

A05

**TABLE HG-715
SIZE OF BOTTOM BLOWOFF PIPING,
VALVES, AND COCKS**

Minimum Required Safety Valve Capacity, lb (kg) of steam/hr [Note (1)]	Blowoff Piping, Valves, and Cocks Min. Size NPS (DN)
Up to 500 (225)	¾ (20)
501 to 1250 (225 to 550)	1 (25)
1251 to 2500 (550 to 1200)	1¼ (32)
2501 to 6000 (1200 to 2700)	1½ (40)
6001 (2700) and larger	2 (50)

NOTE:

(1) To determine the discharge capacity of safety relief valves in terms of Btu, the relieving capacity in lb of steam/hr is multiplied by 1000.

Supply Valve – Number ()

Do Not Close Without Also Closing Return Valve – Number ()

Return Valve – Number ()

Do Not Close Without Also Closing Supply Valve – Number ()

A05 HG-715 BOTTOM BLOWOFF AND DRAIN VALVES

(a) *Bottom Blowoff Valve.* Each steam boiler shall have a bottom blowoff connection fitted with a valve or cock connected to the lowest water space practicable with a minimum size as shown in Table HG-715. The discharge piping shall be full size to the point of discharge.

(b) Boilers having a capacity of 25 gal (95 l) or less are exempt from the above requirements, except that they must have an NPS ¾ (DN 20) minimum drain valve.

(c) *Drain Valve.* Each steam or hot water boiler shall have one or more drain connections, fitted with valves or cocks connecting to the lowest water containing spaces. The minimum size of the drain piping, valves, and cocks shall be NPS ¾ (DN 20). The discharge piping shall be full size to the point of discharge. When the blowoff connection is located at the lowest water containing space, a separate drain connection is not required.

(d) *Minimum Pressure Rating.* The minimum pressure rating of valves and cocks used for blowoff or drain purposes shall be at least equal to the pressure stamped on the boiler but in no case less than 30 psi (200 kPa). The temperature rating of such valves and cocks shall not be less than 250°F (120°C).

HG-716 MODULAR BOILERS

(a) *Individual Modules*

(1) The individual modules shall comply with all the requirements of Part HG, except as specified in HG-607, HG-615, and this paragraph. The individual modules shall be limited to a maximum input of 400,000 Btuh (gas), 3 gal/hr (11 l/hr) (oil), or 115 kW (electricity).

(2) Each module of a steam heating boiler shall be equipped with:

- (a) safety valve, see HG-701
- (b) blowoff valve, see HG-715(a)
- (c) drain valve, see HG-715(c)

(3) Each module of a modular hot water heating boiler shall be equipped with:

- (a) safety relief valve, see HG-701
- (b) drain valve, see HG-715(c)

(b) *Assembled Modular Boilers*

(1) The individual modules shall be manifolded together at the job-site without any intervening valves. The header or manifold piping is field piping and is exempt from Article 2, Part HG, HF, HB, or HC.

(2) The assembled modular steam heating boiler shall also be equipped with:

- (a) feedwater connection, see HG-705(a)
- (b) return pipe connection, see HG-703.2

(3) The assembled modular hot water heating boiler shall also be equipped with:

- (a) makeup water connection, see HG-705(b)
- (b) provision for thermal expansion, see HG-709
- (c) stop valves, see HG-710.2

HG-720 SETTING

Boilers of wrought materials of the wet-bottom type having an external width of over 36 in. (900 mm) shall have not less than 12 in. (300 mm) between the bottom of the boiler and the floorline, with access for inspection. When the width is 36 in. (900 mm) or less, the distance between the bottom of the boiler and the floorline shall be not less than 6 in. (150 mm), except that, when any part of the wet bottom is not farther from an outer edge than 12 in. (300 mm), this distance shall be not less than 4 in. (100 mm).

HG-725 METHODS OF SUPPORT

HG-725.1 Loadings

(a) The design and attachment of lugs, hangers, saddles, and other supports shall take into account the stresses due to hydrostatic head in determining the minimum thicknesses required. Additional stresses imposed by