

North American Adjustable Port Valves



1008A-5F thru -8F

1008A and 1010A Port Valves

- Low torque
- Rotary plug
- Easily cleaned
- Pressure drop adjustable for best flow characteristics
- For gases, oils, water and steam

Product Overview | 1008A Valve

GENERAL INFORMATION

Adjustable Port Valves are ideal for automatic control of fuel or air flow to meet the requirements of modern instrumentation in combustion systems. The adjustable port feature permits sizing the valve to fit the application, after valve has been installed. Linkages can be adjusted for full or limited valve travel.

CORRECT VALVE SIZING

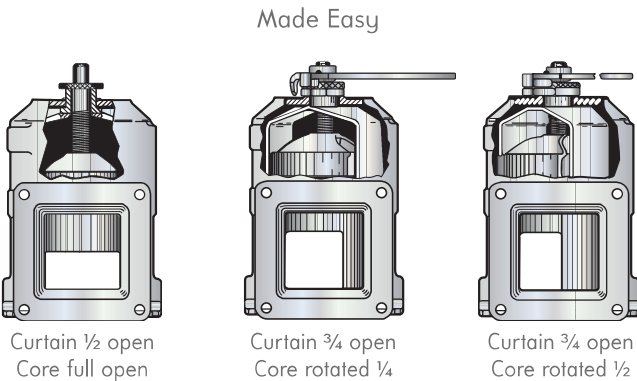


Figure A. Turning curtain adjusting knob changes port opening so valve can constitute optimum resistance in the system for good control.

For a valve operated by a modulating type control, either a linear or an equal percentage characteristic is preferred for most applications. These characteristics are shown in Figure B, together with two curves indicating very common but usually undesirable flow patterns: In their lower parts, change of flow is too fast, causing an "over correction;" while at the upper end there is practically no flow change in response to valve movements.

Shape of a flow curve depends (1) on valve **area characteristic**, and (2) on size of valve port relative to downstream resistances (piping, orifices, and burners), the sum of which is difficult to predict.

An Adjustable Port Valve solves the problem. Its linear area characteristic permits proper "sizing" of valve **after installation** without involved calculations.

Valve Size	Number of turns from full open to fully closed
3/8" and 1/2"	11
3/4"	14
1"	16
1 1/4" and 1 1/2"	23
2"	30
2 1/2"	35
3"	43
4"	60
6v	87

Recommended procedure is to open valve control handle and valve curtain wide, then close curtain until pressure drop across valve is 1/5 to 1/6 of total system pressure drop. Flow characteristics shown as solid lines in **Figure B** can be realized with full valve stroke, enabling desired flow response to movements of the control motor.

Linkage between motor and valve can be "characterized" to produce the desired flow curve, e.g., linear or equal percentage.

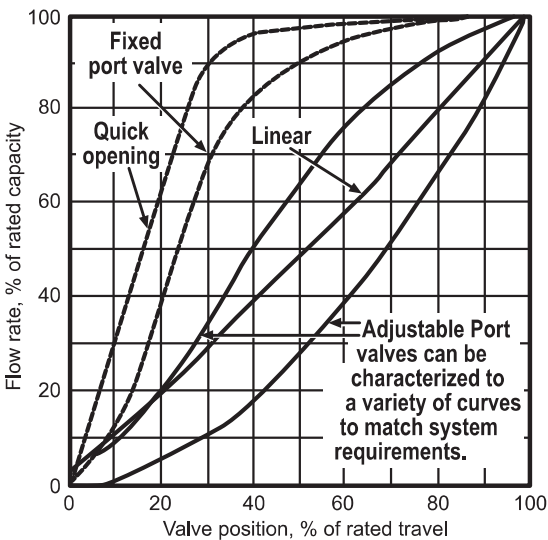
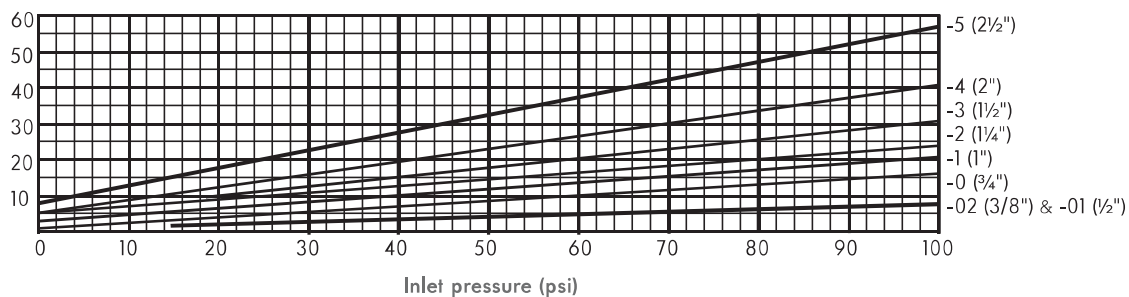
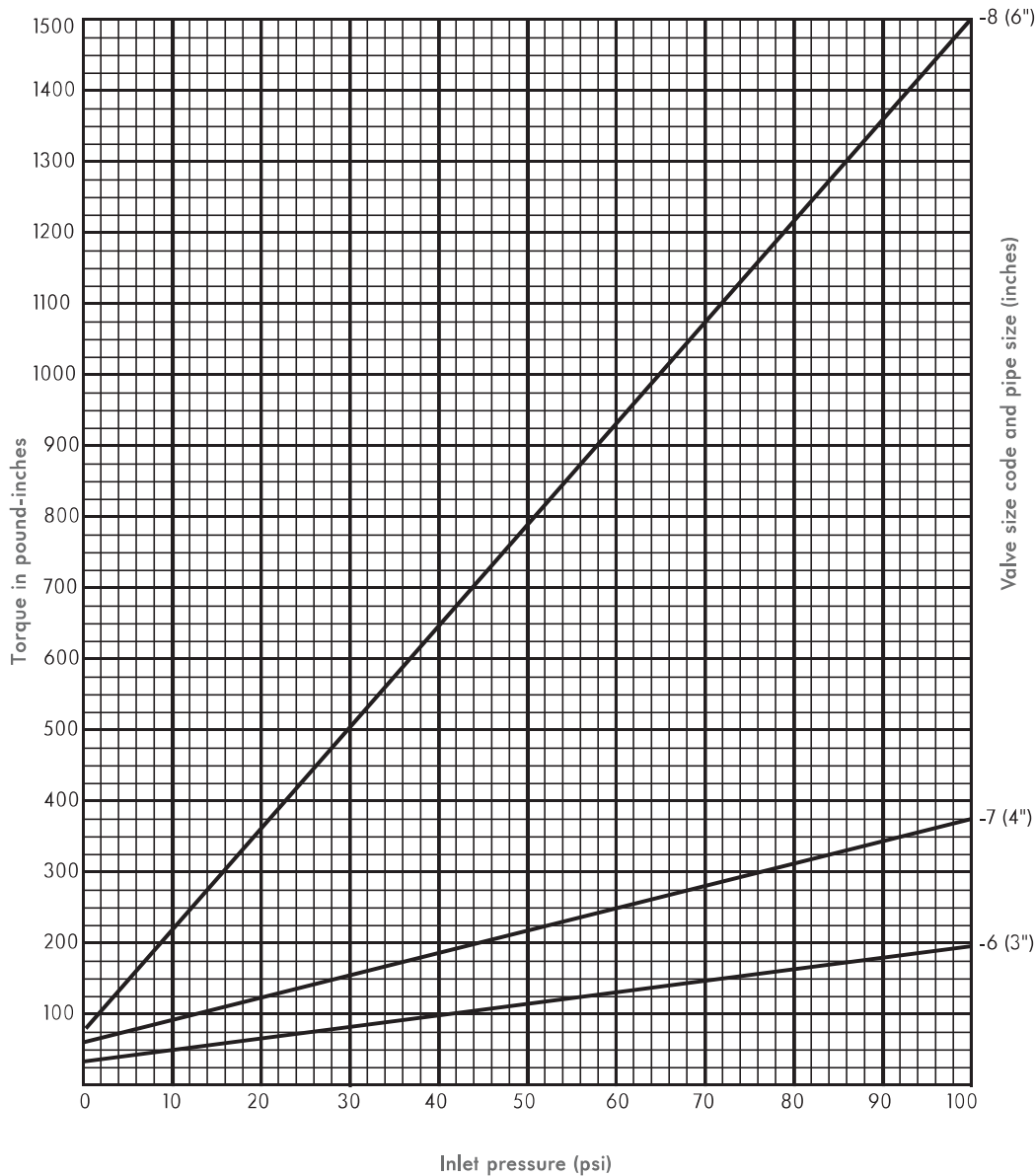


Figure B. Flow characteristics of valves installed in systems with downstream resistance. The three solid lines represent characterizable adjustable port valves.

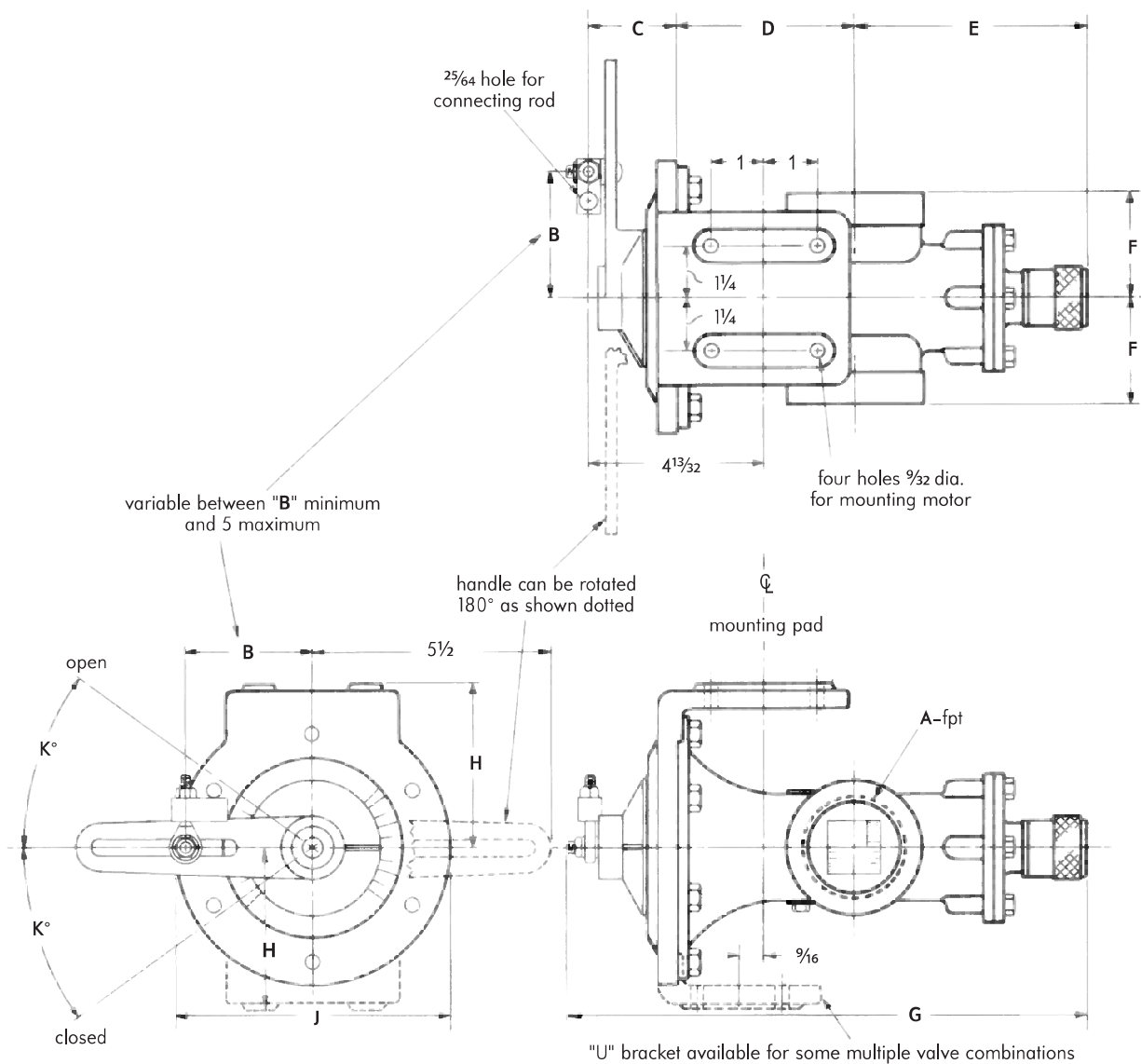
1008A 1010A	Pipe Size	Cv Valve Coefficient
-02	(3/8")	2.0
-01	(1/2")	2.0
-0	(3/4")	7.9
-1	(1")	12.5
-2	(1 1/4")	19.7
-3	(1 1/2")	28
-4	(2")	49
-5	(2 1/2")	71
-6	(3")	111
-7	(4")	191
-8	(6")	433

Torque Requirements | 1008A Valve

Torque Required to Operate 1008A Adjustable Port Valves
for Gas, Steam, Oil or Compressed Air
Graphs represent actual maximums as found in tests on new valves.



Dimensions inches | 1008A/1010A Valves

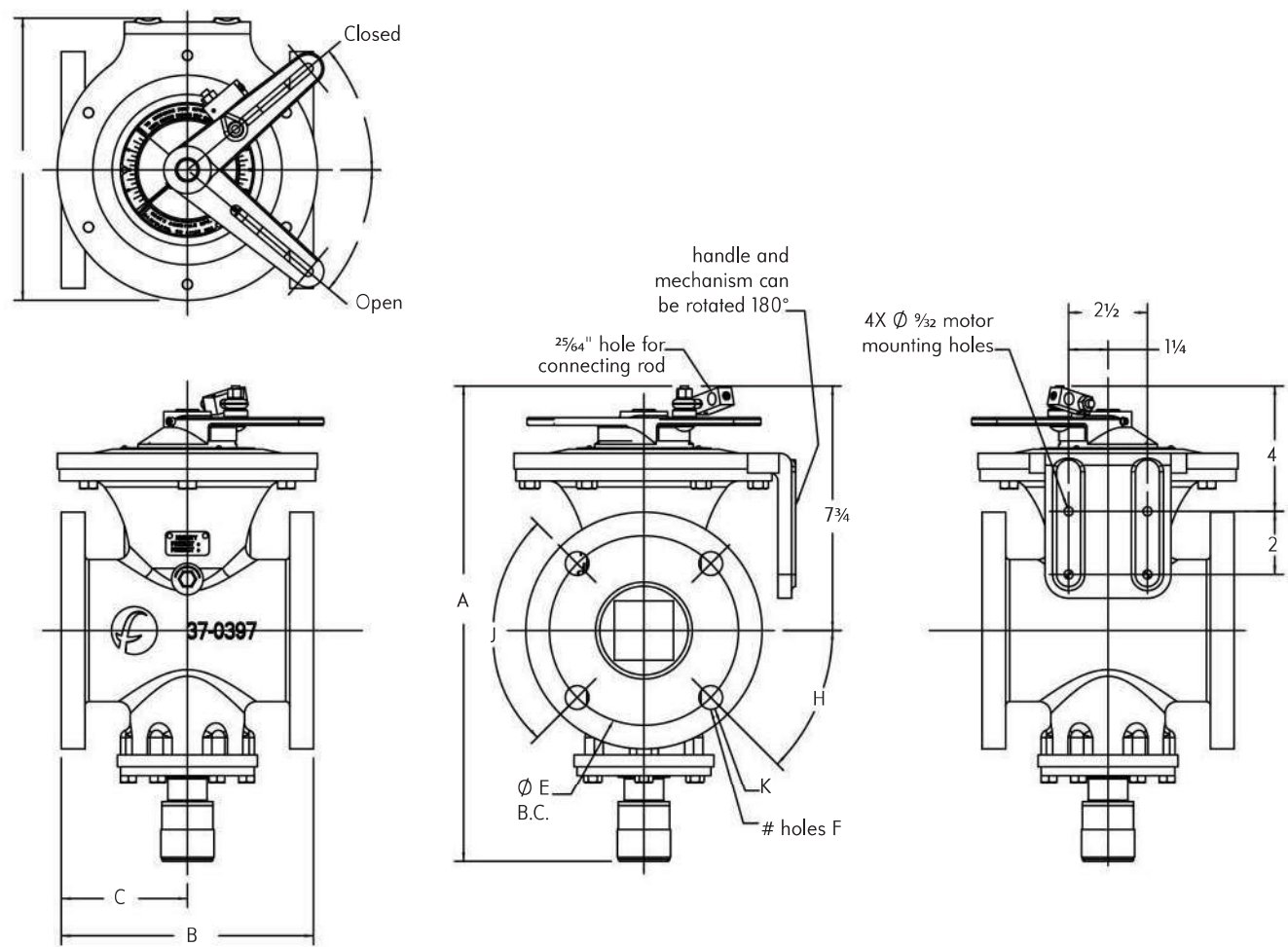


1008A 1010A	dimensions in inches										Wt, lb
	A	B	C	D	E	F	G	H	J	K	
-02 (3/8")	3/8	1 1/4	1 21/32	1 7/8	4 17/32	1 3/4	8 9/16	2 1/2	3 5/8	33°-30'	8 1/2
-01 (1/2")	1/2	1 1/4	1 21/32	1 7/8	4 17/32	1 3/4	8 9/16	2 1/2	3 5/8	33°-30'	8 3/4
-0 (3/4")	3/4	1 1/4	1 21/32	1 7/8	4 9/32	1 5/8	8 5/16	2 1/2	3 5/8	36°-52'	7
-1 (1")	1	1 1/4	1 21/32	1 7/8	4 1/2	1 3/4	8 17/32	2 1/2	3 5/8	36°-39'	9
-2 (1 1/4")	1 1/4	2	1 15/16	2 5/8	4 25/32	2	9 27/32	3	4 5/8	36°-14'	9 1/4
-3 (1 1/2")	1 1/2	2	2 1/16	4 1/16	5 1/32	2 1/8	11 21/32	3 7/8	6 3/8	37°-40'	17 1/2
-4 (2")	2	2	2 1/16	4 1/16	5 17/32	2 7/16	12 5/32	3 7/8	6 3/8	37°-14'	20 1/2
1010A Only											
-5 (2 1/2")*	2 1/2	2	2 1/26	5 1/8	6 5/32	2 13/16	13 27/32	4 13/16	8 1/4	38°-1'	34
-6 (3")*	3	2	2 1/16	5 1/8	7 5/32	3 5/16	14 27/32	4 13/16	8 1/4	38°-41'	37

* 1008A valves are obsolete in -5 and -6 sizes and have been replaced by -5F and -6F valves. The dimensions shown are valid for 1010A valves.

DIMENSIONS SHOWN ARE SUBJECT TO CHANGE. PLEASE OBTAIN CERTIFIED PRINTS FROM FIVES NORTH AMERICAN COMBUSTION, INC.
IF SPACE LIMITATIONS OR OTHER CONSIDERATIONS MAKE EXACT DIMENSION(S) CRITICAL.

Dimensions inches | 1008A- -F Valve



Part Number	Pipe Size	dimensions in inches									Approx. Weight
		A	B	C	D	E	F	H	J	K	
1008A-5F	2 1/2"	14	7 1/2	3 3/4	8 15/16	5 1/2	4	45°	90°	3/4	54 lbs
1008A-6F	3"	15 3/32	8	4	8 15/16	6	4	45°	90°	3/4	63 1/2 lbs
1008A-7F	4"	16 1/8	9	4 1/2	9 5/16	7 1/2	8	22.1/2°	45°	3/4	83 lbs.
1008A-8F	6"	19 3/8	9 3/4	4 7/8	8 1/4	9 1/2	8	22.1/2°	45°	7/8	124 11/25 lbs.

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IF SPACE LIMITATIONS OR OTHER CONSIDERATIONS MAKE EXACT DIMENSION(S) CRITICAL.

Specifications | 1008A Valve

Valves for Gases, Oils, Steam, Compressed Air, Water. (For low pressure air valves, see Specifications 1004/1014.) All valves are for throttling control--not tight shutoff.

						Materials of Construction ■			
Valve	Pipe size	Max inlet pressure (PSI)	Maximum Temp°F.	Minimum Temp°F.	Body	Core and Curtain	Shaft	Shaft Grease	Seal
1008A Valves	3/8", 1/2"	125	350	-20	BRS	316L SST	SST	Litium #2	Viton
	3/4" thru 2"	125	350	-20	DI	316L SST	SST	Litium #2	Viton
	2-1/2" thru 6" ●	125	350	-20	DI	316L SST	SST	Litium #2	Viton
1008A-S (steam)	3/8", 1/2"	125	350	-20	BRS	316L SST	SST	Silicone compound	EP
	3/4" thru 2"	125	350	-20	DI	316L SST	SST	Silicone compound	EP
	2-1/2" thru 6" ●	125	350	-20	DI	316L SST	SST	Silicone compound	EP
1010A-S (steam)	3/4" thru 3"	125	350	-20	BRS	Monel	SST	Silicone compound	EP

Valves must be properly lubricated. See Sheet 1008A Instructions.

- 2 1/2", 3" and 4" valves have ANSI flat face flanges cast into the body. 6" valves are furnished with ductile iron companion flanges.
- Materials abbreviations: BRS = brass, DI = ductile iron, SST = stainless steel.

SELECTION

Fluid	Pressure	Valve	Refer to
Air	0-3 psig 0-125 psig	1004, 1014 1008A	Specifications 1004/1014 example below
Gas, Oil Water	0-125 psig	1008A	example below
Steam (saturated)	0-125 psig	1008A-S 1010A-S	example below

SIZING

Air, 3-125 psig. Subtract desired high flow pressure drop from absolute upstream of the valve to get absolute pressure downstream of the valve. Divide this by upstream absolute pressure. If the result is 0.7 or more, refer to Chart A of this bulletin. Multiply the desired maximum air flow, scfm, by the appropriate density correction factor from the inset on Chart A, and locate the intersection of lines corresponding to corrected flow and pressure drop. The first diagonal line above this point indicates the correct valve size. If the ratio of downstream absolute pressure to upstream absolute pressure is 0.69 or less, read the intersection, on Chart B, of lines corresponding to upstream absolute pressure and flow, scfm (**do not** multiply by the density correction factor). The first diagonal line above this point represents the correct size valve.

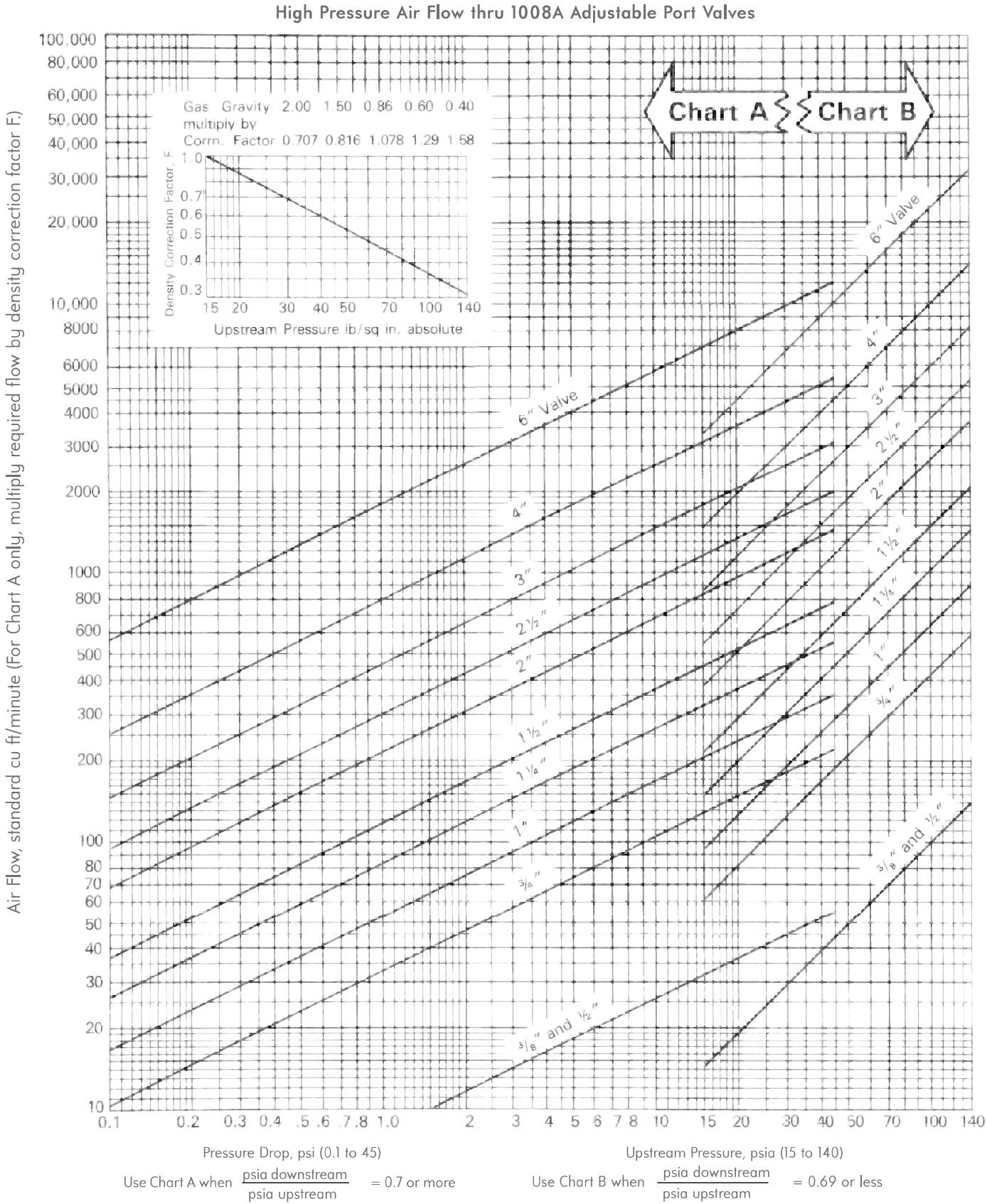
Example: Select a valve to control 1225 scfm air in a 35 psig line. Maximum pressure drop across the wide open valve should be 10 psi. Pressure downstream of the valve will be $(35 - 10) = 25$ psig. Ratio of absolute pressures is $(25 + 15) \text{ psia} \div (35 + 15)$

$\text{psia} = 0.8$. Use Chart A. Density correction factor for 50 psia upstream pressure is 0.53 (from inset, Chart A). Corrected flow is $1225 \text{ scfm} \times 0.53 = 650 \text{ cfm}$. First diagonal line above intersection of 10 psi pressure drop and 650 cfm lines on Chart A represents a 2" valve.

Gas, 2 psig and up. Follow the same procedure as with 3-125 psig air, using Chart A for absolute pressure ratios of 0.7 and higher and Chart B for ratio of 0.69 or less. In either case, multiply flow, scfm, by the appropriate gas gravity correction factor from the two-line table across the top of the inset on Chart A.

Steam (saturated), up to 125 psig. (Specify "-S" model.) When ratio of downstream absolute pressure to upstream absolute pressure is 0.7 or greater, use same selection method as with 3-125 psig air, but select valve from Chart C. When pressure ratio is 0.69 or less, follow procedure for 3-125 psig air, but select valve from Chart D.

High Pressure Air Flow | 1008A Valve



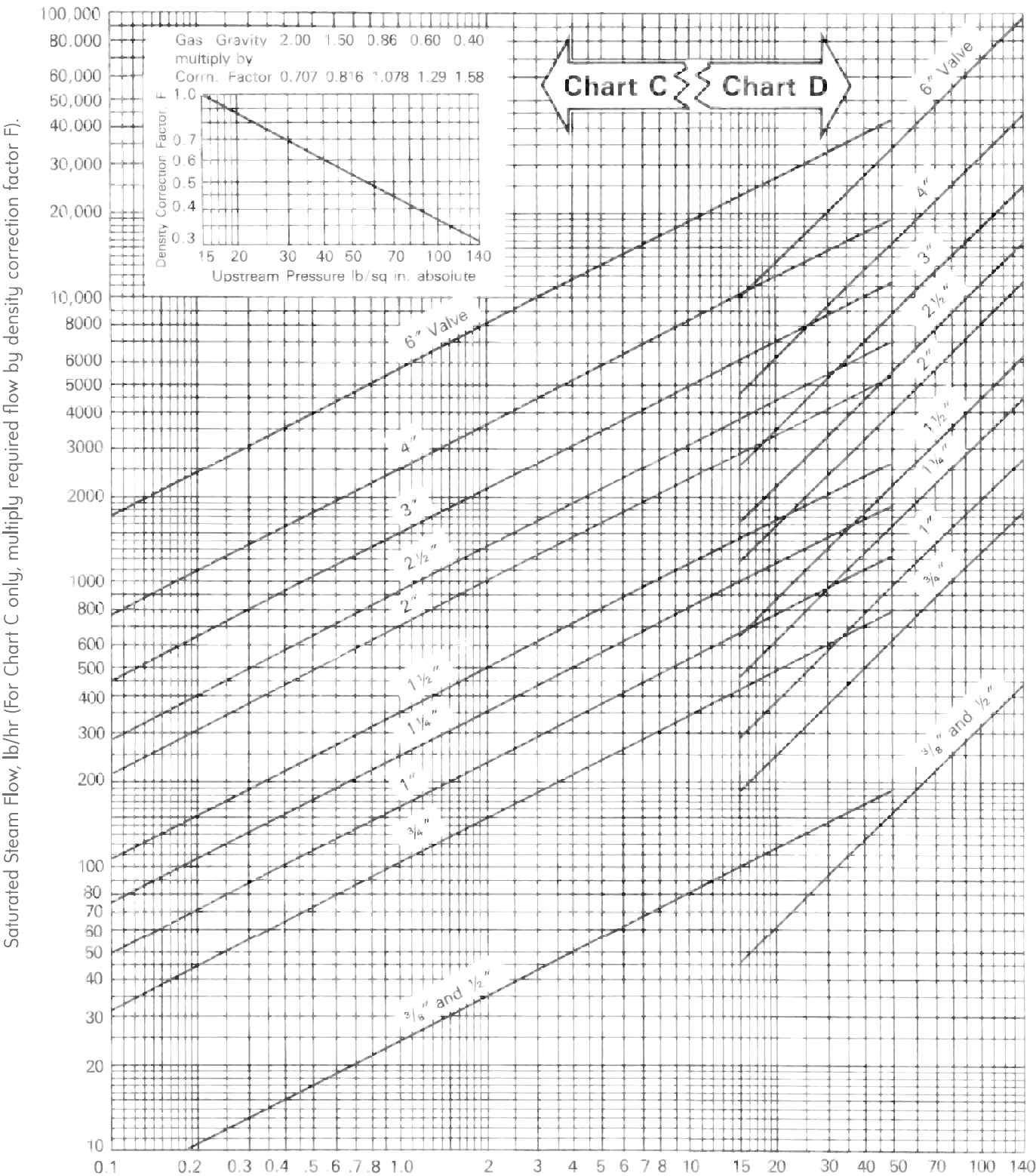
Absolute Pressure, psia = Gauge Pressure + 14.7.

Results are exact only when psia ratio is 0.53 or less.

For instructions and examples illustrating use of these charts, see page 7.

Steam Flow | 1008A Valve

Steam Flow thru 1008A Adjustable Port Valves



Use Chart C when $\frac{\text{psia downstream}}{\text{psia upstream}} = 0.7$ or more

Use Chart D when $\frac{\text{psia downstream}}{\text{psia upstream}} = 0.69$ or less

Absolute Pressure, psia = Gauge Pressure + 14.7.

Results are exact only when psia ratio is 0.58 or less.

For instructions and examples illustrating use of these charts, see page 7.

Ordering Information | 1008A Valve

HOW TO ORDER

Valve Series	(A) Pipe Code	(B) Options
1008A	-02 3/8"	Blank standard
1008AU*	-01 1/2"	R reverse acting
	-0 3/4"	S steam service
	-1 1"	L NEMA 4 low fire switch
	-2 1 1/4"	LD manual locking device
	-3 1 1/2"	LDL manual locking device and NEMA 4 low fire switch
	-4 2"	B direct acting Beck 31 Series
	-5F 2 1/2"	Q 1199 direct acting valve
	-6F 3"	RK valve repair kit
	-7F 4"	
	-8F 6"	

* Valve with u-bracket for side-by-side combo

Valve Series	(C) Pipe Code	(B) Options
1010A	-02 3/8"	Blank standard
	-01 1/2"	S steam service
	-0 3/4"	Q 1199 direct acting valve
	-1 1"	
	-2 1 1/4"	
	-3 1 1/2"	
	-4 2"	
	-5 2 1/2"	
	-6 3"	

Examples:

- 1008A-5F-R 2 1/2" adjustable port valve reverse acting
- 1008AU-4-LDL 2" adjustable port valve with U bracket manual locking device and low fire switch
- 1008A-8F 6" adjustable port valve

Companion slip-on flanges for the -5F, -6F, -7F, and -8F valves are 8767A-5-S, 8767A-6-S, 8767A-7-S, and 8767A-8-S respectively. These include 1 flange, 1 gasket, and hardware.

NOTE: you will have to order quantity of 2 to install new valve.

WARNING: Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Components in combustion systems may exceed 160°F (71°C) surface temperatures and present hot surface contact hazard. Fives North American Combustion, Inc. suggests the use of combustion systems that are in compliance with all Safety Codes, Standards, Regulations and Directives; and care in operation.

CONTACT

fna.sales@fivesgroup.com
T +1 800 626 3477 - F +1 216 373 4237

Fives North American Combustion, Inc.
4455 East 71st Street - Cleveland, OH 44105 - USA
www.fivesgroup.com



North American Adjustable Port Valves

Instructions & Parts List 1008A/1010A/1008A-C/1010A-C

Adjustable port valves are for control purposes only.
They are not for tight shutoff.

GENERAL INFORMATION

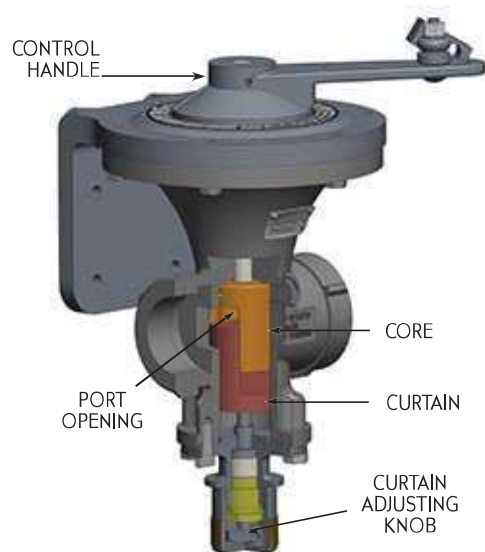
Adjustable Port Valves are ideal for automatic control of fuel or air flow to meet the requirements of modern instrumentation in combustion systems. The adjustable port feature permits sizing the valve to fit the application, after valve has been installed. Linkages can be adjusted for full or limited valve travel.

INSTRUCTIONS

gas, oil, steam, compressed air

Adjustable Port Valves are precision built and should not be subjected to unnecessary strains or rough handling. Provide proper pipe alignment by use of pipe hangers and supports. Instead of holding the valve body itself between jaws of a vise, screw valve onto a piece of pipe held in a vise. When installing the valve in a pipe line, use a pipe wrench at the lugs provided.

Valve port should be adjusted so some pressure drop is observed across valve at high fire. To adjust valve port opening for required flow conditions, set linkage at full valve travel. Remove adjusting screw cover. For sizes $\frac{3}{4}$ " to 6" turn adjusting screw knob clockwise to increase or counterclockwise to decrease flow. For size $\frac{3}{8}$ " and $\frac{1}{2}$ " turn knob clockwise to decrease flow or counterclockwise to increase flow. This raises or lowers the curtain in the core, altering valve port opening.



Use two wrenches to tighten a pipe into the valve.



The packing nut should be tight to prevent valve from leaking around adjusting screw and it secures the adjusting screw in position, therefore it is difficult to operate the port adjustment by hand, necessitating use of a wrench.

Always assure packing nut is tightened to prevent leakage and always replace adjusting screw cover to prevent tampering after making any curtain adjustments.

1008A valves are factory lubricated with general purpose lithium #2 grease. For lubrication instructions see page 2 (see page 3 for oxygen use).

The table (below) shows the number of turns required for adjusting the curtain height from full open to fully closed.

Valve Size	Number of turns from full open to fully closed
$\frac{3}{8}$ " and $\frac{1}{2}$ "	11
$\frac{3}{4}$ "	14
1"	16
$1\frac{1}{4}$ " and $1\frac{1}{2}$ "	23
2"	30
$2\frac{1}{2}$ "	35
3"	43
4"	60
6v	87

The 1008A series adjustable port valves should be lubricated on a regular basis. Note that due to the possibility that a grease fitting can leak gas into the atmosphere, the 1008A series valves are no longer supplied with a grease fitting installed. When servicing valves, users must supply their own temporary grease fitting and greasing tools.

TYPE OF LUBRICATION

1008A adjustable port valves are factory lubricated with lithium based #2 lubricant unless otherwise specified.

Specifications for a typical lithium lubricant are:

Consistency – #2
Dropping Point – 393 F
Base – Lithium.

A few lubricants meeting the above specifications are Factran EP 2 lubricant distributed by BP Oil Co., Shell Oil Alvania #2, and Atlantic Richfield Litholine Industrial Grease #2EP. If some other lubricant is to be used, it is recommended that its specifications should match those shown above.

WARNING: Valves intended for oxygen service (1008A-C, 1010A-C series) use a special synthetic based Molyube PFET-2 lubricant designed specifically to be compatible with oxygen service. See 1008A-C and 1010A-C technical information.

For steam applications (1008A-S & 1010A-S series) Fives uses a special silicone lubricant Dow Corning #111 compound. For applications with corrosive gases such as coke oven gas, we recommend lithium #2 complex grease.

FREQUENCY

It is recommended that 1008A series valves are lubricated at least three to four times per year.

Frequency of lubrication depends entirely on the specific application, type, quality and composition of the fluid the valve is being used with, as well as frequency of operation, operating conditions including temperature, pressure and fluid velocity. It is possible that high velocities can carry away some of the lubrication over time. All of these variables need to be considered when determining required lubrication.

Applications using corrosive fluids may require monthly or even weekly lubrication.

When used in steam service, adjustable port valves should be greased at 7 to 10 day intervals.

LUBRICATION PROCEDURES

WARNING: To prevent the possibility of personal injury or property damage, turn off electrical power, turn off gas to depressurize valve, and vent fluid to a safe area before servicing valve.

These valves do not come with grease fittings for field lubrication. Users must supply their own temporary grease fitting and greasing tools.

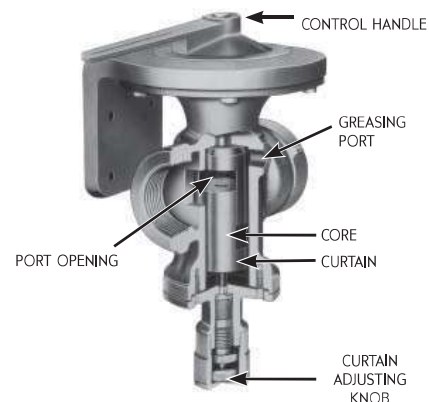
The valve bodies have a 1/8" NPT pipe plug that needs to be removed and temporarily replaced with a grease fitting.

When applying the lubrication to the valve core and curtain assembly, the curtain (valve port opening) should be fully closed. Before closing curtain, note existing valve curtain position. A good method of indicating initial curtain position is to count and record the number of turns required on the adjusting screw to fully close the curtain. Turning the adjusting screw back open the same number of turns will set curtain back to its initial position.

To adjust curtain remove adjusting knob cover, slightly loosen packing nut, turn adjusting screw knob clockwise to open curtain or counterclockwise to close curtain (note that on 3/8" and 1/2" sized valves, turn knob clockwise to close curtain or counterclockwise to open curtain). This raises or lowers the curtain in the core, altering valve port opening.

After application of the lubricant, the valve core should be stroked fully open and closed several times and the curtain should be fully opened and closed before resetting back to the initial position to allow lubricant to be distributed evenly within the valve body.

After servicing, always remove the temporary grease fitting and re-install the pipe plug using proper piping practice (i.e. pipe thread sealant). Always retighten the packing nut and replace the adjusting knob cover.



STORAGE

Store valves in a dry and cool environment, avoiding moisture and extreme temperature conditions. Valves can be stored for an indefinite period of time before commissioning into service. However, it is always good practice and is highly recommended that before commissioning any valve into service that the valve be thoroughly inspected for proper functionality and adequate lubrication. Valves stored in excess of six months will likely require re-lubrication. To inspect valve, manually adjust the curtain adjusting screw opened and closed. Open and close the core by stroking valve 100% while visually inspecting the internals through the inlet and outlet ports of the valve to assure proper operation and observe adequate lubrication. Address any issues that may be observed before commissioning into service.

To order, specify:

R400-6117-C	14.5 oz. cartridge of lithium based EP2 valve lubricant
R400-4195	1/8" NPT Alemite straight grease fitting
R400-4216	1/8" NPT Alemite 90 degree grease fitting (used on 1008A-U valves with U bracket)

Special lubricants:

R400-6205	5.3 oz. cartridge of Dow Corning #111 compound for use with steam
R400-6205-C	14.1 oz. cartridge of Dow Corning #111 compound for use with steam
R400-6155	14 oz. tube lithium #2 complex grease for use with corrosive gases

GREASE and GREASE FITTINGS

Grease fittings and grease are available from North American. Grease comes in a cartridge for insertion into a grease gun, which helps avoid waste and contamination.

LUBRICATION INSTRUCTIONS for 1008A-C and 1010A-C VALVES for OXYGEN SERVICE

Scope

This section has been created as a guide for the lubrication requirements for North American 1008A-C and 1010A-C series valves for use in oxygen service. Only *qualified technical personnel* should attempt to service this valve.

WARNING: All service required on any oxygen handling equipment should only be performed by trained and experienced personnel familiar with the potential hazards associated with oxygen systems. This document does not attempt to address these requirements. The safe operation and maintenance of oxygen systems are the responsibility of the users who should obtain qualified professional training prior to attempting to perform service.

Type of lubrication

1008A-C and 1010A-C adjustable port valves for oxygen use are factory lubricated with Perfluoro Polyether grease (PFPE). PFPE is a synthetic based lubricant designed for difficult chemical environments. It is completely insoluble in most solvents and non-reactive in the presence of concentrated oxygen and chlorine.

WARNING: If servicing for lubrication is required, use only an approved oxygen compatible lubricant such as PFPE (North American part number R400-6415) using accepted and approved oxygen clean equipment and environment standards.

Lubrication procedures

To avoid any possible contamination of an oxygen clean component, these valves do not come with grease fittings for field lubrication due to the strict standards required to prevent contamination that could lead to potential hazards. Users must supply their own temporary oxygen-approved grease fitting and greasing tools or remove valve from service to gain access for lubrication through the inlet/outlet ports. The valves are supplied with a 1/8" NPT pipe plug in the greasing port. If a grease fitting is to be used for greasing, the pipe plug needs to be removed and a oxygen-approved, properly cleaned, grease fitting and properly cleaned grease gun used.

When applying the oxygen-approved lubricant to the valve core and curtain assembly, the curtain (valve port opening) should be fully closed. Before closing curtain, note existing valve curtain position. A good method of indicating initial curtain position is to count and record the number of turns required on the adjusting screw to fully close the curtain. Turning the adjusting screw back open the same number of turns will set curtain back to its initial position.

To adjust curtain, remove adjusting knob cover, slightly loosen packing nut, turn adjusting screw knob clockwise to open curtain or counterclockwise to close curtain (note that on $\frac{3}{8}$ " and $\frac{1}{2}$ " size valves, turn knob clockwise to close curtain or counterclockwise to open curtain). This raises or lowers the curtain in the core, altering valve port opening.

After application of the lubricant, the valve core should be stroked fully open and closed several times and the curtain should be fully opened and closed before resetting back to the initial position to allow lubrication to be distributed evenly within the valve body.

Always retighten the packing nut and replace the adjusting knob cover after servicing. If a grease fitting was used, it should be removed after servicing and replaced with a cleaned $\frac{1}{8}$ " NPT pipe plug using proper piping practice (i.e. oxygen-approved thread compound such as LA-CO Oxytite pipe thread sealant with PTFE for oxygen. North American part number R002-9820).

Frequency

Frequency of lubrication depends entirely on the specific application, type, quality and composition of the O_2 gas, as well as frequency of operation, and operating conditions including temperature, pressure and fluid velocity. We recommend that it is good practice to lubricate "at least" 4 times per year. It is possible that high velocities can carry away some of the lubrication over time. All of these variables need to be considered when determining required lubrication frequency. In rare cases some applications require monthly or even weekly lubrication to help reduce servicing for repair of the valve.

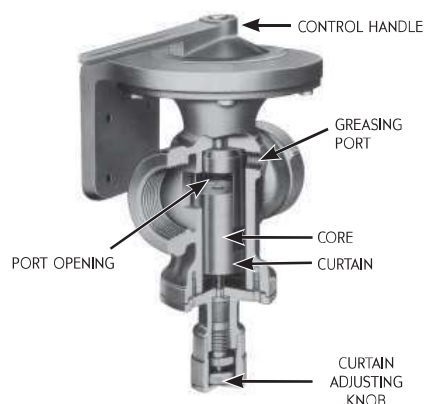
WARNING: If lubrication is desired, servicing must be performed by a trained and approved technician familiar with oxygen service safety requirements.

Storage

Store valve in a properly sealed bag and in a dry, cool environment, avoiding moisture and extreme temperature conditions and any possible contamination. Valves can be stored for an indefinite period of time before commissioning into service. However, it is always good practice and is highly recommended that, before commissioning any valve into service that the valve be thoroughly inspected for proper functionality and adequate lubrication. Valves stored in excess of 6 months will likely require re-lubrication. To inspect valve, manually adjust the curtain adjusting screw opened and closed. Open and close the core by stroking valve 100% while visually inspecting the internals through the inlet and outlet ports of the valve to assure proper operation and observe adequate lubrication. Address any issues that may be observed before commissioning into service.

To order, specify:

R400-6415 Per fluoro polyether grease for oxygen service
(14oz. tube)



1008A REPLACEMENT PARTS

Starting in October 2009, the 1008 series valves were replaced with the redesigned 1008A series valves.

The differences between the 1008A and the 1008 valve designs are as follows:

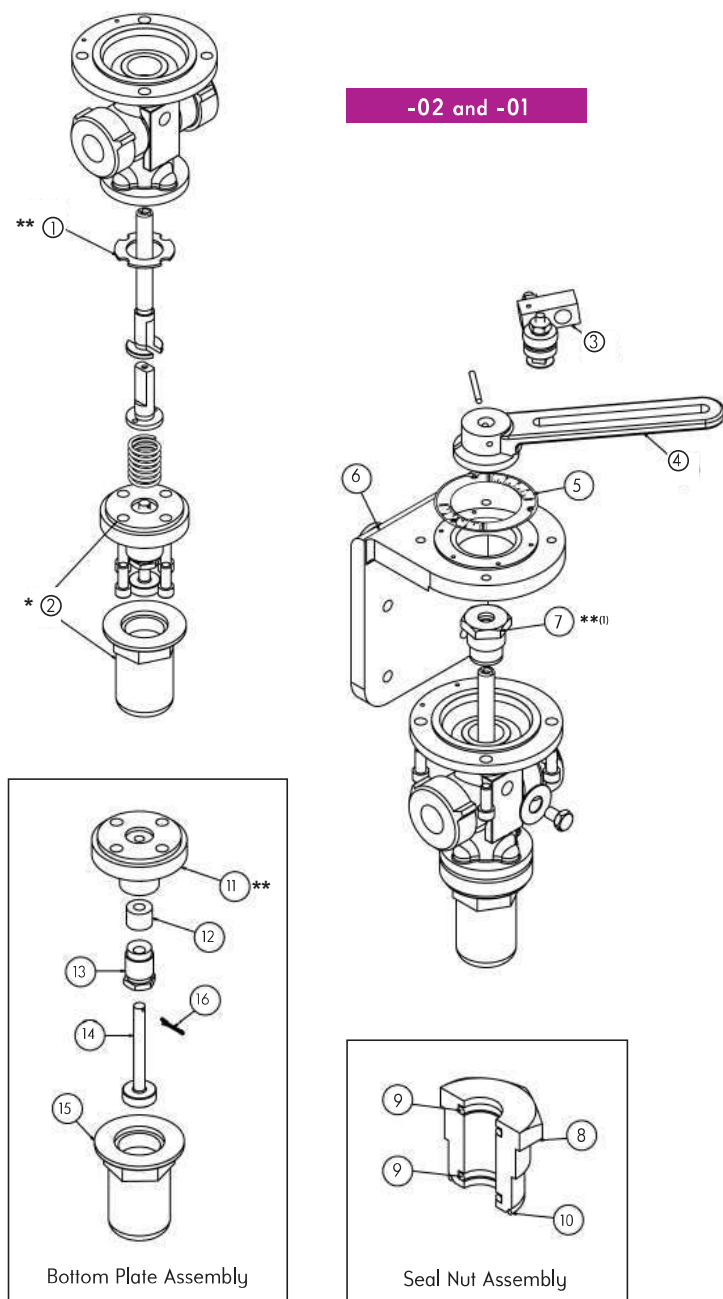
1. **The bottom plate and bottom plate gasket.** The old-style flat faced bottom plate and bottom plate gasket have been replaced with new raised face bottom plate and bottom plate gasket.
2. The **shaft seal with shaft seal nut.** The old style U-cup and U-cup retaining nut have been replaced by O-rings and O-ring seal nut.

The old-style 1008 **bottom plates and bottom plate gaskets** as well as the old-style **1008 U-cup shaft seal nuts and U-cup**

shaft seals are no longer available as replacement parts. The new 1008A parts have been designed to fit into an old-style 1008 valve and are required to repair any old-style 1008 series valve. However it is important to note that the old-style U-cup nuts do not work with the new O-rings. The old bottom plates do not work with the new bottom plate gaskets.

If an old-style 1008 bottom plate gasket or shaft seal requires replacement, the **new bottom plate and bottom plate gasket** or the new **shaft seal nut and O-ring seals** are required to repair and upgrade the 1008 series to be like the new 1008A series design.

The following table indicates the items required to repair and upgrade an old-style 1008 series valve.



PARTS LIST		-02 (3/8")	-01 (1/2")
1 **	Gasket	2-111323-11	2-111323-11
2 *	Bottom Plate Adjusting Screw assembly	2-11348-1	2-11348-1
3	Swivel Block Assembly	2-5021-2	2-5021-2
4	Handle	2-3706-10	2-3706-1
5	Indicator Dial	2-4349-1	2-4349-1
6	L Bracket Optimal U Bracket	2-05016-1 2-0588-1	2-0516-1 2-0588-1
7 ** ⁽¹⁾	Seal Nut assembly Standard (with O rings)	2-11334-1	2-11334-1
	Seal Nut assembly for Steam (with O rings)	2-11334-2	2-11334-2
SEAL NUT ASSEMBLY			
8	Seal Nut Standard (less O rings)	2-11283-1	2-11283-1
9	Inner O Rings Standard (2) required	R520-4080-V	R520-4080-V
10	Inner O rings Steam (2) required	R520-4080-EP	R520-4080-EP
	Outer O Ring Standard	R520-4115-V	R520-4115-V
	Outer O Ring Steam	R520-4115-EP	R520-4115-EP
BOTTOM PLATE ADJUSTING SCREW ASSEMBLY			
11 **	Bottom Plate	2-11324-1	2-11324-1
12	Packing	2-6563-1	2-6563-1
13	Packing Nut	2-0773-6	2-0773-6
14	Curtain Adjusting Screw	2-0450-1A	2-0450-1A
15	Adjusting Screw Cover	2-0449-1	2-0449-1
24	Cotter Pin	R570-0525-S	R570-0525-S

* The new bottom plate required to upgrade the 1008 series valve is available as a loose item or it comes included in the bottom plate adjusting screw assembly.

** Replacement parts required to upgrade an old-style 1008 series valve into a 1008A series valve. These parts are required to repair the shaft seal or bottom plate gasket seal on an old-style 1008 series valve (see Replacement Parts info on this sheet).

(1) This item must be removed with the handle facing down.

Note: Items with no balloon are not field replaceable.

1008A PART LIST

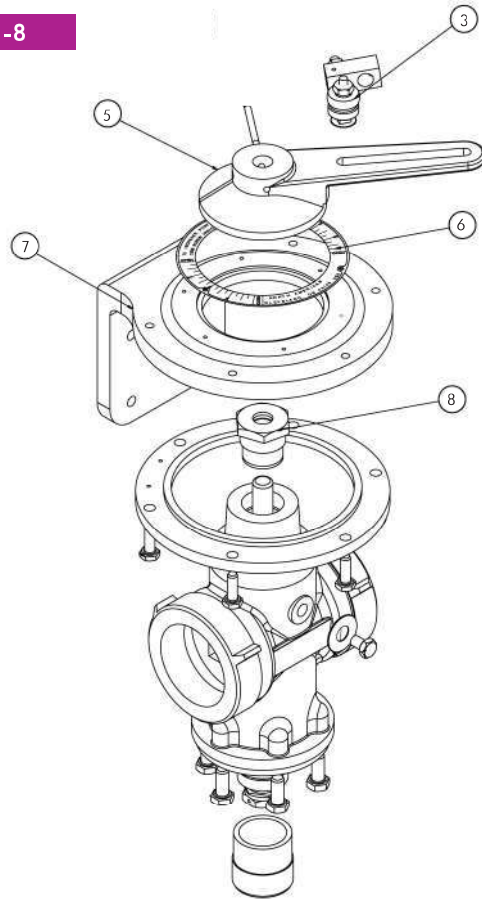
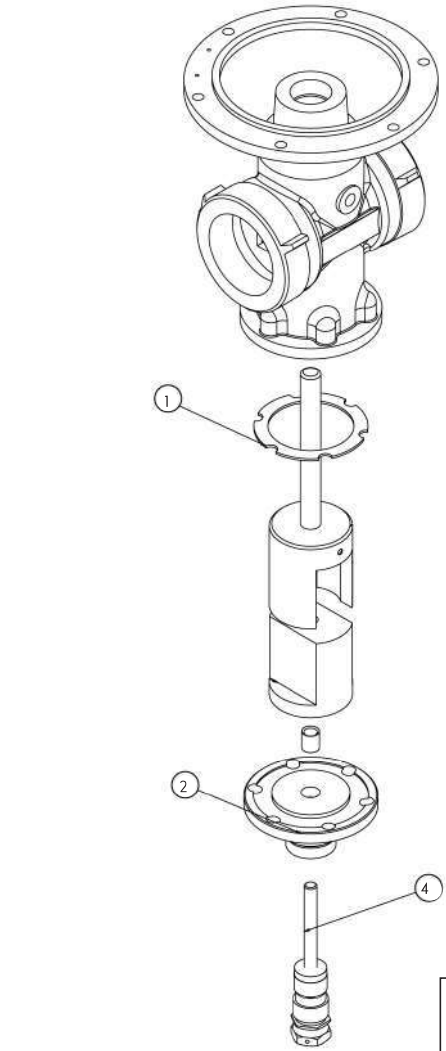
PARTS LIST		- 0 (3/4")	- 1 (1")	- 2 (1-1/4")	- 3 (1-1/2")	- 4 (2")	- 5 (2-1/2")	- 6 (3")	- 7 (4")	- 8 (6")
1	Gasket **	2-11323-11	2-11323-12	2-11323-13	2-11323-14	2-11323-15	2-11323-16	2-11323-17	2-11323-18	2-11323-19
2	Bottom Plate **	2-11325-2	2-11326-2	2-11327-2	2-11328-2	2-11329-2	2-11330-2	2-11331-2	2-11332-2	2-11333-2
3	Swivel Block assembly	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2
4	Adjusting Screw assembly	2-4888-1	2-4888-1	2-4888-1	2-4888-2	2-4888-2	2-4888-2	2-4888-3	2-4888-3	2-4888-4
5	Handle	2-3706-1	2-3706-1	2-3707-1	2-3707-1	2-3707-1	2-3707-2	2-3707-2	2-3707-2	2-3707-2
6	Indicator Dial	2-4348-1	2-4348-1	2-4347-1	2-4347-1	2-4347-1	2-4347-1	2-4347-1	2-4347-1	2-4347-1
7	L Bracket Optional U Bracket	2-0516-1 2-0588-1	2-0516-1 2-0588-1	2-0587-1 2-0589-1	2-0517-1 2-0590-1	2-0517-1 2-0590-1	2-0518-1 2-0591-1	2-0518-1 2-0591-1	2-0518-1 2-0591-1	2-0518-1 2-0591-1
8	Seal Nut assembly Standard ** ⁽¹⁾ (with O rings)	2-11334-1	2-11334-1	2-11335-1	2-11335-1	2-11335-1	2-11336-1	2-11336-1	2-11336-1	2-11336-1
	Seal Nut assembly for Steam ** ⁽¹⁾ (with O rings)	2-11334-2	2-11334-2	2-11335-2	2-11335-2	2-11335-2	2-11336-2	2-11336-2	2-11336-2	2-11336-2
SEAL NUT ASSEMBLY										
9	Seal Nut Standard (less O rings)	2-11283-1	2-11283-1	2-11284-1	2-11284-1	2-11284-1	2-11285-1	2-11285-1	2-11285-1	2-11285-1
10	Inner O Ring Standard (2) req'd	R520-4080-V	R520-4080-V	R520-4102-V	R520-4102-V	R520-4102-V	R520-4140-V	R520-4140-V	R520-4140-V	R520-4140-V
	Inner O Ring Steam (2) req'd	R520-4080-EP	R520-4080-EP	R520-4102-EP	R520-4102-EP	R520-4102-EP	R520-4140-EP	R520-4140-EP	R520-4140-EP	R520-4140-EP
11	Outer O Ring Standard	R520-4115-V	R520-4115-V	R520-4166-V	R520-4166-V	R520-4166-V	R520-4207-V	R520-4207-V	R520-4207-V	R520-4207-V
	Outer O Ring Steam	R520-4115-EP	R520-4115-EP	R520-4166-EP	R520-4166-EP	R520-4166-EP	R520-4207-EP	R520-4207-EP	R520-4207-EP	R520-4207-EP
ADJUSTING SCREW ASSEMBLY										
12	Curtain Adjusting Screw	2-0724-1A	2-0724-1A	2-0724-1A	2-4890-1	2-4890-1	2-4890-1	2-0792-1A	2-0792-1A	2-0783-1A
13	Collar	N/A	N/A	N/A	2-4889-1	2-4889-1	2-4889-1	2-0794-1A	2-0794-1A	2-0785-1A
14	Packing	2-6563-1	2-6563-1	2-6563-1	2-6563-2	2-6563-2	2-6563-2	2-6563-3	2-6563-3	2-6563-4
15	Packing Nut	2-0773-6	2-0773-6	2-0773-6	2-0773-3	2-0773-3	2-0773-3	2-0773-4	2-0773-4	2-0773-1
16	Adjusting Screw Knob	2-0725-1	2-0725-1	2-0725-1	2-0762-1	2-0762-1	2-0762-1	2-0793-1	2-0793-1	2-0784-1
17	Collar Roll Pin	N/A	N/A	N/A	R570-4130-S	R570-4130-S	R570-4130-S	R570-4180-S	R570-4180-S	R570-4220-S
18	Knob Roll Pin	R570-4130	R570-4130	R570-4130	R570-4135	R570-4135	R570-4135	R570-4190	R570-4190	R570-4230
19	Companion Flange	-	-	-	-	-	-	-	2-0855-1 (2 req'd)	2-3730-2 (2 req'd)
20	Flange Gasket	-	-	-	-	-	-	-	2-1295-4 (2 req'd)	2-1295-5 (2 req'd)
21	Flange Bolt	-	-	-	-	-	-	-	R066-3750 (10 req'd)	R066-3750 (12 req'd)
22	Flange Nut	-	-	-	-	-	-	-	R510-2399 (10 req'd)	R510-2399 (12 req'd)

** Replacement parts required to upgrade an old-style 1008 series valve into a 1008A series valve. These parts are required to repair the shaft seal or bottom plate gasket seal on an old-style 1008 series valve (see Replacement Parts info on this sheet).

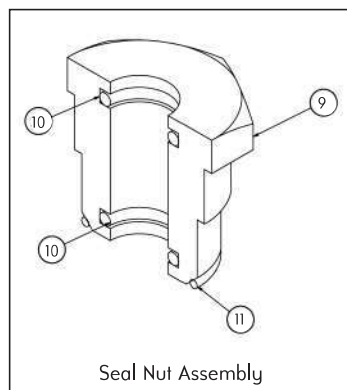
(1) This item must be removed with the handle facing down.

1008A PARTS LIST, cont.

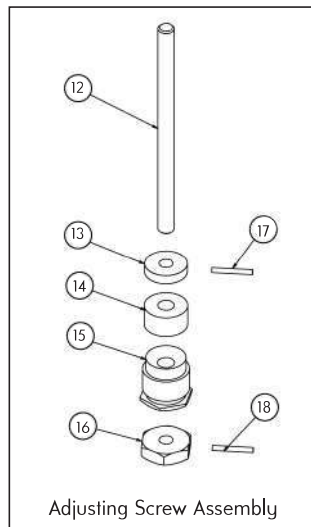
-0 through -8



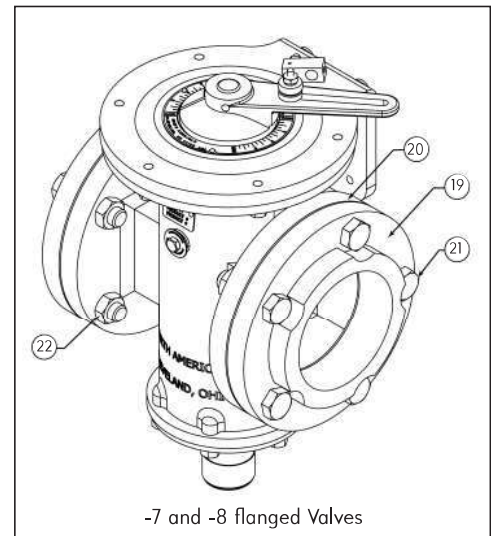
Note: Items with no balloon are not field replaceable.



Seal Nut Assembly



Adjusting Screw Assembly



-7 and -8 flanged Valves

WARNING: Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Components in combustion systems may exceed 160°F (71°C) surface temperatures and present hot surface contact hazard. Fives North American Combustion, Inc. suggests the use of combustion systems that are in compliance with all Safety Codes, Standards, Regulations and Directives; and care in operation.

1008A-C/1010A-C Parts List

Starting in October 2009, the 1010/1008 series valves were replaced with the redesigned 1010A/1008A series valves. The differences between the 1010A/1008A and the 1010/1008 valve designs are as follows:

1. The **bottom plate and bottom plate gasket**. The old-style flat faced bottom plate and bottom plate gasket have been replaced with new raised face bottom plate and bottom plate gasket.
2. The **shaft seal with shaft seal nut**. The old-style U-cup and U-cup retaining nut have been replaced by O-rings and O-ring seal nut.

The old-style 1010/1008 **bottom plates and bottom plate gaskets** as well as the old-style **1010/1008 U-cup shaft seal nuts and U-cup shaft seals** are no longer available as replacement parts. The new 1010A/1008A parts have been designed to fit into an old-style 1010/1008

valve and are required to repair any old-style 1010/1008 series valve. However it is important to note that the old-style U-cup nuts do not work with the new O-rings. The old-style bottom plates do not work with the new bottom plate gaskets.

If an old-style 1010/1008 bottom plate gasket or shaft seal requires replacement, the **new bottom plate and bottom plate gasket** or the new **shaft seal nut and O-ring seals** are required to repair and upgrade the 1010/1008 series to be like the new 1010A/1008A series design.

The parts list table indicates the items required to repair and upgrade an old-style 1010/1008 series valve.

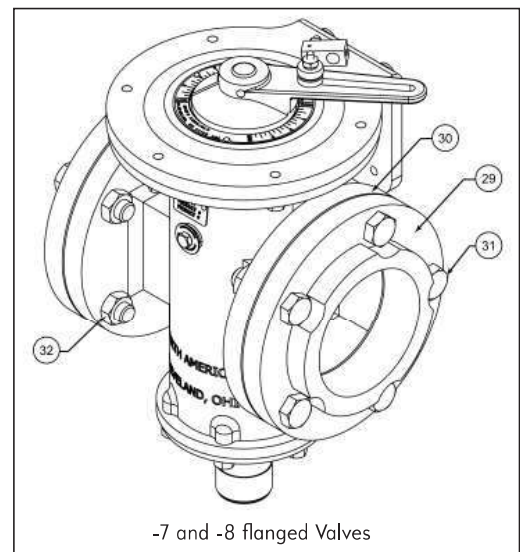
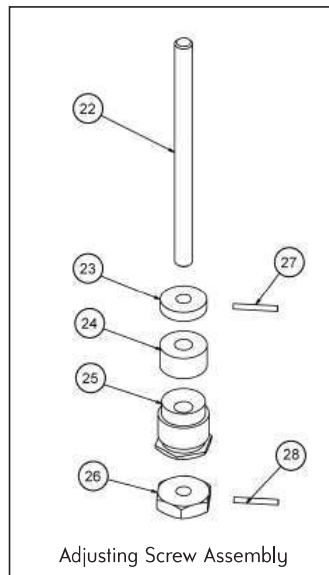
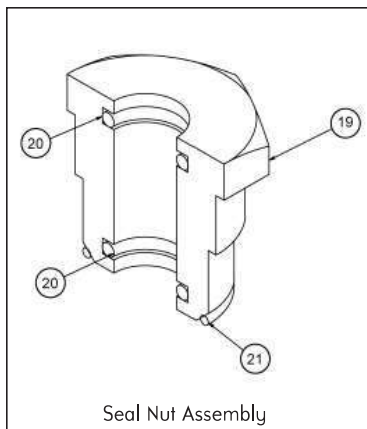
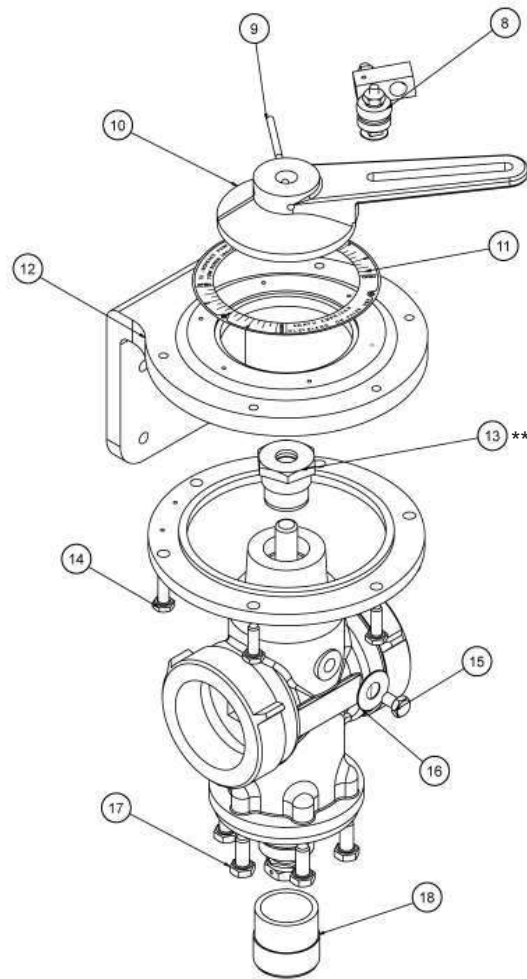
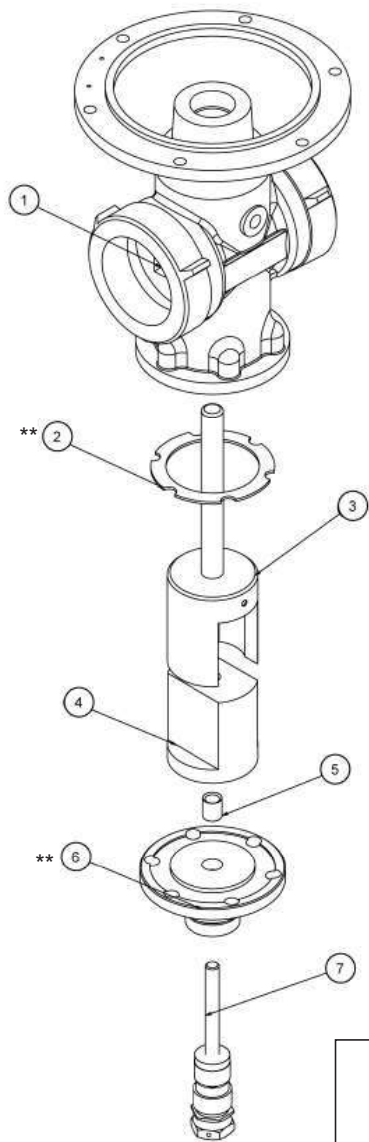
		1008A/1010A	1008A/1010A	1008A/1010A	1008A/1010A	1008A/1010A	1008A/1010A	1008A/1010A	1008A only	1008A only
PARTS LIST 1010A-C and 1008A-C Oxygen										
		-0 (3/4")	-1 (1")	-2 (1-1/4")	-3 (1-1/2")	-4 (2")	-5 (2-1/2")	-6 (3")	-7 (4")	-8 (6")
1	Body 1008A-C	2-0679-2	2-1685-2	2-0738-2	2-0774-2	2-0775-2	2-0777-2*	2-0796-2*	2-0787-2*	2-0778-2
	Body 1008A-F-C	N/A	N/A	N/A	N/A	N/A	2-11768-1	2-11769-1	2-11770-1	N/A
	Body 1010A-C	2-0679-3	2-1685-3	2-0738-3	2-0774-3	2-0775-3	2-0777-3	2-0796-3	N/A	N/A
2 **	Gasket (**supplied clean for O ₂ service)	2-11323-1	2-11323-2	2-11323-3	2-11323-4	2-11323-5	2-11323-6	2-11323-7	2-11323-8	2-11323-9
3	Core and Shaft Assembly 1008A-C	2-11436-1	2-11436-2	2-11436-3	2-11436-4	2-11436-5	2-11436-6	2-11436-7	2-11436-8	2-11436-9
	Core and Shaft Assembly 1010A-C	2-11436-11	2-11436-12	2-11436-13	2-11436-14	2-11436-15	2-11436-16	2-11436-17	N/A	N/A
4	Curtain 1008A-C	2-8089-3	2-8016-3	2-8017-3	2-8018-3	2-8019-3	2-11740-1	2-11750-1	2-11752-1	2-8023-1
	Curtain 1010A-C	2-8089-2	2-8016-2	2-8017-2	2-8018-2	2-8019-2	2-8020-2	2-8021-2	N/A	N/A
5	Spacer	2-7750-1	2-7750-1	2-7750-1	2-7750-2	2-7750-2	2-7750-2	2-7750-3	2-7750-3	2-7750-4
6 **	Bottom Plate 1008A-C	2-11325-2	2-11326-2	2-11327-2	2-11328-2	2-11329-2	2-11330-2	2-11331-2	2-11332-2	2-11333-2
	Bottom Plate 1010A-C	2-11325-3	2-11326-3	2-11327-3	2-11328-3	2-11329-3	2-11330-3	2-11331-3	2-11332-3	2-11333-3
7	Adjusting Screw ass'y	2-4888-1	2-4888-1	2-4888-1	2-4888-2	2-4888-2	2-4888-2	2-4888-3	2-4888-3	2-4888-4
8	Swivel Block ass'y	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2	2-5021-2
9	Handle Roll Pin	R570-4195	R570-4195	R570-4250	R570-4250	R570-4250	R570-4450	R570-4450	R570-4450	R570-4450
10	Handle	2-3706-1	2-3706-1	2-3707-1	2-3707-1	2-3707-1	2-3707-2	2-3707-2	2-3707-2	2-3707-2
11	Indicator Dial	2-4348-1	2-4348-1	2-4347-1	2-4347-1	2-4347-1	2-4347-1	2-4347-1	2-4347-1	2-4347-1
12	L Bracket	2-0516-1	2-0516-1	2-0587-1	2-0517-1	2-0517-1	2-0518-1	2-0518-1	2-0518-1	2-0518-1
	Optimal U Bracket	2-0588-1	2-0588-1	2-0589-1	2-0590-1	2-0590-1	2-0591-1	2-0591-1	2-0591-1	2-0591-1
13 **	Seal Nut Assembly (with O rings) (**supplied clean for O ₂ service)	2-11334-3C	2-11334-3C	2-11335-3C	2-11335-3C	2-11335-3C	2-11336-3C	2-11336-3C	2-11336-13C	2-11336-3C
14	Hex Bolt	R765-2070 (4) req'd	R765-2070 (4) req'd	R066-2330-C (4) req'd	R066-2330-C (6) req'd	R066-2330-C (6) req'd	R066-2920-C (6) req'd	R066-2620-C (6) req'd	R066-2920-C (6) req'd	R066-2940-C15 (6) req'd
	Hex Head Pipe Plug	R950-7814-S	R950-7814-S	R950-7814-S	R950-7814-S	R950-7814-S	R950-7814-S	R950-7814-S	R950-7814-S	R950-7814-S
16	Lubrication Tag	15-0068-1	15-0068-1	15-0068-1	15-0068-1	15-0068-1	15-0068-1	15-0068-1	15-0068-1	15-0068-1
17	Hex Bolt	R765-2070 (4) req'd	R765-2070 (4) req'd	R066-2610-C (4) req'd	R066-2620-C (6) req'd	R066-2620-C (6) req'd	R066-2920-C (6) req'd	R066-2920-C (6) req'd	R066-2920-C (8) req'd	R066-2920-C (8) req'd
18	Adjusting Screw Cover	2-0682-1	2-0682-1	2-0682-1	2-0760-1	2-0760-1	2-0760-1	2-0791-1	2-0791-1	2-0782-1
SEAL NUT ASSEMBLY										
19	Seal Nut Standard (less O Rings)	2-11283-1	2-11283-1	2-11284-1	2-11284-1	2-11284-1	2-11285-1	2-11285-1	2-11285-1	2-11285-1
20	Inner O Ring - (2) req'd	R520-4080-V	R520-4080-V	R520-4102-V	R520-4102-V	R520-4102-V	R520-4140-V	R520-4140-V	R520-4140-V	R520-4140-V
21	Outer O Ring	R520-4115-V	R520-4115-V	R520-4166-V	R520-4166-V	R520-4166-V	R520-4207-V	R520-4207-V	R520-4207-V	R520-4207-V
ADJUSTING SCREW ASSEMBLY										
22	Curtain Adjusting Screw	2-0724-1A	2-0724-1A	2-0724-1A	2-4890-1	2-4890-1	2-4890-1	2-0792-1A	2-0792-1A	2-0783-1A
23	Collar	N/A	N/A	N/A	2-4889-1	2-4889-1	2-4889-1	2-0794-1A	2-0794-1A	2-0785-1A
24	Packing	2-6563-1	2-6563-1	2-6563-1	2-6563-2	2-6563-2	2-6563-2	2-6563-3	2-6563-3	2-6563-4
25	Packing Nut	2-0773-6	2-0773-6	2-0773-6	2-0773-3	2-0773-3	2-0773-3	2-0773-4	2-0773-4	2-0773-1
26	Adjusting Screw Knob	2-0725-1	2-0725-1	2-0725-1	2-0762-1	2-0762-1	2-0762-1	2-0793-1	2-0793-1	2-0784-1
27	Collar Roll Pin	N/A	N/A	N/A	R570-4130-S	R570-4130-S	R570-4130-S	R570-4180-S	R570-4180-S	R570-4220-S
28	Knob Roll Pin	R570-4130	R570-4130	R570-4130	R570-4135	R570-4135	R570-4135	R570-4190	R570-4190	R570-4230
29	Companion Flange	-	-	-	-	-	-	-	2-0855-1 (2) req'd	2-3730-2 (2) req'd
30	Flange Gasket	-	-	-	-	-	-	-	2-1295-4 (2) req'd	2-1295-5 (2) req'd
31	Flange Bolt	-	-	-	-	-	-	-	R066-3750 (10) req'd	R066-3750 (12) req'd
32	Flange Nut	-	-	-	-	-	-	-	R510-2399 (10) req'd	R510-2399 (12) req'd

* These bodies are obsolete and have been replaced by 1008A-F bodies.

** Replacement parts required to upgrade an old-style 1010/1008 series valve into a 1010A/1008A series valve. These parts are required to repair the shaft seal or bottom plate gasket seal on an old-style 1010/1008 series valve (see Replacement Parts info on this sheet).

*** Item supplied in sealed plastic bag, de-greased and cleaned for oxygen service.

WARNING: All service and any part replacement required on any oxygen handling equipment should only be performed by trained and experienced personnel familiar with the potential hazards associated with oxygen systems and component and part cleaning requirements. The safe operation and maintenance of oxygen systems are the responsibility of the users who should obtain qualified professional training prior to attempting to perform service.

**CONTACT**

fna.sales@fivesgroup.com

T +1 800 626 3477 - F +1 216 373 4237

Fives North American Combustion, Inc.
 4455 East 71st Street - Cleveland, OH 44105 - USA
www.fivesgroup.com



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