Chay ton-

BACK PRESSURE REGULATOR

I. Body

2. Seat

Disc and Stem

4. Disc and Stem

5. Locknuts

6. Back-up Washer

7. Flange

8. Diaphragm

Spring Washer

10. Locknut

Adjusting Screw

12. Spring

3. Spring Housing

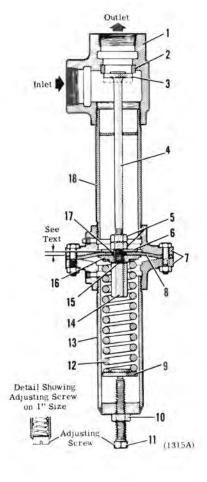
4. Stem Nut

Gasket

16. Diaphragm Washer

17. Diaphragm Spacer

18. Standpipe



The Clayton Back Pressure Regulator is designed to:

- Provide stable operation of any steam generator where steam loads fluctuate rapidly or periods of sudden overload occur.
- Provide stable operation on start-up and during operation of multiple steam generator installations. Enables the steam generating equipment to remain in balance, thus reaching operating pressure more rapidly.
- · Provide high pressure steam more

rapidly when used on heavy oil burning units equipped with steam/electric fuel oil heaters, thus reducing the cost of electrical pre-heat.

By controlling the minimum pressure of the steam generator the Back Pressure Regulator prevents "flashing" of the liquid in the steam generator, thus maintaining it in a stable condition at all times. This results in a faster heat up of the steam system after initial start and faster recovery after an overload period. The pressure differential held by the regulator will not retard heat delivery to the system.

 The Clayton Back Pressure Regulator is available in three sizes for the following steam capacities and pressure ranges;*

Size	Lbs/Hr	Working Pressure	Max. Inle	
1 in.	1140	60-200 psig	200	
2 in	3500	60-250 psig	250	
3 in.	8625	60-250 psig	250	
High I	Pressure			
3in.	9000	250-350 psig	350	

Regulators (selected by Clayton) for higher pressures and larger units are also available.

PECIFICATIONS

INSTALLATION

On multiple installations, a separate regulator is required on each steam generator. The regulator must be installed vertically (as shown) with the steam outlet at the top.

ADJUSTMENT

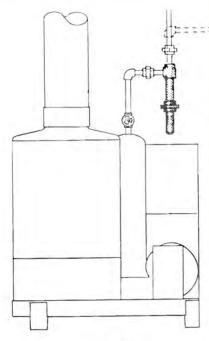
After installation, the regulator is adjusted in the following manner: From an initial start on a cold system, operate the steam generator at full fire. While the plant system pressure is still zero or low, immediately adjust the spring on the regulator to give the proper separator pressure as required for maximum adjusted working pressure. These pressures are:

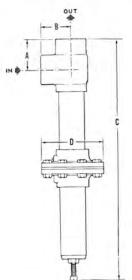
Steam System Maximum Working Pressure	Adjust Back Pressure Regulator to Retain Separator Pressure		
350 psig	290 psig		
300 psig	240 psig		
200 psig	160 psig		
150 psig	110 psig		
100 psig	70 psig		

For immediate working pressures, adjust the regulator to approximately 80% of the maximum working pressure. Example: For a maximum adjusted working pressure of 190 psi, the regulator should be adjusted to a separator pressure of 150 psi. These settings will result in a minimum pressure drop across the regulator of approximately 5 psi at full working pressure.

Size	Part No.		Dimensions			
1"	UH-21836	A 2-1/8	B 2-1/8	c 17-1/2	D 3-3/4	
2"	UH-22868	3-11/16	3-3/8	27-1/2	7	
3 "	UH-22413	4-3/8	4-3/8	38	8-1/2	
3 " (HP) UH-25634	4-3/8	4-3/8	38	8-1/2	

H.P. = High Pressure







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