ADDED OPTION 6 IN 6th DIGIT COLUMN	AEW	2/27/2001		
3	01–0539	IN THE 6th DIGIT COLUMN, OPTIONS 6 & 8, SPECIFIED USE OF SPECIAL PIGTAIL WITH CGA 540	AEW	7/30/2001	John Friedrichs 7/31/2001	
4	02–0290	IN THE 6th DIGIT COLUMN, OPTION 8, 30" PIGTAILS WERE 24" PIGTAILS 529 0078–XXX	AEW	5/23/2002	A. Whitaker 6/20/2002	
5	03–0168	SWAPPED 6th DIGIT OPTIONS "3" & "5", ADDED NOMENCLATURE, UPGRADED TO CURRENT PRACTICES	AEW	3/20/2003	R. Cooper 3/7/2003	
6	03–233	ADDED OPTION CODE COLUMN WITH "F" OPTION, REMOVED 6th DIG OPT 8, ENDS PIGTAIL IN OPT 8	AEW	5/7/2003	J. Friedrichs 4/24/2003	
7	03–547	ADDED BLANK OPTION IN LAST DIGIT, ADDED 6th DIGIT OPTION 3 & 7, 6th DIGIT OPT 4 WAS 7	AEW	10/9/2003	J. Friedrichs 9/16/2003	
8	04–433	IN 6th DIGIT OPT 8, "529 0272 □□□" WAS "529 0272 □□□F"	AEW	7/7/2004	R. Cooper 6/28/2004	
9	04–735	ADDED 7th DIGIT OPTIONS A THRU E, CHANGED PRODUCT NOMENCLATURE	AEW	10/9/2004	R. Cooper 10/5/2004	
10	05–275	ADDED 6th DIGIT OPTION "A", REF TO OPTION "B"	AEW	5/9/2005	A. Whitaker 4/26/2005	
11	05–814	CLARIFIED PART DIMMIRIES	AEW	10/9/2005	A. Whitaker 8/26/2005	
12	07–035	FOR TEFLON PIGTAILS (both armor cased & braided), USED BRAIDED–TETHERED FOR FOREIGN INLET MODELS	AEW	1/17/2007	J. Friedrichs 1/16/2007	
13	08–447	NOTED THAT CGA 300 410 510 NOT AVAILABLE WITH RIGID Cu PIGTAILS 6th OPTS 1 & 2	AEW	10/22/2008	S. Dhiller 8/15/2008	
14	09–528	ALLOWED CGA 510 WITHOUT FLASHBACK, ADDED CGA 410 OPTION, USED –01 PIGTAILS	AEW	9/22/2009	A. Whitaker 9/21/2009	
15	07–722	ADDED PKG PARTS AND INSTRUCTIONS	AEW	3/10/2010	A. Whitaker 2/5/2010	
16	10–241	ALLOWED CGA 540 FOR 6th DIGIT = 3,4,7	AEW	10/28/2010	A. Whitaker 10/19/2010	

SCALE: NONE	THIRD ANGLE PROJECTION	TOLERANCE UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES DIM. & TOL. PER ANSI Y14.5	DRAWN BY: A. Whitaker 2/27/2001
TRUE BLANK PROFILE: .07	REVISION DATE: 1/31/2003	FINISH: XXX DECIMALS ±.005 XX DECIMALS ±.010 FRACTIONS ±1/64 ANGLES ±2° FILLET RADII R 1/64 BREAK EDGES .002–.010	DESIGN ENGINEERING: J. Friedrichs 2/27/2001
CAD FILENAME: 628 1000.DWG			MANUFACTURING ENG: M. Wilson 2/27/2001
MATERIAL:		CAGE NUMBER: 0A389	QUALITY ASSURANCE: E. Filomarino 2/27/2001

CONTROLS CORPORATION OF AMERICA
PRODUCT ENGINEERING DEPARTMENT
VIRGINIA BEACH, VA 23454

TITLE: MFLDASSY,_BRS__XXST_ XXIN_SRXXXPGTLXXXXXX (FOR "X"s IN TITLE, SEE NOTE 2)

PART NO. 628 1000

RELEASE REFERENCE DOCUMENT # SPR 0201–002

REV D

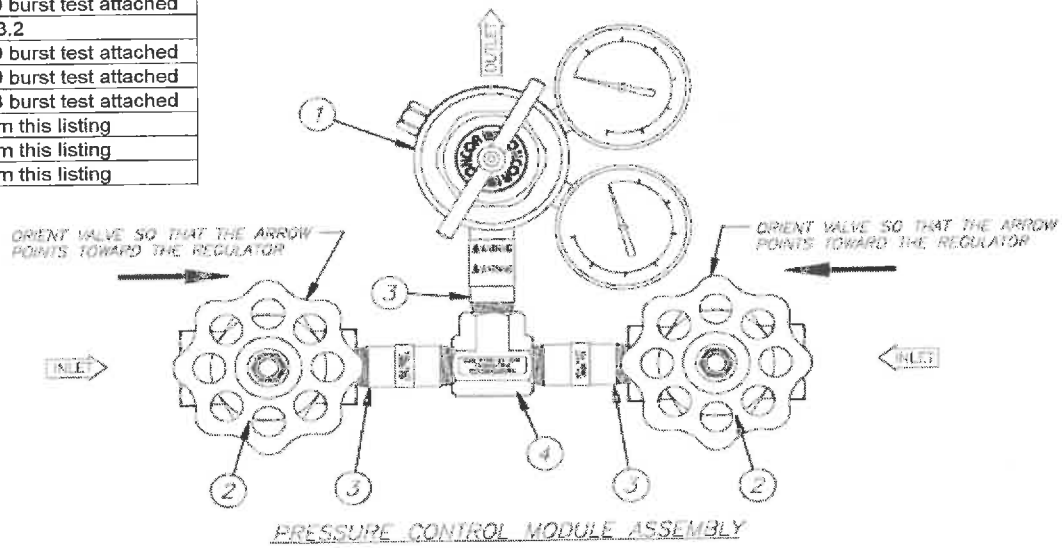
CONCOA CRN Testing Summary Sheet

Package 5 - Type H
631/633

Scope: 631/633 Series Compressed Gas Systems (manifolds on some models shall require a separate valid CRN - Items 8,9 and 10 from sketch below are excluded from this listing)

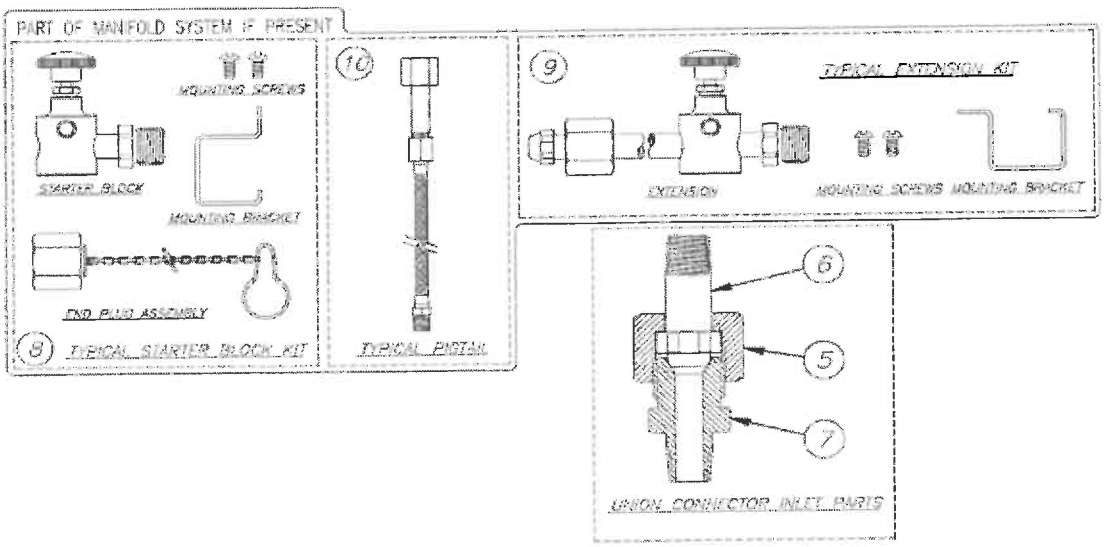
Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	OF11809.2
2	OH7770.5R1
3	See 8306499 burst test attached
4	CRN OA4093.2
5	See 8291839 burst test attached
6	See 8291840 burst test attached
7	See 8306498 burst test attached
8	Excluded from this listing
9	Excluded from this listing
10	Excluded from this listing



PRESSURE CONTROL MODULE ASSEMBLY

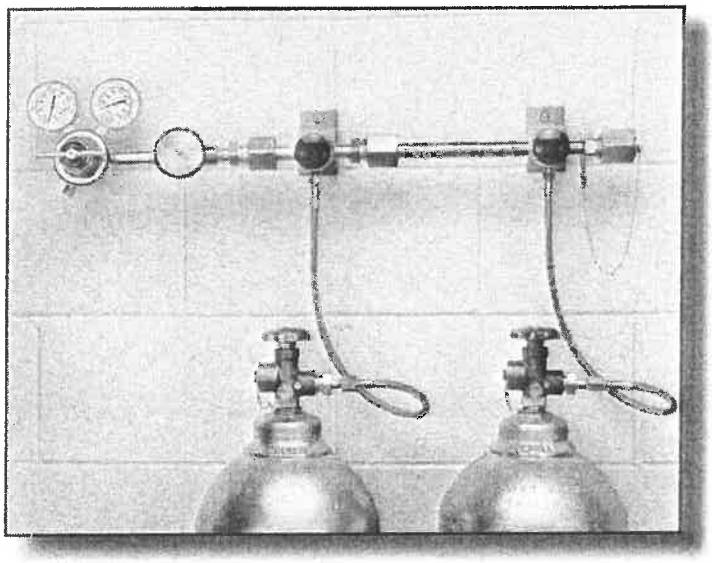
Sketch:



Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

MANIFOLDS

631 Series Simplex HF



The 631 Series Simplex combines a modular manifold system with the extra heavy-duty 6700 Series regulator. Line or station regulators should be installed at the point of use to ensure constant delivery pressure. Use of Acetylene requires flashback arrestor on pigtails.

Advanced Features

- **6700 Regulator**
  High flow capacity
- **Pressure Ranges 0-15 to 0-200 PSIG**
  Broad range of applications
- **Integral Maniflex Manifold System**
  Easy installation and expansion
- **Left and Right Banks**
  Sizes to fit cylinders on either side
- **Standard or Compact Lengths**
  12" or 6" lengths for easy installation
- **Pigtail Style Variety**
  Copper, Brass, or Flexible Stainless Steel

Applications

Pipeline Supply Source
200 PSIG delivery pressure meets NFPA guidelines without compromising flow capacity (15 PSIG maximum for Acetylene)

Fuel Gases
Safely supply acetylene and other fuel gases for cutting, heating or welding with OSHA regulation compliant manifold systems. Use of Acetylene requires flashback arrestor on pigtails.

Materials

Delivery Regulator Body
Brass barstock
Delivery Regulator Bonnet
Forged Brass
Master Valve
Forged Brass
Diaphragm
Fabric-reinforced Neoprene
Internal Seals
PTFE Teflon®
Seat
Viton®
Piping
Forged Brass

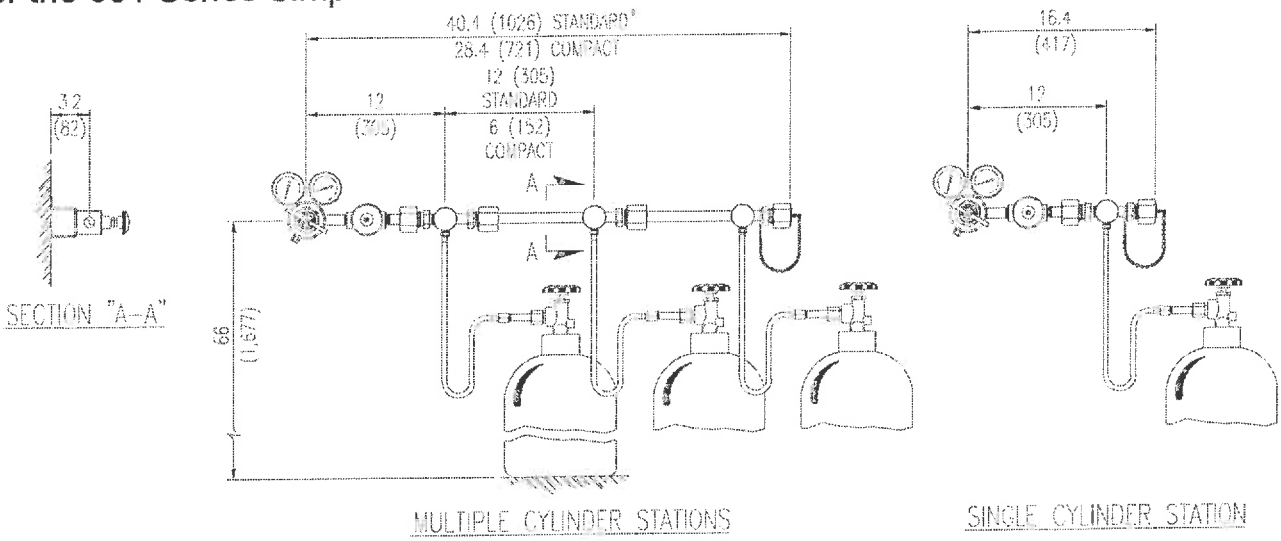
Specifications

Maximum Inlet Pressure
3000 PSIG (210 BAR)
Temperature Range
-40 to 140°F (-40 to 60°C)
Maximum Flow
6000 SCFH (2830 lpm)
Outlet Connection
½" FPT
Weight
9.0 lbs. (4.1 kg)

CONCOA • 1501 Harpers Road, Virginia Beach, Virginia 23454 USA
800.225.0473 • www.CONCOA.com

MANIFOLDS

Mounting and Dimensional Information for the 631 Series Simplex HF



Manifolds

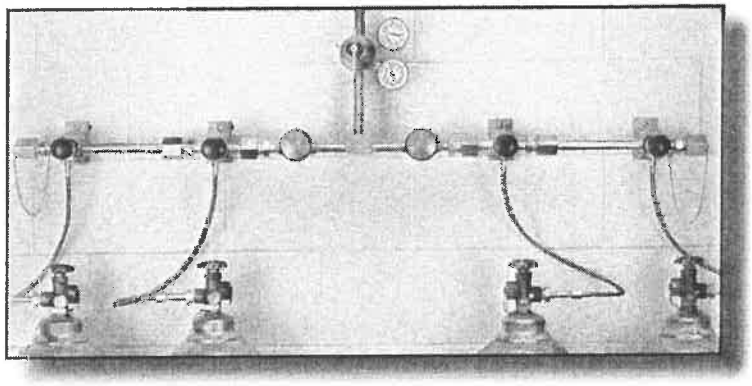
Ordering Information

	A	B	C	D	E	F
Series	**Outlet Pressure**	**Manifold Style**	**Pigtail Style**	**Stations/Side**	**Inlet**	**Options**
631					Please specify inlet connection	C: Foreign Inlets CO_2 & Inert
	1: 0-15 PSIG	1: Standard Length (12" between stations) Right Side with One Cylinder/Station		1: One Station	PTFE-lined pigtails for oxygen service include accumulator extensions to prevent ignition from adiabatic compression.	F: Arrestor for 300, 410, 510
	2: 0-40 PSIG	2: Standard Length (12" between stations) Left Side with One Cylinders/Station	2: 24" Rigid Copper	2: Two Stations		R: Foreign Inlets Ar, H_2, O_2, O_2 Mix
	3: 0-120 PSIG	3: Standard Length (12" between stations) Right Side with Two Cylinders/Station	3: 72" Flexible Stainless Steel Armor Case with Stainless Steel Core	3: Three Stations		
	4: 0-200 PSIG	4: Compact Length (6" between stations) Right Side with One Cylinder/Station	4: 24" Flexible Stainless Steel braided with PTFE lining	4: Four Stations		
	5: 0-15 PSIG Redline	5: Compact Length (6" between stations) Left Side with One Cylinders/Station	5: 36" Flexible Stainless Steel Armor Case with Stainless Steel Core	5: Five Stations		
		6: Compact Length (6" between stations) Right Side with Two Cylinders/Station	6: 36" Flexible Stainless Steel braided with PTFE lining	6: Six Stations		
		7: Standard Length (12" between stations) Left Side with Two Cylinders/Station	7: 24" Flexible Stainless Steel Armor Case with Stainless Steel Core	7: Seven Stations		
		8: Compact Length (6" between stations) Left Side with Two Cylinders/Station	8: 36" Rigid Brass with Flash Arrestor (CGA 300 & 510 Acetylene)	8: Eight Stations		
			9: 72" Flexible Stainless Steel-braided with PTFE lining	9: Nine Stations		

MANIFOLDS

633 Series Duplex HF

Manual Switchover System, High Flow



The 633 Series Duplex supports two banks of high pressure cylinders for applications where continuous gas supply is not required. A heavy-duty valve manually controls the bank priority, and line or station regulators should be installed at the point of use to ensure constant delivery pressure. Use of Acetylene requires flashback arrestor on pigtails.

Advanced Features

- **Manual Switchover**
- **6700 Line Regulator**
  High flow capacity
- **Pressure Ranges 0-15 to 0-200 PSIG**
  Broad range of applications
- **Integral Maniflex Manifold System**
  Easy installation and expansion
- **Left and Right Banks**
  Maintain reserve supply

Applications

Pipeline Supply Source
200 PSIG delivery pressure meets NFPA guidelines without compromising flow capacity (15 PSIG maximum for Acetylene)

Fuel Gases
Safely supply acetylene and other fuel gases for cutting, heating or welding with OSHA regulationcompliant manifold systems. Use of Acetylene requires flashback arrestor on pigtails. All fuel gases require flashback arrestors.

Materials

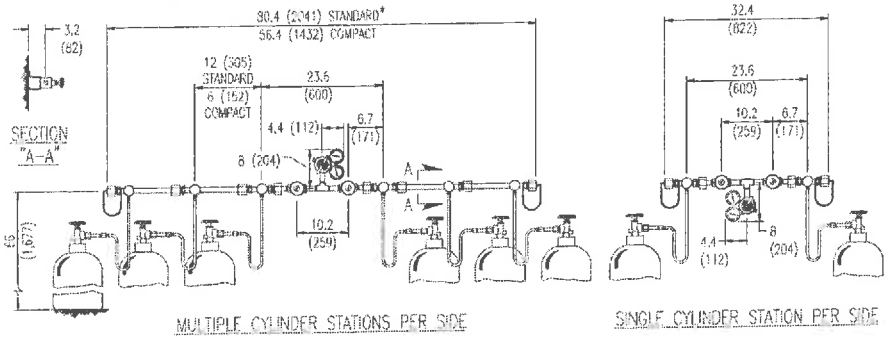
Delivery Regulator Body
Brass barstock
Delivery Regulator Bonnet
Forged Brass
Master Valve
Forged Brass
Diaphragm
Fabric-reinforced Neoprene
Internal Seals
PTFE Teflon®
Seat
Viton®
Piping
Forged Brass

Specifications

Maximum Inlet Pressure
3000 PSIG (210 BAR)
Temperature Range
-40 to 140°F (-40 to 60°C)
Maximum Flow
6000 SCFH (2830 lpm)
Outlet Connection
½" FPT
Weight
23 lbs. (10.4 kg)

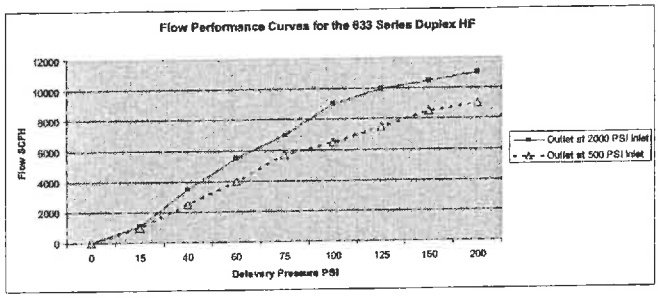
CONCOA • 1501 Harpers Road, Virginia Beach, Virginia 23454 USA
800.225.0473 • www.CONCOA.com

Mounting and Dimensional Information for the 633 Series Duplex HF



MULTIPLE CYLINDER STATIONS PER SIDE

SINGLE CYLINDER STATION PER SIDE



Ordering Information

A	B	C	D	E	F
Series	**Outlet Pressure**	**Manifold Style**	**Pigtail Style**	**Stations/side**	**Inlet**	**Options**
633	1: 0-15 PSIG	1: Standard Length (12" between stations) with One Cylinder/Station	2: 24" Rigid Copper	1: One Station	PTFE-lined pigtails for oxygen service include accumulator extensions to prevent ignition from adiabatic compression. Not for use with Helium or Hydrogen.	C: Foreign Inlets CO_2 & Inert
	2: 0-40 PSIG		3: 72" Flexible Stainless Steel Armor Case with Stainless Steel Core	2: Two Stations		F: Arrestor for 300, 410, 510
	3: 0-120 PSIG	3: Standard Length (12" between stations) with 2 Cylinders/Station	4: 24" Flexible Stainless Steel braided with PTFE lining	3: Three Stations		R: Foreign Inlets Ar, H_2, O_2, O_2 Mix
	4: 0-200 PSIG	4: Compact Length (6" between stations) with One Cylinder/Station	5: 36" Flexible Stainless Steel Armor Case with Stainless Steel Core	4: Four Stations		
	5: 0-15 PSIG (Redline)	6: Compact Length (6" between stations) with 2 Cylinders/Station	6: 36" Flexible Stainless Steel braided with PTFE lining	5: Five Stations		
			7: 24" Flexible Stainless Steel Armor Case with Stainless Steel Core	6: Six Stations		
			8: 36" Rigid Brass with Flash Arrestor (CGA 300 & 510 Acetylene only)	7: Seven Stations		
			9: 72" Flexible Stainless Steel-braided with PTFE lining	8: Eight Stations		
				9: Nine Stations		

Related Options

Option	Order Number	Description
Manifold Floor Stand	830-7437	Supports 2 standard length (12") manifold extensions installed consecutively
Station Regulators	See page 40	Precise pressure delivery at the point of use
Flashback Arrestors	801-8530	Use of Acetylene requires flashback arrestors on pigtails. Meets OSHA and NFPA Std. 51 requirements and complies with ISO 5175 (heavy class) DIN 8521, and BS 6158. See pg. 44.

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
631	control module	5290098	master valve	4500 psig	4500 psig	REGO Cryo CRN OH7770.5R1	5600 psig	5600 psig		
631	control module	8066700	regulator	300 psig	15 psig	CONCOA CRN OF11809.2	300 psig	15 psig		
631	control module	8066725	regulator	3000 psig	120 psig	CONCOA CRN OF11809.2	3000 psig	120 psig		
631	control module	8066740	regulator	300 psig	40 psig	CONCOA CRN OF11809.2	3000 psig	40 psig		
631	control module	8066741	regulator	3000 psig	40 psig	CONCOA CRN OF11809.2	3000 psig	40 psig		
631	control module	8066745	regulator	3000 psig	200 psig	CONCOA CRN OF11809.2	3000 psig	200 psig		
631	control module	8066753	regulator	3000 psig	120 psig	CONCOA CRN OF11809.2	3000 psig	120 psig		
631	control module	8066754	regulator	3000 psig	200 psig	CONCOA CRN OF11809.2	3000 psig	200 psig		
631	control module	8066758	regulator	3000 psig	15 psig	CONCOA CRN OF11809.2	3000 psig	15 psig		
631	control module	8066759	regulator	3000 psig	15 psig	CONCOA CRN OF11809.2	3000 psig	15 psig		
631	control module	8066770	regulator	300 psig	15 psig	CONCOA CRN OF11809.2	300 psig	15 psig		
631	control module	8066772	regulator	300 psig	40 psig	CONCOA CRN OF11809.2	3000 psig	40 psig		
631	control module	8066773	regulator	3000 psig	120 psig	CONCOA CRN OF11809.2	3000 psig	120 psig		
631	control module	8066774	regulator	3000 psig	200 psig	CONCOA CRN OF11809.2	3000 psig	200 psig		
631	control module	8066775	regulator	3000 psig	120 psig	CONCOA CRN OF11809.2	3000 psig	120 psig		
631	control module	8066776	regulator	3000 psig	200 psig	CONCOA CRN OF11809.2	3000 psig	200 psig		
631	control module	8066777	regulator	3000 psig	40 psig	CONCOA CRN OF11809.2	3000 psig	40 psig		
631	control module	8066778	regulator	3000 psig	15 psig	CONCOA CRN OF11809.2	3000 psig	15 psig		
631	control module	8066779	regulator	3000 psig	15 psig	CONCOA CRN OF11809.2	3000 psig	15 psig		
631	control module	8291839	gland	3000 psig	3000 psig				1-1/8 hex x 2-5/8 OAL	Brass, UNS C36000 per ASTM B-16
631	control module	8291840	nut	3000 psig	3000 psig				1-3/4 hex x 1.375 OAL	Brass, UNS C36000 per ASTM B-16
631	control module	8306498	adapter	3000 psig	3000 psig				1-3/8 hex x 2.5 OAL	Brass, UNS C36000 per ASTM B-16
631	control module	8306499	pipe nipple	3000 psig	3000 psig				.844 OD x .468 ID	Brass, UNS C36000 per ASTM B-16
631	control module	628 series	manifold	3000 psig	3000 psig	See separate listing in this report				
633	control module	5290098	master valve	4500 psig	4500 psig	REGO Cryo CRN OH7770.5R1	5600 psig	5600 psig		
633	control module	8066700	regulator	300 psig	15 psig	CONCOA CRN OF11809.2	300 psig	15 psig		
633	control module	8066725	regulator	3000 psig	120 psig	CONCOA CRN OF11809.2	3000 psig	120 psig		
633	control module	8066740	regulator	300 psig	40 psig	CONCOA CRN OF11809.2	3000 psig	40 psig		
633	control module	8066741	regulator	3000 psig	40 psig	CONCOA CRN OF11809.2	3000 psig	40 psig		
633	control module	8066745	regulator	3000 psig	200 psig	CONCOA CRN OF11809.2	3000 psig	200 psig		
633	control module	8066753	regulator	3000 psig	120 psig	CONCOA CRN OF11809.2	3000 psig	120 psig		
633	control module	8066754	regulator	3000 psig	200 psig	CONCOA CRN OF11809.2	3000 psig	200 psig		
633	control module	8066758	regulator	3000 psig	15 psig	CONCOA CRN OF11809.2	3000 psig	15 psig		
633	control module	8066759	regulator	3000 psig	15 psig	CONCOA CRN OF11809.2	3000 psig	15 psig		
633	control module	8066770	regulator	300 psig	15 psig	CONCOA CRN OF11809.2	300 psig	15 psig		
633	control module	8066772	regulator	300 psig	40 psig	CONCOA CRN OF11809.2	3000 psig	40 psig		
633	control module	8066773	regulator	3000 psig	120 psig	CONCOA CRN OF11809.2	3000 psig	120 psig		
633	control module	8066774	regulator	3000 psig	200 psig	CONCOA CRN OF11809.2	3000 psig	200 psig		
633	control module	8066775	regulator	3000 psig	120 psig	CONCOA CRN OF11809.2	3000 psig	120 psig		
633	control module	8066776	regulator	3000 psig	200 psig	CONCOA CRN OF11809.2	3000 psig	200 psig		
633	control module	8066777	regulator	3000 psig	40 psig	CONCOA CRN OF11809.2	3000 psig	40 psig		
633	control module	8066778	regulator	3000 psig	15 psig	CONCOA CRN OF11809.2	3000 psig	15 psig		
633	control module	8066779	regulator	3000 psig	15 psig	CONCOA CRN OF11809.2	3000 psig	15 psig		
633	control module	8291839	gland	3000 psig	3000 psig				1-1/8 hex x 2-5/8 OAL	Brass, UNS C36000 per ASTM B-16
633	control module	8291840	nut	3000 psig	3000 psig				1-3/4 hex x 1.375 OAL	Brass, UNS C36000 per ASTM B-16
633	control module	8306155	pipe tee	3000 psig	3000 psig	HyLok CRN OA4093.2	3000 psig	3000 psig		
633	control module	8306498	adapter	3000 psig	3000 psig				1-3/8 hex x 2.5 OAL	Brass, UNS C36000 per ASTM B-16
633	control module	8306499	pipe nipple	3000 psig	3000 psig				.844 OD x .468 ID	Brass, UNS C36000 per ASTM B-16
633	control module	628 series	manifold	3000 psig	3000 psig	See separate listing in this report				

THE COMPANY CONFIDENTIAL OR PROPRIETARY INFORMATION OF CONCOA (SEE "C" CONTRACT FOR USE OF CONFIDENTIAL INFORMATION). THIS DRAWING IS NOT TO BE REPRODUCED, USED, OR DISCLOSED, EXCEPT AS SPECIFICALLY AUTHORIZED, TO ANY THIRD PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF CONCOA. IT IS LOANED SUBJECT TO RECALL AT ANY TIME AND MUST BE RETURNED UPON REQUEST.

633 — FIRST 3 DIGITS REGULATOR SERIES

X 4TH DIGIT — DELIVERY PRESSURE / DELIVERY REGULATOR WARNING LABEL

- **0** — DELIVERY PRESSURE NOT APPLICABLE; NO DELIVERY REGULATOR; ⚠ WARNING LABEL: 830 6466 QTY 1
- ⚠ **2** — 0–40 PSI DELIVERY; VALID ONLY WITH CGA = 510; DELIVERY REGULATOR : 806 6740 (WITH 400 PSI INLET GAUGE); WARNING LABEL: 830 7544 QTY 1
- **3** — 0–120 PSI DELIVERY; NOT VALID WITH CGA = 510 ⚠; DELIVERY REGULATOR: 806 6725; ⚠ WARNING LABEL: 830 7544 QTY 1
- **4** — 0–200 PSI DELIVERY; NOT VALID WITH CGA = 510 ⚠; DELIVERY REGULATOR: 806 6745; WARNING LABEL: 830 7544 QTY 1
- ⚠ **5** — 0–15 PSI DELIVERY, REDLINE; VALID ONLY WITH CGA = 510; DELIVERY REGULATOR 806 6700 (WITH 400 PSI INLET GAUGE AND 30 PSI REDLINE DELIVERY GAUGE); WARNING LABEL: 830 7544 QTY 1

X 5TH DIGIT — CYLINDER ARRANGEMENT / STARTER BLOCK KITS / EXTENSION KITS

- **0** — CYLINDER ARRANGEMENT UNSPECIFIED; NO STARTER BLOCK KITS; NO EXTENSION KITS; THIS OPTION VALID ONLY WITH 6th AND 7th DIGIT "0"
- **1** — SINGLE ROW, STANDARD (12") SPACING — **A=1** ⚠
- **3** — DUAL ROW, STANDARD (12") SPACING — **A=3** ⚠
- **4** — SINGLE ROW, COMPACT (6") SPACING — **A=4** ⚠
- **6** — DUAL ROW, COMPACT (6") SPACING — **A=6** ⚠

X 6TH DIGIT — PIGTAIL STYLE

⚠ If 6th Digit NOT = 0 ⟶ **QTY 2: 6281ABC-CGA (phantom)**

⚠ If 6th Digit = 0 ⟶ **QTY 2: 6281A0C-000 (phantom)**

THE ABOVE MANIFOLD SYSTEM IS NOT INCLUDED IF 5th DIGIT AND/OR 7th DIGIT = 0

- **0** — NO PIGTAILS ⚠ — **B=0** ⚠
- **2** — 24" RIGID COPPER PIGTAIL ASS'Y ⚠ THIS OPTION NOT VALID WITH 5th OR 7th DIGIT "0" — **B=2** ⚠
- **3** — 72" FLEXIBLE, STAINLESS CORE, ARMOR CASED PIGTAIL ASS'Y ⚠ THIS OPTION NOT VALID WITH 5th OR 7th DIGIT "0" — **B=3**
- **4** — 24" FLEXIBLE, STAINLESS STEEL, TEFLON LINED PIGTAIL ASS'Y THIS OPTION NOT VALID WITH 5th OR 7th DIGIT "0" — **B=4** ⚠
- **5** — 36" FLEXIBLE, STAINLESS CORE, ARMOR CASED PIGTAIL ASS'Y ⚠ THIS OPTION NOT VALID WITH 5th OR 7th DIGIT "0" — **B=5**
- **6** — 36" FLEXIBLE, STAINLESS STEEL, TEFLON LINED PIGTAIL ASS'Y THIS OPTION NOT VALID WITH 5th OR 7th DIGIT "0" — **B=6** ⚠
- **7** — 24" FLEXIBLE, STAINLESS CORE, ARMOR CASED PIGTAIL ASS'Y ⚠ THIS OPTION NOT VALID WITH 5th OR 7th DIGIT "0" — **B=7**
- **9** — 72" FLEXIBLE, STAINLESS STEEL, TEFLON LINED PIGTAIL ASS'Y THIS OPTION NOT VALID WITH 5th OR 7th DIGIT "0" — **B=9** ⚠

X 7TH DIGIT — NUMBER OF CYLINDER STATIONS PER SIDE / REQUIRED QUANTITY OF EXTENSION KITS / REQUIRED QUANTITY OF PIGTAILS

- **0** — ZERO CYLINDER STATIONS PER SIDE; NO STARTER BLOCK KITS; NO EXTENSION KITS; NO PIGTAILS; THIS OPTION VALID ONLY WITH 5th AND 6th DIGIT "0"
- **1** — ONE CYLINDER STATION PER SIDE — **C=1** ⚠ THIS OPTION NOT VALID WITH 5th OR 6th DIGIT "0"
- **2** — TWO CYLINDER STATIONS PER SIDE — **C=2** ⚠ THIS OPTION NOT VALID WITH 5th OR 6th DIGIT "0"
- **3** — THREE CYLINDER STATIONS PER SIDE — **C=3** ⚠ THIS OPTION NOT VALID WITH 5th OR 6th DIGIT "0"
- **4** — FOUR CYLINDER STATIONS PER SIDE — **C=4** ⚠ THIS OPTION NOT VALID WITH 5th OR 6th DIGIT "0"
- **5** — FIVE CYLINDER STATIONS PER SIDE — **C=5** ⚠ THIS OPTION NOT VALID WITH 5th OR 6th DIGIT "0"
- **6** — SIX CYLINDER STATIONS PER SIDE — **C=6** ⚠ THIS OPTION NOT VALID WITH 5th OR 6th DIGIT "0"
- **7** — SEVEN CYLINDER STATIONS PER SIDE — **C=7** ⚠ THIS OPTION NOT VALID WITH 5th OR 6th DIGIT "0"
- **8** — EIGHT CYLINDER STATIONS PER SIDE — **C=8** ⚠ THIS OPTION NOT VALID WITH 5th OR 6th DIGIT "0"
- **9** — NINE CYLINDER STATIONS PER SIDE — **C=9** ⚠ THIS OPTION NOT VALID WITH 5th OR 6th DIGIT "0"

–01 — BRAND CODE

–CGA — CGA INLET CONNECTION / GAS SERVICE / NAMEPLATE. WHEN "NO PIGTAILS" IS SPECIFIED, NO INLET CONNECTION WILL BE SUPPLIED

- FOR CGA 300 – ACETYLENE — SEE DRAWING 633 1000F ⚠
- FOR CGA 320 – CO2 — SEE DRAWING 633 1000C ⚠
- **–346** — ⚠ GAS SERVICE: "AIR" (FOR ITEMS 11 & 12) ⚠ NAMEPLATE (ITEM 12): 830 7238 (BLACK) ⚠ INLET TEST PRESSURE = 2000–2200 PSI; MAX. INLET = 3000 PSI
- **–350** — ⚠ GAS SERVICE: "HYDROGEN" (FOR ITEM 11) ⚠ GAS SERVICE: "HYD" (FOR ITEM 12) ⚠ NAMEPLATE (ITEM 12): 830 6208 (RED) ⚠ INLET TEST PRESSURE = 2000–2200 PSI; MAX. INLET = 3000 PSI
- **–410** — SEE DRAWING 633 1000F ⚠
- **–510** — ⚠ FUEL GAS & OTHER GAS SERVICES. IF THIS CONN. IS DESIRED WITH FLASHBACK ARRESTORS, REFER TO DRAWING 633 1000F. GAS SERVICE: LEAVE BLANK (FOR ITEM 11); GAS SERVICE: LEAVE BLANK (FOR ITEM 12); NAMEPLATE (ITEM 12): 830 6208 (RED). INLET TEST PRESSURE = 270–330 PSI ⚠ EXCEPT FOR 4th DIGIT OPTION = "0" (NO REGULATOR): INLET TEST PRESS. = 2000–2200 PSI. MAX. INLET = 400 PSI
- **–540** — ⚠ GAS SERVICE: "OXYGEN" (FOR ITEM 11) ⚠ GAS SERVICE: "OXY" (FOR ITEM 12) ⚠ NAMEPLATE (ITEM 12): 830 6209 (GREEN) ⚠ INLET TEST PRESSURE = 2000–2200 PSI; MAX. INLET = 3000 PSI
- FOR CGA 580 — SEE DRAWING 633 1000C ⚠ ⚠
- **–590** — ⚠ GAS SERVICE: "02+N2 MIX/AIR" (FOR ITEM 11) ⚠ GAS SERVICE: "MIX/AIR" (FOR ITEM 12) ⚠ NAMEPLATE (ITEM 12): 830 7238 (BLACK) ⚠ INLET TEST PRESSURE = 2000–2200 PSI; MAX. INLET = 3000 PSI
- **–A__ –B__ OR –D__** — FOREIGN INLETS, SEE DRAWING 550 0150 ⚠ INLET TEST PRESSURE = 2000–2200 PSI; MAX. INLET = 3000 PSI
- ✱ MUST SPECIFY OPTION CODE "C", "F", or "R" — GAS SERVICE: "NOT FOR CO2 OR FUEL" (FOR ITEM 11); GAS SERVICE: " " (FOR ITEM 12); NAMEPLATE (ITEM 12): 830 7238 (BLACK) ⚠

USE THE FOLLOWING CONVENTIONS WHERE THE Xs ARE REPLACED BY THE INLET NO. IF IT EXISTS, INLET CODE IF IT DOESN'T:

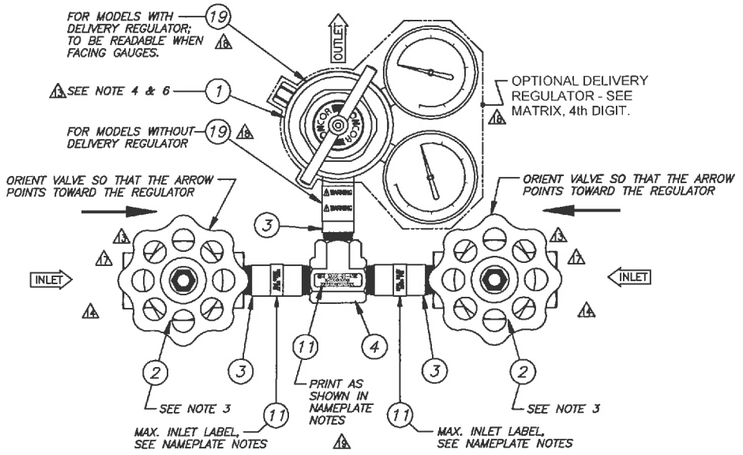
"ARGXXX" (i.e., ARGSM)	ARGENTINE
"BS_XX_" (i.e., BS_01_)	BS 341
"DINXX_" (i.e., DIN01_)	DIN 477
"HV__XX" (i.e., HV__01)	HEVOS
"HVHTXX" (i.e., HVHT01)	HEVOS HAND–TIGHT
"JISXXX" (i.e., JIS22R)	JAPANESE
"SMSXXX" (i.e., SMSSTA)	SWEDISH
"SPAXXX" (i.e., SPASDC)	SPANISH

X — OPTION CODE

- BLANK, ONLY VALID FOR –CGA INLETS
- **C** — ONLY VALID FOR FOREIGN INLETS; SEE DRAWING 633 1000C
- **F** — SEE DRAWING 633 1000F
- **R** — ONLY VALID FOR FOREIGN INLETS

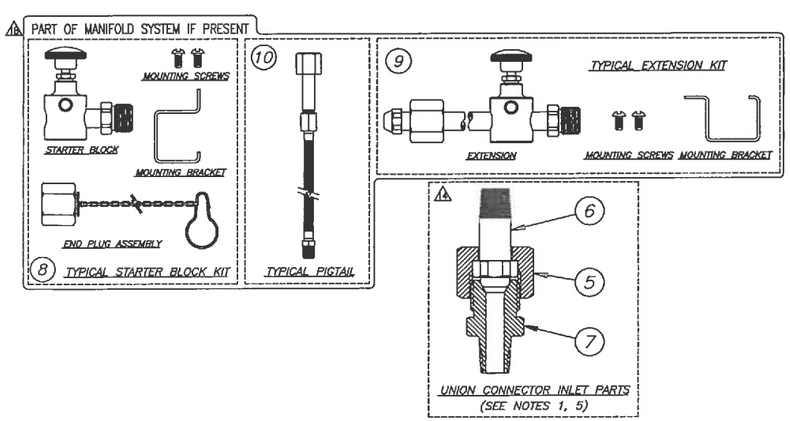
GASES ALLOWED: "AIR", "HYD", "OXY", "D2 MIX"

NOTE: ⚠ FOR CONFIGURATIONS WITHOUT PIGTAILS, THE INLET CODE INDICATES INTENDED GAS SERVICE ONLY. NO GLANDS, NUTS, OR OTHER INLET PARTS ARE INCLUDED WITH THE SYSTEM.



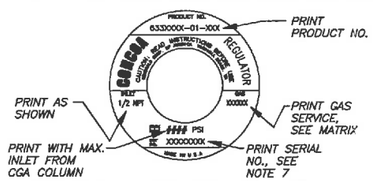
PRESSURE CONTROL MODULE ASSEMBLY

(SEE NOTES 1 & 5 FOR ASSEMBLY AND TESTING INFORMATION)



NOTES

1. MANIFOLD SYSTEMS ARE TO BE PACKAGED SEPARATELY. SEE PACKAGING NOTES.
2. SEAL ALL PIPE THREADS WITH TEFLON TAPE.
3. ORIENT MASTER VALVES (ITEM 2) AS SHOWN.
4. IF A REGULATOR IS SPECIFIED, TEST REGULATOR ((ITEM 1) ACCORDING TO THE TEST PROCEDURE AND SPECIFICATIONS ON THE REGULATOR PRINT PRIOR TO ASSEMBLING IT WITH THE OTHER COMPONENTS SPECIFIED ON THIS DRAWING.
5. ASSEMBLE PRESSURE CONTROL MODULE ASS'Y (ALL SPECIFIED COMPONENTS EXCEPT FOR THE PIGTAILS, EXTENSION KITS, ⚠ UNION GLANDS/NUTS/ADAPTERS, AND STARTER BLOCK KITS) AND TEST IT ACCORDING TO TEST PROCEDURE #1955 USING THE FOLLOWING PARAMETERS:
   - INLET TEST PRESSURE -------- SEE CGA COLUMN ⚠
6. REPLACE REGULATOR NAMEPLATE WITH (ITEM 12) PRINTABLE NAMEPLATE PRINTED WITH THE FOLLOWING INFORMATION USING ⚠ UL–APPROVED PRINTING METHOD (SEE DRAWING 9000 0008): ⚠

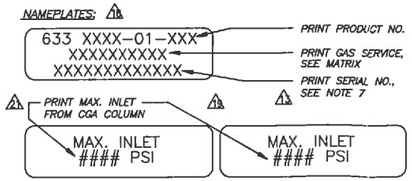


7. SERIAL NO. FOR BOTH LABELS TO BE IDENTICAL.

NAMEPLATES & WARNING LABEL NOTES: ⚠

PRINT NAMEPLATES & WARNING LABEL (ITEMs 11,19) AS SHOWN BELOW USING UL–APPROVED PRINTING METHOD ⚠ (SEE DRAWING 9000 0008):

NAMEPLATES: ⚠



⚠ WARNING LABEL FOR MODELS WITH A DELIVERY REGULATOR.

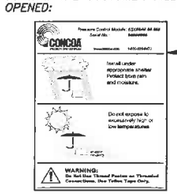
⚠ WARNINGS: DO NOT USED THREAD PASTES. USE TEFLON TAPE ONLY. OPERATING TEMPERATURE 0° – 100°F (18° – 38°C) PROTECT FROM RAIN & MOISTURE.

⚠ WARNING LABEL FOR MODELS WITHOUT A DELIVERY REGULATOR:

⚠ WARNING: OPERATING TEMPERATURE 0° – 100°F (18° – 38°C)
⚠ WARNING: DO NOT USE THREAD PASTES. USE TEFLON TAPE ONLY.

PACKAGING NOTES: ⚠

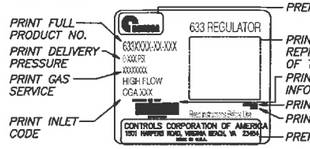
1. THE MANIFOLD SYSTEMS (IF PRESENT) ARE TO BE PACKAGED AND LABELED ⚠ ACCORDING TO INSTRUCTIONS ON THE MANIFOLD SYSTEM DRAWING.
2. PLACE THE CONTROL MODULE ASS'Y INTO LARGE POLY BAG (ITEM 15), AND SEAL THE BAG.
3. ⚠ APPLY MP500 NOTICE LABEL (ITEM 18) TO THE BAG.
4. ⚠ LOOSELY ASSEMBLE UNION CONNECTOR PARTS (ITEMs 5,6,7), AND SEAL IN POLY TUBING (ITEM 21).
5. ⚠ PLACE THE BAGGED ASS'Y & WRAPPED UNION CONNECTOR PARTS INTO CARTON (ITEM 13), AND FOAM PACK.
6. ⚠ PLACE THE ADIs (ITEMs 16,22) INTO SMALL POLY BAG (ITEM 14), SEAL THE BAG, AND PLACE BAGGED ADIs INTO CARTON ATOP THE FOAM PACKING.
7. ⚠ BEFORE CLOSING THE BOX TOP, PLACE A WARNING FLYER SIMILAR TO THE FOLLOWING REFERENCE IMAGE ATOP THE FOAM SO THAT THE CUSTOMER WILL SEE IT WHEN BOX IS FIRST OPENED:



8. SEAL THE CARTON, AND APPLY BOX LABEL (ITEM 17).
9. ⚠ APPLY THE "BOX 1 OF __" LABEL TO THE CONTROL MODULE CARTON, AND APPLY THE REMAINING "BOX X OF __" LABELS TO THE MANIFOLD SYSTEM BOXES. FILL IN THE BLANKS WITH THE TOTAL NUMBER OF BOXES.
10. ⚠ DISCARD UNUSED BOX X OF Y LABELS.

⚠ BOX LABEL NOTES:

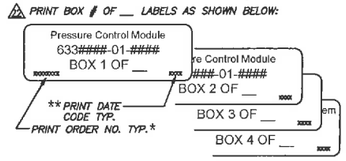
⚠ PRINT BOX LABEL (ITEM 17) & BOX X OF Y LABELS (ITEM 2) AS SHOWN BELOW:



* FACTORY ORDER NO. OR OTHER REFERENCE NO. (i.e., RMA, REWORK, etc.).

** DATE CODE (DATE THE LABEL WAS PRINTED) IN THE FORM OF YYWW (YY IS THE 2 DIGIT YEAR, WW IS THE WEEK OF THE YEAR).

⚠ PRINT BOX # OF __ LABELS AS SHOWN BELOW:



REVISIONS

NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED
16	05–306	ADDED FOREIGN INLET OPTIONS TO MATRIX, ADDED OPTION CODE COLUMN WITH OPTION "R"	AEW	4/26/2005	J. Friedrichs 4/25/2005
17	06–804	RED RING NP FOR FUEL AND GREEN NP FOR OXY MODELS WAS BLACK NP 830 7238	AEW	1/2/2007	A. Whitaker 12/28/2006
18	07–118	+NOTE FOR NO–PIGS, CONFIGURATIONS, +IND PASTE & MP500 LABELS, +WARNING FLYER NOTE	AEW	7/26/2007	A. Whitaker 7/19/2007
19	08–136	REORDER TEE FOR SMALLER SIZE FROM NEW VENDOR, NAMEPLATES WERE 830 7583 QTY 1 LOCATED ON TEE	AEW	12/14/2008	J. Friedrichs 12/11/2008
20	09–528	ALLOWED CGA 510 WITHOUT FLASHBACK, ADDED CGA 410 OPTION	AEW	8/22/2008	A. Whitaker 8/21/2008
21	09–545	ADDED 4th DIGIT OPTION BLOCKS 2 & 3, ADDED SPECIAL REQUIREMENTS FOR CGA 510 CONNECTION	AEW	10/2/2008	A. Whitaker 10/1/2008
22	09–407	ADDED BOX X OF Y LABELS & POLY TUBING	AEW	9/14/2010	A. Whitaker 9/14/2010
23	11–340	ALLOWED NO PIGTAIL MANIFOLD OPTION	AEW	1/5/2012	A. Whitaker 1/5/2012
24	12–113	ADDED ADI # 9906 4500	AEW	5/29/2012	A. Whitaker 5/14/2012

FT NO 633 1000

⚠ USE ONLY FOR BRAND CODE –01 UNLESS OTHERWISE SPECIFIED ON THE APPLICABLE PRIVATE LABEL DRAWING (i.e., 8500000–84).

⚠	22	(9906 4500)	1	ADI, CERTIFIED INSTALLATION REGISTRATION
⚠	21	9905 1014	AS REQU'D	POLY TUBING, 4" WIDE
⚠	20	9901 6312	4	LABEL, BOX X OF Y
⚠	19	SEE MATRIX, 4th DIGIT	1	LABEL, FOR WARNINGS
⚠	18	830 9938	1	LABEL, MP500 NOTICE
⚠	17	9901 6286	1	BOX LABEL
⚠	16	9906 3059	1	ADI, MANIFLEX
⚠	15	9905 1026	1	POLY BAG, 20x24 6 MIL (FOR ASSY)
⚠	14	9905 1004	1	POLY BAG, 12x12 4 MIL (FOR ADI)
⚠	13	9904 8052	1	CARTON, 18x18x13
⚠ ⚠	12	SEE MATRIX	1	LABEL, PRINTABLE, FOR REGULATOR
⚠	11	830 9809	3	LABEL, PRINTABLE, FOR NAMEPLATE & MAX INLET
	10	SEE MATRIX		PIGTAIL ASSEMBLY
	9	SEE MATRIX		EXTENSION KIT
	8	SEE MATRIX		STARTER BLOCK KIT
	7	830 6498	2	UNION CONNECTOR, BRASS
	6	829 1839	2	UNION GLAND, BRASS
	5	829 1840	2	UNION NUT, BRASS
	4	830 6155	1	TEE, BRASS, 1/2 NPTF
	3	830 6499	3	NIPPLE, BRASS, 1/2 NPTM x 1/2 NPTM, 3 1/8"
⚠	2	529 0098	2	MASTER VALVE, BRASS
	1	SEE MATRIX		REGULATOR, HIGH FLOW, SINGLE STAGE
	ITEM	PART NO / SIZE	QTY	MATERIAL / DESCRIPTION

⚠ THESE ITEMS COME WITH THE MANIFOLD SYSTEM IF PRESENT - SEE 5th-7th DIGITS IN MATRIX.

MATL: NONE	THIRD ANGLE PROJECTION	TOLERANCE UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES PER ANSI Y14.5M, 1982 (R88)	DRAWN BY: A. Whitaker 3/19/2001
TRUE SHAPE DIMENSION: #7	RELEASED DATE: 1/31/2003	FRACTIONS ±1/64; XX DECIMALS ±.010; XXX DECIMALS ±.005; ANGLES ±2°; FILLET RADII R 1/64; SPECIAL TOLERANCES .002–.010	DESIGN RECOMPUTED: R. Cooper 3/16/2001
CAD FILENAME: 6331000.DWG		CAGE NUMBER: ØA389	DRAFTSMANSHIP BY: M. Wilson 3/16/2001
			QUALITY ASSURANCE: E. Filomarino 3/19/2001

CONCOA — CONTROLS CORPORATION OF AMERICA, PRODUCT ENGINEERING DEPARTMENT, VIRGINIA BEACH, VA 23464

TITLE: ASSY, _SNGL_REG_DUPLX CTRLMOD_INRT/02/SPCL

PART NO. 633 1000

BILLING REFERENCE DOCUMENT # ECO 01–0236 ⚠ — SIZE D

CONCOA CRN Testing Summary Sheet

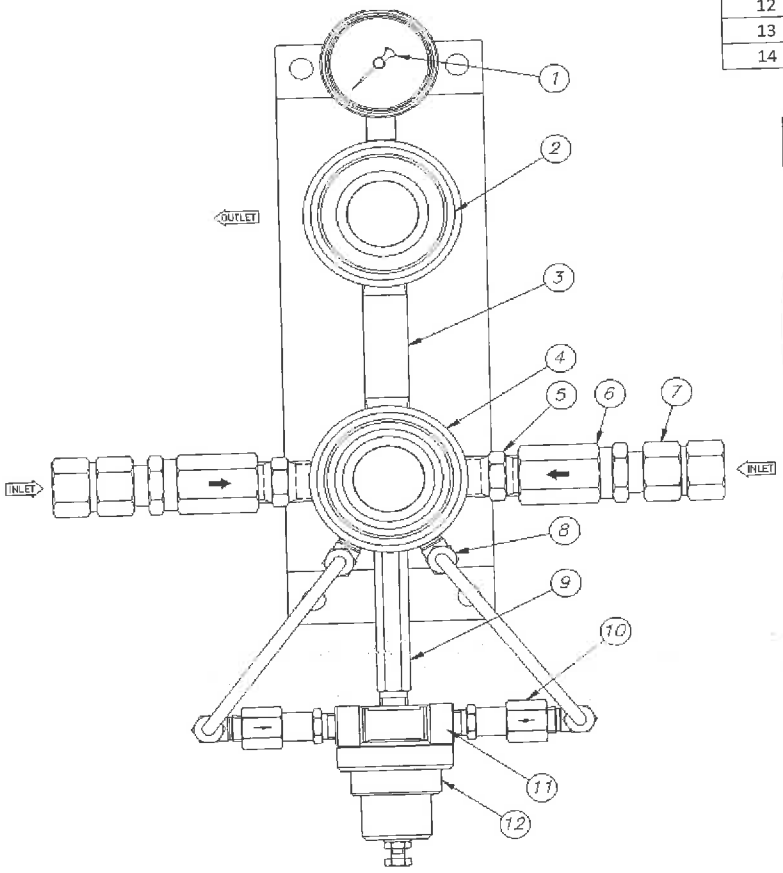
Package 6 - Type H
632

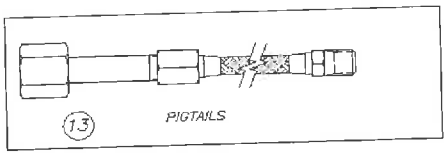
Scope: 632 Series Compressed Gas Systems (manifolds and pigtails on some models shall require a separate valid CRN - Items 13 and 14 from sketch below are excluded from this listing)

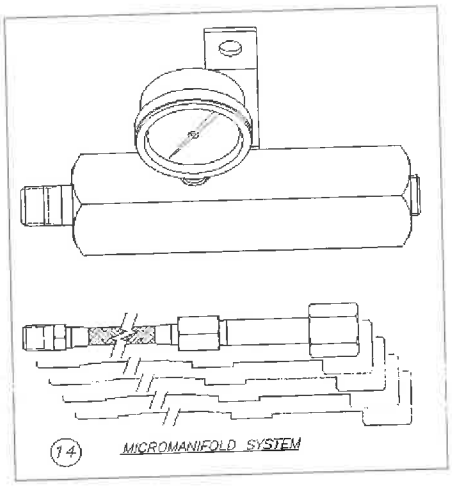
Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	OF8241.5 or OF2026.2
2	OF11809.2
3	See 8306230 burst test attached
4	See 632 Switch Reg burst test attached
5	See 8306499 burst test attached
6	OA12577.5C or OA4093.2
7	OA12577.5C
8	OA12577.5C, OA4093.2 or OA9866.5
9	OA12577.5C, OA4093.2 or OA9866.5
10	OA12577.5C
11	OA4093.2
12	OH7770.5R1
13	Excluded from this listing
14	Excluded from this listing

Sketch:







Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
632	switchover system	8056740	line regulator	260 psig	40 psig	CONCOA CRN OF11809.2	260 psig	40 psig		
632	switchover system	8056741	line regulator	260 psig	120 psig	CONCOA CRN OF11809.2	260 psig	120 psig		
632	switchover system	8056776	line regulator	260 psig	15 psig	CONCOA CRN OF11809.2	260 psig	15 psig		
632	switchover system	8056777	line regulator	260 psig	40 psig	CONCOA CRN OF11809.2	260 psig	40 psig		
632	switchover system	8056778	line regulator	260 psig	120 psig	CONCOA CRN OF11809.2	260 psig	120 psig		
632	switchover system	8305369	check valve	600 psig	600 psig	HyLok CRN OA4093.2	3000 psig	3000 psig		
632	switchover system	8350219	tee	600 psig	600 psig	HyLok CRN OA4093.2	3300 psig	3300 psig		
632	switchover system	8350223	tube fitting elbow	600 psig	600 psig	HyLok CRN OA4093.2	3500 psig	3500 psig		
632	switchover system	5290098	inlet valve	4500 psig	4500 psig	REGO Cryo CRN OH7770.5R1	600 psig	600 psig		
632	switchover system	8050019	economizer regulator	600 psig	325 psig	REGO Cryo CRN OH7770.5R1	600 psig	600 psig		
632	switchover system	8050020	economizer regulator	600 psig	150 psig	REGO Cryo CRN OH7770.5R1	600 psig	600 psig		
632	switchover system	6321000	switch regulator	3000 psig	100 psig	See separate listing in this report				
632	switchover system	6322000	switch regulator	3000 psig	260 psig	See separate listing in this report				
632	switchover system	6322007	switch regulator	600 psig	260 psig	See separate listing in this report				
632	switchover system	6322009	switch regulator	4500 psig	260 psig	See separate listing in this report				
632	switchover system	629 series	manifold system	4500 psig	4500 psig	See separate listing in this report				
632	switchover system	8306871	check valve	600 psig	600 psig	Swagelok CRN OA12577.5C	3000 psig	3000 psig		
632	switchover system	8308600	check valve	600 psig	600 psig	Swagelok CRN OA12577.5C	3000 psig	3000 psig		
632	switchover system	8309891	bushing	600 psig	600 psig	Swagelok CRN OA12577.5C	4900 psig	4900 psig		
632	switchover system	8306163	reducer	3000 psig	3000 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2 or SSP CRN OA9866.5	3350 psig	3350 psig		
632	switchover system	8306195	elbow	3000 psig	3000 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2 or SSP CRN OA9866.5	3300 psig	3300 psig		
632	switchover system	8306196	elbow	4500 psig	4500 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2 or SSP CRN OA9866.5	6600 psig	6600 psig		
632	switchover system	8307917	pipe nipple	600 psig	600 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2 or SSP CRN OA9866.5	4000 psig	4000 psig		
632	switchover system	8309777	pipe nipple between reg and inlet valve	4500 psig	4500 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2 or SSP CRN OA9866.5	7700 psig	7700 psig		
632	switchover system	8305383	check valve	600 psig	600 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2	3000 psig	3000 psig		
632	switchover system	8306164	reducer	4500 psig	4500 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2	5700 psig	5700 psig		
632	switchover system	5500302	outlet gauge	100 psig	100 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	100 psig	100 psig		
632	switchover system	8410003	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
632	switchover system	8410005	outlet gauge	200 psig	200 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	200 psig	200 psig		
632	switchover system	8410014	outlet gauge	100 psig	100 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	100 psig	100 psig		
632	switchover system	8410538	outlet gauge	200 psig	200 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	200 psig	200 psig		
632	switchover system	8410539	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
632	switchover system	8306230	pipe nipple between regs	260 psig	260 psig				1/2NPT pipe fitting - .468 hole	Brass, UNS C36000 per ASTM B-16

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
632	switchover system	8306499	pipe nipple between reg and inlet valve	3000 psig	3000 psig				1/2NPT pipe fitting - .468 hole	Brass, UNS C36000 per ASTM B-16
632	switchover system	90000426	copper tubing	600 psig	600 psig				.250 OD x .028 wall thk	Copper, soft annealed seamless tube per ASTM B-75
632	switchover system	8306198	body	4500 psig	260 psig				M65 Bonnet x M20 capsule	Brass, UNS C36000 per ASTM B-16
632	switchover system	8306491	bonnet	260 psig	260 psig				M65 Bonnet to body thread	Brass, UNS C37700
632	switchover system	8306605	bonnet	260 psig	260 psig				M65 Bonnet to body thread	Brass, UNS C37700
632	switchover system	8305620	capsule	4500 psig	260 psig				M20 Capsule to body thread	Brass, UNS C36000 per ASTM B-16
632	switchover system	8305584	capsule	3000 psig	3000 psig				M20 Capsule to body thread	Brass, UNS C36000 per ASTM B-16

NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED
11	12-113	ADDED ADI 99064500	AEW	5/29/2011	A. Whitaker 3/14/2012
12	12-086	RV for models w 8322000 swover reg was 8305592; Added reference blocks E,F,G & H in 7th digit	AEW	9/20/2012	A. Whitaker 9/17/2012
13	12-291	Added plastic port plugs to prevent wood chips getting into product	AEW	11/9/2012	A. Whitaker 11/7/2012
8	08-260	UPDATED IF STATEMENTS IN 5th DIGIT	AEW	8/26/2008	A. Whitaker 8/26/2008
9	08-442	ADDED BOX X of Y LABELS FOR MODELS WITH HEATERS	AEW	11/3/2008	A. Whitaker 10/27/2008
10	11-132	ADDED 7th DIGIT REF BLOCKS TO DWG 632 100A	AEW	5/25/2011	J. Friedrichs 5/25/2011
5	07-035	CHANGED PIGTAILS FOR FOREIGN INLET MODELS (TETHERED), CORRECTED PIGTAIL NO 6th DIGIT OPT J	AEW	1/17/2007	J. Friedrichs 1/16/2007
6	07-269	CORRECTED ITEM NO. REF IN PKG NOTES	AEW	6/19/2007	A. Whitaker 6/14/2007
7	07-418	HEATER 851 4275 ADDED FOR 120V CGA 580/680/FI MODELS; 220V HTR WAS EXCL FROM 300,350,410,510	AEW	9/20/2007	J. Friedrichs 8/21/2007
2	06-318	TESTING WAS DONE PER TP #2001 - SEE PAGE 2	AEW	5/3/2006	J. Friedrichs 5/1/2006
3	06-407	REPLACED TIE WRAPS WITH CARRIAGE BOLTS, NUTS, & WASHERS	AEW	6/6/2006	A. Whitaker 6/1/2006
4	06-431	RELIEF VALVES IN 4th DIGIT OPTION BLOCK K WAS "830 5529"; IN 2,3,B,C,L WERE "830 4734"	AEW	11/7/2006	J. Pearson 10/3/2006

REVISIONS

NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED
0	06-044	ISSUED	AEW	1/13/2006	———
1	06-130	ADDED ARMOR CASED PIGTAIL OPTIONS, CHANGED BAG & CARTON, RV WAS 8305529, 629 CODE WAS "CC"	AEW	2/24/2006	J. Friedrichs 2/23/2006

632 1001

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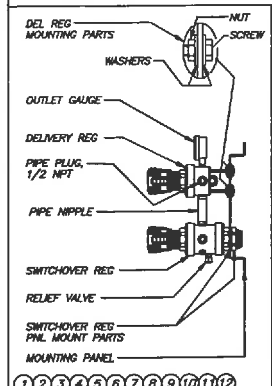
X 4TH DIGIT — DELIVERY PRESSURE



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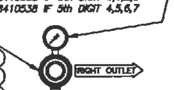
B — 50 PSI DELIVERY

SWITCHOVER REGULATOR: 8322000-41 QTY: 1
DELIVERY REGULATOR: 8058777-41 QTY: 1
SWITCHOVER PNL MOUNT NUT: 8306473 QTY: 1
SWITCHOVER PNL MN WASHER: 8306477 QTY: 1
⚠ RELIEF VALVE: 8305270 ⚠⚠ QTY: 1
PIPE NIPPLE: 8306230 QTY: 1
MOUNTING PANEL: 8309865 QTY: 1
DEL REG MOUNTING SCREWS: 8309246-16 QTY: 2
DEL REG MOUNTING NUTS: 8305480 QTY: 2
DEL REG MOUNTING WASHER: 8309348 QTY: 4
PIPE PLUG, 1/2 NPT: 8306988 QTY: 1
OUTLET GAUGE, QTY: 1:
8410014 IF 5th DIGIT 0,1,2,3
5500302 IF 5th DIGIT 4,5,6,7



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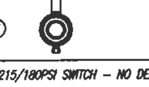
C — 120 PSI DELIVERY

SWITCHOVER REGULATOR: 8322000-41 QTY: 1
DELIVERY REGULATOR: 8058778-41 QTY: 1
SWITCHOVER PNL MOUNT NUT: 8306473 QTY: 1
SWITCHOVER PNL MN WASHER: 8306477 QTY: 1
⚠ RELIEF VALVE: 8305270 ⚠⚠ QTY: 1
PIPE NIPPLE: 8306230 QTY: 1
MOUNTING PANEL: 8309865 QTY: 1
DEL REG MOUNTING SCREWS: 8309246-16 QTY: 2
DEL REG MOUNTING NUTS: 8305480 QTY: 2
DEL REG MOUNTING WASHER: 8309348 QTY: 4
PIPE PLUG, 1/2 NPT: 8306988 QTY: 1
OUTLET GAUGE, QTY: 1:
8410005 IF 5th DIGIT 0,1,2,3
8410538 IF 5th DIGIT 4,5,6,7



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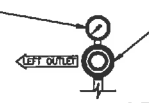
2 — 50 PSI DELIVERY

SWITCHOVER REGULATOR: 8322000-41 QTY: 1
DELIVERY REGULATOR: 8058777-41 QTY: 1
SWITCHOVER PNL MOUNT NUT: 8306473 QTY: 1
SWITCHOVER PNL MN WASHER: 8306477 QTY: 1
⚠ RELIEF VALVE: 8305270 ⚠⚠ QTY: 1
PIPE NIPPLE: 8306230 QTY: 1
MOUNTING PANEL: 8309865 QTY: 1
DEL REG MOUNTING SCREWS: 8309246-16 QTY: 2
DEL REG MOUNTING NUTS: 8305480 QTY: 2
DEL REG MOUNTING WASHER: 8309348 QTY: 4
PIPE PLUG, 1/2 NPT: 8306988 QTY: 1
OUTLET GAUGE, QTY: 1:
8410014 IF 5th DIGIT 0,1,2,3
5500302 IF 5th DIGIT 4,5,6,7



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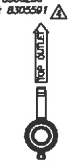
K — 100/80/60PSI SWITCH – NO DEL REG.

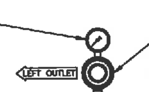
SWITCHOVER REGULATOR: 8321000-41 QTY: 1
SWITCHOVER PNL MOUNT NUT: 8306473 QTY: 1
SWITCHOVER PNL MN WASHER: 8306477 QTY: 1
MOUNTING PANEL: 8309865 QTY: 1
PIPE NIPPLE: 8306230 QTY: 1
RELIEF VALVE: 8305591 ⚠ QTY: 1



(1)(3)(4)(5)(6)(7)

3 — 120 PSI DELIVERY

SWITCHOVER REGULATOR: 8322000-41 QTY: 1
DELIVERY REGULATOR: 8058778-41 QTY: 1
SWITCHOVER PNL MOUNT NUT: 8306473 QTY: 1
SWITCHOVER PNL MN WASHER: 8306477 QTY: 1
⚠ RELIEF VALVE: 8305270 ⚠⚠ QTY: 1
PIPE NIPPLE: 8306230 QTY: 1
MOUNTING PANEL: 8309865 QTY: 1
DEL REG MOUNTING SCREWS: 8309246-16 QTY: 2
DEL REG MOUNTING NUTS: 8305480 QTY: 2
DEL REG MOUNTING WASHER: 8309348 QTY: 4
PIPE PLUG, 1/2 NPT: 8306988 QTY: 1
OUTLET GAUGE, QTY: 1:
8410005 IF 5th DIGIT 0,1,2,3
8410538 IF 5th DIGIT 4,5,6,7



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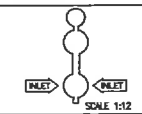
L — 250/215/180PSI SWITCH – NO DEL. REG.

SWITCHOVER REGULATOR: 8322000-41 QTY: 1
SWITCHOVER PNL MOUNT NUT: 8306473 QTY: 1
SWITCHOVER PNL MN WASHER: 8306477 QTY: 1
MOUNTING PANEL: 8309865 QTY: 1
PIPE NIPPLE: 8306230 QTY: 1
⚠ RELIEF VALVE: 8305270 ⚠⚠ QTY: 1

(1)(3)(4)(5)(6)(7)

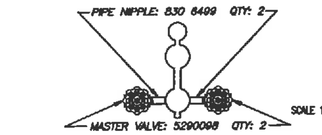
X 5TH DIGIT — INLET ASSEMBLY (2)

0 — NONE – 1/2 NPT FEMALE PORT, PSI/KPa GAUGE IF GAUGE IS PRESENT
⚠ (NOT VALID WITH 7th DIGIT = 2 OR 8)



(NOT VALID WITH CGA 300,350,410,510)

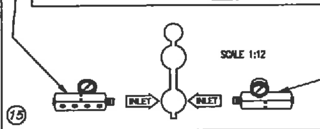
1 — MASTER VALVES, PSI/KPa GAUGE IF GAUGE IS PRESENT
⚠ (NOT VALID WITH 7th DIGIT = 2 OR 8)



(13)(14)

2 — MICROMANIFOLD, PSI/KPa GAUGES
(NOT VALID WITH 7th DIGIT = 2 OR 8) ⚠
(NOT VALID WITH CGA 300,350,410,510)

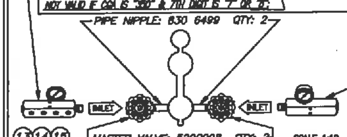
MANIFOLD SYSTEM, QTY 1: 629 5 2 [ ] # -CB- CGA [ ] ⚠
"0" FOR NO PIGTAILS (6th DIGIT 0)
IF 7TH DIGIT IS "1" OR "2":
"C" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
⚠ "D" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"E" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R)
IF 7TH DIGIT IS "7" OR "8":
"4" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
⚠ "6" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"9" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R)
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
INLET CODE (MATCHES DIGITS 12 thru 14)
NO. OF CYLINDERS PER SIDE AS INDICATED IN 6th DIGIT



(15)

3 — MICROMANIFOLD WITH MASTER VALVES, PSI/KPa GAUGES
(NOT VALID WITH 7th DIGIT = 2 OR 8) ⚠

MANIFOLD SYSTEM, QTY 1: 629 5 2 [ ] # -CB- CGA [ ] ⚠
"0" FOR NO PIGTAILS (6th DIGIT 0)
IF CGA IS NOT "350" & 7TH DIGIT IS "1" OR "2":
"C" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
"D" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"E" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R) ⚠
IF CGA IS NOT "350" & 7TH DIGIT IS "7" OR "8":
"4" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
"6" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"9" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R) ⚠
IF CGA IS "350" & 7TH DIGIT IS "1" OR "2":
"7" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
"5" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"3" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R) ⚠
NOT VALID IF CGA IS "350" & 7TH DIGIT IS "7" OR "8".
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
INLET CODE (MATCHES DIGITS 12 thru 14)
NO. OF CYLINDERS PER SIDE AS INDICATED IN 6th DIGIT



(13)(14)(15)

4 — NONE – 1/2 NPT FEMALE PORT, BAR/PSI GAUGE
(NOT VALID WITH 4th DIGIT = K or L)
(NOT VALID WITH CGA 300,350,410,510)
FOR ILLUSTRATION, SEE 5TH DIGIT OPTION BLOCK 0

5 — MASTER VALVES, BAR/PSI GAUGE
(NOT VALID WITH 4th DIGIT = K or L)
FOR ILLUSTRATION, SEE 5TH DIGIT OPTION BLOCK 1
PIPE NIPPLE: 830 6499 QTY: 2
MASTER VALVE: 5290098 QTY: 2
(13)(14)

6 — MICROMANIFOLD, BAR/PSI GAUGES
FOR ILLUSTRATION, SEE 5TH DIGIT OPTION BLOCK 2
(NOT VALID WITH CGA 300,350,410,510)

MANIFOLD SYSTEM, QTY 1: 629 6 [ ] [ ] # -CB- CGA [ ] ⚠
⚠ "2" FOR STANDARD GAUGES (7th DIGIT 1 OR 7)
⚠ "5" FOR PRESS. SW GAUGES (7th DIGIT 2 OR 8)
"0" FOR NO PIGTAILS (6th DIGIT 0)
IF 7TH DIGIT IS "1" OR "2":
"C" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
⚠ "D" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"E" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R)
IF 7TH DIGIT IS "7" OR "8":
"4" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
⚠ "6" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"9" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R)
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
INLET CODE (MATCHES DIGITS 12 thru 14)
NO. OF CYLINDERS PER SIDE AS INDICATED IN 6th DIGIT

(15)

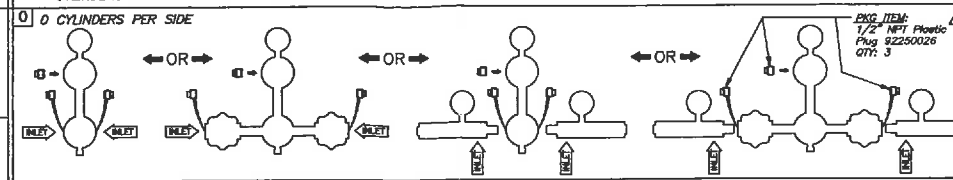
7 — MICROMANIFOLD WITH MASTER VALVES, BAR/PSI GAUGES
FOR ILLUSTRATION, SEE 5TH DIGIT OPTION BLOCK 3

MANIFOLD SYSTEM, QTY 1: 629 6 [ ] [ ] # -CB- CGA [ ] ⚠
⚠ "2" FOR STANDARD GAUGES (7th DIGIT 1 OR 7)
⚠ "5" FOR PRESS. SW GAUGES (7th DIGIT 2 OR 8)
"0" FOR NO PIGTAILS (6th DIGIT 0)
IF CGA IS NOT "350" & 7TH DIGIT IS "1" OR "2":
"C" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
"D" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"E" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R) ⚠
IF CGA IS NOT "350" & 7TH DIGIT IS "7" OR "8":
"4" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
"6" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"9" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R) ⚠
IF CGA IS "350" & 7TH DIGIT IS "1" OR "2":
"7" FOR 24" PIGTAILS (6th DIGIT A,B,C,D,E,F,G,H)
"5" FOR 36" PIGTAILS (6th DIGIT 1,2,3,4,5,6,7,8)
"3" FOR 72" PIGTAILS (6th DIGIT J,K,L,M,N,P,Q,R) ⚠
NOT VALID IF CGA IS "350" & 7TH DIGIT IS "7" OR "8".
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
INLET CODE (MATCHES DIGITS 12 thru 14)
NO. OF CYLINDERS PER SIDE AS INDICATED IN 6th DIGIT

(13)(14)(15)
PIPE NIPPLE: 830 6499 QTY: 2
MASTER VALVE: 5290098 QTY: 2

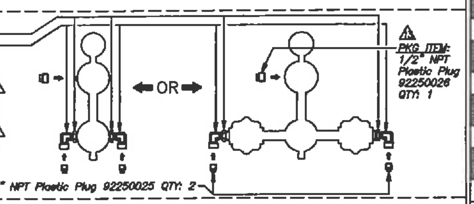
X 6TH DIGIT — CYLINDERS PER SIDE

0 — 0 CYLINDERS PER SIDE



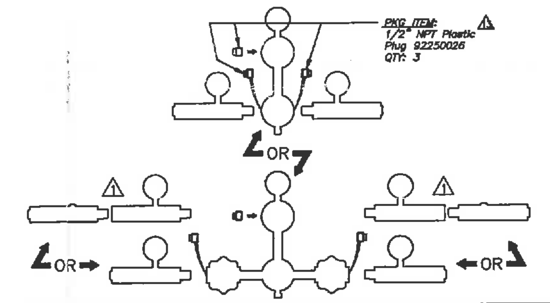
1 — ONE CYLINDER PER SIDE – 36" PIGTAIL

IF 5TH DIGIT IS "0", "1", "4" OR "5"
REDUCING BUSHING: 8306163 QTY: 2
90° STREET ELBOW: 8306195 QTY: 2
PIGTAILS:
IF CGA IS NOT "350":
IF 7TH DIGIT IS "1" OR "2":
36" PIGTAIL 5290044-CGA[ ] QTY: 2 ⚠
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
IF 7TH DIGIT IS "7" OR "8"
36" PIGTAIL 5290047-CGA[ ] QTY: 2 ⚠
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
⚠ IF CGA IS "350" or IF FOREIGN INLET IS SPECIFIED:
NOT VALID IF 7TH DIGIT IS "7" OR "8":
36" PIGTAIL 5290031-CGA QTY: 2
(16)(17)(18)



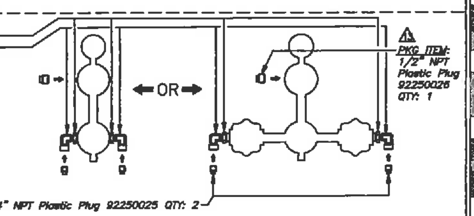
IF 5TH DIGIT IS NOT "0", "1", "4" OR "5"

2	TWO CYLINDERS PER SIDE – 36" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
3	THREE CYLINDERS PER SIDE – 36" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
4	FOUR CYLINDERS PER SIDE – 36" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
5	FIVE CYLINDERS PER SIDE – 36" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
6	SIX CYLINDERS PER SIDE – 36" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
7	SEVEN CYLINDERS PER SIDE – 36" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
8	EIGHT CYLINDERS PER SIDE – 36" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"



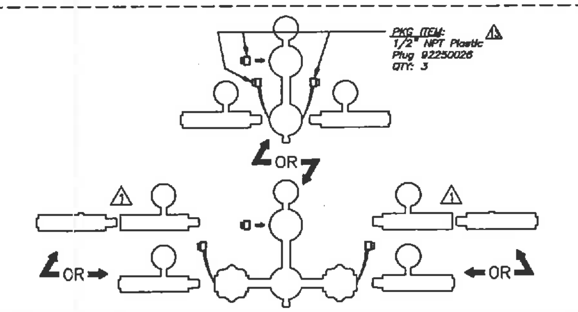
A — ONE CYLINDER PER SIDE – 24" PIGTAIL

IF 5TH DIGIT IS "0", "1", "4" OR "5"
REDUCING BUSHING: 8306163 QTY: 2
90° STREET ELBOW: 8306195 QTY: 2
PIGTAILS:
IF CGA IS NOT "350":
IF 7TH DIGIT IS "1" OR "2":
24" PIGTAIL 5290036-CGA[ ] QTY: 2 ⚠
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
IF 7TH DIGIT IS "7" OR "8"
24" PIGTAIL 5290093-CGA[ ] QTY: 2 ⚠
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
⚠ IF CGA IS "350" or IF FOREIGN INLET IS SPECIFIED:
NOT VALID IF 7TH DIGIT IS "7" OR "8":
24" PIGTAIL 5290071-CGA QTY: 2
(16)(17)(18)



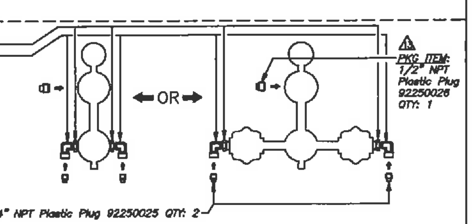
IF 5TH DIGIT IS NOT "0", "1", "4" OR "5"

B	TWO CYLINDERS PER SIDE – 24" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
C	THREE CYLINDERS PER SIDE – 24" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
D	FOUR CYLINDERS PER SIDE – 24" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
E	FIVE CYLINDERS PER SIDE – 24" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
F	SIX CYLINDERS PER SIDE – 24" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
G	SEVEN CYLINDERS PER SIDE – 24" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
H	EIGHT CYLINDERS PER SIDE – 24" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"



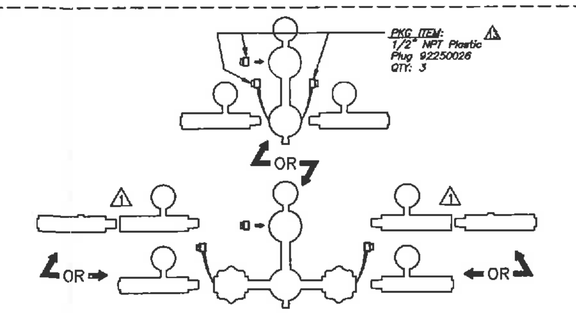
J — ONE CYLINDER PER SIDE – 72" PIGTAIL

IF 5TH DIGIT IS "0", "1", "4" OR "5"
REDUCING BUSHING: 8306163 QTY: 2
90° STREET ELBOW: 8306195 QTY: 2
PIGTAILS:
IF CGA IS NOT "350":
⚠ IF 7TH DIGIT IS "1" OR "2":
72" PIGTAIL 5290272-CGA[ ] QTY: 2 ⚠
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
IF 7TH DIGIT IS "7" OR "8"
72" PIGTAIL 5290094-CGA[ ] QTY: 2 ⚠
USE "F" IF SELECTED FROM THIS MATRIX (SEE 15th DIGIT)
⚠ IF CGA IS "350" or IF FOREIGN INLET IS SPECIFIED:
NOT VALID IF 7TH DIGIT IS "7" OR "8":
72" PIGTAIL 5290055-CGA QTY: 2
(16)(17)(18)



IF 5TH DIGIT IS NOT "0", "1", "4" OR "5"

K	TWO CYLINDERS PER SIDE – 72" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
L	THREE CYLINDERS PER SIDE – 72" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
M	FOUR CYLINDERS PER SIDE – 72" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
N	FIVE CYLINDERS PER SIDE – 72" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
P	SIX CYLINDERS PER SIDE – 72" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
Q	SEVEN CYLINDERS PER SIDE – 72" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"
R	EIGHT CYLINDERS PER SIDE – 72" PIGTAIL ⚠	NOT VALID IF 5TH DIGIT IS "0", "1", "4" OR "5"



X 7TH DIGIT — ASSEMBLY

1 (20)	3000 PSI MODEL WITHOUT PRESSURE SWITCH GAUGES OVERPRESSURE WARNING LABEL: 8307562 QTY 1
2 (20)	3000 PSI MODEL WITH PRESSURE SWITCH GAUGES OVERPRESSURE WARNING LABEL: 8307562 QTY 1
3	300 PSI MODEL WITHOUT PRESSURE SWITCH GAUGES (SEE DRAWING 632 1003)
4	300 PSI MODEL WITH PRESSURE SWITCH GAUGES (SEE DRAWING 632 1003)
5	4500 PSI MODEL WITHOUT PRESSURE SWITCH GAUGES (SEE DRAWING 632 1005)
6	4500 PSI MODEL WITH PRESSURE SWITCH GAUGES (SEE DRAWING 632 1005)
7 ⚠ (20)	3000 PSI MODEL WITHOUT PRESSURE SWITCH GAUGES; WITH ARMOR CASED, TEFLON LINED PIGTAILS OVERPRESSURE WARNING LABEL: 8307562 QTY 1
8 ⚠ (20)	3000 PSI MODEL WITH PRESSURE SWITCH GAUGES; WITH ARMOR CASED, TEFLON LINED PIGTAILS OVERPRESSURE WARNING LABEL: 8307562 QTY 1
A ⚠	600 PSI MODEL WITHOUT PRESSURE SWITCH GAUGES WITHOUT VENT MANIFOLD (SEE DRAWING 632 100A)
B ⚠	600 PSI MODEL WITH PRESSURE SWITCH GAUGES WITHOUT VENT MANIFOLD (SEE DRAWING 632 100A)
C ⚠	600 PSI MODEL WITHOUT PRESSURE SWITCH GAUGES WITH VENT MANIFOLD (SEE DRAWING 632 100A)
D ⚠	600 PSI MODEL WITH PRESSURE SWITCH GAUGES WITH VENT MANIFOLD (SEE DRAWING 632 100A)
E ⚠	600 PSI MODEL WITHOUT PRESSURE SWITCH GAUGES WITHOUT VENT MANIFOLD WITH ECONOMIZER REGULATOR (SEE DRAWING 632 100A)
F ⚠	600 PSI MODEL WITH PRESSURE SWITCH GAUGES WITHOUT VENT MANIFOLD WITH ECONOMIZER REGULATOR (SEE DRAWING 632 100A)
G ⚠	600 PSI MODEL WITHOUT PRESSURE SWITCH GAUGES WITH VENT MANIFOLD WITH ECONOMIZER REGULATOR (SEE DRAWING 632 100A)
H ⚠	600 PSI MODEL WITH PRESSURE SWITCH GAUGES WITH VENT MANIFOLD WITH ECONOMIZER REGULATOR (SEE DRAWING 632 100A)

-XX BRAND CODE NAMEPLATE AND LABELLING INFO

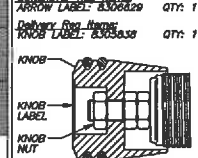
-01

Panel Items:
NAMEPLATE: 8306638-4 * QTY: 1 ⚠
LOGO LABEL:
IF 5TH DIGIT IS "0","1","4" or "5": 830 7936 QTY:1
IF 5TH DIGIT IS "2","3","6" or "7": 830 9633 QTY:2

Packaging Items: ⚠
BOX LABEL: 8306638-1 * QTY: 1
ADI: 99083223 QTY: 1
ADI: 99084500 ⚠ QTY: 1
POLYBAG, ADIs: 99051004 ⚠ QTY: 1
CARRIAGE BOLT: 8309246-25 QTY: 2
NUT, HEX: 8309246-19 QTY: 2
WASHER, FLAT: 8309246-20 QTY: 2
POLYBAG, ASSY: 99051013 ⚠ QTY: 1
CARTON: 99048052 ⚠ QTY: 1
PLYWOOD BASE: 99039279 QTY: 1

Switchover Reg Items:
ARROW LABEL: 8306629 QTY: 1

Delivery Reg Items:
KNOB LABEL: 8305838 QTY: 1



Delivery Reg and Switch Reg Items:
NAMEPLATE: 8306638-3 * QTY: 2 ⚠
KNOB: 8306628 QTY: 2
KNOB NUT: 8306606 QTY: 2
O-RINGS: 8306608 QTY: 4

(21)(22)(23)(24)(25)(26)(27)(28)(29)(30)(31)(32)(33)(34)(35)(39) ⚠⚠

⚠ * NOTE: TOTAL QTY OF 830 6638 LABEL IS 1 (SEE DETAIL ON PG 2)

-XXX INLET CODE

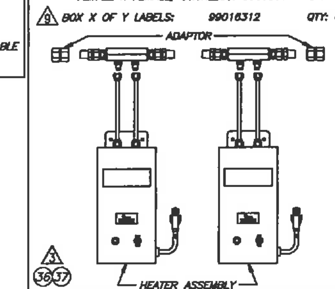
-001
IF 6TH DIGIT IS "0"

-CGA INLET CONNECTION
REFER TO SPECIFIED MANIFOLD / PIGTAIL DRAWINGS FOR AVAILABLE INLET CONNECTIONS

X ADDITIONAL OPTIONS

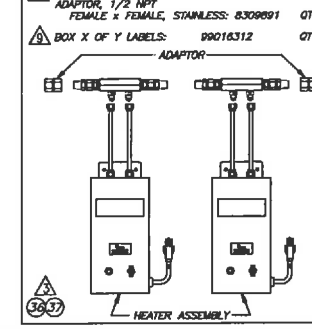
F — OPTIONAL FLASHBACK ARRESTORS ON PIGTAILS (ARRESTORS COME WITH PIGTAIL PART NO. – ADD "F" TO END OF MICROMANIFOLD or PIGTAIL PART NO., SEE 5th or 6th DIGIT) (VALID ONLY WITH CGA 300, CGA 410 & CGA 510)

H — HEATER ASSEMBLIES, 120V (NOT VALID WITH CGA 300,350,410,510)
⚠ HEATER ASS'Y: 8514274 FOR CGA 320 ONLY QTY: 2
HEATER ASS'Y: 8514276 FOR CGA 580/680/FOREIGN INLETS QTY: 2
ADAPTOR, 1/2 NPT FEMALE x FEMALE, STAINLESS: 8309891 QTY: 2
⚠ BOX X OF Y LABELS: 99016312 QTY: 6



(36)(37)

J — HEATER ASSEMBLIES, 220V
VALID ONLY WITH CGA 320
⚠ HEATER ASS'Y: 8514275 FOR CGA 320 ONLY QTY: 2
ADAPTOR, 1/2 NPT FEMALE x FEMALE, STAINLESS: 8309891 QTY: 2
⚠ BOX X OF Y LABELS: 99016312 QTY: 6



(36)(37)

ITEM	PART NO / SIZE	MATERIAL / DESCRIPTION
⚠ 41	SEE MATRIX – 6TH DIGIT	PLASTIC PLUG, 1/4" NPT
⚠ 40	SEE MATRIX – 6TH DIGIT	PLASTIC PLUG, 1/2" NPT
⚠ 39	SEE MATRIX – BRAND CODE	ADI, CERTIFIED INSTALLATION REGISTRATION
⚠ 38	SEE MATRIX – ADD'L OPTIONS	LABELS, BOX X OF Y
37	SEE MATRIX – ADD'L OPTIONS	ADAPTOR, 1/2 NPT MALE TO FEMALE
36	SEE MATRIX – ADD'L OPTIONS	HEATER ASSEMBLY
⚠ 35	SEE MATRIX – BRAND CODE	NUT, HEX
⚠ 34	SEE MATRIX – BRAND CODE	WASHER, FLAT
33	SEE MATRIX – BRAND CODE	POLY BAG, ADI
32	SEE MATRIX – BRAND CODE	ADI
31	SEE MATRIX – BRAND CODE	CARTON
30	SEE MATRIX – BRAND CODE	POLY BAG, ASS'Y
⚠ 29	SEE MATRIX – BRAND CODE	CARRIAGE BOLT
28	SEE MATRIX – BRAND CODE	PLYWOOD SUPPORT, PKG
27	SEE MATRIX – BRAND CODE	LOGO LABEL
26	SEE MATRIX – BRAND CODE	NAMEPLATE & BOX LABEL
25	SEE MATRIX – BRAND CODE	DELIVERY REG. KNOB LABEL
24	SEE MATRIX – BRAND CODE	SWITCHOVER KNOB LABEL
23	SEE MATRIX – BRAND CODE	KNOB O-RING
22	SEE MATRIX – BRAND CODE	KNOB NUT
21	SEE MATRIX – BRAND CODE	KNOB
20	SEE MATRIX – 7TH DIGIT	OVERPRESSURE WARNING LABEL
19		
18	SEE MATRIX – 6TH DIGIT	PIGTAIL
17	SEE MATRIX – 6TH DIGIT	90° STREET ELBOW
16	SEE MATRIX – 6TH DIGIT	REDUCING BUSHING, 1/2 NPT x 1/4 NPT
15	SEE MATRIX – 5TH DIGIT	MICROMANIFOLD SYSTEM
14	SEE MATRIX – 5TH DIGIT	MASTER VALVE
13	SEE MATRIX – 5TH DIGIT	PIPE NIPPLE, HEX.
12	SEE MATRIX – 4TH DIGIT	PIPE PLUG, 1/2 NPT
11	SEE MATRIX – 4TH DIGIT	OUTLET GAUGE
10	SEE MATRIX – 4TH DIGIT	DELIVERY REG. MOUNTING WASHER
9	SEE MATRIX – 4TH DIGIT	DELIVERY REG. MOUNTING NUT
8	SEE MATRIX – 4TH DIGIT	DELIVERY REG. MOUNTING SCREW
7	SEE MATRIX – 4TH DIGIT	MOUNTING PANEL
6	SEE MATRIX – 4TH DIGIT	SWITCHOVER PANEL MOUNT WASHER
5	SEE MATRIX – 4TH DIGIT	SWITCHOVER PANEL MOUNT NUT
4	SEE MATRIX – 4TH DIGIT	RELIEF VALVE
3	SEE MATRIX – 4TH DIGIT	PIPE NIPPLE
2	SEE MATRIX – 4TH DIGIT	DELIVERY REGULATOR
1	SEE MATRIX – 4TH DIGIT	SWITCHOVER REGULATOR

SCALE	1:9 or AS-NOTED
TITLE BLOCK REVISION	#7
REVISION DATE	1/31/2003
CAD FILENAME	6321001-PG1.dwg
TOLERANCE UNLESS OTHERWISE SPEC'D	DIMENSIONS ARE IN INCHES; FINISH; XXX DECIMALS: ±.005; XX DECIMALS: ±.010; FRACTIONS: ±1/64; ANGLES: ±2°; FILLET RADII: R 1/64; BREAK EDGES: .002-.010
CAGE NUMBER	0A389
DRAWN BY	A. Whitaker 1/13/2006
DESIGN ENGINEERING	J.Friedrichs 1/11/2006
MANUFACTURING ENG	M.Wilson 1/12/2006
QUALITY ASSURANCE	E.Filomarino 1/12/2006

CONCOA — CONTROLS CORPORATION OF AMERICA, PRODUCT ENGINEERING DEPARTMENT, VIRGINIA BEACH, VA 23454

TITLE: ASW, _ASSY__BRS______ 3000/XXXXPSI_XXXXXXX (FOR "X"s IN TITLE, SEE NOTE 4)

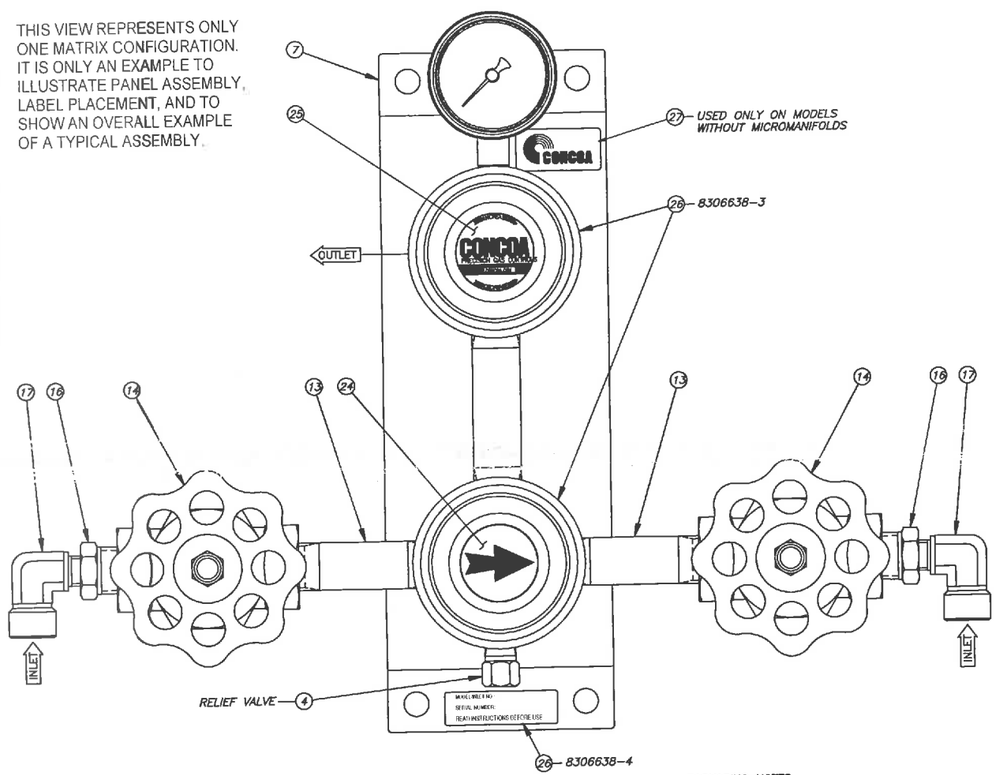
PART NO. 632 1001

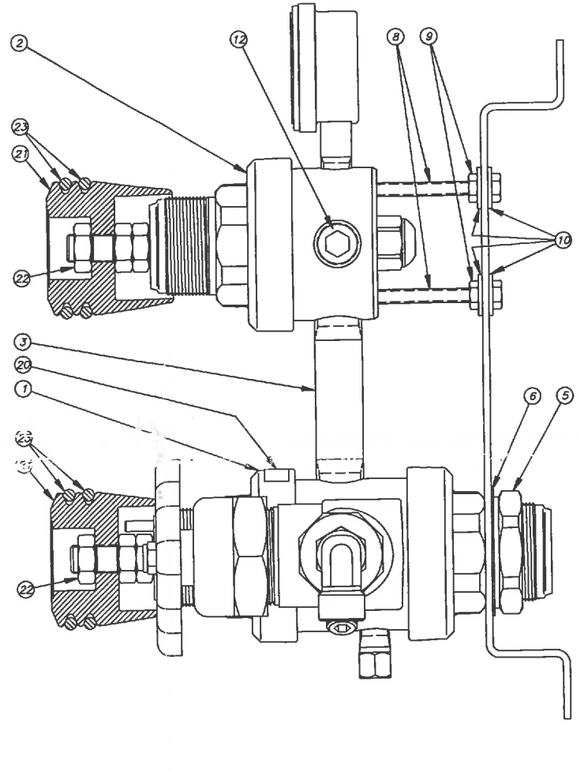
PAGE 1 OF 2

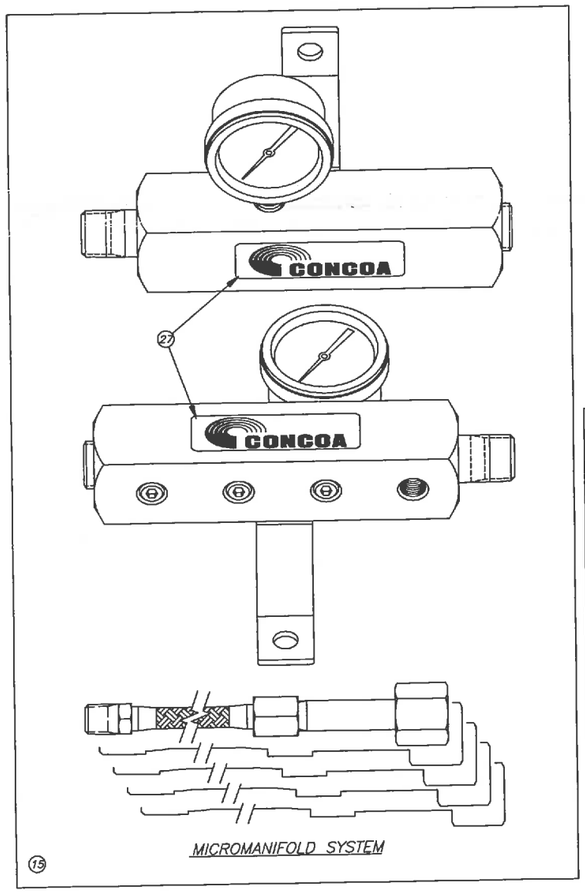
ECN 06-044 — SIZE D

REVISIONS						PT NO
NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED	632 1001
8	08–260	UPDATED 'F' STATEMENTS IN 5th DIGIT ON FG 1	AEW	8/26/2008	A. Whitaker 8/26/2008	
9	08–442	ADDED BOX 'X of Y' LABELS FOR MODELS WITH HEATERS	AEW	11/3/2008	A. Whitaker 10/27/2008	
10	11–132	ADDED 7th DIGIT REF BLOCKS TO DWG 632 1004	AEW	5/25/2011	J. Friedrichs 5/25/2011	
11	12–113	ADDED ADI # 99064500	AEW	5/29/2012	A. Whitaker 5/14/2012	
12	12–085	KV for models w 6322000 answer req was 8305982; Added reference blocks E,F,G & H in 7th digit	AEW	8/29/2012	A. Whitaker 8/17/2012	
13	12–291	Added plastic port plugs to prevent wood chips getting into product.	AEW	11/9/2012	A. Whitaker 11/7/2012	

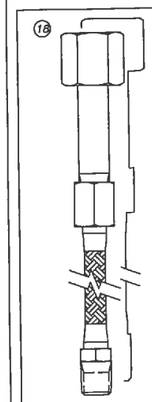
THIS VIEW REPRESENTS ONLY ONE MATRIX CONFIGURATION. IT IS ONLY AN EXAMPLE TO ILLUSTRATE PANEL ASSEMBLY, LABEL PLACEMENT, AND TO SHOW AN OVERALL EXAMPLE OF A TYPICAL ASSEMBLY.





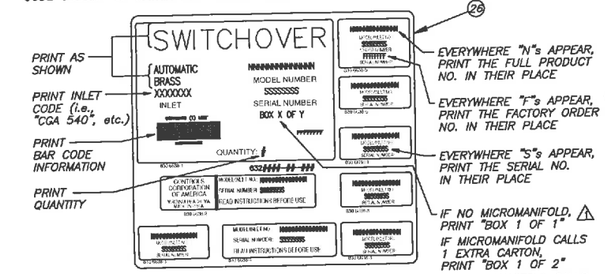


15 MICROMANIFOLD SYSTEM

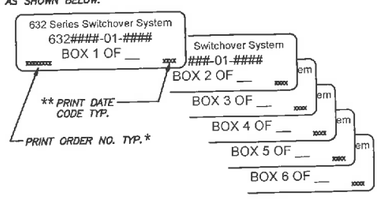


PIGTAILS
(SEPARATE PIGTAILS ARE USED FOR MODELS WITHOUT A MICROMANIFOLD SYSTEM)

NAMEPLATE & BOX LABEL NOTES:
PRINT NAMEPLATE SET (ITEM 26) AS SHOWN BELOW USING UL APPROVED BLACK THERMAL TRANSFER RIBBON (SEE DWG 9000 0008). SEE BRAND CODE COLUMN OF MATRIX FOR PRIVATE LABEL INSTRUCTIONS):



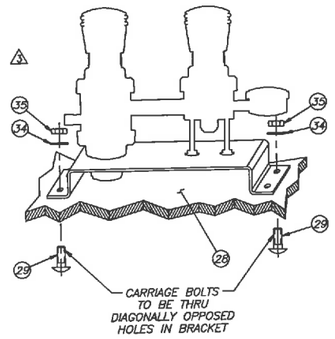
⚠1 *BOX X OF Y LABELS:*
FOR MODELS WITH ADDITIONAL OPTION CODE "J" OR "H" (HEATERS), PRINT LABELS (ITEM 38) AS SHOWN BELOW:



* FACTORY ORDER NO. OR OTHER REFERENCE NO. (i.e., RMA, REWORK, etc.).

** DATE CODE (DATE THE LABEL WAS PRINTED) IN THE FORM OF YYWW (YY IS THE 2 DIGIT YEAR, WW IS THE WEEK OF THE YEAR).

PACKAGING NOTES:
1. *SEE ASS'Y MOUNTING DETAIL:*
   - *SECURE THE SWITCHOVER ASS'Y TO THE PLYWOOD BOARD (ITEM 28) WITH CARRIAGE BOLTS, NUTS, & WASHERS (ITEMs 29,34,35) THROUGH DIAGONALLY OPPOSED HOLES IN EACH END OF THE SWITCHOVER BRACKET.* ⚠3
   - *PLACE THE MOUNTED ASS'Y INTO POLY BAG (ITEM 30) AND SEAL* ⚠3 *THE BAG.*
2. ⚠1 *PLACE ONLY (ADI IS ALLOWED) THE BAGGED AND MOUNTED ASS'Y INTO CARTON (ITEM 31). MICROMANIFOLDS, PIGTAILS, SAFETY BARRIERS AND ANY OTHER OPTIONAL ASSEMBLIES WILL BE PACKAGED SEPARATELY.*
3. ⚠1 *PLACE THE ADIs (ITEMs 32,39) INTO POLY BAG (ITEM 33), AND PUT THE BAGGED ADI(s) INTO THE CARTON.*
4. ⚠3 *FOR MODELS USING BOX X OF Y LABELS (ITEM 38): WRITE IN TOTAL QTY OF BOXES; APPLY BOX 1 OF __ LABEL TO THE MAIN SYSTEM BOX; APPLY REMAINING LABELS TO OTHER SYSTEM BOXES AS NECESSARY; DISCARD UNUSED LABELS.*
5. ⚠3 *SEAL THE CARTON AND APPLY THE BOX LABEL(s) (ITEMs 26, 38).*



CARRIAGE BOLTS TO BE THRU DIAGONALLY OPPOSED HOLES IN BRACKET

NOTES:
1. *SEAL ALL PIPE FITTINGS WITH TEFLON TAPE.*
2. *IF 4th DIGIT = "2", "3", "B" or "C" (MODELS WITH A DELIVERY REG.): TEST THE ASS'Y IN ACCORDANCE WITH TEST PROCEDURE #2000* ⚠1 *USING THE FOLLOWING PARAMETERS:*
   - *ORIFICE SIZE ———— #49(ø.073)*
   - *INLET TEST PRESSURE ———— 2100±100 PSI AND SWITCH REG KNOB FULLY CLOCKWISE*
   - *OUTLET PRESSURE SETTING FLOWING THRU ORIFICE:*

OUTLET PRESSURE MODEL (SEE MATRIX)	MAX. OUTLET PRESSURE
50 PSI MODELS	50–60 PSI
120 PSI MODELS	120–130 PSI

   - *STATIC INCREMENT – TEST FOR STATIC & CREEP*
     50 PSI MODELS ———— 5 PSI MAX
     120 PSI MODELS ———— 10 PSI MAX

   IF 4th DIGIT = "K" or "L" (MODELS WITHOUT A DELIVERY REG.): LEAK TEST THE ASS'Y IN ACCORDANCE WITH TEST PROCEDURE #1955 USING AN INLET TEST PRESSURE OF 2100±100 PSI.
3. *TORQUE TOP KNOB NUT ON ALL KNOBS TO 80 IN–LBS. MIN.*
4. *FOR INFOFLO ITEM MASTER DESCRIPTION, USE:*

   1st LINE: ASW,_ASSY__BRS_____
   2nd LINE: 3000/XXXXPSI_XXXXXXX

FOR XXXX/XXXXPSI IN 2nd LINE, SEE 4th DIGIT COLUMN OF NOMENCLATURE MATRIX

FOR XXXXXXX IN 2nd LINE, SEE 5th DIGIT COLUMN OF NOMENCLATURE MATRIX

NOMENCLATURE MATRIX			
X 4TH DIGIT DEL. PRESSURE	X 5TH DIGIT INLET ASS'Y	X 6TH DIGIT	X 7TH DIGIT ASSEMBLY
2 "3000/__50PSI"	0 "4NPTF__"		
3 "3000/_120PSI"	1 "MSTRVLV"		
B "3000/__50PSI"	2 "MICRO__"		
C "3000/_120PSI"	3 "MMICRO"		
K "3000/__60PSI"	4 "4NPTF__"		
L "3000/_180PSI"	5 "MSTRVLV"		
	6 "MICRO__"		
	7 "MMICRO"		

WEIGHT 3:4	THIRD ANGLE PROJECTION	TOLERANCE UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES PER ASME Y14.5M-1994	DRAWN BY A. Whitaker 1/13/2006	SEE PAGE 1 MATERIAL / DESCRIPTION	
TITLE BLOCK REVISION #7	SHEET SIZE B	FRACTIONS ±1/64	DESIGN ENGINEER J. Friedrichs 1/11/2006	CONCOA CONTROLS CORPORATION OF AMERICA PRODUCT ENGINEERING DEPARTMENT VIRGINIA BEACH, VA 23464	PART NO. 632 1001
DWG FILENAME 6321001-PG2.dwg		XXX DECIMALS ±.005 XX DECIMALS ±.010 ANGLES ±2° FILLET RADII R 1/64 SPECIAL EDGES .002–.010	MANUFACTURING ENG M. Wilson 1/12/2006	ASW,_ASSY__BRS_____ 3000/XXXXPSI_XXXXXXX (FOR 'X's IN TITLE, SEE NOTE 4)	PAGE 2 OF 2
NAME TITLE		CAGE NUMBER 0A389	QUALITY ASSURANCE E. Filomarino 1/12/2006	TITLE	DRAWING REFERENCE ECO/ORDER # ECN 06–044 SIZE D

CONCOA CRN Testing Summary Sheet

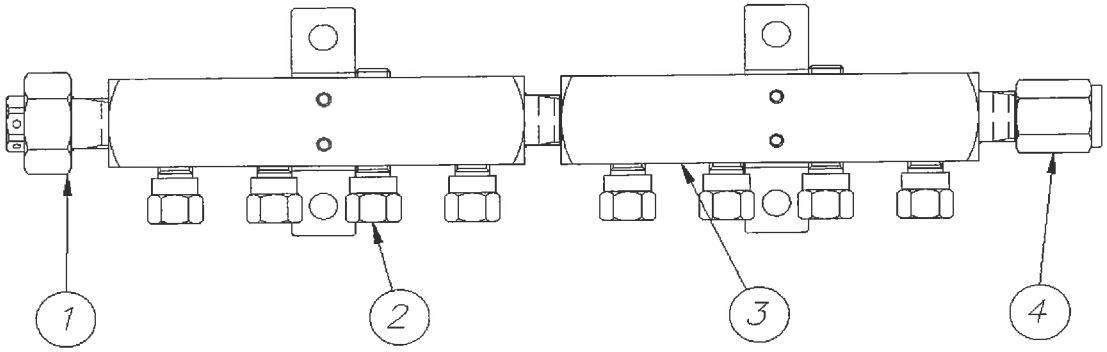
Package 7 - Type H
629

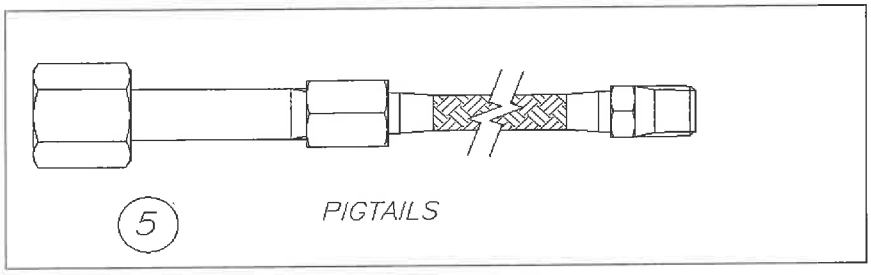
Scope: 629 Series Micro Manifold Compressed Gas Systems

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	Excluded from this listing
2	See 8350080 burst test data attached
3	See 8309746 burst test data attached
4	Excluded from this listing
5	Excluded from this listing

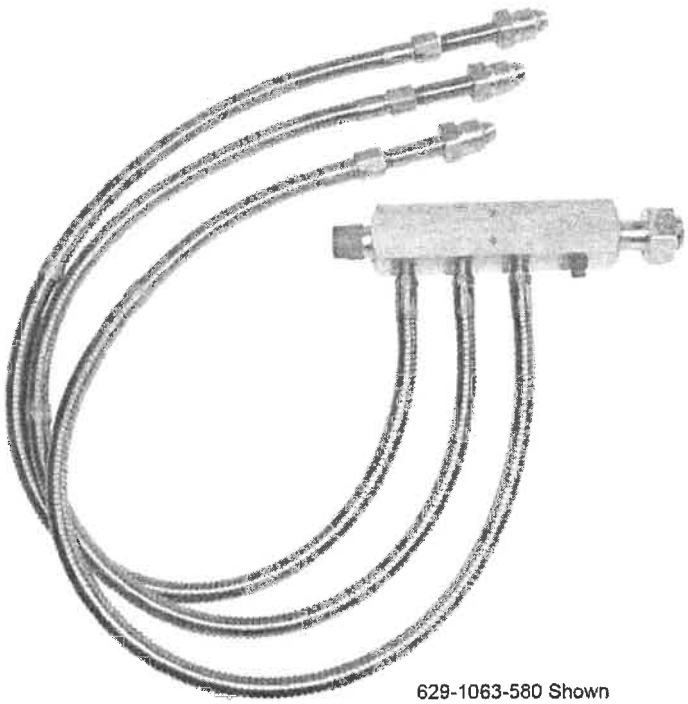
Sketch:





Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

629 Series MicroManifold



629-1063-580 Shown

The 629 Series MicroManifold is a flexible gas distribution system that can be configured as a gas or vent manifold. Configured as a gas manifold, the 629 offers excellent gaseous flow capacity from either liquid cans or high-pressure cylinders to a CONCOA pressure control device. Configured as a vent manifold, the 629 equalizes the head space pressure of each liquid cylinder manifolded together. This allows each cylinder to withdraw equally and operate at maximum flow capacity with minimal losses.

Advanced Features

- **Vent Manifold Excess Flow Orifices**
  Prevents pigtails from whipping
- **Safety Disk**
  Protects manifold from over- pressurization
- **Compact Modular Design**
  Provides simple field expandability
- **Multiple Cylinder Hose Options**
  Universal gas compatibility
- **Integrated ½" MPT Connector**
  Reduces potential leak sites
- **Flexible Design**
  Can be used with a 600 Series switchover or a 623 Series delivery system

Applications

Cryogenic Laser Assist
Nitrogen
Oxygen

High Flow Blanketing
Carbon dioxide
Inert gases

Gas Blending
Argon primary supply

Materials

Brass Barstock Body

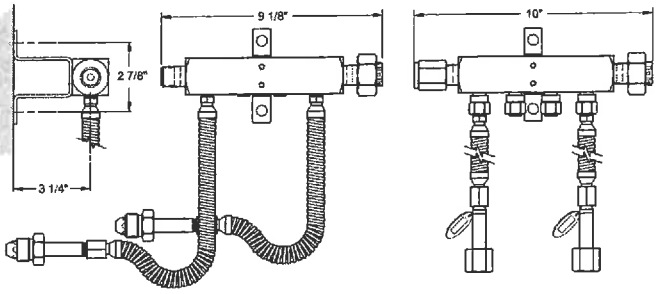
Specifications

Maximum Inlet Pressure
4500 psi (310 BAR)
Temperature Range
-320 F to 165 F
Inlet Connections
¼" F-NPT
Outlet Connections
½" M-NPT
Weight (Manifold & bracket)
14.5 lbs. (6.58kg.)

CONCOA • 1501 Harpers Road, Virginia Beach, Virginia 23454 USA
800.225.0473 • www.CONCOA.com

MANIFOLDS

System Diagram



629-1151-580 MicroManifold

629-21A2-001 Vent MicroManifold

Series	A Manifold Type	B Orientation	C Pigtail Style	D Cylinders/ Side	F Connection	G Option
629		0: Simplex (right bank)	0: No Pigtails		Please specify inlet connection. Use -001 for pigtail options 0, A or B. CGA DIN 477 BS 341 and others available	F: Flashback Arrestor
	1: MicroManifold (No Gauges)	1: Simplex (left bank)	1: 36" Rigid Brass*	1: 1 Cyl.		
	2: Vent MicroManifold (No Gauges)	2: Duplex (right and left bank)	2: 24" Rigid Copper*	2: 2 Cyl.		
	3: MicroManifold (600 PSI/ BAR Gauges)	3: Simplex (right bank with P/S)*	3: 72" Flexible Stainless Steel Core and Armor Cased*	3: 3 Cyl.		
	4: MicroManifold* (600 PSI/ BAR P/S Gauges)	4: Simplex (left bank with P/S)*	4: 24" Flexible Stainless Steel-braided with PTFE lining*	4: 4 Cyl.		
	5: MicroManifold (4,000 PSI/ BAR Gauges)	5: Duplex (right and left bank with P/S)*	5: 36" Flexible Stainless Steel Core and Armor Cased*	5: 5 Cyl.		
	6: MicroManifold* (4,000 PSI/BAR P/S Gauges)		6: 36" Flexible Stainless Steel-braided with PTFE lining*	6: 6 Cyl.		
	7: MicroManifold (6,000 PSI/ KPA Gauges)		7: 24" Flexible Stainless Steel Core and Armor Cased*	7: 7 Cyl.		
	8: MicroManifold* (6,000 PSI/BAR Gauges)			8: 8 Cyl.		
			9: 72" Flexible Stainless Steel-braided with PTFE lining*			
			A: 72" Flexible Stainless Steel-braided with PTFE lining Inert or CO^2†			
			B: 72" Flexible Stainless Steel-braided with PTFE lining Oxygen†			
			C: 24" Flexible Stainless Steel-braided with PTFE Core*			
			D: 36" Flexible Stainless Steel-braided with PTFE Core*			
			E: 72" Flexible Stainless Steel-braided with PTFE Core*			
			K: 72" Flexible Stainless Steel Core and Armor Cased 4,500 PSI†			
			L: 36" Flexible Stainless			

Key:
- * Required for Alarm Capability
- ** Valid with A=1,3,4,5 and 6
- † Valid with A=1,7 and 8
- †† Valid with A=2

Related Options

Option	Stock No.	Description
Burst Disk Kit	829-9960	½" MPT replacement burst disk kit
Gas Extension Kit	829-9961	Four cylinder manifold extension block with mounting hardware
Vent Extension Kit	829-9962	Four cylinder vent manifold extension block with mounting hardware
Floor Stand	830-7437	Single manifold floor stand provides support for up to two consecutive manifold extensions

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
629	Manifold	8309746	manifold block	4500 psig	4500 psig				1.5 square x 7.5 OAL	Brass, UNS C36000 per ASTM B-16
629	Manifold	8350080	orifice	500 psig	500 psig				3/4 hex x 1.280 OAL	Brass, UNS C36000 per ASTM B-16

REVISIONS

NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED
4	06-044	EXTENSIVELY REVISED – ADDED OPTIONS TO EVERY DIGIT, NEW MATRIX ARRANGEMENT	AEW	1/16/2006	————
5	06-102	ADDED PKG ITEMS & INFO, ADDED WARN LABEL FOR NON-BURSTDISK, CHANGED GAGE	AEW	2/24/2006	J. Friedrichs 2/23/2006
6	06-419	ADDED CABLE CLIPS FOR PRESS SW GAUGES, TEST PRESS WAS 2100±100PSI REGARDLESS OF GAUGE	AEW	6/13/2006	A. Whitaker 6/12/2006
7	06-794	FLOW RESTRICTOR WAS 830 8023 FOR VENT MODELS (4th DIGIT = 2)	AEW	12/7/2006	J. Friedrichs 12/7/2006
8	07-035	SPECIFIED TETHERED PIGTAILS FOR FOREIGN INLET MODELS	AEW	1/17/2007	J. Friedrichs 1/16/2007
9	07-259	CORRECTED IF STATEMENT IN 4th DIGIT OPTION BLOCK 2	AEW	5/31/2007	A. Whitaker 5/30/2007
10	08-291	CHANGED PIGTAILS FOR 6th DIGIT A & B, ALLOWED 6th & 7th DIGIT 0 WITH 4th DIGIT 2	AEW	7/10/2008	S. Dinkler 6/26/2008
11	08-361	ADDED CGA 703 TO LIST REQUIRING SAFETY BARRIERS, WARNING LABEL WAS 830 7583	AEW	8/27/2008	A. Whitaker 8/25/2008
12	08-447	MADE FLSBK ARRESTORS REQUIRED FOR CGA 300 410 510 PGTLS, NOTED PGTLS NEEDING "F" OPTION CODE	AEW	10/22/2008	S. Dinkler 9/15/2008
13	09-375	REMOVE REF TO SEE NOTE 4 IN BRAND CODE COL	AEW	7/9/2009	A. Whitaker 7/2/2009
14	09-403	CHANGED PKG & LBL PARTS & INSTRUCTIONS, ALLOWED CGA 540 IN 6th DIGIT OPTION BLOCKS 3,5,7	AEW	10/4/2010	A. Whitaker 10/4/2010
15	11-132	ISSUED BRAND CODE -CD MODELS FOR LIQ CYL 632s	AEW	5/25/2011	J. Friedrichs 5/25/2011

PT NO 629 1001

629 — Matrix

4th Digit = Type of Manifold

1=MicroManifold (No Gauge)
(Not Valid with 5th digit 3,4,5)

Gauge Port Pipe Plug: 9225 0008
Qty: 1 – If 5th Digit=0 or 1 & 7th Digit=0,1,2,3,4
Qty: 2 – If 5th Digit=0 or 1 & 7th Digit=5,6,7,8
Qty: 2 – If 5th Digit=2 & 7th Digit=0,1,2,3,4
Qty: 4 – If 5th Digit=2 & 7th Digit=5,6,7,8

2=Vent MicroManifold (No Gauge)
(Not Valid with 5th digit 3,4,5)
(Not Valid with Brand Codes CA,CC)

Flow Restrictors (Chrome): 835 0080
Qty: 4 – If 5th Digit=0 or 1 & 7th Digit=2,3,4
Qty: 8 – If 5th Digit=0 or 1 & 7th Digit=5,6,7,8
Qty: 8 – If 5th Digit=2 & 7th Digit=2,3,4
Qty: 16 – If 5th Digit=2 & 7th Digit=5,6,7,8

Gauge Port Pipe Plug: 9225 0008
Qty: 1 – If 5th Digit=0 or 1 & 7th Digit=2,3,4
Qty: 2 – If 5th Digit=0 or 1 & 7th Digit=5,6,7,8
Qty: 2 – If 5th Digit=2 & 7th Digit=2,3,4
Qty: 4 – If 5th Digit=2 & 7th Digit=5,6,7,8

Manifold Block End Cap: 830 9759
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5

3=MicroManifold (400 psi/kPa Gauge)
(Not Valid with 5th digit 3,4,5)

Inlet Gauge: 8410007
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5

Gauge Port Pipe Plug: 9225 0008
Qty: 0 – If 5th Digit=0,1,2,3,4,5 & 7th Digit=0,1,2,3,4
Qty: 1 – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 – If 5th Digit=2,5 & 7th Digit=5,6,7,8

4=MicroManifold (600 psi/bar Gauge)
If 5th digit = 0,1,2: 42 bar/psi Inlet Gauge: 550 0169
If 5th digit = 3,4,5: 40 bar/psi Inlet Pressure Switch Gauge Ass'y: 8308588
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5

Gauge Port Pipe Plug: 9225 0008
Qty: 0 – If 5th Digit=0,1,2,3,4,5 & 7th Digit=0,1,2,3,4
Qty: 1 – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 – If 5th Digit=2,5 & 7th Digit=5,6,7,8

5=MicroManifold (4000 psi/kPa Gauge)
(Not Valid with 5th digit 3,4,5)

Inlet Gauge: 8410102
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5

Gauge Port Pipe Plug: 9225 0008
Qty: 0 – If 5th Digit=0,1,2,3,4,5 & 7th Digit=0,1,2,3,4
Qty: 1 – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 – If 5th Digit=2,5 & 7th Digit=5,6,7,8

6=MicroManifold (280 bar/psi Gauge)
If 5th digit = 0,1,2: 280 bar/psi Inlet Gauge: 8410536
If 5th digit = 3,4,5: 280 bar/psi Inlet Pressure Switch Gauge Ass'y: 8308586
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5

Gauge Port Pipe Plug: 9225 0008
Qty: 0 – If 5th Digit=0,1,2,3,4,5 & 7th Digit=0,1,2,3,4
Qty: 1 – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 – If 5th Digit=2,5 & 7th Digit=5,6,7,8

7=MicroManifold (6000 psi/kPa Gauge)
(Not Valid with 5th digit 3,4,5)

Inlet Gauge: 8416000
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5

Gauge Port Pipe Plug: 9225 0008
Qty: 0 – If 5th Digit=0,1,2,3,4,5 & 7th Digit=0,1,2,3,4
Qty: 1 – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 – If 5th Digit=2,5 & 7th Digit=5,6,7,8

8=MicroManifold (414 bar/psi Gauge)
If 5th digit = 0,1,2: 414 bar/psi Inlet Gauge: 5500297
If 5th digit = 3,4,5: 414 bar/psi Inlet Pressure Switch Gauge Ass'y: 8308590
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5

Gauge Port Pipe Plug: 9225 0008
Qty: 0 – If 5th Digit=0,1,2,3,4,5 & 7th Digit=0,1,2,3,4
Qty: 1 – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 – If 5th Digit=2,5 & 7th Digit=5,6,7,8

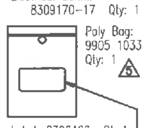
5th Digit = Qty

0=Simplex
Right Hand –
No Pressure Switch

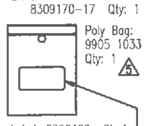
1=Simplex
Left Hand –
No Pressure Switch

2=Duplex
Right & Left Hand –
No Pressure Switch

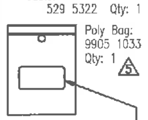
3=Simplex
Right Hand –
With Pressure Switch
Electrical Conn.:
8309170-17 Qty: 1


Poly Bag: 9905 1033 Qty: 1
Label: 8306466 Qty:1
Printed "8309170-17"
Cable Clip: 830 8603 Qty: 1
If CGA 300, 350, 410, 510, 695 or 703 add Intrinsic safety barriers: 5295312 Qty: 1

4=Simplex
Left Hand –
With Pressure Switch
Electrical Conn.:
8309170-17 Qty: 1


Poly Bag: 9905 1033 Qty: 1
Label: 8306466 Qty:1
Printed "8309170-17"
Cable Clip: 830 8603 Qty: 1
If CGA 300, 350, 410, 510, 695 or 703 add Intrinsic safety barriers: 5295312 Qty: 1

5=Duplex
Right & Left Hand –
With Pressure Switch
Electrical Conn.:
8309170-17 Qty: 1
Y Cable:
529 5322 Qty: 1


Poly Bag: 9905 1033 Qty: 1
Label: 8306466 Qty:1
Printed "8309170-17"
Cable Clip: 830 8603 Qty: 2
If CGA 300, 350, 410, 510, 695 or 703 add Intrinsic safety barriers: 5295312 Qty: 1

6th Digit = Pigtail, ADI

0=No Pigtail
(Valid with 7th digit 0 only)
(Valid with CGA code 001 only)
ADI: 9906 3221 Qty: 1 – If 4th Digit=1,2,3,4,5,6
ADI: 9906 3228 Qty: 1 – If 4th Digit=7,8

1=36" Rigid Brass Pigtail
(Not Valid with 4th digit 2,7,8)
Pigtail: 5290028-CGA
Qty: See 7th digit
Not available with CGA 300, 410, or 510 connections.
ADI: 9906 3221 Qty: 1

2=24" Rigid Copper Pigtail
(Not Valid with 4th digit 2,7,8)
(Not Valid with CGA 300, 350, 410, & 510)
Pigtail: 5290035-CGA
Qty: See 7th digit
Not available with CGA 300, 410, or 510 connections.
ADI: 9906 3221 Qty: 1

3=72" Stainless Steel Core Armor Cased Pigtail
(Not Valid with 4th digit 2,7,8)
(CGA 300, 410 & 510 include flashback arrestors)
Pigtail: 5290055-CGA
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

4=24" Teflon Lined Armor Cased Pigtail
(Not Valid with 4th digit 2,7,8)
(If CGA 300, 410 or 510 specified flashback arrestors are required. Specified as option code 'F', see 15th digit.)
Pigtail: 5290093-CGAX
If foreign inlet is specified, use:
Pigtail: 5290071-XXX
(24" braided pigtail ass'y, tethered)
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

5=36" Stainless Steel Core Armor Cased Pigtail
(Not Valid with 4th digit 2,7,8)
(CGA 300, 410 & 510 include flashback arrestors)
Pigtail: 5290031-CGA
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

6=36" Teflon Lined Armor Cased Pigtail
(Not Valid with 4th digit 2,7,8)
(If CGA 300, 410 or 510 specified flashback arrestors are required. Specified as option code 'F', see 15th digit.)
Pigtail: 5290047-CGAX
If foreign inlet is specified, use:
Pigtail: 5290031-XXX
(36" braided pigtail ass'y, tethered)
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

7=24" Stainless Steel Core Armor Cased Pigtail
(Not Valid with 4th digit 2,7,8)
(CGA 300, 410 & 510 include flashback arrestors)
Pigtail: 5290071-CGA
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

8=36" Rigid Brass Pigtail
(Not Valid with 4th digit 2,7,8)
(Valid with CGA 300 & 510 only)
Pigtail: 8307737 if CGA 300
Pigtail: 8307738 if CGA 510
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

9=72" Teflon Lined Armor Cased Pigtail
(Not Valid with 4th digit 2,7,8)
(If CGA 300, 410 or 510 specified flashback arrestors are required. Specified as option code 'F', see 15th digit.)
Pigtail: 5290094-CGAX
If foreign inlet is specified, use:
Pigtail: 5290055-XXX
(72" braided pigtail ass'y, tethered)
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

A=72" Teflon Lined Pigtail
(Valid with 4th digit 2 only)
Pigtail:
If CGA 295: 5290240-295
If CGA 440: 5290241-440
If CGA 622: 5290242-622
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

B=72" Teflon Lined Pigtail
(Valid with 4th digit 2 only)
Pigtail:
If CGA 295: 5290240-295
If CGA 440: 5290241-440
If CGA 622: 5290242-622
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

C=24" Teflon Lined Stainless Braided Pigtail
(Not Valid with 4th digit 2,7,8)
(If CGA 300, 410 or 510 specified flashback arrestors are required. Specified as option code 'F', see 15th digit.)
Pigtail: 5290036-CGAX
If foreign inlet is specified, use:
Pigtail: 5290071-XXX
(24" braided pigtail ass'y, tethered)
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

D=36" Teflon Lined Stainless Braided Pigtail
(Not Valid with 4th digit 2,7,8)
(If CGA 300, 410 or 510 specified flashback arrestors are required. Specified as option code 'F', see 15th digit.)
Pigtail: 5290044-CGAX
If foreign inlet is specified, use:
Pigtail: 5290031-XXX
(36" braided pigtail ass'y, tethered)
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

E=72" Teflon Lined Stainless Braided Pigtail
(Not Valid with 4th digit 2,7,8)
(If CGA 300, 410 or 510 specified flashback arrestors are required. Specified as option code 'F', see 15th digit.)
Pigtail: 5290272-CGAX
If foreign inlet is specified, use:
Pigtail: 5290055-XXX
(72" braided pigtail ass'y, tethered)
Qty: See 7th digit
ADI: 9906 3221 Qty: 1

K=72" Stainless Steel Core Armor Cased Pigtail – 4500 psi
(Not Valid with 4th digit 2,3,4,5,6)
(Valid with CGA 000, 347, 680 & Foreign Inlets Only)
Pigtail: 5290258-CGA
Qty: See 7th digit
ADI: 9906 3228 Qty: 1

L=36" Stainless Steel Core Armor Cased Pigtail – 4500 psi
(Not Valid with 4th digit 2,3,4,5,6)
(Valid with CGA 000, 347, 680 & Foreign Inlets Only)
Pigtail: 5290058-CGA
Qty: See 7th digit
ADI: 9906 3228 Qty: 1

7th Digit = Number of Cylinder Stations Per Side, (Component Quantities)

0
(Valid with 6th digit 0 only)
Manifold Block: 8309746
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Pipe Plug: 9225 0008
Qty: 3 – If 5th Digit=0,1,3,4
Qty: 6 – If 5th Digit=2,5

1= Not valid for 4th digit 2
Manifold Block: 8309746
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Pigtail: See 6th digit for part number
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Pipe Plug: 9225 0008
Qty: 3 – If 5th Digit=0,1,3,4
Qty: 6 – If 5th Digit=2,5

2=2 Cylinder Stations (per side)
Manifold Block: 8309746
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Pigtail: See 6th digit for part number
Qty: 2 – If 5th Digit=0,1,3,4
Qty: 4 – If 5th Digit=2,5
Pipe Plug: 9225 0008
Qty: 2 – If 5th Digit=0,1,3,4
Qty: 4 – If 5th Digit=2,5

3=3 Cylinder Stations (per side)
Manifold Block: 8309746
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Pigtail: See 6th digit for part number
Qty: 3 – If 5th Digit=0,1,3,4
Qty: 6 – If 5th Digit=2,5
Pipe Plug: 9225 0008
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5

4=4 Cylinder Stations (per side)
Manifold Block: 8309746
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Pigtail: See 6th digit for part number
Qty: 4 – If 5th Digit=0,1,3,4
Qty: 8 – If 5th Digit=2,5

5=5 Cylinder Stations (per side)
Manifold Block: 8309746
Qty: 2 – If 5th Digit=0,1,3,4
Qty: 4 – If 5th Digit=2,5
Pigtail: See 6th digit for part number
Qty: 5 – If 5th Digit=0,1,3,4
Qty: 10 – If 5th Digit=2,5
Pipe Plug: 9225 0008
Qty: 3 – If 5th Digit=0,1,3,4
Qty: 6 – If 5th Digit=2,5

6=6 Cylinder Stations (per side)
Manifold Block: 8309746
Qty: 2 – If 5th Digit=0,1,3,4
Qty: 4 – If 5th Digit=2,5
Pigtail: See 6th digit for part number
Qty: 6 – If 5th Digit=0,1,3,4
Qty: 12 – If 5th Digit=2,5
Pipe Plug: 9225 0008
Qty: 2 – If 5th Digit=0,1,3,4
Qty: 4 – If 5th Digit=2,5

7=7 Cylinder Stations (per side)
Manifold Block: 8309746
Qty: 2 – If 5th Digit=0,1,3,4
Qty: 4 – If 5th Digit=2,5
Pigtail: See 6th digit for part number
Qty: 7 – If 5th Digit=0,1,3,4
Qty: 14 – If 5th Digit=2,5
Pipe Plug: 9225 0008
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5

8=8 Cylinder Stations (per side)
Manifold Block: 8309746
Qty: 2 – If 5th Digit=0,1,3,4
Qty: 4 – If 5th Digit=2,5
Pigtail: See 6th digit for part number
Qty: 8 – If 5th Digit=0,1,3,4
Qty: 16 – If 5th Digit=2,5

Brand Code

-01 Short bracket
With Burst Disk
Burst Disk Kit: 8309758
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Mounting Bracket: 8309747
Mounting Bracket Screw: 9204 2748
Qty: 1 Bracket + 2 Screws – If 5th Digit=0,1,3,4 & 7th Digit=0,1,2,3,4
Qty: 2 Brackets + 4 Screws – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 Brackets + 4 Screws – If 5th Digit=2,5 & 7th Digit=0,1,2,3,4
Qty: 4 Brackets + 8 Screws – If 5th Digit=2,5 & 7th Digit=5,6,7,8

-CA Short bracket – No Burst Disk
Not for Sale – Sub-Assembly Only
Warning Label: 8350349
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
1/2 NPT Pipe Plug: 830 8988
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Mounting Bracket: 8309747
Mounting Bracket Screw: 9204 2748
Qty: 1 Bracket + 2 Screws – If 5th Digit=0,1,3,4 & 7th Digit=0,1,2,3,4
Qty: 2 Brackets + 4 Screws – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 Brackets + 4 Screws – If 5th Digit=2,5 & 7th Digit=0,1,2,3,4
Qty: 4 Brackets + 8 Screws – If 5th Digit=2,5 & 7th Digit=5,6,7,8

-CB Long bracket
With Burst Disk
Burst Disk Kit: 8309758
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Mounting Bracket: 8309779
Mounting Bracket Screw: 9204 2748
Qty: 1 Bracket + 2 Screws – If 5th Digit=0,1,3,4 & 7th Digit=0,1,2,3,4
Qty: 2 Brackets + 4 Screws – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 Brackets + 4 Screws – If 5th Digit=2,5 & 7th Digit=0,1,2,3,4
Qty: 4 Brackets + 8 Screws – If 5th Digit=2,5 & 7th Digit=5,6,7,8

-CC Long bracket – No Burst Disk
Not for Sale – Sub-Assembly Only
Warning Label: 8350349
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
1/2 NPT Pipe Plug: 830 8988
Qty: 1 – If 5th Digit=0,1,3,4
Qty: 2 – If 5th Digit=2,5
Mounting Bracket: 8309779
Mounting Bracket Screw: 9204 2748
Qty: 1 Bracket + 2 Screws – If 5th Digit=0,1,3,4 & 7th Digit=0,1,2,3,4
Qty: 2 Brackets + 4 Screws – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 Brackets + 4 Screws – If 5th Digit=2,5 & 7th Digit=0,1,2,3,4
Qty: 4 Brackets + 8 Screws – If 5th Digit=2,5 & 7th Digit=5,6,7,8

-CD Long bracket – With Liquid Cylinder Relief Valve
Not for Sale – Sub-Assembly Only
Liquid Cylinder RV, 375psi: 8350553 + Bushing: 8306163
Blank Label 8307583 Printed with "MAX. INLET: 350 PSI"
Qty: 1 of Each – If 5th Digit=0,1,3,4
Qty: 2 of Each – If 5th Digit=2,5
Mounting Bracket: 8309779
Mounting Bracket Screw: 9204 2748
Qty: 1 Bracket + 2 Screws – If 5th Digit=0,1,3,4 & 7th Digit=0,1,2,3,4
Qty: 2 Brackets + 4 Screws – If 5th Digit=0,1,3,4 & 7th Digit=5,6,7,8
Qty: 2 Brackets + 4 Screws – If 5th Digit=2,5 & 7th Digit=0,1,2,3,4
Qty: 4 Brackets + 8 Screws – If 5th Digit=2,5 & 7th Digit=5,6,7,8

CGA Code

-CGA
(Not Valid if 6th & 7th digit=0)
Refer to specified pigtail drawings for available inlet connections.
If 4th digit=2, then CGA 295, 440, or 622 only.

-001
(If 6th & 7th digit=0 CGA code must be -001)

Option Code

Blank

F
Indicates optional flashback arrestor on pigtail.
Use only when the pigtail part no. uses an F to indicate the presence of a flashback arrestor (see 6th digit column).
Only valid with CGA 300, 410, & 510

BOX OPTIONS FOR PERIPHERALS

SELECT APPROPRIATE BOX FROM THIS TABLE FOR SHIPPING OPTIONAL PERIPHERALS THAT COME WITH THE SYSTEM

BOX PART NO.	SIZE	NOTES
9904 0038	3-1/4" x 4" x 22"	Use for Extra-Extra Small Qtys
9903 9188	8-9/16" x 10-1/4" x 13-11/16"	Use for Extra Small Qtys
9903 9232	10" x 13-3/8" x 15-3/4"	Use for Small Qtys
9904 7019	9" x 10-3/4" X 18"	Use for Medium Qtys
9904 8052	11-5/8" x 16-3/4" x 17-7/16"	Use for Large Qtys
9904 8045	16" x 20" x 22"	Use for Extra Large Qtys

POLY BAG(s)

629 SERIES 5th & 7th DIGIT VALUES	POLY BAG & QTY	MP 500 LABEL & QTY
5th DIGIT = 0,1,3 or 4 (not duplex) AND 7th DIGIT = 0,1,2,3 or 4 (1 mfld block per side)	9905 1025 QTY 1	830 9938 QTY 1
5th DIGIT = 0,1,3 or 4 (not duplex) AND 7th DIGIT = 5,6,7 or 8 (2 mfld blocks per side)	9905 1026 QTY 1	830 9938 QTY 1
5th DIGIT = 2 or 5 (duplex) AND 7th DIGIT = 0,1,2,3 or 4 (1 mfld block per side)	9905 1025 QTY 2	830 9938 QTY 2
5th DIGIT = 2 or 5 (duplex) AND 7th DIGIT = 5,6,7 or 8 (2 mfld blocks per side)	9905 1026 QTY 2	830 9938 QTY 2

NOTES:

1. SEAL ALL PIPE THREADS WITH TEFLON TAPE AND LEAK TEST THE ASSEMBLY ACCORDING TO TEST PROCEDURE #1955 USING THE FOLLOWING INLET TEST PRESSURE:
   INLET TEST PRESSURE DEPENDS ON INLET GAUGE AS FOLLOWS:

INLET GAUGE RANGE	INLET TEST PRESS.
NO GAUGE	4000–4500 PSI
6000 PSI (400 BAR)	4000–4500 PSI
4000 PSI (280 BAR)	2000–2200 PSI
600 PSI (40 BAR)	550–600 PSI
Brand Code "-CD" 600 PSI (40 BAR)	300–325 PSI

2. △5 △14
3. FOR INFOFLO ITEM MASTER DESCRIPTION, USE:
   1st LINE: MFLDASSY, _XXXXX_BRS_
   2nd LINE: _XST_##XXXPGTLXXXXXX
   FOR "_XST" IN 2nd LINE, REPLACE "X" WITH NO. OF CYLINDERS PER SIDE (SEE MATRIX 7th DIGIT COLUMN)
   FOR "##" IN 2nd LINE, USE "SP" FOR SIMPLEX MODELS, USE "DP" FOR DUPLEX MODELS (SEE MATRIX 5th DIGIT COLUMN)
   FOR "XXXPGTL" IN 2nd LINE, REPLACE "XXX" WITH THE PIGTAIL LENGTH IN INCHES, LEAVING LEADING CHARACTERS BLANK FOR 1 AND 2 DIGIT NUMBERS (SEE MATRIX 6th DIGIT COLUMN)
   –or–
   LEAVE BLANK FOR MODELS WITH 0 STATIONS PER SIDE (NO PIGTAILS)
   FOR "XXXXX" IN 1st LINE, USE "MICRO" FOR STANDARD MICROMANIFOLDS, USE "VENT" FOR VENT MICROMANIFOLDS (SEE MATRIX 4th DIGIT COLUMN)
   FOR "XXXXXX" IN 2nd LINE, USE CGA INLET CODE FROM PIGTAILS (i.e., "CGA540", "DIN06", "4NPTF_", etc.)
   –or–
   LEAVE BLANK FOR MODELS WITH 0 STATIONS PER SIDE (NO PIGTAILS)
4. △4 △5
5. △4

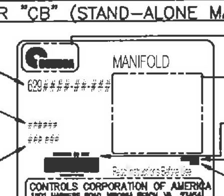
PACKAGING NOTES:

1. MANIFOLD SYSTEM IS TO BE SHIPPED ASSEMBLED AS SHOWN IN THE ASSEMBLY DETAILS ON PAGE 2. PIGTAILS ARE TO BE SHIPPED UNATTACHED TO MANIFOLD(s), PACKAGED PER DRAWING PGTLASY-PKG.
2. SEAL MANIFOLD(s) IN POLY BAG(s) (ITEM 18), AND APPLY MP500 LABEL(s) (ITEM 21) TO POLY BAG(s).
3. IF ALL SYSTEM ITEMS WILL FIT SAFELY INTO MAIN CARTON (ITEM 17), FOAM PACK THEM IN THE CARTON, PLACE THE ADI (ITEM 10) ATOP THE FOAM, SEAL THE CARTON, AND APPLY MAIN BOX LABEL (ITEM 19). DISCARD BOX X OF Y LABELS (ITEM 20) – SEE PACKAGING NOTE 5.
4. IF NECESSARY, SELECT APPROPRIATELY SIZED ADDITIONAL CARTON FOR PERIPHERALS (NOT FOR THE MANIFOLDS – SEE TABLE "BOX OPTIONS FOR PERIPHERALS"), HEAVILY BUBBLE WRAP PERIPHERALS USING BUBBLE WRAP (ITEM 22), AND SEAL PERIPHERALS IN CARTON. APPLY THE "BOX 1 OF 2" LABEL (ITEM 20) TO MAIN CARTON UNDER THE MAIN BOX LABEL. APPLY THE "BOX 2 OF 2" LABEL (ITEM 20) TO THE PERIPHERALS CARTON – SEE PACKAGING NOTE 5.
5. MODELS WITH BRAND CODE -CA, -CC OR -CD ARE INTENDED FOR INCLUSION WITH A HIGHER LEVEL CONCOA SYSTEM. THE TOTAL NUMBER OF BOXES FOR THE HIGHER LEVEL SYSTEM WILL BE GREATER THAN THE TOTAL NUMBER OF BOXES REQUIRED BY THIS DRAWING. IN SUCH CASES, USE THE "BOX 2 OF 3" AND "BOX 3 OF 3" LABELS, OR USE THE "BOX _ OF _" LABELS, AND FILL IN THE BLANKS APPROPRIATELY.
6. DISCARD UNUSED BOX X OF Y LABELS (ITEM 20).

BOX LABEL NOTES:

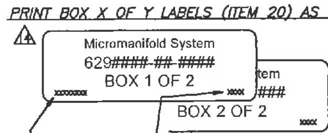
PRINT MAIN BOX LABEL(ITEM 19 & BOX X OF Y LABELS (ITEM 20) AS SHOWN BELOW:

IF BRAND CODE = "01" OR "CB" (STAND-ALONE MANIFOLD SYSTEM):



PRINT FULL PRODUCT NO.
PRINT MFLD TYPE "MICRO" OR "VENT"
PRINT INLET TYPE, i.e. "CGA 540", "1/4" NPT", etc.
PREPRINTED
PRINT GRAPHIC REPRESENTATION OF THE ASS'Y
PRINT BAR CODE INFORMATION
PRINT ORDER NO. *
PRINT DATE CODE **
PREPRINTED

PRINT BOX X OF Y LABELS (ITEM 20) AS SHOWN BELOW:

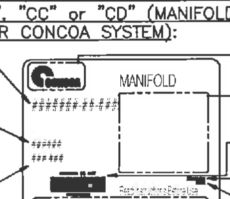


** PRINT DATE CODE TYP.
PRINT ORDER NO. TYP. *

* FACTORY ORDER NO. OR OTHER REFERENCE NO. (i.e., RMA, REWORK, etc.)

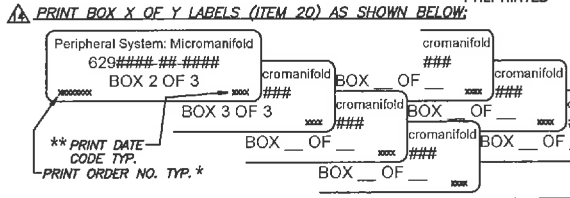
** DATE CODE (DATE THE LABEL WAS PRINTED) IN THE FORM OF YYWW (YY IS THE 2 DIGIT YEAR, WW IS THE WEEK OF THE YEAR)

IF BRAND CODE = "CA", "CC" or "CD" (MANIFOLD SYSTEM WILL BE INCLUDED WITH ANOTHER CONCOA SYSTEM):



PRINT FULL PRODUCT NO. OF REFERENCING PRODUCT (i.e., "6322331-01-580)
PRINT MFLD TYPE "MICRO" OR "VENT"
PRINT INLET TYPE, i.e. "CGA 540", "1/4" NPT", etc.
PREPRINTED
PRINT GRAPHIC REPRESENTATION OF THE ASS'Y
PRINT BAR CODE INFORMATION
PRINT ORDER NO. *
PRINT DATE CODE **
PREPRINTED

PRINT BOX X OF Y LABELS (ITEM 20) AS SHOWN BELOW:



** PRINT DATE CODE TYP.
PRINT ORDER NO. TYP. *

Parts List

SEE TABLE "BOX OPTIONS FOR PERIPHERALS"

ITEM	PART NO / SIZE	QTY	MATERIAL / DESCRIPTION
22	9904 8053	AS REQ'D	BUBBLE WRAP
21	SEE TABLE "POLY BAG(s)"		LABEL, MP 500 CLEANED
20	9901 6312	10	LABEL, BOX X OF Y
19	9901 6286	1	BOX LABEL, MAIN
18	SEE TABLE "POLY BAG(s)"		POLY BAG
17	9904 8052	1	CARTON, MAIN
16	SEE MATRIX – BRAND CODE		MAX INLET or WARNING LABEL (UNSAFE FOR...LIQ CYLS)
15	SEE MATRIX – BRAND CODE		PIPE PLUG, 1/2 NPT or BUSHING
14	SEE MATRIX – BRAND CODE		BURST DISK ASS'Y or RELIEF VALVE
13	SEE MATRIX – BRAND CODE		MOUNTING BRACKET SCREW
12	SEE MATRIX – BRAND CODE		MOUNTING BRACKET
11	SEE MATRIX – 7th DIGIT		MANIFOLD BLOCK
10	SEE MATRIX – 6th DIGIT		ADI
9	SEE MATRIX – 6th DIGIT		PIGTAIL
8	SEE MATRIX – 5th DIGIT		CABLE CLIP
7	SEE MATRIX – 5th DIGIT		Y CABLE
6	SEE MATRIX – 5th DIGIT		ELECTRICAL CONNECTOR
5	SEE MATRIX – 5th DIGIT		INTRINSIC SAFETY BARRIERS
4	SEE MATRIX – 4th DIGIT		END CAP, 1/2 NPT
3	SEE MATRIX – 4th DIGIT		FLOW RESTRICTOR
2	SEE MATRIX – 4th & 7th DIGITS		PIPE PLUG, 1/4 NPT, BOTTOM &/or TOP PORT(s)
1	SEE MATRIX – 4th DIGIT		INLET GAUGE or GAUGE ASS'Y

Title Block

SCALE: AS NOTED	TOLERANCE UNLESS OTHERWISE SPEC'D: XXX DECIMALS ±.005; XX DECIMALS ±.010; FRACTIONS ±1/64; ANGLES ±2°; FILLET RADII R 1/64; BREAK EDGES .002-.010	DRAWN BY: A. Whitaker 1/16/2006
TITLE BLOCK REVISION: #7 — 1/31/2003	CAGE NUMBER: ØA389	DESIGN ENGINEERING: J.Friedrichs 1/11/2006
CAD FILENAME: 6291001-pg1of2.dwg		MANUFACTURING ENG: M. Wilson 1/12/2006
		QUALITY ASSURANCE: E.Filomarino 1/12/2006

CONCOA — CONTROLS CORPORATION OF AMERICA, PRODUCT ENGINEERING DEPARTMENT, VIRGINIA BEACH, VA 23454

TITLE: MFLDASSY, _XXXXX_BRS_ _XST_##XXXPGTLXXXXXX (FOR "X"s & "#"s IN TITLE, SEE NOTE 3)

PART NO. 629 1001 — PAGE 1 of 2

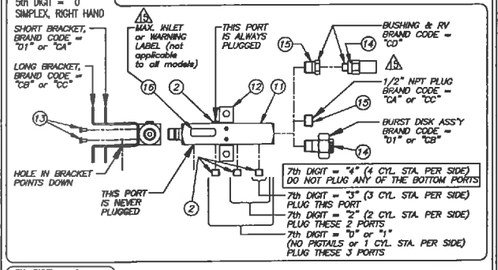
GOVERNING REFERENCE DOCUMENT #: ECN 04-903 — SIZE: D

4th DIGIT = 1
MICROMANIFOLD WITHOUT GAUGE(s)

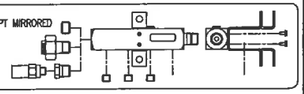
SCALE = 3:16

7th DIGIT = 0 to 4
0 to 4 CYLINDER STATIONS PER SIDE

5th DIGIT = 0
SIMPLEX, RIGHT HAND



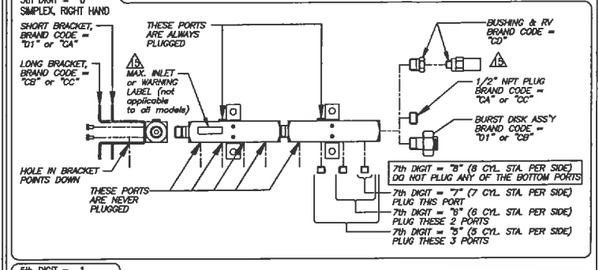
5th DIGIT = 1
SIMPLEX, LEFT HAND
IDENTICAL TO SIMPLEX RIGHT HAND, EXCEPT MIRRORED



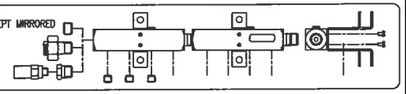
5th DIGIT = 2
DUPLEX
1 EACH OF THE RIGHT HAND AND LEFT HAND SIMPLEX ASS'YS

7th DIGIT = 5 to 8
5 to 8 CYLINDER STATIONS PER SIDE

5th DIGIT = 0
SIMPLEX, RIGHT HAND



5th DIGIT = 1
SIMPLEX, LEFT HAND
IDENTICAL TO SIMPLEX RIGHT HAND, EXCEPT MIRRORED



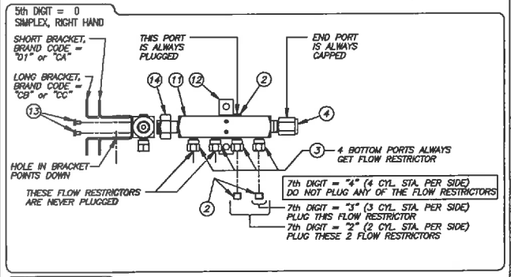
5th DIGIT = 2
DUPLEX
1 EACH OF THE RIGHT HAND AND LEFT HAND SIMPLEX ASS'YS

4th DIGIT = 2
VENT MICROMANIFOLD

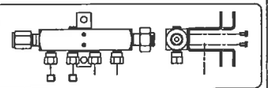
SCALE = 3:16

7th DIGIT = 2 to 4
2 to 4 CYLINDER STATIONS PER SIDE (MUST HAVE 2 STATIONS PER SIDE WITH PIGTAILS MINIMUM)

5th DIGIT = 0
SIMPLEX, RIGHT HAND



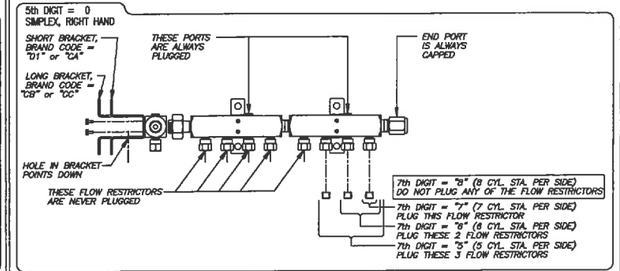
5th DIGIT = 1
SIMPLEX, LEFT HAND
IDENTICAL TO SIMPLEX RIGHT HAND, EXCEPT MIRRORED



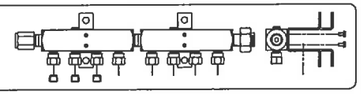
5th DIGIT = 2
DUPLEX
1 EACH OF THE RIGHT HAND AND LEFT HAND SIMPLEX ASS'YS

7th DIGIT = 5 to 8
5 to 8 CYLINDER STATIONS PER SIDE

5th DIGIT = 0
SIMPLEX, RIGHT HAND



5th DIGIT = 1
SIMPLEX, LEFT HAND
IDENTICAL TO SIMPLEX RIGHT HAND, EXCEPT MIRRORED



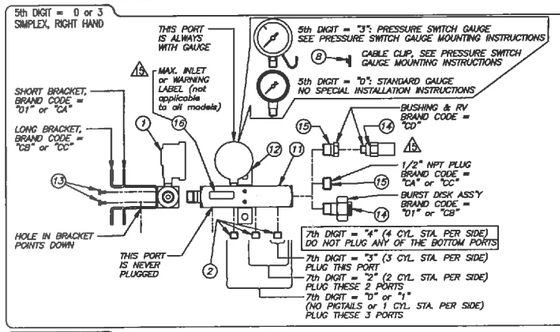
5th DIGIT = 2
DUPLEX
1 EACH OF THE RIGHT HAND AND LEFT HAND SIMPLEX ASS'YS

4th DIGIT = 3, 4, 5, 6, 7 or 8
MICROMANIFOLD WITH GAUGE(s)

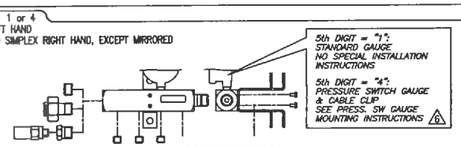
SCALE = 3:16

7th DIGIT = 0 to 4
0 to 4 CYLINDER STATIONS PER SIDE

5th DIGIT = 0 or 3
SIMPLEX, RIGHT HAND



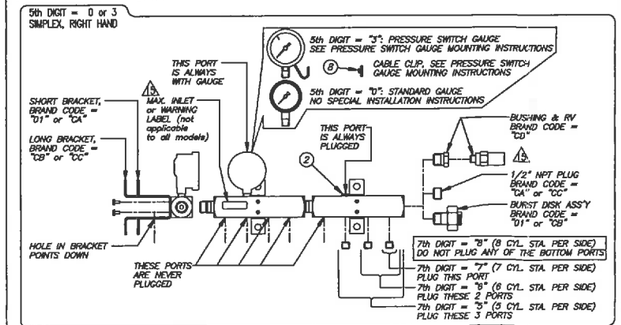
5th DIGIT = 1 or 4
SIMPLEX, LEFT HAND
IDENTICAL TO SIMPLEX RIGHT HAND, EXCEPT MIRRORED



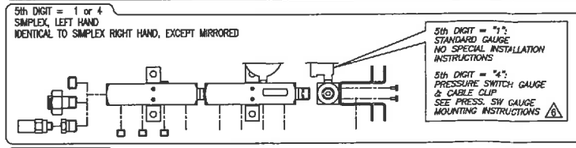
5th DIGIT = 2 or 5
DUPLEX
1 EACH OF THE RIGHT HAND AND LEFT HAND SIMPLEX ASS'YS
5th DIGIT = "2" STANDARD GAUGE NO SPECIAL INSTRUCTIONS
5th DIGIT = "5" PRESS. SW GAUGE, SEE MOUNTING INSTRUCTIONS

7th DIGIT = 5 to 8
5 to 8 CYLINDER STATIONS PER SIDE

5th DIGIT = 0 or 3
SIMPLEX, RIGHT HAND

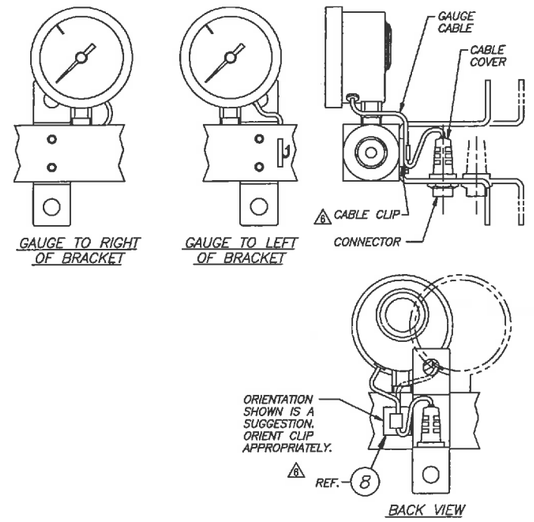


5th DIGIT = 1 or 4
SIMPLEX, LEFT HAND
IDENTICAL TO SIMPLEX RIGHT HAND, EXCEPT MIRRORED



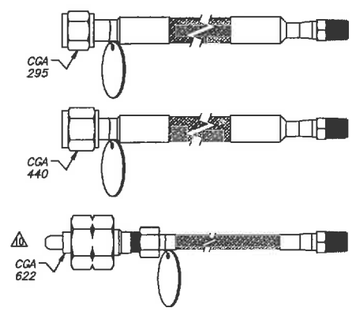
5th DIGIT = 2 or 5
DUPLEX
1 EACH OF THE RIGHT HAND AND LEFT HAND SIMPLEX ASS'YS
5th DIGIT = "2" STANDARD GAUGE NO SPECIAL INSTRUCTIONS
5th DIGIT = "5" PRESS. SW GAUGE, SEE MOUNTING INSTRUCTIONS

PRESSURE SWITCH GAUGE ASS'Y MOUNTING INSTRUCTIONS



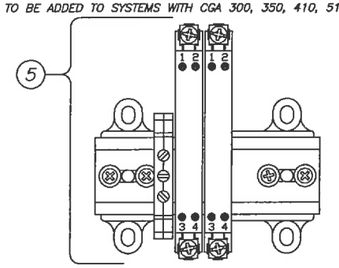
SPECIAL PIGTAILS FOR VENT MICROMANIFOLDS

ONLY THESE PIGTAILS ARE USED WITH VENT MICROMANIFOLDS.
VENT MICROMANIFOLDS MUST ALWAYS HAVE AT LEAST 2 PER SIDE.



INTRINSIC SAFETY BARRIERS

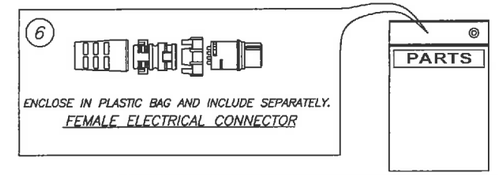
TO BE ADDED TO SYSTEMS WITH CGA 300, 350, 410, 510, 695 OR 703 INLETS.



NOTE:
BARRIERS COME WITH 9906 3211 INTRINSIC SAFETY DIAGRAM WHICH MUST BE INCLUDED REGARDLESS OF BRAND CODE – UL REQUIREMENT.

ELECTRICAL CONNECTOR

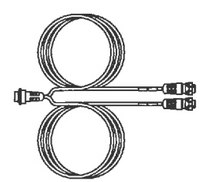
TO BE ADDED TO ASSY'S WITH PRESSURE SWITCH GAUGES



ENCLOSE IN PLASTIC BAG AND INCLUDE SEPARATELY.
FEMALE ELECTRICAL CONNECTOR

Y CABLE

TO BE ADDED TO DUPLEX ASSY'S WITH PRESSURE SWITCH GAUGES



REVISIONS

NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED
4	06-044	EXTENSIVELY REVISED – ADDED OPTIONS TO EVERY DIGIT, NEW MATRIX ARRANGEMENT	AEW	1/16/2006	
5	06-102	ADDED NOTE OF WARNING LABEL	AEW	2/24/2006	J. Friedrichs 2/23/2006
6	06-419	ADDED CABLE CLIPS FOR PRESS SW GAUGES, TEST PRESS SNS 21006:1400PSI REGARDLESS OF GAUGE	AEW	6/13/2006	A. Whitaker 6/12/2006
7	06-794	ON PAGE 1, FLOW RESTRICTOR SNS 630 6023 FOR VENT MODELS (4th DIGIT = 2)	AEW	12/7/2006	J. Friedrichs 12/7/2006
8	07-035	FOR TEFLON PIGTAILS (both armor coated & braided), USED BRANDED-REVERSED FOR FOREIGN INLET MODELS	AEW	1/17/2007	J. Friedrichs 1/16/2007
9	07-259	CORRECTED IF STATEMENT IN 4th DIGIT OPTION BLOCK 2 ON PAGE 1	AEW	5/31/2007	A. Whitaker 5/30/2007
10	08-291	CHANGED PIGTAILS FOR 6th DIGIT A & B, ALLOWED 6th & 7th DIGIT 0 WITH 4th DIGIT 2	AEW	8/23/2008	S. Dinkler 8/25/2008
11	08-361	ADDED CGA 703 TO LIST REQUIRING SAFETY BARRIERS, WARNING LABEL WAS 630 7351	AEW	8/27/2008	A. Whitaker 8/25/2008
12	08-447	MADE FLOW ARRESTORS REQUIRED FOR CGA 300 410 510 PIGTLS, NOTED PIGTLS NEEDING "1" OPTION CODE	AEW	10/22/2008	S. Dinkler 9/15/2008
13	09-375	REMOVE REF TO SEE NOTE 4 IN BRAND CODE COL	AEW	7/9/2009	A. Whitaker 7/2/2009
14	09-403	CHANGED PRS & LBL PARTS & INSTRUCTIONS, ALLOWED CGA 540 IN 6th DIGIT OPTION BLOCKS 3,5,7	AEW	10/4/2010	A. Whitaker 10/4/2010
15	11-132	ISSUED BRAND CODE –CD MODELS FOR LIQ CYL 632#	AEW	5/25/2011	J. Friedrichs 5/25/2011

PT NO 629 1001

SCALE: AS NOTED	THIRD ANGLE PROJECTION	TOLERANCE UNLESS OTHERWISE SPECIFIED: ENGINEERING ARE IN INCHES MILL & TOL. PER ANSI Y14.5	DRAWN BY: A. Whitaker 1/16/2006
TITLE BLOCK REVISION: #7	REVISED DATE: 1/31/2003	FINISH: XXX DECIMALS: ±.005 XX DECIMALS: ±.010 FRACTIONS: ±1/64 ANGLES: ±2° FILLET RADII: R 1/64 BREAK EDGES: .002-.010	DESIGN APPROVED: J.Friedrichs 1/11/2006
DWG FILENAME: 629001-pg2of2.dwg			MANUFACTURING APP.: M. Wilson 1/12/2006
CAGE NUMBER: 0A389			QUALITY ASSURANCE: E.Filomarino 1/12/2006

SEE PAGE 1 OF 2

MATERIAL / DESCRIPTION

CONTROLS CORPORATION OF AMERICA
PRODUCT ENGINEERING DEPARTMENT
VIRGINIA BEACH, VA 23464

MFLDASSY,_XXXXX_BRS_ _XST_##XXXPGTLXXXXXX
(FOR "X"s & "#"s IN TITLE, SEE NOTE 3)

PART NO. 629 1001
PAGE 2 of 2

TITLE

DRAWING REFERENCE DOCUMENT # ECN 04-903

SIZE D

CONCOA CRN Testing Summary Sheet

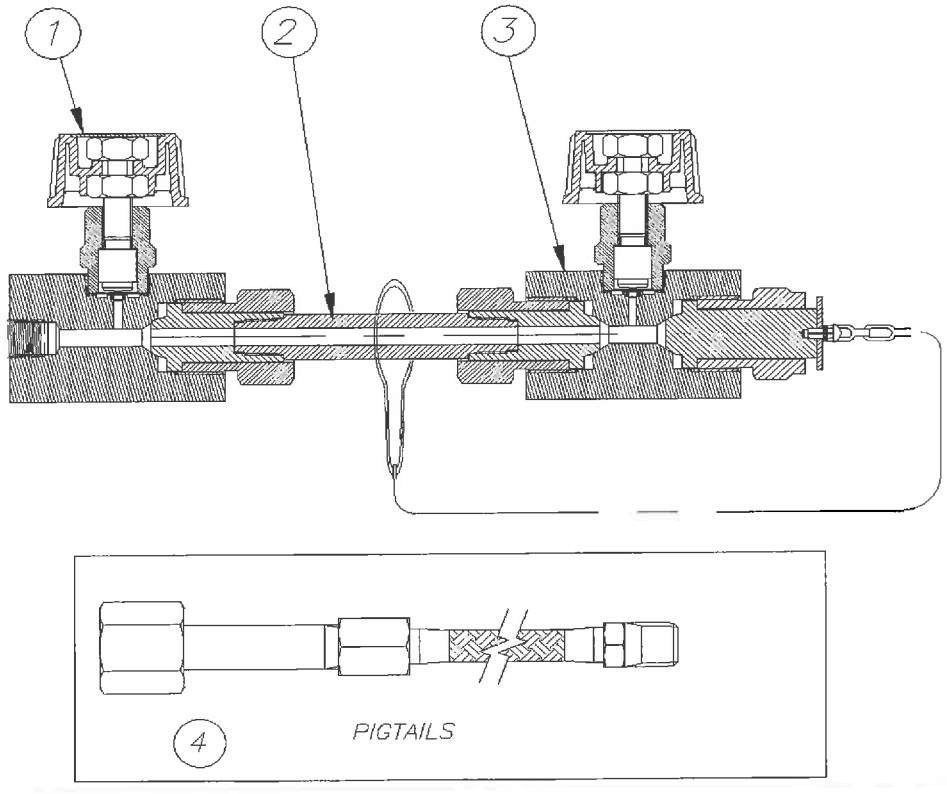
Package 8 - Type H
52B, 52C, 52S

Scope: 52B, 52C and 52S Manifold Compressed Gas Systems (pigtails on some models shall require a separate valid CRN - Items 4 from sketch below is excluded from this listing)

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	OH5216.5R1
2	6" brass - See 8292007 burst test attached
2	6" stainless - See 8294007 burst test attached
2	12" brass - See 8292008 burst test attached
2	12" stainless - See 8294008 burst test attached
3	OH5216.5R1
4	Excluded from this listing

Sketch:



Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

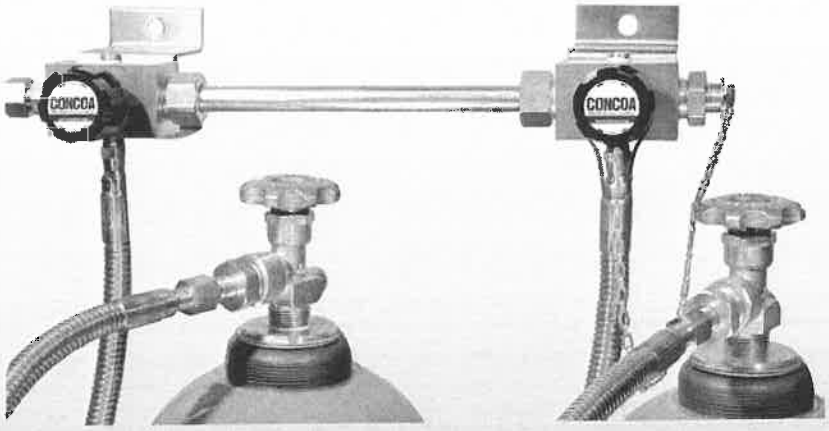
CONCOA
PRECISION GAS CONTROLS

500 Series Distribution Systems

Maniflex™

The 52B, 52C and 52S Series Maniflex are modular gas distribution systems that may be connected to regulators, dual regulator switchovers, IntelliSwitch and AutoSwitch systems. A modular gas distribution system allows the user to size the inlet capacity of a system so that cylinder changes will not be as frequent. The Maniflex system provides the user with the capability of purchasing an unlimited number of manifold stations connected to a single header. The Maniflex headers themselves may be purchased as a complete system (un-assembled) or as individual components.

52



52B 1232- shown

Ask About Our
EXTENDED WARRANTY
On This CONCOA Product

Features

Modular Design
Flexible field installation

Integral Diaphragm Valves
Leak-tight integrity
Independent shut-off capability

Expandable System
Future growth capability

Brass, Chrome-Plated Brass or Stainless Steel
No possibility of gas contamination

Metal to Metal Field-Assembled Joints
Easy leak-tight field assembly
Ease of transportation

Silver-Brazed or TIG Welded Connectors
Contamination-free installation

Materials

Diaphragm Valve
Body: Brass or stainless steel barstock
Seat: PCTFE
Stems: 303/304 stainless steel
Diaphragms: Elgiloy®

Flexible Hoses
316L stainless steel
Monel® inner core for oxygen service
PTFE inner core for 6000 PSIG

Specifications

Maximum Inlet Pressure
3000 PSIG (210 BAR)

Temperature Range
-40°F to 140°F

Header
0.625 OD x 0.188 wall (Brass)
0.625 OD x 0.095 wall (Stainless)

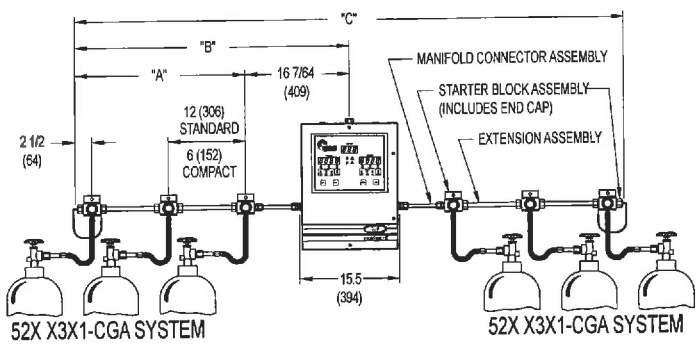
CRN OH 5216.5C

500 Series Distribution Systems

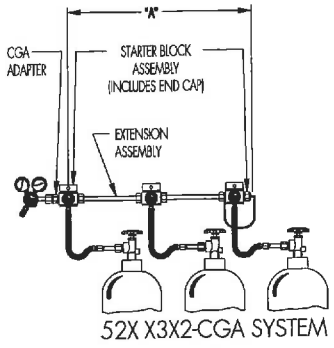
CONCOA PRECISION GAS CONTROLS

Dimensions *("A", "B", and "C" refer to the lengths specified on the diagram below.)*

Cylinders per Side	1	2	3	4	5	6	7	8	9	10
"A" standard (single row)	2.5"	14.5"	26.5"	38.5"	50.5"	62.5"	74.5"	86.5"	98.5"	110.5"
"B" standard (single row)	18.6"	29.6"	42.6"	54.6"	66.6"	78.6"	90.6"	102.6"	114.6"	126.6"
"C" standard (single row)	37.3"	59.3"	85.3"	109.3"	133.3"	157.3"	181.3"	205.3"	229.3"	253.3"
Weight standard (brass single row)	3.45 lbs	7.07 lbs	10.69 lbs	14.31 lbs	17.93 lbs	21.55 lbs	25.17 lbs	28.79 lbs	32.41 lbs	36.03 lbs
Weight standard (ss single row)	3.33 lbs	6.45 lbs	9.57 lbs	12.69 lbs	15.81 lbs	18.93 lbs	22.05 lbs	25.17 lbs	28.29 lbs	31.41 lbs
"A" compact (single row)	2.5"	8.5"	14.5"	20.5"	26.5"	32.5"	38.5"	44.5"	50.5"	56.5"
"B" compact (single row)	18.6"	24.6"	29.6"	36.6"	42.6"	48.6"	54.6"	60.6"	66.6"	72.6"
"C" compact (single row)	37.3"	49.3"	59.3"	73.3"	85.3"	97.3"	109.3"	121.3"	133.3"	145.3"
Weight compact (brass single row)	3.45 lbs	6.62 lbs	9.79 lbs	12.96 lbs	16.13 lbs	19.3 lbs	22.47 lbs	25.64 lbs	28.81 lbs	31.98 lbs
Weight compact (ss single row)	3.33 lbs	6.27 lbs	9.21 lbs	12.15 lbs	15.09 lbs	18.03 lbs	20.97 lbs	23.91 lbs	26.85 lbs	29.79 lbs



Switchover System



Regulator System

Ordering Information

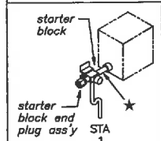
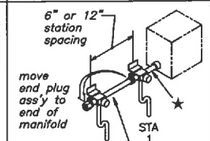
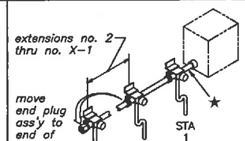
52X	A	B	C	D	-CON
Series	Orientation	Stations	Hose Style	Outlet Connection	Hose Connection
52B Brass	1: Standard single row (right or left) (one cylinder/station)	0: 10 Stations	0: None	1: 1/4" FPT connection	CGA DIN 477 BS 341 and others available
52C Chrome-plated brass	2: Standard double row (right or left) (two cylinders/station)	1: 1 Station	2: 24" flexible 316 stainless steel with check valve	2: Cylinder connection adapter	
52S Stainless steel	3: Standard single duplex (right and left) (one cylinder/station)	2: 2 Stations	3: 36" flexible 316 stainless steel with check valve		
	4: Compact single row (right or left) (One cylinder/station)	3: 3 Stations	6: 72" flexible 316 stainless steel with check valve		
	5: Compact double row (right or left) (two cylinders/station)	4: 4 Stations			
	6: Compact single duplex (right and left) (one cylinder/station)	5: 5 Stations			
		6: 6 Stations			
		7: 7 Stations			
		8: 8 Stations			
		9: 9 Stations			
		A: 11 stations			
		B: 12 stations			
		C: 13 stations			
		D: 14 stations			
		E: 15 stations			

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
52B	Manifold	5292001	Starter block	3000 psig	3000 psig	See separate listing in this report				
52B	Manifold	5292003	extension, 6 inch	3000 psig	3000 psig	See separate listing in this report				
52B	Manifold	5292103	extension, 12 inch	3000 psig	3000 psig	See separate listing in this report				
52S	Manifold	5294001	Starter block	3000 psig	3000 psig	See separate listing in this report				
52S	Manifold	5294003	extension, 6 inch	3000 psig	3000 psig	See separate listing in this report				
52S	Manifold	5294103	extension, 12 inch	3000 psig	3000 psig	See separate listing in this report				
52C	Manifold	5299001	Starter block	3000 psig	3000 psig	See separate listing in this report				
52C	Manifold	5299003	extension, 6 inch	3000 psig	3000 psig	See separate listing in this report				
52C	Manifold	5299103	extension, 12 inch	3000 psig	3000 psig	See separate listing in this report				
8292001	starter block	8292000	valve block	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
8294001	starter block	8294000	valve block	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
8299001	starter block	8299000	valve block	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
8292003	extension, 6 inch	8292002	extension	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
8292103	extension, 12 inch	8292002	extension	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
8294003	extension, 6 inch	8294002	extension	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
8294103	extension, 12 inch	8294002	extension	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
8292003	extension, 6 inch	8292007	extension	3000 psig	3000 psig				.625 OD x .250 ID	Brass, UNS C33000 per ASTM B-135
8292103	extension, 12inch	8292008	extension	3000 psig	3000 psig				.625 OD x .250 ID	Brass, UNS C33000 per ASTM B-135
8294003	extension, 6 inch	8294007	extension	3000 psig	3000 psig				.675 OD x .433 ID	Stainless Steel, UNS S31603 (316L)
8294103	extension, 12inch	8294008	extension	3000 psig	3000 psig				.625 OD x .095 wall	Stainless Steel, UNS S31603 (316L)

REVISIONS						PT NO
NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED	52B 1000
0	01-0852	ISSUED	RNC/AEW	12/21/01		
1	02-0847	LIMITED BRAND CODE TO CONCOA (-01), UPDATED NOMENCLATURE	AEW	12/23/02	A. Whitaker 12/12/2002	
2	03-832	ADDED 4th DIGIT OPTIONS "A","B","C","D", AND "E"	AEW	10/3/2003	J. Friedrichs 10/2/2003	
3	04-435	CLARIFIED QTY REQUIRED FOR CGA ADAPTER	AEW	7/16/2004	R. Cooper 8/26/2004	
4	04-575	CHANGED REQUIREMENTS FOR 6th DIGIT="0", CHANGED NOMENCLATURE	AEW	8/25/2004	R. Cooper 8/26/2004	
5	10-030	ADDED PRG PARTS AND INSTRUCTIONS	AEW	3/12/2010	A. Whitaker 2/5/2010	

52B FIRST 3 DIGITS SERIES	X 4TH DIGIT CONFIGURATION	X 5TH DIGIT NUMBER OF STATIONS	X 6TH DIGIT PIGTAIL STYLE	X 7TH DIGIT OUTLET CONNECTION	-01 ⚠ BRAND CODE NAMEPLATE AND LABELING INFORMATION	-CGA CGA INLET CONNECTION
	1 SINGLE ROW – 12" (RIGHT OR LEFT SIDE) STARTER BLOCK KIT QTY 1 829 2001 ⚠5 EXTENSION KIT SEE 5th DIGIT FOR QTY 829 2103 ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "12IN" (ROW SPACING)	0 9 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 10 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 2 MAIN CARTON QTY 2 MAIN CARTON LABEL SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "10ST" (NO. OF STATIONS)	0 NO PIGTAIL ASSEMBLY ITEM MASTER DESCRIPTION (SEE NOTE 2): ⚠ "NOPGTL"	1 1/4 NPT F CONNECTION	BRAND CODE NAMEPLATE AND LABELING INFORMATION SEE DRAWING 850 0000-01 FOR NAMEPLATES AND LABELS NOT SPECIFICED ON THIS DRAWING.	000 NO INLET ITEM MASTER DESCRIPTION (SEE NOTE 2): ⚠ "_NO_IN"
	2 DOUBLE ROW – 12" (RIGHT OR LEFT SIDE) SEE DRAWING 52B 2000	1 0 EXTENSION KITS 1 PIGTAIL (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 0 MAIN CARTON QTY 1 MAIN CARTON LABEL – SHIP ALL PARTS IN (1) BOX – SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_1ST" (NO. OF STATIONS)	2 24" STAINLESS STEEL PIGTAIL ASSEMBLY PART 529 0071 ☐ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM ITEM MASTER DESCRIPTION (SEE NOTE 2): ⚠ "24PGTL"	2 CGA ADAPTER QTY 1 PART 529 0004 ☐ ⚠5 CGA CODE OF ADAPTER IS SAME AS CGA CODE OF MANIFOLD SYSTEM	XXX REFER TO SPECIFIED PIGTAIL AND ADAPTER DRAWING FOR LIST OF AVAILABLE INLET CONNECTIONS
	3 DUPLEX (SINGLE) – 12" (RIGHT AND LEFT SIDE) SEE DRAWING 52B 3000	2 1 EXTENSION KIT (SEE 4TH DIGIT FOR PART NO.) 2 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 1 MAIN CARTON QTY 1 MAIN CARTON LABEL SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_2ST" (NO. OF STATIONS)	3 36" STAINLESS STEEL PIGTAIL ASSEMBLY PART 529 0031 ☐ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM ITEM MASTER DESCRIPTION (SEE NOTE 2): ⚠ "36PGTL"		
	4 SINGLE ROW – 6" (RIGHT OR LEFT SIDE) STARTER BLOCK KIT QTY 1 829 2001 ⚠5 EXTENSION KIT SEE 5th DIGIT FOR QTY 829 2003 ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_6IN" (ROW SPACING)	3 2 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 3 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 1 MAIN CARTON QTY 1 MAIN CARTON LABEL SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_3ST" (NO. OF STATIONS)	6 72" STAINLESS STEEL PIGTAIL ASSEMBLY PART 529 0055 ☐ CGA CODE OF PIGTAIL IS SAME AS CGA CODE OF MANIFOLD SYSTEM ITEM MASTER DESCRIPTION (SEE NOTE 2): ⚠ "72PGTL"		
	5 DOUBLE ROW – 6" (RIGHT OR LEFT SIDE) SEE DRAWING 52B 2000	4 3 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 4 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 1 MAIN CARTON QTY 1 MAIN CARTON LABEL SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_4ST" (NO. OF STATIONS)				
	6 DUPLEX (SINGLE) – 6" (RIGHT OR LEFT SIDE) SEE DRAWING 52B 3000	5 4 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 5 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 1 MAIN CARTON QTY 1 MAIN CARTON LABEL SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_5ST" (NO. OF STATIONS)				
		6 5 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 6 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 1 MAIN CARTON QTY 1 MAIN CARTON LABEL SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_6ST" (NO. OF STATIONS)				
		7 6 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 7 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 1 MAIN CARTON QTY 1 MAIN CARTON LABEL SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_7ST" (NO. OF STATIONS)				
		8 7 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 8 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 1 MAIN CARTON QTY 1 MAIN CARTON LABEL SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_8ST" (NO. OF STATIONS)				
		9 8 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 9 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 2 MAIN CARTON QTY 2 MAIN CARTON LABEL SEE PACKAGING NOTES ⚠ ITEM MASTER DESCRIPTION (SEE NOTE 2): "_9ST" (NO. OF STATIONS)				
⚠2		A 10 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 11 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 2 MAIN CARTON QTY 2 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "11ST" (NO. OF STATIONS)				
⚠2		B 11 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 12 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 2 MAIN CARTON QTY 2 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "12ST" (NO. OF STATIONS)				
⚠2		C 12 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 13 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 2 MAIN CARTON QTY 2 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "13ST" (NO. OF STATIONS)				
⚠2		D 13 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 14 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 2 MAIN CARTON QTY 2 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "14ST" (NO. OF STATIONS)				
⚠2		E 14 EXTENSION KITS (SEE 4TH DIGIT FOR PART NO.) 15 PIGTAILS (SEE 6TH DIGIT FOR PART NO.) ⚠5 QTY 2 MAIN CARTON QTY 2 MAIN CARTON LABEL SEE PACKAGING NOTES ITEM MASTER DESCRIPTION (SEE NOTE 2): "15ST" (NO. OF STATIONS)				

⚠ TYPICAL SINGLE ROW MANIFOLD ASS'Y – LEFT OR RIGHT SIDE
(LEFT SIDE ASS'Y SHOWN)
ITEM MASTER DESCRIPTION (SEE NOTE 2): "SR"

1 STATION	2 STATIONS	X STATIONS
		

⚠4 ★ MANIFOLD CONNECTOR IS NOT INCLUDED. IT MUST BE SPECIFIED FOR SYSTEMS USING THIS MANIFOLD. THE 52B SERIES STARTER BLOCK HAS A 1/4" NPTF PORT.

NOTES

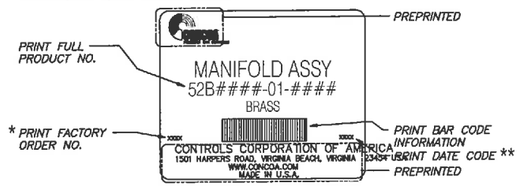
⚠5 ⚠4 1. WITH 6th DIGIT "0" AND 7th DIGIT "1", INLET CODE MUST BE "000". WITH 6th DIGIT "0" AND 7th DIGIT "2", INLET CODE MUST NOT BE "000".

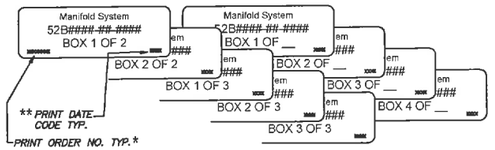
⚠1 2. FOR INFOFLO ITEM MASTER DESCRIPTION, USE:

⚠4 1st LINE: MFLDASSY,_BRS__XXST_
2nd LINE: XXIN_SR_XXPGTLXXXXXX

- FOR "XXST" IN 1st LINE, SEE 5th DIGIT COLUMN OF MATRIX (NO. OF STATIONS PER SIDE)
- FOR "XXIN" IN 2nd LINE, SEE 4th DIGIT COLUMN OF MATRIX (STATION SPACING)
- FOR "XXPGTL" IN 2nd LINE, SEE 6th DIGIT COLUMN OF MATRIX (PIGTAIL LENGTH)
- FOR "XXXXXX" IN 2nd LINE, USE CGA CODE FOR CYLINDER CONNECTIONS (i.e., "CGA540", "DIN06_", etc.) –OR– USE DESCRIPTION FROM CGA COLUMN OF MATRIX

⚠5 BOX LABEL NOTES:
PRINT BOX LABEL (ITEM 7) AND BOX X OF Y LABELS (ITEM 8) AS SHOWN BELOW:





* FACTORY ORDER NO. OR OTHER REFERENCE NO. (i.e., RMA, REWORK, etc.).

** DATE CODE (DATE THE LABEL WAS PRINTED) IN THE FORM OF YYWW (YY IS THE 2 DIGIT YEAR, WW IS THE WEEK OF THE YEAR).

⚠5 PACKAGING NOTES:
1. FOR MODELS WITH 5th DIGIT = "1", SELECT APPROPRIATELY SIZED BOX FROM TABLE "BOX OPTIONS FOR PERIPHERALS" TO HOLD ALL SYSTEM PARTS.
2. FOR MODELS WITH 5th DIGIT NOT = "1", USE MAIN CARTON QTY SPECIFIED IN 5th DIGIT.
3. ENCLOSE A MAXIMUM OF (8) STARTER BLOCK AND/OR EXTENSION KITS IN MAIN CARTON(s), AND INCLUDE THE PIGTAILS IF THEY WILL FIT.
4. IF THE PIGTAILS WON'T FIT IN MAIN CARTON(s), USE ADDITIONAL APPROPRIATELY SIZED CARTON SELECTED FROM TABLE "BOX OPTIONS FOR PERIPHERALS".
5. FOAM PACK ALL CARTONS, AND SEAL THEM.
6. APPLY MAIN CARTON LABEL(s) TO MAIN CARTON(s), AND USE THE BOX X OF Y LABELS AS NECESSARY. FOR MODELS REQUIRING MORE THAN (3) CARTONS, USE THE BOX # OF _ LABELS, AND FILL IN THE BLANKS.
7. DISCARD UNUSED BOX X OF Y LABELS.

⚠5 BOX OPTIONS FOR PERIPHERALS

SELECT APPROPRIATE BOX FROM THIS TABLE FOR SHIPPING OPTIONAL PERIPHERALS THAT COME WITH THE SYSTEM

BOX PART NO.	SIZE	NOTES
9904 0038	3-1/4" x 4" x 22"	Use for Extra-Extra Small Qtys
9903 9188	8-9/16" x 10-1/4" x 13-11/16"	Use for Extra Small Qtys
9903 9232	10" x 13-3/8" x 15-3/4"	Use for Small Qtys
9904 7019	9" x 10-3/4" X 18"	Use for Medium Qtys
9904 8052	11-5/8" x 16-3/4" x 17-7/16"	Use for Large Qtys
9904 8045	16" x 20" x 22"	Use for Extra Large Qtys

ITEM	PART NO / SIZE	QTY	MATERIAL / DESCRIPTION
⚠3	SEE TABLE "BOX OPTIONS FOR PERIPHERALS"		
⚠5 8	9901 6312	9	BOX X OF Y LABEL
⚠5 7	9901 6289	SEE MATRIX	MAIN CARTON LABEL
⚠5 6	9904 0106	SEE MATRIX	MAIN CARTON
⚠1 5	SEE TABLE	SEE MATRIX	CGA ADAPTER (7th DIGIT OPTION 2)
4	SEE TABLE	SEE MATRIX	PIGTAILS
3	SEE TABLE	SEE MATRIX	EXTENSION KIT, 6" VALVE SPACING
2	SEE TABLE	SEE MATRIX	EXTENSION KIT, 12" VALVE SPACING
1	SEE TABLE	1	STARTER BLOCK KIT

MATL: NONE	FINISH:	TOLERANCE UNLESS OTHERWISE SPEC'D: FRACTIONS ±1/64, DECIMALS .X ±.005, .XX ±.010, ANGLES ±2°, FILLET RADII R 1/64, BREAK EDGES .002-.010	DRAWN BY: A. Whitaker 12/21/2001
⚠7	1/31/2003		ENGINEERING: R. Cooper 12/20/2001
CAD FILENAME: 52B1000.dwg			MANUFACTURING: M. Wilson 12/20/2001
		CAGE NUMBER: 0A389	QUALITY ASSURANCE: E. Filomarino 12/21/2001

CONTROLS CORPORATION OF AMERICA
PRODUCT ENGINEERING DEPARTMENT
VIRGINIA BEACH, VA 23454

TITLE: MFLDASSY,_BRS__XXST_ XXIN_SR_XXPGTLXXXXXX (FOR Xs IN TITLE, SEE NOTE 2) ⚠2 ⚠1

PART NO. 52B 1000

REVISION REFERENCE DOCUMENT # PRF 494

SIZE D

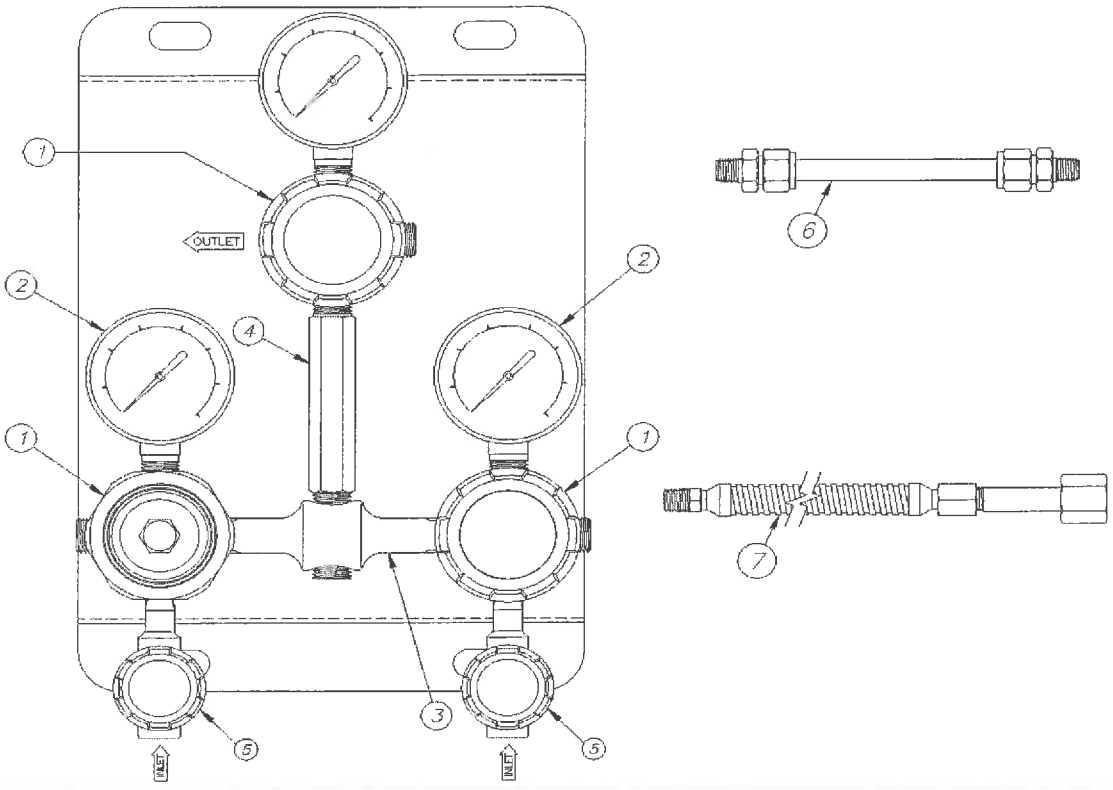
CONCOA CRN Testing Summary Sheet

Scope: 526/527/620 Series Compressed Gas Systems (manifold connectors and pigtails on some models shall require a separate valid CRN - Items 6 and 7 from sketch below are excluded from this listing)

Comments: For items with existing CRN numbers, see attached sheet for pressure ratings. Total internal volume is well under 1.5 cu. ft.

Item	CRN / Test Data / Exclusions
1	OH5216.5R1
2	OF2026.2 or OF8241.5
3	See 8307641 and 8307643 burst tests attached
4	See 8308014 and 8308015 burst tests attached
5	OH5216.5R1
6	Excluded from this listing
7	Excluded from this listing

Sketch:



Note: Test results reflect testing of the highest rated inlet and outet pressures of the entire series - testing the components with the thinnest wall thickness and weakest materials (worst case items in the design). All models in scope have same geometry, same materials of construction, same or lower pressure ratings, and the same temperature ratings as the tested items.

CONCOA
PRECISION GAS CONTROLS

500 Series Distribution Systems

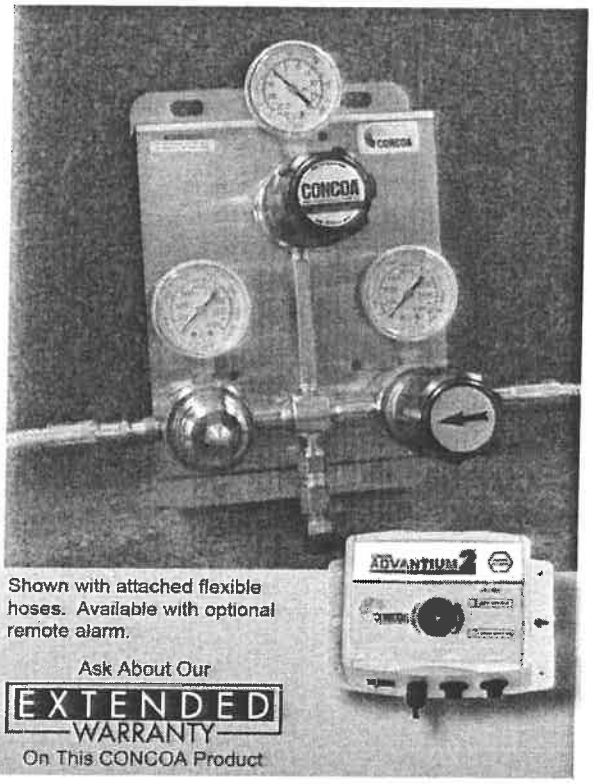
526

Switchover

The 526 Series Switchover is an automatic switchover system designed to supply a continuous supply of high purity, non-corrosive gas. The system comes with either flexible hoses for use with two cylinders or manifold connectors for use with the Maniflex Modular Manifold System. Due to pressure differential considerations, an integral line regulator is available to maintain constant downstream pressure.

Typical Applications

- Ultra high purity gases
- GC carrier and support gases
- AA grade acetylene
- Cell culture incubator CO_2 and N_2
- Pure and mixed process gases



Shown with attached flexible hoses. Available with optional remote alarm.

Ask About Our
EXTENDED WARRANTY
On This CONCOA Product

Features

400 Series Brass Barstock Regulators
Capsule® seat

Metal-to-Metal Diaphragm Seal
No possibility of gas contamination

User-Friendly
One knob switches cylinder priority

Check Valves in Hose Inlet Glands
Prevents contamination and back flow

Compatible with Maniflex Manifolds
Multiple cylinders per side

Optional Line Regulator
Stable line pressure during change over

Optional Remote Alarm
Easy integration with Advantium system

Materials

Bodies
Brass barstock

Diaphragms
316L stainless steel

Seats
PTFE
PCTFE with 4500 PSIG inlet

Filters
10 micron sintered bronze

Internal Seals
PTFE

Specifications

Maximum Inlet Pressure
3000 PSIG (210 BAR)
4500 PSIG (310 BAR) optional

Temperature Range
-40°F to 140°F (-40°C to 60°C)

Gauges
2" diameter brass

Outlet Connection
1/4" MPT (without line regulator)
1/4" FPT (with line regulator)

Helium Leak Integrity
1×10^{-8} scc/sec

Cv
0.1

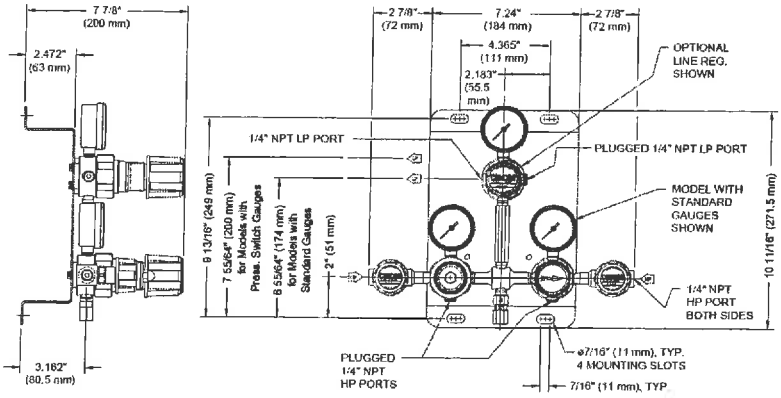
Weight
8.25 lbs. (3.71 kg)

CRN OH 5216.5C

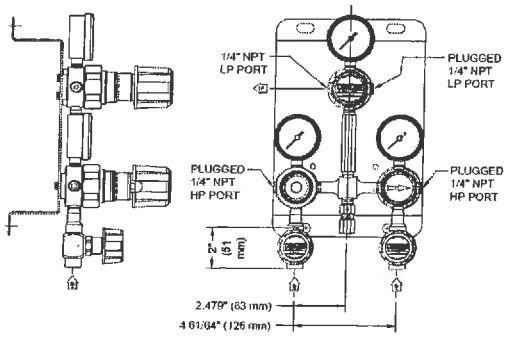
500 Series Distribution Systems

Installation Information

Diaphragm Valves on Side Ports



Diaphragm Valves on Bottom Ports



Ordering Information

526	A	B	C	D	-CON
Series 526	Switching Pressure (Priority R/L)	Inlet Connection	Line Regulator	Assembly	Hose
	1: 125/105 PSIG*	0: 1/4" FPT ports	0: None	1: 0-4000 PSI/kPa gauges* no alarm capability	Please specify inlet connection (if applicable)
	2: 70/50 PSIG*	1: Flexible stainless steel hoses (36")	1: 0-15 PSIG	2: 0-4000 BAR/PSIG gauges* no alarm capability	
	3: 100/75 PSIG	2: Manifold connectors*	2: 0-50 PSIG	3: 0-4000 BAR/PSIG* with pressure switches† and 110V remote alarm	
	4: 200/170 PSIG	3: Flexible stainless steel hoses (24")	3: 0-100 PSIG	4: 0-4000 BAR/PSIG* with pressure switches† and 220V remote alarm	CGA DIN 477 BS 341 and others available
	5: 500/470 PSIG	4: Diaphragm valves with 1/4" FPT port	4: 0-250 PSIG	5: 0-600 BAR/PSIG gauges no alarm capability	
	7: 150/130 PSIG	5: Diaphragm valves with hoses (36")	5: 0-400 PSIG	6: 0-600 BAR/PSIG with pressure switches† and 110V remote alarm	
	8: 300/270 PSIG	6: Diaphragm valves with manifold connectors*	7: 0-150 PSIG	7: 0-600 BAR/PSIG with pressure switches† and 220V remote alarm	
	*Not available with 4500 PSIG inlet Note: switching pressure must be higher than line regulator pressure selected in column C.	7: Diaphragm valves with hoses (24")	A: 0-15 PSIG redline for acetylene	8: 0-4000 BAR/PSIG* with pressure switches† and without remote alarm	
		8: Flexible stainless steel hoses (36") (4500 PSIG maximum inlet pressure)		9: 0-600 BAR/PSIG with pressure switch and without remote alarm	
		9: 1/4" FPT ports (4500 PSIG maximum inlet pressure)		*0-6000 PSI gauges with 4500 PSIG maximum inlet option †Intrinsic safety barriers are required for flammable gas service or for use in hazardous environments.	
		A: Flexible stainless steel hoses (36") with flashback arrestor for acetylene			
		B: Flexible stainless steel hoses (36") with flashback arrestor for acetylene and with diaphragm valve			
		* See pages 36-37 for manifold ordering information			

CONCOA
PRECISION GAS CONTROLS

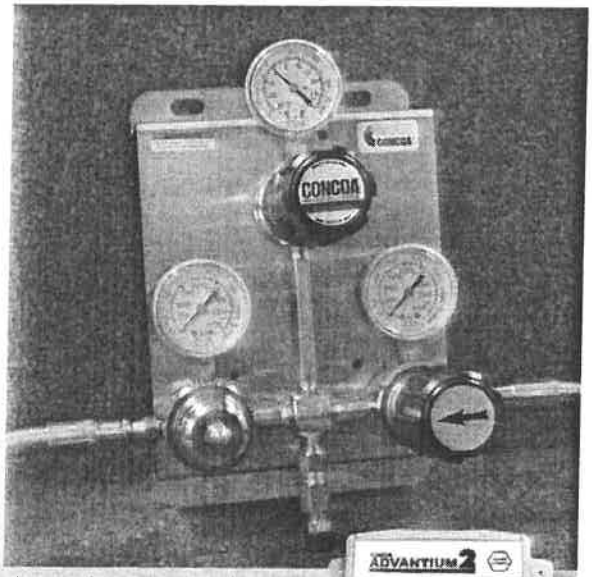
500 Series Distribution Systems

527 Switchover

The 527 Series Switchover is an automatic switchover system designed to supply a continuous supply of high purity or corrosive gas. The system comes with either flexible hoses for use with two cylinders or manifold connectors for use with the Maniflex Modular Manifold System. Due to pressure differential considerations, an integral line regulator is available to maintain constant downstream pressure.

Typical Applications

- Ultra high purity gases
- Research grade pure gases
- GC carrier and support gases
- Pure and mixed process gases
- Corrosive gases
- Ammonia
- Hydrogen Sulfide



Shown with attached flexible hoses. Available with optional remote alarm.

Ask About Our
EXTENDED WARRANTY
On This CONCOA Product

Features

400 Series Stainless Steel Regulators
Capsule® seat

Metal-to-Metal Diaphragm Seal
No possibility of gas contamination

User-Friendly Priority Valve
One knob switches cylinder priority

Check Valves in Inlet Gland
Prevents contamination and back flow

Compatible with Maniflex Manifolds
Multiple cylinders per side

Optional Line Regulator
Stable line pressure during change over

Optional Remote Alarm
Easy integration with Advantium system

Materials

Bodies
316L stainless steel barstock

Diaphragms
316L stainless steel

Seats
PTFE
PCTFE with 4500 PSIG inlet

Filters
Patented 10 micron 316 mesh

Internal Seals
PTFE

Specifications

Maximum Inlet Pressure
3000 PSIG (210 BAR)
4500 PSIG (310 BAR) optional

Temperature Range
-40°F to 140°F (-40°C to 60°C)

Gauges
2" diameter stainless steel

Outlet Connection
1/4" MPT (without line regulator)
1/4" FPT (with line regulator)

Helium Leak Integrity
1 x 10^{-8} scc/sec

Cv
0.1

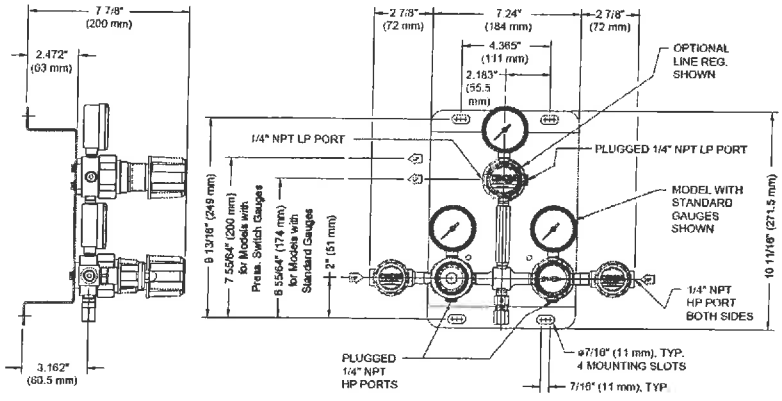
Weight
8.25 lbs. (3.71 kg)

CRN OH 5216.5C

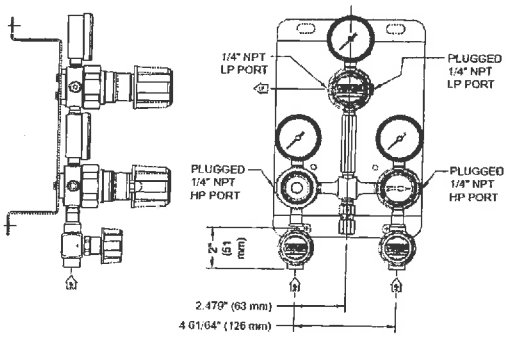
500 Series Distribution Systems

Installation Information

Diaphragm Valves on Side Ports



Diaphragm Valves on Bottom Ports



Ordering Information

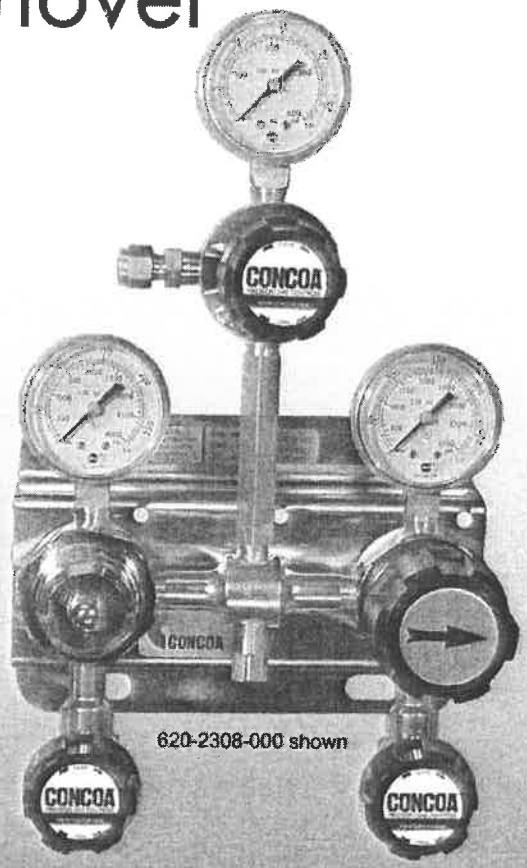
527	A	B	C	D	-CON	OPTIONS
Series 527	Switching Pressure (Priority R/L)	Inlet Connection	Line Regulator	Assembly	Hose	
	1: 125/105 PSIG*	0: 1/4" FPT ports	0: None	1: 0-4000 PSI/kPa gauges* no alarm capability	Please specify inlet connection (if applicable)	S: Stainless steel bonnets
	2: 70/50 PSIG*	1: Flexible stainless steel hoses (36")	1: 0-15 PSIG	2: 0-4000 BAR/PSIG gauges* no alarm capability		
	3: 100/75 PSIG	2: Manifold connectors*	2: 0-50 PSIG	3: 0-4000 BAR/PSIG* with pressure switches† and 110V remote alarm	CGA DIN 477 BS 341 and others available	
	4: 200/170 PSIG	3: Flexible stainless steel hoses (24")	3: 0-100 PSIG	4: 0-4000 BAR/PSIG* with pressure switches†and 220V remote alarm		
	5: 500/470 PSIG	4: Diaphragm valves with 1/4" FPT port	4: 0-250 PSIG	5: 0-600 BAR/PSIG gauges no alarm capability		
	7: 150/130 PSIG	5: Diaphragm valves with hoses (36")	5: 0-400 PSIG	6: 0-600 BAR/PSIG with pressure switches† and 110V remote alarm		
	8: 300/270 PSIG	6: Diaphragm valves with manifold connectors*	7: 0-150 PSIG	7: 0-600 BAR/PSIG with pressure switches† and 220V remote alarm		
	*Not available with 4500 PSIG inlet NOTE: Switching pressure must be higher than line regulator pressure selected in column C	7: Diaphragm valves with hoses (24")		8: 0-4000 BAR/PSIG* with pressure switches† and without remote alarm		
		8: Flexible stainless steel hoses (36") (4500 PSIG maximum inlet pressure)		9: 0-600 BAR/PSIG with pressure switch and without remote alarm		
		9: 1/4" FPT ports (4500 PSIG maximum inlet pressure)		*0-6000 PSI gauges with 4500 PSIG maximum inlet option †Intrinsic safety barriers are required for flammable gas service or for use in hazardous environments.		
		* See page 36 and 37 for manifold ordering information				

CONCOA
PRECISION GAS CONTROLS

Resonator Gas Supply

620 Series Switchover

The 620 Series Laser Gas Switchover is a semi-automatic system designed to provide a continuous supply of laser purity gas. The system comes with either flexible pigtails for use with two cylinders (one per side), or manifolds for two or more cylinders per side. The switchover requires final pressure regulation, which may be ordered integrally to the system, or separately for installation at the point-of-use.



620-2308-000 shown

Advanced Features

- *Laser Quality Brass Regulators*
  Capsule® seat
- *Laser Quality Diaphragm and Seals*
  Limits possibility of contamination
- *User Friendly Priority Valve*
  One knob switches cylinder priority
- *Inlet Gland Check Valves on Pigtails*
  Prevents contamination and backflow

Ask About Our
EXTENDED WARRANTY
On This CONCOA Product

Applications

Laser Pure Resonator Gases
Helium
Nitrogen
Carbon Dioxide

Laser Mixed Resonator Gases
Three gas premix
Four gas premix
Five gas premix

Laser Purging Gases
Zero Air
Nitrogen

Materials

Bodies
Brass barstock

Diaphragms
316L stainless steel

Seats
PTFE

Filters
10-micron sintered bronze

Internal Seals
PTFE

Weight
8.25 lbs. (3.71 kg)

Specifications

Maximum Inlet Pressure
3,000 PSIG (210 BAR)

Temperature Range
-40 to 140°F (-40 to 60°C)

Gauges
2" diameter dual scale brass

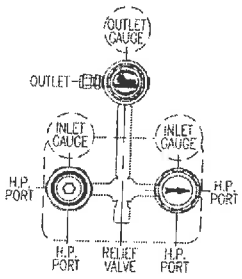
Outlet Connection
¼" stainless steel compression tube

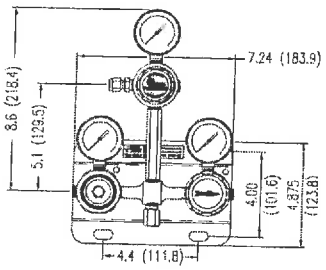
Helium Leak Integrity
1×10^{-8} scc/sec

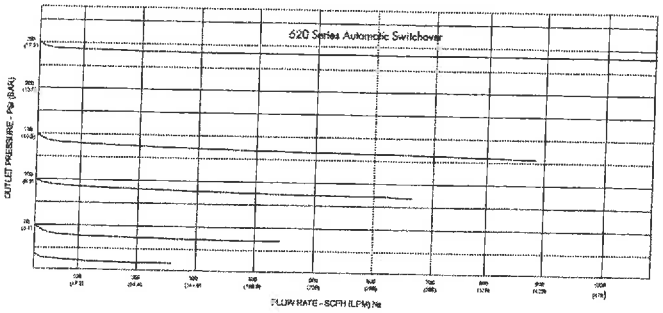
Cv
0.2

Resonator Gas Supply

Flow Performance Curves







Ordering Information

620	A	B	C	D	Inlet	Option
Series 620	Max Delivery Pressure	Inlet Connection	Cylinders Per Side	Assembly/Gauges	Connection	Installed Options
	2: 70 PSIG (5 BAR)	0: ¼" FPT Port	0: 1 Cylinder (¼" FPT Inlet)	2: No Line Regulator (BAR/PSI Gauges) no alarm capability	Please Specify Inlet Connection CGA DIN 477 BS 341 and others available	C: Compact Manifolds
	3: 100 PSIG (7 BAR)	1: Manifold Connector for Maniflex Header*	1: 1 Cylinder (Pigtail Inlets)	3: No Line Regulator (BAR/PSI Gauges) with alarm capability		M: 6mm Tube Fitting Outlet
	4: 200 PSIG (14 BAR)	2: Manifold Connector with Master Valves*	2: 2 Cylinders	7:Line Regulator (BAR/PSI Gauges) with alarm capability		N: Compact Manifolds and 6mm Tube Fitting Outlet
		3: Diaphragm Valve (with ¼" FPT Port)	3: 3 Cylinders	8: Line Regulator (BAR/PSI Gauges) no alarm capability		
		6: Tee Purge & Diaphragm Valve (with ¼" FPT Port)	4: 4 Cylinders			
		7: Tee Purge & Diaphragm Valve (with Manifold Connector	5: 5 Cylinders			
		*Manifold connector required with multiple cylinders per side. (Each manifold station includes a pigtail with CGA inlet for cylinder connection.)	6: 6 Cylinders			

Available Options

Option	Stock No.	Description
Advantium 8	529-5310 (110 Volt) 529-5311 (220 Volt)	Remote alarm provides power for indicator lights up to four 621 Switchovers, audible and visual alarm at remote unit, RS-232 computer interface, and supports optional telephone dialers. Conforms to ANSI/AWS C7.2:1998 recommendations.
Advantium 2	575-0021 (110 Volt) 575-0022 (220 Volt)	Remote alarm provides audible remote alarm for a single 621 Switchover. Conforms to ANSI/AWS C7.2:1998 recommendations.
Manifold Floor Stand	830-7437	Single manifold floor stand provides support for up to two consecutive manifold extensions
Floor Stand	830-7439	AutoSwitch floor stand

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
526 Series	Dual Reg	5333229	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
526 Series	Dual Reg	491 Series	line regulator	550 psig	500 psig	CONCOA CRN OH5216.5R1	4500 psig	500 psig		
526 Series	Dual Reg	496 Series	switch regulator	4500 psig	500 psig	CONCOA CRN OH5216.5R1	4500 psig	500 psig		
526 Series	Dual Reg	498 Series	preset regulator	4500 psig	500 psig	CONCOA CRN OH5216.5R1	4500 psig	500 psig		
526 Series	Dual Reg	5290224	manifold connector	3000 psig	3000 psig	See separate listing in this report				
526 Series	Dual Reg	8307917	pipe nipple	550 psig	550 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2 or SSP CRN OA9866.5	4000 psig	4000 psig		
526 Series	Dual Reg	8410670	inlet gauge	4000 psig	4000 psig	WIKA CRN OF2026.2	4000 psig	4000 psig		
526 Series	Dual Reg	8410672	inlet gauge	600 psig	600 psig	WIKA CRN OF2026.2	600 psig	600 psig		
526 Series	Dual Reg	8410674	inlet gauge	6000 psig	6000 psig	WIKA CRN OF2026.2	6000 psig	6000 psig		
526 Series	Dual Reg	5500169	inlet gauge	600 psig	600 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	600 psig	600 psig		
526 Series	Dual Reg	5500201	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
526 Series	Dual Reg	5500202	outlet gauge	100 psig	100 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	100 psig	100 psig		
526 Series	Dual Reg	5500203	outlet gauge	200 psig	200 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	200 psig	200 psig		
526 Series	Dual Reg	5500206	outlet gauge	400 psig	400 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	400 psig	400 psig		
526 Series	Dual Reg	5500208	inlet gauge	4000 psig	4000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	4000 psig	4000 psig		
526 Series	Dual Reg	5500209	inlet gauge	6000 psig	6000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	6000 psig	6000 psig		
526 Series	Dual Reg	5500300	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
526 Series	Dual Reg	5500302	outlet gauge	100 psig	100 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	100 psig	100 psig		
526 Series	Dual Reg	5500303	outlet gauge	200 psig	200 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	200 psig	200 psig		
526 Series	Dual Reg	5500306	outlet gauge	400 psig	400 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	400 psig	400 psig		
526 Series	Dual Reg	5500308	inlet gauge	4000 psig	4000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	4000 psig	4000 psig		
526 Series	Dual Reg	5500309	inlet gauge	6000 psig	6000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	6000 psig	6000 psig		
526 Series	Dual Reg	8410057	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
526 Series	Dual Reg	8307641	cross	550 psig	550 psig				1/4NPT pipe fitting - .250 hole	Brass, UNS C36000 per ASTM B-16
526 Series	Dual Reg	8308014	pipe nipple	550 psig	550 psig				1/4NPT pipe fitting - .281 hole	Brass, UNS C36000 per ASTM B-16
527 Series	Dual Reg	5333249	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
527 Series	Dual Reg	495 Series	line regulator	550 psig	500 psig	CONCOA CRN OH5216.5R1	4500 psig	500 psig		
527 Series	Dual Reg	497 Series	switch regulator	4500 psig	500 psig	CONCOA CRN OH5216.5R1	4500 psig	500 psig		
527 Series	Dual Reg	499 Series	preset regulator	4500 psig	500 psig	CONCOA CRN OH5216.5R1	4500 psig	500 psig		
527 Series	Dual Reg	5290224	manifold connector	3000 psig	3000 psig	See separate listing in this report				
527 Series	Dual Reg	8307918	pipe nipple	550 psig	550 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2 or SSP CRN OA9866.5	8000 psig	8000 psig		
527 Series	Dual Reg	8410671	inlet gauge	4000 psig	4000 psig	WIKA CRN OF2026.2	4000 psig	4000 psig		

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
527 Series	Dual Reg	8410673	inlet gauge	600 psig	600 psig	WIKA CRN OF2026.2	600 psig	600 psig		
527 Series	Dual Reg	8410675	inlet gauge	6000 psig	6000 psig	WIKA CRN OF2026.2	6000 psig	6000 psig		
527 Series	Dual Reg	5500221	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
527 Series	Dual Reg	5500222	outlet gauge	100 psig	100 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	100 psig	100 psig		
527 Series	Dual Reg	5500223	outlet gauge	200 psig	200 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	200 psig	200 psig		
527 Series	Dual Reg	5500225	outlet gauge	400 psig	400 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	400 psig	400 psig		
527 Series	Dual Reg	5500226	outlet gauge	1000 psig	1000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	1000 psig	1000 psig		
527 Series	Dual Reg	5500228	inlet gauge	4000 psig	4000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	4000 psig	4000 psig		
527 Series	Dual Reg	5500229	inlet gauge	6000 psig	6000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	6000 psig	6000 psig		
527 Series	Dual Reg	5500320	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
527 Series	Dual Reg	5500322	outlet gauge	100 psig	100 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	100 psig	100 psig		
527 Series	Dual Reg	5500323	outlet gauge	200 psig	200 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	200 psig	200 psig		
527 Series	Dual Reg	5500325	outlet gauge	400 psig	400 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	400 psig	400 psig		
527 Series	Dual Reg	5500326	outlet gauge	1000 psig	1000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	1000 psig	1000 psig		
527 Series	Dual Reg	5500327	inlet gauge	600 psig	600 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	600 psig	600 psig		
527 Series	Dual Reg	5500328	inlet gauge	4000 psig	4000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	4000 psig	4000 psig		
527 Series	Dual Reg	5500329	inlet gauge	6000 psig	6000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	6000 psig	6000 psig		
527 Series	Dual Reg	8307643	cross	550 psig	550 psig				1/4NPT pipe fitting - .250 hole	Stainless Steel, UNS S31603 (316L)
527 Series	Dual Reg	8308015	pipe nipple	550 psig	550 psig				1/4NPT pipe fitting - .281 hole	Stainless Steel, UNS S31603 (316L)
620 Series	Dual Reg	5333229	diaphragm valve	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
620 Series	Dual Reg	8292001	starter block	3000 psig	3000 psig	CONCOA CRN OH5216.5R1	3000 psig	3000 psig		
620 Series	Dual Reg	491 Series	line regulator	550 psig	500 psig	CONCOA CRN OH5216.5R1	4500 psig	500 psig		
620 Series	Dual Reg	496 Series	switch regulator	4500 psig	500 psig	CONCOA CRN OH5216.5R1	4500 psig	500 psig		
620 Series	Dual Reg	498 Series	preset regulator	4500 psig	500 psig	CONCOA CRN OH5216.5R1	4500 psig	500 psig		
620 Series	Dual Reg	5500165	outlet fitting	500 psig	500 psig	HyLok CRN OA4093.2	8000 psig	8000 psig		
620 Series	Dual Reg	5290224	manifold connector	3000 psig	3000 psig	See separate listing in this report				
620 Series	Dual Reg	8292003	extension, 6 inch	3000 psig	3000 psig	See separate listing in this report				
620 Series	Dual Reg	8292103	extension, 12inch	3000 psig	3000 psig	See separate listing in this report				
620 Series	Dual Reg	5022XXX	tee purge	3000 psig	3000 psig	See separate listing in this report				
620 Series	Dual Reg	5550220	outlet fitting	500 psig	500 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2 or SSP CRN OA9866.5	8000 psig	8000 psig		
620 Series	Dual Reg	8307917	pipe nipple	550 psig	550 psig	Swagelok CRN OA12577.5C or HyLok CRN OA4093.2 or SSP CRN OA9866.5	4000 psig	4000 psig		

Top Level	Top Level Description	Part Number	Description	Inlet Pressure Rating	Outlet Pressure Rating	Existing CRN?	Existing CRN Inlet Pressure Rating	Existing CRN Outlet Pressure Rating	Dimensions	Material
620 Series	Dual Reg	8410670	inlet gauge	4000 psig	4000 psig	WIKA CRN OF2026.2	4000 psig	4000 psig		
620 Series	Dual Reg	5500201	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
620 Series	Dual Reg	5500202	outlet gauge	100 psig	100 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	100 psig	100 psig		
620 Series	Dual Reg	5500203	outlet gauge	200 psig	200 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	200 psig	200 psig		
620 Series	Dual Reg	5500206	outlet gauge	400 psig	400 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	400 psig	400 psig		
620 Series	Dual Reg	5500208	inlet gauge	4000 psig	4000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	4000 psig	4000 psig		
620 Series	Dual Reg	5500300	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
620 Series	Dual Reg	5500302	outlet gauge	100 psig	100 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	100 psig	100 psig		
620 Series	Dual Reg	5500303	outlet gauge	200 psig	200 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	200 psig	200 psig		
620 Series	Dual Reg	5500306	outlet gauge	400 psig	400 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	400 psig	400 psig		
620 Series	Dual Reg	5500308	inlet gauge	4000 psig	4000 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	4000 psig	4000 psig		
620 Series	Dual Reg	8410057	outlet gauge	30 psig	30 psig	WIKA CRN OF2026.2 or Ametek CRN 0F8241.5	30 psig	30 psig		
620 Series	Dual Reg	8307641	cross	550 psig	550 psig				1/4NPT pipe fitting - .250 hole	Brass, UNS C36000 per ASTM B-16
620 Series	Dual Reg	8308014	pipe nipple	550 psig	550 psig				1/4NPT pipe fitting - .281 hole	Brass, UNS C36000 per ASTM B-16

526 1001 — FIRST 3 DIGITS REGULATOR SERIES

X 4TH DIGIT — NOMINAL DELIVERY PRESSURE
ADJ. & PRESET REGULATORS RELIEF VALVE ASSEMBLY NUMBER

1	0–122.5 PSI NOMINAL (1) PRESET REGULATOR SUBASS'Y 498 1000 (1) ADJ. REGULATOR SUBASS'Y 496 1000 (1) 225 PSI RELIEF VALVE 580 2041 ITEM MASTER DESCRIPTION (SEE NOTE 5): "_123PSI" SEE NOTE 4
2	0–70 PSI NOMINAL (1) PRESET REGULATOR SUBASS'Y 498 2000 (1) ADJ. REGULATOR SUBASS'Y 496 2000 (1) 225 PSI RELIEF VALVE 580 2041 ITEM MASTER DESCRIPTION (SEE NOTE 5): "_70PSI" SEE NOTE 4
3	0–100 PSI NOMINAL (1) PRESET REGULATOR SUBASS'Y 498 3000 (1) ADJ. REGULATOR SUBASS'Y 496 4000 (1) 375 PSI RELIEF VALVE 580 2042 ITEM MASTER DESCRIPTION (SEE NOTE 5): "_100PSI" SEE NOTE 4
4	0–200 PSI NOMINAL (1) PRESET REGULATOR SUBASS'Y 498 4000 (1) ADJ. REGULATOR SUBASS'Y 496 5000 (1) 500 PSI RELIEF VALVE 580 2043 ITEM MASTER DESCRIPTION (SEE NOTE 5): "_200PSI" SEE NOTE 4
5	0–500 PSI NOMINAL (1) PRESET REGULATOR SUBASS'Y 498 5000 (1) ADJ. REGULATOR SUBASS'Y 496 5000 (1) 9225 0008 PIPE PLUG IN PLACE OF RELIEF VALVE ITEM MASTER DESCRIPTION (SEE NOTE 5): "_500PSI" SEE NOTE 4
7	0–150 PSI NOMINAL (1) PRESET REGULATOR SUBASS'Y 498 7000 (1) ADJ. REGULATOR SUBASS'Y 496 4000 (1) 375 PSI RELIEF VALVE 580 2042 ITEM MASTER DESCRIPTION (SEE NOTE 5): "_150PSI" SEE NOTE 4
8	0–300 PSI NOMINAL (1) PRESET REGULATOR SUBASS'Y 498 5000 (1) ADJ. REGULATOR SUBASS'Y 496 5000 (1) 500 PSI RELIEF VALVE 580 2043 ITEM MASTER DESCRIPTION (SEE NOTE 5): "_300PSI" SEE NOTE 4

X 5TH DIGIT — INLET CONNECTION

0	1/4 FEMALE NPT PORT (U/M "00" ONLY) (NO PIGTAILS, DIAPHRAGM VALVES, OR NIPPLES) (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "4NPTF"
1	FLEXIBLE STAINLESS STEEL PIGTAILS 36" (2) PIGTAILS 529 0031–CGA (NO DIAPHRAGM VALVE OR NIPPLES) (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "CGAXXX" – USE CGA FROM PIGTAILS
2	MANIFOLD CONNECTOR FOR MANIFLEX HEADER (2) MANIFOLD CONNECTORS 529 0224 (NO DIAPHRAGM VALVE OR NIPPLES) (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "MFLD"
3	FLEXIBLE STAINLESS STEEL PIGTAILS 24" (2) PIGTAILS 529 0071–CGA (NO DIAPHRAGM VALVE OR NIPPLES) (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "CGAXXX" – USE CGA FROM PIGTAILS
4	1/4 FEMALE NPT PORT WITH DIAPHRAGM VALVES (2) 533 3229 DIAPHRAGM VALVES (NO PIGTAILS (U/M "00" ONLY)) (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "DV"
5	FLEXIBLE PIGTAILS 36" WITH DIAPHRAGM VALVES (2) PIGTAILS 529 0031–CGA (2) 533 3229 DIAPHRAGM VALVES (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "CGAXXX" – USE CGA FROM PIGTAILS
6	MANIFOLD CONNECTOR FOR MANIFLEX HEADER WITH DIAPHRAGM VALVES (2) MANIFOLD CONNECTORS 529 0224 (2) 533 3229 DIAPHRAGM VALVES (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "DVMFLD"
7	FLEXIBLE PIGTAILS 24" WITH DIAPHRAGM VALVES (2) PIGTAILS 529 0071–CGA (2) 533 3229 DIAPHRAGM VALVES (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "CGAXXX" – USE CGA FROM PIGTAILS
8	FLEXIBLE PIGTAILS 36" TEFLON LINED 4500 PSI INLET PRESSURE NOT DEFINED ON THIS DRAWING SEE DRAWING 528 1805
9	1/4 FEMALE NPT PORT 4500 PSI INLET PRESSURE NOT DEFINED ON THIS DRAWING SEE DRAWING 528 1805
A	ACETYLENE PIGTAIL (2) 529 0031–300 or –510 ONLY ONLY VALID WITH 4th DIGIT "2" OR "3" ONLY VALID WITH 7th DIGIT "5" (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "CGAXXX" – USE CGA FROM PIGTAILS
B	ACETYLENE PIGTAILS WITH DIAPHRAGM VALVES (2) 529 0031–300 or –510 ONLY (2) 533 3229 DIAPHRAGM VALVES ONLY VALID WITH 4th DIGIT "2" OR "3" ONLY VALID WITH 7th DIGIT "5" (2) PLASTIC 1/4" PIPE PLUGS 9225 0025 ITEM MASTER DESCRIPTION (SEE NOTE 5): "CGAXXX" – USE CGA FROM PIGTAILS

X 6TH DIGIT — LINE REGULATOR

0	NONE (1) PLASTIC 1/4" PIPE CAP 9225 0028 — QTY 4 MOUNTING SCREW (ITEM 12) NAMEPLATE (ITEM 11, SEE NOTE 3): 830 6638 QTY 2 — QTY 4 MOUNTING WASHER (ITEM 13)
1	0–15 PSI DELIVERY 7TH DIGIT "1": REG: 491 1001 7TH DIGIT "2" or "5": REG: 491 1002 (1) PLASTIC 1/4" PIPE PLUG 9225 0025 — QTY 6 MOUNTING SCREW (ITEM 12) NAMEPLATE (ITEM 11, SEE NOTE 3): 830 6638 QTY 2 — QTY 6 MOUNTING WASHER (ITEM 13)
2	0–50 PSI DELIVERY FOR 4th DIGIT "2", SEE "EXCEPTIONS" NOTE 7TH DIGIT "1": REG: 491 2001 7TH DIGIT "2" or "5": REG: 491 2002 (1) PLASTIC 1/4" PIPE PLUG 9225 0025 — QTY 6 MOUNTING SCREW (ITEM 12) NAMEPLATE (ITEM 11, SEE NOTE 3): 830 6638 QTY 2 — QTY 6 MOUNTING WASHER (ITEM 13)
3	0–100 PSI DELIVERY FOR 4th DIGIT "1","2" OR "3", SEE "EXCEPTIONS" NOTE 7TH DIGIT "1": REG: 491 3001 7TH DIGIT "2" or "5": REG: 491 3002 (1) PLASTIC 1/4" PIPE PLUG 9225 0025 — QTY 6 MOUNTING SCREW (ITEM 12) NAMEPLATE (ITEM 11, SEE NOTE 3): 830 6638 QTY 2 — QTY 6 MOUNTING WASHER (ITEM 13)
4	0–250 PSI DELIVERY FOR 4th DIGIT OTHER THAN "5", SEE "EXCEPTIONS" NOTE 7TH DIGIT "1": REG: 491 4001 7TH DIGIT "2" or "5": REG: 491 4002 (1) PLASTIC 1/4" PIPE PLUG 9225 0025 — QTY 6 MOUNTING SCREW (ITEM 12) NAMEPLATE (ITEM 11, SEE NOTE 3): 830 6638 QTY 2 — QTY 6 MOUNTING WASHER (ITEM 13)
5	0–400 PSI DELIVERY FOR 4th DIGIT OTHER THAN "5", SEE "EXCEPTIONS" NOTE 7TH DIGIT "1": REG: 491 5001 7TH DIGIT "2" or "5": REG: 491 5002 (1) PLASTIC 1/4" PIPE PLUG 9225 0025 — QTY 6 MOUNTING SCREW (ITEM 12) NAMEPLATE (ITEM 11, SEE NOTE 3): 830 6638 QTY 2 — QTY 6 MOUNTING WASHER (ITEM 13)
7	0–150 PSI DELIVERY FOR 4th DIGIT "1","2","3", OR "7", SEE "EXCEPTIONS" NOTE 7TH DIGIT "1": REG: 491 7001 7TH DIGIT "2" or "5": REG: 491 7002 (1) PLASTIC 1/4" PIPE PLUG 9225 0025 — QTY 6 MOUNTING SCREW (ITEM 12) NAMEPLATE (ITEM 11, SEE NOTE 3): 830 6638 QTY 2 — QTY 8 MOUNTING WASHER (ITEM 13)
A	0–15 PSI DELIVERY REDLINE GAUGE FOR ACETYLENE 7th DIGIT "5" ONLY 4th DIGIT "2" OR "3" ONLY REG: 491 6002 (1) PLASTIC 1/4" PIPE PLUG 9225 0025 — QTY 6 MOUNTING SCREW (ITEM 12) NAMEPLATE (ITEM 11, SEE NOTE 3): 830 6638 QTY 2 — QTY 6 MOUNTING WASHER (ITEM 13)

X 7TH DIGIT — ASSY & TESTING
INLET GAUGE

1	STANDARD ASS'Y AND TESTING (2) INLET GAUGE 4000 PSI GAUGE NO. 550 0208 INLET TEST PRESSURE TO BE 2100±100 PSI PRESS. WARNING LABEL 830 7562 ITEM MASTER DESCRIPTION (SEE NOTE 5): "3000"
2	STANDARD ASS'Y AND TESTING (2) INLET GAUGE 0–280 PSI/BAR GAUGE NO. 550 0308 INLET TEST PRESSURE TO BE 2100±100 PSI PRESS. WARNING LABEL 830 7562 ITEM MASTER DESCRIPTION (SEE NOTE 5): "3000"
3	PRESSURE SWITCH MODEL 110V REFER TO DRAWING 528 1003
4	PRESSURE SWITCH MODEL 220 REFER TO DRAWING 528 1003
5	STANDARD ASS'Y AND TESTING (2) INLET GAUGE 0–42 PSI/BAR GAUGE NO. 550 0188 INLET TEST PRESSURE TO BE 300–350 PSI PRESS. WARNING LABEL 830 9381 ONLY AVAILABLE WITH 4th DIGIT OPTIONS 1, 2, 3, 4 & 7 ITEM MASTER DESCRIPTION (SEE NOTE 5): "_350"
7	PRESSURE SWITCH MODEL 220 REFER TO DRAWING 528 1003
8	PRESSURE SWITCH MODEL NO ALARM REFER TO DRAWING 528 1003
9	PRESSURE SWITCH MODEL NO ALARM REFER TO DRAWING 528 1003

–XX 8TH & 9TH DIGIT — BRAND CODE
USE 400 SERIES REGULATOR & DIAPHRAGM VALVE COMPONENTS
SEE DRAWING 850 0000–"XX" FOR APPROPRIATE INFORMATION REGARDING PRIVATE LABELING OF PRODUCT (ADIs, NAMEPLATE, LABELS, KNOBS, KNOB CAPS, ETC.)

–XXX 10TH–12TH DIGIT — INLET CONNECTION

–CGA	REFER TO SPECIFIED MANIFOLD / PIGTAIL DRAWINGS FOR AVAILABLE INLET CONNECTIONS
–001	IF 5TH DIGIT IS: 0, 2, 4 OR 6

X 13TH DIGIT — OPTION CODE

★ *DO NOT USE THE 830 6638–2 NAMEPLATE (WHICH HAS CONCOA'S NAME AND ADDRESS ON IT) ON PROSTAR (–75 BRAND CODE) PRODUCTS. USE NAMEPLATE 830 6638–3 OR –4 INSTEAD.*

REVISIONS — PT NO 526 1001

NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED
40	09–061	CLARIFIED PRIVATE LABEL (COLOR) REQUIREMENTS FOR SHOWER HEC KNOB & CAP	AEW	4/1/2009	A. Whitaker 3/31/2009
41	09–416	ADDED AIR BAG PKG AND BUBBLE WRAP; UPDATED PKG & USE PRINTING INSTRUCTIONS	AEW	8/12/2009	A. Whitaker 8/10/2009
42	09–584	300 PSI MODELS PRESSURE SETTING "A" WAS "230 ±5 PSI"	AEW	11/23/2009	A. Whitaker 11/23/2009
43	10–113	ALLOWED 4th DIGIT = 3 WITH 6th DIGIT = A	AEW	4/6/2010	A. Whitaker 4/6/2010
44	10–149	SHOWED NEW BRACKET, UPDATED PKG FOR NEW BRACKET	AEW	5/10/2010	A. Whitaker 5/6/2010
45	10–212	ADDED PLASTIC PIPE PLUG IN 6th DIGIT "2"	AEW	6/18/2010	A. Whitaker 6/17/2010
46	11–018	CHANGED THE CONCOA LOGO LABEL	AEW	2/9/2011	A. Whitaker 1/25/2011
47	12–113	ADDED ACI # 89064500	AEW	5/15/2012	A. Whitaker 5/14/2012
48	11–230	In 5th digit opts A & B, add "OR 3" to 'if' statement	AEW	8/21/2012	J. Friedrichs 8/17/2012

ORDER OF ASSEMBLY:

1. ASSEMBLE GAUGES (ITEM 5), PIPE PLUGS (ITEM 14), ON TO REGULATORS (ITEM #1 & #2). THE TWO RESULTING REGULATORS ARE TO BE MIRROR IMAGES OF EACH OTHER. NOTE PORT LOCATIONS AS SHOWN IN THE ASS'Y VIEWS.
2. CONNECT THE OUTLETS OF THE REGULATORS USING CROSS (ITEM #8).
3. ATTACH DIAPHRAGM VALVES* (ITEM #7) TO REGULATOR INLETS IF DICTATED BY THE PRODUCT NO.
4. CONNECT 4" NIPPLE (ITEM #9) AND RELIEF VALVE*/PIPE PLUG (ITEM #4) TO CROSS (ITEM #8) EITHER BEFORE OR AFTER THE CROSS IS TIGHTENED ONTO THE REGULATORS.
5. LEAK TEST THE ENTIRE ASS'Y LESS PIGTAILS/MANIFOLD CONNECTORS.
6. MOUNT THE REGULATOR ASSEMBLY ON TO THE REAR MOUNTING BRACKET (ITEM #10) USING WASHERS AND SCREWS (4 SETS OF ITEMS #12 & #13). LOCATE WASHERS BETWEEN SCREWS AND MOUNTING BRACKET.

*FOR SYSTEMS WITH DIAPHRAGM VALVES LOCATED ON BOTTOM PORTS, INSTALL DIAPHRAGM VALVES PRIOR TO INSTALLING RELIEF VALVE.

NOTES:

1. SEAL ALL PIPE THREAD FITTINGS WITH TEFLON TAPE.
2. PIGTAILS/MANIFOLD CONNECTORS (ITEM #6) TO BE SHIPPED WITH ASSEMBLY BUT NOT ATTACHED.
3. NAMEPLATE (ITEM 11) NO. (830 6638) IS A SET OF NAMEPLATES (–1,–2,–3 & –4). PRINT THE NAMEPLATES IN THE SET AS SHOWN IN THE NAMEPLATE AND BOX LABEL NOTES. DISCARD ANY UNUSED NAMEPLATES.
4. PLACE ONE OF THE UNUSED NAMEPLATES FROM ITEM 11 CONTAINING PRODUCT NO. & SERIAL NO. ON THE ORDER PICKING LIST.
5. FOR INFOFLO ITEM MASTER DESCRIPTION, USE:

   1st LINE: ASW,_DASY_BRS_____
   2nd LINE: XXXX/XXXXPSI_XXXXXX

   FOR XXXX IN 2nd LINE, SEE 7th DIGIT COLUMN OF MATRIX
   FOR XXXXPSI IN 2nd LINE, SEE 4th DIGIT COLUMN OF MATRIX
   FOR XXXXXX IN 2nd LINE, SEE 5th DIGIT COLUMN OF MATRIX

6. TORQUE BOTTOM TWO ADJ. REG. (ITEM 2) KNOB NUTS (ITEM 17) TOGETHER TO 150 IN–LBS MINIMUM.
7. TAB ON ADJ. REG. (ITEM 2) KNOB STOP (ITEM 19) SHOULD BE ORIENTED IN SUCH A MANNER THAT THE KNOB CAN ONLY BE TURNED 1/2 TURN (180°). SEE DETAIL A.
8. USE WASHERS (ITEM 18) ON ADJ. REG. (ITEM 2) ONLY WHEN NECESSARY IN ORDER TO GET THE TOP OF THE ADJ. REG. KNOB NUT (ITEM 17) ONTO THE FLAT SECTION OF THE ADJ. REG. ADJ. SCREW.
9. TORQUE THE ADJ. REG. (ITEM 2) TOP KNOB NUT (ITEM 17) TO 75–100 IN–LBS.

TESTING NOTES: (TEST PRIOR TO INSTALLING LINE REGULATOR):

TEST IN ACCORDANCE WITH TEST PROCEDURE #1962 USING THE FOLLOWING PARAMETERS:

ORIFICE SIZE ------ #72 (ø.025)

INLET PRESSURE:
SEE MATRIX, 7th DIGIT

STATIC INCREMENT:

70 PSI MODELS	6 PSI MAX
100 PSI MODELS	7 PSI MAX
122.5 PSI MODELS	10 PSI MAX
150 PSI MODELS	10 PSI MAX
200 PSI MODELS	13 PSI MAX
300 PSI MODELS	15 PSI MAX
500 PSI MODELS	20 PSI MAX

IF INLET TEST PRESSURE IS LESS THAN 400 PSI – ADD 6PSI TO THESE VALUES

EXCEPTIONS:

FOR EXCEPTIONS AS NOTED IN 6th DIGIT COLUMN OF MATRIX, CONFIGURATION IS NOT DESIRED. DUE TO PRESSURE LIMITATIONS FROM THE SWITCHOVER SETTINGS, DESIRED LINE REGULATOR SETTINGS WILL NOT BE ACHIEVED. FOR THE LINE REGULATOR, DELETE THE STATIC INCREMENT CHECK AND MAXIMUM OUTLET PRESSURE CHECK. REGULATOR IS SET AND CHECKED PRIOR TO INSTALLING ON THE SWITCHOVER SYSTEM. WHEN SETTING THE SWITCHOVER PRESSURES, SET THE PRESSURES TO THE UPPER END OF THE TOLERANCES AS INDICATED IN TEST PARAMETER TABLE.

ADJUSTABLE REGULATOR (ITEM #2)

MAX. OUTLET PRESSURE (W/ADJUSTING KNOB TURNED CW TO STOP) ---- SEE "A" IN TEST PARAMETER TABLE

MIN. OUTLET PRESSURE (W/ADJUSTING KNOB TURNED CCW TO STOP) ---- SEE "B" IN TEST PARAMETER TABLE

PRESET REGULATOR (ITEM #1)

OUTLET PRESSURE SETTING ---- SEE "C" IN TEST PARAMETER TABLE

FOR MODELS WITH LINE REGULATORS:

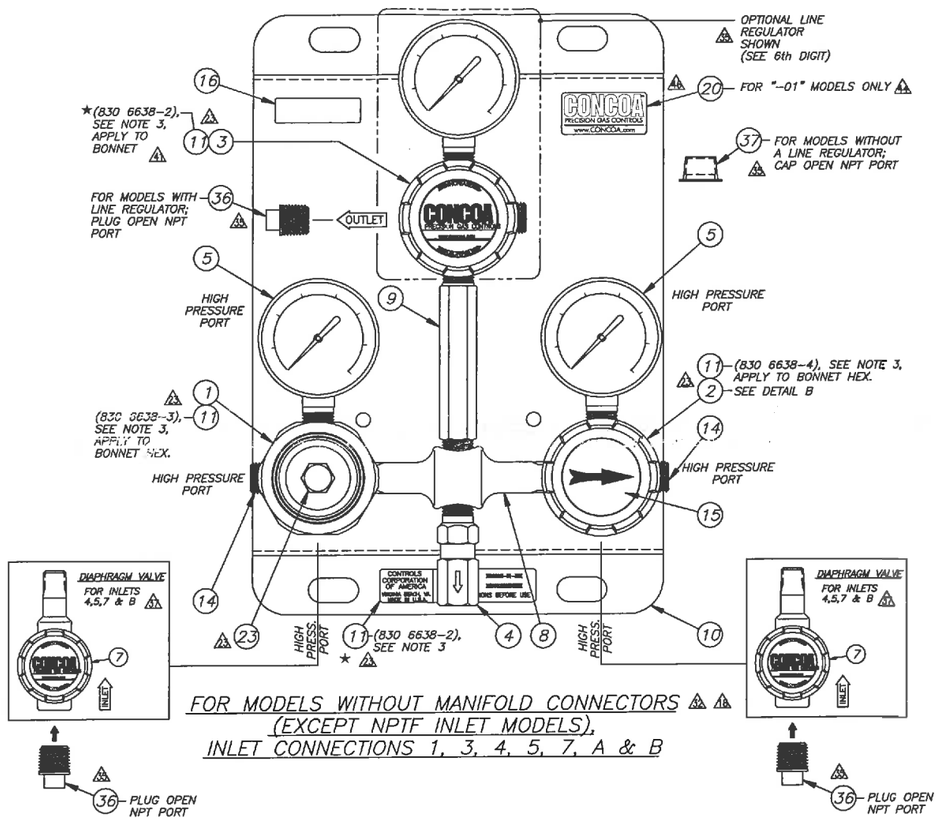
TEST PER TESTING NOTES, THEN ASSEMBLE LINE REGULATOR AND LEAK TEST

TEST PARAMETER TABLE	"A" PRESSURE SETTING ADJ. REG. MAX. OUTLET PRESSURE (FLOWING)	"B" PRESSURE CHECK ADJ. REG. MIN. OUTLET PRESSURE (FLOWING)	"C" PRESSURE SETTING PRESET REG. OUTLET PRESSURE (FLOWING)
526 1XXX 122.5 PSI MODEL	150±5 PSI	105±10 PSI	SET TO WITHIN ±5 PSI OF THE AVERAGE OF THE ACTUAL READINGS RECORDED FOR "A" AND "B" AS PRESCRIBED IN TEST PROCEDURE #1962. (((A+B)/2)±5 PSI)
526 2XXX 70 PSI MODEL	90±5 PSI	45±10 PSI	
526 3XXX 100 PSI MODEL	130±5 PSI	75±10 PSI	
526 4XXX 200 PSI MODEL	240±5 PSI	170±10 PSI	
526 5XXX 500 PSI MODEL	535±10 PSI	465±20 PSI	
526 7XXX 150 PSI MODEL	180±5 PSI	130±10 PSI	
526 8XXX 300 PSI MODEL	335±10 PSI	265±20 PSI	

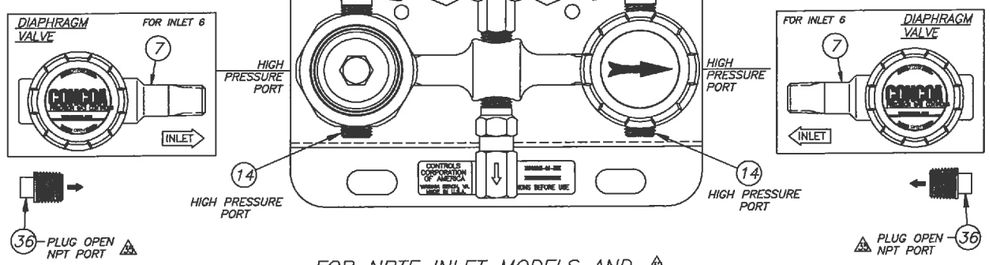
SUPERCEDES DRAWING 520 9001

SCALE 3:4 — THIRD ANGLE PROJECTION
TOLE BLANK NUMBER #7 — RELEASED DATE 1/31/2003
CAD FILENAME: 5261001pg1of2.DWG
TOLERANCE UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIM. & TOL. PER ANSI Y14.5
FRACTIONS ±1/64; XXX DECIMALS ±.005; XX DECIMALS ±.010; ANGLES ±2°; FILLET RADII R 1/64; BREAK EDGES .002–.010
CAGE NUMBER 0A389
DRAWN BY A. Whitaker 2/2/2001
ENGINEERING J. Friedrichs 1/31/2001
MANUFACTURING M. Wilson 2/1/2001
QUALITY ASSURANCE E. Filomarino 2/1/2001
SEE PAGE 2 OF 2
MATERIAL / DESCRIPTION
CONCOA CONTROLS CORPORATION OF AMERICA
PRODUCT ENGINEERING DEPARTMENT
VIRGINIA BEACH, VA. 23454
PART NO. 526 1001 PAGE 1 of 2
TITLE ASW,_DASY_BRS_____ XXXX/XXXXPSI_XXXXXX (FOR Xs IN TITLE – SEE NOTE 5)
ENGINEERING RELEASE NUMBER & DATE ECO 01–0142 D

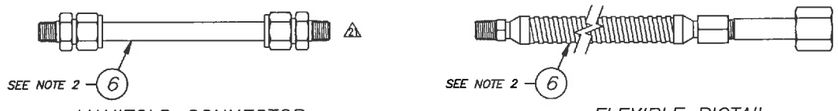
REVISIONS						PT NO
NO	ECN NUMBER	DESCRIPTION	INITIALS	DATE	APPROVED	526 1001
40	09-061	CLARIFIED PRAXAIR LABEL (COLOR) REQUIREMENTS FOR SMOKEY RED KNOB & CAP	AEW	4/1/2009	A. Whitaker 3/30/2009	
41	09-416	ADDED AIR BAG PKG AND BUBBLE WRAP; UPDATED PKG & USE PRINTING INSTRUCTIONS	AEW	8/12/2009	A. Whitaker 8/10/2009	
42	09-584	300 PSI MODELS PRESSURE SETTING "A" WAS "230 ±5 PSI"	AEW	11/30/2009	A. Whitaker 11/23/2009	
43	10-113	ALLOWED 4th DIGIT = 3 WITH 6th DIGIT = A	AEW	4/8/2010	A. Whitaker 4/8/2010	
44	10-149	SMOKED NEW BRACKET, UPDATED PKG FOR NEW BRACKET	AEW	5/10/2010	A. Whitaker 5/6/2010	
45	10-212	ADDED PLASTIC PIPE PLUG IN 4th DIGIT "2"	AEW	6/15/2010	A. Whitaker 6/17/2010	
46	11-018	CHANGED THE CONCOA LOGO LABEL	AEW	2/9/2011	A. Whitaker 1/25/2011	
47	12-113	ADDED ADI # 99064500	AEW	5/16/2012	A. Whitaker 5/14/2012	
48	11-230	In 5th digit opts A & B, added "OR 3" to IF statement	AEW	6/21/2012	J. Friedrichs 6/17/2012	

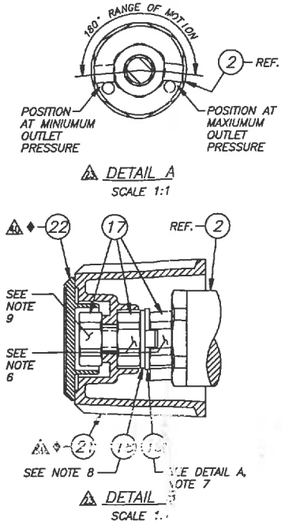


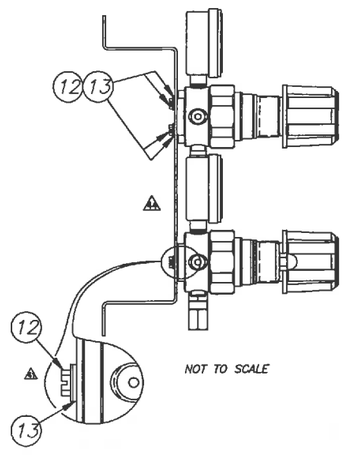
FOR MODELS WITHOUT MANIFOLD CONNECTORS (EXCEPT NPTF INLET MODELS), INLET CONNECTIONS 1, 3, 4, 5, 7, A & B



FOR NPTF INLET MODELS AND MODELS WITH MANIFOLD CONNECTORS, INLET CONNECTIONS 0, 2 & 6

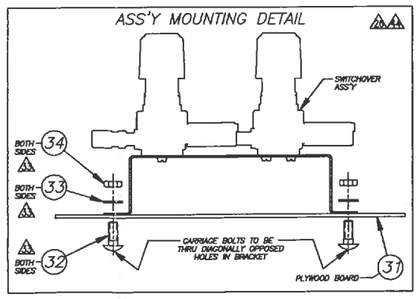






PACKAGING NOTES:

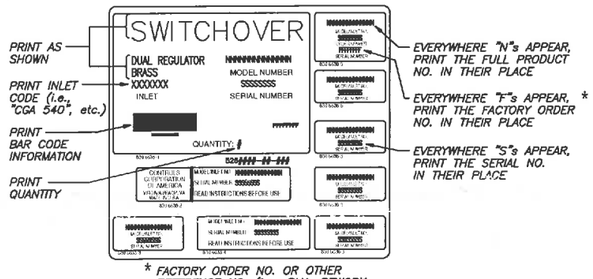
1. SEE ASS'Y MOUNTING DETAIL:
   - SECURE THE SWITCHOVER ASS'Y TO THE PLYWOOD BOARD (ITEM 31) WITH CARRIAGE BOLTS, NUTS, & WASHERS (ITEMs 32,33,34) IN DIAGONALLY OPPOSED HOLES OF THE SWITCHOVER BRACKET.
   - PLACE THE MOUNTED ASS'Y INTO POLY BAG (ITEM 28) AND SEAL THE BAG.
   - APPLY THE MP500 NOTICE LABEL (ITEM 35) TO THE BAG.
2. PLACE THE BAGGED AND MOUNTED ASS'Y INTO CARTON (ITEM 25).
3. PLACE ALL OPTIGNAL EQUIPMENT THAT WILL FIT INTO CARTON BESIDE SWITCHOVER, AND FOAM PACK.
4. IF NECESSARY, SELECT ADDITIONAL CARTON FROM TABLE "BOX OPTIONS FOR PERIPHERALS & SHIPPING" FOR ITEMS THAT WON'T FIT INTO CARTON WITH THE SWITCHOVER. USE BUBBLE WRAP (ITEM 38) AS NECESSARY, AND SEAL THE CARTON.
5. PLACE THE ADIs (ITEMs 29,30) INTO POLY BAG (ITEM 27), AND PUT THE BAGGED ADI INTO THE MAIN CARTON.
6. SEAL THE MAIN CARTON AND APPLY THE MAIN BOX LABEL (830 6638-1).
7. APPLY BOX X OF Y LABELS AS NECESSARY. DISCARD UNUSED BOX X OF Y LABELS.



BOX OPTIONS FOR PERIPHERALS & SHIPPING				
BOX PART NO.	APPROX. SIZE Length (inches)	Width (inches)	Height (inches)	APPROX. VOLUME (cubic inches)
99040101	10	10	8	800
99048054	14	14	5	980
99039188	14	11	9	1386
99040105	23	15	5	1725
99047019	18	10	11	1980
99039232	15.75	13.4	10	2111
99040105	14	14	11	2156
99048052	17.4	15.75	11.6	3381
99047026	23	16	10	3680
99048015	22	20	9	3960
99040134	18	17	13	3978
99048002	24	13	17	5304
99039115	26	16	15	6240
99048045	22	20	16	7040
99048016	23	20	16	7360
99039088	27	19	19	9747

NAMEPLATE & BOX LABEL NOTES:

PRINT NAMEPLATE SET (ITEM 11) & BOX X OF Y LABELS (ITEM 24) AS SHOWN BELOW USING UL-APPROVED PRINTING METHOD (SEE DRAWING 9000 D008)
(SEE BRAND CODE COLUMN OF MATRIX FOR PRIVATE LABEL INSTRUCTIONS):



* FACTORY ORDER NO. OR OTHER REFERENCE NO. (i.e., RMA, REWORK, etc.).

PRINT FULL PRODUCT NO.

526##### ## ### BOX 1 OF 2	526##### ## ### BOX 2 OF 2

DISCARD IF NOT REQUIRED. SEE PACKAGING NOTES.

♦♦ USE ONLY FOR BRAND CODE -01 UNLESS OTHERWISE SPECIFIED ON THE APPLICABLE PRIVATE LABEL DRAWING (i.e., 8500000-84).

♦♦ SEE BRAND CODE COLUMN OF MATRIX FOR PRIVATE LABEL INSTRUCTIONS.

ITEM	PART NO / SIZE	QTY	MATERIAL / DESCRIPTION
	SEE TABLE "BOX OPTIONS FOR PERIPHERALS & SHIPPING"		
38	9904 8053	AS REQ'D	BUBBLE WRAP
37	SEE MATRIX		PORT CAP, 1/4" NPT, PLASTIC
36	SEE MATRIX		PORT PLUG, 1/4" NPT, PLASTIC
35	830 9938	1	LABEL, MP500 NOTICE
34	830 9246-19	2	NUT, HEX 3/8-16 ZPL ST
33	830 9246-20	2	WSHR, FLAT 13/32IDx13/16OD ZPL ST
32	830 9246-25	2	SCR, CARRIAG 3/8-16x1IN ZPL ST
31	9903 9279	1	SUPPORT, PLYWOOD BOARD
30	9906 4500	1	ADI, CERTIFIED INSTALLATION REGISTRATION
29	♦♦ 9906 3166	♦♦ 1	♦♦ ADI, 526 SERIES AUTOMATIC SWITCHOVER
28	9905 1013	1	BAG, POLY (FOR MAIN ASS'Y)
27	9905 1004	1	BAG, POLY 4 MIL 12x12 (FOR ADI(s))
26			
25	9904 0132	1	CARTON, FOR MAIN ASS'Y
24	830 6466	2	LABEL, BOX X OF Y
23	830 5844	1	ACORN NUT, STAINLESS STEEL
22	830 5831	1	CAP, ADJUSTING KNOB (BLACK)
21	830 5554	1	KNOB, BLACK
20	♦ 835 0182	♦ 1	♦ LABEL, "CONCOA" LOGO
19	830 5377	1	KNOB STOP
18	830 5379	A/N	WASHER, SEE NOTE 8
17	830 5378	3	NUT, KNOB
16	SEE MATRIX, 7th DIGIT	1	LABEL, OVERPRESSURE WARNING
15	830 5413	1	KNOB LABEL
14	9225 0008	2	BRASS PIPE PLUG, 1/4" NPT
13	830 6339	SEE MATRIX 6th DIGIT	WASHER, #10 STEEL
12	9204 2748	SEE MATRIX 6th DIGIT	SCREW, 10-32 UNF MACHINE
11	830 6638	2	NAMEPLATE (SEE NOTE 3)
10	830 7644	1	REAR MOUNTING BRACKET
9	830 7917	1	NIPPLE 1/4" NPT x 1/4" NPT (4" LONG)
8	830 7641	1	CROSS, MACHINED BRASS
7	SEE MATRIX	2	DIAPHRAGM VALVE
6	SEE MATRIX	2	INLET CONNECTION
5	SEE MATRIX	2	2" GAUGE, INLET
4	SEE MATRIX	1	RELIEF VALVE
3	SEE MATRIX	1	LINE REGULATOR
2	SEE MATRIX	1	ADJUSTABLE BARE BODY REGULATOR
1	SEE MATRIX	1	PRESET BARE BODY REGULATOR

♦♦ BRAND CODE "-01" ONLY, SEE BRAND CODE COLUMN

♦♦ If product is private labeled and private label drawing indicates a change in knob color, use the knob/cap (color) components specified on the private label drawing.
Note: The regulators used on this switchover are 400 series regulators. Use the information specified for standard 400 series (B-size) regulator for the knob/cap part numbers.

SCALE: 3:4	TOLERANCE UNLESS OTHERWISE SPECIFIED: .XXX DECIMALS: ±.005; .XX DECIMALS: ±.010; FRACTIONS: ±1/64; ANGLES: ±2°; FILLET RADII: R 1/64; BREAK EDGES: .002-.010	DRAWN BY: A. Whitaker 2/2/2001	CONTROLS CORPORATION OF AMERICA, PRODUCT ENGINEERING DEPARTMENT, VIRGINIA BEACH, VA 23464
DATE RELEASED: 1/31/2003	CAGE NO. 0A389	DESIGN APPROVED: J. Friedrichs 1/31/2001	PART NO. 526 1001, PAGE 2 of 2
DWG FILENAME: 5261001pg2of2.DWG		QUALITY APPROVED: M. Wilson 2/1/2001	ASW,_DASY_BRS_____ XXXX/XXXXPSI_XXXXXX (FOR Xs IN TITLE – SEE NOTE 5)
		QUALITY ASSURANCE: E. Filomarino 2/1/2001	BILLING REFERENCE RECORDING #: ECO 01-0142; SIZE: D

SUPERCEDES DRAWING 520 9001

Manitoba
Inspection and Technical Services

May 14, 2024

TSSA
345 Carlingview Drive
Toronto, ON M9W 6N9

Dear Tanya Francis,

Re: Reciprocal CRN Registration in Manitoba

As indicated by the Regulatory Reconciliation and Cooperation Table and the Reconciliation Agreement for the Canadian Registration Number (CRN) for Pressure Equipment, the design reviews conducted and accepted by the Canadian province or territory, or their delegated safety authority, will be mutually recognized in the Province of Manitoba. If a registration is conditionally based on compliance with the notes set by the original issuing Jurisdiction, such compliance shall be applied the same to this Province.

Your submission has been registered, as follows:

File Number:	74-R4052
CRN:	0H15806.54
Scope:	529007X, 5022XXX, 628, 631/633, 632, 629, 52B, 52C, 52S, 526/527/620 CRN Renewal (As Noted)
Manufacturer:	CONTROLS CORPORATION OF AMERICA
Expiry Date:	12 March 2034

Along with this letter is the invoice for registration.

In addition, every Pressure Vessel, Boiler, and Heat Exchanger shall be stamped with the registration number and as required by CSA Code B51, a Manufacturer's Data Report (MDR) must be forwarded to this office immediately at the time a unit is shipped to Manitoba. Send your MDR to qasupport@gov.mb.ca. In your subject line, indicate "*Manufacturer's Data Report-CRN No.*" A fee shall be billed to the Manufacturer to process data reports in accordance with the Steam and Pressure Plants Regulation section 17.1.

Please contact qasupport@gov.mb.ca for any questions or concerns.

Inspection and Technical Services
Labour and Immigration
508 – 401 York Avenue, Winnipeg, MB R3C 0P8
T (204) 945-3373 | **F** (204) 948-2089

Suite 600 - 2889 East 12th Avenue
Vancouver, BC V5M 4T5
Toll Free: 1-866-566-7233
www.technicalsafetybc.ca

ATTN: TSSA BPV NATIONAL REGISTRATION
TECHNICAL STANDARDS & SAFETY AUTHORITY
345 CARLINGVIEW DRIVE
TORONTO ON M9W 6N9

Date: 15-May-2024

TSBC Account #: 061440
TSBC Admin Number: 106950

Canadian Registration Number: 0H15806.51

Re: Application for Design Registration

The design, as detailed in your Design Portal application 0H15806.5R1 - CONTROLS CORPORATION OF AMERICA for a Pressure Fitting is registered with the following notes and considerations:

Registered To:	CONTROLS CORPORATION OF AMERICA
Project Name:	0H15806.5R1 - CONTROLS CORPORATION OF AMERICA
Drawing #:	529007X, 5022XXX, 628, 631/633, 632, 629, 52B, 52C, 52S, 526/527/620 CRN Renewal (As Noted)
Drawing Revision:	N/A

Conditions of Registration:

(1) Fitting Registration Expiry Date: 12-Mar-2034 (2) The registration is valid until the indicated expiry date only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency until that date. Should the approval of quality management system lapse before the expiry date indicated above, this registration shall become void.

Reviewer's Notes:

Any additional conditions and considerations from the initial province of registration shall apply to this BC registration.

Full details of this submission including the scope of registration, design conditions, fabrication details, and calculations pertaining to this design are located in the above Admin Number on the Design Portal. For all other enquiries, please contact eim@technicalsafetybc.ca.

The Engineering Information Management Team

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

New Brunswick | Nova Scotia | Prince Edward Island | Newfoundland and Labrador
Nunavut | Yukon | Northwest Territories

Manufacturers Name: Controls Corporation of America

Manufacturers Address: 1501 Harpers Road, Virginia Beach, VA 23454 U.S.A.

Plant Locations: See above

Category of Fittings to be registered. Circle one Category only

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
C Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, separators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories

N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐ (Meeting CNSC [illegible] ments)

Title of the Standard of Construction

4x burst pressure

Show Manufacturers Name, Trademark, or Logo as it will appear

Type of Construction

Forged ☐ Welded ☐ Wrought ☐
Cast ☐ Other ☐
Describe other:

See attached

List of supporting documentation and identification of the actual items to be registered:

Catalog Pages, Design Drawings, and Test Reports

Declaration:

I John Friedrichs (see note 3) employed by Controls Corporation of Al and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by Perry Johnson Registrars as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer:

Declared before me at CONCOA – VA BEACH, VA

This 8th day of January AD 2024

Commissioner of Oaths
Or Notary Public: (sign) Miriam Duran

(Affix Official seal to the right)

Use this space for the Official Seal
Miriam Duran
NOTARY PUBLIC
Commonwealth of Virginia
Reg. # 8026938
My Commission Expires 2/28/2026

This space for Regulatory Authority use.
This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0H15806.5 Rev1

FID#: 614

Notes:

1. All Fittings shall be registered in the name of the Manufacturer.
2. Each Category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The Declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality Control programs shall be resubmitted for validation.

ACCEPTED
PROVINCE OF PRINCE EDWARD ISLAND
COMMUNITIES, LAND & ENVIRONMENT

C.R.N. 0H15806.59 Rev1

DATE: April 19 2024

INSPECTION SERVICES SECTION
BOILER/PRESSURE VESSEL BRANCH

Fittings Rev.2

Note: CRN Renewal. Compressed gas systems. Registration does not cover product additions, material or design changes. All CRNs for fittings presented on the product scope sheets shall be valid in the jurisdiction of installation for this registration to be considered valid. Registration excludes hose assemblies. Code of construction ASME B31.3 (DGallant)

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

New Brunswick | Nova Scotia | Prince Edward Island | Newfoundland and Labrador
Nunavut | Yukon | Northwest Territories

Manufacturers Name: Controls Corporation of America

Manufacturers Address: 1501 Harpers Road, Virginia Beach, VA 23454 U.S.A.

Plant Locations: See above

Category of Fittings to be registered. Circle one Category only

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
C Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, separators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories

N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐ , (Meeting CNSC [illegible] ments)

Title of the Standard of Construction

4x burst pressure

Show Manufacturers Name, Trademark, or Logo as it will appear

CONCOA PRECISION GAS CONTROLS WWW.CONCOA.COM

Type of Construction

Forged ☐ Welded ☐ Wrought ☐
Cast ☐ Other ☐
Describe other:

See attached

List of supporting documentation and identification of the actual items to be registered:

Catalog Pages, Design Drawings, and Test Reports

Declaration:

I John Friedrichs (see note 3) employed by Controls Corporation of Al and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by Perry Johnson Registrars as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: [signature]

Declared before me at CONCOA – VA BEACH, VA

This 8th day of January AD 2024

Commissioner of Oaths
Or Notary Public: (sign) Miriam Duran

(Affix Official seal to the right)

Use this space for the Official Seal
Miriam Duran
NOTARY PUBLIC
Commonwealth of Virginia
Reg. # 8026938
My Commission Expires 2/28/2026

This space for Regulatory Authority use.
This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0H15806.5 Rev1

FID#: 614

Notes:

1. All Fittings shall be registered in the name of the Manufacturer.
2. Each Category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The Declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality Control programs shall be resubmitted for validation.

BOILER & PRESSURE VESSEL ACT & REGULATIONS NOVA SCOTIA
Date April 19/24
C.R.N. 0H15806.58 Rev.1
Dwg. as described
Signed [signature]
1 of 1 Part

Sect 1.0 - Fittings Rev.2

Note: CRN Renewal. Compressed gas systems. Registration does not cover product additions, material or design changes. All CRNs for fittings presented on the product scope sheets shall be valid in the jurisdiction of installation for this registration to be considered valid. Registration excludes hose assemblies. Code of construction ASME B31.3 (DGallant)

11/2018

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

New Brunswick | Nova Scotia | Prince Edward Island | Newfoundland and Labrador
Nunavut | Yukon | Northwest Territories

Manufacturers Name: Controls Corporation of America

Manufacturers Address: 1501 Harpers Road, Virginia Beach, VA 23454 U.S.A.

Plant Locations: See above

Category of Fittings to be registered. Circle one Category only

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
C Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, separators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories

N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐ , (Meeting CNSC c[illegible]ments)

Title of the Standard of Construction

4x burst pressure

Show Manufacturers Name, Trademark, or Logo as it will appea[illegible]

INCREASE CONCOA PRECISION GAS CONTROLS WWW.CONCOA.COM DECREASE

Type of Construction

Forged ☐ Welded ☐ Wrought ☐
Cast ☐ Other ☐
Describe other:

See attached

List of supporting documentation and identification of the actual items to be registered:

Catalog Pages, Design Drawings, and Test Reports

Declaration:

I John Friedrichs (see note 3) employed by Controls Corporation of Al and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by Perry Johnson Registrars as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: [signature]

Declared before me at CONCOA – VA BEACH, VA

This 8th day of January AD 2024

Commissioner of Oaths
Or Notary Public: (sign) Miriam Duran

(Affix Official seal to the right)

Use this space for the Official Seal

Miriam Duran
NOTARY PUBLIC
Commonwealth of Virginia
Reg. # 8026938
My Commission Expires 2/28/2026

This space for Regulatory Authority use.
This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0H15806.5 Rev1

FID#: 614

Notes:

1. All Fittings shall be registered in the name of the Manufacturer.
2. Each Category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The Declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality Control programs shall be resubmitted for validation.

Note: CRN Renewal. Compressed gas systems. Registration does not cover product additions, material or design changes. All CRNs for fittings presented on the product scope sheets shall be valid in the jurisdiction of installation for this registration to be considered valid. Registration excludes hose assemblies. Code of construction ASME B31.3 (DGallant)

New Nouveau Brunswick

DEPT OF JUSTICE PUBLIC SAFETY
BOILER & PRESSURE VESSEL ACT

REGISTRATION ONLY

CRN 0H15806.5 Rev1

[signature]
CHIEF BOILER INSPECTOR

DATE 4/19/24

Sect 1.0 - Fittings Rev.2

☐ BLRs ☐ PVs

☑ FITTINGS ☐ NUCLEAR COMPONENTS

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

New Brunswick | Nova Scotia | Prince Edward Island | Newfoundland and Labrador
Nunavut | Yukon | Northwest Territories

Manufacturers Name: Controls Corporation of America

Manufacturers Address: 1501 Harpers Road, Virginia Beach, VA 23454 U.S.A.

Plant Locations: See above

Category of Fittings to be registered, Circle one Category only

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
C Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, separators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories

N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐ , (Meeting CNSC [illegible] ments)

Title of the Standard of Construction

4x burst pressure

Show Manufacturers Name, Trademark, or Logo as it will appear

Type of Construction

Forged ☐ Welded ☐ Wrought ☐
Cast ☐ Other ☐
Describe other:

See attached

List of supporting documentation and identification of the actual items to be registered:

Catalog Pages, Design Drawings, and Test Reports

Declaration:

I John Friedrichs (see note 3) employed by Controls Corporation of Al and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by Perry Johnson Registrars as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer:

Declared before me at CONCOA – VA Beach, VA

This 8th day of January AD 2024

Commissioner of Oaths
Or Notary Public: (sign) Miriam Duran

(Affix Official seal to the right)

Use this space for the Official Seal

Miriam Duran
NOTARY PUBLIC
Commonwealth of Virginia
Reg. # 8026938
My Commission Expires 2/28/2026

This space for Regulatory Authority use.

This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0H15806.5 Rev1

FID#: 614

Notes:

1. All Fittings shall be registered in the name of the Manufacturer
2. Each Category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The Declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality Control programs shall be resubmitted for validation.

Newfoundland
Labrador

Registered 0H15806.50 Rev1
Date April 24, 2024
Engineering and Inspection Services
Registered by

UNDER THE AUTHORITY OF THE PUBLIC SAFETY ACT AND THE BOILER PRESSURE VESSEL AND COMPRESSED GAS REGULATIONS

Sect 1.0 - Fittings Rev.2

Note: CRN Renewal. Compressed gas systems. Registration does not cover product additions, material or design changes. All CRNs for fittings presented on the product scope sheets shall be valid in the jurisdiction of installation for this registration to be considered valid. Registration excludes hose assemblies. Code of construction ASME B31.3 (DGallant)

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

New Brunswick | Nova Scotia | Prince Edward Island | Newfoundland and Labrador
Nunavut | Yukon | Northwest Territories

Manufacturers Name: Controls Corporation of America

Manufacturers Address: 1501 Harpers Road, Virginia Beach, VA 23454 U.S.A.

Plant Locations: See above

Category of Fittings to be registered. Circle one Category only

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
C Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, separators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories

N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐ , (Meeting CNSC [illegible] ments)

Title of the Standard of Construction

4x burst pressure

Show Manufacturers Name, Trademark, or Logo as it will appear

Type of Construction

Forged ☐ Welded ☐ Wrought ☐
Cast ☐ Other ☐
Describe other:

See attached

List of supporting documentation and identification of the actual items to be registered:

Catalog Pages, Design Drawings, and Test Reports

Declaration:

I John Friedrichs (see note 3) employed by Controls Corporation of Ai and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by Perry Johnson Registrars as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: [signature]

Declared before me at CONCOA – VA BEACH, VA

This 8th day of January AD 2024

Commissioner of Oaths
Or Notary Public: (sign) Miriam Duran

(Affix Official seal to the right)

Use this space for the Official Seal
Miriam Duran
NOTARY PUBLIC
Commonwealth of Virginia
Reg. # 8026938
My Commission Expires 2/28/2026

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This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0H15806.5 Rev1

FID#: 614

Notes:

1. All Fittings shall be registered in the name of the Manufacturer.
2. Each Category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The Declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality Control programs shall be resubmitted for validation.

GOVERNMENT OF YUKON
BY
CRN 0H15806.5Y REV1
DATE 04/12/2024
BOILERS BRANCH

Sect 1.0 – Fittings Rev.2

Note: CRN Renewal. Compressed gas systems. Registration does not cover product additions, material or design changes. All CRNs for fittings presented on the product scope sheets shall be valid in the jurisdiction of installation for this registration to be considered valid. Registration excludes hose assemblies. Code of construction ASME B31.3 (DGallant)

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

New Brunswick | Nova Scotia | Prince Edward Island | Newfoundland and Labrador
Nunavut | Yukon | Northwest Territories

Manufacturers Name: Controls Corporation of America

Manufacturers Address: 1501 Harpers Road, Virginia Beach, VA 23454 U.S.A.

Plant Locations: See above

Category of Fittings to be registered. Circle one Category only	Title of the Standard of Construction
A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers B Flanges: all flanges C Valves: all line valves D Expansion joints, flexible connections, and hose assemblies: all types E Strainers, filters, separators, and steam traps F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs H Pressure retaining components that do not fall into one of the above categories N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐, (Meeting CNSC requirements)	4x burst pressure
Show Manufacturers Name, Trademark, or Logo as it will appear: CONCOA PRECISION GAS CONTROLS www.concoa.com	**Type of Construction** Forged ☐ Welded ☐ Wrought ☐ Cast ☐ Other ☐ Describe other: See attached

List of supporting documentation and identification of the actual items to be registered:

Catalog Pages, Design Drawings, and Test Reports

Declaration:

I John Friedrichs (see note 3) employed by Controls Corporation of A and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by Perry Johnson Registrars as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: [signature]

Declared before me at CONCOA – VA BEACH, VA

This 8th day of January AD 2024

Commissioner of Oaths
Or Notary Public: (sign) Miriam Duran

(Affix Official seal to the right)

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Miriam Duran
NOTARY PUBLIC
Commonwealth of Virginia
Reg. # 8026938
My Commission Expires 2/28/2026

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This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0H15806.5 Rev1

FID#: 614

Notes:

1. All Fittings shall be registered in the name of the Manufacturer.
2. Each Category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
3. The Declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality Control programs shall be resubmitted for validation.

Note: CRN Renewal. Compressed gas systems. Registration does not cover product additions, material or design changes. All CRNs for fittings presented on the product scope sheets shall be valid in the jurisdiction of installation for this registration to be considered valid. Registration excludes hose assemblies. Code of construction ASME B31.3 (DGallant)

Northwest Territories
REGISTERED
UNDER THE AUTHORITY OF
THE BOILER AND PRESSURE
VESSEL ACT
C.R.N. 0H15806.5T Rev1
SIGNED [signature]
DATE April 22 2024

65.00

Sect 1.3 Piping Rev.2

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

New Brunswick | Nova Scotia | Prince Edward Island | Newfoundland and Labrador
Nunavut | Yukon | Northwest Territories

Manufacturers Name: Controls Corporation of America

Manufacturers Address: 1501 Harpers Road, Virginia Beach, VA 23454 U.S.A.

Plant Locations: See above

Category of Fittings to be registered. Circle one Category only

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
B Flanges: all flanges
C Valves: all line valves
D Expansion joints, flexible connections, and hose assemblies: all types
E Strainers, filters, separators, and steam traps
F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
H Pressure retaining components that do not fall into one of the above categories

N Nuclear components: Class 1 ☐ Class 2 ☐ Class 3 ☐ , (Meeting CNSC [illegible] ments)

Title of the Standard of Construction

4x burst pressure

Show Manufacturers Name, Trademark, or Logo as it will appear

Type of Construction

Forged ☐ Welded ☐ Wrought ☐
Cast ☐ Other ☐
Describe other:

See attached

List of supporting documentation and identification of the actual items to be registered:

Catalog Pages, Design Drawings, and Test Reports

Declaration:

I John Friedrichs (see note 3) employed by Controls Corporation of Ai and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by Perry Johnson Registrars as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: [signature]

Declared before me at CONCOA – VA BEACH, VA

This 8th day of January AD 2024

Commissioner of Oaths
Or Notary Public: (sign) Miriam Duran

(Affix Official seal to the right)

Use this space for the Official Seal

Miriam Duran
NOTARY PUBLIC
Commonwealth of Virginia
Reg. # 8026938
My Commission Expires 2/28/2026

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This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0H15806.5 Rev1

FID#: 614

Notes:

1. All Fittings shall be registered in the name of the Manufacturer.
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3. The Declaration shall be made by the person having full authority and responsibility for the quality of the end product.
4. Quality Control programs shall be resubmitted for validation.

Note: CRN Renewal. Compressed gas systems. Registration does not cover product additions, material or design changes. All CRNs for fittings presented on the product scope sheets shall be valid in the jurisdiction of installation for this registration to be considered valid. Registration excludes hose assemblies. Code of construction ASME B31.3 (DGallant)

Province of Nunavut
Boilers and Pressure Vessels Act

REGISTERED

CRN 0H15806.5N Rev1

Date 04/19/2024

Signed [signature]

Chief Inspector

Sect 1.0 - Fittings Rev 2

Territorial Registration Fee