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INSTRUCTION AND MAINTENANCE MANUAL

HP700 HIGH PRESSURE REGULATOR
HIGH PURITY MODEL

These instructions should be read carefully before installation or maintenance.

GENERAL

The HP700 Series Regulator is a two stage, spring loaded pressure reducing regulator. This HIGH PURITY, model is designed to provide accurate regulation of corrosive and high purity gases.

The HP700 uses soft main valve seats for Helium leak tight shut off in dead ended applications. The 316 stainless steel diaphragm provides good pressure control sensitivity.

MATERIALS OF CONTRUCTIONS

The HP700 will operate with any fluid (liquid or gas) which is compatible with the materials of construction. To identify the materials of construction, refer to Control Engineering Data contained on Page 4.

Body	Brass/316SS/316SS/N.A.C.E.
Bonnet	Brass/Plated Brass
Main Valve Seat	Kel-F/Teflon (All Kel-F design optional)
Diaphragm and Trim	316 Stainless Steel
Inner Friction Bushing	PFA

REGULATOR CLEANING

The HP700 Series High Pressure Regulator is cleaned to ITT Conoflow Specification ES8A 01 294.

OXYGEN SERVICE

Specification of materials in regulators used for oxygen service is the USER'S RESPONSIBILITY. Cleaning for oxygen service (Per ES8A 01 297) to 3500 PSIG (24.20 MPa) is supplied by ITT Conoflow at no additional cost. For special cleaning requirements the customer must supply specification for the desired level of cleaning. Cost will be advised prior to performing the cleaning operation.

CAUTION: Maximum Supply Pressure 3500 PSIG(24.20 MPa).

An internal filter screen is provided in the inlet ("IN") port only to stop random contamination resulting from installation. An auxiliary filter is recommended for all the but the cleanest fluid. Gaseous fluid must be free of excessive moisture to prevent internal icing or condensation during operation.

OUTLET PRESSURE RANGES

OPTION CODE	RANGE
"A"	0- 25 PSIG(.173 MPa)
"B"	0- 50 PSIG(.345 MPa)
"C"	0-100 PSIG(.690 MPa)
"D"	0-150 PSIG(1.04 MPa)
"E"	0-250 PSIG(1.73 MPa)

PORTING CONFIGURATIONS

There are four (4) 1/4" NPTF connections on the HP700. The supply connection port is labeled "IN" and the supply gauge port is labeled "HI". The outlet port is labeled "OUT" and the outlet gauge port is labeled "LOW". CARE should be exercised when installing the high pressure line to assure it is connected to the inlet ("IN") port, otherwise the regulator may be changed.

Teflon thread tape is the preferred thread sealant when the regulator is installed.

OTHER PORTING CONFIGURATIONS AND STYLES ARE AVAILABLE. REFER TO CONTROL ENGINEERING DATA ON PAGE 4 FOR ADDITIONAL INFORMATION.

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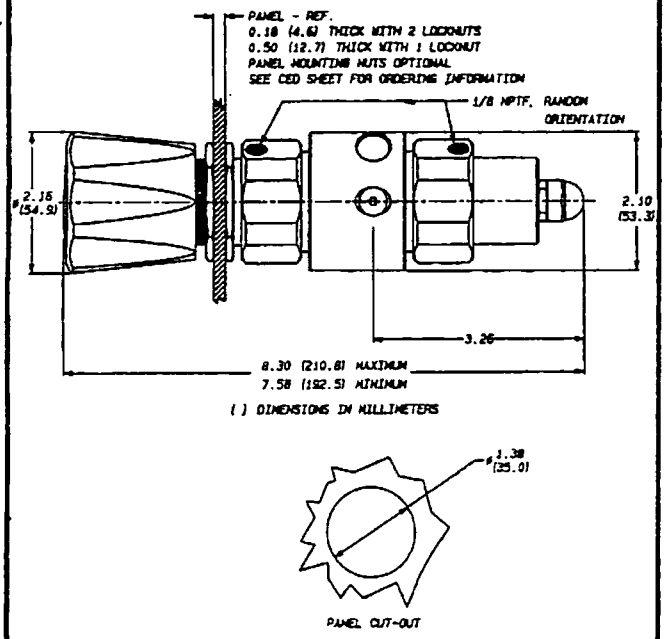
NOTES:

PANEL MOUNTING



INSTALLATION

The HP700 can be line panel mounted (no nuts) and panel mounted with nuts. For line mounted applications refer to porting configurations for proper orientation of ports.

PANEL MOUNTING

1. Remove handwheel, knob or "T" Bar and insert regulator from rear of panel.
2. Projection of regulator through panel may be controlled by adjustment of panel mounting nuts.
3. Replace handwheel, knob or "T" bar handle.
4. Connect inlet, outlet and gauge ports.

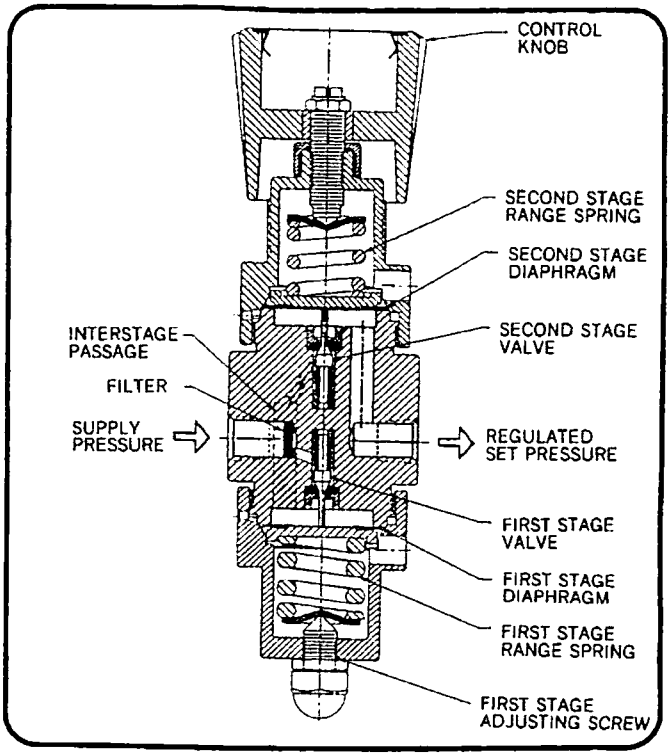
PRINCIPLE OF OPERATION

The HP700 is a self-contained, spring-loaded, two-stage, pressure reducing regulator. Turning the control knob clockwise will increase the force on the second stage range spring and, in turn, increase the outlet set pressure. Conversely, turning the control knob counterclockwise will decrease the force on the second stage range spring and, in turn, decrease the outlet set pressure. In equilibrium, the force exerted by the second stage range spring is balanced by the outlet pressure acting on the second stage diaphragm.

An unbalance between the outlet pressure and the outlet set pressure will cause a corresponding reaction in the diaphragms and valves. If the outlet pressure rises above the set pressure, the second stage diaphragm will lift, allowing the second stage valve to seat. When the second stage valve seats, the interstage pressure will equal the first stage set pressure and the first stage valve will also seat.

If the outlet pressure falls below the outlet set pressure, the force of the range spring will overcome the outlet pressure acting on the second stage diaphragm, allowing the second stage diaphragm to move down and open the second stage valve. When the second stage valve opens, the interstage pressure falls below the first stage set pressure. The unbalance in the first stage allows the first stage diaphragm to move down and unseat the first stage valve plug.

In equilibrium, both the first stage and second stage diaphragms and valve plugs assume positions which will supply the required flow while maintaining the outlet pressure.



Control Engineering Data

Control Engineering Data is intended to provide a single source from which one can determine, in detail, the full scope of the product line. In addition to materials of contruction, diaphragm and elastomer selection, it also provides all necessary data, regarding adjustment options and range selections. Control Engineering Data also provides a means of communicating by way of a code number which is fully descriptive of the product selection. All Catalog Numbers as received must contain fifteen (15) characters.

1-5 Basic Model Number

HP700 = Pressure Reducing Regulator - High Purity Diaphragm Type - Two Stage

6 Materials of Construction

Body/Bonnet/Trim

F = Brass/Brass/316 Stainless Steel

H = 316 Stainless Steel/Nickel Plated Brass/316 Stainless Steel

L = 316L SS (Welded) /Nickel Plated Brass/316 Stainless Steel - See Note 4.

J = N.A.C.E. 316L SS (Welded)/Nickel Plated Brass/316SS - See Notes 1 and 4.

R = N.A.C.E. 316SS/Nickel Plated Brass/316SS - See Note 1.

3 = 316SS/Nickel Plated Brass/316SS - See Note 3.

5 = 316L SS (Welded)/Nickel Plated Brass/316SS - See Notes 3 and 4.

NOTES:
1. National Association of Corrosion Engineers.
2. Maximum supply pressure must not exceed the maximum pressure rating of the supply connection and supply gauge connection.
3. These options are offered when a 15 Ra microinch finish is required. This finish will apply to the wetted surfaces only. Refer to price sheets for list price adder.
4. 316L Stainless Steel is offered for welded connections. Refer to position 10-11.

7-8 Elastomers & Diaphragms

Seals &Diaphragm	Main Valve Seat(s)
11 = 316 Stainless Steel	Kel-F/Teflon (Standard)
12 = 316 Stainless Steel	Kel-F/Kel-F (Optional)
13 = Elgiloy	Kel-F/Teflon
14 = Elgiloy	Kel-F/Kel-F

9 Relieving Options

R = Non-relieving, captured bonnet

10-11 Inlet/Outlet/ Gauge Ports

Inlet/Outlet/2-Gauge Ports (80 degrees)

NPT Connections	Butt Welded Tubing Connections
81 = 1/4"	82 = 316L Stainless Steel 1/4" x 4" Tubing welded per port
	83 = 316L Stainless Steel 1/4" x 4" Tubing welded per port 15Ra microinch finish

Field Welded Connections - See Note 1
84 = 1/4" Butt weld preparation
85 = 1/4" Socketweld preparation

High Purity Internal Connections - See Note 5
86 = 1/4" Vacuseal - Preparation
87 = 1/4" VCR - Preparation
88 = 1/4" Ultra Seal - Preparation

10-11 Inlet/Outlet/ Gauge Ports

Butt Weld (Zero Clearance) - High Purity Connections - See Note 2
89 = 1/4" Vacuseal
8A = 1/4" VCR
8F = 1/4" Ultra Seal

Butt Weld 90 Degree Elbow - See Note 3
8H = 1/4" Butt Weld 90 Degree Elbow

NOTES:
1. Weld preparation to standard tubing tolerance.
2. Fitting(s) supplied by ITT Conoflow.
3. Fittings are installed down away from control handle.
4. All gauge port connections are 1/4" NPT.
5. Customer to supply fitting(s).

12 Mounting

N = Panel Mounting - No nuts
P = Panel Mounting (2-nut)(Optional)

13 Cleaning

A = Regulator is cleaned to ITT Conoflow Specification ES8A 01 294.

B = Oxygen Service. Specification of materials in regulators used for oxygen service is the user's responsiblity. Cleaning for oxygen service (Per ES8A 01 297) to 3500 PSIG(24.20 MPa) is supplied by ITT Conoflow at no additional cost.

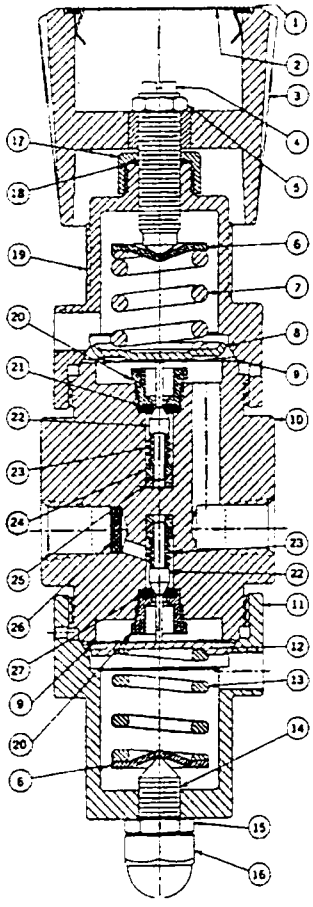
C = Customer Specified Cleaning Customer to specify the desired level of cleanliness. ITT Conoflow will advise cost prior to performing cleaning operation. Specification of materials is the USER'S RESPONSIBILITY.

14 Adjustment Selection

B = Handwheel (Large)
K = Wrench knob with locking device (Optional)
T = "T" bar handle (Optional)

15 Regulated Output Range

A = 0 - 25 PSI (0-0.172 MPa)
B = 0 - 50 PSI (0-0.345 MPa)
C = 0 -100 PSI (0-0.690 MPa)
D = 0 -150 PSI (0-1.04 MPa)
E = 0 -250 PSI (0-1.73 MPa)



PRINCIPLE OF OPERATION

Setting Limit on Maximum Inlet (Control) Pressure.

The handwheel on the HP700 Regulator can be adjusted to limit the maximum outlet pressure attainable to any value between 50 and 100% of the rated outlet pressure range. To set this limit, connect the regulator to a pressure source and a gauge to indicate the regulator outlet pressure. Apply an inlet pressure to the regulator equal to the maximum inlet pressure expected in service. Remove hole plug (2) from handwheel (3) and loosen jam nut (5) using a 9/16" socket. Using a screwdriver, turn adjusting screw (4) clockwise until the indicated outlet pressure is 5 to 10% higher than the pressure at which the limit is desired. Spin handwheel (3) clockwise until it stops against top of bonnet (19) - (On stainless steel models the handwheel seats against packing nut (17). Then turn the handwheel back about 1/8 turn counterclockwise and hold it in this position with one hand. While doing so, tighten jam nut (5) against handwheel (3) with 70 - 120 in.lbs. torque. Turn handwheel counterclockwise until it is no longer seated against the top of bonnet (19) or packing nut (17). Check by adjusting handwheel clockwise to insure that it stops when outlet pressure reaches desired maximum pressure.

FIGURE 1

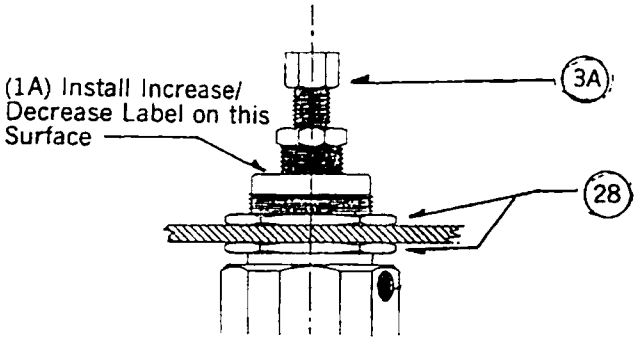
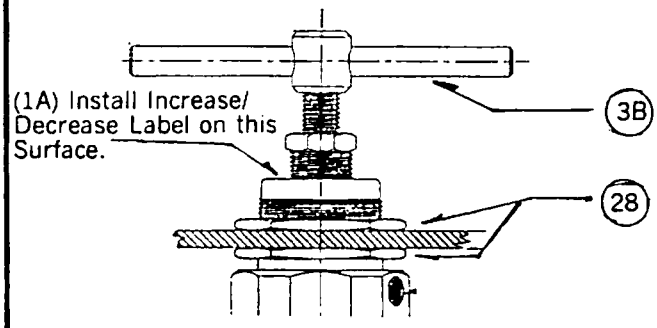


FIGURE 2



SCHEDULED MAINTENANCE

All regulators require scheduled maintenance to remove deposits left by the media and to replace parts worn or damaged as a result of use. Annual maintenance is recommended when the regulator is used under normal conditions. More frequent maintenance may be required due to the condition, cleaniless and/or corrosiveness of the media.

TOOLS REQUIRED

5/16" Wide blade screwdriver
7/16" Socket (seat glands)
9/16" Socket (jam nuts and cap nuts of first state bonnet)
9/16" Open end wrench (jam nut on wrench knob or "T" handle)
1/2" Open or box wrench (wrench knob adjustment option)
3/4" Wrench or socket (packing nut on stainless models)
1-7/8" Wrench or socket (bonnet)
Krytox 240 AB grease or equilvalent
Test Bonnet (P/N) 75070B3)

Other possible tools would be vise, tweezers, clean lint free cloth and a torque wrench.

CAUTION - MAINTENANCE

It is recommended that maintenance be performed by a person experienced in the operation and repair of high pressure regulators.

Maintenance of this unit is best performed by gripping a protruding end of a pipe fitting installed into the regulator body.

WARNING: Bleed System Pressure Prior To Removing Regulator For Servicing.

MAINTENANCE PROCEDURE

First Stage (No Handwheel)
Bonnet Disassembly

1. With regulator secured and first stage section facing upward, remove cap nut (16) and locknut (15) using a 9/16" socket.
2. Loosen adjusting screw (14) until spring load is relieved.
3. Using a 1-7/8" socket or wrench, remove bonnet (11), spring button (6), range spring (21), diaphragm backup (12) and diaphragm (9).

SECOND STAGE (Handwheel End)
Bonnet Disassembly

1. With regulator secured and the second stage section facing upward, adjust the handwheel (3) counterclockwise until the handwheel is fully disengaged. The handwheel will come out as an assembly consisting of handwheel (3), hole plug (2), adjusting screw (4) and jam nut (5).
2. On stainless steel models, remove packing nut (17) using a 3/4" wrench or socket. Also remove packing washers (8).
3. Using a 1-7/8" wrench or socket, remove bonnet (19), spring button (6), range spring (7), diaphragm backup (8) and diaphragm (9).

MAIN VALVE DISASSEMBLY (For Both Stages)

1. Remove glands (20), worn valve seat (21-first stage and 27-second stage). Use 7/16" socket to remove glands (20).
2. The main valve seats (21 and 27) may be removed from glands (20) using a sharp instrument.
3. Lift plug (22) and plug spring (23) from body (10).
4. The friction bushings (24 and 25) can be removed from the body by either just inverting the body (if they are loose) or by carefully easing them out with a long, thin instrument inserted in the center holes.

THE REGULATOR IS REASSEMBLED IN THE REVERSE ORDER OF DISASSEMBLY, OBSERVING THE FOLLOWING PRECAUTIONS:

1. Inspect all component parts and replace those worn or damaged with ITT Conoflow replacement parts. HANDLE THE BODY WITH CARE, BEING SURE NOT TO NICK THE DIAPHRAGM SEALING SURFACE.
2. ALL COMPONENT PARTS SHOULD BE CLEANED TO THE CLEANLINESS LEVEL REQUIRED FOR SAFE OPERATION WITH THE MEDIA USED. All parts in the flow stream must be free of particles which could prevent proper seating of the main valve.

FIRST STAGE ASSEMBLY
Main Valve

1. With the regulator secured and the first stage facing upward, proceed with assembly as outlined below.
2. Install filter screen (26) into inlet port of body (10) and seat it.
3. Snap seat (27) (Kel-F) into gland (20) with the countersunk side facing out. Lubricate the gland threads with Krytox grease.
4. Place an outer friction bushing (25) in the 1/4" center hole body (10) on the side closest to the inlet and outlet ports, flat side down.
5. Place plug spring (23) over plug (22) so it butts against the square shoulder of the plug. Slide an inner friction bushing (24) on the plug with the flat side against the plug spring. Holding the plug by the small diameter end, slide the three components into the 1/4" hole in the body against the outer friction bushing in the hole.
6. Place the gland and seat over the plug and screw the gland into the body. Torque the gland to 75 in.lbs.

FIRST STAGE ASSEMBLY
Bonnet Assembly

1. With the regulator secured and the first stage facing upward, place diaphragm (9) on body (10) orienting the diaphragm as shown in the illustration. Place diaphragm backup (12) on diaphragm (9). Place range spring (13) on the diaphragm backup. Lubricate and place spring button (6) on top of the range spring. Align the stack of parts to center them on the body.
2. Lubricate the bonnet threads and chamfer with Krytox grease. Place the bonnet over the stack of parts and hand tighten. Make sure the diaphragm does not move too much or the diaphragm to body seal could leak. Torque

the bonnet to 100 ft.lbs. three times to insure a correct diaphragm to body seal.
3. Lubricate and thread adjusting screw (14) into bonnet (11).
4. Install a test bonnet (75070B3) over the second stage to seal the second stage. The test bonnet provides outlet pressure equal to the interstage pressure when the second stage valve is absent. This test bonnet can be purchased as spare part from ITT Conoflow.
5. Connect an air supply source to the inlet port (500 PSIG/3.45 MPa required) and connect a gauge to the outlet port. Turn adjusting screw (14) clockwise until the second stage pressure (as indicated by the outlet pressure) reaches 275 PSIG (1.86 MPa). Tighten adjusting jam nut (15) to 70 in.lbs. Install cap nut (16) and tighten it to 60 in.lbs. Bleed the system pressure.

SECOND STAGE ASSEMBLY
Main Valve

1. With the regulator secured and the second stage facing upward, proceed with assembly as outlined below.
2. Snap second stage valve seat (21) into gland (20) with the countersunk side facing out. Lubricate the gland threads with Krytox grease.
3. Place an outer friction bushing (25) in the 1/4" center hole of body (10) in the side furthest from the inlet and outlet ports, flat side down.
4. Place plug spring (23) over plug (22) so it butts against the square shoulder of the plug. Slide an inner friction bushing (24) on the plug with the flat side against the plug spring. Holding the plug by the small diameter end, slide the three components into the 1/4" hole in the body and against the outer friction bushing in the hole.
5. Place the gland and seat over the plug and screw the gland into the body. Torque the gland to 60 in.lbs. For models with two (2) Kel-F seats (See control engineering data option code 12) torque to 75 in.lbs.

SECOND STAGE ASSEMBLY
Bonnet Assembly

1. With the regulator secured and the second stage facing upward, place diaphragm (9) on body (10) orienting the diaphragm as shown in the illustration. Place diaphragm backup (8) on diaphragm (9). Place range spring (7) on the diaphragm backup. Lubricate and place spring button (6) on top of the range spring. Align the stack of parts to center them on the body.
2. Lubricate the bonnet threads and chamfer with Krytox grease. Place the bonnet over the stack of parts and hand tighten. Make sure the diaphragm does not move too much or the diaphragm to body seal could leak. Torque the bonnet to 100 ft.lbs. three times to insure a correct diaphragm to body seal.
3. Lubricate with Krytox grease adjusting screw (4) and thread it into bonnet (19).

STAINLESS STEEL MODELS

1. Prior to adjusting control mechanism, place four packing washers (18) in packing nut (17) and screw them onto bonnet (19). Torque the packing nut to 100 in.lbs.

Prior to re-installation, the regulator should be connected to a pressure source with a media compatible with the use of the regulator and pressurized to check for internal and external leakage and operating characteristics.

NOTES:

Item No.	Description	Qty. Req'd	Part No.
1	Handwheel Label	1	76601MY
1A(1)	Increase/Decrease Label		76607MY
2	Hole Plug	1	76401SN
3	Handwheel	1	71450PP
3A(2)	Wrench Knob - OPTION CODE "K" (See Figure 1)	1	6020614
3B(2)	"T" Handle - OPTION CODE "T" (See Figure 2)	1	71140S3
4	Adjusting Screw (Second Stage)		
	Brass Models	1	71050S3
	Stainless Steel Models	1	71070S3
5	Jam Nut (Second Stage)		
	Brass Models	1	75850B3
	Stainless Steel Models	1	75850NB
6	Spring Button	2	71550S6
7(7)	Range Spring (Second Stage)		
	0-25, 50 PSIG(0-0.173, 0.345 MPa)	1	6019657
	0-100, 150 PSIG(0-0.690, 1.04 MPa)	1	6017347
	0-250 PSIG(0-1.73 MPa)	1	6019921
8(7)	Diaphragm Backup Plate (Second Stage)	1	72950S6
9(6)(7)	Diaphragm (Std. 316 Stainless Steel)	2	74150S6
10	Body	1	See Table I
11	Bonnet (First Stage)		
	Brass Models	1	71270B3
	Stainless Steel Models	1	71270NB
12	Diaphragm Backup (First Stage)	1	72950S6
13	Range Spring (First Stage)	1	6019921
14	Adjusting Screw (First Stage)	1	71071S3
15	Jam Nut (First Stage)		
	Brass Models	1	75850B3
	Stainless Steel Models	1	75850NB
16	Cap Nut		
	Brass Models	1	75870B3
	Stainless Steel Models	1	75870NB
17(3)	Packing Nut	1	71761NB
18(3)(5)	Packing Washers	4	71760TF
19	Bonnet (Second Stage)		
	Brass Model	1	71250B3
	Stainless Steel Model	1	71250NB
20	Gland	2	73350S6
21(5)	Main Valve Seat		
	Teflon	1	73650TF
	Kel-F	1	73650KF
22	Plug	2	73150S6
23	Plug Spring	2	72250S6
24(5)	Inner Friction Bushing	2	73400TF
25	Outer Friction Bushing	2	73401S6
26(6)	Screen (Inlet)	1	6072649
27(5)	Seat (First Stage)	1	73650KF
28	Panel Mounting Nut (See Figures 1 and 2)	2	76201SN
—(4)	Product Label (Not Shown)	1	76604MY

NOTES:

1. When using the Wrench Knob or "T" Handle adjustments, install Increase/Decrease Label (1A) on top of bonnet (19). See Figures 1 and 2.
2. Wrench Knob Adjustment - OPTION CODE "K"
   "T" Handle Adjustment - OPTION CODE "T"
   When installing the above adjustment mechanisms, remove hole plug (2), handwheel (3), adjusting screw (4) and jam nut (5). Before installing the Knob or "T" Handle, remove jam nut (5) from adjusting screw (4) and thread jam nut (5) onto Knob or "T" Handle threads. This jam nut will act as a locking device.
3. Packing Nut (17) Packing Washers (18) are used on stainless steel models only.
4. Product Label - When ordering a product label specify complete catalog number so proper nameplate stampings can be made.

5. Soft Goods Repair Kit - Soft goods can be purchased individually or as a kit under kit numbers:
   80700KF (For all control ranges) Consist of items 17, 21, 24 and 27.
   80701KF (For all control ranges) All Kel-F — Consist of items 17, 21, 24 and 27.
6. Repair Kits - Repair kit parts can be purchased individually or as a kit under kit number:
   81700KF (For all control ranges) Consist of soft goods kit 80700KF and items 9 and 26.
7. Control Kits - Components required to change from one range to another can be purchased individually or under spare part kit numbers:

83700CS	0- 25 PSIG	(0.173 MPa)	} Consist of items 7, 8 and 9.
83701CS	0- 50 PSIG	(0.345 MPa)	
83702CS	0-100 PSIG	(0.690 MPa)	
83703CS	0-150 PSIG	(1.040 MPa)	
83704CS	0-250 PSIG	(1.730 MPa)	

TABLE I — Inlet/Outlet/2-Gauge Ports (80°) (H)

Description	Brass	316SS	316LSS(C)	N.A.C.E.(A) 316SS	N.A.C.E. 316LSS (A)(C)	316SS 15Ra Finish (B)	316LSS 15Ra Finish (B)(C)
NPT Connections							
1/4" N.P.T. (81)	70701B3	70701S6	70701SL	L	L	L	L
Butt Welded Tubing Connections 316SS 1/4" x 4" Tubing Welded Per Port (82)	N/A	L	L	L	L	L	L
316LSS 1/4" x 4" Tubing Welded Per Port 15Ra Finish (83)	N/A	L	L	L	L	L	L
Field Welded Connection (D)							
1/4" Butt weld Preparation (84)	N/A	L	L	L	L	L	L
1/4" Socket weld Preparation (85)	N/A	L	L	L	L	L	L
High Purity Internal Connections (J)							
1/4" Vacuseal-Preparation (86)	N/A	L	L	L	L	L	L
1/4" VCR-Preparation (87)	N/A	L	L	L	L	L	L
1/4" UltraSeal-Preparation (88)	N/A	L	L	L	L	L	L
Butt Weld (Zero Clearance) High Purity Connections (E)							
1/4" Vacuseal (89)	N/A	L	L	L	L	L	L
1/4" VCR (8A)	N/A	L	L	L	L	L	L
1/4" Ultra Seal (8F)	N/A	L	L	L	L	L	L
Butt Weld 90 Degree Elbow							
1/4" Butt Weld 90° Elbow (8H)(F)	N/A	L	L	L	L	L	L

N/A - Not Available ( ) Control Engineering Data Code

NOTES:
A. National Association of Corrosion Engineers
B. 15 Ra micro inch finishes will apply to wetted surfaces only.
C. 316 L Stainless Steel is offered for welded connections.
D. Weld preparation to standard tubing tolerance.
E. Fitting(s) supplied by ITT Conoflow
F. Fittings are installed down away from control handle.
H. All gauge ports are 1/4" NPT.
J. Customer to supply fitting(s).
L. Part number to be assigned.

TROUBLE SHOOTING

When preforming necessary corrective action in the following operations, refer to the MAINTENANCE section for the necessary procedure.

PROBLEM:

The regulated pressure continues to increase after locking up without a change in the control mechanism position.

POSSIBLE CAUSE:

Main valve seat (21) in the second stage needs replacement, follow main valve disassembly and second stage main valve assembly.

PROBLEM:

Leakage through or around the edge of the bonnets.

POSSIBLE CAUSE:

Insufficient torque on the bonnets (11 and 19), re-torque bonnets per first and second stage bonnet assembly. If leakage persist, disassemble regulator per instructions and inspect for nicks and scratches on the radius where the diaphragm seats against the body. Replace body if nicked. Replace diaphragm (9) and reassemble regulator.

PROBLEM:

Regulated pressure drops off sharply even when the flow is within regulator capabilities.

POSSIBLE CAUSE:

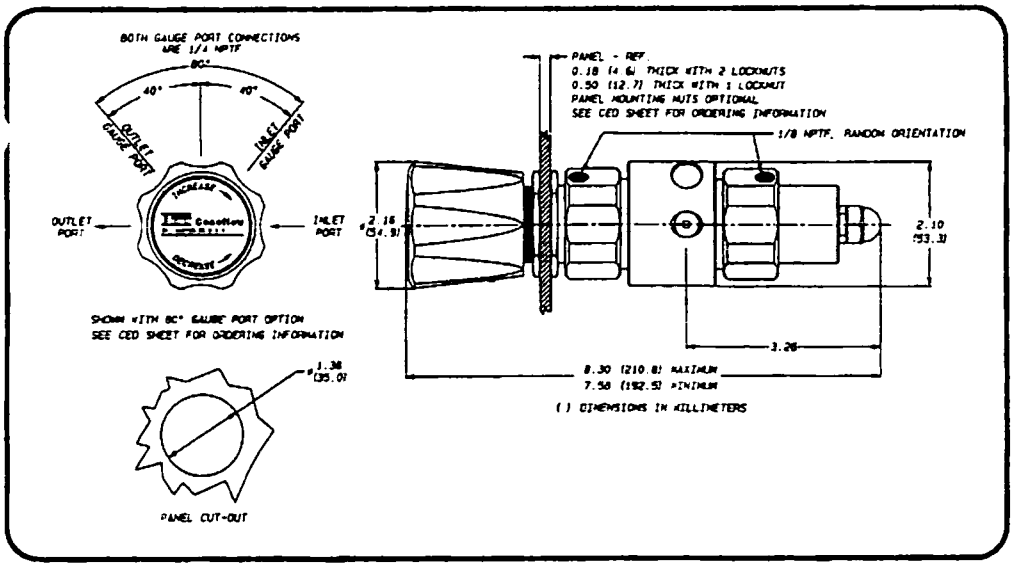
Clogged inlet screen(26). Remove old filter with sharp instrument and press in new one with hand pressure using a blunt instrument.

PROBLEM:

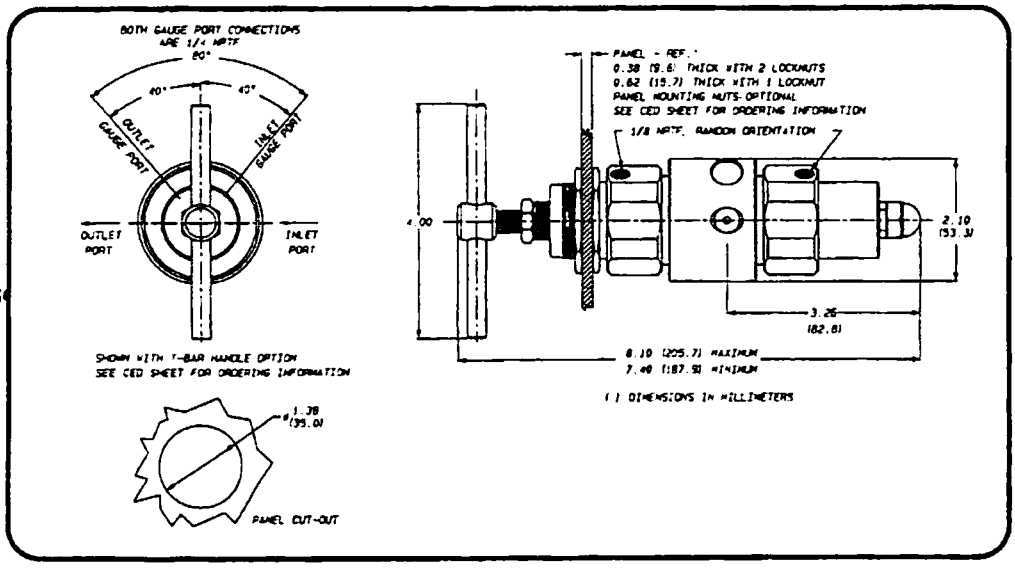
The regulated pressure increases as the supply pressure decreases.

POSSIBLE CAUSE:

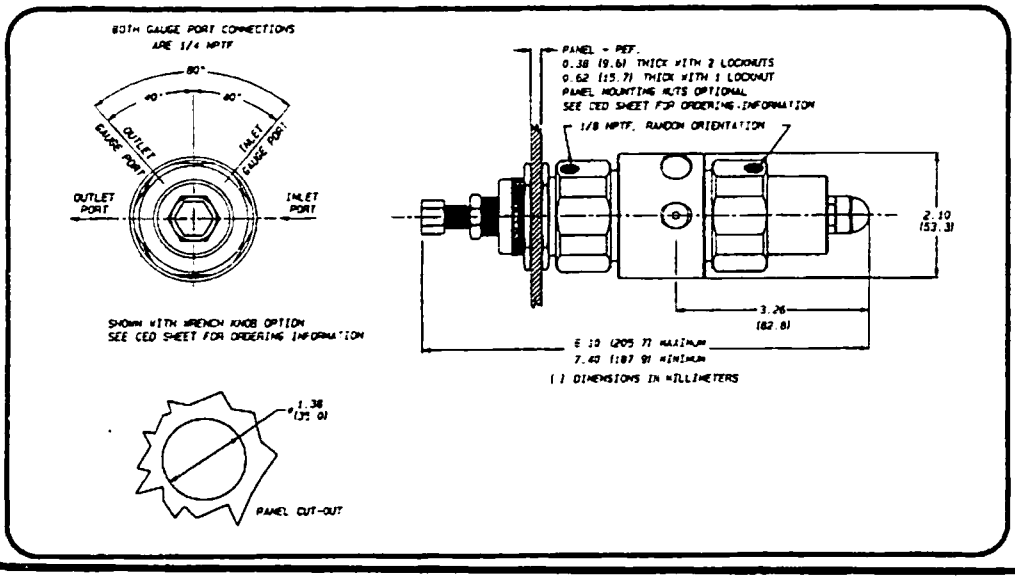
Valve seat (27) in the first stage needs replacement, follow first stage disassembly and assembly instructions.



For certified dimensional drawing, refer to HP700-C1.



For certified dimensional drawing, refer to HP700-C2.



For certified dimensional drawing, refer to HP700-C3.

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WARNING: **MANUFACTURED WITH (1, 1, 1-TRICHLOROETHANE), A SUBSTANCE WHICH HARMS PUBLIC HEALTH AND ENVIRONMENT BY DESTROYING OZONE IN THE UPPER ATMOSPHERE.**