

Description:

Used for removal of mud and other residues that form in the bottom of a boiler or similar equipment. Valve operation can be manual by using a supplied lever (DF-40) or a pneumatic actuator (DFA-40) in conjunction with a timer. A lever operated valve can be easily retrofitted in the field to accept a pneumatic actuator.

Application:

Periodical mud extraction is essential for the proper operation and conservation of boilers, pressure vessels and similar equipment.

The continuous vaporization process and water replenishment implies in the formation and concentration of impurities. To avoid the build-up of impurities on the equipment walls, it is common practice to add chemicals to the water to modify the nature of those impurities. This originates particles that collect as mud or dirt at the bottom of a boiler drum.

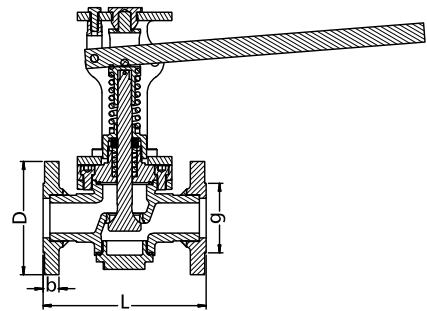
The progressive build-up process can cause thermal stresses that may result in cracked boiler walls or rivets.

If these dregs form on the tubes, the stresses are made worse due to heat retention that can eventually cause its destruction.

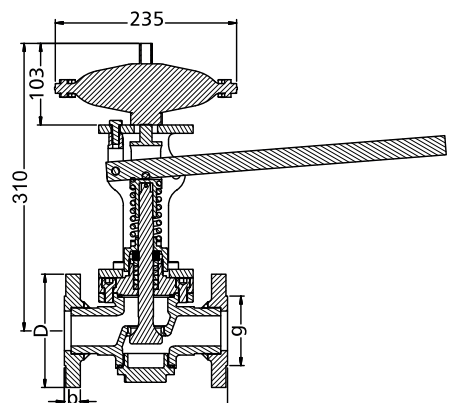
To avoid these problems, with somewhat unpredictable results, it is recommended that mud or dirt be extracted through specially designed valves for use in boiler bottom drums.



DF-40



DFA-40



Dimensions and weight - DF(A) 40, DN 40/50						
DN	40	40	40	50	50	50
FLANGE	ANSI 150	ANSI 300	DIN PN 16/40	ANSI 150	ANSI 300	DIN PN 16/40
L (mm)	216	216	216	216	216	216
D (mm)	127	155,6	150	152,4	165,1	165
b (mm)	17,5	20,6	18	19	22,2	20
N° of holes	4	4	4	4	8	4
Approx. weight (kg)	16	18	18	17	19	19
ACTUATOR APPROX. WEIGHT (kg) 5,0						

Operating limits

Pressure: 21 bar

Temperature: 220 °C

Pneumatic actuator air supply: 5 bar (dry, dust and oil free compressed or instrument air).

Valve materials

Body, cover and bonnet: Carbon steel (A216 WCB)

Seat ring: Type 420 stainless steel

Plug: Heat treated hardened type 420 stainless steel

Packing: PTFE

End connections

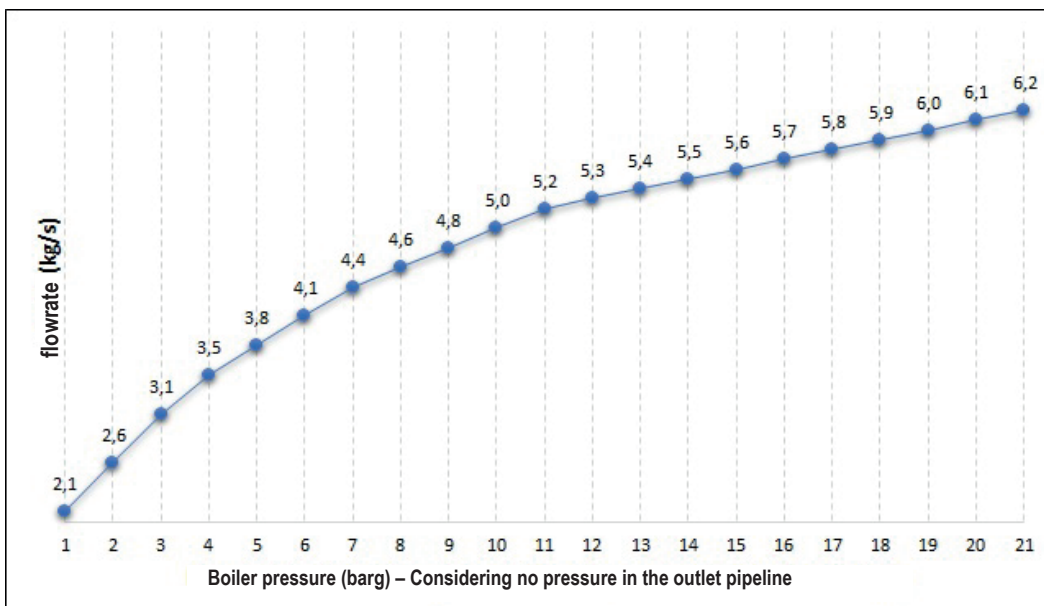
ANSI B16.5 Class 150 or 300 RF flanges

DIN PN16/40 RF flanges

Installation

- 1 Prior to any work, boiler and pipe shall be cleaned and free of debris like electrode stumps, weld slags, etc.);
- 2 During installation, observe the correct flow direction as indicated by the arrow on the valve body;
- 3 The conversion of a DF-40 valve (lever operation) into a DFA-40 (pneumatic operation) is a very straightforward process. It only requires coupling the optional pneumatic actuator. There is no need for special tools or factory procedures.

Flow Capabilities



Valve characteristics:

- Streamlined body and trim design for quick and efficient removal of mud or dirt at the boiler bottom
- Wear resistant hardened trim materials
- Valve closure thrust is a combination of the spring force and boiler pressure (flow to close action) ensuring tight shutoff
- Intermittent boiler blowdown is one of the toughest applications found in industries and require specially designed valves for this purpose
- Cast steel body, bonnet and covers
- Heat treated hardened type 420 stainless steel trim
- Stem sealing uses PTFE rings and Belleville spring washers
- Small body sealing surfaces dimensions ensure excellent tightness and resistance to pressure surges and water hammer
- Flanged process connections – DIN PN 16/40 or ASME/ANSI B16.5 Class 150 or 300
- Available sizes: 1½” and 2” (DN40 and Dn50)

Approximate Dimensions - Bermo reserves the right to change technical specifications without prior notice.

Maintenance

1. Periodically lubricate the moving parts.
2. Spare parts:

Description	Quantity
Body gaskets	02
Packing rings	05
Diaphragm	01



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