

North American 8484-6000 Recuperator Radiant Tube Type

Sheet 8484-3

CAPACITIES: 2000 to 6000 scfh air
FLUE GAS TEMPERATURE: 2000 F maximum
TYPE: Single tube — counterflow

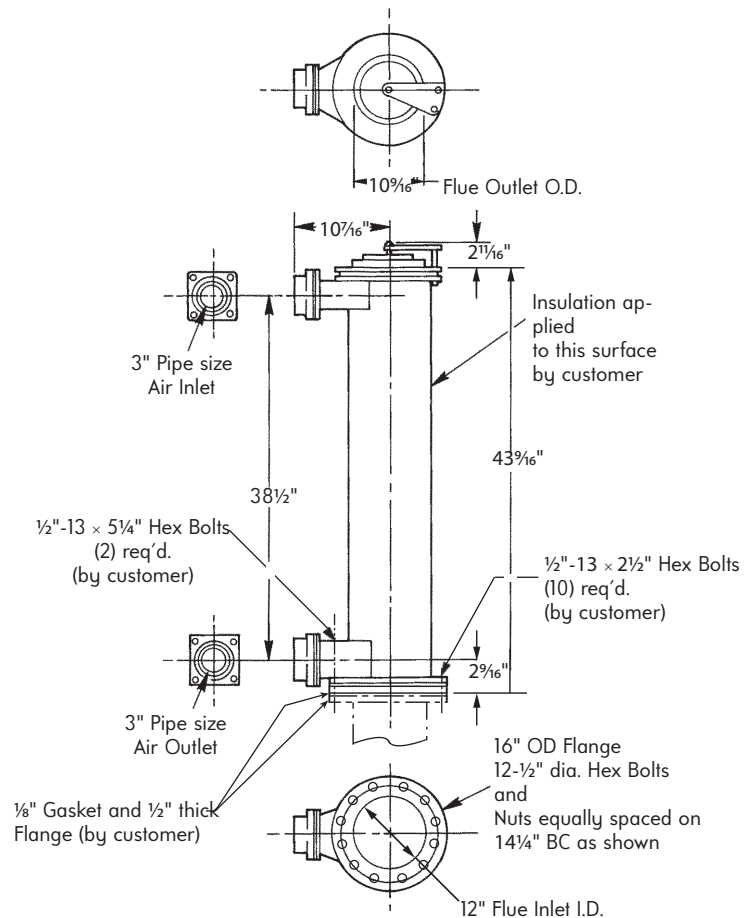
DESCRIPTION

The 8484-6000 is a hybrid recuperator with single radiation tube and a manually adjustable, top mounted, bypass damper that can be used to enhance convection heat transfer.

With the damper open the recuperator functions primarily as a radiation type with some assist by convection transfer to a secondary surface suspended in the flue gas passage.

With the bypass damper closed, flue gas pressure drop and convection heat transfer are at maximum values while radiation transfer is only slightly reduced. Total heat transfer and air preheat temperature are highest in this condition.

While on some applications preheat temperature of more than 1000 F can be realized, it is suggested that temperature be limited to a nominal maximum of 900 F unless testing or observation of radiant tube temperature profile under operating conditions is possible. If the air preheat obtained with the given flue temperature is too high, open the bypass damper to lower preheat air temperature.



Weight: 110 pounds

8484-6000 OVERALL DIMENSIONS

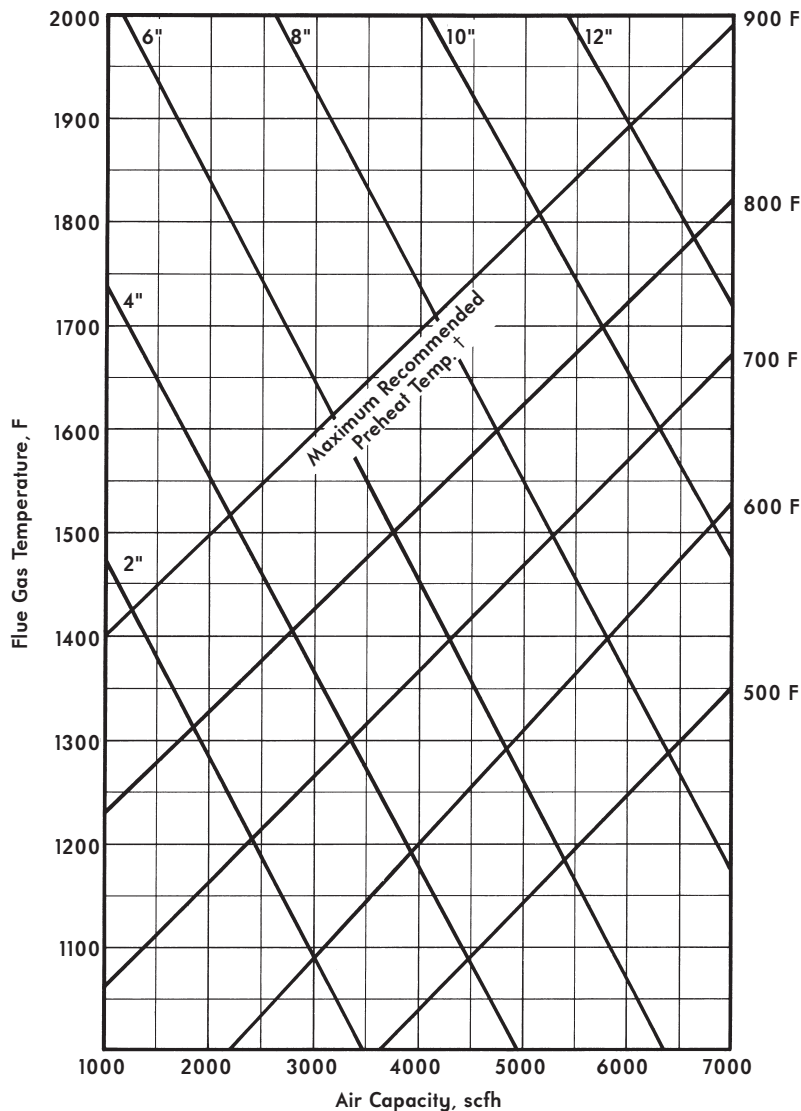
Metric Conversions

- 1 scfh = 0.028 26 sm³/h = 0.026 86 nm³/h
- 1"wc = 25.40 mm H₂O
- C = 5/9 (F - 32)
- 1" = 25.40 mm
- 1 lb = 0.4536 kg

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.

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., is inherent with any combustion application. Parts of this product may exceed 160F in operation and present a contact hazard. Fives North American Combustion, Inc. urges compliance with National Safety Standards and Insurance Underwriters' recommendations, and care in operation.

8484-6000 With Bypass Damper Closed
Total Pressure Drop, ΔP , "wc, Air Side



SELECTION PROCEDURE

Given: scfh preheated air
flue gas temperature

1. Enter selection chart at scfh air, and locate intersection with flue gas temperature line.
2. Read available air preheat temperature and total pressure drop directly from curves.

Given: scfh, 6000
flue gas temperature, 1600 F

1. Enter chart at 6000 scfh.
2. Locate intersection with 1600 F flue gas temperature on grid.
3. Read air preheat achieved (about 720 F).
4. Read total pressure drop (about 9.7"wc).

† For most applications North American recommends 900 F maximum preheat air temperature.



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