

# ITT Industries

AUTOMOTIVE  
DEFENSE & ELECTRONICS  
FLUID TECHNOLOGY

## ITT CONOFLOW

Highway 78 P.O. Box 768  
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### WARNING

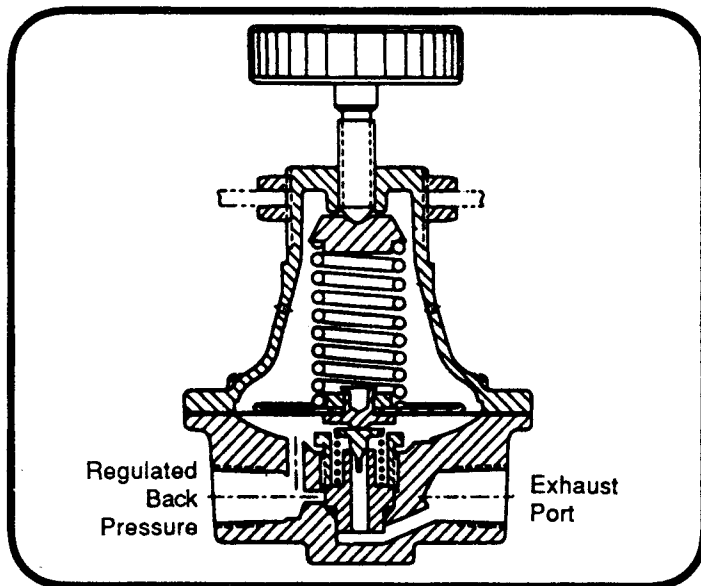
Conoflow's products are designed and manufactured using materials and workmanship required to meet all applicable industry standards. The use of these products should be confined to services specified and/or recommended in the Conoflow catalogs, instructions or by Conoflow application engineers (i.e. exceeding pressure-temperature rating or using device for services other than those specified).

To avoid personal injury or equipment damage due to misuse or misapplication of a product, it is necessary to select the proper materials of construction and pressure-temperature ratings which are consistent with performance requirements.



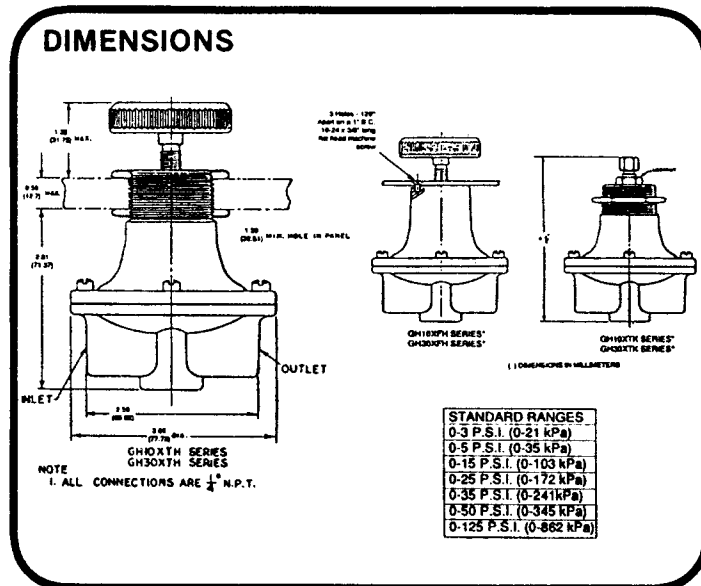
FOREMOST  
IN  
CONTROL  
ELEMENTS

## INSTRUCTION AND MAINTENANCE MANUAL GH30 SERIES BACK PRESSURE REGULATORS



### PRINCIPLE OF OPERATION

Turning the handwheel changes the force exerted by the range spring on the diaphragm assembly. In equilibrium, the force exerted by the range spring is balanced by the force from the back pressure acting underneath the diaphragm assembly. If the back pressure rises above the set pressure, the diaphragm seat is lifted allowing the nozzle plug to open. The excess pressure flows through the exhaust port until the back pressure is reduced to the set point. While the back pressure is at or below the set point, the range spring holds the nozzle plug against its seat shutting off the flow to the exhaust port.



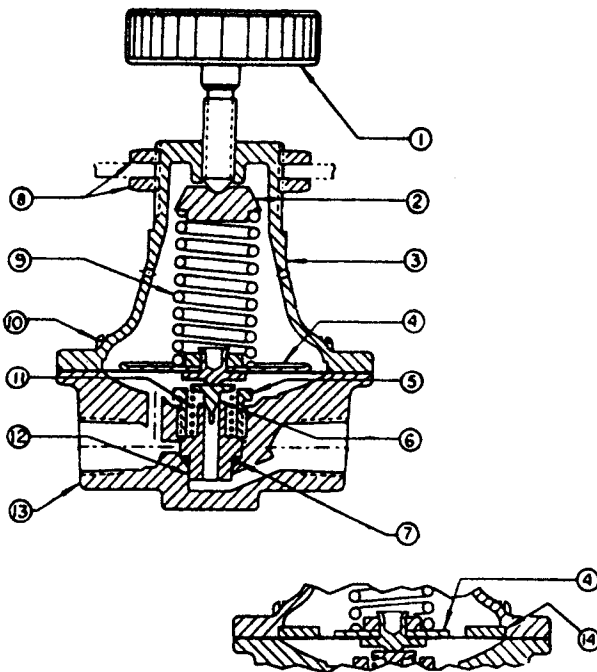
### INSTALLATION

**CAUTION:** Maximum Inlet Pressure is 150 PSI(1034 kPa)

Unit has two 1/4" N.P.T. connections. The inlet connection is marked "IN". **IT IS RECOMMENDED THAT A FILTERED AIR SUPPLY BE USED.**

Check all connections for leakage after installation. Adjusting knob should be kept well lubricated with grease.

FOR CERTIFIED DIMENSIONAL DRAWING,  
REFER TO A17-2



0-125 PSI RANGE

## MAINTENANCE

Remove air supply pressure prior to performing maintenance.

Periodic replacement of the diaphragm assembly and nozzle assembly is recommended for services where the unit is on stream continuously and where consistent, high accuracy regulation is required. The frequency of replacement will depend on the nature of the service, cleanliness of air, humidity of the air, etc.

To replace the diaphragm assembly (4), loosen handwheel until spring tension is relieved. Remove six screws (10) and lift off bonnet (3), spring plate (2), spring (9) and diaphragm assembly (4). Place new diaphragm assembly (4) over body, with diaphragm plate up. Place spring (9) and spring plate (2) on diaphragm assembly (4), re-install bonnet (3) and tighten six screws (10). The six screws should be tightened alternately.

To replace nozzle assembly remove plug (6) and plug spring (11). Use 3/8" socket wrench to remove and replace nozzle retaining nut (5). Remove nozzle (12) and "O" ring (7). Nozzle assembly may be cleaned by immersion in a suitable solvent and blowing dry with air stream.

Item No.	Description	Qty. Req'd.	GH30XTHMXXX(2)	GH30XTHAXKX(2) 303 St. Stl.	GH30XTHAXSX(2) 316 St. Stl.
1	Handwheel Assembly	1	6017792	6017792	6017792
2	Spring Plate	1	6017164	6017164	6017164
3	Bonnet	1	6017701	6017701	6017701
4(1)	Diaphragm Assembly	1			
	0-3, 5, 15, 25, 35, 50 PSI (0-21, 35, 103, 172, 241, 345 kPa)	1			
	0-125 PSI (0-862 kPa)	1	6019988	6019996	6384823
5	Nozzle Retaining Nut	1	6019574	6385062	6384230
6	Plug	1	6019566	6019566	6384820
7(1)	"O" Ring	1	6076640	6076665	6076665
8	Locknut	2	6017628	6017628	6017628
9	Range Spring				
	—Silver 0-3 PSI(0-21 kPa)	1	6385057	6385057	6385057
	—Gold 0-5(0-35 kPa)	1	6017099	6017099	6017099
	—Blue 0-15 PSI(0-103 kPa)	1	6018378	6018378	6018378
	—Black 0-25/35 PSI(0-172/241 kPa)	1	6017453	6017453	6017453
	—White 0-50/125 PSI(0-345/862 kPa)	1	6017834	6017834	6017834
10	Fill. Hd. Screw #8-32 x 3/8" Lg.	6	6900046	6900046	6900046
11	Plug Spring				
	0-3,5,15,25,35,50 PSI (0-21, 35, 103, 172, 241, 345 kPa)	1	6017289	6017289	6384821
	0-125 PSI (0-862 kPa)	1	6019962	6384822	6384822
12	Nozzle	1	6019871	6384233	6384828
13	Body	1	6019970	6019913	6019913
14	Restricting Plate (0-125 PSI(0-862 kPa) Only)	1	6017487	6017487	6017487

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

NOTES: 1. Recommended Spare Parts can be purchased individually or as spare parts kit under numbers:

0-3, 5, 15, 25, 35 & 50 PSI (0-21,35,103,172,241 & 345 kPa)	6385356	6385358	6385360
0-125 PSI(861 kPa)	6385357	6385359	6385361

Consists of Items 4 and 7.

- For definition of catalog number refer to Sales Bulletin C-2008.
- When ordering spare parts, specify complete catalog no., item no. and part no. This will permit positive identification and rapid handling of order.

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